



**PM-TECH**

# FRÉZY PRO OBRÁBĚNÍ OCELÍ

Ceník platný od 1.6.2019



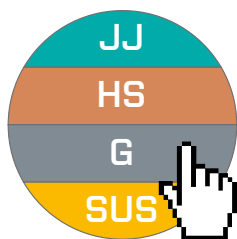
# ▶ INTERAKTIVNÍ PRVKY



## ▶ Vhodný prohlížeč

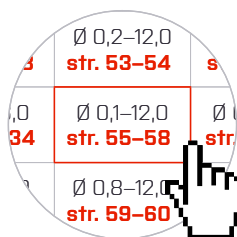
Pro správnou funkci interaktivních prvků doporučujeme k prohlížení katalogu používat program ADOBE READER

Pro snazší orientaci a vyhledávání má katalog následující interaktivní prvky:



## ▶ Série fréz v obsahu

Kliknutím na barevné označení série v hlavičce obsahu se dostanete na její první stránku ve výpisu katalogu



## ▶ Čísla stránek v obsahu

Pro rychlou navigaci na vybranou kategorii produktů klikněte v obsahu na příslušnou buňku tabulky s číslem stránky



## ▶ Zpět na obsah z katalogu

Ze kteréhokoliv místa katalogu se snadno dostanete na obsah kliknutím na červené tlačítko „zpět na obsah“ u horního okraje stránky



## ▶ Odkazy v zápatí stránky

Pokud máte jakékoli dotazy nebo vás zajímají další naše produkty, stačí kliknout na naši e-mailovou adresu, webovou adresu nebo na logo dole na stránce



ZELEŇĚ = NOVÉ POLOŽKY

MODŘĚ = ZMĚNA PROTI PŘEDCHOZÍMU KATALOGU

| Typ           | Obrázek | Poznámka                         | Počet<br>břitů | Série fréz pro obrábění ocelí |                               |                                |                              |
|---------------|---------|----------------------------------|----------------|-------------------------------|-------------------------------|--------------------------------|------------------------------|
|               |         |                                  |                | 52-68 HRC                     | 50-62 HRC                     | ≤ 52 HRC                       | NEREZ                        |
|               |         |                                  |                | JJ                            | HS                            | G                              | SUS                          |
|               |         |                                  |                | 0,2 μm - VHM<br>TiSiN-S       | 0,2 μm - VHM<br>TiSiN         | 0,5 μm - VHM<br>AlCrN          | 0,2 μm - VHM<br>AlCrN, TiSiN |
| Pro žebrování |         | Kulové                           | 2              | Ø 0,1 - 12,0<br>str. 7 - 9    | Ø 0,1 - 12,0<br>str. 45 - 47  | Ø 0,1 - 12,0<br>str. 92 - 94   |                              |
|               |         | Kulové                           | 3              | Ø 1,0 - 12,0<br>str. 10       |                               |                                |                              |
|               |         | Kulové - kuželové<br>odlehčení   | 2              | Ø 0,2 - 12,0<br>str. 11 - 14  |                               |                                |                              |
|               |         | Kulové - kuželové<br>odlehčení   | 3              | Ø 1,0 - 12,0<br>str. 15       |                               |                                |                              |
|               |         | Ostré                            | 2              | Ø 0,1 - 6,0<br>str. 16 - 17   | Ø 0,1 - 12,0<br>str. 48 - 50  | Ø 0,1 - 12,0<br>str. 95 - 96   |                              |
|               |         | Ostré                            | 4              | Ø 0,8 - 12,0<br>str. 18       | Ø 0,8 - 12,0<br>str. 51 - 52  | Ø 0,8 - 12,0<br>str. 97 - 98   | Ø 1,0 - 20,0<br>str. 122     |
|               |         | Toroidní                         | 2              | Ø 0,2 - 10,0<br>str. 19 - 22  | Ø 0,2 - 16,0<br>str. 53 - 57  | Ø 0,2 - 16,0<br>str. 99 - 102  |                              |
|               |         | Toroidní - kuželové<br>odlehčení | 2              | Ø 1,0 - 4,0<br>str. 23 - 24   |                               |                                |                              |
|               |         | Toroidní                         | 4              | Ø 0,5 - 12,0<br>str. 25 - 28  | Ø 0,8 - 12,0<br>str. 58 - 62  | Ø 1,0 - 12,0<br>str. 103 - 106 | Ø 1,0 - 20,0<br>str. 123     |
|               |         | Toroidní - kuželové<br>odlehčení | 4              | Ø 1,0 - 4,0<br>str. 29        |                               |                                |                              |
| Kulové        |         | Krátké                           | 2              | Ø 0,1 - 12,0<br>str. 30       | Ø 0,1 - 12,0<br>str. 63       | Ø 0,2 - 12,0<br>str. 107       |                              |
|               |         | Standardní                       | 2              | Ø 0,1 - 12,0<br>str. 31       | Ø 0,06 - 20,0<br>str. 64 - 65 | Ø 0,1 - 20,0<br>str. 108       |                              |
|               |         | Ultrapřesné                      | 2              |                               | Ø 0,2 - 12,0<br>str. 66       |                                |                              |
|               |         | Standardní                       | 3              |                               | Ø 1,0 - 12,0<br>str. 67       |                                |                              |
|               |         | Standardní                       | 4              |                               | Ø 1,0 - 20,0<br>str. 67       |                                |                              |
|               |         | Standardní 45°                   | 4              |                               |                               |                                | Ø 1,0 - 16,0<br>str. 124     |
|               |         | 230°                             | 2              | Ø 1,0 - 12,0<br>str. 32       |                               |                                |                              |
|               |         | 230°                             | 4              | Ø 1,0 - 12,0<br>str. 33       |                               |                                |                              |
|               |         | 270°                             | 4              | Ø 1,0 - 12,0<br>str. 34       |                               |                                |                              |





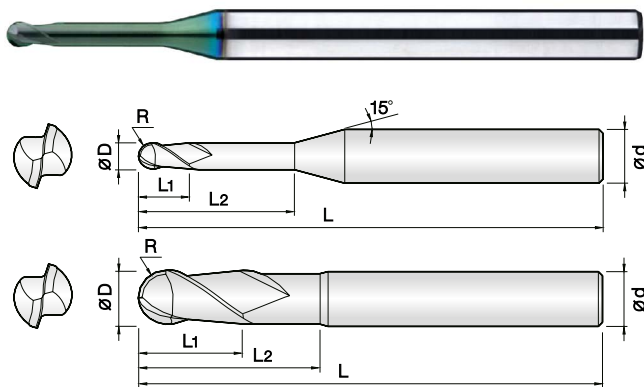
| Typ                     | Obrázek  | Poznámka                | Počet<br>břitů | Série fréz pro obrábění ocelí |                               |                                |                                |
|-------------------------|----------|-------------------------|----------------|-------------------------------|-------------------------------|--------------------------------|--------------------------------|
|                         |          |                         |                | 52-68 HRC                     | 50-62 HRC                     | ≤ 52 HRC                       | NEREZ                          |
|                         |          |                         |                | JJ                            | HS                            | G                              | SUS                            |
|                         |          |                         |                | 0,2 μm - VHM<br>TiSiN-S       | 0,2 μm - VHM<br>TiSiN         | 0,5 μm - VHM<br>AlCrN          | 0,2 μm - VHM<br>AlCrN, TiSiN   |
| Ostré                   |          | Krátké                  | 2              |                               | Ø 0,1 - 12,0<br>str. 68       |                                |                                |
|                         |          | Standardní              | 2              | Ø 0,03 - 20,0<br>str. 35      | Ø 0,05 - 20,0<br>str. 69 - 70 | Ø 0,1 - 20,0<br>str. 109 - 110 |                                |
|                         |          | Dlouhé                  | 2              |                               | Ø 1,0 - 25,0<br>str. 71       | Ø 1,0 - 25,0<br>str. 111       |                                |
|                         |          | Standardní 45°          | 3              |                               |                               |                                | Ø 0,5 - 20,0<br>str. 125       |
|                         |          | Krátké                  | 4              |                               | Ø 0,5 - 16,0<br>str. 72       |                                |                                |
|                         |          | Standardní              | 4              | Ø 0,5 - 20,0<br>str. 36       | Ø 0,5 - 20,0<br>str. 73       | Ø 0,8 - 20,0<br>str. 112       |                                |
|                         |          | Dlouhé                  | 4              |                               | Ø 0,5 - 25,0<br>str. 74       | Ø 1,0 - 25,0<br>str. 113       |                                |
|                         |          | Standardní<br>35° & 38° | 4              |                               |                               |                                | Ø 1,0 - 20,0<br>str. 126       |
|                         |          | Standardní 42°          | 4              |                               |                               |                                | Ø 1,0 - 20,0<br>str. 127       |
|                         |          | Standardní 45°          | 4              | Ø 1,0 - 20,0<br>str. 37       | Ø 1,0 - 25,0<br>str. 75       | Ø 1,0 - 20,0<br>str. 114       |                                |
|                         |          | 45°                     | 6 & 8          | Ø 3,0 - 25,0<br>str. 38       | Ø 3,0 - 25,0<br>str. 76       |                                |                                |
|                         |          | Hrubovací               | 3 & 4          |                               |                               | Ø 4,0 - 20,0<br>str. 115       |                                |
|                         |          | Hrubovací 45°           | 3 & 4 & 5      |                               |                               | Ø 4,0 - 20,0<br>str. 116       |                                |
|                         | Toroidní |                         |                | 2                             | Ø 0,2 - 12,0<br>str. 39 - 40  | Ø 0,2 - 12,0<br>str. 77 - 78   | Ø 0,4 - 12,0<br>str. 117 - 118 |
|                         |          |                         | 4              | Ø 0,5 - 16,0<br>str. 41 - 42  | Ø 1,0 - 20,0<br>str. 79 - 80  | Ø 1,0 - 16,0<br>str. 119 - 120 |                                |
|                         |          | 42°                     | 4              |                               |                               |                                | Ø 1,0 - 20,0<br>str. 128 - 129 |
|                         |          | 42° Dlouhé              | 4              |                               |                               |                                | Ø 6,0 - 20,0<br>str. 130       |
|                         |          | 45°                     | 4              |                               | Ø 1,0 - 20,0<br>str. 81       |                                |                                |
|                         |          | 45°                     | 6              |                               | Ø 5,0 - 16,0<br>str. 82       |                                |                                |
|                         |          | 15°                     | 4              | Ø 1,0 - 16,0<br>str. 43       | Ø 1,0 - 16,0<br>str. 83       |                                |                                |
|                         |          | Hrubovací 45°           | 3 & 4 & 5      |                               |                               |                                | Ø 3,0 - 20,0<br>str. 131       |
| Kružlové<br>(do HRC 55) |          | Kulové                  | 2              |                               | Ø 0,4 - 6,0<br>str. 84 - 85   |                                |                                |
|                         |          |                         | 2              |                               | Ø 0,3 - 8,0<br>str. 86 - 87   |                                |                                |
|                         |          |                         | 4              |                               | Ø 3,0 - 10,0<br>str. 88       |                                |                                |
|                         |          | Pro žebrování           | 4              |                               | Ø 0,5 - 2,5<br>str. 89 - 90   |                                |                                |



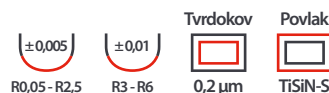
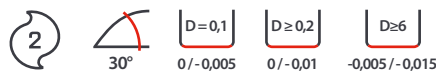
- ▶ Tvrdokovové frézy pro kalené oceli do max. tvrdosti HRC 68
- ▶ Vhodné i pro HSC obrábění

# 2JJRB

## 2-břité KULOVÉ frézy pro žebrování pro kalené oceli do HRC 68



- Určeno pro kalené oceli (52 - 68 HRC)
- Vysoká odolnost proti opotřeбенí díky novému PVD povlaku s vysokým obsahem Si
- Velmi přesné tolerance řezných hran
- Široký sortiment vyložení pro optimální výběr nástroje
- Vysoká kvalita obrobeného povrchu
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdkovu



NOVINKA

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|---|
| 2JJRB-001-003-S04 | 0,1    | R0,05  | -       | 0,3     | 40     | 4         | ☑                  |   |   |
| 2JJRB-001-005-S04 |        |        | -       | 0,5     | 40     | 4         | ☑                  |   |   |
| 2JJRB-002-005-S04 | 0,2    | R0,1   | 0,5     | 0,2     | 40     | 4         | ☑                  |   |   |
| 2JJRB-002-010-S04 |        |        | 1       | 0,2     | 40     | 4         | ☑                  |   |   |
| 2JJRB-002-015-S04 |        |        | 1,5     | 0,2     | 40     | 4         | ☑                  |   |   |
| 2JJRB-002-020-S04 |        |        | 2       | 0,2     | 40     | 4         | ☑                  |   |   |
| 2JJRB-002-025-S04 |        |        | 2,5     | 0,2     | 40     | 4         | ☑                  |   |   |
| 2JJRB-002-030-S04 |        |        | 3       | 0,2     | 40     | 4         | ☑                  |   |   |
| 2JJRB-003-010-S04 |        |        | 0,3     | R0,15   | 1      | 0,3       | 40                 | 4 | ☑ |
| 2JJRB-003-015-S04 | 1,5    | 0,3    |         |         | 40     | 4         | ☑                  |   |   |
| 2JJRB-003-020-S04 | 2      | 0,3    |         |         | 40     | 4         | ☑                  |   |   |
| 2JJRB-003-025-S04 | 2,5    | 0,3    |         |         | 40     | 4         | ☑                  |   |   |
| 2JJRB-003-030-S04 | 3      | 0,3    |         |         | 40     | 4         | ☑                  |   |   |
| 2JJRB-003-035-S04 | 3,5    | 0,3    |         |         | 40     | 4         | ☑                  |   |   |
| 2JJRB-003-040-S04 | 4      | 0,3    |         |         | 40     | 4         | ☑                  |   |   |
| 2JJRB-003-050-S04 | 5      | 0,3    |         |         | 40     | 4         | ☑                  |   |   |
| 2JJRB-004-010-S04 | 0,4    | R0,2   |         |         | 1      | 0,4       | 40                 | 4 | ☑ |
| 2JJRB-004-015-S04 |        |        |         |         | 1,5    | 0,4       | 40                 | 4 | ☑ |
| 2JJRB-004-020-S04 |        |        | 2       | 0,4     | 40     | 4         | ☑                  |   |   |
| 2JJRB-004-025-S04 |        |        | 2,5     | 0,4     | 40     | 4         | ☑                  |   |   |
| 2JJRB-004-030-S04 |        |        | 3       | 0,4     | 40     | 4         | ☑                  |   |   |
| 2JJRB-004-035-S04 |        |        | 3,5     | 0,4     | 40     | 4         | ☑                  |   |   |
| 2JJRB-004-040-S04 |        |        | 4       | 0,4     | 40     | 4         | ☑                  |   |   |
| 2JJRB-004-045-S04 |        |        | 4,5     | 0,4     | 40     | 4         | ☑                  |   |   |
| 2JJRB-004-050-S04 | 0,5    | R0,25  | 5       | 0,4     | 40     | 4         | ☑                  |   |   |
| 2JJRB-004-060-S04 |        |        | 6       | 0,4     | 40     | 4         | ☑                  |   |   |
| 2JJRB-004-080-S04 |        |        | 8       | 0,4     | 40     | 4         | ☑                  |   |   |
| 2JJRB-005-010-S04 |        |        | 0,5     | R0,25   | 1      | 0,5       | 45                 | 4 | ☑ |
| 2JJRB-005-010-S06 |        |        |         |         | 1      | 0,5       | 50                 | 6 | ☑ |
| 2JJRB-005-015-S04 |        |        |         |         | 1,5    | 0,5       | 45                 | 4 | ☑ |
| 2JJRB-005-020-S04 | 2      | 0,5    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-005-020-S06 | 2      | 0,5    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-005-025-S04 | 2,5    | 0,5    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-005-030-S04 | 3      | 0,5    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-005-030-S06 | 3      | 0,5    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-005-035-S04 | 3,5    | 0,5    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-005-040-S04 | 4      | 0,5    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-005-040-S06 | 4      | 0,5    | 50      | 6       | ☑      |           |                    |   |   |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|---|
| 2JJRB-005-045-S04 | 0,5    | R0,25  | 4,5     | 0,5     | 45     | 4         | ☑                  |   |   |
| 2JJRB-005-050-S04 |        |        | 5       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2JJRB-005-050-S06 |        |        | 5       | 0,5     | 50     | 6         | ☑                  |   |   |
| 2JJRB-005-060-S04 |        |        | 6       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2JJRB-005-060-S06 | 0,5    | R0,25  | 6       | 0,5     | 50     | 6         | ☑                  |   |   |
| 2JJRB-005-080-S04 |        |        | 8       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2JJRB-005-100-S04 |        |        | 10      | 0,5     | 45     | 4         | ☑                  |   |   |
| 2JJRB-005-120-S04 |        |        | 12      | 0,5     | 45     | 4         | ☑                  |   |   |
| 2JJRB-006-010-S04 |        |        | 0,6     | R0,3    | 1      | 0,6       | 45                 | 4 | ☑ |
| 2JJRB-006-010-S06 |        |        |         |         | 1      | 0,6       | 50                 | 6 | ☑ |
| 2JJRB-006-020-S04 | 2      | 0,6    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-006-020-S06 | 2      | 0,6    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-006-030-S04 | 3      | 0,6    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-006-030-S06 | 3      | 0,6    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-006-040-S04 | 4      | 0,6    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-006-040-S06 | 4      | 0,6    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-006-050-S04 | 5      | 0,6    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-006-050-S06 | 5      | 0,6    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-006-060-S04 | 0,6    | R0,3   | 6       | 0,6     | 45     | 4         | ☑                  |   |   |
| 2JJRB-006-060-S06 |        |        | 6       | 0,6     | 50     | 6         | ☑                  |   |   |
| 2JJRB-006-080-S04 |        |        | 8       | 0,6     | 45     | 4         | ☑                  |   |   |
| 2JJRB-006-080-S06 |        |        | 8       | 0,6     | 50     | 6         | ☑                  |   |   |
| 2JJRB-006-100-S04 |        |        | 10      | 0,6     | 45     | 4         | ☑                  |   |   |
| 2JJRB-006-120-S04 |        |        | 12      | 0,6     | 45     | 4         | ☑                  |   |   |
| 2JJRB-006-140-S04 | 0,7    | R0,35  | 14      | 0,6     | 45     | 4         | ☑                  |   |   |
| 2JJRB-007-020-S04 |        |        | 2       | 0,7     | 45     | 4         | ☑                  |   |   |
| 2JJRB-007-040-S04 |        |        | 4       | 0,7     | 45     | 4         | ☑                  |   |   |
| 2JJRB-007-060-S04 |        |        | 6       | 0,7     | 45     | 4         | ☑                  |   |   |
| 2JJRB-007-080-S04 |        |        | 8       | 0,7     | 45     | 4         | ☑                  |   |   |
| 2JJRB-007-100-S04 |        |        | 10      | 0,7     | 45     | 4         | ☑                  |   |   |
| 2JJRB-007-120-S04 |        |        | 12      | 0,7     | 45     | 4         | ☑                  |   |   |
| 2JJRB-008-020-S04 |        |        | 0,8     | R0,4    | 2      | 0,8       | 45                 | 4 | ☑ |
| 2JJRB-008-020-S06 |        |        |         |         | 2      | 0,8       | 50                 | 6 | ☑ |
| 2JJRB-008-030-S04 |        |        |         |         | 3      | 0,8       | 45                 | 4 | ☑ |
| 2JJRB-008-030-S06 | 3      | 0,8    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-008-040-S04 | 4      | 0,8    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-008-040-S06 | 4      | 0,8    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-008-050-S04 | 5      | 0,8    |         |         | 45     | 4         | ☑                  |   |   |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|---|
| 2JJRB-008-050-S06 | 0,8    | R0,4   | 5       | 0,8     | 50     | 6         | ☑                  |   |   |
| 2JJRB-008-060-S04 |        |        | 6       | 0,8     | 45     | 4         | ☑                  |   |   |
| 2JJRB-008-060-S06 |        |        | 6       | 0,8     | 50     | 6         | ☑                  |   |   |
| 2JJRB-008-080-S04 |        |        | 8       | 0,8     | 45     | 4         | ☑                  |   |   |
| 2JJRB-008-080-S06 |        |        | 8       | 0,8     | 50     | 6         | ☑                  |   |   |
| 2JJRB-008-100-S04 |        |        | 10      | 0,8     | 45     | 4         | ☑                  |   |   |
| 2JJRB-008-120-S04 |        |        | 12      | 0,8     | 45     | 4         | ☑                  |   |   |
| 2JJRB-009-040-S04 |        |        | 0,9     | R0,45   | 4      | 0,9       | 45                 | 4 | ☑ |
| 2JJRB-009-060-S04 | 6      | 0,9    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-009-080-S04 | 8      | 0,9    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-009-100-S04 | 10     | 0,9    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-009-120-S04 | 12     | 0,9    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-010-020-S04 | 1      | R0,5   |         |         | 2      | 1         | 45                 | 4 | ☑ |
| 2JJRB-010-020-S06 |        |        | 2       | 1       | 50     | 6         | ☑                  |   |   |
| 2JJRB-010-030-S04 |        |        | 3       | 1       | 45     | 4         | ☑                  |   |   |
| 2JJRB-010-030-S06 |        |        | 3       | 1       | 50     | 6         | ☑                  |   |   |
| 2JJRB-010-040-S04 |        |        | 4       | 1       | 45     | 4         | ☑                  |   |   |
| 2JJRB-010-040-S06 |        |        | 4       | 1       | 50     | 6         | ☑                  |   |   |
| 2JJRB-010-050-S04 |        |        | 5       | 1       | 45     | 4         | ☑                  |   |   |
| 2JJRB-010-050-S06 |        |        | 5       | 1       | 50     | 6         | ☑                  |   |   |
| 2JJRB-010-060-S04 |        |        | 6       | 1       | 45     | 4         | ☑                  |   |   |
| 2JJRB-010-060-S06 |        |        | 6       | 1       | 50     | 6         | ☑                  |   |   |
| 2JJRB-010-080-S04 |        |        | 8       | 1       | 45     | 4         | ☑                  |   |   |
| 2JJRB-010-080-S06 |        |        | 8       | 1       | 50     | 6         | ☑                  |   |   |
| 2JJRB-010-100-S04 |        |        | 10      | 1       | 50     | 4         | ☑                  |   |   |
| 2JJRB-010-100-S06 |        |        | 10      | 1       | 50     | 6         | ☑                  |   |   |
| 2JJRB-010-120-S04 |        |        | 12      | 1       | 50     | 4         | ☑                  |   |   |
| 2JJRB-010-120-S06 |        |        | 12      | 1       | 50     | 6         | ☑                  |   |   |
| 2JJRB-010-140-S04 |        |        | 14      | 1       | 50     | 4         | ☑                  |   |   |
| 2JJRB-010-160-S04 |        |        | 16      | 1       | 50     | 4         | ☑                  |   |   |
| 2JJRB-010-180-S04 |        |        | 18      | 1       | 50     | 4         | ☑                  |   |   |
| 2JJRB-010-200-S04 |        |        | 20      | 1       | 50     | 4         | ☑                  |   |   |
| 2JJRB-010-220-S04 |        |        | 22      | 1       | 60     | 4         | ☑                  |   |   |
| 2JJRB-010-250-S04 |        |        | 25      | 1       | 60     | 4         | ☑                  |   |   |
| 2JJRB-012-040-S04 |        |        | 1,2     | R0,6    | 4      | 1,2       | 45                 | 4 | ☑ |
| 2JJRB-012-040-S06 |        |        |         |         | 4      | 1,2       | 50                 | 6 | ☑ |
| 2JJRB-012-060-S04 | 6      | 1,2    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-012-060-S06 | 6      | 1,2    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-012-080-S04 | 8      | 1,2    |         |         | 45     | 4         | ☑                  |   |   |
| 2JJRB-012-080-S06 | 8      | 1,2    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-012-100-S04 | 10     | 1,2    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-012-100-S06 | 10     | 1,2    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-012-120-S04 | 12     | 1,2    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-012-120-S06 | 12     | 1,2    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-012-160-S04 | 16     | 1,2    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-012-200-S04 | 20     | 1,2    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-012-240-S04 | 24     | 1,2    | 60      | 4       | ☑      |           |                    |   |   |
| 2JJRB-014-060-S04 | 1,4    | R0,7   | 6       | 1,4     | 45     | 4         | ☑                  |   |   |
| 2JJRB-014-080-S04 |        |        | 8       | 1,4     | 45     | 4         | ☑                  |   |   |
| 2JJRB-014-120-S04 |        |        | 12      | 1,4     | 50     | 4         | ☑                  |   |   |
| 2JJRB-014-160-S04 |        |        | 16      | 1,4     | 50     | 4         | ☑                  |   |   |
| 2JJRB-015-030-S04 | 1,5    | R0,75  | 3       | 1,5     | 45     | 4         | ☑                  |   |   |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|---|
| 2JJRB-015-030-S06 | 1,5    | R0,75  | 3       | 1,5     | 50     | 6         | ☑                  |   |   |
| 2JJRB-015-040-S04 |        |        | 4       | 1,5     | 45     | 4         | ☑                  |   |   |
| 2JJRB-015-040-S06 |        |        | 4       | 1,5     | 50     | 6         | ☑                  |   |   |
| 2JJRB-015-060-S04 |        |        | 6       | 1,5     | 45     | 4         | ☑                  |   |   |
| 2JJRB-015-060-S06 |        |        | 6       | 1,5     | 50     | 6         | ☑                  |   |   |
| 2JJRB-015-080-S04 |        |        | 1,5     | R0,75   | 8      | 1,5       | 45                 | 4 | ☑ |
| 2JJRB-015-080-S06 | 8      | 1,5    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-015-100-S04 | 10     | 1,5    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-015-100-S06 | 10     | 1,5    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-015-120-S04 | 12     | 1,5    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-015-120-S06 | 12     | 1,5    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-015-140-S04 | 14     | 1,5    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-015-140-S06 | 14     | 1,5    |         |         | 50     | 6         | ☑                  |   |   |
| 2JJRB-015-160-S04 | 16     | 1,5    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-015-160-S06 | 16     | 1,5    |         |         | 60     | 6         | ☑                  |   |   |
| 2JJRB-015-180-S04 | 18     | 1,5    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-015-200-S04 | 20     | 1,5    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-015-220-S04 | 22     | 1,5    | 60      | 4       | ☑      |           |                    |   |   |
| 2JJRB-015-250-S04 | 25     | 1,5    | 60      | 4       | ☑      |           |                    |   |   |
| 2JJRB-015-300-S04 | 30     | 1,5    | 70      | 4       | ☑      |           |                    |   |   |
| 2JJRB-016-060-S04 | 1,6    | R0,8   | 6       | 1,6     | 45     | 4         | ☑                  |   |   |
| 2JJRB-016-080-S04 |        |        | 8       | 1,6     | 45     | 4         | ☑                  |   |   |
| 2JJRB-016-120-S04 |        |        | 12      | 1,6     | 50     | 4         | ☑                  |   |   |
| 2JJRB-016-160-S04 |        |        | 16      | 1,6     | 50     | 4         | ☑                  |   |   |
| 2JJRB-016-200-S04 |        |        | 20      | 1,6     | 50     | 4         | ☑                  |   |   |
| 2JJRB-018-060-S04 |        |        | 1,8     | R0,9    | 6      | 1,8       | 50                 | 4 | ☑ |
| 2JJRB-018-080-S04 | 8      | 1,8    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-018-120-S04 | 12     | 1,8    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-018-160-S04 | 16     | 1,8    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-018-200-S04 | 20     | 1,8    |         |         | 50     | 4         | ☑                  |   |   |
| 2JJRB-020-040-S04 | 2      | R1     |         |         | 4      | 2         | 45                 | 4 | ☑ |
| 2JJRB-020-040-S06 |        |        | 4       | 2       | 50     | 6         | ☑                  |   |   |
| 2JJRB-020-060-S04 |        |        | 6       | 2       | 45     | 4         | ☑                  |   |   |
| 2JJRB-020-060-S06 |        |        | 6       | 2       | 50     | 6         | ☑                  |   |   |
| 2JJRB-020-080-S04 |        |        | 8       | 2       | 45     | 4         | ☑                  |   |   |
| 2JJRB-020-080-S06 |        |        | 8       | 2       | 50     | 6         | ☑                  |   |   |
| 2JJRB-020-100-S04 |        |        | 10      | 2       | 50     | 4         | ☑                  |   |   |
| 2JJRB-020-100-S06 |        |        | 10      | 2       | 50     | 6         | ☑                  |   |   |
| 2JJRB-020-120-S04 |        |        | 12      | 2       | 50     | 4         | ☑                  |   |   |
| 2JJRB-020-120-S06 |        |        | 12      | 2       | 50     | 6         | ☑                  |   |   |
| 2JJRB-020-140-S04 |        |        | 14      | 2       | 50     | 4         | ☑                  |   |   |
| 2JJRB-020-140-S06 |        |        | 14      | 2       | 50     | 6         | ☑                  |   |   |
| 2JJRB-020-160-S04 |        |        | 16      | 2       | 50     | 4         | ☑                  |   |   |
| 2JJRB-020-160-S06 |        |        | 16      | 2       | 60     | 6         | ☑                  |   |   |
| 2JJRB-020-180-S04 |        |        | 18      | 2       | 50     | 4         | ☑                  |   |   |
| 2JJRB-020-180-S06 |        |        | 18      | 2       | 60     | 6         | ☑                  |   |   |
| 2JJRB-020-200-S04 |        |        | 20      | 2       | 50     | 4         | ☑                  |   |   |
| 2JJRB-020-200-S06 |        |        | 20      | 2       | 60     | 6         | ☑                  |   |   |
| 2JJRB-020-220-S04 |        |        | 22      | 2       | 60     | 4         | ☑                  |   |   |
| 2JJRB-020-250-S04 |        |        | 25      | 2       | 60     | 4         | ☑                  |   |   |
| 2JJRB-020-300-S04 |        |        | 30      | 2       | 60     | 4         | ☑                  |   |   |
| 2JJRB-025-080-S04 |        |        | 2,5     | R1,25   | 8      | 2,5       | 45                 | 4 | ☑ |

# 2JJRB

## 2-břité KULOVÉ frézy pro žebrování pro kalené oceli do HRC 68

NOVINKA

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm)                              | d h5 (mm) | Standardní položka                  |   |                                     |
|-------------------|--------|--------|---------|---------|-------------------------------------|-----------|-------------------------------------|---|-------------------------------------|
| 2JJRB-025-080-S06 | 2,5    | R1,25  | 8       | 2,5     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-025-100-S04 |        |        | 10      | 2,5     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-025-100-S06 |        |        | 10      | 2,5     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-025-120-S04 |        |        | 12      | 2,5     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-025-120-S06 |        |        | 12      | 2,5     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-025-160-S04 |        |        | 16      | 2,5     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-025-160-S06 |        |        | 16      | 2,5     | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-025-200-S04 |        |        | 20      | 2,5     | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-025-200-S06 |        |        | 20      | 2,5     | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-025-250-S04 |        |        | 25      | 2,5     | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-025-300-S04 |        |        | 30      | 2,5     | 70                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-030-060-S06 |        |        | 3       | R1,5    | 6                                   | 3         | 50                                  | 6 | <input checked="" type="checkbox"/> |
| 2JJRB-030-080-S06 |        |        |         |         | 8                                   | 3         | 50                                  | 6 | <input checked="" type="checkbox"/> |
| 2JJRB-030-100-S06 | 10     | 3      |         |         | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-030-120-S06 | 12     | 3      |         |         | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-030-160-S06 | 16     | 3      |         |         | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-030-200-S06 | 20     | 3      |         |         | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-030-250-S06 | 25     | 3      |         |         | 65                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-030-300-S06 | 30     | 3      |         |         | 70                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-030-350-S06 | 35     | 3      |         |         | 75                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-030-400-S06 | 40     | 3      |         |         | 80                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-030-450-S06 | 45     | 3      | 90      | 6       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2JJRB-030-500-S06 | 50     | 4      | 100     | 6       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2JJRB-035-100-S06 | 3,5    | R1,75  | 10      | 3,5     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-035-150-S06 |        |        | 15      | 3,5     | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-035-200-S06 |        |        | 20      | 3,5     | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-035-250-S06 |        |        | 25      | 3,5     | 65                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-035-300-S06 |        |        | 30      | 3,5     | 70                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-035-350-S06 |        |        | 35      | 3,5     | 75                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-035-400-S06 |        |        | 40      | 3,5     | 80                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-040-080-S06 | 4      | R2     | 8       | 4       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-040-100-S06 |        |        | 10      | 4       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-040-120-S06 |        |        | 12      | 4       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-040-160-S06 |        |        | 16      | 4       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-040-200-S06 |        |        | 20      | 4       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-040-250-S06 |        |        | 25      | 4       | 65                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-040-300-S06 |        |        | 30      | 4       | 70                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-040-350-S06 |        |        | 35      | 4       | 75                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-040-400-S06 |        |        | 40      | 4       | 80                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-040-450-S06 |        |        | 45      | 4       | 90                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-040-500-S06 | 50     | 4      | 100     | 6       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2JJRB-050-160-S06 | 5      | R2,5   | 16      | 6       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-050-200-S06 |        |        | 20      | 6       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-050-250-S06 |        |        | 25      | 6       | 70                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-050-300-S06 |        |        | 30      | 6       | 75                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-050-400-S06 |        |        | 40      | 6       | 80                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-050-450-S06 |        |        | 45      | 6       | 90                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-050-500-S06 | 50     | 6      | 100     | 6       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2JJRB-060-150-S06 | 6      | R3     | 15      | 10      | 55                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-060-300-100 |        |        | 30      | 10      | 100                                 | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2JJRB-060-500-120 |        |        | 50      | 10      | 120                                 | 6         | <input checked="" type="checkbox"/> |   |                                     |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|-------------------|--------|--------|---------|---------|--------|-----------|-------------------------------------|
| 2JJRB-080-250-060 | 8      | R4     | 25      | 12      | 60     | 8         | <input checked="" type="checkbox"/> |
| 2JJRB-080-300-100 |        |        | 30      | 12      | 100    | 8         | <input checked="" type="checkbox"/> |
| 2JJRB-080-600-120 |        |        | 60      | 12      | 120    | 8         | <input checked="" type="checkbox"/> |
| 2JJRB-100-300-070 | 10     | R5     | 30      | 16      | 70     | 10        | <input checked="" type="checkbox"/> |
| 2JJRB-100-450-100 |        |        | 45      | 16      | 100    | 10        | <input checked="" type="checkbox"/> |
| 2JJRB-100-600-130 | 12     | R6     | 60      | 16      | 130    | 10        | <input checked="" type="checkbox"/> |
| 2JJRB-120-300-075 |        |        | 30      | 18      | 75     | 12        | <input checked="" type="checkbox"/> |
| 2JJRB-120-500-110 |        |        | 50      | 18      | 110    | 12        | <input checked="" type="checkbox"/> |
| 2JJRB-120-600-130 |        |        | 60      | 18      | 130    | 12        | <input checked="" type="checkbox"/> |

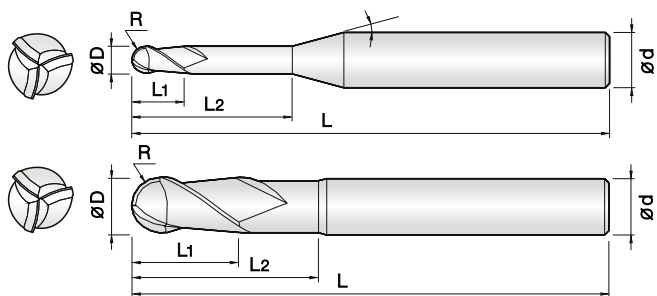
JJ

SH

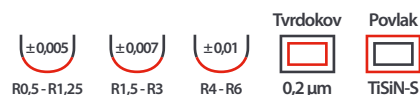
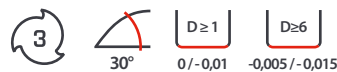
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SUS

# 3JJRB 3-břité KULOVÉ frézy pro žebrování pro kalené oceli do HRC 68



- Určeno pro kalené oceli (52 - 68 HRC)
- Vysoká odolnost proti opotřebení díky novému PVD povlaku s vysokým obsahem Si
- Velmi přesné tolerance řezných hran
- Široký sortiment vyložení pro optimální výběr nástroje
- Vysoká kvalita obroběného povrchu
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



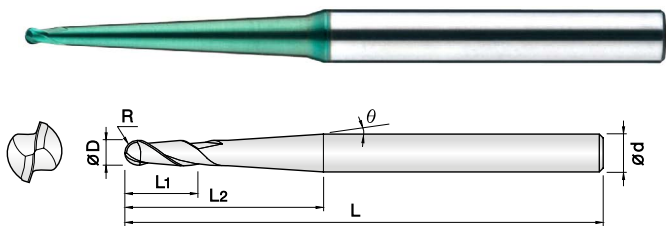
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| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 3JJRB-010-040-S04 | 1      | R0,5   | 4       | 1,2     | 50     | 4         | ☑                  |
| 3JJRB-010-060-S04 |        |        | 6       | 1,2     | 50     | 4         | ☑                  |
| 3JJRB-010-080-S04 |        |        | 8       | 1,2     | 50     | 4         | ☑                  |
| 3JJRB-010-100-S04 |        |        | 10      | 1,2     | 50     | 4         | ☑                  |
| 3JJRB-010-120-S04 |        |        | 12      | 1,2     | 50     | 4         | ☑                  |
| 3JJRB-010-160-S04 |        |        | 16      | 1,2     | 50     | 4         | ☑                  |
| 3JJRB-015-060-S04 | 1,5    | R0,75  | 6       | 1,8     | 50     | 4         | ☑                  |
| 3JJRB-015-080-S04 |        |        | 8       | 1,8     | 50     | 4         | ☑                  |
| 3JJRB-015-100-S04 |        |        | 10      | 1,8     | 50     | 4         | ☑                  |
| 3JJRB-015-120-S04 |        |        | 12      | 1,8     | 50     | 4         | ☑                  |
| 3JJRB-015-160-S04 |        |        | 16      | 1,8     | 50     | 4         | ☑                  |
| 3JJRB-015-200-S04 |        |        | 20      | 1,8     | 60     | 4         | ☑                  |
| 3JJRB-020-080-S04 | 2      | R1     | 8       | 2,4     | 50     | 4         | ☑                  |
| 3JJRB-020-100-S04 |        |        | 10      | 2,4     | 50     | 4         | ☑                  |
| 3JJRB-020-120-S04 |        |        | 12      | 2,4     | 50     | 4         | ☑                  |
| 3JJRB-020-160-S04 |        |        | 16      | 2,4     | 50     | 4         | ☑                  |
| 3JJRB-020-200-S04 |        |        | 20      | 2,4     | 60     | 4         | ☑                  |
| 3JJRB-020-250-S04 |        |        | 25      | 2,4     | 70     | 4         | ☑                  |
| 3JJRB-025-080-S04 | 2,5    | R1,25  | 8       | 3       | 50     | 4         | ☑                  |
| 3JJRB-025-100-S04 |        |        | 10      | 3       | 50     | 4         | ☑                  |
| 3JJRB-025-120-S04 |        |        | 12      | 3       | 50     | 4         | ☑                  |
| 3JJRB-025-160-S04 |        |        | 16      | 3       | 50     | 4         | ☑                  |
| 3JJRB-025-200-S04 |        |        | 20      | 3       | 60     | 4         | ☑                  |
| 3JJRB-025-250-S04 |        |        | 25      | 3       | 70     | 4         | ☑                  |
| 3JJRB-030-120-S06 | 3      | R1,5   | 12      | 3,6     | 60     | 6         | ☑                  |
| 3JJRB-030-160-S06 |        |        | 16      | 3,6     | 60     | 6         | ☑                  |
| 3JJRB-030-200-S06 |        |        | 20      | 3,6     | 65     | 6         | ☑                  |
| 3JJRB-030-250-S06 |        |        | 25      | 3,6     | 70     | 6         | ☑                  |
| 3JJRB-030-300-S06 |        |        | 30      | 3,6     | 75     | 6         | ☑                  |
| 3JJRB-030-400-S06 |        |        | 40      | 3,6     | 90     | 6         | ☑                  |
| 3JJRB-030-500-S06 | 50     | 3,6    | 100     | 6       | ☑      |           |                    |
| 3JJRB-040-160-S06 | 4      | R2     | 16      | 4,8     | 60     | 6         | ☑                  |
| 3JJRB-040-200-S06 |        |        | 20      | 4,8     | 65     | 6         | ☑                  |
| 3JJRB-040-250-S06 |        |        | 25      | 4,8     | 70     | 6         | ☑                  |
| 3JJRB-040-300-S06 |        |        | 30      | 4,8     | 75     | 6         | ☑                  |
| 3JJRB-040-400-S06 |        |        | 40      | 4,8     | 90     | 6         | ☑                  |
| 3JJRB-040-500-S06 |        |        | 50      | 4,8     | 100    | 6         | ☑                  |
| 3JJRB-040-600-S06 | 60     | 4,8    | 110     | 6       | ☑      |           |                    |

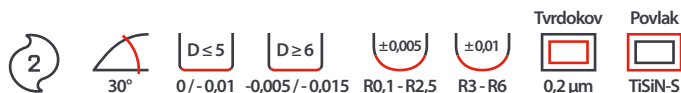
| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 3JJRB-050-300-S06 | 5      | R2,5   | 30      | 6       | 75     | 6         | ☑                  |
| 3JJRB-050-400-S06 |        |        | 40      | 6       | 90     | 6         | ☑                  |
| 3JJRB-050-500-S06 |        |        | 50      | 6       | 100    | 6         | ☑                  |
| 3JJRB-050-600-S06 |        |        | 60      | 6       | 110    | 6         | ☑                  |
| 3JJRB-060-200-060 | 6      | R3     | 20      | 9       | 60     | 6         | ☑                  |
| 3JJRB-060-300-090 |        |        | 30      | 9       | 90     | 6         | ☑                  |
| 3JJRB-080-250-060 | 8      | R4     | 25      | 12      | 60     | 8         | ☑                  |
| 3JJRB-080-400-100 |        |        | 40      | 12      | 100    | 8         | ☑                  |
| 3JJRB-100-300-070 | 10     | R5     | 30      | 15      | 70     | 10        | ☑                  |
| 3JJRB-100-500-110 |        |        | 50      | 15      | 110    | 10        | ☑                  |
| 3JJRB-120-350-075 | 12     | R6     | 35      | 18      | 75     | 12        | ☑                  |
| 3JJRB-120-600-110 |        |        | 60      | 18      | 110    | 12        | ☑                  |

# 2JJTB

## 2-břité KULOVÉ frézy s kuželovým odlehčením pro žebrování pro kalené oceli do HRC 68



- Určeno pro kalené oceli (52 - 68 HRC)
- Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- Velmi přesné tolerance rezných hran
- Široký sortiment vyložení a úhlů pro optimální výběr nástroje
- Vysoká tuhost díky kuželovému odlehčení
- Vynikající výkon při vysokých rezných rychlostech díky 0,2 μm tvrdokovu



NOVINKA

| Objednáací číslo  | D (mm) | R (mm) | Úhel θ | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |    |   |
|-------------------|--------|--------|--------|---------|---------|--------|-----------|--------------------|----|---|
| 2JJTB-002-003-015 | 0,2    | R0,1   | 0°30'  | 1,5     | 0,2     | 40     | 4         | ☑                  |    |   |
| 2JJTB-002-003-020 |        |        |        | 2       | 0,2     | 40     | 4         | ☑                  |    |   |
| 2JJTB-002-010-015 |        |        |        | 1°      | 1,5     | 0,2    | 40        | 4                  | ☑  |   |
| 2JJTB-002-010-020 |        |        |        |         | 2       | 0,2    | 40        | 4                  | ☑  |   |
| 2JJTB-002-010-025 |        |        | 2,5    | 0,2     | 40      | 4      | ☑         |                    |    |   |
| 2JJTB-002-013-015 |        |        | 1°30'  | 1,5     | 0,2     | 40     | 4         | ☑                  |    |   |
| 2JJTB-002-013-020 |        |        |        | 2       | 0,2     | 40     | 4         | ☑                  |    |   |
| 2JJTB-002-013-025 |        |        |        | 2,5     | 0,2     | 40     | 4         | ☑                  |    |   |
| 2JJTB-002-020-015 |        |        |        | 2°      | 1,5     | 0,2    | 40        | 4                  | ☑  |   |
| 2JJTB-002-020-020 |        |        | 2      |         | 0,2     | 40     | 4         | ☑                  |    |   |
| 2JJTB-002-020-025 |        |        | 2,5    | 0,2     | 40      | 4      | ☑         |                    |    |   |
| 2JJTB-002-030-015 |        |        | 3°     | 1,5     | 0,2     | 40     | 4         | ☑                  |    |   |
| 2JJTB-002-030-020 |        |        |        | 2       | 0,2     | 40     | 4         | ☑                  |    |   |
| 2JJTB-002-030-025 |        |        |        | 2,5     | 0,2     | 40     | 4         | ☑                  |    |   |
| 2JJTB-002-050-020 |        |        |        | 2       | 0,2     | 40     | 4         | ☑                  |    |   |
| 2JJTB-003-003-030 |        |        | 0,3    | R0,15   | 0°30'   | 3      | 0,3       | 40                 | 4  | ☑ |
| 2JJTB-003-010-020 |        |        |        |         |         | 1°     | 2         | 0,3                | 40 | 4 |
| 2JJTB-003-010-030 |        |        |        |         | 3       |        | 0,3       | 40                 | 4  | ☑ |
| 2JJTB-003-010-040 |        |        |        |         | 4       |        | 0,3       | 40                 | 4  | ☑ |
| 2JJTB-003-010-050 |        |        |        |         | 5       |        | 0,3       | 40                 | 4  | ☑ |
| 2JJTB-003-013-020 | 1°30'  | 2      |        |         | 0,3     | 40     | 4         | ☑                  |    |   |
| 2JJTB-003-013-030 |        | 3      |        |         | 0,3     | 40     | 4         | ☑                  |    |   |
| 2JJTB-003-013-040 |        | 4      |        |         | 0,3     | 40     | 4         | ☑                  |    |   |
| 2JJTB-003-013-050 |        | 5      |        |         | 0,3     | 40     | 4         | ☑                  |    |   |
| 2JJTB-003-020-020 | 2°     | 2      |        |         | 0,3     | 40     | 4         | ☑                  |    |   |
| 2JJTB-003-020-030 |        | 3      |        |         | 0,3     | 40     | 4         | ☑                  |    |   |
| 2JJTB-003-020-040 |        | 4      |        |         | 0,3     | 40     | 4         | ☑                  |    |   |
| 2JJTB-003-020-050 |        | 5      |        |         | 0,3     | 40     | 4         | ☑                  |    |   |
| 2JJTB-003-030-020 | 3°     | 2      |        |         | 0,3     | 40     | 4         | ☑                  |    |   |
| 2JJTB-003-030-030 |        | 3      |        |         | 0,3     | 40     | 4         | ☑                  |    |   |
| 2JJTB-003-030-040 |        | 4      |        |         | 0,3     | 40     | 4         | ☑                  |    |   |
| 2JJTB-003-030-050 |        | 5      |        |         | 0,3     | 40     | 4         | ☑                  |    |   |
| 2JJTB-003-050-050 | 5°     | 5      |        |         | 0,3     | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-003-020 | 0,4    | R0,2   |        |         | 0°30'   | 2      | 0,4       | 40                 | 4  | ☑ |
| 2JJTB-004-003-030 |        |        |        |         |         | 3      | 0,4       | 40                 | 4  | ☑ |
| 2JJTB-004-003-040 |        |        | 4      | 0,4     |         | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-003-050 |        |        | 5      | 0,4     |         | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-003-060 |        |        | 6      | 0,4     |         | 40     | 4         | ☑                  |    |   |

| Objednáací číslo  | D (mm) | R (mm) | Úhel θ | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |    |   |
|-------------------|--------|--------|--------|---------|---------|--------|-----------|--------------------|----|---|
| 2JJTB-004-010-020 | 0,4    | R0,2   | 1°     | 2       | 0,4     | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-010-030 |        |        |        | 3       | 0,4     | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-010-040 |        |        |        | 4       | 0,4     | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-010-050 |        |        |        | 5       | 0,4     | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-010-060 |        |        | 6      | 0,4     | 40      | 4      | ☑         |                    |    |   |
| 2JJTB-004-013-020 |        |        | 1°30'  | 2       | 0,4     | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-013-030 |        |        |        | 3       | 0,4     | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-013-040 |        |        |        | 4       | 0,4     | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-013-050 |        |        |        | 5       | 0,4     | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-013-060 |        |        | 6      | 0,4     | 40      | 4      | ☑         |                    |    |   |
| 2JJTB-004-020-020 |        |        | 2°     | 2       | 0,4     | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-020-030 |        |        |        | 3       | 0,4     | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-020-040 |        |        |        | 4       | 0,4     | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-020-050 |        |        |        | 5       | 0,4     | 40     | 4         | ☑                  |    |   |
| 2JJTB-004-020-060 |        |        | 6      | 0,4     | 40      | 4      | ☑         |                    |    |   |
| 2JJTB-005-003-040 |        |        | 0,5    | R0,25   | 0°30'   | 4      | 0,5       | 45                 | 4  | ☑ |
| 2JJTB-005-003-060 |        |        |        |         |         | 1°     | 6         | 0,5                | 45 | 4 |
| 2JJTB-005-010-040 |        |        |        |         | 4       |        | 0,5       | 45                 | 4  | ☑ |
| 2JJTB-005-010-060 |        |        |        |         | 6       |        | 0,5       | 45                 | 4  | ☑ |
| 2JJTB-005-010-080 |        |        |        |         | 8       |        | 0,5       | 45                 | 4  | ☑ |
| 2JJTB-005-010-100 | 10     | 0,5    |        |         | 45      | 4      | ☑         |                    |    |   |
| 2JJTB-005-013-040 | 1°30'  | 4      |        |         | 0,5     | 45     | 4         | ☑                  |    |   |
| 2JJTB-005-013-060 |        | 6      |        |         | 0,5     | 45     | 4         | ☑                  |    |   |
| 2JJTB-005-013-080 |        | 8      |        |         | 0,5     | 45     | 4         | ☑                  |    |   |
| 2JJTB-005-013-100 |        | 10     |        |         | 0,5     | 45     | 4         | ☑                  |    |   |
| 2JJTB-005-020-040 | 2°     | 4      |        |         | 0,5     | 45     | 4         | ☑                  |    |   |
| 2JJTB-005-020-060 |        | 6      |        |         | 0,5     | 45     | 4         | ☑                  |    |   |
| 2JJTB-005-020-080 |        | 8      |        |         | 0,5     | 45     | 4         | ☑                  |    |   |
| 2JJTB-005-020-100 |        | 10     |        |         | 0,5     | 45     | 4         | ☑                  |    |   |
| 2JJTB-005-030-080 | 3°     | 8      |        |         | 0,5     | 45     | 4         | ☑                  |    |   |
| 2JJTB-005-030-120 |        | 12     |        |         | 0,5     | 50     | 4         | ☑                  |    |   |
| 2JJTB-005-030-200 |        | 20     |        |         | 0,5     | 60     | 4         | ☑                  |    |   |
| 2JJTB-006-003-040 |        | 0,6    |        |         | R0,3    | 0°30'  | 4         | 0,6                | 45 | 4 |
| 2JJTB-006-003-060 | 6      |        |        |         |         |        | 0,6       | 45                 | 4  | ☑ |
| 2JJTB-006-003-080 | 1°     |        |        |         |         | 8      | 0,6       | 45                 | 4  | ☑ |
| 2JJTB-006-010-040 |        |        | 4      | 0,6     |         | 45     | 4         | ☑                  |    |   |
| 2JJTB-006-010-060 |        |        | 6      | 0,6     |         | 45     | 4         | ☑                  |    |   |
| 2JJTB-006-010-080 |        |        | 8      | 0,6     |         | 45     | 4         | ☑                  |    |   |



| Objednáací číslo  | D (mm) | R (mm) | Úhel $\theta$ | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |     |     |    |   |   |
|-------------------|--------|--------|---------------|---------|---------|--------|-----------|--------------------|-----|-----|----|---|---|
| 2JJTB-006-010-100 | 0,6    | R0,3   | 1°            | 10      | 0,6     | 45     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-006-010-120 |        |        |               | 12      | 0,6     | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-006-010-150 |        |        |               | 15      | 0,6     | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-006-010-200 |        |        |               | 20      | 0,6     | 60     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-006-013-040 |        |        | 0,6           | R0,3    | 1°30'   | 4      | 0,6       | 45                 | 4   | ☑   |    |   |   |
| 2JJTB-006-013-060 |        |        |               |         |         | 6      | 0,6       | 45                 | 4   | ☑   |    |   |   |
| 2JJTB-006-013-080 |        |        |               |         |         | 8      | 0,6       | 45                 | 4   | ☑   |    |   |   |
| 2JJTB-006-013-100 |        |        |               |         |         | 10     | 0,6       | 45                 | 4   | ☑   |    |   |   |
| 2JJTB-006-013-120 |        |        |               |         | 12      | 0,6    | 50        | 4                  | ☑   |     |    |   |   |
| 2JJTB-006-013-150 |        |        |               |         | 15      | 0,6    | 50        | 4                  | ☑   |     |    |   |   |
| 2JJTB-006-013-200 |        |        |               |         | 20      | 0,6    | 60        | 4                  | ☑   |     |    |   |   |
| 2JJTB-006-020-060 |        |        |               |         | 2°      | 2°     | 2°        | 6                  | 0,6 | 45  | 4  | ☑ |   |
| 2JJTB-006-020-080 |        |        |               |         |         |        |           | 8                  | 0,6 | 45  | 4  | ☑ |   |
| 2JJTB-006-020-100 |        |        |               |         |         |        |           | 10                 | 0,6 | 45  | 4  | ☑ |   |
| 2JJTB-006-020-150 |        |        |               |         |         |        |           | 15                 | 0,6 | 50  | 4  | ☑ |   |
| 2JJTB-006-020-200 |        |        |               |         | 20      | 0,6    | 60        | 4                  | ☑   |     |    |   |   |
| 2JJTB-006-030-130 |        |        | 3°            | 3°      | 3°      | 13     | 0,6       | 50                 | 4   | ☑   |    |   |   |
| 2JJTB-006-030-200 |        |        |               |         |         | 20     | 0,6       | 60                 | 4   | ☑   |    |   |   |
| 2JJTB-008-003-040 |        |        |               |         |         | 0,8    | R0,4      | 0°30'              | 4   | 0,8 | 45 | 4 | ☑ |
| 2JJTB-008-003-060 |        |        |               |         |         |        |           |                    | 6   | 0,8 | 45 | 4 | ☑ |
| 2JJTB-008-003-080 | 8      | 0,8    | 45            | 4       | ☑       |        |           |                    |     |     |    |   |   |
| 2JJTB-008-003-100 | 10     | 0,8    | 45            | 4       | ☑       |        |           |                    |     |     |    |   |   |
| 2JJTB-008-003-120 | 12     | 0,8    | 50            | 4       | ☑       |        |           |                    |     |     |    |   |   |
| 2JJTB-008-003-150 | 15     | 0,8    | 50            | 4       | ☑       |        |           |                    |     |     |    |   |   |
| 2JJTB-008-003-200 | 20     | 0,8    | 60            | 4       | ☑       |        |           |                    |     |     |    |   |   |
| 2JJTB-008-010-040 | 0,8    | R0,4   | 1°            | 4       | 0,8     |        |           | 45                 | 4   | ☑   |    |   |   |
| 2JJTB-008-010-060 |        |        |               | 6       | 0,8     |        |           | 45                 | 4   | ☑   |    |   |   |
| 2JJTB-008-010-080 |        |        |               | 8       | 0,8     |        |           | 45                 | 4   | ☑   |    |   |   |
| 2JJTB-008-010-100 |        |        |               | 10      | 0,8     |        |           | 45                 | 4   | ☑   |    |   |   |
| 2JJTB-008-010-120 |        |        |               | 12      | 0,8     |        |           | 50                 | 4   | ☑   |    |   |   |
| 2JJTB-008-010-160 |        |        |               | 16      | 0,8     | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-008-010-200 |        |        | 20            | 0,8     | 60      | 4      | ☑         |                    |     |     |    |   |   |
| 2JJTB-008-013-040 |        |        | 0,8           | R0,4    | 1°30'   | 4      | 0,8       | 45                 | 4   | ☑   |    |   |   |
| 2JJTB-008-013-060 |        |        |               |         |         | 6      | 0,8       | 45                 | 4   | ☑   |    |   |   |
| 2JJTB-008-013-080 |        |        |               |         |         | 8      | 0,8       | 45                 | 4   | ☑   |    |   |   |
| 2JJTB-008-013-100 |        |        |               |         |         | 10     | 0,8       | 45                 | 4   | ☑   |    |   |   |
| 2JJTB-008-013-120 |        |        |               |         |         | 12     | 0,8       | 50                 | 4   | ☑   |    |   |   |
| 2JJTB-008-013-160 | 16     | 0,8    |               |         |         | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-008-013-200 | 20     | 0,8    |               |         | 60      | 4      | ☑         |                    |     |     |    |   |   |
| 2JJTB-008-020-080 | 2°     | 2°     |               |         | 2°      | 8      | 0,8       | 50                 | 4   | ☑   |    |   |   |
| 2JJTB-008-020-100 |        |        |               |         |         | 10     | 0,8       | 50                 | 4   | ☑   |    |   |   |
| 2JJTB-008-020-120 |        |        |               |         |         | 12     | 0,8       | 50                 | 4   | ☑   |    |   |   |
| 2JJTB-008-020-160 |        |        |               |         |         | 16     | 0,8       | 50                 | 4   | ☑   |    |   |   |
| 2JJTB-008-020-200 |        |        |               |         |         | 20     | 0,8       | 60                 | 4   | ☑   |    |   |   |
| 2JJTB-008-030-080 |        |        | 3°            | 3°      |         | 3°     | 8         | 0,8                | 50  | 4   | ☑  |   |   |
| 2JJTB-008-030-120 | 12     | 0,8    |               |         | 50      |        | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-008-030-160 | 16     | 0,8    |               |         | 50      |        | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-008-030-200 | 20     | 0,8    |               |         | 60      |        | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-010-003-060 | 1      | R0,5   | 0°30'         | 6       | 1       | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-010-003-080 |        |        |               | 8       | 1       | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-010-003-100 |        |        |               | 10      | 1       | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-010-003-150 |        |        |               | 15      | 1       | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-010-003-150 |        |        |               | 15      | 1       | 50     | 4         | ☑                  |     |     |    |   |   |

| Objednáací číslo  | D (mm) | R (mm) | Úhel $\theta$ | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |     |     |    |   |   |
|-------------------|--------|--------|---------------|---------|---------|--------|-----------|--------------------|-----|-----|----|---|---|
| 2JJTB-010-003-200 | 1      | R0,5   | 0°30'         | 20      | 1       | 60     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-010-003-250 |        |        |               | 25      | 1       | 60     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-010-003-300 |        |        |               | 30      | 1       | 70     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-010-010-060 |        |        |               | 6       | 1       | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-010-010-080 |        |        | 8             | 1       | 50      | 4      | ☑         |                    |     |     |    |   |   |
| 2JJTB-010-010-100 |        |        | 10            | 1       | 50      | 4      | ☑         |                    |     |     |    |   |   |
| 2JJTB-010-010-150 |        |        | 15            | 1       | 50      | 4      | ☑         |                    |     |     |    |   |   |
| 2JJTB-010-010-200 |        |        | 20            | 1       | 50      | 4      | ☑         |                    |     |     |    |   |   |
| 2JJTB-010-010-250 |        |        | 25            | 1       | 60      | 4      | ☑         |                    |     |     |    |   |   |
| 2JJTB-010-010-300 |        |        | 30            | 1       | 70      | 4      | ☑         |                    |     |     |    |   |   |
| 2JJTB-010-010-350 |        |        | 35            | 1       | 75      | 4      | ☑         |                    |     |     |    |   |   |
| 2JJTB-010-013-060 |        |        | 1°30'         | 1°30'   | 1°30'   | 6      | 1         | 50                 | 4   | ☑   |    |   |   |
| 2JJTB-010-013-080 |        |        |               |         |         | 8      | 1         | 50                 | 4   | ☑   |    |   |   |
| 2JJTB-010-013-100 |        |        |               |         |         | 10     | 1         | 50                 | 4   | ☑   |    |   |   |
| 2JJTB-010-013-150 |        |        |               |         |         | 15     | 1         | 50                 | 4   | ☑   |    |   |   |
| 2JJTB-010-013-200 |        |        |               |         |         | 20     | 1         | 50                 | 4   | ☑   |    |   |   |
| 2JJTB-010-013-250 |        |        |               |         |         | 25     | 1         | 60                 | 4   | ☑   |    |   |   |
| 2JJTB-010-013-300 |        |        |               |         |         | 30     | 1         | 70                 | 4   | ☑   |    |   |   |
| 2JJTB-010-013-350 |        |        |               |         |         | 35     | 1         | 80                 | 4   | ☑   |    |   |   |
| 2JJTB-010-013-400 |        |        |               |         |         | 40     | 1         | 80                 | 4   | ☑   |    |   |   |
| 2JJTB-010-020-150 |        |        |               |         |         | 2°     | 2°        | 2°                 | 15  | 1   | 50 | 4 | ☑ |
| 2JJTB-010-020-200 |        |        |               |         |         |        |           |                    | 20  | 1   | 50 | 4 | ☑ |
| 2JJTB-010-020-250 |        |        |               |         |         |        |           |                    | 25  | 1   | 60 | 4 | ☑ |
| 2JJTB-010-020-300 |        |        | 30            | 1       | 70      |        |           |                    | 4   | ☑   |    |   |   |
| 2JJTB-010-020-400 |        |        | 40            | 1       | 80      |        |           |                    | 4   | ☑   |    |   |   |
| 2JJTB-010-030-200 |        |        | 3°            | 3°      | 3°      |        |           |                    | 20  | 1   | 50 | 4 | ☑ |
| 2JJTB-010-030-300 |        |        |               |         |         | 30     | 1         | 70                 | 6   | ☑   |    |   |   |
| 2JJTB-010-030-400 |        |        |               |         |         | 40     | 1         | 80                 | 6   | ☑   |    |   |   |
| 2JJTB-010-030-500 |        |        |               |         |         | 50     | 1         | 90                 | 6   | ☑   |    |   |   |
| 2JJTB-010-050-230 |        |        | 1,2           | R0,6    | 5°      | 23     | 1         | 60                 | 6   | ☑   |    |   |   |
| 2JJTB-012-003-080 |        |        |               |         |         | 0°30'  | 0°30'     | 8                  | 1,2 | 50  | 4  | ☑ |   |
| 2JJTB-012-003-120 |        |        |               |         |         |        |           | 12                 | 1,2 | 50  | 4  | ☑ |   |
| 2JJTB-012-003-180 |        |        |               |         |         |        |           | 18                 | 1,2 | 50  | 4  | ☑ |   |
| 2JJTB-012-003-240 |        |        |               |         | 24      |        |           | 1,2                | 60  | 4   | ☑  |   |   |
| 2JJTB-012-010-080 |        |        |               |         | 1°      |        |           | 1°                 | 8   | 1,2 | 50 | 4 | ☑ |
| 2JJTB-012-010-120 |        |        |               |         |         |        |           |                    | 12  | 1,2 | 50 | 4 | ☑ |
| 2JJTB-012-010-180 |        |        |               |         |         | 18     | 1,2       |                    | 50  | 4   | ☑  |   |   |
| 2JJTB-012-010-240 |        |        |               |         |         | 24     | 1,2       |                    | 60  | 4   | ☑  |   |   |
| 2JJTB-012-013-080 |        |        |               |         |         | 1°30'  | 1°30'     |                    | 8   | 1,2 | 50 | 4 | ☑ |
| 2JJTB-012-013-120 |        |        |               |         |         |        |           |                    | 12  | 1,2 | 50 | 4 | ☑ |
| 2JJTB-012-013-180 | 18     | 1,2    |               |         | 50      |        |           | 4                  | ☑   |     |    |   |   |
| 2JJTB-012-013-240 | 24     | 1,2    | 60            | 4       | ☑       |        |           |                    |     |     |    |   |   |
| 2JJTB-012-020-080 | 2°     | 2°     | 2°            | 8       | 1,2     | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-012-020-120 |        |        |               | 12      | 1,2     | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-012-020-180 |        |        |               | 18      | 1,2     | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-012-020-240 |        |        |               | 24      | 1,2     | 60     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-015-003-080 | 1,5    | R0,75  | 0°30'         | 8       | 1,5     | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-015-003-100 |        |        |               | 10      | 1,5     | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-015-003-120 |        |        |               | 12      | 1,5     | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-015-003-150 |        |        |               | 15      | 1,5     | 50     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-015-003-200 |        |        |               | 20      | 1,5     | 60     | 4         | ☑                  |     |     |    |   |   |
| 2JJTB-015-003-300 | 30     | 1,5    | 70            | 4       | ☑       |        |           |                    |     |     |    |   |   |



| Objednáací číslo  | D (mm) | R (mm) | Úhel $\theta$ | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |     |    |    |   |
|-------------------|--------|--------|---------------|---------|---------|--------|-----------|--------------------|-----|----|----|---|
| 2JJTB-015-003-400 | 1,5    | R0,75  | 0°30'         | 40      | 1,5     | 80     | 4         | ☑                  |     |    |    |   |
| 2JJTB-015-010-080 |        |        |               | 8       | 1,5     | 50     | 4         | ☑                  |     |    |    |   |
| 2JJTB-015-010-100 |        |        |               | 10      | 1,5     | 50     | 4         | ☑                  |     |    |    |   |
| 2JJTB-015-010-120 |        |        |               | 12      | 1,5     | 50     | 4         | ☑                  |     |    |    |   |
| 2JJTB-015-010-150 |        |        |               | 15      | 1,5     | 50     | 4         | ☑                  |     |    |    |   |
| 2JJTB-015-010-200 |        |        |               | 20      | 1,5     | 60     | 4         | ☑                  |     |    |    |   |
| 2JJTB-015-010-250 |        |        |               | 25      | 1,5     | 60     | 4         | ☑                  |     |    |    |   |
| 2JJTB-015-010-300 |        |        |               | 30      | 1,5     | 70     | 4         | ☑                  |     |    |    |   |
| 2JJTB-015-010-400 |        |        |               | 40      | 1,5     | 80     | 4         | ☑                  |     |    |    |   |
| 2JJTB-015-010-500 |        |        | 50            | 1,5     | 90      | 4      | ☑         |                    |     |    |    |   |
| 2JJTB-015-013-080 |        |        | 1°30'         | R0,75   | 1°30'   | 8      | 1,5       | 50                 | 4   | ☑  |    |   |
| 2JJTB-015-013-100 |        |        |               |         |         | 10     | 1,5       | 50                 | 4   | ☑  |    |   |
| 2JJTB-015-013-120 |        |        |               |         |         | 12     | 1,5       | 50                 | 4   | ☑  |    |   |
| 2JJTB-015-013-150 |        |        |               |         |         | 15     | 1,5       | 50                 | 4   | ☑  |    |   |
| 2JJTB-015-013-200 |        |        |               |         |         | 20     | 1,5       | 60                 | 4   | ☑  |    |   |
| 2JJTB-015-013-250 |        |        |               |         |         | 25     | 1,5       | 60                 | 4   | ☑  |    |   |
| 2JJTB-015-013-300 |        |        |               |         |         | 30     | 1,5       | 70                 | 4   | ☑  |    |   |
| 2JJTB-015-013-400 |        |        |               |         |         | 40     | 1,5       | 80                 | 4   | ☑  |    |   |
| 2JJTB-015-013-500 |        |        |               |         |         | 50     | 1,5       | 90                 | 4   | ☑  |    |   |
| 2JJTB-015-020-100 |        |        |               |         | 2°      | R0,75  | 2°        | 10                 | 1,5 | 50 | 4  | ☑ |
| 2JJTB-015-020-150 |        |        |               |         |         |        |           | 15                 | 1,5 | 50 | 4  | ☑ |
| 2JJTB-015-020-200 |        |        |               |         |         |        |           | 20                 | 1,5 | 60 | 4  | ☑ |
| 2JJTB-015-020-300 |        |        |               |         |         |        |           | 30                 | 1,5 | 70 | 4  | ☑ |
| 2JJTB-015-020-400 |        |        |               |         |         |        |           | 40                 | 1,5 | 80 | 6  | ☑ |
| 2JJTB-015-020-500 |        |        |               |         |         |        |           | 50                 | 1,5 | 90 | 6  | ☑ |
| 2JJTB-015-030-420 |        |        | 3°            | R0,75   | 3°      | 42     | 1,5       | 80                 | 6   | ☑  |    |   |
| 2JJTB-015-050-250 |        |        |               |         |         | 25     | 1,5       | 70                 | 6   | ☑  |    |   |
| 2JJTB-020-003-080 |        |        |               |         |         | 0°30'  | R1        | 0°30'              | 8   | 2  | 50 | 4 |
| 2JJTB-020-003-120 |        |        | 12            | 2       | 50      |        |           |                    | 4   | ☑  |    |   |
| 2JJTB-020-003-160 |        |        | 16            | 2       | 50      |        |           |                    | 4   | ☑  |    |   |
| 2JJTB-020-003-200 | 20     | 2      | 60            | 4       | ☑       |        |           |                    |     |    |    |   |
| 2JJTB-020-003-300 | 30     | 2      | 70            | 4       | ☑       |        |           |                    |     |    |    |   |
| 2JJTB-020-003-400 | 40     | 2      | 80            | 4       | ☑       |        |           |                    |     |    |    |   |
| 2JJTB-020-003-500 | 50     | 2      | 90            | 4       | ☑       |        |           |                    |     |    |    |   |
| 2JJTB-020-010-080 | 1°     | R1     | 1°            | 8       | 2       |        |           |                    | 50  | 4  | ☑  |   |
| 2JJTB-020-010-120 |        |        |               | 12      | 2       |        |           |                    | 50  | 4  | ☑  |   |
| 2JJTB-020-010-160 |        |        |               | 16      | 2       |        |           | 50                 | 4   | ☑  |    |   |
| 2JJTB-020-010-200 |        |        |               | 20      | 2       |        |           | 60                 | 4   | ☑  |    |   |
| 2JJTB-020-010-250 |        |        |               | 25      | 2       |        |           | 60                 | 4   | ☑  |    |   |
| 2JJTB-020-010-300 |        |        |               | 30      | 2       |        |           | 70                 | 4   | ☑  |    |   |
| 2JJTB-020-010-350 |        |        |               | 35      | 2       |        |           | 75                 | 4   | ☑  |    |   |
| 2JJTB-020-010-400 |        |        |               | 40      | 2       |        |           | 80                 | 4   | ☑  |    |   |
| 2JJTB-020-010-500 |        |        |               | 50      | 2       | 90     | 4         | ☑                  |     |    |    |   |
| 2JJTB-020-010-600 |        |        | 60            | 2       | 100     | 6      | ☑         |                    |     |    |    |   |
| 2JJTB-020-013-080 |        |        | 1°30'         | R1      | 1°30'   | 8      | 2         | 50                 | 4   | ☑  |    |   |
| 2JJTB-020-013-120 |        |        |               |         |         | 12     | 2         | 50                 | 4   | ☑  |    |   |
| 2JJTB-020-013-160 |        |        |               |         |         | 16     | 2         | 50                 | 4   | ☑  |    |   |
| 2JJTB-020-013-200 |        |        |               |         |         | 20     | 2         | 60                 | 4   | ☑  |    |   |
| 2JJTB-020-013-250 |        |        |               |         |         | 25     | 2         | 60                 | 4   | ☑  |    |   |
| 2JJTB-020-013-300 | 30     | 2      |               |         |         | 70     | 4         | ☑                  |     |    |    |   |
| 2JJTB-020-013-350 | 35     | 2      |               |         |         | 75     | 6         | ☑                  |     |    |    |   |
| 2JJTB-020-013-400 | 40     | 2      |               |         |         | 80     | 6         | ☑                  |     |    |    |   |
| 2JJTB-020-013-400 | 40     | 2      |               |         |         | 80     | 6         | ☑                  |     |    |    |   |

| Objednáací číslo  | D (mm) | R (mm) | Úhel $\theta$ | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |     |   |    |
|-------------------|--------|--------|---------------|---------|---------|--------|-----------|--------------------|-----|---|----|
| 2JJTB-020-013-500 | 2      | R1     | 1°30'         | 50      | 2       | 90     | 6         | ☑                  |     |   |    |
| 2JJTB-020-013-600 |        |        |               | 60      | 2       | 100    | 6         | ☑                  |     |   |    |
| 2JJTB-020-020-300 |        |        |               | 2°      | R1      | 2°     | 30        | 2                  | 70  | 6 | ☑  |
| 2JJTB-020-020-400 |        |        |               |         |         |        | 40        | 2                  | 80  | 6 | ☑  |
| 2JJTB-020-020-500 |        |        |               |         |         |        | 50        | 2                  | 90  | 6 | ☑  |
| 2JJTB-020-030-300 |        |        | 3°            | R1      | 3°      | 30     | 2         | 70                 | 6   | ☑ |    |
| 2JJTB-020-030-400 |        |        |               |         |         | 40     | 2         | 80                 | 6   | ☑ |    |
| 2JJTB-020-030-500 |        |        |               |         |         | 50     | 2         | 90                 | 6   | ☑ |    |
| 2JJTB-020-030-600 |        |        |               |         |         | 60     | 2         | 100                | 6   | ☑ |    |
| 2JJTB-020-050-250 |        |        |               |         |         | 5°     | R1        | 5°                 | 25  | 2 | 60 |
| 2JJTB-020-050-380 |        |        | 38            | 2       | 80      |        |           |                    | 8   | ☑ |    |
| 2JJTB-030-003-160 |        |        | 3             | R1,5    | 0°30'   | 16     | 3         | 60                 | 6   | ☑ |    |
| 2JJTB-030-003-200 |        |        |               |         |         | 20     | 3         | 65                 | 6   | ☑ |    |
| 2JJTB-030-003-300 |        |        |               |         |         | 30     | 3         | 70                 | 6   | ☑ |    |
| 2JJTB-030-003-400 |        |        |               |         |         | 40     | 3         | 80                 | 6   | ☑ |    |
| 2JJTB-030-003-500 | 50     | 3      |               |         |         | 90     | 6         | ☑                  |     |   |    |
| 2JJTB-030-003-600 | 60     | 3      |               |         |         | 100    | 6         | ☑                  |     |   |    |
| 2JJTB-030-010-160 | 1°     | R1,5   |               |         |         | 1°     | 16        | 3                  | 60  | 6 | ☑  |
| 2JJTB-030-010-200 |        |        |               |         |         |        | 20        | 3                  | 65  | 6 | ☑  |
| 2JJTB-030-010-300 |        |        |               |         |         |        | 30        | 3                  | 70  | 6 | ☑  |
| 2JJTB-030-010-400 |        |        |               |         | 40      |        | 3         | 80                 | 6   | ☑ |    |
| 2JJTB-030-010-500 |        |        |               |         | 50      |        | 3         | 90                 | 6   | ☑ |    |
| 2JJTB-030-010-600 |        |        |               |         | 60      |        | 3         | 100                | 6   | ☑ |    |
| 2JJTB-030-010-700 | 70     | 3      |               |         | 110     | 6      | ☑         |                    |     |   |    |
| 2JJTB-030-013-160 | 1°30'  | R1,5   |               |         | 1°30'   | 16     | 3         | 60                 | 6   | ☑ |    |
| 2JJTB-030-013-200 |        |        |               |         |         | 20     | 3         | 65                 | 6   | ☑ |    |
| 2JJTB-030-013-300 |        |        | 30            | 3       |         | 70     | 6         | ☑                  |     |   |    |
| 2JJTB-030-013-400 |        |        | 40            | 3       |         | 80     | 6         | ☑                  |     |   |    |
| 2JJTB-030-013-500 |        |        | 50            | 3       |         | 90     | 6         | ☑                  |     |   |    |
| 2JJTB-030-013-600 |        |        | 60            | 3       |         | 100    | 6         | ☑                  |     |   |    |
| 2JJTB-030-013-700 |        |        | 70            | 3       |         | 120    | 8         | ☑                  |     |   |    |
| 2JJTB-030-020-160 |        |        | 2°            | R1,5    |         | 2°     | 16        | 3                  | 60  | 6 | ☑  |
| 2JJTB-030-020-200 |        |        |               |         |         |        | 20        | 3                  | 65  | 6 | ☑  |
| 2JJTB-030-020-300 | 30     | 3      |               |         | 70      |        | 6         | ☑                  |     |   |    |
| 2JJTB-030-020-480 | 2°     | R1,5   | 2°            | 48      | 3       | 90     | 6         | ☑                  |     |   |    |
| 2JJTB-030-020-600 |        |        |               | 60      | 3       | 110    | 8         | ☑                  |     |   |    |
| 2JJTB-030-020-700 |        |        |               | 70      | 3       | 120    | 8         | ☑                  |     |   |    |
| 2JJTB-030-030-300 | 3°     | R1,5   | 3°            | 30      | 3       | 70     | 6         | ☑                  |     |   |    |
| 2JJTB-030-030-500 |        |        |               | 50      | 3       | 90     | 8         | ☑                  |     |   |    |
| 2JJTB-030-030-700 |        |        |               | 70      | 3       | 120    | 10        | ☑                  |     |   |    |
| 2JJTB-030-050-330 | 5°     | R1,5   | 5°            | 33      | 3       | 90     | 8         | ☑                  |     |   |    |
| 2JJTB-040-003-600 |        |        |               | 0°30'   | R2      | 0°30'  | 60        | 4                  | 100 | 6 | ☑  |
| 2JJTB-040-003-700 |        |        |               |         |         |        | 70        | 4                  | 110 | 6 | ☑  |
| 2JJTB-040-003-900 | 90     | 4      | 130           |         |         |        | 6         | ☑                  |     |   |    |
| 2JJTB-040-010-500 | 1°     | R2     | 1°            |         |         |        | 50        | 4                  | 90  | 6 | ☑  |
| 2JJTB-040-010-600 |        |        |               |         |         |        | 60        | 4                  | 100 | 6 | ☑  |
| 2JJTB-040-010-700 |        |        |               |         |         |        | 70        | 4                  | 120 | 8 | ☑  |
| 2JJTB-040-010-900 | 1°30'  | R2     | 1°30'         | 90      | 4       | 150    | 8         | ☑                  |     |   |    |
| 2JJTB-040-013-450 |        |        |               | 45      | 4       | 90     | 6         | ☑                  |     |   |    |
| 2JJTB-040-013-600 |        |        |               | 60      | 4       | 110    | 8         | ☑                  |     |   |    |
| 2JJTB-040-013-700 | 3°     | R2     | 3°            | 70      | 4       | 120    | 8         | ☑                  |     |   |    |
| 2JJTB-040-030-250 |        |        |               | 25      | 4       | 70     | 6         | ☑                  |     |   |    |
| 2JJTB-040-030-420 | 42     | 4      | 100           | 8       | ☑       |        |           |                    |     |   |    |

# 2JJTB

## 2-břité KULOVÉ frézy s kuželovým odlehčením pro žebrování pro kalené oceli do HRC 68

NOVINKA

| Objednací číslo    | D (mm) | R (mm) | Úhel $\theta$ | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |                                     |                                     |
|--------------------|--------|--------|---------------|---------|---------|--------|-----------|-------------------------------------|-------------------------------------|-------------------------------------|
| 2JJTB-040-050-290  | 4      | R2     | 5°            | 29      | 4       | 90     | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-050-010-400  | 5      | R2,5   | 1°            | 40      | 5       | 90     | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-050-010-600  |        |        | 1°            | 60      | 5       | 110    | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-050-010-900  |        |        | 1°            | 90      | 5       | 150    | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-050-013-400  |        |        | 1°30'         | 40      | 5       | 90     | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-050-013-600  |        |        |               | 60      | 5       | 110    | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-050-013-900  |        |        |               | 90      | 5       | 150    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-050-030-400  |        |        |               | 3°      | 40      | 5      | 90        | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJTB-060-010-400  |        |        | 6             | R3      | 1°      | 40     | 9         | 90                                  | 8                                   | <input checked="" type="checkbox"/> |
| 2JJTB-060-010-500  | 1°     | 50     |               |         | 9       | 100    | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-060-010-600  | 1°     | 60     |               |         | 9       | 110    | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-060-010-700  | 1°     | 70     |               |         | 9       | 120    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-060-010-800  | 1°     | 80     |               |         | 9       | 130    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-060-010-1000 | 1°     | 100    |               |         | 9       | 150    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-060-013-490  | 1°30'  | 49     |               |         | 9       | 110    | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-060-013-850  | 1°30'  | 85     |               |         | 9       | 150    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-060-020-600  | 2°     | 60     |               |         | 9       | 110    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-060-020-900  | 2°     | 90     |               |         | 9       | 150    | 12        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-060-030-290  | 3°     | 29     |               |         | 9       | 90     | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-060-050-320  | 5°     | 32     |               |         | 9       | 110    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-080-010-500  | 8      | R4     |               |         | 1°      | 50     | 12        | 100                                 | 10                                  | <input checked="" type="checkbox"/> |
| 2JJTB-080-010-600  |        |        |               |         | 1°      | 60     | 12        | 110                                 | 10                                  | <input checked="" type="checkbox"/> |
| 2JJTB-080-010-800  |        |        |               |         | 1°      | 80     | 12        | 130                                 | 12                                  | <input checked="" type="checkbox"/> |
| 2JJTB-080-010-1000 |        |        |               |         | 1°      | 100    | 12        | 150                                 | 12                                  | <input checked="" type="checkbox"/> |
| 2JJTB-080-013-520  |        |        | 1°30'         | 52      | 12      | 110    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-080-013-890  |        |        | 1°30'         | 89      | 12      | 150    | 12        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-080-030-330  |        |        | 3°            | 33      | 12      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-100-010-600  |        |        | 10            | R5      | 1°      | 60     | 18        | 130                                 | 12                                  | <input checked="" type="checkbox"/> |
| 2JJTB-100-010-750  | 1°     | 75     |               |         | 18      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-100-013-540  | 1°30'  | 54     |               |         | 18      | 130    | 12        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-100-030-370  | 3°     | 37     |               |         | 18      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-120-013-850  | 12     | R6     | 1°30'         | 85      | 22      | 160    | 16        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJTB-120-030-630  |        |        | 3°            | 63      | 22      | 130    | 16        | <input checked="" type="checkbox"/> |                                     |                                     |

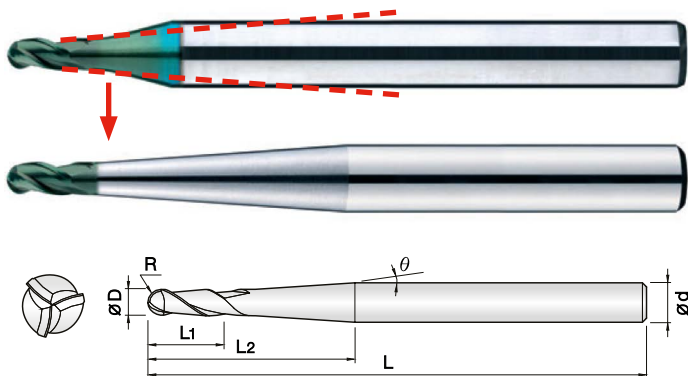


Nahrazuje z předcházejícího katalogu kategorii 2TBE.

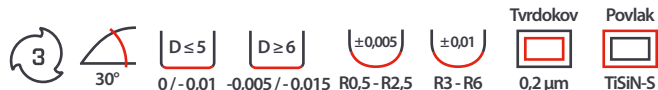


V současné době dochází k výměně skladu z typu 2TBE na 2JJTB, proto po určitou dobu mohou být zaslány oba typy současně.

# 3JJTBS 2-břité KULOVÉ frézy s kuželovým odlehčením pro žebrování pro kalené oceli do HRC 68



- Určeno pro kalené oceli (52 - 68 HRC)
- Vysoká odolnost proti opotřeбенí díky novému PVD povlaku s vysokým obsahem Si
- Velmi přesné tolerance řezných hran
- Rychlá úprava úhlu a délky odlehčení podle Vašich požadavků
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



NOVINKA

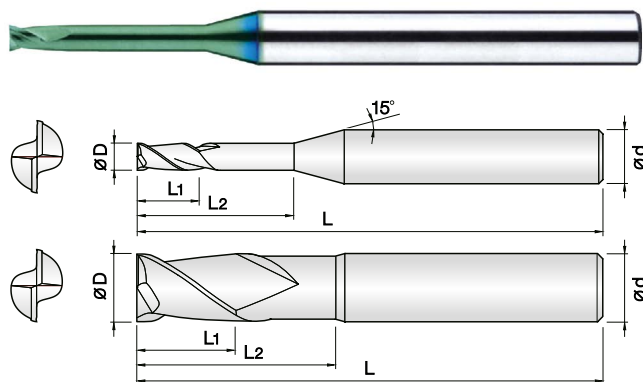
| Objednací číslo    | D (mm) | R (mm) | Úhel θ   | L2 (mm) | L1 (mm) | L (mm)                              | d h5 (mm)                           | Standardní položka                  |
|--------------------|--------|--------|--|---------|---------|-------------------------------------|-------------------------------------|-------------------------------------|
| 3JJTBS-010-060-S04 | 1      | R0,5   | Do objednávky prosím zadejte VÁMI POŽADOVANÝ ÚHEL.<br>Do objednávky prosím zadejte VÁMI POŽADOVANOU DÉLKU ODLEHČENÍ. |         | 1       | 60                                  | 4                                   | <input checked="" type="checkbox"/> |
| 3JJTBS-010-080-S04 |        |        |  |         | 1       | 80                                  | 4                                   | <input checked="" type="checkbox"/> |
| 3JJTBS-010-090-S06 |        |        |  |         | 1       | 90                                  | 6                                   | <input checked="" type="checkbox"/> |
| 3JJTBS-015-060-S04 | 1,5    | R0,75  |  | 1,5     | 60      | 4                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-015-080-S04 |        |        |  | 1,5     | 80      | 4                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-015-090-S06 |        |        |  | 1,5     | 90      | 6                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-020-070-S04 | 2      | R1     |  | 2       | 70      | 4                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-020-090-S04 |        |        |  | 2       | 90      | 4                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-020-090-S06 |        |        |  | 2       | 90      | 6                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-030-080-S06 | 3      | R1,5   |  | 3       | 80      | 6                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-030-100-S06 |        |        |  | 3       | 100     | 6                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-030-110-S08 |        |        |  | 3       | 110     | 8                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-040-080-S06 | 4      | R2     |  | 5       | 80      | 6                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-040-110-S06 |        |        |  | 5       | 110     | 6                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-040-120-S08 |        |        |  | 5       | 120     | 8                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-050-090-S08 | 5      | R2,5   |  | 7       | 90      | 8                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-050-120-S08 |        |        |  | 7       | 120     | 8                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-060-110-S08 |        |        |  | 9       | 110     | 8                                   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3JJTBS-060-150-S10 | 6      | R3     | 9  | 150     | 10      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |
| 3JJTBS-080-120-S10 |        |        | 12   | 120     | 10      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |
| 3JJTBS-080-160-S12 |        |        | 12   | 160     | 12      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |
| 3JJTBS-100-120-S12 | 10     | R5     | 15   | 120     | 12      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |
| 3JJTBS-100-160-S12 |        |        | 15   | 160     | 12      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |
| 3JJTBS-120-160-S16 |        |        | 18   | 160     | 16      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |
| 3JJTBS-120-200-S16 | 12     | R6     | 18   | 200     | 16      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |

**Příklad objednávky:**

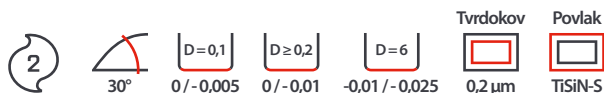
Fréza 3JJTBS-010-060-S04 s úhlem odlehčení 1° a délkou odlehčení 20mm

3JJTBS-010-060-S04 θ=1° L2=20mm

# 2JJRE 2-břité OSTRÉ frézy pro žebrování pro kalené oceli do HRC 65



- ▶ Určeno pro kalené oceli (52 - 65 HRC)
- ▶ Vysoká odolnost proti opotřebení díky novému PVD povlaku s vysokým obsahem Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Široký sortiment vyložení pro optimální výběr nástroje
- ▶ Minimalizace vyštipování díky zesílení řezné hrany
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|---------|--------|-----------|--------------------|
| 2JJRE-001-003-S04 | 0,1    | -       | 0,3     | 40     | 4         | ☑                  |
| 2JJRE-001-005-S04 |        | -       | 0,5     | 40     | 4         | ☑                  |
| 2JJRE-002-005-S04 | 0,2    | 0,5     | 0,2     | 40     | 4         | ☑                  |
| 2JJRE-002-010-S04 |        | 1       | 0,2     | 40     | 4         | ☑                  |
| 2JJRE-002-015-S04 |        | 1,5     | 0,2     | 40     | 4         | ☑                  |
| 2JJRE-002-020-S04 |        | 2       | 0,2     | 40     | 4         | ☑                  |
| 2JJRE-002-025-S04 |        | 2,5     | 0,2     | 40     | 4         | ☑                  |
| 2JJRE-002-030-S04 |        | 3       | 0,2     | 40     | 4         | ☑                  |
| 2JJRE-003-010-S04 | 0,3    | 1       | 0,3     | 40     | 4         | ☑                  |
| 2JJRE-003-015-S04 |        | 1,5     | 0,3     | 40     | 4         | ☑                  |
| 2JJRE-003-020-S04 |        | 2       | 0,3     | 40     | 4         | ☑                  |
| 2JJRE-003-025-S04 |        | 2,5     | 0,3     | 40     | 4         | ☑                  |
| 2JJRE-003-030-S04 |        | 3       | 0,3     | 40     | 4         | ☑                  |
| 2JJRE-003-035-S04 |        | 3,5     | 0,3     | 40     | 4         | ☑                  |
| 2JJRE-003-040-S04 | 4      | 0,3     | 40      | 4      | ☑         |                    |
| 2JJRE-004-010-S04 | 0,4    | 1       | 0,4     | 40     | 4         | ☑                  |
| 2JJRE-004-015-S04 |        | 1,5     | 0,4     | 40     | 4         | ☑                  |
| 2JJRE-004-020-S04 |        | 2       | 0,4     | 40     | 4         | ☑                  |
| 2JJRE-004-025-S04 |        | 2,5     | 0,4     | 40     | 4         | ☑                  |
| 2JJRE-004-030-S04 |        | 3       | 0,4     | 40     | 4         | ☑                  |
| 2JJRE-004-035-S04 |        | 3,5     | 0,4     | 40     | 4         | ☑                  |
| 2JJRE-004-040-S04 | 4      | 0,4     | 40      | 4      | ☑         |                    |
| 2JJRE-004-050-S04 | 0,5    | 5       | 0,4     | 40     | 4         | ☑                  |
| 2JJRE-004-060-S04 |        | 6       | 0,4     | 40     | 4         | ☑                  |
| 2JJRE-004-080-S04 |        | 8       | 0,5     | 40     | 4         | ☑                  |
| 2JJRE-005-010-S04 |        | 1       | 0,5     | 40     | 4         | ☑                  |
| 2JJRE-005-020-S04 |        | 2       | 0,5     | 40     | 4         | ☑                  |
| 2JJRE-005-030-S04 |        | 3       | 0,5     | 40     | 4         | ☑                  |
| 2JJRE-005-040-S04 | 4      | 0,5     | 40      | 4      | ☑         |                    |
| 2JJRE-005-050-S04 | 5      | 0,5     | 40      | 4      | ☑         |                    |
| 2JJRE-005-060-S04 | 6      | 0,5     | 40      | 4      | ☑         |                    |
| 2JJRE-005-080-S04 | 8      | 0,5     | 45      | 4      | ☑         |                    |
| 2JJRE-005-100-S04 | 10     | 0,6     | 45      | 4      | ☑         |                    |
| 2JJRE-006-010-S04 | 0,6    | 1       | 0,6     | 40     | 4         | ☑                  |
| 2JJRE-006-020-S04 |        | 2       | 0,6     | 40     | 4         | ☑                  |
| 2JJRE-006-030-S04 |        | 3       | 0,6     | 40     | 4         | ☑                  |
| 2JJRE-006-040-S04 |        | 4       | 0,6     | 40     | 4         | ☑                  |
| 2JJRE-006-050-S04 |        | 5       | 0,6     | 40     | 4         | ☑                  |

| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|---------|--------|-----------|--------------------|
| 2JJRE-006-060-S04 | 0,6    | 6       | 0,6     | 40     | 4         | ☑                  |
| 2JJRE-006-080-S04 |        | 8       | 0,6     | 45     | 4         | ☑                  |
| 2JJRE-006-100-S04 |        | 10      | 0,7     | 45     | 4         | ☑                  |
| 2JJRE-007-020-S04 | 0,7    | 2       | 0,7     | 40     | 4         | ☑                  |
| 2JJRE-007-040-S04 |        | 4       | 0,7     | 40     | 4         | ☑                  |
| 2JJRE-007-060-S04 |        | 6       | 0,7     | 40     | 4         | ☑                  |
| 2JJRE-007-080-S04 |        | 8       | 0,7     | 45     | 4         | ☑                  |
| 2JJRE-007-100-S04 |        | 10      | 0,7     | 45     | 4         | ☑                  |
| 2JJRE-008-010-S04 | 0,8    | 1       | 0,8     | 40     | 4         | ☑                  |
| 2JJRE-008-020-S04 |        | 2       | 0,8     | 40     | 4         | ☑                  |
| 2JJRE-008-030-S04 |        | 3       | 0,8     | 40     | 4         | ☑                  |
| 2JJRE-008-040-S04 |        | 4       | 0,8     | 40     | 4         | ☑                  |
| 2JJRE-008-050-S04 |        | 5       | 0,8     | 40     | 4         | ☑                  |
| 2JJRE-008-060-S04 |        | 6       | 0,8     | 40     | 4         | ☑                  |
| 2JJRE-008-080-S04 | 8      | 0,8     | 45      | 4      | ☑         |                    |
| 2JJRE-008-100-S04 | 10     | 0,8     | 45      | 4      | ☑         |                    |
| 2JJRE-008-120-S04 | 12     | 0,8     | 45      | 4      | ☑         |                    |
| 2JJRE-009-040-S04 | 0,9    | 4       | 0,9     | 40     | 4         | ☑                  |
| 2JJRE-009-060-S04 |        | 6       | 0,9     | 40     | 4         | ☑                  |
| 2JJRE-009-080-S04 |        | 8       | 0,9     | 45     | 4         | ☑                  |
| 2JJRE-009-100-S04 |        | 10      | 0,9     | 45     | 4         | ☑                  |
| 2JJRE-010-020-S04 | 1      | 2       | 1       | 45     | 4         | ☑                  |
| 2JJRE-010-030-S04 |        | 3       | 1       | 45     | 4         | ☑                  |
| 2JJRE-010-040-S04 |        | 4       | 1       | 45     | 4         | ☑                  |
| 2JJRE-010-050-S04 |        | 5       | 1       | 45     | 4         | ☑                  |
| 2JJRE-010-060-S04 |        | 6       | 1       | 45     | 4         | ☑                  |
| 2JJRE-010-080-S04 |        | 8       | 1       | 45     | 4         | ☑                  |
| 2JJRE-010-100-S04 |        | 10      | 1       | 45     | 4         | ☑                  |
| 2JJRE-010-120-S04 |        | 12      | 1       | 50     | 4         | ☑                  |
| 2JJRE-010-140-S04 |        | 14      | 1       | 50     | 4         | ☑                  |
| 2JJRE-010-160-S04 |        | 16      | 1       | 50     | 4         | ☑                  |
| 2JJRE-010-180-S04 | 18     | 1       | 50      | 4      | ☑         |                    |
| 2JJRE-010-200-S04 | 20     | 1       | 50      | 4      | ☑         |                    |
| 2JJRE-010-220-S04 | 22     | 1       | 60      | 4      | ☑         |                    |
| 2JJRE-010-250-S04 | 25     | 1       | 60      | 4      | ☑         |                    |
| 2JJRE-012-040-S04 | 1,2    | 4       | 1,2     | 45     | 4         | ☑                  |
| 2JJRE-012-060-S04 |        | 6       | 1,2     | 45     | 4         | ☑                  |
| 2JJRE-012-080-S04 |        | 8       | 1,2     | 45     | 4         | ☑                  |

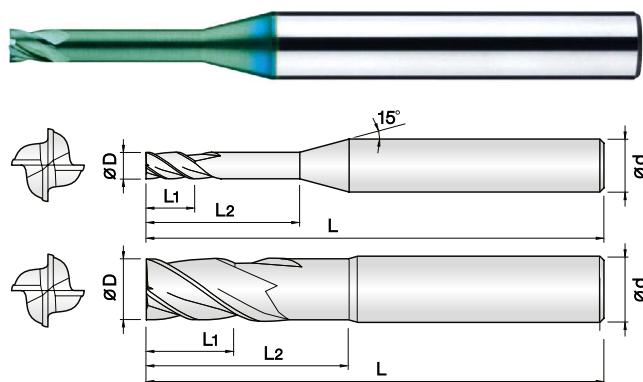
# 2JJRE

## 2-břité OSTRÉ frézy pro žebrování pro kalené oceli do HRC 65

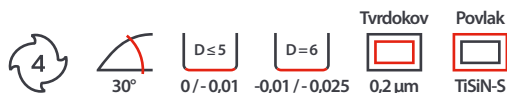
| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|---------|---------|--------|-----------|--------------------|---|
| 2JJRE-012-100-S04 | 1,2    | 10      | 1,2     | 45     | 4         | ☑                  |   |
| 2JJRE-012-120-S04 |        | 12      | 1,2     | 50     | 4         | ☑                  |   |
| 2JJRE-012-160-S04 |        | 16      | 1,2     | 50     | 4         | ☑                  |   |
| 2JJRE-012-200-S04 |        | 20      | 1,2     | 50     | 4         | ☑                  |   |
| 2JJRE-012-250-S04 |        | 25      | 1,2     | 60     | 4         | ☑                  |   |
| 2JJRE-014-080-S04 | 1,4    | 8       | 1,4     | 45     | 4         | ☑                  |   |
| 2JJRE-014-100-S04 |        | 10      | 1,4     | 45     | 4         | ☑                  |   |
| 2JJRE-014-140-S04 |        | 14      | 1,4     | 50     | 4         | ☑                  |   |
| 2JJRE-014-160-S04 |        | 16      | 1,4     | 50     | 4         | ☑                  |   |
| 2JJRE-014-200-S04 | 1,5    | 20      | 1,4     | 50     | 4         | ☑                  |   |
| 2JJRE-015-040-S04 |        | 4       | 1,5     | 45     | 4         | ☑                  |   |
| 2JJRE-015-060-S04 |        | 6       | 1,5     | 45     | 4         | ☑                  |   |
| 2JJRE-015-080-S04 |        | 8       | 1,5     | 45     | 4         | ☑                  |   |
| 2JJRE-015-100-S04 |        | 10      | 1,5     | 50     | 4         | ☑                  |   |
| 2JJRE-015-120-S04 |        | 12      | 1,5     | 50     | 4         | ☑                  |   |
| 2JJRE-015-140-S04 |        | 14      | 1,5     | 50     | 4         | ☑                  |   |
| 2JJRE-015-160-S04 |        | 16      | 1,5     | 50     | 4         | ☑                  |   |
| 2JJRE-015-180-S04 |        | 18      | 1,5     | 50     | 4         | ☑                  |   |
| 2JJRE-015-200-S04 |        | 20      | 1,5     | 50     | 4         | ☑                  |   |
| 2JJRE-015-220-S04 |        | 22      | 1,5     | 60     | 4         | ☑                  |   |
| 2JJRE-015-250-S04 |        | 25      | 1,5     | 60     | 4         | ☑                  |   |
| 2JJRE-016-060-S04 |        | 1,6     | 6       | 1,6    | 45        | 4                  | ☑ |
| 2JJRE-016-100-S04 |        |         | 10      | 1,6    | 50        | 4                  | ☑ |
| 2JJRE-016-140-S04 |        |         | 14      | 1,6    | 50        | 4                  | ☑ |
| 2JJRE-016-180-S04 | 1,8    | 18      | 1,6     | 50     | 4         | ☑                  |   |
| 2JJRE-018-100-S04 |        | 10      | 1,8     | 50     | 4         | ☑                  |   |
| 2JJRE-018-140-S04 |        | 14      | 1,8     | 50     | 4         | ☑                  |   |
| 2JJRE-018-180-S04 | 18     | 1,8     | 50      | 4      | ☑         |                    |   |
| 2JJRE-020-060-S04 | 2      | 6       | 2       | 45     | 4         | ☑                  |   |
| 2JJRE-020-080-S04 |        | 8       | 2       | 45     | 4         | ☑                  |   |
| 2JJRE-020-100-S04 |        | 10      | 2       | 50     | 4         | ☑                  |   |
| 2JJRE-020-120-S04 |        | 12      | 2       | 50     | 4         | ☑                  |   |
| 2JJRE-020-140-S04 |        | 14      | 2       | 50     | 4         | ☑                  |   |
| 2JJRE-020-160-S04 |        | 16      | 2       | 50     | 4         | ☑                  |   |
| 2JJRE-020-180-S04 |        | 18      | 2       | 50     | 4         | ☑                  |   |
| 2JJRE-020-200-S04 |        | 20      | 2       | 50     | 4         | ☑                  |   |
| 2JJRE-020-220-S04 |        | 22      | 2       | 60     | 4         | ☑                  |   |
| 2JJRE-020-250-S04 |        | 25      | 2       | 60     | 4         | ☑                  |   |
| 2JJRE-020-300-S04 |        | 30      | 2       | 60     | 4         | ☑                  |   |
| 2JJRE-020-350-S04 |        | 35      | 2       | 70     | 4         | ☑                  |   |
| 2JJRE-020-400-S04 |        | 40      | 2       | 80     | 4         | ☑                  |   |
| 2JJRE-025-100-S04 |        | 2,5     | 10      | 2,5    | 50        | 4                  | ☑ |
| 2JJRE-025-120-S04 |        |         | 12      | 2,5    | 50        | 4                  | ☑ |
| 2JJRE-025-160-S04 | 16     |         | 2,5     | 50     | 4         | ☑                  |   |
| 2JJRE-025-200-S04 | 20     |         | 2,5     | 50     | 4         | ☑                  |   |
| 2JJRE-025-250-S04 | 25     |         | 2,5     | 60     | 4         | ☑                  |   |
| 2JJRE-025-300-S04 | 30     |         | 2,5     | 70     | 4         | ☑                  |   |
| 2JJRE-025-350-S04 | 35     |         | 2,5     | 70     | 4         | ☑                  |   |
| 2JJRE-025-400-S04 | 40     | 2,5     | 80      | 4      | ☑         |                    |   |
| 2JJRE-030-060-S06 | 3      | 6       | 3       | 45     | 6         | ☑                  |   |
| 2JJRE-030-080-S06 |        | 8       | 3       | 45     | 6         | ☑                  |   |
| 2JJRE-030-100-S06 |        | 10      | 3       | 50     | 6         | ☑                  |   |

| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|---------|--------|-----------|--------------------|
| 2JJRE-030-120-S06 | 3      | 12      | 3       | 50     | 6         | ☑                  |
| 2JJRE-030-160-S06 |        | 16      | 3       | 55     | 6         | ☑                  |
| 2JJRE-030-200-S06 |        | 20      | 3       | 60     | 6         | ☑                  |
| 2JJRE-030-250-S06 |        | 25      | 3       | 65     | 6         | ☑                  |
| 2JJRE-030-300-S06 |        | 30      | 3       | 70     | 6         | ☑                  |
| 2JJRE-030-350-S06 |        | 35      | 3       | 75     | 6         | ☑                  |
| 2JJRE-030-400-S06 |        | 40      | 3       | 80     | 6         | ☑                  |
| 2JJRE-030-450-S06 |        | 45      | 3       | 90     | 6         | ☑                  |
| 2JJRE-030-500-S06 |        | 50      | 3       | 100    | 6         | ☑                  |
| 2JJRE-040-080-S06 |        | 4       | 8       | 4      | 50        | 6                  |
| 2JJRE-040-100-S06 | 10     |         | 4       | 50     | 6         | ☑                  |
| 2JJRE-040-120-S06 | 12     |         | 4       | 50     | 6         | ☑                  |
| 2JJRE-040-160-S06 | 16     |         | 4       | 55     | 6         | ☑                  |
| 2JJRE-040-200-S06 | 20     |         | 4       | 60     | 6         | ☑                  |
| 2JJRE-040-250-S06 | 25     |         | 4       | 65     | 6         | ☑                  |
| 2JJRE-040-300-S06 | 30     |         | 4       | 70     | 6         | ☑                  |
| 2JJRE-040-350-S06 | 35     |         | 4       | 75     | 6         | ☑                  |
| 2JJRE-040-400-S06 | 40     |         | 4       | 80     | 6         | ☑                  |
| 2JJRE-040-450-S06 | 45     |         | 4       | 90     | 6         | ☑                  |
| 2JJRE-040-500-S06 | 50     | 4       | 100     | 6      | ☑         |                    |
| 2JJRE-050-160-S06 | 5      | 16      | 6       | 60     | 6         | ☑                  |
| 2JJRE-050-200-S06 |        | 20      | 6       | 60     | 6         | ☑                  |
| 2JJRE-050-250-S06 |        | 25      | 6       | 65     | 6         | ☑                  |
| 2JJRE-050-300-S06 |        | 30      | 6       | 70     | 6         | ☑                  |
| 2JJRE-050-350-S06 |        | 35      | 6       | 75     | 6         | ☑                  |
| 2JJRE-050-400-S06 | 6      | 40      | 6       | 80     | 6         | ☑                  |
| 2JJRE-050-500-S06 |        | 50      | 6       | 100    | 6         | ☑                  |
| 2JJRE-060-200-S06 |        | 20      | 10      | 60     | 6         | ☑                  |
| 2JJRE-060-300-S06 |        | 30      | 10      | 75     | 6         | ☑                  |
| 2JJRE-060-400-S06 | 6      | 40      | 10      | 80     | 6         | ☑                  |
| 2JJRE-060-500-S06 |        | 50      | 10      | 90     | 6         | ☑                  |
| 2JJRE-060-600-S06 | 60     | 10      | 110     | 6      | ☑         |                    |

# 4JJRE 4-břité OSTRÉ frézy pro žebrování pro kalené oceli do HRC 65



- Určeno pro kalené oceli (52 - 65 HRC)
- Vysoká odolnost proti opotřebování díky novému PVD povlaku s vysokým obsahem Si
- Velmi přesné tolerance rezných hran
- Široký sortiment vyložení pro optimální výběr nástroje
- Minimalizace vyštipování díky zesílení rezné hrany
- Vynikající výkon při vysokých rezných rychlostech díky 0,2 μm tvrdokovu



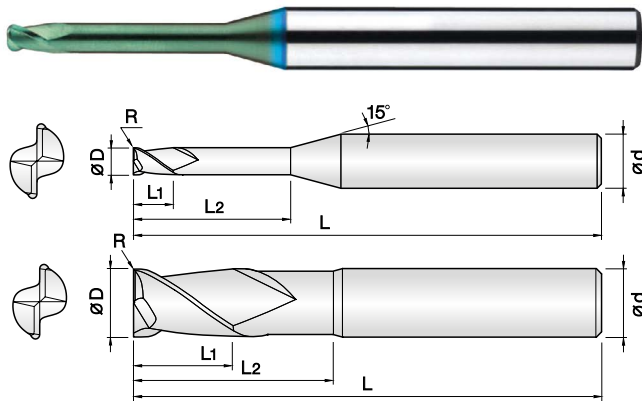
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| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|---------|--------|-----------|--------------------|
| 4JJRE-008-010-S04 | 0,8    | 1       | 0,8     | 40     | 4         | ☑                  |
| 4JJRE-008-020-S04 |        | 2       | 0,8     | 40     | 4         | ☑                  |
| 4JJRE-008-030-S04 |        | 3       | 0,8     | 40     | 4         | ☑                  |
| 4JJRE-008-040-S04 |        | 4       | 0,8     | 40     | 4         | ☑                  |
| 4JJRE-008-050-S04 |        | 5       | 0,8     | 40     | 4         | ☑                  |
| 4JJRE-008-060-S04 |        | 6       | 0,8     | 40     | 4         | ☑                  |
| 4JJRE-008-080-S04 |        | 8       | 0,8     | 40     | 4         | ☑                  |
| 4JJRE-010-020-S04 | 1      | 2       | 1       | 45     | 4         | ☑                  |
| 4JJRE-010-030-S04 |        | 3       | 1       | 45     | 4         | ☑                  |
| 4JJRE-010-040-S04 |        | 4       | 1       | 45     | 4         | ☑                  |
| 4JJRE-010-060-S04 |        | 6       | 1       | 45     | 4         | ☑                  |
| 4JJRE-010-080-S04 |        | 8       | 1       | 45     | 4         | ☑                  |
| 4JJRE-010-100-S04 |        | 10      | 1       | 50     | 4         | ☑                  |
| 4JJRE-010-120-S04 |        | 12      | 1       | 50     | 4         | ☑                  |
| 4JJRE-010-140-S04 | 1,2    | 14      | 1       | 50     | 4         | ☑                  |
| 4JJRE-010-160-S04 |        | 16      | 1       | 50     | 4         | ☑                  |
| 4JJRE-012-040-S04 |        | 4       | 1,2     | 45     | 4         | ☑                  |
| 4JJRE-012-060-S04 |        | 6       | 1,2     | 45     | 4         | ☑                  |
| 4JJRE-012-080-S04 |        | 8       | 1,2     | 45     | 4         | ☑                  |
| 4JJRE-012-100-S04 |        | 10      | 1,2     | 50     | 4         | ☑                  |
| 4JJRE-012-120-S04 |        | 12      | 1,2     | 50     | 4         | ☑                  |
| 4JJRE-012-160-S04 | 1,5    | 16      | 1,2     | 50     | 4         | ☑                  |
| 4JJRE-015-040-S04 |        | 4       | 1,5     | 45     | 4         | ☑                  |
| 4JJRE-015-060-S04 |        | 6       | 1,5     | 45     | 4         | ☑                  |
| 4JJRE-015-080-S04 |        | 8       | 1,5     | 45     | 4         | ☑                  |
| 4JJRE-015-100-S04 |        | 10      | 1,5     | 50     | 4         | ☑                  |
| 4JJRE-015-120-S04 |        | 12      | 1,5     | 50     | 4         | ☑                  |
| 4JJRE-015-160-S04 |        | 16      | 1,5     | 50     | 4         | ☑                  |
| 4JJRE-020-040-S04 | 2      | 4       | 2       | 45     | 4         | ☑                  |
| 4JJRE-020-060-S04 |        | 6       | 2       | 45     | 4         | ☑                  |
| 4JJRE-020-080-S04 |        | 8       | 2       | 45     | 4         | ☑                  |
| 4JJRE-020-100-S04 |        | 10      | 2       | 50     | 4         | ☑                  |
| 4JJRE-020-120-S04 |        | 12      | 2       | 50     | 4         | ☑                  |
| 4JJRE-020-140-S04 |        | 14      | 2       | 50     | 4         | ☑                  |
| 4JJRE-020-160-S04 |        | 16      | 2       | 50     | 4         | ☑                  |
| 4JJRE-020-180-S04 | 2,5    | 18      | 2       | 50     | 4         | ☑                  |
| 4JJRE-020-200-S04 |        | 20      | 2       | 50     | 4         | ☑                  |
| 4JJRE-025-100-S04 |        | 10      | 2,5     | 50     | 4         | ☑                  |
| 4JJRE-025-120-S04 |        | 12      | 2,5     | 50     | 4         | ☑                  |

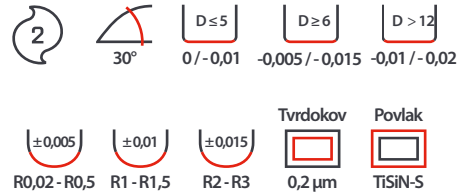
| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|---------|---------|--------|-----------|--------------------|---|
| 4JJRE-025-160-S04 | 2,5    | 16      | 2,5     | 50     | 4         | ☑                  |   |
| 4JJRE-025-200-S04 |        | 20      | 2,5     | 50     | 4         | ☑                  |   |
| 4JJRE-025-250-S04 |        | 25      | 2,5     | 60     | 4         | ☑                  |   |
| 4JJRE-030-060-S06 | 3      | 6       | 3       | 45     | 6         | ☑                  |   |
| 4JJRE-030-080-S06 |        | 8       | 3       | 45     | 6         | ☑                  |   |
| 4JJRE-030-100-S06 |        | 10      | 3       | 50     | 6         | ☑                  |   |
| 4JJRE-030-120-S06 |        | 12      | 3       | 50     | 6         | ☑                  |   |
| 4JJRE-030-160-S06 |        | 16      | 3       | 55     | 6         | ☑                  |   |
| 4JJRE-030-200-S06 |        | 20      | 3       | 60     | 6         | ☑                  |   |
| 4JJRE-030-250-S06 |        | 25      | 3       | 65     | 6         | ☑                  |   |
| 4JJRE-030-300-S06 | 4      | 30      | 3       | 70     | 6         | ☑                  |   |
| 4JJRE-040-060-S06 |        | 6       | 4       | 50     | 6         | ☑                  |   |
| 4JJRE-040-080-S06 |        | 8       | 4       | 50     | 6         | ☑                  |   |
| 4JJRE-040-100-S06 |        | 10      | 4       | 50     | 6         | ☑                  |   |
| 4JJRE-040-120-S06 |        | 12      | 4       | 50     | 6         | ☑                  |   |
| 4JJRE-040-160-S06 |        | 16      | 4       | 55     | 6         | ☑                  |   |
| 4JJRE-040-200-S06 |        | 20      | 4       | 60     | 6         | ☑                  |   |
| 4JJRE-040-250-S06 | 5      | 25      | 4       | 65     | 6         | ☑                  |   |
| 4JJRE-040-300-S06 |        | 30      | 4       | 70     | 6         | ☑                  |   |
| 4JJRE-040-400-S06 |        | 40      | 4       | 80     | 6         | ☑                  |   |
| 4JJRE-050-160-S06 |        | 16      | 5       | 60     | 6         | ☑                  |   |
| 4JJRE-050-200-S06 |        | 20      | 5       | 60     | 6         | ☑                  |   |
| 4JJRE-050-250-S06 |        | 25      | 5       | 65     | 6         | ☑                  |   |
| 4JJRE-050-300-S06 |        | 30      | 5       | 70     | 6         | ☑                  |   |
| 4JJRE-050-400-S06 | 6      | 40      | 5       | 80     | 6         | ☑                  |   |
| 4JJRE-060-200-S06 |        | 20      | 6       | 60     | 6         | ☑                  |   |
| 4JJRE-060-300-S06 |        | 30      | 6       | 75     | 6         | ☑                  |   |
| 4JJRE-060-400-S06 |        | 40      | 6       | 80     | 6         | ☑                  |   |
| 4JJRE-060-500-S06 |        | 50      | 6       | 90     | 6         | ☑                  |   |
| 4JJRE-080-250-S08 |        | 8       | 25      | 8      | 65        | 8                  | ☑ |
| 4JJRE-080-400-S08 |        |         | 40      | 8      | 100       | 8                  | ☑ |
| 4JJRE-080-500-S08 | 50     |         | 8       | 110    | 8         | ☑                  |   |
| 4JJRE-100-300-S10 | 10     | 30      | 10      | 70     | 10        | ☑                  |   |
| 4JJRE-100-500-S10 |        | 50      | 10      | 100    | 10        | ☑                  |   |
| 4JJRE-100-600-S10 |        | 60      | 10      | 120    | 10        | ☑                  |   |
| 4JJRE-120-400-S12 | 12     | 40      | 12      | 80     | 12        | ☑                  |   |
| 4JJRE-120-600-S12 |        | 60      | 12      | 110    | 12        | ☑                  |   |
| 4JJRE-120-700-S12 |        | 70      | 12      | 130    | 12        | ☑                  |   |

# 2JJCR

## 2-břité TOROIDNÍ frézy pro žebrování pro kalené oceli do HRC 68



- Určeno pro kalené oceli (52 - 68 HRC)
- Vysoká odolnost proti opotřeбенí díky novému PVD povlaku s vysokým obsahem Si
- Velmi přesné tolerance řezných hran
- Široký sortiment rádiíů a vyložení pro optimální výběr nástroje
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdkovu



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| Objednací číslo    | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 2JJCR-002-0002-005 | 0,2    | R0,02  | 0,5     | 0,2     | 40     | 4         | ☑                  |
| 2JJCR-002-0002-010 |        |        | 1       | 0,2     | 40     | 4         | ☑                  |
| 2JJCR-002-0002-015 |        |        | 1,5     | 0,2     | 40     | 4         | ☑                  |
| 2JJCR-002-0005-005 |        | R0,05  | 0,5     | 0,2     | 40     | 4         | ☑                  |
| 2JJCR-002-0005-010 |        |        | 1       | 0,2     | 40     | 4         | ☑                  |
| 2JJCR-002-0005-015 |        |        | 1,5     | 0,2     | 40     | 4         | ☑                  |
| 2JJCR-003-0002-010 | 0,3    | R0,02  | 1       | 0,3     | 40     | 4         | ☑                  |
| 2JJCR-003-0002-020 |        |        | 2       | 0,3     | 40     | 4         | ☑                  |
| 2JJCR-003-0002-030 |        |        | 3       | 0,3     | 40     | 4         | ☑                  |
| 2JJCR-003-0005-010 |        | R0,05  | 1       | 0,3     | 40     | 4         | ☑                  |
| 2JJCR-003-0005-020 |        |        | 2       | 0,3     | 40     | 4         | ☑                  |
| 2JJCR-003-0005-030 |        |        | 3       | 0,3     | 40     | 4         | ☑                  |
| 2JJCR-004-0002-010 | 0,4    | R0,02  | 1       | 0,4     | 40     | 4         | ☑                  |
| 2JJCR-004-0002-020 |        |        | 2       | 0,4     | 40     | 4         | ☑                  |
| 2JJCR-004-0002-030 |        |        | 3       | 0,4     | 40     | 4         | ☑                  |
| 2JJCR-004-0002-040 |        |        | 4       | 0,4     | 40     | 4         | ☑                  |
| 2JJCR-004-0005-010 |        | R0,05  | 1       | 0,4     | 40     | 4         | ☑                  |
| 2JJCR-004-0005-020 |        |        | 2       | 0,4     | 40     | 4         | ☑                  |
| 2JJCR-004-0005-030 |        |        | 3       | 0,4     | 40     | 4         | ☑                  |
| 2JJCR-004-0005-040 |        |        | 4       | 0,4     | 40     | 4         | ☑                  |
| 2JJCR-004-001-010  |        | R0,1   | 1       | 0,4     | 40     | 4         | ☑                  |
| 2JJCR-004-001-015  |        |        | 1,5     | 0,4     | 40     | 4         | ☑                  |
| 2JJCR-004-001-020  |        |        | 2       | 0,4     | 40     | 4         | ☑                  |
| 2JJCR-004-001-030  |        |        | 3       | 0,4     | 40     | 4         | ☑                  |
| 2JJCR-004-001-040  | 4      | 0,4    | 40      | 4       | ☑      |           |                    |
| 2JJCR-005-0002-010 | 0,5    | R0,02  | 1       | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-0002-015 |        |        | 1,5     | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-0002-020 |        |        | 2       | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-0002-025 |        |        | 2,5     | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-0002-030 |        |        | 3       | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-0002-040 |        | 4      | 0,5     | 45      | 4      | ☑         |                    |
| 2JJCR-005-0002-050 |        | 5      | 0,5     | 45      | 4      | ☑         |                    |
| 2JJCR-005-0002-060 |        | 6      | 0,5     | 45      | 4      | ☑         |                    |
| 2JJCR-005-0005-010 |        | R0,05  | 1       | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-0005-015 |        |        | 1,5     | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-0005-020 |        |        | 2       | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-0005-025 |        |        | 2,5     | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-0005-030 |        |        | 3       | 0,5     | 45     | 4         | ☑                  |

| Objednací číslo    | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 2JJCR-005-0005-040 | 0,5    | R0,05  | 4       | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-0005-050 |        |        | 5       | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-0005-060 |        |        | 6       | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-001-010  |        | R0,1   | 1       | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-001-015  |        |        | 1,5     | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-001-020  |        |        | 2       | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-001-025  |        |        | 2,5     | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-001-030  |        |        | 3       | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-001-040  |        |        | 4       | 0,5     | 45     | 4         | ☑                  |
| 2JJCR-005-001-050  |        | 5      | 0,5     | 45      | 4      | ☑         |                    |
| 2JJCR-005-001-060  |        | 6      | 0,5     | 45      | 4      | ☑         |                    |
| 2JJCR-006-0002-020 |        | 0,6    | R0,02   | 2       | 0,6    | 45        | 4                  |
| 2JJCR-006-0002-030 | 3      |        |         | 0,6     | 45     | 4         | ☑                  |
| 2JJCR-006-0002-040 | 4      |        |         | 0,6     | 45     | 4         | ☑                  |
| 2JJCR-006-0002-060 | 6      |        |         | 0,6     | 45     | 4         | ☑                  |
| 2JJCR-006-0002-080 | 8      |        | 0,6     | 45      | 4      | ☑         |                    |
| 2JJCR-006-0002-100 | 10     |        | 0,6     | 45      | 4      | ☑         |                    |
| 2JJCR-006-0005-020 | R0,05  |        | 2       | 0,6     | 45     | 4         | ☑                  |
| 2JJCR-006-0005-030 |        |        | 3       | 0,6     | 45     | 4         | ☑                  |
| 2JJCR-006-0005-040 |        |        | 4       | 0,6     | 45     | 4         | ☑                  |
| 2JJCR-006-0005-060 |        |        | 6       | 0,6     | 45     | 4         | ☑                  |
| 2JJCR-006-0005-080 | 8      |        | 0,6     | 45      | 4      | ☑         |                    |
| 2JJCR-006-0005-100 | 10     |        | 0,6     | 45      | 4      | ☑         |                    |
| 2JJCR-006-001-020  | R0,1   | 2      | 0,6     | 45      | 4      | ☑         |                    |
| 2JJCR-006-001-030  |        | 3      | 0,6     | 45      | 4      | ☑         |                    |
| 2JJCR-006-001-040  |        | 4      | 0,6     | 45      | 4      | ☑         |                    |
| 2JJCR-006-001-060  |        | 6      | 0,6     | 45      | 4      | ☑         |                    |
| 2JJCR-006-001-080  | 8      | 0,6    | 45      | 4       | ☑      |           |                    |
| 2JJCR-006-001-100  | 10     | 0,6    | 45      | 4       | ☑      |           |                    |
| 2JJCR-007-001-020  | 0,7    | R0,1   | 2       | 0,7     | 45     | 4         | ☑                  |
| 2JJCR-007-001-040  |        |        | 4       | 0,7     | 45     | 4         | ☑                  |
| 2JJCR-007-001-060  |        |        | 6       | 0,7     | 45     | 4         | ☑                  |
| 2JJCR-008-0002-020 | 0,8    | R0,02  | 2       | 0,8     | 45     | 4         | ☑                  |
| 2JJCR-008-0002-040 |        |        | 4       | 0,8     | 45     | 4         | ☑                  |
| 2JJCR-008-0002-060 |        |        | 6       | 0,8     | 45     | 4         | ☑                  |
| 2JJCR-008-0002-080 |        | 8      | 0,8     | 45      | 4      | ☑         |                    |
| 2JJCR-008-0002-100 |        | 10     | 0,6     | 45      | 4      | ☑         |                    |
| 2JJCR-008-0005-020 |        | R0,05  | 2       | 0,8     | 45     | 4         | ☑                  |



| Objednací číslo    | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm)                           | Standardní položka                  |                                     |
|--------------------|--------|--------|---------|---------|--------|-------------------------------------|-------------------------------------|-------------------------------------|
| 2JJCR-008-0005-040 | 0,8    | R0,05  | 4       | 0,8     | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-008-0005-060 |        |        | 6       | 0,8     | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-008-0005-080 |        |        | 8       | 0,8     | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-008-0005-100 |        |        | 10      | 0,6     | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-008-001-020  |        | R0,1   | 2       | 0,8     | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-008-001-040  |        |        | 4       | 0,8     | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-008-001-060  |        |        | 6       | 0,8     | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-008-001-080  |        |        | 8       | 0,8     | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-008-001-100  |        | R0,1   | 10      | 0,6     | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-008-002-020  |        |        | R0,2    | 2       | 0,8    | 45                                  | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-008-002-040  |        |        |         | 4       | 0,8    | 45                                  | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-008-002-060  |        |        |         | 6       | 0,8    | 45                                  | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-008-002-080  |        | 8      |         | 0,8     | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-008-002-100  |        | 10     | 0,6     | 45      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-0002-040 |        | 1      | R0,02   | 4       | 1      | 45                                  | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-010-0002-060 |        |        |         | 6       | 1      | 45                                  | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-010-0002-080 | 8      |        |         | 1       | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-0002-100 | 10     |        |         | 1       | 50     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-0002-120 | 12     |        |         | 1       | 50     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-0002-160 | 16     |        |         | 1       | 50     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-0002-200 | 20     |        |         | 1       | 50     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-0005-040 | R0,05  |        |         | 4       | 1      | 45                                  | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-010-0005-060 |        |        | 6       | 1       | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-0005-080 |        |        | 8       | 1       | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-0005-100 |        |        | 10      | 1       | 50     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-0005-120 |        |        | 12      | 1       | 50     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-0005-160 |        |        | 16      | 1       | 50     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-0005-200 |        |        | 20      | 1       | 50     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-001-040  |        |        | R0,1    | 4       | 1      | 45                                  | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-010-001-060  | 6      |        |         | 1       | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-001-080  | 8      | 1      |         | 45      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-001-100  | 10     | 1      |         | 50      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-001-120  | 12     | 1      |         | 50      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-001-160  | 16     | 1      |         | 50      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-001-200  | 20     | 1      |         | 50      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-002-040  | R0,2   | 4      |         | 1       | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-002-060  |        | 6      | 1       | 45      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-002-080  |        | 8      | 1       | 45      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-002-100  |        | 10     | 1       | 50      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-002-120  |        | 12     | 1       | 50      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-002-160  |        | 16     | 1       | 50      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-002-200  |        | 20     | 1       | 50      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-003-040  |        | R0,3   | 4       | 1       | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-010-003-060  | 6      |        | 1       | 45      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-003-080  | 8      |        | 1       | 45      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-003-100  | 10     |        | 1       | 50      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-003-120  | R0,3   | 12     | 1       | 50      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-003-160  |        | 16     | 1       | 50      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-010-003-200  |        | 20     | 1       | 50      | 4      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-012-0002-040 |        | 1,2    | R0,02   | 4       | 1,2    | 45                                  | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-0002-060 | 6      |        |         | 1,2     | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-0002-080 | 8      |        |         | 1,2     | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-0002-100 | 10     |        |         | 1,2     | 45     | 4                                   | <input checked="" type="checkbox"/> |                                     |

| Objednací číslo    | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm)                           | Standardní položka                  |
|--------------------|--------|--------|---------|---------|--------|-------------------------------------|-------------------------------------|
| 2JJCR-012-0002-100 | 1,2    | R0,02  | 10      | 1,2     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-0002-120 |        |        | 12      | 1,2     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-0002-160 |        |        | 16      | 1,2     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-0002-200 |        |        | 20      | 1,2     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-0005-040 |        | R0,05  | 4       | 1,2     | 45     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-0005-060 |        |        | 6       | 1,2     | 45     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-0005-080 |        |        | 8       | 1,2     | 45     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-0005-100 |        |        | 10      | 1,2     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-0005-120 |        | R0,05  | 12      | 1,2     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-0005-160 |        |        | 16      | 1,2     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-0005-200 |        |        | 20      | 1,2     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-001-040  |        |        | R0,1    | 4       | 1,2    | 45                                  | 4                                   |
| 2JJCR-012-001-060  |        | 6      |         | 1,2     | 45     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-001-080  |        | 8      |         | 1,2     | 45     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-001-100  |        | 10     |         | 1,2     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-001-120  |        | 12     |         | 1,2     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-001-160  | 16     | 1,2    |         | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-001-200  | 20     | 1,2    |         | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-002-040  | R0,2   | 4      |         | 1,2     | 45     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-002-060  |        | 6      | 1,2     | 45      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-002-080  |        | 8      | 1,2     | 45      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-002-100  |        | 10     | 1,2     | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-002-120  |        | 12     | 1,2     | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-002-160  |        | 16     | 1,2     | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-002-200  |        | 20     | 1,2     | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-003-040  |        | R0,3   | 4       | 1,2     | 45     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-012-003-060  | 6      |        | 1,2     | 45      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-003-080  | 8      |        | 1,2     | 45      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-003-100  | 10     |        | 1,2     | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-003-120  | R0,3   | 12     | 1,2     | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-003-160  |        | 16     | 1,2     | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-012-003-200  |        | 20     | 1,2     | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-015-0002-040 |        | 1,5    | R0,02   | 4       | 1,5    | 45                                  | 4                                   |
| 2JJCR-015-0002-060 | 6      |        |         | 1,5     | 45     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-015-0002-080 | 8      |        |         | 1,5     | 45     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-015-0002-100 | 10     |        |         | 1,5     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-015-0002-120 | 12     |        |         | 1,5     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-015-0002-160 | 16     |        |         | 1,5     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-015-0002-200 | 20     |        |         | 1,5     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-015-0005-040 | R0,05  |        |         | 4       | 1,5    | 45                                  | 4                                   |
| 2JJCR-015-0005-060 |        |        | 6       | 1,5     | 45     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-015-0005-080 |        |        | 8       | 1,5     | 45     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-015-0005-100 |        |        | 10      | 1,5     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-015-0005-120 |        |        | 12      | 1,5     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-015-0005-160 |        |        | 16      | 1,5     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-015-0005-200 |        |        | 20      | 1,5     | 50     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-015-001-040  |        |        | R0,1    | 4       | 1,5    | 45                                  | 4                                   |
| 2JJCR-015-001-060  | 6      |        |         | 1,5     | 45     | 4                                   | <input checked="" type="checkbox"/> |
| 2JJCR-015-001-080  | 8      | 1,5    |         | 45      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-015-001-100  | 10     | 1,5    |         | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-015-001-120  | 12     | 1,5    |         | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-015-001-160  | 16     | 1,5    |         | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-015-001-200  | 20     | 1,5    |         | 50      | 4      | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-015-001-100  | 10     | 1,5    |         | 50      | 4      | <input checked="" type="checkbox"/> |                                     |

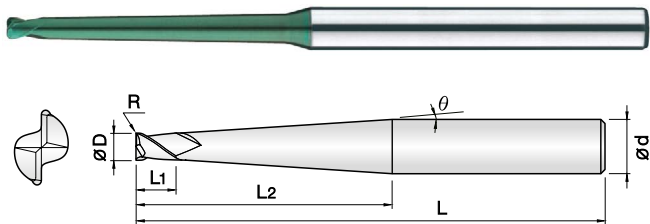


| Objednací číslo    | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|--------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 2JJCR-015-001-200  | 1,5    | R0,1   | 20      | 1,5     | 50     | 4         | ☑                  |   |
| 2JJCR-015-002-040  |        | R0,2   | 4       | 1,5     | 45     | 4         | ☑                  |   |
| 2JJCR-015-002-060  |        |        | 6       | 1,5     | 45     | 4         | ☑                  |   |
| 2JJCR-015-002-080  |        |        | 8       | 1,5     | 45     | 4         | ☑                  |   |
| 2JJCR-015-002-100  |        |        | 10      | 1,5     | 50     | 4         | ☑                  |   |
| 2JJCR-015-002-120  |        |        | 12      | 1,5     | 50     | 4         | ☑                  |   |
| 2JJCR-015-002-160  |        |        | 16      | 1,5     | 50     | 4         | ☑                  |   |
| 2JJCR-015-002-200  |        |        | R0,2    | 20      | 1,5    | 50        | 4                  | ☑ |
| 2JJCR-015-003-040  | R0,3   |        |         | 4       | 1,5    | 45        | 4                  | ☑ |
| 2JJCR-015-003-060  |        | 6      |         | 1,5     | 45     | 4         | ☑                  |   |
| 2JJCR-015-003-080  |        | 8      |         | 1,5     | 45     | 4         | ☑                  |   |
| 2JJCR-015-003-100  |        | 10     |         | 1,5     | 50     | 4         | ☑                  |   |
| 2JJCR-015-003-120  |        | 12     |         | 1,5     | 50     | 4         | ☑                  |   |
| 2JJCR-015-003-160  |        | 16     |         | 1,5     | 50     | 4         | ☑                  |   |
| 2JJCR-015-003-200  |        | 20     |         | 1,5     | 50     | 4         | ☑                  |   |
| 2JJCR-015-005-040  |        | 1,5    | R0,5    | 4       | 1,5    | 45        | 4                  | ☑ |
| 2JJCR-015-005-060  | 6      |        |         | 1,5     | 45     | 4         | ☑                  |   |
| 2JJCR-015-005-080  | 8      |        |         | 1,5     | 45     | 4         | ☑                  |   |
| 2JJCR-015-005-100  | 10     |        |         | 1,5     | 50     | 4         | ☑                  |   |
| 2JJCR-015-005-120  | 12     |        |         | 1,5     | 50     | 4         | ☑                  |   |
| 2JJCR-015-005-160  | 16     |        |         | 1,5     | 50     | 4         | ☑                  |   |
| 2JJCR-015-005-200  | 20     |        |         | 1,5     | 50     | 4         | ☑                  |   |
| 2JJCR-020-0002-060 | 2      |        |         | R0,02   | 6      | 2         | 45                 | 4 |
| 2JJCR-020-0002-080 |        | 8      | 2       |         | 45     | 4         | ☑                  |   |
| 2JJCR-020-0002-100 |        | 10     | 2       |         | 50     | 4         | ☑                  |   |
| 2JJCR-020-0002-120 |        | 12     | 2       |         | 50     | 4         | ☑                  |   |
| 2JJCR-020-0002-160 |        | 16     | 2       |         | 50     | 4         | ☑                  |   |
| 2JJCR-020-0002-200 |        | 20     | 2       |         | 50     | 4         | ☑                  |   |
| 2JJCR-020-0002-250 |        | 25     | 2       |         | 60     | 4         | ☑                  |   |
| 2JJCR-020-0005-060 |        | R0,05  | 6       |         | 2      | 45        | 4                  | ☑ |
| 2JJCR-020-0005-080 |        |        | 8       |         | 2      | 45        | 4                  | ☑ |
| 2JJCR-020-0005-100 |        |        | 10      |         | 2      | 50        | 4                  | ☑ |
| 2JJCR-020-0005-120 |        |        | 12      | 2       | 50     | 4         | ☑                  |   |
| 2JJCR-020-0005-160 |        |        | 16      | 2       | 50     | 4         | ☑                  |   |
| 2JJCR-020-0005-200 |        |        | 20      | 2       | 50     | 4         | ☑                  |   |
| 2JJCR-020-0005-250 |        |        | 25      | 2       | 60     | 4         | ☑                  |   |
| 2JJCR-020-001-060  |        |        | R0,1    | 6       | 2      | 45        | 4                  | ☑ |
| 2JJCR-020-001-080  |        |        |         | 8       | 2      | 45        | 4                  | ☑ |
| 2JJCR-020-001-100  |        |        |         | 10      | 2      | 50        | 4                  | ☑ |
| 2JJCR-020-001-120  |        | 12     |         | 2       | 50     | 4         | ☑                  |   |
| 2JJCR-020-001-160  |        | 16     |         | 2       | 50     | 4         | ☑                  |   |
| 2JJCR-020-001-200  |        | 20     |         | 2       | 50     | 4         | ☑                  |   |
| 2JJCR-020-001-250  |        | 25     |         | 2       | 60     | 4         | ☑                  |   |
| 2JJCR-020-001-300  |        | 30     |         | 2       | 70     | 4         | ☑                  |   |
| 2JJCR-020-002-060  |        | R0,2   |         | 6       | 2      | 45        | 4                  | ☑ |
| 2JJCR-020-002-080  |        |        |         | 8       | 2      | 45        | 4                  | ☑ |
| 2JJCR-020-002-100  |        |        |         | 10      | 2      | 50        | 4                  | ☑ |
| 2JJCR-020-002-120  | 12     |        |         | 2       | 50     | 4         | ☑                  |   |
| 2JJCR-020-002-160  | 16     |        |         | 2       | 50     | 4         | ☑                  |   |
| 2JJCR-020-002-200  | 20     |        |         | 2       | 50     | 4         | ☑                  |   |
| 2JJCR-020-002-250  | 25     |        |         | 2       | 60     | 4         | ☑                  |   |
| 2JJCR-020-002-300  | 30     |        | 2       | 70      | 4      | ☑         |                    |   |

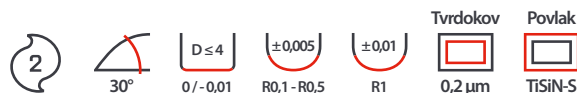
| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|---|
| 2JJCR-020-003-060 | 2      | R0,3   | 6       | 2       | 45     | 4         | ☑                  |   |   |
| 2JJCR-020-003-080 |        |        | 8       | 2       | 45     | 4         | ☑                  |   |   |
| 2JJCR-020-003-100 |        |        | 10      | 2       | 50     | 4         | ☑                  |   |   |
| 2JJCR-020-003-120 |        |        | 12      | 2       | 50     | 4         | ☑                  |   |   |
| 2JJCR-020-003-160 |        |        | 16      | 2       | 50     | 4         | ☑                  |   |   |
| 2JJCR-020-003-200 |        |        | 20      | 2       | 50     | 4         | ☑                  |   |   |
| 2JJCR-020-003-250 |        |        | 25      | 2       | 60     | 4         | ☑                  |   |   |
| 2JJCR-020-003-300 |        |        | 30      | 2       | 70     | 4         | ☑                  |   |   |
| 2JJCR-020-005-060 |        |        | R0,5    | 6       | 2      | 45        | 4                  | ☑ |   |
| 2JJCR-020-005-080 |        |        |         | 8       | 2      | 45        | 4                  | ☑ |   |
| 2JJCR-020-005-100 |        | 10     |         | 2       | 50     | 4         | ☑                  |   |   |
| 2JJCR-020-005-120 |        | 12     |         | 2       | 50     | 4         | ☑                  |   |   |
| 2JJCR-020-005-160 |        | 16     |         | 2       | 50     | 4         | ☑                  |   |   |
| 2JJCR-020-005-200 |        | 20     |         | 2       | 50     | 4         | ☑                  |   |   |
| 2JJCR-020-005-250 |        | 25     |         | 2       | 60     | 4         | ☑                  |   |   |
| 2JJCR-020-005-300 |        | 30     |         | 2       | 70     | 4         | ☑                  |   |   |
| 2JJCR-025-001-100 |        | 2,5    |         | R0,1    | 10     | 2,5       | 50                 | 4 | ☑ |
| 2JJCR-025-001-160 |        |        |         |         | 16     | 2,5       | 50                 | 4 | ☑ |
| 2JJCR-025-001-200 |        |        | 20      |         | 2,5    | 50        | 4                  | ☑ |   |
| 2JJCR-025-001-250 |        |        | 25      |         | 2      | 60        | 4                  | ☑ |   |
| 2JJCR-025-001-300 |        |        | 30      |         | 2      | 70        | 4                  | ☑ |   |
| 2JJCR-025-002-100 |        |        | R0,2    | 10      | 2,5    | 50        | 4                  | ☑ |   |
| 2JJCR-025-002-160 |        |        |         | 16      | 2,5    | 50        | 4                  | ☑ |   |
| 2JJCR-025-002-200 |        |        |         | 20      | 2,5    | 50        | 4                  | ☑ |   |
| 2JJCR-025-003-100 |        |        |         | R0,3    | 10     | 2,5       | 50                 | 4 | ☑ |
| 2JJCR-025-003-160 | 16     |        |         |         | 2,5    | 50        | 4                  | ☑ |   |
| 2JJCR-025-003-200 | 20     |        | 2,5     |         | 50     | 4         | ☑                  |   |   |
| 2JJCR-025-005-100 | R0,5   |        | 10      |         | 2,5    | 50        | 4                  | ☑ |   |
| 2JJCR-025-005-160 |        |        | 16      |         | 2,5    | 50        | 4                  | ☑ |   |
| 2JJCR-025-005-200 |        |        | 20      | 2,5     | 50     | 4         | ☑                  |   |   |
| 2JJCR-030-001-100 |        |        | 3       | R0,1    | 10     | 3         | 50                 | 6 | ☑ |
| 2JJCR-030-001-120 |        | 12     |         |         | 3      | 50        | 6                  | ☑ |   |
| 2JJCR-030-001-160 | 16     | 3      |         |         | 55     | 6         | ☑                  |   |   |
| 2JJCR-030-001-200 | 20     | 3      |         |         | 60     | 6         | ☑                  |   |   |
| 2JJCR-030-001-250 | 25     | 3      |         |         | 65     | 6         | ☑                  |   |   |
| 2JJCR-030-001-300 | 30     | 3      |         | 70      | 6      | ☑         |                    |   |   |
| 2JJCR-030-001-350 | 35     | 3      |         | 75      | 6      | ☑         |                    |   |   |
| 2JJCR-030-001-400 | 40     | 3      |         | 80      | 6      | ☑         |                    |   |   |
| 2JJCR-030-002-100 | R0,2   | 10     |         | 3       | 50     | 6         | ☑                  |   |   |
| 2JJCR-030-002-120 |        | 12     |         | 3       | 50     | 6         | ☑                  |   |   |
| 2JJCR-030-002-160 |        | 16     |         | 3       | 55     | 6         | ☑                  |   |   |
| 2JJCR-030-002-200 |        | 20     |         | 3       | 60     | 6         | ☑                  |   |   |
| 2JJCR-030-002-250 |        | 25     |         | 3       | 65     | 6         | ☑                  |   |   |
| 2JJCR-030-002-300 |        | 30     |         | 3       | 70     | 6         | ☑                  |   |   |
| 2JJCR-030-002-350 |        | 35     |         | 3       | 75     | 6         | ☑                  |   |   |
| 2JJCR-030-002-400 |        | 40     | 3       | 80      | 6      | ☑         |                    |   |   |
| 2JJCR-030-003-100 |        | R0,3   | 10      | 3       | 50     | 6         | ☑                  |   |   |
| 2JJCR-030-003-120 |        |        | 12      | 3       | 50     | 6         | ☑                  |   |   |
| 2JJCR-030-003-160 | 16     |        | 3       | 55      | 6      | ☑         |                    |   |   |
| 2JJCR-030-003-200 | 20     |        | 3       | 60      | 6      | ☑         |                    |   |   |
| 2JJCR-030-003-250 | 25     |        | 3       | 65      | 6      | ☑         |                    |   |   |
| 2JJCR-030-003-300 | 30     | 3      | 70      | 6       | ☑      |           |                    |   |   |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm)                              | d h5 (mm)                           | Standardní položka                  |                                     |
|-------------------|--------|--------|---------|---------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 2JJCR-030-003-350 | 3      | R0,3   | 35      | 3       | 75                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-030-003-400 |        |        | 40      | 3       | 80                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-030-005-100 |        |        | R0,5    | 10      | 3                                   | 50                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2JJCR-030-005-120 |        | 12     |         | 3       | 50                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-030-005-160 |        | 16     |         | 3       | 55                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-030-005-200 |        | 20     |         | 3       | 60                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-030-005-250 |        | 25     |         | 3       | 65                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-030-005-300 |        | 30     |         | 3       | 70                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-030-005-350 |        | 35     | 3       | 75      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-030-005-400 |        | 40     | 3       | 80      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-030-010-100 |        | R1     | 10      | 3       | 50                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-030-010-120 |        |        | 12      | 3       | 50                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-030-010-160 |        |        | 16      | 3       | 55                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-030-010-200 |        | R1     | 20      | 3       | 60                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-030-010-250 |        |        | 25      | 3       | 65                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-030-010-300 |        |        | 30      | 3       | 70                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-030-010-350 |        | 35     | 3       | 75      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-030-010-400 |        | 40     | 3       | 80      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-040-001-120 |        | 4      | R0,1    | 12      | 4                                   | 50                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2JJCR-040-001-160 |        |        |         | 16      | 4                                   | 55                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2JJCR-040-001-200 |        |        |         | 20      | 4                                   | 60                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2JJCR-040-001-250 |        |        |         | 25      | 4                                   | 65                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2JJCR-040-001-300 |        |        |         | 30      | 4                                   | 70                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2JJCR-040-001-350 |        |        |         | 35      | 4                                   | 75                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2JJCR-040-001-400 |        |        | 40      | 4       | 80                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-002-120 |        |        | R0,2    | 12      | 4                                   | 50                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2JJCR-040-002-160 |        |        |         | 16      | 4                                   | 55                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2JJCR-040-002-200 |        |        |         | 20      | 4                                   | 60                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2JJCR-040-002-250 |        |        |         | 25      | 4                                   | 65                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2JJCR-040-002-300 |        |        |         | 30      | 4                                   | 70                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2JJCR-040-002-350 | 35     | 4      |         | 75      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-040-002-400 | 40     | 4      | 80      | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 2JJCR-040-003-120 | 4      | R0,3   | 12      | 4       | 50                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-003-160 |        |        | 16      | 4       | 55                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-003-200 |        |        | 20      | 4       | 60                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-003-250 |        |        | 25      | 4       | 65                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-003-300 |        |        | 30      | 4       | 70                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-003-350 |        |        | 35      | 4       | 75                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-003-400 |        | 40     | 4       | 80      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-040-005-120 |        | R0,5   | 12      | 4       | 50                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-005-160 |        |        | 16      | 4       | 55                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-005-200 |        |        | 20      | 4       | 60                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-005-250 |        |        | 25      | 4       | 65                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-005-300 |        |        | 30      | 4       | 70                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-005-350 | 35     |        | 4       | 75      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJCR-040-005-400 | 40     | 4      | 80      | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 2JJCR-040-010-120 | 4      | R1     | 12      | 4       | 50                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-010-160 |        |        | 16      | 4       | 55                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-010-200 |        |        | 20      | 4       | 60                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-010-250 |        |        | 25      | 4       | 65                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-010-300 |        |        | 30      | 4       | 70                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJCR-040-010-350 |        |        | 35      | 4       | 75                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|-------------------|--------|--------|---------|---------|--------|-----------|-------------------------------------|
| 2JJCR-040-010-400 | 4      | R1     | 40      | 4       | 80     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-050-002-150 | 5      | R0,2   | 15      | 6       | 60     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-050-002-250 |        |        | 25      | 6       | 70     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-050-002-300 |        |        | 30      | 6       | 70     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-050-002-400 |        |        | 40      | 6       | 80     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-050-005-150 |        | R0,5   | 15      | 6       | 60     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-050-005-250 |        |        | 25      | 6       | 70     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-050-005-300 |        |        | 30      | 6       | 70     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-050-005-400 |        |        | 40      | 6       | 80     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-050-010-150 |        | R1     | 15      | 6       | 60     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-050-010-250 |        |        | 25      | 6       | 70     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-050-010-300 |        |        | 30      | 6       | 70     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-050-010-400 |        |        | 40      | 6       | 80     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-060-001-200 | 6      | R0,1   | 20      | 7       | 60     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-060-001-400 |        |        | 40      | 7       | 80     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-060-002-200 |        | R0,2   | 20      | 7       | 60     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-060-002-400 |        |        | 40      | 7       | 80     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-060-003-200 |        | R0,3   | 20      | 7       | 60     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-060-003-400 |        |        | 40      | 7       | 80     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-060-005-200 |        | R0,5   | 20      | 7       | 60     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-060-005-400 |        |        | 40      | 7       | 80     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-060-010-200 |        | R1     | 20      | 7       | 60     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-060-010-400 |        |        | 40      | 7       | 80     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-060-015-200 |        | R1,5   | 20      | 7       | 60     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-060-015-400 |        |        | 40      | 7       | 80     | 6         | <input checked="" type="checkbox"/> |
| 2JJCR-080-002-220 | 8      | R0,2   | 22      | 9       | 65     | 8         | <input checked="" type="checkbox"/> |
| 2JJCR-080-003-220 |        | R0,3   | 22      | 9       | 65     | 8         | <input checked="" type="checkbox"/> |
| 2JJCR-080-005-220 |        | R0,5   | 22      | 9       | 65     | 8         | <input checked="" type="checkbox"/> |
| 2JJCR-080-010-220 |        | R1     | 22      | 9       | 65     | 8         | <input checked="" type="checkbox"/> |
| 2JJCR-080-015-220 |        | R1,5   | 22      | 9       | 65     | 8         | <input checked="" type="checkbox"/> |
| 2JJCR-100-002-240 | 10     | R0,2   | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |
| 2JJCR-100-003-240 |        | R0,3   | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |
| 2JJCR-100-010-240 |        | R1     | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |
| 2JJCR-100-015-240 |        | R1,5   | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |
| 2JJCR-100-020-240 | 12     | R2     | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |
| 2JJCR-120-002-260 |        | R0,2   | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 2JJCR-120-003-260 |        | R0,3   | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 2JJCR-120-005-260 | 12     | R0,5   | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 2JJCR-120-010-260 |        | R1     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 2JJCR-120-015-260 |        | R1,5   | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 2JJCR-120-020-260 | 16     | R2     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 2JJCR-120-030-260 |        | R3     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 2JJCR-160-005-110 | 16     | R0,5   | 35      | 20      | 110    | 16        | <input checked="" type="checkbox"/> |
| 2JJCR-160-010-110 |        | R1     | 35      | 20      | 110    | 16        | <input checked="" type="checkbox"/> |



- Určeno pro kalené oceli (52 - 68 HRC)
- Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- Velmi přesné tolerance rezných hran
- Široký sortiment rádiusů a vyložení pro optimální výběr nástroje
- Vysoká tuhost díky kuželovému odlehčení
- Vynikající výkon při vysokých rezných rychlostech díky 0,2 μm tvrdkovu



| Objednací číslo    | D (mm) | R (mm) | Úhel θ | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |   |
|--------------------|--------|--------|--------|---------|---------|--------|-----------|--------------------|---|---|
| 2JJTC-010-001-0601 | 1      | R0,1   | 1°     | 6       | 1       | 50     | 4         | ☑                  |   |   |
| 2JJTC-010-001-1001 |        |        | 1°     | 10      | 1       | 50     | 4         | ☑                  |   |   |
| 2JJTC-010-001-1501 |        |        | 1°     | 15      | 1       | 50     | 4         | ☑                  |   |   |
| 2JJTC-010-001-2001 |        |        | 1°     | 20      | 1       | 60     | 4         | ☑                  |   |   |
| 2JJTC-010-001-2501 |        |        | 1°     | 25      | 1       | 60     | 4         | ☑                  |   |   |
| 2JJTC-010-001-3001 |        |        | 1°     | 30      | 1       | 70     | 4         | ☑                  |   |   |
| 2JJTC-010-001-3501 |        |        | 1°     | 35      | 1       | 75     | 4         | ☑                  |   |   |
| 2JJTC-010-002-0601 |        |        | 1°     | 6       | 1       | 50     | 4         | ☑                  |   |   |
| 2JJTC-010-002-1001 |        |        | 1°     | 10      | 1       | 50     | 4         | ☑                  |   |   |
| 2JJTC-010-002-1501 |        |        | 1°     | 15      | 1       | 50     | 4         | ☑                  |   |   |
| 2JJTC-010-002-2001 |        |        | 1°     | 20      | 1       | 60     | 4         | ☑                  |   |   |
| 2JJTC-010-002-2501 |        |        | 1°     | 25      | 1       | 60     | 4         | ☑                  |   |   |
| 2JJTC-010-002-3001 |        |        | 1°     | 30      | 1       | 70     | 4         | ☑                  |   |   |
| 2JJTC-010-002-3501 |        |        | 1°     | 35      | 1       | 75     | 4         | ☑                  |   |   |
| 2JJTC-010-003-0601 |        |        | 1°     | 6       | 1       | 50     | 4         | ☑                  |   |   |
| 2JJTC-010-003-1001 |        | 1°     | 10     | 1       | 50      | 4      | ☑         |                    |   |   |
| 2JJTC-010-003-1501 |        | 1°     | 15     | 1       | 50      | 4      | ☑         |                    |   |   |
| 2JJTC-010-003-2001 |        | 1°     | 20     | 1       | 60      | 4      | ☑         |                    |   |   |
| 2JJTC-010-003-2501 |        | 1°     | 25     | 1       | 60      | 4      | ☑         |                    |   |   |
| 2JJTC-010-003-3001 |        | 1°     | 30     | 1       | 70      | 4      | ☑         |                    |   |   |
| 2JJTC-010-003-3501 |        | 1°     | 35     | 1       | 75      | 4      | ☑         |                    |   |   |
| 2JJTC-015-002-1001 |        | 1,5    | R0,2   | 1°      | 10      | 1,5    | 50        | 4                  | ☑ |   |
| 2JJTC-015-002-1501 |        |        |        | 1°      | 15      | 1,5    | 50        | 4                  | ☑ |   |
| 2JJTC-015-002-2001 |        |        |        | 1°      | 20      | 1,5    | 60        | 4                  | ☑ |   |
| 2JJTC-015-002-2501 |        |        |        | 1°      | 25      | 1,5    | 60        | 4                  | ☑ |   |
| 2JJTC-015-002-3001 |        |        |        | 1°      | 30      | 1,5    | 70        | 4                  | ☑ |   |
| 2JJTC-015-002-3501 |        |        |        | 1°      | 35      | 1,5    | 75        | 4                  | ☑ |   |
| 2JJTC-015-003-1001 |        |        |        | R0,3    | 1°      | 10     | 1,5       | 50                 | 4 | ☑ |
| 2JJTC-015-003-1501 |        |        |        |         | 1°      | 15     | 1,5       | 50                 | 4 | ☑ |
| 2JJTC-015-003-2001 |        |        |        |         | 1°      | 20     | 1,5       | 60                 | 4 | ☑ |
| 2JJTC-015-003-2501 | 1°     |        |        |         | 25      | 1,5    | 60        | 4                  | ☑ |   |
| 2JJTC-015-003-3001 | 1°     |        |        |         | 30      | 1,5    | 70        | 4                  | ☑ |   |
| 2JJTC-015-003-3501 | 1°     |        |        |         | 35      | 1,5    | 75        | 4                  | ☑ |   |
| 2JJTC-015-005-1001 | R0,5   |        | 1°     |         | 10      | 1,5    | 50        | 4                  | ☑ |   |
| 2JJTC-015-005-1501 |        |        | 1°     |         | 15      | 1,5    | 50        | 4                  | ☑ |   |
| 2JJTC-015-005-2001 |        |        | 1°     |         | 20      | 1,5    | 60        | 4                  | ☑ |   |
| 2JJTC-015-005-2501 |        |        | 1°     |         | 25      | 1,5    | 60        | 4                  | ☑ |   |
| 2JJTC-015-005-3001 |        |        | 1°     |         | 30      | 1,5    | 70        | 4                  | ☑ |   |
| 2JJTC-015-005-3001 |        |        | 1°     |         | 30      | 1,5    | 70        | 4                  | ☑ |   |

| Objednací číslo    | D (mm) | R (mm) | Úhel θ | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |    |   |
|--------------------|--------|--------|--------|---------|---------|--------|-----------|--------------------|----|---|
| 2JJTC-015-005-3501 | 1,5    | R0,5   | 1°     | 35      | 1,5     | 75     | 4         | ☑                  |    |   |
| 2JJTC-020-002-1201 | 2      | R0,2   | 1°     | 12      | 2       | 50     | 4         | ☑                  |    |   |
| 2JJTC-020-002-1601 |        |        | 1°     | 16      | 2       | 50     | 4         | ☑                  |    |   |
| 2JJTC-020-002-2001 |        |        | 1°     | 20      | 2       | 60     | 4         | ☑                  |    |   |
| 2JJTC-020-002-2501 |        |        | 1°     | 25      | 2       | 60     | 4         | ☑                  |    |   |
| 2JJTC-020-002-3001 |        |        | 1°     | 30      | 2       | 70     | 4         | ☑                  |    |   |
| 2JJTC-020-002-3501 |        |        | 1°     | 35      | 2       | 75     | 4         | ☑                  |    |   |
| 2JJTC-020-002-4001 |        |        | 1°     | 40      | 2       | 80     | 4         | ☑                  |    |   |
| 2JJTC-020-002-5001 |        |        | 1°     | 50      | 2       | 90     | 4         | ☑                  |    |   |
| 2JJTC-020-003-1201 |        |        | R0,3   | 1°      | 12      | 2      | 50        | 4                  | ☑  |   |
| 2JJTC-020-003-1601 |        |        |        | 1°      | 16      | 2      | 50        | 4                  | ☑  |   |
| 2JJTC-020-003-2001 |        |        |        | 1°      | 20      | 2      | 60        | 4                  | ☑  |   |
| 2JJTC-020-003-2501 |        |        |        | 1°      | 25      | 2      | 60        | 4                  | ☑  |   |
| 2JJTC-020-003-3001 |        |        |        | 1°      | 30      | 2      | 70        | 4                  | ☑  |   |
| 2JJTC-020-003-3501 |        |        |        | 1°      | 35      | 2      | 75        | 4                  | ☑  |   |
| 2JJTC-020-003-4001 |        |        |        | 1°      | 40      | 2      | 80        | 4                  | ☑  |   |
| 2JJTC-020-003-5001 |        | 1°     |        | 50      | 2       | 90     | 4         | ☑                  |    |   |
| 2JJTC-020-005-1201 |        | R0,5   |        | 1°      | 12      | 2      | 50        | 4                  | ☑  |   |
| 2JJTC-020-005-1601 |        |        |        | 1°      | 16      | 2      | 50        | 4                  | ☑  |   |
| 2JJTC-020-005-2001 |        |        |        | 1°      | 20      | 2      | 60        | 4                  | ☑  |   |
| 2JJTC-020-005-2501 |        |        |        | 1°      | 25      | 2      | 60        | 4                  | ☑  |   |
| 2JJTC-020-005-3001 |        |        |        | 1°      | 30      | 2      | 70        | 4                  | ☑  |   |
| 2JJTC-020-005-3501 |        |        |        | 1°      | 35      | 2      | 75        | 4                  | ☑  |   |
| 2JJTC-020-005-4001 |        |        |        | 1°      | 40      | 2      | 80        | 4                  | ☑  |   |
| 2JJTC-020-005-5001 |        |        | 1°     | 50      | 2       | 90     | 4         | ☑                  |    |   |
| 2JJTC-030-002-2001 |        |        | 3      | R0,2    | 1°      | 20     | 3         | 60                 | 6  | ☑ |
| 2JJTC-030-002-3001 |        |        |        |         | 1°      | 30     | 3         | 70                 | 6  | ☑ |
| 2JJTC-030-002-4001 |        |        |        |         | 1°      | 40     | 3         | 80                 | 6  | ☑ |
| 2JJTC-030-002-5001 |        |        |        |         | 1°      | 50     | 3         | 90                 | 6  | ☑ |
| 2JJTC-030-002-6001 |        |        |        |         | 1°      | 60     | 3         | 100                | 6  | ☑ |
| 2JJTC-030-003-2001 |        |        |        |         | R0,3    | 1°     | 20        | 3                  | 60 | 6 |
| 2JJTC-030-003-3001 | 1°     |        |        |         |         | 30     | 3         | 70                 | 6  | ☑ |
| 2JJTC-030-003-4001 | 1°     | 40     |        |         |         | 3      | 80        | 6                  | ☑  |   |
| 2JJTC-030-003-5001 | 1°     | 50     |        |         |         | 3      | 90        | 6                  | ☑  |   |
| 2JJTC-030-003-6001 | 1°     | 60     |        | 3       |         | 100    | 6         | ☑                  |    |   |
| 2JJTC-030-005-2001 | R0,5   | 1°     |        | 20      |         | 3      | 60        | 6                  | ☑  |   |
| 2JJTC-030-005-3001 |        | 1°     |        | 30      |         | 3      | 70        | 6                  | ☑  |   |
| 2JJTC-030-005-4001 |        | 1°     |        | 40      |         | 3      | 80        | 6                  | ☑  |   |

| Objednací číslo    | D (mm) | R (mm) | Úhel $\theta$ | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |                                     |
|--------------------|--------|--------|---------------|---------|---------|--------|-----------|-------------------------------------|-------------------------------------|
| 2JJTC-030-005-5001 | 3      | R0,5   | 1°            | 50      | 3       | 90     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-030-005-6001 |        |        | 1°            | 60      | 3       | 100    | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-030-010-2001 |        | R1     | 1°            | 20      | 3       | 60     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-030-010-3001 |        |        | 1°            | 30      | 3       | 70     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-030-010-4001 |        |        | 1°            | 40      | 3       | 80     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-030-010-5001 |        |        | 1°            | 50      | 3       | 90     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-030-010-6001 |        |        | 1°            | 60      | 3       | 100    | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-040-002-2001 |        |        | 4             | R0,2    | 1°      | 20     | 4         | 60                                  | 6                                   |
| 2JJTC-040-002-3001 | 1°     | 30     |               |         | 4       | 70     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-040-002-4001 | 1°     | 40     |               |         | 4       | 80     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-040-002-5001 | 1°     | 50     |               |         | 4       | 90     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-040-002-6001 | 1°     | 60     |               |         | 4       | 100    | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-040-003-2001 | R0,3   | 1°     |               |         | 20      | 4      | 60        | 6                                   | <input checked="" type="checkbox"/> |
| 2JJTC-040-003-3001 |        | 1°     |               | 30      | 4       | 70     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-040-003-4001 |        | 1°     |               | 40      | 4       | 80     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-040-003-5001 |        | 1°     |               | 50      | 4       | 90     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-040-003-6001 |        | 1°     |               | 60      | 4       | 100    | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-040-005-2001 |        | R0,5   |               | 1°      | 20      | 4      | 60        | 6                                   | <input checked="" type="checkbox"/> |
| 2JJTC-040-005-3001 |        |        |               | 1°      | 30      | 4      | 70        | 6                                   | <input checked="" type="checkbox"/> |
| 2JJTC-040-005-4001 |        |        |               | 1°      | 40      | 4      | 80        | 6                                   | <input checked="" type="checkbox"/> |
| 2JJTC-040-005-5001 |        |        |               | 1°      | 50      | 4      | 90        | 6                                   | <input checked="" type="checkbox"/> |
| 2JJTC-040-005-6001 |        |        |               | 1°      | 60      | 4      | 100       | 6                                   | <input checked="" type="checkbox"/> |
| 2JJTC-040-010-2001 |        |        |               | R1      | 1°      | 20     | 4         | 60                                  | 6                                   |
| 2JJTC-040-010-3001 |        | 1°     |               |         | 30      | 4      | 70        | 6                                   | <input checked="" type="checkbox"/> |
| 2JJTC-040-010-4001 | 1°     | 40     |               |         | 4       | 80     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-040-010-5001 | 1°     | 50     |               |         | 4       | 90     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2JJTC-040-010-6001 | 1°     | 60     |               |         | 4       | 100    | 6         | <input checked="" type="checkbox"/> |                                     |



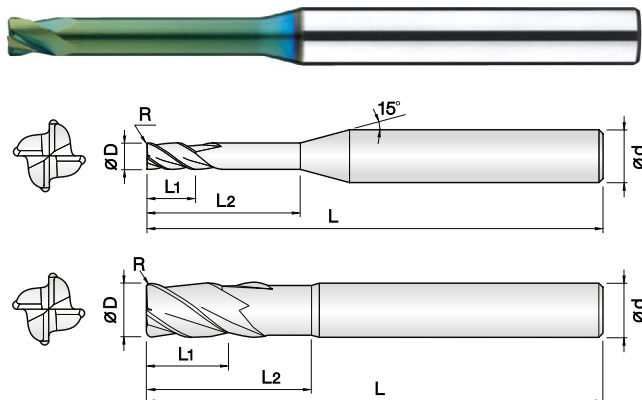
Nahrazuje z předcházejícího katalogu kategorii **2TCR**.



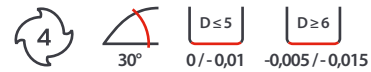
V současné době dochází k výměně skladu z typu 2TCR na 2JJTC, proto po určitou dobu mohou být zaslány oba typy současně.

# 4JJCR

## 4-břité TOROIDNÍ frézy pro žebrování pro kalené oceli do HRC 68



- Určeno pro kalené oceli (52 - 68 HRC)
- Vysoká odolnost proti opotřeby díky novému PVD povlaku s vysokým obsahem Si
- Velmi přesné tolerance řezných hran
- Široký sortiment rádiů a vyložení pro optimální výběr nástroje
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



NOVINKA

| Objednací číslo    | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |   |
|--------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|---|
| 4JJCR-005-0005-020 | 0,5    | R0,5   | 2       | 0,5     | 45     | 4         | ☑                  |   |   |
| 4JJCR-005-0005-040 |        |        | 4       | 0,5     | 45     | 4         | ☑                  |   |   |
| 4JJCR-005-0005-060 |        |        | 6       | 0,5     | 45     | 4         | ☑                  |   |   |
| 4JJCR-005-0005-080 |        |        | 8       | 0,5     | 45     | 4         | ☑                  |   |   |
| 4JJCR-005-001-020  |        | R0,1   | 2       | 0,5     | 45     | 4         | ☑                  |   |   |
| 4JJCR-005-001-040  |        |        | 4       | 0,5     | 45     | 4         | ☑                  |   |   |
| 4JJCR-005-001-060  |        |        | 6       | 0,5     | 45     | 4         | ☑                  |   |   |
| 4JJCR-005-001-080  |        |        | 8       | 0,5     | 45     | 4         | ☑                  |   |   |
| 4JJCR-006-0005-020 |        | 0,6    | R0,5    | 2       | 0,6    | 45        | 4                  | ☑ |   |
| 4JJCR-006-0005-040 |        |        |         | 4       | 0,6    | 45        | 4                  | ☑ |   |
| 4JJCR-006-0005-060 |        |        |         | 6       | 0,6    | 45        | 4                  | ☑ |   |
| 4JJCR-006-0005-080 |        |        |         | 8       | 0,6    | 45        | 4                  | ☑ |   |
| 4JJCR-006-001-020  |        |        | R0,1    | 2       | 0,6    | 45        | 4                  | ☑ |   |
| 4JJCR-006-001-040  |        |        |         | 4       | 0,6    | 45        | 4                  | ☑ |   |
| 4JJCR-006-001-060  |        |        |         | 6       | 0,6    | 45        | 4                  | ☑ |   |
| 4JJCR-006-001-080  |        |        |         | 8       | 0,6    | 45        | 4                  | ☑ |   |
| 4JJCR-007-0005-020 | 0,7    |        | R0,5    | 2       | 0,7    | 45        | 4                  | ☑ |   |
| 4JJCR-007-0005-040 |        |        |         | 4       | 0,7    | 45        | 4                  | ☑ |   |
| 4JJCR-007-0005-060 |        |        |         | 6       | 0,7    | 45        | 4                  | ☑ |   |
| 4JJCR-007-0005-080 |        |        |         | 8       | 0,7    | 45        | 4                  | ☑ |   |
| 4JJCR-007-001-020  |        |        | R0,1    | 2       | 0,7    | 45        | 4                  | ☑ |   |
| 4JJCR-007-001-040  |        |        |         | 4       | 0,7    | 45        | 4                  | ☑ |   |
| 4JJCR-007-001-060  |        |        |         | 6       | 0,7    | 45        | 4                  | ☑ |   |
| 4JJCR-007-001-080  |        |        |         | 8       | 0,7    | 45        | 4                  | ☑ |   |
| 4JJCR-008-0002-020 |        | 0,8    | R0,02   | 2       | 0,8    | 45        | 4                  | ☑ |   |
| 4JJCR-008-0002-040 |        |        |         | 4       | 0,8    | 45        | 4                  | ☑ |   |
| 4JJCR-008-0002-060 |        |        |         | 6       | 0,8    | 45        | 4                  | ☑ |   |
| 4JJCR-008-0002-080 |        |        |         | 8       | 0,8    | 45        | 4                  | ☑ |   |
| 4JJCR-008-0002-100 |        |        | R0,05   | 10      | 0,8    | 45        | 4                  | ☑ |   |
| 4JJCR-008-0005-020 |        |        |         | R0,05   | 2      | 0,8       | 45                 | 4 | ☑ |
| 4JJCR-008-0005-040 |        |        |         |         | 4      | 0,8       | 45                 | 4 | ☑ |
| 4JJCR-008-0005-060 |        |        |         |         | 6      | 0,8       | 45                 | 4 | ☑ |
| 4JJCR-008-0005-080 | 8      |        | 0,8     |         | 45     | 4         | ☑                  |   |   |
| 4JJCR-008-0005-100 | R0,05  |        | 10      | 0,8     | 45     | 4         | ☑                  |   |   |
| 4JJCR-008-001-020  |        |        | R0,1    | 2       | 0,8    | 45        | 4                  | ☑ |   |
| 4JJCR-008-001-040  |        |        |         | 4       | 0,8    | 45        | 4                  | ☑ |   |
| 4JJCR-008-001-060  |        |        |         | 6       | 0,8    | 45        | 4                  | ☑ |   |
| 4JJCR-008-001-080  | 8      |        |         | 0,8     | 45     | 4         | ☑                  |   |   |

| Objednací číslo    | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|--------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 4JJCR-008-001-100  | 0,8    | R0,1   | 10      | 0,8     | 45     | 4         | ☑                  |   |
| 4JJCR-008-001-120  |        |        | 12      | 0,8     | 50     | 4         | ☑                  |   |
| 4JJCR-010-0002-040 | 1      | R0,02  | 4       | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-0002-060 |        |        | 6       | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-0002-080 |        |        | 8       | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-0002-100 |        |        | 10      | 1       | 50     | 4         | ☑                  |   |
| 4JJCR-010-0002-120 |        | 12     | 1       | 50      | 4      | ☑         |                    |   |
| 4JJCR-010-0005-040 |        | R0,05  | 4       | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-0005-060 |        |        | 6       | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-0005-080 |        |        | 8       | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-0005-100 |        |        | 10      | 1       | 50     | 4         | ☑                  |   |
| 4JJCR-010-0005-120 |        | 12     | 1       | 50      | 4      | ☑         |                    |   |
| 4JJCR-010-001-040  |        | R0,1   | 4       | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-001-060  |        |        | 6       | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-001-080  |        |        | 8       | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-001-100  |        |        | 10      | 1       | 50     | 4         | ☑                  |   |
| 4JJCR-010-001-120  |        | 12     | 1       | 50      | 4      | ☑         |                    |   |
| 4JJCR-010-002-040  |        | 1      | R0,2    | 4       | 1      | 45        | 4                  | ☑ |
| 4JJCR-010-002-060  | 6      |        |         | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-002-080  | 8      |        |         | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-002-100  | 10     |        |         | 1       | 50     | 4         | ☑                  |   |
| 4JJCR-010-002-120  | 12     |        | 1       | 50      | 4      | ☑         |                    |   |
| 4JJCR-010-003-040  | R0,3   |        | 4       | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-003-060  |        |        | 6       | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-003-080  |        |        | 8       | 1       | 45     | 4         | ☑                  |   |
| 4JJCR-010-003-100  |        |        | 10      | 1       | 50     | 4         | ☑                  |   |
| 4JJCR-010-003-120  | 12     |        | 1       | 50      | 4      | ☑         |                    |   |
| 4JJCR-012-0002-040 | 1,2    |        | R0,02   | 4       | 1,2    | 45        | 4                  | ☑ |
| 4JJCR-012-0002-060 |        |        |         | 6       | 1,2    | 45        | 4                  | ☑ |
| 4JJCR-012-0002-080 |        |        |         | 8       | 1,2    | 45        | 4                  | ☑ |
| 4JJCR-012-0002-100 |        |        |         | 10      | 1,2    | 50        | 4                  | ☑ |
| 4JJCR-012-0002-120 |        |        | 12      | 1,2     | 50     | 4         | ☑                  |   |
| 4JJCR-012-0005-040 |        |        | R0,05   | 4       | 1,2    | 45        | 4                  | ☑ |
| 4JJCR-012-0005-060 |        | 6      |         | 1,2     | 45     | 4         | ☑                  |   |
| 4JJCR-012-0005-080 |        | 8      |         | 1,2     | 45     | 4         | ☑                  |   |
| 4JJCR-012-0005-100 |        | 10     |         | 1,2     | 50     | 4         | ☑                  |   |
| 4JJCR-012-0005-120 |        | 12     | 1,2     | 50      | 4      | ☑         |                    |   |
| 4JJCR-012-001-040  |        | R0,1   | 4       | 1,2     | 45     | 4         | ☑                  |   |

| Objednací číslo    | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|--------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 4JJCR-012-001-060  | 1,2    | R0,1   | 6       | 1,2     | 45     | 4         | ☑                  |   |
| 4JJCR-012-001-080  |        |        | 8       | 1,2     | 45     | 4         | ☑                  |   |
| 4JJCR-012-001-100  |        |        | 10      | 1,2     | 50     | 4         | ☑                  |   |
| 4JJCR-012-001-120  |        |        | 12      | 1,2     | 50     | 4         | ☑                  |   |
| 4JJCR-012-002-040  |        | R0,2   | 4       | 1,2     | 45     | 4         | ☑                  |   |
| 4JJCR-012-002-060  |        |        | 6       | 1,2     | 45     | 4         | ☑                  |   |
| 4JJCR-012-002-080  |        |        | 8       | 1,2     | 45     | 4         | ☑                  |   |
| 4JJCR-012-002-100  |        |        | 10      | 1,2     | 50     | 4         | ☑                  |   |
| 4JJCR-012-002-120  |        |        | 12      | 1,2     | 50     | 4         | ☑                  |   |
| 4JJCR-012-003-040  |        |        | R0,3    | 4       | 1,2    | 45        | 4                  | ☑ |
| 4JJCR-012-003-060  |        |        |         | 6       | 1,2    | 45        | 4                  | ☑ |
| 4JJCR-012-003-080  |        |        |         | 8       | 1,2    | 45        | 4                  | ☑ |
| 4JJCR-012-003-100  |        | 10     |         | 1,2     | 50     | 4         | ☑                  |   |
| 4JJCR-012-003-120  |        | 12     | 1,2     | 50      | 4      | ☑         |                    |   |
| 4JJCR-015-0002-060 |        | 1,5    | R0,02   | 6       | 1,5    | 45        | 4                  | ☑ |
| 4JJCR-015-0002-080 |        |        |         | 8       | 1,5    | 45        | 4                  | ☑ |
| 4JJCR-015-0002-100 | 10     |        |         | 1,5     | 50     | 4         | ☑                  |   |
| 4JJCR-015-0002-120 | 12     |        |         | 1,5     | 50     | 4         | ☑                  |   |
| 4JJCR-015-0002-160 | R0,05  |        | 16      | 1,5     | 50     | 4         | ☑                  |   |
| 4JJCR-015-0005-060 |        |        | 6       | 1,5     | 45     | 4         | ☑                  |   |
| 4JJCR-015-0005-080 |        |        | 8       | 1,5     | 45     | 4         | ☑                  |   |
| 4JJCR-015-0005-100 |        |        | 10      | 1,5     | 50     | 4         | ☑                  |   |
| 4JJCR-015-0005-120 |        |        | 12      | 1,5     | 50     | 4         | ☑                  |   |
| 4JJCR-015-0005-160 |        |        | 16      | 1,5     | 50     | 4         | ☑                  |   |
| 4JJCR-015-001-060  |        |        | R0,1    | 6       | 1,5    | 45        | 4                  | ☑ |
| 4JJCR-015-001-080  |        |        | R0,1    | 8       | 1,5    | 45        | 4                  | ☑ |
| 4JJCR-015-001-100  | 10     |        |         | 1,5     | 50     | 4         | ☑                  |   |
| 4JJCR-015-001-120  | 12     |        |         | 1,5     | 50     | 4         | ☑                  |   |
| 4JJCR-015-001-160  | 16     |        |         | 1,5     | 50     | 4         | ☑                  |   |
| 4JJCR-015-002-060  | R0,2   |        | 6       | 1,5     | 45     | 4         | ☑                  |   |
| 4JJCR-015-002-080  |        | 8      | 1,5     | 45      | 4      | ☑         |                    |   |
| 4JJCR-015-002-100  |        | 10     | 1,5     | 50      | 4      | ☑         |                    |   |
| 4JJCR-015-002-120  |        | 12     | 1,5     | 50      | 4      | ☑         |                    |   |
| 4JJCR-015-002-160  |        | 16     | 1,5     | 50      | 4      | ☑         |                    |   |
| 4JJCR-015-003-060  |        | R0,3   | 6       | 1,5     | 45     | 4         | ☑                  |   |
| 4JJCR-015-003-080  |        |        | 8       | 1,5     | 45     | 4         | ☑                  |   |
| 4JJCR-015-003-100  |        |        | 10      | 1,5     | 50     | 4         | ☑                  |   |
| 4JJCR-015-003-120  | 12     |        | 1,5     | 50      | 4      | ☑         |                    |   |
| 4JJCR-015-003-160  | R0,5   | 16     | 1,5     | 50      | 4      | ☑         |                    |   |
| 4JJCR-015-005-060  |        | 6      | 1,5     | 45      | 4      | ☑         |                    |   |
| 4JJCR-015-005-080  |        | 8      | 1,5     | 45      | 4      | ☑         |                    |   |
| 4JJCR-015-005-100  |        | 10     | 1,5     | 50      | 4      | ☑         |                    |   |
| 4JJCR-015-005-120  |        | 12     | 1,5     | 50      | 4      | ☑         |                    |   |
| 4JJCR-015-005-160  |        | 16     | 1,5     | 50      | 4      | ☑         |                    |   |
| 4JJCR-020-0002-060 |        | 2      | R0,02   | 6       | 2      | 45        | 4                  | ☑ |
| 4JJCR-020-0002-080 |        |        |         | 8       | 2      | 45        | 4                  | ☑ |
| 4JJCR-020-0002-100 | 10     |        |         | 2       | 50     | 4         | ☑                  |   |
| 4JJCR-020-0002-120 | 12     |        |         | 2       | 50     | 4         | ☑                  |   |
| 4JJCR-020-0002-160 | R0,05  |        | 16      | 2       | 50     | 4         | ☑                  |   |
| 4JJCR-020-0002-200 |        |        | 20      | 2       | 50     | 4         | ☑                  |   |
| 4JJCR-020-0002-250 |        |        | 25      | 2       | 60     | 4         | ☑                  |   |
| 4JJCR-020-0005-060 |        |        | 6       | 2       | 45     | 4         | ☑                  |   |
| 4JJCR-020-0005-080 |        |        | 8       | 2       | 45     | 4         | ☑                  |   |
| 4JJCR-020-0005-100 |        |        | 10      | 2       | 50     | 4         | ☑                  |   |
| 4JJCR-020-0005-120 |        |        | 12      | 2       | 50     | 4         | ☑                  |   |
| 4JJCR-020-0005-160 |        |        | 16      | 2       | 50     | 4         | ☑                  |   |
| 4JJCR-020-0005-200 | R0,1   |        | 20      | 2       | 50     | 4         | ☑                  |   |
| 4JJCR-020-0005-250 |        |        | 25      | 2       | 60     | 4         | ☑                  |   |
| 4JJCR-030-001-100  |        |        | R0,1    | 10      | 3      | 50        | 6                  | ☑ |
| 4JJCR-030-001-120  |        |        |         | 12      | 3      | 50        | 6                  | ☑ |

| Objednací číslo    | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |    |   |   |
|--------------------|--------|--------|---------|---------|--------|-----------|--------------------|----|---|---|
| 4JJCR-020-0005-080 | 2      | R0,05  | 8       | 2       | 45     | 4         | ☑                  |    |   |   |
| 4JJCR-020-0005-100 |        |        | 10      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-0005-120 |        |        | 12      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-0005-160 |        |        | 16      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-0005-200 |        |        | 20      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-0005-250 |        |        | 25      | 2       | 60     | 4         | ☑                  |    |   |   |
| 4JJCR-020-001-060  |        | R0,1   | R0,1    | 6       | 2      | 45        | 4                  | ☑  |   |   |
| 4JJCR-020-001-080  |        |        |         | 8       | 2      | 45        | 4                  | ☑  |   |   |
| 4JJCR-020-001-100  |        |        |         | 10      | 2      | 50        | 4                  | ☑  |   |   |
| 4JJCR-020-001-120  |        |        |         | 12      | 2      | 50        | 4                  | ☑  |   |   |
| 4JJCR-020-001-160  |        |        |         | 16      | 2      | 50        | 4                  | ☑  |   |   |
| 4JJCR-020-001-200  |        |        |         | 20      | 2      | 50        | 4                  | ☑  |   |   |
| 4JJCR-020-001-250  |        |        | 25      | 2       | 60     | 4         | ☑                  |    |   |   |
| 4JJCR-020-002-060  |        |        | R0,2    | R0,2    | 6      | 2         | 45                 | 4  | ☑ |   |
| 4JJCR-020-002-080  |        |        |         |         | 8      | 2         | 45                 | 4  | ☑ |   |
| 4JJCR-020-002-100  |        |        |         |         | 10     | 2         | 50                 | 4  | ☑ |   |
| 4JJCR-020-002-120  | 12     | 2      |         |         | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-002-160  | R0,3   | R0,3   | 16      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-002-200  |        |        | 20      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-002-250  |        |        | 25      | 2       | 60     | 4         | ☑                  |    |   |   |
| 4JJCR-020-003-060  |        |        | 6       | 2       | 45     | 4         | ☑                  |    |   |   |
| 4JJCR-020-003-080  |        |        | 8       | 2       | 45     | 4         | ☑                  |    |   |   |
| 4JJCR-020-003-100  | R0,3   | R0,3   | 10      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-003-120  |        |        | 12      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-003-160  |        |        | 16      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-003-200  |        |        | 20      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-003-250  | R0,5   | R0,3   | 25      | 2       | 60     | 4         | ☑                  |    |   |   |
| 4JJCR-020-005-060  |        |        | 6       | 2       | 45     | 4         | ☑                  |    |   |   |
| 4JJCR-020-005-080  |        |        | 8       | 2       | 45     | 4         | ☑                  |    |   |   |
| 4JJCR-020-005-100  |        |        | 10      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-005-120  |        |        | 12      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-005-160  |        |        | 16      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-005-200  |        |        | 20      | 2       | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-020-005-250  |        |        | 25      | 2       | 60     | 4         | ☑                  |    |   |   |
| 4JJCR-025-001-100  | 2,5    | R0,1   | 10      | 2,5     | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-025-001-160  |        |        | 16      | 2,5     | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-025-001-200  |        |        | 20      | 2,5     | 50     | 4         | ☑                  |    |   |   |
| 4JJCR-025-001-250  |        |        | 25      | 2,5     | 60     | 4         | ☑                  |    |   |   |
| 4JJCR-025-002-100  |        |        | R0,2    | R0,2    | 10     | 2,5       | 50                 | 4  | ☑ |   |
| 4JJCR-025-002-160  |        |        |         |         | 16     | 2,5       | 50                 | 4  | ☑ |   |
| 4JJCR-025-002-200  |        | 20     |         |         | 2,5    | 50        | 4                  | ☑  |   |   |
| 4JJCR-025-002-250  |        | 25     |         |         | 2,5    | 60        | 4                  | ☑  |   |   |
| 4JJCR-025-003-100  |        | R0,3   | R0,3    | 10      | 2,5    | 50        | 4                  | ☑  |   |   |
| 4JJCR-025-003-160  |        |        |         | 16      | 2,5    | 50        | 4                  | ☑  |   |   |
| 4JJCR-025-003-200  |        |        |         | 20      | 2,5    | 50        | 4                  | ☑  |   |   |
| 4JJCR-025-003-250  |        |        |         | 25      | 2,5    | 60        | 4                  | ☑  |   |   |
| 4JJCR-025-005-100  |        |        |         | R0,5    | R0,5   | 10        | 2,5                | 50 | 4 | ☑ |
| 4JJCR-025-005-160  |        |        |         |         |        | 16        | 2,5                | 50 | 4 | ☑ |
| 4JJCR-025-005-200  |        | 20     | 2,5     |         |        | 50        | 4                  | ☑  |   |   |
| 4JJCR-025-005-250  |        | 25     | 2,5     |         |        | 60        | 4                  | ☑  |   |   |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 4JJCR-030-001-160 | 3      |        | 16      | 3       | 55     | 6         | ☑                  |   |
| 4JJCR-030-001-200 |        |        | 20      | 3       | 60     | 6         | ☑                  |   |
| 4JJCR-030-001-250 |        |        | 25      | 3       | 65     | 6         | ☑                  |   |
| 4JJCR-030-001-300 |        |        | 30      | 3       | 70     | 6         | ☑                  |   |
| 4JJCR-030-001-350 |        |        | 35      | 3       | 75     | 6         | ☑                  |   |
| 4JJCR-030-002-100 |        | R0,2   | 10      | 3       | 50     | 6         | ☑                  |   |
| 4JJCR-030-002-120 |        |        | 12      | 3       | 50     | 6         | ☑                  |   |
| 4JJCR-030-002-160 |        |        | 16      | 3       | 55     | 6         | ☑                  |   |
| 4JJCR-030-002-200 |        |        | 20      | 3       | 60     | 6         | ☑                  |   |
| 4JJCR-030-002-250 |        |        | 25      | 3       | 65     | 6         | ☑                  |   |
| 4JJCR-030-002-300 |        |        | 30      | 3       | 70     | 6         | ☑                  |   |
| 4JJCR-030-002-350 |        |        | 35      | 3       | 75     | 6         | ☑                  |   |
| 4JJCR-030-002-400 |        |        | 40      | 3       | 80     | 6         | ☑                  |   |
| 4JJCR-030-003-100 |        |        | R0,3    | 10      | 3      | 50        | 6                  | ☑ |
| 4JJCR-030-003-120 |        |        |         | 12      | 3      | 50        | 6                  | ☑ |
| 4JJCR-030-003-160 |        |        |         | 16      | 3      | 55        | 6                  | ☑ |
| 4JJCR-030-003-200 |        |        |         | 20      | 3      | 60        | 6                  | ☑ |
| 4JJCR-030-003-250 |        | 25     |         | 3       | 65     | 6         | ☑                  |   |
| 4JJCR-030-003-300 |        | 30     |         | 3       | 70     | 6         | ☑                  |   |
| 4JJCR-030-003-350 |        | 35     |         | 3       | 75     | 6         | ☑                  |   |
| 4JJCR-030-003-400 |        | 40     |         | 3       | 80     | 6         | ☑                  |   |
| 4JJCR-030-005-100 |        | R0,5   | 10      | 3       | 50     | 6         | ☑                  |   |
| 4JJCR-030-005-120 |        |        | 12      | 3       | 50     | 6         | ☑                  |   |
| 4JJCR-030-005-160 |        |        | 16      | 3       | 55     | 6         | ☑                  |   |
| 4JJCR-030-005-200 |        |        | 20      | 3       | 60     | 6         | ☑                  |   |
| 4JJCR-030-005-250 |        |        | 25      | 3       | 65     | 6         | ☑                  |   |
| 4JJCR-030-005-300 |        |        | 30      | 3       | 70     | 6         | ☑                  |   |
| 4JJCR-030-005-350 |        |        | 35      | 3       | 75     | 6         | ☑                  |   |
| 4JJCR-030-005-400 |        |        | 40      | 3       | 80     | 6         | ☑                  |   |
| 4JJCR-030-010-100 |        | R1     | 10      | 3       | 50     | 6         | ☑                  |   |
| 4JJCR-030-010-120 |        |        | 12      | 3       | 50     | 6         | ☑                  |   |
| 4JJCR-030-010-160 |        |        | 16      | 3       | 55     | 6         | ☑                  |   |
| 4JJCR-030-010-200 |        |        | 20      | 3       | 60     | 6         | ☑                  |   |
| 4JJCR-030-010-250 |        |        | 25      | 3       | 65     | 6         | ☑                  |   |
| 4JJCR-030-010-300 |        |        | 30      | 3       | 70     | 6         | ☑                  |   |
| 4JJCR-030-010-350 |        |        | 35      | 3       | 75     | 6         | ☑                  |   |
| 4JJCR-030-010-400 |        |        | 40      | 3       | 80     | 6         | ☑                  |   |
| 4JJCR-040-001-130 |        | 4      | R0,1    | 13      | 4      | 55        | 6                  | ☑ |
| 4JJCR-040-001-160 |        |        |         | 16      | 4      | 55        | 6                  | ☑ |
| 4JJCR-040-001-200 |        |        |         | 20      | 4      | 60        | 6                  | ☑ |
| 4JJCR-040-001-250 | 25     |        |         | 4       | 65     | 6         | ☑                  |   |
| 4JJCR-040-001-300 | 30     |        |         | 4       | 70     | 6         | ☑                  |   |
| 4JJCR-040-001-350 | 35     |        |         | 4       | 75     | 6         | ☑                  |   |
| 4JJCR-040-001-400 | 40     |        |         | 4       | 80     | 6         | ☑                  |   |
| 4JJCR-040-002-130 | R0,2   |        |         | 13      | 4      | 55        | 6                  | ☑ |
| 4JJCR-040-002-160 |        |        |         | 16      | 4      | 55        | 6                  | ☑ |
| 4JJCR-040-002-200 |        |        |         | 20      | 4      | 60        | 6                  | ☑ |
| 4JJCR-040-002-250 |        |        | 25      | 4       | 65     | 6         | ☑                  |   |
| 4JJCR-040-002-300 |        |        | 30      | 4       | 70     | 6         | ☑                  |   |
| 4JJCR-040-002-350 |        |        | 35      | 4       | 75     | 6         | ☑                  |   |
| 4JJCR-040-002-400 |        |        | 40      | 4       | 80     | 6         | ☑                  |   |
| 4JJCR-040-002-450 |        |        | 45      | 4       | 90     | 6         | ☑                  |   |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 4JJCR-040-002-500 | 4      | R0,2   | 50      | 4       | 100    | 6         | ☑                  |   |
| 4JJCR-040-003-130 |        |        | 13      | 4       | 55     | 6         | ☑                  |   |
| 4JJCR-040-003-160 |        |        | 16      | 4       | 55     | 6         | ☑                  |   |
| 4JJCR-040-003-200 |        |        | 20      | 4       | 60     | 6         | ☑                  |   |
| 4JJCR-040-003-250 |        |        | 25      | 4       | 65     | 6         | ☑                  |   |
| 4JJCR-040-003-300 |        |        | 30      | 4       | 70     | 6         | ☑                  |   |
| 4JJCR-040-003-350 |        |        | 35      | 4       | 75     | 6         | ☑                  |   |
| 4JJCR-040-003-400 |        |        | 40      | 4       | 80     | 6         | ☑                  |   |
| 4JJCR-040-003-450 |        |        | 45      | 4       | 90     | 6         | ☑                  |   |
| 4JJCR-040-003-500 |        |        | 50      | 4       | 100    | 6         | ☑                  |   |
| 4JJCR-040-005-130 |        | R0,3   | 13      | 4       | 55     | 6         | ☑                  |   |
| 4JJCR-040-005-160 |        |        | 16      | 4       | 55     | 6         | ☑                  |   |
| 4JJCR-040-005-200 |        |        | 20      | 4       | 60     | 6         | ☑                  |   |
| 4JJCR-040-005-250 |        |        | 25      | 4       | 65     | 6         | ☑                  |   |
| 4JJCR-040-005-300 |        |        | 30      | 4       | 70     | 6         | ☑                  |   |
| 4JJCR-040-005-350 |        |        | 35      | 4       | 75     | 6         | ☑                  |   |
| 4JJCR-040-005-400 |        |        | 40      | 4       | 80     | 6         | ☑                  |   |
| 4JJCR-040-005-450 |        |        | 45      | 4       | 90     | 6         | ☑                  |   |
| 4JJCR-040-005-500 |        |        | 50      | 4       | 100    | 6         | ☑                  |   |
| 4JJCR-040-010-130 |        |        | R0,5    | 13      | 4      | 55        | 6                  | ☑ |
| 4JJCR-040-010-160 |        | 16     |         | 4       | 55     | 6         | ☑                  |   |
| 4JJCR-040-010-200 |        | 20     |         | 4       | 60     | 6         | ☑                  |   |
| 4JJCR-040-010-250 |        | 25     |         | 4       | 65     | 6         | ☑                  |   |
| 4JJCR-040-010-300 |        | 30     |         | 4       | 70     | 6         | ☑                  |   |
| 4JJCR-040-010-350 |        | 35     |         | 4       | 75     | 6         | ☑                  |   |
| 4JJCR-040-010-400 |        | 40     |         | 4       | 80     | 6         | ☑                  |   |
| 4JJCR-040-010-450 |        | 45     |         | 4       | 90     | 6         | ☑                  |   |
| 4JJCR-040-010-500 |        | 50     |         | 4       | 100    | 6         | ☑                  |   |
| 4JJCR-050-001-160 |        | 5      |         | R0,1    | 16     | 5         | 60                 | 6 |
| 4JJCR-050-001-300 |        |        | 30      |         | 5      | 70        | 6                  | ☑ |
| 4JJCR-050-002-160 |        |        | R0,2    | 16      | 5      | 60        | 6                  | ☑ |
| 4JJCR-050-002-300 |        |        |         | 30      | 5      | 70        | 6                  | ☑ |
| 4JJCR-050-003-160 |        |        | R0,3    | 16      | 5      | 60        | 6                  | ☑ |
| 4JJCR-050-003-300 |        |        |         | 30      | 5      | 70        | 6                  | ☑ |
| 4JJCR-050-005-160 |        |        | R0,5    | 16      | 5      | 60        | 6                  | ☑ |
| 4JJCR-050-005-300 |        |        |         | 30      | 5      | 70        | 6                  | ☑ |
| 4JJCR-050-005-400 |        |        |         | 40      | 5      | 80        | 6                  | ☑ |
| 4JJCR-050-005-500 |        |        |         | 50      | 5      | 100       | 6                  | ☑ |
| 4JJCR-050-010-160 |        | R1     |         | 16      | 5      | 60        | 6                  | ☑ |
| 4JJCR-050-010-300 |        |        |         | 30      | 5      | 70        | 6                  | ☑ |
| 4JJCR-050-010-400 | 40     |        | 5       | 80      | 6      | ☑         |                    |   |
| 4JJCR-050-010-500 | 50     |        | 5       | 100     | 6      | ☑         |                    |   |
| 4JJCR-060-001-200 | 6      | R0,1   | 20      | 7       | 60     | 6         | ☑                  |   |
| 4JJCR-060-001-400 |        |        | 40      | 7       | 80     | 6         | ☑                  |   |
| 4JJCR-060-002-200 |        | R0,2   | 20      | 7       | 60     | 6         | ☑                  |   |
| 4JJCR-060-002-400 |        |        | 40      | 7       | 80     | 6         | ☑                  |   |
| 4JJCR-060-003-200 |        | R0,3   | 20      | 7       | 60     | 6         | ☑                  |   |
| 4JJCR-060-003-400 |        |        | 40      | 7       | 80     | 6         | ☑                  |   |
| 4JJCR-060-005-200 |        | R0,5   | 20      | 7       | 60     | 6         | ☑                  |   |
| 4JJCR-060-005-400 |        |        | 40      | 7       | 80     | 6         | ☑                  |   |
| 4JJCR-060-005-500 |        |        | 50      | 7       | 100    | 6         | ☑                  |   |
| 4JJCR-060-010-200 |        |        | R1      | 20      | 7      | 60        | 6                  | ☑ |



# 4JJCR

## 4-břité TOROIDNÍ frézy pro žebrování pro kalené oceli do HRC 68

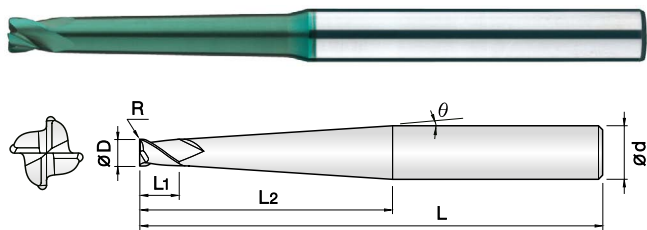
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| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |                                     |
|-------------------|--------|--------|---------|---------|--------|-----------|-------------------------------------|-------------------------------------|
| 4JJCR-060-010-400 | 6      | R1     | 40      | 7       | 80     | 6         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-060-010-500 |        |        | 50      | 7       | 100    | 6         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-060-015-200 |        | R1,5   | 20      | 7       | 60     | 6         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-060-015-400 |        |        | 40      | 7       | 80     | 6         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-080-002-220 | 8      | R0,2   | 22      | 9       | 65     | 8         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-080-002-400 |        |        | 40      | 9       | 100    | 8         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-080-003-220 |        | R0,3   | 22      | 9       | 65     | 8         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-080-003-400 |        |        | 40      | 9       | 100    | 8         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-080-005-220 |        | R0,5   | 22      | 9       | 65     | 8         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-080-005-400 |        |        | 40      | 9       | 100    | 8         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-080-005-500 |        |        | 50      | 9       | 120    | 8         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-080-010-220 |        | R1     | 22      | 9       | 65     | 8         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-080-010-400 |        |        | 40      | 9       | 100    | 8         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-080-010-500 |        |        | 50      | 9       | 120    | 8         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-080-015-220 |        |        | R1,5    | 22      | 9      | 65        | 8                                   | <input checked="" type="checkbox"/> |
| 4JJCR-080-015-400 |        |        |         | 40      | 9      | 100       | 8                                   | <input checked="" type="checkbox"/> |
| 4JJCR-080-020-220 |        |        | R2      | 22      | 9      | 65        | 8                                   | <input checked="" type="checkbox"/> |
| 4JJCR-080-020-400 |        | R2     | 40      | 9       | 100    | 8         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-080-020-500 |        |        | 50      | 9       | 120    | 8         | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-002-240 |        | 10     | R0,2    | 24      | 11     | 70        | 10                                  | <input checked="" type="checkbox"/> |
| 4JJCR-100-002-400 | 40     |        |         | 11      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-003-240 | R0,3   |        | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-003-400 |        |        | 40      | 11      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-005-240 | R0,5   |        | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-005-400 |        |        | 40      | 11      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-005-500 |        |        | 50      | 11      | 120    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-010-240 | R1     |        | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-010-400 |        |        | 40      | 11      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-010-500 |        |        | 50      | 11      | 120    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-015-240 | R1,5   |        | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-015-400 |        |        | 40      | 11      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-020-240 | R2     |        | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-020-400 |        |        | 40      | 11      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-020-500 |        |        | 50      | 11      | 120    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-100-025-240 | R2,5   |        | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-120-003-260 | 12     |        | R0,3    | 26      | 13     | 80        | 12                                  | <input checked="" type="checkbox"/> |
| 4JJCR-120-005-260 |        |        | R0,5    | 26      | 13     | 80        | 12                                  | <input checked="" type="checkbox"/> |
| 4JJCR-120-005-400 |        |        |         | 40      | 13     | 110       | 12                                  | <input checked="" type="checkbox"/> |
| 4JJCR-120-005-600 |        |        |         | 60      | 13     | 130       | 12                                  | <input checked="" type="checkbox"/> |
| 4JJCR-120-005-700 |        | 70     |         | 13      | 150    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-120-010-260 |        | R1     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-120-010-400 |        |        | 40      | 13      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-120-010-600 |        |        | 60      | 13      | 130    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-120-015-260 |        |        | R1,5    | 26      | 13     | 80        | 12                                  | <input checked="" type="checkbox"/> |
| 4JJCR-120-020-260 |        | R2     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-120-020-400 |        | R3     | 40      | 13      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4JJCR-120-030-260 |        | R3     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |                                     |

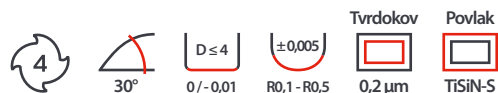


# 4JJTC

## 4-břité TOROIDNÍ frézy s kuželovým odlehčením pro žebrování pro kalené oceli do HRC 68



- ▶ Určeno pro kalené oceli (52 - 68 HRC)
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Široký sortiment rádií a vyložení pro optimální výběr nástroje
- ▶ Vysoká tuhost díky kuželovému odlehčení
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



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| Objednací číslo    | D (mm) | R (mm) | Úhel θ | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|--------------------|--------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 4JJTC-010-001-0601 | 1      | R0,1   | 1°     | 6       | 1       | 50     | 4         | ☑                  |   |
| 4JJTC-010-001-1001 |        |        | 1°     | 10      | 1       | 50     | 4         | ☑                  |   |
| 4JJTC-010-001-1501 |        |        | 1°     | 15      | 1       | 50     | 4         | ☑                  |   |
| 4JJTC-010-001-2001 |        |        | 1°     | 20      | 1       | 60     | 4         | ☑                  |   |
| 4JJTC-010-001-2501 |        |        | 1°     | 25      | 1       | 60     | 4         | ☑                  |   |
| 4JJTC-010-001-3001 |        |        | 1°     | 30      | 1       | 70     | 4         | ☑                  |   |
| 4JJTC-010-001-3501 |        |        | 1°     | 35      | 1       | 75     | 4         | ☑                  |   |
| 4JJTC-010-002-0601 |        | R0,2   | 1°     | 6       | 1       | 50     | 4         | ☑                  |   |
| 4JJTC-010-002-1001 |        |        | 1°     | 10      | 1       | 50     | 4         | ☑                  |   |
| 4JJTC-010-002-1501 |        |        | 1°     | 15      | 1       | 50     | 4         | ☑                  |   |
| 4JJTC-010-002-2001 |        |        | 1°     | 20      | 1       | 60     | 4         | ☑                  |   |
| 4JJTC-010-002-2501 |        |        | 1°     | 25      | 1       | 60     | 4         | ☑                  |   |
| 4JJTC-010-002-3001 |        |        | 1°     | 30      | 1       | 70     | 4         | ☑                  |   |
| 4JJTC-010-002-3501 |        |        | 1°     | 35      | 1       | 75     | 4         | ☑                  |   |
| 4JJTC-010-003-1001 | R0,3   | 1°     | 10     | 1       | 50      | 4      | ☑         |                    |   |
| 4JJTC-010-003-1501 |        | 1°     | 15     | 1       | 50      | 4      | ☑         |                    |   |
| 4JJTC-010-003-2001 |        | 1°     | 20     | 1       | 60      | 4      | ☑         |                    |   |
| 4JJTC-010-003-2501 |        | 1°     | 25     | 1       | 60      | 4      | ☑         |                    |   |
| 4JJTC-015-002-1001 | 1,5    | R0,2   | 1°     | 10      | 1,5     | 50     | 4         | ☑                  |   |
| 4JJTC-015-002-1501 |        |        | 1°     | 15      | 1,5     | 50     | 4         | ☑                  |   |
| 4JJTC-015-002-2001 |        |        | 1°     | 20      | 1,5     | 60     | 4         | ☑                  |   |
| 4JJTC-015-002-2501 |        |        | 1°     | 25      | 1,5     | 60     | 4         | ☑                  |   |
| 4JJTC-015-002-3001 |        |        | 1°     | 30      | 1,5     | 70     | 4         | ☑                  |   |
| 4JJTC-015-002-3501 |        |        | 1°     | 35      | 1,5     | 75     | 4         | ☑                  |   |
| 4JJTC-015-003-1501 |        |        | R0,3   | 1°      | 15      | 1,5    | 50        | 4                  | ☑ |
| 4JJTC-015-003-2001 |        | 1°     |        | 20      | 1,5     | 60     | 4         | ☑                  |   |
| 4JJTC-015-003-2501 |        | 1°     |        | 25      | 1,5     | 60     | 4         | ☑                  |   |
| 4JJTC-015-005-1001 |        | R0,5   | 1°     | 10      | 1,5     | 50     | 4         | ☑                  |   |
| 4JJTC-015-005-1501 |        |        | 1°     | 15      | 1,5     | 50     | 4         | ☑                  |   |
| 4JJTC-015-005-2001 |        |        | 1°     | 20      | 1,5     | 60     | 4         | ☑                  |   |
| 4JJTC-015-005-2501 |        |        | 1°     | 25      | 1,5     | 60     | 4         | ☑                  |   |
| 4JJTC-015-005-3001 |        |        | 1°     | 30      | 1,5     | 70     | 4         | ☑                  |   |
| 4JJTC-015-005-3501 | 1°     |        | 35     | 1,5     | 75      | 4      | ☑         |                    |   |
| 4JJTC-020-002-1201 | 2      |        | R0,2   | 1°      | 12      | 2      | 50        | 4                  | ☑ |
| 4JJTC-020-002-1601 |        | 1°     |        | 16      | 2       | 50     | 4         | ☑                  |   |
| 4JJTC-020-002-2001 |        | 1°     |        | 20      | 2       | 60     | 4         | ☑                  |   |
| 4JJTC-020-002-2501 |        | 1°     |        | 25      | 2       | 60     | 4         | ☑                  |   |
| 4JJTC-020-002-3001 |        | 1°     |        | 30      | 2       | 70     | 4         | ☑                  |   |
| 4JJTC-020-002-3501 |        | 1°     |        | 35      | 2       | 75     | 4         | ☑                  |   |
| 4JJTC-020-003-4001 |        | R0,3   |        | 1°      | 40      | 2      | 80        | 4                  | ☑ |
| 4JJTC-020-003-5001 |        |        |        | 1°      | 50      | 2      | 90        | 4                  | ☑ |
| 4JJTC-020-003-6001 |        |        |        | 1°      | 60      | 2      | 100       | 6                  | ☑ |
| 4JJTC-020-003-7001 |        |        |        | 1°      | 70      | 2      | 110       | 6                  | ☑ |
| 4JJTC-020-003-8001 | 1°     |        | 80     | 2       | 120     | 6      | ☑         |                    |   |
| 4JJTC-020-003-9001 | 1°     |        | 90     | 2       | 130     | 6      | ☑         |                    |   |
| 4JJTC-020-003-1000 | 1°     |        | 100    | 2       | 140     | 6      | ☑         |                    |   |
| 4JJTC-020-003-1100 | 1°     |        | 110    | 2       | 150     | 6      | ☑         |                    |   |
| 4JJTC-020-003-1200 | 1°     |        | 120    | 2       | 160     | 6      | ☑         |                    |   |
| 4JJTC-020-003-1300 | 1°     |        | 130    | 2       | 170     | 6      | ☑         |                    |   |

| Objednací číslo    | D (mm) | R (mm) | Úhel θ | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|--------|--------|---------|---------|--------|-----------|--------------------|
| 4JJTC-020-002-4001 | 2      | R0,2   | 1°     | 40      | 2       | 80     | 4         | ☑                  |
| 4JJTC-020-002-5001 |        |        | 1°     | 50      | 2       | 90     | 4         | ☑                  |
| 4JJTC-020-003-2001 |        | R0,3   | 1°     | 20      | 2       | 60     | 4         | ☑                  |
| 4JJTC-020-003-3001 |        |        | 1°     | 30      | 2       | 70     | 4         | ☑                  |
| 4JJTC-020-003-4001 |        | R0,5   | 1°     | 40      | 2       | 80     | 4         | ☑                  |
| 4JJTC-020-005-1201 |        |        | 1°     | 12      | 2       | 50     | 4         | ☑                  |
| 4JJTC-020-005-1601 |        | R0,5   | 1°     | 16      | 2       | 50     | 4         | ☑                  |
| 4JJTC-020-005-2001 |        |        | 1°     | 20      | 2       | 60     | 4         | ☑                  |
| 4JJTC-020-005-2501 |        | R0,5   | 1°     | 25      | 2       | 60     | 4         | ☑                  |
| 4JJTC-020-005-3001 |        |        | 1°     | 30      | 2       | 70     | 4         | ☑                  |
| 4JJTC-020-005-3501 | R0,5   | 1°     | 35     | 2       | 75      | 4      | ☑         |                    |
| 4JJTC-020-005-4001 |        | 1°     | 40     | 2       | 80      | 4      | ☑         |                    |
| 4JJTC-020-005-5001 | R0,5   | 1°     | 50     | 2       | 90      | 4      | ☑         |                    |
| 4JJTC-030-002-2001 |        | R0,2   | 1°     | 20      | 3       | 60     | 6         | ☑                  |
| 4JJTC-030-002-3001 | 1°     |        | 30     | 3       | 70      | 6      | ☑         |                    |
| 4JJTC-030-002-4001 | 1°     |        | 40     | 3       | 80      | 6      | ☑         |                    |
| 4JJTC-030-002-5001 | 1°     |        | 50     | 3       | 90      | 6      | ☑         |                    |
| 4JJTC-030-002-6001 | 1°     |        | 60     | 3       | 100     | 6      | ☑         |                    |
| 4JJTC-030-003-4001 | R0,3   |        | 1°     | 40      | 3       | 80     | 6         | ☑                  |
| 4JJTC-030-003-5001 |        | 1°     | 50     | 3       | 90      | 6      | ☑         |                    |
| 4JJTC-030-003-6001 |        | 1°     | 60     | 3       | 100     | 6      | ☑         |                    |
| 4JJTC-030-005-2001 |        | R0,5   | 1°     | 20      | 3       | 60     | 6         | ☑                  |
| 4JJTC-030-005-3001 | 1°     |        | 30     | 3       | 70      | 6      | ☑         |                    |
| 4JJTC-030-005-4001 | 1°     |        | 40     | 3       | 80      | 6      | ☑         |                    |
| 4JJTC-030-005-5001 | 1°     |        | 50     | 3       | 90      | 6      | ☑         |                    |
| 4JJTC-030-005-6001 | R0,5   | 1°     | 60     | 3       | 100     | 6      | ☑         |                    |
| 4JJTC-040-002-2001 |        | R0,2   | 1°     | 20      | 4       | 60     | 6         | ☑                  |
| 4JJTC-040-002-3001 | 1°     |        | 30     | 4       | 70      | 6      | ☑         |                    |
| 4JJTC-040-002-4001 | 1°     |        | 40     | 4       | 80      | 6      | ☑         |                    |
| 4JJTC-040-002-5001 | 1°     |        | 50     | 4       | 90      | 6      | ☑         |                    |
| 4JJTC-040-002-6001 | 1°     |        | 60     | 4       | 100     | 6      | ☑         |                    |
| 4JJTC-040-003-4001 | R0,3   |        | 1°     | 40      | 4       | 80     | 6         | ☑                  |
| 4JJTC-040-003-5001 |        | 1°     | 50     | 4       | 90      | 6      | ☑         |                    |
| 4JJTC-040-003-6001 |        | 1°     | 60     | 4       | 100     | 6      | ☑         |                    |
| 4JJTC-040-005-2001 |        | R0,5   | 1°     | 20      | 4       | 60     | 6         | ☑                  |
| 4JJTC-040-005-3001 | 1°     |        | 30     | 4       | 70      | 6      | ☑         |                    |
| 4JJTC-040-005-4001 | 1°     |        | 40     | 4       | 80      | 6      | ☑         |                    |
| 4JJTC-040-005-5001 | 1°     |        | 50     | 4       | 90      | 6      | ☑         |                    |
| 4JJTC-040-005-6001 | 1°     |        | 60     | 4       | 100     | 6      | ☑         |                    |
| 4JJTC-040-005-7001 | 1°     |        | 70     | 4       | 110     | 6      | ☑         |                    |

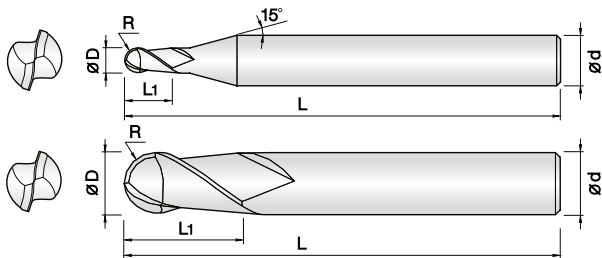
Nahrajuje z předcházejícího katalogu kategorií 4TCR.



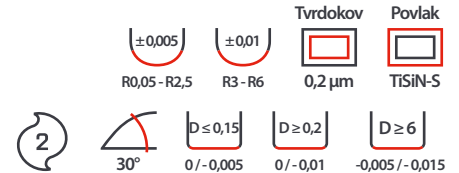
V současné době dochází k výměně skladu z typu 4TCR na 4JJTC, proto po určitou dobu mohou být zaslány oba typy současně.

# 2JJSB

## 2-břité KULOVÉ frézy krátké pro kalené oceli do HRC 68



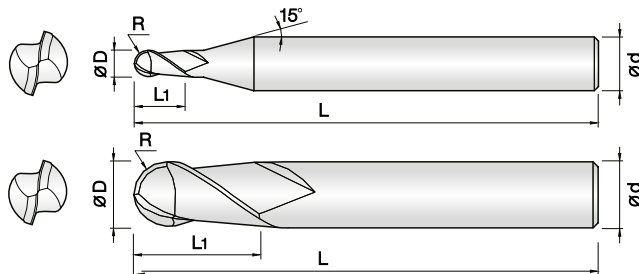
- Určeno pro kalené oceli (52 - 68 HRC)
- Vysoká odolnost proti opotřebení díky novému PVD povlaku s vysokým obsahem Si
- Velmi přesné tolerance řezných hran
- Vysoká tuhost
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



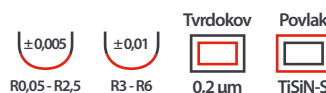
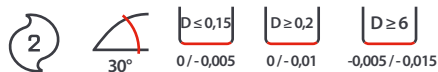
| Objednací číslo     | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|---------------------|--------|--------|---------|--------|-----------|--------------------|
| 2JJSB-001-001-S04   | 0,1    | R0,05  | 0,1     | 38     | 4         | ☑                  |
| 2JJSB-001-0015-S04  |        |        | 0,15    | 38     | 4         | ☑                  |
| 2JJSB-0015-0015-S04 | 0,15   | R0,075 | 0,15    | 38     | 4         | ☑                  |
| 2JJSB-0015-002-S04  |        |        | 0,2     | 38     | 4         | ☑                  |
| 2JJSB-002-002-S04   | 0,2    | R0,1   | 0,2     | 38     | 4         | ☑                  |
| 2JJSB-002-003-S04   |        |        | 0,3     | 38     | 4         | ☑                  |
| 2JJSB-003-003-S04   | 0,3    | R0,15  | 0,3     | 38     | 4         | ☑                  |
| 2JJSB-003-0045-S04  |        |        | 0,45    | 38     | 4         | ☑                  |
| 2JJSB-004-004-S04   | 0,4    | R0,2   | 0,4     | 38     | 4         | ☑                  |
| 2JJSB-004-006-S04   |        |        | 0,6     | 38     | 4         | ☑                  |
| 2JJSB-005-005-S04   | 0,5    | R0,25  | 0,5     | 38     | 4         | ☑                  |
| 2JJSB-005-0075-S04  |        |        | 0,75    | 38     | 4         | ☑                  |
| 2JJSB-006-006-S04   | 0,6    | R0,3   | 0,6     | 38     | 4         | ☑                  |
| 2JJSB-006-009-S04   |        |        | 0,9     | 38     | 4         | ☑                  |
| 2JJSB-007-007-S04   | 0,7    | R0,35  | 0,7     | 38     | 4         | ☑                  |
| 2JJSB-007-010-S04   |        |        | 1       | 38     | 4         | ☑                  |
| 2JJSB-008-008-S04   | 0,8    | R0,4   | 0,8     | 38     | 4         | ☑                  |
| 2JJSB-008-012-S04   |        |        | 1,2     | 38     | 4         | ☑                  |
| 2JJSB-009-009-S04   | 0,9    | R0,45  | 0,9     | 38     | 4         | ☑                  |
| 2JJSB-009-013-S04   |        |        | 1,3     | 38     | 4         | ☑                  |
| 2JJSB-010-010-S04   | 1      | R0,5   | 1       | 40     | 4         | ☑                  |
| 2JJSB-010-010-S06   |        |        | 1       | 40     | 6         | ☑                  |
| 2JJSB-010-015-S04   |        |        | 1,5     | 40     | 4         | ☑                  |
| 2JJSB-010-015-S06   |        |        | 1,5     | 40     | 6         | ☑                  |
| 2JJSB-015-015-S04   | 1,5    | R0,75  | 1,5     | 40     | 4         | ☑                  |
| 2JJSB-015-015-S06   |        |        | 1,5     | 40     | 6         | ☑                  |
| 2JJSB-015-023-S04   |        |        | 2,3     | 40     | 4         | ☑                  |
| 2JJSB-015-023-S06   |        |        | 2,3     | 40     | 6         | ☑                  |
| 2JJSB-020-020-S04   | 2      | R1     | 2       | 45     | 4         | ☑                  |
| 2JJSB-020-020-S06   |        |        | 2       | 45     | 6         | ☑                  |
| 2JJSB-020-030-S04   |        |        | 3       | 45     | 4         | ☑                  |
| 2JJSB-020-030-S06   |        |        | 3       | 45     | 6         | ☑                  |
| 2JJSB-030-030-S04   | 3      | R1,5   | 3       | 45     | 4         | ☑                  |
| 2JJSB-030-030-S06   |        |        | 3       | 45     | 6         | ☑                  |
| 2JJSB-030-045-S04   |        |        | 4,5     | 45     | 4         | ☑                  |
| 2JJSB-030-045-S06   |        |        | 4,5     | 45     | 6         | ☑                  |

| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 2JJSB-040-040-S04 | 4      | R2     | 4       | 45     | 4         | ☑                  |
| 2JJSB-040-040-S06 |        |        | 4       | 45     | 6         | ☑                  |
| 2JJSB-040-060-S04 |        |        | 6       | 45     | 4         | ☑                  |
| 2JJSB-040-060-S06 | 5      | R2,5   | 6       | 45     | 6         | ☑                  |
| 2JJSB-050-050-S06 |        |        | 5       | 50     | 6         | ☑                  |
| 2JJSB-050-075-S06 | 6      | R3     | 7,5     | 50     | 6         | ☑                  |
| 2JJSB-060-060-050 |        |        | 6       | 50     | 6         | ☑                  |
| 2JJSB-060-080-055 |        |        | 8       | 55     | 6         | ☑                  |
| 2JJSB-080-080-050 | 8      | R4     | 8       | 50     | 8         | ☑                  |
| 2JJSB-080-110-060 |        |        | 11      | 60     | 8         | ☑                  |
| 2JJSB-100-100-060 | 10     | R5     | 10      | 60     | 10        | ☑                  |
| 2JJSB-100-130-060 |        |        | 13      | 60     | 10        | ☑                  |
| 2JJSB-120-120-060 | 12     | R6     | 12      | 60     | 12        | ☑                  |
| 2JJSB-120-150-060 |        |        | 15      | 60     | 12        | ☑                  |

# 2JJB 2-břité KULOVÉ frézy pro kalené oceli do HRC 68



- ▶ Určeno pro kalené oceli (52 - 68 HRC)
- ▶ Vysoká odolnost proti opotřebování díky novému PVD povlaku s vysokým obsahem Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Vysoká kvalita obrobeného povrchu
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdkovu



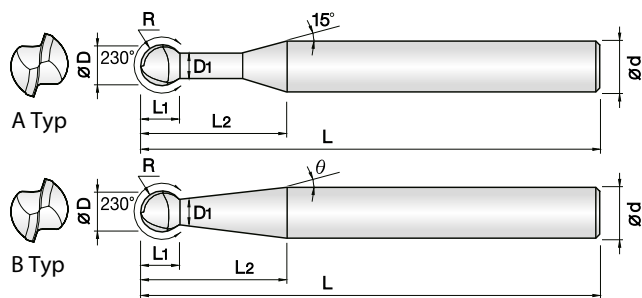
NOVINKA

| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 2JJB-001-002-S04  | 0,1    | R0,05  | 0,2     | 40     | 4         | ☑                  |
| 2JJB-0015-003-S04 | 0,15   | R0,075 | 0,3     | 40     | 4         | ☑                  |
| 2JJB-002-004-S04  | 0,2    | R0,1   | 0,4     | 40     | 4         | ☑                  |
| 2JJB-003-006-S04  | 0,3    | R0,15  | 0,6     | 40     | 4         | ☑                  |
| 2JJB-004-008-S04  | 0,4    | R0,2   | 0,8     | 40     | 4         | ☑                  |
| 2JJB-005-010-S04  | 0,5    | R0,25  | 1       | 45     | 4         | ☑                  |
| 2JJB-006-012-S04  | 0,6    | R0,3   | 1,2     | 45     | 4         | ☑                  |
| 2JJB-007-015-S04  | 0,7    | R0,35  | 1,5     | 45     | 4         | ☑                  |
| 2JJB-008-020-S04  | 0,8    | R0,4   | 2       | 45     | 4         | ☑                  |
| 2JJB-009-020-S04  | 0,9    | R0,45  | 2       | 45     | 4         | ☑                  |
| 2JJB-010-025-S04  | 1      | R0,5   | 2,5     | 50     | 4         | ☑                  |
| 2JJB-010-025-S06  |        |        | 2,5     | 50     | 6         | ☑                  |
| 2JJB-010-025-070  |        |        | 2,5     | 70     | 6         | ☑                  |
| 2JJB-012-030-S04  | 1,2    | R0,6   | 3       | 50     | 4         | ☑                  |
| 2JJB-015-040-S04  | 1,5    | R0,75  | 4       | 50     | 4         | ☑                  |
| 2JJB-015-040-S06  |        |        | 4       | 50     | 6         | ☑                  |
| 2JJB-015-040-070  |        |        | 4       | 70     | 6         | ☑                  |
| 2JJB-020-050-S04  | 2      | R1     | 5       | 50     | 4         | ☑                  |
| 2JJB-020-050-075  |        |        | 5       | 75     | 6         | ☑                  |
| 2JJB-020-050-S06  |        |        | 5       | 50     | 6         | ☑                  |
| 2JJB-025-060-S04  | 2,5    | R1,25  | 6       | 50     | 4         | ☑                  |
| 2JJB-025-060-S06  |        |        | 6       | 75     | 6         | ☑                  |
| 2JJB-030-080-S04  | 3      | R1,5   | 8       | 50     | 4         | ☑                  |
| 2JJB-030-080-S06  |        |        | 8       | 60     | 6         | ☑                  |
| 2JJB-030-080-080  |        |        | 8       | 80     | 6         | ☑                  |
| 2JJB-035-080-S06  | 3,5    | R1,75  | 8       | 60     | 6         | ☑                  |
| 2JJB-040-080-S04  | 4      | R2     | 8       | 60     | 4         | ☑                  |
| 2JJB-040-080-080  |        |        | 8       | 80     | 4         | ☑                  |
| 2JJB-040-080-S06  |        |        | 8       | 70     | 6         | ☑                  |
| 2JJB-040-080-090  |        |        | 8       | 90     | 6         | ☑                  |
| 2JJB-045-080-S06  | 4,5    | R2,25  | 8       | 70     | 6         | ☑                  |
| 2JJB-050-100-S06  | 5      | R2,5   | 10      | 75     | 6         | ☑                  |
| 2JJB-055-100-S06  | 5,5    | R2,75  | 10      | 75     | 6         | ☑                  |
| 2JJB-060-100-060  | 6      | R3     | 10      | 60     | 6         | ☑                  |
| 2JJB-060-120-080  |        |        | 12      | 80     | 6         | ☑                  |
| 2JJB-060-120-090  |        |        | 12      | 90     | 6         | ☑                  |
| 2JJB-070-140-S08  | 7      | R3,5   | 14      | 80     | 8         | ☑                  |

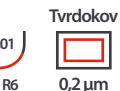
| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 2JJB-080-120-060 | 8      | R4     | 12      | 60     | 8         | ☑                  |
| 2JJB-080-140-090 |        |        | 14      | 90     | 8         | ☑                  |
| 2JJB-080-140-100 |        |        | 14      | 100    | 8         | ☑                  |
| 2JJB-100-150-070 | 10     | R5     | 15      | 70     | 10        | ☑                  |
| 2JJB-100-180-100 |        |        | 18      | 100    | 10        | ☑                  |
| 2JJB-120-180-075 | 12     | R6     | 18      | 75     | 12        | ☑                  |
| 2JJB-120-220-110 |        |        | 22      | 110    | 12        | ☑                  |

# 2JJSP

## 2-břité KULOVÉ frézy s rádiusem 230° pro kalené oceli do HRC 68



- Určeno pro kalené oceli (52 - 68 HRC)
- Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- Velmi přesné tolerance řezných hran
- 230° rádius pro vyšší rozsah 3D obrábění
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | D1 (mm) | Úhel θ | L (mm) | d h5 (mm) | Typ | Standardní položka                  |
|-------------------|--------|--------|---------|---------|---------|--------|--------|-----------|-----|-------------------------------------|
| 2JJSP-010-040-S06 | 1      | R0,5   | 4       | 0,7     | 0,91    | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 2JJSP-010-060-S06 |        |        | 6       | 0,7     | 0,91    | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 2JJSP-010-013-200 |        |        | 20      | 0,7     | 0,91    | 1° 30' | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 2JJSP-015-060-S06 | 1,5    | R0,75  | 6       | 1       | 1,36    | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 2JJSP-015-080-S06 |        |        | 8       | 1       | 1,36    | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 2JJSP-015-013-200 |        |        | 20      | 1       | 1,36    | 1° 30' | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 2JJSP-020-060-S06 | 2      | R1     | 6       | 1,4     | 1,8     | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 2JJSP-020-100-S06 |        |        | 10      | 1,4     | 1,8     | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 2JJSP-020-013-200 |        |        | 20      | 1,4     | 1,8     | 1° 30' | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 2JJSP-030-100-S06 | 3      | R1,5   | 10      | 2,1     | 2,7     | 0°     | 70     | 6         | A   | <input checked="" type="checkbox"/> |
| 2JJSP-030-150-S06 |        |        | 15      | 2,1     | 2,7     | 0°     | 70     | 6         | A   | <input checked="" type="checkbox"/> |
| 2JJSP-030-013-300 |        |        | 30      | 2,1     | 2,7     | 1° 30' | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 2JJSP-040-120-S06 | 4      | R2     | 12      | 2,8     | 3,6     | 0°     | 70     | 6         | A   | <input checked="" type="checkbox"/> |
| 2JJSP-040-200-S06 |        |        | 20      | 2,8     | 3,6     | 0°     | 70     | 6         | A   | <input checked="" type="checkbox"/> |
| 2JJSP-040-030-250 |        |        | 25      | 2,8     | 3,6     | 3°     | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 2JJSP-050-010-400 | 5      | R2,5   | 40      | 3,5     | 4,5     | 1°     | 90     | 6         | B   | <input checked="" type="checkbox"/> |
| 2JJSP-060-150-S06 | 6      | R3     | 15      | 4,2     | 5,4     | 0°     | 90     | 6         | A   | <input checked="" type="checkbox"/> |
| 2JJSP-060-300-S06 |        |        | 30      | 4,2     | 5,4     | 0°     | 90     | 6         | A   | <input checked="" type="checkbox"/> |
| 2JJSP-060-010-210 |        |        | 21      | 4,2     | 5,4     | 1°     | 100    | 6         | B   | <input checked="" type="checkbox"/> |
| 2JJSP-080-010-280 | 8      | R4     | 28      | 5,7     | 7,2     | 1°     | 100    | 8         | B   | <input checked="" type="checkbox"/> |
| 2JJSP-100-010-350 | 10     | R5     | 35      | 7,1     | 9       | 1°     | 110    | 10        | B   | <input checked="" type="checkbox"/> |
| 2JJSP-120-010-420 | 12     | R6     | 42      | 8,5     | 10,8    | 1°     | 120    | 12        | B   | <input checked="" type="checkbox"/> |



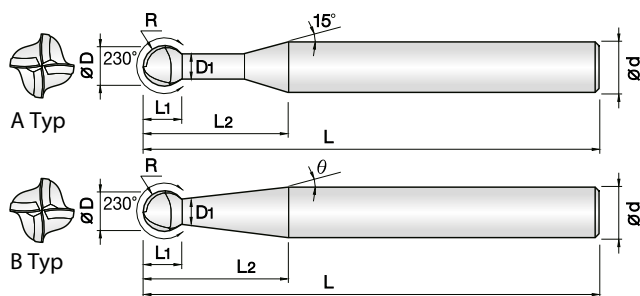
Nahrazuje z předcházejícího katalogu kategorii 2SPH.



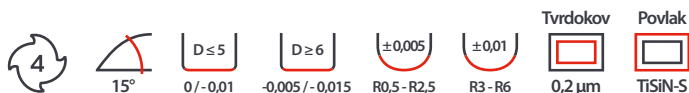
V současné době dochází k výměně skladu z typu 2SPH na 2JJSP, proto po určitou dobu mohou být zaslány oba typy současně.

# 4JJSP

## 4-břité KULOVÉ frézy s rádiusem 230° pro kalené oceli do HRC 68



- ▶ Určeno pro kalené oceli (52 - 68 HRC)
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ 230° rádius pro vyšší rozsah 3D obrábění
- ▶ Vyšší posuvy díky 4 řezným hranám
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 µm tvrdokovu



| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | D1 (mm) | Úhel θ | L (mm) | d h5 (mm) | Typ | Standardní položka                  |
|-------------------|--------|--------|---------|---------|---------|--------|--------|-----------|-----|-------------------------------------|
| 4JJSP-010-040-506 | 1      | R0,5   | 4       | 0,7     | 0,91    | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSP-010-060-506 |        |        | 6       | 0,7     | 0,91    | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSP-010-013-200 |        |        | 20      | 0,7     | 0,91    | 1° 30' | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSP-015-060-506 | 1,5    | R0,75  | 6       | 1       | 1,36    | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSP-015-080-506 |        |        | 8       | 1       | 1,36    | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSP-015-013-200 |        |        | 20      | 1       | 1,36    | 1° 30' | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSP-020-060-506 | 2      | R1     | 6       | 1,4     | 1,8     | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSP-020-100-506 |        |        | 10      | 1,4     | 1,8     | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSP-020-013-200 |        |        | 20      | 1,4     | 1,8     | 1° 30' | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSP-030-100-506 | 3      | R1,5   | 10      | 2,1     | 2,7     | 0°     | 70     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSP-030-150-506 |        |        | 15      | 2,1     | 2,7     | 0°     | 70     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSP-030-013-300 |        |        | 30      | 2,1     | 2,7     | 1° 30' | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSP-040120-506  | 4      | R2     | 12      | 2,8     | 3,6     | 0°     | 70     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSP-040-200-506 |        |        | 20      | 2,8     | 3,6     | 0°     | 70     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSP-040-030-250 |        |        | 25      | 2,8     | 3,6     | 3°     | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSP-050-010-400 | 5      | R2,5   | 40      | 3,5     | 4,5     | 1°     | 90     | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSP-060-150-506 | 6      | R3     | 15      | 4,2     | 5,4     | 0°     | 90     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSP-060-300-506 |        |        | 30      | 4,2     | 5,4     | 0°     | 90     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSP-060-010-210 |        |        | 21      | 4,2     | 5,4     | 1°     | 100    | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSP-080-010-280 | 8      | R4     | 28      | 5,7     | 7,2     | 1°     | 100    | 8         | B   | <input checked="" type="checkbox"/> |
| 4JJSP-100-010-350 | 10     | R5     | 35      | 7,1     | 9       | 1°     | 110    | 10        | B   | <input checked="" type="checkbox"/> |
| 4JJSP-120-010-420 | 12     | R6     | 42      | 8,5     | 10,8    | 1°     | 120    | 12        | B   | <input checked="" type="checkbox"/> |



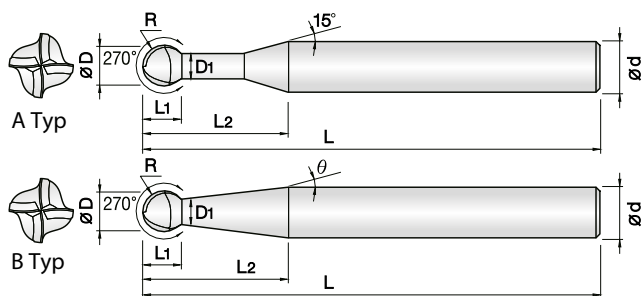
Nahrazuje z předcházejícího katalogu kategorií 4SPH.



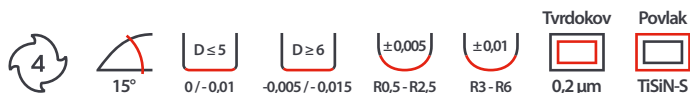
V současné době dochází k výměně skladu z typu 4SPH na 4JJSP, proto po určitou dobu mohou být zaslány oba typy současně.

# 4JJSPM

## 4-břité KULOVÉ frézy s rádiusem 270° pro kalené oceli do HRC 68



- ▶ Určeno pro kalené oceli (52 - 68 HRC)
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ 270° rádius pro vyšší rozsah 3D obrábění
- ▶ Vyšší posuvy díky 4 řezným hranám
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu

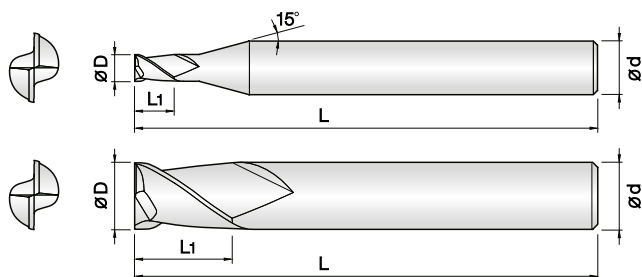


| Objednací číslo    | D (mm) | R (mm) | L2 (mm) | L1 (mm) | D1 (mm) | Úhel θ | L (mm) | d h5 (mm) | Typ | Standardní položka                  |
|--------------------|--------|--------|---------|---------|---------|--------|--------|-----------|-----|-------------------------------------|
| 4JJSPM-010-040-S06 | 1      | R0,5   | 4       | 0,8     | 0,7     | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSPM-010-060-S06 |        |        | 6       | 0,8     | 0,7     | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSPM-010-013-200 |        |        | 20      | 0,8     | 0,7     | 1° 30' | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSPM-015-060-S06 | 1,5    | R0,75  | 6       | 1,2     | 1       | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSPM-015-080-S06 |        |        | 8       | 1,2     | 1       | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSPM-015-013-200 |        |        | 20      | 1,2     | 1       | 1° 30' | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSPM-020-060-S06 | 2      | R1     | 6       | 1,7     | 1,4     | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSPM-020-100-S06 |        |        | 10      | 1,7     | 1,4     | 0°     | 60     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSPM-020-013-200 |        |        | 20      | 1,7     | 1,4     | 1° 30' | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSPM-030-100-S06 | 3      | R1,5   | 10      | 2,5     | 2,1     | 0°     | 70     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSPM-030-150-S06 |        |        | 15      | 2,5     | 2,1     | 0°     | 70     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSPM-030-013-300 |        |        | 30      | 2,5     | 2,1     | 1° 30' | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSPM-040120-S06  | 4      | R2     | 12      | 3,4     | 2,8     | 0°     | 70     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSPM-040-200-S06 |        |        | 20      | 3,4     | 2,8     | 0°     | 70     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSPM-040-030-250 |        |        | 25      | 3,4     | 2,8     | 3°     | 80     | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSPM-050-010-400 | 5      | R2,5   | 40      | 4,2     | 3,5     | 1°     | 90     | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSPM-060-150-S06 | 6      | R3     | 15      | 5,1     | 4,2     | 0°     | 90     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSPM-060-300-S06 |        |        | 30      | 5,1     | 4,2     | 0°     | 90     | 6         | A   | <input checked="" type="checkbox"/> |
| 4JJSPM-060-010-210 |        |        | 21      | 5,1     | 4,2     | 1°     | 100    | 6         | B   | <input checked="" type="checkbox"/> |
| 4JJSPM-080-010-280 | 8      | R4     | 28      | 6,8     | 5,6     | 1°     | 100    | 8         | B   | <input checked="" type="checkbox"/> |
| 4JJSPM-100-010-350 | 10     | R5     | 35      | 8,5     | 7       | 1°     | 110    | 10        | B   | <input checked="" type="checkbox"/> |
| 4JJSPM-120-010-420 | 12     | R6     | 42      | 10      | 8,5     | 1°     | 120    | 12        | B   | <input checked="" type="checkbox"/> |

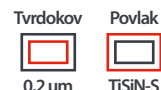
**i** Nahrazuje z předcházejícího katalogu kategorií 4SPHM.

**!** V současné době dochází k výměně skladu z typu 4SPHM na 4JJSPM, proto po určitou dobu mohou být zaslány oba typy současně.

# 2JJE 2-břité OSTRÉ frézy pro kalené oceli do HRC 65



- ▶ Určeno pro kalené oceli (52 - 65 HRC)
- ▶ Vysoká odolnost proti opotřebování díky novému PVD povlaku s vysokým obsahem Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Minimalizace vyštipování díky zesílení řezné hrany
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu

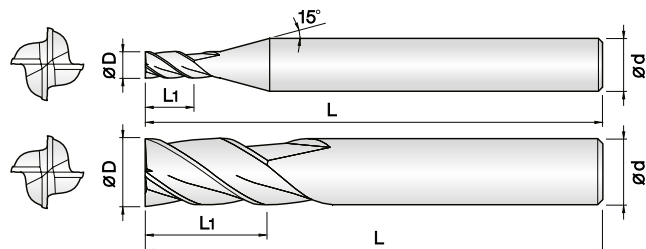


## NOVINKA

| Objednací číslo     | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|---------------------|--------|---------|--------|-----------|--------------------|
| 2JJE-0003-00045-S04 | 0,03   | 0,0045  | 40     | 4         | ☑                  |
| 2JJE-0004-0006-S04  | 0,04   | 0,006   | 40     | 4         | ☑                  |
| 2JJE-0005-0008-S04  | 0,05   | 0,08    | 38     | 4         | ☑                  |
| 2JJE-0006-001-S04   | 0,06   | 0,1     | 38     | 4         | ☑                  |
| 2JJE-0007-0012-S04  | 0,07   | 0,12    | 38     | 4         | ☑                  |
| 2JJE-0008-0015-S04  | 0,08   | 0,15    | 38     | 4         | ☑                  |
| 2JJE-0009-0017-S04  | 0,09   | 0,17    | 38     | 4         | ☑                  |
| 2JJE-001-002-S04    | 0,1    | 0,2     | 38     | 4         | ☑                  |
| 2JJE-0015-003-S04   | 0,15   | 0,3     | 38     | 4         | ☑                  |
| 2JJE-002-004-S04    | 0,2    | 0,4     | 38     | 4         | ☑                  |
| 2JJE-0025-005-S04   | 0,25   | 0,5     | 38     | 4         | ☑                  |
| 2JJE-003-006-S04    | 0,3    | 0,6     | 38     | 4         | ☑                  |
| 2JJE-0035-007-S04   | 0,35   | 0,7     | 38     | 4         | ☑                  |
| 2JJE-004-008-S04    | 0,4    | 0,8     | 38     | 4         | ☑                  |
| 2JJE-0045-009-S04   | 0,45   | 0,9     | 38     | 4         | ☑                  |
| 2JJE-005-010-S04    | 0,5    | 1       | 38     | 4         | ☑                  |
| 2JJE-0055-011-S04   | 0,55   | 1,1     | 38     | 4         | ☑                  |
| 2JJE-006-012-S04    | 0,6    | 1,2     | 38     | 4         | ☑                  |
| 2JJE-0065-013-S04   | 0,65   | 1,3     | 38     | 4         | ☑                  |
| 2JJE-007-014-S04    | 0,7    | 1,4     | 38     | 4         | ☑                  |
| 2JJE-0075-015-S04   | 0,75   | 1,5     | 38     | 4         | ☑                  |
| 2JJE-008-016-S04    | 0,8    | 1,6     | 38     | 4         | ☑                  |
| 2JJE-0085-017-S04   | 0,85   | 1,7     | 38     | 4         | ☑                  |
| 2JJE-009-020-S04    | 0,9    | 2       | 38     | 4         | ☑                  |
| 2JJE-0095-020-S04   | 0,95   | 2       | 38     | 4         | ☑                  |
| 2JJE-010-025-S04    | 1      | 2,5     | 40     | 4         | ☑                  |
| 2JJE-010-025-S06    |        | 2,5     | 40     | 6         | ☑                  |
| 2JJE-011-027-S04    | 1,1    | 2,7     | 40     | 4         | ☑                  |
| 2JJE-012-030-S04    | 1,2    | 3       | 40     | 4         | ☑                  |
| 2JJE-013-032-S04    | 1,3    | 3,2     | 40     | 4         | ☑                  |
| 2JJE-014-035-S04    | 1,4    | 3,5     | 40     | 4         | ☑                  |
| 2JJE-015-040-S04    | 1,5    | 4       | 40     | 4         | ☑                  |
| 2JJE-015-040-S06    |        | 4       | 40     | 6         | ☑                  |
| 2JJE-016-040-S04    | 1,6    | 4       | 40     | 4         | ☑                  |
| 2JJE-017-042-S04    | 1,7    | 4,2     | 40     | 4         | ☑                  |
| 2JJE-018-045-S04    | 1,8    | 4,5     | 40     | 4         | ☑                  |
| 2JJE-019-050-S04    | 1,9    | 5       | 40     | 4         | ☑                  |
| 2JJE-020-060-S04    | 2      | 6       | 40     | 4         | ☑                  |

| Objednací číslo  | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|--------|-----------|--------------------|
| 2JJE-020-060-S06 | 2      | 6       | 40     | 6         | ☑                  |
| 2JJE-021-060-S04 | 2,1    | 6       | 40     | 4         | ☑                  |
| 2JJE-022-060-S04 | 2,2    | 6       | 40     | 4         | ☑                  |
| 2JJE-023-060-S04 | 2,3    | 6       | 40     | 4         | ☑                  |
| 2JJE-024-080-S04 | 2,4    | 8       | 45     | 4         | ☑                  |
| 2JJE-025-080-S04 | 2,5    | 8       | 45     | 4         | ☑                  |
| 2JJE-025-080-S06 |        | 8       | 45     | 6         | ☑                  |
| 2JJE-026-080-S04 | 2,6    | 8       | 45     | 4         | ☑                  |
| 2JJE-027-080-S04 | 2,7    | 8       | 45     | 4         | ☑                  |
| 2JJE-028-080-S04 | 2,8    | 8       | 45     | 4         | ☑                  |
| 2JJE-029-080-S04 | 2,9    | 8       | 45     | 4         | ☑                  |
| 2JJE-030-080-S04 | 3      | 8       | 45     | 4         | ☑                  |
| 2JJE-030-080-S06 |        | 8       | 45     | 6         | ☑                  |
| 2JJE-035-100-S06 | 3,5    | 10      | 45     | 6         | ☑                  |
| 2JJE-040-100-S04 | 4      | 10      | 45     | 4         | ☑                  |
| 2JJE-040-110-S06 |        | 11      | 45     | 6         | ☑                  |
| 2JJE-045-110-S06 | 4,5    | 11      | 45     | 6         | ☑                  |
| 2JJE-050-130-S06 | 5      | 13      | 50     | 6         | ☑                  |
| 2JJE-055-130-S06 | 5,5    | 13      | 50     | 6         | ☑                  |
| 2JJE-060-130-S06 | 6      | 13      | 50     | 6         | ☑                  |
| 2JJE-065-160-S08 | 6,5    | 16      | 60     | 8         | ☑                  |
| 2JJE-070-160-S08 | 7      | 16      | 60     | 8         | ☑                  |
| 2JJE-075-160-S08 | 7,5    | 16      | 60     | 8         | ☑                  |
| 2JJE-080-190-S08 | 8      | 19      | 60     | 8         | ☑                  |
| 2JJE-085-190-S10 | 8,5    | 19      | 70     | 10        | ☑                  |
| 2JJE-090-190-S10 | 9      | 19      | 70     | 10        | ☑                  |
| 2JJE-095-190-S10 | 9,5    | 19      | 70     | 10        | ☑                  |
| 2JJE-100-220-S10 | 10     | 22      | 70     | 10        | ☑                  |
| 2JJE-105-220-S12 | 10,5   | 22      | 75     | 12        | ☑                  |
| 2JJE-110-220-S12 | 11     | 22      | 75     | 12        | ☑                  |
| 2JJE-115-220-S12 | 11,5   | 22      | 75     | 12        | ☑                  |
| 2JJE-120-260-S12 | 12     | 26      | 75     | 12        | ☑                  |
| 2JJE-140-260-S14 | 14     | 26      | 80     | 14        | ☑                  |
| 2JJE-140-260-S16 |        | 26      | 85     | 16        | ☑                  |
| 2JJE-160-350-S16 | 16     | 35      | 100    | 16        | ☑                  |
| 2JJE-180-350-S18 | 18     | 35      | 105    | 18        | ☑                  |
| 2JJE-200-400-S20 | 20     | 40      | 105    | 20        | ☑                  |

# 4JJE 4-břité OSTRÉ frézy pro kalené oceli do HRC 65



- Určeno pro kalené oceli (52 - 65 HRC)
- Vysoká odolnost proti opotřebení díky novému PVD povlaku s vysokým obsahem Si
- Velmi přesné tolerance řezných hran
- Minimalizace vyštipování díky zesílení řezné hrany
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdkovu

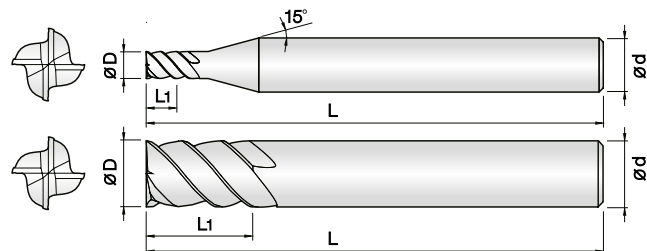


NOVINKA

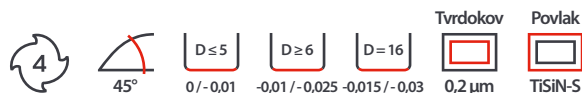
| Objednací číslo  | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|------------------|--------|---------|--------|-----------|-------------------------------------|
| 4JJE-005-010-S04 | 0,5    | 1       | 40     | 4         | <input checked="" type="checkbox"/> |
| 4JJE-006-012-S04 | 0,6    | 1,2     | 40     | 4         | <input checked="" type="checkbox"/> |
| 4JJE-007-014-S04 | 0,7    | 1,4     | 40     | 4         | <input checked="" type="checkbox"/> |
| 4JJE-008-016-S04 | 0,8    | 1,6     | 40     | 4         | <input checked="" type="checkbox"/> |
| 4JJE-009-018-S04 | 0,9    | 1,8     | 40     | 4         | <input checked="" type="checkbox"/> |
| 4JJE-010-025-S04 | 1      | 2,5     | 40     | 4         | <input checked="" type="checkbox"/> |
| 4JJE-010-025-S06 |        | 2,5     | 40     | 6         | <input checked="" type="checkbox"/> |
| 4JJE-012-030-S04 | 1,2    | 3       | 40     | 4         | <input checked="" type="checkbox"/> |
| 4JJE-015-040-S04 | 1,5    | 4       | 40     | 4         | <input checked="" type="checkbox"/> |
| 4JJE-015-040-S06 |        | 4       | 40     | 6         | <input checked="" type="checkbox"/> |
| 4JJE-020-060-S04 | 2      | 6       | 40     | 4         | <input checked="" type="checkbox"/> |
| 4JJE-020-060-S06 |        | 6       | 40     | 6         | <input checked="" type="checkbox"/> |
| 4JJE-025-080-S04 | 2,5    | 8       | 45     | 4         | <input checked="" type="checkbox"/> |
| 4JJE-025-080-S06 |        | 8       | 45     | 6         | <input checked="" type="checkbox"/> |
| 4JJE-030-080-S04 | 3      | 8       | 45     | 4         | <input checked="" type="checkbox"/> |
| 4JJE-030-080-S06 |        | 8       | 45     | 6         | <input checked="" type="checkbox"/> |
| 4JJE-035-100-S06 | 3,5    | 10      | 45     | 6         | <input checked="" type="checkbox"/> |
| 4JJE-040-110-S04 | 4      | 11      | 45     | 4         | <input checked="" type="checkbox"/> |
| 4JJE-040-110-S06 |        | 11      | 45     | 6         | <input checked="" type="checkbox"/> |
| 4JJE-045-110-S06 | 4,5    | 11      | 45     | 6         | <input checked="" type="checkbox"/> |
| 4JJE-050-130-S06 | 5      | 13      | 50     | 6         | <input checked="" type="checkbox"/> |
| 4JJE-055-130-S06 | 5,5    | 13      | 50     | 6         | <input checked="" type="checkbox"/> |
| 4JJE-060-130-S06 | 6      | 13      | 50     | 6         | <input checked="" type="checkbox"/> |
| 4JJE-080-190-S08 | 8      | 19      | 60     | 8         | <input checked="" type="checkbox"/> |
| 4JJE-100-220-S10 | 10     | 22      | 70     | 10        | <input checked="" type="checkbox"/> |
| 4JJE-120-260-S12 | 12     | 26      | 75     | 12        | <input checked="" type="checkbox"/> |
| 4JJE-140-300-S14 | 14     | 30      | 90     | 14        | <input checked="" type="checkbox"/> |
| 4JJE-160-350-S16 | 16     | 35      | 100    | 16        | <input checked="" type="checkbox"/> |
| 4JJE-200-400-S20 | 20     | 40      | 100    | 20        | <input checked="" type="checkbox"/> |



# 4JJHE 4-břité OSTRÉ frézy 45° pro kalené oceli do HRC 65



- ▶ Určeno pro kalené oceli (52 - 65 HRC)
- ▶ Vysoká odolnost proti opotřeбенí díky novému PVD povlaku s vysokým obsahem Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Minimalizace vyštipování díky zesílení řezné hrany
- ▶ Vyšší posuvy díky 45° geometrii
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



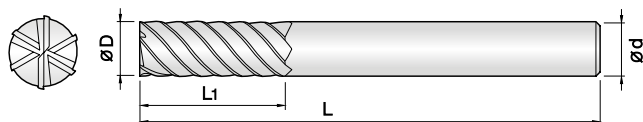
## NOVINKA

| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 4JJHE-010-015-S06 | 1      | 1,5     | 40     | 6         | ☑                  |
| 4JJHE-010-025-S06 |        | 2,5     | 40     | 6         | ☑                  |
| 4JJHE-010-035-S06 |        | 3,5     | 40     | 6         | ☑                  |
| 4JJHE-010-050-S06 |        | 5       | 45     | 6         | ☑                  |
| 4JJHE-015-040-S06 | 1,5    | 4       | 40     | 6         | ☑                  |
| 4JJHE-015-060-S06 |        | 6       | 40     | 6         | ☑                  |
| 4JJHE-015-080-S06 |        | 8       | 40     | 6         | ☑                  |
| 4JJHE-020-030-S06 | 2      | 3       | 40     | 6         | ☑                  |
| 4JJHE-020-050-S06 |        | 5       | 40     | 6         | ☑                  |
| 4JJHE-020-080-S06 |        | 8       | 40     | 6         | ☑                  |
| 4JJHE-020-100-S06 |        | 10      | 45     | 6         | ☑                  |
| 4JJHE-025-060-S06 | 2,5    | 6       | 45     | 6         | ☑                  |
| 4JJHE-025-080-S06 |        | 8       | 45     | 6         | ☑                  |
| 4JJHE-025-100-S06 |        | 10      | 50     | 6         | ☑                  |
| 4JJHE-030-060-S06 | 3      | 6       | 45     | 6         | ☑                  |
| 4JJHE-030-080-S06 |        | 8       | 45     | 6         | ☑                  |
| 4JJHE-030-120-S06 |        | 12      | 50     | 6         | ☑                  |
| 4JJHE-030-150-S06 |        | 15      | 50     | 6         | ☑                  |
| 4JJHE-035-080-S06 | 3,5    | 8       | 45     | 6         | ☑                  |
| 4JJHE-040-080-S06 | 4      | 8       | 45     | 6         | ☑                  |
| 4JJHE-040-110-S06 |        | 11      | 45     | 6         | ☑                  |
| 4JJHE-040-150-S06 |        | 15      | 55     | 6         | ☑                  |
| 4JJHE-040-200-S06 |        | 20      | 60     | 6         | ☑                  |
| 4JJHE-045-110-S06 | 4,5    | 11      | 50     | 6         | ☑                  |
| 4JJHE-050-100-S06 | 5      | 10      | 50     | 6         | ☑                  |
| 4JJHE-050-130-S06 |        | 13      | 50     | 6         | ☑                  |
| 4JJHE-050-200-S06 |        | 20      | 60     | 6         | ☑                  |
| 4JJHE-050-250-S06 |        | 25      | 70     | 6         | ☑                  |
| 4JJHE-050-300-S06 |        | 30      | 75     | 6         | ☑                  |
| 4JJHE-060-130-S06 | 6      | 13      | 50     | 6         | ☑                  |
| 4JJHE-060-150-S06 |        | 15      | 55     | 6         | ☑                  |
| 4JJHE-060-200-S06 |        | 20      | 60     | 6         | ☑                  |
| 4JJHE-060-250-S06 |        | 25      | 70     | 6         | ☑                  |
| 4JJHE-060-300-S06 |        | 30      | 75     | 6         | ☑                  |
| 4JJHE-070-160-S08 | 7      | 16      | 60     | 8         | ☑                  |

| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 4JJHE-080-200-S08 | 8      | 20      | 60     | 8         | ☑                  |
| 4JJHE-080-250-S08 |        | 25      | 70     | 8         | ☑                  |
| 4JJHE-080-300-S08 |        | 30      | 80     | 8         | ☑                  |
| 4JJHE-080-400-S08 |        | 40      | 90     | 8         | ☑                  |
| 4JJHE-090-220-S10 | 9      | 22      | 70     | 10        | ☑                  |
| 4JJHE-100-220-S10 | 10     | 22      | 70     | 10        | ☑                  |
| 4JJHE-100-300-S10 |        | 30      | 80     | 10        | ☑                  |
| 4JJHE-100-400-S10 |        | 40      | 90     | 10        | ☑                  |
| 4JJHE-100-500-S10 |        | 50      | 100    | 10        | ☑                  |
| 4JJHE-120-260-S12 | 12     | 26      | 75     | 12        | ☑                  |
| 4JJHE-120-350-S12 |        | 35      | 90     | 12        | ☑                  |
| 4JJHE-120-500-S12 |        | 50      | 100    | 12        | ☑                  |
| 4JJHE-120-600-S12 |        | 60      | 110    | 12        | ☑                  |
| 4JJHE-140-350-S14 | 14     | 35      | 90     | 14        | ☑                  |
| 4JJHE-140-550-S14 |        | 55      | 110    | 14        | ☑                  |
| 4JJHE-160-350-S16 | 16     | 35      | 90     | 16        | ☑                  |
| 4JJHE-160-500-S16 |        | 50      | 110    | 16        | ☑                  |
| 4JJHE-160-700-S16 |        | 70      | 130    | 16        | ☑                  |
| 4JJHE-180-380-S18 | 18     | 38      | 100    | 18        | ☑                  |
| 4JJHE-200-400-S20 | 20     | 40      | 100    | 20        | ☑                  |
| 4JJHE-200-550-S20 |        | 55      | 120    | 20        | ☑                  |
| 4JJHE-200-750-S20 |        | 75      | 150    | 20        | ☑                  |

# 6&8JJHE

## 6-břité OSTRÉ frézy 45° pro kalené oceli do HRC 68



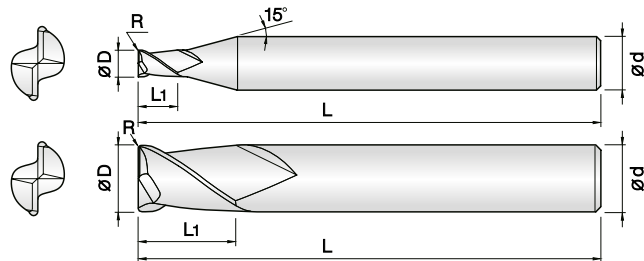
- ▶ **Určeno pro kalené oceli (52 - 68 HRC)**
- ▶ Vysoká odolnost proti opotřebení díky novému PVD povlaku s vysokým obsahem Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Minimalizace vyštipování díky zesílení řezné hrany
- ▶ Vyšší posuvy díky 45° geometrii
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdkovu



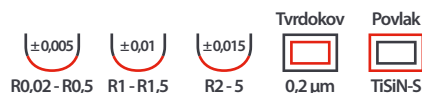
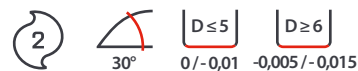
### NOVINKA

| Objednáací číslo  | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 6JJHE-030-100-S06 | 3      | 10      | 50     | 6         | ☑                  |
| 6JJHE-030-150-S06 |        | 15      | 50     | 6         | ☑                  |
| 6JJHE-030-200-S06 |        | 20      | 60     | 6         | ☑                  |
| 6JJHE-040-120-S06 | 4      | 12      | 50     | 6         | ☑                  |
| 6JJHE-040-160-S06 |        | 16      | 50     | 6         | ☑                  |
| 6JJHE-040-200-S06 |        | 20      | 60     | 6         | ☑                  |
| 6JJHE-050-150-S06 | 5      | 15      | 50     | 6         | ☑                  |
| 6JJHE-050-200-S06 |        | 20      | 60     | 6         | ☑                  |
| 6JJHE-050-250-S06 |        | 25      | 60     | 6         | ☑                  |
| 6JJHE-060-150-S06 | 6      | 15      | 50     | 6         | ☑                  |
| 6JJHE-060-200-S06 |        | 20      | 60     | 6         | ☑                  |
| 6JJHE-060-250-S06 |        | 25      | 65     | 6         | ☑                  |
| 6JJHE-060-300-S06 |        | 30      | 70     | 6         | ☑                  |
| 6JJHE-060-350-S06 |        | 35      | 75     | 6         | ☑                  |
| 6JJHE-060-400-S06 |        | 40      | 80     | 6         | ☑                  |
| 6JJHE-080-200-S08 | 8      | 20      | 60     | 8         | ☑                  |
| 6JJHE-080-250-S08 |        | 25      | 65     | 8         | ☑                  |
| 6JJHE-080-300-S08 |        | 30      | 75     | 8         | ☑                  |
| 6JJHE-080-350-S08 |        | 35      | 80     | 8         | ☑                  |
| 6JJHE-080-400-S08 |        | 40      | 90     | 8         | ☑                  |
| 6JJHE-080-450-S08 |        | 45      | 100    | 8         | ☑                  |
| 6JJHE-080-500-S08 | 10     | 50      | 100    | 8         | ☑                  |
| 6JJHE-100-250-S10 |        | 25      | 70     | 10        | ☑                  |
| 6JJHE-100-350-S10 |        | 35      | 90     | 10        | ☑                  |
| 6JJHE-100-450-S10 |        | 45      | 100    | 10        | ☑                  |
| 6JJHE-100-500-S10 |        | 50      | 100    | 10        | ☑                  |
| 6JJHE-100-600-S10 |        | 60      | 110    | 10        | ☑                  |
| 6JJHE-120-300-S12 | 12     | 30      | 80     | 12        | ☑                  |
| 6JJHE-120-400-S12 |        | 40      | 90     | 12        | ☑                  |
| 6JJHE-120-500-S12 |        | 50      | 100    | 12        | ☑                  |
| 6JJHE-120-600-S12 |        | 60      | 110    | 12        | ☑                  |
| 6JJHE-120-700-S12 |        | 70      | 120    | 12        | ☑                  |
| 6JJHE-140-350-S14 |        | 14      | 35     | 90        | 14                 |
| 6JJHE-140-550-S14 | 55     |         | 110    | 14        | ☑                  |
| 6JJHE-160-350-S16 | 16     | 35      | 90     | 16        | ☑                  |
| 6JJHE-160-500-S16 |        | 50      | 110    | 16        | ☑                  |
| 6JJHE-160-650-S16 |        | 65      | 120    | 16        | ☑                  |
| 6JJHE-160-800-S16 |        | 80      | 150    | 16        | ☑                  |

| Objednáací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|---------|--------|-----------|--------------------|
| 6JJHE-160-900-S16  | 16     | 90      | 160    | 16        | ☑                  |
| 6JJHE-160-1000-S16 |        | 100     | 160    | 16        | ☑                  |
| 6JJHE-180-400-S18  | 18     | 40      | 100    | 18        | ☑                  |
| 6JJHE-180-650-S18  |        | 65      | 120    | 18        | ☑                  |
| 6JJHE-200-450-S20  | 20     | 45      | 100    | 20        | ☑                  |
| 6JJHE-200-600-S20  |        | 60      | 120    | 20        | ☑                  |
| 6JJHE-200-800-S20  |        | 80      | 150    | 20        | ☑                  |
| 6JJHE-200-900-S20  |        | 90      | 160    | 20        | ☑                  |
| 6JJHE-200-1000-S20 |        | 100     | 160    | 20        | ☑                  |
| 6JJHE-200-1100-S20 |        | 110     | 170    | 20        | ☑                  |
| 6JJHE-200-1200-S20 | 25     | 120     | 180    | 20        | ☑                  |
| 8JJHE-250-1000-S25 |        | 100     | 160    | 25        | ☑                  |
| 8JJHE-250-1300-S25 |        | 130     | 200    | 25        | ☑                  |



- Určeno pro kalené oceli (52 - 68 HRC)
- Vysoká odolnost proti opotřebování díky novému PVD povlaku s vysokým obsahem Si
- Velmi přesné tolerance řezných hran
- Široký sortiment rádiusů a délek pro optimální výběr nástroje
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdkovu



| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 2JJC-002-0002-S04 | 0,2    | R0,02  | 0,4     | 45     | 4         | ☑                  |
| 2JJC-002-0005-S04 |        | R0,05  | 0,4     | 45     | 4         | ☑                  |
| 2JJC-003-0002-S04 | 0,3    | R0,02  | 0,6     | 45     | 4         | ☑                  |
| 2JJC-003-0005-S04 |        | R0,05  | 0,6     | 45     | 4         | ☑                  |
| 2JJC-003-001-S04  |        | R0,1   | 0,6     | 45     | 4         | ☑                  |
| 2JJC-004-0002-S04 | 0,4    | R0,02  | 0,8     | 45     | 4         | ☑                  |
| 2JJC-004-0005-S04 |        | R0,05  | 0,8     | 45     | 4         | ☑                  |
| 2JJC-004-001-S04  |        | R0,1   | 0,8     | 45     | 4         | ☑                  |
| 2JJC-005-0002-S04 | 0,5    | R0,02  | 1       | 45     | 4         | ☑                  |
| 2JJC-005-0005-S04 |        | R0,05  | 1       | 45     | 4         | ☑                  |
| 2JJC-005-001-S04  |        | R0,1   | 1       | 45     | 4         | ☑                  |
| 2JJC-006-0002-S04 | 0,6    | R0,02  | 1,2     | 45     | 4         | ☑                  |
| 2JJC-006-0005-S04 |        | R0,05  | 1,2     | 45     | 4         | ☑                  |
| 2JJC-006-001-S04  |        | R0,1   | 1,2     | 45     | 4         | ☑                  |
| 2JJC-006-002-S04  | 0,7    | R0,2   | 1,2     | 45     | 4         | ☑                  |
| 2JJC-007-0005-S04 |        | R0,05  | 1,4     | 45     | 4         | ☑                  |
| 2JJC-007-001-S04  |        | R0,1   | 1,4     | 45     | 4         | ☑                  |
| 2JJC-007-002-S04  | 0,8    | R0,2   | 1,4     | 45     | 4         | ☑                  |
| 2JJC-008-0002-S04 |        | R0,02  | 1,6     | 45     | 4         | ☑                  |
| 2JJC-008-0005-S04 |        | R0,05  | 1,6     | 45     | 4         | ☑                  |
| 2JJC-008-001-S04  |        | R0,1   | 1,6     | 45     | 4         | ☑                  |
| 2JJC-008-002-S04  | 0,9    | R0,2   | 1,6     | 45     | 4         | ☑                  |
| 2JJC-009-0005-S04 |        | R0,05  | 1,8     | 45     | 4         | ☑                  |
| 2JJC-009-001-S04  |        | R0,1   | 1,8     | 45     | 4         | ☑                  |
| 2JJC-010-0002-S04 | 1      | R0,02  | 2,5     | 45     | 4         | ☑                  |
| 2JJC-010-0005-S04 |        | R0,05  | 2,5     | 45     | 4         | ☑                  |
| 2JJC-010-001-S04  |        | R0,1   | 2,5     | 45     | 4         | ☑                  |
| 2JJC-010-002-S04  | 1,2    | R0,2   | 2,5     | 45     | 4         | ☑                  |
| 2JJC-010-003-S04  |        | R0,3   | 2,5     | 45     | 4         | ☑                  |
| 2JJC-012-0002-S04 |        | 1,2    | R0,02   | 3,2    | 45        | 4                  |
| 2JJC-012-0005-S04 | R0,05  |        | 3,2     | 45     | 4         | ☑                  |
| 2JJC-012-001-S04  | R0,1   |        | 3,2     | 45     | 4         | ☑                  |
| 2JJC-012-002-S04  | R0,2   |        | 3,2     | 45     | 4         | ☑                  |
| 2JJC-012-003-S04  | 1,5    | R0,3   | 3,2     | 45     | 4         | ☑                  |
| 2JJC-015-0002-S04 |        | R0,02  | 4       | 45     | 4         | ☑                  |
| 2JJC-015-0005-S04 |        | R0,05  | 4       | 45     | 4         | ☑                  |
| 2JJC-015-001-S04  |        | R0,1   | 4       | 45     | 4         | ☑                  |
| 2JJC-015-002-S04  |        | R0,2   | 4       | 45     | 4         | ☑                  |

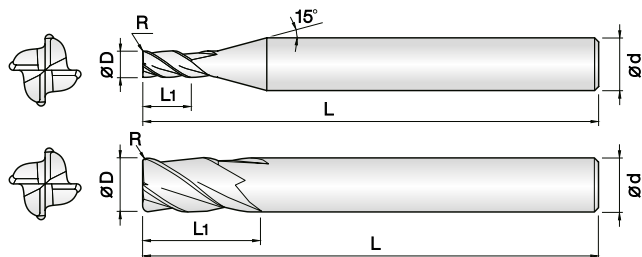
| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 2JJC-015-003-S04  | 1,5    | R0,3   | 4       | 45     | 4         | ☑                  |
| 2JJC-015-005-S04  |        | R0,5   | 4       | 45     | 4         | ☑                  |
| 2JJC-020-0002-S04 | 2      | R0,02  | 6       | 45     | 4         | ☑                  |
| 2JJC-020-0005-S04 |        | R0,05  | 6       | 45     | 4         | ☑                  |
| 2JJC-020-001-S04  |        | R0,1   | 6       | 45     | 4         | ☑                  |
| 2JJC-020-002-S04  |        | R0,2   | 6       | 45     | 4         | ☑                  |
| 2JJC-020-003-S04  | 2,5    | R0,3   | 6       | 45     | 4         | ☑                  |
| 2JJC-020-005-S04  |        | R0,5   | 6       | 45     | 4         | ☑                  |
| 2JJC-025-001-S04  |        | R0,1   | 6       | 50     | 4         | ☑                  |
| 2JJC-025-002-S04  | 3      | R0,2   | 6       | 50     | 4         | ☑                  |
| 2JJC-025-003-S04  |        | R0,3   | 6       | 50     | 4         | ☑                  |
| 2JJC-025-005-S04  |        | R0,5   | 6       | 50     | 4         | ☑                  |
| 2JJC-030-001-S06  | 3      | R0,1   | 8       | 60     | 6         | ☑                  |
| 2JJC-030-002-S06  |        | R0,2   | 8       | 60     | 6         | ☑                  |
| 2JJC-030-003-S06  |        | R0,3   | 8       | 60     | 6         | ☑                  |
| 2JJC-030-005-S06  |        | R0,5   | 8       | 60     | 6         | ☑                  |
| 2JJC-030-010-S06  | 4      | R1     | 8       | 60     | 6         | ☑                  |
| 2JJC-040-001-S04  |        | R0,1   | 9       | 60     | 4         | ☑                  |
| 2JJC-040-001-S06  |        | R0,2   | 10      | 70     | 6         | ☑                  |
| 2JJC-040-002-S04  |        |        | 9       | 60     | 4         | ☑                  |
| 2JJC-040-002-S06  |        | R0,3   | 10      | 70     | 6         | ☑                  |
| 2JJC-040-003-S04  |        |        | 9       | 60     | 4         | ☑                  |
| 2JJC-040-003-S06  |        |        | 10      | 70     | 6         | ☑                  |
| 2JJC-040-005-S04  |        | R0,5   | 9       | 60     | 4         | ☑                  |
| 2JJC-040-005-S06  | 10     |        | 70      | 6      | ☑         |                    |
| 2JJC-040-010-S04  | 5      | R1     | 9       | 60     | 4         | ☑                  |
| 2JJC-040-010-S06  |        | R0,1   | 10      | 70     | 6         | ☑                  |
| 2JJC-050-001-S06  |        |        | 10      | 70     | 6         | ☑                  |
| 2JJC-050-002-S06  |        | R0,2   | 13      | 75     | 6         | ☑                  |
| 2JJC-050-003-S06  | R0,3   | 13     | 75      | 6      | ☑         |                    |
| 2JJC-050-005-S06  |        | 13     | 75      | 6      | ☑         |                    |
| 2JJC-050-010-S06  |        | R1     | 13      | 75     | 6         | ☑                  |
| 2JJC-060-001-060  | 6      | R0,1   | 11      | 60     | 6         | ☑                  |
| 2JJC-060-001-090  |        | R0,2   | 13      | 90     | 6         | ☑                  |
| 2JJC-060-002-060  |        |        | 11      | 60     | 6         | ☑                  |
| 2JJC-060-002-090  |        | R0,3   | 13      | 90     | 6         | ☑                  |
| 2JJC-060-003-060  |        |        | 11      | 60     | 6         | ☑                  |
| 2JJC-060-003-090  | 13     |        | 90      | 6      | ☑         |                    |

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm)                           | Standardní položka                  |                                     |
|------------------|--------|--------|---------|--------|-------------------------------------|-------------------------------------|-------------------------------------|
| 2JJC-060-005-060 | 6      | R0,5   | 11      | 60     | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-060-005-090 |        |        | 13      | 90     | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-060-005-110 |        |        | 13      | 110    | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-060-010-060 |        | R1     | 11      | 60     | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-060-010-090 |        |        | 13      | 90     | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-060-010-110 |        |        | 13      | 90     | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-060-015-060 |        | R1,5   | 11      | 60     | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-060-015-090 |        |        | 13      | 90     | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-060-020-060 |        | R2     | 11      | 60     | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-060-020-090 |        |        | 13      | 90     | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-060-025-090 |        | R2,5   | 13      | 90     | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-080-001-070 |        | 8      | R0,1    | 16     | 70                                  | 8                                   | <input checked="" type="checkbox"/> |
| 2JJC-080-001-100 |        |        |         | 19     | 100                                 | 8                                   | <input checked="" type="checkbox"/> |
| 2JJC-080-002-070 |        |        | R0,2    | 16     | 70                                  | 8                                   | <input checked="" type="checkbox"/> |
| 2JJC-080-002-100 | 19     |        |         | 100    | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-080-003-070 | R0,3   |        | 16      | 70     | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-080-003-100 |        |        | 19      | 100    | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-080-005-070 | R0,5   |        | 16      | 70     | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-080-005-100 |        |        | 19      | 100    | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-080-005-120 |        |        | 19      | 120    | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-080-010-070 | R1     |        | 16      | 70     | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-080-010-100 |        |        | 19      | 100    | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-080-010-120 |        |        | 19      | 120    | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-080-015-070 | R1,5   |        | 16      | 70     | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-080-015-100 |        |        | 19      | 100    | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2JJC-080-020-070 | R2     | 16     | 70      | 8      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJC-080-020-100 |        | 19     | 100     | 8      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJC-080-025-100 | R2,5   | 19     | 100     | 8      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJC-080-030-100 | R3     | 19     | 100     | 8      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJC-080-035-100 | R3,5   | 19     | 100     | 8      | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJC-100-001-075 | 10     | R0,1   | 19      | 75     | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-001-100 |        |        | 22      | 100    | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-002-075 |        | R0,2   | 19      | 75     | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-002-100 |        |        | 22      | 100    | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-003-075 |        | R0,3   | 19      | 75     | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-003-100 |        |        | 22      | 100    | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-005-075 |        | R0,5   | 19      | 75     | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-005-100 |        |        | 22      | 100    | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-005-120 |        |        | 22      | 120    | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-010-075 |        | R1     | 19      | 75     | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-010-100 |        |        | 22      | 100    | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-010-120 |        |        | 22      | 120    | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-015-075 |        | R1,5   | 19      | 75     | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-015-100 |        |        | 22      | 100    | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-100-020-075 | R2     | 19     | 75      | 10     | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJC-100-020-100 |        | 22     | 100     | 10     | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJC-100-025-100 | R2,5   | 22     | 100     | 10     | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJC-100-030-100 | R3     | 22     | 100     | 10     | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJC-100-040-100 | R4     | 22     | 100     | 10     | <input checked="" type="checkbox"/> |                                     |                                     |
| 2JJC-120-001-080 | 12     | R0,1   | 22      | 80     | 12                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-120-001-110 |        |        | 26      | 110    | 12                                  | <input checked="" type="checkbox"/> |                                     |
| 2JJC-120-002-080 |        | R0,2   | 22      | 80     | 12                                  | <input checked="" type="checkbox"/> |                                     |

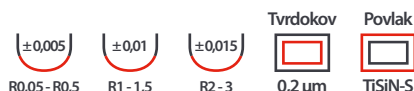
| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm)                           | Standardní položka                  |
|------------------|--------|--------|---------|--------|-------------------------------------|-------------------------------------|
| 2JJC-120-002-110 | 12     | R0,2   | 26      | 110    | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-003-080 |        | R0,3   | 22      | 80     | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-003-110 |        |        | 26      | 110    | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-005-080 |        | R0,5   | 22      | 80     | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-005-110 |        |        | 26      | 110    | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-005-130 |        |        | 26      | 130    | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-010-080 |        | R1     | 22      | 80     | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-010-110 |        |        | 26      | 110    | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-010-130 |        |        | 26      | 130    | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-015-080 |        | R1,5   | 22      | 80     | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-015-110 |        |        | 26      | 110    | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-020-080 |        | R2     | 22      | 80     | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-020-110 |        |        | 26      | 110    | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-020-130 |        |        | 26      | 130    | 12                                  | <input checked="" type="checkbox"/> |
| 2JJC-120-025-110 | R2,5   | 26     | 110     | 12     | <input checked="" type="checkbox"/> |                                     |
| 2JJC-120-030-110 | R3     | 26     | 110     | 12     | <input checked="" type="checkbox"/> |                                     |
| 2JJC-120-040-110 | R4     | 26     | 110     | 12     | <input checked="" type="checkbox"/> |                                     |
| 2JJC-120-050-110 | R5     | 26     | 110     | 12     | <input checked="" type="checkbox"/> |                                     |

# 4JJC

## 4-břité TOROIDNÍ frézy pro kalené oceli do HRC 68



- Určeno pro kalené oceli (52 - 68 HRC)
- Vysoká odolnost proti opotřebení díky novému PVD povlaku s vysokým obsahem Si
- Velmi přesné tolerance řezných hran
- Široký sortiment rádiusů a délek pro optimální výběr nástroje
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdkovu



NOVINKA

| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 4JJC-005-0005-S04 | 0,5    | R0,05  | 1       | 45     | 4         | ☑                  |
| 4JJC-005-001-S04  |        | R0,1   | 1       | 45     | 4         | ☑                  |
| 4JJC-006-0005-S04 | 0,6    | R0,05  | 1,2     | 45     | 4         | ☑                  |
| 4JJC-006-001-S04  |        | R0,1   | 1,2     | 45     | 4         | ☑                  |
| 4JJC-007-0005-S04 | 0,7    | R0,05  | 1,4     | 45     | 4         | ☑                  |
| 4JJC-007-001-S04  |        | R0,1   | 1,4     | 45     | 4         | ☑                  |
| 4JJC-008-0005-S04 | 0,8    | R0,05  | 1,6     | 45     | 4         | ☑                  |
| 4JJC-008-001-S04  |        | R0,1   | 1,6     | 45     | 4         | ☑                  |
| 4JJC-009-0005-S04 | 0,9    | R0,05  | 1,8     | 45     | 4         | ☑                  |
| 4JJC-009-001-S04  |        | R0,1   | 1,8     | 45     | 4         | ☑                  |
| 4JJC-010-0005-S04 | 1      | R0,05  | 2,5     | 45     | 4         | ☑                  |
| 4JJC-010-001-S04  |        | R0,1   | 2,5     | 45     | 4         | ☑                  |
| 4JJC-010-002-S04  |        | R0,2   | 2,5     | 45     | 4         | ☑                  |
| 4JJC-010-003-S04  | 1,5    | R0,3   | 2,5     | 45     | 4         | ☑                  |
| 4JJC-015-0005-S04 |        | R0,05  | 4       | 45     | 4         | ☑                  |
| 4JJC-015-001-S04  |        | R0,1   | 4       | 45     | 4         | ☑                  |
| 4JJC-015-002-S04  | 2      | R0,2   | 4       | 45     | 4         | ☑                  |
| 4JJC-015-003-S04  |        | R0,3   | 4       | 45     | 4         | ☑                  |
| 4JJC-015-005-S04  |        | R0,5   | 4       | 45     | 4         | ☑                  |
| 4JJC-020-0005-S04 | 2      | R0,05  | 6       | 45     | 4         | ☑                  |
| 4JJC-020-001-S04  |        | R0,1   | 6       | 45     | 4         | ☑                  |
| 4JJC-020-002-S04  |        | R0,2   | 6       | 45     | 4         | ☑                  |
| 4JJC-020-003-S04  |        | R0,3   | 6       | 45     | 4         | ☑                  |
| 4JJC-020-005-S04  | 2,5    | R0,5   | 6       | 45     | 4         | ☑                  |
| 4JJC-025-001-S04  |        | R0,1   | 6       | 50     | 4         | ☑                  |
| 4JJC-025-002-S04  |        | R0,2   | 6       | 50     | 4         | ☑                  |
| 4JJC-025-003-S04  |        | R0,3   | 6       | 50     | 4         | ☑                  |
| 4JJC-025-005-S04  | 3      | R0,5   | 6       | 50     | 4         | ☑                  |
| 4JJC-030-001-S06  |        | R0,1   | 8       | 60     | 6         | ☑                  |
| 4JJC-030-002-S06  |        | R0,2   | 8       | 60     | 6         | ☑                  |
| 4JJC-030-003-S06  |        | R0,3   | 8       | 60     | 6         | ☑                  |
| 4JJC-030-005-S06  | 3,5    | R0,5   | 8       | 60     | 6         | ☑                  |
| 4JJC-030-010-S06  |        | R1     | 8       | 60     | 6         | ☑                  |
| 4JJC-035-001-S06  |        | R0,1   | 9       | 70     | 6         | ☑                  |
| 4JJC-035-002-S06  |        | R0,2   | 9       | 70     | 6         | ☑                  |
| 4JJC-035-003-S06  | 4      | R0,3   | 9       | 70     | 6         | ☑                  |
| 4JJC-035-005-S06  |        | R0,5   | 9       | 70     | 6         | ☑                  |
| 4JJC-040-001-S04  |        | R0,1   | 9       | 60     | 4         | ☑                  |

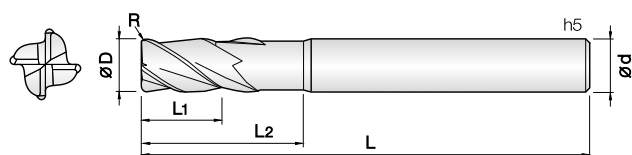
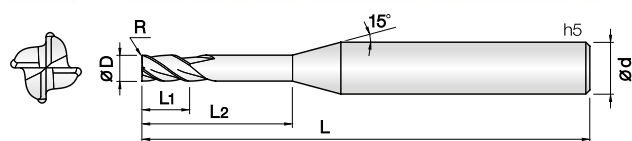
| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 4JJC-040-001-S06  | 4      | R0,1   | 10      | 70     | 6         | ☑                  |
| 4JJC-040-002-S04  |        | R0,2   | 9       | 60     | 4         | ☑                  |
| 4JJC-040-002-S06  |        | R0,2   | 10      | 70     | 6         | ☑                  |
| 4JJC-040-003-S04  |        | R0,3   | 9       | 60     | 4         | ☑                  |
| 4JJC-040-003-S06  |        | R0,3   | 10      | 70     | 6         | ☑                  |
| 4JJC-040-005-S04  |        | R0,5   | 9       | 60     | 4         | ☑                  |
| 4JJC-040-005-S06  |        | R0,5   | 10      | 70     | 6         | ☑                  |
| 4JJC-040-010-S04  |        | R1     | 9       | 60     | 4         | ☑                  |
| 4JJC-040-010-S06  |        | R1     | 10      | 70     | 6         | ☑                  |
| 4JJC-045-002-S06  |        | 4,5    | R0,2    | 11     | 75        | 6                  |
| 4JJC-045-005-S06  | R0,5   |        | 11      | 75     | 6         | ☑                  |
| 4JJC-050-001-S06  | 5      | R0,1   | 13      | 75     | 6         | ☑                  |
| 4JJC-050-002-S06  |        | R0,2   | 13      | 75     | 6         | ☑                  |
| 4JJC-050-003-S06  |        | R0,3   | 13      | 75     | 6         | ☑                  |
| 4JJC-050-005-S06  |        | R0,5   | 13      | 75     | 6         | ☑                  |
| 4JJC-050-010-S06  | R1     | 13     | 75      | 6      | ☑         |                    |
| 4JJC-060-0005-055 | 6      | R0,05  | 11      | 55     | 6         | ☑                  |
| 4JJC-060-0005-080 |        | R0,05  | 13      | 80     | 6         | ☑                  |
| 4JJC-060-001-055  |        | R0,1   | 11      | 55     | 6         | ☑                  |
| 4JJC-060-001-080  |        | R0,1   | 13      | 80     | 6         | ☑                  |
| 4JJC-060-002-055  |        | R0,2   | 11      | 55     | 6         | ☑                  |
| 4JJC-060-002-080  |        | R0,2   | 13      | 80     | 6         | ☑                  |
| 4JJC-060-002-100  |        | R0,2   | 13      | 100    | 6         | ☑                  |
| 4JJC-060-002-120  |        | R0,2   | 13      | 120    | 6         | ☑                  |
| 4JJC-060-003-055  |        | R0,3   | 11      | 55     | 6         | ☑                  |
| 4JJC-060-003-080  |        | R0,3   | 13      | 80     | 6         | ☑                  |
| 4JJC-060-003-100  | 6      | R0,3   | 13      | 100    | 6         | ☑                  |
| 4JJC-060-003-120  |        | R0,3   | 13      | 120    | 6         | ☑                  |
| 4JJC-060-005-055  |        | R0,5   | 11      | 55     | 6         | ☑                  |
| 4JJC-060-005-080  |        | R0,5   | 13      | 80     | 6         | ☑                  |
| 4JJC-060-005-100  | 6      | R0,5   | 13      | 100    | 6         | ☑                  |
| 4JJC-060-005-120  |        | R0,5   | 13      | 120    | 6         | ☑                  |
| 4JJC-060-010-055  |        | R1     | 11      | 55     | 6         | ☑                  |
| 4JJC-060-010-080  |        | R1     | 13      | 80     | 6         | ☑                  |
| 4JJC-060-010-100  | 6      | R1     | 13      | 100    | 6         | ☑                  |
| 4JJC-060-010-120  |        | R1     | 13      | 120    | 6         | ☑                  |
| 4JJC-060-015-055  |        | R1,5   | 11      | 55     | 6         | ☑                  |
| 4JJC-060-015-080  | R1,5   | 13     | 80      | 6      | ☑         |                    |

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm)                           | Standardní položka                  |
|------------------|--------|--------|---------|--------|-------------------------------------|-------------------------------------|
| 4JJC-060-020-055 | 6      | R2     | 11      | 55     | 6                                   | <input checked="" type="checkbox"/> |
| 4JJC-060-020-080 |        | R2     | 13      | 80     | 6                                   | <input checked="" type="checkbox"/> |
| 4JJC-080-002-060 | 8      | R0,2   | 16      | 60     | 8                                   | <input checked="" type="checkbox"/> |
| 4JJC-080-002-090 |        | R0,2   | 19      | 90     | 8                                   | <input checked="" type="checkbox"/> |
| 4JJC-080-003-060 |        | R0,3   | 16      | 60     | 8                                   | <input checked="" type="checkbox"/> |
| 4JJC-080-003-090 |        | R0,3   | 19      | 90     | 8                                   | <input checked="" type="checkbox"/> |
| 4JJC-080-005-060 |        | R0,5   | 16      | 60     | 8                                   | <input checked="" type="checkbox"/> |
| 4JJC-080-005-090 |        | R0,5   | 19      | 90     | 8                                   | <input checked="" type="checkbox"/> |
| 4JJC-080-005-110 |        | R0,5   | 19      | 110    | 8                                   | <input checked="" type="checkbox"/> |
| 4JJC-080-005-150 |        | R0,5   | 19      | 150    | 8                                   | <input checked="" type="checkbox"/> |
| 4JJC-080-010-060 |        | R1     | 16      | 60     | 8                                   | <input checked="" type="checkbox"/> |
| 4JJC-080-010-090 |        | R1     | 19      | 90     | 8                                   | <input checked="" type="checkbox"/> |
| 4JJC-080-010-110 |        | R1     | 19      | 110    | 8                                   | <input checked="" type="checkbox"/> |
| 4JJC-080-010-150 |        | R1     | 19      | 150    | 8                                   | <input checked="" type="checkbox"/> |
| 4JJC-080-015-060 | R1,5   | 16     | 60      | 8      | <input checked="" type="checkbox"/> |                                     |
| 4JJC-080-015-090 | R1,5   | 19     | 90      | 8      | <input checked="" type="checkbox"/> |                                     |
| 4JJC-080-020-060 | R2     | 16     | 60      | 8      | <input checked="" type="checkbox"/> |                                     |
| 4JJC-080-020-090 | R2     | 19     | 90      | 8      | <input checked="" type="checkbox"/> |                                     |
| 4JJC-100-002-070 | 10     | R0,2   | 19      | 70     | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-002-100 |        | R0,2   | 22      | 100    | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-003-070 |        | R0,3   | 19      | 70     | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-003-100 |        | R0,3   | 22      | 100    | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-005-070 |        | R0,5   | 19      | 70     | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-005-100 |        | R0,5   | 22      | 100    | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-005-120 |        | R0,5   | 22      | 120    | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-005-150 |        | R0,5   | 22      | 150    | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-010-070 |        | R1     | 19      | 70     | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-010-100 |        | R1     | 22      | 100    | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-010-120 |        | R1     | 22      | 120    | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-010-150 |        | R1     | 22      | 150    | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-015-070 |        | R1,5   | 19      | 70     | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-015-100 |        | R1,5   | 22      | 100    | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-020-070 |        | R2     | 19      | 70     | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-020-100 |        | R2     | 22      | 100    | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-020-120 |        | R2     | 22      | 120    | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-020-150 |        | R2     | 22      | 150    | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-025-070 |        | R2,5   | 19      | 70     | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-100-025-100 |        | R2,5   | 22      | 100    | 10                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-002-075 | 12     | R0,2   | 22      | 75     | 12                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-002-110 |        | R0,2   | 26      | 110    | 12                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-003-075 |        | R0,3   | 22      | 75     | 12                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-003-110 |        | R0,3   | 26      | 110    | 12                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-005-075 |        | R0,5   | 22      | 75     | 12                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-005-110 |        | R0,5   | 26      | 110    | 12                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-005-130 |        | R0,5   | 26      | 130    | 12                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-005-160 |        | R0,5   | 26      | 160    | 12                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-010-075 |        | R1     | 22      | 75     | 12                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-010-110 |        | R1     | 26      | 110    | 12                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-010-130 |        | R1     | 26      | 130    | 12                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-010-160 |        | R1     | 26      | 160    | 12                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-015-075 |        | R1,5   | 22      | 75     | 12                                  | <input checked="" type="checkbox"/> |
| 4JJC-120-015-110 |        | R1,5   | 26      | 110    | 12                                  | <input checked="" type="checkbox"/> |

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|------------------|--------|--------|---------|--------|-----------|-------------------------------------|
| 4JJC-120-020-075 | 12     | R2     | 22      | 75     | 12        | <input checked="" type="checkbox"/> |
| 4JJC-120-020-110 |        | R2     | 26      | 110    | 12        | <input checked="" type="checkbox"/> |
| 4JJC-120-020-130 |        | R2     | 26      | 130    | 12        | <input checked="" type="checkbox"/> |
| 4JJC-120-020-160 |        | R2     | 26      | 160    | 12        | <input checked="" type="checkbox"/> |
| 4JJC-120-025-075 |        | R2,5   | 22      | 75     | 12        | <input checked="" type="checkbox"/> |
| 4JJC-120-025-110 |        | R2,5   | 26      | 110    | 12        | <input checked="" type="checkbox"/> |
| 4JJC-120-030-075 |        | R3     | 22      | 75     | 12        | <input checked="" type="checkbox"/> |
| 4JJC-120-030-110 |        | R3     | 26      | 110    | 12        | <input checked="" type="checkbox"/> |
| 4JJC-160-005-110 | 16     | R0,5   | 32      | 110    | 16        | <input checked="" type="checkbox"/> |
| 4JJC-160-010-110 |        | R1     | 32      | 110    | 16        | <input checked="" type="checkbox"/> |

# 4JJRC

## 4-břité TOROIDNÍ frézy 15° pro kalené oceli do HRC 68



- ▶ Určeno pro kalené oceli (52 - 68 HRC)
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Určeno pro vysoké posuvy při nižších řezných rychlostech
- ▶ Vhodné pro náročné a hrubovací obrábění
- ▶ Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 4JJRC-010-002-025 | 1      | R0,2   | 2,5     | 1       | 50     | 4         | ☑                  |   |
| 4JJRC-015-005-040 | 1,5    | R0,5   | 4       | 1,5     | 50     | 4         | ☑                  |   |
| 4JJRC-020-005-060 | 2      | R0,5   | 6       | 2       | 50     | 6         | ☑                  |   |
| 4JJRC-030-005-080 | 3      | R0,5   | 8       | 3       | 50     | 6         | ☑                  |   |
| 4JJRC-040-005-120 | 4      | R0,5   | 12      | 4       | 60     | 6         | ☑                  |   |
| 4JJRC-040-005-160 |        |        | 16      | 4       | 60     | 6         | ☑                  |   |
| 4JJRC-040-010-120 |        | R1     | 12      | 4       | 60     | 6         | ☑                  |   |
| 4JJRC-040-010-160 |        |        | 16      | 4       | 60     | 6         | ☑                  |   |
| 4JJRC-050-005-150 | 5      | R0,5   | 15      | 5       | 60     | 6         | ☑                  |   |
| 4JJRC-050-010-150 |        | R1     | 15      | 5       | 60     | 6         | ☑                  |   |
| 4JJRC-060-003-150 | 6      | R0,3   | 15      | 6       | 60     | 6         | ☑                  |   |
| 4JJRC-060-005-150 |        | R0,5   | 15      | 6       | 60     | 6         | ☑                  |   |
| 4JJRC-060-010-150 |        | R1     | 15      | 6       | 60     | 6         | ☑                  |   |
| 4JJRC-060-015-150 |        |        | R1,5    | 15      | 6      | 60        | 6                  | ☑ |
| 4JJRC-080-003-160 | 8      | R0,3   | 16      | 8       | 60     | 8         | ☑                  |   |
| 4JJRC-080-005-160 |        |        | 16      | 8       | 60     | 8         | ☑                  |   |
| 4JJRC-080-005-200 |        | R0,5   | 20      | 8       | 80     | 8         | ☑                  |   |
| 4JJRC-080-005-300 |        |        | 30      | 8       | 110    | 8         | ☑                  |   |
| 4JJRC-080-010-160 |        | R1     | 16      | 8       | 60     | 8         | ☑                  |   |
| 4JJRC-080-010-200 |        |        | 20      | 8       | 80     | 8         | ☑                  |   |
| 4JJRC-080-010-300 |        |        | 30      | 8       | 110    | 8         | ☑                  |   |
| 4JJRC-080-020-160 |        |        | R2      | 16      | 8      | 60        | 8                  | ☑ |
| 4JJRC-080-020-200 |        | 20     |         | 8       | 80     | 8         | ☑                  |   |
| 4JJRC-080-020-300 |        | 30     |         | 8       | 110    | 8         | ☑                  |   |
| 4JJRC-100-003-200 | 10     | R0,3   |         | 20      | 10     | 70        | 10                 | ☑ |
| 4JJRC-100-005-200 |        | R0,5   | 20      | 10      | 70     | 10        | ☑                  |   |
| 4JJRC-100-005-250 |        |        | 25      | 10      | 90     | 10        | ☑                  |   |
| 4JJRC-100-005-300 |        |        | 30      | 10      | 120    | 10        | ☑                  |   |
| 4JJRC-100-010-200 |        | R1     | 20      | 10      | 70     | 10        | ☑                  |   |
| 4JJRC-100-010-250 |        |        | 25      | 10      | 90     | 10        | ☑                  |   |
| 4JJRC-100-010-300 |        |        | 30      | 10      | 120    | 10        | ☑                  |   |
| 4JJRC-100-020-200 |        |        | R2      | 20      | 10     | 70        | 10                 | ☑ |
| 4JJRC-100-020-250 |        | 25     |         | 10      | 90     | 10        | ☑                  |   |
| 4JJRC-100-020-300 |        | 30     |         | 10      | 120    | 10        | ☑                  |   |
| 4JJRC-120-005-250 | 12     | R0,5   |         | 25      | 12     | 80        | 12                 | ☑ |
| 4JJRC-120-005-300 |        |        |         | 30      | 12     | 100       | 12                 | ☑ |
| 4JJRC-120-005-350 |        | R1     |         | 35      | 12     | 130       | 12                 | ☑ |
| 4JJRC-120-010-250 |        |        | 25      | 12      | 80     | 12        | ☑                  |   |

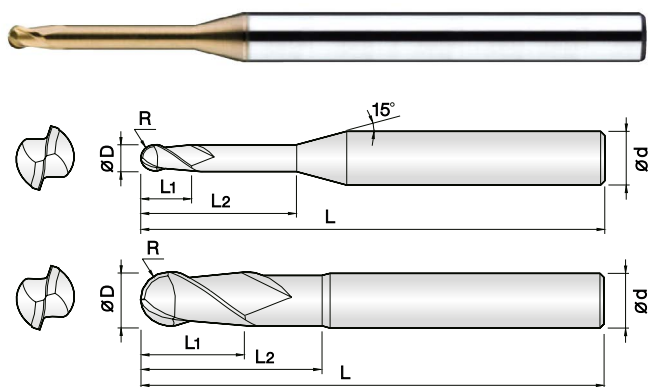
| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 4JJRC-120-010-300 | 12     | R1     | 30      | 12      | 100    | 12        | ☑                  |
| 4JJRC-120-010-350 |        |        | 35      | 12      | 130    | 12        | ☑                  |
| 4JJRC-120-020-250 |        | R2     | 25      | 12      | 80     | 12        | ☑                  |
| 4JJRC-120-020-300 |        |        | 30      | 12      | 100    | 12        | ☑                  |
| 4JJRC-120-020-350 |        | R3     | 35      | 12      | 130    | 12        | ☑                  |
| 4JJRC-120-030-250 |        |        | 25      | 12      | 80     | 12        | ☑                  |
| 4JJRC-160-010-300 | 16     | R1     | 30      | 16      | 110    | 16        | ☑                  |
| 4JJRC-160-010-400 |        |        | 40      | 16      | 160    | 16        | ☑                  |
| 4JJRC-160-020-300 |        | R2     | 30      | 16      | 110    | 16        | ☑                  |
| 4JJRC-160-020-400 |        |        | 40      | 16      | 160    | 16        | ☑                  |



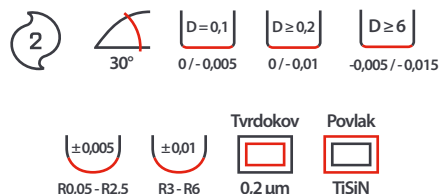
# HS

- ▶ Tvrdokové frézy pro kalené oceli do max. tvrdosti HRC 62
- ▶ Vhodné i pro HSC obrábění

# 2HRB 2-břité KULOVÉ frézy pro žebrování pro kalené oceli do HRC 62



- Určeno pro kalené oceli (50 - 62 HRC)
- Vysoká odolnost proti opotřebování díky PVD povlaku na bázi Si
- Velmi přesné tolerance řezných hran
- Široký sortiment vyložení pro optimální výběr nástroje
- Vysoká kvalita obrobeného povrchu
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |   |
|------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|---|
| 2HRB-001-003-S04 | 0,1    | R0,05  | -       | 0,3     | 40     | 4         | ☑                  |   |   |
| 2HRB-001-005-S04 |        |        | -       | 0,5     | 40     | 4         | ☑                  |   |   |
| 2HRB-002-005-S04 | 0,2    | R0,1   | 0,5     | 0,2     | 40     | 4         | ☑                  |   |   |
| 2HRB-002-010-S04 |        |        | 1       | 0,2     | 40     | 4         | ☑                  |   |   |
| 2HRB-002-015-S04 |        |        | 1,5     | 0,2     | 40     | 4         | ☑                  |   |   |
| 2HRB-002-020-S04 |        |        | 2       | 0,2     | 40     | 4         | ☑                  |   |   |
| 2HRB-002-025-S04 |        |        | 2,5     | 0,2     | 40     | 4         | ☑                  |   |   |
| 2HRB-002-030-S04 |        |        | 3       | 0,2     | 40     | 4         | ☑                  |   |   |
| 2HRB-003-010-S04 | 0,3    | R0,15  | 1       | 0,3     | 40     | 4         | ☑                  |   |   |
| 2HRB-003-015-S04 |        |        | 1,5     | 0,3     | 40     | 4         | ☑                  |   |   |
| 2HRB-003-020-S04 |        |        | 2       | 0,3     | 40     | 4         | ☑                  |   |   |
| 2HRB-003-025-S04 |        |        | 2,5     | 0,3     | 40     | 4         | ☑                  |   |   |
| 2HRB-003-030-S04 |        |        | 3       | 0,3     | 40     | 4         | ☑                  |   |   |
| 2HRB-003-035-S04 |        |        | 3,5     | 0,3     | 40     | 4         | ☑                  |   |   |
| 2HRB-003-040-S04 |        |        | 4       | 0,3     | 40     | 4         | ☑                  |   |   |
| 2HRB-003-050-S04 |        |        | 5       | 0,3     | 40     | 4         | ☑                  |   |   |
| 2HRB-004-010-S04 |        |        | 0,4     | R0,2    | 1      | 0,4       | 40                 | 4 | ☑ |
| 2HRB-004-015-S04 |        |        |         |         | 1,5    | 0,4       | 40                 | 4 | ☑ |
| 2HRB-004-020-S04 | 2      | 0,4    |         |         | 40     | 4         | ☑                  |   |   |
| 2HRB-004-025-S04 | 2,5    | 0,4    |         |         | 40     | 4         | ☑                  |   |   |
| 2HRB-004-030-S04 | 3      | 0,4    |         |         | 40     | 4         | ☑                  |   |   |
| 2HRB-004-035-S04 | 3,5    | 0,4    |         |         | 40     | 4         | ☑                  |   |   |
| 2HRB-004-040-S04 | 4      | 0,4    |         |         | 40     | 4         | ☑                  |   |   |
| 2HRB-004-045-S04 | 4,5    | 0,4    |         |         | 40     | 4         | ☑                  |   |   |
| 2HRB-004-050-S04 | 5      | 0,4    |         |         | 40     | 4         | ☑                  |   |   |
| 2HRB-004-060-S04 | 6      | 0,4    |         |         | 40     | 4         | ☑                  |   |   |
| 2HRB-004-080-S04 | 8      | 0,4    | 40      | 4       | ☑      |           |                    |   |   |
| 2HRB-004-100-S04 | 10     | 0,4    | 40      | 4       | ☑      |           |                    |   |   |
| 2HRB-005-010-S04 | 0,5    | R0,25  | 1       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2HRB-005-015-S04 |        |        | 1,5     | 0,5     | 45     | 4         | ☑                  |   |   |
| 2HRB-005-020-S04 |        |        | 2       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2HRB-005-025-S04 |        |        | 2,5     | 0,5     | 45     | 4         | ☑                  |   |   |
| 2HRB-005-030-S04 |        |        | 3       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2HRB-005-035-S04 |        |        | 3,5     | 0,5     | 45     | 4         | ☑                  |   |   |
| 2HRB-005-040-S04 |        |        | 4       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2HRB-005-045-S04 |        |        | 4,5     | 0,5     | 45     | 4         | ☑                  |   |   |
| 2HRB-005-050-S04 |        |        | 5       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2HRB-005-060-S04 |        |        | 6       | 0,5     | 45     | 4         | ☑                  |   |   |

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 2HRB-005-080-S04 | 0,5    | R0,25  | 8       | 0,5     | 45     | 4         | ☑                  |
| 2HRB-005-100-S04 |        |        | 10      | 0,5     | 45     | 4         | ☑                  |
| 2HRB-005-120-S04 |        |        | 12      | 0,5     | 45     | 4         | ☑                  |
| 2HRB-005-140-S04 |        |        | 14      | 0,5     | 45     | 4         | ☑                  |
| 2HRB-006-010-S04 | 0,6    | R0,3   | 1       | 0,6     | 45     | 4         | ☑                  |
| 2HRB-006-020-S04 |        |        | 2       | 0,6     | 45     | 4         | ☑                  |
| 2HRB-006-030-S04 |        |        | 3       | 0,6     | 45     | 4         | ☑                  |
| 2HRB-006-040-S04 |        |        | 4       | 0,6     | 45     | 4         | ☑                  |
| 2HRB-006-050-S04 |        |        | 5       | 0,6     | 45     | 4         | ☑                  |
| 2HRB-006-060-S04 |        |        | 6       | 0,6     | 45     | 4         | ☑                  |
| 2HRB-006-080-S04 |        |        | 8       | 0,6     | 45     | 4         | ☑                  |
| 2HRB-006-100-S04 |        |        | 10      | 0,6     | 45     | 4         | ☑                  |
| 2HRB-006-120-S04 |        |        | 12      | 0,6     | 45     | 4         | ☑                  |
| 2HRB-006-140-S04 |        |        | 14      | 0,6     | 45     | 4         | ☑                  |
| 2HRB-006-160-S04 | 16     | 0,6    | 45      | 4       | ☑      |           |                    |
| 2HRB-007-020-S04 | 0,7    | R0,35  | 2       | 0,7     | 45     | 4         | ☑                  |
| 2HRB-007-040-S04 |        |        | 4       | 0,7     | 45     | 4         | ☑                  |
| 2HRB-007-060-S04 |        |        | 6       | 0,7     | 45     | 4         | ☑                  |
| 2HRB-007-080-S04 |        |        | 8       | 0,7     | 45     | 4         | ☑                  |
| 2HRB-007-100-S04 |        |        | 10      | 0,7     | 45     | 4         | ☑                  |
| 2HRB-007-120-S04 |        |        | 12      | 0,7     | 45     | 4         | ☑                  |
| 2HRB-008-020-S04 | 0,8    | R0,4   | 2       | 0,8     | 45     | 4         | ☑                  |
| 2HRB-008-030-S04 |        |        | 3       | 0,8     | 45     | 4         | ☑                  |
| 2HRB-008-040-S04 |        |        | 4       | 0,8     | 45     | 4         | ☑                  |
| 2HRB-008-050-S04 |        |        | 5       | 0,8     | 45     | 4         | ☑                  |
| 2HRB-008-060-S04 |        |        | 6       | 0,8     | 45     | 4         | ☑                  |
| 2HRB-008-080-S04 |        |        | 8       | 0,8     | 45     | 4         | ☑                  |
| 2HRB-008-100-S04 |        |        | 10      | 0,8     | 45     | 4         | ☑                  |
| 2HRB-008-120-S04 |        |        | 12      | 0,8     | 45     | 4         | ☑                  |
| 2HRB-008-140-S04 |        |        | 14      | 0,8     | 45     | 4         | ☑                  |
| 2HRB-008-160-S04 |        |        | 16      | 0,8     | 45     | 4         | ☑                  |
| 2HRB-009-040-S04 | 0,9    | R0,45  | 4       | 0,9     | 45     | 4         | ☑                  |
| 2HRB-010-020-S04 | 1      | R0,5   | 2       | 1       | 45     | 4         | ☑                  |
| 2HRB-010-020-S06 |        |        | 2       | 1       | 50     | 6         | ☑                  |
| 2HRB-010-030-S04 |        |        | 3       | 1       | 45     | 4         | ☑                  |
| 2HRB-010-030-S06 |        |        | 3       | 1       | 50     | 6         | ☑                  |
| 2HRB-010-040-S04 |        |        | 4       | 1       | 45     | 4         | ☑                  |
| 2HRB-010-040-S06 |        |        | 4       | 1       | 50     | 6         | ☑                  |

# 2HRB

## 2-břité KULOVÉ frézy pro žebrování pro kalené oceli do HRC 62

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm)                              | d h5 (mm) | Standardní položka                  |   |                                     |
|------------------|--------|--------|---------|---------|-------------------------------------|-----------|-------------------------------------|---|-------------------------------------|
| 2HRB-010-050-S04 | 1      | R0,5   | 5       | 1       | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-050-S06 |        |        | 5       | 1       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-060-S04 |        |        | 6       | 1       | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-060-S06 |        |        | 6       | 1       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-080-S04 |        |        | 8       | 1       | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-080-S06 |        |        | 8       | 1       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-100-S04 |        |        | 10      | 1       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-100-S06 |        |        | 10      | 1       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-120-S04 |        |        | 12      | 1       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-120-S06 |        |        | 12      | 1       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-140-S04 |        |        | 14      | 1       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-140-S06 |        |        | 14      | 1       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-160-S04 |        |        | 16      | 1       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-160-S06 |        |        | 16      | 1       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-180-S04 |        |        | 18      | 1       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-180-S06 |        |        | 18      | 1       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-200-S04 |        |        | 20      | 1       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-200-S06 |        |        | 20      | 1       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-220-S04 |        |        | 22      | 1       | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-220-S06 |        |        | 22      | 1       | 65                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-010-250-S04 | 25     | 1      | 60      | 4       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2HRB-010-300-S04 | 30     | 1      | 70      | 4       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2HRB-012-040-S04 | 1,2    | R0,6   | 4       | 1,2     | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-040-S06 |        |        | 4       | 1,2     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-060-S04 |        |        | 6       | 1,2     | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-060-S06 |        |        | 6       | 1,2     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-080-S04 |        |        | 8       | 1,2     | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-080-S06 |        |        | 8       | 1,2     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-100-S04 |        |        | 10      | 1,2     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-100-S06 |        |        | 10      | 1,2     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-120-S04 |        |        | 12      | 1,2     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-120-S06 |        |        | 12      | 1,2     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-160-S04 |        |        | 16      | 1,2     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-160-S06 |        |        | 16      | 1,2     | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-200-S04 |        |        | 20      | 1,2     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-200-S06 |        |        | 20      | 1,2     | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-240-S04 |        |        | 24      | 1,2     | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-012-240-S06 |        |        | 24      | 1,2     | 65                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-014-060-S04 |        |        | 1,4     | R0,7    | 6                                   | 1,4       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 2HRB-014-080-S04 |        |        |         |         | 8                                   | 1,4       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 2HRB-014-120-S04 |        |        |         |         | 12                                  | 1,4       | 50                                  | 4 | <input checked="" type="checkbox"/> |
| 2HRB-014-160-S04 |        |        |         |         | 16                                  | 1,4       | 50                                  | 4 | <input checked="" type="checkbox"/> |
| 2HRB-015-030-S04 | 1,5    | R0,75  | 3       | 1,5     | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-030-S06 |        |        | 3       | 1,5     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-040-S04 |        |        | 4       | 1,5     | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-040-S06 |        |        | 4       | 1,5     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-060-S04 |        |        | 6       | 1,5     | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-060-S06 |        |        | 6       | 1,5     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-080-S04 |        |        | 8       | 1,5     | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-080-S06 |        |        | 8       | 1,5     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-100-S04 |        |        | 10      | 1,5     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-100-S06 |        |        | 10      | 1,5     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm)                              | d h5 (mm) | Standardní položka                  |   |                                     |
|------------------|--------|--------|---------|---------|-------------------------------------|-----------|-------------------------------------|---|-------------------------------------|
| 2HRB-015-120-S04 | 1,5    | R0,75  | 12      | 1,5     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-120-S06 |        |        | 12      | 1,5     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-140-S04 |        |        | 14      | 1,5     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-140-S06 |        |        | 14      | 1,5     | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-160-S04 |        |        | 16      | 1,5     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-160-S06 |        |        | 16      | 1,5     | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-180-S04 |        |        | 18      | 1,5     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-180-S06 |        |        | 18      | 1,5     | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-200-S04 |        |        | 20      | 1,5     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-200-S06 |        |        | 20      | 1,5     | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-220-S04 |        |        | 22      | 1,5     | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-220-S06 |        |        | 22      | 1,5     | 65                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-250-S04 |        |        | 25      | 1,5     | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-250-S06 |        |        | 25      | 1,5     | 65                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-300-S04 |        |        | 30      | 1,5     | 70                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-300-S06 |        |        | 30      | 1,5     | 70                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-350-S04 |        |        | 35      | 1,5     | 70                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-015-400-S04 |        |        | 40      | 1,5     | 80                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-016-060-S04 |        |        | 1,6     | R0,8    | 6                                   | 1,6       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 2HRB-016-080-S04 |        |        |         |         | 8                                   | 1,6       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 2HRB-016-120-S04 | 12     | 1,6    |         |         | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-016-160-S04 | 16     | 1,6    |         |         | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-016-200-S04 | 20     | 1,6    | 50      | 4       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2HRB-018-060-S04 | 1,8    | R0,9   | 6       | 1,8     | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-018-080-S04 |        |        | 8       | 1,8     | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-018-120-S04 |        |        | 12      | 1,8     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-018-160-S04 |        |        | 16      | 1,8     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-018-200-S04 | 20     | 1,8    | 50      | 4       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2HRB-020-040-S04 | 2      | R1     | 4       | 2       | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-040-S06 |        |        | 4       | 2       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-060-S04 |        |        | 6       | 2       | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-060-S06 |        |        | 6       | 2       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-080-S04 |        |        | 8       | 2       | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-080-S06 |        |        | 8       | 2       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-100-S04 |        |        | 10      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-100-S06 |        |        | 10      | 2       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-120-S04 |        |        | 12      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-120-S06 |        |        | 12      | 2       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-140-S04 |        |        | 14      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-140-S06 |        |        | 14      | 2       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-160-S04 |        |        | 16      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-160-S06 |        |        | 16      | 2       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-180-S04 |        |        | 18      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-180-S06 |        |        | 18      | 2       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-200-S04 |        |        | 20      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-200-S06 |        |        | 20      | 2       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-220-S04 |        |        | 22      | 2       | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-220-S06 |        |        | 22      | 2       | 65                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-250-S04 | 25     | 2      | 60      | 4       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2HRB-020-250-S06 | 25     | 2      | 65      | 6       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2HRB-020-300-S04 | 30     | 2      | 70      | 4       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2HRB-020-300-S06 | 30     | 2      | 70      | 6       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |

# 2HRB

## 2-břité KULOVÉ frézy pro žebrování pro kalené oceli do HRC 62

NOVINKA

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm)                              | d h5 (mm) | Standardní položka                  |   |                                     |
|------------------|--------|--------|---------|---------|-------------------------------------|-----------|-------------------------------------|---|-------------------------------------|
| 2HRB-020-350-S04 | 2      | R1     | 35      | 2       | 70                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-350-S06 |        |        | 35      | 2       | 75                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-400-S04 |        |        | 40      | 2       | 80                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-400-S06 |        |        | 40      | 2       | 80                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-450-S04 |        |        | 45      | 2       | 80                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-020-500-S04 |        |        | 50      | 2       | 90                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-025-080-S04 |        |        | 2,5     | R1,25   | 8                                   | 2,5       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 2HRB-025-080-S06 |        |        |         |         | 8                                   | 2,5       | 50                                  | 6 | <input checked="" type="checkbox"/> |
| 2HRB-025-100-S04 | 10     | 2,5    |         |         | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-025-100-S06 | 10     | 2,5    |         |         | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-025-120-S04 | 10     | 2,5    |         |         | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-025-120-S06 | 12     | 2,5    |         |         | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-025-160-S04 | 16     | 2,5    |         |         | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-025-160-S06 | 16     | 2,5    |         |         | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-025-200-S04 | 20     | 2,5    |         |         | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-025-250-S04 | 25     | 2,5    |         |         | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-025-300-S04 | 30     | 2,5    |         |         | 70                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-025-350-S04 | 35     | 2,5    |         |         | 70                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-025-400-S04 | 40     | 2,5    |         |         | 80                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-030-060-S06 | 3      | R1,5   |         |         | 6                                   | 3         | 50                                  | 6 | <input checked="" type="checkbox"/> |
| 2HRB-030-080-S06 |        |        |         |         | 8                                   | 3         | 50                                  | 6 | <input checked="" type="checkbox"/> |
| 2HRB-030-100-S06 |        |        |         |         | 10                                  | 3         | 50                                  | 6 | <input checked="" type="checkbox"/> |
| 2HRB-030-120-S06 |        |        |         |         | 12                                  | 3         | 50                                  | 6 | <input checked="" type="checkbox"/> |
| 2HRB-030-160-S06 |        |        |         |         | 16                                  | 3         | 60                                  | 6 | <input checked="" type="checkbox"/> |
| 2HRB-030-200-S06 |        |        | 20      | 3       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-030-250-S06 |        |        | 25      | 3       | 65                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-030-300-S06 |        |        | 30      | 3       | 70                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-030-350-S06 |        |        | 35      | 3       | 75                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-030-400-S06 |        |        | 40      | 3       | 80                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-030-450-S06 |        |        | 45      | 3       | 90                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-030-500-S06 |        |        | 50      | 3       | 100                                 | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-030-600-S06 | 60     | 3      | 100     | 6       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2HRB-030-650-S06 | 65     | 3      | 110     | 6       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2HRB-030-700-S06 | 70     | 3      | 110     | 6       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2HRB-040-080-S06 | 4      | R2     | 8       | 4       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-040-100-S06 |        |        | 10      | 4       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-040-120-S06 |        |        | 12      | 4       | 50                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-040-160-S06 |        |        | 16      | 4       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-040-200-S06 |        |        | 20      | 4       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-040-250-S06 |        |        | 25      | 4       | 65                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-040-300-S06 |        |        | 30      | 4       | 70                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-040-350-S06 |        |        | 35      | 4       | 75                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-040-400-S06 |        |        | 40      | 4       | 80                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-040-450-S06 |        |        | 45      | 4       | 90                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-040-500-S06 |        |        | 50      | 4       | 100                                 | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-040-550-S06 |        |        | 55      | 4       | 100                                 | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-040-600-S06 | 60     | 4      | 100     | 6       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2HRB-040-650-S06 | 65     | 4      | 110     | 6       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2HRB-040-700-S06 | 70     | 4      | 110     | 6       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |
| 2HRB-050-160-S06 | 5      | R2,5   | 16      | 6       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-050-200-S06 |        |        | 20      | 6       | 60                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRB-050-250-S06 |        |        | 25      | 6       | 70                                  | 6         | <input checked="" type="checkbox"/> |   |                                     |

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|------------------|--------|--------|---------|---------|--------|-----------|-------------------------------------|
| 2HRB-050-300-S06 | 5      | R2,5   | 30      | 6       | 75     | 6         | <input checked="" type="checkbox"/> |
| 2HRB-050-400-S06 |        |        | 40      | 6       | 80     | 6         | <input checked="" type="checkbox"/> |
| 2HRB-050-450-S06 |        |        | 45      | 6       | 90     | 6         | <input checked="" type="checkbox"/> |
| 2HRB-050-500-S06 |        |        | 50      | 6       | 100    | 6         | <input checked="" type="checkbox"/> |
| 2HRB-050-600-S06 |        |        | 60      | 6       | 100    | 6         | <input checked="" type="checkbox"/> |
| 2HRB-050-650-S06 |        |        | 65      | 6       | 110    | 6         | <input checked="" type="checkbox"/> |
| 2HRB-050-700-S06 |        |        | 70      | 6       | 110    | 6         | <input checked="" type="checkbox"/> |
| 2HRB-060-150-S06 |        |        | 6       | R3      | 15     | 10        | 55                                  |
| 2HRB-060-300-S06 | 30     | 10     |         |         | 110    | 6         | <input checked="" type="checkbox"/> |
| 2HRB-080-250-060 | 8      | R4     | 25      | 12      | 60     | 8         | <input checked="" type="checkbox"/> |
| 2HRB-080-300-100 |        |        | 30      | 12      | 100    | 8         | <input checked="" type="checkbox"/> |
| 2HRB-100-300-070 | 10     | R5     | 30      | 16      | 70     | 10        | <input checked="" type="checkbox"/> |
| 2HRB-100-350-100 |        |        | 35      | 16      | 100    | 10        | <input checked="" type="checkbox"/> |
| 2HRB-120-300-075 | 12     | R6     | 30      | 18      | 75     | 12        | <input checked="" type="checkbox"/> |
| 2HRB-120-400-110 |        |        | 40      | 18      | 110    | 12        | <input checked="" type="checkbox"/> |

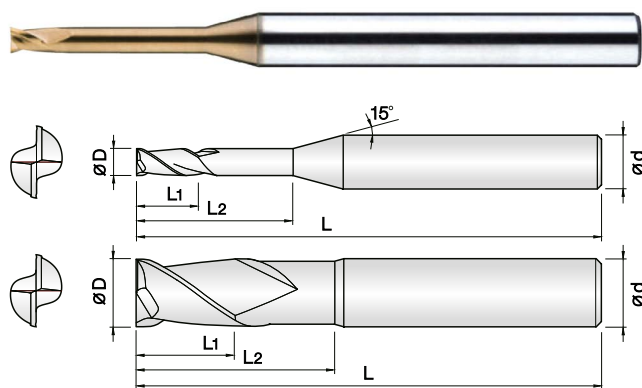
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# 2HRE 2-břité OSTRÉ frézy pro žebrování pro kalené oceli do HRC 60



- ▶ **Určeno pro kalené oceli (50 - 60 HRC)**
- ▶ Vysoká odolnost proti opotřeбенí díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Široký sortiment vyložení pro optimální výběr nástroje
- ▶ Minimalizace vyštipování díky zesílení řezné hrany
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 µm tvrdokovu



| Objednací číslo  | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|------------------|--------|---------|---------|--------|-----------|--------------------|---|
| 2HRE-001-003-S04 | 0,1    | -       | 0,3     | 40     | 4         | ☑                  |   |
| 2HRE-001-005-S04 |        | -       | 0,5     | 40     | 4         | ☑                  |   |
| 2HRE-002-005-S04 | 0,2    | 0,5     | 0,2     | 40     | 4         | ☑                  |   |
| 2HRE-002-010-S04 |        | 1       | 0,2     | 40     | 4         | ☑                  |   |
| 2HRE-002-015-S04 |        | 1,5     | 0,2     | 40     | 4         | ☑                  |   |
| 2HRE-002-020-S04 |        | 2       | 0,2     | 40     | 4         | ☑                  |   |
| 2HRE-002-025-S04 |        | 2,5     | 0,2     | 40     | 4         | ☑                  |   |
| 2HRE-002-030-S04 |        | 3       | 0,2     | 40     | 4         | ☑                  |   |
| 2HRE-003-010-S04 |        | 0,3     | 1       | 0,3    | 40        | 4                  | ☑ |
| 2HRE-003-015-S04 | 1,5    |         | 0,3     | 40     | 4         | ☑                  |   |
| 2HRE-003-020-S04 | 2      |         | 0,3     | 40     | 4         | ☑                  |   |
| 2HRE-003-025-S04 | 2,5    |         | 0,3     | 40     | 4         | ☑                  |   |
| 2HRE-003-030-S04 | 3      |         | 0,3     | 40     | 4         | ☑                  |   |
| 2HRE-003-035-S04 | 3,5    |         | 0,3     | 40     | 4         | ☑                  |   |
| 2HRE-003-040-S04 | 4      |         | 0,3     | 40     | 4         | ☑                  |   |
| 2HRE-003-050-S04 | 5      |         | 0,3     | 40     | 4         | ☑                  |   |
| 2HRE-004-010-S04 | 0,4    |         | 1       | 0,4    | 40        | 4                  | ☑ |
| 2HRE-004-015-S04 |        |         | 1,5     | 0,4    | 40        | 4                  | ☑ |
| 2HRE-004-020-S04 |        | 2       | 0,4     | 40     | 4         | ☑                  |   |
| 2HRE-004-025-S04 |        | 2,5     | 0,4     | 40     | 4         | ☑                  |   |
| 2HRE-004-030-S04 |        | 3       | 0,4     | 40     | 4         | ☑                  |   |
| 2HRE-004-035-S04 |        | 3,5     | 0,4     | 40     | 4         | ☑                  |   |
| 2HRE-004-040-S04 |        | 4       | 0,4     | 40     | 4         | ☑                  |   |
| 2HRE-004-050-S04 |        | 5       | 0,4     | 40     | 4         | ☑                  |   |
| 2HRE-004-060-S04 |        | 6       | 0,4     | 40     | 4         | ☑                  |   |
| 2HRE-004-080-S04 |        | 8       | 0,4     | 40     | 4         | ☑                  |   |
| 2HRE-004-100-S04 | 10     | 0,4     | 40      | 4      | ☑         |                    |   |
| 2HRE-005-010-S04 | 0,5    | 1       | 0,5     | 40     | 4         | ☑                  |   |
| 2HRE-005-020-S04 |        | 2       | 0,5     | 40     | 4         | ☑                  |   |
| 2HRE-005-030-S04 |        | 3       | 0,5     | 40     | 4         | ☑                  |   |
| 2HRE-005-040-S04 |        | 4       | 0,5     | 40     | 4         | ☑                  |   |
| 2HRE-005-050-S04 |        | 5       | 0,5     | 40     | 4         | ☑                  |   |
| 2HRE-005-060-S04 |        | 6       | 0,5     | 40     | 4         | ☑                  |   |
| 2HRE-005-080-S04 |        | 8       | 0,5     | 40     | 4         | ☑                  |   |
| 2HRE-005-100-S04 |        | 10      | 0,5     | 40     | 4         | ☑                  |   |
| 2HRE-005-120-S04 |        | 12      | 0,5     | 45     | 4         | ☑                  |   |
| 2HRE-005-140-S04 |        | 14      | 0,5     | 45     | 4         | ☑                  |   |
| 2HRE-006-010-S04 | 0,6    | 1       | 0,6     | 40     | 4         | ☑                  |   |

| Objednací číslo  | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|---------|--------|-----------|--------------------|
| 2HRE-006-020-S04 | 0,6    | 2       | 0,6     | 40     | 4         | ☑                  |
| 2HRE-006-030-S04 |        | 3       | 0,6     | 40     | 4         | ☑                  |
| 2HRE-006-040-S04 |        | 4       | 0,6     | 40     | 4         | ☑                  |
| 2HRE-006-050-S04 |        | 5       | 0,6     | 40     | 4         | ☑                  |
| 2HRE-006-060-S04 |        | 6       | 0,6     | 40     | 4         | ☑                  |
| 2HRE-006-080-S04 |        | 8       | 0,6     | 40     | 4         | ☑                  |
| 2HRE-006-100-S04 |        | 10      | 0,6     | 40     | 4         | ☑                  |
| 2HRE-006-120-S04 |        | 12      | 0,6     | 45     | 4         | ☑                  |
| 2HRE-006-140-S04 |        | 14      | 0,6     | 45     | 4         | ☑                  |
| 2HRE-006-160-S04 |        | 16      | 0,6     | 45     | 4         | ☑                  |
| 2HRE-007-020-S04 | 0,7    | 2       | 0,7     | 40     | 4         | ☑                  |
| 2HRE-007-040-S04 |        | 4       | 0,7     | 40     | 4         | ☑                  |
| 2HRE-007-060-S04 |        | 6       | 0,7     | 40     | 4         | ☑                  |
| 2HRE-007-080-S04 |        | 8       | 0,7     | 40     | 4         | ☑                  |
| 2HRE-007-100-S04 |        | 10      | 0,7     | 40     | 4         | ☑                  |
| 2HRE-007-120-S04 |        | 12      | 0,7     | 45     | 4         | ☑                  |
| 2HRE-008-020-S04 | 0,8    | 2       | 0,8     | 40     | 4         | ☑                  |
| 2HRE-008-030-S04 |        | 3       | 0,8     | 40     | 4         | ☑                  |
| 2HRE-008-040-S04 |        | 4       | 0,8     | 40     | 4         | ☑                  |
| 2HRE-008-050-S04 |        | 5       | 0,8     | 40     | 4         | ☑                  |
| 2HRE-008-060-S04 |        | 6       | 0,8     | 40     | 4         | ☑                  |
| 2HRE-008-080-S04 |        | 8       | 0,8     | 40     | 4         | ☑                  |
| 2HRE-008-100-S04 |        | 10      | 0,8     | 40     | 4         | ☑                  |
| 2HRE-008-120-S04 |        | 12      | 0,8     | 45     | 4         | ☑                  |
| 2HRE-008-140-S04 | 14     | 0,8     | 45      | 4      | ☑         |                    |
| 2HRE-009-060-S04 | 0,9    | 6       | 0,9     | 40     | 4         | ☑                  |
| 2HRE-009-080-S04 |        | 8       | 0,9     | 40     | 4         | ☑                  |
| 2HRE-009-100-S04 |        | 10      | 0,9     | 40     | 4         | ☑                  |
| 2HRE-010-020-S04 | 1      | 2       | 1       | 45     | 4         | ☑                  |
| 2HRE-010-030-S04 |        | 3       | 1       | 45     | 4         | ☑                  |
| 2HRE-010-040-S04 |        | 4       | 1       | 45     | 4         | ☑                  |
| 2HRE-010-050-S04 |        | 5       | 1       | 45     | 4         | ☑                  |
| 2HRE-010-060-S04 |        | 6       | 1       | 45     | 4         | ☑                  |
| 2HRE-010-080-S04 |        | 8       | 1       | 45     | 4         | ☑                  |
| 2HRE-010-100-S04 |        | 10      | 1       | 45     | 4         | ☑                  |
| 2HRE-010-120-S04 |        | 12      | 1       | 45     | 4         | ☑                  |
| 2HRE-010-140-S04 |        | 14      | 1       | 45     | 4         | ☑                  |
| 2HRE-010-160-S04 |        | 16      | 1       | 50     | 4         | ☑                  |

# 2HRE

## 2-břité OSTRÉ frézy pro žebrování pro kalené oceli do HRC 60

| Objednací číslo  | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|------------------|--------|---------|---------|--------|-----------|--------------------|---|
| 2HRE-010-180-S04 | 1      | 18      | 1       | 50     | 4         | ☑                  |   |
| 2HRE-010-200-S04 |        | 20      | 1       | 50     | 4         | ☑                  |   |
| 2HRE-010-250-S04 |        | 25      | 1       | 60     | 4         | ☑                  |   |
| 2HRE-010-300-S04 |        | 30      | 1       | 70     | 4         | ☑                  |   |
| 2HRE-012-040-S04 | 1,2    | 4       | 1,2     | 45     | 4         | ☑                  |   |
| 2HRE-012-060-S04 |        | 6       | 1,2     | 45     | 4         | ☑                  |   |
| 2HRE-012-080-S04 |        | 8       | 1,2     | 45     | 4         | ☑                  |   |
| 2HRE-012-100-S04 |        | 10      | 1,2     | 45     | 4         | ☑                  |   |
| 2HRE-012-120-S04 |        | 12      | 1,2     | 45     | 4         | ☑                  |   |
| 2HRE-012-160-S04 |        | 16      | 1,2     | 50     | 4         | ☑                  |   |
| 2HRE-012-200-S04 |        | 20      | 1,2     | 50     | 4         | ☑                  |   |
| 2HRE-012-250-S04 |        | 25      | 1,2     | 60     | 4         | ☑                  |   |
| 2HRE-012-300-S04 | 1,4    | 30      | 1,2     | 70     | 4         | ☑                  |   |
| 2HRE-014-060-S04 |        | 6       | 1,4     | 45     | 4         | ☑                  |   |
| 2HRE-014-080-S04 |        | 8       | 1,4     | 45     | 4         | ☑                  |   |
| 2HRE-014-100-S04 |        | 10      | 1,4     | 45     | 4         | ☑                  |   |
| 2HRE-014-140-S04 |        | 14      | 1,4     | 45     | 4         | ☑                  |   |
| 2HRE-014-160-S04 |        | 16      | 1,4     | 50     | 4         | ☑                  |   |
| 2HRE-014-200-S04 |        | 20      | 1,4     | 50     | 4         | ☑                  |   |
| 2HRE-015-040-S04 |        | 1,5     | 4       | 1,5    | 45        | 4                  | ☑ |
| 2HRE-015-060-S04 | 6      |         | 1,5     | 45     | 4         | ☑                  |   |
| 2HRE-015-080-S04 | 8      |         | 1,5     | 45     | 4         | ☑                  |   |
| 2HRE-015-100-S04 | 10     |         | 1,5     | 45     | 4         | ☑                  |   |
| 2HRE-015-120-S04 | 12     |         | 1,5     | 45     | 4         | ☑                  |   |
| 2HRE-015-140-S04 | 14     |         | 1,5     | 50     | 4         | ☑                  |   |
| 2HRE-015-160-S04 | 16     |         | 1,5     | 50     | 4         | ☑                  |   |
| 2HRE-015-180-S04 | 18     |         | 1,5     | 50     | 4         | ☑                  |   |
| 2HRE-015-200-S04 | 1,6    | 20      | 1,5     | 50     | 4         | ☑                  |   |
| 2HRE-015-250-S04 |        | 25      | 1,5     | 60     | 4         | ☑                  |   |
| 2HRE-015-300-S04 |        | 30      | 1,5     | 70     | 4         | ☑                  |   |
| 2HRE-016-100-S04 |        | 10      | 1,6     | 45     | 4         | ☑                  |   |
| 2HRE-016-140-S04 |        | 14      | 1,6     | 45     | 4         | ☑                  |   |
| 2HRE-016-180-S04 |        | 18      | 1,6     | 60     | 4         | ☑                  |   |
| 2HRE-018-100-S04 |        | 1,8     | 10      | 1,8    | 45        | 4                  | ☑ |
| 2HRE-018-140-S04 |        |         | 14      | 1,8    | 45        | 4                  | ☑ |
| 2HRE-018-180-S04 | 18     |         | 1,8     | 50     | 4         | ☑                  |   |
| 2HRE-020-040-S04 | 2      | 4       | 2       | 45     | 4         | ☑                  |   |
| 2HRE-020-060-S04 |        | 6       | 2       | 45     | 4         | ☑                  |   |
| 2HRE-020-080-S04 |        | 8       | 2       | 45     | 4         | ☑                  |   |
| 2HRE-020-100-S04 |        | 10      | 2       | 45     | 4         | ☑                  |   |
| 2HRE-020-120-S04 |        | 12      | 2       | 45     | 4         | ☑                  |   |
| 2HRE-020-140-S04 |        | 14      | 2       | 45     | 4         | ☑                  |   |
| 2HRE-020-160-S04 |        | 16      | 2       | 50     | 4         | ☑                  |   |
| 2HRE-020-180-S04 |        | 18      | 2       | 50     | 4         | ☑                  |   |
| 2HRE-020-200-S04 |        | 20      | 2       | 50     | 4         | ☑                  |   |
| 2HRE-020-220-S04 |        | 22      | 2       | 60     | 4         | ☑                  |   |
| 2HRE-020-250-S04 |        | 25      | 2       | 60     | 4         | ☑                  |   |
| 2HRE-020-300-S04 |        | 30      | 2       | 60     | 4         | ☑                  |   |
| 2HRE-020-350-S04 |        | 35      | 2       | 70     | 4         | ☑                  |   |
| 2HRE-020-400-S04 |        | 40      | 2       | 80     | 4         | ☑                  |   |
| 2HRE-020-450-S04 |        | 45      | 2       | 80     | 4         | ☑                  |   |
| 2HRE-020-500-S04 |        | 50      | 2       | 90     | 4         | ☑                  |   |

| Objednací číslo  | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|------------------|--------|---------|---------|--------|-----------|--------------------|---|
| 2HRE-025-080-S04 | 2,5    | 8       | 2,5     | 45     | 4         | ☑                  |   |
| 2HRE-025-100-S04 |        | 10      | 2,5     | 45     | 4         | ☑                  |   |
| 2HRE-025-120-S04 |        | 12      | 2,5     | 45     | 4         | ☑                  |   |
| 2HRE-025-160-S04 |        | 16      | 2,5     | 50     | 4         | ☑                  |   |
| 2HRE-025-200-S04 |        | 20      | 2,5     | 50     | 4         | ☑                  |   |
| 2HRE-025-250-S04 |        | 25      | 2,5     | 60     | 4         | ☑                  |   |
| 2HRE-025-300-S04 |        | 30      | 2,5     | 70     | 4         | ☑                  |   |
| 2HRE-025-350-S04 |        | 35      | 2,5     | 70     | 4         | ☑                  |   |
| 2HRE-025-400-S04 | 3      | 40      | 2,5     | 80     | 4         | ☑                  |   |
| 2HRE-025-500-S04 |        | 50      | 2,5     | 90     | 4         | ☑                  |   |
| 2HRE-030-060-S06 |        | 6       | 3       | 45     | 6         | ☑                  |   |
| 2HRE-030-080-S06 |        | 8       | 3       | 45     | 6         | ☑                  |   |
| 2HRE-030-100-S06 |        | 10      | 3       | 45     | 6         | ☑                  |   |
| 2HRE-030-120-S06 |        | 12      | 3       | 50     | 6         | ☑                  |   |
| 2HRE-030-160-S06 |        | 16      | 3       | 55     | 6         | ☑                  |   |
| 2HRE-030-200-S06 |        | 20      | 3       | 60     | 6         | ☑                  |   |
| 2HRE-030-250-S06 | 4      | 25      | 3       | 65     | 6         | ☑                  |   |
| 2HRE-030-300-S06 |        | 30      | 3       | 70     | 6         | ☑                  |   |
| 2HRE-030-350-S06 |        | 35      | 3       | 75     | 6         | ☑                  |   |
| 2HRE-030-400-S06 |        | 40      | 3       | 80     | 6         | ☑                  |   |
| 2HRE-030-450-S06 |        | 45      | 3       | 90     | 6         | ☑                  |   |
| 2HRE-030-500-S06 |        | 50      | 3       | 100    | 6         | ☑                  |   |
| 2HRE-030-600-S06 |        | 60      | 3       | 100    | 6         | ☑                  |   |
| 2HRE-040-080-S06 |        | 5       | 8       | 4      | 50        | 6                  | ☑ |
| 2HRE-040-100-S06 | 10     |         | 4       | 50     | 6         | ☑                  |   |
| 2HRE-040-120-S06 | 12     |         | 4       | 50     | 6         | ☑                  |   |
| 2HRE-040-160-S06 | 16     |         | 4       | 55     | 6         | ☑                  |   |
| 2HRE-040-200-S06 | 20     |         | 4       | 60     | 6         | ☑                  |   |
| 2HRE-040-250-S06 | 25     |         | 4       | 65     | 6         | ☑                  |   |
| 2HRE-040-300-S06 | 30     |         | 4       | 70     | 6         | ☑                  |   |
| 2HRE-040-350-S06 | 35     |         | 4       | 75     | 6         | ☑                  |   |
| 2HRE-040-400-S06 | 6      | 40      | 4       | 80     | 6         | ☑                  |   |
| 2HRE-040-450-S06 |        | 45      | 4       | 90     | 6         | ☑                  |   |
| 2HRE-040-500-S06 |        | 50      | 4       | 100    | 6         | ☑                  |   |
| 2HRE-040-550-S06 |        | 55      | 4       | 100    | 6         | ☑                  |   |
| 2HRE-040-600-S06 |        | 60      | 4       | 100    | 6         | ☑                  |   |
| 2HRE-050-160-S06 |        | 8       | 16      | 6      | 55        | 6                  | ☑ |
| 2HRE-050-200-S06 |        |         | 20      | 6      | 60        | 6                  | ☑ |
| 2HRE-050-250-S06 |        |         | 25      | 6      | 65        | 6                  | ☑ |
| 2HRE-050-300-S06 | 30     |         | 6       | 70     | 6         | ☑                  |   |
| 2HRE-050-350-S06 | 35     |         | 6       | 75     | 6         | ☑                  |   |
| 2HRE-050-400-S06 | 40     |         | 6       | 80     | 6         | ☑                  |   |
| 2HRE-050-500-S06 | 50     |         | 6       | 100    | 6         | ☑                  |   |
| 2HRE-050-600-S06 | 60     |         | 6       | 100    | 6         | ☑                  |   |
| 2HRE-060-200-S06 | 6      | 20      | 10      | 60     | 6         | ☑                  |   |
| 2HRE-060-300-S06 |        | 30      | 10      | 75     | 6         | ☑                  |   |
| 2HRE-060-400-S06 |        | 40      | 10      | 80     | 6         | ☑                  |   |
| 2HRE-060-500-S06 |        | 50      | 10      | 90     | 6         | ☑                  |   |
| 2HRE-060-600-S06 |        | 60      | 10      | 110    | 6         | ☑                  |   |
| 2HRE-080-200-S08 |        | 8       | 20      | 12     | 65        | 8                  | ☑ |
| 2HRE-080-300-S08 |        |         | 30      | 12     | 80        | 8                  | ☑ |
| 2HRE-080-400-S08 |        |         | 40      | 12     | 100       | 8                  | ☑ |

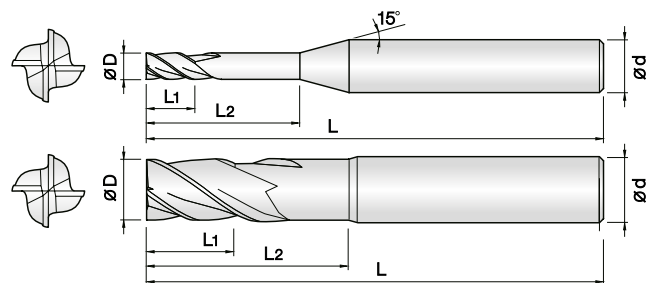
# 2HRE 2-břité OSTRÉ frézy pro žebrování pro kalené oceli do HRC 60

| Objednací číslo  | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|------------------|--------|---------|---------|--------|-----------|-------------------------------------|
| 2HRE-100-250-S10 | 10     | 25      | 15      | 70     | 10        | <input checked="" type="checkbox"/> |
| 2HRE-100-350-S10 |        | 35      | 15      | 80     | 10        | <input checked="" type="checkbox"/> |
| 2HRE-100-450-S10 |        | 45      | 15      | 100    | 10        | <input checked="" type="checkbox"/> |
| 2HRE-120-300-S12 | 12     | 30      | 18      | 80     | 12        | <input checked="" type="checkbox"/> |
| 2HRE-120-400-S12 |        | 40      | 18      | 100    | 12        | <input checked="" type="checkbox"/> |
| 2HRE-120-500-S12 |        | 50      | 18      | 120    | 12        | <input checked="" type="checkbox"/> |

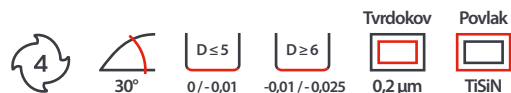
JJ  
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# 4HRE 4-břité OSTRÉ frézy pro žebrování pro kalené oceli do HRC 60



- ▶ Určeno pro kalené oceli (50 - 60 HRC)
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance rezných hran
- ▶ Široký sortiment vyložení pro optimální výběr nástroje
- ▶ Minimalizace vyštipování díky zesílení rezné hrany
- ▶ Vynikající výkon při vysokých rezných rychlostech díky 0,2 μm tvrdkovu



| Objednací číslo  | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|---------|--------|-----------|--------------------|
| 4HRE-008-020-S04 | 0,8    | 2       | 0,8     | 45     | 4         | ☑                  |
| 4HRE-008-040-S04 |        | 4       | 0,8     | 45     | 4         | ☑                  |
| 4HRE-008-060-S04 |        | 6       | 0,8     | 45     | 4         | ☑                  |
| 4HRE-008-080-S04 |        | 8       | 0,8     | 45     | 4         | ☑                  |
| 4HRE-008-100-S04 |        | 10      | 0,8     | 45     | 4         | ☑                  |
| 4HRE-008-120-S04 |        | 12      | 0,8     | 45     | 4         | ☑                  |
| 4HRE-008-160-S04 |        | 16      | 0,8     | 50     | 4         | ☑                  |
| 4HRE-009-020-S04 | 0,9    | 2       | 0,9     | 45     | 4         | ☑                  |
| 4HRE-009-060-S04 |        | 6       | 0,9     | 45     | 4         | ☑                  |
| 4HRE-009-080-S04 |        | 8       | 0,9     | 45     | 4         | ☑                  |
| 4HRE-009-100-S04 | 1      | 10      | 0,9     | 45     | 4         | ☑                  |
| 4HRE-010-020-S04 |        | 2       | 1       | 45     | 4         | ☑                  |
| 4HRE-010-030-S04 |        | 3       | 1       | 45     | 4         | ☑                  |
| 4HRE-010-040-S04 |        | 4       | 1       | 45     | 4         | ☑                  |
| 4HRE-010-060-S04 |        | 6       | 1       | 45     | 4         | ☑                  |
| 4HRE-010-080-S04 |        | 8       | 1       | 45     | 4         | ☑                  |
| 4HRE-010-100-S04 |        | 10      | 1       | 45     | 4         | ☑                  |
| 4HRE-010-120-S04 |        | 12      | 1       | 45     | 4         | ☑                  |
| 4HRE-010-140-S04 |        | 14      | 1       | 50     | 4         | ☑                  |
| 4HRE-010-160-S04 |        | 16      | 1       | 50     | 4         | ☑                  |
| 4HRE-010-200-S04 | 1,2    | 20      | 1       | 50     | 4         | ☑                  |
| 4HRE-010-250-S04 |        | 25      | 1       | 60     | 4         | ☑                  |
| 4HRE-012-040-S04 |        | 4       | 1,2     | 45     | 4         | ☑                  |
| 4HRE-012-060-S04 |        | 6       | 1,2     | 45     | 4         | ☑                  |
| 4HRE-012-080-S04 |        | 8       | 1,2     | 45     | 4         | ☑                  |
| 4HRE-012-100-S04 |        | 10      | 1,2     | 45     | 4         | ☑                  |
| 4HRE-012-120-S04 | 1,5    | 12      | 1,2     | 45     | 4         | ☑                  |
| 4HRE-012-160-S04 |        | 16      | 1,2     | 50     | 4         | ☑                  |
| 4HRE-015-040-S04 |        | 4       | 1,5     | 45     | 4         | ☑                  |
| 4HRE-015-060-S04 |        | 6       | 1,5     | 45     | 4         | ☑                  |
| 4HRE-015-080-S04 |        | 8       | 1,5     | 45     | 4         | ☑                  |
| 4HRE-015-100-S04 |        | 10      | 1,5     | 45     | 4         | ☑                  |
| 4HRE-015-120-S04 |        | 12      | 1,5     | 45     | 4         | ☑                  |
| 4HRE-015-160-S04 | 2      | 16      | 1,5     | 50     | 4         | ☑                  |
| 4HRE-015-200-S04 |        | 20      | 1,5     | 50     | 4         | ☑                  |
| 4HRE-015-250-S04 |        | 25      | 1,5     | 60     | 4         | ☑                  |
| 4HRE-020-040-S04 |        | 4       | 2       | 45     | 4         | ☑                  |
| 4HRE-020-060-S04 |        | 6       | 2       | 45     | 4         | ☑                  |

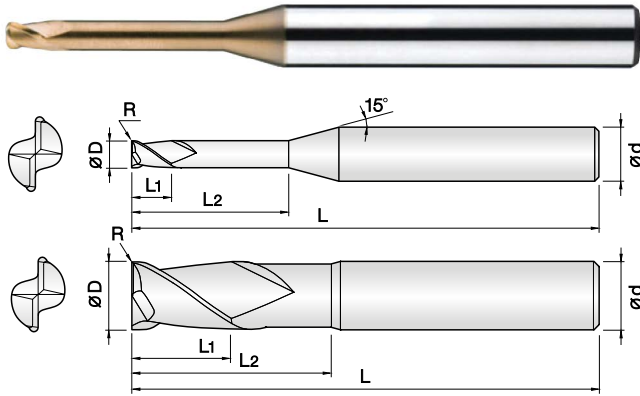
| Objednací číslo  | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|---------|--------|-----------|--------------------|
| 4HRE-020-080-S04 | 2      | 8       | 2       | 45     | 4         | ☑                  |
| 4HRE-020-100-S04 |        | 10      | 2       | 45     | 4         | ☑                  |
| 4HRE-020-120-S04 |        | 12      | 2       | 45     | 4         | ☑                  |
| 4HRE-020-140-S04 |        | 14      | 2       | 50     | 4         | ☑                  |
| 4HRE-020-160-S04 |        | 16      | 2       | 50     | 4         | ☑                  |
| 4HRE-020-180-S04 |        | 18      | 2       | 50     | 4         | ☑                  |
| 4HRE-020-200-S04 |        | 20      | 2       | 50     | 4         | ☑                  |
| 4HRE-020-250-S04 |        | 25      | 2       | 60     | 4         | ☑                  |
| 4HRE-020-300-S04 |        | 30      | 2       | 70     | 4         | ☑                  |
| 4HRE-025-100-S04 |        | 2,5     | 10      | 2,5    | 45        | 4                  |
| 4HRE-025-120-S04 | 12     |         | 2,5     | 45     | 4         | ☑                  |
| 4HRE-025-160-S04 | 16     |         | 2,5     | 50     | 4         | ☑                  |
| 4HRE-025-200-S04 | 20     |         | 2,5     | 50     | 4         | ☑                  |
| 4HRE-025-250-S04 | 25     |         | 2,5     | 60     | 4         | ☑                  |
| 4HRE-025-300-S04 | 3      | 30      | 2,5     | 70     | 4         | ☑                  |
| 4HRE-030-060-S06 |        | 6       | 3       | 45     | 6         | ☑                  |
| 4HRE-030-080-S06 |        | 8       | 3       | 45     | 6         | ☑                  |
| 4HRE-030-100-S06 |        | 10      | 3       | 45     | 6         | ☑                  |
| 4HRE-030-120-S06 |        | 12      | 3       | 50     | 6         | ☑                  |
| 4HRE-030-160-S06 |        | 16      | 3       | 55     | 6         | ☑                  |
| 4HRE-030-200-S06 |        | 20      | 3       | 60     | 6         | ☑                  |
| 4HRE-030-250-S06 |        | 25      | 3       | 65     | 6         | ☑                  |
| 4HRE-030-300-S06 |        | 30      | 3       | 70     | 6         | ☑                  |
| 4HRE-030-350-S06 |        | 35      | 3       | 75     | 6         | ☑                  |
| 4HRE-030-400-S06 | 4      | 40      | 3       | 80     | 6         | ☑                  |
| 4HRE-040-060-S06 |        | 6       | 4       | 50     | 6         | ☑                  |
| 4HRE-040-080-S06 |        | 8       | 4       | 50     | 6         | ☑                  |
| 4HRE-040-100-S06 |        | 10      | 4       | 50     | 6         | ☑                  |
| 4HRE-040-120-S06 |        | 12      | 4       | 50     | 6         | ☑                  |
| 4HRE-040-160-S06 |        | 16      | 4       | 55     | 6         | ☑                  |
| 4HRE-040-200-S06 |        | 20      | 4       | 60     | 6         | ☑                  |
| 4HRE-040-250-S06 |        | 25      | 4       | 65     | 6         | ☑                  |
| 4HRE-040-300-S06 |        | 30      | 4       | 70     | 6         | ☑                  |
| 4HRE-040-400-S06 |        | 40      | 4       | 80     | 6         | ☑                  |
| 4HRE-040-450-S06 | 5      | 45      | 4       | 90     | 6         | ☑                  |
| 4HRE-040-500-S06 |        | 50      | 4       | 100    | 6         | ☑                  |
| 4HRE-050-160-S06 |        | 16      | 5       | 55     | 6         | ☑                  |
| 4HRE-050-200-S06 |        | 20      | 5       | 60     | 6         | ☑                  |

# 4HRE 4-břité OSTRÉ frézy pro žebrování pro kalené oceli do HRC 60

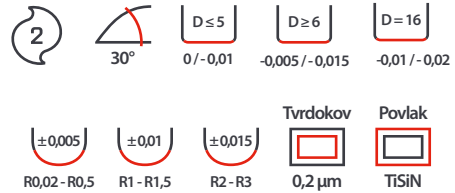
| Objednací číslo  | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|------------------|--------|---------|---------|--------|-----------|-------------------------------------|
| 4HRE-050-250-S06 | 5      | 25      | 5       | 65     | 6         | <input checked="" type="checkbox"/> |
| 4HRE-050-300-S06 |        | 30      | 5       | 70     | 6         | <input checked="" type="checkbox"/> |
| 4HRE-050-400-S06 |        | 40      | 5       | 80     | 6         | <input checked="" type="checkbox"/> |
| 4HRE-050-500-S06 |        | 50      | 5       | 100    | 6         | <input checked="" type="checkbox"/> |
| 4HRE-060-200-S06 | 6      | 20      | 6       | 60     | 6         | <input checked="" type="checkbox"/> |
| 4HRE-060-300-S06 |        | 30      | 6       | 75     | 6         | <input checked="" type="checkbox"/> |
| 4HRE-060-400-S06 |        | 40      | 6       | 80     | 6         | <input checked="" type="checkbox"/> |
| 4HRE-060-500-S06 |        | 50      | 6       | 90     | 6         | <input checked="" type="checkbox"/> |
| 4HRE-080-200-S08 | 8      | 20      | 10      | 65     | 8         | <input checked="" type="checkbox"/> |
| 4HRE-080-300-S08 |        | 30      | 10      | 80     | 8         | <input checked="" type="checkbox"/> |
| 4HRE-080-400-S08 |        | 40      | 10      | 100    | 8         | <input checked="" type="checkbox"/> |
| 4HRE-100-250-S10 | 10     | 25      | 15      | 70     | 10        | <input checked="" type="checkbox"/> |
| 4HRE-100-350-S10 |        | 35      | 15      | 90     | 10        | <input checked="" type="checkbox"/> |
| 4HRE-100-450-S10 |        | 45      | 15      | 110    | 10        | <input checked="" type="checkbox"/> |
| 4HRE-120-300-S12 | 12     | 30      | 18      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4HRE-120-400-S12 |        | 40      | 18      | 100    | 12        | <input checked="" type="checkbox"/> |
| 4HRE-120-500-S12 |        | 50      | 18      | 120    | 12        | <input checked="" type="checkbox"/> |

# 2CRE

## 2-břité TOROIDNÍ frézy pro žebrování pro kalené oceli do HRC 62



- Určeno pro kalené oceli (50 - 62 HRC)
- Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- Velmi přesné tolerance řezných hran
- Široký sortiment rádií a vyložení pro optimální výběr nástroje
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|---|
| 2CRE-002-0002-010 | 0,2    | R0,02  | 1       | 0,2     | 40     | 4         | ☑                  |   |   |
| 2CRE-002-0002-015 |        |        | 1,5     | 0,2     | 40     | 4         | ☑                  |   |   |
| 2CRE-002-0005-010 |        | R0,05  | 1       | 0,2     | 40     | 4         | ☑                  |   |   |
| 2CRE-002-0005-015 |        |        | 1,5     | 0,2     | 40     | 4         | ☑                  |   |   |
| 2CRE-003-0005-010 | 0,3    | R0,05  | 1       | 0,3     | 40     | 4         | ☑                  |   |   |
| 2CRE-003-0005-020 |        |        | 2       | 0,3     | 40     | 4         | ☑                  |   |   |
| 2CRE-003-0005-030 |        |        | 3       | 0,3     | 40     | 4         | ☑                  |   |   |
| 2CRE-004-0005-010 | 0,4    | R0,05  | 1       | 0,4     | 40     | 4         | ☑                  |   |   |
| 2CRE-004-0005-020 |        |        | 2       | 0,4     | 40     | 4         | ☑                  |   |   |
| 2CRE-004-0005-030 |        |        | 3       | 0,4     | 40     | 4         | ☑                  |   |   |
| 2CRE-004-001-010  |        | R0,1   | 1       | 0,4     | 40     | 4         | ☑                  |   |   |
| 2CRE-004-001-015  |        |        | 1,5     | 0,4     | 40     | 4         | ☑                  |   |   |
| 2CRE-004-001-020  |        |        | 2       | 0,4     | 40     | 4         | ☑                  |   |   |
| 2CRE-004-001-030  |        |        | 3       | 0,4     | 40     | 4         | ☑                  |   |   |
| 2CRE-004-001-040  |        |        | 4       | 0,4     | 40     | 4         | ☑                  |   |   |
| 2CRE-005-0002-010 |        |        | 0,5     | R0,02   | 1      | 0,5       | 45                 | 4 | ☑ |
| 2CRE-005-0002-015 |        |        |         |         | 1,5    | 0,5       | 45                 | 4 | ☑ |
| 2CRE-005-0002-020 | 2      | 0,5    |         |         | 45     | 4         | ☑                  |   |   |
| 2CRE-005-0002-025 | 2,5    | 0,5    |         |         | 45     | 4         | ☑                  |   |   |
| 2CRE-005-0002-030 | 3      | 0,5    |         |         | 45     | 4         | ☑                  |   |   |
| 2CRE-005-0002-040 | 4      | 0,5    |         |         | 45     | 4         | ☑                  |   |   |
| 2CRE-005-0002-050 | 5      | 0,5    |         |         | 45     | 4         | ☑                  |   |   |
| 2CRE-005-0002-060 | 6      | 0,5    |         |         | 45     | 4         | ☑                  |   |   |
| 2CRE-005-0002-080 | 8      | 0,5    |         |         | 45     | 4         | ☑                  |   |   |
| 2CRE-005-0002-100 | 10     | 0,5    |         |         | 50     | 4         | ☑                  |   |   |
| 2CRE-005-0005-010 | R0,05  | 1      |         | 0,5     | 45     | 4         | ☑                  |   |   |
| 2CRE-005-0005-015 |        | 1,5    |         | 0,5     | 45     | 4         | ☑                  |   |   |
| 2CRE-005-0005-020 |        | 2      |         | 0,5     | 45     | 4         | ☑                  |   |   |
| 2CRE-005-0005-025 |        | 2,5    |         | 0,5     | 45     | 4         | ☑                  |   |   |
| 2CRE-005-0005-030 |        | 3      |         | 0,5     | 45     | 4         | ☑                  |   |   |
| 2CRE-005-0005-040 | R0,1   | 4      | 0,5     | 45      | 4      | ☑         |                    |   |   |
| 2CRE-005-0005-050 |        | 5      | 0,5     | 45      | 4      | ☑         |                    |   |   |
| 2CRE-005-0005-060 |        | 6      | 0,5     | 45      | 4      | ☑         |                    |   |   |
| 2CRE-005-0005-080 |        | 8      | 0,5     | 45      | 4      | ☑         |                    |   |   |
| 2CRE-005-0005-100 |        | 10     | 0,5     | 50      | 4      | ☑         |                    |   |   |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|---|
| 2CRE-005-001-020  | 0,5    | R0,1   | 2       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2CRE-005-001-025  |        |        | 2,5     | 0,5     | 45     | 4         | ☑                  |   |   |
| 2CRE-005-001-030  |        |        | 3       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2CRE-005-001-040  |        |        | 4       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2CRE-005-001-050  |        |        | 5       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2CRE-005-001-060  |        |        | 6       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2CRE-005-001-080  |        |        | 8       | 0,5     | 45     | 4         | ☑                  |   |   |
| 2CRE-005-001-100  |        |        | 10      | 0,5     | 50     | 4         | ☑                  |   |   |
| 2CRE-006-0002-020 |        |        | 0,6     | R0,02   | 2      | 0,6       | 45                 | 4 | ☑ |
| 2CRE-006-0002-030 |        |        |         |         | 3      | 0,6       | 45                 | 4 | ☑ |
| 2CRE-006-0002-040 | 4      | 0,6    |         |         | 45     | 4         | ☑                  |   |   |
| 2CRE-006-0002-060 | 6      | 0,6    |         |         | 45     | 4         | ☑                  |   |   |
| 2CRE-006-0002-080 | 8      | 0,6    |         |         | 45     | 4         | ☑                  |   |   |
| 2CRE-006-0002-100 | 10     | 0,6    |         | 50      | 4      | ☑         |                    |   |   |
| 2CRE-006-0005-020 | R0,05  | 2      |         | 0,6     | 45     | 4         | ☑                  |   |   |
| 2CRE-006-0005-030 |        | 3      |         | 0,6     | 45     | 4         | ☑                  |   |   |
| 2CRE-006-0005-040 |        | 4      |         | 0,6     | 45     | 4         | ☑                  |   |   |
| 2CRE-006-0005-060 |        | 6      |         | 0,6     | 45     | 4         | ☑                  |   |   |
| 2CRE-006-0005-080 |        | 8      | 0,6     | 45      | 4      | ☑         |                    |   |   |
| 2CRE-006-001-020  | 0,7    | R0,1   | 2       | 0,6     | 45     | 4         | ☑                  |   |   |
| 2CRE-006-001-030  |        |        | 3       | 0,6     | 45     | 4         | ☑                  |   |   |
| 2CRE-006-001-040  |        |        | 4       | 0,6     | 45     | 4         | ☑                  |   |   |
| 2CRE-006-001-060  |        |        | 6       | 0,6     | 45     | 4         | ☑                  |   |   |
| 2CRE-006-001-080  |        |        | 8       | 0,6     | 45     | 4         | ☑                  |   |   |
| 2CRE-006-001-100  |        | 10     | 0,6     | 50      | 4      | ☑         |                    |   |   |
| 2CRE-007-001-020  |        | 0,8    | R0,02   | 2       | 0,7    | 45        | 4                  | ☑ |   |
| 2CRE-007-001-040  |        |        |         | 4       | 0,7    | 45        | 4                  | ☑ |   |
| 2CRE-007-001-060  |        |        |         | 6       | 0,7    | 45        | 4                  | ☑ |   |
| 2CRE-008-0002-020 |        | 0,8    | R0,02   | 2       | 0,8    | 45        | 4                  | ☑ |   |
| 2CRE-008-0002-040 | 4      |        |         | 0,8     | 45     | 4         | ☑                  |   |   |
| 2CRE-008-0002-060 | 6      |        |         | 0,8     | 45     | 4         | ☑                  |   |   |
| 2CRE-008-0002-080 | 8      |        |         | 0,8     | 45     | 4         | ☑                  |   |   |
| 2CRE-008-0002-100 | 10     |        | 0,8     | 50      | 4      | ☑         |                    |   |   |
| 2CRE-008-0005-020 | R0,05  |        | 2       | 0,8     | 45     | 4         | ☑                  |   |   |
| 2CRE-008-0005-040 |        |        | 4       | 0,8     | 45     | 4         | ☑                  |   |   |
| 2CRE-008-0005-060 |        |        | 6       | 0,8     | 45     | 4         | ☑                  |   |   |
| 2CRE-008-0005-080 |        | 8      | 0,8     | 45      | 4      | ☑         |                    |   |   |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 2CRE-008-0005-100 | 0,8    | R0,05  | 10      | 0,8     | 50     | 4         | ☑                  |   |
| 2CRE-008-001-020  |        |        | 2       | 0,8     | 45     | 4         | ☑                  |   |
| 2CRE-008-001-040  |        | R0,1   | 4       | 0,8     | 45     | 4         | ☑                  |   |
| 2CRE-008-001-060  |        |        | 6       | 0,8     | 45     | 4         | ☑                  |   |
| 2CRE-008-001-080  |        |        | 8       | 0,8     | 45     | 4         | ☑                  |   |
| 2CRE-008-001-100  |        |        | 10      | 0,8     | 50     | 4         | ☑                  |   |
| 2CRE-008-002-020  |        | R0,2   | 2       | 0,8     | 45     | 4         | ☑                  |   |
| 2CRE-008-002-040  |        |        | 4       | 0,8     | 45     | 4         | ☑                  |   |
| 2CRE-008-002-060  |        |        | 6       | 0,8     | 45     | 4         | ☑                  |   |
| 2CRE-008-002-080  |        |        | 8       | 0,8     | 45     | 4         | ☑                  |   |
| 2CRE-008-002-100  |        |        | 10      | 0,8     | 50     | 4         | ☑                  |   |
| 2CRE-010-0005-040 |        |        | 1       | R0,05   | 4      | 1         | 45                 | 4 |
| 2CRE-010-0005-060 |        | 6      |         |         | 1      | 45        | 4                  | ☑ |
| 2CRE-010-0005-080 |        | 8      |         |         | 1      | 45        | 4                  | ☑ |
| 2CRE-010-0005-100 | 10     | 1      |         |         | 50     | 4         | ☑                  |   |
| 2CRE-010-0005-120 | 12     | 1      |         |         | 50     | 4         | ☑                  |   |
| 2CRE-010-0005-160 | 16     | 1      |         |         | 50     | 4         | ☑                  |   |
| 2CRE-010-0005-200 | R0,1   | 20     |         | 1       | 50     | 4         | ☑                  |   |
| 2CRE-010-0005-220 |        | 22     |         | 1       | 60     | 4         | ☑                  |   |
| 2CRE-010-0005-250 |        | 25     |         | 1       | 60     | 4         | ☑                  |   |
| 2CRE-010-001-040  |        | 4      |         | 1       | 45     | 4         | ☑                  |   |
| 2CRE-010-001-060  |        | 6      |         | 1       | 45     | 4         | ☑                  |   |
| 2CRE-010-001-080  |        | 8      |         | 1       | 45     | 4         | ☑                  |   |
| 2CRE-010-001-100  |        | 10     |         | 1       | 50     | 4         | ☑                  |   |
| 2CRE-010-001-120  |        | 12     |         | 1       | 50     | 4         | ☑                  |   |
| 2CRE-010-001-160  | 16     | 1      | 50      | 4       | ☑      |           |                    |   |
| 2CRE-010-001-200  | 20     | 1      | 50      | 4       | ☑      |           |                    |   |
| 2CRE-010-001-220  | 22     | 1      | 60      | 4       | ☑      |           |                    |   |
| 2CRE-010-001-250  | 25     | 1      | 60      | 4       | ☑      |           |                    |   |
| 2CRE-010-002-040  | R0,2   | 4      | 1       | 45      | 4      | ☑         |                    |   |
| 2CRE-010-002-060  |        | 6      | 1       | 45      | 4      | ☑         |                    |   |
| 2CRE-010-002-080  |        | 8      | 1       | 45      | 4      | ☑         |                    |   |
| 2CRE-010-002-100  |        | 10     | 1       | 50      | 4      | ☑         |                    |   |
| 2CRE-010-002-120  |        | 12     | 1       | 50      | 4      | ☑         |                    |   |
| 2CRE-010-002-160  |        | 16     | 1       | 50      | 4      | ☑         |                    |   |
| 2CRE-010-002-200  |        | 20     | 1       | 50      | 4      | ☑         |                    |   |
| 2CRE-010-002-220  |        | 22     | 1       | 60      | 4      | ☑         |                    |   |
| 2CRE-010-002-250  |        | 25     | 1       | 60      | 4      | ☑         |                    |   |
| 2CRE-010-003-040  |        | R0,3   | 4       | 1       | 45     | 4         | ☑                  |   |
| 2CRE-010-003-060  | 6      |        | 1       | 45      | 4      | ☑         |                    |   |
| 2CRE-010-003-080  | 8      |        | 1       | 45      | 4      | ☑         |                    |   |
| 2CRE-010-003-100  | 10     |        | 1       | 50      | 4      | ☑         |                    |   |
| 2CRE-010-003-120  | 12     |        | 1       | 50      | 4      | ☑         |                    |   |
| 2CRE-010-003-160  | 16     |        | 1       | 50      | 4      | ☑         |                    |   |
| 2CRE-010-003-200  | 20     | 1      | 50      | 4       | ☑      |           |                    |   |
| 2CRE-010-003-220  | 22     | 1      | 60      | 4       | ☑      |           |                    |   |
| 2CRE-010-003-250  | 25     | 1      | 60      | 4       | ☑      |           |                    |   |
| 2CRE-012-001-040  | 1,2    | R0,1   | 4       | 1,2     | 45     | 4         | ☑                  |   |
| 2CRE-012-001-060  |        |        | 6       | 1,2     | 45     | 4         | ☑                  |   |
| 2CRE-012-001-080  |        |        | 8       | 1,2     | 45     | 4         | ☑                  |   |
| 2CRE-012-001-100  |        |        | 10      | 1,2     | 50     | 4         | ☑                  |   |
| 2CRE-012-001-120  |        |        | 12      | 1,2     | 50     | 4         | ☑                  |   |
| 2CRE-012-001-160  |        |        | 16      | 1,2     | 50     | 4         | ☑                  |   |

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 2CRE-012-001-160 | 1,2    | R0,1   | 16      | 1,2     | 50     | 4         | ☑                  |
| 2CRE-012-001-200 |        |        | 20      | 1,2     | 50     | 4         | ☑                  |
| 2CRE-012-002-040 |        | R0,2   | 4       | 1,2     | 45     | 4         | ☑                  |
| 2CRE-012-002-060 |        |        | 6       | 1,2     | 45     | 4         | ☑                  |
| 2CRE-012-002-080 |        |        | 8       | 1,2     | 45     | 4         | ☑                  |
| 2CRE-012-002-100 |        |        | 10      | 1,2     | 50     | 4         | ☑                  |
| 2CRE-012-002-120 |        |        | 12      | 1,2     | 50     | 4         | ☑                  |
| 2CRE-012-002-160 |        |        | 16      | 1,2     | 50     | 4         | ☑                  |
| 2CRE-012-002-200 |        | R0,3   | 20      | 1,2     | 50     | 4         | ☑                  |
| 2CRE-012-003-040 |        |        | 4       | 1,2     | 45     | 4         | ☑                  |
| 2CRE-012-003-060 |        |        | 6       | 1,2     | 45     | 4         | ☑                  |
| 2CRE-012-003-080 |        |        | 8       | 1,2     | 45     | 4         | ☑                  |
| 2CRE-012-003-100 |        |        | 10      | 1,2     | 50     | 4         | ☑                  |
| 2CRE-012-003-120 |        |        | 12      | 1,2     | 50     | 4         | ☑                  |
| 2CRE-012-003-160 | 16     | 1,2    | 50      | 4       | ☑      |           |                    |
| 2CRE-012-003-200 | 20     | 1,2    | 50      | 4       | ☑      |           |                    |
| 2CRE-015-001-040 | 1,5    | R0,1   | 4       | 1,5     | 45     | 4         | ☑                  |
| 2CRE-015-001-060 |        |        | 6       | 1,5     | 45     | 4         | ☑                  |
| 2CRE-015-001-080 |        |        | 8       | 1,5     | 45     | 4         | ☑                  |
| 2CRE-015-001-100 |        |        | 10      | 1,5     | 50     | 4         | ☑                  |
| 2CRE-015-001-120 |        |        | 12      | 1,5     | 50     | 4         | ☑                  |
| 2CRE-015-001-160 |        |        | 16      | 1,5     | 50     | 4         | ☑                  |
| 2CRE-015-001-200 |        | 20     | 1,5     | 50      | 4      | ☑         |                    |
| 2CRE-015-001-220 |        | 22     | 1,5     | 60      | 4      | ☑         |                    |
| 2CRE-015-001-250 |        | 25     | 1,5     | 60      | 4      | ☑         |                    |
| 2CRE-015-002-040 |        | R0,2   | 4       | 1,5     | 45     | 4         | ☑                  |
| 2CRE-015-002-060 |        |        | 6       | 1,5     | 45     | 4         | ☑                  |
| 2CRE-015-002-080 |        |        | 8       | 1,5     | 45     | 4         | ☑                  |
| 2CRE-015-002-100 |        |        | 10      | 1,5     | 50     | 4         | ☑                  |
| 2CRE-015-002-120 |        |        | 12      | 1,5     | 50     | 4         | ☑                  |
| 2CRE-015-002-160 | 16     |        | 1,5     | 50      | 4      | ☑         |                    |
| 2CRE-015-002-200 | 20     | 1,5    | 50      | 4       | ☑      |           |                    |
| 2CRE-015-002-220 | 22     | 1,5    | 60      | 4       | ☑      |           |                    |
| 2CRE-015-002-250 | 25     | 1,5    | 60      | 4       | ☑      |           |                    |
| 2CRE-015-003-040 | R0,3   | 4      | 1,5     | 45      | 4      | ☑         |                    |
| 2CRE-015-003-060 |        | 6      | 1,5     | 45      | 4      | ☑         |                    |
| 2CRE-015-003-080 |        | 8      | 1,5     | 45      | 4      | ☑         |                    |
| 2CRE-015-003-100 |        | 10     | 1,5     | 50      | 4      | ☑         |                    |
| 2CRE-015-003-120 |        | 12     | 1,5     | 50      | 4      | ☑         |                    |
| 2CRE-015-003-160 |        | 16     | 1,5     | 50      | 4      | ☑         |                    |
| 2CRE-015-003-200 | 20     | 1,5    | 50      | 4       | ☑      |           |                    |
| 2CRE-015-003-220 | 22     | 1,5    | 60      | 4       | ☑      |           |                    |
| 2CRE-015-003-250 | 25     | 1,5    | 60      | 4       | ☑      |           |                    |
| 2CRE-015-005-040 | R0,5   | 4      | 1,5     | 45      | 4      | ☑         |                    |
| 2CRE-015-005-060 |        | 6      | 1,5     | 45      | 4      | ☑         |                    |
| 2CRE-015-005-080 |        | 8      | 1,5     | 45      | 4      | ☑         |                    |
| 2CRE-015-005-100 |        | 10     | 1,5     | 50      | 4      | ☑         |                    |
| 2CRE-015-005-120 |        | 12     | 1,5     | 50      | 4      | ☑         |                    |
| 2CRE-015-005-160 |        | 16     | 1,5     | 50      | 4      | ☑         |                    |
| 2CRE-015-005-200 | 20     | 1,5    | 50      | 4       | ☑      |           |                    |
| 2CRE-015-005-220 | 22     | 1,5    | 60      | 4       | ☑      |           |                    |
| 2CRE-015-005-250 | 25     | 1,5    | 60      | 4       | ☑      |           |                    |

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 2CRE-020-001-060 | 2      | R0,1   | 6       | 2       | 45     | 4         | ☑                  |
| 2CRE-020-001-080 |        |        | 8       | 2       | 45     | 4         | ☑                  |
| 2CRE-020-001-100 |        |        | 10      | 2       | 50     | 4         | ☑                  |
| 2CRE-020-001-120 |        |        | 12      | 2       | 50     | 4         | ☑                  |
| 2CRE-020-001-160 |        |        | 16      | 2       | 50     | 4         | ☑                  |
| 2CRE-020-001-200 |        |        | 20      | 2       | 50     | 4         | ☑                  |
| 2CRE-020-001-250 |        |        | 25      | 2       | 60     | 4         | ☑                  |
| 2CRE-020-001-300 |        |        | 30      | 2       | 70     | 4         | ☑                  |
| 2CRE-020-002-060 |        |        | R0,2    | 6       | 2      | 45        | 4                  |
| 2CRE-020-002-080 |        | 8      |         | 2       | 45     | 4         | ☑                  |
| 2CRE-020-002-100 |        | 10     |         | 2       | 50     | 4         | ☑                  |
| 2CRE-020-002-120 |        | 12     |         | 2       | 50     | 4         | ☑                  |
| 2CRE-020-002-160 |        | 16     |         | 2       | 50     | 4         | ☑                  |
| 2CRE-020-002-200 |        | 20     |         | 2       | 50     | 4         | ☑                  |
| 2CRE-020-002-250 |        | 25     |         | 2       | 60     | 4         | ☑                  |
| 2CRE-020-002-300 |        | 30     |         | 2       | 70     | 4         | ☑                  |
| 2CRE-020-003-060 |        | R0,3   |         | 6       | 2      | 45        | 4                  |
| 2CRE-020-003-080 |        |        | 8       | 2       | 45     | 4         | ☑                  |
| 2CRE-020-003-100 |        |        | 10      | 2       | 50     | 4         | ☑                  |
| 2CRE-020-003-120 |        |        | 12      | 2       | 50     | 4         | ☑                  |
| 2CRE-020-003-160 |        |        | 16      | 2       | 50     | 4         | ☑                  |
| 2CRE-020-003-200 |        |        | 20      | 2       | 50     | 4         | ☑                  |
| 2CRE-020-003-250 |        |        | 25      | 2       | 60     | 4         | ☑                  |
| 2CRE-020-003-300 |        |        | 30      | 2       | 70     | 4         | ☑                  |
| 2CRE-020-005-060 |        |        | R0,5    | 6       | 2      | 45        | 4                  |
| 2CRE-020-005-080 |        | 8      |         | 2       | 45     | 4         | ☑                  |
| 2CRE-020-005-100 |        | 10     |         | 2       | 50     | 4         | ☑                  |
| 2CRE-020-005-120 |        | 12     |         | 2       | 50     | 4         | ☑                  |
| 2CRE-020-005-160 |        | 16     |         | 2       | 50     | 4         | ☑                  |
| 2CRE-020-005-200 |        | 20     |         | 2       | 50     | 4         | ☑                  |
| 2CRE-020-005-250 | 25     | 2      |         | 60      | 4      | ☑         |                    |
| 2CRE-020-005-300 | 30     | 2      |         | 70      | 4      | ☑         |                    |
| 2CRE-025-001-100 | 2,5    | R0,1   |         | 10      | 2,5    | 50        | 4                  |
| 2CRE-025-001-160 |        |        | 16      | 2,5     | 50     | 4         | ☑                  |
| 2CRE-025-001-200 |        |        | 20      | 2,5     | 50     | 4         | ☑                  |
| 2CRE-025-001-250 |        |        | 25      | 2,5     | 60     | 4         | ☑                  |
| 2CRE-025-001-300 |        |        | 30      | 2,5     | 70     | 4         | ☑                  |
| 2CRE-025-002-100 |        | R0,2   | 10      | 2,5     | 50     | 4         | ☑                  |
| 2CRE-025-002-160 |        |        | 16      | 2,5     | 50     | 4         | ☑                  |
| 2CRE-025-002-200 |        |        | 20      | 2,5     | 50     | 4         | ☑                  |
| 2CRE-025-002-250 |        |        | 25      | 2,5     | 60     | 4         | ☑                  |
| 2CRE-025-002-300 |        |        | 30      | 2,5     | 70     | 4         | ☑                  |
| 2CRE-025-003-100 |        | R0,3   | 10      | 2,5     | 50     | 4         | ☑                  |
| 2CRE-025-003-160 |        |        | 16      | 2,5     | 50     | 4         | ☑                  |
| 2CRE-025-003-200 |        |        | 20      | 2,5     | 50     | 4         | ☑                  |
| 2CRE-025-003-250 |        |        | 25      | 2,5     | 60     | 4         | ☑                  |
| 2CRE-025-003-300 |        |        | 30      | 2,5     | 70     | 4         | ☑                  |
| 2CRE-025-005-100 |        |        | 10      | 2,5     | 50     | 4         | ☑                  |
| 2CRE-025-005-160 |        |        | 16      | 2,5     | 50     | 4         | ☑                  |
| 2CRE-025-005-200 |        |        | 20      | 2,5     | 50     | 4         | ☑                  |
| 2CRE-025-005-250 |        |        | 25      | 2,5     | 60     | 4         | ☑                  |
| 2CRE-025-005-300 |        |        | 30      | 2,5     | 70     | 4         | ☑                  |

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 2CRE-030-001-100 | 3      | R0,1   | 10      | 3       | 50     | 6         | ☑                  |   |
| 2CRE-030-001-120 |        |        | 12      | 3       | 55     | 6         | ☑                  |   |
| 2CRE-030-001-160 |        |        | 16      | 3       | 55     | 6         | ☑                  |   |
| 2CRE-030-001-200 |        |        | 20      | 3       | 60     | 6         | ☑                  |   |
| 2CRE-030-001-250 |        |        | 25      | 3       | 65     | 6         | ☑                  |   |
| 2CRE-030-001-300 |        |        | 30      | 3       | 70     | 6         | ☑                  |   |
| 2CRE-030-001-350 |        |        | 35      | 3       | 75     | 6         | ☑                  |   |
| 2CRE-030-001-400 |        |        | 40      | 3       | 80     | 6         | ☑                  |   |
| 2CRE-030-002-100 |        |        | R0,2    | 10      | 3      | 50        | 6                  | ☑ |
| 2CRE-030-002-120 |        |        |         | 12      | 3      | 55        | 6                  | ☑ |
| 2CRE-030-002-160 |        | 16     |         | 3       | 55     | 6         | ☑                  |   |
| 2CRE-030-002-200 |        | 20     |         | 3       | 60     | 6         | ☑                  |   |
| 2CRE-030-002-250 |        | 25     |         | 3       | 65     | 6         | ☑                  |   |
| 2CRE-030-002-300 |        | 30     |         | 3       | 70     | 6         | ☑                  |   |
| 2CRE-030-002-350 |        | 35     |         | 3       | 75     | 6         | ☑                  |   |
| 2CRE-030-002-400 |        | 40     |         | 3       | 80     | 6         | ☑                  |   |
| 2CRE-030-003-100 |        | R0,3   |         | 10      | 3      | 50        | 6                  | ☑ |
| 2CRE-030-003-120 |        |        |         | 12      | 3      | 55        | 6                  | ☑ |
| 2CRE-030-003-160 |        |        | 16      | 3       | 55     | 6         | ☑                  |   |
| 2CRE-030-003-200 |        |        | 20      | 3       | 60     | 6         | ☑                  |   |
| 2CRE-030-003-250 |        |        | 25      | 3       | 65     | 6         | ☑                  |   |
| 2CRE-030-003-300 |        |        | 30      | 3       | 70     | 6         | ☑                  |   |
| 2CRE-030-003-350 |        |        | 35      | 3       | 75     | 6         | ☑                  |   |
| 2CRE-030-003-400 |        |        | 40      | 3       | 80     | 6         | ☑                  |   |
| 2CRE-030-005-100 |        |        | R0,5    | 10      | 3      | 50        | 6                  | ☑ |
| 2CRE-030-005-120 |        |        |         | 12      | 3      | 55        | 6                  | ☑ |
| 2CRE-030-005-160 |        | 16     |         | 3       | 55     | 6         | ☑                  |   |
| 2CRE-030-005-200 |        | 20     |         | 3       | 60     | 6         | ☑                  |   |
| 2CRE-030-005-250 |        | 25     |         | 3       | 65     | 6         | ☑                  |   |
| 2CRE-030-005-300 |        | 30     |         | 3       | 70     | 6         | ☑                  |   |
| 2CRE-030-005-350 |        | 35     |         | 3       | 75     | 6         | ☑                  |   |
| 2CRE-030-005-400 |        | 40     |         | 3       | 80     | 6         | ☑                  |   |
| 2CRE-030-010-100 |        | R1     |         | 10      | 3      | 50        | 6                  | ☑ |
| 2CRE-030-010-120 |        |        |         | 12      | 3      | 55        | 6                  | ☑ |
| 2CRE-030-010-160 |        |        | 16      | 3       | 55     | 6         | ☑                  |   |
| 2CRE-030-010-200 |        |        | 20      | 3       | 60     | 6         | ☑                  |   |
| 2CRE-030-010-250 |        |        | 25      | 3       | 65     | 6         | ☑                  |   |
| 2CRE-030-010-300 |        |        | 30      | 3       | 70     | 6         | ☑                  |   |
| 2CRE-030-010-350 |        |        | 35      | 3       | 75     | 6         | ☑                  |   |
| 2CRE-030-010-400 |        |        | 40      | 3       | 80     | 6         | ☑                  |   |
| 2CRE-040-001-050 | 4      |        | R0,1    | 12      | 4      | 50        | 4                  | ☑ |
| 2CRE-040-001-070 |        |        |         | 20      | 4      | 70        | 4                  | ☑ |
| 2CRE-040-001-120 |        | 12     |         | 4       | 55     | 6         | ☑                  |   |
| 2CRE-040-001-160 |        | 16     |         | 4       | 55     | 6         | ☑                  |   |
| 2CRE-040-001-200 |        | 20     |         | 4       | 60     | 6         | ☑                  |   |
| 2CRE-040-001-250 |        | 25     |         | 4       | 65     | 6         | ☑                  |   |
| 2CRE-040-001-300 |        | 30     |         | 4       | 70     | 6         | ☑                  |   |
| 2CRE-040-001-350 |        | 35     |         | 4       | 75     | 6         | ☑                  |   |
| 2CRE-040-001-400 |        | 40     |         | 4       | 80     | 6         | ☑                  |   |
| 2CRE-040-001-450 |        | 45     |         | 4       | 90     | 6         | ☑                  |   |
| 2CRE-040-001-500 | 50     | 4      | 100     | 6       | ☑      |           |                    |   |
| 2CRE-040-002-050 | R0,2   | 12     | 4       | 50      | 4      | ☑         |                    |   |

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 2CRE-040-002-070 | 4      | R0,2   | 20      | 4       | 70     | 4         | ☑                  |   |
| 2CRE-040-002-120 |        |        | 12      | 4       | 55     | 6         | ☑                  |   |
| 2CRE-040-002-160 |        |        | 16      | 4       | 55     | 6         | ☑                  |   |
| 2CRE-040-002-200 |        |        | 20      | 4       | 60     | 6         | ☑                  |   |
| 2CRE-040-002-250 |        |        | 25      | 4       | 65     | 6         | ☑                  |   |
| 2CRE-040-002-300 |        |        | 30      | 4       | 70     | 6         | ☑                  |   |
| 2CRE-040-002-350 |        |        | 35      | 4       | 75     | 6         | ☑                  |   |
| 2CRE-040-002-400 |        |        | 40      | 4       | 80     | 6         | ☑                  |   |
| 2CRE-040-002-450 |        |        | 45      | 4       | 90     | 6         | ☑                  |   |
| 2CRE-040-002-500 |        |        | 50      | 4       | 100    | 6         | ☑                  |   |
| 2CRE-040-003-050 |        | R0,3   | R0,3    | 12      | 4      | 50        | 4                  | ☑ |
| 2CRE-040-003-070 |        |        |         | 20      | 4      | 70        | 4                  | ☑ |
| 2CRE-040-003-120 |        |        |         | 12      | 4      | 55        | 6                  | ☑ |
| 2CRE-040-003-160 |        |        |         | 16      | 4      | 55        | 6                  | ☑ |
| 2CRE-040-003-200 |        |        |         | 20      | 4      | 60        | 6                  | ☑ |
| 2CRE-040-003-250 |        |        | 25      | 4       | 65     | 6         | ☑                  |   |
| 2CRE-040-003-300 |        |        | 30      | 4       | 70     | 6         | ☑                  |   |
| 2CRE-040-003-350 |        |        | 35      | 4       | 75     | 6         | ☑                  |   |
| 2CRE-040-003-400 |        |        | 40      | 4       | 80     | 6         | ☑                  |   |
| 2CRE-040-003-450 |        |        | 45      | 4       | 90     | 6         | ☑                  |   |
| 2CRE-040-003-500 | 50     |        | 4       | 100     | 6      | ☑         |                    |   |
| 2CRE-040-005-050 | R0,5   |        | R0,5    | 12      | 4      | 50        | 4                  | ☑ |
| 2CRE-040-005-070 |        |        |         | 20      | 4      | 70        | 4                  | ☑ |
| 2CRE-040-005-120 |        |        |         | 12      | 4      | 55        | 6                  | ☑ |
| 2CRE-040-005-160 |        |        |         | 16      | 4      | 55        | 6                  | ☑ |
| 2CRE-040-005-200 |        | 20     |         | 4       | 60     | 6         | ☑                  |   |
| 2CRE-040-005-250 |        | 25     | 4       | 65      | 6      | ☑         |                    |   |
| 2CRE-040-005-300 |        | 30     | 4       | 70      | 6      | ☑         |                    |   |
| 2CRE-040-005-350 |        | 35     | 4       | 75      | 6      | ☑         |                    |   |
| 2CRE-040-005-400 |        | 40     | 4       | 80      | 6      | ☑         |                    |   |
| 2CRE-040-005-450 |        | 45     | 4       | 90      | 6      | ☑         |                    |   |
| 2CRE-040-005-500 |        | 50     | 4       | 100     | 6      | ☑         |                    |   |
| 2CRE-040-010-050 |        | R1     | R1      | 12      | 4      | 50        | 4                  | ☑ |
| 2CRE-040-010-070 |        |        |         | 20      | 4      | 70        | 4                  | ☑ |
| 2CRE-040-010-120 |        |        |         | 12      | 4      | 55        | 6                  | ☑ |
| 2CRE-040-010-160 |        |        |         | 16      | 4      | 55        | 6                  | ☑ |
| 2CRE-040-010-200 | 20     |        |         | 4       | 60     | 6         | ☑                  |   |
| 2CRE-040-010-250 | 25     |        |         | 4       | 65     | 6         | ☑                  |   |
| 2CRE-040-010-300 | 30     |        |         | 4       | 70     | 6         | ☑                  |   |
| 2CRE-040-010-350 | 35     |        |         | 4       | 75     | 6         | ☑                  |   |
| 2CRE-040-010-400 | 40     |        |         | 4       | 80     | 6         | ☑                  |   |
| 2CRE-040-010-450 | 45     |        |         | 4       | 90     | 6         | ☑                  |   |
| 2CRE-040-010-500 | 50     | 4      | 100     | 6       | ☑      |           |                    |   |
| 2CRE-050-002-150 | 5      | R0,2   | 15      | 6       | 60     | 6         | ☑                  |   |
| 2CRE-050-002-250 |        |        | 25      | 6       | 70     | 6         | ☑                  |   |
| 2CRE-050-002-300 |        |        | 30      | 6       | 70     | 6         | ☑                  |   |
| 2CRE-050-002-400 |        |        | 40      | 6       | 80     | 6         | ☑                  |   |
| 2CRE-050-002-500 |        |        | 50      | 6       | 100    | 6         | ☑                  |   |
| 2CRE-050-005-150 |        | R0,5   | R0,5    | 15      | 6      | 60        | 6                  | ☑ |
| 2CRE-050-005-250 |        |        |         | 25      | 6      | 70        | 6                  | ☑ |
| 2CRE-050-005-300 |        |        |         | 30      | 6      | 70        | 6                  | ☑ |
| 2CRE-050-005-400 |        |        |         | 40      | 6      | 80        | 6                  | ☑ |
| 2CRE-050-005-500 |        |        |         | 50      | 6      | 100       | 6                  | ☑ |

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 2CRE-050-005-500 | 5      | R0,5   | 50      | 6       | 100    | 6         | ☑                  |   |
| 2CRE-050-010-150 |        |        | R1      | 15      | 6      | 60        | 6                  | ☑ |
| 2CRE-050-010-250 |        |        |         | 25      | 6      | 70        | 6                  | ☑ |
| 2CRE-050-010-300 |        |        |         | 30      | 6      | 70        | 6                  | ☑ |
| 2CRE-050-010-400 |        |        |         | 40      | 6      | 80        | 6                  | ☑ |
| 2CRE-050-010-500 |        | 50     |         | 6       | 100    | 6         | ☑                  |   |
| 2CRE-060-001-200 |        | 6      | R0,1    | 20      | 7      | 60        | 6                  | ☑ |
| 2CRE-060-001-400 |        |        |         | 40      | 7      | 90        | 6                  | ☑ |
| 2CRE-060-002-200 |        |        | R0,2    | 20      | 7      | 60        | 6                  | ☑ |
| 2CRE-060-002-400 |        |        |         | 40      | 7      | 90        | 6                  | ☑ |
| 2CRE-060-003-200 | R0,3   |        | 20      | 7       | 60     | 6         | ☑                  |   |
| 2CRE-060-003-400 |        |        | 40      | 7       | 90     | 6         | ☑                  |   |
| 2CRE-060-005-200 | R0,5   |        | 20      | 7       | 60     | 6         | ☑                  |   |
| 2CRE-060-005-400 |        |        | 40      | 7       | 90     | 6         | ☑                  |   |
| 2CRE-060-010-200 | R1     |        | 20      | 7       | 60     | 6         | ☑                  |   |
| 2CRE-060-010-400 |        |        | 40      | 7       | 90     | 6         | ☑                  |   |
| 2CRE-060-015-200 | R1,5   | 20     | 7       | 60      | 6      | ☑         |                    |   |
| 2CRE-060-015-400 |        | 40     | 7       | 90      | 6      | ☑         |                    |   |
| 2CRE-080-002-220 | 8      | R0,2   | 22      | 9       | 65     | 8         | ☑                  |   |
| 2CRE-080-002-400 |        |        | 40      | 9       | 100    | 8         | ☑                  |   |
| 2CRE-080-003-220 |        | R0,3   | 22      | 9       | 65     | 8         | ☑                  |   |
| 2CRE-080-003-400 |        |        | 40      | 9       | 100    | 8         | ☑                  |   |
| 2CRE-080-005-220 |        | R0,5   | 22      | 9       | 65     | 8         | ☑                  |   |
| 2CRE-080-005-400 |        |        | 40      | 9       | 100    | 8         | ☑                  |   |
| 2CRE-080-010-220 |        | R1     | 22      | 9       | 65     | 8         | ☑                  |   |
| 2CRE-080-010-400 |        |        | 40      | 9       | 100    | 8         | ☑                  |   |
| 2CRE-080-015-220 |        | R1,5   | 22      | 9       | 65     | 8         | ☑                  |   |
| 2CRE-080-015-400 |        |        | 40      | 9       | 100    | 8         | ☑                  |   |
| 2CRE-100-002-240 | 10     | R0,2   | 24      | 11      | 70     | 10        | ☑                  |   |
| 2CRE-100-002-450 |        |        | 45      | 11      | 100    | 10        | ☑                  |   |
| 2CRE-100-003-240 |        | R0,3   | 24      | 11      | 70     | 10        | ☑                  |   |
| 2CRE-100-003-450 |        |        | 45      | 11      | 100    | 10        | ☑                  |   |
| 2CRE-100-005-240 |        | R0,5   | 24      | 11      | 70     | 10        | ☑                  |   |
| 2CRE-100-005-450 |        |        | 45      | 11      | 100    | 10        | ☑                  |   |
| 2CRE-100-010-240 |        | R1     | 24      | 11      | 70     | 10        | ☑                  |   |
| 2CRE-100-010-450 |        |        | 45      | 11      | 100    | 10        | ☑                  |   |
| 2CRE-100-015-240 |        | R1,5   | 24      | 11      | 70     | 10        | ☑                  |   |
| 2CRE-100-015-450 |        |        | 45      | 11      | 100    | 10        | ☑                  |   |
| 2CRE-100-020-240 | R2     | 24     | 11      | 70      | 10     | ☑         |                    |   |
| 2CRE-100-020-450 |        | 45     | 11      | 100     | 10     | ☑         |                    |   |
| 2CRE-120-002-260 | 12     | R0,2   | 26      | 13      | 80     | 12        | ☑                  |   |
| 2CRE-120-002-500 |        |        | 50      | 13      | 110    | 12        | ☑                  |   |
| 2CRE-120-003-260 |        | R0,3   | 26      | 13      | 80     | 12        | ☑                  |   |
| 2CRE-120-003-500 |        |        | 50      | 13      | 110    | 12        | ☑                  |   |
| 2CRE-120-005-260 |        | R0,5   | 26      | 13      | 80     | 12        | ☑                  |   |
| 2CRE-120-005-500 |        |        | 50      | 13      | 110    | 12        | ☑                  |   |
| 2CRE-120-010-260 |        | R1     | 26      | 13      | 80     | 12        | ☑                  |   |
| 2CRE-120-010-500 |        |        | 50      | 13      | 110    | 12        | ☑                  |   |
| 2CRE-120-015-260 |        | R1,5   | 26      | 13      | 80     | 12        | ☑                  |   |
| 2CRE-120-015-500 |        |        | 50      | 13      | 110    | 12        | ☑                  |   |
| 2CRE-120-020-260 | R2     | 26     | 13      | 80      | 12     | ☑         |                    |   |
| 2CRE-120-020-500 |        | 50     | 13      | 110     | 12     | ☑         |                    |   |

# 2CRE

## 2-břité TOROIDNÍ frézy pro žebrování pro kalené oceli do HRC 62

| Objednací číslo  | D<br>(mm) | R<br>(mm) | L2<br>(mm) | L1<br>(mm) | L<br>(mm) | d h5<br>(mm) | Standardní<br>položka               |
|------------------|-----------|-----------|------------|------------|-----------|--------------|-------------------------------------|
| 2CRE-120-030-260 | 12        | R3        | 26         | 13         | 80        | 12           | <input checked="" type="checkbox"/> |
| 2CRE-120-030-500 |           |           | 50         | 13         | 110       | 12           | <input checked="" type="checkbox"/> |
| 2CRE-160-005-110 | 16        | R0,5      | 35         | 20         | 110       | 16           | <input checked="" type="checkbox"/> |
| 2CRE-160-005-160 |           |           | 35         | 20         | 160       | 16           | <input checked="" type="checkbox"/> |
| 2CRE-160-010-110 |           | R1        | 35         | 20         | 110       | 16           | <input checked="" type="checkbox"/> |
| 2CRE-160-010-160 |           |           | 35         | 20         | 160       | 16           | <input checked="" type="checkbox"/> |

JJ

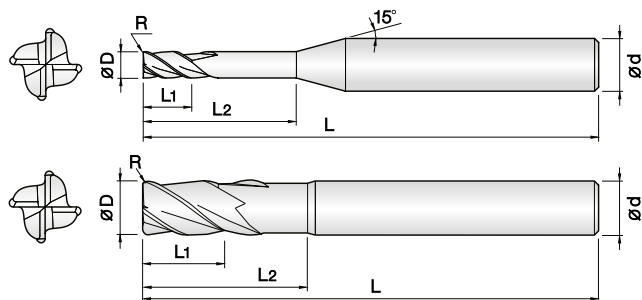
HS

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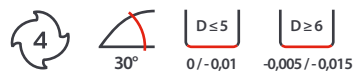
SUS



# 4CRE 4-břité TOROIDNÍ frézy pro žebrování pro kalené oceli do HRC 62



- Určeno pro kalené oceli (50 - 62 HRC)
- Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- Velmi přesné tolerance řezných hran
- Široký sortiment rádiusů a vyložení pro optimální výběr nástroje
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu v



| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 4CRE-008-0002-020 | 0,8    | R0,02  | 2       | 0,8     | 45     | 4         | ☑                  |
| 4CRE-008-0002-040 |        |        | 4       | 0,8     | 45     | 4         | ☑                  |
| 4CRE-008-0002-060 |        |        | 6       | 0,8     | 45     | 4         | ☑                  |
| 4CRE-008-0002-080 |        |        | 8       | 0,8     | 45     | 4         | ☑                  |
| 4CRE-008-0002-100 |        |        | 10      | 0,8     | 45     | 4         | ☑                  |
| 4CRE-008-0005-020 |        | R0,05  | 2       | 0,8     | 45     | 4         | ☑                  |
| 4CRE-008-0005-040 |        |        | 4       | 0,8     | 45     | 4         | ☑                  |
| 4CRE-008-0005-060 |        |        | 6       | 0,8     | 45     | 4         | ☑                  |
| 4CRE-008-0005-080 |        |        | 8       | 0,8     | 45     | 4         | ☑                  |
| 4CRE-008-0005-100 |        |        | 10      | 0,8     | 45     | 4         | ☑                  |
| 4CRE-008-001-020  | R0,1   | 2      | 0,8     | 45      | 4      | ☑         |                    |
| 4CRE-008-001-040  |        | 4      | 0,8     | 45      | 4      | ☑         |                    |
| 4CRE-008-001-060  |        | 6      | 0,8     | 45      | 4      | ☑         |                    |
| 4CRE-008-001-080  |        | 8      | 0,8     | 45      | 4      | ☑         |                    |
| 4CRE-008-001-100  |        | 10     | 0,8     | 45      | 4      | ☑         |                    |
| 4CRE-010-0002-040 | 1      | R0,02  | 4       | 1       | 45     | 4         | ☑                  |
| 4CRE-010-0002-060 |        |        | 6       | 1       | 45     | 4         | ☑                  |
| 4CRE-010-0002-080 |        |        | 8       | 1       | 45     | 4         | ☑                  |
| 4CRE-010-0002-100 |        |        | 10      | 1       | 50     | 4         | ☑                  |
| 4CRE-010-0002-120 |        |        | 12      | 1       | 50     | 4         | ☑                  |
| 4CRE-010-0002-160 |        | 16     | 1       | 50      | 4      | ☑         |                    |
| 4CRE-010-0002-200 |        | 20     | 1       | 50      | 4      | ☑         |                    |
| 4CRE-010-0005-040 |        | R0,05  | 4       | 1       | 45     | 4         | ☑                  |
| 4CRE-010-0005-060 |        |        | 6       | 1       | 45     | 4         | ☑                  |
| 4CRE-010-0005-080 |        |        | 8       | 1       | 45     | 4         | ☑                  |
| 4CRE-010-0005-100 | 10     |        | 1       | 50      | 4      | ☑         |                    |
| 4CRE-010-0005-120 | 12     |        | 1       | 50      | 4      | ☑         |                    |
| 4CRE-010-0005-160 | 16     | 1      | 50      | 4       | ☑      |           |                    |
| 4CRE-010-0005-200 | 20     | 1      | 50      | 4       | ☑      |           |                    |
| 4CRE-010-001-040  | R0,1   | 4      | 1       | 45      | 4      | ☑         |                    |
| 4CRE-010-001-060  |        | 6      | 1       | 45      | 4      | ☑         |                    |
| 4CRE-010-001-080  |        | 8      | 1       | 45      | 4      | ☑         |                    |
| 4CRE-010-001-100  |        | 10     | 1       | 50      | 4      | ☑         |                    |
| 4CRE-010-001-120  |        | 12     | 1       | 50      | 4      | ☑         |                    |
| 4CRE-010-001-160  | 16     | 1      | 50      | 4       | ☑      |           |                    |
| 4CRE-010-001-200  | 20     | 1      | 50      | 4       | ☑      |           |                    |
| 4CRE-010-002-040  | R0,2   | 4      | 1       | 45      | 4      | ☑         |                    |
| 4CRE-010-002-060  |        | 6      | 1       | 45      | 4      | ☑         |                    |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 4CRE-010-002-080  | 1      | R0,2   | 8       | 1       | 45     | 4         | ☑                  |
| 4CRE-010-002-100  |        |        | 10      | 1       | 50     | 4         | ☑                  |
| 4CRE-010-002-120  |        |        | 12      | 1       | 50     | 4         | ☑                  |
| 4CRE-010-002-160  |        |        | 16      | 1       | 50     | 4         | ☑                  |
| 4CRE-010-002-200  |        |        | 20      | 1       | 50     | 4         | ☑                  |
| 4CRE-010-003-040  |        | R0,3   | 4       | 1       | 45     | 4         | ☑                  |
| 4CRE-010-003-060  |        |        | 6       | 1       | 45     | 4         | ☑                  |
| 4CRE-010-003-080  |        |        | 8       | 1       | 45     | 4         | ☑                  |
| 4CRE-010-003-100  |        |        | 10      | 1       | 50     | 4         | ☑                  |
| 4CRE-010-003-120  |        |        | 12      | 1       | 50     | 4         | ☑                  |
| 4CRE-010-003-160  | 16     | 1      | 50      | 4       | ☑      |           |                    |
| 4CRE-010-003-200  | 20     | 1      | 50      | 4       | ☑      |           |                    |
| 4CRE-012-0002-040 | 1,2    | R0,02  | 4       | 1,2     | 45     | 4         | ☑                  |
| 4CRE-012-0002-060 |        |        | 6       | 1,2     | 45     | 4         | ☑                  |
| 4CRE-012-0002-080 |        |        | 8       | 1,2     | 45     | 4         | ☑                  |
| 4CRE-012-0002-100 |        |        | 10      | 1,2     | 50     | 4         | ☑                  |
| 4CRE-012-0002-120 |        |        | 12      | 1,2     | 50     | 4         | ☑                  |
| 4CRE-012-0002-160 |        | 16     | 1,2     | 50      | 4      | ☑         |                    |
| 4CRE-012-0002-200 |        | 20     | 1,2     | 50      | 4      | ☑         |                    |
| 4CRE-012-0005-040 |        | R0,05  | 4       | 1,2     | 45     | 4         | ☑                  |
| 4CRE-012-0005-060 |        |        | 6       | 1,2     | 45     | 4         | ☑                  |
| 4CRE-012-0005-080 |        |        | 8       | 1,2     | 45     | 4         | ☑                  |
| 4CRE-012-0005-100 | 10     |        | 1,2     | 50      | 4      | ☑         |                    |
| 4CRE-012-0005-120 | 12     |        | 1,2     | 50      | 4      | ☑         |                    |
| 4CRE-012-0005-160 | 16     | 1,2    | 50      | 4       | ☑      |           |                    |
| 4CRE-012-0005-200 | 20     | 1,2    | 50      | 4       | ☑      |           |                    |
| 4CRE-012-001-040  | R0,1   | 4      | 1,2     | 45      | 4      | ☑         |                    |
| 4CRE-012-001-060  |        | 6      | 1,2     | 45      | 4      | ☑         |                    |
| 4CRE-012-001-080  |        | 8      | 1,2     | 45      | 4      | ☑         |                    |
| 4CRE-012-001-100  |        | 10     | 1,2     | 50      | 4      | ☑         |                    |
| 4CRE-012-001-120  |        | 12     | 1,2     | 50      | 4      | ☑         |                    |
| 4CRE-012-001-160  | 16     | 1,2    | 50      | 4       | ☑      |           |                    |
| 4CRE-012-001-200  | 20     | 1,2    | 50      | 4       | ☑      |           |                    |
| 4CRE-012-002-040  | R0,2   | 4      | 1,2     | 45      | 4      | ☑         |                    |
| 4CRE-012-002-060  |        | 6      | 1,2     | 45      | 4      | ☑         |                    |
| 4CRE-012-002-080  |        | 8      | 1,2     | 45      | 4      | ☑         |                    |
| 4CRE-012-002-100  |        | 10     | 1,2     | 50      | 4      | ☑         |                    |
| 4CRE-012-002-120  | 12     | 1,2    | 50      | 4       | ☑      |           |                    |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |   |                                     |
|-------------------|--------|--------|---------|---------|--------|-----------|-------------------------------------|---|-------------------------------------|
| 4CRE-012-002-160  | 1,2    | R0,2   | 16      | 1,2     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-012-002-200  |        |        | 20      | 1,2     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-012-003-040  |        | R0,3   | 4       | 1,2     | 45     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-012-003-060  |        |        | 6       | 1,2     | 45     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-012-003-080  |        |        | 8       | 1,2     | 45     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-012-003-100  |        |        | 10      | 1,2     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-012-003-120  |        |        | 12      | 1,2     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-012-003-160  |        |        | 16      | 1,2     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-012-003-200  |        |        | 20      | 1,2     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-0002-060 |        |        | 1,5     | R0,02   | 6      | 1,5       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-015-0002-080 | 8      | 1,5    |         |         | 45     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-0002-100 | 10     | 1,5    |         |         | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-0002-120 | 12     | 1,5    |         |         | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-0002-160 | 16     | 1,5    |         |         | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-0002-200 | 20     | 1,5    |         |         | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-0002-220 | 22     | 1,5    |         |         | 60     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-0002-250 | 25     | 1,5    |         |         | 60     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-0005-060 | 1,5    | R0,05  |         |         | 6      | 1,5       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-015-0005-080 |        |        |         |         | 8      | 1,5       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-015-0005-100 |        |        | 10      | 1,5     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-0005-120 |        |        | 12      | 1,5     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-0005-160 |        |        | 16      | 1,5     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-0005-200 |        |        | 20      | 1,5     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-0005-220 |        |        | 22      | 1,5     | 60     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-0005-250 |        |        | 25      | 1,5     | 60     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-001-060  |        |        | 1,5     | R0,1    | 6      | 1,5       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-015-001-080  |        |        |         |         | 8      | 1,5       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-015-001-100  | 10     | 1,5    |         |         | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-001-120  | 12     | 1,5    |         |         | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-001-160  | 16     | 1,5    |         |         | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-001-200  | 20     | 1,5    |         |         | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-001-220  | 22     | 1,5    |         |         | 60     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-001-250  | 25     | 1,5    |         |         | 60     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-002-060  | 1,5    | R0,2   |         |         | 6      | 1,5       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-015-002-080  |        |        |         |         | 8      | 1,5       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-015-002-100  |        |        | 10      | 1,5     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-002-120  |        |        | 12      | 1,5     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-002-160  |        |        | 16      | 1,5     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-002-200  |        |        | 20      | 1,5     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-002-220  |        |        | 22      | 1,5     | 60     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-002-250  |        |        | 25      | 1,5     | 60     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-003-060  |        |        | 1,5     | R0,3    | 6      | 1,5       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-015-003-080  |        |        |         |         | 8      | 1,5       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-015-003-100  | 10     | 1,5    |         |         | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-003-120  | 12     | 1,5    |         |         | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-003-160  | 16     | 1,5    |         |         | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-003-200  | 20     | 1,5    |         |         | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-003-220  | 22     | 1,5    |         |         | 60     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-003-250  | 25     | 1,5    |         |         | 60     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-005-060  | 1,5    | R0,5   |         |         | 6      | 1,5       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-015-005-080  |        |        |         |         | 8      | 1,5       | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-015-005-100  |        |        | 10      | 1,5     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-005-120  |        |        | 12      | 1,5     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-005-100  |        |        | 10      | 1,5     | 50     | 4         | <input checked="" type="checkbox"/> |   |                                     |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm)                              | d h5 (mm) | Standardní položka                  |   |                                     |
|-------------------|--------|--------|---------|---------|-------------------------------------|-----------|-------------------------------------|---|-------------------------------------|
| 4CRE-015-005-120  | 1,5    | R0,5   | 12      | 1,5     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-005-160  |        |        | 16      | 1,5     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-005-200  |        |        | 20      | 1,5     | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-005-220  |        |        | 22      | 1,5     | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-015-005-250  |        |        | 25      | 1,5     | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0002-060 | 2      | R0,02  | 6       | 2       | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0002-080 |        |        | 8       | 2       | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0002-100 |        |        | 10      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0002-120 |        |        | 12      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0002-140 |        |        | 14      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0002-160 |        |        | 16      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0002-180 |        |        | 18      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0002-200 |        |        | 20      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0002-220 |        |        | 22      | 2       | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0002-250 |        |        | 25      | 2       | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0002-300 | 2      | R0,05  | 30      | 2       | 70                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0002-350 |        |        | 35      | 2       | 70                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0005-060 |        |        | 6       | 2       | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0005-080 |        |        | 8       | 2       | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0005-100 |        |        | 10      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0005-120 |        |        | 12      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0005-140 |        |        | 14      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0005-160 |        |        | 16      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0005-180 |        |        | 18      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0005-200 |        |        | 20      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0005-220 | 2      | R0,1   | 22      | 2       | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0005-250 |        |        | 25      | 2       | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0005-300 |        |        | 30      | 2       | 70                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-0005-350 |        |        | 35      | 2       | 70                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-001-060  |        |        | 6       | 2       | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-001-080  |        |        | 8       | 2       | 45                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-001-100  |        |        | 10      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-001-120  |        |        | 12      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-001-140  |        |        | 14      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-001-160  |        |        | 16      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-001-180  | 2      | R0,2   | 18      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-001-200  |        |        | 20      | 2       | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-001-220  |        |        | 22      | 2       | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-001-250  |        |        | 25      | 2       | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-001-300  |        |        | 30      | 2       | 70                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-001-350  |        |        | 35      | 2       | 70                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-002-060  |        |        | 2       | R0,2    | 6                                   | 2         | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-020-002-080  |        |        |         |         | 8                                   | 2         | 45                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-020-002-100  |        |        |         |         | 10                                  | 2         | 50                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-020-002-120  |        |        |         |         | 12                                  | 2         | 50                                  | 4 | <input checked="" type="checkbox"/> |
| 4CRE-020-002-140  | 14     | 2      |         |         | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-002-160  | 16     | 2      |         |         | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-002-180  | 18     | 2      |         |         | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-002-200  | 20     | 2      |         |         | 50                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-002-220  | 22     | 2      |         |         | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-002-250  | 25     | 2      |         |         | 60                                  | 4         | <input checked="" type="checkbox"/> |   |                                     |
| 4CRE-020-002-300  | 30     | 2      | 70      | 4       | <input checked="" type="checkbox"/> |           |                                     |   |                                     |

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm)                           | Standardní položka                  | Objednací číslo                     | D (mm)                              | R (mm)                              | L2 (mm)          | L1 (mm) | L (mm)                              | d h5 (mm)                           | Standardní položka                  |                                     |
|------------------|--------|--------|---------|---------|--------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|------------------|---------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 4CRE-020-002-350 | 2      | R0,2   | 35      | 2       | 70     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-001-200                    | 3                                   | R0,1                                | 20               | 3       | 60                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-020-003-060 |        |        | 6       | 2       | 45     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-001-250                    |                                     |                                     | 25               | 3       | 65                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-020-003-080 |        |        | 8       | 2       | 45     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-001-300                    |                                     |                                     | 30               | 3       | 70                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-020-003-100 |        |        | 10      | 2       | 50     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-001-350                    |                                     |                                     | 35               | 3       | 75                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-020-003-120 |        |        | 12      | 2       | 50     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-001-400                    |                                     |                                     | 40               | 3       | 80                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-020-003-140 |        |        | 14      | 2       | 50     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-001-500                    |                                     |                                     | 50               | 3       | 100                                 | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-020-003-160 |        |        | 16      | 2       | 50     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-002-100                    |                                     |                                     | 10               | 3       | 50                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-020-003-180 |        |        | 18      | 2       | 50     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-002-120                    |                                     |                                     | 12               | 3       | 50                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-020-003-200 |        | 20     | 2       | 50      | 4      | <input checked="" type="checkbox"/> | 4CRE-030-002-160                    | 16                                  |                                     | 3                                   | 55               | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-020-003-220 |        | 22     | 2       | 60      | 4      | <input checked="" type="checkbox"/> | 4CRE-030-002-200                    | 20                                  |                                     | 3                                   | 60               | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-020-003-250 |        | 25     | 2       | 60      | 4      | <input checked="" type="checkbox"/> | 4CRE-030-002-250                    | 25                                  |                                     | 3                                   | 65               | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-020-003-300 |        | 30     | 2       | 70      | 4      | <input checked="" type="checkbox"/> | 4CRE-030-002-300                    | 30                                  |                                     | 3                                   | 70               | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-020-003-350 |        | 35     | 2       | 70      | 4      | <input checked="" type="checkbox"/> | 4CRE-030-002-350                    | 35                                  |                                     | 3                                   | 75               | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-020-005-060 |        | R0,3   | R0,5    | 6       | 2      | 45                                  | 4                                   | <input checked="" type="checkbox"/> |                                     | 4CRE-030-002-400                    | 40               | 3       | 80                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-020-005-080 |        |        |         | 8       | 2      | 45                                  | 4                                   | <input checked="" type="checkbox"/> |                                     | 4CRE-030-002-500                    | 50               | 3       | 100                                 | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-020-005-100 |        |        |         | 10      | 2      | 50                                  | 4                                   | <input checked="" type="checkbox"/> |                                     | 4CRE-030-003-100                    | 10               | 3       | 50                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-020-005-120 |        |        |         | 12      | 2      | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-003-120                    | 12                                  | 3                | 50      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-020-005-140 |        |        |         | 14      | 2      | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-003-160                    | 16                                  | 3                | 55      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-020-005-160 |        |        |         | 16      | 2      | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-003-200                    | 20                                  | 3                | 60      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-020-005-180 |        |        |         | 18      | 2      | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-003-250                    | 25                                  | 3                | 65      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-020-005-200 |        |        |         | 20      | 2      | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-003-300                    | 30                                  | 3                | 70      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-020-005-220 |        |        |         | 22      | 2      | 60                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-003-350                    | 35                                  | 3                | 75      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-020-005-250 |        |        |         | 25      | 2      | 60                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-003-400                    | 40                                  | 3                | 80      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-020-005-300 |        |        |         | 30      | 2      | 70                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-003-500                    | 50                                  | 3                | 100     | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-020-005-350 |        |        |         | 35      | 2      | 70                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-005-100                    | 10                                  | 3                | 50      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-025-001-100 |        | R0,1   | R0,1    | 10      | 2,5    | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-005-120                    | 12                                  | 3                | 50      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-025-001-120 |        |        |         | 12      | 2,5    | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-005-160                    | 16                                  | 3                | 55      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-025-001-160 |        |        |         | 16      | 2,5    | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-005-200                    | 20                                  | 3                | 60      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-025-001-200 | 20     |        |         | 2,5     | 50     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-005-250                    | 25                                  | 3                                   | 65               | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-025-001-250 | 25     |        |         | 2,5     | 60     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-005-300                    | 30                                  | 3                                   | 70               | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-025-001-300 | 30     |        |         | 2,5     | 70     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-005-350                    | 35                                  | 3                                   | 75               | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-025-002-100 | R0,2   |        |         | R0,2    | 10     | 2,5                                 | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-005-400                    | 40               | 3       | 80                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-025-002-120 |        |        |         |         | 12     | 2,5                                 | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-005-500                    | 50               | 3       | 100                                 | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-025-002-160 |        |        | 16      |         | 2,5    | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-010-100                    | 10                                  | 3                | 50      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-025-002-200 |        |        | 20      |         | 2,5    | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-010-120                    | 12                                  | 3                | 50      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-025-002-250 |        |        | 25      |         | 2,5    | 60                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-010-160                    | 16                                  | 3                | 55      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-025-002-300 |        |        | 30      |         | 2,5    | 70                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-010-200                    | 20                                  | 3                | 60      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-025-003-100 |        |        | R0,3    |         | R0,3   | 10                                  | 2,5                                 | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-010-250 | 25      | 3                                   | 65                                  | 6                                   | <input checked="" type="checkbox"/> |
| 4CRE-025-003-120 |        |        |         |         |        | 12                                  | 2,5                                 | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-010-300 | 30      | 3                                   | 70                                  | 6                                   | <input checked="" type="checkbox"/> |
| 4CRE-025-003-160 | 16     |        |         | 2,5     |        | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-010-350                    | 35                                  | 3                | 75      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-025-003-200 | 20     |        |         | 2,5     |        | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-010-400                    | 40                                  | 3                | 80      | 6                                   | <input checked="" type="checkbox"/> |                                     |                                     |
| 4CRE-025-003-250 | 25     | 2,5    |         | 60      |        | 4                                   | <input checked="" type="checkbox"/> | 4CRE-030-010-500                    | 50                                  | 3                                   | 100              | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-025-003-300 | 30     | 2,5    |         | 70      |        | 4                                   | <input checked="" type="checkbox"/> | 4CRE-040-001-050                    | 12                                  | 4                                   | 50               | 4       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-025-005-100 | R0,5   | R0,5   |         | 10      |        | 2,5                                 | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-040-001-070                    | 20               | 4       | 70                                  | 4                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-025-005-120 |        |        |         | 12      |        | 2,5                                 | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 4CRE-040-001-130                    | 13               | 4       | 55                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-025-005-160 |        |        | 16      | 2,5     | 50     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-040-001-160                    | 16                                  | 4                                   | 55               | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-025-005-200 |        |        | 20      | 2,5     | 50     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-040-001-200                    | 20                                  | 4                                   | 60               | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-025-005-250 |        |        | 25      | 2,5     | 60     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-040-001-250                    | 25                                  | 4                                   | 65               | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-025-005-300 |        |        | 30      | 2,5     | 70     | 4                                   | <input checked="" type="checkbox"/> | 4CRE-040-001-300                    | 30                                  | 4                                   | 70               | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |
| 4CRE-030-001-100 |        |        | 3       | R0,1    | 10     | 3                                   | 50                                  | 6                                   | <input checked="" type="checkbox"/> | 4CRE-040-001-350                    | 35               | 4       | 75                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-030-001-120 |        |        |         |         | 12     | 3                                   | 50                                  | 6                                   | <input checked="" type="checkbox"/> | 4CRE-040-001-400                    | 40               | 4       | 80                                  | 6                                   | <input checked="" type="checkbox"/> |                                     |
| 4CRE-030-001-160 | 16     | 3      |         |         | 55     | 6                                   | <input checked="" type="checkbox"/> | 4CRE-040-001-450                    | 45                                  | 4                                   | 90               | 6       | <input checked="" type="checkbox"/> |                                     |                                     |                                     |

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm)        | Standardní položka | Objednací číslo  | D (mm)           | R (mm)           | L2 (mm)          | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|------------------|--------|--------|---------|---------|--------|------------------|--------------------|------------------|------------------|------------------|------------------|---------|--------|-----------|--------------------|---|
| 4CRE-040-001-500 | 4      | R0,1   | 50      | 4       | 100    | 6                | ☑                  | 4CRE-050-002-500 | 5                | R0,2             | 50               | 5       | 100    | 6         | ☑                  |   |
| 4CRE-040-002-050 |        | R0,2   | 12      | 4       | 50     | 4                | ☑                  | 4CRE-050-003-160 |                  | R0,3             | 16               | 5       | 60     | 6         | ☑                  |   |
| 4CRE-040-002-070 |        |        | 20      | 4       | 70     | 4                | ☑                  | 4CRE-050-003-300 |                  |                  | 30               | 5       | 70     | 6         | ☑                  |   |
| 4CRE-040-002-130 |        |        | 13      | 4       | 55     | 6                | ☑                  | 4CRE-050-003-400 |                  |                  | 40               | 5       | 80     | 6         | ☑                  |   |
| 4CRE-040-002-160 |        |        | 16      | 4       | 55     | 6                | ☑                  | 4CRE-050-003-500 |                  |                  | 50               | 5       | 100    | 6         | ☑                  |   |
| 4CRE-040-002-200 |        |        | 20      | 4       | 60     | 6                | ☑                  | 4CRE-050-005-160 |                  |                  | R0,5             | 16      | 5      | 60        | 6                  | ☑ |
| 4CRE-040-002-250 |        | 25     | 4       | 65      | 6      | ☑                | 4CRE-050-005-300   | 30               |                  | 5                |                  | 70      | 6      | ☑         |                    |   |
| 4CRE-040-002-300 |        | 30     | 4       | 70      | 6      | ☑                | 4CRE-050-005-400   | 40               |                  | 5                |                  | 80      | 6      | ☑         |                    |   |
| 4CRE-040-002-350 |        | R0,2   | 35      | 4       | 75     | 6                | ☑                  | 4CRE-050-005-500 |                  | R0,5             | 50               | 5       | 100    | 6         | ☑                  |   |
| 4CRE-040-002-400 |        |        | 40      | 4       | 80     | 6                | ☑                  | 4CRE-050-010-160 |                  |                  | R1               | 16      | 5      | 60        | 6                  | ☑ |
| 4CRE-040-002-450 |        |        | 45      | 4       | 90     | 6                | ☑                  | 4CRE-050-010-300 |                  |                  |                  | 30      | 5      | 70        | 6                  | ☑ |
| 4CRE-040-002-500 |        |        | 50      | 4       | 100    | 6                | ☑                  | 4CRE-050-010-400 |                  | 40               |                  | 5       | 80     | 6         | ☑                  |   |
| 4CRE-040-003-050 |        |        | 12      | 4       | 50     | 4                | ☑                  | 4CRE-050-010-500 |                  | 50               | 5                | 100     | 6      | ☑         |                    |   |
| 4CRE-040-003-070 |        | 20     | 4       | 70      | 4      | ☑                | 4CRE-060-001-200   | R0,1             |                  | 20               | 7                | 60      | 6      | ☑         |                    |   |
| 4CRE-040-003-130 |        | 13     | 4       | 55      | 6      | ☑                | 4CRE-060-001-400   |                  |                  | 40               | 7                | 80      | 6      | ☑         |                    |   |
| 4CRE-040-003-160 |        | 16     | 4       | 55      | 6      | ☑                | 4CRE-060-001-500   |                  |                  | 50               | 7                | 100     | 6      | ☑         |                    |   |
| 4CRE-040-003-200 |        | R0,3   | 20      | 4       | 60     | 6                | ☑                  | 4CRE-060-002-200 |                  | R0,2             | 20               | 7       | 60     | 6         | ☑                  |   |
| 4CRE-040-003-250 |        |        | 25      | 4       | 65     | 6                | ☑                  | 4CRE-060-002-400 |                  |                  | 40               | 7       | 80     | 6         | ☑                  |   |
| 4CRE-040-003-300 |        |        | 30      | 4       | 70     | 6                | ☑                  | 4CRE-060-002-500 |                  |                  | 50               | 7       | 100    | 6         | ☑                  |   |
| 4CRE-040-003-350 |        |        | 35      | 4       | 75     | 6                | ☑                  | 4CRE-060-003-200 |                  | R0,3             | 20               | 7       | 60     | 6         | ☑                  |   |
| 4CRE-040-003-400 |        |        | 40      | 4       | 80     | 6                | ☑                  | 4CRE-060-003-400 |                  |                  | 40               | 7       | 80     | 6         | ☑                  |   |
| 4CRE-040-003-450 |        | 45     | 4       | 90      | 6      | ☑                | 4CRE-060-003-500   | 50               |                  |                  | 7                | 100     | 6      | ☑         |                    |   |
| 4CRE-040-003-500 |        | 50     | 4       | 100     | 6      | ☑                | 4CRE-060-005-200   | R0,5             |                  | 20               | 7                | 60      | 6      | ☑         |                    |   |
| 4CRE-040-005-050 |        | R0,5   | 12      | 4       | 50     | 4                | ☑                  |                  |                  | 4CRE-060-005-400 | 40               | 7       | 80     | 6         | ☑                  |   |
| 4CRE-040-005-070 |        |        | 20      | 4       | 70     | 4                | ☑                  |                  |                  | 4CRE-060-005-500 | 50               | 7       | 100    | 6         | ☑                  |   |
| 4CRE-040-005-130 |        |        | 13      | 4       | 55     | 6                | ☑                  | 4CRE-060-010-200 |                  | R1               | 20               | 7       | 60     | 6         | ☑                  |   |
| 4CRE-040-005-160 |        |        | 16      | 4       | 55     | 6                | ☑                  | 4CRE-060-010-400 |                  |                  | 40               | 7       | 80     | 6         | ☑                  |   |
| 4CRE-040-005-200 |        |        | 20      | 4       | 60     | 6                | ☑                  | 4CRE-060-010-500 |                  |                  | 50               | 7       | 100    | 6         | ☑                  |   |
| 4CRE-040-005-250 |        | 25     | 4       | 65      | 6      | ☑                | 4CRE-060-015-200   | R1,5             |                  | 20               | 7                | 60      | 6      | ☑         |                    |   |
| 4CRE-040-005-300 |        | 30     | 4       | 70      | 6      | ☑                | 4CRE-060-015-400   |                  |                  | 40               | 7                | 80      | 6      | ☑         |                    |   |
| 4CRE-040-005-350 |        | 35     | 4       | 75      | 6      | ☑                | 4CRE-060-015-500   |                  |                  | 50               | 7                | 100     | 6      | ☑         |                    |   |
| 4CRE-040-005-400 |        | R0,5   | 40      | 4       | 80     | 6                | ☑                  | 4CRE-080-002-220 |                  | R0,2             | 22               | 9       | 65     | 8         | ☑                  |   |
| 4CRE-040-005-450 |        |        | 45      | 4       | 90     | 6                | ☑                  | 4CRE-080-003-220 |                  | R0,3             | 22               | 9       | 65     | 8         | ☑                  |   |
| 4CRE-040-005-500 |        |        | 50      | 4       | 100    | 6                | ☑                  | 4CRE-080-005-220 |                  | R0,5             | 22               | 9       | 65     | 8         | ☑                  |   |
| 4CRE-040-010-050 |        |        | R1      | 12      | 4      | 50               | 4                  | ☑                |                  |                  | 4CRE-080-005-400 | 40      | 9      | 100       | 8                  | ☑ |
| 4CRE-040-010-070 |        |        |         | 20      | 4      | 70               | 4                  | ☑                |                  |                  | 4CRE-080-010-220 | R1      | 22     | 9         | 65                 | 8 |
| 4CRE-040-010-130 |        | 13     |         | 4       | 55     | 6                | ☑                  | 4CRE-080-010-400 |                  | 40               | 9                |         | 100    | 8         | ☑                  |   |
| 4CRE-040-010-160 |        | 16     |         | 4       | 55     | 6                | ☑                  | 4CRE-080-015-220 |                  | R1,5             | 22               |         | 9      | 65        | 8                  | ☑ |
| 4CRE-040-010-200 |        | 20     |         | 4       | 60     | 6                | ☑                  | 4CRE-080-015400  |                  |                  | 40               | 9       | 100    | 8         | ☑                  |   |
| 4CRE-040-010-250 |        | R1     | 25      | 4       | 65     | 6                | ☑                  | 4CRE-080-020-220 |                  | R2               | 22               | 9       | 65     | 8         | ☑                  |   |
| 4CRE-040-010-300 | 30     |        | 4       | 70      | 6      | ☑                | 4CRE-100-002-240   | R0,2             | 24               | 11               | 70               | 10      | ☑      |           |                    |   |
| 4CRE-040-010-350 | 35     |        | 4       | 75      | 6      | ☑                | 4CRE-100-003-240   |                  | R0,3             | 24               | 11               | 70      | 10     | ☑         |                    |   |
| 4CRE-040-010-400 | 40     |        | 4       | 80      | 6      | ☑                | 4CRE-100-005-240   |                  | R0,5             | 24               | 11               | 70      | 10     | ☑         |                    |   |
| 4CRE-040-010-450 | 45     |        | 4       | 90      | 6      | ☑                | 4CRE-100-005-400   | 40               |                  | 11               | 100              | 10      | ☑      |           |                    |   |
| 4CRE-040-010-500 | 50     | 4      | 100     | 6       | ☑      | 4CRE-100-010-240 | R1                 | 24               |                  | 11               | 70               | 10      | ☑      |           |                    |   |
| 4CRE-050-001-160 | 5      | R0,1   | 16      | 5       | 60     | 6                |                    | ☑                | 4CRE-100-010-400 | 40               | 11               | 100     | 10     | ☑         |                    |   |
| 4CRE-050-001-300 |        |        | 30      | 5       | 70     | 6                |                    | ☑                | 4CRE-100-015-240 | R1,5             | 24               | 11      | 70     | 10        | ☑                  |   |
| 4CRE-050-001-400 |        |        | 40      | 5       | 80     | 6                | ☑                  | 4CRE-100-015-400 | 40               |                  | 11               | 100     | 10     | ☑         |                    |   |
| 4CRE-050-001-500 |        |        | 50      | 5       | 100    | 6                | ☑                  | 4CRE-100-020-240 | R2               | 24               | 11               | 70      | 10     | ☑         |                    |   |
| 4CRE-050-002-160 |        |        | R0,2    | 16      | 5      | 60               | 6                  | ☑                | 4CRE-100-025-240 | R2,5             | 24               | 11      | 70     | 10        | ☑                  |   |
| 4CRE-050-002-300 |        | 30     |         | 5       | 70     | 6                | ☑                  | 4CRE-120-003-260 | R0,3             | 26               | 13               | 80      | 12     | ☑         |                    |   |
| 4CRE-050-002-400 |        | 40     |         | 5       | 80     | 6                | ☑                  | 4CRE-120-005-260 | R0,5             | 26               | 13               | 80      | 12     | ☑         |                    |   |

# 4CRE 4-břité TOROIDNÍ frézy pro žebrování pro kalené oceli do HRC 62

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|------------------|--------|--------|---------|---------|--------|-----------|-------------------------------------|
| 4CRE-120-005-400 | 12     | R0,5   | 40      | 13      | 110    | 12        | <input checked="" type="checkbox"/> |
| 4CRE-120-010-260 |        | R1     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4CRE-120-010-400 |        |        | 40      | 13      | 110    | 12        | <input checked="" type="checkbox"/> |
| 4CRE-120-015-260 |        | R1,5   | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4CRE-120-015-400 |        |        | 40      | 13      | 110    | 12        | <input checked="" type="checkbox"/> |
| 4CRE-120-020-260 |        | R2     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4CRE-120-030-260 |        | R3     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |

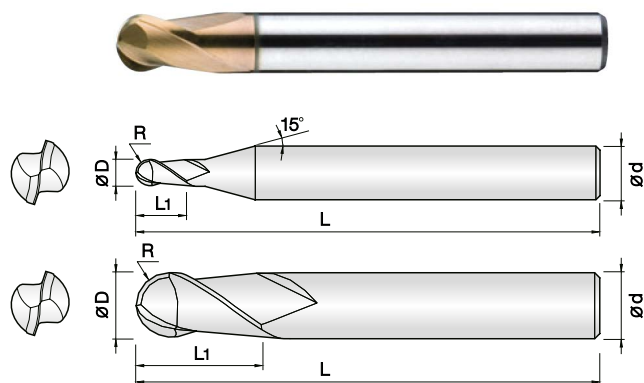
J

SH

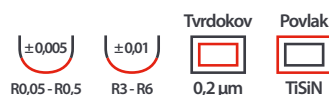
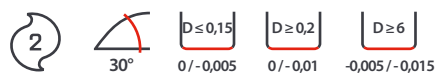
G

SNS

# 2HSB 2-břité KULOVÉ frézy krátké pro kalené oceli do HRC 62



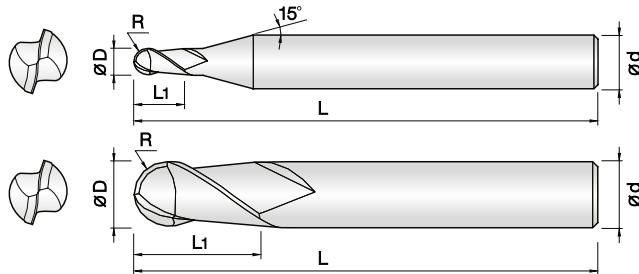
- ▶ Určeno pro kalené oceli (50 - 62 HRC)
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Vysoká tuhost
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 µm tvrdokovu



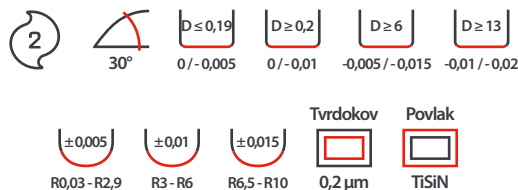
| Objednací číslo    | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|--------|---------|--------|-----------|--------------------|
| 2HSB-001-001-S04   | 0,1    | R0,05  | 0,1     | 38     | 4         | ☑                  |
| 2HSB-001-0015-S04  |        |        | 0,15    | 38     | 4         | ☑                  |
| 2HSB-0015-0015-S04 | 0,15   | R0,075 | 0,15    | 38     | 4         | ☑                  |
| 2HSB-0015-002-S04  |        |        | 0,2     | 38     | 4         | ☑                  |
| 2HSB-002-002-S04   | 0,2    | R0,1   | 0,2     | 38     | 4         | ☑                  |
| 2HSB-002-003-S04   |        |        | 0,3     | 38     | 4         | ☑                  |
| 2HSB-003-003-S04   | 0,3    | 0,15R  | 0,3     | 38     | 4         | ☑                  |
| 2HSB-003-0045-S04  |        |        | 0,45    | 38     | 4         | ☑                  |
| 2HSB-004-004-S04   | 0,4    | R0,2   | 0,4     | 38     | 4         | ☑                  |
| 2HSB-004-006-S04   |        |        | 0,6     | 38     | 4         | ☑                  |
| 2HSB-005-005-S04   | 0,5    | R0,25  | 0,5     | 38     | 4         | ☑                  |
| 2HSB-005-0075-S04  |        |        | 0,75    | 38     | 4         | ☑                  |
| 2HSB-006-006-S04   | 0,6    | R0,3   | 0,6     | 38     | 4         | ☑                  |
| 2HSB-006-009-S04   |        |        | 0,9     | 38     | 4         | ☑                  |
| 2HSB-007-007-S04   | 0,7    | R0,35  | 0,7     | 38     | 4         | ☑                  |
| 2HSB-007-010-S04   |        |        | 1       | 38     | 4         | ☑                  |
| 2HSB-008-008-S04   | 0,8    | R0,4   | 0,8     | 38     | 4         | ☑                  |
| 2HSB-008-012-S04   |        |        | 1,2     | 38     | 4         | ☑                  |
| 2HSB-009-009-S04   | 0,9    | R0,45  | 0,9     | 38     | 4         | ☑                  |
| 2HSB-009-013-S04   |        |        | 1,3     | 38     | 4         | ☑                  |
| 2HSB-010-010-S04   | 1      | R0,5   | 1       | 40     | 4         | ☑                  |
| 2HSB-010-010-S06   |        |        | 1       | 40     | 6         | ☑                  |
| 2HSB-010-015-S04   |        |        | 1,5     | 40     | 4         | ☑                  |
| 2HSB-010-015-S06   |        |        | 1,5     | 40     | 6         | ☑                  |
| 2HSB-015-015-S04   | 1,5    | R0,75  | 1,5     | 40     | 4         | ☑                  |
| 2HSB-015-015-S06   |        |        | 1,5     | 40     | 6         | ☑                  |
| 2HSB-015-023-S04   |        |        | 2,3     | 40     | 4         | ☑                  |
| 2HSB-015-023-S06   |        |        | 2,3     | 40     | 6         | ☑                  |
| 2HSB-020-020-S04   | 2      | R1     | 2       | 45     | 4         | ☑                  |
| 2HSB-020-020-S06   |        |        | 2       | 45     | 6         | ☑                  |
| 2HSB-020-030-S04   |        |        | 3       | 45     | 4         | ☑                  |
| 2HSB-020-030-S06   |        |        | 3       | 45     | 6         | ☑                  |
| 2HSB-030-030-S04   | 3      | R1,5   | 3       | 45     | 4         | ☑                  |
| 2HSB-030-030-S06   |        |        | 3       | 45     | 6         | ☑                  |
| 2HSB-030-045-S04   |        |        | 4,5     | 45     | 4         | ☑                  |
| 2HSB-030-045-S06   |        |        | 4,5     | 45     | 6         | ☑                  |
| 2HSB-040-040-S04   | 4      | 2R     | 4       | 45     | 4         | ☑                  |
| 2HSB-040-040-S06   |        |        | 4       | 45     | 6         | ☑                  |

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 2HSB-040-060-S04 | 4      | 2R     | 6       | 45     | 4         | ☑                  |
| 2HSB-040-060-S06 |        |        | 6       | 45     | 6         | ☑                  |
| 2HSB-050-050-S06 | 5      | R2,5   | 5       | 50     | 6         | ☑                  |
| 2HSB-050-075-S06 |        |        | 7,5     | 50     | 6         | ☑                  |
| 2HSB-060-060-050 | 6      | R3     | 6       | 50     | 6         | ☑                  |
| 2HSB-060-060-060 |        |        | 6       | 60     | 6         | ☑                  |
| 2HSB-080-080-050 | 8      | R4     | 8       | 50     | 8         | ☑                  |
| 2HSB-080-080-060 |        |        | 8       | 60     | 8         | ☑                  |
| 2HSB-100-100-060 | 10     | R5     | 10      | 60     | 10        | ☑                  |
| 2HSB-100-100-070 |        |        | 10      | 70     | 10        | ☑                  |
| 2HSB-120-120-060 | 12     | R6     | 12      | 60     | 12        | ☑                  |
| 2HSB-120-120-070 |        |        | 12      | 70     | 12        | ☑                  |

# 2HCB 2-břité KULOVÉ frézy pro kalené oceli do HRC 62



- Určeno pro kalené oceli (50 - 62 HRC)
- Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- Velmi přesné tolerance řezných hran
- Vysoká kvalita obrobeného povrchu
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



| Objednací číslo    | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|--------|---------|--------|-----------|--------------------|
| 2HCB-0006-001-S04  | 0,06   | R0,03  | 0,1     | 40     | 4         | ☑                  |
| 2HCB-0007-0012-S04 | 0,07   | R0,035 | 0,12    | 40     | 4         | ☑                  |
| 2HCB-0008-0015-S04 | 0,08   | R0,04  | 0,15    | 40     | 4         | ☑                  |
| 2HCB-0009-0017-S04 | 0,09   | R0,045 | 0,17    | 40     | 4         | ☑                  |
| 2HCB-001-002-S04   | 0,1    | R0,05  | 0,2     | 40     | 4         | ☑                  |
| 2HCB-0015-003-S04  | 0,15   | R0,075 | 0,3     | 40     | 4         | ☑                  |
| 2HCB-002-004-S04   | 0,2    | R0,1   | 0,4     | 40     | 4         | ☑                  |
| 2HCB-003-006-S04   | 0,3    | R0,15  | 0,6     | 40     | 4         | ☑                  |
| 2HCB-004-008-S04   | 0,4    | R0,2   | 0,8     | 40     | 4         | ☑                  |
| 2HCB-005-010-S04   | 0,5    | R0,25  | 1       | 45     | 4         | ☑                  |
| 2HCB-006-012-S04   | 0,6    | R0,3   | 1,2     | 45     | 4         | ☑                  |
| 2HCB-007-015-S04   | 0,7    | R0,35  | 1,5     | 45     | 4         | ☑                  |
| 2HCB-008-020-S04   | 0,8    | R0,4   | 2       | 45     | 4         | ☑                  |
| 2HCB-009-020-S04   | 0,9    | R0,45  | 2       | 45     | 4         | ☑                  |
| 2HCB-010-025-S03   | 1      | R0,5   | 2,5     | 50     | 3         | ☑                  |
| 2HCB-010-025-S04   |        |        | 2,5     | 50     | 4         | ☑                  |
| 2HCB-010-025-S06   |        |        | 2,5     | 50     | 6         | ☑                  |
| 2HCB-010-025-070   |        |        | 2,5     | 70     | 6         | ☑                  |
| 2HCB-010-025-100   |        |        | 2,5     | 100    | 6         | ☑                  |
| 2HCB-011-027-S04   | 1,1    | R0,55  | 2,7     | 50     | 4         | ☑                  |
| 2HCB-012-030-S03   | 1,2    | R0,6   | 3       | 50     | 3         | ☑                  |
| 2HCB-012-030-S04   |        |        | 3       | 50     | 4         | ☑                  |
| 2HCB-013-032-S04   | 1,3    | R0,65  | 3,2     | 50     | 4         | ☑                  |
| 2HCB-014-035-S04   | 1,4    | R0,7   | 3,5     | 50     | 4         | ☑                  |
| 2HCB-015-040-S03   | 1,5    | R0,75  | 4       | 50     | 3         | ☑                  |
| 2HCB-015-040-S04   |        |        | 4       | 50     | 4         | ☑                  |
| 2HCB-015-040-S06   |        |        | 4       | 50     | 6         | ☑                  |
| 2HCB-015-040-070   |        |        | 4       | 70     | 6         | ☑                  |
| 2HCB-015-040-100   |        |        | 4       | 100    | 6         | ☑                  |
| 2HCB-016-040-S04   | 1,6    | R0,8   | 4       | 50     | 4         | ☑                  |
| 2HCB-017-042-S04   | 1,7    | R0,85  | 4,2     | 50     | 4         | ☑                  |
| 2HCB-018-045-S04   | 1,8    | R0,9   | 4,5     | 50     | 4         | ☑                  |
| 2HCB-019-047-S04   | 1,9    | R0,95  | 4,7     | 50     | 4         | ☑                  |
| 2HCB-020-050-S03   | 2      | R1     | 5       | 50     | 3         | ☑                  |
| 2HCB-020-050-S04   |        |        | 5       | 50     | 4         | ☑                  |
| 2HCB-020-050-S06   |        |        | 5       | 50     | 6         | ☑                  |
| 2HCB-020-050-075   |        |        | 5       | 75     | 6         | ☑                  |
| 2HCB-020-050-100   |        |        | 5       | 100    | 6         | ☑                  |

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 2HCB-022-055-S04 | 2,2    | R1,1   | 5,5     | 50     | 4         | ☑                  |
| 2HCB-024-060-S04 | 2,4    | R1,2   | 6       | 50     | 4         | ☑                  |
| 2HCB-025-060-S03 | 2,5    | R1,25  | 6       | 50     | 3         | ☑                  |
| 2HCB-025-060-S04 |        |        | 6       | 50     | 4         | ☑                  |
| 2HCB-025-060-S06 |        |        | 6       | 75     | 6         | ☑                  |
| 2HCB-025-060-100 |        |        | 6       | 100    | 6         | ☑                  |
| 2HCB-026-060-S04 | 2,6    | R1,3   | 6       | 50     | 4         | ☑                  |
| 2HCB-028-070-S04 | 2,8    | R1,4   | 7       | 50     | 4         | ☑                  |
| 2HCB-030-080-S03 | 3      | R1,5   | 8       | 60     | 3         | ☑                  |
| 2HCB-030-080-S04 |        |        | 8       | 50     | 4         | ☑                  |
| 2HCB-030-080-S06 |        |        | 8       | 60     | 6         | ☑                  |
| 2HCB-030-080-080 |        |        | 8       | 80     | 6         | ☑                  |
| 2HCB-030-080-100 |        |        | 8       | 100    | 6         | ☑                  |
| 2HCB-032-080-S04 | 3,2    | R1,6   | 8       | 60     | 4         | ☑                  |
| 2HCB-034-080-S04 | 3,4    | R1,7   | 8       | 60     | 4         | ☑                  |
| 2HCB-035-080-S06 | 3,5    | R1,75  | 8       | 60     | 6         | ☑                  |
| 2HCB-036-090-S04 | 3,6    | R1,8   | 9       | 60     | 4         | ☑                  |
| 2HCB-038-090-S04 | 3,8    | R1,9   | 9       | 60     | 4         | ☑                  |
| 2HCB-040-080-060 | 4      | R2     | 8       | 60     | 4         | ☑                  |
| 2HCB-040-080-080 |        |        | 8       | 80     | 4         | ☑                  |
| 2HCB-040-080-S06 |        |        | 8       | 70     | 6         | ☑                  |
| 2HCB-040-080-090 |        |        | 8       | 90     | 6         | ☑                  |
| 2HCB-040-080-120 |        |        | 8       | 120    | 6         | ☑                  |
| 2HCB-042-100-S06 | 4,2    | R2,1   | 10      | 70     | 6         | ☑                  |
| 2HCB-044-100-S06 | 4,4    | R2,2   | 10      | 70     | 6         | ☑                  |
| 2HCB-045-080-S06 | 4,5    | R2,25  | 8       | 70     | 6         | ☑                  |
| 2HCB-046-100-S06 | 4,6    | R2,3   | 10      | 70     | 6         | ☑                  |
| 2HCB-048-110-S06 | 4,8    | R2,4   | 11      | 70     | 6         | ☑                  |
| 2HCB-050-080-S05 | 5      | R2,5   | 8       | 80     | 5         | ☑                  |
| 2HCB-050-100-S06 |        |        | 10      | 75     | 6         | ☑                  |
| 2HCB-052-120-S06 | 5,2    | R2,6   | 12      | 75     | 6         | ☑                  |
| 2HCB-054-120-S06 | 5,4    | R2,7   | 12      | 75     | 6         | ☑                  |
| 2HCB-055-100-S06 | 5,5    | R2,75  | 10      | 75     | 6         | ☑                  |
| 2HCB-056-120-S06 | 5,6    | R2,8   | 12      | 75     | 6         | ☑                  |
| 2HCB-058-120-S06 | 5,8    | R2,9   | 12      | 75     | 6         | ☑                  |
| 2HCB-060-100-060 | 6      | R3     | 10      | 60     | 6         | ☑                  |
| 2HCB-060-120-080 |        |        | 12      | 80     | 6         | ☑                  |
| 2HCB-060-120-100 |        |        | 12      | 100    | 6         | ☑                  |



# 2HCB

## 2-břité KULOVÉ frézy pro kalené oceli do HRC 62

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|------------------|--------|--------|---------|--------|-----------|-------------------------------------|
| 2HCB-060-120-120 | 6      | R3     | 12      | 120    | 6         | <input checked="" type="checkbox"/> |
| 2HCB-060-120-150 |        |        | 12      | 150    | 6         | <input checked="" type="checkbox"/> |
| 2HCB-070-140-508 | 7      | R3,5   | 14      | 80     | 8         | <input checked="" type="checkbox"/> |
| 2HCB-080-140-090 | 8      | R4     | 14      | 90     | 8         | <input checked="" type="checkbox"/> |
| 2HCB-080-140-110 |        |        | 14      | 110    | 8         | <input checked="" type="checkbox"/> |
| 2HCB-080-140-150 |        |        | 14      | 150    | 8         | <input checked="" type="checkbox"/> |
| 2HCB-090-160-510 | 9      | R4,5   | 16      | 100    | 10        | <input checked="" type="checkbox"/> |
| 2HCB-100-180-100 | 10     | R5     | 18      | 100    | 10        | <input checked="" type="checkbox"/> |
| 2HCB-100-180-120 |        |        | 18      | 120    | 10        | <input checked="" type="checkbox"/> |
| 2HCB-100-180-150 |        |        | 18      | 150    | 10        | <input checked="" type="checkbox"/> |
| 2HCB-100-180-180 |        |        | 18      | 180    | 10        | <input checked="" type="checkbox"/> |
| 2HCB-110-200-512 | 11     | R5,5   | 20      | 110    | 12        | <input checked="" type="checkbox"/> |
| 2HCB-120-220-110 | 12     | R6     | 22      | 110    | 12        | <input checked="" type="checkbox"/> |
| 2HCB-120-220-130 |        |        | 22      | 130    | 12        | <input checked="" type="checkbox"/> |
| 2HCB-120-220-150 |        |        | 22      | 150    | 12        | <input checked="" type="checkbox"/> |
| 2HCB-120-220-200 |        |        | 22      | 200    | 12        | <input checked="" type="checkbox"/> |
| 2HCB-130-240-514 | 13     | R6,5   | 24      | 110    | 14        | <input checked="" type="checkbox"/> |
| 2HCB-140-240-514 | 14     | R7     | 24      | 110    | 14        | <input checked="" type="checkbox"/> |
| 2HCB-160-300-130 | 16     | R8     | 30      | 130    | 16        | <input checked="" type="checkbox"/> |
| 2HCB-160-300-160 |        |        | 30      | 160    | 16        | <input checked="" type="checkbox"/> |
| 2HCB-160-300-200 |        |        | 30      | 200    | 16        | <input checked="" type="checkbox"/> |
| 2HCB-200-380-160 | 20     | R10    | 38      | 160    | 20        | <input checked="" type="checkbox"/> |
| 2HCB-200-380-200 |        |        | 38      | 200    | 20        | <input checked="" type="checkbox"/> |

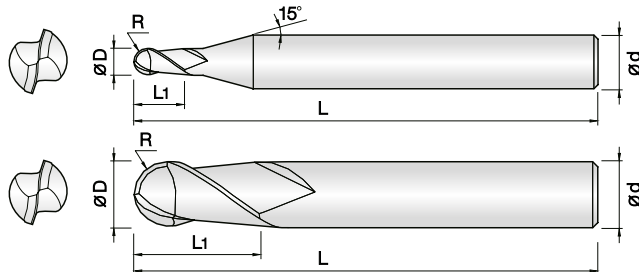
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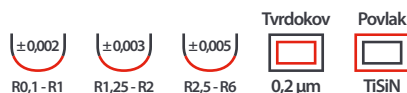
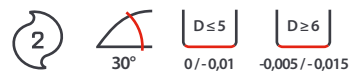
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# 2PHCB 2-břité KULOVÉ frézy ultrapřesné ( $\pm 2 \mu\text{m}$ ) pro kalené oceli do HRC 62

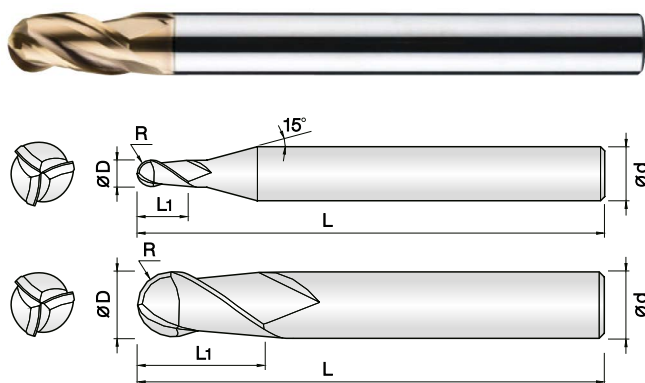


- ▶ Určeno pro kalené oceli (50 - 62 HRC)
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Vysoká kvalita obrobeného povrchu
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2  $\mu\text{m}$  tvrdkovu

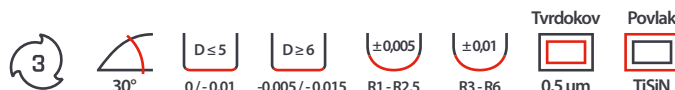


| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 2PHCB-002-004-S04 | 0,2    | R0,1   | 0,4     | 40     | 4         | ☑                  |
| 2PHCB-003-006-S04 | 0,3    | R0,15  | 0,6     | 40     | 4         | ☑                  |
| 2PHCB-004-008-S04 | 0,4    | R0,2   | 0,8     | 40     | 4         | ☑                  |
| 2PHCB-005-010-S04 | 0,5    | R0,25  | 1       | 45     | 4         | ☑                  |
| 2PHCB-006-012-S04 | 0,6    | R0,3   | 1,2     | 45     | 4         | ☑                  |
| 2PHCB-007-015-S04 | 0,7    | R0,35  | 1,5     | 45     | 4         | ☑                  |
| 2PHCB-008-020-S04 | 0,8    | R0,4   | 2       | 45     | 4         | ☑                  |
| 2PHCB-009-020-S04 | 0,9    | R0,45  | 2       | 45     | 4         | ☑                  |
| 2PHCB-010-025-S04 | 1      | R0,5   | 2,5     | 50     | 4         | ☑                  |
| 2PHCB-010-025-S06 |        |        | 2,5     | 50     | 6         | ☑                  |
| 2PHCB-012-030-S04 | 1,2    | R0,6   | 3       | 50     | 4         | ☑                  |
| 2PHCB-015-040-S04 | 1,5    | R0,75  | 4       | 50     | 4         | ☑                  |
| 2PHCB-015-040-S06 |        |        | 4       | 50     | 6         | ☑                  |
| 2PHCB-020-050-S04 | 2      | R1     | 5       | 50     | 4         | ☑                  |
| 2PHCB-020-050-S06 |        |        | 5       | 50     | 6         | ☑                  |
| 2PHCB-025-060-S04 | 2,5    | R1,25  | 6       | 50     | 4         | ☑                  |
| 2PHCB-030-080-S04 | 3      | R1,5   | 8       | 50     | 4         | ☑                  |
| 2PHCB-030-080-S06 |        |        | 8       | 60     | 6         | ☑                  |
| 2PHCB-035-080-S06 | 3,5    | R1,75  | 8       | 60     | 6         | ☑                  |
| 2PHCB-040-080-S04 | 4      | R2     | 8       | 60     | 4         | ☑                  |
| 2PHCB-040-080-S06 |        |        | 8       | 70     | 6         | ☑                  |
| 2PHCB-045-080-S06 | 4,5    | R2,25  | 8       | 70     | 6         | ☑                  |
| 2PHCB-050-100-S06 | 5      | R2,5   | 10      | 75     | 6         | ☑                  |
| 2PHCB-055-100-S06 | 5,5    | R2,75  | 10      | 75     | 6         | ☑                  |
| 2PHCB-060-120-080 | 6      | R3     | 12      | 80     | 6         | ☑                  |
| 2PHCB-070-140-S08 | 7      | R3,5   | 14      | 80     | 8         | ☑                  |
| 2PHCB-080-140-090 | 8      | R4     | 14      | 90     | 8         | ☑                  |
| 2PHCB-100-180-100 | 10     | R5     | 18      | 100    | 10        | ☑                  |
| 2PHCB-120-220-110 | 12     | R6     | 22      | 110    | 12        | ☑                  |

## 3HCB 3-břité KULOVÉ frézy pro kalené oceli do HRC 62



- Určeno pro kalené oceli (50 - 62 HRC)
- Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- Velmi přesné tolerance řezných hran
- Vyšší posuvy díky 3 řezným hranám
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu

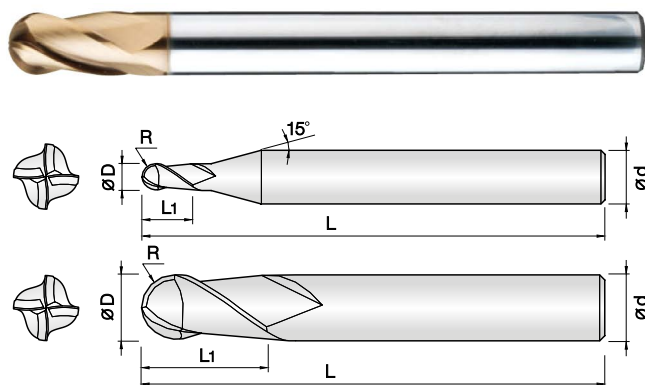


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| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 3HCB-010-025-S04 | 1      | R0,5   | 2,5     | 50     | 4         | ☑                  |
| 3HCB-015-040-S04 | 1,5    | R0,75  | 4       | 50     | 4         | ☑                  |
| 3HCB-020-050-S06 | 2      | R1     | 5       | 50     | 6         | ☑                  |
| 3HCB-030-080-S06 | 3      | R1,5   | 8       | 65     | 6         | ☑                  |
| 3HCB-040-080-S04 | 4      | R2     | 8       | 60     | 4         | ☑                  |
| 3HCB-040-080-S06 |        | R2     | 8       | 70     | 6         | ☑                  |

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 3HCB-050-100-S06 | 5      | R2,5   | 10      | 75     | 6         | ☑                  |
| 3HCB-060-120-S06 | 6      | R3     | 12      | 80     | 6         | ☑                  |
| 3HCB-080-140-S08 | 8      | R4     | 14      | 90     | 8         | ☑                  |
| 3HCB-100-180-S10 | 10     | R5     | 18      | 100    | 10        | ☑                  |
| 3HCB-120-220-S12 | 12     | R6     | 22      | 110    | 12        | ☑                  |

## 4HCB 4-břité KULOVÉ frézy pro kalené oceli do HRC 62



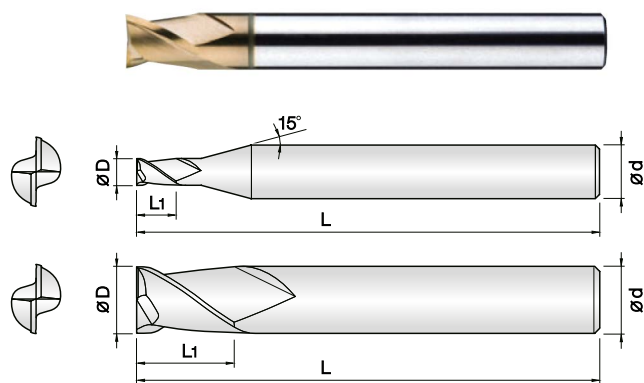
- Určeno pro kalené oceli (50 - 62 HRC)
- Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- Velmi přesné tolerance řezných hran
- Vyšší posuvy díky 4 řezným hranám
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



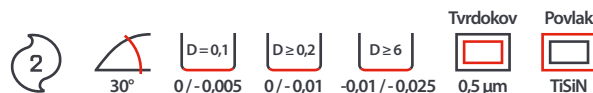
| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 4HCB-010-025-S06 | 1      | R0,5   | 2,5     | 50     | 6         | ☑                  |
| 4HCB-015-040-S06 | 1,5    | R0,75  | 4       | 50     | 6         | ☑                  |
| 4HCB-020-050-S06 | 2      | R1     | 5       | 50     | 6         | ☑                  |
| 4HCB-030-080-S06 | 3      | R1,5   | 8       | 60     | 6         | ☑                  |
| 4HCB-040-080-S04 | 4      | R2     | 8       | 60     | 4         | ☑                  |
| 4HCB-040-080-S06 |        |        | 8       | 70     | 6         | ☑                  |
| 4HCB-050-100-S06 | 5      | R2,5   | 10      | 80     | 6         | ☑                  |
| 4HCB-060-120-S06 | 6      | R3     | 12      | 90     | 6         | ☑                  |
| 4HCB-080-140-S08 | 8      | R4     | 14      | 100    | 8         | ☑                  |

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 4HCB-100-180-S10 | 10     | R5     | 18      | 100    | 10        | ☑                  |
| 4HCB-120-220-S12 | 12     | R6     | 22      | 110    | 12        | ☑                  |
| 4HCB-160-300-S16 | 16     | R8     | 30      | 130    | 16        | ☑                  |
| 4HCB-200-400-S20 | 20     | R10    | 40      | 160    | 20        | ☑                  |

# 2HSE 2-břité OSTRÉ frézy krátké pro kalené oceli do HRC 60

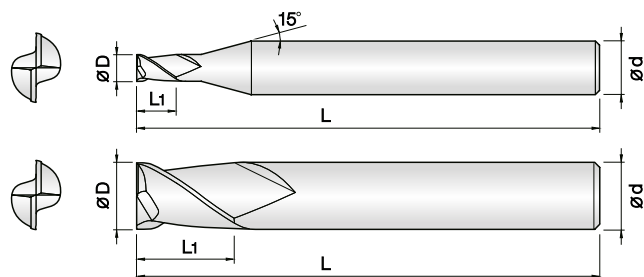


- ▶ Určeno pro kalené oceli (50 - 60 HRC)
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Minimalizace vyštipování díky zesílení řezné hrany
- ▶ Vysoká tuhost
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu

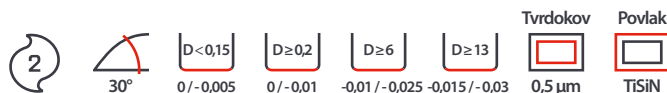


| Objednací číslo  | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|--------|-----------|--------------------|
| 2HSE-001-001-S04 | 0,1    | 0,1     | 38     | 4         | ☑                  |
| 2HSE-002-002-S04 | 0,2    | 0,2     | 38     | 4         | ☑                  |
| 2HSE-003-003-S04 | 0,3    | 0,3     | 38     | 4         | ☑                  |
| 2HSE-004-004-S04 | 0,4    | 0,4     | 38     | 4         | ☑                  |
| 2HSE-005-005-S04 | 0,5    | 0,5     | 38     | 4         | ☑                  |
| 2HSE-006-006-S04 | 0,6    | 0,6     | 38     | 4         | ☑                  |
| 2HSE-007-007-S04 | 0,7    | 0,7     | 38     | 4         | ☑                  |
| 2HSE-008-008-S04 | 0,8    | 0,8     | 38     | 4         | ☑                  |
| 2HSE-009-009-S04 | 0,9    | 0,9     | 38     | 4         | ☑                  |
| 2HSE-010-010-S04 | 1      | 1       | 40     | 4         | ☑                  |
| 2HSE-012-012-S04 | 1,2    | 1,2     | 40     | 4         | ☑                  |
| 2HSE-015-015-S04 | 1,5    | 1,5     | 40     | 4         | ☑                  |
| 2HSE-020-020-S04 | 2      | 2       | 40     | 4         | ☑                  |
| 2HSE-030-030-S04 | 3      | 3       | 40     | 4         | ☑                  |
| 2HSE-040-040-S04 | 4      | 4       | 40     | 4         | ☑                  |
| 2HSE-050-050-S06 | 5      | 5       | 45     | 6         | ☑                  |
| 2HSE-060-060-S06 | 6      | 6       | 45     | 6         | ☑                  |
| 2HSE-080-080-S08 | 8      | 8       | 50     | 8         | ☑                  |
| 2HSE-100-100-S10 | 10     | 10      | 60     | 10        | ☑                  |
| 2HSE-120-120-S12 | 12     | 12      | 65     | 12        | ☑                  |

# 2HCE 2-břité OSTRÉ frézy pro kalené oceli do HRC 60



- ▶ Určeno pro kalené oceli (50 - 60 HRC)
- ▶ Vysoká odolnost proti opotřebování díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Minimalizace vyštipování díky zesílení řezné hrany
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



| Objednací číslo    | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|---------|--------|-----------|--------------------|
| 2HCE-0005-0008-S04 | 0,05   | 0,08    | 38     | 4         | ☑                  |
| 2HCE-0006-001-S04  | 0,06   | 0,1     | 38     | 4         | ☑                  |
| 2HCE-0007-0012-S04 | 0,07   | 0,12    | 38     | 4         | ☑                  |
| 2HCE-0008-0015-S04 | 0,08   | 0,15    | 38     | 4         | ☑                  |
| 2HCE-0009-0017-S04 | 0,09   | 0,17    | 38     | 4         | ☑                  |
| 2HCE-001-002-S04   | 0,1    | 0,2     | 38     | 4         | ☑                  |
| 2HCE-0015-003-S04  | 0,15   | 0,3     | 38     | 4         | ☑                  |
| 2HCE-002-004-S04   | 0,2    | 0,4     | 38     | 4         | ☑                  |
| 2HCE-0025-005-S04  | 0,25   | 0,5     | 38     | 4         | ☑                  |
| 2HCE-003-006-S04   | 0,3    | 0,6     | 38     | 4         | ☑                  |
| 2HCE-0035-007-S04  | 0,35   | 0,7     | 38     | 4         | ☑                  |
| 2HCE-004-008-S04   | 0,4    | 0,8     | 38     | 4         | ☑                  |
| 2HCE-0045-009-S04  | 0,45   | 0,9     | 38     | 4         | ☑                  |
| 2HCE-005-010-S03   | 0,5    | 1       | 40     | 3         | ☑                  |
| 2HCE-005-010-S04   |        | 1       | 38     | 4         | ☑                  |
| 2HCE-0055-011-S04  | 0,55   | 1,1     | 38     | 4         | ☑                  |
| 2HCE-006-012-S03   | 0,6    | 1,2     | 40     | 3         | ☑                  |
| 2HCE-006-012-S04   |        | 1,2     | 38     | 4         | ☑                  |
| 2HCE-0065-013-S04  | 0,65   | 1,3     | 38     | 4         | ☑                  |
| 2HCE-007-014-S04   | 0,7    | 1,4     | 38     | 4         | ☑                  |
| 2HCE-0075-015-S04  | 0,75   | 1,5     | 38     | 4         | ☑                  |
| 2HCE-008-016-S03   | 0,8    | 1,6     | 40     | 3         | ☑                  |
| 2HCE-008-016-S04   |        | 1,6     | 38     | 4         | ☑                  |
| 2HCE-0085-017-S04  | 0,85   | 1,7     | 38     | 4         | ☑                  |
| 2HCE-009-020-S04   | 0,9    | 2       | 38     | 4         | ☑                  |
| 2HCE-0095-020-S04  | 0,95   | 2       | 38     | 4         | ☑                  |
| 2HCE-010-025-S03   | 1      | 2,5     | 40     | 3         | ☑                  |
| 2HCE-010-025-S04   |        | 2,5     | 40     | 4         | ☑                  |
| 2HCE-010-025-S06   |        | 2,5     | 40     | 6         | ☑                  |
| 2HCE-010-025-060   |        | 2,5     | 60     | 6         | ☑                  |
| 2HCE-0105-025-S04  | 1,05   | 2,5     | 40     | 4         | ☑                  |
| 2HCE-011-027-S04   | 1,1    | 2,7     | 40     | 4         | ☑                  |
| 2HCE-0115-025-S04  | 1,15   | 2,5     | 40     | 4         | ☑                  |
| 2HCE-012-030-S03   | 1,2    | 3       | 40     | 3         | ☑                  |
| 2HCE-012-030-S04   |        | 3       | 40     | 4         | ☑                  |
| 2HCE-012-030-060   |        | 3       | 60     | 6         | ☑                  |
| 2HCE-0125-030-S04  | 1,25   | 3       | 40     | 4         | ☑                  |
| 2HCE-013-032-S04   | 1,3    | 3,2     | 40     | 4         | ☑                  |

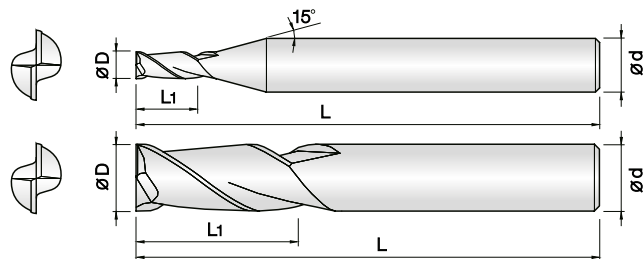
| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 2HCE-0135-032-S04 | 1,35   | 3,2     | 40     | 4         | ☑                  |
| 2HCE-014-035-S04  | 1,4    | 3,5     | 40     | 4         | ☑                  |
| 2HCE-0145-035-S04 | 1,45   | 3,5     | 40     | 4         | ☑                  |
| 2HCE-015-040-S03  | 1,5    | 4       | 40     | 3         | ☑                  |
| 2HCE-015-040-S04  |        | 4       | 40     | 4         | ☑                  |
| 2HCE-015-040-S06  |        | 4       | 40     | 6         | ☑                  |
| 2HCE-015-040-060  |        | 4       | 60     | 6         | ☑                  |
| 2HCE-0155-040-S04 | 1,55   | 4       | 40     | 4         | ☑                  |
| 2HCE-016-040-S04  | 1,6    | 4       | 40     | 4         | ☑                  |
| 2HCE-0165-040-S04 | 1,65   | 4       | 40     | 4         | ☑                  |
| 2HCE-017-042-S04  | 1,7    | 4,2     | 40     | 4         | ☑                  |
| 2HCE-0175-042-S04 | 1,75   | 4,2     | 40     | 4         | ☑                  |
| 2HCE-018-045-S04  | 1,8    | 4,5     | 40     | 4         | ☑                  |
| 2HCE-0185-045-S04 | 1,85   | 4,5     | 40     | 4         | ☑                  |
| 2HCE-019-050-S04  | 1,9    | 5       | 40     | 4         | ☑                  |
| 2HCE-0195-050-S04 | 1,95   | 5       | 40     | 4         | ☑                  |
| 2HCE-020-060-S03  | 2      | 6       | 40     | 3         | ☑                  |
| 2HCE-020-060-S04  |        | 6       | 40     | 4         | ☑                  |
| 2HCE-020-060-S06  |        | 6       | 40     | 6         | ☑                  |
| 2HCE-020-060-060  |        | 6       | 60     | 6         | ☑                  |
| 2HCE-021-060-S04  | 2,1    | 6       | 40     | 4         | ☑                  |
| 2HCE-022-060-S04  | 2,2    | 6       | 40     | 4         | ☑                  |
| 2HCE-023-060-S04  | 2,3    | 6       | 40     | 4         | ☑                  |
| 2HCE-024-080-S04  | 2,4    | 8       | 45     | 4         | ☑                  |
| 2HCE-025-080-S03  | 2,5    | 8       | 45     | 3         | ☑                  |
| 2HCE-025-080-S04  |        | 8       | 45     | 4         | ☑                  |
| 2HCE-025-080-S06  |        | 8       | 45     | 6         | ☑                  |
| 2HCE-025-080-070  |        | 8       | 70     | 6         | ☑                  |
| 2HCE-026-080-S04  | 2,6    | 8       | 45     | 4         | ☑                  |
| 2HCE-027-080-S04  | 2,7    | 8       | 45     | 4         | ☑                  |
| 2HCE-028-080-S04  | 2,8    | 8       | 45     | 4         | ☑                  |
| 2HCE-029-080-S04  | 2,9    | 8       | 45     | 4         | ☑                  |
| 2HCE-030-080-S03  | 3      | 8       | 45     | 3         | ☑                  |
| 2HCE-030-080-S04  |        | 8       | 45     | 4         | ☑                  |
| 2HCE-030-080-S06  |        | 8       | 45     | 6         | ☑                  |
| 2HCE-030-080-070  |        | 8       | 70     | 6         | ☑                  |
| 2HCE-031-080-S06  | 3,1    | 8       | 45     | 6         | ☑                  |
| 2HCE-032-080-S06  | 3,2    | 8       | 45     | 6         | ☑                  |

# 2HCE 2-břité OSTRÉ frézy pro kalené oceli do HRC 60

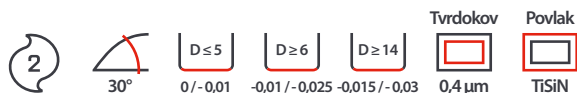
| Objednací číslo  | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|--------|-----------|--------------------|
| 2HCE-033-080-S06 | 3,3    | 8       | 45     | 6         | ☑                  |
| 2HCE-034-080-S06 | 3,4    | 8       | 45     | 6         | ☑                  |
| 2HCE-035-100-S06 | 3,5    | 10      | 45     | 6         | ☑                  |
| 2HCE-036-100-S06 | 3,6    | 10      | 45     | 6         | ☑                  |
| 2HCE-037-100-S06 | 3,7    | 10      | 45     | 6         | ☑                  |
| 2HCE-038-100-S06 | 3,8    | 10      | 45     | 6         | ☑                  |
| 2HCE-039-100-S06 | 3,9    | 10      | 45     | 6         | ☑                  |
| 2HCE-040-100-S04 | 4      | 10      | 45     | 4         | ☑                  |
| 2HCE-040-110-S06 |        | 11      | 45     | 6         | ☑                  |
| 2HCE-040-110-070 |        | 11      | 70     | 6         | ☑                  |
| 2HCE-041-110-S06 | 4,1    | 11      | 45     | 6         | ☑                  |
| 2HCE-042-110-S06 | 4,2    | 11      | 45     | 6         | ☑                  |
| 2HCE-043-110-S06 | 4,3    | 11      | 45     | 6         | ☑                  |
| 2HCE-044-110-S06 | 4,4    | 11      | 45     | 6         | ☑                  |
| 2HCE-045-110-S06 | 4,5    | 11      | 45     | 6         | ☑                  |
| 2HCE-046-110-S06 | 4,6    | 11      | 45     | 6         | ☑                  |
| 2HCE-047-110-S06 | 4,7    | 11      | 45     | 6         | ☑                  |
| 2HCE-048-110-S06 | 4,8    | 11      | 45     | 6         | ☑                  |
| 2HCE-049-110-S06 | 4,9    | 11      | 45     | 6         | ☑                  |
| 2HCE-050-130-S06 | 5      | 13      | 50     | 6         | ☑                  |
| 2HCE-050-130-080 |        | 13      | 80     | 6         | ☑                  |
| 2HCE-051-130-S06 | 5,1    | 13      | 50     | 6         | ☑                  |
| 2HCE-052-130-S06 | 5,2    | 13      | 50     | 6         | ☑                  |
| 2HCE-053-130-S06 | 5,3    | 13      | 50     | 6         | ☑                  |
| 2HCE-054-130-S06 | 5,4    | 13      | 50     | 6         | ☑                  |
| 2HCE-055-130-S06 | 5,5    | 13      | 50     | 6         | ☑                  |
| 2HCE-056-130-S06 | 5,6    | 13      | 50     | 6         | ☑                  |
| 2HCE-057-130-S06 | 5,7    | 13      | 50     | 6         | ☑                  |
| 2HCE-058-130-S06 | 5,8    | 13      | 50     | 6         | ☑                  |
| 2HCE-059-130-S06 | 5,9    | 13      | 50     | 6         | ☑                  |
| 2HCE-060-130-S06 | 6      | 13      | 50     | 6         | ☑                  |
| 2HCE-060-130-080 |        | 13      | 80     | 6         | ☑                  |
| 2HCE-061-150-S08 | 6,1    | 15      | 70     | 8         | ☑                  |
| 2HCE-062-150-S08 | 6,2    | 15      | 70     | 8         | ☑                  |
| 2HCE-063-150-S08 | 6,3    | 15      | 70     | 8         | ☑                  |
| 2HCE-064-150-S08 | 6,4    | 15      | 70     | 8         | ☑                  |
| 2HCE-065-160-S08 | 6,5    | 16      | 60     | 8         | ☑                  |
| 2HCE-070-160-S08 | 7      | 16      | 60     | 8         | ☑                  |
| 2HCE-075-160-S08 | 7,5    | 16      | 60     | 8         | ☑                  |
| 2HCE-080-190-S08 | 8      | 19      | 60     | 8         | ☑                  |
| 2HCE-085-190-S10 | 8,5    | 19      | 70     | 10        | ☑                  |
| 2HCE-090-190-S10 | 9      | 19      | 70     | 10        | ☑                  |
| 2HCE-095-190-S10 | 9,5    | 19      | 70     | 10        | ☑                  |
| 2HCE-100-220-S10 | 10     | 22      | 70     | 10        | ☑                  |
| 2HCE-105-220-S12 | 10,5   | 22      | 75     | 12        | ☑                  |
| 2HCE-110-220-S12 | 11     | 22      | 75     | 12        | ☑                  |
| 2HCE-115-220-S12 | 11,5   | 22      | 75     | 12        | ☑                  |
| 2HCE-120-260-S12 | 12     | 26      | 75     | 12        | ☑                  |
| 2HCE-130-260-S14 | 13     | 26      | 90     | 14        | ☑                  |
| 2HCE-140-260-S14 | 14     | 26      | 80     | 14        | ☑                  |
| 2HCE-140-260-S16 |        | 26      | 90     | 16        | ☑                  |
| 2HCE-150-350-S16 | 15     | 35      | 100    | 16        | ☑                  |

| Objednací číslo  | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|--------|-----------|--------------------|
| 2HCE-160-350-S16 | 16     | 35      | 100    | 16        | ☑                  |
| 2HCE-170-350-S18 | 17     | 35      | 100    | 18        | ☑                  |
| 2HCE-180-350-S18 | 18     | 35      | 100    | 18        | ☑                  |
| 2HCE-200-400-S20 | 20     | 40      | 100    | 20        | ☑                  |

# 2LEM 2-břité OSTRÉ frézy dlouhé pro oceli a kalené oceli do HRC 58



- ▶ Určeno pro oceli a kalené oceli do HRC 58
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Široký sortiment délek pro optimální volbu nástroje
- ▶ Minimalizace vyštipování díky zesílení rezné hrany a tvrdkovu se zvýšenou houževnatostí

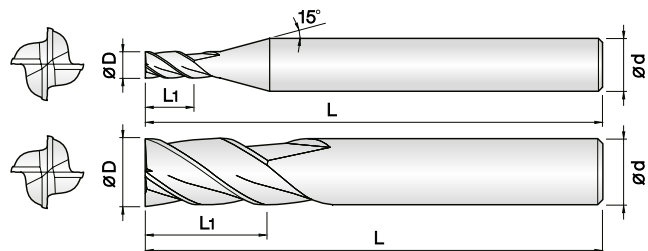


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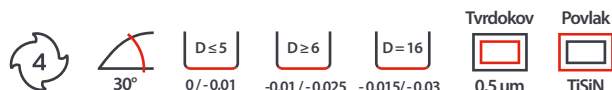
| Objednací číslo  | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|------------------|--------|---------|--------|-----------|--------------------|---|
| 2LEM-010-030-S06 | 1      | 3       | 60     | 6         | ☑                  |   |
| 2LEM-010-050-S06 |        | 5       | 60     | 6         | ☑                  |   |
| 2LEM-010-070-S06 |        | 7       | 60     | 6         | ☑                  |   |
| 2LEM-010-100-S06 |        | 10      | 60     | 6         | ☑                  |   |
| 2LEM-010-120-S06 |        | 12      | 60     | 6         | ☑                  |   |
| 2LEM-010-150-S06 |        | 15      | 60     | 6         | ☑                  |   |
| 2LEM-015-060-S06 | 1,5    | 6       | 60     | 6         | ☑                  |   |
| 2LEM-015-075-S06 |        | 7,5     | 60     | 6         | ☑                  |   |
| 2LEM-015-100-S06 |        | 10      | 60     | 6         | ☑                  |   |
| 2LEM-015-150-S06 | 2      | 15      | 60     | 6         | ☑                  |   |
| 2LEM-015-200-S06 |        | 20      | 60     | 6         | ☑                  |   |
| 2LEM-020-060-S06 |        | 2       | 6      | 60        | 6                  | ☑ |
| 2LEM-020-100-S06 |        |         | 10     | 60        | 6                  | ☑ |
| 2LEM-020-150-S06 |        |         | 15     | 60        | 6                  | ☑ |
| 2LEM-020-200-S06 |        |         | 20     | 60        | 6                  | ☑ |
| 2LEM-030-120-S06 | 3      | 12      | 70     | 6         | ☑                  |   |
| 2LEM-030-150-S06 |        | 15      | 70     | 6         | ☑                  |   |
| 2LEM-030-200-S06 |        | 20      | 70     | 6         | ☑                  |   |
| 2LEM-030-250-S06 | 4      | 25      | 70     | 6         | ☑                  |   |
| 2LEM-030-300-S06 |        | 30      | 70     | 6         | ☑                  |   |
| 2LEM-040-150-S06 |        | 4       | 15     | 70        | 6                  | ☑ |
| 2LEM-040-200-S06 | 20     |         | 70     | 6         | ☑                  |   |
| 2LEM-040-300-S06 | 30     |         | 75     | 6         | ☑                  |   |
| 2LEM-040-350-S06 | 4      | 35      | 75     | 6         | ☑                  |   |
| 2LEM-040-400-S06 |        | 40      | 80     | 6         | ☑                  |   |
| 2LEM-050-200-S06 |        | 5       | 20     | 80        | 6                  | ☑ |
| 2LEM-050-250-S06 | 25     |         | 70     | 6         | ☑                  |   |
| 2LEM-050-300-S06 | 30     |         | 75     | 6         | ☑                  |   |
| 2LEM-050-400-S06 | 5      | 40      | 80     | 6         | ☑                  |   |
| 2LEM-060-200-S06 |        | 6       | 20     | 75        | 6                  | ☑ |
| 2LEM-060-200-100 |        |         | 20     | 100       | 6                  | ☑ |
| 2LEM-060-250-S06 | 25     |         | 75     | 6         | ☑                  |   |
| 2LEM-060-300-S06 | 6      | 30      | 80     | 6         | ☑                  |   |
| 2LEM-060-350-S06 |        | 35      | 80     | 6         | ☑                  |   |
| 2LEM-060-400-S06 |        | 40      | 90     | 6         | ☑                  |   |
| 2LEM-060-450-S06 | 6      | 45      | 90     | 6         | ☑                  |   |
| 2LEM-060-500-S06 |        | 50      | 100    | 6         | ☑                  |   |
| 2LEM-080-250-S08 | 8      | 25      | 75     | 8         | ☑                  |   |

| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|---------|--------|-----------|--------------------|---|
| 2LEM-080-250-100  | 8      | 25      | 100    | 8         | ☑                  |   |
| 2LEM-080-300-S08  |        | 30      | 80     | 8         | ☑                  |   |
| 2LEM-080-350-S08  |        | 35      | 80     | 8         | ☑                  |   |
| 2LEM-080-400-S08  |        | 40      | 90     | 8         | ☑                  |   |
| 2LEM-080-450-S08  |        | 45      | 100    | 8         | ☑                  |   |
| 2LEM-080-500-S08  |        | 50      | 100    | 8         | ☑                  |   |
| 2LEM-080-550-S08  |        | 55      | 100    | 8         | ☑                  |   |
| 2LEM-080-600-S08  |        | 60      | 110    | 8         | ☑                  |   |
| 2LEM-100-300-S10  |        | 10      | 30     | 80        | 10                 | ☑ |
| 2LEM-100-300-110  |        |         | 30     | 110       | 10                 | ☑ |
| 2LEM-100-350-S10  | 35     |         | 90     | 10        | ☑                  |   |
| 2LEM-100-400-S10  | 40     |         | 90     | 10        | ☑                  |   |
| 2LEM-100-450-S10  | 45     |         | 100    | 10        | ☑                  |   |
| 2LEM-100-500-S10  | 50     |         | 100    | 10        | ☑                  |   |
| 2LEM-100-550-S10  | 55     |         | 110    | 10        | ☑                  |   |
| 2LEM-100-600-S10  | 60     |         | 110    | 10        | ☑                  |   |
| 2LEM-100-650-S10  | 65     |         | 120    | 10        | ☑                  |   |
| 2LEM-100-700-S10  | 70     |         | 120    | 10        | ☑                  |   |
| 2LEM-120-300-S12  | 12     | 30      | 90     | 12        | ☑                  |   |
| 2LEM-120-350-110  |        | 35      | 110    | 12        | ☑                  |   |
| 2LEM-120-400-S12  |        | 40      | 100    | 12        | ☑                  |   |
| 2LEM-120-450-S12  |        | 45      | 100    | 12        | ☑                  |   |
| 2LEM-120-500-S12  |        | 50      | 100    | 12        | ☑                  |   |
| 2LEM-120-550-S12  |        | 55      | 110    | 12        | ☑                  |   |
| 2LEM-120-600-S12  | 14     | 60      | 110    | 12        | ☑                  |   |
| 2LEM-120-700-S12  |        | 70      | 130    | 12        | ☑                  |   |
| 2LEM-120-800-S12  |        | 80      | 130    | 12        | ☑                  |   |
| 2LEM-140-500-S14  |        | 50      | 110    | 14        | ☑                  |   |
| 2LEM-160-400-160  | 16     | 40      | 160    | 16        | ☑                  |   |
| 2LEM-160-550-S16  |        | 55      | 120    | 16        | ☑                  |   |
| 2LEM-160-700-S16  |        | 70      | 130    | 16        | ☑                  |   |
| 2LEM-160-800-S16  |        | 80      | 160    | 16        | ☑                  |   |
| 2LEM-160-1000-S16 | 20     | 100     | 160    | 16        | ☑                  |   |
| 2LEM-200-500-160  |        | 50      | 160    | 20        | ☑                  |   |
| 2LEM-200-600-S20  |        | 60      | 130    | 20        | ☑                  |   |
| 2LEM-200-1000-S20 | 20     | 100     | 200    | 20        | ☑                  |   |
| 2LEM-250-750-S25  |        | 25      | 75     | 160       | 25                 | ☑ |

# 4HSE 4-břité OSTRÉ frézy krátké pro kalené oceli do HRC 60



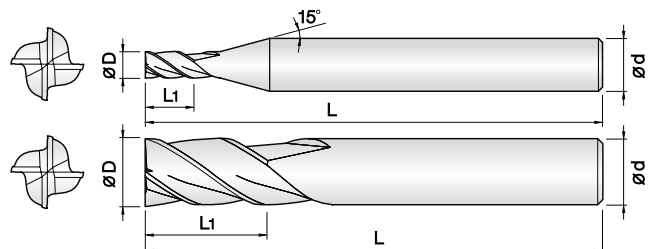
- ▶ Určeno pro kalené oceli (50 - 60 HRC)
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Minimalizace vyštipování díky zesílení řezné hrany
- ▶ Vysoká tuhost
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 4HSE-005-0075-S04 | 0,5    | 0,75    | 38     | 4         | ☑                  |
| 4HSE-006-009-S04  | 0,6    | 0,9     | 38     | 4         | ☑                  |
| 4HSE-008-012-S04  | 0,8    | 1,2     | 38     | 4         | ☑                  |
| 4HSE-010-015-S04  | 1      | 1,5     | 40     | 4         | ☑                  |
| 4HSE-012-020-S04  | 1,2    | 2       | 40     | 4         | ☑                  |
| 4HSE-015-022-S04  | 1,5    | 2,2     | 40     | 4         | ☑                  |
| 4HSE-020-035-S04  | 2      | 3,5     | 40     | 4         | ☑                  |
| 4HSE-020-035-S06  | 2      | 3,5     | 40     | 6         | ☑                  |
| 4HSE-030-045-S04  | 3      | 4,5     | 40     | 4         | ☑                  |
| 4HSE-030-045-S06  | 3      | 4,5     | 40     | 6         | ☑                  |
| 4HSE-040-060-S04  | 4      | 6       | 40     | 4         | ☑                  |
| 4HSE-040-060-S06  | 4      | 6       | 40     | 6         | ☑                  |
| 4HSE-050-075-S06  | 5      | 7,5     | 45     | 6         | ☑                  |
| 4HSE-060-090-S06  | 6      | 9       | 45     | 6         | ☑                  |
| 4HSE-080-120-S08  | 8      | 12      | 55     | 8         | ☑                  |
| 4HSE-100-150-S10  | 10     | 15      | 60     | 10        | ☑                  |
| 4HSE-120-180-S12  | 12     | 18      | 65     | 12        | ☑                  |
| 4HSE-160-240-S16  | 16     | 24      | 75     | 16        | ☑                  |



# 4HCE 4-břité OSTRÉ frézy pro kalené oceli do HRC 60



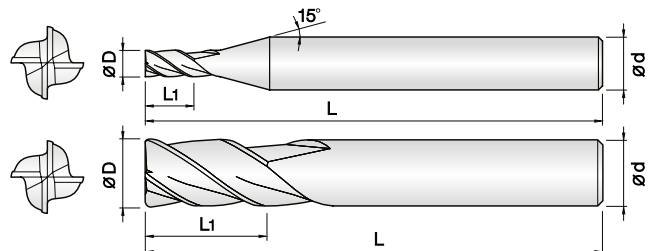
- ▶ Určeno pro kalené oceli (50 - 60 HRC)
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Minimalizace vyštipování díky zesílení řezné hrany
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



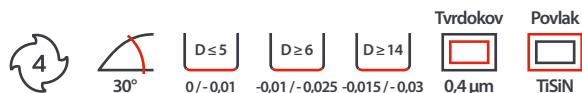
| Objednací číslo  | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|--------|-----------|--------------------|
| 4HCE-005-010-S04 | 0,5    | 1       | 38     | 4         | ☑                  |
| 4HCE-006-012-S04 | 0,6    | 1,2     | 38     | 4         | ☑                  |
| 4HCE-007-014-S04 | 0,7    | 1,4     | 38     | 4         | ☑                  |
| 4HCE-008-020-S04 | 0,8    | 2       | 38     | 4         | ☑                  |
| 4HCE-009-018-S04 | 0,9    | 1,8     | 38     | 4         | ☑                  |
| 4HCE-010-025-S03 | 1      | 2,5     | 40     | 3         | ☑                  |
| 4HCE-010-025-S04 |        | 2,5     | 40     | 4         | ☑                  |
| 4HCE-010-025-S06 |        | 2,5     | 40     | 6         | ☑                  |
| 4HCE-010-025-060 |        | 2,5     | 60     | 6         | ☑                  |
| 4HCE-010-025-080 |        | 2,5     | 80     | 6         | ☑                  |
| 4HCE-012-030-S03 | 1,2    | 3       | 40     | 3         | ☑                  |
| 4HCE-012-030-S04 |        | 3       | 40     | 4         | ☑                  |
| 4HCE-012-030-S06 |        | 3       | 40     | 6         | ☑                  |
| 4HCE-012-030-060 | 1,5    | 3       | 60     | 6         | ☑                  |
| 4HCE-015-040-S03 |        | 4       | 40     | 3         | ☑                  |
| 4HCE-015-040-S04 |        | 4       | 40     | 4         | ☑                  |
| 4HCE-015-040-S06 |        | 4       | 40     | 6         | ☑                  |
| 4HCE-015-040-060 |        | 4       | 60     | 6         | ☑                  |
| 4HCE-015-040-080 | 2      | 4       | 80     | 6         | ☑                  |
| 4HCE-020-060-S03 |        | 6       | 40     | 3         | ☑                  |
| 4HCE-020-060-S04 |        | 6       | 40     | 4         | ☑                  |
| 4HCE-020-060-S06 |        | 6       | 40     | 6         | ☑                  |
| 4HCE-020-060-060 |        | 6       | 60     | 6         | ☑                  |
| 4HCE-020-060-100 | 2,5    | 6       | 100    | 6         | ☑                  |
| 4HCE-025-080-S03 |        | 8       | 45     | 3         | ☑                  |
| 4HCE-025-080-S04 |        | 8       | 45     | 4         | ☑                  |
| 4HCE-025-080-S06 |        | 8       | 45     | 6         | ☑                  |
| 4HCE-025-080-070 |        | 8       | 70     | 6         | ☑                  |
| 4HCE-025-080-100 | 3      | 8       | 100    | 6         | ☑                  |
| 4HCE-030-080-S03 |        | 8       | 45     | 3         | ☑                  |
| 4HCE-030-080-S04 |        | 8       | 45     | 4         | ☑                  |
| 4HCE-030-080-S06 |        | 8       | 45     | 6         | ☑                  |
| 4HCE-030-080-070 |        | 8       | 70     | 6         | ☑                  |
| 4HCE-030-080-100 | 3,5    | 8       | 100    | 6         | ☑                  |
| 4HCE-035-100-S06 |        | 10      | 45     | 6         | ☑                  |
| 4HCE-040-110-S04 |        | 4       | 11     | 45        | 4                  |
| 4HCE-040-110-S06 | 11     |         | 45     | 6         | ☑                  |
| 4HCE-040-110-070 | 11     |         | 70     | 6         | ☑                  |

| Objednací číslo  | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|--------|-----------|--------------------|
| 4HCE-040-110-100 | 4      | 11      | 100    | 6         | ☑                  |
| 4HCE-045-110-S06 | 4,5    | 11      | 45     | 6         | ☑                  |
| 4HCE-050-130-S06 | 5      | 13      | 50     | 6         | ☑                  |
| 4HCE-050-130-080 |        | 13      | 80     | 6         | ☑                  |
| 4HCE-050-130-100 |        | 13      | 100    | 6         | ☑                  |
| 4HCE-055-130-S06 | 5,5    | 13      | 50     | 6         | ☑                  |
| 4HCE-060-130-S06 | 6      | 13      | 50     | 6         | ☑                  |
| 4HCE-060-130-080 |        | 13      | 80     | 6         | ☑                  |
| 4HCE-060-130-100 |        | 13      | 100    | 6         | ☑                  |
| 4HCE-065-160-S08 | 6,5    | 16      | 60     | 8         | ☑                  |
| 4HCE-070-160-S08 | 7      | 16      | 60     | 8         | ☑                  |
| 4HCE-075-160-S08 | 7,5    | 16      | 60     | 8         | ☑                  |
| 4HCE-080-190-S08 | 8      | 19      | 60     | 8         | ☑                  |
| 4HCE-085-190-S10 | 8,5    | 19      | 70     | 10        | ☑                  |
| 4HCE-090-190-S10 | 9      | 19      | 70     | 10        | ☑                  |
| 4HCE-095-190-S10 | 9,5    | 19      | 70     | 10        | ☑                  |
| 4HCE-100-220-S10 | 10     | 22      | 70     | 10        | ☑                  |
| 4HCE-105-220-S12 | 10,5   | 22      | 75     | 12        | ☑                  |
| 4HCE-110-220-S12 | 11     | 22      | 75     | 12        | ☑                  |
| 4HCE-115-220-S12 | 11,5   | 22      | 75     | 12        | ☑                  |
| 4HCE-120-260-S12 | 12     | 26      | 75     | 12        | ☑                  |
| 4HCE-130-260-S14 | 13     | 26      | 80     | 14        | ☑                  |
| 4HCE-140-260-S14 | 14     | 26      | 80     | 14        | ☑                  |
| 4HCE-140-260-S16 |        | 26      | 90     | 16        | ☑                  |
| 4HCE-150-350-S16 | 15     | 35      | 100    | 16        | ☑                  |
| 4HCE-160-350-S16 | 16     | 35      | 100    | 16        | ☑                  |
| 4HCE-170-350-S18 | 17     | 35      | 100    | 18        | ☑                  |
| 4HCE-180-350-S18 | 18     | 35      | 100    | 18        | ☑                  |
| 4HCE-200-400-S20 | 20     | 40      | 100    | 20        | ☑                  |

# 4LEM 4-břité OSTRÉ frézy dlouhé pro oceli a kalené oceli do HRC 58



- ▶ Určeno pro oceli a kalené oceli do HRC 58
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Široký sortiment délek pro optimální volbu nástroje
- ▶ Minimalizace vyštipování díky zesílení rezné hrany a tvrdokovu se zvýšenou houževnatostí

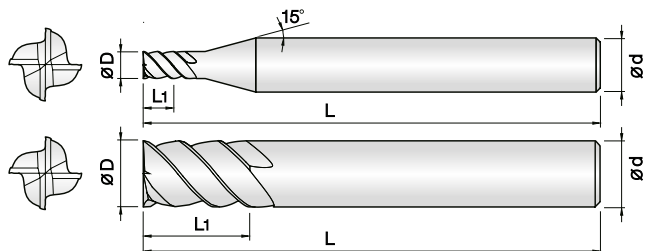


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| Objednací číslo  | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|------------------|--------|---------|--------|-----------|--------------------|---|
| 4LEM-005-015-S04 | 0,5    | 1,5     | 40     | 4         | ☑                  |   |
| 4LEM-006-018-S04 | 0,6    | 1,8     | 40     | 4         | ☑                  |   |
| 4LEM-008-024-S04 | 0,8    | 2,4     | 40     | 4         | ☑                  |   |
| 4LEM-010-030-S06 | 1      | 3       | 60     | 6         | ☑                  |   |
| 4LEM-010-050-S06 |        | 5       | 60     | 6         | ☑                  |   |
| 4LEM-010-070-S06 |        | 7       | 60     | 6         | ☑                  |   |
| 4LEM-010-100-S06 |        | 10      | 60     | 6         | ☑                  |   |
| 4LEM-010-120-S06 |        | 12      | 60     | 6         | ☑                  |   |
| 4LEM-015-060-S06 |        | 1,5     | 6      | 60        | 6                  | ☑ |
| 4LEM-015-080-S06 |        |         | 8      | 60        | 6                  | ☑ |
| 4LEM-015-100-S06 | 10     |         | 60     | 6         | ☑                  |   |
| 4LEM-015-120-S06 | 12     |         | 60     | 6         | ☑                  |   |
| 4LEM-015-150-S06 | 15     |         | 60     | 6         | ☑                  |   |
| 4LEM-020-080-S06 | 2      | 8       | 60     | 6         | ☑                  |   |
| 4LEM-020-100-S06 |        | 10      | 60     | 6         | ☑                  |   |
| 4LEM-020-120-S06 |        | 12      | 60     | 6         | ☑                  |   |
| 4LEM-020-150-S06 |        | 15      | 60     | 6         | ☑                  |   |
| 4LEM-030-100-S06 | 3      | 10      | 70     | 6         | ☑                  |   |
| 4LEM-030-150-S06 |        | 15      | 70     | 6         | ☑                  |   |
| 4LEM-030-200-S06 |        | 20      | 70     | 6         | ☑                  |   |
| 4LEM-030-250-S06 |        | 25      | 70     | 6         | ☑                  |   |
| 4LEM-030-300-S06 |        | 30      | 70     | 6         | ☑                  |   |
| 4LEM-040-120-S06 | 4      | 12      | 70     | 6         | ☑                  |   |
| 4LEM-040-150-S04 |        | 15      | 70     | 4         | ☑                  |   |
| 4LEM-040-150-S06 |        | 15      | 70     | 6         | ☑                  |   |
| 4LEM-040-200-S04 |        | 20      | 70     | 4         | ☑                  |   |
| 4LEM-040-200-S06 |        | 20      | 70     | 6         | ☑                  |   |
| 4LEM-040-250-S06 |        | 25      | 70     | 6         | ☑                  |   |
| 4LEM-040-300-S06 |        | 30      | 75     | 6         | ☑                  |   |
| 4LEM-040-350-S06 |        | 35      | 75     | 6         | ☑                  |   |
| 4LEM-040-400-S06 | 40     | 80      | 6      | ☑         |                    |   |
| 4LEM-050-200-S06 | 5      | 20      | 70     | 6         | ☑                  |   |
| 4LEM-050-250-S06 |        | 25      | 75     | 6         | ☑                  |   |
| 4LEM-050-300-S06 |        | 30      | 80     | 6         | ☑                  |   |
| 4LEM-050-400-S06 |        | 40      | 80     | 6         | ☑                  |   |
| 4LEM-060-200-S06 | 6      | 20      | 75     | 6         | ☑                  |   |
| 4LEM-060-200-100 |        | 20      | 100    | 6         | ☑                  |   |
| 4LEM-060-250-S06 |        | 25      | 75     | 6         | ☑                  |   |
| 4LEM-060-300-S06 |        | 30      | 80     | 6         | ☑                  |   |
| 4LEM-060-350-S06 |        | 35      | 80     | 6         | ☑                  |   |
| 4LEM-060-400-S06 |        | 40      | 90     | 6         | ☑                  |   |

| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 4LEM-060-450-S06  | 6      | 45      | 90     | 6         | ☑                  |
| 4LEM-060-500-S06  |        | 50      | 100    | 6         | ☑                  |
| 4LEM-080-250-S08  | 8      | 25      | 75     | 8         | ☑                  |
| 4LEM-080-250-100  |        | 25      | 100    | 8         | ☑                  |
| 4LEM-080-300-S08  |        | 30      | 80     | 8         | ☑                  |
| 4LEM-080-350-S08  |        | 35      | 90     | 8         | ☑                  |
| 4LEM-080-400-S08  |        | 40      | 90     | 8         | ☑                  |
| 4LEM-080-450-S08  | 8      | 45      | 100    | 8         | ☑                  |
| 4LEM-080-500-S08  |        | 50      | 100    | 8         | ☑                  |
| 4LEM-080-550-S08  |        | 55      | 100    | 8         | ☑                  |
| 4LEM-080-600-S08  |        | 60      | 110    | 8         | ☑                  |
| 4LEM-100-300-S10  | 10     | 30      | 80     | 10        | ☑                  |
| 4LEM-100-300-110  |        | 30      | 110    | 10        | ☑                  |
| 4LEM-100-350-S10  |        | 35      | 90     | 10        | ☑                  |
| 4LEM-100-400-S10  |        | 40      | 90     | 10        | ☑                  |
| 4LEM-100-450-S10  |        | 45      | 100    | 10        | ☑                  |
| 4LEM-100-500-S10  |        | 50      | 100    | 10        | ☑                  |
| 4LEM-100-550-S10  |        | 55      | 100    | 10        | ☑                  |
| 4LEM-100-600-S10  |        | 60      | 110    | 10        | ☑                  |
| 4LEM-100-650-S10  |        | 65      | 120    | 10        | ☑                  |
| 4LEM-100-700-S10  |        | 70      | 120    | 10        | ☑                  |
| 4LEM-120-300-S12  | 12     | 30      | 90     | 12        | ☑                  |
| 4LEM-120-350-110  |        | 35      | 110    | 12        | ☑                  |
| 4LEM-120-400-S12  |        | 40      | 100    | 12        | ☑                  |
| 4LEM-120-450-S12  |        | 45      | 100    | 12        | ☑                  |
| 4LEM-120-500-S12  |        | 50      | 100    | 12        | ☑                  |
| 4LEM-120-550-S12  |        | 55      | 110    | 12        | ☑                  |
| 4LEM-120-600-S12  |        | 60      | 110    | 12        | ☑                  |
| 4LEM-120-700-S12  |        | 70      | 130    | 12        | ☑                  |
| 4LEM-120-800-S12  | 80     | 130     | 12     | ☑         |                    |
| 4LEM-140-500-S14  | 14     | 50      | 110    | 14        | ☑                  |
| 4LEM-160-400-160  | 16     | 40      | 160    | 16        | ☑                  |
| 4LEM-160-550-S16  |        | 55      | 120    | 16        | ☑                  |
| 4LEM-160-700-S16  |        | 70      | 130    | 16        | ☑                  |
| 4LEM-160-900-S16  |        | 90      | 150    | 16        | ☑                  |
| 4LEM-160-1000-S16 | 16     | 100     | 160    | 16        | ☑                  |
| 4LEM-200-500-160  | 20     | 50      | 160    | 20        | ☑                  |
| 4LEM-200-600-S20  |        | 60      | 130    | 20        | ☑                  |
| 4LEM-200-800-S20  |        | 80      | 160    | 20        | ☑                  |
| 4LEM-200-1000-S20 |        | 100     | 200    | 20        | ☑                  |
| 4LEM-250-750-S25  |        | 25      | 75     | 160       | 25                 |

# 4HEM 4-břité OSTRÉ frézy 45° pro kalené oceli do HRC 60



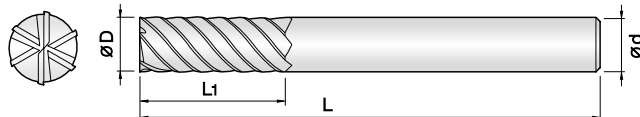
- ▶ Určeno pro kalené oceli (50 - 60 HRC)
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Minimalizace vyštipování díky zesílení řezné hrany
- ▶ Vyšší posuvy díky 45° geometrii
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



| Objednací číslo  | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|--------|-----------|--------------------|
| 4HEM-010-025-S06 | 1      | 2,5     | 40     | 6         | ☑                  |
| 4HEM-010-035-S06 |        | 3,5     | 40     | 6         | ☑                  |
| 4HEM-010-050-S06 |        | 5       | 45     | 6         | ☑                  |
| 4HEM-012-030-S06 |        | 1,2     | 3      | 40        | 6                  |
| 4HEM-015-040-S06 | 1,5    | 4       | 40     | 6         | ☑                  |
| 4HEM-015-060-S06 |        | 6       | 40     | 6         | ☑                  |
| 4HEM-015-080-S06 |        | 8       | 45     | 6         | ☑                  |
| 4HEM-020-050-S06 | 2      | 5       | 40     | 6         | ☑                  |
| 4HEM-020-080-S06 |        | 8       | 45     | 6         | ☑                  |
| 4HEM-020-100-S06 |        | 10      | 50     | 6         | ☑                  |
| 4HEM-030-080-S06 | 3      | 8       | 45     | 6         | ☑                  |
| 4HEM-030-120-S06 |        | 12      | 50     | 6         | ☑                  |
| 4HEM-030-150-S06 |        | 15      | 55     | 6         | ☑                  |
| 4HEM-040-110-S06 | 4      | 11      | 45     | 6         | ☑                  |
| 4HEM-040-160-S06 |        | 16      | 55     | 6         | ☑                  |
| 4HEM-040-200-S06 |        | 20      | 60     | 6         | ☑                  |
| 4HEM-050-130-S06 | 5      | 13      | 50     | 6         | ☑                  |
| 4HEM-050-180-S06 |        | 18      | 60     | 6         | ☑                  |
| 4HEM-050-250-S06 |        | 25      | 70     | 6         | ☑                  |
| 4HEM-060-130-S06 | 6      | 13      | 50     | 6         | ☑                  |
| 4HEM-060-200-S06 |        | 20      | 60     | 6         | ☑                  |
| 4HEM-060-250-S06 |        | 25      | 70     | 6         | ☑                  |
| 4HEM-080-200-S08 | 8      | 20      | 60     | 8         | ☑                  |
| 4HEM-080-250-S08 |        | 25      | 70     | 8         | ☑                  |
| 4HEM-080-300-S08 |        | 30      | 75     | 8         | ☑                  |
| 4HEM-080-400-S08 | 10     | 40      | 90     | 8         | ☑                  |
| 4HEM-100-220-S10 |        | 22      | 70     | 10        | ☑                  |
| 4HEM-100-300-S10 |        | 30      | 80     | 10        | ☑                  |
| 4HEM-100-400-S10 | 12     | 40      | 90     | 10        | ☑                  |
| 4HEM-100-500-S10 |        | 50      | 100    | 10        | ☑                  |
| 4HEM-120-260-S12 |        | 26      | 75     | 12        | ☑                  |
| 4HEM-120-400-S12 | 14     | 40      | 90     | 12        | ☑                  |
| 4HEM-120-500-S12 |        | 50      | 100    | 12        | ☑                  |
| 4HEM-120-600-S12 |        | 60      | 110    | 12        | ☑                  |
| 4HEM-140-300-S14 | 16     | 30      | 80     | 14        | ☑                  |
| 4HEM-140-500-S14 |        | 50      | 110    | 14        | ☑                  |
| 4HEM-160-350-S16 |        | 35      | 90     | 16        | ☑                  |
| 4HEM-160-500-S16 | 50     | 110     | 16     | ☑         |                    |

| Objednací číslo  | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|--------|-----------|--------------------|
| 4HEM-160-650-S16 | 16     | 65      | 120    | 16        | ☑                  |
| 4HEM-200-400-S20 | 20     | 40      | 100    | 20        | ☑                  |
| 4HEM-200-500-S20 |        | 50      | 110    | 20        | ☑                  |
| 4HEM-200-700-S20 |        | 70      | 130    | 20        | ☑                  |
| 4HEM-250-800-S25 | 25     | 80      | 160    | 25        | ☑                  |

# 6&8HEM 6 a 8-břité OSTRÉ frézy 45° pro kalené oceli do HRC 62



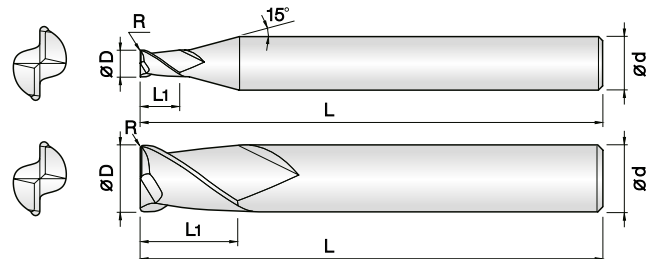
- ▶ Určeno pro kalené oceli (50 - 62 HRC)
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Minimalizace vyštípování díky zesílení řezné hrany
- ▶ Vyšší posuvy díky 45° geometrii
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



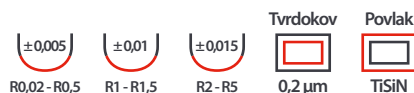
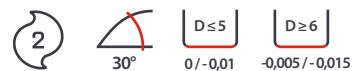
| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 6HEM-030-100-S06  | 3      | 10      | 50     | 6         | ☑                  |
| 6HEM-030-150-S06  |        | 15      | 50     | 6         | ☑                  |
| 6HEM-040-120-S06  | 4      | 12      | 50     | 6         | ☑                  |
| 6HEM-040-160-S06  |        | 16      | 50     | 6         | ☑                  |
| 6HEM-050-150-S06  | 5      | 15      | 50     | 6         | ☑                  |
| 6HEM-050-200-S06  |        | 20      | 60     | 6         | ☑                  |
| 6HEM-060-150-S06  | 6      | 15      | 50     | 6         | ☑                  |
| 6HEM-060-200-S06  |        | 20      | 60     | 6         | ☑                  |
| 6HEM-060-250-S06  |        | 25      | 65     | 6         | ☑                  |
| 6HEM-060-300-S06  |        | 30      | 70     | 6         | ☑                  |
| 6HEM-060-350-S06  | 8      | 35      | 75     | 6         | ☑                  |
| 6HEM-080-200-S08  |        | 20      | 60     | 8         | ☑                  |
| 6HEM-080-250-S08  |        | 25      | 65     | 8         | ☑                  |
| 6HEM-080-300-S08  |        | 30      | 75     | 8         | ☑                  |
| 6HEM-080-350-S08  |        | 35      | 80     | 8         | ☑                  |
| 6HEM-080-400-S08  |        | 40      | 90     | 8         | ☑                  |
| 6HEM-080-450-S08  | 8      | 45      | 100    | 8         | ☑                  |
| 6HEM-080-500-S08  |        | 50      | 100    | 8         | ☑                  |
| 6HEM-100-250-S10  | 10     | 25      | 70     | 10        | ☑                  |
| 6HEM-100-350-S10  |        | 35      | 90     | 10        | ☑                  |
| 6HEM-100-450-S10  |        | 45      | 100    | 10        | ☑                  |
| 6HEM-100-500-S10  |        | 50      | 100    | 10        | ☑                  |
| 6HEM-100-600-S10  | 12     | 60      | 110    | 10        | ☑                  |
| 6HEM-120-300-S12  |        | 30      | 80     | 12        | ☑                  |
| 6HEM-120-400-S12  |        | 40      | 90     | 12        | ☑                  |
| 6HEM-120-500-S12  |        | 50      | 100    | 12        | ☑                  |
| 6HEM-120-600-S12  |        | 60      | 110    | 12        | ☑                  |
| 6HEM-120-700-S12  |        | 70      | 120    | 12        | ☑                  |
| 6HEM-160-350-S16  | 16     | 35      | 90     | 16        | ☑                  |
| 6HEM-160-500-S16  |        | 50      | 110    | 16        | ☑                  |
| 6HEM-160-650-S16  |        | 65      | 120    | 16        | ☑                  |
| 6HEM-160-800-S16  |        | 80      | 150    | 16        | ☑                  |
| 6HEM-160-900-S16  |        | 90      | 160    | 16        | ☑                  |
| 6HEM-160-1000-S16 | 20     | 100     | 160    | 16        | ☑                  |
| 6HEM-200-450-S20  |        | 45      | 100    | 20        | ☑                  |
| 6HEM-200-600-S20  |        | 60      | 120    | 20        | ☑                  |
| 6HEM-200-800-S20  |        | 80      | 150    | 20        | ☑                  |
| 6HEM-200-900-S20  | 90     | 160     | 20     | ☑         |                    |

| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 6HEM-200-1000-S20 | 20     | 100     | 160    | 20        | ☑                  |
| 6HEM-200-1100-S20 |        | 110     | 170    | 20        | ☑                  |
| 6HEM-200-1200-S20 |        | 120     | 180    | 20        | ☑                  |
| 8HEM-250-1000-S25 | 25     | 100     | 160    | 25        | ☑                  |
| 8HEM-250-1250-S25 |        | 125     | 200    | 25        | ☑                  |

# 2NCR 2-břité TOROIDNÍ frézy pro kalené oceli do HRC 62



- Určeno pro kalené oceli (50 - 62 HRC)
- Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- Velmi přesné tolerance řezných hran
- Široký sortiment rádiusů a délek pro optimální výběr nástroje
- Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



NOVINKA

| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 2NCR-002-0002-S04 | 0,2    | R0,02  | 0,6     | 45     | 4         | ☑                  |
| 2NCR-002-0005-S04 |        | R0,05  | 0,6     | 45     | 4         | ☑                  |
| 2NCR-003-0002-S04 | 0,3    | R0,02  | 0,6     | 45     | 4         | ☑                  |
| 2NCR-003-0005-S04 |        | R0,05  | 0,6     | 45     | 4         | ☑                  |
| 2NCR-003-001-S04  |        | R0,1   | 0,6     | 45     | 4         | ☑                  |
| 2NCR-004-0002-S04 | 0,4    | R0,02  | 0,8     | 45     | 4         | ☑                  |
| 2NCR-004-0005-S04 |        | R0,05  | 0,8     | 45     | 4         | ☑                  |
| 2NCR-004-001-S04  |        | R0,1   | 0,8     | 45     | 4         | ☑                  |
| 2NCR-005-0002-S04 | 0,5    | R0,02  | 1       | 45     | 4         | ☑                  |
| 2NCR-005-0005-S04 |        | R0,05  | 1       | 45     | 4         | ☑                  |
| 2NCR-005-001-S04  |        | R0,1   | 1       | 45     | 4         | ☑                  |
| 2NCR-006-0002-S04 | 0,6    | R0,02  | 1,2     | 45     | 4         | ☑                  |
| 2NCR-006-0005-S04 |        | R0,05  | 1,2     | 45     | 4         | ☑                  |
| 2NCR-006-001-S04  |        | R0,1   | 1,2     | 45     | 4         | ☑                  |
| 2NCR-006-002-S04  |        | R0,2   | 1,2     | 45     | 4         | ☑                  |
| 2NCR-007-0005-S04 | 0,7    | R0,05  | 1,4     | 45     | 4         | ☑                  |
| 2NCR-007-001-S04  |        | R0,1   | 1,4     | 45     | 4         | ☑                  |
| 2NCR-007-002-S04  |        | R0,2   | 1,4     | 45     | 4         | ☑                  |
| 2NCR-008-0002-S04 | 0,8    | R0,02  | 1,6     | 45     | 4         | ☑                  |
| 2NCR-008-0005-S04 |        | R0,05  | 1,6     | 45     | 4         | ☑                  |
| 2NCR-008-001-S04  |        | R0,1   | 1,6     | 45     | 4         | ☑                  |
| 2NCR-008-002-S04  |        | R0,2   | 1,6     | 45     | 4         | ☑                  |
| 2NCR-009-0005-S04 | 0,9    | R0,05  | 1,8     | 45     | 4         | ☑                  |
| 2NCR-009-001-S04  |        | R0,1   | 1,8     | 45     | 4         | ☑                  |
| 2NCR-010-0002-S04 | 1      | R0,02  | 2,5     | 45     | 4         | ☑                  |
| 2NCR-010-0005-S04 |        | R0,05  | 2,5     | 45     | 4         | ☑                  |
| 2NCR-010-001-S04  |        | R0,1   | 2,5     | 45     | 4         | ☑                  |
| 2NCR-010-002-S04  |        | R0,2   | 2,5     | 45     | 4         | ☑                  |
| 2NCR-010-003-S04  |        | R0,3   | 2,5     | 45     | 4         | ☑                  |
| 2NCR-010-004-S04  |        | R0,4   | 2,5     | 45     | 4         | ☑                  |
| 2NCR-012-0005-S04 | 1,2    | R0,05  | 3,2     | 45     | 4         | ☑                  |
| 2NCR-012-001-S04  |        | R0,1   | 3,2     | 45     | 4         | ☑                  |
| 2NCR-012-002-S04  |        | R0,2   | 3,2     | 45     | 4         | ☑                  |
| 2NCR-012-003-S04  |        | R0,3   | 3,2     | 45     | 4         | ☑                  |
| 2NCR-015-0002-S04 | 1,5    | R0,02  | 4       | 45     | 4         | ☑                  |
| 2NCR-015-0005-S04 |        | R0,05  | 4       | 45     | 4         | ☑                  |
| 2NCR-015-001-S04  |        | R0,1   | 4       | 45     | 4         | ☑                  |
| 2NCR-015-002-S04  |        | R0,2   | 4       | 45     | 4         | ☑                  |

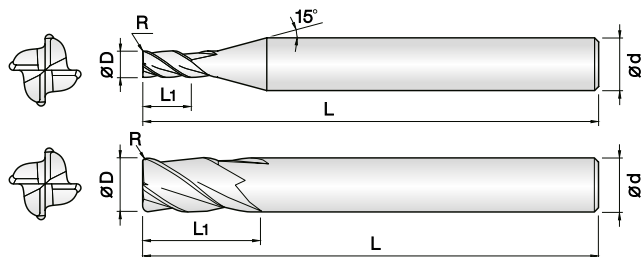
| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 2NCR-015-003-S04  | 1,5    | R0,3   | 4       | 45     | 4         | ☑                  |
| 2NCR-015-004-S04  |        | R0,4   | 4       | 45     | 4         | ☑                  |
| 2NCR-015-005-S04  |        | R0,5   | 4       | 45     | 4         | ☑                  |
| 2NCR-020-0002-S04 | 2      | R0,02  | 6       | 45     | 4         | ☑                  |
| 2NCR-020-0005-S04 |        | R0,05  | 6       | 45     | 4         | ☑                  |
| 2NCR-020-001-S04  |        | R0,1   | 6       | 45     | 4         | ☑                  |
| 2NCR-020-002-S04  |        | R0,2   | 6       | 45     | 4         | ☑                  |
| 2NCR-020-003-S04  |        | R0,3   | 6       | 45     | 4         | ☑                  |
| 2NCR-020-004-S04  |        | R0,4   | 6       | 45     | 4         | ☑                  |
| 2NCR-020-005-S04  |        | R0,5   | 6       | 45     | 4         | ☑                  |
| 2NCR-025-0005-S04 | 2,5    | R0,05  | 6       | 50     | 4         | ☑                  |
| 2NCR-025-001-S04  |        | R0,1   | 6       | 50     | 4         | ☑                  |
| 2NCR-025-002-S04  |        | R0,2   | 6       | 50     | 4         | ☑                  |
| 2NCR-025-003-S04  |        | R0,3   | 6       | 50     | 4         | ☑                  |
| 2NCR-025-004-S04  |        | R0,4   | 6       | 50     | 4         | ☑                  |
| 2NCR-025-005-S04  |        | R0,5   | 6       | 50     | 4         | ☑                  |
| 2NCR-030-0005-S06 | 3      | R0,05  | 8       | 60     | 6         | ☑                  |
| 2NCR-030-001-S06  |        | R0,1   | 8       | 60     | 6         | ☑                  |
| 2NCR-030-002-S06  |        | R0,2   | 8       | 60     | 6         | ☑                  |
| 2NCR-030-003-S06  |        | R0,3   | 8       | 60     | 6         | ☑                  |
| 2NCR-030-004-S06  |        | R0,4   | 8       | 60     | 6         | ☑                  |
| 2NCR-030-005-S06  |        | R0,5   | 8       | 60     | 6         | ☑                  |
| 2NCR-030-010-S06  |        | R1     | 8       | 60     | 6         | ☑                  |
| 2NCR-035-001-S06  | 3,5    | R0,1   | 9       | 70     | 6         | ☑                  |
| 2NCR-035-002-S06  |        | R0,2   | 9       | 70     | 6         | ☑                  |
| 2NCR-035-003-S06  |        | R0,3   | 9       | 70     | 6         | ☑                  |
| 2NCR-035-005-S06  |        | R0,5   | 9       | 70     | 6         | ☑                  |
| 2NCR-040-0005-060 | 4      | R0,05  | 9       | 60     | 4         | ☑                  |
| 2NCR-040-0005-080 |        |        | R0,05   | 9      | 80        | 4                  |
| 2NCR-040-0005-S06 |        | R0,05  | 9       | 70     | 6         | ☑                  |
| 2NCR-040-001-060  | 4      | R0,1   | 9       | 60     | 4         | ☑                  |
| 2NCR-040-001-080  |        |        | R0,1    | 9      | 80        | 4                  |
| 2NCR-040-001-S06  |        | R0,1   | 10      | 70     | 6         | ☑                  |
| 2NCR-040-002-060  | 4      | R0,2   | 9       | 60     | 4         | ☑                  |
| 2NCR-040-002-080  |        |        | R0,2    | 9      | 80        | 4                  |
| 2NCR-040-002-S06  |        | R0,2   | 10      | 70     | 6         | ☑                  |
| 2NCR-040-003-060  | 4      | R0,3   | 9       | 60     | 4         | ☑                  |
| 2NCR-040-003-080  |        |        | R0,3    | 9      | 80        | 4                  |

| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|--------|---------|--------|-----------|--------------------|---|
| 2NCR-040-003-S06  | 4      | R0,3   | 10      | 70     | 6         | ☑                  |   |
| 2NCR-040-004-060  |        |        | 9       | 60     | 4         | ☑                  |   |
| 2NCR-040-004-080  |        | R0,4   | 9       | 80     | 4         | ☑                  |   |
| 2NCR-040-004-S06  |        |        | 10      | 70     | 6         | ☑                  |   |
| 2NCR-040-005-060  |        | R0,5   | 9       | 60     | 4         | ☑                  |   |
| 2NCR-040-005-080  |        |        | 9       | 80     | 4         | ☑                  |   |
| 2NCR-040-005-S06  |        |        | 10      | 70     | 6         | ☑                  |   |
| 2NCR-040-010-060  |        |        | R1      | 9      | 60        | 4                  | ☑ |
| 2NCR-040-010-080  |        | 9      |         | 80     | 4         | ☑                  |   |
| 2NCR-040-010-S06  |        | 10     |         | 70     | 6         | ☑                  |   |
| 2NCR-045-001-S06  |        | 4,5    | R0,1    | 11     | 75        | 6                  | ☑ |
| 2NCR-045-002-S06  |        |        | R0,2    | 11     | 75        | 6                  | ☑ |
| 2NCR-045-003-S06  | R0,3   |        | 11      | 75     | 6         | ☑                  |   |
| 2NCR-045-005-S06  | R0,5   |        | 11      | 75     | 6         | ☑                  |   |
| 2NCR-045-010-S06  | R1     |        | 11      | 75     | 6         | ☑                  |   |
| 2NCR-050-001-S06  | 5      | R0,1   | 13      | 75     | 6         | ☑                  |   |
| 2NCR-050-002-S06  |        | R0,2   | 13      | 75     | 6         | ☑                  |   |
| 2NCR-050-003-S06  |        | R0,3   | 13      | 75     | 6         | ☑                  |   |
| 2NCR-050-004-S06  |        | R0,4   | 13      | 75     | 6         | ☑                  |   |
| 2NCR-050-005-S06  |        | R0,5   | 13      | 75     | 6         | ☑                  |   |
| 2NCR-050-010-S06  |        | R1     | 13      | 75     | 6         | ☑                  |   |
| 2NCR-060-0005-060 | 6      | R0,05  | 11      | 60     | 6         | ☑                  |   |
| 2NCR-060-0005-090 |        |        | 13      | 90     | 6         | ☑                  |   |
| 2NCR-060-001-060  |        | R0,1   | 11      | 60     | 6         | ☑                  |   |
| 2NCR-060-001-090  |        |        | 13      | 90     | 6         | ☑                  |   |
| 2NCR-060-002-060  |        |        | 11      | 60     | 6         | ☑                  |   |
| 2NCR-060-002-090  |        | R0,2   | 13      | 90     | 6         | ☑                  |   |
| 2NCR-060-003-060  |        |        | 11      | 60     | 6         | ☑                  |   |
| 2NCR-060-003-090  |        | R0,3   | 13      | 90     | 6         | ☑                  |   |
| 2NCR-060-004-060  |        |        | 11      | 60     | 6         | ☑                  |   |
| 2NCR-060-004-090  |        | R0,4   | 13      | 90     | 6         | ☑                  |   |
| 2NCR-060-005-060  |        |        | 11      | 60     | 6         | ☑                  |   |
| 2NCR-060-005-090  |        | R0,5   | 13      | 90     | 6         | ☑                  |   |
| 2NCR-060-010-060  |        |        | 11      | 60     | 6         | ☑                  |   |
| 2NCR-060-010-090  |        | R1     | 13      | 90     | 6         | ☑                  |   |
| 2NCR-060-015-060  |        |        | 11      | 60     | 6         | ☑                  |   |
| 2NCR-060-015-090  |        | R1,5   | 13      | 90     | 6         | ☑                  |   |
| 2NCR-060-020-060  |        |        | R2      | 11     | 60        | 6                  | ☑ |
| 2NCR-060-020-090  |        | R2     | 13      | 90     | 6         | ☑                  |   |
| 2NCR-060-025-090  | R2,5   |        | 13      | 90     | 6         | ☑                  |   |
| 2NCR-080-001-070  | 8      |        | R0,1    | 16     | 70        | 8                  | ☑ |
| 2NCR-080-001-100  |        | 19     |         | 100    | 8         | ☑                  |   |
| 2NCR-080-002-070  |        | R0,2   | 16      | 70     | 8         | ☑                  |   |
| 2NCR-080-002-100  |        |        | 19      | 100    | 8         | ☑                  |   |
| 2NCR-080-003-070  |        | R0,3   | 16      | 70     | 8         | ☑                  |   |
| 2NCR-080-003-100  |        |        | 19      | 100    | 8         | ☑                  |   |
| 2NCR-080-005-070  |        |        | 16      | 70     | 8         | ☑                  |   |
| 2NCR-080-005-100  |        | R0,5   | 19      | 100    | 8         | ☑                  |   |
| 2NCR-080-005-120  |        |        | 19      | 120    | 8         | ☑                  |   |
| 2NCR-080-010-070  |        | R1     | 16      | 70     | 8         | ☑                  |   |
| 2NCR-080-010-100  |        |        | 19      | 100    | 8         | ☑                  |   |
| 2NCR-080-010-120  |        |        | 19      | 120    | 8         | ☑                  |   |

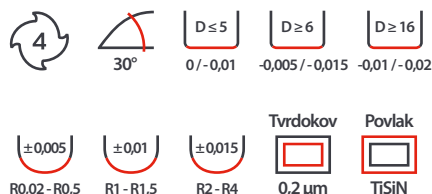
| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|------------------|--------|--------|---------|--------|-----------|--------------------|---|
| 2NCR-080-015-070 | 8      | R1,5   | 16      | 70     | 8         | ☑                  |   |
| 2NCR-080-015-100 |        |        | 19      | 100    | 8         | ☑                  |   |
| 2NCR-080-020-070 |        | R2     | 16      | 70     | 8         | ☑                  |   |
| 2NCR-080-020-100 |        |        | 19      | 100    | 8         | ☑                  |   |
| 2NCR-080-025-100 |        | R2,5   | 19      | 100    | 8         | ☑                  |   |
| 2NCR-080-030-100 |        | R3     | 19      | 100    | 8         | ☑                  |   |
| 2NCR-080-035-100 |        | R3,5   | 19      | 100    | 8         | ☑                  |   |
| 2NCR-100-001-075 |        | 10     | R0,1    | 19     | 75        | 10                 | ☑ |
| 2NCR-100-001-100 | 22     |        |         | 100    | 10        | ☑                  |   |
| 2NCR-100-002-075 | R0,2   |        | 19      | 75     | 10        | ☑                  |   |
| 2NCR-100-002-100 |        |        | 22      | 100    | 10        | ☑                  |   |
| 2NCR-100-003-075 | R0,3   |        | 19      | 75     | 10        | ☑                  |   |
| 2NCR-100-003-100 |        |        | 22      | 100    | 10        | ☑                  |   |
| 2NCR-100-005-075 | R0,5   |        | 19      | 75     | 10        | ☑                  |   |
| 2NCR-100-005-100 |        |        | 22      | 100    | 10        | ☑                  |   |
| 2NCR-100-005-130 | R1     |        | 22      | 130    | 10        | ☑                  |   |
| 2NCR-100-010-075 |        |        | 19      | 75     | 10        | ☑                  |   |
| 2NCR-100-010-100 |        |        | 22      | 100    | 10        | ☑                  |   |
| 2NCR-100-010-130 |        |        | 22      | 130    | 10        | ☑                  |   |
| 2NCR-100-015-075 |        |        | R1,5    | 19     | 75        | 10                 | ☑ |
| 2NCR-100-015-100 |        |        |         | 22     | 100       | 10                 | ☑ |
| 2NCR-100-015-130 |        |        | R2      | 22     | 130       | 10                 | ☑ |
| 2NCR-100-020-075 |        |        |         | 19     | 75        | 10                 | ☑ |
| 2NCR-100-020-100 | R2,5   |        | 22      | 100    | 10        | ☑                  |   |
| 2NCR-100-025-100 |        |        | 22      | 100    | 10        | ☑                  |   |
| 2NCR-100-030-100 |        | R3     | 22      | 100    | 10        | ☑                  |   |
| 2NCR-100-040-100 |        | R4     | 22      | 100    | 10        | ☑                  |   |
| 2NCR-120-001-080 | 12     | R0,1   | 22      | 80     | 12        | ☑                  |   |
| 2NCR-120-001-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 2NCR-120-002-080 |        | R0,2   | 22      | 80     | 12        | ☑                  |   |
| 2NCR-120-002-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 2NCR-120-003-080 |        | R0,3   | 22      | 80     | 12        | ☑                  |   |
| 2NCR-120-003-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 2NCR-120-005-080 |        | R0,5   | 22      | 80     | 12        | ☑                  |   |
| 2NCR-120-005-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 2NCR-120-005-130 |        |        | 26      | 130    | 12        | ☑                  |   |
| 2NCR-120-010-080 |        | R1     | 22      | 80     | 12        | ☑                  |   |
| 2NCR-120-010-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 2NCR-120-010-130 |        | R1,5   | 26      | 130    | 12        | ☑                  |   |
| 2NCR-120-015-080 |        |        | 22      | 80     | 12        | ☑                  |   |
| 2NCR-120-015-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 2NCR-120-015-130 |        |        | 26      | 130    | 12        | ☑                  |   |
| 2NCR-120-020-080 |        |        | R2      | 22     | 80        | 12                 | ☑ |
| 2NCR-120-020-110 |        |        |         | 26     | 110       | 12                 | ☑ |
| 2NCR-120-020-130 |        | R2,5   | 26      | 130    | 12        | ☑                  |   |
| 2NCR-120-025-110 | 26     |        | 110     | 12     | ☑         |                    |   |
| 2NCR-120-030-110 | R3     |        | 26      | 110    | 12        | ☑                  |   |
| 2NCR-120-040-110 | R4     | 26     | 110     | 12     | ☑         |                    |   |
| 2NCR-120-050-110 | R5     | 26     | 110     | 12     | ☑         |                    |   |



# 4NCR 4-břité TOROIDNÍ frézy pro kalené oceli do HRC 62



- ▶ **Určeno pro kalené oceli (50 - 62 HRC)**
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance rezných hran
- ▶ Široký sortiment rádiusů a délek pro optimální výběr nástroje
- ▶ Vynikající výkon při vysokých rezných rychlostech díky 0,2 μm tvrdokovu



| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 4NCR-010-0002-S04 | 1      | R0,02  | 2,5     | 45     | 4         | ☑                  |
| 4NCR-010-0005-S04 |        | R0,05  | 2,5     | 45     | 4         | ☑                  |
| 4NCR-010-001-S04  |        | R0,1   | 2,5     | 45     | 4         | ☑                  |
| 4NCR-010-002-S04  |        | R0,2   | 2,5     | 45     | 4         | ☑                  |
| 4NCR-010-003-S04  |        | R0,3   | 2,5     | 45     | 4         | ☑                  |
| 4NCR-012-0002-S04 | 1,2    | R0,02  | 4       | 45     | 4         | ☑                  |
| 4NCR-012-0005-S04 |        | R0,05  | 4       | 45     | 4         | ☑                  |
| 4NCR-012-001-S04  |        | R0,1   | 4       | 45     | 4         | ☑                  |
| 4NCR-012-002-S04  |        | R0,2   | 4       | 45     | 4         | ☑                  |
| 4NCR-012-003-S04  | R0,3   | 4      | 45      | 4      | ☑         |                    |
| 4NCR-015-0002-S04 | 1,5    | R0,02  | 4       | 45     | 4         | ☑                  |
| 4NCR-015-0005-S04 |        | R0,05  | 4       | 45     | 4         | ☑                  |
| 4NCR-015-001-S04  |        | R0,1   | 4       | 45     | 4         | ☑                  |
| 4NCR-015-002-S04  |        | R0,2   | 4       | 45     | 4         | ☑                  |
| 4NCR-015-003-S04  |        | R0,3   | 4       | 45     | 4         | ☑                  |
| 4NCR-015-004-S04  |        | R0,4   | 4       | 45     | 4         | ☑                  |
| 4NCR-015-005-S04  | R0,5   | 4      | 45      | 4      | ☑         |                    |
| 4NCR-020-0002-S04 | 2      | R0,02  | 6       | 45     | 4         | ☑                  |
| 4NCR-020-0005-S04 |        | R0,05  | 6       | 45     | 4         | ☑                  |
| 4NCR-020-001-S04  |        | R0,1   | 6       | 45     | 4         | ☑                  |
| 4NCR-020-002-S04  |        | R0,2   | 6       | 45     | 4         | ☑                  |
| 4NCR-020-003-S04  |        | R0,3   | 6       | 45     | 4         | ☑                  |
| 4NCR-020-004-S04  |        | R0,4   | 6       | 45     | 4         | ☑                  |
| 4NCR-020-005-S04  | R0,5   | 6      | 45      | 4      | ☑         |                    |
| 4NCR-025-0005-S04 | 2,5    | R0,05  | 6       | 50     | 4         | ☑                  |
| 4NCR-025-001-S04  |        | R0,1   | 6       | 50     | 4         | ☑                  |
| 4NCR-025-002-S04  |        | R0,2   | 6       | 50     | 4         | ☑                  |
| 4NCR-025-003-S04  |        | R0,3   | 6       | 50     | 4         | ☑                  |
| 4NCR-025-005-S04  | R0,5   | 6      | 50      | 4      | ☑         |                    |
| 4NCR-030-0005-S06 | 3      | R0,05  | 8       | 60     | 6         | ☑                  |
| 4NCR-030-001-S06  |        | R0,1   | 8       | 60     | 6         | ☑                  |
| 4NCR-030-002-S06  |        | R0,2   | 8       | 60     | 6         | ☑                  |
| 4NCR-030-003-S06  |        | R0,3   | 8       | 60     | 6         | ☑                  |
| 4NCR-030-004-S06  |        | R0,4   | 8       | 60     | 6         | ☑                  |
| 4NCR-030-005-S06  |        | R0,5   | 8       | 60     | 6         | ☑                  |
| 4NCR-030-010-S06  |        | R1     | 8       | 60     | 6         | ☑                  |
| 4NCR-040-0005-060 | 4      | R0,05  | 9       | 60     | 4         | ☑                  |
| 4NCR-040-0005-080 |        |        | 9       | 80     | 4         | ☑                  |

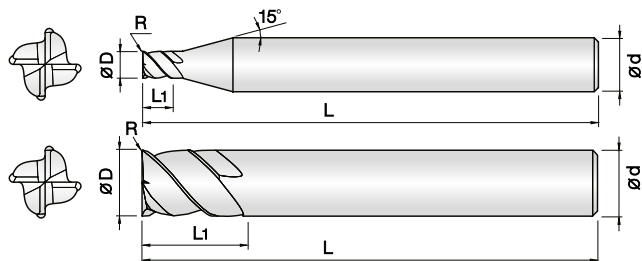
| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|--------|---------|--------|-----------|--------------------|---|
| 4NCR-040-0005-S06 | 4      | R0,05  | 10      | 70     | 6         | ☑                  |   |
| 4NCR-040-001-060  |        | R0,1   | 9       | 60     | 4         | ☑                  |   |
| 4NCR-040-001-080  |        |        | 9       | 80     | 4         | ☑                  |   |
| 4NCR-040-001-506  |        |        | 10      | 70     | 6         | ☑                  |   |
| 4NCR-040-002-060  |        | R0,2   | 9       | 60     | 4         | ☑                  |   |
| 4NCR-040-002-080  |        |        | 9       | 80     | 4         | ☑                  |   |
| 4NCR-040-002-S06  |        | 10     | 70      | 6      | ☑         |                    |   |
| 4NCR-040-003-060  |        | R0,3   | 9       | 60     | 4         | ☑                  |   |
| 4NCR-040-003-080  |        |        | 9       | 80     | 4         | ☑                  |   |
| 4NCR-040-003-S06  |        | 10     | 70      | 6      | ☑         |                    |   |
| 4NCR-040-004-060  |        | R0,4   | 9       | 60     | 4         | ☑                  |   |
| 4NCR-040-004-080  |        |        | 9       | 80     | 4         | ☑                  |   |
| 4NCR-040-004-S06  |        | 10     | 70      | 6      | ☑         |                    |   |
| 4NCR-040-005-060  |        | R0,5   | 9       | 60     | 4         | ☑                  |   |
| 4NCR-040-005-080  |        |        | 9       | 80     | 4         | ☑                  |   |
| 4NCR-040-005-S06  |        | 10     | 70      | 6      | ☑         |                    |   |
| 4NCR-040-010-060  |        | R1     | 9       | 60     | 4         | ☑                  |   |
| 4NCR-040-010-080  |        |        | 9       | 80     | 4         | ☑                  |   |
| 4NCR-040-010-S06  |        | 10     | 70      | 6      | ☑         |                    |   |
| 4NCR-050-0005-S06 |        | 5      | R0,05   | 13     | 75        | 6                  | ☑ |
| 4NCR-050-001-S06  |        |        | R0,1    | 13     | 75        | 6                  | ☑ |
| 4NCR-050-002-S06  |        |        | R0,2    | 13     | 75        | 6                  | ☑ |
| 4NCR-050-003-S06  |        |        | R0,3    | 13     | 75        | 6                  | ☑ |
| 4NCR-050-004-S06  |        |        | R0,4    | 13     | 75        | 6                  | ☑ |
| 4NCR-050-005-S06  | R0,5   |        | 13      | 75     | 6         | ☑                  |   |
| 4NCR-050-010-S06  | R1     |        | 13      | 75     | 6         | ☑                  |   |
| 4NCR-060-0005-080 | 6      | R0,05  | 13      | 80     | 6         | ☑                  |   |
| 4NCR-060-001-060  |        | R0,1   | 11      | 60     | 6         | ☑                  |   |
| 4NCR-060-001-080  |        |        | 13      | 80     | 6         | ☑                  |   |
| 4NCR-060-002-060  |        | R0,2   | 11      | 60     | 6         | ☑                  |   |
| 4NCR-060-002-080  |        |        | 13      | 80     | 6         | ☑                  |   |
| 4NCR-060-003-060  |        | R0,3   | 11      | 60     | 6         | ☑                  |   |
| 4NCR-060-003-080  |        |        | 13      | 80     | 6         | ☑                  |   |
| 4NCR-060-004-080  |        | R0,4   | 13      | 80     | 6         | ☑                  |   |
| 4NCR-060-005-060  |        | R0,5   | 11      | 60     | 6         | ☑                  |   |
| 4NCR-060-005-080  |        |        | 13      | 80     | 6         | ☑                  |   |
| 4NCR-060-010-060  |        | R1     | 11      | 60     | 6         | ☑                  |   |
| 4NCR-060-010-080  | 13     |        | 80      | 6      | ☑         |                    |   |

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 4NCR-060-015-060 | 6      | R1,5   | 11      | 60     | 6         | ☑                  |
| 4NCR-060-015-080 |        |        | 13      | 80     | 6         | ☑                  |
| 4NCR-060-020-060 |        | R2     | 11      | 60     | 6         | ☑                  |
| 4NCR-060-020-080 |        |        | 13      | 80     | 6         | ☑                  |
| 4NCR-080-001-070 | 8      | R0,1   | 16      | 70     | 8         | ☑                  |
| 4NCR-080-001-090 |        |        | 19      | 90     | 8         | ☑                  |
| 4NCR-080-002-070 |        | R0,2   | 16      | 70     | 8         | ☑                  |
| 4NCR-080-002-090 |        |        | 19      | 90     | 8         | ☑                  |
| 4NCR-080-003-070 |        | R0,3   | 16      | 70     | 8         | ☑                  |
| 4NCR-080-003-090 |        |        | 19      | 90     | 8         | ☑                  |
| 4NCR-080-005-070 |        | R0,5   | 16      | 70     | 8         | ☑                  |
| 4NCR-080-005-090 |        |        | 19      | 90     | 8         | ☑                  |
| 4NCR-080-005-110 |        | R1     | 19      | 110    | 8         | ☑                  |
| 4NCR-080-010-070 |        |        | 16      | 70     | 8         | ☑                  |
| 4NCR-080-010-090 |        |        |         |        | 19        | 90                 |
| 4NCR-080-010-110 |        |        | 19      | 110    | 8         | ☑                  |
| 4NCR-080-015-070 |        |        |         |        | 16        | 70                 |
| 4NCR-080-015-090 |        |        | 19      | 90     |           |                    |
| 4NCR-080-015-110 |        |        |         |        | 19        | 110                |
| 4NCR-080-020-070 |        |        | R2      | 16     |           |                    |
| 4NCR-080-020-090 | 19     |        |         | 90     | 8         | ☑                  |
| 4NCR-080-020-110 | 19     |        | 110     | 8      | ☑         |                    |
| 4NCR-080-025-090 | R2,5   | 19     | 90      | 8      | ☑         |                    |
| 4NCR-100-001-075 | 10     | R0,1   | 19      | 75     | 10        | ☑                  |
| 4NCR-100-001-100 |        |        | 22      | 100    | 10        | ☑                  |
| 4NCR-100-002-075 |        | R0,2   | 19      | 75     | 10        | ☑                  |
| 4NCR-100-002-100 |        |        | 22      | 100    | 10        | ☑                  |
| 4NCR-100-002-120 |        |        | 22      | 120    | 10        | ☑                  |
| 4NCR-100-003-075 |        | R0,3   | 19      | 75     | 10        | ☑                  |
| 4NCR-100-003-100 |        |        | 22      | 100    | 10        | ☑                  |
| 4NCR-100-005-075 |        | R0,5   | 19      | 75     | 10        | ☑                  |
| 4NCR-100-005-100 |        |        | 22      | 100    | 10        | ☑                  |
| 4NCR-100-005-120 |        |        | 22      | 120    | 10        | ☑                  |
| 4NCR-100-010-075 |        |        | R1      | 19     | 75        | 10                 |
| 4NCR-100-010-100 |        | 22     |         | 100    | 10        | ☑                  |
| 4NCR-100-010-120 |        | 22     |         | 120    | 10        | ☑                  |
| 4NCR-100-015-075 |        | R1,5   | 19      | 75     | 10        | ☑                  |
| 4NCR-100-015-100 |        |        | 22      | 100    | 10        | ☑                  |
| 4NCR-100-015-120 |        |        | 22      | 120    | 10        | ☑                  |
| 4NCR-100-020-075 |        | R2     | 19      | 75     | 10        | ☑                  |
| 4NCR-100-020-100 |        |        | 22      | 100    | 10        | ☑                  |
| 4NCR-100-020-120 |        |        | 22      | 120    | 10        | ☑                  |
| 4NCR-100-025-075 |        | R2,5   | 19      | 75     | 10        | ☑                  |
| 4NCR-100-025-100 |        |        | 22      | 100    | 10        | ☑                  |
| 4NCR-100-025-120 |        | R3     | 22      | 120    | 10        | ☑                  |
| 4NCR-100-030-100 |        |        | 22      | 100    | 10        | ☑                  |
| 4NCR-120-002-080 |        | 12     | R0,2    | 22     | 80        | 12                 |
| 4NCR-120-002-110 | 26     |        |         | 110    | 12        | ☑                  |
| 4NCR-120-002-130 | 22     |        |         | 120    | 10        | ☑                  |
| 4NCR-120-003-080 | R0,3   |        | 22      | 80     | 12        | ☑                  |
| 4NCR-120-003-110 |        |        | 26      | 110    | 12        | ☑                  |
| 4NCR-120-005-080 | R0,5   |        | 22      | 80     | 12        | ☑                  |

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|------------------|--------|--------|---------|--------|-----------|--------------------|---|
| 4NCR-120-005-110 | 12     | R0,5   | 26      | 110    | 12        | ☑                  |   |
| 4NCR-120-005-130 |        |        | 26      | 130    | 12        | ☑                  |   |
| 4NCR-120-010-080 |        | R1     | 22      | 80     | 12        | ☑                  |   |
| 4NCR-120-010-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 4NCR-120-010-130 |        |        | 26      | 130    | 12        | ☑                  |   |
| 4NCR-120-015-080 |        | R1,5   | 22      | 80     | 12        | ☑                  |   |
| 4NCR-120-015-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 4NCR-120-015-130 |        |        | 26      | 130    | 12        | ☑                  |   |
| 4NCR-120-020-080 |        | R2     | 22      | 80     | 12        | ☑                  |   |
| 4NCR-120-020-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 4NCR-120-020-130 |        |        | 26      | 130    | 12        | ☑                  |   |
| 4NCR-120-025-080 |        | R2,5   | 22      | 80     | 12        | ☑                  |   |
| 4NCR-120-025-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 4NCR-120-025-130 |        |        | 26      | 130    | 12        | ☑                  |   |
| 4NCR-120-030-080 |        | R3     | 22      | 80     | 12        | ☑                  |   |
| 4NCR-120-030-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 4NCR-120-030-130 |        |        | 26      | 130    | 12        | ☑                  |   |
| 4NCR-120-035-110 |        | R3,5   | 26      | 110    | 12        | ☑                  |   |
| 4NCR-120-040-110 |        | R4     | 26      | 110    | 12        | ☑                  |   |
| 4NCR-160-005-110 |        | 16     | R0,5    | 32     | 110       | 16                 | ☑ |
| 4NCR-160-005-160 |        |        |         | 32     | 160       | 16                 | ☑ |
| 4NCR-160-010-110 |        |        | R1      | 32     | 110       | 16                 | ☑ |
| 4NCR-160-010-160 |        |        |         | 32     | 160       | 16                 | ☑ |
| 4NCR-160-015-110 |        |        | R1,5    | 32     | 110       | 16                 | ☑ |
| 4NCR-160-020-110 | R2     |        | 32      | 110    | 16        | ☑                  |   |
| 4NCR-160-030-110 | R3     |        | 32      | 110    | 16        | ☑                  |   |
| 4NCR-200-005-160 | 20     |        | R0,5    | 38     | 160       | 20                 | ☑ |
| 4NCR-200-010-160 |        | R1     | 38      | 160    | 20        | ☑                  |   |
| 4NCR-200-015-160 |        | R1,5   | 38      | 160    | 20        | ☑                  |   |
| 4NCR-200-020-160 |        | R2     | 38      | 160    | 20        | ☑                  |   |



# 4CRL 4-břité TOROIDNÍ frézy 45° pro kalené oceli do HRC 62



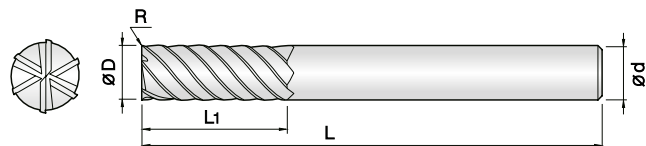
- ▶ Určeno pro kalené oceli (50 - 62 HRC)
- ▶ Vysoká odolnost proti opotřeбенí díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Vyšší posuvy díky 45° geometrii
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



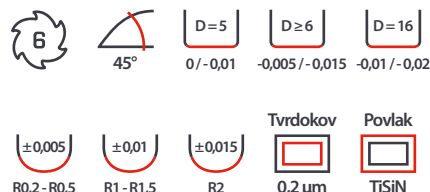
| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 4CRL-010-0005-S06 | 1      | R0,05  | 2       | 50     | 6         | ☑                  |
| 4CRL-010-001-S06  |        | R0,1   | 2       | 50     | 6         | ☑                  |
| 4CRL-010-002-S06  |        | R0,2   | 2       | 50     | 6         | ☑                  |
| 4CRL-010-003-S06  |        | R0,3   | 2       | 50     | 6         | ☑                  |
| 4CRL-012-0005-S06 | 1,2    | R0,05  | 2,5     | 50     | 6         | ☑                  |
| 4CRL-012-001-S06  |        | R0,1   | 2,5     | 50     | 6         | ☑                  |
| 4CRL-012-002-S06  |        | R0,2   | 2,5     | 50     | 6         | ☑                  |
| 4CRL-012-003-S06  |        | R0,3   | 2,5     | 50     | 6         | ☑                  |
| 4CRL-015-0005-S06 | 1,5    | R0,05  | 3       | 50     | 6         | ☑                  |
| 4CRL-015-001-S06  |        | R0,1   | 3       | 50     | 6         | ☑                  |
| 4CRL-015-002-S06  |        | R0,2   | 3       | 50     | 6         | ☑                  |
| 4CRL-015-003-S06  |        | R0,3   | 3       | 50     | 6         | ☑                  |
| 4CRL-015-005-S06  |        | R0,5   | 3       | 50     | 6         | ☑                  |
| 4CRL-020-001-S06  | 2      | R0,1   | 5       | 50     | 6         | ☑                  |
| 4CRL-020-002-S06  |        | R0,2   | 5       | 50     | 6         | ☑                  |
| 4CRL-020-003-S06  |        | R0,3   | 5       | 50     | 6         | ☑                  |
| 4CRL-020-005-S06  |        | R0,5   | 5       | 50     | 6         | ☑                  |
| 4CRL-025-001-S06  | 2,5    | R0,1   | 6       | 60     | 6         | ☑                  |
| 4CRL-025-002-S06  |        | R0,2   | 6       | 60     | 6         | ☑                  |
| 4CRL-025-003-S06  |        | R0,3   | 6       | 60     | 6         | ☑                  |
| 4CRL-025-005-S06  |        | R0,5   | 6       | 60     | 6         | ☑                  |
| 4CRL-030-001-S06  | 3      | R0,1   | 6       | 70     | 6         | ☑                  |
| 4CRL-030-002-S06  |        | R0,2   | 6       | 70     | 6         | ☑                  |
| 4CRL-030-003-S06  |        | R0,3   | 6       | 70     | 6         | ☑                  |
| 4CRL-030-005-S06  |        | R0,5   | 6       | 70     | 6         | ☑                  |
| 4CRL-030-010-S06  |        | R1     | 6       | 70     | 6         | ☑                  |
| 4CRL-040-001-S06  | 4      | R0,1   | 8       | 70     | 6         | ☑                  |
| 4CRL-040-002-S06  |        | R0,2   | 8       | 70     | 6         | ☑                  |
| 4CRL-040-003-S06  |        | R0,3   | 8       | 70     | 6         | ☑                  |
| 4CRL-040-005-S06  |        | R0,5   | 8       | 70     | 6         | ☑                  |
| 4CRL-040-010-S06  |        | R1     | 8       | 70     | 6         | ☑                  |
| 4CRL-060-001-S06  | 6      | R0,1   | 12      | 90     | 6         | ☑                  |
| 4CRL-060-002-S06  |        | R0,2   | 12      | 90     | 6         | ☑                  |
| 4CRL-060-003-S06  |        | R0,3   | 12      | 90     | 6         | ☑                  |
| 4CRL-060-005-S06  |        | R0,5   | 12      | 90     | 6         | ☑                  |
| 4CRL-060-010-S06  |        | R1     | 12      | 90     | 6         | ☑                  |
| 4CRL-060-015-S06  |        | R1,5   | 12      | 90     | 6         | ☑                  |
| 4CRL-060-020-S06  | R2     | 12     | 90      | 6      | ☑         |                    |

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 4CRL-080-002-S08 | 8      | R0,2   | 16      | 90     | 8         | ☑                  |
| 4CRL-080-003-S08 |        | R0,3   | 16      | 90     | 8         | ☑                  |
| 4CRL-080-005-S08 |        | R0,5   | 16      | 90     | 8         | ☑                  |
| 4CRL-080-010-S08 |        | R1     | 16      | 90     | 8         | ☑                  |
| 4CRL-080-015-S08 |        | R1,5   | 16      | 90     | 8         | ☑                  |
| 4CRL-080-020-S08 |        | R2     | 16      | 90     | 8         | ☑                  |
| 4CRL-100-002-S10 | 10     | R0,2   | 20      | 100    | 10        | ☑                  |
| 4CRL-100-003-S10 |        | R0,3   | 20      | 100    | 10        | ☑                  |
| 4CRL-100-005-S10 |        | R0,5   | 20      | 100    | 10        | ☑                  |
| 4CRL-100-010-S10 |        | R1     | 20      | 100    | 10        | ☑                  |
| 4CRL-100-015-S10 |        | R1,5   | 20      | 100    | 10        | ☑                  |
| 4CRL-100-020-S10 |        | R2     | 20      | 100    | 10        | ☑                  |
| 4CRL-120-003-S12 | 12     | R0,3   | 24      | 110    | 12        | ☑                  |
| 4CRL-120-005-S12 |        | R0,5   | 24      | 110    | 12        | ☑                  |
| 4CRL-120-010-S12 |        | R1     | 24      | 110    | 12        | ☑                  |
| 4CRL-120-015-S12 |        | R1,5   | 24      | 110    | 12        | ☑                  |
| 4CRL-120-020-S12 |        | R2     | 24      | 110    | 12        | ☑                  |
| 4CRL-120-030-S12 |        | R3     | 24      | 110    | 12        | ☑                  |
| 4CRL-160-005-S16 | 16     | R0,5   | 32      | 120    | 16        | ☑                  |
| 4CRL-160-010-S16 |        | R1     | 32      | 120    | 16        | ☑                  |
| 4CRL-160-020-S16 |        | R2     | 32      | 120    | 16        | ☑                  |
| 4CRL-160-030-S16 |        | R3     | 32      | 120    | 16        | ☑                  |
| 4CRL-200-005-S20 | 20     | R0,5   | 38      | 130    | 20        | ☑                  |
| 4CRL-200-010-S20 |        | R1     | 38      | 130    | 20        | ☑                  |
| 4CRL-200-020-S20 |        | R2     | 38      | 130    | 20        | ☑                  |
| 4CRL-200-030-S20 |        | R3     | 38      | 130    | 20        | ☑                  |
| 4CRL-200-040-S20 |        | R4     | 38      | 130    | 20        | ☑                  |
| 4CRL-200-050-S20 | R5     | 38     | 130     | 20     | ☑         |                    |

# 6CRL 6-břité TOROIDNÍ frézy 45° pro kalené oceli do HRC 62

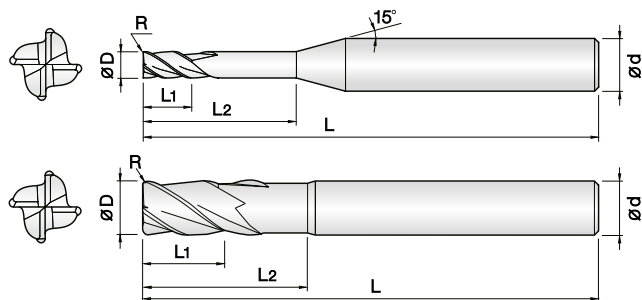


- ▶ Určeno pro kalené oceli (50 - 62 HRC)
- ▶ Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Vyšší posuvy díky 45° geometrii
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,2 μm tvrdokovu



| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 6CRL-050-002-060 | 5      | R0,2   | 13      | 60     | 6         | ☑                  |
| 6CRL-050-003-060 |        | R0,3   | 13      | 60     | 6         | ☑                  |
| 6CRL-050-005-060 |        | R0,5   | 13      | 60     | 6         | ☑                  |
| 6CRL-050-010-060 |        | R1     | 13      | 60     | 6         | ☑                  |
| 6CRL-060-002-060 | 6      | R0,2   | 15      | 60     | 6         | ☑                  |
| 6CRL-060-002-080 |        |        | 15      | 80     | 6         | ☑                  |
| 6CRL-060-003-060 |        | R0,3   | 15      | 60     | 6         | ☑                  |
| 6CRL-060-003-080 |        |        | 15      | 80     | 6         | ☑                  |
| 6CRL-060-005-060 |        | R0,5   | 15      | 60     | 6         | ☑                  |
| 6CRL-060-005-080 |        |        | 15      | 80     | 6         | ☑                  |
| 6CRL-060-010-060 |        | R1     | 15      | 60     | 6         | ☑                  |
| 6CRL-060-010-080 |        |        | 15      | 80     | 6         | ☑                  |
| 6CRL-080-003-070 | 8      | R0,3   | 20      | 70     | 8         | ☑                  |
| 6CRL-080-003-090 |        |        | 20      | 90     | 8         | ☑                  |
| 6CRL-080-005-070 |        | R0,5   | 20      | 70     | 8         | ☑                  |
| 6CRL-080-005-090 |        |        | 20      | 90     | 8         | ☑                  |
| 6CRL-080-010-070 |        | R1     | 20      | 70     | 8         | ☑                  |
| 6CRL-080-010-090 |        |        | 20      | 90     | 8         | ☑                  |
| 6CRL-080-015-070 |        | R1,5   | 20      | 70     | 8         | ☑                  |
| 6CRL-100-003-075 | 10     | R0,3   | 25      | 75     | 10        | ☑                  |
| 6CRL-100-003-100 |        |        | 25      | 100    | 10        | ☑                  |
| 6CRL-100-005-075 |        | R0,5   | 25      | 75     | 10        | ☑                  |
| 6CRL-100-005-100 |        |        | 25      | 100    | 10        | ☑                  |
| 6CRL-100-010-075 |        | R1     | 25      | 75     | 10        | ☑                  |
| 6CRL-100-010-100 |        |        | 25      | 100    | 10        | ☑                  |
| 6CRL-100-020-075 | R2     | 25     | 75      | 10     | ☑         |                    |
| 6CRL-120-003-080 | 12     | R0,3   | 30      | 80     | 12        | ☑                  |
| 6CRL-120-003-110 |        |        | 30      | 110    | 12        | ☑                  |
| 6CRL-120-005-080 |        | R0,5   | 30      | 80     | 12        | ☑                  |
| 6CRL-120-005-110 |        |        | 30      | 110    | 12        | ☑                  |
| 6CRL-120-010-080 |        | R1     | 30      | 80     | 12        | ☑                  |
| 6CRL-120-010-110 |        |        | 30      | 110    | 12        | ☑                  |
| 6CRL-120-020-080 |        | R2     | 30      | 80     | 12        | ☑                  |
| 6CRL-160-005-110 |        | 16     | R0,5    | 50     | 110       | 16                 |
| 6CRL-160-010-110 | R1     |        | 50      | 110    | 16        | ☑                  |
| 6CRL-160-020-110 | R2     |        | 50      | 110    | 16        | ☑                  |

# 4RCU 4-břité TOROIDNÍ frézy 15° pro kalené oceli do HRC 60



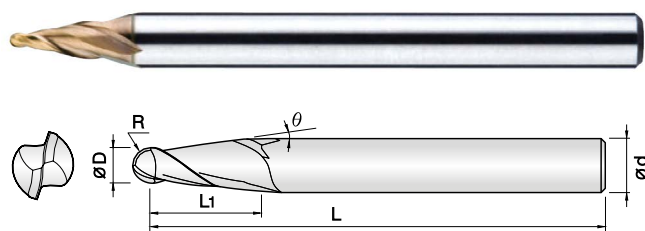
- Určeno pro kalené oceli (50 - 60 HRC)
- Vysoká odolnost proti opotřeбенí díky PVD povlaku na bázi Si
- Určeno pro vysoké posuvy při nižších řezných rychlostech
- Vhodné pro náročné a hrubovací obrábění
- Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



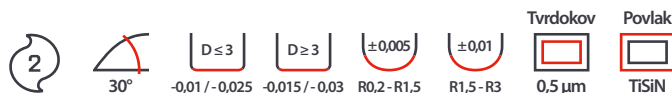
| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 4RCU-010-002-025 | 1      | R0,2   | 2,5     | 1       | 50     | 4         | ☑                  |
| 4RCU-015-005-040 | 1,5    | R0,5   | 4       | 1,5     | 50     | 4         | ☑                  |
| 4RCU-020-005-060 | 2      | R0,5   | 6       | 2       | 50     | 6         | ☑                  |
| 4RCU-030-005-080 | 3      | R0,5   | 8       | 3       | 50     | 6         | ☑                  |
| 4RCU-040-005-120 | 4      | R0,5   | 12      | 4       | 60     | 6         | ☑                  |
| 4RCU-040-005-160 |        |        | 16      | 4       | 60     | 6         | ☑                  |
| 4RCU-040-010-120 | 4      | R1     | 12      | 4       | 60     | 6         | ☑                  |
| 4RCU-040-010-160 |        |        | 16      | 4       | 60     | 6         | ☑                  |
| 4RCU-050-005-150 | 5      | R0,5   | 15      | 5       | 60     | 6         | ☑                  |
| 4RCU-050-010-150 |        | R1     | 15      | 5       | 60     | 6         | ☑                  |
| 4RCU-060-003-150 | 6      | R0,3   | 15      | 6       | 60     | 6         | ☑                  |
| 4RCU-060-005-150 |        | R0,5   | 15      | 6       | 60     | 6         | ☑                  |
| 4RCU-060-010-150 |        | R1     | 15      | 6       | 60     | 6         | ☑                  |
| 4RCU-060-015-150 |        |        | 15      | 6       | 60     | 6         | ☑                  |
| 4RCU-080-003-160 | 8      | R0,3   | 16      | 8       | 60     | 8         | ☑                  |
| 4RCU-080-005-160 |        | R0,5   | 16      | 8       | 60     | 8         | ☑                  |
| 4RCU-080-005-200 |        |        | 20      | 8       | 80     | 8         | ☑                  |
| 4RCU-080-005-300 |        |        | 30      | 8       | 110    | 8         | ☑                  |
| 4RCU-080-010-160 |        | R1     | 16      | 8       | 60     | 8         | ☑                  |
| 4RCU-080-010-200 |        |        | 20      | 8       | 80     | 8         | ☑                  |
| 4RCU-080-010-300 |        |        | 30      | 8       | 110    | 8         | ☑                  |
| 4RCU-080-020-160 |        |        | R2      | 16      | 8      | 60        | 8                  |
| 4RCU-080-020-200 |        | 20     |         | 8       | 80     | 8         | ☑                  |
| 4RCU-080-020-300 |        | 30     |         | 8       | 110    | 8         | ☑                  |
| 4RCU-100-003-200 | 10     | R0,3   | 20      | 10      | 70     | 10        | ☑                  |
| 4RCU-100-005-200 |        | R0,5   | 20      | 10      | 70     | 10        | ☑                  |
| 4RCU-100-005-250 |        |        | 25      | 10      | 90     | 10        | ☑                  |
| 4RCU-100-005-300 |        |        | 30      | 10      | 120    | 10        | ☑                  |
| 4RCU-100-010-200 |        | R1     | 20      | 10      | 70     | 10        | ☑                  |
| 4RCU-100-010-250 |        |        | 25      | 10      | 90     | 10        | ☑                  |
| 4RCU-100-010-300 |        |        | 30      | 10      | 120    | 10        | ☑                  |
| 4RCU-100-020-200 |        |        | R2      | 20      | 10     | 70        | 10                 |
| 4RCU-100-020-250 |        | 25     |         | 10      | 90     | 10        | ☑                  |
| 4RCU-100-020-300 |        | 30     |         | 10      | 120    | 10        | ☑                  |
| 4RCU-120-005-250 | 12     | R0,5   | 25      | 12      | 80     | 12        | ☑                  |
| 4RCU-120-005-300 |        |        | 30      | 12      | 100    | 12        | ☑                  |
| 4RCU-120-005-350 |        |        | 35      | 12      | 130    | 12        | ☑                  |
| 4RCU-120-010-250 |        |        | R1      | 25      | 12     | 80        | 12                 |

| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 4RCU-120-010-300 | 12     | R1     | 30      | 12      | 100    | 12        | ☑                  |
| 4RCU-120-010-350 |        |        | 35      | 12      | 130    | 12        | ☑                  |
| 4RCU-120-020-250 |        |        | R2      | 25      | 12     | 80        | 12                 |
| 4RCU-120-020-300 |        | 30     |         | 12      | 100    | 12        | ☑                  |
| 4RCU-120-020-350 |        | 35     |         | 12      | 130    | 12        | ☑                  |
| 4RCU-120-030-250 |        | R3     | 25      | 12      | 80     | 12        | ☑                  |
| 4RCU-160-010-300 | 16     | R1     | 30      | 16      | 110    | 16        | ☑                  |
| 4RCU-160-010-400 |        |        | 40      | 16      | 160    | 16        | ☑                  |
| 4RCU-160-020-300 |        |        | R2      | 30      | 16     | 110       | 16                 |
| 4RCU-160-020-400 |        | 40     |         | 16      | 160    | 16        | ☑                  |

# 2CTB 2-břité KUŽELOVÉ kulové frézy pro kalené oceli do HRC 55



- Určeno pro kalené oceli (45 - 55 HRC)
- Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- Velmi přesné tolerance řezných hran
- Zesílená řezná hrana pro minimalizaci vyštipování
- Vynikající výkon při vysokých řezných rychlostech díky 0,5 μm tvrdokovu



| Objednací číslo  | D (mm) | R (mm) | Úhel θ | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|--------|---------|--------|-----------|--------------------|
| 2CTB-004-020-030 | 0,4    | R0,2   | 2°     | 3       | 40     | 4         | ☑                  |
| 2CTB-004-030-030 |        |        | 3°     | 3       | 40     | 4         | ☑                  |
| 2CTB-004-040-030 |        |        | 4°     | 3       | 40     | 4         | ☑                  |
| 2CTB-004-050-030 |        |        | 5°     | 3       | 40     | 4         | ☑                  |
| 2CTB-004-070-030 |        |        | 7°     | 3       | 40     | 4         | ☑                  |
| 2CTB-004-100-030 |        |        | 10°    | 3       | 40     | 4         | ☑                  |
| 2CTB-005-020-030 | 0,5    | R0,25  | 2°     | 3       | 40     | 4         | ☑                  |
| 2CTB-005-030-030 |        |        | 3°     | 3       | 40     | 4         | ☑                  |
| 2CTB-005-040-035 |        |        | 4°     | 3,5     | 40     | 4         | ☑                  |
| 2CTB-005-050-035 |        |        | 5°     | 3,5     | 40     | 4         | ☑                  |
| 2CTB-005-070-035 |        |        | 7°     | 3,5     | 40     | 4         | ☑                  |
| 2CTB-005-100-035 |        |        | 10°    | 3,5     | 40     | 4         | ☑                  |
| 2CTB-006-020-030 | 0,6    | R0,3   | 2°     | 3       | 40     | 4         | ☑                  |
| 2CTB-006-030-030 |        |        | 3°     | 3       | 40     | 4         | ☑                  |
| 2CTB-006-040-035 |        |        | 4°     | 3,5     | 40     | 4         | ☑                  |
| 2CTB-006-050-035 |        |        | 5°     | 3,5     | 40     | 4         | ☑                  |
| 2CTB-006-070-035 |        |        | 7°     | 3,5     | 40     | 4         | ☑                  |
| 2CTB-006-100-035 |        |        | 10°    | 3,5     | 40     | 4         | ☑                  |
| 2CTB-008-020-030 | 0,8    | R0,4   | 2°     | 3       | 40     | 4         | ☑                  |
| 2CTB-008-030-030 |        |        | 3°     | 3       | 40     | 4         | ☑                  |
| 2CTB-008-040-040 |        |        | 4°     | 4       | 40     | 4         | ☑                  |
| 2CTB-008-050-040 |        |        | 5°     | 4       | 40     | 4         | ☑                  |
| 2CTB-008-070-040 |        |        | 7°     | 4       | 40     | 4         | ☑                  |
| 2CTB-008-100-040 |        |        | 10°    | 4       | 40     | 4         | ☑                  |
| 2CTB-010-003-030 | 1      | R0,5   | 0°30'  | 3       | 40     | 4         | ☑                  |
| 2CTB-010-010-030 |        |        | 1°     | 3       | 40     | 4         | ☑                  |
| 2CTB-010-013-040 |        |        | 1°30'  | 4       | 40     | 4         | ☑                  |
| 2CTB-010-020-040 |        |        | 2°     | 4       | 40     | 4         | ☑                  |
| 2CTB-010-030-040 |        |        | 3°     | 4       | 40     | 4         | ☑                  |
| 2CTB-010-040-060 |        |        | 4°     | 6       | 45     | 4         | ☑                  |
| 2CTB-010-050-060 |        |        | 5°     | 6       | 45     | 4         | ☑                  |
| 2CTB-010-070-060 |        |        | 7°     | 6       | 45     | 4         | ☑                  |
| 2CTB-010-100-060 |        |        | 10°    | 6       | 45     | 4         | ☑                  |
| 2CTB-015-003-060 |        |        | 1,5    | R0,75   | 0°30'  | 6         | 45                 |
| 2CTB-015-010-060 | 1°     | 6      |        |         | 45     | 4         | ☑                  |
| 2CTB-015-013-060 | 1°30'  | 6      |        |         | 45     | 4         | ☑                  |
| 2CTB-015-020-060 | 2°     | 6      |        |         | 45     | 4         | ☑                  |
| 2CTB-015-030-060 | 3°     | 6      |        |         | 45     | 4         | ☑                  |

| Objednací číslo  | D (mm) | R (mm) | Úhel θ | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |    |   |
|------------------|--------|--------|--------|---------|--------|-----------|--------------------|----|---|
| 2CTB-015-040-060 | 1,5    | R0,75  | 4°     | 6       | 45     | 4         | ☑                  |    |   |
| 2CTB-015-050-060 |        |        | 5°     | 6       | 45     | 4         | ☑                  |    |   |
| 2CTB-015-070-060 |        |        | 7°     | 6       | 45     | 4         | ☑                  |    |   |
| 2CTB-020-003-080 | 2      | R1     | 0°30'  | 8       | 45     | 4         | ☑                  |    |   |
| 2CTB-020-010-080 |        |        | 1°     | 8       | 45     | 4         | ☑                  |    |   |
| 2CTB-020-013-080 |        |        | 1°30'  | 8       | 45     | 4         | ☑                  |    |   |
| 2CTB-020-020-080 |        |        | 2°     | 8       | 45     | 4         | ☑                  |    |   |
| 2CTB-020-030-080 |        |        | 3°     | 8       | 45     | 4         | ☑                  |    |   |
| 2CTB-020-040-080 |        |        | 4°     | 8       | 45     | 4         | ☑                  |    |   |
| 2CTB-020-050-080 |        |        | 5°     | 8       | 45     | 4         | ☑                  |    |   |
| 2CTB-020-070-080 |        |        | 7°     | 8       | 45     | 4         | ☑                  |    |   |
| 2CTB-030-003-120 |        |        | 3      | R1,5    | 0°30'  | 12        | 60                 | 6  | ☑ |
| 2CTB-030-010-120 |        |        |        |         | 1°     | 12        | 60                 | 6  | ☑ |
| 2CTB-030-013-120 | 1°30'  | 12     |        |         | 60     | 6         | ☑                  |    |   |
| 2CTB-030-020-120 | 2°     | 12     |        |         | 60     | 6         | ☑                  |    |   |
| 2CTB-030-030-120 | 3°     | 12     |        |         | 60     | 6         | ☑                  |    |   |
| 2CTB-030-040-120 | 4°     | 12     |        |         | 60     | 6         | ☑                  |    |   |
| 2CTB-030-050-120 | 5°     | 12     |        |         | 60     | 6         | ☑                  |    |   |
| 2CTB-030-070-120 | 7°     | 12     |        |         | 60     | 6         | ☑                  |    |   |
| 2CTB-040-003-160 | 4      | R2     |        |         | 0°30'  | 16        | 70                 | 8  | ☑ |
| 2CTB-040-010-160 |        |        |        |         | 1°     | 16        | 70                 | 8  | ☑ |
| 2CTB-040-013-160 |        |        | 1°30'  | 16      | 70     | 8         | ☑                  |    |   |
| 2CTB-040-020-160 |        |        | 2°     | 16      | 70     | 8         | ☑                  |    |   |
| 2CTB-040-030-160 |        |        | 3°     | 16      | 70     | 8         | ☑                  |    |   |
| 2CTB-040-040-160 |        |        | 4°     | 16      | 70     | 8         | ☑                  |    |   |
| 2CTB-040-050-160 |        |        | 5°     | 16      | 70     | 8         | ☑                  |    |   |
| 2CTB-040-070-160 |        |        | 7°     | 16      | 70     | 8         | ☑                  |    |   |
| 2CTB-050-003-200 |        |        | 5      | R2,5    | 0°30'  | 20        | 75                 | 8  | ☑ |
| 2CTB-050-010-200 |        |        |        |         | 1°     | 20        | 75                 | 8  | ☑ |
| 2CTB-050-013-200 | 1°30'  | 20     |        |         | 75     | 8         | ☑                  |    |   |
| 2CTB-050-020-200 | 2°     | 20     |        |         | 75     | 8         | ☑                  |    |   |
| 2CTB-050-030-200 | 3°     | 20     |        |         | 75     | 8         | ☑                  |    |   |
| 2CTB-050-040-200 | 4°     | 20     |        |         | 75     | 8         | ☑                  |    |   |
| 2CTB-050-050-200 | 5°     | 20     |        |         | 80     | 10        | ☑                  |    |   |
| 2CTB-050-070-200 | 7°     | 20     |        |         | 80     | 10        | ☑                  |    |   |
| 2CTB-060-003-240 | 6      | R3     |        |         | 0°30'  | 24        | 80                 | 10 | ☑ |
| 2CTB-060-010-240 |        |        |        |         | 1°     | 24        | 80                 | 10 | ☑ |
| 2CTB-060-013-240 |        |        | 1°30'  | 24      | 80     | 10        | ☑                  |    |   |

# 2CTB 2-břité KUŽELOVÉ kulové frézy pro kalené oceli do HRC 55

| Objednací číslo  | D (mm) | R (mm) | Úhel $\theta$ | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|------------------|--------|--------|---------------|---------|--------|-----------|-------------------------------------|
| 2CTB-060-020-240 | 6      | R3     | 2°            | 24      | 80     | 10        | <input checked="" type="checkbox"/> |
| 2CTB-060-030-240 |        |        | 3°            | 24      | 80     | 10        | <input checked="" type="checkbox"/> |
| 2CTB-060-040-240 |        |        | 4°            | 24      | 80     | 10        | <input checked="" type="checkbox"/> |
| 2CTB-060-050-240 |        |        | 5°            | 24      | 90     | 12        | <input checked="" type="checkbox"/> |
| 2CTB-060-070-240 |        |        | 7°            | 24      | 90     | 12        | <input checked="" type="checkbox"/> |

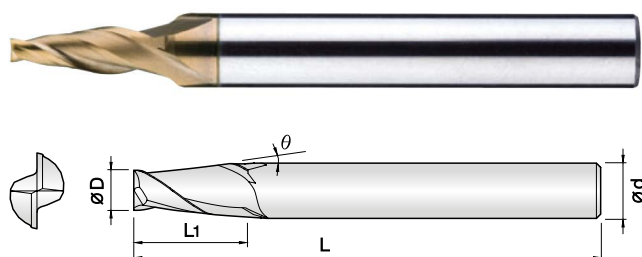
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# 2CTE 2-břité KUŽELOVÉ ostré frézy pro kalené oceli do HRC 55



- Určeno pro kalené oceli (45 - 55 HRC)
- Vysoká odolnost proti opotřebování díky PVD povlaku na bázi Si
- Velmi přesné tolerance řezných hran
- Zesílená řezná hrana pro minimalizaci vyštipování
- Vynikající výkon při vysokých řezných rychlostech díky 0,5 μm tvrdokovu



| Objednací číslo  | D (mm) | Úhel θ | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 2CTE-003-003-012 | 0,3    | 0°30'  | 1,2     | 40     | 4         | ☑                  |
| 2CTE-003-010-012 |        | 1°     | 1,2     | 40     | 4         | ☑                  |
| 2CTE-003-013-012 |        | 1°30'  | 1,2     | 40     | 4         | ☑                  |
| 2CTE-003-020-012 |        | 2°     | 1,2     | 40     | 4         | ☑                  |
| 2CTE-003-030-012 |        | 3°     | 1,2     | 40     | 4         | ☑                  |
| 2CTE-003-050-012 |        | 5°     | 1,2     | 40     | 4         | ☑                  |
| 2CTE-003-070-015 |        | 7°     | 1,5     | 40     | 4         | ☑                  |
| 2CTE-003-100-015 |        | 10°    | 1,5     | 40     | 4         | ☑                  |
| 2CTE-004-003-016 |        | 0,4    | 0°30'   | 1,6    | 40        | 4                  |
| 2CTE-004-010-016 | 1°     |        | 1,6     | 40     | 4         | ☑                  |
| 2CTE-004-013-016 | 1°30'  |        | 1,6     | 40     | 4         | ☑                  |
| 2CTE-004-020-016 | 2°     |        | 1,6     | 40     | 4         | ☑                  |
| 2CTE-004-030-016 | 3°     |        | 1,6     | 40     | 4         | ☑                  |
| 2CTE-004-050-016 | 5°     |        | 1,6     | 40     | 4         | ☑                  |
| 2CTE-004-070-020 | 7°     |        | 2       | 40     | 4         | ☑                  |
| 2CTE-004-100-020 | 10°    |        | 2       | 40     | 4         | ☑                  |
| 2CTE-005-003-020 | 0,5    |        | 0°30'   | 2      | 40        | 4                  |
| 2CTE-005-010-020 |        | 1°     | 2       | 40     | 4         | ☑                  |
| 2CTE-005-013-020 |        | 1°30'  | 2       | 40     | 4         | ☑                  |
| 2CTE-005-020-020 |        | 2°     | 2       | 40     | 4         | ☑                  |
| 2CTE-005-030-020 |        | 3°     | 2       | 40     | 4         | ☑                  |
| 2CTE-005-050-020 |        | 5°     | 2       | 40     | 4         | ☑                  |
| 2CTE-005-070-025 |        | 7°     | 2,5     | 40     | 4         | ☑                  |
| 2CTE-005-100-025 |        | 10°    | 2,5     | 40     | 4         | ☑                  |
| 2CTE-006-003-020 |        | 0,6    | 0°30'   | 2      | 40        | 4                  |
| 2CTE-006-010-020 | 1°     |        | 2       | 40     | 4         | ☑                  |
| 2CTE-006-013-020 | 1°30'  |        | 2       | 40     | 4         | ☑                  |
| 2CTE-006-020-020 | 2°     |        | 2       | 40     | 4         | ☑                  |
| 2CTE-006-030-020 | 3°     |        | 2       | 40     | 4         | ☑                  |
| 2CTE-006-050-020 | 5°     |        | 2       | 40     | 4         | ☑                  |
| 2CTE-006-070-025 | 7°     |        | 2,5     | 40     | 4         | ☑                  |
| 2CTE-006-100-025 | 10°    |        | 2,5     | 40     | 4         | ☑                  |
| 2CTE-007-010-025 | 0,7    |        | 1°      | 2,5    | 40        | 4                  |
| 2CTE-007-013-025 |        | 1°30'  | 2,5     | 40     | 4         | ☑                  |
| 2CTE-007-020-025 |        | 2°     | 2,5     | 40     | 4         | ☑                  |
| 2CTE-007-030-025 |        | 3°     | 2,5     | 40     | 4         | ☑                  |
| 2CTE-007-050-025 |        | 5°     | 2,5     | 40     | 4         | ☑                  |
| 2CTE-007-070-030 |        | 7°     | 3       | 40     | 4         | ☑                  |

| Objednací číslo  | D (mm) | Úhel θ | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 2CTE-007-100-030 | 0,7    | 10°    | 3       | 40     | 4         | ☑                  |
| 2CTE-008-003-030 | 0,8    | 0°30'  | 3       | 40     | 4         | ☑                  |
| 2CTE-008-010-030 |        | 1°     | 3       | 40     | 4         | ☑                  |
| 2CTE-008-013-030 |        | 1°30'  | 3       | 40     | 4         | ☑                  |
| 2CTE-008-020-030 |        | 2°     | 3       | 40     | 4         | ☑                  |
| 2CTE-008-030-030 |        | 3°     | 3       | 40     | 4         | ☑                  |
| 2CTE-008-050-030 |        | 5°     | 3       | 40     | 4         | ☑                  |
| 2CTE-008-070-030 |        | 7°     | 3       | 40     | 4         | ☑                  |
| 2CTE-008-100-030 |        | 10°    | 3       | 40     | 4         | ☑                  |
| 2CTE-010-003-040 |        | 1      | 0°30'   | 4      | 45        | 4                  |
| 2CTE-010-010-040 | 1°     |        | 4       | 45     | 4         | ☑                  |
| 2CTE-010-013-040 | 1°30'  |        | 4       | 45     | 4         | ☑                  |
| 2CTE-010-020-040 | 2°     |        | 4       | 45     | 4         | ☑                  |
| 2CTE-010-030-040 | 3°     |        | 4       | 45     | 4         | ☑                  |
| 2CTE-010-050-040 | 5°     |        | 4       | 45     | 4         | ☑                  |
| 2CTE-010-070-040 | 7°     |        | 4       | 45     | 4         | ☑                  |
| 2CTE-010-100-040 | 10°    |        | 4       | 45     | 4         | ☑                  |
| 2CTE-015-003-050 | 1,5    |        | 0°30'   | 5      | 45        | 4                  |
| 2CTE-015-010-050 |        | 1°     | 5       | 45     | 4         | ☑                  |
| 2CTE-015-013-060 |        | 1°30'  | 6       | 45     | 4         | ☑                  |
| 2CTE-015-020-070 |        | 2°     | 7       | 45     | 4         | ☑                  |
| 2CTE-015-030-080 |        | 3°     | 8       | 45     | 4         | ☑                  |
| 2CTE-015-050-100 |        | 5°     | 10      | 50     | 4         | ☑                  |
| 2CTE-015-070-100 |        | 7°     | 10      | 50     | 4         | ☑                  |
| 2CTE-015-100-100 |        | 10°    | 10      | 50     | 6         | ☑                  |
| 2CTE-020-003-060 |        | 2      | 0°30'   | 6      | 45        | 4                  |
| 2CTE-020-010-060 | 1°     |        | 6       | 45     | 4         | ☑                  |
| 2CTE-020-013-060 | 1°30'  |        | 6       | 45     | 4         | ☑                  |
| 2CTE-020-020-080 | 2°     |        | 8       | 45     | 4         | ☑                  |
| 2CTE-020-030-100 | 3°     |        | 10      | 50     | 4         | ☑                  |
| 2CTE-020-050-100 | 5°     |        | 10      | 50     | 4         | ☑                  |
| 2CTE-020-070-100 | 7°     |        | 10      | 50     | 6         | ☑                  |
| 2CTE-020-100-110 | 10°    |        | 11      | 50     | 6         | ☑                  |
| 2CTE-025-003-080 | 2,5    |        | 0°30'   | 8      | 45        | 6                  |
| 2CTE-025-010-100 |        | 1°     | 10      | 50     | 6         | ☑                  |
| 2CTE-025-013-100 |        | 1°30'  | 10      | 50     | 6         | ☑                  |
| 2CTE-025-020-120 |        | 2°     | 12      | 50     | 6         | ☑                  |
| 2CTE-025-030-120 |        | 3°     | 12      | 50     | 6         | ☑                  |

# 2CTE 2-břité KUŽELOVÉ ostré frézy pro kalené oceli do HRC 55

| Objednací číslo  | D (mm) | Úhel $\theta$ | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |                                     |
|------------------|--------|---------------|---------|--------|-----------|-------------------------------------|-------------------------------------|
| 2CTE-025-050-120 | 2,5    | 5°            | 12      | 50     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-025-070-120 |        | 7°            | 12      | 50     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-025-100-100 |        | 10°           | 10      | 50     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-030-003-120 | 3      | 0°30'         | 12      | 50     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-030-010-120 |        | 1°            | 12      | 50     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-030-013-120 |        | 1°30'         | 12      | 50     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-030-020-120 |        | 2°            | 12      | 50     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-030-030-120 |        | 3°            | 12      | 50     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-030-050-120 |        | 5°            | 12      | 50     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-030-070-120 |        | 7°            | 12      | 50     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-030-100-080 |        | 10°           | 8       | 50     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-040-003-150 |        | 4             | 0°30'   | 15     | 60        | 6                                   | <input checked="" type="checkbox"/> |
| 2CTE-040-010-150 |        |               | 1°      | 15     | 60        | 6                                   | <input checked="" type="checkbox"/> |
| 2CTE-040-013-150 | 1°30'  |               | 15      | 60     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-040-020-150 | 2°     |               | 15      | 60     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-040-030-180 | 3°     |               | 18      | 60     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-040-050-230 | 5°     |               | 23      | 65     | 8         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-060-003-200 | 6      | 0°30'         | 20      | 65     | 8         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-060-010-200 |        | 1°            | 20      | 65     | 8         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-060-013-200 |        | 1°30'         | 20      | 65     | 8         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-060-020-200 |        | 2°            | 20      | 65     | 8         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-060-030-190 |        | 3°            | 19      | 65     | 8         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-060-050-230 |        | 5°            | 23      | 75     | 10        | <input checked="" type="checkbox"/> |                                     |
| 2CTE-060-070-240 |        | 7°            | 24      | 75     | 12        | <input checked="" type="checkbox"/> |                                     |
| 2CTE-060-100-170 |        | 10°           | 17      | 75     | 12        | <input checked="" type="checkbox"/> |                                     |
| 2CTE-070-003-250 | 7      | 0°30'         | 25      | 70     | 8         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-070-010-250 |        | 1°            | 25      | 70     | 8         | <input checked="" type="checkbox"/> |                                     |
| 2CTE-070-013-250 |        | 1°30'         | 25      | 70     | 10        | <input checked="" type="checkbox"/> |                                     |
| 2CTE-070-030-280 |        | 3°            | 28      | 80     | 10        | <input checked="" type="checkbox"/> |                                     |
| 2CTE-070-050-280 |        | 5°            | 28      | 80     | 12        | <input checked="" type="checkbox"/> |                                     |
| 2CTE-080-003-320 | 8      | 0°30'         | 32      | 90     | 10        | <input checked="" type="checkbox"/> |                                     |
| 2CTE-080-010-350 |        | 1°            | 35      | 90     | 10        | <input checked="" type="checkbox"/> |                                     |
| 2CTE-080-013-350 |        | 1°30'         | 35      | 90     | 10        | <input checked="" type="checkbox"/> |                                     |
| 2CTE-080-020-280 |        | 2°            | 28      | 75     | 10        | <input checked="" type="checkbox"/> |                                     |
| 2CTE-080-030-350 |        | 3°            | 35      | 90     | 12        | <input checked="" type="checkbox"/> |                                     |
| 2CTE-080-050-450 |        | 5°            | 45      | 100    | 16        | <input checked="" type="checkbox"/> |                                     |
| 2CTE-080-070-320 |        | 7°            | 32      | 90     | 16        | <input checked="" type="checkbox"/> |                                     |
| 2CTE-080-100-340 |        | 10°           | 34      | 100    | 20        | <input checked="" type="checkbox"/> |                                     |

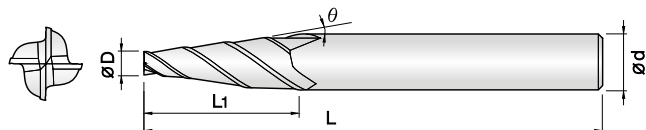
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# 4CTE 4-břité KUŽELOVÉ ostré frézy pro kalené oceli do HRC 55



- ▶ Určeno pro kalené oceli (45 - 55 HRC)
- ▶ Vysoká odolnost proti opotřebování díky PVD povlaku na bázi Si
- ▶ Velmi přesné tolerance řezných hran
- ▶ Zesílená řezná hrana pro minimalizaci vyštipování
- ▶ Vynikající výkon při vysokých řezných rychlostech díky 0,5 μm tvrdkovu

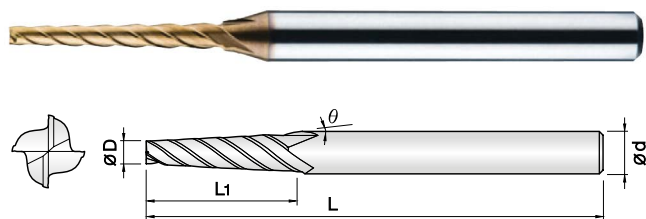


| Objednací číslo  | D (mm) | Úhel θ | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 4CTE-030-003-110 | 3      | 0°30'  | 11      | 50     | 6         | ☑                  |
| 4CTE-030-010-110 |        | 1°     | 11      | 50     | 6         | ☑                  |
| 4CTE-030-013-110 |        | 1°30'  | 11      | 50     | 6         | ☑                  |
| 4CTE-030-020-150 |        | 2°     | 15      | 60     | 6         | ☑                  |
| 4CTE-030-023-150 |        | 2°30'  | 15      | 60     | 6         | ☑                  |
| 4CTE-030-030-150 |        | 3°     | 15      | 60     | 6         | ☑                  |
| 4CTE-030-050-150 |        | 5°     | 15      | 60     | 6         | ☑                  |
| 4CTE-030-070-120 |        | 7°     | 12      | 60     | 6         | ☑                  |
| 4CTE-040-003-150 |        | 4      | 0°30'   | 15     | 60        | 6                  |
| 4CTE-040-010-150 | 1°     |        | 15      | 60     | 6         | ☑                  |
| 4CTE-040-013-150 | 1°30'  |        | 15      | 60     | 6         | ☑                  |
| 4CTE-040-020-180 | 2°     |        | 18      | 60     | 6         | ☑                  |
| 4CTE-040-023-180 | 2°30'  |        | 18      | 60     | 6         | ☑                  |
| 4CTE-040-030-180 | 3°     |        | 18      | 60     | 6         | ☑                  |
| 4CTE-040-050-230 | 5°     |        | 23      | 65     | 8         | ☑                  |
| 4CTE-040-070-250 | 7°     | 25     | 75      | 10     | ☑         |                    |
| 4CTE-050-003-180 | 5      | 0°30'  | 18      | 60     | 6         | ☑                  |
| 4CTE-050-010-180 |        | 1°     | 18      | 60     | 6         | ☑                  |
| 4CTE-050-013-180 |        | 1°30'  | 18      | 60     | 6         | ☑                  |
| 4CTE-050-020-150 |        | 2°     | 15      | 60     | 6         | ☑                  |
| 4CTE-050-023-200 |        | 2°30'  | 20      | 65     | 8         | ☑                  |
| 4CTE-050-030-210 |        | 3°     | 21      | 65     | 8         | ☑                  |
| 4CTE-050-050-280 | 5°     | 28     | 80      | 10     | ☑         |                    |
| 4CTE-050-070-280 | 7°     | 28     | 80      | 12     | ☑         |                    |
| 4CTE-060-003-200 | 6      | 0°30'  | 20      | 65     | 8         | ☑                  |
| 4CTE-060-010-200 |        | 1°     | 20      | 65     | 8         | ☑                  |
| 4CTE-060-013-200 |        | 1°30'  | 20      | 65     | 8         | ☑                  |
| 4CTE-060-020-200 |        | 2°     | 20      | 65     | 8         | ☑                  |
| 4CTE-060-023-200 |        | 2°30'  | 20      | 65     | 8         | ☑                  |
| 4CTE-060-030-260 |        | 3°     | 26      | 75     | 10        | ☑                  |
| 4CTE-060-050-230 |        | 5°     | 23      | 75     | 10        | ☑                  |
| 4CTE-060-070-240 | 7°     | 24     | 80      | 12     | ☑         |                    |
| 4CTE-080-003-250 | 8      | 0°30'  | 25      | 75     | 10        | ☑                  |
| 4CTE-080-010-250 |        | 1°     | 25      | 75     | 10        | ☑                  |
| 4CTE-080-013-250 |        | 1°30'  | 25      | 75     | 10        | ☑                  |
| 4CTE-080-020-250 |        | 2°     | 25      | 75     | 10        | ☑                  |
| 4CTE-080-023-230 |        | 2°30'  | 23      | 75     | 10        | ☑                  |
| 4CTE-080-030-300 |        | 3°     | 30      | 80     | 12        | ☑                  |

| Objednací číslo  | D (mm) | Úhel θ | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 4CTE-080-050-230 | 8      | 5°     | 23      | 85     | 12        | ☑                  |
| 4CTE-100-003-300 | 10     | 0°30'  | 30      | 80     | 12        | ☑                  |
| 4CTE-100-010-300 |        | 1°     | 30      | 80     | 12        | ☑                  |
| 4CTE-100-013-300 |        | 1°30'  | 30      | 80     | 12        | ☑                  |
| 4CTE-100-020-280 |        | 2°     | 28      | 80     | 12        | ☑                  |
| 4CTE-100-030-400 |        | 3°     | 40      | 100    | 16        | ☑                  |
| 4CTE-100-050-340 |        | 5°     | 34      | 100    | 16        | ☑                  |



# 4RTE 4-břité KUŽELOVÉ ostré frézy pro žebrování pro kalené oceli do HRC 55



- Určeno pro kalené oceli (45 - 55 HRC)
- Vysoká odolnost proti opotřebení díky PVD povlaku na bázi Si
- Velmi přesné tolerance řezných hran
- Zesílená řezná hrana pro minimalizaci vyštipování
- Vynikající výkon při vysokých řezných rychlostech díky 0,5 μm tvrdokovu



| Objednací číslo  | D (mm) | Úhel θ | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 4RTE-005-030-040 | 0,5    | 0°30'  | 4       | 45     | 4         | ☑                  |
| 4RTE-005-030-060 |        |        | 6       | 45     | 4         | ☑                  |
| 4RTE-005-045-040 |        | 0°45'  | 4       | 45     | 4         | ☑                  |
| 4RTE-005-045-060 |        |        | 6       | 45     | 4         | ☑                  |
| 4RTE-005-100-040 |        | 1°     | 4       | 45     | 4         | ☑                  |
| 4RTE-005-100-060 |        |        | 6       | 45     | 4         | ☑                  |
| 4RTE-006-030-040 | 0,6    | 0°30'  | 4       | 45     | 4         | ☑                  |
| 4RTE-006-030-060 |        |        | 6       | 45     | 4         | ☑                  |
| 4RTE-006-045-040 |        | 0°45'  | 4       | 45     | 4         | ☑                  |
| 4RTE-006-045-060 |        |        | 6       | 45     | 4         | ☑                  |
| 4RTE-006-100-040 |        | 1°     | 4       | 45     | 4         | ☑                  |
| 4RTE-006-100-060 |        |        | 6       | 45     | 4         | ☑                  |
| 4RTE-007-030-060 | 0,7    | 0°30'  | 6       | 45     | 4         | ☑                  |
| 4RTE-007-030-080 |        |        | 8       | 45     | 4         | ☑                  |
| 4RTE-007-045-060 |        | 0°45'  | 6       | 45     | 4         | ☑                  |
| 4RTE-007-045-080 |        |        | 8       | 45     | 4         | ☑                  |
| 4RTE-007-100-060 |        | 1°     | 6       | 45     | 4         | ☑                  |
| 4RTE-007-100-080 |        |        | 8       | 45     | 4         | ☑                  |
| 4RTE-008-030-060 | 0,8    | 0°30'  | 6       | 45     | 4         | ☑                  |
| 4RTE-008-030-080 |        |        | 8       | 45     | 4         | ☑                  |
| 4RTE-008-030-100 |        | 10     | 45      | 4      | ☑         |                    |
| 4RTE-008-045-060 |        | 0°45'  | 6       | 45     | 4         | ☑                  |
| 4RTE-008-045-080 |        |        | 8       | 45     | 4         | ☑                  |
| 4RTE-008-045-100 |        | 10     | 45      | 4      | ☑         |                    |
| 4RTE-008-100-060 | 1°     | 6      | 45      | 4      | ☑         |                    |
| 4RTE-008-100-080 |        | 8      | 45      | 4      | ☑         |                    |
| 4RTE-008-100-100 |        | 10     | 45      | 4      | ☑         |                    |
| 4RTE-009-030-060 |        | 0,9    | 0°30'   | 6      | 45        | 4                  |
| 4RTE-009-030-080 | 8      |        |         | 45     | 4         | ☑                  |
| 4RTE-009-030-100 | 10     |        | 45      | 4      | ☑         |                    |
| 4RTE-009-045-060 | 0°45'  |        | 6       | 45     | 4         | ☑                  |
| 4RTE-009-045-080 |        |        | 8       | 45     | 4         | ☑                  |
| 4RTE-009-045-100 | 10     |        | 45      | 4      | ☑         |                    |
| 4RTE-009-100-060 | 1°     | 6      | 45      | 4      | ☑         |                    |
| 4RTE-009-100-080 |        | 8      | 45      | 4      | ☑         |                    |
| 4RTE-009-100-100 |        | 10     | 45      | 4      | ☑         |                    |
| 4RTE-010-030-080 |        | 1      | 0°30'   | 8      | 45        | 4                  |
| 4RTE-010-030-100 | 10     |        |         | 45     | 4         | ☑                  |

| Objednací číslo  | D (mm) | Úhel θ | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 4RTE-010-030-120 | 1      | 0°30'  | 12      | 45     | 4         | ☑                  |
| 4RTE-010-045-080 |        | 0°45'  | 8       | 45     | 4         | ☑                  |
| 4RTE-010-045-100 |        |        | 10      | 45     | 4         | ☑                  |
| 4RTE-010-045-120 |        | 12     | 45      | 4      | ☑         |                    |
| 4RTE-010-100-080 |        | 1°     | 8       | 45     | 4         | ☑                  |
| 4RTE-010-100-100 |        |        | 10      | 45     | 4         | ☑                  |
| 4RTE-010-100-120 | 12     | 45     | 4       | ☑      |           |                    |
| 4RTE-012-030-080 | 1,2    | 0°30'  | 8       | 45     | 4         | ☑                  |
| 4RTE-012-030-100 |        |        | 10      | 45     | 4         | ☑                  |
| 4RTE-012-030-120 |        | 12     | 45      | 4      | ☑         |                    |
| 4RTE-012-030-160 |        | 16     | 50      | 4      | ☑         |                    |
| 4RTE-012-045-080 |        | 0°45'  | 8       | 45     | 4         | ☑                  |
| 4RTE-012-045-100 |        |        | 10      | 45     | 4         | ☑                  |
| 4RTE-012-045-120 | 12     | 45     | 4       | ☑      |           |                    |
| 4RTE-012-045-160 | 16     | 50     | 4       | ☑      |           |                    |
| 4RTE-012-100-080 | 1°     | 8      | 45      | 4      | ☑         |                    |
| 4RTE-012-100-100 |        | 10     | 45      | 4      | ☑         |                    |
| 4RTE-012-100-120 |        | 12     | 45      | 4      | ☑         |                    |
| 4RTE-012-100-160 |        | 16     | 50      | 4      | ☑         |                    |
| 4RTE-015-030-060 | 1,5    | 0°30'  | 6       | 45     | 4         | ☑                  |
| 4RTE-015-030-100 |        |        | 10      | 45     | 4         | ☑                  |
| 4RTE-015-030-160 |        | 16     | 50      | 4      | ☑         |                    |
| 4RTE-015-030-200 |        | 20     | 60      | 4      | ☑         |                    |
| 4RTE-015-100-060 |        | 1°     | 6       | 45     | 4         | ☑                  |
| 4RTE-015-100-100 |        |        | 10      | 45     | 4         | ☑                  |
| 4RTE-015-100-160 | 16     |        | 50      | 4      | ☑         |                    |
| 4RTE-015-100-200 | 20     |        | 60      | 4      | ☑         |                    |
| 4RTE-015-100-250 | 25     | 60     | 4       | ☑      |           |                    |
| 4RTE-015-130-060 | 1°30'  | 6      | 45      | 4      | ☑         |                    |
| 4RTE-015-130-100 |        | 10     | 45      | 4      | ☑         |                    |
| 4RTE-015-130-160 |        | 16     | 50      | 4      | ☑         |                    |
| 4RTE-015-130-200 |        | 20     | 60      | 4      | ☑         |                    |
| 4RTE-015-130-250 | 25     | 60     | 4       | ☑      |           |                    |
| 4RTE-020-030-100 | 2      | 0°30'  | 10      | 45     | 4         | ☑                  |
| 4RTE-020-030-160 |        |        | 16      | 50     | 4         | ☑                  |
| 4RTE-020-030-200 |        | 20     | 60      | 4      | ☑         |                    |
| 4RTE-020-030-250 |        | 25     | 60      | 4      | ☑         |                    |
| 4RTE-020-100-100 |        | 1°     | 10      | 45     | 4         | ☑                  |

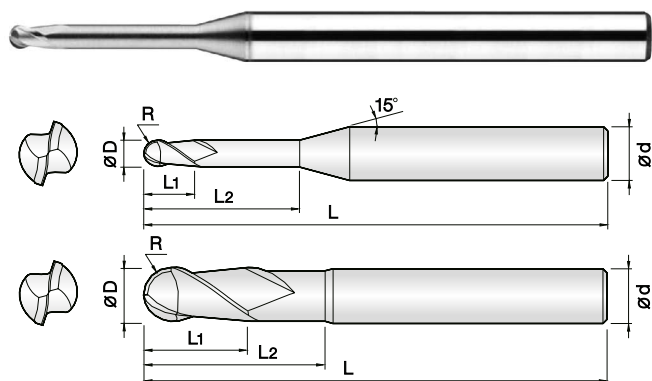
# 4RTE 4-břité KUŽELOVÉ ostré frézy pro žebrování pro kalené oceli do HRC 55

| Objednací číslo  | D (mm) | Úhel $\theta$ | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|------------------|--------|---------------|---------|--------|-----------|-------------------------------------|
| 4RTE-020-100-160 | 2      | 1°            | 16      | 50     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-020-100-200 |        |               | 20      | 60     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-020-100-250 |        |               | 25      | 60     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-020-130-100 |        | 1°30'         | 10      | 45     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-020-130-160 |        |               | 16      | 50     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-020-130-200 |        |               | 20      | 60     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-020-130-250 |        |               | 25      | 60     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-025-030-100 | 2,5    | 0°30'         | 10      | 45     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-025-030-160 |        |               | 16      | 50     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-025-030-200 |        |               | 20      | 60     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-025-030-250 |        |               | 25      | 60     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-025-100-100 |        | 1°            | 10      | 45     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-025-100-160 |        |               | 16      | 50     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-025-100-200 |        |               | 20      | 60     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-025-100-250 |        |               | 25      | 60     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-025-130-100 |        | 1°30'         | 10      | 45     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-025-130-160 |        |               | 16      | 50     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-025-130-200 |        |               | 20      | 60     | 4         | <input checked="" type="checkbox"/> |
| 4RTE-025-130-250 |        |               | 25      | 60     | 4         | <input checked="" type="checkbox"/> |

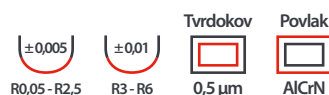
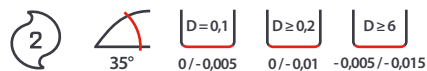
# G

- ▶ Tvrdokovové frézy pro široký sortiment ocelí do HRC 52

# 2HRBG 2-břité KULOVÉ frézy pro žebrování pro široký sortiment ocelí do HRC 52



- Určeno pro široký sortiment různých typů ocelí do HRC 92
- Optimální pro různé typy ocelí díky AlCrN povlaku
- Velmi přesné tolerance řezných hran
- Široký sortiment vyložení pro optimální výběr nástroje
- Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 2HRBG-001-003-S04 | 0,1    | R0,05  | -       | 0,3     | 40     | 4         | ☑                  |
| 2HRBG-001-005-S04 |        |        | -       | 0,5     | 40     | 4         | ☑                  |
| 2HRBG-002-005-S04 | 0,2    | R0,1   | 0,5     | 0,2     | 40     | 4         | ☑                  |
| 2HRBG-002-010-S04 |        |        | 1       | 0,2     | 40     | 4         | ☑                  |
| 2HRBG-002-015-S04 |        |        | 1,5     | 0,2     | 40     | 4         | ☑                  |
| 2HRBG-002-020-S04 |        |        | 2       | 0,2     | 40     | 4         | ☑                  |
| 2HRBG-003-010-S04 | 0,3    | R0,15  | 1       | 0,3     | 40     | 4         | ☑                  |
| 2HRBG-003-015-S04 |        |        | 1,5     | 0,3     | 40     | 4         | ☑                  |
| 2HRBG-003-020-S04 |        |        | 2       | 0,3     | 40     | 4         | ☑                  |
| 2HRBG-003-030-S04 |        |        | 3       | 0,3     | 40     | 4         | ☑                  |
| 2HRBG-003-040-S04 |        |        | 4       | 0,3     | 40     | 4         | ☑                  |
| 2HRBG-003-050-S04 |        |        | 5       | 0,3     | 40     | 4         | ☑                  |
| 2HRBG-004-010-S04 | 0,4    | R0,2   | 1       | 0,5     | 40     | 4         | ☑                  |
| 2HRBG-004-020-S04 |        |        | 2       | 0,5     | 40     | 4         | ☑                  |
| 2HRBG-004-030-S04 |        |        | 3       | 0,5     | 40     | 4         | ☑                  |
| 2HRBG-004040-S04  |        |        | 4       | 0,5     | 40     | 4         | ☑                  |
| 2HRBG-004-050-S04 |        |        | 5       | 0,5     | 40     | 4         | ☑                  |
| 2HRBG-004-060-S04 |        |        | 6       | 0,5     | 40     | 4         | ☑                  |
| 2HRBG-004-080-S04 |        |        | 8       | 0,5     | 40     | 4         | ☑                  |
| 2HRBG-004-100-S04 |        |        | 10      | 0,5     | 40     | 4         | ☑                  |
| 2HRBG-005-010-S04 | 0,5    | R0,25  | 1       | 0,6     | 45     | 4         | ☑                  |
| 2HRBG-005-020-S04 |        |        | 2       | 0,6     | 45     | 4         | ☑                  |
| 2HRBG-005-030-S04 |        |        | 3       | 0,6     | 45     | 4         | ☑                  |
| 2HRBG-005-040-S04 |        |        | 4       | 0,6     | 45     | 4         | ☑                  |
| 2HRBG-005-050-S04 |        |        | 5       | 0,6     | 45     | 4         | ☑                  |
| 2HRBG-005-060-S04 |        |        | 6       | 0,6     | 45     | 4         | ☑                  |
| 2HRBG-005-080-S04 |        |        | 8       | 0,6     | 45     | 4         | ☑                  |
| 2HRBG-005-100-S04 |        |        | 10      | 0,6     | 45     | 4         | ☑                  |
| 2HRBG-005-120-S04 |        |        | 12      | 0,6     | 45     | 4         | ☑                  |
| 2HRBG-005-140-S04 |        |        | 14      | 0,6     | 45     | 4         | ☑                  |
| 2HRBG-006-010-S04 | 0,6    | R0,3   | 1       | 0,7     | 45     | 4         | ☑                  |
| 2HRBG-006-020-S04 |        |        | 2       | 0,7     | 45     | 4         | ☑                  |
| 2HRBG-006-030-S04 |        |        | 3       | 0,7     | 45     | 4         | ☑                  |
| 2HRBG-006-040-S04 |        |        | 4       | 0,7     | 45     | 4         | ☑                  |
| 2HRBG-006-050-S04 |        |        | 5       | 0,7     | 45     | 4         | ☑                  |
| 2HRBG-006-060-S04 |        |        | 6       | 0,7     | 45     | 4         | ☑                  |
| 2HRBG-006-080-S04 |        |        | 8       | 0,7     | 45     | 4         | ☑                  |
| 2HRBG-006-100-S04 |        |        | 10      | 0,7     | 45     | 4         | ☑                  |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 2HRBG-006-120-S04 | 0,6    | R0,3   | 12      | 0,7     | 45     | 4         | ☑                  |
| 2HRBG-006-140-S04 |        |        | 14      | 0,7     | 45     | 4         | ☑                  |
| 2HRBG-006-160-S04 |        |        | 16      | 0,7     | 45     | 4         | ☑                  |
| 2HRBG-007-020-S04 | 0,7    | R0,35  | 2       | 0,8     | 45     | 4         | ☑                  |
| 2HRBG-007-040-S04 |        |        | 4       | 0,8     | 45     | 4         | ☑                  |
| 2HRBG-007-080-S04 |        |        | 8       | 0,8     | 45     | 4         | ☑                  |
| 2HRBG-007-100-S04 |        |        | 10      | 0,8     | 45     | 4         | ☑                  |
| 2HRBG-007-120-S04 |        |        | 12      | 0,8     | 45     | 4         | ☑                  |
| 2HRBG-008-020-S04 | 0,8    | R0,4   | 2       | 0,9     | 45     | 4         | ☑                  |
| 2HRBG-008-040-S04 |        |        | 4       | 0,9     | 45     | 4         | ☑                  |
| 2HRBG-008-060-S04 |        |        | 6       | 0,9     | 45     | 4         | ☑                  |
| 2HRBG-008-080-S04 |        |        | 8       | 0,9     | 45     | 4         | ☑                  |
| 2HRBG-008-100-S04 |        |        | 10      | 0,9     | 45     | 4         | ☑                  |
| 2HRBG-008-120-S04 |        |        | 12      | 0,9     | 45     | 4         | ☑                  |
| 2HRBG-008-140-S04 |        |        | 14      | 0,9     | 45     | 4         | ☑                  |
| 2HRBG-008-160-S04 |        |        | 16      | 0,9     | 45     | 4         | ☑                  |
| 2HRBG-009-040-S04 | 0,9    | R0,45  | 4       | 1       | 45     | 4         | ☑                  |
| 2HRBG-010-020-S04 | 1      | R0,5   | 2       | 1,2     | 45     | 4         | ☑                  |
| 2HRBG-010-020-S06 |        |        | 2       | 1,2     | 45     | 6         | ☑                  |
| 2HRBG-010-030-S04 |        |        | 3       | 1,2     | 45     | 4         | ☑                  |
| 2HRBG-010-030-S06 |        |        | 3       | 1,2     | 45     | 6         | ☑                  |
| 2HRBG-010-040-S04 |        |        | 4       | 1,2     | 45     | 4         | ☑                  |
| 2HRBG-010-040-S06 |        |        | 4       | 1,2     | 45     | 6         | ☑                  |
| 2HRBG-010-050-S04 |        |        | 5       | 1,2     | 45     | 4         | ☑                  |
| 2HRBG-010-050-S06 |        |        | 5       | 1,2     | 45     | 6         | ☑                  |
| 2HRBG-010-060-S04 |        |        | 6       | 1,2     | 45     | 4         | ☑                  |
| 2HRBG-010-060-S06 |        |        | 6       | 1,2     | 45     | 6         | ☑                  |
| 2HRBG-010-080-S04 |        |        | 8       | 1,2     | 45     | 4         | ☑                  |
| 2HRBG-010-080-S06 |        |        | 8       | 1,2     | 45     | 6         | ☑                  |
| 2HRBG-010-100-S04 |        |        | 10      | 1,2     | 50     | 4         | ☑                  |
| 2HRBG-010-100-S06 |        |        | 10      | 1,2     | 50     | 6         | ☑                  |
| 2HRBG-010-120-S04 |        |        | 12      | 1,2     | 50     | 4         | ☑                  |
| 2HRBG-010-120-S06 |        |        | 12      | 1,2     | 50     | 6         | ☑                  |
| 2HRBG-010-140-S04 |        |        | 14      | 1,2     | 50     | 4         | ☑                  |
| 2HRBG-010-140-S06 |        |        | 14      | 1,2     | 50     | 6         | ☑                  |
| 2HRBG-010-160-S04 | 16     | 1,2    | 50      | 4       | ☑      |           |                    |
| 2HRBG-010-160-S06 | 16     | 1,2    | 55      | 6       | ☑      |           |                    |
| 2HRBG-010-180-S04 | 18     | 1,2    | 50      | 4       | ☑      |           |                    |

# 2HRBG

## 2-břité KULOVÉ frézy pro žebrování pro široký sortiment ocelí do HRC 52

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|---|
| 2HRBG-010-180-S06 | 1      | R0,5   | 18      | 1,2     | 60     | 6         | ☑                  |   |   |
| 2HRBG-010-200-S04 |        |        | 20      | 1,2     | 50     | 4         | ☑                  |   |   |
| 2HRBG-010-200-S06 |        |        | 20      | 1,2     | 60     | 6         | ☑                  |   |   |
| 2HRBG-010-220-S04 |        |        | 22      | 1,2     | 60     | 4         | ☑                  |   |   |
| 2HRBG-010-220-S06 |        |        | 22      | 1,2     | 65     | 6         | ☑                  |   |   |
| 2HRBG-010-250-S04 |        |        | 25      | 1,2     | 60     | 4         | ☑                  |   |   |
| 2HRBG-012-040-S04 |        |        | 1,2     | R0,6    | 4      | 1,4       | 45                 | 4 | ☑ |
| 2HRBG-012-040-S06 | 4      | 1,4    |         |         | 45     | 6         | ☑                  |   |   |
| 2HRBG-012-060-S04 | 6      | 1,4    |         |         | 45     | 4         | ☑                  |   |   |
| 2HRBG-012-060-S06 | 6      | 1,4    |         |         | 45     | 6         | ☑                  |   |   |
| 2HRBG-012-080-S04 | 8      | 1,4    |         |         | 45     | 4         | ☑                  |   |   |
| 2HRBG-012-080-S06 | 8      | 1,4    |         |         | 45     | 6         | ☑                  |   |   |
| 2HRBG-012-100-S04 | 10     | 1,4    |         |         | 50     | 4         | ☑                  |   |   |
| 2HRBG-012-100-S06 | 10     | 1,4    |         |         | 50     | 6         | ☑                  |   |   |
| 2HRBG-012-120-S04 | 12     | 1,4    |         |         | 50     | 4         | ☑                  |   |   |
| 2HRBG-012-120-S06 | 12     | 1,4    |         |         | 50     | 6         | ☑                  |   |   |
| 2HRBG-012-160-S04 | 16     | 1,4    |         |         | 50     | 4         | ☑                  |   |   |
| 2HRBG-012-160-S06 | 16     | 1,4    |         |         | 55     | 6         | ☑                  |   |   |
| 2HRBG-012-200-S04 | 20     | 1,4    |         |         | 50     | 4         | ☑                  |   |   |
| 2HRBG-012-200-S06 | 20     | 1,4    |         |         | 60     | 6         | ☑                  |   |   |
| 2HRBG-012-240-S04 | 24     | 1,4    |         |         | 60     | 4         | ☑                  |   |   |
| 2HRBG-012-240-S06 | 24     | 1,4    |         |         | 65     | 6         | ☑                  |   |   |
| 2HRBG-014-060-S04 | 1,4    | R0,7   |         |         | 6      | 1,6       | 45                 | 4 | ☑ |
| 2HRBG-014-080-S04 |        |        |         |         | 8      | 1,6       | 45                 | 4 | ☑ |
| 2HRBG-014-120-S04 |        |        | 12      | 1,6     | 50     | 4         | ☑                  |   |   |
| 2HRBG-014-160-S04 |        |        | 16      | 1,6     | 50     | 4         | ☑                  |   |   |
| 2HRBG-015-030-S04 | 1,5    | R0,75  | 3       | 1,8     | 45     | 4         | ☑                  |   |   |
| 2HRBG-015-030-S06 |        |        | 3       | 1,8     | 45     | 6         | ☑                  |   |   |
| 2HRBG-015-040-S04 |        |        | 4       | 1,8     | 45     | 4         | ☑                  |   |   |
| 2HRBG-015-040-S06 |        |        | 4       | 1,8     | 45     | 6         | ☑                  |   |   |
| 2HRBG-015-060-S04 |        |        | 6       | 1,8     | 45     | 4         | ☑                  |   |   |
| 2HRBG-015-060-S06 |        |        | 6       | 1,8     | 45     | 6         | ☑                  |   |   |
| 2HRBG-015-080-S04 |        |        | 8       | 1,8     | 45     | 4         | ☑                  |   |   |
| 2HRBG-015-080-S06 |        |        | 8       | 1,8     | 45     | 6         | ☑                  |   |   |
| 2HRBG-015-100-S04 |        |        | 10      | 1,8     | 50     | 4         | ☑                  |   |   |
| 2HRBG-015-100-S06 |        |        | 10      | 1,8     | 50     | 6         | ☑                  |   |   |
| 2HRBG-015-120-S04 |        |        | 12      | 1,8     | 50     | 4         | ☑                  |   |   |
| 2HRBG-015-120-S06 |        |        | 12      | 1,8     | 50     | 6         | ☑                  |   |   |
| 2HRBG-015-140-S04 |        |        | 14      | 1,8     | 50     | 4         | ☑                  |   |   |
| 2HRBG-015-140-S06 |        |        | 14      | 1,8     | 50     | 6         | ☑                  |   |   |
| 2HRBG-015-160-S04 |        |        | 16      | 1,8     | 50     | 4         | ☑                  |   |   |
| 2HRBG-015-160-S06 |        |        | 16      | 1,8     | 55     | 6         | ☑                  |   |   |
| 2HRBG-015-180-S04 |        |        | 18      | 1,8     | 50     | 4         | ☑                  |   |   |
| 2HRBG-015-180-S06 |        |        | 18      | 1,8     | 60     | 6         | ☑                  |   |   |
| 2HRBG-015-200-S04 |        |        | 20      | 1,8     | 50     | 4         | ☑                  |   |   |
| 2HRBG-015-200-S06 |        |        | 20      | 1,8     | 60     | 6         | ☑                  |   |   |
| 2HRBG-015-220-S04 |        |        | 22      | 1,8     | 60     | 4         | ☑                  |   |   |
| 2HRBG-015-220-S06 |        |        | 22      | 1,8     | 65     | 6         | ☑                  |   |   |
| 2HRBG-015-250-S04 |        |        | 25      | 1,8     | 60     | 4         | ☑                  |   |   |
| 2HRBG-015-250-S06 |        |        | 25      | 1,8     | 65     | 6         | ☑                  |   |   |
| 2HRBG-015-300-S04 | 30     | 1,8    | 70      | 4       | ☑      |           |                    |   |   |
| 2HRBG-015-300-S06 | 30     | 1,8    | 70      | 6       | ☑      |           |                    |   |   |

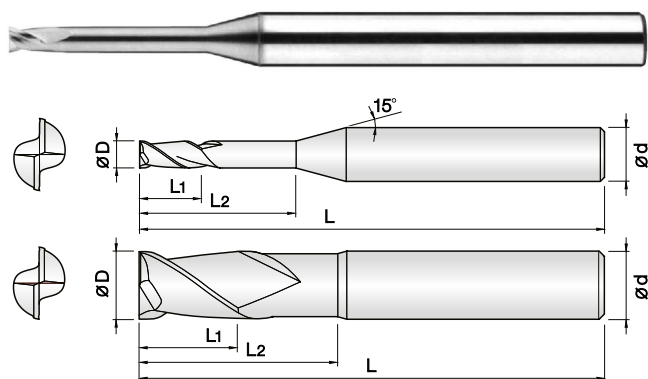
| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 2HRBG-015-350-S04 | 1,5    | R0,75  | 35      | 1,8     | 70     | 4         | ☑                  |
| 2HRBG-016-060-S04 | 1,6    | R0,8   | 6       | 1,9     | 45     | 4         | ☑                  |
| 2HRBG-016-080-S04 |        |        | 8       | 1,9     | 45     | 4         | ☑                  |
| 2HRBG-016-120-S04 |        |        | 12      | 1,9     | 50     | 4         | ☑                  |
| 2HRBG-016-160-S04 |        |        | 16      | 1,9     | 50     | 4         | ☑                  |
| 2HRBG-016-200-S04 |        |        | 20      | 1,9     | 50     | 4         | ☑                  |
| 2HRBG-016-200-S06 |        |        | 20      | 1,9     | 50     | 4         | ☑                  |
| 2HRBG-018-060-S04 | 1,8    | R0,9   | 6       | 2,1     | 45     | 4         | ☑                  |
| 2HRBG-018-080-S04 |        |        | 8       | 2,1     | 45     | 4         | ☑                  |
| 2HRBG-018-120-S04 |        |        | 12      | 2,1     | 50     | 4         | ☑                  |
| 2HRBG-018-160-S04 |        |        | 16      | 2,1     | 50     | 4         | ☑                  |
| 2HRBG-018-200-S04 |        |        | 20      | 2,1     | 50     | 4         | ☑                  |
| 2HRBG-020-040-S04 |        |        | 2       | R1      | 4      | 2,4       | 45                 |
| 2HRBG-020-040-S06 | 4      | 2,4    |         |         | 45     | 6         | ☑                  |
| 2HRBG-020-060-S04 | 6      | 2,4    |         |         | 45     | 4         | ☑                  |
| 2HRBG-020-060-S06 | 6      | 2,4    |         |         | 45     | 6         | ☑                  |
| 2HRBG-020-080-S04 | 8      | 2,4    |         |         | 45     | 4         | ☑                  |
| 2HRBG-020-080-S06 | 8      | 2,4    |         |         | 45     | 6         | ☑                  |
| 2HRBG-020-100-S04 | 10     | 2,4    |         |         | 50     | 4         | ☑                  |
| 2HRBG-020-100-S06 | 10     | 2,4    |         |         | 50     | 6         | ☑                  |
| 2HRBG-020-120-S04 | 12     | 2,4    |         |         | 50     | 4         | ☑                  |
| 2HRBG-020-120-S06 | 12     | 2,4    |         |         | 50     | 6         | ☑                  |
| 2HRBG-020-140-S04 | 14     | 2,4    |         |         | 50     | 4         | ☑                  |
| 2HRBG-020-140-S06 | 14     | 2,4    |         |         | 50     | 6         | ☑                  |
| 2HRBG-020-160-S04 | 16     | 2,4    |         |         | 50     | 4         | ☑                  |
| 2HRBG-020-160-S06 | 16     | 2,4    |         |         | 55     | 6         | ☑                  |
| 2HRBG-020-180-S04 | 18     | 2,4    |         |         | 50     | 4         | ☑                  |
| 2HRBG-020-180-S06 | 18     | 2,4    |         |         | 60     | 6         | ☑                  |
| 2HRBG-020-200-S04 | 20     | 2,4    |         |         | 50     | 4         | ☑                  |
| 2HRBG-020-200-S06 | 20     | 2,4    |         |         | 60     | 6         | ☑                  |
| 2HRBG-020-220-S04 | 22     | 2,4    |         |         | 60     | 4         | ☑                  |
| 2HRBG-020-220-S06 | 22     | 2,4    |         |         | 65     | 6         | ☑                  |
| 2HRBG-020-250-S04 | 25     | 2,4    |         |         | 60     | 4         | ☑                  |
| 2HRBG-020-250-S06 | 25     | 2,4    |         |         | 65     | 6         | ☑                  |
| 2HRBG-020-300-S04 | 30     | 2,4    |         |         | 70     | 4         | ☑                  |
| 2HRBG-020-300-S06 | 30     | 2,4    |         |         | 70     | 6         | ☑                  |
| 2HRBG-020-350-S04 | 35     | 2,4    | 70      | 4       | ☑      |           |                    |
| 2HRBG-020-350-S06 | 35     | 2,4    | 75      | 6       | ☑      |           |                    |
| 2HRBG-020-400-S04 | 40     | 2,4    | 80      | 4       | ☑      |           |                    |
| 2HRBG-020-400-S06 | 40     | 2,4    | 80      | 6       | ☑      |           |                    |
| 2HRBG-020-450-S04 | 45     | 2,4    | 80      | 4       | ☑      |           |                    |
| 2HRBG-025-080-S04 | 2,5    | R1,25  | 8       | 3       | 45     | 4         | ☑                  |
| 2HRBG-025-100-S04 |        |        | 10      | 3       | 50     | 4         | ☑                  |
| 2HRBG-025-160-S04 |        |        | 16      | 3       | 50     | 4         | ☑                  |
| 2HRBG-025-200-S04 |        |        | 20      | 3       | 50     | 4         | ☑                  |
| 2HRBG-025-250-S04 |        |        | 25      | 3       | 60     | 4         | ☑                  |
| 2HRBG-025-300-S04 |        |        | 30      | 3       | 70     | 4         | ☑                  |
| 2HRBG-025-350-S04 | 35     | 3      | 70      | 4       | ☑      |           |                    |
| 2HRBG-030-060-S06 | 3      | R1,5   | 6       | 3,6     | 45     | 6         | ☑                  |
| 2HRBG-030-080-S06 |        |        | 8       | 3,6     | 45     | 6         | ☑                  |
| 2HRBG-030-100-S06 |        |        | 10      | 3,6     | 50     | 6         | ☑                  |
| 2HRBG-030-120-S06 |        |        | 12      | 3,6     | 50     | 6         | ☑                  |
| 2HRBG-030-160-S06 |        |        | 16      | 3,6     | 55     | 6         | ☑                  |

# 2HRBG

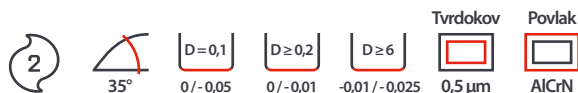
## 2-břité KULOVÉ frézy pro žebrování pro široký sortiment ocelí do HRC 52

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |   |                                     |
|-------------------|--------|--------|---------|---------|--------|-----------|-------------------------------------|---|-------------------------------------|
| 2HRBG-030-200-S06 | 3      | R1,5   | 20      | 3,6     | 60     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-030-250-S06 |        |        | 25      | 3,6     | 65     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-030-300-S06 |        |        | 30      | 3,6     | 70     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-030-350-S06 |        |        | 35      | 3,6     | 75     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-030-400-S06 |        |        | 40      | 3,6     | 80     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-030-450-S06 |        |        | 45      | 3,6     | 90     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-030-500-S06 |        |        | 50      | 3,6     | 100    | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-030-600-S06 |        |        | 60      | 3,6     | 100    | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-040-080-S06 | 4      | R2     | 8       | 4,8     | 45     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-040-100-S06 |        |        | 10      | 4,8     | 50     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-040-120-S06 |        |        | 12      | 4,8     | 50     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-040-160-S06 |        |        | 16      | 4,8     | 55     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-040-200-S06 |        |        | 20      | 4,8     | 60     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-040-250-S06 |        |        | 25      | 4,8     | 65     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-040-300-S06 |        |        | 30      | 4,8     | 70     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-040-350-S06 |        |        | 35      | 4,8     | 75     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-040-400-S06 |        |        | 40      | 4,8     | 80     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-040-450-S06 |        |        | 45      | 4,8     | 90     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-040-500-S06 |        |        | 50      | 4,8     | 100    | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-040-550-S06 |        |        | 55      | 4,8     | 100    | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-040-600-S06 |        |        | 60      | 4,8     | 100    | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-050-150-S06 |        |        | 5       | R2,5    | 15     | 6         | 55                                  | 6 | <input checked="" type="checkbox"/> |
| 2HRBG-050-200-S06 |        |        |         |         | 20     | 6         | 60                                  | 6 | <input checked="" type="checkbox"/> |
| 2HRBG-050-250-S06 |        |        |         |         | 25     | 6         | 70                                  | 6 | <input checked="" type="checkbox"/> |
| 2HRBG-050-300-S06 | 30     | 6      |         |         | 75     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-050-400-S06 | 40     | 6      |         |         | 80     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-050-450-S06 | 45     | 6      |         |         | 90     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-050-500-S06 | 50     | 6      |         |         | 100    | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-050-600-S06 | 60     | 6      |         |         | 100    | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-060-150-S06 | 6      | R3     | 15      | 10      | 55     | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-060-300-S06 |        |        | 30      | 10      | 110    | 6         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-080-250-060 | 8      | R4     | 25      | 12      | 60     | 8         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-080-300-100 |        |        | 30      | 12      | 100    | 8         | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-100-300-070 | 10     | R5     | 30      | 16      | 70     | 10        | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-100-350-100 |        |        | 35      | 16      | 100    | 10        | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-120-300-075 | 12     | R6     | 30      | 18      | 75     | 12        | <input checked="" type="checkbox"/> |   |                                     |
| 2HRBG-120-400-110 |        |        | 40      | 18      | 110    | 12        | <input checked="" type="checkbox"/> |   |                                     |

# 2HREG 2-břité OSTRÉ frézy pro žebrování pro široký sortiment ocelí do HRC 52



- Určeno pro široký sortiment různých typů ocelí do HRC 52
- Optimální pro různé typy ocelí díky AlCrN povlaku
- Velmi přesné tolerance rezných hran
- Široký sortiment vyložení pro optimální výběr nástroje
- Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|---------|--------|-----------|--------------------|
| 2HREG-001-003-S04 | 0,1    | -       | 0,3     | 40     | 4         | ☑                  |
| 2HREG-001-005-S04 |        | -       | 0,5     | 40     | 4         | ☑                  |
| 2HREG-002-005-S04 | 0,2    | 0,5     | 0,3     | 40     | 4         | ☑                  |
| 2HREG-002-010-S04 |        | 1       | 0,2     | 40     | 4         | ☑                  |
| 2HREG-002-015-S04 |        | 1,5     | 0,2     | 40     | 4         | ☑                  |
| 2HREG-002-020-S04 |        | 2       | 0,2     | 40     | 4         | ☑                  |
| 2HREG-003-010-S04 | 0,3    | 1       | 0,3     | 40     | 4         | ☑                  |
| 2HREG-003-015-S04 |        | 1,5     | 0,3     | 40     | 4         | ☑                  |
| 2HREG-003-020-S04 |        | 2       | 0,3     | 40     | 4         | ☑                  |
| 2HREG-003-030-S04 |        | 3       | 0,3     | 40     | 4         | ☑                  |
| 2HREG-003-040-S04 |        | 4       | 0,3     | 40     | 4         | ☑                  |
| 2HREG-003-050-S04 | 0,4    | 5       | 0,3     | 40     | 4         | ☑                  |
| 2HREG-004-010-S04 |        | 1       | 0,5     | 40     | 4         | ☑                  |
| 2HREG-004-020-S04 |        | 2       | 0,5     | 40     | 4         | ☑                  |
| 2HREG-004-030-S04 |        | 3       | 0,5     | 40     | 4         | ☑                  |
| 2HREG-004-040-S04 |        | 4       | 0,5     | 40     | 4         | ☑                  |
| 2HREG-004-050-S04 |        | 5       | 0,5     | 40     | 4         | ☑                  |
| 2HREG-004-060-S04 |        | 6       | 0,5     | 40     | 4         | ☑                  |
| 2HREG-004-080-S04 | 0,5    | 8       | 0,5     | 40     | 4         | ☑                  |
| 2HREG-004-100-S04 |        | 10      | 0,5     | 40     | 4         | ☑                  |
| 2HREG-005-020-S04 |        | 2       | 0,6     | 45     | 4         | ☑                  |
| 2HREG-005-030-S04 |        | 3       | 0,6     | 45     | 4         | ☑                  |
| 2HREG-005-040-S04 |        | 4       | 0,6     | 45     | 4         | ☑                  |
| 2HREG-005-050-S04 |        | 5       | 0,6     | 45     | 4         | ☑                  |
| 2HREG-005-060-S04 | 0,6    | 6       | 0,6     | 45     | 4         | ☑                  |
| 2HREG-005-080-S04 |        | 8       | 0,6     | 45     | 4         | ☑                  |
| 2HREG-005-100-S04 |        | 10      | 0,6     | 45     | 4         | ☑                  |
| 2HREG-005-120-S04 |        | 12      | 0,6     | 45     | 4         | ☑                  |
| 2HREG-005-140-S04 |        | 14      | 0,6     | 45     | 4         | ☑                  |
| 2HREG-006-020-S04 |        | 2       | 0,7     | 45     | 4         | ☑                  |
| 2HREG-006-030-S04 |        | 3       | 0,7     | 45     | 4         | ☑                  |
| 2HREG-006-040-S04 |        | 4       | 0,7     | 45     | 4         | ☑                  |
| 2HREG-006-050-S04 | 0,6    | 5       | 0,7     | 45     | 4         | ☑                  |
| 2HREG-006-060-S04 |        | 6       | 0,7     | 45     | 4         | ☑                  |
| 2HREG-006-080-S04 |        | 8       | 0,7     | 45     | 4         | ☑                  |
| 2HREG-006-100-S04 |        | 10      | 0,7     | 45     | 4         | ☑                  |
| 2HREG-006-120-S04 |        | 12      | 0,7     | 45     | 4         | ☑                  |
| 2HREG-006-140-S04 |        | 14      | 0,7     | 45     | 4         | ☑                  |

| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|---------|---------|--------|-----------|--------------------|---|
| 2HREG-006-160-S04 | 0,6    | 16      | 0,7     | 45     | 4         | ☑                  |   |
| 2HREG-007-020-S04 | 0,7    | 2       | 0,8     | 45     | 4         | ☑                  |   |
| 2HREG-007-040-S04 |        | 4       | 0,8     | 45     | 4         | ☑                  |   |
| 2HREG-007-060-S04 |        | 6       | 0,8     | 45     | 4         | ☑                  |   |
| 2HREG-007-080-S04 |        | 8       | 0,8     | 45     | 4         | ☑                  |   |
| 2HREG-007-100-S04 |        | 10      | 0,8     | 45     | 4         | ☑                  |   |
| 2HREG-007-120-S04 | 0,8    | 12      | 0,8     | 45     | 4         | ☑                  |   |
| 2HREG-008-020-S04 |        | 2       | 0,9     | 45     | 4         | ☑                  |   |
| 2HREG-008-040-S04 |        | 4       | 0,9     | 45     | 4         | ☑                  |   |
| 2HREG-008-060-S04 |        | 6       | 0,9     | 45     | 4         | ☑                  |   |
| 2HREG-008-080-S04 |        | 8       | 0,9     | 45     | 4         | ☑                  |   |
| 2HREG-008-100-S04 | 0,9    | 10      | 0,9     | 45     | 4         | ☑                  |   |
| 2HREG-008-120-S04 |        | 12      | 0,9     | 45     | 4         | ☑                  |   |
| 2HREG-008-140-S04 |        | 14      | 0,9     | 45     | 4         | ☑                  |   |
| 2HREG-009-060-S04 |        | 6       | 1       | 45     | 4         | ☑                  |   |
| 2HREG-009-080-S04 | 0,9    | 8       | 1       | 45     | 4         | ☑                  |   |
| 2HREG-009-100-S04 |        | 10      | 1       | 45     | 4         | ☑                  |   |
| 2HREG-010-020-S04 |        | 1       | 2       | 1,2    | 45        | 4                  | ☑ |
| 2HREG-010-030-S04 | 3      |         | 1,2     | 45     | 4         | ☑                  |   |
| 2HREG-010-040-S04 | 4      |         | 1,2     | 45     | 4         | ☑                  |   |
| 2HREG-010-050-S04 | 5      |         | 1,2     | 45     | 4         | ☑                  |   |
| 2HREG-010-060-S04 | 6      |         | 1,2     | 45     | 4         | ☑                  |   |
| 2HREG-010-080-S04 | 8      |         | 1,2     | 45     | 4         | ☑                  |   |
| 2HREG-010-100-S04 | 10     |         | 1,2     | 50     | 4         | ☑                  |   |
| 2HREG-010-120-S04 | 12     |         | 1,2     | 50     | 4         | ☑                  |   |
| 2HREG-010-140-S04 | 14     |         | 1,2     | 50     | 4         | ☑                  |   |
| 2HREG-010-160-S04 | 16     |         | 1,2     | 50     | 4         | ☑                  |   |
| 2HREG-010-180-S04 | 1,2    | 18      | 1,2     | 50     | 4         | ☑                  |   |
| 2HREG-010-200-S04 |        | 20      | 1,2     | 50     | 4         | ☑                  |   |
| 2HREG-010-250-S04 |        | 25      | 1,2     | 60     | 4         | ☑                  |   |
| 2HREG-010-300-S04 |        | 30      | 1,2     | 70     | 4         | ☑                  |   |
| 2HREG-012-040-S04 |        | 1,2     | 4       | 1,4    | 45        | 4                  | ☑ |
| 2HREG-012-060-S04 |        |         | 6       | 1,4    | 45        | 4                  | ☑ |
| 2HREG-012-080-S04 |        |         | 8       | 1,4    | 45        | 4                  | ☑ |
| 2HREG-012-100-S04 |        |         | 10      | 1,4    | 50        | 4                  | ☑ |
| 2HREG-012-120-S04 |        |         | 12      | 1,4    | 50        | 4                  | ☑ |
| 2HREG-012-160-S04 |        |         | 16      | 1,4    | 50        | 4                  | ☑ |
| 2HREG-012-200-S04 | 20     |         | 1,4     | 50     | 4         | ☑                  |   |

# 2HREG

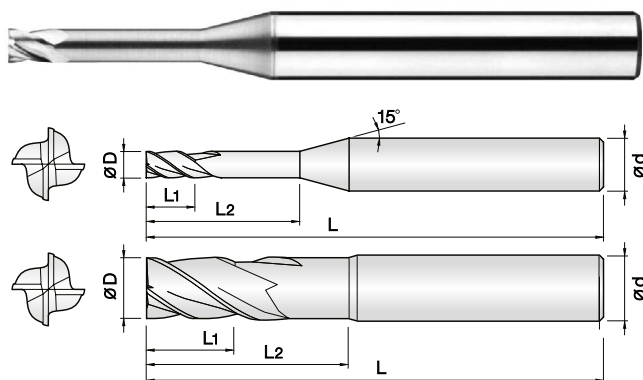
## 2-břité OSTRÉ frézy pro žebrování pro široký sortiment ocelí do HRC 52

| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|---------|--------|-----------|--------------------|
| 2HREG-012-250-S04 | 1,2    | 25      | 1,4     | 60     | 4         | ☑                  |
| 2HREG-012-300-S04 |        | 30      | 1,4     | 70     | 4         | ☑                  |
| 2HREG-014-060-S04 | 1,4    | 6       | 1,6     | 45     | 4         | ☑                  |
| 2HREG-014-080-S04 |        | 8       | 1,6     | 45     | 4         | ☑                  |
| 2HREG-014-100-S04 |        | 10      | 1,6     | 50     | 4         | ☑                  |
| 2HREG-014-140-S04 |        | 14      | 1,6     | 50     | 4         | ☑                  |
| 2HREG-014-160-S04 |        | 16      | 1,6     | 50     | 4         | ☑                  |
| 2HREG-014-200-S04 |        | 20      | 1,6     | 50     | 4         | ☑                  |
| 2HREG-015-040-S04 | 1,5    | 4       | 1,8     | 45     | 4         | ☑                  |
| 2HREG-015-060-S04 |        | 6       | 1,8     | 45     | 4         | ☑                  |
| 2HREG-015-080-S04 |        | 8       | 1,8     | 45     | 4         | ☑                  |
| 2HREG-015-100-S04 |        | 10      | 1,8     | 50     | 4         | ☑                  |
| 2HREG-015-120-S04 |        | 12      | 1,8     | 50     | 4         | ☑                  |
| 2HREG-015-140-S04 |        | 14      | 1,8     | 50     | 4         | ☑                  |
| 2HREG-015-160-S04 |        | 16      | 1,8     | 50     | 4         | ☑                  |
| 2HREG-015-180-S04 |        | 18      | 1,8     | 50     | 4         | ☑                  |
| 2HREG-015-200-S04 |        | 20      | 1,8     | 50     | 4         | ☑                  |
| 2HREG-015-250-S04 |        | 25      | 1,8     | 60     | 4         | ☑                  |
| 2HREG-016-100-S04 | 1,6    | 10      | 1,9     | 50     | 4         | ☑                  |
| 2HREG-016-140-S04 |        | 14      | 1,9     | 50     | 4         | ☑                  |
| 2HREG-016-180-S04 |        | 18      | 1,9     | 50     | 4         | ☑                  |
| 2HREG-018-100-S04 | 1,8    | 10      | 2,1     | 50     | 4         | ☑                  |
| 2HREG-018-140-S04 |        | 14      | 2,1     | 50     | 4         | ☑                  |
| 2HREG-018-180-S04 |        | 18      | 2,1     | 50     | 4         | ☑                  |
| 2HREG-020-040-S04 | 2      | 4       | 2,4     | 45     | 4         | ☑                  |
| 2HREG-020-060-S04 |        | 6       | 2,4     | 45     | 4         | ☑                  |
| 2HREG-020-080-S04 |        | 8       | 2,4     | 45     | 4         | ☑                  |
| 2HREG-020-100-S04 |        | 10      | 2,4     | 50     | 4         | ☑                  |
| 2HREG-020-120-S04 |        | 12      | 2,4     | 50     | 4         | ☑                  |
| 2HREG-020-140-S04 |        | 14      | 2,4     | 50     | 4         | ☑                  |
| 2HREG-020-160-S04 |        | 16      | 2,4     | 50     | 4         | ☑                  |
| 2HREG-020-180-S04 |        | 18      | 2,4     | 50     | 4         | ☑                  |
| 2HREG-020-200-S04 |        | 20      | 2,4     | 50     | 4         | ☑                  |
| 2HREG-020-220-S04 |        | 22      | 2,4     | 60     | 4         | ☑                  |
| 2HREG-020-250-S04 |        | 25      | 2,4     | 60     | 4         | ☑                  |
| 2HREG-020-300-S04 |        | 30      | 2,4     | 70     | 4         | ☑                  |
| 2HREG-020-350-S04 |        | 35      | 2,4     | 70     | 4         | ☑                  |
| 2HREG-020-400-S04 |        | 40      | 2,4     | 80     | 4         | ☑                  |
| 2HREG-020-450-S04 | 45     | 2,4     | 80      | 4      | ☑         |                    |
| 2HREG-020-500-S04 | 50     | 2,4     | 90      | 4      | ☑         |                    |
| 2HREG-025-080-S04 | 2,5    | 8       | 3       | 45     | 4         | ☑                  |
| 2HREG-025-100-S04 |        | 10      | 3       | 50     | 4         | ☑                  |
| 2HREG-025-120-S04 |        | 12      | 3       | 50     | 4         | ☑                  |
| 2HREG-025-160-S04 |        | 16      | 3       | 50     | 4         | ☑                  |
| 2HREG-025-200-S04 |        | 20      | 3       | 50     | 4         | ☑                  |
| 2HREG-025-250-S04 |        | 25      | 3       | 60     | 4         | ☑                  |
| 2HREG-025-300-S04 |        | 30      | 3       | 70     | 4         | ☑                  |
| 2HREG-025-350-S04 |        | 35      | 3       | 70     | 4         | ☑                  |
| 2HREG-025-400-S04 |        | 40      | 3       | 80     | 4         | ☑                  |
| 2HREG-025-500-S04 |        | 50      | 3       | 90     | 4         | ☑                  |
| 2HREG-030-060-S06 | 3      | 6       | 3,6     | 45     | 6         | ☑                  |

| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|---------|---------|--------|-----------|--------------------|---|
| 2HREG-030-080-S06 | 3      | 8       | 3,6     | 45     | 6         | ☑                  |   |
| 2HREG-030-100-S06 |        | 10      | 3,6     | 50     | 6         | ☑                  |   |
| 2HREG-030-120-S06 |        | 12      | 3,6     | 50     | 6         | ☑                  |   |
| 2HREG-030-160-S06 |        | 16      | 3,6     | 55     | 6         | ☑                  |   |
| 2HREG-030-200-S06 |        | 20      | 3,6     | 60     | 6         | ☑                  |   |
| 2HREG-030-250-S06 |        | 25      | 3,6     | 65     | 6         | ☑                  |   |
| 2HREG-030-300-S06 |        | 30      | 3,6     | 70     | 6         | ☑                  |   |
| 2HREG-030-350-S06 |        | 35      | 3,6     | 75     | 6         | ☑                  |   |
| 2HREG-030-400-S06 |        | 40      | 3,6     | 80     | 6         | ☑                  |   |
| 2HREG-030-450-S06 |        | 45      | 3,6     | 90     | 6         | ☑                  |   |
| 2HREG-030-500-S06 | 4      | 50      | 3,6     | 100    | 6         | ☑                  |   |
| 2HREG-030-600-S06 |        | 60      | 3,6     | 100    | 6         | ☑                  |   |
| 2HREG-040-080-S06 |        | 8       | 4,8     | 45     | 6         | ☑                  |   |
| 2HREG-040-100-S06 |        | 10      | 4,8     | 50     | 6         | ☑                  |   |
| 2HREG-040-120-S06 |        | 12      | 4,8     | 50     | 6         | ☑                  |   |
| 2HREG-040-160-S06 |        | 16      | 4,8     | 55     | 6         | ☑                  |   |
| 2HREG-040-200-S06 |        | 20      | 4,8     | 60     | 6         | ☑                  |   |
| 2HREG-040-250-S06 |        | 25      | 4,8     | 65     | 6         | ☑                  |   |
| 2HREG-040-300-S06 |        | 30      | 4,8     | 70     | 6         | ☑                  |   |
| 2HREG-040-350-S06 |        | 35      | 4,8     | 75     | 6         | ☑                  |   |
| 2HREG-040-400-S06 | 5      | 40      | 4,8     | 80     | 6         | ☑                  |   |
| 2HREG-040-450-S06 |        | 45      | 4,8     | 90     | 6         | ☑                  |   |
| 2HREG-040-500-S06 |        | 50      | 4,8     | 100    | 6         | ☑                  |   |
| 2HREG-040-550-S06 |        | 55      | 4,8     | 100    | 6         | ☑                  |   |
| 2HREG-040-600-S06 |        | 60      | 4,8     | 100    | 6         | ☑                  |   |
| 2HREG-050-150-S06 |        | 15      | 6       | 55     | 6         | ☑                  |   |
| 2HREG-050-200-S06 |        | 20      | 6       | 60     | 6         | ☑                  |   |
| 2HREG-050-250-S06 |        | 25      | 6       | 70     | 6         | ☑                  |   |
| 2HREG-050-300-S06 |        | 30      | 6       | 75     | 6         | ☑                  |   |
| 2HREG-050-350-S06 |        | 35      | 6       | 75     | 6         | ☑                  |   |
| 2HREG-050-400-S06 | 6      | 40      | 6       | 80     | 6         | ☑                  |   |
| 2HREG-050-500-S06 |        | 50      | 6       | 100    | 6         | ☑                  |   |
| 2HREG-050-600-S06 |        | 60      | 6       | 100    | 6         | ☑                  |   |
| 2HREG-060-200-S06 |        | 20      | 10      | 60     | 6         | ☑                  |   |
| 2HREG-060-300-S06 |        | 30      | 10      | 75     | 6         | ☑                  |   |
| 2HREG-060-400-S06 |        | 40      | 10      | 80     | 6         | ☑                  |   |
| 2HREG-060-500-S06 |        | 50      | 10      | 90     | 6         | ☑                  |   |
| 2HREG-060-600-S06 |        | 60      | 10      | 110    | 6         | ☑                  |   |
| 2HREG-080-200-S08 |        | 8       | 20      | 12     | 65        | 8                  | ☑ |
| 2HREG-080-300-S08 |        |         | 30      | 12     | 80        | 8                  | ☑ |
| 2HREG-080-400-S08 | 40     |         | 12      | 100    | 8         | ☑                  |   |
| 2HREG-100-250-S10 | 10     | 25      | 15      | 70     | 10        | ☑                  |   |
| 2HREG-100-350-S10 |        | 35      | 15      | 80     | 10        | ☑                  |   |
| 2HREG-100-450-S10 |        | 45      | 15      | 100    | 10        | ☑                  |   |
| 2HREG-120-300-S12 | 12     | 30      | 18      | 80     | 12        | ☑                  |   |
| 2HREG-120-400-S12 |        | 40      | 18      | 100    | 12        | ☑                  |   |
| 2HREG-120-500-S12 |        | 50      | 18      | 120    | 12        | ☑                  |   |



# 4HREG 4-břité OSTRÉ frézy pro žebrování pro široký sortiment ocelí do HRC 52



- ▶ Určeno pro široký sortiment různých typů ocelí do HRC 52
- ▶ Optimální pro různé typy ocelí díky AlCrN povlaku
- ▶ Velmi přesné tolerance rezných hran
- ▶ Široký sortiment vyložení pro optimální výběr nástroje
- ▶ Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|---------|--------|-----------|--------------------|
| 4HREG-008-020-S04 | 0,8    | 2       | 0,9     | 45     | 4         | ☑                  |
| 4HREG-008-040-S04 |        | 4       | 0,9     | 45     | 4         | ☑                  |
| 4HREG-008-060-S04 |        | 6       | 0,9     | 45     | 4         | ☑                  |
| 4HREG-008-080-S04 |        | 8       | 0,9     | 45     | 4         | ☑                  |
| 4HREG-008-100-S04 |        | 10      | 0,9     | 45     | 4         | ☑                  |
| 4HREG-008-120-S04 |        | 12      | 0,9     | 45     | 4         | ☑                  |
| 4HREG-008-160-S04 |        | 16      | 0,9     | 45     | 4         | ☑                  |
| 4HREG-009-020-S04 |        | 0,9     | 2       | 1      | 45        | 4                  |
| 4HREG-009-060-S04 | 6      |         | 1       | 45     | 4         | ☑                  |
| 4HREG-009-080-S04 | 8      |         | 1       | 45     | 4         | ☑                  |
| 4HREG-009-100-S04 | 1      | 10      | 1       | 45     | 4         | ☑                  |
| 4HREG-010-030-S04 |        | 3       | 1,2     | 45     | 4         | ☑                  |
| 4HREG-010-040-S04 |        | 4       | 1,2     | 45     | 4         | ☑                  |
| 4HREG-010-060-S04 |        | 6       | 1,2     | 45     | 4         | ☑                  |
| 4HREG-010-080-S04 |        | 8       | 1,2     | 45     | 4         | ☑                  |
| 4HREG-010-100-S04 |        | 10      | 1,2     | 50     | 4         | ☑                  |
| 4HREG-010-120-S04 |        | 12      | 1,2     | 50     | 4         | ☑                  |
| 4HREG-010-160-S04 |        | 16      | 1,2     | 50     | 4         | ☑                  |
| 4HREG-010-200-S04 | 1,2    | 20      | 1,2     | 50     | 4         | ☑                  |
| 4HREG-010-250-S04 |        | 25      | 1,2     | 60     | 4         | ☑                  |
| 4HREG-012-060-S04 |        | 6       | 1,4     | 45     | 4         | ☑                  |
| 4HREG-012-080-S04 |        | 8       | 1,4     | 45     | 4         | ☑                  |
| 4HREG-012-100-S04 |        | 10      | 1,4     | 50     | 4         | ☑                  |
| 4HREG-012-120-S04 |        | 12      | 1,4     | 50     | 4         | ☑                  |
| 4HREG-012-160-S04 |        | 16      | 1,4     | 50     | 4         | ☑                  |
| 4HREG-015-060-S04 |        | 1,5     | 6       | 1,8    | 45        | 4                  |
| 4HREG-015-080-S04 | 8      |         | 1,8     | 45     | 4         | ☑                  |
| 4HREG-015-100-S04 | 10     |         | 1,8     | 50     | 4         | ☑                  |
| 4HREG-015-120-S04 | 12     |         | 1,8     | 50     | 4         | ☑                  |
| 4HREG-015-160-S04 | 16     |         | 1,8     | 50     | 4         | ☑                  |
| 4HREG-015-200-S04 | 20     |         | 1,8     | 50     | 4         | ☑                  |
| 4HREG-015-250-S04 | 2      | 25      | 1,8     | 60     | 4         | ☑                  |
| 4HREG-020-060-S04 |        | 6       | 2,4     | 45     | 4         | ☑                  |
| 4HREG-020-080-S04 |        | 8       | 2,4     | 45     | 4         | ☑                  |
| 4HREG-020-100-S04 |        | 10      | 2,4     | 50     | 4         | ☑                  |
| 4HREG-020-120-S04 |        | 12      | 2,4     | 50     | 4         | ☑                  |
| 4HREG-020-160-S04 |        | 16      | 2,4     | 50     | 4         | ☑                  |
| 4HREG-020-200-S04 |        | 20      | 2,4     | 50     | 4         | ☑                  |

| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|---------|--------|-----------|--------------------|
| 4HREG-020-250-S04 | 2      | 25      | 2,4     | 60     | 4         | ☑                  |
| 4HREG-020-300-S04 |        | 30      | 2,4     | 70     | 4         | ☑                  |
| 4HREG-025-100-S04 | 2,5    | 10      | 3       | 50     | 4         | ☑                  |
| 4HREG-025-120-S04 |        | 12      | 3       | 50     | 4         | ☑                  |
| 4HREG-025-160-S04 |        | 16      | 3       | 50     | 4         | ☑                  |
| 4HREG-025-200-S04 |        | 20      | 3       | 50     | 4         | ☑                  |
| 4HREG-025-250-S04 |        | 25      | 3       | 60     | 4         | ☑                  |
| 4HREG-025-300-S04 |        | 30      | 3       | 70     | 4         | ☑                  |
| 4HREG-030-100-S06 | 3      | 10      | 3,6     | 50     | 6         | ☑                  |
| 4HREG-030-120-S06 |        | 12      | 3,6     | 50     | 6         | ☑                  |
| 4HREG-030-160-S06 |        | 16      | 3,6     | 55     | 6         | ☑                  |
| 4HREG-030-200-S06 |        | 20      | 3,6     | 60     | 6         | ☑                  |
| 4HREG-030-250-S06 |        | 25      | 3,6     | 65     | 6         | ☑                  |
| 4HREG-030-300-S06 |        | 30      | 3,6     | 70     | 6         | ☑                  |
| 4HREG-030-350-S06 | 4      | 35      | 3,6     | 75     | 6         | ☑                  |
| 4HREG-030-400-S06 |        | 40      | 3,6     | 80     | 6         | ☑                  |
| 4HREG-040-100-S06 |        | 10      | 4,8     | 50     | 6         | ☑                  |
| 4HREG-040-120-S06 |        | 12      | 4,8     | 50     | 6         | ☑                  |
| 4HREG-040-160-S06 |        | 16      | 4,8     | 55     | 6         | ☑                  |
| 4HREG-040-200-S06 |        | 20      | 4,8     | 60     | 6         | ☑                  |
| 4HREG-040-250-S06 |        | 25      | 4,8     | 65     | 6         | ☑                  |
| 4HREG-040-300-S06 |        | 30      | 4,8     | 70     | 6         | ☑                  |
| 4HREG-040-400-S06 | 5      | 40      | 4,8     | 80     | 6         | ☑                  |
| 4HREG-040-450-S06 |        | 45      | 4,8     | 90     | 6         | ☑                  |
| 4HREG-040-500-S06 |        | 50      | 4,8     | 100    | 6         | ☑                  |
| 4HREG-050-150-S06 |        | 15      | 6       | 55     | 6         | ☑                  |
| 4HREG-050-200-S06 |        | 20      | 6       | 60     | 6         | ☑                  |
| 4HREG-050-250-S06 | 6      | 25      | 6       | 65     | 6         | ☑                  |
| 4HREG-050-300-S06 |        | 30      | 6       | 70     | 6         | ☑                  |
| 4HREG-050-400-S06 |        | 40      | 6       | 80     | 6         | ☑                  |
| 4HREG-050-500-S06 | 8      | 50      | 6       | 100    | 6         | ☑                  |
| 4HREG-060-200-S06 |        | 20      | 10      | 60     | 6         | ☑                  |
| 4HREG-060-300-S06 |        | 30      | 10      | 75     | 6         | ☑                  |
| 4HREG-060-400-S06 |        | 40      | 10      | 80     | 6         | ☑                  |
| 4HREG-060-500-S06 | 8      | 50      | 10      | 90     | 6         | ☑                  |
| 4HREG-080-200-S08 |        | 20      | 12      | 65     | 8         | ☑                  |
| 4HREG-080-300-S08 |        | 30      | 12      | 80     | 8         | ☑                  |
| 4HREG-080-400-S08 |        | 40      | 12      | 100    | 8         | ☑                  |

# 4HREG

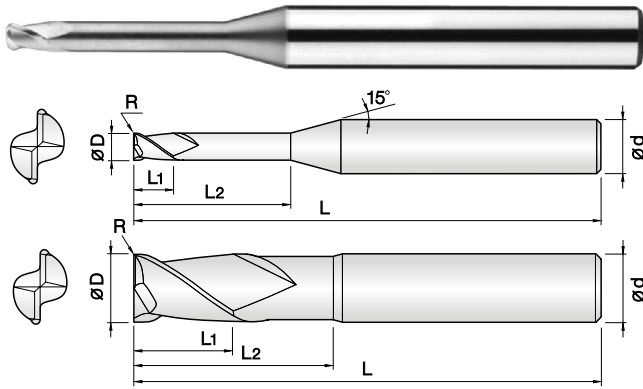
4-břité OSTRÉ frézy pro žebrování  
pro široký sortiment ocelí do HRC 52

| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|-------------------|--------|---------|---------|--------|-----------|-------------------------------------|
| 4HREG-100-250-S10 | 10     | 25      | 15      | 70     | 10        | <input checked="" type="checkbox"/> |
| 4HREG-100-350-S10 |        | 35      | 15      | 90     | 10        | <input checked="" type="checkbox"/> |
| 4HREG-100-450-S10 |        | 45      | 15      | 110    | 10        | <input checked="" type="checkbox"/> |
| 4HREG-120-300-S12 | 12     | 30      | 18      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4HREG-120-400-S12 |        | 40      | 18      | 100    | 12        | <input checked="" type="checkbox"/> |
| 4HREG-120-500-S12 |        | 50      | 18      | 120    | 12        | <input checked="" type="checkbox"/> |

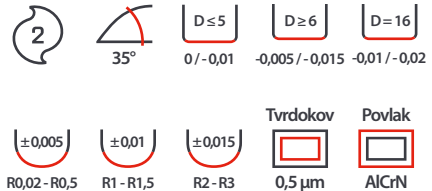
JJ  
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# 2CREG

## 2-břité TOROIDNÍ frézy pro žebrování pro široký sortiment ocelí do HRC 52



- Určeno pro široký sortiment různých typů ocelí do HRC 52
- Optimální pro různé typy ocelí díky AlCrN povlaku
- Velmi přesné tolerance řezných hran
- Široký sortiment vyložení a rádiusů pro optimální výběr nástroje
- Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



| Objednací číslo    | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|--------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 2CREG-002-0002-010 | 0,2    | R0,02  | 1       | 0,2     | 40     | 4         | ☑                  |   |
| 2CREG-002-0002-015 |        |        | 1,5     | 0,2     | 40     | 4         | ☑                  |   |
| 2CREG-002-0005-010 |        | R0,05  | 1       | 0,2     | 40     | 4         | ☑                  |   |
| 2CREG-002-0005-015 |        |        | 1,5     | 0,2     | 40     | 4         | ☑                  |   |
| 2CREG-003-0005-010 | 0,3    | R0,05  | 1       | 0,3     | 40     | 4         | ☑                  |   |
| 2CREG-003-0005-020 |        |        | 2       | 0,3     | 40     | 4         | ☑                  |   |
| 2CREG-003-0005-030 |        |        | 3       | 0,3     | 40     | 4         | ☑                  |   |
| 2CREG-004-0005-010 | 0,4    | R0,05  | 1       | 0,5     | 40     | 4         | ☑                  |   |
| 2CREG-004-0005-020 |        |        | 2       | 0,5     | 40     | 4         | ☑                  |   |
| 2CREG-004-0005-030 |        |        | 3       | 0,5     | 40     | 4         | ☑                  |   |
| 2CREG-004-0005-040 |        |        | 4       | 0,5     | 40     | 4         | ☑                  |   |
| 2CREG-004-001-010  |        | R0,1   | 1       | 0,5     | 40     | 4         | ☑                  |   |
| 2CREG-004-001-015  |        |        | 1,5     | 0,5     | 40     | 4         | ☑                  |   |
| 2CREG-004-001-020  |        |        | 2       | 0,5     | 40     | 4         | ☑                  |   |
| 2CREG-004-001-030  |        |        | 3       | 0,5     | 40     | 4         | ☑                  |   |
| 2CREG-004-001-040  |        | 4      | 0,5     | 40      | 4      | ☑         |                    |   |
| 2CREG-005-0005-010 |        | 0,5    | R0,05   | 1       | 0,6    | 45        | 4                  | ☑ |
| 2CREG-005-0005-015 |        |        |         | 1,5     | 0,6    | 45        | 4                  | ☑ |
| 2CREG-005-0005-020 |        |        |         | 2       | 0,6    | 45        | 4                  | ☑ |
| 2CREG-005-0005-025 | 2,5    |        |         | 0,6     | 45     | 4         | ☑                  |   |
| 2CREG-005-0005-030 | 3      |        |         | 0,6     | 45     | 4         | ☑                  |   |
| 2CREG-005-0005-040 | 4      |        |         | 0,6     | 45     | 4         | ☑                  |   |
| 2CREG-005-0005-050 | 5      |        |         | 0,6     | 45     | 4         | ☑                  |   |
| 2CREG-005-0005-060 | 6      |        |         | 0,6     | 45     | 4         | ☑                  |   |
| 2CREG-005-001-010  | R0,1   |        | 1       | 0,6     | 45     | 4         | ☑                  |   |
| 2CREG-005-001-015  |        |        | 1,5     | 0,6     | 45     | 4         | ☑                  |   |
| 2CREG-005-001-020  |        |        | 2       | 0,6     | 45     | 4         | ☑                  |   |
| 2CREG-005-001-025  |        |        | 2,5     | 0,6     | 45     | 4         | ☑                  |   |
| 2CREG-005-001-030  |        |        | 3       | 0,6     | 45     | 4         | ☑                  |   |
| 2CREG-005-001-040  |        |        | 4       | 0,6     | 45     | 4         | ☑                  |   |
| 2CREG-005-001-050  |        |        | 5       | 0,6     | 45     | 4         | ☑                  |   |
| 2CREG-005-001-060  |        |        | 6       | 0,6     | 45     | 4         | ☑                  |   |
| 2CREG-006-0005-020 | 0,6    | R0,05  | 2       | 0,7     | 45     | 4         | ☑                  |   |
| 2CREG-006-0005-030 |        |        | 3       | 0,7     | 45     | 4         | ☑                  |   |
| 2CREG-006-0005-040 |        |        | 4       | 0,7     | 45     | 4         | ☑                  |   |
| 2CREG-006-0005-060 |        |        | 6       | 0,7     | 45     | 4         | ☑                  |   |
| 2CREG-006-0005-080 |        | R0,1   | 8       | 0,7     | 45     | 4         | ☑                  |   |
| 2CREG-006-001-020  |        |        | 2       | 0,7     | 45     | 4         | ☑                  |   |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 2CREG-006-001-030 | 0,6    | R0,1   | 3       | 0,7     | 45     | 4         | ☑                  |   |
| 2CREG-006-001-040 |        |        | 4       | 0,7     | 45     | 4         | ☑                  |   |
| 2CREG-006-001-060 |        |        | 6       | 0,7     | 45     | 4         | ☑                  |   |
| 2CREG-006-001-080 |        |        | 8       | 0,7     | 45     | 4         | ☑                  |   |
| 2CREG-007-001-020 | 0,7    | R0,1   | 2       | 0,8     | 45     | 4         | ☑                  |   |
| 2CREG-007-001-040 |        |        | 4       | 0,8     | 45     | 4         | ☑                  |   |
| 2CREG-007-001-060 |        |        | 6       | 0,8     | 45     | 4         | ☑                  |   |
| 2CREG-008-001-020 | 0,8    | R0,1   | 2       | 0,9     | 45     | 4         | ☑                  |   |
| 2CREG-008-001-040 |        |        | 4       | 0,9     | 45     | 4         | ☑                  |   |
| 2CREG-008-001-060 |        |        | 6       | 0,9     | 45     | 4         | ☑                  |   |
| 2CREG-008-001-080 |        |        | 8       | 0,9     | 45     | 4         | ☑                  |   |
| 2CREG-008-002-020 |        | R0,2   | 2       | 0,9     | 45     | 4         | ☑                  |   |
| 2CREG-008-002-040 |        |        | 4       | 0,9     | 45     | 4         | ☑                  |   |
| 2CREG-008-002-060 |        |        | 6       | 0,9     | 45     | 4         | ☑                  |   |
| 2CREG-008-002-080 |        |        | 8       | 0,9     | 45     | 4         | ☑                  |   |
| 2CREG-010-001-040 |        | 1      | R0,1    | 4       | 1,2    | 45        | 4                  | ☑ |
| 2CREG-010-001-060 |        |        |         | 6       | 1,2    | 45        | 4                  | ☑ |
| 2CREG-010-001-080 |        |        |         | 8       | 1,2    | 45        | 4                  | ☑ |
| 2CREG-010-001-100 |        |        |         | 10      | 1,2    | 50        | 4                  | ☑ |
| 2CREG-010-001-120 | 12     |        |         | 1,2     | 50     | 4         | ☑                  |   |
| 2CREG-010-001-160 | 16     |        |         | 1,2     | 50     | 4         | ☑                  |   |
| 2CREG-010-001-200 | 20     |        |         | 1,2     | 50     | 4         | ☑                  |   |
| 2CREG-010-002-040 | R0,2   |        |         | 4       | 1,2    | 45        | 4                  | ☑ |
| 2CREG-010-002-060 |        |        | 6       | 1,2     | 45     | 4         | ☑                  |   |
| 2CREG-010-002-080 |        |        | 8       | 1,2     | 45     | 4         | ☑                  |   |
| 2CREG-010-002-100 |        |        | 10      | 1,2     | 50     | 4         | ☑                  |   |
| 2CREG-010-002-120 |        |        | 12      | 1,2     | 50     | 4         | ☑                  |   |
| 2CREG-010-002-160 |        |        | 16      | 1,2     | 50     | 4         | ☑                  |   |
| 2CREG-010-002-200 |        |        | 20      | 1,2     | 50     | 4         | ☑                  |   |
| 2CREG-010-003-040 |        |        | R0,3    | 4       | 1,2    | 45        | 4                  | ☑ |
| 2CREG-010-003-060 | 6      |        |         | 1,2     | 45     | 4         | ☑                  |   |
| 2CREG-010-003-080 | 8      | 1,2    |         | 45      | 4      | ☑         |                    |   |
| 2CREG-010-003-100 | 10     | 1,2    |         | 50      | 4      | ☑         |                    |   |
| 2CREG-010-003-120 | 12     | 1,2    |         | 50      | 4      | ☑         |                    |   |
| 2CREG-010-003-160 | 16     | 1,2    |         | 50      | 4      | ☑         |                    |   |
| 2CREG-010-003-200 | 20     | 1,2    |         | 50      | 4      | ☑         |                    |   |
| 2CREG-012-001-040 | 1,2    | R0,1   |         | 4       | 1,4    | 45        | 4                  | ☑ |
| 2CREG-012-001-060 |        |        | 6       | 1,4     | 45     | 4         | ☑                  |   |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 2CREG-012-001-080 | 1,2    | R0,1   | 8       | 1,4     | 45     | 4         | ☑                  |   |
| 2CREG-012-001-100 |        |        | 10      | 1,4     | 50     | 4         | ☑                  |   |
| 2CREG-012-001-120 |        |        | 12      | 1,4     | 50     | 4         | ☑                  |   |
| 2CREG-012-001-160 |        |        | 16      | 1,4     | 50     | 4         | ☑                  |   |
| 2CREG-012-001-200 |        |        | 20      | 1,4     | 50     | 4         | ☑                  |   |
| 2CREG-012-002-040 |        | R0,2   | 4       | 1,4     | 45     | 4         | ☑                  |   |
| 2CREG-012-002-060 |        |        | 6       | 1,4     | 45     | 4         | ☑                  |   |
| 2CREG-012-002-080 |        |        | 8       | 1,4     | 45     | 4         | ☑                  |   |
| 2CREG-012-002-100 |        |        | 10      | 1,4     | 50     | 4         | ☑                  |   |
| 2CREG-012-002-120 |        |        | 12      | 1,4     | 50     | 4         | ☑                  |   |
| 2CREG-012-002-160 |        |        | 16      | 1,4     | 50     | 4         | ☑                  |   |
| 2CREG-012-002-200 |        |        | 20      | 1,4     | 50     | 4         | ☑                  |   |
| 2CREG-012-003-040 |        |        | R0,3    | 4       | 1,4    | 45        | 4                  | ☑ |
| 2CREG-012-003-060 |        |        |         | 6       | 1,4    | 45        | 4                  | ☑ |
| 2CREG-012-003-080 |        |        |         | 8       | 1,4    | 45        | 4                  | ☑ |
| 2CREG-012-003-100 |        | 10     |         | 1,4     | 50     | 4         | ☑                  |   |
| 2CREG-012-003-120 |        | 12     |         | 1,4     | 50     | 4         | ☑                  |   |
| 2CREG-012-003-160 |        | 16     |         | 1,4     | 50     | 4         | ☑                  |   |
| 2CREG-012-003-200 |        | 20     | 1,4     | 50      | 4      | ☑         |                    |   |
| 2CREG-015-001-040 |        | 1,5    | R0,1    | 4       | 1,8    | 45        | 4                  | ☑ |
| 2CREG-015-001-060 | 6      |        |         | 1,8     | 45     | 4         | ☑                  |   |
| 2CREG-015-001-080 | 8      |        |         | 1,8     | 45     | 4         | ☑                  |   |
| 2CREG-015-001-100 | 10     |        |         | 1,8     | 50     | 4         | ☑                  |   |
| 2CREG-015-001-120 | 12     |        |         | 1,8     | 50     | 4         | ☑                  |   |
| 2CREG-015-001-160 | 16     |        | 1,8     | 50      | 4      | ☑         |                    |   |
| 2CREG-015-001-200 | 20     |        | 1,8     | 50      | 4      | ☑         |                    |   |
| 2CREG-015-001-220 | 22     |        | 1,8     | 60      | 4      | ☑         |                    |   |
| 2CREG-015-001-250 | 25     |        | 1,8     | 60      | 4      | ☑         |                    |   |
| 2CREG-015-002-040 | R0,2   |        | 4       | 1,8     | 45     | 4         | ☑                  |   |
| 2CREG-015-002-060 |        |        | 6       | 1,8     | 45     | 4         | ☑                  |   |
| 2CREG-015-002-080 |        |        | 8       | 1,8     | 45     | 4         | ☑                  |   |
| 2CREG-015-002-100 |        |        | 10      | 1,8     | 50     | 4         | ☑                  |   |
| 2CREG-015-002-120 |        |        | 12      | 1,8     | 50     | 4         | ☑                  |   |
| 2CREG-015-002-160 |        |        | 16      | 1,8     | 50     | 4         | ☑                  |   |
| 2CREG-015-002-200 |        |        | 20      | 1,8     | 50     | 4         | ☑                  |   |
| 2CREG-015-002-220 |        |        | 22      | 1,8     | 60     | 4         | ☑                  |   |
| 2CREG-015-002-250 |        |        | 25      | 1,8     | 60     | 4         | ☑                  |   |
| 2CREG-015-003-040 |        |        | R0,3    | 4       | 1,8    | 45        | 4                  | ☑ |
| 2CREG-015-003-060 | 6      |        |         | 1,8     | 45     | 4         | ☑                  |   |
| 2CREG-015-003-080 | 8      | 1,8    |         | 45      | 4      | ☑         |                    |   |
| 2CREG-015-003-100 | 10     | 1,8    |         | 50      | 4      | ☑         |                    |   |
| 2CREG-015-003-120 | 12     | 1,8    |         | 50      | 4      | ☑         |                    |   |
| 2CREG-015-003-160 | 16     | 1,8    |         | 50      | 4      | ☑         |                    |   |
| 2CREG-015-003-200 | 20     | 1,8    | 50      | 4       | ☑      |           |                    |   |
| 2CREG-015-003-220 | 22     | 1,8    | 60      | 4       | ☑      |           |                    |   |
| 2CREG-015-003-250 | 25     | 1,8    | 60      | 4       | ☑      |           |                    |   |
| 2CREG-015-005-040 | R0,5   | 4      | 1,8     | 45      | 4      | ☑         |                    |   |
| 2CREG-015-005-060 |        | 6      | 1,8     | 45      | 4      | ☑         |                    |   |
| 2CREG-015-005-080 |        | 8      | 1,8     | 45      | 4      | ☑         |                    |   |
| 2CREG-015-005-100 |        | 10     | 1,8     | 50      | 4      | ☑         |                    |   |
| 2CREG-015-005-120 |        | 12     | 1,8     | 50      | 4      | ☑         |                    |   |
| 2CREG-015-005-160 |        | 16     | 1,8     | 50      | 4      | ☑         |                    |   |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 2CREG-015-005-200 | 1,5    | R0,5   | 20      | 1,8     | 50     | 4         | ☑                  |
| 2CREG-015-005-220 |        |        | 22      | 1,8     | 60     | 4         | ☑                  |
| 2CREG-015-005-250 |        |        | 25      | 1,8     | 60     | 4         | ☑                  |
| 2CREG-020-001-060 | 2      | R0,1   | 6       | 2,4     | 45     | 4         | ☑                  |
| 2CREG-020-001-080 |        |        | 8       | 2,4     | 45     | 4         | ☑                  |
| 2CREG-020-001-100 |        |        | 10      | 2,4     | 50     | 4         | ☑                  |
| 2CREG-020-001-120 |        |        | 12      | 2,4     | 50     | 4         | ☑                  |
| 2CREG-020-001-160 |        |        | 16      | 2,4     | 50     | 4         | ☑                  |
| 2CREG-020-001-200 |        | 20     | 2,4     | 50      | 4      | ☑         |                    |
| 2CREG-020-001-250 |        | 25     | 2,4     | 60      | 4      | ☑         |                    |
| 2CREG-020-001-300 |        | 30     | 2,4     | 70      | 4      | ☑         |                    |
| 2CREG-020-002-060 |        | R0,2   | 6       | 2,4     | 45     | 4         | ☑                  |
| 2CREG-020-002-080 |        |        | 8       | 2,4     | 45     | 4         | ☑                  |
| 2CREG-020-002-100 | 10     |        | 2,4     | 50      | 4      | ☑         |                    |
| 2CREG-020-002-120 | 12     |        | 2,4     | 50      | 4      | ☑         |                    |
| 2CREG-020-002-160 | 16     |        | 2,4     | 50      | 4      | ☑         |                    |
| 2CREG-020-002-200 | 20     |        | 2,4     | 50      | 4      | ☑         |                    |
| 2CREG-020-002-250 | 25     | 2,4    | 60      | 4       | ☑      |           |                    |
| 2CREG-020-002-300 | 30     | 2,4    | 70      | 4       | ☑      |           |                    |
| 2CREG-020-003-060 | R0,3   | 6      | 2,4     | 45      | 4      | ☑         |                    |
| 2CREG-020-003-080 |        | 8      | 2,4     | 45      | 4      | ☑         |                    |
| 2CREG-020-003-100 |        | 10     | 2,4     | 50      | 4      | ☑         |                    |
| 2CREG-020-003-120 |        | 12     | 2,4     | 50      | 4      | ☑         |                    |
| 2CREG-020-003-160 |        | 16     | 2,4     | 50      | 4      | ☑         |                    |
| 2CREG-020-003-200 |        | 20     | 2,4     | 50      | 4      | ☑         |                    |
| 2CREG-020-003-250 | 25     | 2,4    | 60      | 4       | ☑      |           |                    |
| 2CREG-020-003-300 | 30     | 2,4    | 70      | 4       | ☑      |           |                    |
| 2CREG-020-005-060 | 2,5    | R0,5   | 6       | 2,4     | 45     | 4         | ☑                  |
| 2CREG-020-005-080 |        |        | 8       | 2,4     | 45     | 4         | ☑                  |
| 2CREG-020-005-100 |        |        | 10      | 2,4     | 50     | 4         | ☑                  |
| 2CREG-020-005-120 |        |        | 12      | 2,4     | 50     | 4         | ☑                  |
| 2CREG-020-005-160 |        |        | 16      | 2,4     | 50     | 4         | ☑                  |
| 2CREG-020-005-200 |        | 20     | 2,4     | 50      | 4      | ☑         |                    |
| 2CREG-020-005-250 |        | 25     | 2,4     | 60      | 4      | ☑         |                    |
| 2CREG-020-005-300 |        | 30     | 2,4     | 70      | 4      | ☑         |                    |
| 2CREG-025-001-100 |        | R0,1   | 10      | 3       | 50     | 4         | ☑                  |
| 2CREG-025-001-160 |        |        | 16      | 3       | 50     | 4         | ☑                  |
| 2CREG-025-001-200 | 20     |        | 3       | 50      | 4      | ☑         |                    |
| 2CREG-025-001-250 | 25     |        | 3       | 60      | 4      | ☑         |                    |
| 2CREG-025-001-300 | 30     |        | 3       | 70      | 4      | ☑         |                    |
| 2CREG-025-002-100 | R0,2   |        | 10      | 3       | 50     | 4         | ☑                  |
| 2CREG-025-002-160 |        | 16     | 3       | 50      | 4      | ☑         |                    |
| 2CREG-025-002-200 |        | 20     | 3       | 50      | 4      | ☑         |                    |
| 2CREG-025-002-250 | R0,3   | 25     | 3       | 60      | 4      | ☑         |                    |
| 2CREG-025-002-300 |        | 30     | 3       | 70      | 4      | ☑         |                    |
| 2CREG-025-003-100 |        | 10     | 3       | 50      | 4      | ☑         |                    |
| 2CREG-025-003-160 | R0,5   | 16     | 3       | 50      | 4      | ☑         |                    |
| 2CREG-025-003-200 |        | 20     | 3       | 50      | 4      | ☑         |                    |
| 2CREG-025-003-250 |        | 25     | 3       | 60      | 4      | ☑         |                    |
| 2CREG-025-003-300 | R0,5   | 30     | 3       | 70      | 4      | ☑         |                    |
| 2CREG-025-005-100 |        | 10     | 3       | 50      | 4      | ☑         |                    |
| 2CREG-025-005-160 |        | 16     | 3       | 50      | 4      | ☑         |                    |

# 2CREG

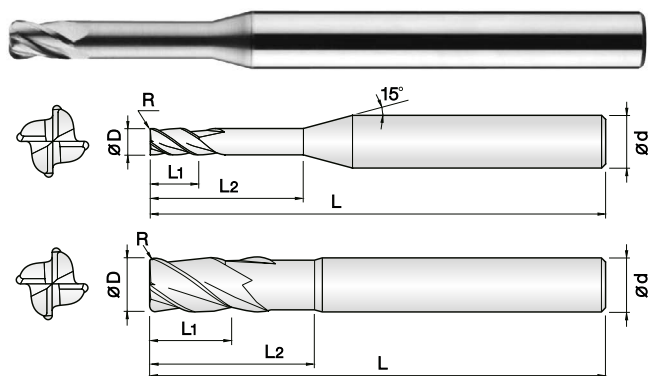
## 2-břité TOROIDNÍ frézy pro žebrování pro široký sortiment ocelí do HRC 52

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  | Objednací číslo                     | D (mm)                              | R (mm)                              | L2 (mm)                             | L1 (mm)           | L (mm) | d h5 (mm) | Standardní položka                  |                                     |
|-------------------|--------|--------|---------|---------|--------|-----------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------|--------|-----------|-------------------------------------|-------------------------------------|
| 2CREG-025-005-200 | 2,5    | R0,5   | 20      | 3       | 50     | 4         | <input checked="" type="checkbox"/> | 2CREG-040-001-450                   | 4                                   | R0,1                                | 45                                  | 4,8               | 90     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-025-005-250 |        |        | 25      | 3       | 60     | 4         | <input checked="" type="checkbox"/> | 2CREG-040-001-500                   |                                     |                                     | 50                                  | 4,8               | 100    | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-025-005-300 |        |        | 30      | 3       | 70     | 4         | <input checked="" type="checkbox"/> | 2CREG-040-002-050                   |                                     |                                     | 12                                  | 4,8               | 50     | 4         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-001-100 | 3      | R0,1   | 10      | 3,6     | 50     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-002-070                   | R0,2                                | R0,2                                | 20                                  | 4,8               | 70     | 4         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-001-120 |        |        | 12      | 3,6     | 50     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-002-120                   |                                     |                                     | 12                                  | 4,8               | 50     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-001-160 |        |        | 16      | 3,6     | 55     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-002-160                   |                                     |                                     | 16                                  | 4,8               | 55     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-001-200 |        |        | 20      | 3,6     | 60     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-002-200                   |                                     |                                     | 20                                  | 4,8               | 60     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-001-250 |        |        | 25      | 3,6     | 65     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-002-250                   |                                     |                                     | 25                                  | 4,8               | 65     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-001-300 |        |        | 30      | 3,6     | 70     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-002-300                   |                                     |                                     | 30                                  | 4,8               | 70     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-001-350 |        |        | 35      | 3,6     | 75     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-002-350                   |                                     |                                     | 35                                  | 4,8               | 75     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-001-400 |        |        | 40      | 3,6     | 80     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-002-400                   |                                     |                                     | 40                                  | 4,8               | 80     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-002-100 |        |        | R0,2    | R0,2    | 10     | 3,6       | 50                                  | 6                                   |                                     |                                     | <input checked="" type="checkbox"/> | 2CREG-040-002-450 | R0,3   | R0,3      | 45                                  | 4,8                                 |
| 2CREG-030-002-120 |        | 12     |         |         | 3,6    | 50        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-002-500                   | 50                                  | 4,8                                 | 100               |        |           | 6                                   | <input checked="" type="checkbox"/> |
| 2CREG-030-002-160 |        | 16     |         |         | 3,6    | 55        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-003-050                   | 12                                  | 4,8                                 | 50                |        |           | 4                                   | <input checked="" type="checkbox"/> |
| 2CREG-030-002-200 |        | 20     |         |         | 3,6    | 60        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-003-070                   | 20                                  | 4,8                                 | 70                |        |           | 4                                   | <input checked="" type="checkbox"/> |
| 2CREG-030-002-250 |        | 25     |         |         | 3,6    | 65        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-003-120                   | 12                                  | 4,8                                 | 50                |        |           | 6                                   | <input checked="" type="checkbox"/> |
| 2CREG-030-002-300 |        | 30     |         |         | 3,6    | 70        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-003-160                   | 16                                  | 4,8                                 | 55                |        |           | 6                                   | <input checked="" type="checkbox"/> |
| 2CREG-030-002-350 |        | 35     |         |         | 3,6    | 75        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-003-200                   | 20                                  | 4,8                                 | 60                |        |           | 6                                   | <input checked="" type="checkbox"/> |
| 2CREG-030-002-400 |        | 40     |         |         | 3,6    | 80        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-003-250                   | 25                                  | 4,8                                 | 65                |        |           | 6                                   | <input checked="" type="checkbox"/> |
| 2CREG-030-003-100 |        | R0,3   |         |         | R0,3   | 10        | 3,6                                 | 50                                  | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-003-300                   | R0,5              |        |           | R0,5                                | 30                                  |
| 2CREG-030-003-120 |        |        | 12      | 3,6     |        | 50        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-003-350                   | 35                                  | 4,8                                 |                   | 75     | 6         |                                     | <input checked="" type="checkbox"/> |
| 2CREG-030-003-160 |        |        | 16      | 3,6     |        | 55        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-003-400                   | 40                                  | 4,8                                 |                   | 80     | 6         |                                     | <input checked="" type="checkbox"/> |
| 2CREG-030-003-200 |        |        | 20      | 3,6     |        | 60        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-003-450                   | 45                                  | 4,8                                 |                   | 80     | 6         |                                     | <input checked="" type="checkbox"/> |
| 2CREG-030-003-250 |        |        | 25      | 3,6     |        | 65        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-003-500                   | 50                                  | 4,8                                 |                   | 100    | 6         |                                     | <input checked="" type="checkbox"/> |
| 2CREG-030-003-300 |        |        | 30      | 3,6     |        | 70        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-005-050                   | 12                                  | 4,8                                 |                   | 50     | 4         |                                     | <input checked="" type="checkbox"/> |
| 2CREG-030-003-350 |        |        | 35      | 3,6     |        | 75        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-005-070                   | 20                                  | 4,8                                 |                   | 70     | 4         |                                     | <input checked="" type="checkbox"/> |
| 2CREG-030-003-400 |        |        | 40      | 3,6     |        | 80        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-005-120                   | 12                                  | 4,8                                 |                   | 50     | 6         |                                     | <input checked="" type="checkbox"/> |
| 2CREG-030-005-100 |        |        | R0,5    | R0,5    |        | 10        | 3,6                                 | 50                                  | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-005-160                   |                   | R1     | R1        |                                     | 16                                  |
| 2CREG-030-005-120 |        | 12     |         |         | 3,6    | 50        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-005-200                   | 20                                  | 4,8                                 | 60                |        |           | 6                                   | <input checked="" type="checkbox"/> |
| 2CREG-030-005-160 |        | 16     |         |         | 3,6    | 55        | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-005-250                   | 25                                  | 4,8                                 | 65                |        |           | 6                                   | <input checked="" type="checkbox"/> |
| 2CREG-030-005-200 | 20     | 3,6    |         |         | 60     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-005-300                   | 30                                  | 4,8                                 | 70                                  | 6                 |        |           | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-005-250 | 25     | 3,6    |         |         | 65     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-005-350                   | 35                                  | 4,8                                 | 75                                  | 6                 |        |           | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-005-300 | 30     | 3,6    |         |         | 70     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-005-400                   | 40                                  | 4,8                                 | 80                                  | 6                 |        |           | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-005-350 | 35     | 3,6    |         |         | 75     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-005-450                   | 45                                  | 4,8                                 | 90                                  | 6                 |        |           | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-005-400 | 40     | 3,6    |         |         | 80     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-005-500                   | 50                                  | 4,8                                 | 100                                 | 6                 |        |           | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-010-100 | R1     | R1     |         |         | 10     | 3,6       | 50                                  | 6                                   | <input checked="" type="checkbox"/> | 2CREG-040-010-050                   | R0,2                                | R0,2              |        |           | 12                                  | 4,8                                 |
| 2CREG-030-010-120 |        |        | 12      | 3,6     | 50     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-010-070                   | 20                                  | 4,8                                 |                                     |                   | 70     | 4         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-010-160 |        |        | 16      | 3,6     | 55     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-010-120                   | 12                                  | 4,8                                 |                                     |                   | 50     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-010-200 |        |        | 20      | 3,6     | 60     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-010-160                   | 16                                  | 4,8                                 |                                     |                   | 55     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-010-250 |        |        | 25      | 3,6     | 65     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-010-200                   | 20                                  | 4,8                                 |                                     |                   | 60     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-010-300 |        |        | 30      | 3,6     | 70     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-010-250                   | 25                                  | 4,8                                 |                                     |                   | 65     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-010-350 |        |        | 35      | 3,6     | 75     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-010-300                   | 30                                  | 4,8                                 |                                     |                   | 70     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-030-010-400 |        |        | 40      | 3,6     | 80     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-010-350                   | 35                                  | 4,8                                 |                                     |                   | 75     | 6         | <input checked="" type="checkbox"/> |                                     |
| 2CREG-040-001-050 |        |        | 4       | R0,1    | 12     | 4,8       | 50                                  | 4                                   | <input checked="" type="checkbox"/> | 2CREG-040-010-400                   |                                     |                   | R0,5   | R0,5      | 40                                  | 4,8                                 |
| 2CREG-040-001-070 | 20     | 4,8    |         |         | 70     | 4         | <input checked="" type="checkbox"/> | 2CREG-040-010-450                   | 45                                  | 4,8                                 | 90                                  | 6                 |        |           | <input checked="" type="checkbox"/> |                                     |
| 2CREG-040-001-120 | 12     | 4,8    |         |         | 50     | 6         | <input checked="" type="checkbox"/> | 2CREG-040-010-500                   | 50                                  | 4,8                                 | 100                                 | 6                 |        |           | <input checked="" type="checkbox"/> |                                     |
| 2CREG-040-001-160 | 16     | 4,8    |         |         | 55     | 6         | <input checked="" type="checkbox"/> | 2CREG-050-002-150                   | 15                                  | 6                                   | 55                                  | 6                 |        |           | <input checked="" type="checkbox"/> |                                     |
| 2CREG-040-001-200 | 20     | 4,8    |         |         | 60     | 6         | <input checked="" type="checkbox"/> | 2CREG-050-002-250                   | 25                                  | 6                                   | 70                                  | 6                 |        |           | <input checked="" type="checkbox"/> |                                     |
| 2CREG-040-001-250 | 25     | 4,8    |         |         | 65     | 6         | <input checked="" type="checkbox"/> | 2CREG-050-002-300                   | 30                                  | 6                                   | 70                                  | 6                 |        |           | <input checked="" type="checkbox"/> |                                     |
| 2CREG-040-001-300 | 30     | 4,8    |         |         | 70     | 6         | <input checked="" type="checkbox"/> | 2CREG-050-002-400                   | 40                                  | 6                                   | 80                                  | 6                 |        |           | <input checked="" type="checkbox"/> |                                     |
| 2CREG-040-001-350 | 35     | 4,8    |         |         | 75     | 6         | <input checked="" type="checkbox"/> | 2CREG-050-002-500                   | 50                                  | 6                                   | 100                                 | 6                 |        |           | <input checked="" type="checkbox"/> |                                     |
| 2CREG-040-001-400 | 40     | 4,8    |         |         | 80     | 6         | <input checked="" type="checkbox"/> | 2CREG-050-005-150                   | 15                                  | 6                                   | 55                                  | 6                 |        |           | <input checked="" type="checkbox"/> |                                     |

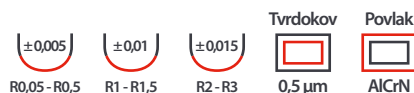
| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |                                     |                                     |
|-------------------|--------|--------|---------|---------|--------|-----------|-------------------------------------|-------------------------------------|-------------------------------------|
| 2CREG-050-005-250 | 5      | R0,5   | 25      | 6       | 70     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-050-005-300 |        |        | 30      | 6       | 70     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-050-005-400 |        |        | 40      | 6       | 80     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-050-005-500 |        |        | 50      | 6       | 100    | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-050-010-150 |        | R1     | 15      | 6       | 55     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-050-010-250 |        |        | 25      | 6       | 70     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-050-010-300 |        |        | 30      | 6       | 70     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-050-010-400 |        |        | 40      | 6       | 80     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-050-010-500 |        |        | 50      | 6       | 100    | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-060-001-200 |        |        | 6       | R0,1    | 20     | 7         | 60                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2CREG-060-001-400 |        |        |         |         | 40     | 7         | 90                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2CREG-060-002-200 |        |        |         | R0,2    | 20     | 7         | 60                                  | 6                                   | <input checked="" type="checkbox"/> |
| 2CREG-060-002-400 | 40     | 7      |         |         | 90     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-060-003-200 | R0,3   | 20     |         | 7       | 60     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-060-003-400 |        | 40     |         | 7       | 90     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-060-005-200 | R0,5   | 20     |         | 7       | 60     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-060-005-400 |        | 40     |         | 7       | 90     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-060-010-200 | R1     | 20     |         | 7       | 60     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-060-010-400 |        | 40     |         | 7       | 90     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-060-015-200 | R1,5   | 20     |         | 7       | 60     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-060-015-400 |        | 40     |         | 7       | 90     | 6         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-080-002-220 | 8      | R0,2   |         | 22      | 9      | 65        | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2CREG-080-002-400 |        |        |         | 40      | 9      | 100       | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2CREG-080-003-220 |        | R0,3   |         | 22      | 9      | 65        | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2CREG-080-003-400 |        |        |         | 40      | 9      | 100       | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2CREG-080-005-220 |        | R0,5   |         | 22      | 9      | 65        | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2CREG-080-005-400 |        |        |         | 40      | 9      | 100       | 8                                   | <input checked="" type="checkbox"/> |                                     |
| 2CREG-080-010-220 |        | R1     | 22      | 9       | 65     | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-080-010-400 |        |        | 40      | 9       | 100    | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-080-015-220 |        | R1,5   | 22      | 9       | 65     | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-080-015-400 |        |        | 40      | 9       | 100    | 8         | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-100-002-240 |        | 10     | R0,2    | 24      | 11     | 70        | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2CREG-100-002-450 |        |        |         | 45      | 11     | 100       | 10                                  | <input checked="" type="checkbox"/> |                                     |
| 2CREG-100-003-240 | R0,3   |        | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-100-003-450 |        |        | 45      | 11      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-100-005-240 | R0,5   |        | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-100-005-450 |        |        | 45      | 11      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-100-010-240 | R1     |        | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-100-010-450 |        |        | 45      | 11      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-100-015-240 | R1,5   |        | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-100-015-450 |        |        | 45      | 11      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-100-020-240 | R2     |        | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-100-020-450 |        |        | 45      | 11      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-120-002-260 | 12     |        | R0,2    | 26      | 13     | 80        | 12                                  | <input checked="" type="checkbox"/> |                                     |
| 2CREG-120-002-500 |        |        |         | 50      | 13     | 110       | 12                                  | <input checked="" type="checkbox"/> |                                     |
| 2CREG-120-003-260 |        |        | R0,3    | 26      | 13     | 80        | 12                                  | <input checked="" type="checkbox"/> |                                     |
| 2CREG-120-003-500 |        |        |         | 50      | 13     | 110       | 12                                  | <input checked="" type="checkbox"/> |                                     |
| 2CREG-120-005-260 |        |        | R0,5    | 26      | 13     | 80        | 12                                  | <input checked="" type="checkbox"/> |                                     |
| 2CREG-120-005-500 |        |        |         | 50      | 13     | 110       | 12                                  | <input checked="" type="checkbox"/> |                                     |
| 2CREG-120-010-260 |        | R1     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-120-010-500 |        |        | 50      | 13      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |                                     |
| 2CREG-120-015-260 |        | R1,5   | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |                                     |                                     |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|-------------------|--------|--------|---------|---------|--------|-----------|-------------------------------------|
| 2CREG-120-015-500 | 12     | R1,5   | 50      | 13      | 110    | 12        | <input checked="" type="checkbox"/> |
| 2CREG-120-020-260 |        | R2     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 2CREG-120-020-500 |        |        | 50      | 13      | 110    | 12        | <input checked="" type="checkbox"/> |
| 2CREG-120-030-260 |        | R3     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 2CREG-120-030-500 |        |        | 50      | 13      | 110    | 12        | <input checked="" type="checkbox"/> |
| 2CREG-160-005-110 |        | 16     | R0,5    | 35      | 20     | 110       | 16                                  |
| 2CREG-160-005-160 | 35     |        |         | 20      | 160    | 16        | <input checked="" type="checkbox"/> |
| 2CREG-160-010-110 | R1     |        | 35      | 20      | 110    | 16        | <input checked="" type="checkbox"/> |
| 2CREG-160-010-160 |        |        | 35      | 20      | 160    | 16        | <input checked="" type="checkbox"/> |

# 4CREG 4-břité TOROIDNÍ frézy pro žebrování pro široký sortiment ocelí do HRC 52



- Určeno pro široký sortiment různých typů ocelí do HRC 92
- Optimální pro různé typy ocelí díky AlCrN povlaku
- Velmi přesné tolerance řezných hran
- Široký sortiment vyložení a rádiíů pro optimální výběr nástroje
- Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



| Objednací číslo    | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|--------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 4CREG-010-0005-040 | 1      | R0,05  | 4       | 1,2     | 45     | 4         | ☑                  |   |
| 4CREG-010-0005-060 |        |        | 6       | 1,2     | 45     | 4         | ☑                  |   |
| 4CREG-010-0005-080 |        |        | 8       | 1,2     | 45     | 4         | ☑                  |   |
| 4CREG-010-0005-100 |        |        | 10      | 1,2     | 50     | 4         | ☑                  |   |
| 4CREG-010-0005-120 |        |        | 12      | 1,2     | 50     | 4         | ☑                  |   |
| 4CREG-010-0005-160 |        |        | 16      | 1,2     | 50     | 4         | ☑                  |   |
| 4CREG-010-0005-200 |        |        | 20      | 1,2     | 50     | 4         | ☑                  |   |
| 4CREG-010-001-040  |        |        | R0,1    | 4       | 1,2    | 45        | 4                  | ☑ |
| 4CREG-010-001-060  |        |        |         | 6       | 1,2    | 45        | 4                  | ☑ |
| 4CREG-010-001-080  |        |        |         | 8       | 1,2    | 45        | 4                  | ☑ |
| 4CREG-010-001-100  |        | 10     |         | 1,2     | 50     | 4         | ☑                  |   |
| 4CREG-010-001-120  |        | 12     |         | 1,2     | 50     | 4         | ☑                  |   |
| 4CREG-010-001-160  |        | 16     |         | 1,2     | 50     | 4         | ☑                  |   |
| 4CREG-010-001-200  |        | 20     |         | 1,2     | 50     | 4         | ☑                  |   |
| 4CREG-010-002-040  |        | R0,2   |         | 4       | 1,2    | 45        | 4                  | ☑ |
| 4CREG-010-002-060  |        |        |         | 6       | 1,2    | 45        | 4                  | ☑ |
| 4CREG-010-002-080  |        |        |         | 8       | 1,2    | 45        | 4                  | ☑ |
| 4CREG-010-002-100  |        |        | 10      | 1,2     | 50     | 4         | ☑                  |   |
| 4CREG-010-002-120  |        |        | 12      | 1,2     | 50     | 4         | ☑                  |   |
| 4CREG-010-002-160  |        |        | 16      | 1,2     | 50     | 4         | ☑                  |   |
| 4CREG-010-002-200  | 20     |        | 1,2     | 50      | 4      | ☑         |                    |   |
| 4CREG-010-003-040  | R0,3   |        | 4       | 1,2     | 45     | 4         | ☑                  |   |
| 4CREG-010-003-060  |        |        | 6       | 1,2     | 45     | 4         | ☑                  |   |
| 4CREG-010-003-080  |        |        | 8       | 1,2     | 45     | 4         | ☑                  |   |
| 4CREG-010-003-100  |        | 10     | 1,2     | 50      | 4      | ☑         |                    |   |
| 4CREG-010-003-120  |        | 12     | 1,2     | 50      | 4      | ☑         |                    |   |
| 4CREG-010-003-160  |        | 16     | 1,2     | 50      | 4      | ☑         |                    |   |
| 4CREG-010-003-200  |        | 20     | 1,2     | 50      | 4      | ☑         |                    |   |
| 4CREG-012-001-040  |        | 1,2    | R0,1    | 4       | 1,4    | 45        | 4                  | ☑ |
| 4CREG-012-001-060  |        |        |         | 6       | 1,4    | 45        | 4                  | ☑ |
| 4CREG-012-001-080  |        |        |         | 8       | 1,4    | 45        | 4                  | ☑ |
| 4CREG-012-001-100  | 10     |        |         | 1,4     | 50     | 4         | ☑                  |   |
| 4CREG-012-001-120  | 12     |        |         | 1,4     | 50     | 4         | ☑                  |   |
| 4CREG-012-001-160  | 16     |        | 1,4     | 50      | 4      | ☑         |                    |   |
| 4CREG-012-001-200  | 20     |        | 1,4     | 50      | 4      | ☑         |                    |   |
| 4CREG-012-002-040  | R0,2   |        | 4       | 1,4     | 45     | 4         | ☑                  |   |
| 4CREG-012-002-060  |        |        | 6       | 1,4     | 45     | 4         | ☑                  |   |
| 4CREG-012-002-080  |        |        | 8       | 1,4     | 45     | 4         | ☑                  |   |
| 4CREG-012-002-100  |        | 10     | 1,4     | 50      | 4      | ☑         |                    |   |
| 4CREG-012-002-120  |        | 12     | 1,4     | 50      | 4      | ☑         |                    |   |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 4CREG-012-002-100 | 1,2    | R0,2   | 10      | 1,4     | 50     | 4         | ☑                  |   |
| 4CREG-012-002-120 |        |        | 12      | 1,4     | 50     | 4         | ☑                  |   |
| 4CREG-012-002-160 |        |        | 16      | 1,4     | 50     | 4         | ☑                  |   |
| 4CREG-012-002-200 |        |        | 20      | 1,4     | 50     | 4         | ☑                  |   |
| 4CREG-012-003-040 |        |        | R0,3    | 4       | 1,4    | 45        | 4                  | ☑ |
| 4CREG-012-003-060 |        | 6      |         | 1,4     | 45     | 4         | ☑                  |   |
| 4CREG-012-003-080 |        | 8      |         | 1,4     | 45     | 4         | ☑                  |   |
| 4CREG-012-003-100 |        | 10     |         | 1,4     | 50     | 4         | ☑                  |   |
| 4CREG-012-003-120 |        | 12     |         | 1,4     | 50     | 4         | ☑                  |   |
| 4CREG-015-001-060 |        | 1,5    | R0,1    | 6       | 1,8    | 45        | 4                  | ☑ |
| 4CREG-015-001-080 | 8      |        |         | 1,8     | 45     | 4         | ☑                  |   |
| 4CREG-015-001-100 | 10     |        |         | 1,8     | 50     | 4         | ☑                  |   |
| 4CREG-015-001-120 | 12     |        |         | 1,8     | 50     | 4         | ☑                  |   |
| 4CREG-015-001-160 | 16     |        |         | 1,8     | 50     | 4         | ☑                  |   |
| 4CREG-015-001-200 | 20     |        | 1,8     | 50      | 4      | ☑         |                    |   |
| 4CREG-015-001-220 | R0,2   |        | 22      | 1,8     | 60     | 4         | ☑                  |   |
| 4CREG-015-001-250 |        |        | 25      | 1,8     | 60     | 4         | ☑                  |   |
| 4CREG-015-002-060 |        |        | R0,3    | 6       | 1,8    | 45        | 4                  | ☑ |
| 4CREG-015-002-080 |        |        |         | 8       | 1,8    | 45        | 4                  | ☑ |
| 4CREG-015-002-100 |        | 10     |         | 1,8     | 50     | 4         | ☑                  |   |
| 4CREG-015-002-120 | 12     | 1,8    |         | 50      | 4      | ☑         |                    |   |
| 4CREG-015-002-160 | 16     | 1,8    |         | 50      | 4      | ☑         |                    |   |
| 4CREG-015-002-200 | R0,5   | 20     | 1,8     | 50      | 4      | ☑         |                    |   |
| 4CREG-015-002-220 |        | 22     | 1,8     | 60      | 4      | ☑         |                    |   |
| 4CREG-015-002-250 |        | 25     | 1,8     | 60      | 4      | ☑         |                    |   |
| 4CREG-015-003-060 |        | R0,5   | 6       | 1,8     | 45     | 4         | ☑                  |   |
| 4CREG-015-003-080 |        |        | 8       | 1,8     | 45     | 4         | ☑                  |   |
| 4CREG-015-003-100 | 10     |        | 1,8     | 50      | 4      | ☑         |                    |   |
| 4CREG-015-003-120 | 12     |        | 1,8     | 50      | 4      | ☑         |                    |   |
| 4CREG-015-003-160 | 16     |        | 1,8     | 50      | 4      | ☑         |                    |   |
| 4CREG-015-003-200 | R0,5   | 20     | 1,8     | 50      | 4      | ☑         |                    |   |
| 4CREG-015-003-220 |        | 22     | 1,8     | 60      | 4      | ☑         |                    |   |
| 4CREG-015-003-250 |        | 25     | 1,8     | 60      | 4      | ☑         |                    |   |
| 4CREG-015-005-060 |        | R0,5   | 6       | 1,8     | 45     | 4         | ☑                  |   |
| 4CREG-015-005-080 |        |        | 8       | 1,8     | 45     | 4         | ☑                  |   |
| 4CREG-015-005-100 | 10     |        | 1,8     | 50      | 4      | ☑         |                    |   |



# 4CREG

## 4-břité TOROIDNÍ frézy pro žebrování pro široký sortiment ocelí do HRC 52

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 4CREG-015-005-120 | 1,5    | R0,5   | 12      | 1,8     | 50     | 4         | ☑                  |   |
| 4CREG-015-005-160 |        |        | 16      | 1,8     | 50     | 4         | ☑                  |   |
| 4CREG-015-005-200 |        |        | 20      | 1,8     | 50     | 4         | ☑                  |   |
| 4CREG-015-005-220 |        |        | 22      | 1,8     | 60     | 4         | ☑                  |   |
| 4CREG-015-005-250 |        |        | 25      | 1,8     | 60     | 4         | ☑                  |   |
| 4CREG-020-001-060 | 2      | R0,1   | 6       | 2,4     | 45     | 4         | ☑                  |   |
| 4CREG-020-001-080 |        |        | 8       | 2,4     | 45     | 4         | ☑                  |   |
| 4CREG-020-001-100 |        |        | 10      | 2,4     | 50     | 4         | ☑                  |   |
| 4CREG-020-001-120 |        |        | 12      | 2,4     | 50     | 4         | ☑                  |   |
| 4CREG-020-001-160 |        |        | 16      | 2,4     | 50     | 4         | ☑                  |   |
| 4CREG-020-001-200 |        | 20     | 2,4     | 50      | 4      | ☑         |                    |   |
| 4CREG-020-001-250 |        | 25     | 2,4     | 60      | 4      | ☑         |                    |   |
| 4CREG-020-001-300 |        | 30     | 2,4     | 70      | 4      | ☑         |                    |   |
| 4CREG-020-001-350 |        | 35     | 2,4     | 70      | 4      | ☑         |                    |   |
| 4CREG-020-002-060 |        | 2      | R0,2    | 6       | 2,4    | 45        | 4                  | ☑ |
| 4CREG-020-002-080 |        |        |         | 8       | 2,4    | 45        | 4                  | ☑ |
| 4CREG-020-002-100 |        |        |         | 10      | 2,4    | 50        | 4                  | ☑ |
| 4CREG-020-002-120 |        |        |         | 12      | 2,4    | 50        | 4                  | ☑ |
| 4CREG-020-002-160 |        |        |         | 16      | 2,4    | 50        | 4                  | ☑ |
| 4CREG-020-002-200 |        |        | 20      | 2,4     | 50     | 4         | ☑                  |   |
| 4CREG-020-002-250 | 25     |        | 2,4     | 60      | 4      | ☑         |                    |   |
| 4CREG-020-002-300 | 30     |        | 2,4     | 70      | 4      | ☑         |                    |   |
| 4CREG-020-002-350 | 35     |        | 2,4     | 70      | 4      | ☑         |                    |   |
| 4CREG-020-003-060 | 2      |        | R0,3    | 6       | 2,4    | 45        | 4                  | ☑ |
| 4CREG-020-003-080 |        |        |         | 8       | 2,4    | 45        | 4                  | ☑ |
| 4CREG-020-003-100 |        |        |         | 10      | 2,4    | 50        | 4                  | ☑ |
| 4CREG-020-003-120 |        |        |         | 12      | 2,4    | 50        | 4                  | ☑ |
| 4CREG-020-003-160 |        |        |         | 16      | 2,4    | 50        | 4                  | ☑ |
| 4CREG-020-003-200 |        |        | 20      | 2,4     | 50     | 4         | ☑                  |   |
| 4CREG-020-003-250 |        | 25     | 2,4     | 60      | 4      | ☑         |                    |   |
| 4CREG-020-003-300 |        | 30     | 2,4     | 70      | 4      | ☑         |                    |   |
| 4CREG-020-003-350 |        | 35     | 2,4     | 70      | 4      | ☑         |                    |   |
| 4CREG-020-005-060 |        | 2,5    | R0,5    | 6       | 2,4    | 45        | 4                  | ☑ |
| 4CREG-020-005-080 |        |        |         | 8       | 2,4    | 45        | 4                  | ☑ |
| 4CREG-020-005-100 |        |        |         | 10      | 2,4    | 50        | 4                  | ☑ |
| 4CREG-020-005-120 |        |        |         | 12      | 2,4    | 50        | 4                  | ☑ |
| 4CREG-020-005-160 |        |        |         | 16      | 2,4    | 50        | 4                  | ☑ |
| 4CREG-020-005-200 |        |        | 20      | 2,4     | 50     | 4         | ☑                  |   |
| 4CREG-020-005-250 | 25     |        | 2,4     | 60      | 4      | ☑         |                    |   |
| 4CREG-020-005-300 | 30     |        | 2,4     | 70      | 4      | ☑         |                    |   |
| 4CREG-020-005-350 | 35     |        | 2,4     | 70      | 4      | ☑         |                    |   |
| 4CREG-025-001-100 | 2,5    |        | R0,1    | 10      | 3      | 50        | 4                  | ☑ |
| 4CREG-025-001-160 |        |        |         | 16      | 3      | 50        | 4                  | ☑ |
| 4CREG-025-001-200 |        |        |         | 20      | 3      | 50        | 4                  | ☑ |
| 4CREG-025-001-250 |        |        |         | 25      | 3      | 60        | 4                  | ☑ |
| 4CREG-025-001-300 |        |        |         | 30      | 3      | 70        | 4                  | ☑ |
| 4CREG-025-002-100 |        |        | 2,5     | R0,2    | 10     | 3         | 50                 | 4 |
| 4CREG-025-002-160 |        | 16     |         |         | 3      | 50        | 4                  | ☑ |
| 4CREG-025-002-200 |        | 20     |         |         | 3      | 50        | 4                  | ☑ |
| 4CREG-025-002-250 |        | 25     |         |         | 3      | 60        | 4                  | ☑ |
| 4CREG-025-002-300 |        | 30     |         |         | 3      | 70        | 4                  | ☑ |
| 4CREG-025-003-100 |        | R0,3   |         | 10      | 3      | 50        | 4                  | ☑ |
| 4CREG-025-003-160 |        |        |         | 16      | 3      | 50        | 4                  | ☑ |
| 4CREG-025-003-250 |        |        |         | 25      | 3      | 60        | 4                  | ☑ |
| 4CREG-025-003-300 |        |        |         | 30      | 3      | 70        | 4                  | ☑ |
| 4CREG-025-003-100 |        |        |         | 10      | 3      | 50        | 4                  | ☑ |

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|---|
| 4CREG-025-003-160 | 2,5    | R0,3   | 16      | 3       | 50     | 4         | ☑                  |   |
| 4CREG-025-003-200 |        |        | 20      | 3       | 50     | 4         | ☑                  |   |
| 4CREG-025-003-250 |        |        | 25      | 3       | 60     | 4         | ☑                  |   |
| 4CREG-025-003-300 |        |        | 30      | 3       | 70     | 4         | ☑                  |   |
| 4CREG-025-005-100 |        |        | 10      | 3       | 50     | 4         | ☑                  |   |
| 4CREG-025-005-160 |        | R0,5   | 16      | 3       | 50     | 4         | ☑                  |   |
| 4CREG-025-005-200 |        |        | 20      | 3       | 50     | 4         | ☑                  |   |
| 4CREG-025-005-250 |        |        | 25      | 3       | 60     | 4         | ☑                  |   |
| 4CREG-025-005-300 |        |        | 30      | 3       | 70     | 4         | ☑                  |   |
| 4CREG-030-001-100 |        |        | 3       | R0,1    | 10     | 3,6       | 50                 | 6 |
| 4CREG-030-001-160 |        | 16     |         |         | 3,6    | 55        | 6                  | ☑ |
| 4CREG-030-001-200 |        | 20     |         |         | 3,6    | 60        | 6                  | ☑ |
| 4CREG-030-001-250 |        | 25     |         |         | 3,6    | 65        | 6                  | ☑ |
| 4CREG-030-001-300 |        | 30     |         |         | 3,6    | 70        | 6                  | ☑ |
| 4CREG-030-001-350 |        | 35     |         | 3,6     | 75     | 6         | ☑                  |   |
| 4CREG-030-001-400 | R0,2   | 40     |         | 3,6     | 80     | 6         | ☑                  |   |
| 4CREG-030-001-500 |        | 50     |         | 3,6     | 100    | 6         | ☑                  |   |
| 4CREG-030-002-100 |        | 10     |         | 3,6     | 50     | 6         | ☑                  |   |
| 4CREG-030-002-160 |        | 16     |         | 3,6     | 55     | 6         | ☑                  |   |
| 4CREG-030-002-200 |        | 20     |         | 3,6     | 60     | 6         | ☑                  |   |
| 4CREG-030-002-250 | R0,3   | 25     |         | 3,6     | 65     | 6         | ☑                  |   |
| 4CREG-030-002-300 |        | 30     |         | 3,6     | 70     | 6         | ☑                  |   |
| 4CREG-030-002-350 |        | 35     |         | 3,6     | 75     | 6         | ☑                  |   |
| 4CREG-030-002-400 |        | 40     |         | 3,6     | 80     | 6         | ☑                  |   |
| 4CREG-030-002-500 |        | 50     | 3,6     | 100     | 6      | ☑         |                    |   |
| 4CREG-030-003-100 | 3      | R0,3   | 10      | 3,6     | 50     | 6         | ☑                  |   |
| 4CREG-030-003-160 |        |        | 16      | 3,6     | 55     | 6         | ☑                  |   |
| 4CREG-030-003-200 |        |        | 20      | 3,6     | 60     | 6         | ☑                  |   |
| 4CREG-030-003-250 |        |        | 25      | 3,6     | 65     | 6         | ☑                  |   |
| 4CREG-030-003-300 |        |        | 30      | 3,6     | 70     | 6         | ☑                  |   |
| 4CREG-030-003-350 |        | R0,5   | 35      | 3,6     | 75     | 6         | ☑                  |   |
| 4CREG-030-003-400 |        |        | 40      | 3,6     | 80     | 6         | ☑                  |   |
| 4CREG-030-003-500 |        |        | 50      | 3,6     | 100    | 6         | ☑                  |   |
| 4CREG-030-005-100 |        |        | 10      | 3,6     | 50     | 6         | ☑                  |   |
| 4CREG-030-005-160 |        |        | 16      | 3,6     | 55     | 6         | ☑                  |   |
| 4CREG-030-005-200 |        | R0,1   | 20      | 3,6     | 60     | 6         | ☑                  |   |
| 4CREG-030-005-250 |        |        | 25      | 3,6     | 65     | 6         | ☑                  |   |
| 4CREG-030-005-300 |        |        | 30      | 3,6     | 70     | 6         | ☑                  |   |
| 4CREG-030-005-350 |        |        | 35      | 3,6     | 75     | 6         | ☑                  |   |
| 4CREG-030-005-400 |        |        | 40      | 3,6     | 80     | 6         | ☑                  |   |
| 4CREG-030-005-500 | R0,5   | 50     | 3,6     | 100     | 6      | ☑         |                    |   |
| 4CREG-030-010-100 |        | 10     | 3,6     | 50      | 6      | ☑         |                    |   |
| 4CREG-030-010-160 |        | 16     | 3,6     | 55      | 6      | ☑         |                    |   |
| 4CREG-030-010-200 |        | 20     | 3,6     | 60      | 6      | ☑         |                    |   |
| 4CREG-030-010-250 |        | 25     | 3,6     | 65      | 6      | ☑         |                    |   |
| 4CREG-030-010-300 | R1     | 30     | 3,6     | 70      | 6      | ☑         |                    |   |
| 4CREG-030-010-350 |        | 35     | 3,6     | 75      | 6      | ☑         |                    |   |
| 4CREG-030-010-400 |        | 40     | 3,6     | 80      | 6      | ☑         |                    |   |
| 4CREG-030-010-500 |        | 50     | 3,6     | 100     | 6      | ☑         |                    |   |
| 4CREG-040-001-050 |        | 4      | R0,1    | 12      | 4,8    | 50        | 4                  | ☑ |
| 4CREG-040-001-070 | 20     |        |         | 4,8     | 70     | 4         | ☑                  |   |
| 4CREG-040-001-120 | 12     |        |         | 4,8     | 50     | 6         | ☑                  |   |



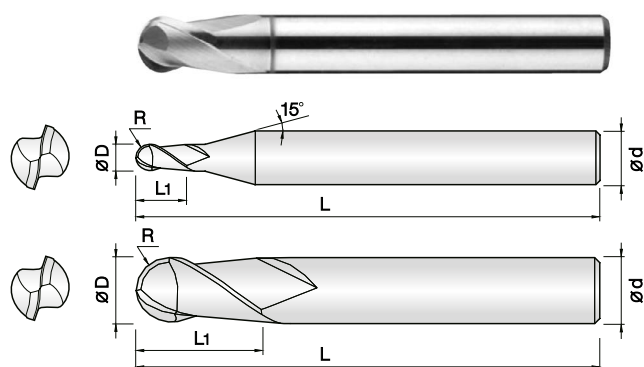
| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm)         | Standardní položka | Objednací číslo   | D (mm)            | R (mm)            | L2 (mm)           | L1 (mm)           | L (mm) | d h5 (mm) | Standardní položka |   |   |
|-------------------|--------|--------|---------|---------|--------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------|-----------|--------------------|---|---|
| 4CREG-040-001-160 | 4      | R0,1   | 16      | 4,8     | 55     | 6                 | ☑                  | 4CREG-050-001-150 | 5                 | R0,1              | 15                | 6                 | 55     | 6         | ☑                  |   |   |
| 4CREG-040-001-200 |        |        | 20      | 4,8     | 60     | 6                 | ☑                  | 4CREG-050-001-300 |                   |                   | 30                | 6                 | 70     | 6         | ☑                  |   |   |
| 4CREG-040-001-250 |        |        | 25      | 4,8     | 65     | 6                 | ☑                  | 4CREG-050-001-400 |                   |                   | 40                | 6                 | 80     | 6         | ☑                  |   |   |
| 4CREG-040-001-300 |        |        | 30      | 4,8     | 70     | 6                 | ☑                  | 4CREG-050-001-500 |                   |                   | 50                | 6                 | 100    | 6         | ☑                  |   |   |
| 4CREG-040-001-350 |        |        | 35      | 4,8     | 75     | 6                 | ☑                  | 4CREG-050-002-150 |                   |                   | R0,2              | 15                | 6      | 55        | 6                  | ☑ |   |
| 4CREG-040-001-400 |        |        | 40      | 4,8     | 80     | 6                 | ☑                  | 4CREG-050-002-300 |                   |                   |                   | 30                | 6      | 70        | 6                  | ☑ |   |
| 4CREG-040-001-450 |        |        | 45      | 4,8     | 90     | 6                 | ☑                  | 4CREG-050-002-400 |                   |                   |                   | 40                | 6      | 80        | 6                  | ☑ |   |
| 4CREG-040-001-500 |        |        | 50      | 4,8     | 100    | 6                 | ☑                  | 4CREG-050-002-500 |                   |                   | 50                | 6                 | 100    | 6         | ☑                  |   |   |
| 4CREG-040-002-050 |        | R0,2   | R0,3    | 12      | 4,8    | 50                | 4                  | ☑                 |                   | 4CREG-050-003-150 | R0,3              | 15                | 6      | 55        | 6                  | ☑ |   |
| 4CREG-040-002-070 |        |        |         | 20      | 4,8    | 70                | 4                  | ☑                 |                   | 4CREG-050-003-300 |                   | 30                | 6      | 70        | 6                  | ☑ |   |
| 4CREG-040-002-120 |        |        |         | 12      | 4,8    | 50                | 6                  | ☑                 |                   | 4CREG-050-003-400 |                   | 40                | 6      | 80        | 6                  | ☑ |   |
| 4CREG-040-002-160 |        |        |         | 16      | 4,8    | 55                | 6                  | ☑                 |                   | 4CREG-050-003-500 |                   | 50                | 6      | 100       | 6                  | ☑ |   |
| 4CREG-040-002-200 |        |        | 20      | 4,8     | 60     | 6                 | ☑                  | 4CREG-050-005-150 |                   | R0,5              | 15                | 6                 | 55     | 6         | ☑                  |   |   |
| 4CREG-040-002-250 |        |        | 25      | 4,8     | 65     | 6                 | ☑                  | 4CREG-050-005-300 |                   |                   | 30                | 6                 | 70     | 6         | ☑                  |   |   |
| 4CREG-040-002-300 |        |        | 30      | 4,8     | 70     | 6                 | ☑                  | 4CREG-050-005-400 |                   |                   | 40                | 6                 | 80     | 6         | ☑                  |   |   |
| 4CREG-040-002-350 |        |        | 35      | 4,8     | 75     | 6                 | ☑                  | 4CREG-050-005-500 |                   | 50                | 6                 | 100               | 6      | ☑         |                    |   |   |
| 4CREG-040-002-400 |        |        | 40      | 4,8     | 80     | 6                 | ☑                  | 4CREG-050-010-150 |                   | R1                | 15                | 6                 | 55     | 6         | ☑                  |   |   |
| 4CREG-040-002-450 |        |        | 45      | 4,8     | 90     | 6                 | ☑                  | 4CREG-050-010-300 |                   |                   | 30                | 6                 | 70     | 6         | ☑                  |   |   |
| 4CREG-040-002-500 |        |        | 50      | 4,8     | 100    | 6                 | ☑                  | 4CREG-050-010-400 |                   |                   | 40                | 6                 | 80     | 6         | ☑                  |   |   |
| 4CREG-040-003-050 |        |        | R0,3    | R0,1    | 12     | 4,8               | 50                 | 4                 |                   | ☑                 | 4CREG-050-010-500 | 50                | 6      | 100       | 6                  | ☑ |   |
| 4CREG-040-003-070 |        | 20     |         |         | 4,8    | 70                | 4                  | ☑                 |                   | 4CREG-060-001-200 | R0,1              | 20                | 7      | 60        | 6                  | ☑ |   |
| 4CREG-040-003-120 |        | 12     |         |         | 4,8    | 50                | 6                  | ☑                 |                   | 4CREG-060-001-400 |                   | 40                | 7      | 80        | 6                  | ☑ |   |
| 4CREG-040-003-160 |        | 16     |         |         | 4,8    | 55                | 6                  | ☑                 |                   | 4CREG-060-001-500 |                   | 50                | 7      | 100       | 6                  | ☑ |   |
| 4CREG-040-003-200 |        | 20     |         |         | 4,8    | 60                | 6                  | ☑                 |                   | 4CREG-060-002-200 | R0,2              | 20                | 7      | 60        | 6                  | ☑ |   |
| 4CREG-040-003-250 |        | 25     |         |         | 4,8    | 65                | 6                  | ☑                 |                   | 4CREG-060-002-400 |                   | 40                | 7      | 80        | 6                  | ☑ |   |
| 4CREG-040-003-300 |        | 30     |         |         | 4,8    | 70                | 6                  | ☑                 |                   | 4CREG-060-002-500 |                   | 50                | 7      | 100       | 6                  | ☑ |   |
| 4CREG-040-003-350 |        | 35     |         |         | 4,8    | 75                | 6                  | ☑                 |                   | 4CREG-060-003-200 | R0,3              | 20                | 7      | 60        | 6                  | ☑ |   |
| 4CREG-040-003-400 |        | 40     |         | 4,8     | 80     | 6                 | ☑                  | 4CREG-060-003-400 |                   | 40                |                   | 7                 | 80     | 6         | ☑                  |   |   |
| 4CREG-040-003-450 |        | 45     |         | 4,8     | 90     | 6                 | ☑                  | 4CREG-060-003-500 |                   | 50                |                   | 7                 | 100    | 6         | ☑                  |   |   |
| 4CREG-040-003-500 |        | 50     |         | 4,8     | 100    | 6                 | ☑                  | 4CREG-060-005-200 |                   | R0,5              | 20                | 7                 | 60     | 6         | ☑                  |   |   |
| 4CREG-040-005-050 |        | R0,5   |         | R0,5    | 12     | 4,8               | 50                 | 4                 |                   |                   | ☑                 | 4CREG-060-005-400 | 40     | 7         | 80                 | 6 | ☑ |
| 4CREG-040-005-070 |        |        |         |         | 20     | 4,8               | 70                 | 4                 |                   |                   | ☑                 | 4CREG-060-005-500 | 50     | 7         | 100                | 6 | ☑ |
| 4CREG-040-005-120 |        |        |         |         | 12     | 4,8               | 50                 | 6                 |                   | ☑                 | 4CREG-060-010-200 | R1                | 20     | 7         | 60                 | 6 | ☑ |
| 4CREG-040-005-160 |        |        |         |         | 16     | 4,8               | 55                 | 6                 |                   | ☑                 | 4CREG-060-010-400 |                   | 40     | 7         | 80                 | 6 | ☑ |
| 4CREG-040-005-200 |        |        |         | 20      | 4,8    | 60                | 6                  | ☑                 |                   | 4CREG-060-010-500 | 50                |                   | 7      | 100       | 6                  | ☑ |   |
| 4CREG-040-005-250 |        |        | 25      | 4,8     | 65     | 6                 | ☑                  | 4CREG-060-015-200 |                   | R1,5              | 20                | 7                 | 60     | 6         | ☑                  |   |   |
| 4CREG-040-005-300 |        |        | 30      | 4,8     | 70     | 6                 | ☑                  | 4CREG-060-015-400 |                   |                   | 40                | 7                 | 80     | 6         | ☑                  |   |   |
| 4CREG-040-005-350 |        |        | 35      | 4,8     | 75     | 6                 | ☑                  | 4CREG-060-015-500 |                   |                   | 50                | 7                 | 100    | 6         | ☑                  |   |   |
| 4CREG-040-005-400 |        | 40     | 4,8     | 80      | 6      | ☑                 | 4CREG-080-002-220  | R0,2              |                   | 22                | 9                 | 65                | 8      | ☑         |                    |   |   |
| 4CREG-040-005-450 |        | 45     | 4,8     | 90      | 6      | ☑                 | 4CREG-080-003-220  |                   |                   | 22                | 9                 | 65                | 8      | ☑         |                    |   |   |
| 4CREG-040-005-500 | 50     | 4,8    | 100     | 6       | ☑      | 4CREG-080-005-220 | R0,5               |                   | 22                | 9                 | 65                | 8                 | ☑      |           |                    |   |   |
| 4CREG-040-010-050 | R1     | R0,5   | 12      | 4,8     | 50     | 4                 |                    | ☑                 | 4CREG-080-005-400 | 40                | 9                 | 100               | 8      | ☑         |                    |   |   |
| 4CREG-040-010-070 |        |        | 20      | 4,8     | 70     | 4                 | ☑                  | 4CREG-080-010-220 | R1                | 22                | 9                 | 65                | 8      | ☑         |                    |   |   |
| 4CREG-040-010-120 |        |        | 12      | 4,8     | 50     | 6                 | ☑                  | 4CREG-080-010-400 |                   | 40                | 9                 | 100               | 8      | ☑         |                    |   |   |
| 4CREG-040-010-160 |        |        | 16      | 4,8     | 55     | 6                 | ☑                  | 4CREG-080-015-220 | R1,5              | 22                | 9                 | 65                | 8      | ☑         |                    |   |   |
| 4CREG-040-010-200 |        | 20     | 4,8     | 60      | 6      | ☑                 | 4CREG-080-015400   | 40                |                   | 9                 | 100               | 8                 | ☑      |           |                    |   |   |
| 4CREG-040-010-250 |        | 25     | 4,8     | 65      | 6      | ☑                 | 4CREG-080-020-220  | R2                | 22                | 9                 | 65                | 8                 | ☑      |           |                    |   |   |
| 4CREG-040-010-300 |        | 30     | 4,8     | 70      | 6      | ☑                 | 4CREG-100-002-240  | R0,2              | 24                | 11                | 70                | 10                | ☑      |           |                    |   |   |
| 4CREG-040-010-350 |        | 35     | 4,8     | 75      | 6      | ☑                 | 4CREG-100-003-240  |                   | 24                | 11                | 70                | 10                | ☑      |           |                    |   |   |
| 4CREG-040-010-400 |        | 40     | 4,8     | 80      | 6      | ☑                 | 4CREG-100-005-240  | R0,5              | 24                | 11                | 70                | 10                | ☑      |           |                    |   |   |
| 4CREG-040-010-450 |        | 45     | 4,8     | 90      | 6      | ☑                 | 4CREG-100-005-400  |                   | 40                | 11                | 100               | 10                | ☑      |           |                    |   |   |
| 4CREG-040-010-500 |        | 50     | 4,8     | 100     | 6      | ☑                 | 4CREG-100-010-240  |                   | R1                | 24                | 11                | 70                | 10     | ☑         |                    |   |   |

# 4CREG

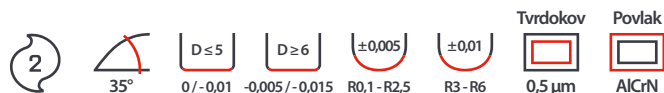
4-břité TOROIDNÍ frézy pro žebrování  
pro široký sortiment ocelí do HRC 52

| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|-------------------|--------|--------|---------|---------|--------|-----------|-------------------------------------|
| 4CREG-100-010-400 | 10     | R1     | 40      | 11      | 100    | 10        | <input checked="" type="checkbox"/> |
| 4CREG-100-015-240 |        | R1,5   | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |
| 4CREG-100-015-400 |        |        | 40      | 11      | 100    | 10        | <input checked="" type="checkbox"/> |
| 4CREG-100-020-240 |        | R2     | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |
| 4CREG-100-025-240 |        | R2,5   | 24      | 11      | 70     | 10        | <input checked="" type="checkbox"/> |
| 4CREG-120-003-260 | 12     | R0,3   | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4CREG-120-005-260 |        | R0,5   | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4CREG-120-005-400 |        |        | 40      | 13      | 110    | 12        | <input checked="" type="checkbox"/> |
| 4CREG-120-010-260 |        | R1     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4CREG-120-010-400 |        |        | 40      | 13      | 110    | 12        | <input checked="" type="checkbox"/> |
| 4CREG-120-015-260 |        | R1,5   | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4CREG-120-015-400 |        |        | 40      | 13      | 110    | 12        | <input checked="" type="checkbox"/> |
| 4CREG-120-020-260 |        | R2     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4CREG-120-030-260 |        | R3     | 26      | 13      | 80     | 12        | <input checked="" type="checkbox"/> |

# 2HSBG 2-břité KULOVÉ frézy krátké pro široký sortiment ocelí do HRC 52

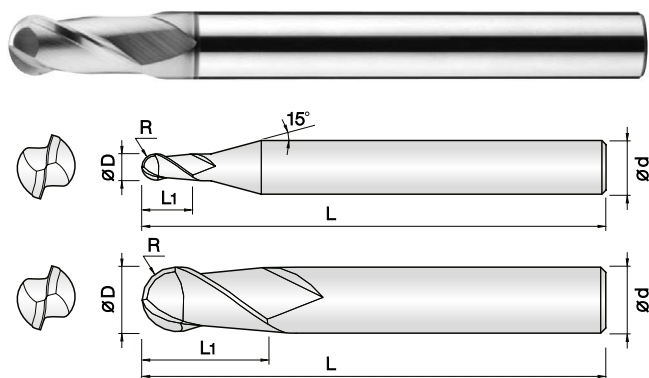


- ▶ Určeno pro široký sortiment různých typů ocelí do HRC 52
- ▶ Optimální pro různé typy ocelí díky AlCrN povlaku
- ▶ Velmi přesné tolerance řezných hran
- ▶ Vysoká tuhost
- ▶ Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí

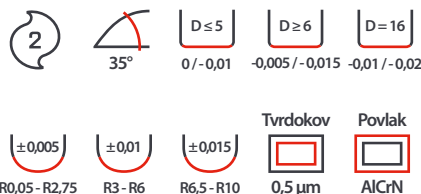


| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 2HSBG-002-002-S04 | 0,2    | 0,1    | 0,2     | 40     | 4         | ☑                  |
| 2HSBG-003-003-S04 | 0,3    | 0,15   | 0,3     | 40     | 4         | ☑                  |
| 2HSBG-004-004-S04 | 0,4    | 0,2    | 0,4     | 40     | 4         | ☑                  |
| 2HSBG-005-005-S04 | 0,5    | 0,25   | 0,5     | 40     | 4         | ☑                  |
| 2HSBG-006-006-S04 | 0,6    | 0,3    | 0,6     | 40     | 4         | ☑                  |
| 2HSBG-007-007-S04 | 0,7    | 0,35   | 0,7     | 40     | 4         | ☑                  |
| 2HSBG-008-008-S04 | 0,8    | 0,4    | 0,8     | 40     | 4         | ☑                  |
| 2HSBG-009-009-S04 | 0,9    | 0,45   | 0,9     | 40     | 4         | ☑                  |
| 2HSBG-010-010-S04 | 1      | 0,5    | 1       | 40     | 4         | ☑                  |
| 2HSBG-010-010-S06 |        |        | 1       | 40     | 6         | ☑                  |
| 2HSBG-015-015-S04 | 1,5    | 0,75   | 1,5     | 40     | 4         | ☑                  |
| 2HSBG-015-015-S06 |        |        | 1,5     | 40     | 6         | ☑                  |
| 2HSBG-020-020-S04 | 2      | 1      | 2       | 45     | 4         | ☑                  |
| 2HSBG-020-020-S06 |        |        | 2       | 45     | 6         | ☑                  |
| 2HSBG-030-030-S04 | 3      | 1,5    | 3       | 45     | 4         | ☑                  |
| 2HSBG-030-030-S06 |        |        | 3       | 45     | 6         | ☑                  |
| 2HSBG-040-040-S04 | 4      | 2      | 4       | 45     | 4         | ☑                  |
| 2HSBG-040-040-S06 |        |        | 4       | 45     | 6         | ☑                  |
| 2HSBG-050-050-S06 | 5      | 2,5    | 5       | 50     | 6         | ☑                  |
| 2HSBG-060-060-050 | 6      | 3      | 6       | 50     | 6         | ☑                  |
| 2HSBG-060-060-060 |        |        | 6       | 60     | 6         | ☑                  |
| 2HSBG-080-080-050 | 8      | 4      | 8       | 50     | 8         | ☑                  |
| 2HSBG-080-080-060 |        |        | 8       | 60     | 8         | ☑                  |
| 2HSBG-100-100-060 | 10     | 5      | 10      | 60     | 10        | ☑                  |
| 2HSBG-100-100-070 |        |        | 10      | 70     | 10        | ☑                  |
| 2HSBG-120-120-060 | 12     | 6      | 12      | 60     | 12        | ☑                  |
| 2HSBG-120-120-070 |        |        | 12      | 70     | 12        | ☑                  |

# 2HCBG 2-břité KULOVÉ frézy pro široký sortiment ocelí do HRC 52



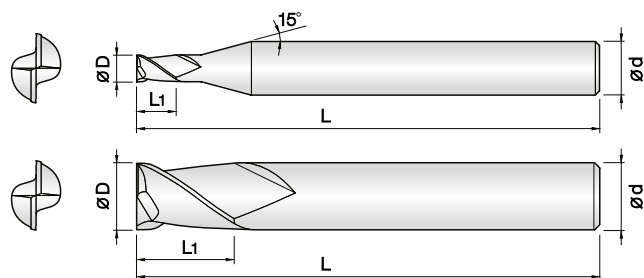
- Určeno pro široký sortiment různých typů ocelí do HRC 52
- Optimální pro různé typy ocelí díky AlCrN povlaku
- Velmi přesné tolerance řezných hran
- Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



| Objednací číslo    | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|--------|---------|--------|-----------|--------------------|
| 2HCBG-001-002-S04  | 0,1    | R0,05  | 0,2     | 40     | 4         | ☑                  |
| 2HCBG-0015-003-S04 | 0,15   | R0,075 | 0,3     | 40     | 4         | ☑                  |
| 2HCBG-002-004-S04  | 0,2    | R0,1   | 0,4     | 40     | 4         | ☑                  |
| 2HCBG-003-006-S04  | 0,3    | R0,15  | 0,6     | 40     | 4         | ☑                  |
| 2HCBG-004-008-S04  | 0,4    | R0,2   | 0,8     | 40     | 4         | ☑                  |
| 2HCBG-005-010-S04  | 0,5    | R0,25  | 1       | 45     | 4         | ☑                  |
| 2HCBG-006-012-S04  | 0,6    | R0,3   | 1,2     | 45     | 4         | ☑                  |
| 2HCBG-007-015-S04  | 0,7    | R0,35  | 1,5     | 45     | 4         | ☑                  |
| 2HCBG-008-020-S04  | 0,8    | R0,4   | 2       | 45     | 4         | ☑                  |
| 2HCBG-009-020-S04  | 0,9    | R0,45  | 2       | 45     | 4         | ☑                  |
| 2HCBG-010-025-S04  | 1      | R0,5   | 2,5     | 50     | 4         | ☑                  |
| 2HCBG-010-025-S06  |        |        | 2,5     | 50     | 6         | ☑                  |
| 2HCBG-010-025-070  |        |        | 2,5     | 70     | 6         | ☑                  |
| 2HCBG-010-025-100  |        |        | 2,5     | 100    | 6         | ☑                  |
| 2HCBG-012-030-S04  | 1,2    | R0,6   | 3       | 50     | 4         | ☑                  |
| 2HCBG-015-040-S04  | 1,5    | R0,75  | 4       | 50     | 4         | ☑                  |
| 2HCBG-015-040-S06  |        |        | 4       | 50     | 6         | ☑                  |
| 2HCBG-015-040-070  |        |        | 4       | 70     | 6         | ☑                  |
| 2HCBG-015-040-100  |        |        | 4       | 100    | 6         | ☑                  |
| 2HCBG-020-050-S04  | 2      | R1     | 5       | 50     | 4         | ☑                  |
| 2HCBG-020-050-S06  |        |        | 5       | 50     | 6         | ☑                  |
| 2HCBG-020-050-075  |        |        | 5       | 75     | 6         | ☑                  |
| 2HCBG-020-050-100  |        |        | 5       | 100    | 6         | ☑                  |
| 2HCBG-025-060-S04  | 2,5    | R1,25  | 6       | 50     | 4         | ☑                  |
| 2HCBG-025-060-S06  |        |        | 6       | 60     | 6         | ☑                  |
| 2HCBG-025-060-075  |        |        | 6       | 75     | 6         | ☑                  |
| 2HCBG-025-060-100  |        |        | 6       | 100    | 6         | ☑                  |
| 2HCBG-030-080-S03  | 3      | R1,5   | 8       | 60     | 3         | ☑                  |
| 2HCBG-030-080-S04  |        |        | 8       | 50     | 4         | ☑                  |
| 2HCBG-030-080-S06  |        |        | 8       | 60     | 6         | ☑                  |
| 2HCBG-030-080-080  |        |        | 8       | 80     | 6         | ☑                  |
| 2HCBG-030-080-100  |        |        | 8       | 100    | 6         | ☑                  |
| 2HCBG-035-080-S06  |        |        | 3,5     | R1,75  | 8         | 60                 |
| 2HCBG-040-080-060  | 4      | R2     | 8       | 60     | 4         | ☑                  |
| 2HCBG-040-080-080  |        |        | 8       | 80     | 4         | ☑                  |
| 2HCBG-040-080-S06  |        |        | 8       | 70     | 6         | ☑                  |
| 2HCBG-040-080-090  |        |        | 8       | 90     | 6         | ☑                  |
| 2HCBG-040-080-120  |        |        | 8       | 120    | 6         | ☑                  |

| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 2HCBG-045-080-S06 | 4,5    | R2,25  | 8       | 70     | 6         | ☑                  |
| 2HCBG-050-080-S05 | 5      | R2,5   | 8       | 80     | 5         | ☑                  |
| 2HCBG-050-100-S06 |        |        | 10      | 75     | 6         | ☑                  |
| 2HCBG-055-100-S06 | 5,5    | R2,75  | 10      | 75     | 6         | ☑                  |
| 2HCBG-060-100-060 | 6      | R3     | 10      | 60     | 6         | ☑                  |
| 2HCBG-060-120-080 |        |        | 12      | 80     | 6         | ☑                  |
| 2HCBG-060-120-100 |        |        | 12      | 100    | 6         | ☑                  |
| 2HCBG-060-120-120 |        |        | 12      | 120    | 6         | ☑                  |
| 2HCBG-070-140-S08 | 7      | R3,5   | 14      | 80     | 8         | ☑                  |
| 2HCBG-080-120-060 | 8      | R4     | 12      | 60     | 8         | ☑                  |
| 2HCBG-080-140-090 |        |        | 14      | 90     | 8         | ☑                  |
| 2HCBG-080-140-110 |        |        | 14      | 110    | 8         | ☑                  |
| 2HCBG-080-140-150 |        |        | 14      | 150    | 8         | ☑                  |
| 2HCBG-090-160-S10 | 9      | R4,5   | 16      | 100    | 10        | ☑                  |
| 2HCBG-100-150-070 | 10     | R5     | 15      | 70     | 10        | ☑                  |
| 2HCBG-100-180-100 |        |        | 18      | 100    | 10        | ☑                  |
| 2HCBG-100-180-120 |        |        | 18      | 120    | 10        | ☑                  |
| 2HCBG-100-180-150 |        |        | 18      | 150    | 10        | ☑                  |
| 2HCBG-100-180-180 | 18     | 180    | 10      | ☑      |           |                    |
| 2HCBG-110-200-S12 | 11     | R5,5   | 20      | 110    | 12        | ☑                  |
| 2HCBG-120-180-070 | 12     | R6     | 18      | 70     | 12        | ☑                  |
| 2HCBG-120-220-110 |        |        | 22      | 110    | 12        | ☑                  |
| 2HCBG-120-220-130 |        |        | 22      | 130    | 12        | ☑                  |
| 2HCBG-120-220-150 |        |        | 22      | 150    | 12        | ☑                  |
| 2HCBG-120-220-200 | 22     | 200    | 12      | ☑      |           |                    |
| 2HCBG-130-240-S14 | 13     | R6,5   | 24      | 110    | 14        | ☑                  |
| 2HCBG-140-240-S14 | 14     | R7     | 24      | 110    | 14        | ☑                  |
| 2HCBG-160-300-130 | 16     | R8     | 30      | 130    | 16        | ☑                  |
| 2HCBG-160-300-160 |        |        | 30      | 160    | 16        | ☑                  |
| 2HCBG-160-300-200 |        |        | 30      | 200    | 16        | ☑                  |
| 2HCBG-200-380-160 |        |        | 20      | R10    | 38        | 160                |
| 2HCBG-200-380-200 | 38     | 200    |         |        | 20        | ☑                  |

# 2HCEG 2-břité OSTRÉ frézy pro široký sortiment ocelí do HRC 52



- Určeno pro široký sortiment různých typů ocelí do HRC 52
- Optimální pro různé typy ocelí díky AlCrN povlaku
- Velmi přesné tolerance řezných hran
- Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



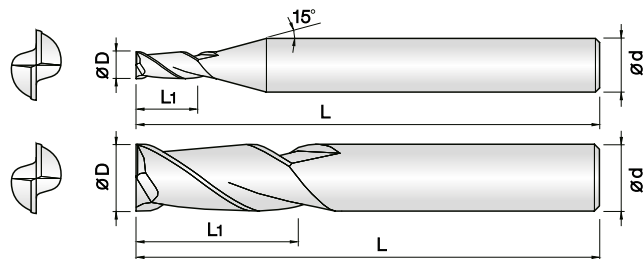
| Objednací číslo    | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|---------|--------|-----------|--------------------|
| 2HCEG-001-002-S04  | 0,1    | 0,2     | 38     | 4         | ☑                  |
| 2HCEG-0015-003-S04 | 0,15   | 0,3     | 38     | 4         | ☑                  |
| 2HCEG-002-004-S04  | 0,2    | 0,4     | 38     | 4         | ☑                  |
| 2HCEG-0025-005-S04 | 0,25   | 0,5     | 38     | 4         | ☑                  |
| 2HCEG-003-006-S04  | 0,3    | 0,6     | 38     | 4         | ☑                  |
| 2HCEG-0035-007-S04 | 0,35   | 0,7     | 38     | 4         | ☑                  |
| 2HCEG-004-008-S04  | 0,4    | 0,8     | 38     | 4         | ☑                  |
| 2HCEG-0045-009-S04 | 0,45   | 0,9     | 38     | 4         | ☑                  |
| 2HCEG-005-010-S04  | 0,5    | 1       | 38     | 4         | ☑                  |
| 2HCEG-0055-011-S04 | 0,55   | 1,1     | 38     | 4         | ☑                  |
| 2HCEG-006-012-S04  | 0,6    | 1,2     | 38     | 4         | ☑                  |
| 2HCEG-0065-013-S04 | 0,65   | 1,3     | 38     | 4         | ☑                  |
| 2HCEG-007-014-S04  | 0,7    | 1,4     | 38     | 4         | ☑                  |
| 2HCEG-0075-015-S04 | 0,75   | 1,5     | 38     | 4         | ☑                  |
| 2HCEG-008-016-S04  | 0,8    | 1,6     | 38     | 4         | ☑                  |
| 2HCEG-0085-017-S04 | 0,85   | 1,7     | 38     | 4         | ☑                  |
| 2HCEG-009-020-S04  | 0,9    | 2       | 38     | 4         | ☑                  |
| 2HCEG-0095-020-S04 | 0,95   | 2       | 38     | 4         | ☑                  |
| 2HCEG-010-010-S04  | 1      | 1       | 40     | 4         | ☑                  |
| 2HCEG-010-025-S04  |        | 2,5     | 40     | 4         | ☑                  |
| 2HCEG-010-025-S06  |        | 2,5     | 40     | 6         | ☑                  |
| 2HCEG-010-025-060  |        | 2,5     | 60     | 6         | ☑                  |
| 2HCEG-010-040-S06  | 1,1    | 4       | 50     | 6         | ☑                  |
| 2HCEG-011-027-S04  |        | 2,7     | 40     | 4         | ☑                  |
| 2HCEG-012-012-S04  | 1,2    | 1,2     | 40     | 4         | ☑                  |
| 2HCEG-012-030-S04  |        | 3       | 40     | 4         | ☑                  |
| 2HCEG-012-030-S06  |        | 3       | 40     | 6         | ☑                  |
| 2HCEG-012-030-060  |        | 3       | 60     | 6         | ☑                  |
| 2HCEG-012-060-S06  | 1,3    | 6       | 50     | 6         | ☑                  |
| 2HCEG-013-032-S04  |        | 3,2     | 40     | 4         | ☑                  |
| 2HCEG-014-035-S04  | 1,4    | 3,5     | 40     | 4         | ☑                  |
| 2HCEG-015-015-S04  | 1,5    | 1,5     | 40     | 4         | ☑                  |
| 2HCEG-015-040-S04  |        | 4       | 40     | 4         | ☑                  |
| 2HCEG-015-040-S06  |        | 4       | 40     | 6         | ☑                  |
| 2HCEG-015-040-060  |        | 4       | 60     | 6         | ☑                  |
| 2HCEG-016-040-S04  | 1,6    | 4       | 40     | 4         | ☑                  |
| 2HCEG-017-042-S04  | 1,7    | 4,2     | 40     | 4         | ☑                  |
| 2HCEG-018-045-S04  | 1,8    | 4,5     | 40     | 4         | ☑                  |

| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 2HCEG-019-050-S04 | 1,9    | 5       | 40     | 4         | ☑                  |
| 2HCEG-020-020-S04 | 2      | 2       | 40     | 4         | ☑                  |
| 2HCEG-020-060-S04 |        | 6       | 40     | 4         | ☑                  |
| 2HCEG-020-060-S06 |        | 6       | 40     | 6         | ☑                  |
| 2HCEG-020-060-060 |        | 6       | 60     | 6         | ☑                  |
| 2HCEG-021-060-S04 | 2,1    | 6       | 40     | 4         | ☑                  |
| 2HCEG-022-060-S04 | 2,2    | 6       | 40     | 4         | ☑                  |
| 2HCEG-023-060-S04 | 2,3    | 6       | 40     | 4         | ☑                  |
| 2HCEG-024-080-S04 | 2,4    | 8       | 45     | 4         | ☑                  |
| 2HCEG-025-080-S04 | 2,5    | 8       | 45     | 4         | ☑                  |
| 2HCEG-025-080-S06 |        | 8       | 45     | 6         | ☑                  |
| 2HCEG-025-080-070 |        | 8       | 70     | 6         | ☑                  |
| 2HCEG-026-080-S04 | 2,6    | 8       | 45     | 4         | ☑                  |
| 2HCEG-027-080-S04 | 2,7    | 8       | 45     | 4         | ☑                  |
| 2HCEG-028-080-S04 | 2,8    | 8       | 45     | 4         | ☑                  |
| 2HCEG-029-080-S04 | 2,9    | 8       | 45     | 4         | ☑                  |
| 2HCEG-030-030-S04 | 3      | 3       | 40     | 4         | ☑                  |
| 2HCEG-030-080-S04 |        | 8       | 45     | 4         | ☑                  |
| 2HCEG-030-080-S06 |        | 8       | 45     | 6         | ☑                  |
| 2HCEG-030-080-070 | 3,5    | 8       | 70     | 6         | ☑                  |
| 2HCEG-035-100-S06 |        | 10      | 45     | 6         | ☑                  |
| 2HCEG-040-040-S04 | 4      | 4       | 40     | 4         | ☑                  |
| 2HCEG-040-100-S04 |        | 10      | 45     | 4         | ☑                  |
| 2HCEG-040-110-S06 |        | 11      | 45     | 6         | ☑                  |
| 2HCEG-040-110-070 | 4,5    | 11      | 70     | 6         | ☑                  |
| 2HCEG-045-110-S06 |        | 11      | 45     | 6         | ☑                  |
| 2HCEG-050-130-S06 | 5      | 13      | 50     | 6         | ☑                  |
| 2HCEG-050-130-080 |        | 13      | 80     | 6         | ☑                  |
| 2HCEG-055-130-S06 | 5,5    | 13      | 50     | 6         | ☑                  |
| 2HCEG-060-060-S06 | 6      | 6       | 45     | 6         | ☑                  |
| 2HCEG-060-130-S06 |        | 13      | 50     | 6         | ☑                  |
| 2HCEG-060-130-080 |        | 13      | 80     | 6         | ☑                  |
| 2HCEG-060-150-S06 |        | 15      | 60     | 6         | ☑                  |
| 2HCEG-065-160-S08 | 6,5    | 16      | 60     | 8         | ☑                  |
| 2HCEG-070-160-S08 | 7      | 16      | 60     | 8         | ☑                  |
| 2HCEG-075-160-S08 | 7,5    | 16      | 60     | 8         | ☑                  |
| 2HCEG-080-080-S08 | 8      | 8       | 50     | 8         | ☑                  |
| 2HCEG-080-190-S08 |        | 19      | 60     | 8         | ☑                  |

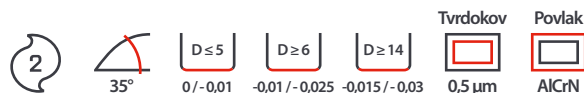
**2HCEG****2-břité OSTRÉ frézy  
pro široký sortiment ocelí do HRC 52**

| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|-------------------|--------|---------|--------|-----------|-------------------------------------|
| 2HCEG-080-200-S08 | 8      | 20      | 70     | 8         | <input checked="" type="checkbox"/> |
| 2HCEG-085-190-S10 | 8,5    | 19      | 70     | 10        | <input checked="" type="checkbox"/> |
| 2HCEG-090-190-S10 | 9      | 19      | 70     | 10        | <input checked="" type="checkbox"/> |
| 2HCEG-095-190-S10 | 9,5    | 19      | 70     | 10        | <input checked="" type="checkbox"/> |
| 2HCEG-100-100-S10 | 10     | 10      | 60     | 10        | <input checked="" type="checkbox"/> |
| 2HCEG-100-220-S10 |        | 22      | 70     | 10        | <input checked="" type="checkbox"/> |
| 2HCEG-100-250-S10 |        | 25      | 75     | 10        | <input checked="" type="checkbox"/> |
| 2HCEG-105-220-S12 | 10,5   | 22      | 75     | 12        | <input checked="" type="checkbox"/> |
| 2HCEG-110-220-S12 | 11     | 22      | 75     | 12        | <input checked="" type="checkbox"/> |
| 2HCEG-115-220-S12 | 11,5   | 22      | 75     | 12        | <input checked="" type="checkbox"/> |
| 2HCEG-120-120-S12 | 12     | 12      | 65     | 12        | <input checked="" type="checkbox"/> |
| 2HCEG-120-260-S12 |        | 26      | 75     | 12        | <input checked="" type="checkbox"/> |
| 2HCEG-120-300-S12 |        | 30      | 80     | 12        | <input checked="" type="checkbox"/> |
| 2HCEG-140-260-S14 | 14     | 26      | 80     | 14        | <input checked="" type="checkbox"/> |
| 2HCEG-140-260-S16 |        | 26      | 85     | 16        | <input checked="" type="checkbox"/> |
| 2HCEG-160-350-S16 | 16     | 35      | 100    | 16        | <input checked="" type="checkbox"/> |
| 2HCEG-160-400-S16 |        | 40      | 100    | 16        | <input checked="" type="checkbox"/> |
| 2HCEG-180-350-S18 | 18     | 35      | 100    | 18        | <input checked="" type="checkbox"/> |
| 2HCEG-200-400-S20 | 20     | 40      | 100    | 20        | <input checked="" type="checkbox"/> |
| 2HCEG-200-500-S20 |        | 50      | 110    | 20        | <input checked="" type="checkbox"/> |

# 2LEMG 2-břité OSTRÉ frézy dlouhé pro široký sortiment ocelí do HRC 52



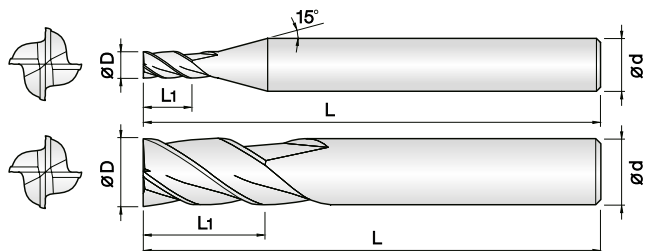
- Určeno pro široký sortiment různých typů ocelí do HRC 52
- Optimální pro různé typy ocelí díky AlCrN povlaku
- Široký sortiment délek pro optimální volbu nástroje
- Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 2LEMG-010-030-S06 | 1      | 3       | 60     | 6         | ☑                  |
| 2LEMG-010-050-S06 |        | 5       | 60     | 6         | ☑                  |
| 2LEMG-010-070-S06 |        | 7       | 60     | 6         | ☑                  |
| 2LEMG-010-100-S06 |        | 10      | 60     | 6         | ☑                  |
| 2LEMG-010-150-S06 |        | 15      | 60     | 6         | ☑                  |
| 2LEMG-015-060-S06 | 1,5    | 6       | 60     | 6         | ☑                  |
| 2LEMG-015-075-S06 |        | 7.5     | 60     | 6         | ☑                  |
| 2LEMG-015-100-S06 |        | 10      | 60     | 6         | ☑                  |
| 2LEMG-015-150-S06 |        | 15      | 60     | 6         | ☑                  |
| 2LEMG-015-200-S06 | 2      | 20      | 60     | 6         | ☑                  |
| 2LEMG-020-060-S06 |        | 6       | 60     | 6         | ☑                  |
| 2LEMG-020-100-S06 |        | 10      | 60     | 6         | ☑                  |
| 2LEMG-020-150-S06 |        | 15      | 60     | 6         | ☑                  |
| 2LEMG-020-200-S06 |        | 20      | 60     | 6         | ☑                  |
| 2LEMG-030-120-S06 | 3      | 12      | 70     | 6         | ☑                  |
| 2LEMG-030-150-S06 |        | 15      | 70     | 6         | ☑                  |
| 2LEMG-030-200-S06 |        | 20      | 70     | 6         | ☑                  |
| 2LEMG-030-250-S06 |        | 25      | 70     | 6         | ☑                  |
| 2LEMG-030-300-S06 |        | 30      | 70     | 6         | ☑                  |
| 2LEMG-040-150-S06 | 4      | 15      | 70     | 6         | ☑                  |
| 2LEMG-040-200-S06 |        | 20      | 70     | 6         | ☑                  |
| 2LEMG-040-300-S06 |        | 30      | 75     | 6         | ☑                  |
| 2LEMG-050-200-S06 | 5      | 20      | 70     | 6         | ☑                  |
| 2LEMG-050-250-S06 |        | 25      | 75     | 6         | ☑                  |
| 2LEMG-050-300-S06 |        | 30      | 80     | 6         | ☑                  |
| 2LEMG-060-200-S06 | 6      | 20      | 75     | 6         | ☑                  |
| 2LEMG-060-200-100 |        | 20      | 100    | 6         | ☑                  |
| 2LEMG-060-250-S06 |        | 25      | 75     | 6         | ☑                  |
| 2LEMG-060-300-S06 |        | 30      | 80     | 6         | ☑                  |
| 2LEMG-080-250-S08 | 8      | 25      | 75     | 8         | ☑                  |
| 2LEMG-080-250-100 |        | 25      | 100    | 8         | ☑                  |
| 2LEMG-080-300-S08 |        | 30      | 80     | 8         | ☑                  |
| 2LEMG-080-350-S08 |        | 35      | 80     | 8         | ☑                  |
| 2LEMG-080-400-S08 |        | 40      | 90     | 8         | ☑                  |
| 2LEMG-080-500-S08 |        | 50      | 100    | 8         | ☑                  |
| 2LEMG-100-300-S10 | 10     | 30      | 80     | 10        | ☑                  |
| 2LEMG-100-300-110 |        | 30      | 110    | 10        | ☑                  |
| 2LEMG-100-350-S10 |        | 35      | 90     | 10        | ☑                  |

| Objednací číslo    | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|---------|--------|-----------|--------------------|
| 2LEMG-100-400-S10  | 10     | 40      | 90     | 10        | ☑                  |
| 2LEMG-100-500-S10  |        | 50      | 100    | 10        | ☑                  |
| 2LEMG-100-600-S10  |        | 60      | 110    | 10        | ☑                  |
| 2LEMG-120-300-S12  | 12     | 30      | 90     | 12        | ☑                  |
| 2LEMG-120-350-110  |        | 35      | 110    | 12        | ☑                  |
| 2LEMG-120-400-S12  |        | 40      | 100    | 12        | ☑                  |
| 2LEMG-120-500-S12  |        | 50      | 100    | 12        | ☑                  |
| 2LEMG-120-600-S12  |        | 60      | 110    | 12        | ☑                  |
| 2LEMG-120-700-S12  | 14     | 70      | 130    | 12        | ☑                  |
| 2LEMG-140-500-S14  |        | 50      | 110    | 14        | ☑                  |
| 2LEMG-160-400-160  |        | 16      | 40     | 160       | 16                 |
| 2LEMG-160-550-S16  | 55     |         | 120    | 16        | ☑                  |
| 2LEMG-160-700-S16  | 70     |         | 130    | 16        | ☑                  |
| 2LEMG-160-800-S16  | 80     |         | 160    | 16        | ☑                  |
| 2LEMG-200-500-160  | 20     | 50      | 160    | 20        | ☑                  |
| 2LEMG-200-600-S20  |        | 60      | 130    | 20        | ☑                  |
| 2LEMG-200-1000-S20 |        | 100     | 200    | 20        | ☑                  |
| 2LEMG-250-750-S25  | 25     | 75      | 160    | 25        | ☑                  |

# 4HCEG 4-břité OSTRÉ frézy pro široký sortiment ocelí do HRC 52



- ▶ Určeno pro široký sortiment různých typů ocelí do HRC 52
- ▶ Optimální pro různé typy ocelí díky AlCrN povlaku
- ▶ Velmi přesné tolerance řezných hran
- ▶ Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



Tvrdokov



Povlak

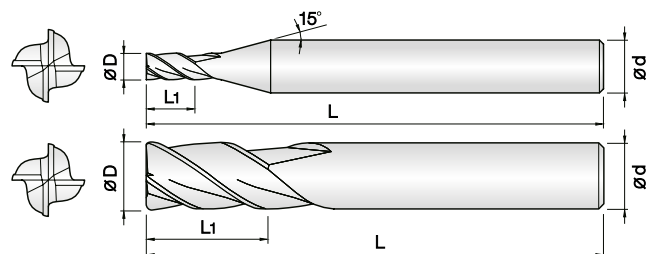


| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 4HCEG-008-020-S04 | 0,8    | 2       | 40     | 4         | ☑                  |
| 4HCEG-010-010-S04 | 1      | 1       | 40     | 4         | ☑                  |
| 4HCEG-010-025-S04 |        | 2,5     | 40     | 4         | ☑                  |
| 4HCEG-010-025-S06 |        | 2,5     | 40     | 6         | ☑                  |
| 4HCEG-010-025-060 |        | 2,5     | 60     | 6         | ☑                  |
| 4HCEG-010-025-080 |        | 2,5     | 80     | 6         | ☑                  |
| 4HCEG-010-040-S06 |        | 4       | 50     | 6         | ☑                  |
| 4HCEG-012-012-S04 |        | 1,2     | 1,2    | 40        | 4                  |
| 4HCEG-012-030-S04 | 3      |         | 40     | 4         | ☑                  |
| 4HCEG-012-030-S06 | 3      |         | 40     | 6         | ☑                  |
| 4HCEG-012-030-060 | 3      |         | 60     | 6         | ☑                  |
| 4HCEG-012-060-S06 | 6      |         | 50     | 6         | ☑                  |
| 4HCEG-015-015-S04 | 1,5    | 1,5     | 40     | 4         | ☑                  |
| 4HCEG-015-040-S04 |        | 4       | 40     | 4         | ☑                  |
| 4HCEG-015-040-S06 |        | 4       | 40     | 6         | ☑                  |
| 4HCEG-015-040-060 |        | 4       | 60     | 6         | ☑                  |
| 4HCEG-015-040-080 |        | 4       | 80     | 6         | ☑                  |
| 4HCEG-020-020-S04 | 2      | 2       | 40     | 4         | ☑                  |
| 4HCEG-020-060-S04 |        | 6       | 40     | 4         | ☑                  |
| 4HCEG-020-060-S06 |        | 6       | 40     | 6         | ☑                  |
| 4HCEG-020-060-060 |        | 6       | 60     | 6         | ☑                  |
| 4HCEG-020-060-100 |        | 6       | 100    | 6         | ☑                  |
| 4HCEG-025-080-S04 | 2,5    | 8       | 45     | 4         | ☑                  |
| 4HCEG-025-080-S06 |        | 8       | 45     | 6         | ☑                  |
| 4HCEG-025-080-070 |        | 8       | 70     | 6         | ☑                  |
| 4HCEG-025-080-100 |        | 8       | 100    | 6         | ☑                  |
| 4HCEG-030-080-S03 | 3      | 8       | 45     | 3         | ☑                  |
| 4HCEG-030-080-S04 |        | 8       | 45     | 4         | ☑                  |
| 4HCEG-030-080-S06 |        | 8       | 45     | 6         | ☑                  |
| 4HCEG-030-080-070 |        | 8       | 70     | 6         | ☑                  |
| 4HCEG-030-080-100 |        | 8       | 100    | 6         | ☑                  |
| 4HCEG-035-100-S06 | 3,5    | 10      | 45     | 6         | ☑                  |
| 4HCEG-040-040-S04 | 4      | 4       | 40     | 4         | ☑                  |
| 4HCEG-040-110-S04 |        | 11      | 45     | 4         | ☑                  |
| 4HCEG-040-110-S06 |        | 11      | 45     | 6         | ☑                  |
| 4HCEG-040-110-070 |        | 11      | 70     | 6         | ☑                  |
| 4HCEG-040-110-100 |        | 11      | 100    | 6         | ☑                  |
| 4HCEG-045-110-S06 | 4,5    | 11      | 45     | 6         | ☑                  |

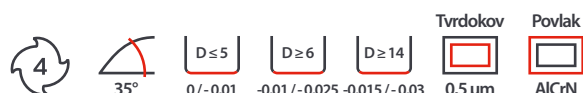
| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 4HCEG-050-130-S06 | 5      | 13      | 50     | 6         | ☑                  |
| 4HCEG-050-130-080 |        | 13      | 80     | 6         | ☑                  |
| 4HCEG-050-130-100 |        | 13      | 100    | 6         | ☑                  |
| 4HCEG-055-130-S06 | 5,5    | 13      | 50     | 6         | ☑                  |
| 4HCEG-060-060-S06 | 6      | 6       | 45     | 6         | ☑                  |
| 4HCEG-060-130-S06 |        | 13      | 50     | 6         | ☑                  |
| 4HCEG-060-130-080 |        | 13      | 80     | 6         | ☑                  |
| 4HCEG-060-130-100 |        | 13      | 100    | 6         | ☑                  |
| 4HCEG-060-150-S06 |        | 15      | 60     | 6         | ☑                  |
| 4HCEG-065-160-S08 | 6,5    | 16      | 60     | 8         | ☑                  |
| 4HCEG-070-160-S08 | 7      | 16      | 60     | 8         | ☑                  |
| 4HCEG-075-160-S08 | 7,5    | 16      | 60     | 8         | ☑                  |
| 4HCEG-080-080-S08 | 8      | 8       | 50     | 8         | ☑                  |
| 4HCEG-080-190-S08 |        | 19      | 60     | 8         | ☑                  |
| 4HCEG-080-200-S08 |        | 20      | 70     | 8         | ☑                  |
| 4HCEG-085-190-S10 | 8,5    | 19      | 70     | 10        | ☑                  |
| 4HCEG-090-190-S10 | 9      | 19      | 70     | 10        | ☑                  |
| 4HCEG-095-190-S10 | 9,5    | 19      | 70     | 10        | ☑                  |
| 4HCEG-100-100-S10 | 10     | 10      | 60     | 10        | ☑                  |
| 4HCEG-100-220-S10 |        | 22      | 70     | 10        | ☑                  |
| 4HCEG-100-250-S10 |        | 25      | 75     | 10        | ☑                  |
| 4HCEG-105-220-S12 | 10,5   | 22      | 75     | 12        | ☑                  |
| 4HCEG-110-220-S12 | 11     | 22      | 75     | 12        | ☑                  |
| 4HCEG-115-220-S12 | 11,5   | 22      | 75     | 12        | ☑                  |
| 4HCEG-120-120-S12 | 12     | 12      | 65     | 12        | ☑                  |
| 4HCEG-120-260-S12 |        | 26      | 75     | 12        | ☑                  |
| 4HCEG-120-300-S12 |        | 30      | 80     | 12        | ☑                  |
| 4HCEG-140-260-S14 | 14     | 26      | 80     | 14        | ☑                  |
| 4HCEG-140-260-S16 |        | 26      | 85     | 16        | ☑                  |
| 4HCEG-160-350-S16 | 16     | 35      | 100    | 16        | ☑                  |
| 4HCEG-160-400-S16 |        | 40      | 100    | 16        | ☑                  |
| 4HCEG-180-350-S18 | 18     | 35      | 100    | 18        | ☑                  |
| 4HCEG-200-400-S20 | 20     | 40      | 100    | 20        | ☑                  |
| 4HCEG-200-450-S20 |        | 45      | 100    | 20        | ☑                  |



# 4LEMG 4-břité OSTRÉ frézy dlouhé pro široký sortiment ocelí do HRC 52



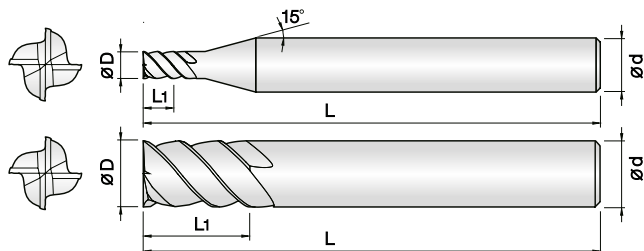
- Určeno pro široký sortiment různých typů ocelí do HRC 52
- Optimální pro různé typy ocelí díky AlCrN povlaku
- Široký sortiment délek pro optimální volbu nástroje
- Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



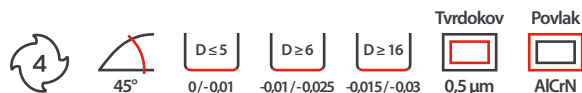
| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 4LEMG-010-030-S06 | 1      | 3       | 60     | 6         | ☑                  |
| 4LEMG-010-050-S06 |        | 5       | 60     | 6         | ☑                  |
| 4LEMG-015-060-S06 | 1,5    | 6       | 60     | 6         | ☑                  |
| 4LEMG-015-080-S06 |        | 8       | 60     | 6         | ☑                  |
| 4LEMG-020-080-S06 | 2      | 8       | 60     | 6         | ☑                  |
| 4LEMG-020-100-S06 |        | 10      | 60     | 6         | ☑                  |
| 4LEMG-030-100-S06 | 3      | 10      | 70     | 6         | ☑                  |
| 4LEMG-030-150-S06 |        | 15      | 70     | 6         | ☑                  |
| 4LEMG-030-200-S06 |        | 20      | 70     | 6         | ☑                  |
| 4LEMG-030-250-S06 |        | 25      | 70     | 6         | ☑                  |
| 4LEMG-040-120-S06 | 4      | 12      | 70     | 6         | ☑                  |
| 4LEMG-040-150-S04 |        | 15      | 70     | 4         | ☑                  |
| 4LEMG-040-150-S06 |        | 15      | 70     | 6         | ☑                  |
| 4LEMG-040-200-S04 |        | 20      | 70     | 4         | ☑                  |
| 4LEMG-040-200-S06 |        | 20      | 70     | 6         | ☑                  |
| 4LEMG-040-250-S06 |        | 25      | 70     | 6         | ☑                  |
| 4LEMG-040-300-S06 |        | 30      | 75     | 6         | ☑                  |
| 4LEMG-050-200-S06 | 5      | 20      | 70     | 6         | ☑                  |
| 4LEMG-050-250-S06 |        | 25      | 75     | 6         | ☑                  |
| 4LEMG-050-300-S06 |        | 30      | 80     | 6         | ☑                  |
| 4LEMG-060-200-S06 | 6      | 20      | 75     | 6         | ☑                  |
| 4LEMG-060-200-100 |        | 20      | 100    | 6         | ☑                  |
| 4LEMG-060-250-S06 |        | 25      | 75     | 6         | ☑                  |
| 4LEMG-060-300-S06 |        | 30      | 80     | 6         | ☑                  |
| 4LEMG-060-350-S06 |        | 35      | 80     | 6         | ☑                  |
| 4LEMG-080-250-S08 | 8      | 25      | 75     | 8         | ☑                  |
| 4LEMG-080-250-100 |        | 25      | 100    | 8         | ☑                  |
| 4LEMG-080-300-S08 |        | 30      | 80     | 8         | ☑                  |
| 4LEMG-080-350-S08 |        | 35      | 90     | 8         | ☑                  |
| 4LEMG-080-400-S08 |        | 40      | 90     | 8         | ☑                  |
| 4LEMG-080-450-S08 |        | 45      | 100    | 8         | ☑                  |
| 4LEMG-100-300-S10 | 10     | 30      | 80     | 10        | ☑                  |
| 4LEMG-100-300-110 |        | 30      | 110    | 10        | ☑                  |
| 4LEMG-100-350-S10 |        | 35      | 90     | 10        | ☑                  |
| 4LEMG-100-400-S10 |        | 40      | 90     | 10        | ☑                  |
| 4LEMG-100-500-S10 |        | 50      | 100    | 10        | ☑                  |
| 4LEMG-100-600-S10 |        | 60      | 110    | 10        | ☑                  |
| 4LEMG-120-300-S12 | 12     | 30      | 90     | 12        | ☑                  |

| Objednací číslo    | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|---------|--------|-----------|--------------------|
| 4LEMG-120-350-110  | 12     | 35      | 110    | 12        | ☑                  |
| 4LEMG-120-400-S12  |        | 40      | 100    | 12        | ☑                  |
| 4LEMG-120-500-S12  |        | 50      | 100    | 12        | ☑                  |
| 4LEMG-120-600-S12  |        | 60      | 110    | 12        | ☑                  |
| 4LEMG-120-700-S12  |        | 70      | 130    | 12        | ☑                  |
| 4LEMG-140-500-S14  | 14     | 50      | 110    | 14        | ☑                  |
| 4LEMG-160-400-160  | 16     | 40      | 160    | 16        | ☑                  |
| 4LEMG-160-550-S16  |        | 55      | 120    | 16        | ☑                  |
| 4LEMG-160-700-S16  |        | 70      | 130    | 16        | ☑                  |
| 4LEMG-180-800-160  | 18     | 80      | 160    | 18        | ☑                  |
| 4LEMG-200-500-160  | 20     | 50      | 160    | 20        | ☑                  |
| 4LEMG-200-600-S20  |        | 60      | 130    | 20        | ☑                  |
| 4LEMG-200-1000-S20 |        | 100     | 200    | 20        | ☑                  |
| 4LEMG-250-750-S25  | 25     | 75      | 160    | 25        | ☑                  |

# 4HEMG 4-břité OSTRÉ frézy 45° pro široký sortiment ocelí do HRC 52



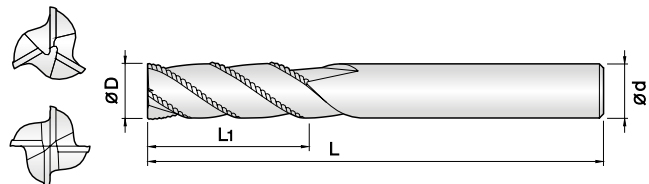
- ▶ Určeno pro široký sortiment různých typů ocelí do HRC 52
- ▶ Optimální pro různé typy ocelí díky AlCrN povlaku
- ▶ Velmi přesné tolerance řezných hran
- ▶ Vyšší posuvy díky 45° geometrii
- ▶ Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|-------------------|--------|---------|--------|-----------|-------------------------------------|
| 4HEMG-010-025-S06 | 1      | 2,5     | 40     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-010-035-S06 |        | 3,5     | 40     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-015-040-S06 | 1,5    | 4       | 40     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-015-060-S06 |        | 6       | 40     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-020-050-S06 | 2      | 5       | 40     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-020-080-S06 |        | 8       | 45     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-030-080-S06 | 3      | 8       | 45     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-030-120-S06 |        | 12      | 50     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-040-110-S06 | 4      | 11      | 45     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-040-160-S06 |        | 16      | 55     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-050-130-S06 | 5      | 13      | 50     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-050-180-S06 |        | 18      | 60     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-060-130-S06 | 6      | 13      | 50     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-060-200-S06 |        | 20      | 60     | 6         | <input checked="" type="checkbox"/> |
| 4HEMG-080-200-S08 | 8      | 20      | 60     | 8         | <input checked="" type="checkbox"/> |
| 4HEMG-080-250-S08 |        | 25      | 70     | 8         | <input checked="" type="checkbox"/> |
| 4HEMG-100-220-S10 | 10     | 22      | 70     | 10        | <input checked="" type="checkbox"/> |
| 4HEMG-100-300-S10 |        | 30      | 80     | 10        | <input checked="" type="checkbox"/> |
| 4HEMG-120-260-S12 | 12     | 26      | 75     | 12        | <input checked="" type="checkbox"/> |
| 4HEMG-120-400-S12 |        | 40      | 90     | 12        | <input checked="" type="checkbox"/> |
| 4HEMG-120-500-S12 |        | 50      | 100    | 12        | <input checked="" type="checkbox"/> |
| 4HEMG-160-350-S16 | 16     | 35      | 90     | 16        | <input checked="" type="checkbox"/> |
| 4HEMG-160-500-S16 |        | 50      | 110    | 16        | <input checked="" type="checkbox"/> |
| 4HEMG-200-400-S20 | 20     | 40      | 100    | 20        | <input checked="" type="checkbox"/> |
| 4HEMG-200-500-S20 |        | 50      | 110    | 20        | <input checked="" type="checkbox"/> |

# 3&4ROUG

## 3 a 4-břité OSTRÉ frézy hrubovací pro široký sortiment ocelí do HRC 50

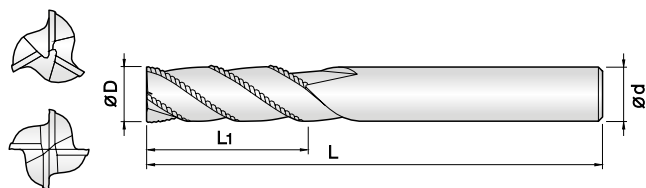


- ▶ Určeno pro široký sortiment různých typů ocelí do HRC 52
- ▶ Optimální pro různé typy ocelí díky AlCrN povlaku
- ▶ Snížení výrobního času díky výbornému utváření třísek
- ▶ Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 3ROUG-040-100-S06 | 4      | 10      | 50     | 6         | ☑                  |
| 3ROUG-050-130-S06 | 5      | 13      | 50     | 6         | ☑                  |
| 3ROUG-060-100-050 | 6      | 10      | 50     | 6         | ☑                  |
| 3ROUG-060-150-055 |        | 15      | 55     | 6         | ☑                  |
| 3ROUG-060-200-060 |        | 20      | 60     | 6         | ☑                  |
| 3ROUG-070-180-S08 | 7      | 18      | 65     | 8         | ☑                  |
| 3ROUG-080-120-060 | 8      | 12      | 60     | 8         | ☑                  |
| 3ROUG-080-190-065 |        | 19      | 65     | 8         | ☑                  |
| 3ROUG-080-250-070 |        | 25      | 70     | 8         | ☑                  |
| 4ROUG-090-220-S10 | 9      | 22      | 70     | 10        | ☑                  |
| 4ROUG-100-150-070 | 10     | 15      | 70     | 10        | ☑                  |
| 4ROUG-100-220-070 |        | 22      | 70     | 10        | ☑                  |
| 4ROUG-100-300-080 |        | 30      | 80     | 10        | ☑                  |
| 4ROUG-110-270-S12 | 11     | 27      | 80     | 12        | ☑                  |
| 4ROUG-120-200-075 | 12     | 20      | 75     | 12        | ☑                  |
| 4ROUG-120-260-080 |        | 26      | 80     | 12        | ☑                  |
| 4ROUG-120-350-090 |        | 35      | 90     | 12        | ☑                  |
| 4ROUG-160-320-090 | 16     | 32      | 90     | 16        | ☑                  |
| 4ROUG-160-400-100 |        | 40      | 100    | 16        | ☑                  |
| 4ROUG-200-380-110 | 20     | 38      | 110    | 20        | ☑                  |
| 4ROUG-200-500-110 |        | 50      | 110    | 20        | ☑                  |

# 3&4HROUG 3 a 4-břité OSTRÉ frézy hrubovací 45° pro široký sortiment ocelí do HRC 50

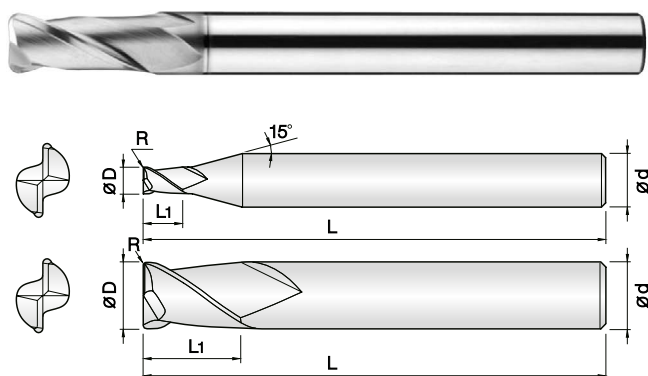


- ▶ Určeno pro široký sortiment různých typů ocelí do HRC 52
- ▶ Optimální pro různé typy ocelí díky AlCrN povlaku
- ▶ Snížení výrobního času díky výbornému utváření třísek
- ▶ Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí

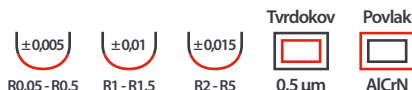
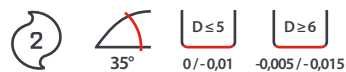


| Objednací číslo    | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|---------|--------|-----------|--------------------|
| 3HROUG-040-100-S06 | 4      | 10      | 50     | 6         | ☑                  |
| 3HROUG-050-130-S06 | 5      | 13      | 50     | 6         | ☑                  |
| 3HROUG-060-100-050 | 6      | 10      | 50     | 6         | ☑                  |
| 3HROUG-060-160-055 |        | 16      | 55     | 6         | ☑                  |
| 3HROUG-060-200-060 |        | 20      | 60     | 6         | ☑                  |
| 3HROUG-070-180-S08 | 7      | 18      | 65     | 8         | ☑                  |
| 3HROUG-080-120-060 | 8      | 12      | 60     | 8         | ☑                  |
| 3HROUG-080-190-065 |        | 19      | 65     | 8         | ☑                  |
| 3HROUG-080-250-070 |        | 25      | 70     | 8         | ☑                  |
| 4HROUG-090-220-S10 | 9      | 22      | 70     | 10        | ☑                  |
| 4HROUG-100-150-070 | 10     | 15      | 70     | 10        | ☑                  |
| 4HROUG-100-220-070 |        | 22      | 70     | 10        | ☑                  |
| 4HROUG-100-300-080 |        | 30      | 80     | 10        | ☑                  |
| 4HROUG-110-270-S12 | 11     | 27      | 80     | 12        | ☑                  |
| 4HROUG-120-200-075 | 12     | 20      | 75     | 12        | ☑                  |
| 4HROUG-120-250-080 |        | 25      | 80     | 12        | ☑                  |
| 4HROUG-120-350-090 |        | 35      | 90     | 12        | ☑                  |
| 4HROUG-160-320-090 | 16     | 32      | 90     | 16        | ☑                  |
| 4HROUG-160-400-110 |        | 40      | 110    | 16        | ☑                  |
| 4HROUG-200-380-110 | 20     | 38      | 110    | 20        | ☑                  |
| 4HROUG-200-500-120 |        | 50      | 120    | 20        | ☑                  |

# 2NCRG 2-břité TOROIDNÍ frézy pro široký sortiment ocelí do HRC 52



- Určeno pro široký sortiment různých typů ocelí do HRC 52
- Optimální pro různé typy ocelí díky AlCrN povlaku
- Velmi přesné tolerance řezných hran
- Širokový sortiment rádiusů pro optimální volbu nástroje
- Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



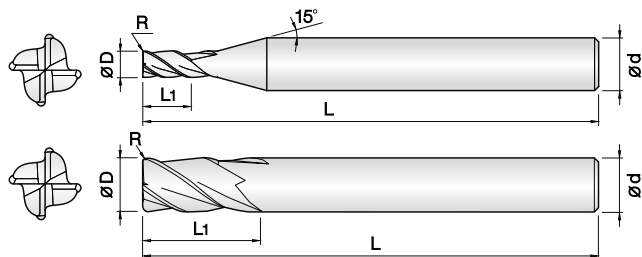
| Objednací číslo    | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|--------|---------|--------|-----------|--------------------|
| 2NCRG-004-0005-S04 | 0,4    | R0,05  | 0,8     | 45     | 4         | ☑                  |
| 2NCRG-004-001-S04  |        | R0,1   | 0,8     | 45     | 4         | ☑                  |
| 2NCRG-005-0005-S04 | 0,5    | R0,05  | 1       | 45     | 4         | ☑                  |
| 2NCRG-005-001-S04  |        | R0,1   | 1       | 45     | 4         | ☑                  |
| 2NCRG-006-0005-S04 | 0,6    | R0,05  | 1,2     | 45     | 4         | ☑                  |
| 2NCRG-006-001-S04  |        | R0,1   | 1,2     | 45     | 4         | ☑                  |
| 2NCRG-006-002-S04  |        | R0,2   | 1,2     | 45     | 4         | ☑                  |
| 2NCRG-007-0005-S04 | 0,7    | R0,05  | 1,4     | 45     | 4         | ☑                  |
| 2NCRG-007-001-S04  |        | R0,1   | 1,4     | 45     | 4         | ☑                  |
| 2NCRG-007-002-S04  |        | R0,2   | 1,4     | 45     | 4         | ☑                  |
| 2NCRG-008-0005-S04 | 0,8    | R0,05  | 1,6     | 45     | 4         | ☑                  |
| 2NCRG-008-001-S04  |        | R0,1   | 1,6     | 45     | 4         | ☑                  |
| 2NCRG-008-002-S04  |        | R0,2   | 1,6     | 45     | 4         | ☑                  |
| 2NCRG-009-0005-S04 | 0,9    | R0,05  | 1,8     | 45     | 4         | ☑                  |
| 2NCRG-009-001-S04  |        | R0,1   | 1,8     | 45     | 4         | ☑                  |
| 2NCRG-010-001-S04  | 1      | R0,1   | 2,5     | 45     | 4         | ☑                  |
| 2NCRG-010-002-S04  |        | R0,2   | 2,5     | 45     | 4         | ☑                  |
| 2NCRG-010-003-S04  |        | R0,3   | 2,5     | 45     | 4         | ☑                  |
| 2NCRG-012-001-S04  | 1,2    | R0,1   | 3,2     | 45     | 4         | ☑                  |
| 2NCRG-012-002-S04  |        | R0,2   | 3,2     | 45     | 4         | ☑                  |
| 2NCRG-012-003-S04  |        | R0,3   | 3,2     | 45     | 4         | ☑                  |
| 2NCRG-015-001-S04  | 1,5    | R0,1   | 4       | 45     | 4         | ☑                  |
| 2NCRG-015-002-S04  |        | R0,2   | 4       | 45     | 4         | ☑                  |
| 2NCRG-015-003-S04  |        | R0,3   | 4       | 45     | 4         | ☑                  |
| 2NCRG-015-005-S04  | 2      | R0,5   | 4       | 45     | 4         | ☑                  |
| 2NCRG-020-001-S04  |        | R0,1   | 6       | 45     | 4         | ☑                  |
| 2NCRG-020-002-S04  |        | R0,2   | 6       | 45     | 4         | ☑                  |
| 2NCRG-020-003-S04  |        | R0,3   | 6       | 45     | 4         | ☑                  |
| 2NCRG-020-005-S04  |        | R0,5   | 6       | 45     | 4         | ☑                  |
| 2NCRG-025-001-S04  | 2,5    | R0,1   | 6       | 50     | 4         | ☑                  |
| 2NCRG-025-002-S04  |        | R0,2   | 6       | 50     | 4         | ☑                  |
| 2NCRG-025-003-S04  |        | R0,3   | 6       | 50     | 4         | ☑                  |
| 2NCRG-025-005-S04  |        | R0,5   | 6       | 50     | 4         | ☑                  |
| 2NCRG-030-001-S06  |        | 3      | R0,1    | 8      | 60        | 6                  |
| 2NCRG-030-002-S06  | R0,2   |        | 8       | 60     | 6         | ☑                  |
| 2NCRG-030-003-S06  | R0,3   |        | 8       | 60     | 6         | ☑                  |
| 2NCRG-030-005-S06  | R0,5   |        | 8       | 60     | 6         | ☑                  |
| 2NCRG-030-010-S06  | R1     |        | 8       | 60     | 6         | ☑                  |

| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 2NCRG-040-001-060 | 4      | R0,1   | 9       | 60     | 4         | ☑                  |
| 2NCRG-040-001-080 |        |        | 9       | 80     | 4         | ☑                  |
| 2NCRG-040-001-S06 |        | 10     | 70      | 6      | ☑         |                    |
| 2NCRG-040-002-060 |        | R0,2   | 9       | 60     | 4         | ☑                  |
| 2NCRG-040-002-080 |        |        | 9       | 80     | 4         | ☑                  |
| 2NCRG-040-002-S06 |        | 10     | 70      | 6      | ☑         |                    |
| 2NCRG-040-003-060 |        | R0,3   | 9       | 60     | 4         | ☑                  |
| 2NCRG-040-003-080 |        |        | 9       | 80     | 4         | ☑                  |
| 2NCRG-040-003-S06 |        |        | 10      | 70     | 6         | ☑                  |
| 2NCRG-040-005-060 |        | R0,5   | 9       | 60     | 4         | ☑                  |
| 2NCRG-040-005-080 |        |        | 9       | 80     | 4         | ☑                  |
| 2NCRG-040-005-S06 |        |        | 10      | 70     | 6         | ☑                  |
| 2NCRG-040-010-060 |        | R1     | 9       | 60     | 4         | ☑                  |
| 2NCRG-040-010-080 |        |        | 9       | 80     | 4         | ☑                  |
| 2NCRG-040-010-S06 |        |        | 10      | 70     | 6         | ☑                  |
| 2NCRG-050-001-S06 |        | 5      | R0,1    | 13     | 75        | 6                  |
| 2NCRG-050-002-S06 | R0,2   |        | 13      | 75     | 6         | ☑                  |
| 2NCRG-050-003-S06 | R0,3   |        | 13      | 75     | 6         | ☑                  |
| 2NCRG-050-005-S06 | R0,5   |        | 13      | 75     | 6         | ☑                  |
| 2NCRG-050-010-S06 | R1     |        | 13      | 75     | 6         | ☑                  |
| 2NCRG-060-001-060 | 6      | R0,1   | 11      | 60     | 6         | ☑                  |
| 2NCRG-060-001-090 |        |        | 13      | 90     | 6         | ☑                  |
| 2NCRG-060-002-060 |        | R0,2   | 11      | 60     | 6         | ☑                  |
| 2NCRG-060-002-090 |        |        | 13      | 90     | 6         | ☑                  |
| 2NCRG-060-003-060 |        | R0,3   | 11      | 60     | 6         | ☑                  |
| 2NCRG-060-003-090 |        |        | 13      | 90     | 6         | ☑                  |
| 2NCRG-060-005-060 |        | R0,5   | 11      | 60     | 6         | ☑                  |
| 2NCRG-060-005-090 |        |        | 13      | 90     | 6         | ☑                  |
| 2NCRG-060-010-060 |        | R1     | 11      | 60     | 6         | ☑                  |
| 2NCRG-060-010-090 |        |        | 13      | 90     | 6         | ☑                  |
| 2NCRG-060-015-060 |        | R1,5   | 11      | 60     | 6         | ☑                  |
| 2NCRG-060-015-090 |        |        | 13      | 90     | 6         | ☑                  |
| 2NCRG-060-020-060 |        | R2     | 11      | 60     | 6         | ☑                  |
| 2NCRG-060-020-090 |        |        | 13      | 90     | 6         | ☑                  |
| 2NCRG-060-025-090 |        | R2,5   | 13      | 90     | 6         | ☑                  |
| 2NCRG-080-001-070 |        | 8      | R0,1    | 16     | 70        | 8                  |
| 2NCRG-080-001-100 | 19     |        |         | 100    | 8         | ☑                  |
| 2NCRG-080-002-070 | R0,2   |        | 16      | 70     | 8         | ☑                  |

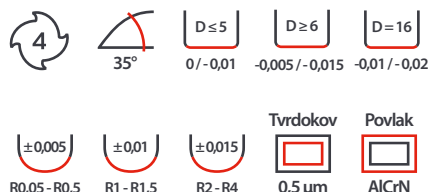
| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |   |
|-------------------|--------|--------|---------|--------|-----------|--------------------|---|
| 2NCRG-080-002-100 | 8      | R0,2   | 19      | 100    | 8         | ☑                  |   |
| 2NCRG-080-003-070 |        | R0,3   | 16      | 70     | 8         | ☑                  |   |
| 2NCRG-080-003-100 |        |        | 19      | 100    | 8         | ☑                  |   |
| 2NCRG-080-005-070 |        | R0,5   | 16      | 70     | 8         | ☑                  |   |
| 2NCRG-080-005-100 |        |        | 19      | 100    | 8         | ☑                  |   |
| 2NCRG-080-005-120 |        |        | 19      | 120    | 8         | ☑                  |   |
| 2NCRG-080-010-070 |        | R1     | 16      | 70     | 8         | ☑                  |   |
| 2NCRG-080-010-100 |        |        | 19      | 100    | 8         | ☑                  |   |
| 2NCRG-080-010-120 |        |        | 19      | 120    | 8         | ☑                  |   |
| 2NCRG-080-015-070 |        |        | R1,5    | 16     | 70        | 8                  | ☑ |
| 2NCRG-080-015-100 |        | 19     |         | 100    | 8         | ☑                  |   |
| 2NCRG-080-020-070 |        | R2     | 16      | 70     | 8         | ☑                  |   |
| 2NCRG-080-020-100 |        |        | 19      | 100    | 8         | ☑                  |   |
| 2NCRG-080-025-100 |        | R2,5   | 19      | 100    | 8         | ☑                  |   |
| 2NCRG-080-030-100 |        | R3     | 19      | 100    | 8         | ☑                  |   |
| 2NCRG-080-035-100 |        | R3,5   | 19      | 100    | 8         | ☑                  |   |
| 2NCRG-100-001-075 |        | 10     | R0,1    | 19     | 75        | 10                 | ☑ |
| 2NCRG-100-001-100 |        |        |         | 22     | 100       | 10                 | ☑ |
| 2NCRG-100-002-075 |        |        | R0,2    | 19     | 75        | 10                 | ☑ |
| 2NCRG-100-002-100 |        |        |         | 22     | 100       | 10                 | ☑ |
| 2NCRG-100-003-075 | R0,3   |        | 19      | 75     | 10        | ☑                  |   |
| 2NCRG-100-003-100 |        |        | 22      | 100    | 10        | ☑                  |   |
| 2NCRG-100-005-075 | R0,5   |        | 19      | 75     | 10        | ☑                  |   |
| 2NCRG-100-005-100 |        |        | 22      | 100    | 10        | ☑                  |   |
| 2NCRG-100-005-130 |        |        | 22      | 130    | 10        | ☑                  |   |
| 2NCRG-100-010-075 | R1     |        | 19      | 75     | 10        | ☑                  |   |
| 2NCRG-100-010-100 |        |        | 22      | 100    | 10        | ☑                  |   |
| 2NCRG-100-010-130 |        |        | 22      | 130    | 10        | ☑                  |   |
| 2NCRG-100-015-075 | R1,5   |        | 19      | 75     | 10        | ☑                  |   |
| 2NCRG-100-015-100 |        |        | 22      | 100    | 10        | ☑                  |   |
| 2NCRG-100-015-130 |        |        | 22      | 130    | 10        | ☑                  |   |
| 2NCRG-100-020-075 | R2     |        | 19      | 75     | 10        | ☑                  |   |
| 2NCRG-100-020-100 |        |        | 22      | 100    | 10        | ☑                  |   |
| 2NCRG-100-025-100 | R2,5   |        | 22      | 100    | 10        | ☑                  |   |
| 2NCRG-100-030-100 | R3     |        | 22      | 100    | 10        | ☑                  |   |
| 2NCRG-100-040-100 | R4     |        | 22      | 100    | 10        | ☑                  |   |
| 2NCRG-120-001-080 | 12     | R0,1   | 22      | 80     | 12        | ☑                  |   |
| 2NCRG-120-001-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 2NCRG-120-002-080 |        | R0,2   | 22      | 80     | 12        | ☑                  |   |
| 2NCRG-120-002-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 2NCRG-120-003-080 |        | R0,3   | 22      | 80     | 12        | ☑                  |   |
| 2NCRG-120-003-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 2NCRG-120-005-080 |        | R0,5   | 22      | 80     | 12        | ☑                  |   |
| 2NCRG-120-005-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 2NCRG-120-005-130 |        |        | 26      | 130    | 12        | ☑                  |   |
| 2NCRG-120-010-080 |        | R1     | 22      | 80     | 12        | ☑                  |   |
| 2NCRG-120-010-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 2NCRG-120-010-130 |        |        | 26      | 130    | 12        | ☑                  |   |
| 2NCRG-120-015-080 |        | R1,5   | 22      | 80     | 12        | ☑                  |   |
| 2NCRG-120-015-110 |        |        | 26      | 110    | 12        | ☑                  |   |
| 2NCRG-120-015-130 |        |        | 26      | 130    | 12        | ☑                  |   |

| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 2NCRG-120-020-080 | 12     | R2     | 22      | 80     | 12        | ☑                  |
| 2NCRG-120-020-110 |        |        | 26      | 110    | 12        | ☑                  |
| 2NCRG-120-020-130 |        |        | 26      | 130    | 12        | ☑                  |
| 2NCRG-120-025-110 |        | R2,5   | 26      | 110    | 12        | ☑                  |
| 2NCRG-120-030-110 |        | R3     | 26      | 110    | 12        | ☑                  |
| 2NCRG-120-040-110 |        | R4     | 26      | 110    | 12        | ☑                  |
| 2NCRG-120-050-110 |        | R5     | 26      | 110    | 12        | ☑                  |

# 4NCRG 4-břité TOROIDNÍ frézy pro široký sortiment ocelí do HRC 52



- Určeno pro široký sortiment různých typů ocelí do HRC 52
- Optimální pro různé typy ocelí díky AlCrN povlaku
- Velmi přesné tolerance řezných hran
- Širokový sortiment rádiusů pro optimální volbu nástroje
- Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí



| Objednací číslo    | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|--------|---------|--------|-----------|--------------------|
| 4NCRG-010-0005-S04 | 1      | R0,05  | 2,5     | 45     | 4         | ☑                  |
| 4NCRG-010-001-S04  |        | R0,1   | 2,5     | 45     | 4         | ☑                  |
| 4NCRG-010-002-S04  |        | R0,2   | 2,5     | 45     | 4         | ☑                  |
| 4NCRG-010-003-S04  |        | R0,3   | 2,5     | 45     | 4         | ☑                  |
| 4NCRG-015-0005-S04 | 1,5    | R0,05  | 4       | 45     | 4         | ☑                  |
| 4NCRG-015-001-S04  |        | R0,1   | 4       | 45     | 4         | ☑                  |
| 4NCRG-015-002-S04  |        | R0,2   | 4       | 45     | 4         | ☑                  |
| 4NCRG-015-003-S04  |        | R0,3   | 4       | 45     | 4         | ☑                  |
| 4NCRG-015-005-S04  |        | R0,5   | 4       | 45     | 4         | ☑                  |
| 4NCRG-020-0005-S04 | 2      | R0,05  | 6       | 45     | 4         | ☑                  |
| 4NCRG-020-001-S04  |        | R0,1   | 6       | 45     | 4         | ☑                  |
| 4NCRG-020-002-S04  |        | R0,2   | 6       | 45     | 4         | ☑                  |
| 4NCRG-020-003-S04  |        | R0,3   | 6       | 45     | 4         | ☑                  |
| 4NCRG-020-005-S04  |        | R0,5   | 6       | 45     | 4         | ☑                  |
| 4NCRG-025-001-S04  | 2,5    | R0,1   | 6       | 50     | 4         | ☑                  |
| 4NCRG-025-002-S04  |        | R0,2   | 6       | 50     | 4         | ☑                  |
| 4NCRG-025-003-S04  |        | R0,3   | 6       | 50     | 4         | ☑                  |
| 4NCRG-025-005-S04  |        | R0,5   | 6       | 50     | 4         | ☑                  |
| 4NCRG-030-001-S06  | 3      | R0,1   | 8       | 60     | 6         | ☑                  |
| 4NCRG-030-002-S06  |        | R0,2   | 8       | 60     | 6         | ☑                  |
| 4NCRG-030-003-S06  |        | R0,3   | 8       | 60     | 6         | ☑                  |
| 4NCRG-030-005-S06  |        | R0,5   | 8       | 60     | 6         | ☑                  |
| 4NCRG-030-010-S06  |        | R1     | 8       | 60     | 6         | ☑                  |
| 4NCRG-040-001-060  | 4      | R0,1   | 9       | 60     | 4         | ☑                  |
| 4NCRG-040-001-080  |        |        | 9       | 80     | 4         | ☑                  |
| 4NCRG-040-001-S06  |        |        | 10      | 70     | 6         | ☑                  |
| 4NCRG-040-002-060  |        | R0,2   | 9       | 60     | 4         | ☑                  |
| 4NCRG-040-002-080  |        |        | 9       | 80     | 4         | ☑                  |
| 4NCRG-040-002-S06  |        |        | 10      | 70     | 6         | ☑                  |
| 4NCRG-040-003-060  |        | R0,3   | 9       | 60     | 4         | ☑                  |
| 4NCRG-040-003-080  |        |        | 9       | 80     | 4         | ☑                  |
| 4NCRG-040-003-S06  |        |        | 10      | 70     | 6         | ☑                  |
| 4NCRG-040-005-060  |        | R0,5   | 9       | 60     | 4         | ☑                  |
| 4NCRG-040-005-080  |        |        | 9       | 80     | 4         | ☑                  |
| 4NCRG-040-005-S06  |        |        | 10      | 70     | 6         | ☑                  |
| 4NCRG-040-010-060  |        | R1     | 9       | 60     | 4         | ☑                  |
| 4NCRG-040-010-080  |        |        | 9       | 80     | 4         | ☑                  |
| 4NCRG-040-010-080  |        |        | 9       | 80     | 4         | ☑                  |
| 4NCRG-040-010-S06  |        |        | 10      | 70     | 6         | ☑                  |

| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|--------|-----------|--------------------|
| 4NCRG-050-001-S06 | 5      | R0,1   | 13      | 75     | 6         | ☑                  |
| 4NCRG-050-002-S06 |        | R0,2   | 13      | 75     | 6         | ☑                  |
| 4NCRG-050-003-S06 |        | R0,3   | 13      | 75     | 6         | ☑                  |
| 4NCRG-050-005-S06 |        | R0,5   | 13      | 75     | 6         | ☑                  |
| 4NCRG-050-010-S06 |        | R1     | 13      | 75     | 6         | ☑                  |
| 4NCRG-060-001-060 | 6      | R0,1   | 11      | 60     | 6         | ☑                  |
| 4NCRG-060-001-080 |        |        | 13      | 80     | 6         | ☑                  |
| 4NCRG-060-002-060 |        | R0,2   | 11      | 60     | 6         | ☑                  |
| 4NCRG-060-002-080 |        |        | 13      | 80     | 6         | ☑                  |
| 4NCRG-060-003-060 |        | R0,3   | 11      | 60     | 6         | ☑                  |
| 4NCRG-060-003-080 |        |        | 13      | 80     | 6         | ☑                  |
| 4NCRG-060-005-060 |        | R0,5   | 11      | 60     | 6         | ☑                  |
| 4NCRG-060-005-080 |        |        | 13      | 80     | 6         | ☑                  |
| 4NCRG-060-010-060 |        | R1     | 11      | 60     | 6         | ☑                  |
| 4NCRG-060-010-080 |        |        | 13      | 80     | 6         | ☑                  |
| 4NCRG-060-015-060 |        | R1,5   | 11      | 60     | 6         | ☑                  |
| 4NCRG-060-015-080 |        |        | 13      | 80     | 6         | ☑                  |
| 4NCRG-060-020-060 | R2     | 11     | 60      | 6      | ☑         |                    |
| 4NCRG-060-020-080 |        | 13     | 80      | 6      | ☑         |                    |
| 4NCRG-080-001-070 | 8      | R0,1   | 16      | 70     | 8         | ☑                  |
| 4NCRG-080-001-090 |        |        | 19      | 90     | 8         | ☑                  |
| 4NCRG-080-002-070 |        | R0,2   | 16      | 70     | 8         | ☑                  |
| 4NCRG-080-002-090 |        |        | 19      | 90     | 8         | ☑                  |
| 4NCRG-080-003-070 |        | R0,3   | 16      | 70     | 8         | ☑                  |
| 4NCRG-080-003-090 |        |        | 19      | 90     | 8         | ☑                  |
| 4NCRG-080-005-070 |        | R0,5   | 16      | 70     | 8         | ☑                  |
| 4NCRG-080-005-090 |        |        | 19      | 90     | 8         | ☑                  |
| 4NCRG-080-005-110 |        |        | 19      | 110    | 8         | ☑                  |
| 4NCRG-080-010-070 |        | R1     | 16      | 70     | 8         | ☑                  |
| 4NCRG-080-010-090 |        |        | 19      | 90     | 8         | ☑                  |
| 4NCRG-080-010-110 |        |        | 19      | 110    | 8         | ☑                  |
| 4NCRG-080-015-070 |        | R1,5   | 16      | 70     | 8         | ☑                  |
| 4NCRG-080-015-090 |        |        | 19      | 90     | 8         | ☑                  |
| 4NCRG-080-015-110 |        |        | 19      | 110    | 8         | ☑                  |
| 4NCRG-080-020-070 |        | R2     | 16      | 70     | 8         | ☑                  |
| 4NCRG-080-020-090 | 19     |        | 90      | 8      | ☑         |                    |
| 4NCRG-080-020-110 | 19     |        | 110     | 8      | ☑         |                    |
| 4NCRG-080-025-090 | R2,5   |        | 19      | 90     | 8         | ☑                  |

# 4NCRG

## 4-břité TOROIDNÍ frézy pro široký sortiment ocelí do HRC 52

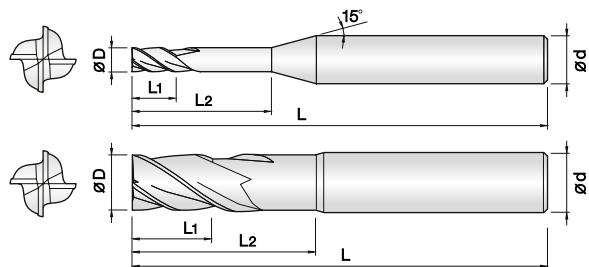
| Objednací číslo   | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |                                     |
|-------------------|--------|--------|---------|--------|-----------|-------------------------------------|-------------------------------------|
| 4NCRG-100-001-075 | 10     | R0,1   | 19      | 75     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-001-100 |        |        | 22      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-002-075 |        | R0,2   | 19      | 75     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-002-100 |        |        | 22      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-003-075 |        | R0,3   | 19      | 75     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-003-100 |        |        | 22      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-005-075 |        | R0,5   | 19      | 75     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-005-100 |        |        | 22      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-005-120 |        |        | 22      | 120    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-010-075 |        | R1     | 19      | 75     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-010-100 |        |        | 22      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-010-120 |        |        | 22      | 120    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-015-075 |        | R1,5   | 19      | 75     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-015-100 |        |        | 22      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-015-120 |        |        | 22      | 120    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-020-075 |        | R2     | 19      | 75     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-020-100 |        |        | 22      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-020-120 |        |        | 22      | 120    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-025-075 |        | R2,5   | 19      | 75     | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-025-100 |        |        | 22      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-025-120 |        |        | 22      | 120    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-100-030-100 |        | R3     | 22      | 100    | 10        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-002-080 |        | 12     | R0,2    | 22     | 80        | 12                                  | <input checked="" type="checkbox"/> |
| 4NCRG-120-002-110 |        |        |         | 26     | 110       | 12                                  | <input checked="" type="checkbox"/> |
| 4NCRG-120-003-080 | R0,3   |        | 22      | 80     | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-003-110 |        |        | 26      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-005-080 | R0,5   |        | 22      | 80     | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-005-110 |        |        | 26      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-005-130 |        |        | 26      | 130    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-010-080 | R1     |        | 22      | 80     | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-010-110 |        |        | 26      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-010-130 |        |        | 26      | 130    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-015-080 | R1,5   |        | 22      | 80     | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-015-110 |        |        | 26      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-015-130 |        |        | 26      | 130    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-020-080 | R2     |        | 22      | 80     | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-020-110 |        |        | 26      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-020-130 |        |        | 26      | 130    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-025-080 | R2,5   |        | 22      | 80     | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-025-110 |        |        | 26      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-025-130 |        |        | 26      | 130    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-030-080 | R3     |        | 22      | 80     | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-030-110 |        |        | 26      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-030-130 |        |        | 26      | 130    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-035-110 | R3,5   |        | 26      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-120-040-110 | R4     |        | 26      | 110    | 12        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-160-005-110 | 16     | R0,5   | 35      | 110    | 16        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-160-005-160 |        |        | 35      | 160    | 16        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-160-010-110 |        | R1     | 35      | 110    | 16        | <input checked="" type="checkbox"/> |                                     |
| 4NCRG-160-010-160 |        |        | 35      | 160    | 16        | <input checked="" type="checkbox"/> |                                     |



# SUS

- ▶ Tvrdokovové frézy pro korozivzdorné oceli, titan a slitiny Ni

# 4SURE 4-břité OSTRÉ frézy pro žebrování pro korozivzdorné oceli, Titan a slitiny Ni



- ▶ Určeno do oceli ≤ 850 MPa, nerezové oceli, titan a slitiny niklu
- ▶ Zvýšená odolnost proti opotřebení díky povlaku AlCrN
- ▶ Minimalizace vibrací díky nerovnoměrné rozteči břitů
- ▶ Vysoká kvalita obrobeneho povrchu
- ▶ Hlubší šroubovice pro lepší odvod třísek
- ▶ Minimalizace vyštipování díky tvrdokovou s vysokou houževnatostí



Tvrdokov



Povlak

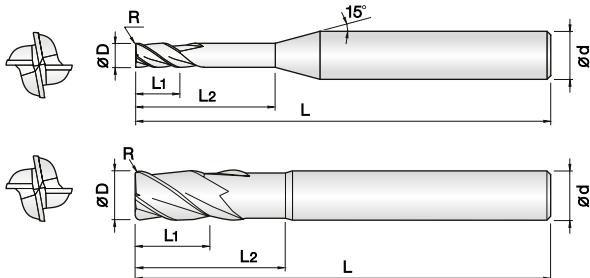


NOVINKA

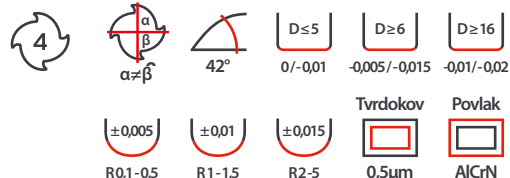
| Objednací číslo   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|---------|--------|-----------|--------------------|
| 4SURE-010-030-S04 | 1      | 3       | 1,5     | 50     | 4         | ☑                  |
| 4SURE-010-050-S04 |        | 5       | 1,5     | 50     | 4         | ☑                  |
| 4SURE-015-045-S04 |        | 1,5     | 4,5     | 2,5    | 50        | 4                  |
| 4SURE-015-060-S04 | 6      |         | 2,5     | 50     | 4         | ☑                  |
| 4SURE-015-080-S04 | 8      |         | 2,5     | 50     | 4         | ☑                  |
| 4SURE-020-060-S04 | 2      | 6       | 3       | 50     | 4         | ☑                  |
| 4SURE-020-080-S04 |        | 8       | 3       | 50     | 4         | ☑                  |
| 4SURE-020-100-S04 |        | 10      | 3       | 50     | 4         | ☑                  |
| 4SURE-020-120-S04 |        | 12      | 3       | 50     | 4         | ☑                  |
| 4SURE-025-075-S04 | 2,5    | 7,5     | 4       | 50     | 4         | ☑                  |
| 4SURE-025-100-S04 |        | 10      | 4       | 50     | 4         | ☑                  |
| 4SURE-025-120-S04 |        | 12      | 4       | 50     | 4         | ☑                  |
| 4SURE-030-090-S06 | 3      | 9       | 4,5     | 60     | 6         | ☑                  |
| 4SURE-030-120-S06 |        | 12      | 4,5     | 60     | 6         | ☑                  |
| 4SURE-030-160-S06 |        | 16      | 4,5     | 60     | 6         | ☑                  |
| 4SURE-030-200-S06 |        | 20      | 4,5     | 60     | 6         | ☑                  |
| 4SURE-040-120-S06 | 4      | 12      | 6       | 60     | 6         | ☑                  |
| 4SURE-040-160-S06 |        | 16      | 6       | 60     | 6         | ☑                  |
| 4SURE-040-200-S06 |        | 20      | 6       | 60     | 6         | ☑                  |
| 4SURE-040-250-S06 |        | 25      | 6       | 65     | 6         | ☑                  |
| 4SURE-050-150-S06 | 5      | 15      | 7,5     | 60     | 6         | ☑                  |
| 4SURE-050-180-100 |        | 18      | 7,5     | 100    | 6         | ☑                  |
| 4SURE-050-200-S06 |        | 20      | 7,5     | 60     | 6         | ☑                  |
| 4SURE-050-250-S06 |        | 25      | 7,5     | 65     | 6         | ☑                  |
| 4SURE-050-300-S06 | 6      | 30      | 7,5     | 70     | 6         | ☑                  |
| 4SURE-060-200-S06 |        | 20      | 9       | 60     | 6         | ☑                  |
| 4SURE-060-250-100 |        | 25      | 9       | 100    | 6         | ☑                  |
| 4SURE-060-300-S06 | 8      | 30      | 9       | 70     | 6         | ☑                  |
| 4SURE-080-250-S08 |        | 25      | 12      | 70     | 8         | ☑                  |
| 4SURE-080-350-110 |        | 35      | 12      | 110    | 8         | ☑                  |
| 4SURE-080-400-S08 | 10     | 40      | 12      | 80     | 8         | ☑                  |
| 4SURE-100-300-S10 |        | 30      | 15      | 80     | 10        | ☑                  |
| 4SURE-100-400-120 |        | 40      | 15      | 120    | 10        | ☑                  |
| 4SURE-100-500-S10 | 12     | 50      | 15      | 100    | 10        | ☑                  |
| 4SURE-120-360-S12 |        | 36      | 18      | 90     | 12        | ☑                  |
| 4SURE-120-500-130 |        | 50      | 18      | 130    | 12        | ☑                  |
| 4SURE-120-600-S12 | 16     | 60      | 18      | 110    | 12        | ☑                  |
| 4SURE-160-480-S16 |        | 48      | 24      | 110    | 16        | ☑                  |

| Objednací číslo    | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|---------|---------|--------|-----------|--------------------|
| 4SURE-160-700-150  | 16     | 70      | 24      | 150    | 16        | ☑                  |
| 4SURE-160-800-S16  |        | 80      | 24      | 130    | 16        | ☑                  |
| 4SURE-200-600-130  | 20     | 60      | 30      | 130    | 20        | ☑                  |
| 4SURE-200-1000-160 |        | 100     | 30      | 160    | 20        | ☑                  |

# 4SUCR 4-břité TOROIDNÍ frézy pro žebrování pro korozivzdorné oceli, Titan a slitiny Ni



- Určeno do oceli ≤ 850 MPa, nerezové oceli, titan a slitiny niklu
- Zvýšená odolnost proti opotřeбенí díky povlaku AlCrN
- Minimalizace vibrací díky nerovnoměrné rozteči břitů
- Vysoká kvalita obrobeneho povrchu
- Hlubší šroubovice pro lepší odvod třísek
- Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí

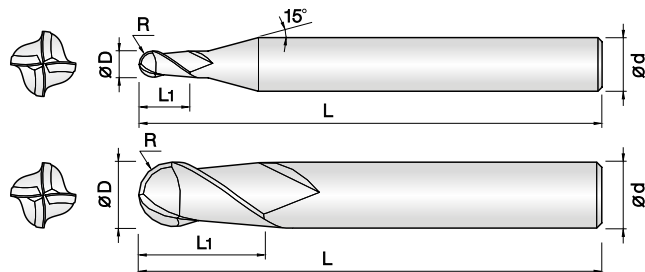


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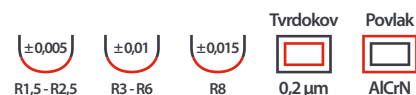
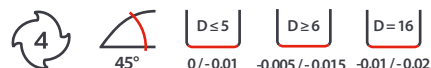
| Objednací číslo   | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 4SUCR-010-001-050 | 1      | R0,1   | 5       | 1,5     | 60     | 4         | ☑                  |
| 4SUCR-020-001-100 | 2      | R0,1   | 10      | 3       | 60     | 4         | ☑                  |
| 4SUCR-020-002-100 |        | R0,2   | 10      | 3       | 60     | 4         | ☑                  |
| 4SUCR-030-002-150 | 3      | R0,2   | 15      | 4,5     | 65     | 6         | ☑                  |
| 4SUCR-030-005-150 |        | R0,5   | 15      | 4,5     | 65     | 6         | ☑                  |
| 4SUCR-040-002-200 | 4      | R0,2   | 20      | 6       | 70     | 6         | ☑                  |
| 4SUCR-040-005-200 |        | R0,5   | 20      | 6       | 70     | 6         | ☑                  |
| 4SUCR-040-010-200 |        | R1     | 20      | 6       | 70     | 6         | ☑                  |
| 4SUCR-050-002-250 | 5      | R0,2   | 25      | 7,5     | 70     | 6         | ☑                  |
| 4SUCR-050-005-250 |        | R0,5   | 25      | 7,5     | 70     | 6         | ☑                  |
| 4SUCR-050-010-250 |        | R1     | 25      | 7,5     | 70     | 6         | ☑                  |
| 4SUCR-060-003-300 | 6      | R0,3   | 30      | 9       | 70     | 6         | ☑                  |
| 4SUCR-060-005-300 |        | R0,5   | 30      | 9       | 70     | 6         | ☑                  |
| 4SUCR-060-010-300 |        | R1     | 30      | 9       | 70     | 6         | ☑                  |
| 4SUCR-060-015-300 |        | R1,5   | 30      | 9       | 70     | 6         | ☑                  |
| 4SUCR-070-003-350 | 7      | R0,3   | 35      | 10      | 80     | 8         | ☑                  |
| 4SUCR-070-005-350 |        | R0,5   | 35      | 10      | 80     | 8         | ☑                  |
| 4SUCR-070-010-350 |        | R1     | 35      | 10      | 80     | 8         | ☑                  |
| 4SUCR-080-003-400 | 8      | R0,3   | 40      | 12      | 80     | 8         | ☑                  |
| 4SUCR-080-005-400 |        | R0,5   | 40      | 12      | 80     | 8         | ☑                  |
| 4SUCR-080-010-400 |        | R1     | 40      | 12      | 80     | 8         | ☑                  |
| 4SUCR-080-015-400 |        | R1,5   | 40      | 12      | 80     | 8         | ☑                  |
| 4SUCR-080-020-400 | R2     | 40     | 12      | 80      | 8      | ☑         |                    |
| 4SUCR-090-003-450 | 9      | R0,3   | 45      | 13      | 90     | 10        | ☑                  |
| 4SUCR-090-005-450 |        | R0,5   | 45      | 13      | 90     | 10        | ☑                  |
| 4SUCR-090-010-450 |        | R1     | 45      | 13      | 90     | 10        | ☑                  |
| 4SUCR-100-003-500 | 10     | R0,3   | 50      | 15      | 100    | 10        | ☑                  |
| 4SUCR-100-005-500 |        | R0,5   | 50      | 15      | 100    | 10        | ☑                  |
| 4SUCR-100-010-500 |        | R1     | 50      | 15      | 100    | 10        | ☑                  |
| 4SUCR-100-015-500 |        | R1,5   | 50      | 15      | 100    | 10        | ☑                  |
| 4SUCR-100-020-500 | R2     | 50     | 15      | 100     | 10     | ☑         |                    |
| 4SUCR-110-003-550 | 11     | R0,3   | 55      | 16      | 100    | 12        | ☑                  |
| 4SUCR-110-005-550 |        | R0,5   | 55      | 16      | 100    | 12        | ☑                  |
| 4SUCR-110-010-550 |        | R1     | 55      | 16      | 100    | 12        | ☑                  |
| 4SUCR-120-003-600 | 12     | R0,3   | 60      | 18      | 110    | 12        | ☑                  |
| 4SUCR-120-005-600 |        | R0,5   | 60      | 18      | 110    | 12        | ☑                  |
| 4SUCR-120-010-600 |        | R1     | 60      | 18      | 110    | 12        | ☑                  |
| 4SUCR-120-015-600 |        | R1,5   | 60      | 18      | 110    | 12        | ☑                  |

| Objednací číslo    | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|--------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 4SUCR-120-020-600  | 12     | R2     | 60      | 18      | 110    | 12        | ☑                  |
| 4SUCR-120-025-600  |        | R2,5   | 60      | 18      | 110    | 12        | ☑                  |
| 4SUCR-120-030-600  |        | R3     | 60      | 18      | 110    | 12        | ☑                  |
| 4SUCR-160-005-800  | 16     | R0,5   | 80      | 24      | 130    | 16        | ☑                  |
| 4SUCR-160-010-800  |        | R1     | 80      | 24      | 130    | 16        | ☑                  |
| 4SUCR-160-015-800  |        | R1,5   | 80      | 24      | 130    | 16        | ☑                  |
| 4SUCR-160-020-800  |        | R2     | 80      | 24      | 130    | 16        | ☑                  |
| 4SUCR-160-030-800  | R3     | 80     | 24      | 130     | 16     | ☑         |                    |
| 4SUCR-200-005-1000 | 20     | R0,5   | 100     | 30      | 150    | 20        | ☑                  |
| 4SUCR-200-010-1000 |        | R1     | 100     | 30      | 150    | 20        | ☑                  |
| 4SUCR-200-015-1000 |        | R1,5   | 100     | 30      | 150    | 20        | ☑                  |
| 4SUCR-200-020-1000 |        | R2     | 100     | 30      | 150    | 20        | ☑                  |
| 4SUCR-200-030-1000 |        | R3     | 100     | 30      | 150    | 20        | ☑                  |
| 4SUCR-200-050-1000 | R5     | 100    | 30      | 150     | 20     | ☑         |                    |

# 4SUB 4-břité KULOVÉ frézy pro korozivzdorné oceli, Titan a slitiny Ni



- ▶ Určeno pro korozivzdorné oceli, titan a slitiny niklu
- ▶ Zvýšená odolnost proti opotřebení díky novému AlCrN povlaku
- ▶ Vysoká kvalita obrobeného povrchu
- ▶ Hlubší šroubovice pro lepší odvod třísek
- ▶ Minimalizace vyštipování díky tvrdokovou s vysokou houževnatostí

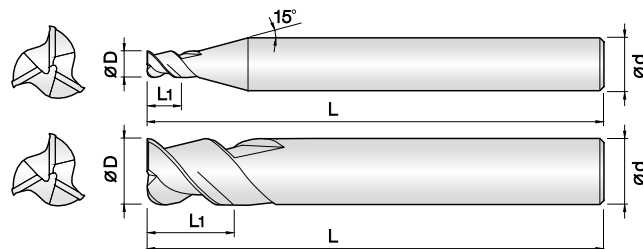


NOVINKA

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|------------------|--------|--------|---------|--------|-----------|-------------------------------------|
| 4SUB-010-025-S06 | 1      | R0,5   | 2,5     | 50     | 6         | <input checked="" type="checkbox"/> |
| 4SUB-015-040-S06 | 1,5    | R0,75  | 4       | 50     | 6         | <input checked="" type="checkbox"/> |
| 4SUB-020-060-S06 | 2      | R1     | 6       | 50     | 6         | <input checked="" type="checkbox"/> |
| 4SUB-030-080-S06 | 3      | R1,5   | 8       | 60     | 6         | <input checked="" type="checkbox"/> |
| 4SUB-040-080-S06 | 4      | R2     | 8       | 70     | 6         | <input checked="" type="checkbox"/> |
| 4SUB-050-100-S06 | 5      | R2,5   | 10      | 80     | 6         | <input checked="" type="checkbox"/> |
| 4SUB-060-120-S06 | 6      | R3     | 12      | 90     | 6         | <input checked="" type="checkbox"/> |
| 4SUB-080-140-S08 | 8      | R4     | 14      | 100    | 8         | <input checked="" type="checkbox"/> |
| 4SUB-100-180-S10 | 10     | R5     | 18      | 100    | 10        | <input checked="" type="checkbox"/> |
| 4SUB-120-220-S12 | 12     | R6     | 22      | 110    | 12        | <input checked="" type="checkbox"/> |
| 4SUB-160-300-S16 | 16     | R8     | 30      | 130    | 16        | <input checked="" type="checkbox"/> |

# 3SUE

## 3-břité OSTRÉ frézy pro korozivzdorné oceli, Titan a slitiny Ni



- ▶ Určeno pro oceli do HRC 40, nerezové oceli, titan a slitiny niklu
- ▶ Zvýšená odolnost proti opotřebení díky povlaku TiSiN
- ▶ Vysoká kvalita obrobeného povrchu
- ▶ Hlubší šroubovice pro lepší odvod třísek
- ▶ Minimalizace vyštipování díky tvrdokovou s vysokou houževnatostí

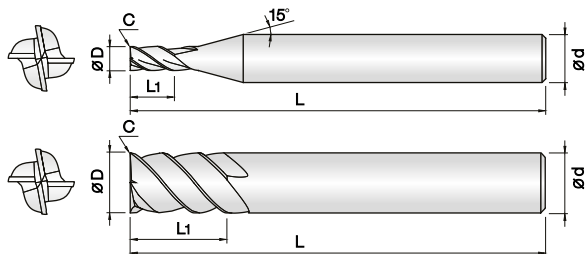


### NOVINKA

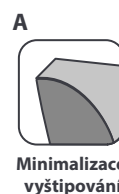
| Objednací číslo  | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|---------|--------|-----------|--------------------|
| 3SUE-005-010-S04 | 0,5    | -       | 1       | 45     | 4         | ☑                  |
| 3SUE-005-020-S04 | 0,5    | 2       | 1       | 45     | 4         | ☑                  |
| 3SUE-005-030-S04 | 0,5    | 3       | 1       | 45     | 4         | ☑                  |
| 3SUE-005-040-S04 | 0,5    | 4       | 1       | 45     | 4         | ☑                  |
| 3SUE-006-012-S04 | 0,6    | -       | 1,2     | 45     | 4         | ☑                  |
| 3SUE-006-030-S04 | 0,6    | 3       | 1,2     | 45     | 4         | ☑                  |
| 3SUE-006-050-S04 | 0,6    | 5       | 1,2     | 45     | 4         | ☑                  |
| 3SUE-007-014-S04 | 0,7    | -       | 1,4     | 45     | 4         | ☑                  |
| 3SUE-007-030-S04 | 0,7    | 3       | 1,4     | 45     | 4         | ☑                  |
| 3SUE-008-020-S04 | 0,8    | -       | 2       | 45     | 4         | ☑                  |
| 3SUE-008-040-S06 |        | 4       | 2       | 45     | 6         | ☑                  |
| 3SUE-008-060-S06 |        | 6       | 2       | 45     | 6         | ☑                  |
| 3SUE-010-025-S04 | 1      | -       | 2,5     | 45     | 4         | ☑                  |
| 3SUE-010-025-S06 |        | -       | 2,5     | 45     | 6         | ☑                  |
| 3SUE-010-040-S06 |        | 4       | 2,5     | 45     | 6         | ☑                  |
| 3SUE-010-060-S06 |        | 6       | 2,5     | 45     | 6         | ☑                  |
| 3SUE-010-080-S06 |        | 8       | 2,5     | 45     | 6         | ☑                  |
| 3SUE-012-030-S04 | 1,2    | -       | 3       | 45     | 4         | ☑                  |
| 3SUE-012-030-S06 |        | -       | 3       | 45     | 6         | ☑                  |
| 3SUE-012-060-S06 |        | 6       | 3       | 45     | 6         | ☑                  |
| 3SUE-012-080-S06 | 8      | 3       | 45      | 6      | ☑         |                    |
| 3SUE-015-040-S04 | 1,5    | -       | 4       | 45     | 4         | ☑                  |
| 3SUE-015-040-S06 |        | -       | 4       | 45     | 6         | ☑                  |
| 3SUE-015-060-S06 |        | 6       | 4       | 45     | 6         | ☑                  |
| 3SUE-015-080-S06 |        | 8       | 4       | 45     | 6         | ☑                  |
| 3SUE-015-100-S06 | 10     | 4       | 45      | 6      | ☑         |                    |
| 3SUE-020-050-S04 | 2      | -       | 5       | 45     | 4         | ☑                  |
| 3SUE-020-050-S06 |        | -       | 5       | 45     | 6         | ☑                  |
| 3SUE-020-080-S06 |        | 8       | 5       | 45     | 6         | ☑                  |
| 3SUE-020-100-S06 |        | 10      | 5       | 50     | 6         | ☑                  |
| 3SUE-020-120-S06 |        | 12      | 5       | 50     | 6         | ☑                  |
| 3SUE-030-080-S04 | 3      | -       | 8       | 45     | 4         | ☑                  |
| 3SUE-030-080-S06 |        | -       | 8       | 45     | 6         | ☑                  |
| 3SUE-030-150-S06 |        | 15      | 8       | 45     | 6         | ☑                  |
| 3SUE-030-200-S06 |        | 20      | 8       | 60     | 6         | ☑                  |
| 3SUE-040-100-S04 | 4      | -       | 10      | 50     | 4         | ☑                  |
| 3SUE-040-100-S06 |        | -       | 10      | 50     | 6         | ☑                  |
| 3SUE-040-150-S06 |        | 15      | 10      | 50     | 6         | ☑                  |

| Objednací číslo  | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|---------|--------|-----------|--------------------|
| 3SUE-040-200-S06 | 4      | 20      | 10      | 60     | 6         | ☑                  |
| 3SUE-050-120-S06 | 5      | -       | 12      | 50     | 6         | ☑                  |
| 3SUE-060-120-S06 | 6      | -       | 12      | 50     | 6         | ☑                  |
| 3SUE-060-200-S06 |        | 20      | 12      | 60     | 6         | ☑                  |
| 3SUE-080-190-S08 | 8      | -       | 19      | 60     | 8         | ☑                  |
| 3SUE-080-260-S08 |        | 26      | 26      | 60     | 8         | ☑                  |
| 3SUE-100-220-S10 | 10     | -       | 22      | 70     | 10        | ☑                  |
| 3SUE-100-320-S10 |        | 32      | 22      | 70     | 10        | ☑                  |
| 3SUE-120-260-S12 | 12     | -       | 26      | 80     | 12        | ☑                  |
| 3SUE-120-380-S12 |        | 38      | 26      | 80     | 12        | ☑                  |
| 3SUE-160-360-S16 | 16     | -       | 36      | 100    | 16        | ☑                  |
| 3SUE-160-450-S16 |        | 45      | 36      | 100    | 16        | ☑                  |
| 3SUE-200-550-S20 | 20     | 55      | 38      | 110    | 20        | ☑                  |

# 4SUV 4-břité OSTRÉ frézy s variabilní šroubovicí pro korozivzdorné oceli, Titan a slitiny Ni



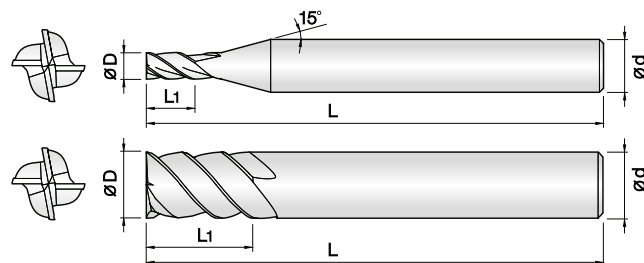
- ▶ Určeno do oceli ≤ 850 MPa, nerezové oceli, titan a slitiny niklu
- ▶ Zvýšená odolnost proti opotřebení díky povlaku AlCrN
- ▶ Minimalizace vibrací díky nerovnoměrné rozteči břitů a variabilní šroubovicí
- ▶ Vysoká kvalita obroběného povrchu
- ▶ Hlubší šroubovice pro lepší odvod třísek
- ▶ Minimalizace vyštipování díky tvrdokovou s vysokou houževnatostí



| Objednací číslo   | TYP |   | D (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|-----|---|--------|---------|---------|--------|-----------|--------------------|
| 4SUVA-010-025-S04 | A   | - | 1      | -       | 2,5     | 50     | 4         | ☑                  |
| 4SUVB-010-025-S04 | -   | B |        | -       | 2,5     | 50     | 4         | ☑                  |
| 4SUVA-010-060-S04 | A   | - |        | 6       | 2,5     | 50     | 4         | ☑                  |
| 4SUVA-015-040-S04 | A   | - | 1,5    | -       | 4       | 50     | 4         | ☑                  |
| 4SUVB-015-040-S04 | -   | B |        | -       | 4       | 50     | 4         | ☑                  |
| 4SUVA-015-100-S04 | A   | - |        | 10      | 4       | 50     | 4         | ☑                  |
| 4SUVA-020-050-S04 | A   | - | 2      | -       | 5       | 50     | 4         | ☑                  |
| 4SUVB-020-050-S04 | -   | B |        | -       | 5       | 50     | 4         | ☑                  |
| 4SUVA-020-120-S04 | A   | - |        | 12      | 5       | 50     | 4         | ☑                  |
| 4SUVA-030-080-S06 | A   | - | 3      | -       | 8       | 60     | 6         | ☑                  |
| 4SUVB-030-080-S06 | -   | B |        | -       | 8       | 60     | 6         | ☑                  |
| 4SUVA-030-180-S06 | A   | - |        | 18      | 8       | 60     | 6         | ☑                  |
| 4SUVA-040-110-S06 | A   | - | 4      | -       | 11      | 60     | 6         | ☑                  |
| 4SUVB-040-110-S06 | -   | B |        | -       | 11      | 60     | 6         | ☑                  |
| 4SUVA-040-210-S06 | A   | - |        | 21      | 11      | 60     | 6         | ☑                  |
| 4SUVA-050-130-S06 | A   | - | 5      | -       | 13      | 60     | 6         | ☑                  |
| 4SUVB-050-130-S06 | -   | B |        | -       | 13      | 60     | 6         | ☑                  |
| 4SUVA-050-210-S06 | A   | - |        | 21      | 13      | 60     | 6         | ☑                  |
| 4SUVA-060-130-S06 | A   | - | 6      | -       | 13      | 60     | 6         | ☑                  |
| 4SUVB-060-130-S06 | -   | B |        | -       | 13      | 60     | 6         | ☑                  |
| 4SUVA-060-210-S06 | A   | - |        | 21      | 13      | 60     | 6         | ☑                  |
| 4SUVA-080-190-S08 | A   | - | 8      | -       | 19      | 60     | 8         | ☑                  |
| 4SUVB-080-190-S08 | -   | B |        | -       | 19      | 60     | 8         | ☑                  |
| 4SUVA-080-270-S08 | A   | - |        | 27      | 19      | 60     | 8         | ☑                  |
| 4SUVA-100-220-S10 | A   | - | 10     | -       | 22      | 70     | 10        | ☑                  |
| 4SUVB-100-220-S10 | -   | B |        | -       | 22      | 70     | 10        | ☑                  |
| 4SUVA-100-320-S10 | A   | - |        | 32      | 22      | 70     | 10        | ☑                  |
| 4SUVA-120-260-S12 | A   | - | 12     | -       | 26      | 80     | 12        | ☑                  |
| 4SUVB-120-260-S12 | -   | B |        | -       | 26      | 80     | 12        | ☑                  |
| 4SUVA-120-380-S12 | A   | - |        | 38      | 26      | 80     | 12        | ☑                  |
| 4SUVA-160-320-S16 | A   | - | 16     | -       | 32      | 90     | 16        | ☑                  |
| 4SUVB-160-320-S16 | -   | B |        | -       | 32      | 90     | 16        | ☑                  |
| 4SUVA-160-450-S16 | A   | - |        | 45      | 32      | 90     | 16        | ☑                  |
| 4SUVA-200-380-S20 | A   | - | 20     | -       | 38      | 100    | 20        | ☑                  |
| 4SUVB-200-380-S20 | -   | B |        | -       | 38      | 100    | 20        | ☑                  |
| 4SUVA-200-550-S20 | A   | - |        | 55      | 38      | 110    | 20        | ☑                  |

# 4SUE

## 4-břité OSTRÉ frézy s nerovnoměrnou roztečí břitů pro korozivzdorné oceli, Titan a slitiny Ni



- Určeno do oceli  $\leq 850$  MPa, nerezové oceli, titan a slitiny niklu
- Zvýšená odolnost proti opotřebení díky povlaku AlCrN
- Vysoká kvalita obrobeného povrchu
- Minimalizace vibrací díky nerovnoměrné rozteči břitů
- Hlubší šroubovice pro lepší odvod třísek
- Minimalizace vyštipování díky tvrdokovu s vysokou houževnatostí

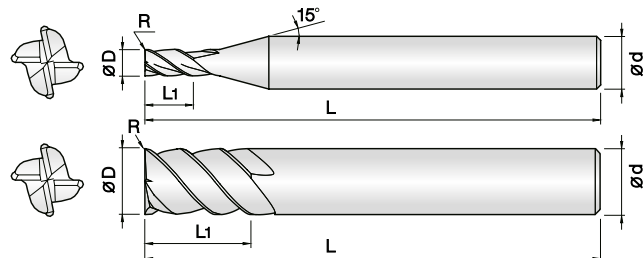


| Objednací číslo  | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|---------|--------|-----------|--------------------|
| 4SUE-010-015-S04 | 1      | 1,5     | 50     | 4         | ☑                  |
| 4SUE-010-025-S04 |        | 2,5     | 50     | 4         | ☑                  |
| 4SUE-010-035-S04 |        | 3,5     | 50     | 4         | ☑                  |
| 4SUE-010-050-S04 |        | 5       | 50     | 4         | ☑                  |
| 4SUE-015-025-S04 | 1,5    | 2,5     | 50     | 4         | ☑                  |
| 4SUE-015-040-S04 |        | 4       | 50     | 4         | ☑                  |
| 4SUE-015-055-S04 |        | 5,5     | 50     | 4         | ☑                  |
| 4SUE-015-070-S04 | 7      | 50      | 4      | ☑         |                    |
| 4SUE-020-030-S04 | 2      | 3       | 50     | 4         | ☑                  |
| 4SUE-020-060-S04 |        | 6       | 50     | 4         | ☑                  |
| 4SUE-020-080-S04 |        | 8       | 50     | 4         | ☑                  |
| 4SUE-020-100-S04 |        | 10      | 50     | 4         | ☑                  |
| 4SUE-020-120-S04 | 12     | 50      | 4      | ☑         |                    |
| 4SUE-025-035-S04 | 2,5    | 3,5     | 50     | 4         | ☑                  |
| 4SUE-025-080-S04 |        | 8       | 50     | 4         | ☑                  |
| 4SUE-025-100-S04 |        | 10      | 50     | 4         | ☑                  |
| 4SUE-025-120-S04 | 12     | 50      | 4      | ☑         |                    |
| 4SUE-030-045-S06 | 3      | 4,5     | 60     | 6         | ☑                  |
| 4SUE-030-100-S06 |        | 10      | 60     | 6         | ☑                  |
| 4SUE-030-120-S06 |        | 12      | 60     | 6         | ☑                  |
| 4SUE-030-150-S06 | 15     | 60      | 6      | ☑         |                    |
| 4SUE-030-200-S06 | 20     | 70      | 6      | ☑         |                    |
| 4SUE-035-055-S06 | 3,5    | 5,5     | 60     | 6         | ☑                  |
| 4SUE-035-100-S06 |        | 10      | 60     | 6         | ☑                  |
| 4SUE-035-150-S06 | 15     | 60      | 6      | ☑         |                    |
| 4SUE-040-060-S06 | 4      | 6       | 60     | 6         | ☑                  |
| 4SUE-040-120-S06 |        | 12      | 60     | 6         | ☑                  |
| 4SUE-040-160-S06 |        | 16      | 60     | 6         | ☑                  |
| 4SUE-040-200-S06 |        | 20      | 70     | 6         | ☑                  |
| 4SUE-040-250-S06 | 25     | 70      | 6      | ☑         |                    |
| 4SUE-045-070-S06 | 4,5    | 7       | 60     | 6         | ☑                  |
| 4SUE-045-130-S06 |        | 13      | 60     | 6         | ☑                  |
| 4SUE-045-180-S06 |        | 18      | 60     | 6         | ☑                  |
| 4SUE-050-075-S06 | 5      | 7,5     | 60     | 6         | ☑                  |
| 4SUE-050-150-S06 |        | 15      | 60     | 6         | ☑                  |
| 4SUE-050-200-S06 |        | 20      | 70     | 6         | ☑                  |
| 4SUE-050-250-S06 | 25     | 70      | 6      | ☑         |                    |
| 4SUE-060-090-S06 | 6      | 9       | 60     | 6         | ☑                  |
| 4SUE-060-150-S06 |        | 15      | 60     | 6         | ☑                  |
| 4SUE-060-180-S06 |        | 18      | 65     | 6         | ☑                  |
| 4SUE-060-250-S06 |        | 25      | 70     | 6         | ☑                  |

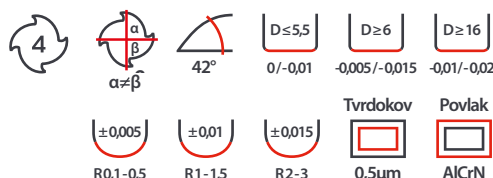
| Objednací číslo   | D (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|-------------------|--------|---------|--------|-----------|--------------------|
| 4SUE-060-300-S06  | 6      | 30      | 70     | 6         | ☑                  |
| 4SUE-060-400-S06  |        | 40      | 80     | 6         | ☑                  |
| 4SUE-070-110-S08  | 7      | 11      | 70     | 8         | ☑                  |
| 4SUE-070-180-S08  |        | 18      | 70     | 8         | ☑                  |
| 4SUE-070-210-S08  | 21     | 70      | 8      | ☑         |                    |
| 4SUE-080-120-S08  | 8      | 12      | 70     | 8         | ☑                  |
| 4SUE-080-200-S08  |        | 20      | 70     | 8         | ☑                  |
| 4SUE-080-240-S08  |        | 24      | 70     | 8         | ☑                  |
| 4SUE-080-300-S08  |        | 30      | 80     | 8         | ☑                  |
| 4SUE-080-400-S08  | 40     | 90      | 8      | ☑         |                    |
| 4SUE-080-500-S08  | 50     | 100     | 8      | ☑         |                    |
| 4SUE-090-140-S10  | 9      | 14      | 80     | 10        | ☑                  |
| 4SUE-090-220-S10  |        | 22      | 80     | 10        | ☑                  |
| 4SUE-090-270-S10  | 27     | 80      | 10     | ☑         |                    |
| 4SUE-100-150-S10  | 10     | 15      | 80     | 10        | ☑                  |
| 4SUE-100-250-S10  |        | 25      | 80     | 10        | ☑                  |
| 4SUE-100-300-S10  |        | 30      | 80     | 10        | ☑                  |
| 4SUE-100-400-S10  |        | 40      | 90     | 10        | ☑                  |
| 4SUE-100-500-S10  | 50     | 100     | 10     | ☑         |                    |
| 4SUE-100-600-S10  | 60     | 110     | 10     | ☑         |                    |
| 4SUE-110-170-S12  | 11     | 17      | 90     | 12        | ☑                  |
| 4SUE-110-220-S12  |        | 22      | 90     | 12        | ☑                  |
| 4SUE-110-330-S12  |        | 33      | 90     | 12        | ☑                  |
| 4SUE-120-180-S12  | 12     | 18      | 90     | 12        | ☑                  |
| 4SUE-120-300-S12  |        | 30      | 90     | 12        | ☑                  |
| 4SUE-120-360-S12  |        | 36      | 90     | 12        | ☑                  |
| 4SUE-120-500-S12  |        | 50      | 100    | 12        | ☑                  |
| 4SUE-120-600-S12  | 60     | 110     | 12     | ☑         |                    |
| 4SUE-120-700-S12  | 70     | 120     | 12     | ☑         |                    |
| 4SUE-160-240-S16  | 16     | 24      | 100    | 16        | ☑                  |
| 4SUE-160-350-S16  |        | 35      | 100    | 16        | ☑                  |
| 4SUE-160-500-S16  |        | 50      | 110    | 16        | ☑                  |
| 4SUE-160-700-S16  | 70     | 130     | 16     | ☑         |                    |
| 4SUE-160-900-S16  | 90     | 150     | 16     | ☑         |                    |
| 4SUE-200-300-S20  | 20     | 30      | 100    | 20        | ☑                  |
| 4SUE-200-400-S20  |        | 40      | 100    | 20        | ☑                  |
| 4SUE-200-600-S20  |        | 60      | 120    | 20        | ☑                  |
| 4SUE-200-800-S20  |        | 80      | 150    | 20        | ☑                  |
| 4SUE-200-1000-S20 | 100    | 160     | 20     | ☑         |                    |

# 4SUC

## 4-břité TOROIDNÍ frézy s nerovnoměrnou roztečí břitů pro korozivzdorné oceli, Titan a slitiny Ni



- Určeno do oceli ≤ 850 MPa, nerezové oceli, titan a slitiny niklu
- Zvýšená odolnost proti opotřeбенí díky povlaku AlCrN
- Vysoká kvalita obrobeného povrchu
- Minimalizace vibrací díky nerovnoměrné rozteči břitů
- Hlubší šroubovice pro lepší odvod třísek
- Minimalizace vyštipování díky tvrdokovové s vysokou houževnatostí



NOVINKA

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 4SUC-010-001-S04 | 1      | R0,1   | 2,5     | 50     | 4         | ☑                  |
| 4SUC-010-002-S04 |        | R0,2   | 2,5     | 50     | 4         | ☑                  |
| 4SUC-012-001-S04 | 1,2    | R0,1   | 3       | 50     | 4         | ☑                  |
| 4SUC-012-002-S04 |        | R0,2   | 3       | 50     | 4         | ☑                  |
| 4SUC-015-001-S04 | 1,5    | R0,1   | 4       | 50     | 4         | ☑                  |
| 4SUC-015-002-S04 |        | R0,2   | 4       | 50     | 4         | ☑                  |
| 4SUC-015-003-S04 |        | R0,3   | 4       | 50     | 4         | ☑                  |
| 4SUC-020-001-S04 | 2      | R0,1   | 6       | 50     | 4         | ☑                  |
| 4SUC-020-002-S04 |        | R0,2   | 6       | 50     | 4         | ☑                  |
| 4SUC-020-003-S04 |        | R0,3   | 6       | 50     | 4         | ☑                  |
| 4SUC-020-005-S04 |        | R0,5   | 6       | 50     | 4         | ☑                  |
| 4SUC-025-001-S04 | 2,5    | R0,1   | 7       | 50     | 4         | ☑                  |
| 4SUC-025-002-S04 |        | R0,2   | 7       | 50     | 4         | ☑                  |
| 4SUC-025-003-S04 |        | R0,3   | 7       | 50     | 4         | ☑                  |
| 4SUC-030-001-S06 | 3      | R0,1   | 10      | 60     | 6         | ☑                  |
| 4SUC-030-002-055 |        | R0,2   | 6       | 55     | 6         | ☑                  |
| 4SUC-030-002-S06 |        |        | 10      | 60     | 6         | ☑                  |
| 4SUC-030-003-S06 |        | R0,3   | 10      | 60     | 6         | ☑                  |
| 4SUC-030-005-055 |        | R0,5   | 6       | 55     | 6         | ☑                  |
| 4SUC-030-005-S06 |        |        | 10      | 60     | 6         | ☑                  |
| 4SUC-035-002-S06 | 3,5    | R0,2   | 10      | 60     | 6         | ☑                  |
| 4SUC-040-001-S06 | 4      | R0,1   | 12      | 60     | 6         | ☑                  |
| 4SUC-040-002-055 |        | R0,2   | 8       | 55     | 6         | ☑                  |
| 4SUC-040-002-S06 |        |        | 12      | 60     | 6         | ☑                  |
| 4SUC-040-003-S06 |        | R0,3   | 12      | 60     | 6         | ☑                  |
| 4SUC-040-005-055 |        | R0,5   | 8       | 55     | 6         | ☑                  |
| 4SUC-040-005-S06 |        |        | 12      | 60     | 6         | ☑                  |
| 4SUC-040-010-S06 | R1     | 12     | 60      | 6      | ☑         |                    |
| 4SUC-045-002-S06 | 4,5    | R0,2   | 14      | 60     | 6         | ☑                  |
| 4SUC-050-002-055 | 5      | R0,2   | 10      | 55     | 6         | ☑                  |
| 4SUC-050-002-S06 |        |        | 15      | 60     | 6         | ☑                  |
| 4SUC-050-003-S06 |        | R0,3   | 15      | 60     | 6         | ☑                  |
| 4SUC-050-005-055 |        |        | 10      | 55     | 6         | ☑                  |
| 4SUC-050-005-S06 |        | R0,5   | 15      | 60     | 6         | ☑                  |
| 4SUC-050-010-S06 | R1     | 15     | 60      | 6      | ☑         |                    |
| 4SUC-055-002-S06 | 5,5    | R0,2   | 15      | 60     | 6         | ☑                  |
| 4SUC-060-003-055 | 6      | R0,3   | 12      | 55     | 6         | ☑                  |
| 4SUC-060-003-S06 |        |        | 15      | 60     | 6         | ☑                  |

| Objednací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|--------|-----------|--------------------|
| 4SUC-060-005-055 | 6      | R0,5   | 12      | 55     | 6         | ☑                  |
| 4SUC-060-005-S06 |        |        | 15      | 60     | 6         | ☑                  |
| 4SUC-060-010-055 |        | R1     | 12      | 55     | 6         | ☑                  |
| 4SUC-060-010-S06 |        |        | 15      | 60     | 6         | ☑                  |
| 4SUC-060-015-S06 | R1,5   | 15     | 60      | 6      | ☑         |                    |
| 4SUC-065-003-S08 | 6,5    | R0,3   | 18      | 60     | 8         | ☑                  |
| 4SUC-070-003-S08 | 7      | R0,3   | 20      | 80     | 8         | ☑                  |
| 4SUC-070-005-S08 |        | R0,5   | 20      | 80     | 8         | ☑                  |
| 4SUC-070-010-S08 |        | R1     | 20      | 80     | 8         | ☑                  |
| 4SUC-080-003-070 | 8      | R0,3   | 16      | 70     | 8         | ☑                  |
| 4SUC-080-003-S08 |        |        | 20      | 80     | 8         | ☑                  |
| 4SUC-080-005-070 |        | R0,5   | 16      | 70     | 8         | ☑                  |
| 4SUC-080-005-S08 |        |        | 20      | 80     | 8         | ☑                  |
| 4SUC-080-010-070 |        | R1     | 16      | 70     | 8         | ☑                  |
| 4SUC-080-010-S08 |        |        | 20      | 80     | 8         | ☑                  |
| 4SUC-080-015-S08 |        |        | R1,5    | 20     | 80        | 8                  |
| 4SUC-080-020-S08 |        | R2     | 20      | 80     | 8         | ☑                  |
| 4SUC-085-003-S10 | 8,5    | R0,3   | 22      | 80     | 10        | ☑                  |
| 4SUC-090-003-S10 | 9      | R0,3   | 25      | 80     | 10        | ☑                  |
| 4SUC-100-003-070 | 10     | R0,3   | 20      | 70     | 10        | ☑                  |
| 4SUC-100-003-S10 |        |        | 25      | 80     | 10        | ☑                  |
| 4SUC-100-005-070 |        | R0,5   | 20      | 70     | 10        | ☑                  |
| 4SUC-100-005-S10 |        |        | 25      | 80     | 10        | ☑                  |
| 4SUC-100-010-070 |        | R1     | 20      | 70     | 10        | ☑                  |
| 4SUC-100-010-S10 |        |        | 25      | 80     | 10        | ☑                  |
| 4SUC-100-015-070 |        | R1,5   | 20      | 70     | 10        | ☑                  |
| 4SUC-100-015-S10 |        |        | 25      | 80     | 10        | ☑                  |
| 4SUC-100-020-070 |        | R2     | 20      | 70     | 10        | ☑                  |
| 4SUC-100-020-S10 |        |        | 25      | 80     | 10        | ☑                  |
| 4SUC-100-025-070 | R2,5   | 20     | 70      | 10     | ☑         |                    |
| 4SUC-100-025-S10 |        | 25     | 80      | 10     | ☑         |                    |
| 4SUC-100-030-070 | R3     | 20     | 70      | 10     | ☑         |                    |
| 4SUC-100-030-S10 |        | 25     | 80      | 10     | ☑         |                    |
| 4SUC-110-005-S12 | 11     | R0,5   | 27      | 90     | 12        | ☑                  |
| 4SUC-110-010-S12 |        | R1     | 27      | 90     | 12        | ☑                  |
| 4SUC-120-003-080 | 12     | R0,3   | 24      | 80     | 12        | ☑                  |
| 4SUC-120-003-S12 |        |        | 30      | 100    | 12        | ☑                  |
| 4SUC-120-005-080 |        | R0,5   | 24      | 80     | 12        | ☑                  |



**4SUC****4-břité TOROIDNÍ frézy s nerovnoměrnou roztečí břitů  
pro korozivzdorné oceli, Titan a slitiny Ni**

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| Objednáací číslo | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka                  |
|------------------|--------|--------|---------|--------|-----------|-------------------------------------|
| 4SUC-120-005-S12 | 12     | R0,5   | 30      | 100    | 12        | <input checked="" type="checkbox"/> |
| 4SUC-120-010-080 |        | R1     | 24      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4SUC-120-010-S12 |        |        | 30      | 100    | 12        | <input checked="" type="checkbox"/> |
| 4SUC-120-015-080 |        | R1,5   | 24      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4SUC-120-015-S12 |        |        | 30      | 100    | 12        | <input checked="" type="checkbox"/> |
| 4SUC-120-020-080 |        | R2     | 24      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4SUC-120-020-S12 |        |        | 30      | 100    | 12        | <input checked="" type="checkbox"/> |
| 4SUC-120-025-S12 |        | R2,5   | 30      | 100    | 12        | <input checked="" type="checkbox"/> |
| 4SUC-120-030-080 |        | R3     | 24      | 80     | 12        | <input checked="" type="checkbox"/> |
| 4SUC-120-030-S12 |        |        | 30      | 100    | 12        | <input checked="" type="checkbox"/> |
| 4SUC-140-005-S14 | 14     | R0,5   | 35      | 100    | 14        | <input checked="" type="checkbox"/> |
| 4SUC-140-010-S14 |        | R1     | 35      | 100    | 14        | <input checked="" type="checkbox"/> |
| 4SUC-160-005-100 | 16     | R0,5   | 32      | 100    | 16        | <input checked="" type="checkbox"/> |
| 4SUC-160-005-S16 |        |        | 42      | 110    | 16        | <input checked="" type="checkbox"/> |
| 4SUC-160-010-100 |        | R1     | 32      | 100    | 16        | <input checked="" type="checkbox"/> |
| 4SUC-160-010-S16 |        |        | 42      | 110    | 16        | <input checked="" type="checkbox"/> |
| 4SUC-180-005-S18 | 18     | R0,5   | 45      | 110    | 18        | <input checked="" type="checkbox"/> |
| 4SUC-180-010-S18 |        | R1     | 45      | 110    | 18        | <input checked="" type="checkbox"/> |
| 4SUC-200-005-S20 | 20     | R0,5   | 48      | 110    | 20        | <input checked="" type="checkbox"/> |
| 4SUC-200-010-S20 |        | R1     | 48      | 110    | 20        | <input checked="" type="checkbox"/> |

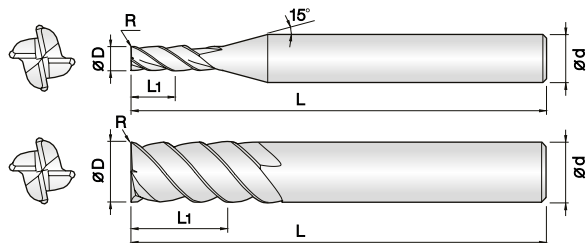
JJ

SH

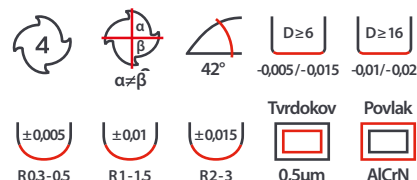
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# 4LSUC 4-břité TOROIDNÍ frézy dlouhé pro korozivzdorné oceli, Titan a slitiny Ni



- ▶ Určeno do oceli ≤ 850 MPa, nerezové oceli, titan a slitiny niklu
- ▶ Zvýšená odolnost proti opotřeбенí díky povlaku AlCrN
- ▶ Vysoká kvalita obrobeného povrchu
- ▶ Minimalizace vibrací díky nerovnoměrné rozteči břitů
- ▶ Hlubší šroubovice pro lepší odvod třísek
- ▶ Minimalizace vyštipování díky tvrdokovou s vysokou houževnatostí

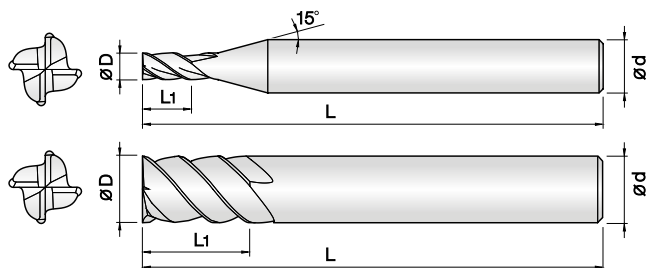


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| Objednáací číslo  | D (mm) | R (mm) | L1 (mm) | L (mm) | d h5 (mm)                           | Standardní položka                  |
|-------------------|--------|--------|---------|--------|-------------------------------------|-------------------------------------|
| 4LSUC-060-003-070 | 6      | R0,3   | 30      | 70     | 6                                   | <input checked="" type="checkbox"/> |
| 4LSUC-060-005-070 |        | R0,5   | 30      | 70     | 6                                   | <input checked="" type="checkbox"/> |
| 4LSUC-060-010-070 |        | R1     | 30      | 70     | 6                                   | <input checked="" type="checkbox"/> |
| 4LSUC-060-015-070 |        | R1,5   | 30      | 70     | 6                                   | <input checked="" type="checkbox"/> |
| 4LSUC-080-003-080 | 8      | R0,3   | 40      | 80     | 8                                   | <input checked="" type="checkbox"/> |
| 4LSUC-080-005-080 |        | R0,5   | 40      | 80     | 8                                   | <input checked="" type="checkbox"/> |
| 4LSUC-080-010-080 |        | R1     | 40      | 80     | 8                                   | <input checked="" type="checkbox"/> |
| 4LSUC-080-015-080 |        | R1,5   | 40      | 80     | 8                                   | <input checked="" type="checkbox"/> |
| 4LSUC-080-020-080 | R2     | 40     | 80      | 8      | <input checked="" type="checkbox"/> |                                     |
| 4LSUC-100-003-100 | 10     | R0,3   | 50      | 100    | 10                                  | <input checked="" type="checkbox"/> |
| 4LSUC-100-005-100 |        | R0,5   | 50      | 100    | 10                                  | <input checked="" type="checkbox"/> |
| 4LSUC-100-010-100 |        | R1     | 50      | 100    | 10                                  | <input checked="" type="checkbox"/> |
| 4LSUC-100-015-100 |        | R1,5   | 50      | 100    | 10                                  | <input checked="" type="checkbox"/> |
| 4LSUC-100-020-100 | R2     | 50     | 100     | 10     | <input checked="" type="checkbox"/> |                                     |
| 4LSUC-120-003-120 | 12     | R0,3   | 60      | 120    | 12                                  | <input checked="" type="checkbox"/> |
| 4LSUC-120-005-120 |        | R0,5   | 60      | 120    | 12                                  | <input checked="" type="checkbox"/> |
| 4LSUC-120-010-120 |        | R1     | 60      | 120    | 12                                  | <input checked="" type="checkbox"/> |
| 4LSUC-120-015-120 |        | R1,5   | 60      | 120    | 12                                  | <input checked="" type="checkbox"/> |
| 4LSUC-120-020-120 |        | R2     | 60      | 120    | 12                                  | <input checked="" type="checkbox"/> |
| 4LSUC-120-025-120 | R2,5   | 60     | 120     | 12     | <input checked="" type="checkbox"/> |                                     |
| 4LSUC-120-030-120 | R3     | 60     | 120     | 12     | <input checked="" type="checkbox"/> |                                     |
| 4LSUC-160-005-130 | 16     | R0,5   | 80      | 130    | 16                                  | <input checked="" type="checkbox"/> |
| 4LSUC-160-010-130 |        | R1     | 80      | 130    | 16                                  | <input checked="" type="checkbox"/> |
| 4LSUC-160-015-130 |        | R1,5   | 80      | 130    | 16                                  | <input checked="" type="checkbox"/> |
| 4LSUC-160-020-130 |        | R2     | 80      | 130    | 16                                  | <input checked="" type="checkbox"/> |
| 4LSUC-160-030-130 | R3     | 80     | 130     | 16     | <input checked="" type="checkbox"/> |                                     |
| 4LSUC-200-005-160 | 20     | R0,5   | 100     | 160    | 20                                  | <input checked="" type="checkbox"/> |
| 4LSUC-200-010-160 |        | R1     | 100     | 160    | 20                                  | <input checked="" type="checkbox"/> |
| 4LSUC-200-015-160 |        | R1,5   | 100     | 160    | 20                                  | <input checked="" type="checkbox"/> |
| 4LSUC-200-020-160 |        | R2     | 100     | 160    | 20                                  | <input checked="" type="checkbox"/> |
| 4LSUC-200-030-160 | R3     | 100    | 160     | 20     | <input checked="" type="checkbox"/> |                                     |

# 3&4&5SUR

## 3, 4 a 5-břité OSTRÉ frézy hrubovací 45° pro korozi-vzdorné oceli, Titan a slitiny Ni



- ▶ Určeno pro oceli do HRC 40, nerezové oceli, titan a slitiny niklu
- ▶ Zvýšená odolnost proti opotřebení díky povlaku AlCrN
- ▶ Vysoká kvalita obrobeného povrchu
- ▶ Snížení výrobního času díky výbornému utváření třísek
- ▶ Hlubší šroubovice pro lepší odvod třísek
- ▶ Minimalizace vyštipování díky tvrdokovou s vysokou houževnatostí



| Objednací číslo  | D (mm) | R (mm) | L2 (mm) | L1 (mm) | L (mm) | d h5 (mm) | Standardní položka |
|------------------|--------|--------|---------|---------|--------|-----------|--------------------|
| 3SUR-030-002-S06 | 3      | R0,2   | -       | 8       | 50     | 6         | ☑                  |
| 3SUR-040-002-S06 | 4      | R0,2   | -       | 10      | 50     | 6         | ☑                  |
| 4SUR-050-002-S06 | 5      | R0,2   | -       | 13      | 50     | 6         | ☑                  |
| 4SUR-060-002-200 | 6      | R0,2   | 20      | 10      | 60     | 6         | ☑                  |
| 4SUR-060-002-S06 |        |        | -       | 13      | 60     | 6         | ☑                  |
| 4SUR-060-005-S06 |        | R0,5   | -       | 13      | 60     | 6         | ☑                  |
| 4SUR-070-002-S08 | 7      | R0,2   | -       | 18      | 70     | 8         | ☑                  |
| 4SUR-080-002-250 | 8      | R0,2   | 25      | 12      | 70     | 8         | ☑                  |
| 4SUR-080-002-S08 |        |        | -       | 19      | 70     | 8         | ☑                  |
| 4SUR-080-010-S08 |        | R1     | -       | 19      | 70     | 8         | ☑                  |
| 4SUR-090-003-S10 | 9      | R0,3   | -       | 20      | 70     | 10        | ☑                  |
| 4SUR-100-003-300 | 10     | R0,3   | 30      | 15      | 75     | 10        | ☑                  |
| 4SUR-100-003-S10 |        |        | -       | 22      | 75     | 10        | ☑                  |
| 4SUR-100-010-S10 |        | R1     | -       | 22      | 75     | 10        | ☑                  |
| 4SUR-110-003-S12 | 11     | R0,3   | -       | 25      | 80     | 12        | ☑                  |
| 4SUR-120-003-350 | 12     | R0,3   | 35      | 20      | 80     | 12        | ☑                  |
| 4SUR-120-003-S12 |        |        | -       | 26      | 80     | 12        | ☑                  |
| 4SUR-120-010-S12 |        | R1     | -       | 26      | 80     | 12        | ☑                  |
| 5SUR-140-005-S16 | 14     | R0,5   | -       | 28      | 90     | 16        | ☑                  |
| 5SUR-160-005-100 | 16     | R0,5   | -       | 32      | 100    | 16        | ☑                  |
| 5SUR-160-005-110 |        |        | -       | 42      | 110    | 16        | ☑                  |
| 5SUR-160-015-100 |        | R1,5   | -       | 32      | 100    | 16        | ☑                  |
| 5SUR-160-015-110 |        |        | -       | 42      | 110    | 16        | ☑                  |
| 5SUR-200-005-100 | 20     | R0,5   | -       | 38      | 100    | 20        | ☑                  |
| 5SUR-200-005-110 |        |        | -       | 45      | 110    | 20        | ☑                  |
| 5SUR-200-020-100 |        | R2     | -       | 38      | 100    | 20        | ☑                  |
| 5SUR-200-020-110 |        |        | -       | 45      | 110    | 20        | ☑                  |

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