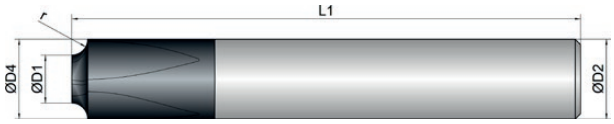
| | |
|---|---|
| Cooling | |
| Tolerance | V1 |
| Coating | BetaUni Iron |
| Strategy | UNI |
| Application | |
| Features | HA |

Basic

For the universal manufacturing of radii to components




**Roughing**

inappropriate — optimal

**Finishing**

inappropriate — optimal

| BCU1-M11-0023 | D1 mm ø | D4 mm ø | L1 mm | D2 mm ø | z # | r mm |
|---|---|---|---|---|---|---|
| **3/0,5** | 3.0 | 4 | 50.0 | 4.0 | 4 | 0.50 |
| **3,2/0,4** | 3.2 | 4 | 50.0 | 4.0 | 4 | 0.40 |
| **3,4/0,3** | 3.4 | 4 | 50.0 | 4.0 | 4 | 0.30 |
| **3,6/0,2** | 3.6 | 4 | 50.0 | 4.0 | 4 | 0.20 |
| **4/1** | 4.0 | 6 | 50.0 | 6.0 | 4 | 1.00 |
| **4,4/0,8** | 4.4 | 6 | 50.0 | 6.0 | 4 | 0.80 |
| **4,8/0,6** | 4.8 | 6 | 50.0 | 6.0 | 4 | 0.60 |
| **5/1,5** | 5.0 | 10 | 66.0 | 10.0 | 4 | 1.50 |
| **5/10** | 5.0 | 25 | 100.0 | 25.0 | 4 | 10.00 |
| **6/2** | 6.0 | 10 | 66.0 | 10.0 | 4 | 2.00 |
| **6/3** | 6.0 | 12 | 73.0 | 12.0 | 4 | 3.00 |
| **7/2,5** | 7.0 | 12 | 73.0 | 12.0 | 4 | 2.50 |
| **7/4,5** | 7.0 | 16 | 82.0 | 16.0 | 4 | 4.50 |
| **8/4** | 8.0 | 16 | 82.0 | 16.0 | 4 | 4.00 |
| **8/6** | 8.0 | 20 | 80.0 | 20.0 | 4 | 6.00 |
| **9/3,5** | 9.0 | 16 | 82.0 | 16.0 | 4 | 3.50 |
| **9/8** | 9.0 | 25 | 100.0 | 25.0 | 4 | 8.00 |
| **10/5** | 10.0 | 20 | 80.0 | 20.0 | 4 | 5.00 |

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| | Material | Strength (N/mm²) | Dimension | Ø3.6 R0.2 | Ø3.4 R0.3 | Ø3.2 R0.4 | Ø3 R0.5 | Ø4.8 R0.6 | Ø4.4 R0.8 | Ø4 R1 | Ø5 R1.5 | Ø6 R2 | Ø7 R2.5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Infeed in mm | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax |
| | | | Application | | | | | | | | | | |
| | | | Feed (mm/Z) | fz | fz | fz | fz | fz | fz | fz | fz | fz | fz |
| P | | | Vc (m/min) | | | | | | | | | | |
| 1.1-1.3 | Steel, unalloyed | <850 | 170 | 0.024 | 0.024 | 0.024 | 0.024 | 0.028 | 0.028 | 0.028 | 0.03 | 0.034 | 0.038 |
| 2.1-2.2 | Steel, low-alloyed | <950 | 150 | 0.02 | 0.02 | 0.02 | 0.02 | 0.024 | 0.024 | 0.024 | 0.026 | 0.03 | 0.034 |
| 3.1-3.2 | Steel, high-alloyed | <1100 | 100 | 0.016 | 0.016 | 0.016 | 0.016 | 0.02 | 0.02 | 0.02 | 0.022 | 0.026 | 0.03 |
| K | | | Vc (m/min) | | | | | | | | | | |
| 1.1-1.2 | Grey cast iron | <1000 | 125 | 0.016 | 0.016 | 0.016 | 0.016 | 0.02 | 0.02 | 0.02 | 0.022 | 0.026 | 0.03 |
| M | | | Vc (m/min) | | | | | | | | | | |
| 1.1 | Inox, ferritic/martensitic | <850 | 85 | 0.012 | 0.012 | 0.012 | 0.012 | 0.016 | 0.016 | 0.016 | 0.018 | 0.022 | 0.026 |
| 2.1 | Inox, austenitic | <650 | 75 | 0.01 | 0.01 | 0.01 | 0.01 | 0.014 | 0.014 | 0.014 | 0.016 | 0.02 | 0.024 |
| N | | | Vc (m/min) | | | | | | | | | | |
| 1.1-2.3 | Alu, alloyed, casted | <600 | 500 | 0.029 | 0.029 | 0.029 | 0.029 | 0.033 | 0.033 | 0.033 | 0.035 | 0.039 | 0.043 |
| 3.1-3.3 | Cooper, alloyed | <600 | 180 | 0.02 | 0.02 | 0.02 | 0.02 | 0.024 | 0.024 | 0.024 | 0.026 | 0.03 | 0.034 |
| T | | | Vc (m/min) | | | | | | | | | | |
| 2.1-2.2 | Titanium, pure, alloyed | <1000 | 40 | 0.012 | 0.012 | 0.012 | 0.012 | 0.016 | 0.016 | 0.016 | 0.018 | 0.022 | 0.026 |
| S | | | Vc (m/min) | | | | | | | | | | |
| 1.1-1.3 | Super alloys | <1450 | 25 | 0.01 | 0.01 | 0.01 | 0.01 | 0.014 | 0.014 | 0.014 | 0.016 | 0.02 | 0.024 |

| | Material | Strength (N/mm²) | Dimension | Ø6 R3 | Ø9 R3.5 | Ø8 R4 | Ø7 4.5 | Ø10 R5 | Ø8 R6 | Ø9 R8 | Ø5 R10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Infeed in mm | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax | ae= rmax ap= rmax |
| | | | Application | | | | | | | | |
| | | | Feed (mm/Z) | fz | fz | fz | fz | fz | fz | fz | fz |
| P | | | Vc (m/min) | | | | | | | | |
| 1.1-1.3 | Steel, unalloyed | <850 | 170 | 0.038 | 0.04 | 0.04 | 0.04 | 0.041 | 0.041 | 0.045 | 0.045 |
| 2.1-2.2 | Steel, low-alloyed | <950 | 150 | 0.034 | 0.036 | 0.036 | 0.036 | 0.037 | 0.037 | 0.04 | 0.04 |
| 3.1-3.2 | Steel, high-alloyed | <1100 | 100 | 0.03 | 0.032 | 0.032 | 0.032 | 0.033 | 0.033 | 0.035 | 0.035 |
| K | | | Vc (m/min) | | | | | | | | |
| 1.1-1.2 | Grey cast iron | <1000 | 125 | 0.03 | 0.032 | 0.032 | 0.032 | 0.033 | 0.033 | 0.035 | 0.035 |
| M | | | Vc (m/min) | | | | | | | | |
| 1.1 | Inox, ferritic/martensitic | <850 | 85 | 0.026 | 0.028 | 0.028 | 0.028 | 0.029 | 0.029 | 0.03 | 0.03 |
| 2.1 | Inox, austenitic | <650 | 75 | 0.024 | 0.026 | 0.026 | 0.026 | 0.027 | 0.027 | 0.028 | 0.028 |
| N | | | Vc (m/min) | | | | | | | | |
| 1.1-2.3 | Alu, alloyed, casted | <600 | 500 | 0.043 | 0.045 | 0.045 | 0.045 | 0.046 | 0.046 | 0.05 | 0.05 |
| 3.1-3.3 | Cooper, alloyed | <600 | 180 | 0.034 | 0.036 | 0.036 | 0.036 | 0.037 | 0.037 | 0.04 | 0.04 |
| T | | | Vc (m/min) | | | | | | | | |
| 2.1-2.2 | Titanium, pure, alloyed | <1000 | 40 | 0.026 | 0.028 | 0.028 | 0.028 | 0.029 | 0.029 | 0.03 | 0.03 |
| S | | | Vc (m/min) | | | | | | | | |
| 1.1-1.3 | Super alloys | <1450 | 25 | 0.024 | 0.026 | 0.026 | 0.026 | 0.027 | 0.027 | 0.028 | 0.028 |

**NOTE |** The values marked in turquoise are side applications!

Please use the arithmetic average from D2 and D1 to calculate cutting datas. For example tool Ø5 R10, D1=Ø5; R=10
calculated diameter = Ø15 Formula: D1+R= Result Example: 5mm+10mm=15mm