

# GUHRING

- radially relief ground
- universal application for all materials
- wear-resistant TiAlN-coating

NEW



**Chamfering milling cutters** with 60°, 90° or 120° point angle

GUHRING - YOUR WORLD-WIDE PARTNER

# Chamfering milling cutters with radial relief geometry for chamfering, de-burring and contour operations

- Advantages:**
- ➔ especially smooth cutting operation with low wear
  - ➔ up to five re-grinds possible
  - ➔ universal application in most materials
  - ➔ long tool life thanks to wear-resistant TiAlN-coating and ultra-tough carbide

## Chamfering milling cutters

60°

90°

120°

Guhring no.

6711

6712

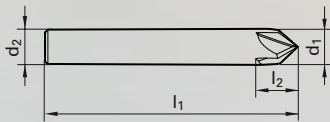
6713

3396

6714

6715

Guhring std., straight fluted  
HA and HB shank to DIN 6535  
VHM ultra fine  
TiAlN-coated  
helix angle 0°

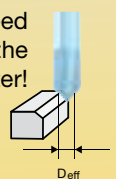


| d1 (js9) | d2 (h6) | l1    | l2    | Z | 60° Availability |   | 90° Availability |   | 120° Availability |   |
|----------|---------|-------|-------|---|------------------|---|------------------|---|-------------------|---|
| mm       | mm      | mm    | mm    |   |                  |   |                  |   |                   |   |
| 4.000    | 4.000   | 50.00 | 22.00 | 4 | ●                |   | ●                |   | ●                 |   |
| 6.000    | 6.000   | 57.00 | 21.00 | 4 | ●                | ● | ●                | ● | ●                 | ● |
| 8.000    | 8.000   | 63.00 | 27.00 | 4 | ●                | ● | ●                | ● | ●                 | ● |
| 10.000   | 10.000  | 72.00 | 32.00 | 4 | ●                | ● | ●                | ● | ●                 | ● |
| 12.000   | 12.000  | 83.00 | 38.00 | 4 | ●                | ● | ●                | ● | ●                 | ● |

## Cutting rates

| Material/ISO material  | Hardness  | Cutting speed*<br>(vc)       | fz (mm/min) |       |       |       |       |       |
|--|---|------------------------------|-------------|-------|-------|-------|-------|-------|
|  |   |                              | 4           | 6     | 8     | 10    | 12    |       |
| <b>P</b> Structural/free-cutting steels, unalloyed heat-treat./case hard. steels | up to 850 N/mm <sup>2</sup>   | 130                          | 0.013       | 0.025 | 0.032 | 0.042 | 0.049 |       |
|  | Free-cutting steels, unalloyed case hardened steels, nitriding steels | 850 - 1200 N/mm <sup>2</sup> | 120         | 0.013 | 0.025 | 0.032 | 0.042 | 0.049 |
|  | Alloyed heat-treatable, tool and high speed steels                    | 850 - 1400 N/mm <sup>2</sup> | 90          | 0.011 | 0.021 | 0.028 | 0.039 | 0.046 |
| <b>M</b> Stainless steel - easy to machine                                       | up to 750 N/mm <sup>2</sup>   | 80                           | 0.009       | 0.018 | 0.024 | 0.030 | 0.036 |       |
|  | Stainless steel - moderately difficult                                | up to 750 N/mm <sup>2</sup>  | 60          | 0.009 | 0.015 | 0.021 | 0.027 | 0.030 |
|  | Stainless steel - difficult to machine                                | über 750 N/mm <sup>2</sup>   | 50          | 0.007 | 0.015 | 0.018 | 0.024 | 0.027 |
| <b>K</b> Cast iron, grey cast iron, spheroidal graphite and malleable cast iron  | up to 240 HB 30   | 120                          | 0.012       | 0.024 | 0.030 | 0.039 | 0.048 |       |
|  | Grey cast iron, spheroidal graphite and malleable cast iron           | above 240 HB 30              | 100         | 0.010 | 0.018 | 0.024 | 0.033 | 0.039 |
| <b>N</b> Aluminium, Al-wrought alloys, Al-alloys                                 | up to 3% Si   | 300                          | 0.014       | 0.028 | 0.035 | 0.046 | 0.056 |       |
|  | Aluminium-cast alloys   | above 3% Si                  | 150         | 0.011 | 0.021 | 0.028 | 0.039 | 0.046 |

\* Calculate cutting speed based on the major cutting edge diameter!



# GUHRING

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