

Garant
Solid carbide torus cutter R1 0.2, Diamond, Ø DC × L1: 1X20mm

Order data

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|--------------|---------------|
| Order number | 209721 1X20 |
| GTIN | 4045197918536 |
| Item class | 11Y |

Description
Version:

With **crystalline diamond sp³ coating**. For the **highest demands regarding performance and precision** in fibre-reinforced composites, CRP, GRP, and graphite. **Extremely tight tolerances** ensure maximum accuracy. Double relief ground with 2 hollow-ground chamfers. **Recess angle $\alpha = 16^\circ$** .

Tolerances:

- **Corner radius: $R_1 = \pm 0.0025$ mm**
- **Neck Ø: $D_1 = 0 / -0.01$ mm**

Note:

At greater tool overhang lengths, use a reduced value for a_p !

Values for:

copying: $a_p = 0.10 \times D \times a_{p, \text{korr}}$

side milling: $a_p = 0.20 \times D \times a_{p, \text{korr}}$

To calculate the feed rate vf please use the actual speed of the machine (the maximum possible speed)!

e.g: $vf = 18000$ [rpm] × fz [mm/Z] × z

Technical description

| | |
|---|---------|
| Feed f_z for side milling in graphite | 0.02 mm |
| No. of teeth Z | 2 |
| Corner radius R_1 | 0.2 mm |
| Overall length L | 60 mm |
| Feed f_z for copy milling in graphite | 0.02 mm |
| Cutting edge Ø D_c | 1 mm |

| | |
|---|----------------------------------|
| Shank $\varnothing D_s$ | 4 mm |
| Shank | DIN 6535 HA to h5 |
| Flute length L_c | 1 mm |
| Recess $\varnothing D_1$ | 0.95 mm |
| Overhang length L_1 incl. recess | 20 mm |
| Helix angle | 30 degrees |
| Correction factor $a_{p\ corr}$ | 0.08 |
| Coating | Diamond |
| Tool material | Solid carbide |
| Standard | Manufacturer's standard |
| Tolerance nominal \varnothing | 0 / -0.005 |
| Direction of infeed | horizontal, oblique and vertical |
| Cutting width a_e for milling operation | 0.05×D for copy milling |
| Cutting width a_e for milling operation | 0.5×D for side milling |
| Through-coolant | no |
| Colour ring | black |
| Type of product | Torus cutter |

User data

| | Suitability | V_c | ISO code |
|--------------------|-------------|-----------|----------|
| PVDF GF20 | suitable | 200 m/min | N |
| POM GF25 | suitable | 190 m/min | N |
| PA 66 GF30 | suitable | 170 m/min | N |
| PEEK GF30 | suitable | 150 m/min | N |
| PTFE CF25 | suitable | 180 m/min | N |
| PEEK CF30 | suitable | 160 m/min | N |
| Hybrids | suitable | | |
| Honeycomb sandwich | suitable | 350 m/min | N |
| GRP | suitable | 190 m/min | N |

| | | | |
|-------------|----------|-----------|---|
| GRP, CRP | suitable | 190 m/min | N |
| Graphite | suitable | 340 m/min | N |
| wet minimum | suitable | | |
| dry | suitable | | |
| Air | suitable | | |