

Garant
Solid carbide torus cutter R1 0.1, DLC, Ø DC × L1: 1,5X12mm

Order data

| | |
|--------------|---------------|
| Order number | 206042 1,5X12 |
| GTIN | 4045197914132 |
| Item class | 11X |

Description
Version:

With **advanced DLC sp² coating**. For the **highest demands regarding performance and precision in aluminium materials**. **Extremely tight tolerances** ensure maximum accuracy. Double-relief ground with 2 chamfers hollow ground.

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:

slots milled from solid: $a_p = 0.25 \times D \times a_{p \text{ korr}}$

side milling: $a_p = 0.50 \times D \times a_{p \text{ korr}}$

copying: $a_p = 0.25 \times D \times a_{p \text{ korr}}$

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

| | |
|---|-------------------|
| Recess Ø D_1 | 1.44 mm |
| No. of teeth Z | 2 |
| Shank | DIN 6535 HA to h5 |
| Feed f_z for copy milling in cast aluminium | 0.03 mm |
| Flute length L_c | 1.5 mm |

| | |
|---|----------------------------------|
| Overhang length L_1 incl. recess | 12 mm |
| Corner radius R_1 | 0.1 mm |
| Overall length L | 55 mm |
| Cutting edge $\varnothing D_c$ | 1.5 mm |
| Feed f_z for side milling in cast aluminium | 0.03 mm |
| Shank $\varnothing D_s$ | 4 mm |
| Helix angle | 30 degrees |
| Correction factor $a_{p,corr}$ | 0.8 |
| Coating | DLC |
| Tool material | Solid carbide |
| Standard | Manufacturer's standard |
| Type | W |
| Tolerance nominal \varnothing | 0 / -0.005 |
| Direction of infeed | horizontal, oblique and vertical |
| Cutting width a_e for milling operation | 0.5×D for side milling |
| Cutting width a_e for milling operation | 0.05×D for copy milling |
| Through-coolant | no |
| Colour ring | yellow |
| Type of product | Torus cutter |

User data

| | Suitability | V_c | ISO code |
|----------------------------|-------------|-----------|----------|
| Aluminium | suitable | 480 m/min | N |
| Aluminium (short chipping) | suitable | 400 m/min | N |
| Alu > 10% Si | suitable | 400 m/min | N |
| PMMA acrylic | Suitable | 200 m/min | N |
| PE-HD | Suitable | 160 m/min | N |
| PA 66 | Suitable | 200 m/min | N |

| | | | |
|-------------|---|-----------|---|
| PEEK | Suitable | 150 m/min | N |
| PF 31 | Suitable | 130 m/min | N |
| PVDF GF20 | suitable | 180 m/min | N |
| POM GF25 | Suitable | 160 m/min | N |
| PA 66 GF30 | suitable | 150 m/min | N |
| PEEK GF30 | suitable | 130 m/min | N |
| PTFE CF25 | suitable | 160 m/min | N |
| Cu | suitable | 160 m/min | N |
| CuZn | suitable | 200 m/min | N |
| wet maximum | suitable | | |
| wet minimum | suitable | | |
| dry | suitable only under restricted conditions | | |
| Air | suitable | | |