

**Garant**
**Solid carbide torus cutter R1 0.3, Diamond, Ø DC × L1: 3X50 mm**

**Order data**

|              |               |
|--------------|---------------|
| Order number | 209726 3X50   |
| GTIN         | 4045197919373 |
| Item class   | 11Y           |

**Description**
**Version:**

With **crystalline diamond sp<sup>3</sup> 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] ×  $z$

No. of teeth  $Z$ : 2

Helix angle: 30 degrees

Shank: DIN 6535 HA to h5

No. of teeth  $Z$ : 2

Flute length  $L_c$ : 4.5 mm

Corner radius  $R_1$ : 0.3 mm

Overhang length  $L_1$  incl. recess: 50 mm

Recess Ø  $D_1$ : 2.91 mm

Overall length  $L$ : 90 mm

**Technical description**

|   |                                  |
|---|----------------------------------|
| Feed $f_z$ for side milling in graphite   | 0.03 mm                          |
| Overall length L                          | 90 mm                            |
| Cutting edge $\varnothing D_c$            | 3 mm                             |
| No. of teeth Z                            | 2                                |
| Shank $\varnothing D_s$                   | 4 mm                             |
| Overhang length $L_1$ incl. recess        | 50 mm                            |
| Shank                                     | DIN 6535 HA to h5                |
| Corner radius $R_1$                       | 0.3 mm                           |
| Flute length $L_c$                        | 4.5 mm                           |
| Recess $\varnothing D_1$                  | 2.91 mm                          |
| Feed $f_z$ for copy milling in graphite   | 0.03 mm                          |
| Helix angle                               | 30 degrees                       |
| Correction factor $a_{p\text{ corr}}$     | 0.35                             |
| 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 | 0.5×D for side milling           |
| Cutting width $a_e$ for milling operation | 0.05×D for copy milling          |
| Through-coolant                           | no                               |
| Colour ring                               | black                            |
| Type of product                           | End mill                         |