

**Garant**
**Solid carbide torus cutter R1 0.2, DLC, Ø DC × L1: 1,5X25mm**

**Order data**

|              |               |
|--------------|---------------|
| Order number | 206043 1,5X25 |
| GTIN         | 4045197914613 |
| Item class   | 11X           |

**Description**
**Version:**

With **advanced DLC sp<sup>2</sup> 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**

|   |                   |
|---|-------------------|
| Overall length L                              | 60 mm             |
| Flute length $L_c$                            | 1.5 mm            |
| Feed $f_z$ for side milling in cast aluminium | 0.025 mm          |
| No. of teeth Z                                | 2                 |
| Shank   | DIN 6535 HA to h5 |

|   |                                  |
|---|----------------------------------|
| Recess $\varnothing D_1$                      | 1.44 mm                          |
| Corner radius $R_1$                           | 0.2 mm                           |
| Overhang length $L_1$ incl. recess            | 25 mm                            |
| Feed $f_z$ for copy milling in cast aluminium | 0.025 mm                         |
| Shank $\varnothing D_s$                       | 4 mm                             |
| Cutting edge $\varnothing D_c$                | 1.5 mm                           |
| Helix angle                                   | 30 degrees                       |
| Correction factor $a_{p,corr}$                | 0.12                             |
| 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     | 0.05×D for copy milling          |
| Cutting width $a_e$ for milling operation     | 0.5×D for side 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<br>restricted conditions |           |   |
| Air         | suitable                                     |           |   |