

**Garant****Solid carbide torus cutter, uncoated, Ø h6 DC / R1: 20/2,0mm**

## Order data

|              |               |
|--------------|---------------|
| Order number | 206192 20/2,0 |
| GTIN         | 4045197853165 |
| Item class   | 11X           |

## Description

### Version:

**Eccentric relief ground**, additionally **polish ground** in the flutes for **outstanding chip evacuation** in long-chipping aluminium workpieces.

Tolerances:

#### · Corner radius

**$R_1 = 0.5$  tolerance  $\pm 0.02$ .**

**$R_1 > 0.5 - 1.5$  tolerance  $\pm 0.03$ .**

**$R_1 > 1.5$  tolerance  $\pm 0.05$ .**

Dimensions to manufacturer's standard.

## Technical description

|                                                         |                   |
|---------------------------------------------------------|-------------------|
| Overall length L                                        | 150 mm            |
| Recess Ø $D_1$                                          | 19 mm             |
| Flute length $L_c$                                      | 32 mm             |
| Shank                                                   | DIN 6535 HA to h6 |
| Balance quality with shank                              | G 2.5 with HA     |
| Overhang length $L_1$ incl. recess                      | 98 mm             |
| Feed $f_z$ for side milling in short-chipping aluminium | 0.12 mm           |
| Corner radius $R_1$                                     | 2 mm              |
| No. of teeth Z                                          | 3                 |
| Cutting edge Ø $D_c$                                    | 20 mm             |

|                                                                  |                                  |
|------------------------------------------------------------------|----------------------------------|
| Shank Ø D <sub>s</sub>                                           | 20 mm                            |
| Feed f <sub>z</sub> for copy milling in short-chipping aluminium | 0.13 mm                          |
| Helix angle                                                      | 45 degrees                       |
| Coating                                                          | uncoated                         |
| Tool material                                                    | Solid carbide                    |
| Standard                                                         | Manufacturer's standard          |
| Type                                                             | W                                |
| Tolerance nominal Ø                                              | h6                               |
| Direction of infeed                                              | horizontal, oblique and vertical |
| Cutting width a <sub>e</sub> for milling operation               | 0.05×D for copy milling          |
| Cutting width a <sub>e</sub> for milling operation               | 0.3×D for side milling           |
| Through-coolant                                                  | no                               |
| Shank tolerance                                                  | h6                               |
| Colour ring                                                      | yellow                           |
| Type of product                                                  | Torus cutter                     |

## User data

|                            | Suitability | V <sub>c</sub> | ISO code |
|----------------------------|-------------|----------------|----------|
| Aluminium                  | Suitable    | 130 m/min      | N        |
| Aluminium (short chipping) | suitable    | 100 m/min      | N        |
| Alu > 10% Si               | suitable    | 80 m/min       | N        |
| PMMA acrylic               | Suitable    | 130 m/min      | N        |
| PE-HD                      | Suitable    | 90 m/min       | N        |
| PA 66                      | Suitable    | 100 m/min      | N        |
| PEEK                       | Suitable    | 90 m/min       | N        |
| PF 31                      | Suitable    | 80 m/min       | N        |
| Cu                         | Suitable    | 70 m/min       | N        |
| CuZn                       | Suitable    | 90 m/min       | N        |

|                        |                                           |
|------------------------|-------------------------------------------|
| wet maximum            | suitable                                  |
| wet minimum            | Suitable only under restricted conditions |
| dry                    | suitable only under restricted conditions |
| Air                    | suitable only under restricted conditions |
| <b>Services</b>        |                                           |
| Shank grinding Type HB | 129100 HB                                 |