

**Garant****GARANT Master Steel solid carbide torus cutter HPC, TiAlN, Ø e8 DC / R1: 1/0,2mm****Order data**

|              |               |
|--------------|---------------|
| Order number | 206335 1/0,2  |
| GTIN         | 4069515015066 |
| Item class   | 11X           |

**Description****Version:**

HPC milling cutter with **newly developed high-performance coating**. For **outstanding tool life** and **optimum metal removal rates** in a range of materials.

With **double relief ground side clearance angle**.

Tolerance: Corner radius  $R_1$

Radius size 0.1 mm – 1 mm:  $R_1 = \pm 0.003$  mm.

Radius size > 1.0 mm:  $R_1 = \pm 0.005$  mm.

**Application:**

Especially for **high speed machining** in **mould and tool making** for **copy milling**. Excellent results for **dry milling**.

**Note:**

**Successor product to No. 206300.**

**Technical description**

|                                                               |                   |
|---------------------------------------------------------------|-------------------|
| Corner radius $R_1$                                           | 0.2 mm            |
| Overall length L                                              | 75 mm             |
| Shank                                                         | DIN 6535 HA to h6 |
| maximum shank recess dia. $D_6$                               | 0.95 mm           |
| minimum shank recess dia. $D_5$                               | 0.85 mm           |
| Feed $f_z$ for side milling in steel < 1100 N/mm <sup>2</sup> | 0.005 mm          |
| Cutting edge Ø $D_c$                                          | 1 mm              |

## Data sheet

|                                                               |                                  |
|---------------------------------------------------------------|----------------------------------|
| No. of teeth Z                                                | 4                                |
| Helix angle                                                   | 30 degrees                       |
| Feed $f_z$ for copy milling in steel < 1100 N/mm <sup>2</sup> | 0.006 mm                         |
| Overhang length $L_1$ incl. recess                            | 20 mm                            |
| Flute length $L_c$                                            | 1.5 mm                           |
| Shank $\varnothing D_s$                                       | 3 mm                             |
| Series                                                        | Master Steel                     |
| Coating                                                       | TiAlN                            |
| Tool material                                                 | Solid carbide                    |
| Standard                                                      | Manufacturer's standard          |
| Type                                                          | H                                |
| Tolerance nominal $\varnothing$                               | e8                               |
| Direction of infeed                                           | horizontal, oblique and vertical |
| Cutting width $a_e$ for milling operation                     | 0.05×D for side milling          |
| Cutting width $a_e$ for milling operation                     | Full slot cutting depth 0,2×D    |
| Through-coolant                                               | no                               |
| Machining strategy                                            | HPC                              |
| Colour ring                                                   | green                            |
| Type of product                                               | Torus cutter                     |

## User data

|                                | Suitability                               | $V_c$     | ISO code |
|--------------------------------|-------------------------------------------|-----------|----------|
| Steel < 500 N/mm <sup>2</sup>  | suitable only under restricted conditions | 180 m/min | P        |
| Steel < 750 N/mm <sup>2</sup>  | suitable                                  | 150 m/min | P        |
| Steel < 900 N/mm <sup>2</sup>  | suitable                                  | 110 m/min | P        |
| Steel < 1100 N/mm <sup>2</sup> | suitable                                  | 75 m/min  | P        |
| Steel < 1400 N/mm <sup>2</sup> | suitable                                  | 65 m/min  | P        |
| Steel < 55 HRC                 | suitable                                  | 35 m/min  | H        |

## Data sheet

|                              |                                           |           |   |
|------------------------------|-------------------------------------------|-----------|---|
| INOX < 900 N/mm <sup>2</sup> | suitable                                  | 90 m/min  | M |
| INOX > 900 N/mm <sup>2</sup> | suitable                                  | 80 m/min  | M |
| GG(G)                        | suitable                                  | 100 m/min | K |
| Uni                          | suitable                                  |           |   |
| wet maximum                  | suitable                                  |           |   |
| wet minimum                  | suitable only under restricted conditions |           |   |
| dry                          | suitable                                  |           |   |
| Air                          | suitable                                  |           |   |