

**Garant**
**GARANT Master Steel solid carbide torus cutter HPC, TiAlN, Ø e8 DC / R1: 10/1,0mm**

**Order data**

|              |               |
|--------------|---------------|
| Order number | 206333 10/1,0 |
| GTIN         | 4062406276355 |
| 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. 206280.**

**Technical description**

|   |                   |
|---|-------------------|
| No. of teeth Z  | 5                 |
| Corner radius $R_1$   | 1 mm              |
| Overall length L  | 72 mm             |
| Feed $f_z$ for side milling in steel < 1100 N/mm <sup>2</sup> | 0.035 mm          |
| Shank $\varnothing D_s$                                       | 10 mm             |
| Shank   | DIN 6535 HA to h6 |
| Flute length $L_c$  | 11 mm             |

|  |                                  |
|--|----------------------------------|
| Helix angle  | 30 degrees                       |
| Overhang length $L_1$ incl. recess                           | 32 mm                            |
| Feed $f_z$ for copy milling in steel $< 1100 \text{ N/mm}^2$ | 0.04 mm                          |
| Cutting edge $\varnothing D_c$                               | 10 mm                            |
| minimum shank recess dia. $D_5$                              | 9.2 mm                           |
| maximum shank recess dia. $D_6$                              | 9.9 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                    | $0.03 \times D$ for copy milling |
| Cutting width $a_e$ for milling operation                    | $0.2 \times D$ for side milling  |
| Through-coolant  | no                               |
| Machining strategy   | HPC                              |
| Colour ring  | green                            |
| Type of product  | Torus cutter                     |

## User data

|                               | Suitability                               | $V_c$     | ISO code |
|-------------------------------|---|-----------|----------|
| Steel $< 500 \text{ N/mm}^2$  | suitable only under restricted conditions | 200 m/min | P        |
| Steel $< 750 \text{ N/mm}^2$  | suitable                                  | 170 m/min | P        |
| Steel $< 900 \text{ N/mm}^2$  | suitable                                  | 120 m/min | P        |
| Steel $< 1100 \text{ N/mm}^2$ | suitable                                  | 85 m/min  | P        |
| Steel $< 1400 \text{ N/mm}^2$ | suitable                                  | 70 m/min  | P        |
| Steel $< 55 \text{ HRC}$      | suitable                                  | 40 m/min  | H        |

|                              |   |           |   |
|------------------------------|---|-----------|---|
| INOX < 900 N/mm <sup>2</sup> | suitable                                  | 95 m/min  | M |
| INOX > 900 N/mm <sup>2</sup> | suitable                                  | 85 m/min  | M |
| GG(G)                        | suitable                                  | 110 m/min | K |
| Uni                          | suitable                                  |           |   |
| wet maximum                  | suitable                                  |           |   |
| wet minimum                  | suitable only under restricted conditions |           |   |
| dry                          | suitable                                  |           |   |
| Air                          | suitable                                  |           |   |
| <b>Services</b>              |   |           |   |

Shank grinding Type HB

129100 HB