

Garant
GARANT Diabolo solid carbide torus cutter R1 0.3, TiAlN, Ø DC × L1: 2X12mm

Order data

| | |
|--------------|---------------|
| Order number | 206158 2X12 |
| GTIN | 4045197935236 |
| Item class | 11X |

Description
Version:
GARANT Diabolo:

Special geometry, coating and carbide **for hard machining in the high-performance field.**
Suitable even for machining **electrolytic copper.**

Double-relief ground with 2 chamfers hollow ground for high-precision hard machining.

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:

side milling: $a_p = 0.1 \times D \times a_{p,corr}$

copying: $a_p = 0.05 \times D \times a_{p,corr}$

To calculate the feed rate v_f please use the actual speed of the machine (the maximum possible speed)! e.g: $v_f = 18000$ [rpm] × f_z [mm/Z] × z

Technical description

| | |
|---|-------------------|
| Cutting edge Ø D_c | 2 mm |
| Flute length L_c | 2 mm |
| Shank | DIN 6535 HA to h5 |
| Overall length L | 55 mm |
| Feed f_z for copy milling in steel < 65 HRC | 0.03 mm |
| Correction factor $a_{p,corr}$ | 0.9 |

| | |
|---|----------------------------------|
| Corner radius R_1 | 0.3 mm |
| Feed f_z for side milling in steel < 65 HRC | 0.03 mm |
| Helix angle | 30 degrees |
| Shank $\varnothing D_s$ | 4 mm |
| Recess $\varnothing D_1$ | 1.91 mm |
| No. of teeth Z | 2 |
| Overhang length L_1 incl. recess | 12 mm |
| Series | Diabolo |
| Coating | TiAlN |
| Tool material | Solid carbide |
| Standard | Manufacturer's standard |
| Type | H |
| 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 | 0.05×D for copy milling |
| Through-coolant | no |
| Colour ring | red |
| Type of product | Torus cutter |

User data

| | Suitability | V_c | ISO code |
|--------------------------------|---|-----------|----------|
| Steel < 750 N/mm ² | suitable only under restricted conditions | 200 m/min | P |
| Steel < 900 N/mm ² | suitable only under restricted conditions | 200 m/min | P |
| Steel < 1100 N/mm ² | suitable | 190 m/min | P |
| Steel < 1400 N/mm ² | suitable | 170 m/min | P |
| Steel < 50 HRC | suitable | 120 m/min | H |

| | | | |
|------------------------------|---|-----------|---|
| Steel < 55 HRC | suitable | 100 m/min | H |
| Steel < 60 HRC | suitable | 72 m/min | H |
| Steel < 65 HRC | suitable | 55 m/min | H |
| Steel < 67 HRC | suitable | 50 m/min | H |
| Steel < 70 HRC | suitable | 45 m/min | H |
| INOX < 900 N/mm ² | suitable | 90 m/min | M |
| INOX > 900 N/mm ² | suitable | 80 m/min | M |
| CuZn | suitable | 140 m/min | N |
| wet maximum | suitable only under restricted conditions | | |
| wet minimum | suitable only under restricted conditions | | |
| dry | suitable | | |
| Air | suitable | | |