

**Garant**
**GARANT Diabolo solid carbide torus cutter HPC, TiAlN, Ø e8 DC / R1: 3/1,0mm**

**Order data**

Order number	206162 3/1,0
GTIN	4045197597755
Item class	11X

**Description**
**Version:**
**GARANT Diabolo:**

Special geometry, coating and carbide, specially for hard machining.

For copy milling with **angle  $\alpha$ : 1° 30'**. Double relief ground side clearance angle.

Tolerances:

- **Corner radius:  $R_1 = \pm 0.005$  mm.**
- **Angle  $\alpha = \pm 20'$ .**

**Note:**

Standard application values:  $f_z$  for  $a_p = 0.1 \times D$ .

**Technical description**

Cutting edge Ø $D_c$	3 mm
Corner radius $R_1$	1 mm
No. of teeth $Z$	2
Recess Ø $D_1$	2.8 mm
Feed $f_z$ for copy milling in steel < 65 HRC	0.019 mm
$L_2$	40 mm
Feed $f_z$ for side milling in steel < 65 HRC	0.019 mm
Overhang length $L_1$ incl. recess	12 mm
Shank Ø $D_s$	6 mm
Flute length $L_c$	2 mm

Overall length L	80 mm
Shank	DIN 6535 HA to h6
Helix angle	30 degrees
maximum shank recess dia. $D_6$	4.3 mm
Series	Diabolo
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	0.2×D for side milling
Cutting width $a_e$ for milling operation	0.05×D for copy milling
Through-coolant	no
Machining strategy	HPC
Shank tolerance	h6
Colour ring	red
Type of product	Torus cutter

## User data

	Suitability	$V_c$	ISO code
Steel < 1400 N/mm <sup>2</sup>	suitable	180 m/min	P
Steel < 50 HRC	suitable	170 m/min	H
Steel < 55 HRC	suitable	140 m/min	H
Steel < 60 HRC	suitable	135 m/min	H
Steel < 65 HRC	suitable	100 m/min	H
wet maximum	suitable only under restricted conditions		

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