

Garant**GARANT Master Steel solid carbide torus cutter HPC, TiAlN, Ø e8 DC / R1: 20/1,0mm****Order data**

Order number	206333 20/1,0
GTIN	4069515015042
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	6
Helix angle	30 degrees
minimum shank recess dia. D_5	19 mm
Overall length L	104 mm
Feed f_z for copy milling in steel < 1100 N/mm ²	0.1 mm
Shank	DIN 6535 HA to h6
Flute length L_c	20 mm

Data sheet

Cutting edge $\varnothing D_c$	20 mm
Corner radius R_1	1 mm
Feed f_z for side milling in steel $< 1100 \text{ N/mm}^2$	0.08 mm
Shank $\varnothing D_s$	20 mm
maximum shank recess dia. D_6	19.8 mm
Overhang length L_1 incl. recess	55 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

Data sheet

INOX < 900 N/mm ²	suitable	95 m/min	M
INOX > 900 N/mm ²	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		