

**Garant**
**GARANT Master Steel solid carbide torus cutter HPC, TiAlN, Ø DC / R1:  
12/1,5mm**

**Order data**

Order number	206359 12/1,5
GTIN	4045197943491
Item class	11X

**Description**
**Version:**

Tolerance: Corner radius  $R_1 = \pm 0.01$  mm.

**Advantage:**

Optimised flute form, eccentric relief ground, wide chip space.  
HPC milling cutters with various corner radii for all radial transitions.

**Technical description**

Shank	DIN 6535 HB to h6
No. of teeth Z	4
Overhang length $L_1$ incl. recess	46 mm
Flute length $L_c$	26 mm
Feed $f_z$ for side milling in steel $< 900$ N/mm <sup>2</sup>	0.09 mm
Feed $f_z$ for slot milling in steel $< 900$ N/mm <sup>2</sup>	0.07 mm
Overall length L	93 mm
Helix angle	38 degrees
Shank Ø $D_s$	12 mm
Recess Ø $D_1$	11.6 mm
Corner radius $R_1$	1.5 mm
Cutting edge Ø $D_c$	12 mm

Series	Master Steel
Coating	TiAlN
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	N
Tolerance nominal $\varnothing$	f8
Helix angle characteristic	unequal spacing
Spacing of the cutters	unequal spacing
Direction of infeed	horizontal, oblique and vertical
Cutting width $a_e$ for milling operation	Full slot cutting depth $1 \times D$
Cutting width $a_e$ for milling operation	$0.3 \times D$ 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 N/mm <sup>2</sup>	suitable	260 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	240 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	190 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	180 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable only under restricted conditions	150 m/min	P
INOX < 900 N/mm <sup>2</sup>	suitable	80 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	70 m/min	M
GG(G)	suitable	250 m/min	K
Uni	suitable		
wet maximum	suitable		

wet minimum	suitable only under restricted conditions
dry	suitable
Air	suitable