

**Garant**
**GARANT Master Steel solid carbide ball nose slot drill HPC, TiAlN, Ø f8 DC: 12mm**

**Order data**

Order number	207490 12
GTIN	4062406285388
Item class	11X

**Description**
**Version:**

**Precision ground for very high accuracy requirements.**

Tolerance: Radius contour =  $\pm 0.005$  mm.

Improved cutting edge protection thanks to slight edge honing. Tremendous bending strength due to the use of ultra-fine grain substrate.

**Technical description**

Flute length $L_c$	16 mm
Shank $\varnothing D_s$	12 mm
Overhang length $L_1$ incl. recess	38 mm
Helix angle	30 degrees
Feed $f_z$ for side milling in steel $< 900$ N/mm <sup>2</sup>	0.07 mm
Recess $\varnothing D_1$	11.5 mm
Overall length $L$	83 mm
No. of teeth $Z$	4
Cutting edge $\varnothing D_c$	12 mm
Feed $f_z$ for copy milling in steel $< 900$ N/mm <sup>2</sup>	0.075 mm
Radius $R$	6 mm
Series	Master Steel

Coating	TiAlN
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	N
Tolerance nominal $\varnothing$	f8
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	Full slot cutting depth $1 \times D$
Shank	DIN 6535 HA to h6
Through-coolant	no
Machining strategy	HPC
Colour ring	green
Type of product	Ball-nosed slot drill

## User data

	Suitability	$V_c$	ISO code
Steel < 500 N/mm <sup>2</sup>	Suitable	270 m/min	P
Steel < 750 N/mm <sup>2</sup>	Suitable	240 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	220 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	190 m/min	P
Steel < 1400 N/mm <sup>2</sup>	Suitable	170 m/min	P
Steel < 55 HRC	suitable only under restricted conditions	140 m/min	H
INOX < 900 N/mm <sup>2</sup>	suitable	90 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable only under restricted conditions	80 m/min	M
GG(G)	Suitable	400 m/min	K
Uni	Suitable		
wet maximum	Suitable		

wet minimum	suitable only under restricted conditions
dry	suitable only under restricted conditions
Air	suitable only under restricted conditions