

Garant
**GARANT Master Steel solid carbide ball nose milling cutter HPC, TiAlN, Ø f8
DC: 20mm**

Order data

Order number	207490 20
GTIN	4062406285418
Item class	11X

Description
Version:
Precision ground for very high accuracy requirements.

Tolerance: Radius contour = ± 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

Shank Ø D _s	20 mm
Feed f _z for side milling in steel < 900 N/mm ²	0.15 mm
Overhang length L ₁ incl. recess	50 mm
Feed f _z for copy milling in steel < 900 N/mm ²	0.18 mm
Overall length L	104 mm
Flute length L _c	26 mm
No. of teeth Z	4
Helix angle	30 degrees
Cutting edge Ø D _c	20 mm
Recess Ø D ₁	19.5 mm
Radius R	10 mm
Series	Master Steel

Coating	TiAlN
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	N
Tolerance nominal Ø	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 ²	Suitable	270 m/min	P
Steel < 750 N/mm ²	Suitable	240 m/min	P
Steel < 900 N/mm ²	suitable	220 m/min	P
Steel < 1100 N/mm ²	suitable	190 m/min	P
Steel < 1400 N/mm ²	Suitable	170 m/min	P
Steel < 55 HRC	suitable only under restricted conditions	140 m/min	H
INOX < 900 N/mm ²	suitable	90 m/min	M
INOX > 900 N/mm ²	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