

**Garant**
**GARANT Master INOX M solid carbide milling cutter HPC / TPC, TiAlN, Ø e8 DC: 20mm**

**Order data**

Order number	202989 20
GTIN	4062406245122
Item class	11X

**Description**
**Version:**

Milling cutter with newly **developed high-performance coating** for **outstanding tool working life** and **optimum metal removal rates** in a wide range of stainless steels. Can be used at high **cutting speeds**, e.g. in duplex steels.

**Note:**

**Successor product to No. 203009.**

**Technical description**

Direction of infeed	horizontal, oblique and vertical
Helix angle	42 degrees
Overall length L	104 mm
Recess Ø D <sub>1</sub>	19.5 mm
Overhang length L <sub>1</sub> incl. recess	52 mm
Shank Ø D <sub>s</sub>	20 mm
Tolerance nominal Ø	e8
No. of teeth Z	4
Feed f <sub>z</sub> for slot milling in stainless steel > 900 N/mm <sup>2</sup>	0.1 mm
Feed f <sub>z</sub> for side milling in INOX > 900 N/mm <sup>2</sup>	0.12 mm
Cutting edge Ø D <sub>c</sub>	20 mm

Shank	DIN 6535 HB to h6
Flute length $L_c$	41 mm
Corner rounding $r_v$	0.2 mm
Series	Master INOX
Coating	TiAlN
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	N
Helix angle characteristic	unequal spacing
Spacing of the cutters	unequal spacing
Cutting width $a_e$ for milling operation	Full slot cutting depth $1 \times D$
Cutting width $a_e$ for milling operation	$0.03 \times D$ for copy milling
Cutting width $a_e$ for milling operation	$0.1 \times D$
Through-coolant	no
Machining strategy	HPC
Machining strategy	TPC
Colour ring	blue
Type of product	End / face mill

## User data

	Suitability	$V_c$	ISO code
Steel < 500 N/mm <sup>2</sup>	suitable	250 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	230 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	200 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	180 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	170 m/min	P
TOOLOX 33	suitable	115 m/min	H
TOOLOX 44	suitable	80 m/min	H
INOX < 900 N/mm <sup>2</sup>	suitable	100 m/min	M

INOX > 900 N/mm <sup>2</sup>	suitable	90 m/min	M
Uni	suitable only under restricted conditions		
wet maximum	suitable		
wet minimum	suitable		
dry	Suitable only under restricted conditions		
Air	suitable		