

Garant

GARANT Master INOX solid carbide milling cutter with chip separators TPC, TiAlN, Ø f8 DC: 12mm



Order data

Order number	203119 12
GTIN	4062406783808
Item class	11Z

Description

Version:

High-performance milling cutter with **irregular cutter spacing** and **irregular helical pitch**. **High process reliability** and **better chip evacuation** due to **increased flutes**. **Optimised carbide substrate** for **higher bending strength** and **extreme tool life**, even in stainless steels in the high-performance field, especially duplex. **Chip separator** positioned offset **at cutting edges**.

Advantage:

Lower pull-out forces due to reduced helix angle.

Note:

h_{max} : The values stated in the table are maximum values. For finishing operations we recommend items No. 204012, 204014, 204015, 204016, 204018 and 204019.

$a_{e,max} = 0.04 \times D$ for TPC machining.

Successor product for No. 203105 and No. 203108.

Technical description

Shank	DIN 6535 HB to h6
Flute length L_c	60 mm
Cutting edge $\varnothing D_c$	12 mm
Corner chamfer width at 45°	0.24 mm
Shank $\varnothing D_s$	12 mm
Corner chamfer angle	45 degrees
Direction of infeed	horizontal, oblique and vertical

Tolerance nominal \varnothing	e8
No. of teeth Z	6
Balance quality with shank	G 2.5 with HB
Overall length L	112 mm
Average chip thickness h_{\max} for TPC milling in INOX < 900 N/mm ²	0.047 mm
Helix angle	36 degrees
Number of chip separators	3
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	0.04×D
Through-coolant	no
Machining strategy	TPC
Colour ring	blue
Type of product	End / face mill

User data

	Suitability	V_c	ISO code
Steel < 500 N/mm ²	Suitable only under restricted conditions	270 m/min	P
Steel < 750 N/mm ²	Suitable only under restricted conditions	240 m/min	P
Steel < 900 N/mm ²	Suitable only under restricted conditions	210 m/min	P

Steel < 1100 N/mm ²	Suitable only under restricted conditions	160 m/min	P
INOX < 900 N/mm ²	suitable	200 m/min	M
INOX > 900 N/mm ²	suitable	140 m/min	M
Ti > 850 N/mm ²	suitable	100 m/min	S
wet maximum	suitable		
wet minimum	Suitable only under restricted conditions		
Air	suitable		