

Garant

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



Order data

Order number	203120 12
GTIN	4067263117124
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**.

Internal cooling version for improved chip evacuation.

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.

$a_{e_{max}} = 0.1 \times D$ for TPC machining.

Technical description

Cutting edge Ø D _c	12 mm
Direction of infeed	horizontal, oblique and vertical
Balance quality with shank	G 2.5 with HB
Average chip thickness h_{max} for TPC milling in INOX < 900 N/mm ²	0.072 mm
Shank	DIN 6535 HB to h6
Overall length L	93 mm

Shank $\varnothing D_s$	12 mm
Recess $\varnothing D_1$	11.8 mm
Number of chip separators	2
No. of teeth Z	6
Helix angle	36 degrees
Overhang length L_1 incl. recess	45 mm
Corner chamfer angle	45 degrees
Corner chamfer width at 45°	0.24 mm
Flute length L_c	36 mm
Tolerance nominal \varnothing	f8
Series	Master INOX
Coating	TiAlN
Tool material	Solid carbide
Standard	Works standard
Type	N
Helix angle characteristic	unequal spacing
Spacing of the cutters	unequal spacing
Cutting width a_e for milling operation	0.12×D
Through-coolant	yes
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	380 m/min	P
Steel < 750 N/mm ²	suitable only under restricted conditions	340 m/min	P

Steel < 900 N/mm ²	suitable only under restricted conditions	300 m/min	P
Steel < 1100 N/mm ²	suitable only under restricted conditions	230 m/min	P
INOX < 900 N/mm ²	suitable	240 m/min	M
INOX > 900 N/mm ²	suitable	170 m/min	M
Ti > 850 N/mm ²	suitable	140 m/min	S
wet maximum	suitable		
wet minimum	suitable only under restricted conditions		
Air	suitable		