

Garant
Solid carbide milling cutter with chip separators TPC, TiAlN, Ø f8 DC: 12mm

Order data

Order number	203103 12
GTIN	4045197814593
Item class	11X

Description

Version:

High-performance milling cutter with irregular cutter spacing and irregular helical pitch. Optimised bending strength due to the use of ultra-fine grain substrates. Offset chip breaker.

Note:

$a_{e\ max} = 0.07 \times D$ for TPC machining. NEW GENERATION AVAILABLE! Recommended successor product is No. 203117. h_{max} : The values stated in the table are maximum values. For finishing operations we recommend items No. 204012, 204014 and 204015.

Technical description

Flute length L_c	36 mm
Overhang length L_1 incl. recess	45 mm
Shank	DIN 6535 HB to h6
Recess $\varnothing D_1$	11.8 mm
Tolerance nominal \varnothing	f8
Cutting edge $\varnothing D_c$	12 mm
Balance quality with shank	G 2.5 with HB
Corner chamfer width at 45°	0.24 mm
Overall length L	93 mm
Shank $\varnothing D_s$	12 mm
No. of teeth Z	7

Direction of infeed	horizontal and oblique
Helix angle	40 degrees
Average chip thickness h_{\max} for TPC milling in INOX < 900 N/mm ²	0.06 mm
Corner chamfer angle	45 degrees
Number of chip separators	1
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	0.07×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	380 m/min	P
Steel < 750 N/mm ²	suitable	340 m/min	P
Steel < 900 N/mm ²	suitable	300 m/min	P
Steel < 1100 N/mm ²	suitable	230 m/min	P
INOX < 900 N/mm ²	suitable	240 m/min	M
INOX > 900 N/mm ²	suitable	170 m/min	M
wet maximum	Suitable		
wet minimum	Suitable only under restricted conditions		

Air

suitable