



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



Order data

Order number	203109 12
GTIN	4062406734961
Item class	12X

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 breakers for controlled chip breaking.**

Note:

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

$a_{e,max} = 0.07 \times D$ for TPC machining.

Technical description

Overhang length L_1 incl. recess	45 mm
Shank $\varnothing D_s$	12 mm
Flute length L_c	36 mm
Recess $\varnothing D_1$	11.8 mm
Cutting edge $\varnothing D_c$	12 mm
Tolerance nominal \varnothing	e8
Corner chamfer angle	45 degrees
Average chip thickness h_{max} for TPC milling in INOX < 900 N/mm ²	0.06 mm
Corner chamfer width at 45°	0.24 mm
Overall length L	93 mm

Direction of infeed	horizontal and oblique
Balance quality with shank	G 2.5 with HB
Helix angle	40 degrees
Shank	DIN 6535 HB to h6
No. of teeth Z	5
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	$0.07 \times D$
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