

Garant

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



Order data

Order number	203091 12
GTIN	4045197814425
Item class	11X

Description

Version:

High-performance end mills for general-purpose machining, **specially designed for TPC applications.**

Strengthened core. Offset chip breaker. **Optimised bending strength** due to the use of ultra-fine grain substrates.

Note:

h_{max} : The values stated in the table are maximum values.

$a_{e,max} = 0.03 \times D$ for TPC machining.

Tolerance nominal Ø: f8

No. of teeth Z: 5

Helix angle: 40°

Direction of infeed: horizontal and oblique

Shank: DIN 6535 HB to h6

Balance quality with shank: G 2.5 with HB

No. of teeth Z: 5

Flute length L_c : 60 mm

Overall length L: 112 mm

Shank Ø D_s : 12 mm

Corner chamfer width at 45°: 0.24 mm

Average chip thickness h_{max} for TPC milling in Toolox 44 HRC: 0.044 mm

Technical description

Shank	DIN 6535 HB to h6
Average chip thickness h_{max} for TPC milling in Toolox 44 HRC	0.044 mm

Shank $\varnothing D_s$	12 mm
Corner chamfer width at 45°	0.24 mm
No. of teeth Z	5
Balance quality with shank	G 2.5 with HB
Cutting edge $\varnothing D_c$	12 mm
Tolerance nominal \varnothing	f8
Direction of infeed	horizontal and oblique
Flute length L_c	60 mm
Overall length L	112 mm
Helix angle	40°
Corner chamfer angle	45°
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	0.03×D
Through-coolant	no
Machining strategy	TPC
Colour ring	green
Type of product	End / face mill

User data

	Suitability	V_c	ISO code
Steel < 500 N/mm ²	suitable	350 m/min	P
Steel < 750 N/mm ²	suitable	310 m/min	P
Steel < 900 N/mm ²	suitable	270 m/min	P
Steel < 1100 N/mm ²	suitable	200 m/min	P

Steel < 1400 N/mm ²	suitable	120 m/min	P
TOOLOX 33	suitable	50 m/min	H
TOOLOX 44	suitable	30 m/min	H
HARDOX 500 < 1600 N/mm ²	suitable	20 m/min	H
INOX < 900 N/mm ²	suitable	190 m/min	M
INOX > 900 N/mm ²	suitable only under restricted conditions	120 m/min	M
Uni	suitable		
wet maximum	Suitable		
dry	Suitable only under restricted conditions		
Air	suitable		
Services			

Shank clamping flats for shrink-fit chucks, with retainer function Shank Ø tool 12 mm

SZ2025 12