

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

Order data

Order number	203088 12
GTIN	4045197814296
Item class	11X

Description
Version:

High-performance milling cutter specially designed for general-purpose TPC applications. Strengthened core.

Optimised bending strength due to the use of ultra-fine grain substrates.

Note:

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

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

Technical description

Recess Ø D_1	11.8 mm
Cutting edge Ø D_c	12 mm
Tolerance nominal Ø	f8
Balance quality with shank	G 2.5 with HB
Flute length L_c	26 mm
Shank Ø D_s	12 mm
Corner chamfer width at 45°	0.24 mm
Direction of infeed	horizontal and oblique
No. of teeth Z	5
Overall length L	83 mm
Shank	DIN 6535 HB to h6

Overhang length L_1 incl. recess	36 mm
Average chip thickness h_{max} for TPC milling in Toolox 44 HRC	0.065 mm
Helix angle	40 degrees
Corner chamfer angle	45 degrees
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	$0.1 \times D$
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	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
Steel < 1400 N/mm ²	suitable	150 m/min	P
TOOLOX 33	suitable	60 m/min	H
TOOLOX 44	suitable	40 m/min	H
HARDOX 500 < 1600 N/mm ²	suitable	25 m/min	H
INOX < 900 N/mm ²	suitable	220 m/min	M

INOX > 900 N/mm ²	suitable only under restricted conditions	150 m/min	M
Uni	suitable		
wet maximum	Suitable		
dry	Suitable only under restricted conditions		
Air	suitable		