

**Garant**
**Solid carbide milling cutter with internal coolant supply HPC, TiAlN, Ø e8 DC: 12mm**

**Order data**

Order number	203016 12
GTIN	4045197551108
Item class	11X

**Description**
**Version:**

With **internal coolant supply** for reliable swarf evacuation.

**Note:**

**NEW GENERATION AVAILABLE! Recommended successor product is No. 202999.**

**Technical description**

Overhang length $L_1$ incl. recess	36 mm
Cutting edge $\varnothing D_c$	12 mm
No. of teeth $Z$	4
Recess $\varnothing D_1$	11.6 mm
Feed $f_z$ for side milling in INOX > 900 N/mm <sup>2</sup>	0.05 mm
Feed $f_z$ for slot milling in stainless steel > 900 N/mm <sup>2</sup>	0.04 mm
Corner chamfer width at 45°	0.3 mm
Shank $\varnothing D_s$	12 mm
Overall length $L$	83 mm
Flute length $L_c$	26 mm
Direction of infeed	horizontal, oblique and vertical
Shank	DIN 6535 HB to h6

Tolerance nominal $\varnothing$	e8
Balance quality with shank	G 2.5 with HB
Helix angle	38 degrees
Corner chamfer angle	45 degrees
Coating	TiAlN
Tool material	Solid carbide
Standard	DIN 6527
Type	N
Helix angle characteristic	unequal spacing
Spacing of the cutters	unequal spacing
Cutting width $a_e$ for milling operation	0.3×D for side milling
Cutting width $a_e$ for milling operation	Full slot cutting depth 1×D
Through-coolant	yes
Machining strategy	HPC
Colour ring	blue
Type of product	End / face mill

## User data

	Suitability	$V_c$	ISO code
Steel < 500 N/mm <sup>2</sup>	suitable	250 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	230 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	200 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	180 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	170 m/min	P
TOOLOX 33	suitable	115 m/min	H
TOOLOX 44	suitable	80 m/min	H
INOX < 900 N/mm <sup>2</sup>	suitable	100 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	85 m/min	M

Ti > 850 N/mm <sup>2</sup>	suitable only under restricted conditions	60 m/min	S
Uni	suitable only under restricted conditions		
wet maximum	suitable		
Air	Suitable		