

**Garant**
**Solid carbide roughing end mill MTC / TPC, TiAlN, Ø f8 DC: 12 mm**

**Order data**

Order number	202978 12
GTIN	4045197431486
Item class	11X

**Description**
**Version:**

**Significant cutting force reduction** due to 45° helix.

Specially for **trochoidal milling strategy**.

**Application:**

Especially for **MTC (Multi Task Cutting)** use on the new generation of turning / milling centres.

**Note:**

For materials > 55 HRC we recommend reducing the depth of cut to  $a_p=0.25 \times D \dots 0.5 \times D$ .

Tolerance nominal Ø: f8

No. of teeth Z: 4

Helix angle: 45 degrees

Direction of infeed: horizontal, oblique and vertical

Shank: DIN 6535 HA to h6

No. of teeth Z: 4

Flute length  $L_c$ : 36 mm

Overhang length  $L_1$  incl. recess: 45 mm

Recess Ø  $D_1$ : 11 mm

Overall length L: 93 mm

Shank Ø  $D_s$ : 12 mm

**Technical description**

No. of teeth Z	4
Feed $f_z$ for side milling in steel < 60 HRC	0.035 mm
Corner chamfer width at 45°	0.15 mm
Recess Ø $D_1$	11 mm

Overhang length $L_1$ incl. recess	45 mm
Cutting edge $\varnothing D_c$	12 mm
Feed $f_z$ for slot milling in steel < 60 HRC	0.03 mm
Shank $\varnothing D_s$	12 mm
Overall length L	93 mm
Flute length $L_c$	36 mm
Direction of infeed	horizontal, oblique and vertical
Shank	DIN 6535 HA to h6
Tolerance nominal $\varnothing$	f8
Helix angle	45 degrees
Corner chamfer angle	45 degrees
Coating	TiAlN
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	H
Helix angle characteristic	unequal spacing
Spacing of the cutters	unequal spacing
Cutting width $a_e$ for milling operation	0.2xD for side milling
Cutting width $a_e$ for milling operation	Full slot cutting depth 1xD
Cutting width $a_e$ for milling operation	0.1xD
Through-coolant	no
Machining strategy	MTC
Machining strategy	TPC
Colour ring	red
Type of product	End mill

## Services

Shank recess Type FRST	209900 FRST
	SZ2025 12

Shank clamping flats for shrink-fit chucks, with retainer  
function Shank  $\varnothing$  tool 12 mm

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