

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

**Order data**

Order number	202977 12
GTIN	4045197431394
Item class	11X

**Description**
**Version:**

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

**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 HB to h6

No. of teeth Z: 4

Flute length  $L_c$ : 26 mm

Overhang length  $L_1$  incl. recess: 35 mm

Recess Ø  $D_1$ : 11 mm

Overall length L: 83 mm

Shank Ø  $D_s$ : 12 mm

**Technical description**

Overhang length $L_1$ incl. recess	35 mm
Cutting edge Ø $D_c$	12 mm
Feed $f_z$ for side milling in steel < 60 HRC	0.035 mm
Recess Ø $D_1$	11 mm
No. of teeth Z	4

Corner chamfer width at 45°	0.15 mm
Feed $f_z$ for slot milling in steel < 60 HRC	0.03 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 $\varnothing$	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	Full slot cutting depth $1 \times D$
Cutting width $a_e$ for milling operation	$0.15 \times D$ for side milling
Cutting width $a_e$ for milling operation	$0.1 \times D$
Through-coolant	no
Machining strategy	MTC
Machining strategy	TPC
Colour ring	red
Type of product	End mill

## Services

Shank recess Type FRST	209900 FRST
Shank clamping flats for shrink-fit chucks, with retainer function Shank $\varnothing$ tool 12 mm	SZ2025 12

