

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

**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  $a_p=0.25 \times D \dots 0.5 \times D$ .

**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 Ø $D_c$	12 mm
Feed $f_z$ for slot milling in steel < 60 HRC	0.03 mm
Shank Ø $D_s$	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	0.2×D for side milling
Cutting width $a_e$ for milling operation	Full slot cutting depth 1×D
Cutting width $a_e$ for milling operation	0.1×D
Through-coolant	no
Machining strategy	MTC
Machining strategy	TPC
Colour ring	red
Type of product	End / face mill

## User data

	Suitability	$V_c$	ISO code
Steel < 900 N/mm <sup>2</sup>	suitable	160 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	115 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	115 m/min	P
Steel < 55 HRC	suitable	60 m/min	H
Steel < 60 HRC	suitable	30 m/min	H
Steel < 65 HRC	suitable	25 m/min	H
Steel < 67 HRC	suitable only under restricted conditions	20 m/min	H

wet maximum	suitable only under restricted conditions
wet minimum	suitable only under restricted conditions
dry	suitable
Air	suitable