


**Solid carbide end mill, TiAlN, Ø h10 DC: 12mm**

**Order data**

Order number	203320 12
GTIN	4045197119179
Item class	12X

**Description**
**Version:**

Strengthened core and geometry for hard machining, without dynamic helical pitch.

**Application:**

**For profile milling as finishing.**

(Plunge cutting only to shallow depths).

**Technical description**

No. of teeth Z	6
Cutting edge Ø D <sub>c</sub>	12 mm
Feed f <sub>z</sub> for side milling in steel < 55 HRC	0.045 mm
Shank Ø D <sub>s</sub>	12 mm
Overall length L	93 mm
Flute length L <sub>c</sub>	36 mm
Direction of infeed	horizontal and oblique
Shank	DIN 6535 HA to h6
Tolerance nominal Ø	h10
Helix angle	50 degrees
Corner chamfer angle	90 degrees
Coating	TiAlN
Tool material	Solid carbide

Standard	Manufacturer's standard
Type	H
Helix angle characteristic	unequal spacing
Cutting width $a_e$ for milling operation	$0.05 \times D$ for side milling
Through-coolant	no
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	95 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	85 m/min	P
Steel < 50 HRC	suitable	75 m/min	H
Steel < 55 HRC	suitable	65 m/min	H
Steel < 60 HRC	suitable	50 m/min	H
Steel < 65 HRC	suitable only under restricted conditions	30 m/min	H
wet minimum	suitable only under restricted conditions		
dry	suitable		
Air	suitable		

### Services

Shank grinding Type HB	129100 HB
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