

## Garant

### Roughing end mill with internal cooling, TiAlN, Ø k12 DC: 12 mm



#### Order data

Order number	192910 12
GTIN	4045197108760
Item class	11W

#### Description

##### Version:

**Relief ground fine pitch knuckle form profile.** Centre cutting edge geometry for plunging. For the most demanding metal removal rates.

##### Advantage:

The coolant is fed directly **to the cutting edges**, resulting in **longer tool life** and **complete chip clearance**.

Through-coolant: yes

Tolerance nominal Ø: k12

No. of teeth Z: 4

Helix angle: 30 degrees

Direction of infeed: horizontal, oblique and vertical

Shank: DIN 1835 B to h6

No. of teeth Z: 4

Flute length  $L_c$ : 26 mm

Overall length L: 83 mm

Shank Ø  $D_s$ : 12 mm

Corner chamfer width at 45°: 0.5 mm

Feed  $f_z$  for slot milling in steel < 1100 N/mm<sup>2</sup>: 0.035 mm

#### Technical description

Cutting edge Ø $D_c$	12 mm
No. of teeth Z	4
Corner chamfer width at 45°	0.5 mm
Shank Ø $D_s$	12 mm

Overall length L	83 mm
Flute length L <sub>c</sub>	26 mm
Feed f <sub>z</sub> for slot milling in steel < 1100 N/mm <sup>2</sup>	0.035 mm
Direction of infeed	horizontal, oblique and vertical
Shank	DIN 1835 B to h6
Tolerance nominal Ø	k12
Helix angle	30 degrees
Corner chamfer angle	45 degrees
Coating	TiAlN
Tool material	HSS PM
Standard	DIN 844
Milling profile	HR
Spacing of the cutters	unequal spacing
Through-coolant	yes
Colour ring	without
Type of product	End mill