

**Garant**
**Roughing end mill HSS-PM, TiAlN, Ø DC: 12M mm**

**Order data**

Order number	192860 12M
GTIN	4045197108487
Item class	11W

**Description**
**Version:**
**Relief ground fine pitch knuckle form profile.**

Centre cutting teeth for plunging.

Size 6M to 25M – **MID mills:** Dimensions to **manufacturer's standard**, which is **between** DIN 844 **stub** and DIN 844 **long**.

Through-coolant: no

Tolerance nominal  $\varnothing$ :  $\pm 0.12$

No. of teeth Z: 5

Helix angle: 30 degrees

Direction of infeed: horizontal, oblique and vertical

Shank: DIN 1835 B to h6

No. of teeth Z: 5

Flute length  $L_c$ : 40 mm

Overhang length  $L_1$  incl. recess: 51 mm

Recess  $\varnothing D_1$ : 11.5 mm

Overall length L: 97 mm

Shank  $\varnothing D_s$ : 12 mm

**Technical description**

Corner chamfer width at 45°	0.3 mm
Recess $\varnothing D_1$	11.5 mm
Overhang length $L_1$ incl. recess	51 mm
Cutting edge $\varnothing D_c$	12 mm
Feed $f_z$ for slot milling in steel < 900 N/mm <sup>2</sup>	0.033 mm

No. of teeth Z	5
Shank $\varnothing D_s$	12 mm
Overall length L	97 mm
Flute length $L_c$	40 mm
Direction of infeed	horizontal, oblique and vertical
Shank	DIN 1835 B to h6
Tolerance nominal $\varnothing$	$\pm 0.12$
Helix angle	30 degrees
Corner chamfer angle	45 degrees
Coating	TiAlN
Tool material	HSS PM
Standard	DIN 844
Milling profile	HR
Through-coolant	no
Colour ring	green
Type of product	End mill