

**Garant**
**End mill HSS-PM, TiAlN, Ø k10 DC: 20Mmm**

**Order data**

Order number	191520 20M
GTIN	4045197103307
Item class	11W

**Description**
**Version:**

Multi-flute end mill. **Eccentric relief ground.**

For the highest demands in respect to material removal rates.

**Excellent results** when **milling dry.**

Size 6M–25M **MID mills:**

Dimensions to **manufacturer's standard**, which lies **between** DIN 844 **short** and DIN 844 **long**.

**Particularly suitable** for **mould** and **tool making**, as the **medium length** provides higher **rigidity** than long series mills to DIN 844.

**Technical description**

Feed $f_z$ for slot milling in steel $< 750 \text{ N/mm}^2$	0.039 mm
Cutting edge $\varnothing D_c$	20 mm
No. of teeth Z	6
Shank $\varnothing D_s$	20 mm
Overall length L	122 mm
Flute length $L_c$	58 mm
Direction of infeed	horizontal, oblique and vertical
Shank	DIN 1835 B to h6
Tolerance nominal $\varnothing$	k10
Helix angle	30-40 degrees
Corner chamfer angle	90 degrees

Coating	TiAlN
Tool material	HSS PM
Standard	DIN 844 B
Type	N
Through-coolant	no
Colour ring	without
Type of product	End / face mill

### User data

	Suitability	V <sub>c</sub>	ISO code
Aluminium (short chipping)	suitable only under restricted conditions	138 m/min	N
Alu > 10% Si	suitable only under restricted conditions	110 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	83 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	64 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	64 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	37 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable only under restricted conditions	32 m/min	P
INOX < 900 N/mm <sup>2</sup>	suitable	23 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable only under restricted conditions	18 m/min	M
GG(G)	suitable only under restricted conditions	55 m/min	K
CuZn	suitable only under restricted conditions	110 m/min	N
Uni	suitable		
wet maximum	suitable		
dry	suitable		

