

**Garant**
**Semi-roughing end mill, uncoated, Ø k10 DC: 20mm**

**Order data**

Order number	191700 20
GTIN	4045197104656
Item class	11W

**Description**
**Version:**
**Relief ground truncated-type roughing profile.**

Centre cutting teeth for plunging.

The wide tooth lands can be re-ground frequently without losing the profile.

Universal cutter for profile milling or for plunging.

**Advantage:**

Compared to multi-flute cutters, **better chip evacuation due to larger flutes.**

**Technical description**

Corner chamfer width at 45°	0.5 mm
Feed $f_z$ for slot milling in steel < 750 N/mm <sup>2</sup>	0.06 mm
Cutting edge Ø $D_c$	20 mm
No. of teeth Z	3
Shank Ø $D_s$	20 mm
Overall length L	141 mm
Flute length $L_c$	75 mm
Direction of infeed	horizontal, oblique and vertical
Shank	DIN 1835 B to h6
Tolerance nominal Ø	k10
Helix angle	25 degrees
Corner chamfer angle	45 degrees

Coating	uncoated
Tool material	HSS Co 8
Standard	DIN 844 B
Milling profile	NF
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	83 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	30 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	25 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable only under restricted conditions	25 m/min	P
GG(G)	suitable only under restricted conditions	23 m/min	K
CuZn	suitable only under restricted conditions	55 m/min	N
Uni	suitable only under restricted conditions		
wet maximum	suitable		