

**Garant**

**Solid carbide roughing end mill with internal coolant supply, uncoated, Ø d11  
DC: 20mm**


**Order data**

Order number	205335 20
GTIN	4045197645838
Item class	11X

**Description**
**Version:**

**Dimensions similar to DIN 6527.**

**Knuckle form profile.**

**Special profile for machining non-ferrous metals.**

**With through-coolant.**

**Technical description**

Corner chamfer width at 45°	1.05 mm
Overhang length $L_1$ incl. recess	54 mm
Feed $f_z$ for slot milling in short-chipping aluminium	0.12 mm
Feed $f_z$ for side milling in short-chipping aluminium	0.14 mm
Recess Ø $D_1$	19.8 mm
No. of teeth $Z$	3
Cutting edge Ø $D_c$	20 mm
Shank Ø $D_s$	20 mm
Overall length $L$	104 mm
Flute length $L_c$	38 mm
Direction of infeed	horizontal, oblique and vertical
Shank	DIN 6535 HB to h6

Tolerance nominal $\varnothing$	d11
Helix angle	30 degrees
Corner chamfer angle	45 degrees
Coating	uncoated
Tool material	Solid carbide
Standard	Manufacturer's standard
Milling profile	WR
Cutting width $a_e$ for milling operation	0.5×D for side milling
Cutting width $a_e$ for milling operation	Full slot cutting depth 1×D
Through-coolant	yes
Colour ring	yellow
Type of product	End / face mill

## User data

	Suitability	$V_c$	ISO code
Aluminium	Suitable	270 m/min	N
Aluminium (short chipping)	suitable	250 m/min	N
Alu > 10% Si	suitable only under restricted conditions	180 m/min	N
Cu	Suitable	80 m/min	N
CuZn	Suitable	100 m/min	N
wet maximum	suitable		
Air	Suitable only under restricted conditions		