


**HAIMER MILL end mill SAFE-LOCK, AlTiN, Ø f9 DC: 20mm**

**Order data**

Order number	220288 20
GTIN	4034221104359
Item class	26X

**Description**
**Version:**

With SAFE-LOCK pull-out protection to provide an additional form fit for the tool. In conjunction with SAFE-LOCK tool holders, it secures the tool to prevent it being pulled out.

For **general-purpose use** in steel materials and high-alloy steels, especially stainless steel. With **cylindrical core** for optimised tool stiffness when milling slots. Reliable processes guaranteed when ramping and during circular interpolation milling thanks to **special end face geometry**.

**Note:**

Tool holders with the SAFE-LOCK pull-out protection can be found under clamping technology.

**Technical description**

Corner chamfer width at 45°	0.4 mm
Helix angle	32 degrees
Feed $f_z$ for side milling in steel < 900 N/mm <sup>2</sup>	0.13 mm
Recess Ø D <sub>1</sub>	19 mm
Overhang length L <sub>1</sub> incl. recess	52 mm
Shank	Safe-Lock h6
Corner chamfer angle	45 degrees
Feed $f_z$ for slot milling in steel < 900 N/mm <sup>2</sup>	0.11 mm
Cutting edge Ø D <sub>c</sub>	20 mm
Tolerance nominal Ø	f8

Overall length L	105 mm
Shank $\varnothing D_s$	20 mm
Direction of infeed	horizontal, oblique and vertical
No. of teeth Z	4
Flute length $L_c$	38 mm
Coating	AlTiN
Tool material	Solid carbide
Standard	DIN 6527
Type	N
Helix angle characteristic	unequal spacing
Spacing of the cutters	unequal spacing
Cutting width $a_e$ for milling operation	Full slot cutting depth $1 \times D$
Cutting width $a_e$ for milling operation	$0.5 \times D$ for side milling
Through-coolant	no
Machining strategy	HPC
Colour ring	without
Type of product	End / face mill

## User data

	Suitability	$V_c$	ISO code
Alu plastics	suitable only under restricted conditions	480 m/min	N
Aluminium (short chipping)	suitable only under restricted conditions	480 m/min	N
Alu > 10% Si	suitable only under restricted conditions	350 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	275 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	255 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	210 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	190 m/min	P

INOX < 900 N/mm <sup>2</sup>	suitable	95 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	75 m/min	M
Ti > 850 N/mm <sup>2</sup>	suitable only under restricted conditions	35 m/min	S
GG(G)	suitable only under restricted conditions	155 m/min	K
Uni	suitable		
Oil	suitable		
wet maximum	suitable		
wet minimum	suitable		
dry	suitable		
Air	suitable		