

**Garant**
**Solid carbide high precision milling cutter, TiAlN, Ø f8 DC: 20mm**

**Order data**

Order number	203530 20
GTIN	4045197352859
Item class	11X

**Description**
**Version:**

**High stability** and **extremely smooth cutting action** due to at least 6 teeth. **Eccentric relief ground.**

Extremely **high taper accuracy with tolerances in the µm range**, for **precise 90° angles** and plane-parallel surfaces in profile milling.

**For the most demanding angular accuracy.**

Cutter corner chamfer undefined due to eccentric relief grinding.

**With maximum 0.008 mm tapering.**

**Application:**

**For peripheral milling** as a **finishing operation.**

**Technical description**

Feed $f_z$ for side milling in steel $< 900 \text{ N/mm}^2$	0.1 mm
Cutting edge $\varnothing D_c$	20 mm
Overhang length $L_1$ incl. recess	52 mm
No. of teeth $Z$	6
Recess $\varnothing D_1$	19 mm
Shank $\varnothing D_s$	20 mm
Overall length $L$	104 mm
Flute length $L_c$	38 mm
Direction of infeed	horizontal

Shank	DIN 6535 HA to h6
Tolerance nominal $\varnothing$	f8
Balance quality with shank	G 2.5 with HA
Helix angle	45 degrees
Corner chamfer angle	90 degrees
Coating	TiAlN
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	N
Helix angle characteristic	unequal spacing
Spacing of the cutters	unequal spacing
Milling application	High-precision 90° mono milling tools
Cutting width $a_e$ for milling operation	0.05×D for side milling
Through-coolant	no
Colour ring	green
Type of product	End / face mill

## User data

	Suitability	$V_c$	ISO code
Steel < 500 N/mm <sup>2</sup>	suitable	250 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	200 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	175 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	145 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	120 m/min	P
Steel < 55 HRC	suitable only under restricted conditions	50 m/min	H
INOX < 900 N/mm <sup>2</sup>	suitable	100 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable only under restricted conditions	80 m/min	M

GG(G)	suitable only under restricted conditions	220 m/min	K
Uni	suitable		
wet maximum	suitable		
wet minimum	suitable only under restricted conditions		
dry	suitable only under restricted conditions		
Air	suitable only under restricted conditions		
<b>Services</b>			
Shank grinding Type HB		129100 HB	