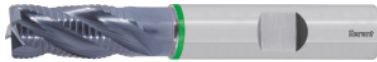


**Garant**
**Solid carbide roughing end mill HPC, TiAlN, Ø d11 DC: 20mm**

**Order data**

Order number	205490 20
GTIN	4045197551610
Item class	11X

**Description**
**Version:**
**With special knuckle profile.**

Dimensions similar to DIN 6527.

For high feed rates, very high metal removal rate.

**Note:**
**NEW GENERATION AVAILABLE!**
**Recommended successor product No. 205550.**
**Technical description**

Feed $f_z$ for slot milling in steel < 900 N/mm <sup>2</sup>	0.1 mm
Recess Ø $D_1$	19 mm
Corner chamfer width at 45°	0.5 mm
Overhang length $L_1$ incl. recess	54 mm
Cutting edge Ø $D_c$	20 mm
Feed $f_z$ for side milling in steel < 900 N/mm <sup>2</sup>	0.12 mm
No. of teeth $Z$	4
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	TiAlN
Tool material	Solid carbide
Standard	DIN 6527
Milling profile	HR
Helix angle characteristic	unequal spacing
Spacing of the cutters	unequal spacing
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	no
Machining strategy	HPC
Colour ring	green
Type of product	End / face mill

## User data

	Suitability	$V_c$	ISO code
Aluminium (short chipping)	suitable only under restricted conditions	280 m/min	N
Alu > 10% Si	suitable only under restricted conditions	200 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	120 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	105 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	100 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	70 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	60 m/min	P
Steel < 55 HRC	suitable only under restricted conditions	35 m/min	H

INOX < 900 N/mm <sup>2</sup>	suitable	60 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	50 m/min	M
GG(G)	suitable	90 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		