

Garant
Roughing end mill HSS-PM, TiAlN, Ø DC: 20mm

Order data

Order number	192645 20
GTIN	4045197107350
Item class	11W

Description
Version:
With relief ground knuckle form profile.

Up to size 20 with end cutting teeth profile for plunging.

The wide teeth lands permit multiple re-grinding without losing the profile.

HSS-PM – For highest demands on metal removal rates.

Sizes 6M to 25M – **MID mills:** dimensions to **factory standard, which is between DIN 844 stub and DIN 844 long.**

Through-coolant: no

Tolerance nominal Ø: js12

No. of teeth Z: 4

Helix angle: 30°

Direction of infeed: horizontal, oblique and vertical

Shank: DIN 1835 B to h6

No. of teeth Z: 4

Flute length L_c : 38 mm

Overall length L: 104 mm

Shank Ø D_s : 20 mm

Corner chamfer width at 45°: 0.6 mm

Feed f_z for slot milling in steel < 750 N/mm²: 0.07 mm

Technical description

No. of teeth Z	4
Cutting edge Ø D_c	20 mm
Corner chamfer width at 45°	0.6 mm

Feed f_z for slot milling in steel < 750 N/mm ²	0.07 mm
Shank $\varnothing D_s$	20 mm
Overall length L	104 mm
Flute length L_c	38 mm
Direction of infeed	horizontal, oblique and vertical
Shank	DIN 1835 B to h6
Tolerance nominal \varnothing	js12
Helix angle	30°
Corner chamfer angle	45°
Coating	TiAlN
Tool material	HSS PM
Standard	DIN 844 B
Milling profile	NR
Through-coolant	no
Colour ring	without
Type of product	End / face mill

User data

	Suitability	V_c	ISO code
Aluminium (short chipping)	suitable only under restricted conditions	138 m/min	N
Steel < 500 N/mm ²	suitable	83 m/min	P
Steel < 750 N/mm ²	suitable	64 m/min	P
Steel < 900 N/mm ²	suitable	64 m/min	P
Steel < 1100 N/mm ²	suitable	37 m/min	P
Steel < 1400 N/mm ²	suitable only under restricted conditions	32 m/min	P
INOX < 900 N/mm ²	suitable	23 m/min	M
INOX > 900 N/mm ²	suitable only under restricted conditions	18 m/min	M

GG(G)	suitable only under restricted conditions	55 m/min	K
CuZn	suitable only under restricted conditions	110 m/min	N
Uni	suitable		
wet maximum	suitable		
dry	suitable		