

Garant
Roughing end mill with internal cooling, TiAlN, Ø k12 DC: 20mm

Order data

Order number	192910 20
GTIN	4045197108784
Item class	11W

Description
Version:

Relief ground fine pitch knuckle form profile. Centre cutting edge geometry for plunging. For the most demanding metal removal rates.

Advantage:

The coolant is fed directly **to the cutting edges**, resulting in **longer tool life** and **complete chip clearance**.

Technical description

No. of teeth Z	4
Corner chamfer width at 45°	0.5 mm
Cutting edge Ø D _c	20 mm
Shank Ø D _s	20 mm
Overall length L	104 mm
Flute length L _c	38 mm
Feed f _z for slot milling in steel < 1100 N/mm ²	0.048 mm
Direction of infeed	horizontal, oblique and vertical
Shank	DIN 1835 B to h6
Tolerance nominal Ø	k12
Helix angle	30 degrees
Corner chamfer angle	45 degrees

Coating	TiAlN
Tool material	HSS PM
Standard	DIN 844
Milling profile	HR
Spacing of the cutters	unequal spacing
Through-coolant	yes
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	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		