

Garant
GARANT Master Steel solid carbide roughing end mill HPC, TiAlN, Ø f8 DC: 12mm

Order data

Order number	203036 12
GTIN	4045197718884
Item class	11X

Description
Version:

For **roughing and finishing** up to $0.7 \times D$ into solid material **at very high feed rates** with smooth cutting action.

Advantage:

Optimised flute form, eccentric relief ground, wide chip space.

Technical description

Recess $\varnothing D_1$	11.6 mm
Corner chamfer width at 45°	0.24 mm
Overhang length L_1 incl. recess	46 mm
No. of teeth Z	4
Cutting edge $\varnothing D_c$	12 mm
Feed f_z for slot milling in steel $< 900 \text{ N/mm}^2$	0.07 mm
Feed f_z for side milling in steel $< 900 \text{ N/mm}^2$	0.09 mm
Shank $\varnothing D_s$	12 mm
Overall length L	93 mm
Flute length L_c	26 mm
Direction of infeed	horizontal, oblique and vertical
Shank	DIN 6535 HB to h6

Tolerance nominal \varnothing	f8
Helix angle	38 degrees
Corner chamfer angle	45 degrees
Series	Master Steel
Coating	TiAlN
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	N
Helix angle characteristic	unequal spacing
Spacing of the cutters	unequal spacing
Cutting width a_e for milling operation	0.25×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
Steel < 500 N/mm ²	suitable	260 m/min	P
Steel < 750 N/mm ²	suitable	240 m/min	P
Steel < 900 N/mm ²	suitable	190 m/min	P
Steel < 1100 N/mm ²	suitable	180 m/min	P
Steel < 1400 N/mm ²	suitable only under restricted conditions	150 m/min	P
INOX < 900 N/mm ²	suitable	80 m/min	M
INOX > 900 N/mm ²	suitable	70 m/min	M
GG(G)	suitable	250 m/min	K
Uni	suitable		

wet maximum	suitable
wet minimum	suitable only under restricted conditions
dry	suitable
Air	suitable