

Garant
Solid carbide roughing end mill ISO H55 HPC/TPC, TiSiN, Ø f8 DC: 12mm

Order data

Order number	202970 12
GTIN	4067263886303
Item class	11Z

Description
Version:

For machining **steels** in the transition range between the **ISO material groups P and H**. Specially developed for steel materials with **tensile strengths of 1000-1500 N/mm²** and for **hardened steel materials up to HRC 55**. **Micro-grain substrate** and coating are coordinated to achieve the **longest service life and process reliability**. **Soft cuts** due to 45° helix angle.

Technical description

No. of teeth Z	4
Helix angle	45 degrees
Overhang length L ₁ incl. recess	35 mm
Shank Ø D _s	12 mm
Tolerance nominal Ø	f8
Feed f _z for side milling in steel < 55 HRC	0.04 mm
Cutting edge Ø D _c	12 mm
Overall length L	83 mm
Shank	DIN 6535 HA to h6
Flute length L _c	26 mm
Recess Ø D ₁	11 mm
Direction of infeed	horizontal, oblique and vertical

Corner rounding r_v	0.3 mm
Feed rate f_z for slot milling in steel < 55 HRC	0.03 mm
Coating	TiSiN
Tool material	Solid carbide
Standard	Works standard
Type	H
Helix angle characteristic	unequal spacing
Spacing of the cutters	unequal spacing
Cutting width a_e for milling operation	Full slot cutting depth $1 \times D$
Cutting width a_e for milling operation	$0.1 \times D$
Cutting width a_e for milling operation	$0.15 \times D$ for side milling
Through-coolant	no
Machining strategy	HPC
Machining strategy	TPC
Colour ring	red
Type of product	End / face mill

User data

	Suitability	V_c	ISO code
Steel < 900 N/mm ²	suitable	160 m/min	P
Steel < 1100 N/mm ²	suitable	120 m/min	P
Steel < 1400 N/mm ²	suitable	115 m/min	P
Steel < 50 HRC	suitable	70 m/min	H
Steel < 55 HRC	suitable	60 m/min	H
Steel < 60 HRC	suitable only under restricted conditions	30 m/min	H
dry	suitable		
Air	suitable		

