

**Garant**
**GARANT Master Steel solid carbide finishing cutter HPC, TiAlN, Ø f8 DC: 12mm**

**Order data**

Order number	204012 12
GTIN	4045197886620
Item class	11X

**Description**
**Version:**

For **finishing operations**.

Special geometry for optimum chip evacuation.

Unequal spacing gives high **intrinsic stability and smooth cutting action**.

For **profile milling as a finishing operation**.

Suitable for machining titanium and titanium alloys.

**Note:**

$$a_{e\max} = 0.1 \times D$$

Can be reground from  $\varnothing D_c = 6$  mm.

**Technical description**

Shank $\varnothing D_s$	12 mm
Corner chamfer width at 45°	0.12 mm
Shank	DIN 6535 HA to h6
No. of teeth Z	7
Flute length $L_c$	26 mm
Overall length L	83 mm
Feed $f_z$ for side milling in steel < 900 N/mm <sup>2</sup>	0.1 mm
Direction of infeed	horizontal
Cutting edge $\varnothing D_c$	12 mm

Balance quality with shank	G 2.5 with HA
Tolerance nominal $\varnothing$	f8
Helix angle	45 degrees
Corner chamfer angle	45 degrees
Series	Master Steel
Coating	TiAlN
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	N
Spacing of the cutters	unequal spacing
Cutting width $a_e$ for milling operation	$0.1 \times D$ for side milling
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 <sup>2</sup>	suitable	360 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	340 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	300 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	290 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	200 m/min	P
INOX < 900 N/mm <sup>2</sup>	suitable	130 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	120 m/min	M
Ti > 850 N/mm <sup>2</sup>	suitable only under restricted conditions	100 m/min	S
GG(G)	suitable	300 m/min	K

wet maximum	suitable only under restricted conditions
wet minimum	suitable only under restricted conditions
dry	suitable only under restricted conditions
<del>Air</del> <b>Services</b>	suitable
Shank grinding Type HB	129100 HB