

## Garant

### GARANT Master TM plain shank thread mill with countersink 2×D, TiAlN, M: M10



#### Order data

Order number	139653 M10
GTIN	4045197957788
Item class	11D

#### Description

##### Version:

Solid carbide thread milling cutters **with irregular cutting edge spacing and an increased number of cutting edges**. Due to the **irregular cutting edge spacing** they achieve very **smooth running** and **long tool life**.

**Newly developed universal geometry** and **high-performance coating** for use across a wide spectrum of materials.

- **Significantly reduced vibration due to irregular cutting edge spacing.**
- **Increased number of cutting edges.**
- **New coating for optimum wear resistance.**
- **Corrected thread profile for avoidance of profile distortions.**

##### Advantage:

Incorporating a countersink profile for a 90° countersink and thread milling in a single operation.

##### Note:

HB and HE shanks are available at the same price as HA.

Order **HB** shank: with **No. 139653 + 129100 HB**.

Order **HE** shank: with **No. 139653 + 129100 HE**.

#### Technical description

Number of clamping slots	6
Thread pitch	1.5 mm
Overall length L	82 mm
Feed $f_z$ in steel < 750 N/mm <sup>2</sup>	0.075 mm

Through-coolant	yes
Shank $\varnothing D_s$	12 mm
Shank length $L_s$	45 mm
No. of teeth Z	6
Thread depth	20.25 mm
Thread size	M10
Nominal $\varnothing D_c$	8.1 mm
Flute length $L_c$	20.25 mm
Programming value for countersink $L_1$	21.45 mm
Neck $\varnothing D_1$	10.5 mm
Coating	TiAlN
Thread type	M
Thread type	M-LH
Flank angle	60 degrees
Tool material	Solid carbide
Thread standard	DIN 13
Shank	DIN 6535 HA to h6
Application for type of drilling	up to 2xD for blind holes
Application for type of drilling	up to 2xD for through holes
Spacing of the cutters	unequal spacing
Countersink angle	90 degrees
Shank tolerance	h6
Colour ring	green
Internal/external application	Indvendig
Series	Master TM
Type of product	thread milling cutter

## User data

	Suitability	$V_c$	ISO code
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Alu plastics	suitable	220 m/min	N
Aluminium (short chipping)	suitable	220 m/min	N
Alu > 10% Si	suitable	180 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	140 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	130 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	120 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	90 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	80 m/min	P
Steel < 55 HRC	suitable only under restricted conditions	45 m/min	H
TOOLOX 33	suitable	85 m/min	H
TOOLOX 44	suitable	50 m/min	H
INOX < 900 N/mm <sup>2</sup>	suitable	82 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	75 m/min	M
Ti > 850 N/mm <sup>2</sup>	suitable	50 m/min	S
GG(G)	suitable	120 m/min	K
CuZn	suitable	200 m/min	N
Uni	suitable		
wet maximum	suitable		
wet minimum	suitable		
Air	suitable		

### Services

Shank grinding Type HE	129100 HE
Shank grinding Type HB	129100 HB