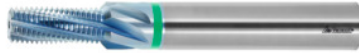


## Garant

### GARANT Master TM plain shank thread mill with countersink 2×D, TiAlN, UNF: 1/2-20



#### Order data

Order number	139728 1/2-20
GTIN	4062406058333
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.**
- **Corrected thread profile for avoidance of profile distortions.**
- **increased number of cutting edges**
- **new coating for optimum wear resistance**

##### Advantage:

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

##### Application:

For **UNF unified fine threads** ASME-B1.1.

##### Note:

Form HB and HE supplied at the same price as HA.

Form **HB**: order with **No. 139728 + 129100 HB**

Form **HE**: order with **No. 139728 + 129100 HE**

Thread type: UNF

Thread type: UNF-LH

No. of teeth Z: 6

Threads per inch: 20

Nominal  $\varnothing D_c$ : 10.9 mm

Flute length  $L_c$ : 25.99 mm

Shank length  $L_s$ : 45 mm

Overall length L: 94 mm

Shank  $\varnothing D_s$ : 14 mm

## Technical description

Overall length L	94 mm
Shank $\varnothing D_s$	14 mm
Thread pitch	1.27 mm
No. of teeth Z	6
Thread type	UNF
Thread type	UNF-LH
Thread $\varnothing$	12.7 mm
Threads per inch	20
Number of clamping slots	6
Shank length $L_s$	45 mm
Flute length $L_c$	25.99 mm
Feed $f_z$ in steel < 750 N/mm <sup>2</sup>	0.1 mm
Thread size	1/2-20 UNF
Nominal $\varnothing D_c$	10.9 mm
Programming value for countersink $L_1$	27.14 mm
Neck $\varnothing D_1$	13.2 mm
Series	Master TM
Coating	TiAlN
Flank angle	60°
Tool material	solid carbide
Shank	DIN 6535 HA with h6
Through-coolant	yes
Cutting direction	right-hand
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°
Shank tolerance	h6
Colour ring	green
Internal/external application	Internal
Type of product	thread milling cutter

### User data

	Suitability	V <sub>c</sub>	ISO code
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 < 50 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
<b>Services</b>	

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