

## Garant

### GARANT Master TM plain shank thread mill with countersink 2.5×D, TiAlN, M: M4



#### Order data

Order number	139654 M4
GTIN	4045197956903
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. 139654 + 129100 HB**.

Order **HE** shank: with **No. 139654 + 129100 HE**.

#### Technical description

No. of teeth Z	4
Thread depth	10.15 mm
Shank length L <sub>s</sub>	36 mm
Thread pitch	0.7 mm

Overall length L	58 mm
Through-coolant	yes
Shank $\varnothing D_s$	6 mm
Feed $f_z$ in steel < 750 N/mm <sup>2</sup>	0.02 mm
Number of clamping slots	4
Thread size	M4
Nominal $\varnothing D_c$	3.1 mm
Flute length $L_c$	10.15 mm
Programming value for countersink $L_1$	10.85 mm
Neck $\varnothing D_1$	4.5 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 2×D for blind holes
Application for type of drilling	up to 2.5×D 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	200 m/min	N
Aluminium (short chipping)	suitable	190 m/min	N
Alu > 10% Si	suitable	160 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	125 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	115 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	110 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	80 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	70 m/min	P
INOX < 900 N/mm <sup>2</sup>	suitable	75 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	70 m/min	M
Ti > 850 N/mm <sup>2</sup>	suitable	45 m/min	S
GG(G)	suitable	105 m/min	K
CuZn	suitable	175 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