

Garant**GARANT Master TM plain shank thread mill with countersink 1.5×D, AlTiN, M: M4****Order data**

Order number	139666 M4
GTIN	4067263126768
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.**
- **Latest-generation AlTiN-based HiPIMS coating.**
- **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. 139666 + 129100 HB**.

Order **HE** shank: with **No. 139666 + 129100 HE**.

Technical description

Thread size	M4
Thread pitch	0.7 mm
Thread Ø	4 mm
Through-coolant	yes

Nominal $\varnothing D_c$	3.1 mm
Feed f_z in steel $< 750 \text{ N/mm}^2$	0.02 mm
Programming value for countersink L_1	7.33 mm
No. of teeth Z	4
Flute length L_c	6.63 mm
Number of clamping slots	4
Overall length L	58 mm
Shank $\varnothing D_s$	6 mm
Neck $\varnothing D_1$	5 mm
Thread depth	6.63 mm
Shank length L_s	39.4 mm
Coating	AlTiN
Thread type	M-LH
Thread type	M
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 $1.5 \times D$ for through holes
Application for type of drilling	up to $1.5 \times D$ for blind holes
Spacing of the cutters	unequal spacing
Countersink angle	90 degrees
Shank tolerance	h6
Colour ring	green
Internal/external application	Internal
Series	Master TM
Type of product	thread milling cutter

User data

	Suitability	V _c	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 ²	suitable	140 m/min	P
Steel < 750 N/mm ²	suitable	130 m/min	P
Steel < 900 N/mm ²	suitable	120 m/min	P
Steel < 1100 N/mm ²	suitable	90 m/min	P
Steel < 1400 N/mm ²	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 ²	suitable	82 m/min	M
INOX > 900 N/mm ²	suitable	75 m/min	M
Ti > 850 N/mm ²	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 HB	129100 HB
Shank grinding Type HE	129100 HE