

**Garant**
**GARANT Master TM plain shank thread mill with countersink 2×D, TiAlN, M: M16**

**Order data**

Order number	139653 M16
GTIN	4045197957818
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:**

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

Form **HB**: order with **No. 139656 + 129100 HB**

Form **HE**: order with **No. 139656 + 129100 HE**

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Form **HE**: order with **No. 139653 + 129100 HE**

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Form **HE**: order with **No. 139654 + 129100 HE**.

Through-coolant: yes

No. of teeth Z: 6

Thread pitch: 2 mm

Nominal  $\varnothing D_c$ : 13.4 mm

Shank length  $L_s$ : 48 mm

Overall length L: 108 mm

Shank  $\varnothing D_s$ : 18 mm  
 maximum countersink  $\varnothing D_1$ : 16.5 mm

## Technical description

No. of teeth Z	6
Shank $\varnothing D_s$	18 mm
Number of clamping slots	6
Thread pitch	2 mm
Overall length L	108 mm
Through-coolant	yes
Thread depth	32 mm
Feed $f_z$ in steel < 750 N/mm <sup>2</sup>	0.11 mm
Programming value for countersink $l_1$	34.55 mm
Shank length $L_s$	48 mm
maximum countersink $\varnothing D_1$	16.5 mm
Thread size	M16
Nominal $\varnothing D_c$	13.4 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 and through holes
Spacing of the cutters	unequal spacing
Countersink angle	90 degrees
Shank tolerance	h6
Colour ring	green

Internal/external application	Indvendig
Series	GARANT Master TM
Type of product	thread milling cutter

**Services**

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