

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

**Order data**

|              |               |
|--------------|---------------|
| Order number | 139656 M4     |
| GTIN         | 4062406240929 |
| 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**

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

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

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

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

Through-coolant: yes

No. of teeth Z: 4

Thread pitch: 0.7 mm

Nominal Ø D<sub>c</sub>: 3.1 mm

Shank length L<sub>s</sub>: 36 mm

Overall length L: 58 mm

Shank  $\varnothing D_s$ : 6 mm  
maximum countersink  $\varnothing D_1$ : 4.5 mm

## Technical description

|                                            |                                                        |
|--------------------------------------------|--------------------------------------------------------|
| Thread depth                               | 8 mm                                                   |
| Thread pitch                               | 0.7 mm                                                 |
| Overall length L                           | 58 mm                                                  |
| Shank $\varnothing D_s$                    | 6 mm                                                   |
| Number of clamping slots                   | 4                                                      |
| Thread $\varnothing$                       | 4 mm                                                   |
| Feed $f_z$ in steel $< 750 \text{ N/mm}^2$ | 0.02 mm                                                |
| Shank length $L_s$                         | 36 mm                                                  |
| Thread size                                | M4                                                     |
| Through-coolant                            | yes                                                    |
| No. of teeth Z                             | 4                                                      |
| Programming value for countersink $l_1$    | 6.5 mm                                                 |
| maximum countersink $\varnothing D_1$      | 4.5 mm                                                 |
| Nominal $\varnothing D_c$                  | 3.1 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 $1.5 \times D$ 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 | Internal              |
| Series                        | GARANT Master TM      |
| Type of product               | thread milling cutter |

**Services**

|                        |           |
|------------------------|-----------|
| Shank grinding Type HE | 129100 HE |
| Shank grinding Type HB | 129100 HB |