

## Garant

### GARANT Master TM plain shank thread mill with countersink 2.5×D, AlTiN, MF: 4X0,5



#### Order data

|              |               |
|--------------|---------------|
| Order number | 139687 4X0,5  |
| GTIN         | 4067263126799 |
| 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.**
- **The latest generation of 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. 139687 + 129100 HB**

Order **HE** shank: with **No. 139687 + 129100 HE**

#### Technical description

|                          |          |
|--------------------------|----------|
| Flute length $L_c$       | 10.25 mm |
| Thread size              | M4×0.5   |
| Through-coolant          | yes      |
| Number of clamping slots | 4        |

|  |  |
|--|--|
| Thread pitch                               | 0.5 mm                                 |
| No. of teeth Z                             | 4                                      |
| Neck $\varnothing D_1$                     | 4.5 mm                                 |
| Nominal $\varnothing D_c$                  | 3.29 mm                                |
| Shank length $L_s$                         | 36.2 mm                                |
| Overall length L                           | 58 mm                                  |
| Shank $\varnothing D_s$                    | 6 mm                                   |
| Programming value for countersink $L_1$    | 10.86 mm                               |
| Thread depth                               | 10.25 mm                               |
| Feed $f_z$ in steel $< 750 \text{ N/mm}^2$ | 0.02 mm                                |
| Coating                                    | AlTiN                                  |
| Thread type                                | MF                                     |
| Thread type                                | MF-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 $2 \times D$ for blind holes     |
| Application for type of drilling           | up to $2.5 \times D$ for through holes |
| Spacing of the cutters                     | unequal spacing                        |
| Countersink angle                          | 90 degrees                             |
| 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    | 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 HB | 129100 HB |
| Shank grinding Type HE | 129100 HE |