

**Garant****GARANT Master TM solid carbide three-profile thread mill 3×D, AlTiN, M: M6****Order data**

|              |               |
|--------------|---------------|
| Order number | 139630 M6     |
| GTIN         | 4067263140061 |
| 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 cutting action** 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.**

**Axial cooling grooves on the shank.**

**Advantage:**

Significantly **less radial pressure** than with multi-tooth thread mills.

**Note:**

HB and HE shanks are available at the same price as HA.

**HB shank:** order with No. **139630 + 129100 HB**.

**HE shank:** order with No. **139630 + 129100 HE**.

**Technical description**

|                                              |         |
|----------------------------------------------|---------|
| No. of teeth Z                               | 6       |
| Thread size                                  | M6      |
| Feed $f_z$ in steel < 1400 N/mm <sup>2</sup> | 0.04 mm |
| Shank Ø D <sub>s</sub>                       | 6 mm    |
| Nominal Ø D <sub>c</sub>                     | 4.7 mm  |

## Data sheet

|                                  |                             |
|----------------------------------|-----------------------------|
| Feed $f_z$ in CRP                | 0.05 mm                     |
| Shank length $L_s$               | 36.9 mm                     |
| Flute length $L_c$               | 3 mm                        |
| Overall length $L$               | 58 mm                       |
| Thread pitch                     | 1 mm                        |
| Number of clamping slots         | 6                           |
| Through-coolant                  | yes                         |
| Overhang $L_1$                   | 18.5 mm                     |
| Thread depth                     | 18 mm                       |
| Thread profile                   | Full profile                |
| Coating                          | AlTiN                       |
| Thread type                      | M                           |
| Thread type                      | M-LH                        |
| Thread type                      | EG-M                        |
| Thread type                      | EG-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 3×D for blind holes   |
| Application for type of drilling | up to 3×D for through holes |
| Spacing of the cutters           | unequal spacing             |
| Shank tolerance                  | h6                          |
| Colour ring                      | green                       |
| Internal/external application    | Internal                    |
| Series                           | Master TM                   |
| Type of product                  | thread milling cutter       |

## User data

## Data sheet

|                                | <b>Suitability</b>                        | <b>V<sub>c</sub></b> | <b>ISO code</b> |
|--------------------------------|-------------------------------------------|----------------------|-----------------|
| 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               |
| Steel < 55 HRC                 | suitable                                  | 45 m/min             | H               |
| Steel < 60 HRC                 | suitable only under restricted conditions | 35 m/min             | H               |
| 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               |
| CuZn                           | suitable                                  | 175 m/min            | N               |
| GRP                            | suitable                                  | 100 m/min            | N               |
| CRP                            | suitable                                  | 100 m/min            | N               |
| Graphite                       | suitable                                  | 150 m/min            | N               |
| Uni                            | suitable                                  |                      |                 |
| wet maximum                    | suitable                                  |                      |                 |
| wet minimum                    | suitable                                  |                      |                 |
| Air                            | suitable                                  |                      |                 |