

**Garant****GARANT Master TM solid carbide single profile thread mill 2×D, AlTiN, M: M1,4****Order data**

|              |               |
|--------------|---------------|
| Order number | 139620 M1,4   |
| GTIN         | 4067263139805 |
| 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.**

**Parallel coolant channels.****Advantage:**

Significantly **less radial pressure** than with multi-tooth thread mills. The tool can also be used for additional thread profiles (UN; UN-LH) **for various pitches and diameters**. See overview for possible threads.

**Note:**

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

**HB shank:** order with No. **139620 + 129100 HB**.

**HE shank:** order with No. **139620 + 129100 HE**.

**Technical description**

|                                              |          |
|----------------------------------------------|----------|
| Feed $f_z$ in steel < 1400 N/mm <sup>2</sup> | 0.008 mm |
| Shank length $L_s$                           | 42 mm    |
| No. of teeth Z                               | 4        |

## Data sheet

|                                  |                             |
|----------------------------------|-----------------------------|
| Through-coolant                  | yes                         |
| Thread depth                     | 2.8 mm                      |
| Overall length L                 | 58 mm                       |
| Flute length $L_c$               | 0.39 mm                     |
| Feed $f_z$ in CRP                | 0.004 mm                    |
| Shank $\varnothing D_s$          | 6 mm                        |
| Thread size                      | M1.4                        |
| Nominal $\varnothing D_c$        | 1.03 mm                     |
| Number of clamping slots         | 4                           |
| Overhang $L_1$                   | 3 mm                        |
| Thread pitch range               | 0.14 - 0.3 mm               |
| Thread profile                   | Partial profile             |
| Coating                          | AlTiN                       |
| Thread type                      | M-LH                        |
| Thread type                      | M                           |
| Thread type                      | UN                          |
| Thread type                      | UN-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   |
| Application for type of drilling | up to 2xD 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

|                                | 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 <sup>2</sup>  | suitable    | 140 m/min | P        |
| Steel < 750 N/mm <sup>2</sup>  | suitable    | 130 m/min | P        |
| Steel < 900 N/mm <sup>2</sup>  | suitable    | 120 m/min | P        |
| Steel < 1100 N/mm <sup>2</sup> | suitable    | 90 m/min  | P        |
| Steel < 1400 N/mm <sup>2</sup> | suitable    | 80 m/min  | P        |
| Steel < 55 HRC                 | suitable    | 45 m/min  | H        |
| Steel < 60 HRC                 | suitable    | 35 m/min  | H        |
| INOX < 900 N/mm <sup>2</sup>   | suitable    | 82 m/min  | M        |
| INOX > 900 N/mm <sup>2</sup>   | suitable    | 75 m/min  | M        |
| Ti > 850 N/mm <sup>2</sup>     | suitable    | 50 m/min  | S        |
| CuZn                           | suitable    | 200 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    |           |          |