

**Garant****GARANT Master TM plain shank thread mill, AlTiN, G: G1/2****Order data**

|              |               |
|--------------|---------------|
| Order number | 139706 G1/2   |
| GTIN         | 4067263128922 |
| 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.**

**Application:**

For **Whitworth parallel pipe threads** DIN-ISO 228/1 (threads that do not form a seal within the connections). **Suitable for internal and external threads.**

**Note:**

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

Order **HB** shank: with **No. 139706 + 129100 HB**.

Order **HE** shank: with **No. 139706 + 129100 HE**.

**Technical description**

|                             |           |
|-----------------------------|-----------|
| Series                      | Master TM |
| Shank Ø D <sub>s</sub>      | 16 mm     |
| Flute length L <sub>c</sub> | 42.63 mm  |
| Threads per inch            | 14        |

|   |                             |
|---|-----------------------------|
| Nominal $\varnothing D_c$                   | 15.95 mm                    |
| Thread pitch                                | 1.814 mm                    |
| No. of teeth Z                              | 6                           |
| Overall length L                            | 106 mm                      |
| Shank length $L_s$                          | 48.1 mm                     |
| Thread depth                                | 42.63 mm                    |
| For use with external threads               | up to 2xD for bolt threads  |
| Application for type of drilling            | up to 2xD for blind holes   |
| Application for type of drilling            | up to 2xD for through holes |
| Thread size                                 | G1/2                        |
| Number of clamping slots                    | 6                           |
| Feed $f_z$ in steel < 750 N/mm <sup>2</sup> | 0.13 mm                     |
| Coating                                     | AlTiN                       |
| Thread type                                 | BSP                         |
| Thread type                                 | G                           |
| Flank angle                                 | 55 degrees                  |
| Tool material                               | Solid carbide               |
| Shank                                       | DIN 6535 HA to h6           |
| Through-coolant                             | yes                         |
| Spacing of the cutters                      | unequal spacing             |
| Colour ring                                 | green                       |
| Internal/external application               | Internal and external       |
| 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 < 50 HRC                 | suitable only under restricted conditions | 45 m/min  | H |
| TOOLOX 33                      | suitable                                  | 85 m/min  | H |
| TOOLOX 44                      | suitable                                  | 50 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 |
| GG(G)                          | suitable                                  | 120 m/min | K |
| CuZn                           | suitable                                  | 200 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 |