

**Garant**
**GARANT Master TM plain shank thread mill 2xD, AlTiN, UNF: 1-12**

**Order data**

|              |               |
|--------------|---------------|
| Order number | 139737 1-12   |
| GTIN         | 4067263129240 |
| 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.**
- **increased number of cutting edges.**
- **new coating for optimum wear resistance.**

**Application:**

For **UNF unified fine threads** ASME-B1.1.

**Note:**

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

Order **HB** shank: with **No. 139737 + 129100 HB**

Order **HE** shank: with **No. 139737 + 129100 HE**

**Technical description**

|                             |         |
|-----------------------------|---------|
| Shank Ø D <sub>s</sub>      | 20 mm   |
| Thread type                 | UNF     |
| Thread type                 | UNF-LH  |
| Shank length L <sub>s</sub> | 51.5 mm |

|                                             |                             |
|---------------------------------------------|-----------------------------|
| Thread Ø                                    | 25.4 mm                     |
| Feed $f_z$ in steel < 750 N/mm <sup>2</sup> | 0.15 mm                     |
| Thread pitch                                | 2.117 mm                    |
| Flute length $L_c$                          | 51.77 mm                    |
| Thread size                                 | 1-12 UNF                    |
| Overall length L                            | 120 mm                      |
| Threads per inch                            | 12                          |
| No. of teeth Z                              | 6                           |
| Number of clamping slots                    | 6                           |
| Nominal Ø $D_c$                             | 19.95 mm                    |
| Series                                      | Master TM                   |
| Coating                                     | AlTiN                       |
| Flank angle                                 | 60 degrees                  |
| Tool material                               | Solid carbide               |
| Shank                                       | DIN 6535 HA to h6           |
| Through-coolant                             | yes                         |
| Cutting direction                           | right-hand                  |
| Application for type of drilling            | up to 2×D for through holes |
| Application for type of drilling            | up to 2×D for blind holes   |
| Spacing of the cutters                      | unequal spacing             |
| Shank tolerance                             | h6                          |
| Colour ring                                 | green                       |
| Internal/external application               | Internal                    |
| 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 |