

**Garant**
**GARANT Master TM plain shank thread mill with countersink 2×D, AlTiN, UNF: 5/8-18**

**Order data**

|              |               |
|--------------|---------------|
| Order number | 139738 5/8-18 |
| GTIN         | 4067263129318 |
| 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.**
- **Corrected thread profile for avoidance of profile distortions.**
- **Increased number of cutting edges.**
- **The latest generation of AlTiN-based HiPIMS coating.**
- **increased number of cutting edges**
- **new coating for optimum wear resistance**

**Advantage:**

Incorporating a countersink profile for a 90° countersink and thread milling in a single operation.

**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. 139738 + 129100 HB**

Order **HE** shank: with **No. 139738 + 129100 HE**

**Technical description**

|   |         |
|---|---------|
| Feed $f_z$ in steel < 750 N/mm <sup>2</sup> | 0.11 mm |
|---|---------|

|   |                             |
|---|-----------------------------|
| Overall length L                        | 108 mm                      |
| Thread pitch                            | 1.411 mm                    |
| Thread type                             | UNF-LH                      |
| Thread type                             | UNF                         |
| Shank $\varnothing D_s$                 | 18 mm                       |
| No. of teeth Z                          | 6                           |
| Threads per inch                        | 18                          |
| Thread size                             | 5/8-18 UNF                  |
| Nominal $\varnothing D_c$               | 13.9 mm                     |
| Programming value for countersink $L_1$ | 34.35 mm                    |
| Number of clamping slots                | 6                           |
| Flute length $L_c$                      | 33.11 mm                    |
| Shank length $L_s$                      | 56.3 mm                     |
| Thread $\varnothing$                    | 15.86 mm                    |
| Neck $\varnothing D_1$                  | 17 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 2xD for blind holes   |
| Application for type of drilling        | up to 2xD for through holes |
| Spacing of the cutters                  | unequal spacing             |
| Countersink angle                       | 90 degrees                  |
| Shank tolerance                         | h6                          |
| Colour ring                             | green                       |
| Internal/external application           | Internal                    |

Type of product

thread milling cutter

**User data**

|                                | <b>Suitability</b>                        | <b>V<sub>c</sub></b> | <b>ISO code</b> |
|--------------------------------|---|----------------------|-----------------|
| 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

