

## Garant

### GARANT Master TM plain shank thread mill with countersink 2.5×D, TiAlN, MF: 5X0,5



#### Order data

|              |               |
|--------------|---------------|
| Order number | 139683 5X0,5  |
| GTIN         | 4045197957993 |
| 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.**
- **New coating for optimum wear resistance.**
- **Corrected thread profile for avoidance of profile distortions.**

##### Advantage:

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

##### Note:

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

Order **HB** shank: with **No. 139683 + 129100 HB**

Order **HE** shank: with **No. 139683 + 129100 HE**

#### Technical description

|   |          |
|---|----------|
| Feed $f_z$ in steel < 750 N/mm <sup>2</sup> | 0.035 mm |
| Number of clamping slots                    | 4        |
| Thread depth                                | 13.25 mm |
| Overall length L                            | 64 mm    |

|   |                               |
|---|-------------------------------|
| Shank length $L_s$                      | 36 mm                         |
| No. of teeth $Z$                        | 4                             |
| Thread pitch                            | 0.5 mm                        |
| Through-coolant                         | yes                           |
| Shank $\varnothing D_s$                 | 6 mm                          |
| Thread size                             | M5×0.5                        |
| Nominal $\varnothing D_c$               | 4.1 mm                        |
| Flute length $L_c$                      | 13.25 mm                      |
| Programming value for countersink $L_1$ | 13.95 mm                      |
| Neck $\varnothing D_1$                  | 5.5 mm                        |
| Coating                                 | TiAlN                         |
| Thread type                             | MF                            |
| Thread type                             | MF-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 2×D for blind holes     |
| Application for type of drilling        | up to 2.5×D for through holes |
| Spacing of the cutters                  | unequal spacing               |
| Countersink angle                       | 90 degrees                    |
| 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    | 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 |
| 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 |
| GG(G)                          | suitable | 105 m/min | K |
| CuZn                           | suitable | 175 m/min | N |
| Uni                            | suitable |           |   |
| wet maximum                    | suitable |           |   |
| wet minimum                    | suitable |           |   |
| Air                            | suitable |           |   |

### Services

|                        |           |
|------------------------|-----------|
| Shank grinding Type HE | 129100 HE |
| Shank grinding Type HB | 129100 HB |