

Garant

GARANT Master TM plain shank thread mill with countersink 1.5×D, AlTiN, M: M12



Order data

| | |
|--------------|---------------|
| Order number | 139666 M12 |
| GTIN | 4067263128571 |
| 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.**
- **Latest-generation AlTiN-based HiPIMS coating.**
- **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. 139666 + 129100 HB**.

Order **HE** shank: with **No. 139666 + 129100 HE**.

Technical description

| | |
|--------------------------|---------|
| Shank $\varnothing D_s$ | 14 mm |
| Thread pitch | 1.75 mm |
| Number of clamping slots | 6 |
| Thread size | M12 |

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|---|-------------------------------|
| Feed f_z in steel < 750 N/mm ² | 0.09 mm |
| Neck $\varnothing D_1$ | 12.5 mm |
| Thread \varnothing | 12 mm |
| Flute length L_c | 18.32 mm |
| Nominal $\varnothing D_c$ | 9.8 mm |
| Thread depth | 18.32 mm |
| Shank length L_s | 58.1 mm |
| Programming value for countersink L_1 | 19.67 mm |
| Overall length L | 94 mm |
| Through-coolant | yes |
| No. of teeth Z | 6 |
| Coating | AlTiN |
| Thread type | M-LH |
| Thread type | M |
| 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 1.5×D for through holes |
| Application for type of drilling | up to 1.5×D for blind holes |
| Spacing of the cutters | unequal spacing |
| Countersink angle | 90 degrees |
| 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 ² | suitable | 140 m/min | P |
| Steel < 750 N/mm ² | suitable | 130 m/min | P |
| Steel < 900 N/mm ² | suitable | 120 m/min | P |
| Steel < 1100 N/mm ² | suitable | 90 m/min | P |
| Steel < 1400 N/mm ² | suitable | 80 m/min | P |
| Steel < 55 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 ² | suitable | 82 m/min | M |
| INOX > 900 N/mm ² | suitable | 75 m/min | M |
| Ti > 850 N/mm ² | 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

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