

Garant**GARANT Master Steel HT high-precision countersink with unequal spacing 90°, TiAlN, External Ø Dc: 10mm****Order data**

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|--------------|---------------|
| Order number | 150350 10 |
| GTIN | 4067263125303 |
| Item class | 15B |

Description**Version:**

Countersinks with 3 convex unequally spaced cutting edges for chatter-free countersinking and deburring. Robust design and special geometry with variable pitch of the spiral cutting edges for the highest demands – even in difficult-to-machine materials such as Toolox 44 and Hardox 500. Significantly reduced radial and axial forces. Manufactured with narrower production tolerances than specified by DIN335-C.

Advantage:

High self-guidance and stability due to the convex cutting edge geometry. Chatter-free running for excellent results with long tool life at the same time.

Application:

High-precision countersinks for production of exactly round 90° countersunk surfaces in steel, cast iron and materials that are challenging to machine. Exceptionally well suited for use on hand-held power drills and single-pillar drilling machines.

Technical description

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|---------------------------------------------------|-------|
| Overall length L | 50 mm |
| Number of cutting edges Z | 3 |
| for countersunk screws ISO 2009, 2010, 7046, 7047 | M5 |
| External Ø | 10 mm |
| Shank Ø D _s | 6 mm |

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|------------------------------------------|-------------------------------|
| smallest countersink Ø for holes from | 3 mm |
| Feed f in steel < 1400 N/mm ² | 0.08 mm/rev. |
| Coating | TiAlN |
| Countersink tip angle | 90 degrees |
| Tool material | HSS E |
| Spacing of the countersink cutting edges | unequal spacing |
| Standard | DIN 335 C |
| Shank | Plain shank with h9 |
| Through-coolant | no |
| Colour ring | red |
| Series | Master Steel |
| Type of product | Stepped drill and countersink |

User data

| | Suitability | V _c | ISO code |
|-------------------------------------|-------------------------------------------|----------------|----------|
| Aluminium (short chipping) | suitable only under restricted conditions | 72 m/min | N |
| Alu > 10% Si | suitable only under restricted conditions | 58 m/min | N |
| Steel < 500 N/mm ² | suitable | 42 m/min | P |
| Steel < 750 N/mm ² | suitable | 35 m/min | P |
| Steel < 900 N/mm ² | suitable | 31 m/min | P |
| Steel < 1100 N/mm ² | suitable | 19 m/min | P |
| Steel < 1400 N/mm ² | suitable | 15 m/min | P |
| TOOLOX 33 | suitable | 14 m/min | H |
| TOOLOX 44 | suitable | 13 m/min | H |
| HARDOX 500 < 1600 N/mm ² | suitable | 10 m/min | H |
| INOX < 900 N/mm ² | suitable only under restricted conditions | 17 m/min | M |

Data sheet

| | | | |
|------------------------------|-------------------------------------------|----------|---|
| INOX > 900 N/mm ² | suitable only under restricted conditions | 13 m/min | M |
| Ti > 850 N/mm ² | suitable only under restricted conditions | 10 m/min | S |
| GG(G) | suitable | 29 m/min | K |
| Oil | suitable only under restricted conditions | | |
| wet maximum | suitable | | |
| dry | suitable only under restricted conditions | | |