

Garant

GARANT Master Steel MICRO solid carbide pilot drill, plain shank DIN 6535 HA 5xD, AlCrN, Ø DC: 2,4 mm



Order data

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|--------------|---------------|
| Order number | 121223 2,4 |
| GTIN | 4062406580094 |
| Item class | 10F |

Description

Version:

High-performance micro-drill for general-purpose use on material, focussing on steel processing. Maximum process reliability due to **exactly matched tools within the overall system** and **expanded guide chamfer**. Drilling of very small diameters down to the maximum depth after creating a pilot hole. **Optimum compromise between core diameter and flute size for optimum chip evacuation** – even with long-chipping materials. The **increased metal removal rates and longer tool life** ensure an economical drilling process, even with very small hole diameters combined with a large L/D ratio.

Note:

For reliable use of the micro-drills from 8xD, a **pilot hole of at least 4xD** is required using the micro-pilot drill 121223. For vertical machining and flat workpiece surfaces, a pilot hole can be dispensed with from $D_c = \varnothing 1 \text{ mm}$ up to a length of $12 \times D$. Please always ensure that the **pilot hole is free from chips** before using the subsequent drilling tool. We recommend setting a 90° counterbore with a suitable NC spotting drill after the pilot hole has been completed. For **through holes**, reduce the feed rate of the tool by 50% before exiting the hole. Long-chipping materials may require **chips to be evacuated** in steps of $3 \times D$ each by moving the drill back slightly at pilot hole depth. Please make sure that you use a suitable **tool clamping device** (shrink-fit chuck, hydraulic clamping chuck) with a radial run-out of less than 0.003 mm, a sufficiently high **coolant pressure** (at least 30 bar), as well as sufficiently fine **filtration** of the cooling medium ($D_c < \varnothing 2 \text{ mm}$ with filter $\leq 0.010 \text{ mm}$; $D_c < \varnothing 3 \text{ mm}$ filter $\leq 0.020 \text{ mm}$). The specified L/D ratio gives the **minimum achievable depth of hole** with the respective micro-drill. Flute length $L_c = L_2 + 1.5 \times D_c$.

Standard: Manufacturer's standard

Tolerance nominal \varnothing : m6

Number of cutting edges Z: 2

Tolerance nominal \varnothing : m6

recommended maximum drilling depth L_2 : 13.2 mm

Overall length L: 48 mm

Shank $\varnothing D_s$: 3 mm

Feed f in steel < 1100 N/mm²: 0.095 mm/rev.

Feed f in stainless steel < 900 N/mm²: 0.06 mm/rev.

Technical description

| | |
|---|-------------------------|
| Nominal $\varnothing D_c$ | 2.4 mm |
| Overall length L | 48 mm |
| recommended maximum drilling depth L ₂ | 13.2 mm |
| Feed f in steel < 1100 N/mm ² | 0.095 mm/rev. |
| Tolerance nominal \varnothing | m6 |
| Feed f in stainless steel < 900 N/mm ² | 0.06 mm/rev. |
| Number of cutting edges Z | 2 |
| Flute length L _c | 16.8 mm |
| Standard | Manufacturer's standard |
| Shank $\varnothing D_s$ | 3 mm |
| Series | GARANT Master Steel |
| Coating | AlCrN |
| Tool material | Solid carbide |
| Drill depth up to | 5×D |
| Point angle | 135 degrees |
| Shank | Parallel shank to h6 |
| Through-coolant | yes, with 40 bar |
| Machining strategy | HPC |
| Semi-Standard | yes |
| Colour ring | green |
| Type of product | Jobber drill |