GARANT Master Steel MICRO solid carbide drill, plain shank DIN 6535 HA 8×D, AlCrN, Ø DC m7: 2,8 mm

Order data

Order number	121224 2,8
GTIN	4062406580483
Item class	10F

Description

Version:
High-performance micro-drill for universal material use, 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 process reliability when using micro-drills from 8×D, a **pilot hole** of **at least 4×D** is required using the micro-pilot drill 121223. For vertical machining and flat workpiece surfaces, a pilot hole can be dispensed with from $D_C = Ø$ 1 mm up to a length of 12×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×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 ($D_C <Ø$ 2 mm with filter ≤ 0.010 mm; $D_C <Ø$ 3 mm filter ≤ 0.020 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 Ø: h6
Number of cutting edges Z: 2
Tolerance nominal Ø: h6
recommended maximum drilling depth L_2: 23.8 mm

Overall length L: 59 mm
Shank Ø D_s: 3 mm
Feed f in steel < 1100 N/mm^2: 0.115 mm/rev.
Feed f in stainless steel < 900 N/mm^2: 0.08 mm/rev.

Technical description

Shank Ø D_s	3 mm
Tolerance nominal Ø	h6
Overall length L	59 mm
Feed f in stainless steel < 900 N/mm^2	0.08 mm/rev.
Nominal Ø D_C	2.8 mm
Flute length L_c	28 mm
Number of cutting edges Z	2
Feed f in steel < 1100 N/mm^2	0.115 mm/rev.
recommended maximum drilling depth L_2	23.8 mm
Standard	Manufacturer’s standard
Series	GARANT Master Steel
Coating	AlCrN
Tool material	Solid carbide
Drill depth up to	8×D
Point angle	128 degrees
Shank	Parallel shank to h6
Through-coolant	yes, with 25 bar
Machining strategy	HPC
Pilot drill required	yes, pilot drill
Semi-Standard	yes
Colour ring	green
Type of product	Jobber drill