

Garant**GARANT Master Steel solid carbide high-performance drill, plain shank DIN 6535 HB, TiAlN, Ø DC h7: 13mm****Order data**

Order number	123241 13
GTIN	4069515031622
Item class	11E

Description**Version:**

Robust drill design and optimised special point geometry for the **best possible chip formation and reliable chip breakage** with **higher feed rates at the same time**. **Advanced micro-geometry, convex** cutting edge and **conical profile grinding** to provide additional stability for the main cutting edge. **Optimised flute geometry and patented face geometry** for **reliable chip evacuation** in steel materials and cast material. **High-performance coating** of the latest generation.

Note:

Flute length $L_c = L_2 + 1.5 \times D_c$.

For process reliability when using the 12xD drill, an initial centre drilling with No. 121068 – 121130 is recommended.

Technical description

Nominal Ø D_c	13 mm
Flute length L_c	182 mm
Standard	Works standard
Tolerance nominal Ø	h7
Number of cutting edges Z	2
Shank Ø D_s	14 mm
recommended maximum drilling depth L_2	162.5 mm
Overall length L	230 mm

Data sheet

Feed f in steel < 1100 N/mm ²	0.31 mm/rev.
Series	Master Steel
Coating	TiAlN
Tool material	Solid carbide
Version	12xD
Point angle	135 degrees
Shank	DIN 6535 HB to h6
Through-coolant	yes, with 25 bar
Machining strategy	HPC
Semi-Standard	yes
Colour ring	green
Type of product	Jobber drill

User data

	Suitability	V _c	ISO code
Steel < 500 N/mm ²	suitable	130 m/min	P
Steel < 750 N/mm ²	suitable	120 m/min	P
Steel < 900 N/mm ²	suitable	110 m/min	P
Steel < 1100 N/mm ²	suitable	100 m/min	P
Steel < 1400 N/mm ²	suitable	80 m/min	P
GG(G)	suitable	95 m/min	K
Uni	suitable		
wet maximum	suitable		
wet minimum	suitable		
Air	suitable		