

**Garant**
**GARANT Master Steel DEEP solid carbide deep hole drill, plain shank DIN 6535 HA 16×D, TiAlN, Ø DC: 4mm**

**Order data**

Order number	123888 4
GTIN	4062406267650
Item class	10E

**Description**
**Version:**

**Excellent chip evacuation** due to the unequal helical pitch of the flutes, guide rings and additional guide chamfers for very high precision when drilling. **Maximum process reliability** due to exactly matching tools within the overall system. Drilling up to the maximum depth without a pilot drill. **Significantly increased tool stability** due to the substantially strengthened core. **Increased metal removal rates** and **outstanding tool lives** lead to an economical high-end drilling process.

**Note:**

For process reliability when using the 16×D deep-hole drill, initial centre drilling with No. 121068 – 121121 or a pilot hole of at least 4×D with pilot drill No. 122736 is necessary. For deep holes greater than 20×D, a pilot hole to the maximum drilling depth with pilot drill No. 122736 is absolutely essential. The generation of a pilot hole improves process reliability. **The specified L/D ratio gives the minimum achievable depth of hole with the respective deep-hole drill.** Flute length  $L_c = L_2 + 1.5 \times D_c$ .

**Technical description**

Nominal Ø $D_c$	4 mm
recommended maximum drilling depth $L_2$	70 mm
Number of cutting edges Z	2
Tolerance nominal Ø	j6
Overall length L	118 mm
Shank Ø $D_s$	6 mm

Standard	Manufacturer's standard
Flute length $L_c$	76 mm
Feed $f$ in steel $< 900 \text{ N/mm}^2$	0.09 mm/rev.
Series	Master Steel
Coating	TiAlN
Tool material	Solid carbide
Version	16xD
Point angle	138 degrees
Shank	DIN 6535 HA to h6
Through-coolant	yes, with 40 bar
Machining strategy	HPC
Pilot drill required	yes, pilot drill
Colour ring	green
Type of product	Jobber drill

## User data

	Suitability	$V_c$	ISO code
Steel $< 500 \text{ N/mm}^2$	suitable only under restricted conditions	125 m/min	P
Steel $< 750 \text{ N/mm}^2$	suitable	115 m/min	P
Steel $< 900 \text{ N/mm}^2$	suitable only under restricted conditions	110 m/min	P
Steel $< 1100 \text{ N/mm}^2$	suitable	110 m/min	P
Steel $< 1400 \text{ N/mm}^2$	suitable	90 m/min	P
INOX $< 900 \text{ N/mm}^2$	suitable	65 m/min	M
INOX $> 900 \text{ N/mm}^2$	suitable only under restricted conditions	60 m/min	M
Ti $> 850 \text{ N/mm}^2$	suitable only under restricted conditions	30 m/min	S

GG(G)	suitable only under restricted conditions	115 m/min	K
Uni	suitable		
wet maximum	suitable only under restricted conditions		
wet minimum	suitable only under restricted conditions		