

## Garant

### GARANT Master Steel DEEP solid carbide deep hole drill, plain shank DIN 6535 HA 16×D, TiAlN, Ø DC: 4,5mm



#### Order data

Order number	123888 4,5
GTIN	4062406267681
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

Number of cutting edges Z	2
Tolerance nominal Ø	j6
Nominal Ø D <sub>c</sub>	4.5 mm
Standard	Manufacturer's standard
Overall length L	126 mm
Shank Ø D <sub>s</sub>	6 mm

Feed f in steel < 900 N/mm <sup>2</sup>	0.11 mm/rev.
recommended maximum drilling depth L <sub>2</sub>	77.3 mm
Flute length L <sub>c</sub>	84 mm
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 <sub>c</sub>	ISO code
Steel < 500 N/mm <sup>2</sup>	suitable only under restricted conditions	125 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	115 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable only under restricted conditions	110 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	110 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	90 m/min	P
INOX < 900 N/mm <sup>2</sup>	suitable	65 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable only under restricted conditions	60 m/min	M
Ti > 850 N/mm <sup>2</sup>	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		