

**Garant**
**Solid carbide HPC deep hole drill plain shank DIN 6535 HA 20×D, TiAlN, Ø DC h7: 4,5mm**

**Order data**

Order number	123690 4,5
GTIN	4045197263575
Item class	11E

**Description**
**Version:**

Spiral fluted, with **4 guide chamfers** and internal cooling channels. New generation of high performance deep hole drills in the HPC range.

**With 135° point angle** and special **h7 cutting edge tolerance** for optimum generation of a deep hole.

**High roundness and alignment accuracy of the deep hole.**

**Note:**

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

For process reliability when using the 16×D deep hole drill, an initial centre drilling with No. 121068 – 121121 or 4×D pilot drilling operation 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.** See also pages 140/141.

**Technical description**

Flute length $L_c$	110 mm
Feed $f$ in steel < 900 N/mm <sup>2</sup>	0.1 mm/rev.
Nominal $\varnothing D_c$	4.5 mm
Number of cutting edges $Z$	2
Tolerance nominal $\varnothing$	h7
Shank $\varnothing D_s$	6 mm
Overall length $L$	160 mm

Standard	Manufacturer's standard
recommended maximum drilling depth L <sub>2</sub>	103.3 mm
Coating	TiAlN
Tool material	Solid carbide
Version	20xD
Point angle	135 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	105 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	90 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	90 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	90 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	70 m/min	P
INOX < 900 N/mm <sup>2</sup>	suitable	50 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable only under restricted conditions	45 m/min	M
GG(G)	suitable	95 m/min	K
Uni	suitable		
wet maximum	suitable		