

**Garant**
**Jobber drill HSS-E-PM HPC, TiAlN, Ø DC h8: 4,5mm**

**Order data**

Order number	114610 4,5
GTIN	4045197856296
Item class	11B

**Description**
**Version:**

**High-performance HPC twist drills** for high-alloy and high tensile materials. Particularly strong due to **strengthened core and a parabolic flute profile**. Point geometry with rake angle correction. Precise concentricity for exact holes.

With form S point.

**Recommendation:**
**Maximum drilling depth:**

$$L_2 = L_c - 1.5 \times D_c.$$

**Technical description**

recommended maximum drilling depth $L_2$	40.3 mm
Shank $\varnothing D_s$	4.5 mm
Flute length $L_c$	47 mm
Number of cutting edges Z	2
Overall length L	80 mm
Feed f in steel < 900 N/mm <sup>2</sup>	0.05 mm/rev.
Nominal $\varnothing D_c$	4.5 mm
Tolerance nominal $\varnothing$	h8
Standard	DIN 338
Point angle	130 degrees
Shank	Plain shank

Coating	TiAlN
Tool material	HSS E PM
Helix angle	38 degrees
Through-coolant	no
Machining strategy	HPC
Colour ring	green
Type of product	Jobber drill

### User data

	Suitability	V <sub>c</sub>	ISO code
Alu plastics	suitable only under restricted conditions	80 m/min	N
Aluminium (short chipping)	suitable only under restricted conditions	70 m/min	N
Alu > 10% Si	suitable only under restricted conditions	60 m/min	N
Steel < 750 N/mm <sup>2</sup>	suitable only under restricted conditions	50 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	40 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	25 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	14 m/min	P
INOX < 900 N/mm <sup>2</sup>	suitable only under restricted conditions	20 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	15 m/min	M
Ti > 850 N/mm <sup>2</sup>	suitable only under restricted conditions	12 m/min	S
GG(G)	suitable	50 m/min	K
CuZn	suitable only under restricted conditions	60 m/min	N
Uni	suitable		
Oil	suitable		

wet maximum

suitable