

## Garant

**GARANT Master Steel FEED solid carbide drill, plain shank DIN 6535 HA, TiAlN, Ø DC h7 (mm or inch): 20**



### Order data

Order number	122435 20
GTIN	4045197787576
Item class	11E

### Description

#### Version:

**3-flute drill**, specially developed for **use at very high feed rates**. Extremely suitable for **machines with high power** output and stable machining conditions.

- **Special point geometry with stable cutting edges and large clearance at the centre permits very high feed rates.**
- **The patented point geometry is optimised for chip flow and generates low cutting forces with good chip breakage.**
- **With 145° point angle for low burr formation when drilling through holes.**

The **sector-leading technology of the chisel point** guarantees **optimum self-centring behaviour** and permits spot drilling on irregular surfaces. 3 guide chamfers guarantee a stable exit from the hole and an exact roundness of the hole.

#### Note:

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

HB and HE shanks are available at the same price as HA. <br>For **HB shanks**: use order **No. 122436**. <br>For **HE shanks**: use order **No. 122435 + 129100HE**.

Standard: DIN 6537 K

Tolerance nominal Ø: h7

Number of cutting edges Z: 3

Tolerance nominal Ø: h7

recommended maximum drilling depth  $L_2$ : 49 mm

Overall length L: 131 mm

Shank Ø  $D_s$ : 20 mm

Feed f in steel < 1100 N/mm<sup>2</sup>: 0.69 mm/rev.

### Technical description

Nominal $\varnothing D_c$	20 mm
Shank $\varnothing D_s$	20 mm
Flute length $L_c$	79 mm
Standard	DIN 6537 K
Feed $f$ in steel < 1100 N/mm <sup>2</sup>	0.69 mm/rev.
Number of cutting edges $Z$	3
Tolerance nominal $\varnothing$	h7
Overall length $L$	131 mm
recommended maximum drilling depth $L_2$	49 mm
Series	Master Steel
Coating	TiAlN
Tool material	solid carbide
Version	4xD
Point angle	145 °
Shank	DIN 6535 HA 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 <sup>2</sup>	suitable	160 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	140 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	130 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
Steel < 55 HRC	suitable	60 m/min	H

INOX < 900 N/mm <sup>2</sup>	suitable	60 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	50 m/min	M
Ti > 850 N/mm <sup>2</sup>	suitable only under restricted conditions	40 m/min	S
GG	suitable	130 m/min	K
GGG	suitable	80 m/min	K
Uni	suitable		
wet maximum	suitable		
wet minimum	suitable		

**Services**

Shank grinding Type HE

129100 HE