

**Garant**
**Machine reamer H7, uncoated, Nominal Ø DC: 13mm**

**Order data**

Order number	163000 13
GTIN	4045197253200
Item class	110

**Description**
**Version:**

With long flutes and left-hand helix.  
 From size 1.8 even number of teeth and uneven spacing.  
 Up to size 3.7 both ends with external centres;  
 from size 3.9 both ends with internal centres.

**Reamers finish ground for fit H7.**
**Application:**

For reaming through holes. Also suitable for blind holes (from 3.9 mm Ø) due to short chamfer lead.

**Note:**

- **Straight flute machine chucking reamers – available ex-stock.**
- **For reamers with other diameters and fits see No. 162951.**

**Technical description**

Nominal Ø D <sub>c</sub>	13 mm
Overhang L <sub>1</sub>	110 mm
Feed f in steel < 750 N/mm <sup>2</sup>	0.25 mm/rev.
Shank tolerance	h9
Shank Ø D <sub>s</sub>	10 mm
Overall length L	151 mm
Flute length L <sub>c</sub>	44 mm
Number of cutting edges Z	6

Tolerance	H7
Reaming oversize in diameter	0.2 - 0.3 mm
Coating	uncoated
Tool material	HSS E
Standard	DIN 212 B
Through-coolant	no
Shank	Plain shank with h9
Application for type of drilling	for through holes
Colour ring	without
Type of product	Phillips bit

## User data

	Suitability	V <sub>c</sub>	ISO code
Aluminium	suitable	20 m/min	N
Aluminium (short chipping)	suitable	20 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	15 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	10 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	7 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	5 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable only under restricted conditions	4 m/min	P
INOX < 900 N/mm <sup>2</sup>	suitable	5 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable only under restricted conditions	5 m/min	M
Ti > 850 N/mm <sup>2</sup>	suitable only under restricted conditions	5 m/min	S
GG(G)	suitable only under restricted conditions	5 m/min	K
CuZn	suitable only under restricted conditions	13 m/min	N

Uni	suitable
Oil	suitable
wet maximum	suitable