

**Garant**
**GARANT Master Steel solid carbide high-performance reamer HPC through hole, TiAlN, Nominal Ø DC: 20mm**

**Order data**

Order number	164420 20
GTIN	4062406284367
Item class	10P

**Description**
**Version:**

The latest generation of **universal** HPC reamers. Extra-short teeth for increased cutting performance values. Optimised cooling strategy with radially arranged coolant outlets aligned directly to the teeth. **For uncompromising applications in steel and stainless steel.** Reliable machining of high-tensile steels **up to 60 HRC. Version suitable for NC** with straight shank Ø for standard arbors especially in **hydraulic chucks** or **high precision collet chucks**. Very high concentricity and process reliability due to unequal spacing.

**Tolerance specifications:**

**Configurable:** Reamers finish ground to match your specification.

**H7:** Version for H7 bore tolerance.

**0/0.005 mm:** Manufacturing or cutting tolerance of nominal Ø D<sub>C</sub>.

**Application:**

Special version for through holes.

**Technical description**

Feed f in steel < 1100 N/mm <sup>2</sup>	2 mm/rev.
Flute length L <sub>c</sub>	15 mm
Overhang L <sub>1</sub>	100 mm
Tolerance	Configurable
Shank Ø D <sub>s</sub>	20 mm
Nominal Ø D <sub>C</sub>	20 mm
Number of cutting edges Z	6

Overall length L	150 mm
Ø range	19.201 - 20.2 mm
Series	Master Steel
Feed f in stainless steel < 900 N/mm <sup>2</sup>	0.6 mm/rev.
Reaming oversize in diameter	0.2 mm
Coating	TiAlN
Tool material	Solid carbide
Standard	Manufacturer's standard
Through-coolant	yes, with 25 bar
Shank	DIN 6535 HA with h6
Machining strategy	HPC
Application for type of drilling	for through holes
Colour ring	green
Type of product	Phillips bit

## User data

	Suitability	V <sub>c</sub>	ISO code
Steel < 500 N/mm <sup>2</sup>	suitable only under restricted conditions	180 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	180 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	180 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	150 m/min	P
Steel < 1400 N/mm <sup>2</sup>	Suitable	100 m/min	P
Steel < 55 HRC	Suitable	12 m/min	H
Steel < 60 HRC	Suitable only under restricted conditions	8 m/min	H
INOX < 900 N/mm <sup>2</sup>	suitable	50 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	30 m/min	M
GG	suitable	110 m/min	K

GGG	suitable	90 m/min	K
Uni	suitable		
wet maximum	suitable		
wet minimum	suitable		