

**Garant**
**Solid carbide NC machine reamer, TiAlN, Nominal  $\varnothing$  DC: 20mm**

**Order data**

Order number	164341 20
GTIN	4062406136864
Item class	11P

**Description**
**Version:**

**Version suitable for NC** similar to DIN 8093 **with straight shank  $\varnothing$**  for **standard chucking** especially in **hydraulic chucks** or **high precision collet chucks**. This ensures **the highest concentricity**.

**Tolerance specifications:**

Size 0.6 – 0.9: Manufacturing or cutting edge tolerance **0/+0.004 mm**.

Size 0.98 – 20: Reamer manufacturing or cutting edge tolerance to DIN1420 for **H7 bore tolerance**.

**No need to procure special collets when using GARANT-NC reamers.** With long flutes and left-hand helix.

**Application:**

For reaming through holes, as the chips are evacuated in the cutting direction. Lead taper is suitable also for blind holes.

**Note:**

For reamers like No. 164340 and 164341 but with other diameters and fits see No. 164344 and 164345.

**Technical description**

Overall length L	195 mm
Overhang L <sub>1</sub>	136 mm
Tolerance	H7
Feed f in steel < 1100 N/mm <sup>2</sup>	0.2 mm/rev.
Nominal $\varnothing$ D <sub>c</sub>	20 mm
Shank $\varnothing$ D <sub>s</sub>	20 mm

Number of cutting edges Z	8
Flute length $L_c$	60 mm
Reaming oversize in diameter	0.2 - 0.3 mm
Coating	TiAlN
Tool material	Solid carbide
Standard	Manufacturer's standard
Through-coolant	no
Shank	DIN 6535 HA with h6
Application for type of drilling	for through holes
Colour ring	green
Type of product	Phillips bit

## User data

	Suitability	$V_c$	ISO code
Aluminium	suitable	35 m/min	N
Aluminium (short chipping)	suitable	30 m/min	N
Alu > 10% Si	suitable only under restricted conditions	25 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	30 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	25 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	20 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	15 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	10 m/min	P
INOX < 900 N/mm <sup>2</sup>	suitable	15 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	12 m/min	M
Ti > 850 N/mm <sup>2</sup>	suitable only under restricted conditions	10 m/min	S
GG(G)	suitable	10 m/min	K
CuZn	suitable	25 m/min	N

Uni	suitable
wet maximum	suitable