

**Garant**
**NC reamer, uncoated, Nominal Ø DC: 11,91mm**

**Order data**

Order number	162902 11,91
GTIN	4062406146481
Item class	110

**Description**
**Version:**
**Reamers such as 162900, but in 1/100 sizes.**
**Version suitable for NC similar to DIN 212 with straight shank Ø for standard chucking especially in hydraulic chucks or high precision collet chucks. For highest concentricity and process reliability. No need to order special collets.**

With long flutes and left-hand helix.

**Tolerance specifications:**

 Size 1.01 – 5.5: Manufacturing or cutting edge tolerance **0 / +0.004 mm**.

 Size 5.51 – 12.05: Manufacturing or cutting edge tolerance **0 / +0.005 mm**.

**Ordering example:**

Desired dia. 6.24 mm – ordering particulars: article number 162902 6.24.

The 6.24 mm reamer with tolerance 0 / +0.005 mm is supplied.

Depending on availability, delivery time is from stock or max. 1 working week.

To determine which diameter you need for your desired fit, please see the following table (page 231). Often one reamer also covers further fits, since the tolerance bands overlap.

**Note:**

 Reamers in whole number sizes and 1/10 sizes for **H7 fit** see **No. 162900**.

 For reamers with diameters and **fits to specification** see **No. 162951**.

**Technical description**

Tolerance	0 / 0,005
Overhang L <sub>1</sub>	110 mm
Shank Ø D <sub>s</sub>	10 mm
Flute length L <sub>c</sub>	44 mm

Overall length L	151 mm
Nominal $\varnothing D_c$	11.91 mm
Number of cutting edges Z	6
Feed f in steel < 750 N/mm <sup>2</sup>	0.25 mm/rev.
Reaming oversize in diameter	0.1 - 0.2 mm
Coating	uncoated
Tool material	HSS E
Standard	Manufacturer's standard
Through-coolant	no
Shank	DIN 1835 A to 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	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		