

**Garant**
**Solid carbide copy slot drill, DLC, Ø DC × L1: 3X20mm**

**Order data**

Order number	207023 3X20
GTIN	4045197916785
Item class	11X

**Description**
**Version:**

With **advanced DLC sp<sup>2</sup> coating**. For the **highest demands regarding performance and precision in aluminium materials**. **Extremely tight tolerances** ensure maximum accuracy.

Double-relief ground with 2 chamfers hollow ground.

Recess angle  $\alpha = 16^\circ$ .

Tolerances:

- **Corner radius: Radius contour = 0 / -0.005 mm.**
- **Neck Ø: D<sub>1</sub> = 0 / -0.01 mm.**

**Note:**

At greater tool overhang lengths, use a reduced value for a<sub>p</sub>!

values for:

copying:  $a_p = 0.25 \times D \times a_{p, \text{korr}}$

**To calculate the feed rate vf please use the actual speed of the machine (the maximum possible speed)!**

e.g:  $vf = 18000 \text{ [rpm]} \times fz \text{ [mm/Z]} \times z$

**Technical description**

Shank Ø D <sub>s</sub>	4 mm
No. of teeth Z	2
Flute length L <sub>c</sub>	3.5 mm
Overall length L	55 mm
Overhang length L <sub>1</sub> incl. recess	20 mm
Recess Ø D <sub>1</sub>	2.92 mm

Feed $f_z$ for copy milling in cast aluminium	0.035 mm
Cutting edge $\varnothing D_c$	3 mm
Corner radius $R_1$	1.5 mm
Helix angle	30 degrees
Correction factor $a_{p\text{corr}}$	0.9
Coating	DLC
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	W
Tolerance nominal $\varnothing$	0 / -0.005
Direction of infeed	horizontal, oblique and vertical
Cutting width $a_e$ for milling operation	0.05×D for copy milling
Shank	DIN 6535 HA to h5
Through-coolant	no
Colour ring	yellow
Type of product	Ball-nosed slot drill

## User data

	Suitability	$V_c$	ISO code
Aluminium	suitable	480 m/min	N
Aluminium (short chipping)	suitable	440 m/min	N
Alu > 10% Si	suitable	400 m/min	N
PMMA acrylic	Suitable	200 m/min	N
PE-HD	Suitable	160 m/min	N
PA 66	Suitable	200 m/min	N
PEEK	Suitable	150 m/min	N
PF 31	Suitable	130 m/min	N
PVDF GF20	suitable	180 m/min	N

POM GF25	Suitable	160 m/min	N
PA 66 GF30	suitable	150 m/min	N
PEEK GF30	suitable	130 m/min	N
PTFE CF25	suitable	160 m/min	N
Honeycomb sandwich	suitable only under restricted conditions	300 m/min	N
Cu	suitable	160 m/min	N
CuZn	suitable	200 m/min	N
wet maximum	suitable		
wet minimum	suitable		
dry	suitable only under restricted conditions		
Air	suitable		