

**Garant**
**Solid carbide micro slot drill, Diamond, Ø DC × L1: 1X20mm**

**Order data**

Order number	209700 1X20
GTIN	4045197917218
Item class	11Y

**Description**
**Version:**

With **crystalline diamond sp<sup>3</sup> coating**. For the **highest demands regarding performance and precision** in fibre-reinforced composites, CRP, GRP, and graphite. **Extremely tight tolerances** ensure maximum accuracy. Double relief ground with 2 hollow-ground chamfers. **Recess angle  $\alpha = 16^\circ$** .

Tolerances:

- **Neck Ø:  $D_1 = 0 / -0.01$  mm.**

**Note:**

At greater tool overhang lengths, use a reduced value for  $a_p$ !

Values for:

slots milled from solid:  $a_p = 0.1 \times D \times a_{p\text{ korr}}$

side milling:  $a_p = 0.2 \times D \times a_{p\text{ korr}}$

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

e.g:  $vf = 18000$  [rpm] ×  $f_z$  [mm/Z] ×  $z$

**Technical description**

Direction of infeed	horizontal, oblique and vertical
Feed $f_z$ for slot milling in graphite	0.016 mm
Feed $f_z$ for side milling in graphite	0.02 mm
Recess Ø $D_1$	0.95 mm
No. of teeth $Z$	2
Flute length $L_c$	1.5 mm

Shank $\varnothing D_s$	4 mm
Tolerance nominal $\varnothing$	0 / -0.005
Shank	DIN 6535 HA to h5
Overall length L	60 mm
Cutting edge $\varnothing D_c$	1 mm
Overhang length $L_1$ incl. recess	20 mm
Helix angle	30 degrees
Correction factor $a_{p\ corr}$	0.08
Corner chamfer angle	90 degrees
Coating	Diamond
Tool material	Solid carbide
Standard	Manufacturer's standard
Cutting width $a_e$ for milling operation	0.5×D for side milling
Cutting width $a_e$ for milling operation	Full slot cutting depth 1×D
Through-coolant	no
Colour ring	black
Type of product	End / face mill

## User data

	Suitability	$V_c$	ISO code
PVDF GF20	suitable	200 m/min	N
POM GF25	suitable	190 m/min	N
PA 66 GF30	suitable	170 m/min	N
PEEK GF30	suitable	150 m/min	N
PTFE CF25	suitable	180 m/min	N
PEEK CF30	suitable	160 m/min	N
Hybrids	suitable		
Honeycomb sandwich	suitable	350 m/min	N
GRP	suitable	190 m/min	N

GRP, CRP	suitable	190 m/min	N
Graphite	suitable	340 m/min	N
wet minimum	suitable		
dry	suitable		
Air	suitable		