

**Garant**
**Diabolo solid carbide micro slot drill, TiAlN, Ø DC × L1: 3X20 mm**

**Order data**

Order number	201631 3X20
GTIN	4045197933409
Item class	11X

**Description**
**Version:**
**GARANT Diabolo:**

Special geometry, coating and carbide **for hard machining in the high-performance field.** Suitable even for **machining electrolytic copper.** Double-relief ground 2 chamfers hollow ground for high-precision hard machining.

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:  $a_p = 0.05 \times D \times a_{p \text{ korr}}$

side milling:  $a_p = 0.1 \times D \times a_{p \text{ korr}}$

**To calculate the feed rate  $vf$  please use the actual speed of the machine (the maximum possible speed)! e.g.  $vf = 18000 \text{ [rpm]} \times fz \text{ [mm/Z]} \times z$**

Through-coolant: no

Tolerance nominal Ø:  $0 / -0,005$

No. of teeth Z: 2

Helix angle: 30 degrees

Direction of infeed: horizontal, oblique and vertical

Shank: DIN 6535 HA to h5

No. of teeth Z: 2

Flute length  $L_c$ : 4.6 mm

Overhang length  $L_1$  incl. recess: 20 mm

Recess Ø  $D_1$ : 2.91 mm

Overall length L: 60 mm

Shank Ø  $D_s$ : 4 mm

## Technical description

Cutting edge $\varnothing D_c$	3 mm
Direction of infeed	horizontal, oblique and vertical
Flute length $L_c$	4.6 mm
Shank $\varnothing D_s$	4 mm
Overhang length $L_1$ incl. recess	20 mm
Shank	DIN 6535 HA to h5
Feed $f_z$ for slot milling in steel < 65 HRC	0.025 mm
No. of teeth $Z$	2
Helix angle	30 degrees
Recess $\varnothing D_1$	2.91 mm
Feed $f_z$ for side milling in steel < 65 HRC	0.03 mm
Tolerance nominal $\varnothing$	0 / -0,005
Cutting speed $v_c$ in steel < 65 HRC	36 m/min
Overall length $L$	60 mm
Correction factor $a_{p\ corr}$	0.9
Corner chamfer angle	90 degrees
Series	Diabolo
Coating	TiAlN
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	H
Cutting width $a_e$ for milling operation	Full slot cutting depth $1 \times D$
Cutting width $a_e$ for milling operation	$0.1 \times D$ for side milling
Through-coolant	no
Colour ring	red
Type of product	End mill

