

Garant
Solid carbide torus cutter R1 0.05, DLC, Ø DC × L1: 2X20 mm

Order data

Order number	206043 2X20
GTIN	4045197914736
Item class	11X

Description
Version:

With **advanced DLC sp² 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: $R_1 = \pm 0.0025$ mm.**
- **Neck Ø: $D_1 = 0 / -0.01$ mm.**

Description:

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

Values for:

ts_fraes-kopieren fz for $a_p = 0.25 \times D$

ts_fraes-besaeumen fz for $a_n = 0.50 \times D$

ap max ts_fraes-kopieren : $a_p \text{ korr} \times 0.25 \times D$ [mm]

ap max ts_fraes-besaeumen : $a_p \text{ korr} \times 0.50 \times D$ [mm]

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

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

Note:

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

Values for:

slots milled from solid: $a_p = 0.25 \times D \times a_{p \text{ korr}}$

side milling: $a_p = 0.50 \times D \times a_{p \text{ korr}}$

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: $vf = 18000$ [rpm] \times fz [mm/Z] \times z

No. of teeth Z: 2

Helix angle: 30 degrees
 Shank: DIN 6535 HA to h5
 No. of teeth Z: 2
 Flute length L_c : 2 mm
 Corner radius R_1 : 0.2 mm
 Overhang length L_1 incl. recess: 20 mm
 Recess $\varnothing D_1$: 1.91 mm
 Overall length L: 60 mm

Technical description

Cutting edge $\varnothing D_c$	2 mm
Overall length L	60 mm
Recess $\varnothing D_1$	1.91 mm
Shank	DIN 6535 HA to h5
Feed f_z for copy milling in cast aluminium	0.03 mm
Shank $\varnothing D_s$	4 mm
Feed f_z for side milling in cast aluminium	0.03 mm
Overhang length L_1 incl. recess	20 mm
No. of teeth Z	2
Flute length L_c	2 mm
Corner radius R_1	0.2 mm
Helix angle	30 degrees
Correction factor $a_{p,corr}$	0.5
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
Cutting width a_e for milling operation	0.5×D for side milling
Through-coolant	no

Colour ring	yellow
Type of product	End mill