

## Garant

### Solid carbide torus cutter R1 0.05, DLC, Ø DC × L1: 3X20 mm



## Order data

Order number	206045 3X20
GTIN	4045197915795
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:  $R_1 = \pm 0.0025$  mm.**
- **Neck Ø:  $D_1 = 0 / -0.01$  mm.**

### Description:

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

Values for:

$ts\_fraes-kopieren$   $f_z$  for  $a_p = 0.25 \times D$

$ts\_fraes-besaeumen$   $f_z$  for  $a_n = 0.50 \times D$

$a_p$  max  $ts\_fraes-kopieren$  :  $a_p\ korr \times 0.25 \times D$  [mm]

$a_p$  max  $ts\_fraes-besaeumen$  :  $a_p\ korr \times 0.50 \times D$  [mm]

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

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

### Note:

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

Values for:

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

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

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

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

e.g:  $vf = 18000$  [rpm]  $\times$   $f_z$  [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  $L_c$ : 4.5 mm  
 Corner radius  $R_1$ : 0.5 mm  
 Overhang length  $L_1$  incl. recess: 20 mm  
 Recess  $\varnothing D_1$ : 2.91 mm  
 Overall length L: 55 mm

## Technical description

Feed $f_z$ for side milling in cast aluminium	0.035 mm
Flute length $L_c$	4.5 mm
Recess $\varnothing D_1$	2.91 mm
Shank	DIN 6535 HA to h5
Feed $f_z$ for copy milling in cast aluminium	0.035 mm
No. of teeth Z	2
Cutting edge $\varnothing D_c$	3 mm
Overhang length $L_1$ incl. recess	20 mm
Shank $\varnothing D_s$	4 mm
Corner radius $R_1$	0.5 mm
Overall length L	55 mm
Helix angle	30 degrees
Correction factor $a_{p,corr}$	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	0.5×D for side milling
Cutting width $a_e$ for milling operation	0.05×D for copy milling
Through-coolant	no

Colour ring	yellow
Type of product	End mill