

**Garant**
**Solid carbide torus cutter R1 0.05, DLC, Ø DC × L1: 1X4 mm**

**Order data**

Order number	206043 1X4
GTIN	4045197914408
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:

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

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

$ap$  max  $ts\_fraes-kopieren$  :  $ap_{korr} \times 0.25 \times D$  [mm]

$ap$  max  $ts\_fraes-besaeumen$  :  $ap_{korr} \times 0.50 \times D$  [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:  $a_p = 0.25 \times D \times a_{p,korr}$

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]  $\times$   $fz$  [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  $L_c$ : 1 mm  
 Corner radius  $R_1$ : 0.2 mm  
 Overhang length  $L_1$  incl. recess: 4 mm  
 Recess  $\varnothing D_1$ : 0.95 mm  
 Overall length L: 50 mm

## Technical description

Overall length L	50 mm
Overhang length $L_1$ incl. recess	4 mm
Shank $\varnothing D_s$	4 mm
Shank	DIN 6535 HA to h5
Corner radius $R_1$	0.2 mm
Feed $f_z$ for side milling in cast aluminium	0.03 mm
No. of teeth Z	2
Flute length $L_c$	1 mm
Cutting edge $\varnothing D_c$	1 mm
Feed $f_z$ for copy milling in cast aluminium	0.03 mm
Recess $\varnothing D_1$	0.95 mm
Helix angle	30 degrees
Correction factor $a_{p,corr}$	1
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