Garant

Solid carbide torus cutter R1 0.5, DLC, ⌀ DC × L1: 3X45mm

Order data

Order number	206045 3X45
GTIN	4045197915849
Item class	11X

Description

Version:
With **advanced DLC sp^2 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 α = 16°.
Tolerances:
· **Corner radius: R_1 = ±0.0025 mm.**
· **Neck ⌀: 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: $a_p = 0.25 \times D \times a_{p\,korr}$
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]× fz [mm/Z]× z

Technical description

Shank ⌀ D_s	4 mm
Overhang length L_1 incl. recess	45 mm
Feed f_z for side milling in cast aluminium	0.03 mm
Recess ⌀ D_1	2.91 mm
Cutting edge ⌀ D_C	3 mm

Overall length L	90 mm
No. of teeth Z	2
Shank	DIN 6535 HA to h5
Corner radius R_1	0.5 mm
Flute length L_c	4.5 mm
Feed f_z for copy milling in cast aluminium	0.03 mm
Helix angle	30 degrees
Correction factor $a_{p\,corr}$	0.2
Coating	DLC
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	W
Tolerance nominal ∅	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	Torus cutter

User data

	Suitability	V_c	ISO code
Aluminium	suitable	480 m/min	N
Aluminium (short chipping)	suitable	400 m/min	N
Alu > 10% Si	suitable	400 m/min	N
PMMA acrylic	Suitable	200 m/min	N
PE-HD	Suitable	160 m/min	N
PA 66	Suitable	200 m/min	N

PEEK	Suitable	150 m/min	N
PF 31	Suitable	130 m/min	N
PVDF GF20	suitable	180 m/min	N
POM GF25	Suitable	160 m/min	N
PA 66 GF30	suitable	150 m/min	N
PEEK GF30	suitable	130 m/min	N
PTFE CF25	suitable	160 m/min	N
Cu	suitable	160 m/min	N
CuZn	suitable	200 m/min	N
wet maximum	suitable		
wet minimum	suitable		
dry	suitable only under restricted conditions		
Air	suitable		