

Garant
Solid carbide micro slot drill, DLC, Ø DC × L1: 1,8X12mm

Order data

Order number	201140 1,8X12
GTIN	4045197913159
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 hollow-ground chamfers. **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: $a_p = 0.25 \times D \times a_{p,corr}$
 side milling: $a_p = 0.5 \times D \times a_{p,corr}$
To calculate the feed rate vf please use the actual speed of the machine (the maximum possible speed)!
 e.g: $vf = 18000 \text{ [rpm]} \times fz \text{ [mm/Z]} \times z$

Technical description

Recess Ø D_1	1.71 mm
Tolerance nominal Ø	0 / -0.005
Shank	DIN 6535 HA to h5
Cutting edge Ø D_c	1.8 mm
Shank Ø D_s	4 mm
Direction of infeed	horizontal, oblique and vertical
Feed f_z for slot milling in cast aluminium	0.03 mm
No. of teeth Z	2
Overall length L	50 mm

Overhang length L_1 incl. recess	12 mm
Feed f_z for side milling in cast aluminium	0.035 mm
Flute length L_c	2.7 mm
Helix angle	30 degrees
Correction factor $a_{p,corr}$	0.9
Corner chamfer angle	90 degrees
Coating	DLC
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	W
Cutting width a_e for milling operation	0.5×D for side milling
Cutting width a_e for milling operation	Full slot cutting depth 1×D
Through-coolant	no
Colour ring	yellow
Type of product	End / face mill

User data

	Suitability	V_c	ISO code
Aluminium	suitable	480 m/min	N
Aluminium (short chipping)	suitable	440 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
Honeycomb sandwich	suitable only under restricted conditions	300 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		