

**Garant**
**Solid carbide micro slot drill, DLC,  $\varnothing D_c \times L_1$ : 2X12mm**

**Order data**

Order number	201141 2X12
GTIN	4062406387426
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 hollow-ground chamfers. **Recess angle  $\alpha = 16^\circ$** .

Tolerances:

· **Neck  $\varnothing$ :  $D_1 = 0 / -0.01$  mm.**

Extra-sturdy shank to reduce the tendency to vibrate.

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

**Technical description**

Shank $\varnothing D_s$	6 mm
Flute length $L_c$	3 mm
Cutting edge $\varnothing D_c$	2 mm
Overhang length $L_1$ incl. recess	12 mm
Tolerance nominal $\varnothing$	0 / -0.005
Direction of infeed	horizontal, oblique and vertical
Corner chamfer angle	90 degrees
Recess $\varnothing D_1$	1.91 mm

No. of teeth Z	2
Overall length L	55 mm
Helix angle	30 degrees
Feed $f_z$ for side milling in cast aluminium	0.04 mm
Shank	DIN 6535 HA to h5
Correction factor $a_{p\ corr}$	0.9
Feed $f_z$ for slot milling in cast aluminium	0.033 mm
Coating	DLC
Tool material	Solid carbide
Standard	Manufacturer's standard
Type	W
Cutting width $a_e$ for milling operation	Full slot cutting depth $1 \times D$
Cutting width $a_e$ for milling operation	$0.5 \times D$ for side milling
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		