

Garant
Solid carbide micro slot drill, DLC, Ø DC × L1: 2X20mm

Order data

| | |
|--------------|---------------|
| Order number | 201140 2X20 |
| GTIN | 4045197913241 |
| 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

| | |
|---|-------------------|
| Shank | DIN 6535 HA to h5 |
| Recess Ø D_1 | 1.91 mm |
| Overall length L | 60 mm |
| Feed f_z for slot milling in cast aluminium | 0.025 mm |
| Cutting edge Ø D_c | 2 mm |
| Shank Ø D_s | 4 mm |
| Feed f_z for side milling in cast aluminium | 0.03 mm |
| Flute length L_c | 3 mm |
| No. of teeth Z | 2 |

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|---|----------------------------------|
| Tolerance nominal \varnothing | 0 / -0.005 |
| Direction of infeed | horizontal, oblique and vertical |
| Overhang length L_1 incl. recess | 20 mm |
| Helix angle | 30 degrees |
| Correction factor $a_{p\text{corr}}$ | 0.5 |
| 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 |

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|--------------------|---|-----------|---|
| 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 | | |