

**Garant**
**Solid carbide micro slot drill, DLC, Ø DC × L1: 1X8mm**

**Order data**

|              |               |
|--------------|---------------|
| Order number | 201140 1X8    |
| GTIN         | 4045197912886 |
| 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 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**

|                                               |                                  |
|-----------------------------------------------|----------------------------------|
| Feed $f_z$ for side milling in cast aluminium | 0.03 mm                          |
| Recess Ø $D_1$                                | 0.95 mm                          |
| No. of teeth $Z$                              | 2                                |
| Tolerance nominal Ø                           | 0 / -0.005                       |
| Direction of infeed                           | horizontal, oblique and vertical |
| Shank Ø $D_s$                                 | 4 mm                             |
| Feed $f_z$ for slot milling in cast aluminium | 0.025 mm                         |
| Cutting edge Ø $D_c$                          | 1 mm                             |
| Overall length $L$                            | 45 mm                            |

|                                           |                             |
|-------------------------------------------|-----------------------------|
| Shank                                     | DIN 6535 HA to h5           |
| Flute length $L_c$                        | 1.5 mm                      |
| Overhang length $L_1$ incl. recess        | 8 mm                        |
| Helix angle                               | 30 degrees                  |
| Correction factor $a_{p,corr}$            | 0.8                         |
| 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                                  |           |   |