

**Garant**
**GARANT Diabolo solid carbide copy slot drill, TiAlN, Ø Dc × L1: 1,5X12mm**

**Order data**

|              |               |
|--------------|---------------|
| Order number | 207373 1,5X12 |
| GTIN         | 4045197936554 |
| Item class   | 11X           |

**Description**
**Version:**
**GARANT Diabolo:**

Special geometry, coating and carbide **for hard machining in the high-performance field.**  
Suitable even for **machining electrolytic copper.**

Recess angle  $\alpha = 16^\circ$ .

Tolerances:

- **Corner radius: Radius contour = 0 / -0.005 mm.**
- **Neck Ø: D<sub>1</sub> = 0 / -0.01 mm.**

**Note:**

At greater tool overhang lengths, use a reduced value for a<sub>p</sub>!  
values for:

copying:  $a_p = 0.05 \times D \times a_{p, \text{korr}}$

**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**

|  |            |
|--|------------|
| Corner radius R <sub>1</sub>                           | 0.75 mm    |
| Cutting edge Ø D <sub>c</sub>                          | 1.5 mm     |
| Helix angle  | 30 degrees |
| Recess Ø D <sub>1</sub>                                | 1.44 mm    |
| Shank Ø D <sub>s</sub>                                 | 4 mm       |
| Feed f <sub>z</sub> for copy milling in steel < 65 HRC | 0.02 mm    |
| Flute length L <sub>c</sub>                            | 1.2 mm     |

|  |                                  |
|--|----------------------------------|
| Overall length L                                   | 45 mm                            |
| No. of teeth Z                                     | 2                                |
| Overhang length L <sub>1</sub> incl. recess        | 12 mm                            |
| Correction factor a <sub>p,corr</sub>              | 0.8                              |
| Series   | Diabolo                          |
| Coating  | TiAlN                            |
| Tool material                                      | Solid carbide                    |
| Standard   | Manufacturer's standard          |
| Type   | H                                |
| Tolerance nominal Ø                                | 0 / -0,005                       |
| Direction of infeed                                | horizontal, oblique and vertical |
| Cutting width a <sub>e</sub> for milling operation | 0.05×D for copy milling          |
| Shank  | DIN 6535 HA to h5                |
| Through-coolant                                    | no                               |
| Colour ring  | red                              |
| Type of product                                    | Ball-nosed slot drill            |

## User data

|                                | Suitability                               | V <sub>c</sub> | ISO code |
|--------------------------------|---|----------------|----------|
| Steel < 750 N/mm <sup>2</sup>  | suitable only under restricted conditions | 200 m/min      | P        |
| Steel < 900 N/mm <sup>2</sup>  | suitable only under restricted conditions | 200 m/min      | P        |
| Steel < 1100 N/mm <sup>2</sup> | suitable                                  | 190 m/min      | P        |
| Steel < 1400 N/mm <sup>2</sup> | suitable                                  | 170 m/min      | P        |
| Steel < 50 HRC                 | suitable                                  | 120 m/min      | H        |
| Steel < 55 HRC                 | suitable                                  | 100 m/min      | H        |
| Steel < 60 HRC                 | suitable                                  | 72 m/min       | H        |
| Steel < 65 HRC                 | suitable                                  | 55 m/min       | H        |

|                              |   |           |   |
|------------------------------|---|-----------|---|
| Steel < 67 HRC               | suitable                                  | 50 m/min  | H |
| Steel < 70 HRC               | suitable                                  | 45 m/min  | H |
| INOX < 900 N/mm <sup>2</sup> | suitable                                  | 90 m/min  | M |
| INOX > 900 N/mm <sup>2</sup> | suitable                                  | 80 m/min  | M |
| CuZn                         | suitable                                  | 140 m/min | N |
| wet maximum                  | suitable only under restricted conditions |           |   |
| wet minimum                  | suitable only under restricted conditions |           |   |
| dry                          | suitable                                  |           |   |
| Air                          | suitable                                  |           |   |