

**Garant**
**GARANT Diabolo solid carbide copy slot drill, TiAlN, Ø Dc × L1: 3X30mm**

**Order data**

|              |               |
|--------------|---------------|
| Order number | 207373 3X30   |
| GTIN         | 4045197936998 |
| 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**

|   |            |
|---|------------|
| No. of teeth Z                              | 2          |
| Overhang length L <sub>1</sub> incl. recess | 30 mm      |
| Recess Ø D <sub>1</sub>                     | 2.92 mm    |
| Flute length L <sub>c</sub>                 | 3.5 mm     |
| Helix angle                                 | 30 degrees |
| Corner radius R <sub>1</sub>                | 1.5 mm     |
| Overall length L                            | 70 mm      |

|   |                                  |
|---|----------------------------------|
| Cutting edge $\varnothing D_c$                | 3 mm                             |
| Shank $\varnothing D_s$                       | 4 mm                             |
| Correction factor $a_{p,corr}$                | 0.5                              |
| Feed $f_z$ for copy milling in steel < 65 HRC | 0.025 mm                         |
| Series  | Diabolo                          |
| Coating                                       | TiAlN                            |
| Tool material                                 | Solid carbide                    |
| Standard                                      | Manufacturer's standard          |
| Type  | H                                |
| Tolerance nominal $\varnothing$               | 0 / -0,005                       |
| Direction of infeed                           | horizontal, oblique and vertical |
| Cutting width $a_e$ 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                               | $V_c$     | 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                                  |           |   |