

**Garant**
**GARANT Master Steel SlotMachine solid carbide roughing end mill HPC / TPC, TiAlN, Ø d11 DC: 14mm**

**Order data**

|              |               |
|--------------|---------------|
| Order number | 205554 14     |
| GTIN         | 4045197959973 |
| Item class   | 11X           |

**Description**
**Version:**

With a new-type knurled profile, optimised for higher feed rates. Improved cutting edge protection thanks to slight edge honing. Tremendous bending strength due to the use of ultra-fine grain substrate.

**Advantage:**

The tool geometry produces particularly tightly rolled swarf that is discharged via flat chip breaker recesses. As a result, the tool maintains an extremely stable core.

Plunge angle of up to 10° possible thanks to generous recess on the front face.

**Application:**

For roughing machining.

**Problem-solver for TPC machining.**

**Technical description**

|   |                   |
|---|-------------------|
| Recess Ø D <sub>1</sub>   | 13 mm             |
| Corner chamfer width at 45°   | 0.7 mm            |
| Shank   | DIN 6535 HB to h6 |
| Feed f <sub>z</sub> for slot milling in steel < 900 N/mm <sup>2</sup> | 0.07 mm           |
| Cutting edge Ø D <sub>c</sub>   | 14 mm             |
| Overall length L  | 99 mm             |
| Helix angle   | 42 degrees        |
| Flute length L <sub>c</sub>   | 42 mm             |

|   |                                      |
|---|--------------------------------------|
| No. of teeth Z  | 5                                    |
| Shank $\varnothing D_s$                                     | 14 mm                                |
| Tolerance nominal $\varnothing$                             | d11                                  |
| Overhang length $L_1$ incl. recess                          | 50 mm                                |
| Direction of infeed   | horizontal, oblique and vertical     |
| Feed $f_z$ for side milling in steel $< 900 \text{ N/mm}^2$ | 0.09 mm                              |
| Corner chamfer angle  | 45 degrees                           |
| Series  | Master Steel                         |
| Coating   | TiAlN                                |
| Tool material   | Solid carbide                        |
| Standard  | Manufacturer's standard              |
| Milling profile   | NR                                   |
| Spacing of the cutters                                      | unequal spacing                      |
| Cutting width $a_e$ for milling operation                   | Full slot cutting depth $1 \times D$ |
| Cutting width $a_e$ for milling operation                   | $0.4 \times D$ for side milling      |
| Through-coolant   | no                                   |
| Machining strategy  | HPC                                  |
| Machining strategy  | TPC                                  |
| Colour ring   | green                                |
| Type of product   | End / face mill                      |

## User data

|                               | Suitability | $V_c$     | ISO code |
|-------------------------------|-------------|-----------|----------|
| Steel $< 500 \text{ N/mm}^2$  | suitable    | 200 m/min | P        |
| Steel $< 750 \text{ N/mm}^2$  | suitable    | 180 m/min | P        |
| Steel $< 900 \text{ N/mm}^2$  | suitable    | 160 m/min | P        |
| Steel $< 1100 \text{ N/mm}^2$ | suitable    | 140 m/min | P        |
| Steel $< 1400 \text{ N/mm}^2$ | suitable    | 110 m/min | P        |
| INOX $< 900 \text{ N/mm}^2$   | suitable    | 50 m/min  | M        |

|                              |   |           |   |
|------------------------------|---|-----------|---|
| INOX > 900 N/mm <sup>2</sup> | suitable                                  | 35 m/min  | M |
| GG(G)                        | suitable                                  | 200 m/min | K |
| Uni                          | suitable                                  |           |   |
| wet maximum                  | suitable                                  |           |   |
| wet minimum                  | suitable only under restricted conditions |           |   |
| dry                          | suitable                                  |           |   |
| Air                          | suitable                                  |           |   |