

## Garant

### GARANT Master INOX M SlotMachine solid carbide roughing end mill HPC, TiAlN, Ø d11 DC: 12mm



## Order data

|              |               |
|--------------|---------------|
| Order number | 205454 12     |
| GTIN         | 4062406380700 |
| Item class   | 11X           |

## Description

### Version:

With a **new-type knuckle form profile**, optimised for higher feed rates in INOX. Improved cutting edge protection thanks to slight edge honing. **Tremendous bending strength** due to the use of **ultra-fine grain substrate**. Number of teeth tailored to performance and process reliability.

**Problem-solver** for **TPC machining**. Ideal for automated production as the risk of chip accumulations in the machine is largely prevented.

### 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**.

### Recommendation:

To ensure reliable working, particularly for full slot milling, use arbors with **4 cooling channel bores**.

### Note:

$h_{max}$ : The values stated in the table are maximum values.

$ae_{max} = 0.05 \times D$  for TPC machining.

## Technical description

|                             |         |
|-----------------------------|---------|
| Tolerance nominal Ø         | d11     |
| Shank Ø D <sub>s</sub>      | 12 mm   |
| Corner chamfer width at 45° | 0.25 mm |
| Overall length L            | 100 mm  |

|  |                                  |
|--|----------------------------------|
| Flute length $L_c$   | 49 mm                            |
| Average chip thickness $h_{max}$ for TPC milling in INOX < 900 N/mm <sup>2</sup> | 0.054 mm                         |
| No. of teeth Z   | 5                                |
| Corner chamfer angle   | 45 degrees                       |
| Cutting edge $\varnothing D_c$   | 12 mm                            |
| Overhang length $L_1$ incl. recess   | 56 mm                            |
| Direction of infeed  | horizontal, oblique and vertical |
| Helix angle  | 40 degrees                       |
| Shank  | DIN 6535 HB to h6                |
| Recess $\varnothing D_1$   | 11.1 mm                          |
| Series   | Master INOX                      |
| Coating  | TiAlN                            |
| Tool material  | Solid carbide                    |
| Standard   | Manufacturer's standard          |
| Milling profile  | NF                               |
| Cutting width $a_e$ for milling operation  | 0.05×D                           |
| Through-coolant  | no                               |
| Machining strategy   | HPC                              |
| Colour ring  | blue                             |
| Type of product  | End / face mill                  |

## User data

|                                | Suitability                               | $V_c$     | ISO code |
|--------------------------------|---|-----------|----------|
| Steel < 500 N/mm <sup>2</sup>  | suitable only under restricted conditions | 130 m/min | P        |
| Steel < 750 N/mm <sup>2</sup>  | suitable                                  | 120 m/min | P        |
| Steel < 900 N/mm <sup>2</sup>  | suitable                                  | 100 m/min | P        |
| Steel < 1100 N/mm <sup>2</sup> | suitable only under restricted conditions | 95 m/min  | P        |

|                                |   |          |   |
|--------------------------------|---|----------|---|
| Steel < 1400 N/mm <sup>2</sup> | suitable only under restricted conditions | 85 m/min | P |
| INOX < 900 N/mm <sup>2</sup>   | suitable                                  | 75 m/min | M |
| INOX > 900 N/mm <sup>2</sup>   | suitable                                  | 70 m/min | M |
| Uni                            | suitable only under restricted conditions |          |   |
| wet maximum                    | suitable                                  |          |   |
| wet minimum                    | suitable only under restricted conditions |          |   |
| Air                            | Suitable only under restricted conditions |          |   |