

## Garant

### GARANT Master Form Steel fluteless machine tap with oil grooves Left-hand thread HSS-E-PM Form C 6HX, TiAlN, M-LH: M4



#### Order data

|              |               |
|--------------|---------------|
| Order number | 139255 M4     |
| GTIN         | 4062406383763 |
| Item class   | 111           |

#### Description

##### Version:

The latest generation of **high-performance fluteless taps**, specially developed for **use in steel materials**.

- **Optimised polygon geometry for a lower torque.**
- **Multi-layer HIPIMS coating for high wear resistance.**
- **HSS-E-PM substrate for exceptional process reliability.**

**DIN 2174** (≈ **DIN 371** ≤ M10; ≈ **DIN 376** ≥ M12).

Tolerance class: ISO 2X 6HX

Thread pitch: 0.7 mm

Overall length L: 63 mm

Shank Ø D<sub>s</sub>: 4.5 mm

Shank square □: 3.4 mm

Tapping hole Ø guide value: 3.7 mm

#### Technical description

|                            |               |
|----------------------------|---------------|
| Tapping hole Ø guide value | 3.7 mm        |
| Overall length L           | 63 mm         |
| Thread Ø                   | 4 mm          |
| Tolerance class            | ISO 2X 6HX    |
| Number of cutting edges Z  | 5             |
| Series                     | GARANT Master |
| Shank Ø D <sub>s</sub>     | 4.5 mm        |

|                                  |                             |
|----------------------------------|-----------------------------|
| Thread depth                     | 12 mm                       |
| Thread size                      | M4 LH                       |
| Thread pitch                     | 0.7 mm                      |
| Number of clamping slots         | 5                           |
| Shank square □                   | 3.4 mm                      |
| Coating                          | TiAlN                       |
| Thread type                      | M-LH                        |
| Flank angle                      | 60°                         |
| Tool material                    | HSS E PM                    |
| Standard                         | DIN 2174                    |
| Thread standard                  | DIN 13                      |
| Taper lead form                  | C                           |
| Shank                            | Plain shank with h9         |
| Through-coolant                  | no                          |
| Application for type of drilling | up to 3×D for blind holes   |
| Application for type of drilling | up to 3×D for through holes |
| Cutting direction                | right-hand                  |
| Colour ring                      | without                     |
| Type of product                  | Fluteless tap               |

## User data

|                                | Suitability | V <sub>c</sub> | ISO code |
|--------------------------------|-------------|----------------|----------|
| Aluminium (short chipping)     | suitable    | 38 m/min       | N        |
| Steel < 500 N/mm <sup>2</sup>  | suitable    | 37 m/min       | P        |
| Steel < 750 N/mm <sup>2</sup>  | suitable    | 35 m/min       | P        |
| Steel < 900 N/mm <sup>2</sup>  | suitable    | 27 m/min       | P        |
| Steel < 1100 N/mm <sup>2</sup> | suitable    | 18 m/min       | P        |
| Steel < 1400 N/mm <sup>2</sup> | suitable    | 12 m/min       | P        |

|                              |   |          |   |
|------------------------------|---|----------|---|
| INOX < 900 N/mm <sup>2</sup> | suitable                                  | 12 m/min | M |
| INOX > 900 N/mm <sup>2</sup> | suitable                                  | 7 m/min  | M |
| CuZn                         | suitable only under restricted conditions | 22 m/min | N |
| Oil                          | suitable                                  |          |   |
| wet maximum                  | suitable                                  |          |   |
| wet minimum                  | suitable                                  |          |   |