

Garant

GARANT Master Form Steel fluteless machine tap with oil grooves HSS-E-PM, TiAlN, UNF: 1/2-20



Order data

| | |
|--------------|---------------|
| Order number | 139495 1/2-20 |
| GTIN | 4062406707224 |
| Item class | 11I |

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 (\approx **DIN 371** \leq 3/8; \approx **DIN 376** \geq 7/16).

Form E (lead-in 1.5 – 2 turns). For deep threads with short lead-in. The thread is tapped almost to the bottom of the hole.

Application:

For UNF unified fine threads ASME–B1.1.

Thread pitch: 1.27 mm

Threads per inch: 20

Thread \varnothing : 12.7 mm

Overall length L: 100 mm

Shank \varnothing D_s: 9 mm

Shank square \square : 7 mm

Technical description

| | |
|----------------------------------------|---------|
| Shank \varnothing D _s | 9 mm |
| Tapping hole \varnothing guide value | 12.1 mm |
| Overall length L | 100 mm |
| Number of cutting edges Z | 8 |

| | |
|----------------------------------|-----------------------------|
| Thread pitch | 1.27 mm |
| Thread depth | 36.21 mm |
| Shank square □ | 7 mm |
| Number of clamping slots | 8 |
| Thread Ø | 12.7 mm |
| Threads per inch | 20 |
| Coating | TiAlN |
| Thread type | UNF |
| Flank angle | 60 ° |
| Tool material | HSS E PM |
| Standard | DIN 2174 |
| Tolerance class | 2BX |
| Taper lead form | E |
| 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 |
| Type of product | Fluteless tap |

User data

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

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