

**Garant****GARANT Master Form Steel fluteless machine tap with oil grooves HSS-E-PM Form C 6HX, TiAlN, M: M12****Order data**

Order number	139194 M12
GTIN	4062406383329
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  $\leq$  M10;  $\approx$  DIN 376  $\geq$  M12).

**Tolerance class: ISO 2X/6HX.**

Tolerance class: ISO 2X 6HX

Thread pitch: 1.75 mm

Overall length L: 110 mm

Shank  $\varnothing$  D<sub>s</sub>: 9 mm

Shank square □: 7 mm

Tapping hole  $\varnothing$  guide value: 11.2 mm

**Technical description**

Tolerance class	ISO 2X 6HX
Number of clamping slots	8
Number of cutting edges Z	8
Thread pitch	1.75 mm
Overall length L	110 mm
Thread size	M12

Thread Ø	12 mm
Series	GARANT Master
Shank square □	7 mm
Tapping hole Ø guide value	11.2 mm
Thread depth	36 mm
Shank Ø D <sub>s</sub>	9 mm
Coating	TiAlN
Thread type	M
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	22 m/min	N
Oil	suitable		
wet maximum	suitable		
wet minimum	suitable		