

**Garant**
**Fluteless machine tap with oil grooves HSS-E-PM IC, TiAlN, G: G1/2**

**Order data**

Order number	139425 G1/2
GTIN	4062406384050
Item class	111

**Description**
**Version:**

**DIN 2189** (≈ DIN 5156). **With oil grooves; optimum lubrication effect even in deeper threads.**

**GARANT Master Form Steel:**

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

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

**With internal coolant feed** laterally from the grooves. **Permits the longest possible tool life** when machining through holes and blind holes.

**Application:**

For **Whitworth parallel pipe threads** DIN-ISO 228/1 (threads that do not form a seal within the connection).

Thread pitch: 1.814 mm

Threads per inch: 14

Thread Ø: 20.96 mm

Overall length L: 125 mm

Shank Ø D<sub>s</sub>: 16 mm

Shank square □: 12 mm

**Technical description**

Thread Ø	20.96 mm
Thread size	G1/2
Number of cutting edges Z	8
Number of clamping slots	8

Threads per inch	14
Shank square □	12 mm
Thread depth	62.88 mm
Shank Ø D <sub>s</sub>	16 mm
Tapping hole Ø guide value	20.05 mm
Overall length L	125 mm
Thread pitch	1.814 mm
Coating	TiAlN
Thread type	G
Flank angle	55 °
Tool material	HSS E PM
Standard	DIN 2189
Tolerance class	ISO 228 X
Taper lead form	C
Shank	Plain shank with h9
Through-coolant	yes
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	blue
Type of product	Fluteless tap

## User data

	Suitability	V <sub>c</sub>	ISO code
Aluminium (short chipping)	suitable only under restricted conditions	42 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	40 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	38 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	29 m/min	P

Steel < 1100 N/mm <sup>2</sup>	suitable	20 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	15 m/min	P
INOX < 900 N/mm <sup>2</sup>	suitable	15 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable only under restricted conditions	8 m/min	M
CuZn	suitable only under restricted conditions	25 m/min	N
Oil	suitable		
wet maximum	suitable		
wet minimum	suitable		