

**Garant**
**GARANT Master Tap machine tap HSS-E-PM, ALTiX, NPT: 3/8-18**

**Order data**

Order number	138105 3/8-18
GTIN	4045197901927
Item class	111

**Description**
**Version:**

**Universal taps**, designed for use in a wide spectrum of materials with high process reliability.

- **HSS-E-PM tool material for maximum wear resistance.**
- **Reduced coefficient of friction due to the new high-performance coating.**
- **Special geometry for optimum chip evacuation.**

**Application:**

**Tapered** pipe threads (NPT) to **ANSI B1.20.1**, for threads with sealants. See the table for the specified minimum size of the tapping hole.

**Recommendation:**
**Tapping hole Ø A:**

Pre-drill a plain hole **without using a reamer**.

**Tapping hole Ø B:**

Pre-drill a plain hole and then **ream it using a 1:16 taper reamer (see No. 162650)**. The taper bore Ø B can then be checked laterally by reference to the  $D_{\max}$  check dimension (see table). **Variant B** for drilling the tapping hole offers the best process reliability for the tapping operation.

Threads per inch: 18

Overall length L: 110 mm

Shank Ø  $D_s$ : 12 mm

Shank square □: 9 mm

Tapping hole Ø A: 14.29 mm

Tapping hole Ø A: 9/16 in

**Technical description**

Thread gauge Ø $D_{\max} + 0.05$	14.8 mm
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Number of cutting edges Z	4
Thread size	3/8-18 NPT
Thread depth	29 mm
Tapping hole Ø A	9/16 in
Thread pitch	1.411 mm
Tapping hole Ø A	14.29 mm
Thread Ø	17.055 mm
Tapping hole Ø B	14.1 mm
Tapping hole minimum depth	17.6 mm
Threads per inch	18
Shank square □	9 mm
Number of clamping slots	4
Overall length L	110 mm
Shank Ø D <sub>s</sub>	12 mm
Coating	AlTiX
Thread type	NPT
Flank angle	60 °
Tool material	HSS E PM
Standard	Manufacturer's standard
Thread standard	ANSI B 1.20.1
Taper lead form	C
Taper ratio	1:16
Helix angle	40 °
Shank	Plain shank with h9
Through-coolant	no
Application for type of drilling	Blind hole
Application for type of drilling	Through hole
Cutting direction	right-hand
Type of threading tool	Machine tap for dynamic machining

Colour ring	green
Series	Master Tap
Type of product	Tap

## User data

	Suitability	$V_c$	ISO code
Alu plastics	suitable	30 m/min	N
Aluminium (short chipping)	suitable	35 m/min	N
Alu > 10% Si	suitable	20 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	30 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	30 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	25 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	12 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	8 m/min	P
INOX < 900 N/mm <sup>2</sup>	suitable	10 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	8 m/min	M
GG(G)	suitable	20 m/min	K
CuZn	suitable	20 m/min	N
Uni	suitable		
Oil	suitable		
wet maximum	suitable		