

Garant
GARANT Master Tap machine tap HSS-E-PM, ALTiX, NPT: 1/2-14

Order data

Order number	138105 1/2-14
GTIN	4045197901934
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 can then be checked laterally by reference to the D_{max} check dimension (see table). **Variante B** for drilling the tapping hole offers the best process reliability for the tapping operation.

Threads per inch: 14

Overall length L: 125 mm

Shank Ø D_s : 16 mm

Shank square □: 12 mm

Tapping hole Ø A: 17.85 mm

Tapping hole Ø B: 17.5 mm

Technical description

Overall length L	125 mm
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Threads per inch	14
Number of clamping slots	4
Shank square □	12 mm
Thread pitch	1.814 mm
Thread depth	35.06 mm
Tapping hole minimum depth	22.9 mm
Thread Ø	21.223 mm
Thread size	1/2-14 NPT
Shank Ø D _s	16 mm
Number of cutting edges Z	4
Tapping hole Ø A	17.85 mm
Tapping hole Ø B	17.5 mm
Thread gauge Ø D _{max} + 0.05	18.32 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 ²	suitable	30 m/min	P
Steel < 750 N/mm ²	suitable	30 m/min	P
Steel < 900 N/mm ²	suitable	25 m/min	P
Steel < 1100 N/mm ²	suitable	12 m/min	P
Steel < 1400 N/mm ²	suitable	8 m/min	P
INOX < 900 N/mm ²	suitable	10 m/min	M
INOX > 900 N/mm ²	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		