

**Garant**
**Machine tap HSS-E-PM, TiAlN, NPT: 1/4-18**

**Order data**

Order number	138100 1/4-18
GTIN	4045197080424
Item class	11H

**Description**
**Version:**

**For the highest performance demands.** For use with **emulsion** (fat content minimum 8%).

**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:**

For **TOOLOX** and **HARDOX** materials we recommend deviating from the DIN data (see table) by drilling the tapping hole  $\varnothing$  **0.05** to **0.3 mm** larger.

**Tapping hole  $\varnothing$  A:**

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

**Tapping hole  $\varnothing$  B:**

Pre-drill a plain hole and then **ream it using a 1:16 taper reamer (see No. 162650)**. The taper bore  $\varnothing$  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: 100 mm

Shank  $\varnothing$   $D_s$ : 11 mm

Shank square  $\square$ : 9 mm

Tapping hole  $\varnothing$  A: 11.1 mm

Tapping hole  $\varnothing$  B: 10.75 mm

**Technical description**

Thread $\varnothing$	13.616 mm
Tapping hole $\varnothing$ B	10.75 mm

Threads per inch	18
Tapping hole $\varnothing A$	11.1 mm
Tapping hole minimum depth	17.5 mm
Number of clamping slots	4
Number of cutting edges Z	4
Thread pitch	1.411 mm
Thread gauge $\varnothing D_{\max} + 0.05$	11.36 mm
Shank $\varnothing D_s$	11 mm
Overall length L	100 mm
Shank square $\square$	9 mm
Thread depth	25.84 mm
Thread size	1/4-18 NPT
Coating	TiAlN
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	15°
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	red
Type of product	Tap

**User data**

	<b>Suitability</b>	<b>V<sub>c</sub></b>	<b>ISO code</b>
Steel < 900 N/mm <sup>2</sup>	suitable	23 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	13 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable only under restricted conditions	7 m/min	P
TOOLOX 33	suitable	4 m/min	H
TOOLOX 44	suitable	3 m/min	H
HARDOX 500 < 1600 N/mm <sup>2</sup>	suitable	2 m/min	H
Oil	suitable		
wet maximum	suitable		