

**Garant****GARANT Master Tap SteelHT machine tap HSS-E-PM Form C 6HX, TiAlN, M: M20****Order data**

Order number	135371 M20
GTIN	4062406236878
Item class	11I

**Description****Version:**

High-performance tap, specially developed for use in **steels with high tensile strength** and for **difficult-to-machine materials**. Sturdy design with **optimised guide thread to avoid chips jamming**.

- **HSS-E-PM tool material – for very high cutting edge stability.**
- **Optimised honed cutting edges.**
- **TiAlN coating – for maximum wear protection.**

**Recommendation:**

For **TOOLOX** and **HARDOX** materials we recommend deviating from the **DIN data** (see table) by **selecting a larger tapping hole  $\varnothing$** .

**Note:**

For **TOOLOX** and **HARDOX materials**: do not exceed the maximum thread depth  $2 \times D!$

**Technical description**

Standard	DIN 376
Number of clamping slots	4
Tool material	HSS E PM
Tolerance class	ISO 2X 6HX
Thread depth	50 mm
Number of cutting edges Z	4
Thread type	M

Shank square □	12 mm
Thread pitch	2.5 mm
Thread Ø	20 mm
Shank Ø D <sub>s</sub>	16 mm
Thread size	M20
Tapping hole Ø	17.5 mm
Overall length L	140 mm
Coating	TiAlN
Flank angle	60 degrees
Thread standard	DIN 13
Taper lead form	C
Helix angle	40 degrees
Shank	Plain shank with h9
Through-coolant	no
Application for type of drilling	up to 2.5×D for blind holes
Cutting direction	right-hand
Type of threading tool	Machine tap for dynamic machining
Colour ring	red
Series	Master Tap
Type of product	Tap

## User data

	Suitability	V <sub>c</sub>	ISO code
Steel < 750 N/mm <sup>2</sup>	suitable only under restricted conditions	30 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	20 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	15 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	12 m/min	P

Steel < 50 HRC	suitable only under restricted conditions		
TOOLOX 33	suitable	15 m/min	H
TOOLOX 44	suitable		
INOX > 900 N/mm <sup>2</sup>	suitable		
Ti > 850 N/mm <sup>2</sup>	suitable only under restricted conditions		
Oil	suitable		
wet maximum	suitable		