

**Garant**
**GARANT Master TM end cutting thread mill 2.5×D, AlCrN, M: M12**

**Order data**

Order number	139526 M12
GTIN	4067263290674
Item class	11D

**Description**
**Version:**

- **Significantly reduced vibrations due to irregular cutting edge spacing.**
- **New coating for optimum wear resistance.**
- **Cooling grooves on the shank for targeted coolant feed.**
- **Corrected thread profile for avoidance of profile distortions.**

The special front cutter geometry **with unequal spacing** permits **process-reliable circular thread milling** across a **wide spectrum of materials**. The **side cooling grooves** on the shank ensure **outstanding coolant feed** without weakening the tool core and thus offer **maximum process reliability even in unstable conditions**. All tools have left-hand cutting and are suitable for **right-hand and left-hand threads**.

**Note:**

HB and HE shanks are available at the same price as HA.

**HB shank:** order with No. **139526 + 129100 HB**.

**HE shank:** order with No. **139526 + 129100 HE**.

**Technical description**

Shank $\varnothing D_s$	10 mm
Programming radius	4.84 mm
Number of clamping slots	4
Neck $\varnothing D_1$	7.45 mm
Series	Master TM
Thread depth	30

Cutting edge $\varnothing D_c$	9.8 mm
Overhang $L_1$	31.75 mm
Cutter length $l_c$	3.5 mm
Shank length $L_s$	40 mm
Overall length $L$	76 mm
Thread pitch	1.75 mm
Thread size	M12
Feed $f_z$ in steel $< 750 \text{ N/mm}^2$	0.06 mm
Through-coolant	yes
Coating	AlCrN
Thread type	M
Thread type	M-LH
Flank angle	60 degrees
Tool material	Solid carbide
Thread standard	DIN 13
Shank	DIN 6535 HA to h6
Number of cutting edges $Z$	4
Application for type of drilling	up to $2.5 \times D$ for blind holes
Application for type of drilling	up to $2.5 \times D$ for through holes
Cutting direction	left-hand
Spacing of the cutters	unequal spacing
Shank tolerance	h6
Colour ring	green
Internal/external application	Internal
Type of product	Drill thread milling cutters

## User data

	Suitability	$V_c$	ISO code
Alu plastics	suitable	220 m/min	N

Aluminium (short chipping)	suitable	220 m/min	N
Alu > 10% Si	suitable	180 m/min	N
Steel < 500 N/mm <sup>2</sup>	suitable	140 m/min	P
Steel < 750 N/mm <sup>2</sup>	suitable	130 m/min	P
Steel < 900 N/mm <sup>2</sup>	suitable	120 m/min	P
Steel < 1100 N/mm <sup>2</sup>	suitable	90 m/min	P
Steel < 1400 N/mm <sup>2</sup>	suitable	80 m/min	P
TOOLOX 33	suitable	85 m/min	H
TOOLOX 44	suitable	50 m/min	H
INOX < 900 N/mm <sup>2</sup>	suitable	82 m/min	M
INOX > 900 N/mm <sup>2</sup>	suitable	75 m/min	M
Ti > 850 N/mm <sup>2</sup>	suitable	50 m/min	S
GG(G)	suitable	120 m/min	K
CuZn	suitable	200 m/min	N
Uni	suitable		
wet maximum	suitable		
Air	suitable		

### Services

Shank grinding Type HB	129100 HB
Shank grinding Type HE	129100 HE