

Garant**GARANT Master TM plain shank thread mill with countersink 2×D, AlTiN, MF: 12X1****Order data**

Order number	139686 12X1
GTIN	4067263128786
Item class	11D

Description**Version:**

Solid carbide thread milling cutters **with irregular cutting edge spacing and an increased number of cutting edges**. Due to the **irregular cutting edge spacing** they achieve very **smooth running** and **long tool life**.

Newly developed universal geometry and **high-performance coating** for use across a wide spectrum of materials.

- **Significantly reduced vibration due to irregular cutting edge spacing.**
- **Increased number of cutting edges.**
- **The latest generation of AlTiN-based HiPIMS coating.**
- **Corrected thread profile for avoidance of profile distortions.**

Advantage:

Incorporating a countersink profile for a 90° countersink and thread milling in a single operation.

Note:

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

Order **HB** shank: with **No. 139686 + 129100 HB**

Order **HE** shank: with **No. 139686 + 129100 HE**

Technical description

Thread depth	24.5 mm
Programming value for countersink L ₁	25.55 mm
No. of teeth Z	6
Shank Ø D _s	14 mm

Neck Ø D ₁	13 mm
Thread pitch	1 mm
Through-coolant	yes
Number of clamping slots	6
Feed f _z in steel < 750 N/mm ²	0.09 mm
Thread size	M12×1
Overall length L	94 mm
Flute length L _c	24.5 mm
Nominal Ø D _c	10.4 mm
Shank length L _s	52.8 mm
Coating	AlTiN
Thread type	MF-LH
Thread type	MF
Flank angle	60 degrees
Tool material	Solid carbide
Thread standard	DIN 13
Shank	DIN 6535 HA to h6
Application for type of drilling	up to 2×D for blind holes
Application for type of drilling	up to 2×D for through holes
Spacing of the cutters	unequal spacing
Countersink angle	90 degrees
Colour ring	green
Internal/external application	Internal
Series	Master TM
Type of product	thread milling cutter

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 ²	suitable	140 m/min	P
Steel < 750 N/mm ²	suitable	130 m/min	P
Steel < 900 N/mm ²	suitable	120 m/min	P
Steel < 1100 N/mm ²	suitable	90 m/min	P
Steel < 1400 N/mm ²	suitable	80 m/min	P
Steel < 50 HRC	suitable only under restricted conditions	45 m/min	H
TOOLOX 33	suitable	85 m/min	H
TOOLOX 44	suitable	50 m/min	H
INOX < 900 N/mm ²	suitable	82 m/min	M
INOX > 900 N/mm ²	suitable	75 m/min	M
Ti > 850 N/mm ²	suitable	50 m/min	S
GG(G)	suitable	120 m/min	K
CuZn	suitable	200 m/min	N
Uni	suitable		
wet maximum	suitable		
wet minimum	suitable		
Air	suitable		

Services

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