

GARANT Master TM plain shank thread mill with countersink 1.5×D, AlTiN, M: M10



Order data

Order number	139666 M10
GTIN	4067263128564
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.
- · Latest-generation 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. 139666 + 129100 HB**. Order **HE** shank: with **No. 139666 + 129100 HE**.

Technical description

Thread size	M10
Nominal Ø D _c	8.1 mm
Programming value for countersink L₁	16.9 mm
Neck Ø D₁	11 mm

Flute length L _c Shank Ø D _c No. of teeth Z Thread Ø Thread Ø Thread Ø Thread depth Thread depth Overall length L Thread pitch Thread pitch Number of clamping slots Through-coolant Ves Coating AlTiN Thread type M-LH Thread type M Flank angle Tool material Shank DIN 6535 HA to h6 Application for type of drilling Application for type of drilling Spacing of the cutters Colour ring Colour ring Colour ring Internal (Series Master TM	Food fin stool < 750 N/mm²	0.075 mm
Shank Ø D, 12 mm No. of teeth Z 6 Thread Ø 10 mm Shank length L, 49.9 mm Thread depth 15.7 mm Overall length L 82 mm Thread pitch 1.5 mm Number of clamping slots 6 Through-coolant yes Coating AlTiN Thread type M 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 1.5×D for through holes Application for type of drilling up to 1.5×D for blind holes Spacing of the cutters unequal spacing Countersink angle 90 degrees Shank tolerance h6 Colour ring green Internal/external application Internal Series Master TM	Feed f _z in steel < 750 N/mm ²	
No. of teeth Z Thread Ø Thread Ø Thread P Shank length L, Thread depth Thread depth Thread pitch Thread pitch Thread pitch Thread pitch Thread pitch Thread pitch Thread solution Thread type Thread type Thread type Thread type Thread type Thread standard Thread standard Thread standard Thread standard Thread standard Thread standard Thread type of drilling Thread standard Thread standard Thread type of drilling Thread standard	Flute length L _c	15.7 mm
Thread Ø Shank length L, Thread depth Thread depth Thread pitch Thread pitch Thread pitch Through-coolant Ves Coating AlTiN Thread type Thread type Thread type Thread standard Thread standard Thread standard Thread standard Thread standard Thread standard Thread type of drilling Thread type of drilling Thread standard Thread standa	Shank Ø D _s	12 mm
Shank length L₁ 49.9 mm Thread depth 15.7 mm Overall length L 82 mm Thread pitch 1.5 mm Number of clamping slots 6 Through-coolant yes Coating AITIN Thread type M-LH Thread type M 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 1.5×D for through holes Application for type of drilling up to 1.5×D for blind holes Spacing of the cutters unequal spacing Countersink angle 90 degrees Shank tolerance h6 Colour ring green Internal/external application Internal Series Master TM	No. of teeth Z	6
Thread depth Overall length L B2 mm Thread pitch 1.5 mm Number of clamping slots 6 Through-coolant yes Coating AlTiN Thread type M-LH Thread type M Flank angle 60 degrees Tool material Solid carbide Thread standard DIN 13 Shank DIN 6535 HA to h6 Application for type of drilling Application for type of drilling Spacing of the cutters Countersink angle Spacing of the cutters Colour ring Internal/external application Series Master TM	Thread ∅	10 mm
Overall length L 82 mm Thread pitch 1.5 mm Number of clamping slots 6 Through-coolant yes Coating AlTiN Thread type M-LH Thread type M 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 1.5×D for through holes Application for type of drilling up to 1.5×D for blind holes Spacing of the cutters unequal spacing Countersink angle 90 degrees Shank tolerance h6 Colour ring green Internal/external application Series Master TM	Shank length L₅	49.9 mm
Thread pitch Number of clamping slots Coating Coating AlTiN Thread type M-LH Thread type M Flank angle Flool material Thread standard DIN 13 Shank DIN 6535 HA to h6 Application for type of drilling Application for type of drilling Countersink angle Countersink angle Shank tolerance Colour ring Internal years Internal years Internal Series Internal Internal Series Internal Internal Series Internal Internal Series Internal Series Internal Internal Series Internal Internal Internal	Thread depth	15.7 mm
Number of clamping slots Through-coolant yes Coating AlTiN Thread type M-LH Thread type M Flank angle 60 degrees Tool material Solid carbide Thread standard DIN 13 Shank DIN 6535 HA to h6 Application for type of drilling Application for type of drilling Up to 1.5×D for through holes Spacing of the cutters Unnequal spacing Countersink angle Shank tolerance h6 Colour ring Internal/external application Series Master TM	Overall length L	82 mm
Through-coolant Coating AlTiN Thread type M-LH Thread type M Flank angle 60 degrees Tool material Solid carbide Thread standard DIN 13 Shank DIN 6535 HA to h6 Application for type of drilling Application for type of drilling Application for type of drilling Countersink angle Shank tolerance Colour ring Internal/external application Series Master TM	Thread pitch	1.5 mm
Coating Thread type M-LH Thread type M Flank angle Flank angle Floor material Thread standard Thread standard Thread standard Thread standard Solid carbide Thread standard DIN 13 Shank DIN 6535 HA to h6 Application for type of drilling Up to 1.5×D for through holes Application for type of drilling Up to 1.5×D for blind holes Spacing of the cutters Unequal spacing Countersink angle Shank tolerance h6 Colour ring Internal/external application Internal Series Master TM	Number of clamping slots	6
Thread type M. Thread type M 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 1.5×D for through holes Application for type of drilling up to 1.5×D for blind holes Spacing of the cutters unequal spacing Countersink angle 90 degrees Shank tolerance h6 Colour ring green Internal/external application Series Master TM	Through-coolant	yes
Thread type Flank angle 60 degrees Tool material Solid carbide Thread standard DIN 13 Shank DIN 6535 HA to h6 Application for type of drilling Application for type of drilling Up to 1.5×D for through holes Application for type of drilling Up to 1.5×D for blind holes Spacing of the cutters Unequal spacing Countersink angle 90 degrees Shank tolerance h6 Colour ring Internal/external application Internal Series Master TM	Coating	AlTiN
Flank angle Tool material Thread standard Solid carbide Thread standard DIN 13 Shank DIN 6535 HA to h6 Application for type of drilling Application for type of drilling Up to 1.5×D for through holes Application for type of drilling Up to 1.5×D for blind holes Spacing of the cutters Unequal spacing Countersink angle 90 degrees Shank tolerance h6 Colour ring green Internal/external application Internal Series Master TM	Thread type	M-LH
Tool material Solid carbide Thread standard DIN 13 Shank DIN 6535 HA to h6 Application for type of drilling up to 1.5×D for through holes Application for type of drilling up to 1.5×D for blind holes Spacing of the cutters unequal spacing Countersink angle Shank tolerance h6 Colour ring green Internal/external application Series Master TM	Thread type	M
Thread standard Shank DIN 6535 HA to h6 Application for type of drilling Application for type of drilling Up to 1.5×D for through holes Application for type of drilling Up to 1.5×D for blind holes Spacing of the cutters Unequal spacing Countersink angle 90 degrees Shank tolerance h6 Colour ring green Internal/external application Internal Series Master TM	Flank angle	60 degrees
Shank Application for type of drilling Application for type of drilling Application for type of drilling Up to 1.5×D for through holes up to 1.5×D for blind holes Spacing of the cutters Unequal spacing Countersink angle 90 degrees Shank tolerance h6 Colour ring green Internal/external application Series Master TM	Tool material	Solid carbide
Application for type of drilling up to 1.5×D for through holes Application for type of drilling up to 1.5×D for blind holes Spacing of the cutters unequal spacing Countersink angle 90 degrees Shank tolerance h6 Colour ring green Internal/external application Internal Series Master TM	Thread standard	DIN 13
Application for type of drilling up to 1.5×D for blind holes Spacing of the cutters unequal spacing Countersink angle 90 degrees Shank tolerance h6 Colour ring green Internal/external application Internal Series Master TM	Shank	DIN 6535 HA to h6
Spacing of the cuttersunequal spacingCountersink angle90 degreesShank toleranceh6Colour ringgreenInternal/external applicationInternalSeriesMaster TM	Application for type of drilling	up to 1.5×D for through holes
Countersink angle 90 degrees Shank tolerance h6 Colour ring green Internal/external application Internal Series Master TM	Application for type of drilling	up to 1.5×D for blind holes
Shank tolerance h6 Colour ring green Internal/external application Internal Series Master TM	Spacing of the cutters	unequal spacing
Colour ring green Internal/external application Internal Series Master TM	Countersink angle	90 degrees
Internal/external application Internal Series Master TM	Shank tolerance	h6
Series Master TM	Colour ring	green
	Internal/external application	Internal
Type of product thread milling cutter	Series	Master TM
7. 1	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	Р
Steel < 750 N/mm ²	suitable	130 m/min	Р
Steel < 900 N/mm ²	suitable	120 m/min	Р
Steel < 1100 N/mm ²	suitable	90 m/min	Р
Steel < 1400 N/mm ²	suitable	80 m/min	Р
Steel < 55 HRC	suitable only under restricted conditions	45 m/min	Н
TOOLOX 33	suitable	85 m/min	Н
TOOLOX 44	suitable	50 m/min	Н
INOX < 900 N/mm ²	suitable	82 m/min	М
INOX > 900 N/mm ²	suitable	75 m/min	М
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