

# GARANT Master TM plain shank thread mill with countersink 2×D, TiAlN, M: M5



### **Order data**

Order number	139653 M5
GTIN	4045197957757
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
- · New coating for optimum wear resistance
- · 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

Form HB and HE supplied at the same price as HA.

Form **HB**: order with **No. 139656 + 129100 HB** 

Form **HE**: order with **No. 139656 + 129100 HE** 

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Form **HE**: order with **No. 139653 + 129100 HE** 

Form **HB**: order with **No. 139654 + 129100 HB** 

Form **HE**: order with **No. 139654 + 129100 HE**.

Through-coolant: yes

No. of teeth Z: 4

Thread pitch: 0.8 mm Nominal Ø D<sub>c</sub>: 3.9 mm Shank length L<sub>s</sub>: 36 mm Overall length L: 58 mm

Shank Ø D<sub>s</sub>: 6 mm

maximum countersink Ø D<sub>1</sub>: 5.5 mm

# **Technical description**

Thread pitch 0.8 mm  Thread depth 10 mm  Programming value for countersink I, 11.6 mm  Number of clamping slots 4  maximum countersink Ø D, 5.5 mm  Shank Ø D, 6 mm  Feed f, in steel < 750 N/mm² 0.035 mm  Shank length L, 36 mm  No. of teeth Z 4  Through-coolant yes  Thread size M5  Nominal Ø Dc 3.9 mm  Coating TiAlN  Thread type M-LH  Flank angle 60 degrees  Tool material Solid carbide  Thread standard DIN 13  Shank DIN 6535 HA to h6  Application for type of drilling Pacing of the cutters unequal spacing  Countersink angle 90 degrees  Shank tolerance h6  Colour ring green  Internal/external application Indvendig	Overall langeth I	F.O. 100 100
Thread depth Programming value for countersink I₁ Number of clamping slots 4 maximum countersink Ø D₁ Shank Ø D₂ Feed f₂ in steel < 750 N/mm² No. of teeth Z Through-coolant Yes Thread size Nominal Ø D₂ Coating TiAIN Thread type M Thread type Thread type Tool material Thread standard Shank Application for type of drilling Spacing of the cutters Countersink angle Countersink angle Shank tolerance Colour ring TiAIN Thread type Thread standard Spacing of the cutters Tool material Tomm Theol Mary Tomm Tomm Tomm Tomm Tomm Tomm Tomm Tom	Overall length L	58 mm
Programming value for countersink I₁       11.6 mm         Number of clamping slots       4         maximum countersink Ø D₁       5.5 mm         Shank Ø D₂       6 mm         Feed f₂ in steel < 750 N/mm²	Thread pitch	0.8 mm
Number of clamping slots       4         maximum countersink $\oslash$ D <sub>1</sub> 5.5 mm         Shank $\oslash$ D <sub>2</sub> 6 mm         Feed $f_z$ in steel < 750 N/mm²	Thread depth	10 mm
maximum countersink $\oslash$ D15.5 mmShank $\oslash$ D26 mmFeed $f_z$ in steel < 750 N/mm²	Programming value for countersink I <sub>1</sub>	11.6 mm
Shank Ø D₃       6 mm         Feed f₂ in steel < 750 N/mm²	Number of clamping slots	4
Feed f₂ in steel < 750 N/mm²	maximum countersink $\emptyset$ D <sub>1</sub>	5.5 mm
Shank length L₅       36 mm         No. of teeth Z       4         Through-coolant       yes         Thread size       M5         Nominal Ø D₀       3.9 mm         Coating       TiAlN         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         Application for type of drilling       up to 2×D for blind holes and through holes         Spacing of the cutters       unequal spacing         Countersink angle       90 degrees         Shank tolerance       h6         Colour ring       green	Shank Ø D <sub>s</sub>	6 mm
No. of teeth Z Through-coolant yes Thread size M5 Nominal Ø Dc 3.9 mm Coating TiAIN 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 Application for type of drilling Spacing of the cutters unequal spacing Countersink angle 90 degrees Shank tolerance h6 Colour ring	Feed $f_z$ in steel < 750 N/mm <sup>2</sup>	0.035 mm
Through-coolant Thread size M5 Nominal Ø Dc Soating TiAlN Thread type M Thread type M-LH Flank angle Floor material Thread standard Thread type Threa	Shank length L <sub>s</sub>	36 mm
Thread size  Nominal Ø Dc  Coating  TiAlN  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  Application for type of drilling  Application for type of drilling  Countersink angle  Countersink angle  Solid carbide  Up to 2×D for blind holes and through holes  Spacing of the cutters  unequal spacing  Countersink angle  90 degrees  Shank tolerance  h6  Colour ring	No. of teeth Z	4
Nominal Ø Dc       3.9 mm         Coating       TiAIN         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         Application for type of drilling       up to 2×D for blind holes and through holes         Spacing of the cutters       unequal spacing         Countersink angle       90 degrees         Shank tolerance       h6         Colour ring       green	Through-coolant	yes
Coating 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 Application for type of drilling Countersink angle Colour ring TiAlN M M  M  M  M  M  M  DIN 13  Solid carbide DIN 13  DIN 13  DIN 6535 HA to h6  up to 2×D for blind holes and through holes  90 degrees  h6  Colour ring Green	Thread size	M5
Thread type  M-LH  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  Countersink angle  Spacing of the cutters  Countersink angle  Shank tolerance  h6  Colour ring	Nominal Ø D <sub>C</sub>	3.9 mm
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  holes and through holes  Spacing of the cutters  unequal spacing  Countersink angle  90 degrees  Shank tolerance  h6  Colour ring	Coating	TiAIN
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 and through holes  Spacing of the cutters unequal spacing  Countersink angle 90 degrees  Shank tolerance h6  Colour ring green	Thread type	M
Tool material  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  Solid carbide  DIN 13  DIN 6535 HA to h6  up to 2×D for blind holes and through holes  unequal spacing  Spacing of the cutters  Unequal spacing  90 degrees  Shank tolerance  h6  Colour ring  green	Thread type	M-LH
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  Shank tolerance  h6  Colour ring  DIN 13  DIN 13  DIN 13  DIN 13  Application for type of drilling  up to 2×D for blind holes and through holes  unequal spacing  90 degrees  h6  Green	Flank angle	60 degrees
Shank  Application for type of drilling  Spacing of the cutters  Countersink angle  Shank tolerance  Colour ring  DIN 6535 HA to h6  up to 2×D for blind holes  unequal spacing  unequal spacing  90 degrees  h6  Green	Tool material	Solid carbide
Application for type of drilling  Up to 2×D for blind holes and through holes  Spacing of the cutters  Unequal spacing  Countersink angle  90 degrees  Shank tolerance  h6  Colour ring  green	Thread standard	DIN 13
Application for type of drilling  Spacing of the cutters  Countersink angle  Shank tolerance  Colour ring  holes and through holes  unequal spacing  90 degrees  h6  green	Shank	DIN 6535 HA to h6
Countersink angle 90 degrees  Shank tolerance h6  Colour ring green	Application for type of drilling	·
Shank tolerance h6 Colour ring green	Spacing of the cutters	unequal spacing
Colour ring green	Countersink angle	90 degrees
· · · · · · · · · · · · · · · · · · ·	Shank tolerance	h6
Internal/external application Indvendig	Colour ring	green
	Internal/external application	Indvendig

Series	GARANT Master TM
Type of product	thread milling cutter
Services	
Shank grinding Type HB	129100 HB
Shank grinding Type HE	129100 HE