

GARANT Master TM plain shank thread mill with countersink 2×D, TiAIN, MF: 16X1,5



Order data

Order number	139682 16X1,5
GTIN	4045197957986
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. 139682 + 129100 HB**

Form **HE**: order with **No. 139682 + 129100 HE**

Form **HB**: order with **No. 139683 + 129100 HB**

Form **HE**: order with **No. 139683 + 129100 HE**

Order **HB** shank: with **No. 139682 + 129100 HB**

Order HE shank: with No. 139682 + 129100 HE

Through-coolant: yes

No. of teeth Z: 6

Thread pitch: 1.5 mm Nominal \varnothing D_c: 13.9 mm Shank length L_s: 48 mm Overall length L: 108 mm

Shank Ø D_s: 18 mm

maximum countersink Ø D₁: 16.5 mm

Technical description

Number of clamping slots Shank length L, Overall length L Programming value for countersink I, maximum countersink Ø D, Through-coolant Thread depth Feed f₂ in steel < 750 N/mm² Thread pitch No. of teeth Z Thread size M16×1.5 Nominal Ø D₂ Coating TiAIN Thread type MF Thread type MF-LH Flank angle Tool material Shank DIN 6355 HA to h6 Application for type of drilling Countersink angle Colour ring Internal /external application Series GARANT Master TM	Shank Ø D₅	18 mm
Overall length L 108 mm Programming value for countersink l₁ 33.55 mm maximum countersink Ø D₁ 16.5 mm Through-coolant yes Thread depth 32 mm Feed f₂ in steel < 750 N/mm²	Number of clamping slots	6
Programming value for countersink I₁ 33.55 mm maximum countersink Ø D₁ 16.5 mm Through-coolant yes Thread depth 32 mm Feed f₂ in steel < 750 N/mm²	Shank length L₅	48 mm
maximum countersink Ø D₁ 16.5 mm Through-coolant yes Thread depth 32 mm Feed f₂ in steel < 750 N/mm²	Overall length L	108 mm
Through-coolant Thread depth 32 mm Feed f₂ in steel < 750 N/mm² 0.11 mm Thread pitch 1.5 mm No. of teeth Z 6 Thread size M16×1.5 Nominal Ø D₂ 13.9 mm Coating TiAIN Thread type MF Thread type MF-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 Colour ring Internal/external application Internal	Programming value for countersink I ₁	33.55 mm
Thread depth Feed f₂ in steel < 750 N/mm² 0.11 mm Thread pitch 1.5 mm No. of teeth Z 6 Thread size M16×1.5 Nominal Ø D₂ Coating TiAlN Thread type MF Thread type MF Thread type MF-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 Countersink angle 90 degrees Colour ring Internal/external application Internal	maximum countersink Ø D ₁	16.5 mm
Feed f₂ in steel < 750 N/mm²	Through-coolant	yes
Thread pitch No. of teeth Z 6 Thread size M16×1.5 Nominal Ø Dc 13.9 mm Coating TiAIN Thread type MF Thread type MF-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 Countersink angle Colour ring Internal/external application	Thread depth	32 mm
No. of teeth Z Thread size M16×1.5 Nominal Ø D _c 13.9 mm Coating TiAlN Thread type MF Thread type MF-LH Flank angle Floor 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 Goderes Tolor 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 Golour ring green Internal/external application	Feed f_z in steel < 750 N/mm ²	0.11 mm
Thread size Nominal Ø Dc 13.9 mm Coating TiAlN Thread type MF Thread type MF-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 Gunternal green Internal/external application	Thread pitch	1.5 mm
Nominal Ø Dc13.9 mmCoatingTiAINThread typeMFThread typeMF-LHFlank angle60 degreesTool materialSolid carbideThread standardDIN 13ShankDIN 6535 HA to h6Application for type of drillingup to 2×D for blind holes and through holesSpacing of the cuttersunequal spacingCountersink angle90 degreesColour ringgreenInternal/external applicationInternal	No. of teeth Z	6
Coating TiAIN Thread type MF Thread type MF-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 Colour ring green Internal/external application Internal	Thread size	M16×1.5
Thread type Thread type MF MF-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 Spacing of the cutters Countersink angle Countersink angle Golour ring Internal/external application MF MF MF MF MF MF MF MF MF M	Nominal Ø D _c	13.9 mm
Thread type MF-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 Colour ring green Internal/external application Internal	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 Colour ring green Internal/external application Internal	Thread type	MF
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 Colour ring Internal/external application Solid carbide DIN 13 DIN 6535 HA to h6 up to 2×D for blind holes and through holes unequal spacing 90 degrees Internal	Thread type	MF-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 Colour ring Internal/external application DIN 13 DIN 13 DIN 13 DIN 13 Application 19 up to 2×D for blind holes and through holes unequal spacing 90 degrees Internal	Flank angle	60 degrees
Shank Application for type of drilling Spacing of the cutters Countersink angle Colour ring Internal/external application DIN 6535 HA to h6 up to 2×D for blind holes unequal spacing unequal spacing 90 degrees 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 Colour ring green Internal/external application Internal	Thread standard	DIN 13
Application for type of drilling Spacing of the cutters Countersink angle Colour ring Internal/external application holes and through holes unequal spacing 90 degrees green Internal	Shank	DIN 6535 HA to h6
Countersink angle 90 degrees Colour ring green Internal/external application Internal	Application for type of drilling	· · · · · · · · · · · · · · · · · · ·
Colour ring green Internal/external application Internal	Spacing of the cutters	unequal spacing
Internal/external application Internal	Countersink angle	90 degrees
	Colour ring	green
Series GARANT Master TM	Internal/external application	Internal
	Series	GARANT Master TM

Type of product	thread milling cutter
Services	
Shank grinding Type HB	129100 HB
Shank grinding Type HE	129100 HE