Garant

GARANT Master TM plain shank thread mill with countersink 2×D, TiAIN, UNF: 5/8-18



Order data

Order number	139728 5/8-18
GTIN	4062406058357
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.
- · Corrected thread profile for avoidance of profile distortions.
- · increased number of cutting edges
- new coating for optimum wear resistance

Advantage:

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

For **UNF unified fine threads** ASME-B1.1.

Note:

Form HB and HE supplied at the same price as HA. Form HB: order with No. 139728 + 129100 HB Form HE: order with No. 139728 + 129100 HE Thread type: UNF Thread type: UNF-LH No. of teeth Z: 6 Threads per inch: 18 Nominal \emptyset D_c: 13.9 mm Flute length L_c: 33.11 mm Shank length L_s: 48 mm Overall length L: 108 mm Shank Ø D_s: 18 mm

Technical description

Threads per inch18Overall length L108 mmNumber of clamping slots6Shank Ø D,18 mmThread typeUNFThread type0UNF-LHNo. of teeth Z6Thread pitch1.411 mmThread Ø15.86 mmFlute length Lc33.11 mmFeed fc in steel < 750 N/mm²0.11 mmThread size5/8-18 UNFNominal Ø Dc13.9 mmProgramming value for countersink Li34.35 mmNeck Ø Di16.4 mmSeriesMaster TMCoatingTiAINFlank angle60°Through-coolantyesCutting directionyesCutting direction for type of drillingup to 2×D for blind holesSpacing of the cuttersunequal spacing	Shank length L _s	48 mm	
Number of clamping slots6Shank Ø D,18 mmThread typeUNFThread typeUNF-LHNo. of teeth Z6Thread pitch1.411 mmThread Ø15.86 mmFlute length L,33.11 mmFlute length L,0.11 mmThread size5/8-18 UNFNominal Ø Dc13.9 mmProgramming value for countersink L,34.35 mmNeck Ø D,16.4 mmSeriesMaster TMCoatingTiAINFlank angle60 °ShankDIN 6535 HA with h6Through-coolantyesCutting directionright-handApplication for type of drillingup to 2×D for blind holes	Threads per inch	18	
Shank Ø D,18 mmThread typeUNFThread typeUNF-LHNo. of teeth Z6Thread pitch1.411 mmThread Ø15.86 mmFlute length L,33.11 mmFeed f, in steel < 750 N/mm²	Overall length L	108 mm	
Thread typeUNFThread typeUNF-LHNo. of teeth Z6Thread pitch1.411 mmThread Ø15.86 mmFlute length L33.11 mmFeed f, in steel < 750 N/mm²	Number of clamping slots	6	
Thread typeUNF-LHNo. of teeth Z6Thread pitch1.411 mmThread Ø15.86 mmFlute length Lc33.11 mmFeed f, in steel < 750 N/mm²	Shank $Ø D_s$	18 mm	
No. of teeth Z6No. of teeth Z6Thread pitch1.411 mmThread Ø15.86 mmFlute length L,33.11 mmFeed f, in steel < 750 N/mm²	Thread type	UNF	
Thread pitch1.411 mmThread Ø15.86 mmFlute length Lc33.11 mmFeed fz in steel < 750 N/mm²	Thread type	UNF-LH	
Thread Ø15.86 mmFlute length L33.11 mmFeed f, in steel < 750 N/mm²	No. of teeth Z	6	
Flute length Lc33.11 mmFeed fz in steel < 750 N/mm²	Thread pitch	1.411 mm	
Feed f, in steel < 750 N/mm²0.11 mmThread size5/8-18 UNFNominal Ø Dc13.9 mmProgramming value for countersink L,34.35 mmNeck Ø D,16.4 mmSeriesMaster TMCoatingTiAINFlank angle60 °Tool materialSolid carbideShankDIN 6535 HA with h6Through-coolantyesCutting directionright-handApplication for type of drillingup to 2×D for through holes	Thread Ø	15.86 mm	
Thread size5/8-18 UNFNominal Ø Dc13.9 mmProgramming value for countersink L134.35 mmNeck Ø D116.4 mmSeriesMaster TMCoatingTiAINFlank angle60 °Tool materialSolid carbideShankDIN 6535 HA with h6Through-coolantyesCutting directionright-handApplication for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holes	Flute length L _c	33.11 mm	
Nominal Ø Dc13.9 mmProgramming value for countersink L134.35 mmNeck Ø D116.4 mmSeriesMaster TMCoatingMaster TMFlank angle60°Tool materialSolid carbideShankDIN 6535 HA with h6Through-coolantyesCutting directionright-handApplication for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holes	Feed f _z in steel < 750 N/mm ²	0.11 mm	
Programming value for countersink L134.35 mmNeck Ø D116.4 mmSeriesMaster TMCoatingTiAINCoatingTiAINFlank angle60°Tool materialsolid carbideShankDIN 6535 HA with h6Through-coolantyesCutting directionright-handApplication for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holes	Thread size	5/8-18 UNF	
Neck Ø D116.4 mmSeriesMaster TMCoatingTiAINCoatingTiAINFlank angle60°Tool materialSolid carbideShankDIN 6535 HA with h6Through-coolantyesCutting directionright-handApplication for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holes	Nominal Ø D _c	13.9 mm	
SeriesMaster TMCoatingTiAINFlank angle60°Tool materialSolid carbideShankDIN 6535 HA with h6Through-coolantyesCutting directionright-handApplication for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holes	Programming value for countersink L ₁	34.35 mm	
CoatingTiAINFlank angle60°Tool materialsolid carbideShankDIN 6535 HA with h6Through-coolantyesCutting directionright-handApplication for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holes	Neck Ø D ₁	16.4 mm	
Flank angle60 °Tool materialSolid carbideShankDIN 6535 HA with h6Through-coolantyesCutting directionright-handApplication for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holes	Series	Master TM	
Tool materialsolid carbideShankDIN 6535 HA with h6Through-coolantyesCutting directionright-handApplication for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holes	Coating	TiAIN	
ShankDIN 6535 HA with h6Through-coolantyesCutting directionright-handApplication for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holes	Flank angle	60 °	
Through-coolantyesCutting directionright-handApplication for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holes	Tool material	solid carbide	
Cutting directionright-handApplication for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holes	Shank	DIN 6535 HA with h6	
Application for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holes	Through-coolant	yes	
Application for type of drillingup to 2×D for through holes	Cutting direction	right-hand	
	Application for type of drilling	up to 2×D for blind holes	
Spacing of the cutters unequal spacing	Application for type of drilling	up to 2×D for through holes	
	Spacing of the cutters	unequal spacing	

Countersink angle	90 °	
Shank tolerance	h6	
Colour ring	green	
Internal/external application	Internal	
Type of product	thread milling cutter	

User data

	Suitability	V _c	ISO code
Alu plastics	Suitable	220 m/min	Ν
Aluminium (short chipping)	suitable	220 m/min	Ν
Alu > 10% Si	Suitable	180 m/min	Ν
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 < 50 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	К
CuZn	Suitable	200 m/min	Ν
Uni	Suitable		
wet maximum	Suitable		
wet minimum	Suitable		

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Air Services	Suitable	
Shank grinding Type HB	}	129100 HB
Shank grinding Type HE		129100 HE