Garant

GARANT Master TM plain shank thread mill 2×D, TiAlN, MF: 20X1,5



Order data

Order number	139665 20X1,5
GTIN	4045197957689
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.

Through-coolant feed $\ge 4 \times 0.5$

Note:

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

Order **HB** shank: with **No. 139665 + 129100 HB**.

Order **HE** shank: with **No. 139665 + 129100 HE**. Can also be used for thread dimensions M24 × 1.5 and M30 × 1.5.

Technical description

Shank length L _s	48 mm
Thread depth	41.25 mm
Number of clamping slots	6
Thread pitch	1.5 mm
Shank Ø D _s	16 mm

Overall length L106 mmFeed f _z in steel < 750 N/mm²0.13 mmNo. of teeth Z6Through-coolantyesThread sizeM20×1.5Nominal Ø D _c 15.95 mmFlute length L _c 41.25 mmCoatingTiAINThread typeMFThread type60 degreesTool materialSolid carbideThread standardDIN 6535 HA to h6Application for type of drillingup to 2×D for blind holesSpacing of the cuttersunequal spacingColour ringgreenInternal/external applicationIndvendigSeriesMaster TMType of productthread milling cutter			
No. of teeth Z6Through-coolantyesThread sizeM20×1.5Nominal Ø Dc15.95 mmFlute length Lc41.25 mmCoatingTiAINCoatingMFThread typeMFThread type60 degreesTool materialSolid carbideThread standardDIN 13ShankDIN 6535 HA to h6Application for type of drillingup to 2×D for through holesApplication for type of drillingunequal spacingColour ringgreenInternal/external applicationIndvendigSeriesMaster TM	Overall length L	106 mm	
Through-coolantyesThread sizeM20×1.5Nominal Ø Dc15.95 mmFlute length Lc41.25 mmCoatingTiAINCoatingMFThread typeMFThread type60 degreesTool materialSolid carbideThread standardDIN 6535 HA to h6Application for type of drillingup to 2×D for through holesApplication for type of drillingup to 2×D for through holesSocior ringgreenInternal/external applicationIndvendigSeriesMaster TM	Feed f _z in steel < 750 N/mm ²	0.13 mm	
Thread sizeM20×1.5Nominal Ø Dc15.95 mmFlute length Lc41.25 mmCoatingTiAINCoatingMFThread typeMFThread type60 degreesTool material60 degreesTool materialDIN 6535 HA to h6Application for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holesSpacing of the cuttersunequal spacingColour ringIndvendigInternal/external applicationIndvendigSeriesMaster TM	No. of teeth Z	6	
Nominal Ø Dc15.95 mmFlute length Lc41.25 mmCoatingTiAlNThread typeMFThread typeMF-LHFlank angle60 degreesTool materialSolid carbideThread standardDIN 13ShankDIN 6535 HA to h6Application for type of drillingup to 2×D for blind holesSpacing of the cuttersunequal spacingColour ringgreenInternal/external applicationIndvendigSeriesMaster TM	Through-coolant	yes	
Flute length L41.25 mmCoatingTiAlNThread typeMFThread typeMF-LHFlank angle60 degreesTool materialSolid carbideThread standardDIN 13ShankDIN 6535 HA to h6Application for type of drillingup to 2×D for blind holesSpacing of the cuttersunequal spacingColour ringgreenInternal/external applicationIndvendigSeriesMaster TM	Thread size	M20×1.5	
CoatingTiAINCoatingTiAINThread typeMFThread typeMF-LHFlank angle60 degreesTool materialSolid carbideTool materialDIN 13ShankDIN 6535 HA to h6Application for type of drillingup to 2×D for blind holesSpacing of the cuttersunequal spacingColour ringGreenInternal/external applicationIndvendigSeriesMaster TM	Nominal \emptyset D _c	15.95 mm	
Thread typeMFThread typeMF-LHFlank angle60 degreesTool materialSolid carbideThread standardDIN 13ShankDIN 6535 HA to h6Application for type of drillingup to 2×D for blind holesApplication for type of drillingunequal spacingSpacing of the cuttersunequal spacingInternal/external applicationIndvendigSeriesMaster TM	Flute length L _c	41.25 mm	
Thread typeMF-LHFlank angle60 degreesTool materialSolid carbideThread standardDIN 13ShankDIN 6535 HA to h6Application for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holesSpacing of the cuttersunequal spacingColour ringgreenInternal/external applicationIndvendigSeriesMaster TM	Coating	TiAIN	
Flank angle60 degreesTool materialSolid carbideThread standardDIN 13ShankDIN 6535 HA to h6Application for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holesSpacing of the cuttersunequal spacingColour ringgreenInternal/external applicationIndvendigSeriesMaster TM	Thread type	MF	
Tool materialSolid carbideThread standardDIN 13ShankDIN 6535 HA to h6Application for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holesSpacing of the cuttersunequal spacingColour ringgreenInternal/external applicationIndvendigSeriesMaster TM	Thread type	MF-LH	
Thread standardDIN 13ShankDIN 6535 HA to h6Application for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holesSpacing of the cuttersunequal spacingColour ringgreenInternal/external applicationIndvendigSeriesMaster TM	Flank angle	60 degrees	
ShankDIN 6535 HA to h6Application for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holesSpacing of the cuttersunequal spacingColour ringgreenInternal/external applicationIndvendigSeriesMaster TM	Tool material	Solid carbide	
Application for type of drillingup to 2×D for blind holesApplication for type of drillingup to 2×D for through holesSpacing of the cuttersunequal spacingColour ringgreenInternal/external applicationIndvendigSeriesMaster TM	Thread standard	DIN 13	
Application for type of drillingup to 2×D for through holesSpacing of the cuttersunequal spacingColour ringgreenInternal/external applicationIndvendigSeriesMaster TM	Shank	DIN 6535 HA to h6	
Spacing of the cuttersunequal spacingColour ringgreenInternal/external applicationIndvendigSeriesMaster TM	Application for type of drilling	up to 2×D for blind holes	
Colour ringgreenInternal/external applicationIndvendigSeriesMaster TM	Application for type of drilling	up to 2×D for through holes	
Internal/external application Indvendig Series Master TM	Spacing of the cutters	unequal spacing	
Series Master TM	Colour ring	green	
	Internal/external application	Indvendig	
Type of product thread milling cutter	Series	Master TM	
	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

© Hoffmann GmbH Qualitätswerkzeuge

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/mm²	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		
Air Services	suitable		

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