



## **HELICOIL® Plus**

Thread technology for  
high-strength fastenings  
– metric threads

# **BÖLLHOFF**

## HELICOIL® thread inserts



Can you imagine a world without screws? Even today, the screw is the most widely used fastening element for detachable joints. Optimised tightening methods and high-strength screws allow constant improvement. Considerably higher forces can be transmitted so that the dimension or total number of required screws can be reduced. However, only highly sustainable nut threads permit high-strength screw joints. This is where our HELICOIL® thread technology is used.

### Your advantages – an overview:

- High thread loading
- Increased quality and value
- Wear-resistant, low and constant thread friction
- Strong
- Corrosion and temperature resistant
- Cost-effective
- Tight fit
- Screw locking

# HELICOIL® thread inserts

## Structural component – thread reinforcement and repair

HELICOIL® is thread reinforcement and repair.

Threads are reinforced whenever low-strength materials (e.g. aluminium, aluminium-magnesium alloys and fibre-reinforced plastics) are used. The nut thread is wear-resistant even in cases of frequent use. HELICOIL® allows miniaturisation and lightweight construction for the development of production parts. The HELICOIL® thread insert has been tried and tested for more than 60 years and has become a widely used structural component.

Worldwide, HELICOIL® thread inserts are approved for economical and lasting repair of damaged or worn out threads.

Apart from repair of valuable individual components, parts used in large-scale production which have been rejected due to faults during thread production can be reintegrated into the production process.

## Technology

Thanks to continuous optimisation, the HELICOIL® Plus is now much easier to install. “Plus” refers to the special start of the thread, compared to the HELICOIL® Classic. The thread insert is a wire with rhombic profile formed into an elastic spiral. It is positioned and screwed in like a screw. To screw in the thread insert, all you need is an installation mandrel with thread dimensions similar to a tap of the same nominal diameter. However, existing tools of the commonly used design can still be used for installation. Thanks to the considerably wider range of tools to be used for installation, installation times are up to 20 % shorter than for previous methods.

If through-hole threads are required, after installation, the tang can be broken off at the notch (predetermined breaking point).

HELICOIL® Plus produces high-strength threads transferring forces from flank to flank into the holding thread. It is a highly reliable system for which German and international industrial property rights have been filed. HELICOIL® Plus are thread inserts produced according to consistent material and quality specifications and meet the requirements of national standardisation as well as aeronautical and military standards. Apart from that, leading large-scale users base their manufacturing standards on this system.



Defective thread



Repaired thread



$R_m$  = min. tensile strength 1400 N/mm<sup>2</sup> (1 N/mm<sup>2</sup> equals 1 MPa)  
 $HV$  = Vickers hardness 425 HV 0.2 min.  
 $R_z$  = roughness depth approx. 2.5  $\mu\text{m}$   
 $\mu_G$  = reduced thread friction, results in increased preload-force FV at constant tightening torque  
 $\tau_t$  = reduced torsion stress in the screw shank

## HELICOIL® Plus Free Running\*



Every thread of the thread insert with precision-formed, rhombic profile is Free Running. The result is an internal thread true to gauge that can be used from both ends. The dimensional stability of the ISO thread complies with DIN 13 6H as well as for special requirements with 4H and meets the demands on international standard specifications. The advantages of the HELICOIL® Plus system are particularly apparent with respect to processing and tools and result in shorter cycle times.

## HELICOIL® Plus Screwlock\*



This thread insert has an additional screw-locking area. One or several polygonal-shaped threads clamp the flanks of the installed screw. The elastically resilient frictional locking results in prevailing torques similar to the specifications of ISO 2320. These screw locking torques meet the demands of technical delivery terms regarding international standard specifications. However, the prevailing torques can also be adjusted as required for the corresponding application, e.g. for securing of setting screws. HELICOIL® Plus Screwlock can only be used with screws of higher property classes (8.8 and higher). Common lubricants according to the manufacturers' recommendations should be used for highly alloyed screws. The advantages of the HELICOIL® Plus system are particularly apparent with respect to processing and tools and result in shorter cycle times.

## HELICOIL® Classic Free Running\*



Every thread of the thread insert with precision-formed, rhombic profile is Free Running. The result is an internal thread true to gauge that can be used from both ends. The dimensional stability of the ISO thread complies with DIN 13 6H as well as for special requirements with 4H and meets the demands on international standard specifications.

## HELICOIL® Classic Screwlock\*



This thread insert has an additional screw-locking area. One or several polygonal-shaped threads clamp the flanks of the installed screw. The elastically resilient frictional locking results in prevailing torques similar to the specifications of ISO 2320. These screw locking torques meet the demands of technical delivery terms regarding international standard specifications. However, the prevailing torques can also be adjusted as required for the corresponding application, e.g. for securing of setting screws. HELICOIL® Classic Screwlock can only be used with screws of higher property classes (8.8 and higher). Common lubricants according to the manufacturers' recommendations should be used for highly alloyed screws.

\* Comply with DIN 8140 standard. For further standards, see page 12.

**HELICOIL® Tangfree Free Running\*\***



You do not need a tang to install these thread inserts. Therefore, tang break and removal are not required. Combined with the matching installation tools, the current innovation status in the HELICOIL® technology is a perfect addition to the HELICOIL® product family.

Simply order the separate catalogue No 0150.

**HELICOIL® Tangfree Screwlock\*\***



HELICOIL® Tangfree Screwlock has the same advantages as HELICOIL® Tangfree. In addition, there is a screw-locking area. The screw is locked by one or several polygonal-shaped threads clamping the flanks of the screwed in screw. The elastically resilient frictional locking results in prevailing torques similar to the specifications of ISO 2320. These screw locking torques meet the demands of technical delivery terms regarding international standard specifications. HELICOIL® Tangfree Screwlock can only be used with screws of higher property classes (8.8 and higher). Common lubricants according to the manufacturers' recommendations shall be used for highly alloyed screws. This thread insert is widely used in the aviation industry.

Simply order the separate catalogue No 0150.

**HELICOIL® Locknuts**



HELICOIL® locknuts consist of a nut body and an integrated HELICOIL® Plus Screwlock thread insert. One or several polygonal-shaped threads clamp the flanks of the screwed in screw resulting in elastically resilient frictional locking. The achieved prevailing torques are similar to the specifications of ISO and meet the demands of technical delivery terms regarding international standard specifications. Moreover, they can also be adjusted as required for the corresponding application. HELICOIL® nuts are available in different materials.

Simply order the separate catalogue No 0560.

**RIVKLE® Aero**



RIVKLE® Aero combines a high-strength stainless steel blind rivet nut and a HELICOIL® Screwlock. These two perfectly matching fasteners provide considerable benefits for screwed connections on thin-walled components with high mechanical requirements. Due to the polygonal-shaped thread of the HELICOIL® Screwlock thread insert, there is a locking effect on the flanks of the screw or bolt to be screwed in.

As a result, there is a highly elastically resilient frictional locking so that the screw is locked to prevent self-unscrewing.

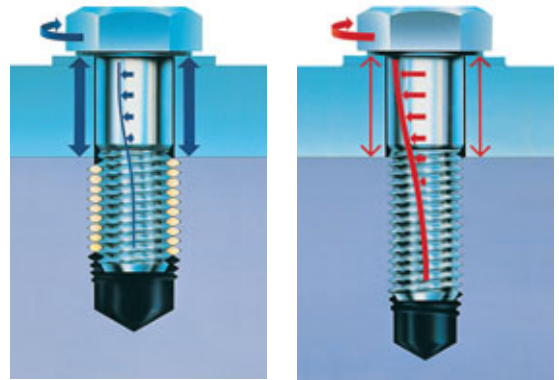
Simply order the separate catalogue No 2307.

\*\* Comply with standards NAS 1130 and NAS 0276. For further standards, see page 12.

# HELICOIL® thread inserts – a close look at the advantages

## Wear resistance

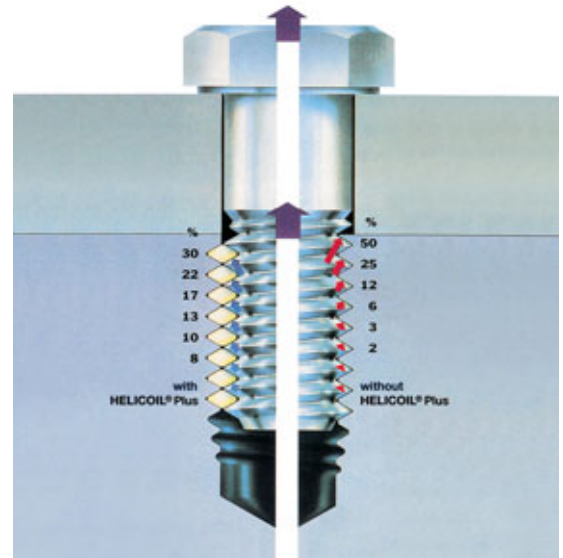
HELICOIL® Plus thread inserts are made of austenitic chrome-nickel steel (minimum tensile strength 1,400 N/mm<sup>2</sup>). The high surface quality of the rolled thread ensures a high-strength, wear-resistant thread with an extremely small and constant thread friction torque. Therefore, a higher, constant preload-force is achieved for repeated cycles at the same tightening torque. The utilisation of the yield point of high-strength screws is improved. Torsion stress is considerably reduced. Compared to tapped threads, the surface roughness of the HELICOIL® Plus is reduced by 90%.



## Strength

The elastic properties of the HELICOIL® Plus thread insert allow a uniform load and stress distribution. An optimum flank contact is achieved. Variable pitches and angles are compensated for over the entire length of the thread insert. Force transmission from bolt to nut thread is optimised. The quality of the screw joint is considerably increased – for static as well as dynamic operating loads.

Due to the improved distribution of the preload-force, the fatigue strength of dynamically loaded screws is increased. This is why the HELICOIL® is also suitable for use in threads in high-strength materials, e.g. steel or cast iron alloys.



## Corrosion and temperature resistance

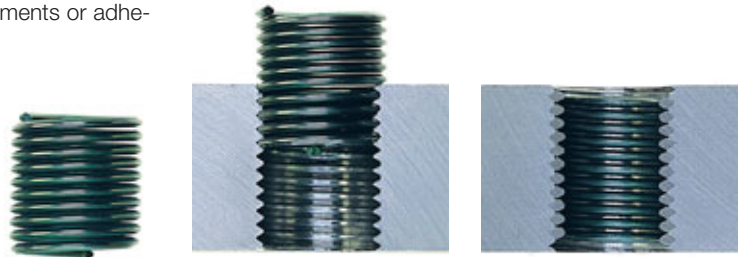
The standard material of the HELICOIL® Plus prevents seizing of screws under environmental influences. HELICOIL® Plus thread inserts of nickel-based materials are available for thermally highly stressed screw joints. Elasticity and spring force remain constant. For materials particularly susceptible to corrosion, such as magnesium, the HELICOIL® Plus made of hard-coated high-strength aluminium is used. This prevents contact corrosion caused by galvanic action.



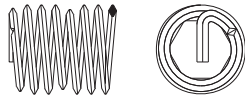
## Tight fit

When not installed, the outside diameter of the HELICOIL® Plus exceeds the receiving thread by a defined amount. In combination with the high spring force of the material, this difference in dimension results in radial expansion and therefore in the tight and clearance-free fit in the nut thread. Additional locking elements or adhesive – as are common for fixed bushes – are therefore obsolete.

If you use impact wrenches, please contact us. We will be happy to help you.



## Screw locking



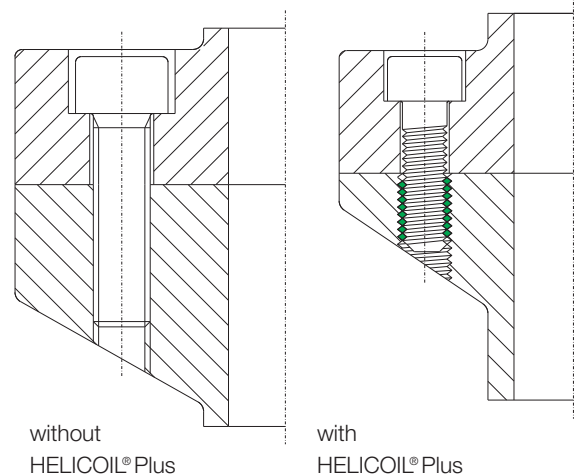
Thread technology and the polygonal-shaped thread of the HELICOIL® Plus Screwlock lead to a high degree of frictional locking and thus prevents the screw unscrewing and its losing. Additional locking of the joint with split pins, wires or washers is not required. Costs are reduced and installation is easier.

## Friction

Thread friction and its scatter range can be reduced if a HELICOIL® is used. The dispersion range can be restricted. (For example: If the thread friction value  $\mu_G$  of a property class 10.9 carbon steel screw, screwed into a tapped nut thread ranges between 0.12 and 0.18, the  $\mu_G$  values range between 0.11 and 0.13 if a coil thread insert is used.) For a torque-controlled screw tightening application, the screw preload-force can be adjusted more precisely and the yield point of the screw utilised more efficiently. Simultaneously, the preload force is increased during screw breakage due to reduced torsional stress.




## Downsizing

Engineers can choose almost any material. The HELICOIL® Plus corresponds to today's trend toward lightweight construction (e.g. aluminium and magnesium) because this method of thread reinforcement combines minimum space requirements and high strength. High-strength screws are therefore also perfectly suitable for low-shear materials. A reduced number of joints and smaller screw sizes save material, installation space and weight – at high fatigue strength. These are definite advantages of the HELICOIL® system.



# HELICOIL® modular system

The HELICOIL® has been tried and tested for more than 60 years and has become a renowned structural component. There is a solution to almost every task related to this thread technology.

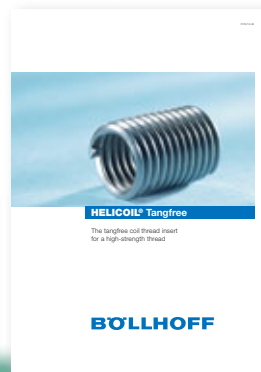
Thread types	Metric coarse thread DIN ISO 13 1	Metric fine thread DIN ISO 13 (T02-T11)	Pipe thread DIN EN ISO 228/1 G	UNC thread NASM 21209
Designs	 HELICOIL® Plus Free Running	 HELICOIL® Plus Screwlock	 HELICOIL® Tangfree	
Materials	Stainless steel A2 material No 1.4301	Stainless steel A4 material No 1.4571	Bronze material No 2.1020.34	Inconel X 750 material No 2.4669
Surfaces	Bright		Tin-plated G100 / G300	Dry film lubricated

## HELICOIL® further catalogues



**HELICOIL® Plus**  
Imperial thread inserts for metals  
Catalogue No 0101

<http://www.boellhoff.de/en/helicoil-plus-imperial>



**HELICOIL® Tangfree**  
The Tangfree coil thread insert for a high-strength thread  
Catalogue No 0150

<http://www.boellhoff.de/en/helicoil-tangfree>







Thread types



Designs



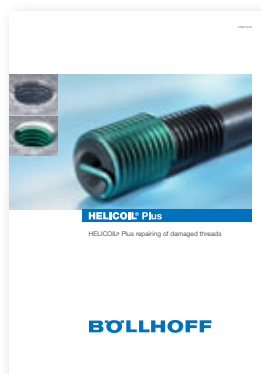
Materials



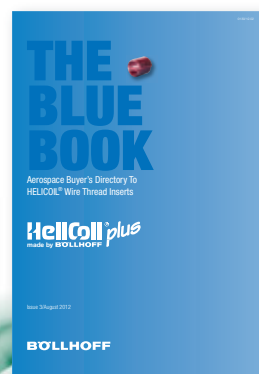
Surfaces

Not all combinations are viable.

**HELICOIL® Plus**  
Repairing of damaged threads  
Catalogue No 0180  
<http://www.boellhoff.de/en/thread-repair>



**THE BLUE BOOK**  
Aerospace Buyer's Directory to HELICOIL® Wire Thread Inserts  
Catalogue No 0130  
<http://www.boellhoff.de/the-blue-book>



## Materials

The overview table shows the most common materials with specifications.

Materials ①	Temperature resistance	Minimum tensile strength at room temperature	Examples of use
Stainless steel A 2 X5 CrNi 18 10 material No 1.4301	low temperature –196°C short-term 425°C long-term 315°C	1400 N/mm <sup>2</sup> *	<ul style="list-style-type: none"> <li>Standard applications for all property classes and materials ③</li> <li>General lightweight construction e.g. of aluminium, magnesium or aluminium alloys ②</li> </ul>
Stainless steel A 4 X6 CrNiMoTi 17 12 2 ④ material No 1.4571	low temperature –196°C short-term 425°C long-term 315°C	1400 N/mm <sup>2</sup> *	<ul style="list-style-type: none"> <li>Increased corrosion protection</li> <li>Highly alloyed CrNi steel screws ③</li> <li>Low thread friction</li> <li>General lightweight construction</li> <li>Sea water/chlorine-containing water</li> </ul>
Bronze CuSN 6 material No 2.1020.34	short-term 300°C long-term 250°C	900 N/mm <sup>2</sup> *	<ul style="list-style-type: none"> <li>Copper workpieces</li> <li>Moving threads</li> <li>CrNi steel screws</li> </ul>
Inconel X 750 NiCr 15 Fe 7 TiAl ④ material No 2.4669	short-term 750°C long-term 550°C	1150 N/mm <sup>2</sup> *	<ul style="list-style-type: none"> <li>Thermal load in combination with corrosion protection</li> <li>Aerospace technology</li> <li>Aeroplane engines</li> <li>Turbochargers</li> </ul>
Nimonic 90 NiCr 20 Co 18 Ti material No 2.4632	short-term 900°C long-term 600°C		
Aluminium AlZnMgCu 1.5 ④ material No 3.4365	short-term 170°C long-term 150°C	500 N/mm <sup>2</sup> *	<ul style="list-style-type: none"> <li>Magnesium workpieces</li> <li>Vehicle technology</li> <li>Lightweight construction</li> </ul>

① Further materials and surfaces on request.

② If magnesium alloys are used outdoors, we recommend special measures for corrosion protection.

③ If CrNi screws are used, you should use a suitable coating or standard lubricant.

④ Delivery on request.

Note: Data only apply to uncoloured HELICOIL® Plus.

Up to M 5, the applied colour is temperature-resistant from –18°C to +200°C.

From M 6, the applied colour is temperature-resistant from –5°C to +120°C (+150°C short-term).

\*1 N/mm<sup>2</sup> equals 1 MPa

## Thread types

Thread	HELICOIL® Plus Free Running		HELICOIL® Plus Screwlock		Page
	Nominal diameters	Nominal lengths	Nominal diameters	Nominal lengths	
Metric ISO thread coarse thread	M 2 to M 42*	0.5 d to 3 d	M 2 to M 39	0.75 d to 3 d ⑤	18–23
Metric ISO thread fine thread	M 8 x 1 to M 39 x 3*	0.5 d to 3 d	M 8 x 1 to M 64 x 4	0.75 d to 3 d	

⑤ Length 3 d only from M 3.

\*Further sizes available.

HELICOIL® Plus thread inserts comply with diverse requirements and standards from general and aerospace industries, such as DIN 8140, DIN 65536, LN 9039 and LN 9499. Further standards (e.g. MS or EN standards) on request.

## Prevailing torques for HELICOIL® Screwlock

Guide values for prevailing torques according to ISO 2320 Valid for coarse threads and fine thread Values in Nm for property class 8											
Thread	M 3	M 4	M 5	M 6	M 8	M 10	M 12	M 14	M 16	M 18	M 20
1 <sup>st</sup> cycle-on, max.	0.43	0.90	1.60	3.00	6.00	10.5	15.5	24.0	32.0	42.0	54.0
1 <sup>st</sup> cycle-off, min.	0.12	0.18	0.29	0.45	0.85	1.5	2.3	3.3	4.5	6.0	7.5
5 <sup>th</sup> cycle-off, min.	0.08	0.12	0.20	0.30	0.60	1.0	1.6	2.3	3.0	4.2	5.3

Prevailing torques according to aerospace standards and for other metric threads on request.

### Determination of nominal length

Guide values to determine the minimum length of the HELICOIL® Plus thread insert depending on parent material and screw property class, valid for 20°C.

Strength of parent material	Screw property class									
	3.6 4.6	4.8 5.6	5.8 6.6	6.8 6.9	8.8	9.8	10.9	12.9	14.9	
Tensile strength $R_m$ (N/mm <sup>2</sup> )*										
to 100	1.5 d	1.5 d	2 d	2.5 d	3 d	3 d	–	–	–	
> 100 – 150	1.5 d	1.5 d	2 d	2 d	2.5 d	2.5 d	2.5 d	2.5 d	3 d	
> 150 – 200	1 d	1.5 d	1.5 d	1.5 d	2 d	2 d	2 d	2.5 d	2.5 d	
> 200 – 250	1 d	1 d	1.5 d	1.5 d	1.5 d	1.5 d	2 d	2.5 d	2.5 d	
> 250 – 300	1 d	1 d	1 d	1 d	1.5 d	1.5 d	1.5 d	2 d	2 d	
> 300 – 350	1 d	1 d	1 d	1 d	1 d	1.5 d	1.5 d	1.5 d	2 d	
> 350 – 400	1 d	1 d	1 d	1 d	1 d	1 d	1.5 d	1.5 d	1.5 d	
> 400	1 d	1 d	1 d	1 d	1 d	1 d	1.5 d	1.5 d	1.5 d	

The table of values to determine the nominal length applies to aluminium as well as to materials with a ratio from  $\frac{\text{shear stress}}{\text{tensile stress}} = 0.6$  to  $0.7$ .  
Some iron cast alloys have a ratio ranging from  $\frac{\text{shear stress}}{\text{tensile stress}} = 0.8$  to  $1.4$ . (source: VDI 2230)

For these guide values, the screw is the weaker joint member.

Lengths can be shorter than the recommended nominal lengths if tests confirm this.

Intermediate lengths are also available.

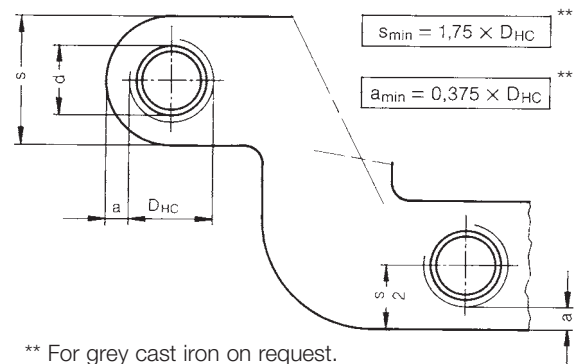
Temperature limits for validity: aluminium alloys  $T_{max} = 300^\circ\text{C}$ , magnesium alloys  $T_{max} = 100^\circ\text{C}$ .

For the design of screw joints under thermal stress, the changes of temperature-dependent material parameters must be taken into account.

\* 1 N/mm<sup>2</sup> equals 1 MPa

### Minimum wall thickness (related to outside diameter of the HELICOIL® receiving thread)

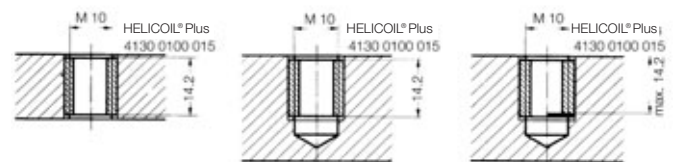
The minimum wall thickness mainly depends on individual operating data. These define material strength and length of thread engagement. The indicated guide value formulas apply to aluminium, cast and wrought alloys and a length of thread engagement of the HELICOIL® Plus of 1.5 d.



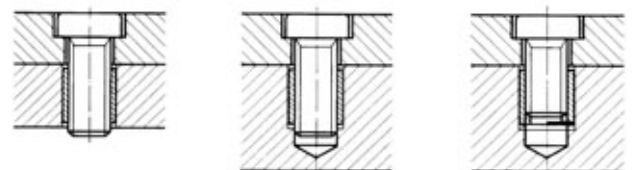
- d = nominal Ø
- D<sub>HC</sub> = outside Ø of the receiving thread
- a = residual wall thickness

### Diagrammatic representation with the example of M 10 x 15:

HELICOIL® Plus thread insert installed



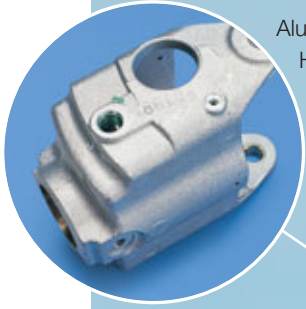
HELICOIL® Plus thread insert installed, with screw



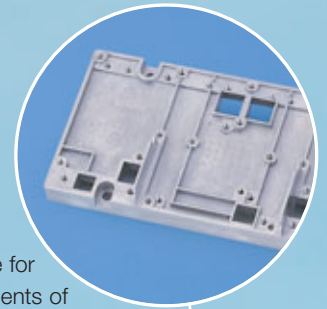
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[www.boellhoff.de/en/cad](http://www.boellhoff.de/en/cad)



Aluminium steering gear casing  
HELICOIL® Plus  
Free Running  
M 14 x 1.5 x 14



Mounting plate for  
electronic components of  
die-cast aluminium



High-temperature application with  
Inconel HELICOIL® insert, silver plated



Cast aluminium fitting for  
car roof rails with HELICOIL® Plus  
Screwlock M 6 x 6



Cast aluminium cage  
protection of flush-mounted  
lamp  
HELICOIL® Plus  
Free Running M 8 x 12



Automotive



Aerospace industry



Rail carriages



White goods



Plastics



Metal construction

**Fields of application for HELICOIL® Plus thread inserts**

- Gear box housing of magnesium alloys
- Thread reinforcement for oil drain plugs
- Exhaust systems
- Satellite technology
- Aeroplane engines
- Repeated installations
- Maintenance and repair
- Lamps
- Electrical appliances
- Hammer drills
- Printing presses



Magnesium bracket (G-AlSi9 Mg)  
HELICOIL® Plus  
Free Running M 8 x 12



Oil drain hole of an aluminium car oil sump  
Thread reinforcement with HELICOIL® Plus  
Free Running M 14 x 1.5 x 14



Housing for aluminium electronic components  
HELICOIL® Plus Screwlock



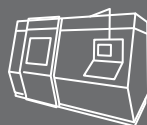
Aluminium cast alloy housing  
Flange with HELICOIL® Plus  
Screwlock M 5 x 10



Agricultural machinery



Construction machinery



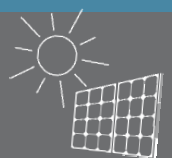
Mechanical engineering



Wind power



Electronic devices



Solar

# HELICOIL® Plus installation

HELICOIL® Plus thread inserts can be easily and economically installed because there are only a few basic rules to observe. There is a broad range of installation tools for efficient installation – for individual applications as well as for large-scale production. Installation phases are as follows:

## Drilling

Common twist drills are used.

Notes on diameter and tapped hole depth are given on pages 18 to 23.

Prior to tapping, counter-bore 90° and deburr. Outside diameter of **countersink =  $D_{HC} + 0.1$  mm.**



## Tapping

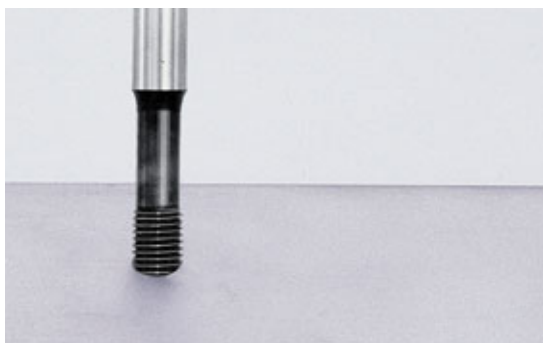
To tap the HELICOIL® Plus holding thread, system-dependent original HELICOIL® taps must be used.

Recommendations for suitable manual and machine taps are given on pages 30 to 37. The trueness to gauge of the holding thread must be checked with HELICOIL® thread plug limit gauges (see page 38).



## Form tapping

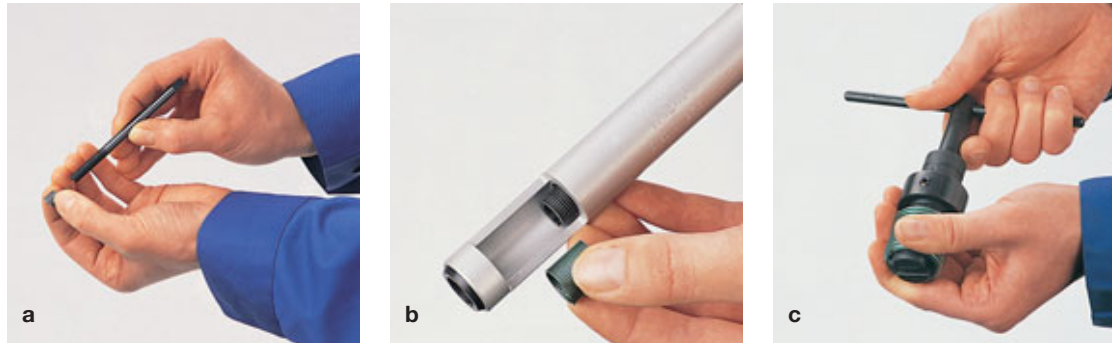
Today, chipless production of internal threads with forming taps is an efficient production method for many materials. This also applies to the HELICOIL® Plus (see bottom of page 36).



### Insertion of thread insert

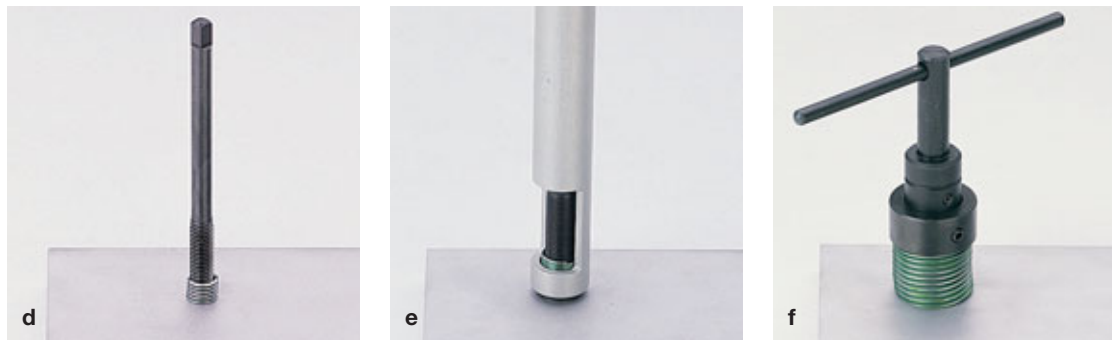
The installation can be done manually, automatically or with machine tools.

The HELICOIL® Plus thread insert is screwed onto the installation mandrel with the tang down (a), inserted into the leader cartridge (b) or placed on the fly-over tool (c). Then, the tool is placed over the tapped hole.



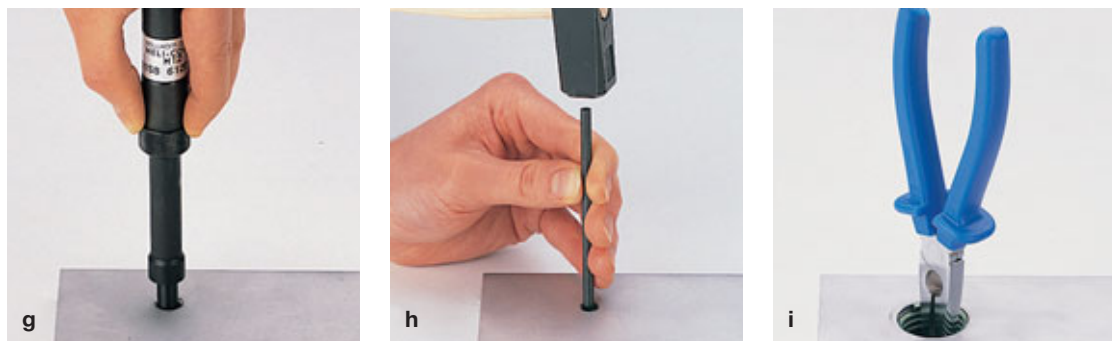
### Installation

By turning the threaded mandrel (d), the mandrel (e) or the fly-over tool (f), respectively, manually or triggering the drive, the thread insert is screwed in. It must be installed at least 0.25 P below the surface (see page 17 b).



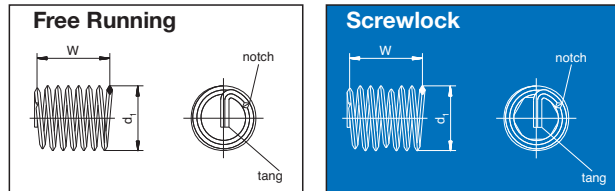
### Breaking off the tang

To produce a through-hole thread, the tang is broken off at the notch. For that, a tang break-off tool is used (g and h). For threads from M 14 (fine and normal pitch), the tang can be removed with long nose pliers (i). For blind-hole threads, the tang does not have to be removed if the maximum screw-in depth  $t_3$  of the screw is observed.



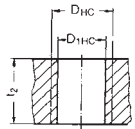
To read the table,  
please open this page.

# HELICOIL® Plus thread inserts

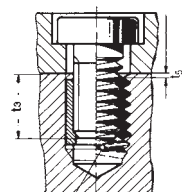
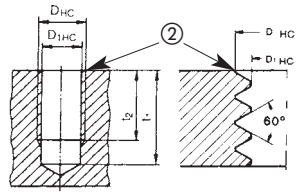
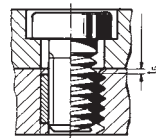


W and d<sub>1</sub> are the control values for thread inserts (Free Running and Screwlock) before they have been installed. The length can only be measured for installed thread inserts.

## Holding thread



## Assembly



- d = Nominal thread diameter
- P = Thread pitch
- d<sub>1</sub> = Outside diameter of thread insert prior to installation
- W = Number of threads prior to installation
- D<sub>HC</sub> = Outside diameter of the parent thread
- D<sub>1HC</sub> = Crest diameter
- B = Suitable twist drill diameter. Please note: D<sub>1HC</sub> is critical for selecting the correct twist drill diameter.
- t<sub>1</sub> = Minimum depth of tapped hole according to DIN 76 – Part 1 (guide value)
- t<sub>2</sub> = The nominal length of the thread insert corresponds to the minimum length of the full parent thread for blind holes or the minimum plate thickness for a through hole.
- t<sub>3</sub> = Maximum screw-in depth when the tang is not removed
- t<sub>5</sub> = Distance of the thread insert from the joint face = 0.25 to 0.5 P, if t<sub>2</sub> corresponds to the above-mentioned minimum value

② Prior to tapping, counter-bore 90° and deburr. Outside diameter of **countersink** = **D<sub>HC</sub> + 0.1 mm**.

■ When you use HELICOIL® Plus thread inserts for volume production, we recommend to add at least 1 x P to values t<sub>1</sub> and t<sub>2</sub>.

① Materials and surface finishes must be indicated with the 5<sup>th</sup> digit of the item no:

### Example:

- 0 = Stainless steel A 2, X 5 CrNi 18 10      4130 002 0005  
 1 = Bronze, CuSn 6  
 2 = Nimonic 90, NiCr 20 Co 18 Ti, silver plated\*  
 3 = Stainless steel A 4, X 6 CrNiMoTi 17 12 2  
 4 = Inconel X 750, NiCr 15 Fe 7 TiAl, silver plated\*  
 5 = Inconel X 750, NiCr 15 Fe 7 TiAl, bright  
 6 = Stainless steel A 2, X 5 CrNi 18 10, cadmium-plated  
 7 = Stainless steel A 2, X 5 CrNi 18 10, magazined\*\*  
 8 = Bronze, CuSn 6, magazined\*\*  
 Other materials on request

\* Use special tools for HELICOIL® Screwlock

\*\*See page 24

All measures in mm. Technical changes reserved.

# HELICOIL® Plus thread inserts

d	P	t <sub>2</sub> min.*		W	d <sub>1</sub> min. max.	D <sub>1HC</sub> min. max.	B	t <sub>3</sub> max.	D <sub>HC</sub> min.	Free Running Item No <sup>①</sup>	Screwlock Item No <sup>①</sup>
		x d	mm								
M 2	0.40	1 d	2.0	2.9	2.60 2.80	2.09 2.18	2.10	1.8 2.8 3.8 4.8 5.8	2.52	4130 002 0002	on request
		1.5 d	3.0	4.9						4130 002 0003	
		2 d	4.0	6.9						4130 002 0004	
		2.5 d	5.0	8.9						4130 002 0005	
		3 d	6.0	10.9						4130 002 0006	
M 2.5	0.45	1 d	2.5	3.5	3.30 3.50	2.60 2.70	2.60	2.3 3.5 4.8 6.0 7.3	3.08	4130 025 0025	4132 025 0025
		1.5 d	3.75	5.9						4130 025 0375	4132 025 0375
		2 d	5.0	8.1						4130 025 0005	4132 025 0005
		2.5 d	6.25	10.5						4130 025 0625	4132 025 0625
		3 d	7.5	12.9						4130 025 0075	4132 025 0075
M 3	0.5	1 d	3.0	3.9	3.80 4.00	3.11 3.22	3.20	2.7 4.2 5.7 7.2 8.7	3.65	4130 003 0003	4132 003 0003
		1.5 d	4.5	6.3						4130 003 0045	4132 003 0045
		2 d	6.0	8.7						4130 003 0006	4132 003 0006
		2.5 d	7.5	11.1						4130 003 0075	4132 003 0075
		3 d	9.0	13.5						4130 003 0009	4132 003 0009
M 3.5	0.6	1 d	3.5	3.7	4.42 4.60	3.63 3.76	3.70	3.2 5.0 6.7 8.5 10.2	4.28	4130 035 0035	4132 035 0035
		1.5 d	5.25	6.3						4130 035 0053	4132 035 0053
		2 d	7.0	8.7						4130 035 0007	4132 035 0007
		2.5 d	8.75	11.2						4130 035 0875	4132 035 0875
		3 d	10.5	13.3						4130 035 0105	4132 035 0105
M 4	0.7	1 d	4.0	3.7	5.05 5.25	4.15 4.29	4.20	3.6 5.6 7.6 9.6 11.6	4.91	4130 004 0004	4132 004 0004
		1.5 d	6.0	6.1						4130 004 0006	4132 004 0006
		2 d	8.0	8.4						4130 004 0008	4132 004 0008
		2.5 d	10.0	10.9						4130 004 0010	4132 004 0010
		3 d	12.0	13.2						4130 004 0012	4132 004 0012
M 5	0.8	1 d	5.0	4.3	6.35 6.60	5.17 5.33	5.20	4.6 7.1 9.6 12.1 14.6	6.04	4130 005 0005	4132 005 0005
		1.5 d	7.5	6.9						4130 005 0075	4132 005 0075
		2 d	10.0	9.7						4130 005 0010	4132 005 0010
		2.5 d	12.5	12.3						4130 005 0125	4132 005 0125
		3 d	15.0	14.8						4130 005 0015	4132 005 0015
M 6	1.0	1 d	6.0	4.2	7.60 7.85	6.22 6.41	6.30	5.5 8.5 11.5 14.5 17.5	7.30	4130 006 0006	4132 006 0006
		1.5 d	9.0	6.9						4130 006 0009	4132 006 0009
		2 d	12.0	9.6						4130 006 0012	4132 006 0012
		2.5 d	15.0	12.3						4130 006 0015	4132 006 0015
		3 d	18.0	14.6						4130 006 0018	4132 006 0018
M 7	1.0	1 d	7.0	5.3	8.65 8.90	7.22 7.41	7.30	6.5 10.0 13.5 17.0 20.5	8.30	4130 007 0007	4132 007 0007
		1.5 d	10.5	8.2						4130 007 0105	4132 007 0105
		2 d	14.0	11.1						4130 007 0014	4132 007 0014
		2.5 d	17.5	14.3						4130 007 0175	4132 007 0175
		3 d	21.0	17.4						4130 007 0021	4132 007 0021
M 8	1.25	1 d	8.0	4.7	9.85 10.10	8.27 8.48	8.40	7.4 11.4 15.4 19.4 23.4	9.62	4130 008 0008	4132 008 0008
		1.5 d	12.0	7.4						4130 008 0012	4132 008 0012
		2 d	16.0	10.6						4130 008 0016	4132 008 0016
		2.5 d	20.0	13.5						4130 008 0020	4132 008 0020
		3 d	24.0	16.4						4130 008 0024	4132 008 0024
M 8 x 1	1.0	1 d	8.0	6.1	9.85 10.10	8.22 8.41	8.30	7.5 11.5 15.5 19.5 23.5	9.30	4130 008 3008	4132 008 3008
		1.5 d	12.0	9.5						4130 008 3012	4132 008 3012
		2 d	16.0	12.9						4130 008 3016	4132 008 3016
		2.5 d	20.0	16.5						4130 008 3020	4132 008 3020
		3 d	24.0	19.9						4130 008 3024	4132 008 3024

\*Intermediate lengths also available.

① See flap page 17 b

Lead time of items: approx. 3 weeks (10,000 pieces max.).

We have items with blue order numbers in stock – subject to being unsold.



**HELICOIL® Plus** thread inserts

d	P	t <sub>2</sub> min.*		W	d <sub>1</sub> min. max.	D <sub>1HC</sub> min. max.	B	t <sub>3</sub> max.	D <sub>HC</sub> min.	Free Running Item No <sup>®</sup>	Screwlock Item No <sup>®</sup>
		x d	mm								
<b>M 9</b>	1.25	1 d	9.0	5.3	10.85 11.10	9.27 9.48	9.40	8.4	10.62	4130 009 0009	on request
		1.5 d	13.5	8.6				12.9		4130 009 0135	
		2 d	18.0	11.9				17.4		4130 009 0018	
		2.5 d	22.5	15.3				21.9		4130 009 0225	
		3 d	27.0	18.1				26.4		4130 009 0027	
<b>M 10</b>	1.5	1 d	10.0	5.0	12.10 12.50	10.32 10.56	10.50	9.2	11.95	4130 010 0010	4132 010 0010
		1.5 d	15.0	8.1				14.2		4130 010 0015	4132 010 0015
		2 d	20.0	11.2				19.2		4130 010 0020	4132 010 0020
		2.5 d	25.0	14.2				24.2		4130 010 0025	4132 010 0025
		3 d	30.0	17.2				29.2		4130 010 0030	4132 010 0030
<b>M 10 x 1</b>	1.0	1 d	10.0	7.6	12.10 12.50	10.22 10.41	10.25	9.5	11.30	4130 010 3010	4132 010 3010
		1.5 d	15.0	12.1				14.5		4130 010 3015	4132 010 3015
		2 d	20.0	16.3				19.5		4130 010 3020	4132 010 3020
		2.5 d	25.0	20.7				24.5		4130 010 3025	4132 010 3025
		3 d	30.0	25.0				29.5		4130 010 3030	4132 010 3030
<b>M 10 x 1.25</b>	1.25	1 d	10.0	6.0	12.10 12.50	10.27 10.48	10.40	9.4	11.62	4130 010 9010	4132 010 9010
		1.5 d	15.0	9.7				14.4		4130 010 9015	4132 010 9015
		2 d	20.0	13.1				19.4		4130 010 9020	4132 010 9020
		2.5 d	25.0	16.9				24.4		4130 010 9025	4132 010 9025
		3 d	30.0	20.1				29.4		4130 010 9030	4132 010 9030
<b>M 11</b>	1.5	1 d	11.0	5.6	13.10 13.50	11.33 11.56	11.50	10.2	12.95	4130 011 0011	on request
		1.5 d	16.5	9.0				15.7		4130 011 0165	
		2 d	22.0	12.3				21.2		4130 011 0022	
		2.5 d	27.5	15.7				26.7		4130 011 0275	
		3 d	33.0	19.1				32.2		4130 011 0033	
<b>M 12</b>	1.75	1 d	12.0	5.2	14.40 14.80	12.38 12.64	12.50	11.1	14.27	4130 012 0012	4132 012 0012
		1.5 d	18.0	8.4				17.1		4130 012 0018	4132 012 0018
		2 d	24.0	11.7				23.1		4130 012 0024	4132 012 0024
		2.5 d	30.0	14.7				29.1		4130 012 0030	4132 012 0030
		3 d	36.0	18.0				35.1		4130 012 0036	4132 012 0036
<b>M 12 x 1</b>	1.0	1 d	12.0	9.3	14.40 14.80	12.22 12.41	12.25	11.5	13.30	4130 012 3012	on request
		1.5 d	18.0	14.5				17.5		4130 012 3018	
		2 d	24.0	19.5				23.5		4130 012 3024	
		2.5 d	30.0	24.8				29.5		4130 012 3030	
		3 d	36.0	30.0				35.5		4130 012 3036	
<b>M 12 x 1.25</b>	1.25	1 d	12.0	7.4	14.40 14.80	12.27 12.48	12.25	11.4	13.62	4130 012 9012	4132 012 9012
		1.5 d	18.0	11.6				17.4		4130 012 9018	4132 012 9018
		2 d	24.0	15.9				23.4		4130 012 9024	4132 012 9024
		2.5 d	30.0	20.0				29.4		4130 012 9030	4132 012 9030
		3 d	36.0	24.3				35.4		4130 012 9036	4132 012 9036
<b>M 12 x 1.5</b>	1.5	1 d	12.0	6.2	14.40 14.80	12.32 12.56	12.50	11.2	13.95	4130 012 4012	4132 012 4012
		1.5 d	18.0	9.8				17.2		4130 012 4018	4132 012 4018
		2 d	24.0	13.5				23.2		4130 012 4024	4132 012 4024
		2.5 d	30.0	17.1				29.2		4130 012 4030	4132 012 4030
		3 d	36.0	20.8				35.2		4130 012 4036	4132 012 4036

\*Intermediate lengths also available.

<sup>®</sup> See flap page 17b

**Lead time of items: approx. 3 weeks (10,000 pieces max.).**

**We have items with blue order numbers in stock – subject to being unsold.**

# HELICOIL® Plus thread inserts

d	P	t <sub>2</sub> min.*		W	d <sub>1</sub> min. max.	D <sub>1HC</sub> min. max.	B	t <sub>3</sub> max.	D <sub>HC</sub> min.	Free Running Item No <sup>®</sup>	Screwlock Item No <sup>®</sup>
		x d	mm								
M 14	2.0	1 d	14.0	5.6	16.80 17.20	14.43 14.73	14.50	13.0	16.60	4130 014 0014	4132 014 0014
		1.5 d	21.0	8.8				20.0		4130 014 0021	4132 014 0021
		2 d	28.0	12.0				27.0		4130 014 0028	4132 014 0028
		2.5 d	35.0	15.2				34.0		4130 014 0035	4132 014 0035
M 14 x 1	1.0	1 d	14.0	11.2	16.80 17.20	14.22 14.41	14.25	13.5	15.30	4130 014 3014	on request
		1.5 d	21.0	17.2				20.5		4130 014 3021	
		2 d	28.0	23.2				27.5		4130 014 3028	
		2.5 d	35.0	29.2				34.5		4130 014 3035	
M 14 x 1.25	1.25	spark plug thread	8.4	4.6	16.80 17.20	14.27 14.48	14.25	7.8	15.62	4130 014 9084	on request
			12.4	7.4				11.8		4130 014 9124	
			14.4	9.1				13.8		4130 014 9144	
			16.4	10.2				15.8		4130 014 9164	
M 14 x 1.5	1.5	1 d	14.0	7.4	16.80 17.20	14.38 14.56	14.50	13.2	15.95	4130 014 4014	4132 014 4014
		1.5 d	21.0	11.6				20.2		4130 014 4021	4132 014 4021
		2 d	28.0	15.7				27.2		4130 014 4028	4132 014 4028
		2.5 d	35.0	19.9				34.2		4130 014 4035	4132 014 4035
M 16	2.0	1 d	16.0	6.5	19.00 19.40	16.43 16.73	16.50	15.0	18.60	4130 016 0016	4132 016 0016
		1.5 d	24.0	10.1				23.0		4130 016 0024	4132 016 0024
		2 d	32.0	13.8				31.0		4130 016 0032	4132 016 0032
		2.5 d	40.0	17.5				39.0		4130 016 0040	4132 016 0040
M 16 x 1.5	1.5	1 d	16.0	8.7	19.00 19.40	16.32 16.56	16.50	15.2	17.95	4130 016 4016	4132 016 4016
		1.5 d	24.0	13.4				23.2		4130 016 4024	4132 016 4024
		2 d	32.0	18.1				31.2		4130 016 4032	4132 016 4032
		2.5 d	40.0	22.9				39.2		4130 016 4040	4132 016 4040
M 18	2.5	0.5 d	9.0	2.3	21.50 22.00	18.54 18.90	18.75	7.7	21.25	4130 018 0009	4132 018 0009
		0.75 d	13.5	3.8				12.2		4130 018 0135	4132 018 0135
		1 d	18.0	5.6				16.7		4130 018 0018	4132 018 0018
		1.5 d	27.0	9.0				25.7		4130 018 0027	4132 018 0027
		2 d	36.0	12.3				34.7		4130 018 0036	4132 018 0036
M 18 x 1.5	1.5	0.5 d	9.0	4.2	21.50 22.00	18.32 18.56	18.50	8.2	19.95	4130 018 4009	4132 018 4009
		0.75 d	13.5	7.0				12.7		4130 018 4135	4132 018 4135
		1 d	18.0	9.5				17.2		4130 018 4018	4132 018 4018
		1.5 d	27.0	14.9				26.2		4130 018 4027	4132 018 4027
		2 d	36.0	20.2				35.2		4130 018 4036	4132 018 4036
M 18 x 2	2.0	0.5 d	9.0	3.1	21.50 22.00	18.43 18.72	18.50	8.0	20.60	4130 018 5009	4132 018 5009
		0.75 d	13.5	5.1				12.5		4130 018 5135	4132 018 5135
		1 d	18.0	7.1				17.0		4130 018 5018	4132 018 5018
		1.5 d	27.0	11.2				26.0		4130 018 5027	4132 018 5027
		2 d	36.0	15.1				35.0		4130 018 5036	4132 018 5036

\*Intermediate lengths also available.

<sup>®</sup> See flap page 17b

Lead time of items: approx. 3 weeks (10,000 pieces max.).

We have items with blue order numbers in stock – subject to being unsold.

**HELICOIL® Plus** thread inserts

d	P	t <sub>2</sub> min.*		W	d <sub>1</sub> min. max.	D <sub>1HC</sub> min. max.	B	t <sub>3</sub> max.	D <sub>HC</sub> min.	Free Running Item No <sup>®</sup>	Screwlock Item No <sup>®</sup>
		x d	mm								
<b>M 20</b>	2.5	0.5 d	10.0	2.7	23.70 24.20	20.54 20.90	20.75	8.7	23.25	4130 020 0010	4132 020 0010
		0.75 d	15.0	4.5				13.7		4130 020 0015	4132 020 0015
		1 d	20.0	6.3				18.7		4130 020 0020	4132 020 0020
		1.5 d	30.0	10.0				28.7		4130 020 0030	4132 020 0030
		2 d	40.0	13.7				38.7		4130 020 0040	4132 020 0040
<b>M 20 x 1.5</b>	1.5	0.5 d	10.0	4.9	23.70 24.20	20.32 20.56	20.50	9.2	21.95	4130 020 4010	4132 020 4010
		0.75 d	15.0	7.9				14.2		4130 020 4015	4132 020 4015
		1 d	20.0	10.7				19.2		4130 020 4020	4132 020 4020
		1.5 d	30.0	16.7				29.2		4130 020 4030	4132 020 4030
		2 d	40.0	22.4				39.2		4130 020 4040	4132 020 4040
<b>M 20 x 2</b>	2.0	0.5 d	10.0	3.5	23.70 24.20	20.43 20.73	20.50	9.0	22.60	4130 020 5010	4132 020 5010
		0.75 d	15.0	5.8				14.0		4130 020 5015	4132 020 5015
		1 d	20.0	8.0				19.0		4130 020 5020	4132 020 5020
		1.5 d	30.0	12.5				29.0		4130 020 5030	4132 020 5030
		2 d	40.0	16.8				39.0		4130 020 5040	4132 020 5040
<b>M 22</b>	2.5	0.5 d	11.0	3.0	26.30 26.80	22.54 22.90	22.75	9.7	25.25	4130 022 0011	4132 022 0011
		0.75 d	16.5	5.0				15.2		4130 022 0165	4132 022 0165
		1 d	22.0	6.9				20.7		4130 022 0022	4132 022 0022
		1.5 d	33.0	10.9				31.7		4130 022 0033	4132 022 0033
		2 d	44.0	15.0				42.7		4130 022 0044	4132 022 0044
<b>M 22 x 1.5</b>	1.5	0.5 d	11.0	5.5	26.30 26.80	22.32 22.56	22.50	10.2	23.95	4130 022 4011	on request
		0.75 d	16.5	8.6				15.7		4130 022 4165	
		1 d	22.0	11.7				21.2		4130 022 4022	
		1.5 d	33.0	18.1				32.2		4130 022 4033	
		2 d	44.0	24.5				43.2		4130 022 4044	
<b>M 22 x 2</b>	2.0	0.5 d	11.0	3.9	26.30 26.80	22.43 22.73	22.50	10.0	24.60	4130 022 5011	4132 022 5011
		0.75 d	16.5	6.4				15.5		4130 022 5165	4132 022 5165
		1 d	22.0	8.7				21.0		4130 022 5022	4132 022 5022
		1.5 d	33.0	13.6				32.0		4130 022 5033	4132 022 5033
		2 d	44.0	18.4				43.0		4130 022 5044	4132 022 5044
<b>M 24</b>	3.0	0.5 d	12.0	2.6	28.60 29.10	24.65 25.05	24.75	10.5	27.90	4130 024 0012	4132 024 0012
		0.75 d	18.0	4.5				16.5		4130 024 0018	4132 024 0018
		1 d	24.0	6.2				22.5		4130 024 0024	4132 024 0024
		1.5 d	36.0	10.0				34.5		4130 024 0036	4132 024 0036
		2 d	48.0	14.0				46.5		4130 024 0048	on request
<b>M 24 x 1.5</b>	1.5	0.5 d	12.0	6.0	28.60 29.10	24.33 24.56	24.50	11.2	25.95	4130 024 4012	on request
		0.75 d	18.0	9.5				17.2		4130 024 4018	
		1 d	24.0	12.9				23.2		4130 024 4024	
		1.5 d	36.0	19.8				35.2		4130 024 4036	
		2 d	48.0	26.7				47.2		4130 024 4048	
<b>M 24 x 2</b>	2.0	0.5 d	12.0	4.3	28.60 29.10	24.43 24.73	24.50	11.0	26.60	4130 024 5012	4132 024 5012
		0.75 d	18.0	7.0				17.0		4130 024 5018	4132 024 5018
		1 d	24.0	9.6				23.0		4130 024 5024	4132 024 5024
		1.5 d	36.0	15.0				35.0		4130 024 5036	4132 024 5036
		2 d	48.0	20.2				47.0		4130 024 5048	4132 024 5048

\*Intermediate lengths also available.

<sup>®</sup> See flap page 17b

**Lead time of items: approx. 3 weeks (10,000 pieces max.).**

**We have items with blue order numbers in stock – subject to being unsold.**

# HELICOIL® Plus thread inserts

d	P	t <sub>2</sub> min.*		W	d <sub>1</sub> min. max.	D <sub>1HC</sub> min. max.	B	t <sub>3</sub> max.	D <sub>HC</sub> min.	Free Running Item No <sup>®</sup>	Screwlock Item No <sup>®</sup>
		x d	mm								
M 26 x 1.5	1.5	0.5 d	13.0	6.5	31.00 31.50	26.33 26.56	26.50	12.2	27.95	4130 026 4013	on request
		0.75 d	19.5	10.3				18.7		4130 026 4195	
		1 d	26.0	14.0				25.2		4130 026 4026	
		1.5 d	39.0	21.6				38.2		4130 026 4039	
		2 d	52.0	29.1				51.2		4130 026 4052	
M 27	3.0	0.5 d	13.5	3.2	32.20 32.70	27.65 28.05	27.75	12.0	30.90	4130 027 0135	4132 027 0135
		0.75 d	20.3	5.0				18.8		4130 027 0203	4132 027 0203
		1 d	27.0	7.1				25.5		4130 027 0027	4132 027 0027
		1.5 d	40.5	11.4				39.0		4130 027 0405	4132 027 0405
		2 d	54.0	15.4				52.5		4130 027 0054	4132 027 0054
M 27 x 1.5	1.5	0.5 d	13.5	6.7	32.20 32.70	27.33 27.56	27.50	12.7	28.95	4130 027 4135	on request
		0.75 d	20.3	10.7				19.5		4130 027 4203	
		1 d	27.0	14.6				26.2		4130 027 4027	
		1.5 d	40.5	22.6				39.7		4130 027 4405	
		2 d	54.0	30.0				53.2		4130 027 4054	
M 27 x 2	2.0	0.5 d	13.5	5.1	32.20 32.70	27.43 27.73	27.50	12.5	29.60	4130 027 5135	on request
		0.75 d	20.3	7.9				19.3		4130 027 5203	
		1 d	27.0	10.8				26.0		4130 027 5027	
		1.5 d	40.5	16.8				39.5		4130 027 5405	
		2 d	54.0	22.6				53.0		4130 027 5054	
M 28 x 1.5	1.5	0.5 d	14.0	7.1	33.10 33.60	28.33 28.56	28.50	13.2	29.95	4130 028 4014	on request
		0.75 d	21.0	11.1				20.2		4130 028 4021	
		1 d	28.0	15.2				27.2		4130 028 4028	
		1.5 d	42.0	23.3				41.2		4130 028 4042	
		2 d	56.0	31.4				55.2		4130 028 4056	
M 30	3.5	0.5 d	15.0	3.0	35.20 35.70	30.76 31.21	31.00	13.2	34.55	4130 030 0015	4132 030 0015
		0.75 d	22.5	4.9				20.7		4130 030 0225	4132 030 0225
		1 d	30.0	7.0				28.2		4130 030 0030	4132 030 0030
		1.5 d	45.0	11.0				43.2		4130 030 0045	4132 030 0045
		2 d	60.0	14.9				58.2		4130 030 0060	4132 030 0060
M 30 x 1.5	1.5	0.5 d	15.0	7.8	35.20 35.70	30.33 30.56	30.50	14.2	31.95	4130 030 4015	on request
		0.75 d	22.5	12.2				21.7		4130 030 4225	
		1 d	30.0	16.5				29.2		4130 030 4030	
		1.5 d	45.0	25.3				44.2		4130 030 4045	
		2 d	60.0	34.0				59.2		4130 030 4060	
M 30 x 2	2.0	0.5 d	15.0	5.7	35.20 35.70	30.43 30.73	30.50	14.0	32.60	4130 030 5015	on request
		0.75 d	22.5	9.0				21.5		4130 030 5225	
		1 d	30.0	12.3				29.0		4130 030 5030	
		1.5 d	45.0	19.0				44.0		4130 030 5045	
		2 d	60.0	25.5				59.0		4130 030 5060	
M 33	3.5	0.5 d	16.5	3.4	38.30 38.80	33.76 34.21	34.00	14.7	37.55	4130 033 0165	on request
		0.75 d	24.8	5.6				23.0		4130 033 0248	on request
		1 d	33.0	7.8				31.2		4130 033 0033	4132 033 0033
		1.5 d	49.5	12.2				47.7		4130 033 0495	4132 033 0495
		2 d	66.0	16.5				64.2		4130 033 0066	4132 033 0066

\*Intermediate lengths also available.

<sup>®</sup> See flap page 17b

Lead time of items: approx. 3 weeks (10,000 pieces max.).

We have items with blue order numbers in stock – subject to being unsold.

**HELICOIL® Plus** thread inserts

d	P	t <sub>2</sub> min.*		W	d <sub>1</sub> min. max.	D <sub>1HC</sub> min. max.	B	t <sub>3</sub> max.	D <sub>HC</sub> min.	Free Running Item No <sup>®</sup>	Screwlock Item No <sup>®</sup>
		x d	mm								
<b>M 33 x 2</b>	2.0	0.5 d	16.5	6.4	38.30 38.80	33.43 33.73	33.50	15.5	35.60	4130 033 5165	on request
		0.75 d	24.8	10.1				23.8		4130 033 5248	
		1 d	33.0	13.7				32.0		4130 033 5033	
		1.5 d	49.5	21.2				48.5		4130 033 5495	
		2 d	66.0	28.4				65.0		4130 033 5066	
<b>M 36</b>	4.0	0.5 d	18.0	3.2	42.10 42.60	36.87 37.34	37.00	16.0	41.20	4130 036 0018	on request
		0.75 d	27.0	5.0				25.0		4130 036 0027	on request
		1 d	36.0	7.0				34.0		4130 036 0036	4132 036 0036
		1.5 d	54.0	11.1				52.0		4130 036 0054	4132 036 0054
		2 d	72.0	15.2				70.0		4130 036 0072	4132 036 0072
<b>M 36 x 1.5</b>	1.5	0.5 d	18.0	9.5	42.10 42.60	36.33 36.56	36.50	17.2	37.95	4130 036 4018	on request
		0.75 d	27.0	14.7				26.2		4130 036 4027	
		1 d	36.0	19.9				35.2		4130 036 4036	
		1.5 d	54.0	30.5				53.2		4130 036 4054	
		2 d	72.0	41.0				71.2		4130 036 4072	
<b>M 36 x 2</b>	2.0	0.5 d	18.0	6.8	42.10 42.60	36.43 36.73	36.50	17.0	38.60	4130 036 5018	on request
		0.75 d	27.0	10.3				26.0		4130 036 5027	
		1 d	36.0	14.1				35.0		4130 036 5036	
		1.5 d	54.0	21.9				53.0		4130 036 5054	
		2 d	72.0	31.1				71.0		4130 036 5072	
<b>M 36 x 3**</b>	3.0	0.5 d	18.0	4.4	42.10 42.60	36.65 37.05	37.00	16.5	39.90	4130 036 6018	4132 036 6018
		0.75 d	27.0	7.2				25.5		4130 036 6027	4132 036 6027
		1 d	36.0	9.9				34.5		4130 036 6036	4132 036 6036
		1.5 d	54.0	15.3				52.5		4130 036 6054	4132 036 6054
		2 d	72.0	20.5				70.5		4130 036 6072	4132 036 6072
<b>M 39</b>	4.0	0.75 d	29.3	5.5	45.10 45.60	39.87 40.34	40.00	23.4	44.20	4130 039 0293	4132 039 0293
		1 d	39.0	7.7				33.1		4130 039 0039	4132 039 0039
		1.25 d	48.8	9.9				42.9		4130 039 0488	4132 039 0488
		1.5 d	58.5	12.3				52.6		4130 039 0585	4132 039 0585
		2 d	78.0	16.6				72.1		4130 039 0078	4132 039 0078
<b>M 39 x 2</b>	2.0	0.5 d	19.5	7.5	45.10 45.60	39.43 39.73	39.50	16.6	41.60	4130 039 5195	4132 039 5195
		0.75 d	29.3	11.9				26.3		4130 039 5293	4132 039 5293
		1 d	39.0	16.3				36.1		4130 039 5039	4132 039 5039
		1.25 d	48.8	20.6				45.8		4130 039 5488	4132 039 5488
		1.5 d	58.5	25.0				55.6		4130 039 5585	4132 039 5585
<b>M 39 x 3</b>	3.0	0.5 d	19.5	4.9	45.10 45.60	39.65 40.05	40.00	15.1	42.90	4130 039 6195	4132 039 6195
		0.75 d	29.3	7.8				24.8		4130 039 6293	4132 039 6293
		1 d	39.0	10.8				34.6		4130 039 6039	4132 039 6039
		1.25 d	48.8	13.7				44.3		4130 039 6488	4132 039 6488
		1.5 d	58.5	16.8				54.1		4130 039 6585	4132 039 6585
<b>M 42</b>	4.5	0.5 d	21.0	3.3	48.50 49.00	42.98 43.50	43.00	18.7	47.85	4130 042 0021	on request
		0.75 d	35.0	6.2				32.7		4130 042 0035	
		1 d	42.0	7.3				39.7		4130 042 0042	
		1.25 d	52.5	9.5				50.2		4130 042 0525	
		1.5 d	63.0	11.6				60.7		4130 042 0063	
2 d	84.0	15.6	81.7	4130 042 0084							

\*Intermediate lengths also available. HELICOIL® Plus > M 42 on request.

\*\* Further nominal thread diameters available. See "Thread types" table on page 12.

© See flap page 17b

Lead time of items: approx. 3 weeks (10,000 pieces max.).

We have items with blue order numbers in stock – subject to being unsold.