HELISOLID® Threaded Inserts

PERMANENT THREAD FOR BASE MATERIALS

- MILD STEEL
- ALUMINIUM
- CAST IRON
- PLASTIC
- BRASS
- WOOD
- LIGHT ALLOY

Available in Materials

- STEEL HARDENED
- STAINLESS STEEL
- BRASS

NAVBHARAT ENGINEERS

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HELISOLID® Threaded Inserts

Key Locking Threaded Inserts

- Helisolid Key Locking Threaded Inserts are solid, one-piece, key-locking inserts for use in original equipment or used to repair damaged threads. The locking keys of Helisolid Key Locking Threaded Inserts provide a positive mechanical lock which prevents rotation due to vibration or torsion.
- Helisolid Key Locking Threaded Inserts are ideal for thread reinforcement, especially when the mating stud or bolt will be removed frequently. They provide strong, permanent steel threads in a weaker parent material — ferrous, non-ferrous, or non-metallic. Key Locking Inserts are also well suited for quick repair of stripped, damaged, or worn threads. A solid version is also available to use as a handy plug to relocate holes drilled or tapped on the wrong location. Install with standard drills and taps.
- Helisolid Key Locking Threaded Inserts have 2 or 4 pre-assembled keys depending on the size of the external thread. After installation of the keys into the parent material the assembly is positively locked in place.

- Solid, one-piece threaded insert construction provides a high degree of pull-out strength
- Provide a positive mechanical lock which prevents rotation due to vibration or torsion
- Easy threaded insert installation and removal
- Installed with standard drills and taps
- No pre-winder tool required
- No tang to break off
- Miniature, Lightweight, Heavy Duty and Extra Heavy Duty Threaded Insert types
- Full range of Inch and Metric sizes in coarse or fine pitch threads
- Industrial Style Threaded inserts can be purchased in bulk quantities or kits
- These inserts are also available as per leading Aerospace & Defence specifications (MS/NAS Style)

*** Thread repair kit containing 100 Nos. Inserts size M3 to M16 are available**

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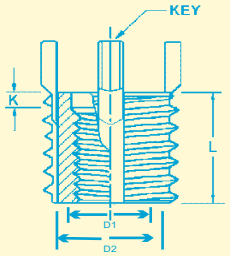
TECHNICAL SHEET

HELISOLID®



Key Locking Threaded Inserts

A) Miniature

Internal Thread D1 (mm)	External Thread D2 (mm)	Length L (mm)	Tap Drill Size	Ordering No.
M2x0.4	M4x0.7	3.00	3.4	CM020S
M2.5x0.45	M4.5x0.75	4.00	3.9	CM02.50S
M3x0.5	M5x0.8	4.25	4.4	CL030S
M4x0.7	M6x0.75	5.25	5.5	CL040S

B) Light weight

Internal Thread D1 (mm)	External Thread D2 (mm)	Length L (mm)	Tap Drill Size	Ordering No.
M5x0.8	M8x1.25	8	6.90	CL050S
M6x1.0	M10x1.25	10	8.80	CL060S
M8x1.25	M12x1.25	12	10.80	CL080S
M10x1.5	M14x1.5	14	12.80	CL100S
M12x1.75	M16x1.5	16	14.75	CL120S

C) Heavy Duty

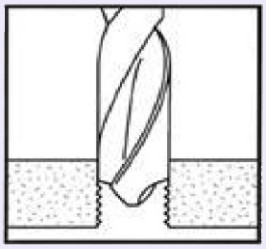
Internal Thread D1 (mm)	External Thread D2 (mm)	Length L (mm)	Tap Drill Size	Ordering No.
M4x0.7	M8x1.25	8	6.9	CH040S
M5x0.8	M10x1.25	10	8.8	CH050S
M6x1.0	M12x1.25	12	10.8	CH060S
M8x1.25	M14x1.5	14	12.8	CH080S
M10x1.5	M16x1.5	16	14.75	CH100S
M12x1.75	M18x1.5	18	16.75	CH120S
M14x2.0	M20x1.5	20	18.75	CH140S
M16x2.0	M22x1.5	22	20.5	CH160S
M18x1.5	M24x2.0	24	22.5	CH180S
M20x2.5	M30x2.0	30	28	CH200S
M22x1.5	M32x2.0	32	31	CH220S
M24x3.0	M33x2.0	33	30	CH240S

- Material: Stainless Steel / Steel Hardened / Brass
- Tolerances: +/- 0.25mm unless sepecified otherwise
- BSW, BSF, UNC & UNF Thread Series Available
- Steel Hardened Coating: Zinc Yellow Plated / Backodising
- Thin & Thick wall thickness inserts also available
- We also manufacture Non-Standard inserts as per specifications/drawing
- Tap Drill Hole Tolerance : 3.40 to 5.50 = +0.080/-0.025; 6.90 to 10.80 = +0.100/-0.025; Over 12.80 = +0.130/-0.025

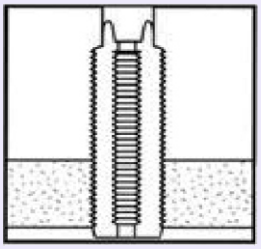
HELISOLID® Threaded Inserts

Key Locking Threaded Inserts

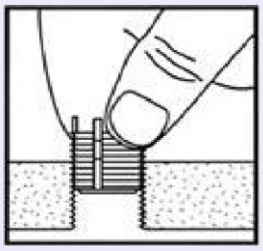
Installation



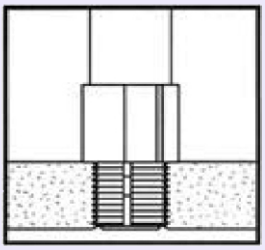
Drill out old threads with a standard drill. Note: Drill is oversize - see charts for proper dimensions. Chamfer the hole with a standard countersink (82^0-100^0)



Tap new threads with a standard tap. See charts for proper size and depth.

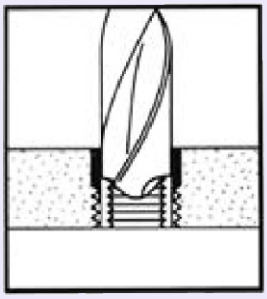


Screw in the insert until slightly below surface.

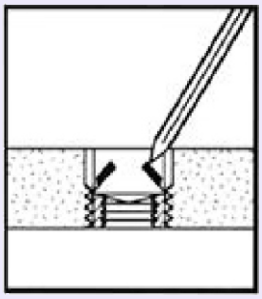


Drive keys down with several hammer taps on the proper installation tool

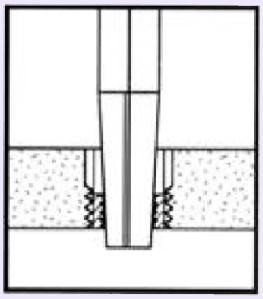
Removal



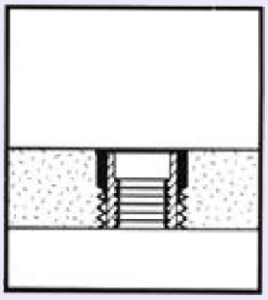
Drill out material between keys and internal thread with standard drill to specified depth (refer to charts for proper dimensions)



Deflect keys inward and break off.



Remove inert using Helisolid drill out tool



Same size replacement insert may be installed in the original hole.