

powercoil®

wire thread insert system



M2 – M12 (1/8" – 1/2") PowerCoil Thread Repair Kits include all the necessary components to successfully repair damaged threads. Kits include Drill, STI Tap, Inserts, Installation Tool and Tang Break-Off Tool.

The PowerCoil Wire Thread Insert System includes a complete range of over 140 Thread Repair Kits; Free Running & Screw Locking inserts; Strip Feed Inserts; STI Hand & Machine Taps; Installation, Tang Break & Removal Tools.

wire thread insert system features & benefits

- Lighter and Cheaper than any other equivalent type of thread insert.
- Can generally be introduced into existing designs where no previous provision has been made.
- Increase quality and performance whilst reducing overall product cost.
- Their introduction may result in the use of thinner sections or lighter parent materials without sacrificing thread strength.
- Create internal threads with greatly improved distribution of residual stress loading
- Compensate for pitch and flank angle errors
- Create internal threads in which wear due to thread friction is virtually eliminated.
- Providing threads that stay tight.

wire thread insert system installation instructions

1 DRILL

Drill to clear the damaged thread with a standard twist drill. Thread Repair Kits up to M12 (1/2") include the correct size drill. The required tapping drill size is shown on the front of this pack.



Note: Spark Plug inserts utilise a pilot nose tap which does not require pre-drilling.

2 TAP

Use the specified tap to cut the holding thread into the cleared hole. When tapping a hole, it is recommended to use a suitable lubricant.



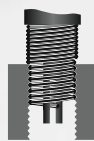
Note: Wire Thread Inserts require the use of STI taps which are slightly oversize to provide the correct hole diameter. Always check that the thread and pitch of the tap are the same as the bolt you wish to insert into the finished hole.

3 INSERT

Loosen the grub screw and slide the collar along the insert tool shaft so that the tang on the insert is positioned half way up the insert tool slot.



Note: Do not position tang at the very top or bottom of the insert tool slot.



Use the installation tool to wind the insert into the threaded hole using light downward pressure until half a turn below the surface.



Note: Do not work against the thread direction as the tang may break off.

4 SNAP



Lift installation tool, rotate 90° and tap down sharply to break off wire thread insert tang. Use the tang break off tool to perform this function where supplied.



Note: For spark plug and large inserts use long nose pliers to remove the tang.

5 DONE!



You have successfully repaired your damaged thread. The new thread is normally stronger than the original.

PowerCoil military standards available:
MA3279, MA3280, MA3281,
NASM122076-124850
MA3329, MA3330, MA3331
and NASM21209

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FOR THE ONES WHO GET IT DONE

PART NUMBERS		
SIZE	KIT No.	INSERTS
METRIC		
M2-.4	3520-2.00K	3520-2.00X1.5D
M2.2-.4	3520-2.20K	3520-2.20X1.5D
M2.5-0.45	3520-2.50K	3520-2.50X1.5D
M3-.5	3520-3.00K	3520-3.50X1.5D
M3.5-.6	3520-3.50K	3520-3.50X1.5D
M4-.7	3520-4.00K	3520-4.00X1.5D
M5-.8	3520-5.00K	3520-5.00X1.5D
M6-1.0	3520-6.00K	3520-6.00X1.5D
M7-1.0	3520-7.00K	3520-7.00X1.5D
M8-1.25	3520-8.00K	3520-8.00X1.5D
M8-1.0	3521-8.00K	3521-8.00X1.5D
M9-1.25	3520-9.00K	3520-9.00X1.5D
M10-1.5	3520-10.00K	3520-10.00X1.5D
M10-1.25	3521-10.00K	3521-10.00X1.5D
M10-1.0	3523-10.00K	3523-10.00X1.5D
M11-1.5	3520-11.00K	3520-11.00X1.5D
M11-1.25	3521-11.00K	3521-11.00X1.5D
M11-1.0	3523-11.00K	3523-11.00X1.5D
M12-1.75	3520-12.00K	3520-12.00X1.5D
M12-1.5	3521-12.00K	3521-12.00X1.5D
M12-1.25	3523-12.00K	3523-12.00X1.5D
M12-1.0	3524-12.00K	3524-12.00X1.5D
M14-2.0	3520-14.00K	3520-14.00X1.5D
M14-1.5	3521-14.00K	3521-14.00X1.5D
M14-1.25	3523-14.00K	3523-14.00X1.5D
M14-1.0	3524-14.00K	3524-14.00X1.5D
M16-2.0	3520-16.00K	3520-16.00X1.5D
M16-1.5	3521-16.00K	3521-16.00X1.5D
M18-2.5	3520-18.00K	3520-18.00X1.5D
M18-2.0	3521-18.00K	3521-18.00X1.5D
M18-1.5	3523-18.00K	3523-18.00X1.5D
M20-2.5	3520-20.00K	3520-20.00X1.5D
M20-2.0	3521-20.00K	3521-20.00X1.5D
M20-1.5	3523-20.00K	3523-20.00X1.5D
M22-2.5	3520-22.00K	3520-22.00X1.5D
M22-2.0	3521-22.00K	3521-22.00X1.5D
M22-1.5	3523-22.00K	3523-22.00X1.5D
M24-3.0	3520-24.00K	3520-24.00X1.5D
M24-2.0	3521-24.00K	3521-24.00X1.5D
M24-1.5	3523-24.00K	3523-24.00X1.5D
M26-1.5	3523-26.00K	3523-26.00X1.5D
M27-3.0	3520-27.00K	3520-27.00X1.5D
M27-2.0	3521-27.00K	3521-27.00X1.5D
M27-1.5	3523-27.00K	3523-27.00X1.5D
M28-1.5	3523-28.00K	3523-28.00X1.5D
M30-3.5	3520-30.00K	3520-30.00X1.5D
M30-2.0	3521-30.00K	3521-30.00X1.5D
M30-1.5	3523-30.00K	3523-30.00X1.5D

PowerCoil Inserts
Made from high quality Diamond shape 304 stainless steel (AS7245)wire, inserts are wound to the shape of a spring thread. The insert, larger in diameter than the tapped hole, is compressed during installation, then springs back to permanently anchor the insert in the tapped hole. Can be used in applications where temperatures range up to 800°F/430°C

PART NUMBERS		
SIZE	KIT No.	INSERTS
METRIC (Cont)		
M33-3.5	3520-33.00K	3520-33.00X1.5D
M33-2.0	3521-33.00K	3521-33.00X1.5D
M36-4.0	3520-36.00K	3520-36.00X1.5D
M36-3.0	3521-36.00K	3521-36.00X1.5D
M36-2.0	3523-36.00K	3523-36.00X1.5D
M36-1.5	3524-36.00K	3524-36.00X1.5D
UNC		
2-56	3532-2GK	3532-2GX1.5D
4-40	3532-4GK	3532-4GX1.5D
5-40	3532-4GK	3532-5GX1.5D
6-32	3532-6GK	3532-6/32X1.5D
8-32	3532-8GK	3532-8/32X1.5D
10-24	3532-10GK	3532-10/24X1.5D
12-24	3532-12GK	3532-12GX1.5D
1/4-20	3532-1/4K	3532-1/4X1.5D
5/16-18	3532-5/16K	3532-5/16X1.5D
3/8-16	3532-3/8K	3532-3/8X1.5D
7/16-14	3532-7/16K	3532-7/16X1.5D
1/2-13	3532-1/2K	3532-1/2X1.5D
9/16-12	3532-9/16K	3532-9/16X1.5D
5/8-11	3532-5/8K	3532-5/8X1.5D
3/4-10	3532-3/4K	3532-3/4X1.5D
7/8-9	3532-7/8K	3532-7/8X1.5D
1-8	3532-1K	3532-1X1.5D
1 1/8-7	3532-1.1/8K	3532-1.1/8X1.5D
1 1/4-7	3532-1.1/4K	3532-1.1/4X1.5D
1 3/8-6	3532-1.3/8K	3532-1.3/8X1.5D
1 1/2-6	3532-1.1/2K	3532-1.1/2X1.5D
UNF		
4-48	3534-4GK	3534-4GX1.5D
6-40	3534-6GK	3534-6GX1.5D
8-36	3534-8GK	3534-8GX1.5D
10-32	3534-10GK	3534-10/32X1.5D
1/4-28	3534-1/4K	3534-1/4X1.5D
5/16-24	3534-5/16K	3534-5/16X1.5D
3/8-24	3534-3/8K	3534-3/8X1.5D
7/16-20	3534-7/16K	3534-7/16X1.5D
1/2-20	3534-1/2K	3534-1/2X1.5D
9/16-18	3534-9/16K	3534-9/16X1.5D
5/8-18	3534-5/8K	3534-5/8X1.5D
3/4-16	3534-3/4K	3534-3/4X1.5D
7/8-14	3534-7/8K	3534-7/8X1.5D
1-12	3534-1K	3534-1X1.5D
1-14	3535-1K	3535-1X1.5D
1 1/8-12	3534-1.1/8K	3534-1.1/8X1.5D
1 1/4-12	3534-1.1/4K	3534-1.1/4X1.5D
1 3/8-12	3534-1.3/8K	3534-1.3/8X1.5D
1 1/2-12	3534-1.1/2K	3534-1.1/2X1.5D

Specifications
Inserts are manufactured to all applicable procurement and design specifications:
- NASM 122076 - 122275 - UNC Free-Running Helical Inserts
- NASM 124651 - 124850 - UNF Free-Running Helical Inserts
- NASM 21209 - Unified Screw-Lock Helical Inserts
- MA 3279, 3280, 3281 - Metric Free-Running Helical Inserts
- MA 3329, 3330, 3331 - Metric Screw-Lock Helical Inserts
Inserts are also available in Inconel X-750 (AS7246), Phosphor Bronze (DIN17677 or BS2783 PB102), 316 Stainless Steel (AISI316)

PART NUMBERS		
SIZE	KIT No.	INSERTS
SPARKPLUG		
M10-1.0	3522-10.00K	3522-10.00X1/2
		3522-10.00X.339
M12-1.25	3522-12.00K	3522-12.00X1/2
		3522-12.00X3/4
M14-1.25	3532-14.00K1	3522-14.00X3/8
		3522-14.00X1/2
		3522-14.00X3/4
BSF		
3/16-32	3530-3/16K	3530-3/16X1.5D
1/4-26	3530-1/4K	3530-1/4X1.5D
5/16-22	3530-5/16K	3530-5/16X1.5D
3/8-20	3530-3/8K	3530-3/8X1.5D
7/16-18	3530-7/16K	3530-7/16X1.5D
1/2-16	3530-1/2K	3530-1/2X1.5D
9/16-16	3530-9/16K	3530-3/16X1.5D
5/8-14	3530-5/8K	3530-5/8X1.5D
3/4-12	3530-3/4K	3530-3/4X1.5D
7/8-11	3530-7/8K	3530-7/8X1.5D
1-10	3530-1K	3530-1X1.5D
BSF		
1/8-28	3546-1/8K	3546-1/8X1.5D
1/4-19	3546-1/4K	3546-1/4X1.5D
3/8-19	3546-3/8K	3546-3/8X1.5D
1/2-14	3546-1/2K	3546-1/2X1.5D
5/8-14	3546-5/8K	3546-5/8X1.5D
3/4-14	3546-3/4K	3546-3/4X1.5D
7/8-14	3546-7/8K	3546-7/8X1.5D
1-11	3545-1K	3545-1X1.5D
BSW		
3/16-24	3528-3/16K	3528-3/16X1.5D
1/4-20	3528-1/4K	3528-1/4X1.5D
5/16-18	3528-5/16K	3528-5/16X1.5D
3/8-16	3528-3/8K	3528-3/8X1.5D
7/16-14	3528-7/16K	3528-7/16X1.5D
1/2-12	3528-1/2K	3528-1/2X1.5D
9/16-12	3528-9/16K	3528-9/16X1.5D
5/8-11	3528-5/8K	3528-5/8X1.5D
3/4-10	3528-3/4K	3528-3/4X1.5D
7/8-9	3528-7/8K	3528-7/8X1.5D
1-8	3528-1K	3528-1X1.5D
NPT		
1/8-27	3552-1/8K	3552-1/8X1.5D
1/4-18	3552-1/4K	3552-1/4X1.5D
3/8-18	3552-3/8K	3552-3/8X1.5D
1/2-14	3552-1/2K	3552-1/2X1.5D
3/4-14	3552-3/4K	3552-3/4X1.5D
1-11 1/2	3552-1K	3552-1X1.5D

PART NUMBERS		
SIZE	KIT No.	INSERTS
8- PITCH UN		
1.1/8-8	3570-1.1/8K	3570-1.1/8X1.5D
1.1/4-8	3570-1.1/4K	3570-1.1/4x1.5D
1.3/8-8	3570-1.3/8K	3570-1.3/8x1.5D
1.1/2-8	3570-1.1/2K	3570-1.1/2x1.5D
1.5/8-8	3570-1.5/8K	3570-1.5/8x1.5D
1.3/4-8	3570-1.3/4K	3570-1.3/4x1.5D
1.7/8-8	3570-1.7/8K	3570-1.7/8x1.5D
2-8	3570-2K	3570-2x1.5D
RANGE KITS		
SIZES INCLU DE D	PART No.	
UNC 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13	3532-WK1	
UNF 1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20	3534-WK1	
METRIC M5-.8, M6-1, M8-1.25, M10-1.5, M12-1.75	3520-WK1	
METRIC M5-.8, M6-1, M8-1.25, M10-1.5, M12-1.75, M14-1.25 SPARKPLUG	3522-WK4	

PowerCoil Range
- Inserts are available in five lengths, 1 X Dia to 3 X Dia.
- Inserts available as replacement packs (for many sizes), bulk or stripfeed.
- Inserts available in free-running or screw-lock styles for applications where the thread assembly may be subject to vibration.
- Dry Film Lubricant, Cadmium and Silver Platings available.

Distributed by:


Tooling
Featuring the simple hand installation tool for general maintenance use, in addition to a wide range of semi-automatic and pneumatic installations tools. HSS STI taps available in straight flute, spiral point, spiral flute, and pilot nose styles.