



**LIMING COMPONENT**



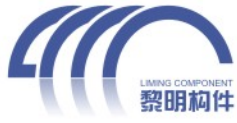
Wire Thread Insert

Other Threaded Insert

Tools for Insert

Thread Repair Kit

**FIRST WIRE THREAD INSERT IN CHINA  
THE INITIATOR OF CHINESE STANDARD**



## ABOUT US

### Shenyang Liming Mechanical Component Factory



In 1965, our founder, Dr. Shi, started to design the first batch of wire thread inserts in China.

In 1979, we got reward from Chinese Aerospace Ministry, when Dr. Shi worked for Liming Group.

In 1993, Dr. Shi founded the workshop himself to make different kinds of threaded inserts.

In 1998, Liming Component was established formally.

In 2002, we got ISO9001:2000, and the permission of aerospace supplier.

In 2003, our wire thread inserts are used in 'SHENZHOU' FIVE Spacecraft.

In 2009, Dr. Shi drew up the national standard of China, for wire thread inserts.

In 2016, we received the thanks letter from 'Long March Rocket' for supplied thread inserts.

Nowadays, we have become the steady supplier of Chinese military and aerospace.

Also, our thread inserts are selling all over the world, including HITACHI, GE and Würth, etc.

## WHY CHOOSE US

### Biggest & Earliest

We have the largest scale in manufacturers of thread inserts in China, also the earliest one. Our founder, Dr. Shi, started to analyze thread inserts since 1965 and set up the factory in 1993. After more than 25 years developing, now we have 3 workshops in a 4-floor building headquarter, 16 full-automatic production lines and a series of special device to meet every customers' demand. Also, a large amount of regular stock help us to send the products rapidly.



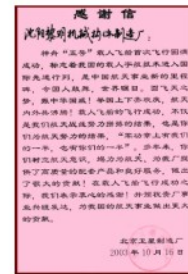
ISO from Aerospace Dept



ISO from Military Dept.



Reward from LONG MARCH V



Reward from Satellite Dept.

### Production & Inspection

Now we have already achieved all-automatic production unless special request, the speed of production is leading in China.

The inspection will be started from the material, (our supplier of stainless steel wire is same as the one of CSSC). Also, a series of methods and devices will be used to inspect the quality of thread inserts such as tool-microscope, B-Value Gauge (Our Unique tool for inspection, we have the patent of this gauge for over 10 years) etc. All the inspections are try to make the precision, duration and usage better than the other suppliers.



### Packing, Freight and Service

Usually, we use neutral package of carton with plastic bags, with white label (size, qty and material) on it. Other demand or design on request.

We have good relationship with freight company such as DHL, TNT or Fedex, the price and time will be nice.

We have 7\*24 after-sale service and we accept many kinds of payment.



## WIRE THREAD INSERT

Threads are reinforced whenever low-strength materials (e.g. aluminum, aluminum-magnesium alloys and fiber reinforced plastics) are used. The nut thread is wear-resistant even in cases of frequent use.

After decades of developing and analyzing, our quality is steady, at the top of China.

### Free Running Insert

Free Running Insert, also called normal wire insert, is the basic and most commonly used type. Every thread of the thread insert with precision-formed, rhombic profile is Free Running.



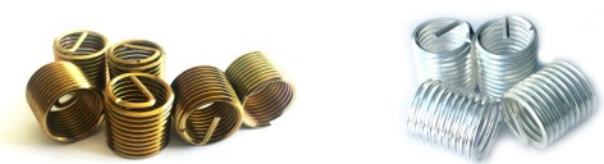
### Screw Locking Insert

This thread insert has an additional screw-locking area. One or several polygonal shaped threads clamp the flanks of the installed screw. These screw locking torques meet the demands of international standard specifications.



### Surface Coating Insert

We also provided surface coating inserts. Such as Cadmium coated, Silver coated and Dry film lubricated, etc. Any other demand or specification just contact us.



### Taper Insert & Tangless Inert

There isn't a tang for taper thread insert, which was inserted into the screw hole by 2~3 circles on the top with special tools.

Tangless inert: you do not need a tang to install these thread inserts. Therefore, tang break and removal are not required.



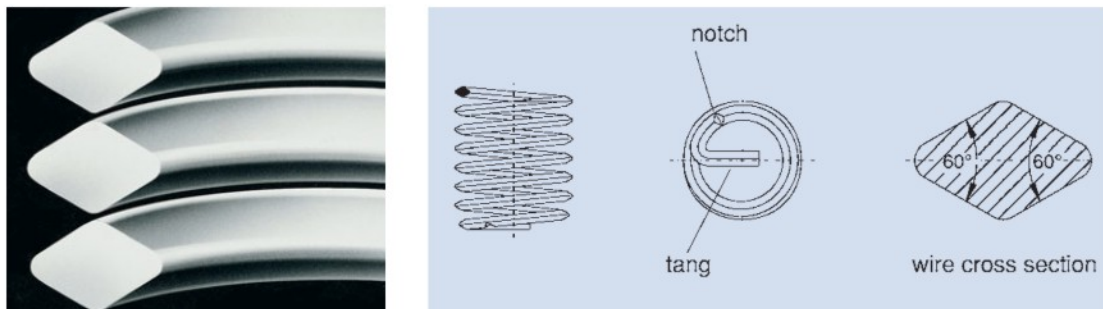
## Application

The wire thread inserts are used to reinforce and to repair the thread.

Threads are reinforced whenever low-strength materials (e.g. aluminum, aluminum-magnesium alloys are used. The nut thread is wear-resistant even in cases of frequent use. It allows miniaturisation and lightweight construction for the development of production parts.

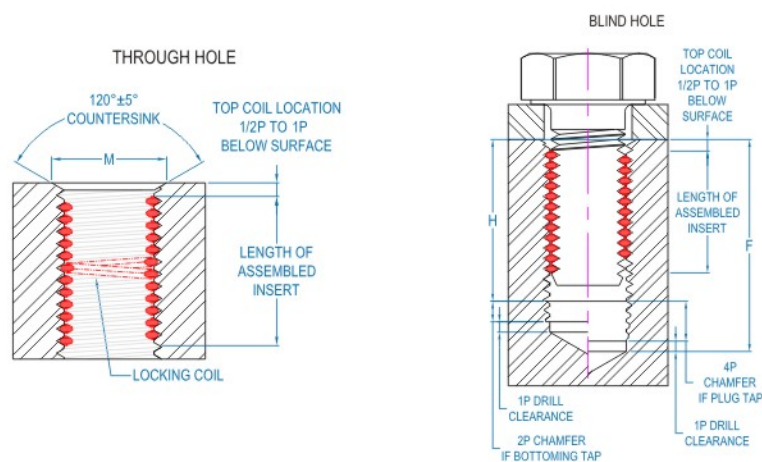


## The cross-section shape of our insert.

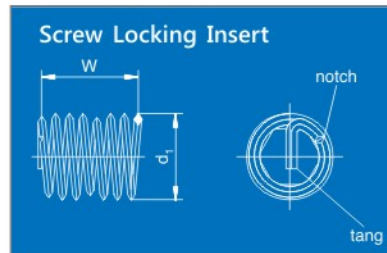
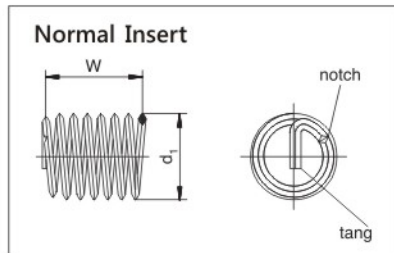


## Assembly

See page7 to get more information about insertion and tools.



## SPECIFICATION



The outside diameter and number of coils are the control value BEFORE they have been installed.

The length can only be measured for INSTALLED thread inserts.

Size	XD	Nominal Length (After Installation) (mm)	Free Outside Dia.(d1) min. max.	Number of Coils(W)	Suitable Drill Diameter (mm)
M2*0.4	1D	2.00	2.6-2.8	3.0	2.1
	1.5D	3.00		5.1	
	2D	4.00		7.2	
	2.5D	5.00		9.0	
	3D	6.00		11.5	
M2.5*0.45	1D	2.50	3.3-3.5	3.5	2.6
	1.5D	3.75		5.9	
	2D	5.00		8.1	
	2.5D	6.25		10.5	
	3D	7.50		13.0	
M3*0.5	1D	3.00	3.8-4.0	4.0	3.2
	1.5D	4.50		6.3	
	2D	6.00		8.7	
	2.5D	7.50		11.0	
	3D	9.00		13.5	
M4*0.7	1D	4.00	5.05-5.25	3.7	4.2
	1.5D	6.00		6.1	
	2D	8.00		8.4	
	2.5D	10.00		11.0	
	3D	12.00		13.2	
M5*0.8	1D	5.00	6.35-6.6	4.3	5.2
	1.5D	7.50		7.0	
	2D	10.00		9.7	
	2.5D	12.50		12.5	
	3D	15.00		15.0	
M6*1	1D	6.00	7.60-7.85	4.2	6.3
	1.5D	9.00		6.9	
	2D	12.00		9.6	
	2.5D	15.00		12.3	
	3D	18.00		14.6	
M8*1.25	1D	8.00	9.85-10.1	4.7	8.3
	1.5D	12.00		7.7	
	2D	16.00		10.7	
	2.5D	20.00		13.7	
	3D	24.00		16.8	

Size	XD	Nominal Length (After Installation) (mm)	Free Outside Dia.(d1) min. max.	Number of Coils(W)	Suitable Drill Diameter (mm)
M10*1.5	1D	10.00	12.1-12.5	5.0	10.4
	1.5D	15.00		8.1	
	2D	20.00		11.3	
	2.5D	25.00		14.5	
	3D	30.00		17.7	
M12*1.75	1D	12.00	14.4-14.8	5.1	12.5
	1.5D	18.00		8.4	
	2D	24.00		11.7	
	2.5D	30.00		15.0	
	3D	36.00		18.2	
M14*2	1D	14.00	16.8-17.2	5.2	14.5
	1.5D	21.00		8.6	
	2D	28.00		12.0	
	2.5D	35.00		15.3	
	3D	42.00		18.6	
M16*2	1D	16.00	19.0-19.4	6.3	16.5
	1.5D	24.00		10.1	
	2D	32.00		13.9	
	2.5D	40.00		17.7	
	3D	48.00		21.5	
M18*2	1D	18.00	21.5-22.0	5.7	18.6
	1.5D	27.00		9.1	
	2D	36.00		12.6	
	2.5D	45.00		16.0	
	3D	54.00		19.5	
M20*2.5	1D	20.00	23.7-24.2	6.4	20.6
	1.5D	30.00		10.2	
	2D	40.00		14.1	
	2.5D	50.00		17.9	
	3D	60.00		21.8	
M24*3	1D	24.00	28.6-29.1	6.4	24.75
	1.5D	36.00		10.2	
	2D	48.00		14.0	
	2.5D	60.00		17.9	
	3D	72.00		21.8	

\*The chart only shows a part of sizes. Need other specification or full chart just contact us.

Size	XD	Nominal Length (After Installation) (mm)	Free Outside Dia.(d1) min. max.	Number of Coils(W)	Suitable Drill Diameter (mm)	Size	XD	Nominal Length (After Installation) (mm)	Free Outside Dia.(d1) min. max.	Number of Coils(W)	Suitable Drill Diameter (mm)
2-56	1D	2.2	2.7-2.9	3.0	2.4	12-24	1D	5.5	6.8-7.2	3.3	5.8
	1.5D	3.3		5.2			5.7				
	2D	4.4		7.3			8.0				
	2.5D	5.5		9.6			10.3				
	3D	6.6		11.8			12.7				
3-48	1D	2.5	3.25-3.45	2.9	2.7	1/4-20	1D	6.4	8.0-8.4	3.7	6.7
	1.5D	3.75		5.0			6.2				
	2D	5		7.2			8.6				
	2.5D	6.25		9.3			11.0				
	3D	7.5		11.5			13.3				
4-40	1D	2.9	3.6-4.0	2.7	3.1	5/16-18	1D	7.9	9.7-10.2	4.2	8.4
	1.5D	4.35		4.7			7.1				
	2D	5.8		6.7			9.8				
	2.5D	7.25		8.7			12.0				
	3D	8.7		10.8			15.0				
5-40	1D	3.2	4.0-4.4	3.2	3.4	3/8-16	1D	9.5	11.5-12.0	4.4	10
	1.5D	4.8		5.5			7.1				
	2D	6.4		7.7			10.0				
	2.5D	8		10.0			12.5				
	3D	9.6		12.2			15.0				
6-32	1D	3.5	4.5-4.9	2.7	3.8	7/16-14	1D	11.1	13.4-14.0	4.7	11.6
	1.5D	5.25		4.7			7.5				
	2D	7		6.8			10.3				
	2.5D	8.75		8.8			13.0				
	3D	10.5		10.8			15.5				
8-32	1D	4.2	5.2-5.6	3.5	4.4	1/2-13	1D	12.7	15.2-15.8	4.8	13.2
	1.5D	6.3		6.0			7.9				
	2D	8.4		8.3			10.9				
	2.5D	10.5		10.7			13.9				
	3D	12.6		13.2			16.2				
10-24	1D	4.8	6.2-6.6	2.9	5.2	3/4-10	1D	19.1	22.4-23.0	5.9	19.7
	1.5D	7.2		5.0			9.4				
	2D	9.6		7.1			13.0				
	2.5D	12		9.2			16.0				
	3D	14.4		11.3			18.2				

\*The chart only shows a part of sizes. Need other specification or full chart just contact us.

Metric Normal: M1.6-M42

Metric Fine: M8\*1.0-M39\*2

UNC: From 2-56 to 1-1/2-6

UNF: From 3-56 to 1-1/2-8

Also BSW, BSF and Pipe Threads



## TOOLS FOR INSERT

### HSS Screw Tap (Straight and Spiral)



### Insertion Tool (Simple, Sleeve and Electric)



Manual Tools

Mandrill for Electric tool

### Other tools



Gauge

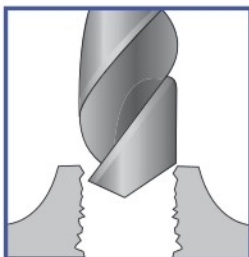


Extractor

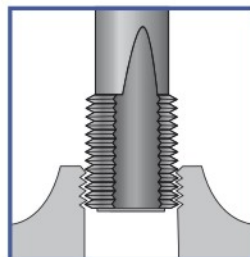


Tang Breaker

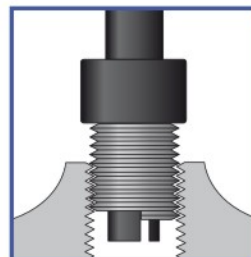
### Installation



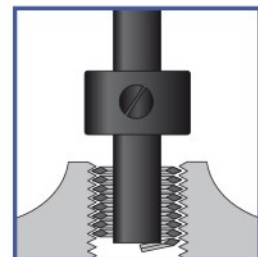
1. Drilling



2. Tapping



3. Inserting



4. Breaking the tang



## THREAD REPAIR KIT

Wire thread inserts are available in thread repair kits and sets for repairing tapped holes which have been stripped or damaged due to wear, corrosion and over-torque. They are available in inch, metric, spark plug and pipe thread series. All kits have a quantity of inserts, the proper size drill, HSS Screw tap, an installation tool and tang breaker.

Metric Coarse		Metric Fine		UNC		UNF	
Thread Size	Inserts Per Kit*	Thread Size	Inserts Per Kit*	Thread Size	Inserts Per Kit*	Thread Size	Inserts Per Kit*
M3*0.5	25	M8*1.0	25	6-32	25	6-40	25
M4*0.7	25	M10*1.0	15	8-32	25	8-36	25
M5*0.8	25	M10*1.25	15	10-24	25	10-32	25
M6*1.0	25	M12*1.0	10	12-24	25	1/4-28	25
M8*1.25	25	M12*1.25	10	1/4-20	25	5/16-24	25
M10*1.5	15	M12*1.5	10	5/16-18	25	3/8-24	15
M12*1.75	10	M14*1.25	10	3/8-16	15	7/16-20	10
M14*2.0	10	M14*1.5	10	7/16-14	10	1/2-20	10
M16*2.0	8	M16*1.5	8	1/2-13	10	1/4+ 5/16+ 3/8	60
M18*2.5	5			3/4-10	7		
M20*2.5	5			1-8	5		
M24*3	5			1/4+ 5/16+ 3/8	60		
M5+M6+M8	75			1/4+ 5/16+3/8 +7/16+1/2	110		
M6+M8+M10	75						
M5+M6+M8 +M10+M12	110						

\*Other sizes on request



## KEYLOCKING THREAD INSERT



Designed to repair damaged threads or for use in original equipment, Key locking Insert provide easy installation and versatility.

Featuring a key-locking action that prevents rotation due to vibration or torsion, commercial-grade Keylocking inserts can be used in a wide range of materials and applications.

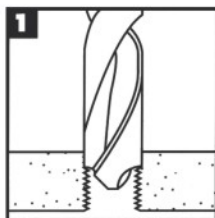
Commercial-grade Keylocking inserts are available in carbon and stainless steel, both inch and metric series, and are supplied in Thin-wall, Heavy Duty and Extra Locking Inserts.

	Insert				Installation		
	Internal Thread*	External Thread*	Length (mm)	No. of Keys	Drill Size	Thread Tap	
						Thread Tap Size	Min Depth
Light Weight(Or Extra Lock)	M3*0.5	M5*0.8	4.25	2	4.4	M5*0.8	5.5
	M4*0.7	M6*0.75	5.25	2	5.5	M6*0.75	6.5
	M5*0.8	M8*1.25	8	2	6.9	M8*1.25	9.5
	M6*1.0	M10*1.25	10	2	8.8	M10*1.25	11.5
	M8*1.25/ M8*1.0	M12*1.25	12	4	10.8	M12*1.25	13.5
	M10*1.5/ M10*1.25	M14*1.5	14	4	12.8	M14*1.5	15.5
	M12*1.75/ M12*1.25	M16*1.5	16	4	14.75	M16*1.5	17.5
	M14*2/ M14*1.5	M18*1.5	18	4	16.75	M18*1.5	20.5
	M16*2/ M16*1.5	M20*1.5	20	4	18.75	M20*1.5	22.5
Heavy Duty(Or Extra Lock)	Insert				Installation		
	Internal Thread*	External Thread*	Length (mm)	No. of Keys	Drill Size	Thread Tap	
						Thread Tap Size	Min Depth
	M4*0.7	M8*1.25	8	2	6.9	M8*1.25	9.5
	M5*0.8	M10*1.25	10	2	8.8	M10*1.25	12.5
	M6*1.0	M12*1.25	12	2	10.8	M12*1.25	14.5
	M8*1.25/ M8*1.0	M14*1.5	14	4	12.8	M14*1.5	16.5
	M10*1.5/ M10*1.25	M16*1.5	16	4	14.75	M16*1.5	18.5
	M12*1.75/ M12*1.25	M18*1.5	18	4	16.75	M18*1.5	20.5
	M14*2/ M14*1.5	M20*1.5	20	4	18.75	M20*1.5	22.5
	M16*2/ M16*1.5	M22*1.5	22	4	20.5	M22*1.5	24.5
M18*1.5	M24*1.5	24	4	22.5	M24*1.5	26.5	
M20*2.5/ M20*1.5	M30*2	30	4	28	M30*2	34.5	

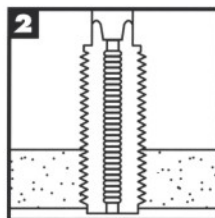


Other size and demand of precision are on request

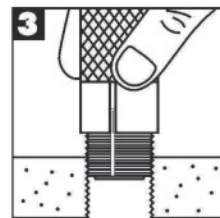
Tools and other type on request



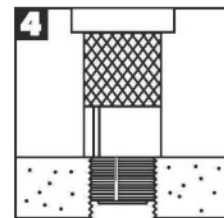
Drill out old threads with a standard drill.



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.

## SELF-TAPPING THREAD INSERT



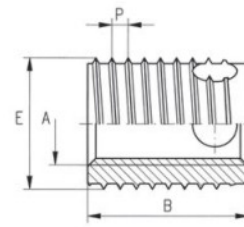
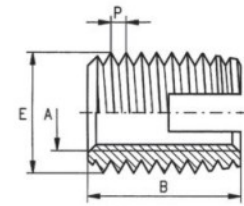
Self-tapping threaded insert with external and internal thread, cutting slots or cutting bores.

A continuous process of further development has brought about a number of major improvements to product characteristics.

The slot one (with cutting slot) is recommended for most application cases.

The 3-hole one (with cutting bores) was developed for materials with difficult cutting properties.

302 Series (Slot type)	Internal Thread	External Thread	Length(mm)	Min Drill Depth
	M2*0.4	M4.5*0.5	6	8
	M2.5*0.45	M4.5*0.5	6	8
	M3*0.5	M5*0.5	6	8
	M4*0.7	M6*0.75	8	10
	M5*0.8	M8*1.0	10	13
	M6*1.0	M9*1.0	12	15
	M6*1.0	M10*1.5	14	17
	M8*1.25	M12*1.5	15	18
	M10*1.5	M14*1.5	18	22
	M12*1.75	M16*1.5	22	26
	M14*2.0	M18*1.5	24	28
	M16*2.0	M20*1.5	22	27
	M18*2.5	M22*1.5	24	29
	M20*2.5	M24*1.5	27	32
	M22*2.5	M26*1.5	30	36
	M24*3.0	M30*1.5	30	36
M27*3.0	M34*1.5	30	36	
M30*3.5	M36*1.5	40	46	
307&308 Series (Bore type)	Internal Thread	External Thread	Length(mm)	Min Drill Depth
	M3*0.5	M5*0.6	4	6
	M3*0.5	M5*0.6	6	8
	M4*0.7	M6.5*0.8	6	8
	M4*0.7	M6.5*0.8	8	10
	M5*0.8	M8*1	7	9
	M5*0.8	M8*1	10	13
	M6*1.0	M10*1.25	8	10
	M6*1.0	M10*1.25	12	15
	M8*1.25	M12*1.5	9	11
	M8*1.25	M12*1.5	14	17
	M10*1.5	M14*1.5	10	13
	M10*1.5	M14*1.5	18	22
	M12*1.75	M16*1.75	12	15
	M12*1.75	M16*1.75	22	26
	M14*2.0	M18*2	14	17
	M14*2.0	M18*2	24	28
M16*2.0	M20*2	14	17	
M16*2.0	M20*2	24	28	



\*Other size and length are on request

# 30 Years' Manufacturer of Threaded Insert

## PARTNERS



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