



Wire Thread Insert


Xinxiang Donghai Industry Co.,Ltd



Donghai Industry Co. Ltd

Serving in global fastener/provide high quality products and services

Company Profile

Donghai Industry Co. Ltd is an industry which is major in producing varieties of specifications of metric system , British system , Uniform thread wire screw sleeve, screw-thread bush and complete sets of installation inspection tool, which is located in Xin Xiang High-tech industry park . there are Highly automatic production equipment , Strict quality management system , First-class technical talent team , excellent after-sales service system in the company . recent years , the technicians develop and make researches on new products many times to replace import , especially in Thread connection new process , make a new contribution to the country. The company have already passed the IOS 9001 : 2008 quality management system and military products certification. In January of 2014 , it has successfully passed the trademark registration of Tai Ke  brand's wire thread insert . and become the first wire thread insert producer which have its own brand inland .

Our company has always been adhering to the management ideas of Quality is uppermost, openness basing on sincerity .and our products have already sold to 28 provinces , cities, municipality through the nationwide , and also sold to England , the United States , India , and Russia and many other countries .



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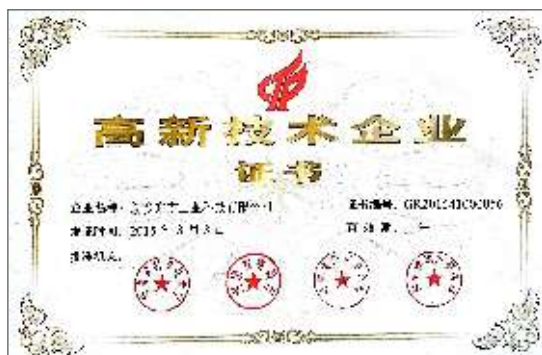
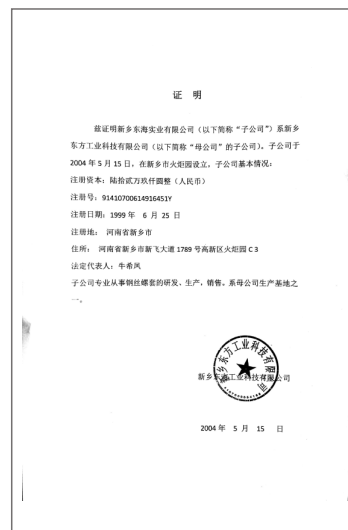
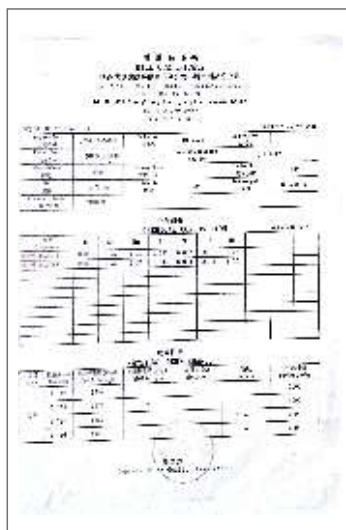
Qualification Honor





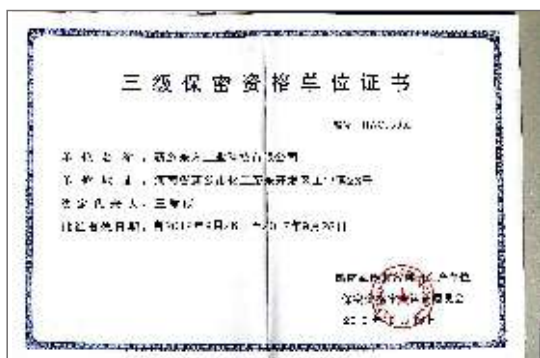
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Wire Thread Insert

Wire Thread Insert Brief Introduction

Wire thread insert, also known as Helicoil, is a new type of internal screw fastener, generally made of the Helicoil which has high strength and high precision. The cold rolled stainless steel wire with a smooth surface is formed precisely. It is an internal and external thread concentric body with high precision. When the wire screw is ready, it can form an internal thread with high precision and also can meet the corresponding standards. Its performance is superior to the internal thread which is formed directly with the tap of the tap.



The Principle Of Wire Screw Cover

The diameter of the wire screw in the free state is larger than the diameter of the inner thread. Assembly is achieved by installing the wire thread guide ring. To make the wire screw a torsion precompression, the outer diameter becomes smaller. After screwing in, the wire screw is created to expand into the surrounding area, so it's firmly fixed in the screw hole. It doesn't move with the screw.



Wire Screw Application

Application 1 assembly: A standard internal thread that forms high strength, wear-resistant and interchangeability in metal or non-metallic materials. The application of low strength engineering materials such as aluminum, copper, titanium, magnesium alloy, plastic and density plate can obviously improve the strength and wear resistance. Applied in steel, stainless steel, cast iron, it can improve the durability of screw, prevent induced fatigue and fracture screw loosening because of various vibration, and improve the fatigue strength of bolt connection.

Application 2 maintenance: In case of thread machining errors or internal thread hole repair of damaged, use wire as a screw to repair hand piece, don't have rights to add weight and volume, economic maintenance, save important components, quickly and efficiently to repair to the original state, and still use the original specifications screws, meet or exceed the technical requirements of the original design requirements.

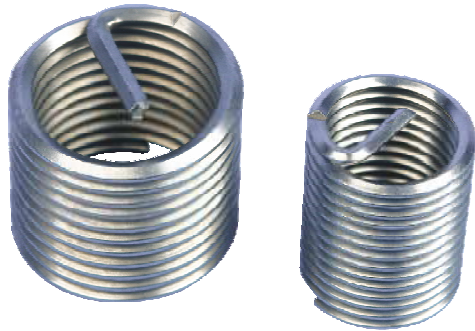
Application 3 conversion: It is very square, fast and economical to use the wire screw to make the series of thread holes, such as the common thread, which is suitable for import and export.



Wire Screw Type Classification

The Classification Of Wire Screw According To The Use Function

1. General type wire thread inserts
(Free-Running Inserts) mark“FR”



2. Locking wire thread inser
(Screw Lock Inserts) mark“SL”



The Classification Of Wire Screw According To The Thread System

1. International standard ISO "M, MJ" series of wire snails

Thread series labeled "M", "MJ"; Spark Plug threads are set in this series

2. unified screw thread series Wire Thread Insert.

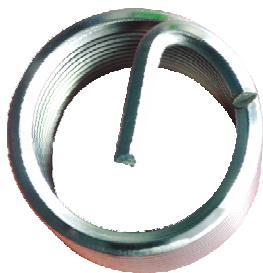
Coarse thread marks“UNC”, Fine thread mark “UNF” , Super fine tooth mark “UNEF”

3. Non-threaded pipe threads Thread tag number

4. Pipe threads where pressure-tight joints are made on the threads . Rp stands the inner tube thread; Rc stands taper internal pipe thread; R stands taper external pipe thread.

Classified The Wire Thread According To Whether It Has The Install Handling Or Not

1. There is a wire screw with mounted handle





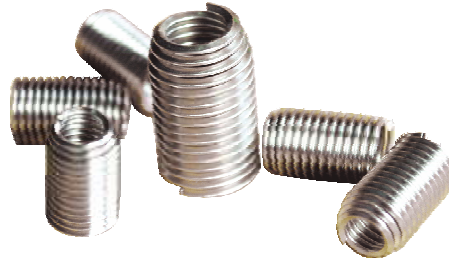
2. There is no wire screw with mounted handle

a. Endless screw sleeve



b. Taper screw sleeve

(note: this product is suitable for blind hole matrix)



Classification According To The Turning Direction Of The Wire Thread Insert

1. dextro wire thread insert



2. levorotatory wire thread insert

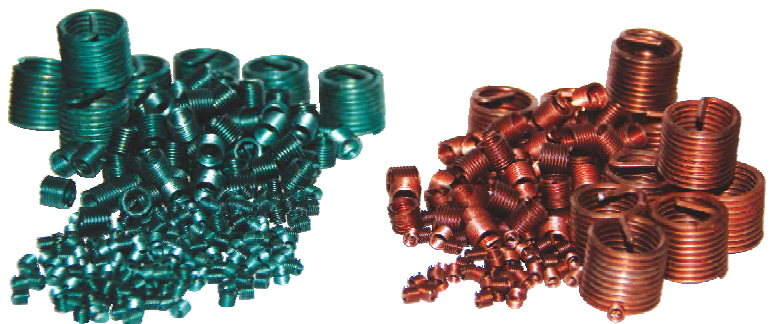


To Handle The Classification According To The Surface Of The Wire

1. No surface treated wire screw sleeve



2. Dyed steel wire screw cover



3. Coated steel wire screw cover

a. Cadmium plated wire screw cover



b. Silver plated wire screw cover





The advantages of wire screw cover

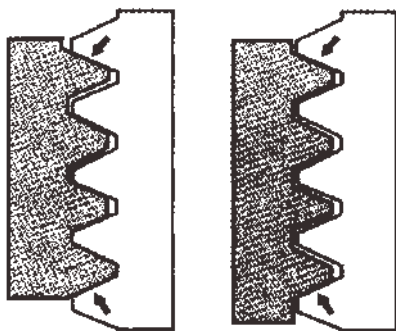
Advantages 1 Free state of steel wire diameter of a screw into the screw hole diameter larger than the assembly by installing a wrench screw thread Guide ring makes the steel wire by a screw torque precompression to smaller diameter, screwing in advance with steel for a screw tap tapping, good internal screw hole after installed, similar to the expansion of the spring steel wire spiral sets of production function, firmly fixed on the screw in the pit, along with the activity of screw motion.



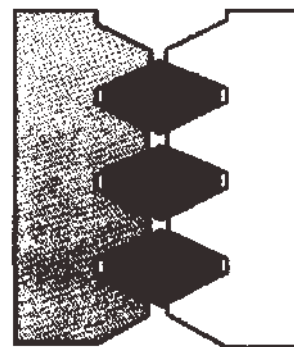
Steel screw screwed into the bottom section of the real contraction

Steel screw screwed into the bottom section diagrammatic sketch

Advantages 2 Increase the carrying capacity and fatigue strength of fatigue strength , The steel wire thread sleeve between the screw and the installation of steel wire sets of internal thread hole formation and elastic connection, can effectively eliminate the pitch and tooth type half angle error between the inner and outer threads, in accordance with the length of each thread so that the load is distributed evenly, thereby enhancing the internal thread strength and vibration, so it can improve the anti fatigue strength of parts of threaded connection.



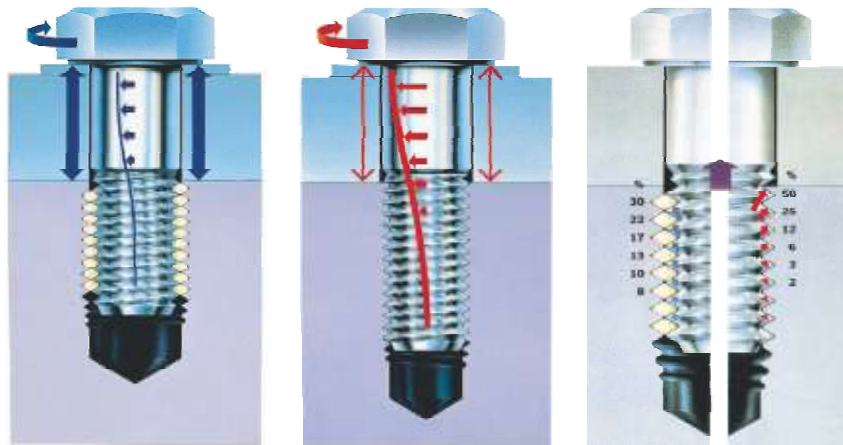
Bolt directly with internal screw thread bottom hole with schematic diagram



Bolt and steel screw and internal screw thread bottom hole with schematic diagram



Advantages 3 Wear-resistant: By the hard cold rolling of steel wire Lo sets of stainless steel wire and screw surface hardness of up to HRC43~50, like a mirror surface (precision 2~4M m) reduces friction and wear, can make the screw due to friction torque is reduced by 90%, thus the maximum pretension torque and screw tension with the smallest screw screw torque, and prevent the bolt from loosening the screws, various materials and grades in the best use of the state.

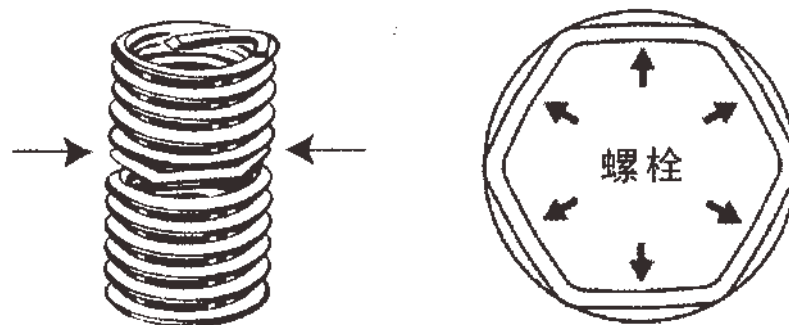


Advantages 4 Corrosion resistance: because of the excellent corrosion resistance of stainless steel screw sets, to ensure their suitability in most materials and the usual environmental conditions, the use of a combination of wire bolts will not be durable.

Advantages 5 Heat resistant: steel wire thread can prevent the thread connection from sticking or scratching at high temperature .

Advantages 6 Saving material: with a steel screw thread, in the same conditions, the use of steel wire Lo sets, as far as possible in order to take advantage of the yield limit, can choose the smaller size, higher strength of the screw, so as to maximally save material, reduce weight and reduce volume.

Advantages 7 Lock type steel screw to screw locking screw holes formed in the steel screw after installation, the vibration and impact, can make the screw not relent off, than the usual locking device process performance. The locking type screw sleeve with restoring capability allows repeated disassembly and assembly without reducing the torque of the thread so as to have higher reuse.



Schematic diagram of lock type steel wire bolt lock bolt



The Material And Application Condition Of Steel Screw Thread

Material	Marks	Room Temperature Tensile Strength	Stabilized Operating Temperature	Surface states
Stainless Steel	0Cr19Ni9	>1400MPa	425°C short time 315°C long time	No coating Apply lubrication layer on the surface Cadmium plating Silver plating
	1Cr18Ni9Ti			
	00Cr17Ni14Mo2			
Copper Alloy	QSn6. 5-.4	>1000MPa	300°C short time 250°C long time	No coating Cadmium plating
High Temperature Alloy	Inconel X750 Nimonic90	>1400MPa	750°C short time 550°C long time	No coating Silver plating

Technical Standards For Wire Screw Covers

The wire thread insert our company produced based on the following standards:

GJB119. 1 ~ 119. 3A-2001	GJB General type wire thread inserts
GJB119. 4A-2001	GJB General type wire thread inserts General specification
GJB5107-2002	GJB Universal specification for lock type wire screw
GJB5108-2002	GJB Wire screw mounting requirement
GJB5109-2002	GJB The lock type has broken steel screw sleeve
GJB5110-2002	GJB Locking type without broken groove steel wire screw sleeve
HB6200-1989	Aviation industry standard Locking type steel wire screw sleeve with broken groove
HB6201-1989	Aviation industry standard Locking type steel wire bolt sleeve without breaking groove
HB6202-1989	Aviation industry standard Technical specification for locking type steel wire ropes
HB5513-1996	Aviation industry standard Ordinary type with broken groove steel wire screw sleeve
HB5514-1996	Aviation industry standard Common type without broken groove steel wire screw sleeve
HB5515-1996	Aviation industry standard Install wire screw to apply internal thread
HB5516-1996	Aviation industry standard Technical conditions of common type wire screw
JB/T-7604-1994	Standards of machinery industry of the People's Republic of China



American standards

MS 122076 Series, Insert, corrosion resistant. Helical coil, coarse thread.
MS 124651 Series, insert, corrosion resistant. Helical coil, fine thread.
Ms21209 Series, Insert, screw thread, screw locking.
MIL-1-8846 C, Insert, screw thread. screw locking.
MIL-1-8846 C, Insert, screw thread. Helical coil.
MA 3329, 3330, 3331, Metric screw locking series.
MA 3279, 3280, 3281, Metric free running series.
MA 1565, 1567, Metric free running and screw locking, assembly dimensions.
MS 33537 Revision E, Assembly dimensions for screw thread inserts.

English standards

BS 43377, BS7751, BS7752, BS7753
AS 6733 Series, AS 8455 Series, AGS 3600 Series, AGS 3700 Series

Germany standards

DIN8140 Part 1, Wire thread inserts for ISO metric screw threads. (德国工业标准)
LN 9499 LN 9039. (德国航空标准)

The Marking Method Of Wire Screw Sleeve

Standardized Approach

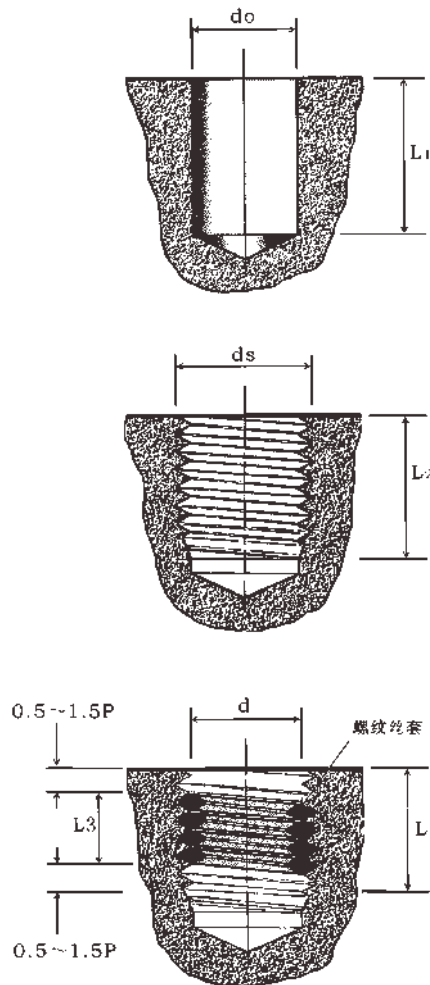
d(Diameter)***P**(Thread pitch)***N**(The number of wire loops in free states)

Notes: This is the GJB and HB marking method, not all standards are used for method tags, and the exact method according to the corresponding standards

Specification method

- 1.FR(Normal diameter thread pitch) Md(Diameter) *P(Thred pitch) -nd
- 2.SL(Screw lock diameter thread pitch) Md(Diameter) *P(Thred pitch) -nd

Type And Installation Parameters Of Wire Screw Sleevesize And Installation Parameters Of The Wire Thread Insert



Symbol	Instructions
d	The diameter of the wire thread insert
ds	The diameter of inner thread of bottom hole
p	The distance between the screws
d0	Low diameter
L	Nominal length of the wire thread insert
L1	Bottle hole depth
L2	Tapping depth
L3	Effective length of the wire thread insert after assembled

The Instructions

1. The bottle hole depth L1 and the tapping depth L2 are blind hole design. In principle, all tapping are required to fulfill the wire thread insert when through the hole, and an empty thread 0.5 to 1.5 times the pitch should be kept both under and above.
2. The select of the bottom hole diameter should be according to the mechanical properties of the processed materials. Low strength metal material such as aluminum, magnesium, copper and alloy, the diameter should be close the the base size, high strength or adhesion such as stainless steel, composite materials, etc, the diameter should be close to the maximum, and Non-metallic material, the bottom hole diameter should be biased to the minimum. The principle is to ensure that the integrity of the teeth is good for tapping.
3. The thread shrink its diameter after screwing in threaded hole, large diameter tolerance under free state (caused by its elastic material and production) does not affect the normal screwing and accuracy, only torsion changed! It is not required that the outside diameter is too small because of this partial pursuit, which weakened the mechanical strength after screwing.



The size and the installation parameters of the series of wire screw in the metric series

The size and the installation parameters of the series of wire screw in the metric series

Nominal Diameter(d)	Thread Pitch(p)	Nominal Length			Cylinder Number(N)	The Outer Diameter Of The Free State Dz		Drill Diameter (do)
		x	d	L		min	max	
1.4	0.3	1	d	1.4	2.5	1.88	2.05	1.5
1.4	0.3	1.5	d	2.1	4.5	1.88	2.05	1.5
1.4	0.3	2	d	2.8	7.0	1.88	2.05	1.5
1.6	0.35	1	d	1.6	2.4	2.1	2.32	1.7
1.6	0.35	1.5	d	2.4	4.75	2.1	2.32	1.7
1.6	0.35	2	d	3.2	7.0	2.1	2.32	1.7
2	0.4	1	d	2	2.9	2.62	2.76	2
2	0.4	1.5	d	3	4.7	2.62	2.76	2
2	0.4	2	d	4	6.5	2.62	2.76	2
2.5	0.45	1	d	2.5	3.6	3.3	3.5	2.6
2.5	0.45	1.5	d	3.8	5.9	3.3	3.5	2.6
2.5	0.45	2	d	5	8.2	3.3	3.5	2.6
2.5	0.45	2.5	d	6.3	10.5	3.3	3.5	2.6
2.5	0.45	3	d	7.5	12.8	3.3	3.5	2.6
3	0.5	1	d	3	4.2	3.8	4	3.1
3	0.5	1.5	d	4.5	6.8	3.8	4	3.1
3	0.5	2	d	6	9.4	3.8	4	3.1
3	0.5	2.5	d	7.5	12	3.8	4	3.1
3	0.5	3	d	9	14.6	3.8	4	3.1
3.5	0.6	1	d	3.5	4	4.55	4.75	3.7
3.5	0.6	1.5	d	5.3	6.4	4.55	4.75	3.7
3.5	0.6	2	d	7	8.9	4.55	4.75	3.7
3.5	0.6	2.5	d	8.8	11.4	4.55	4.75	3.7
3.5	0.6	3	d	10.5	13.9	4.55	4.75	3.7
4	0.7	1	d	4	4	5.05	5.25	4.2
4	0.7	1.5	d	6	6.6	5.05	5.25	4.2
4	0.7	2	d	8	9.1	5.05	5.25	4.2
4	0.7	2.5	d	10	11.7	5.05	5.25	4.2
4	0.7	3	d	12	14.2	5.05	5.25	4.2
5	0.8	1	d	5	4.4	6.35	6.6	5.2
5	0.8	1.5	d	7.5	7.1	6.35	6.6	5.2
5	0.8	2	d	10	9.9	6.35	6.6	5.2
5	0.8	2.5	d	12.5	12.6	6.35	6.6	5.2
5	0.8	3	d	15	15.3	6.35	6.6	5.2
6	1	1	d	6	4.3	7.6	7.85	6.3
6	1	1.5	d	9	6.9	7.6	7.85	6.3



The size and the installation parameters of the series of wire screw in the metric series

Nominal Diameter(d)	Thread Pitch(p)	Nominal Length			Cylinder Number(N)	The Outer Diameter Of The Free State Dz		Drill Diameter (do)
		x	d	L		min	max	
6	1	2	d	12	9.6	7.6	7.85	6.3
6	1	2.5	d	15	12.2	7.6	7.85	6.3
6	1	3	d	18	14.9	7.6	7.85	6.3
7	1	1	d	7	5.2	8.65	8.9	7.3
7	1	1.5	d	10.5	8.3	8.65	8.9	7.3
7	1	2	d	14	11.5	8.65	8.9	7.3
7	1	2.5	d	17.5	14.6	8.65	8.9	7.3
8	1	1	d	8	6	9.85	10.1	8.3
8	1	1.5	d	12	9.6	9.85	10.1	8.3
8	1	2	d	16	13.1	9.85	10.1	8.3
8	1	2.5	d	20	16.7	9.85	10.1	8.3
8	1.25	1	d	8	4.8	9.85	10.1	8.3
8	1.25	1.5	d	12	7.7	9.85	10.1	8.3
8	1.25	2	d	16	10.6	9.85	10.1	8.3
8	1.25	2.5	d	20	13.5	9.85	10.1	8.3
8	1.25	3	d	24	16.5	9.85	10.1	8.3
9	1.25	1	d	9	5.5	10.85	11.1	9.3
9	1.25	1.5	d	13.5	8.9	10.85	11.1	9.3
9	1.25	2	d	18	12.2	10.85	11.1	9.3
9	1.25	2.5	d	22.5	15.5	10.85	11.1	9.3
9	1.25	3	d	27	18.8	10.85	11.1	9.3
10	1.5	1	d	10	5	12.1	12.5	10.4
10	1.5	1.5	d	15	8.1	12.1	12.5	10.4
10	1.5	2	d	20	11.2	12.1	12.5	10.4
10	1.5	2.5	d	25	14.2	12.1	12.5	10.4
10	1.5	3	d	30	17.3	12.1	12.5	10.4
10	1.25	1	d	10	6.1	12.1	12.5	10.3
10	1.25	1.5	d	15	9.7	12.1	12.5	10.3
10	1.25	2	d	20	13.3	12.1	12.5	10.3
10	1.25	2.5	d	25	16.9	12.1	12.5	10.3
10	1	1	d	10	7.7	12.1	12.5	10.3
10	1	1.5	d	15	12.1	12.1	12.5	10.3
10	1	2	d	20	16.5	12.1	12.5	10.3
10	1	2.5	d	25	20.8	12.1	12.5	10.3
11	1.5	1	d	11	5.7	13.1	13.5	11.4
11	1.5	1.5	d	16.5	9.1	13.1	13.5	11.4
11	1.5	2	d	22	12.5	13.1	13.5	11.4
11	1.5	2.5	d	27.5	15.9	13.1	13.5	11.4



The size and the installation parameters of the series of wire screw in the metric series

Nominal Diameter(d)	Thread Pitch(p)	Nominal Length			Cylinder Number(N)	The Outer Diameter Of The Free State Dz		Drill Diameter (do)
		x	d	L		min	max	
12	1.75	1	d	12	5.3	14.4	14.8	12.4
12	1.75	1.5	d	18	8.4	14.4	14.8	12.4
12	1.75	2	d	24	11.6	14.4	14.8	12.4
12	1.75	2.5	d	30	14.8	14.4	14.8	12.4
12	1.75	3	d	36	18	14.4	14.8	12.4
12	1.5	1	d	12	6.2	14.4	14.8	12.4
12	1.5	1.5	d	18	9.8	14.4	14.8	12.4
12	1.5	2	d	24	13.5	14.4	14.8	12.4
12	1.5	2.5	d	30	17.1	14.4	14.8	12.4
12	1.25	1	d	12	7.5	14.4	14.8	12.3
12	1.25	1.5	d	18	11.8	14.4	14.8	12.3
12	1.25	2	d	24	16.1	14.4	14.8	12.3
12	1.25	2.5	d	30	20.3	14.4	14.8	12.3
12	1	1	d	12	9.4	14.4	14.8	12.3
12	1	1.5	d	18	14.7	14.4	14.8	12.3
12	1	2	d	24	19.9	14.4	14.8	12.3
13	1.25	1	d	13	8	15.8	16.3	13.3
13	1.25	1.5	d	19.5	12.5	15.8	16.3	13.3
13	1.25	2	d	26	17	15.8	16.3	13.3
14	2	1	d	14	5.4	16.8	17.2	14.5
14	2	1.5	d	21	8.7	16.8	17.2	14.5
14	2	2	d	28	11.9	16.8	17.2	14.5
14	2	2.5	d	35	15.2	16.8	17.2	14.5
14	2	3	d	42	18.4	16.8	17.2	14.5
14	1.5	0.75	d	10.5	5.2	16.8	17.2	14.4
14	1.5	1	d	14	7.3	16.8	17.2	14.4
14	1.5	1.5	d	21	11.5	16.8	17.2	14.4
14	1.5	2	d	28	15.7	16.8	17.2	14.4
14	1.5	2.5	d	35	19.9	16.8	17.2	14.4
14	1.25	1	d	14	8.8	16.8	17.2	14.3
14	1.25	1.5	d	21	13.8	16.8	17.2	14.3
16	2	1	d	16	6.3	19	19.4	16.5
16	2	1.5	d	24	10	19	19.4	16.5
16	2	2	d	32	13.7	19	19.4	16.5
16	2	2.5	d	40	17.5	19	19.4	16.5
16	2	3	d	48	21.2	19	19.4	16.5
16	1.5	0.75	d	12	6.1	19	19.4	16.4
16	1.5	1	d	16	8.5	19	19.4	16.4



The size and the installation parameters of the series of wire screw in the metric series

Nominal Diameter(d)	Thread Pitch(p)	Nominal Length			Cylinder Number(N)	The Outer Diameter Of The Free State Dz		Drill Diameter (do)
		x	d	L		min	max	
16	1.5	1.5	d	24	13.3	19	19.4	16.4
16	1.5	2	d	32	18.1	19	19.4	16.4
18	2.5	1	d	18	5.6	21.5	22	18.6
18	2.5	1.5	d	27	9	21.5	22	18.6
18	2.5	2	d	36	12.3	21.5	22	18.6
18	2.5	2.5	d	45	15.7	21.5	22	18.6
18	2.5	3	d	54	19	21.5	22	18.6
18	2	0.75	d	13.5	5	21.5	22	18.5
18	2	1	d	18	7.1	21.5	22	18.5
18	2	1.5	d	27	11.2	21.5	22	18.5
18	2	2	d	36	15.2	21.5	22	18.5
18	1.5	0.75	d	13.5	7.1	21.48	21.82	18.4
18	1.5	1	d	18	9.8	21.48	21.82	18.4
18	1.5	1.5	d	27	15	21.48	21.82	18.4
18	1.5	2	d	36	20.3	21.48	21.8	18.4
20	2.5	1	d	20	6.5	23.7	24.2	20.6
20	2.5	1.5	d	30	10	23.7	24.2	20.6
20	2.5	2	d	40	13.8	23.7	24.2	20.6
20	2.5	2.5	d	50	17.5	23.7	24.2	20.6
20	2.5	3	d	60	21.2	23.7	24.2	20.6
20	2	0.75	d	15	5.7	23.7	24.2	20.5
20	2	1	d	20	8	23.7	24.2	20.5
20	2	1.5	d	30	12.5	23.7	24.2	20.5
20	2	2	d	40	17.1	23.7	24.2	20.5
20	1.5	0.5	d	10	4.8	23.7	24.2	20.4
20	1.5	0.75	d	15	7.8	23.7	24.2	20.4
20	1.5	1	d	20	10.7	23.7	24.2	20.4
20	1.5	1.5	d	30	16.7	23.7	24.2	20.4
22	2.5	1	d	22	6.9	26.3	26.8	22.6
22	2.5	1.5	d	33	11	26.3	26.8	22.6
22	2.5	2	d	44	15	26.3	26.8	22.6
22	2.5	2.5	d	55	19	26.3	26.8	22.6
22	2.5	3	d	66	23	26.3	26.8	22.6
22	2	0.75	d	16.5	6.3	26.3	26.8	22.5
22	2	1	d	22	8.8	26.3	26.8	22.5
22	2	1.5	d	33	13.7	26.3	26.8	22.5
22	2	2	d	44	18.6	26.3	26.8	22.5
22	1.5	0.5	d	11	5.4	26	26.52	22.4



The size and the installation parameters of the series of wire screw in the metric series

Nominal Diameter(d)	Thread Pitch(p)	Nominal Length			Cylinder Number(N)	The Outer Diameter Of The Free State Dz		Drill Diameter (do)
		x	d	L		min	max	
22	1.5	0.75	d	16.5	8.7	26	26.52	22.4
22	1.5	1	d	22	11.9	26	26.52	22.4
22	1.5	1.5	d	33	18.4	26	26.52	22.4
24	3	1	d	24	6.3	28.6	29.1	24.8
24	3	1.5	d	36	10	28.6	29.1	24.8
24	3	2	d	48	13.7	28.6	29.1	24.8
24	3	2.5	d	60	17.5	28.6	29.1	24.8
24	3	3	d	72	21.2	28.6	29.1	24.8
24	2	0.75	d	18	7	28.6	29.1	24.5
24	2	1	d	24	9.6	28.6	29.1	24.5
24	2	1.5	d	36	15	28.6	29.1	24.5
24	2	2	d	48	20.3	28.6	29.1	24.5
24	1.5	0.5	d	12	6	28.4	28.92	24.4
24	1.5	0.75	d	18	9.5	28.4	28.92	24.4
24	1.5	1	d	24	13	28.4	28.92	24.4
26	1.5	0.5	d	13	6.5	30	31.5	26.4
26	1.5	0.75	d	19.5	10.3	30	31.5	26.4
26	1.5	1	d	26	14	30	31.5	26.4
27	3	1	d	27	7.2	32.2	32.7	27.8
27	3	1.5	d	40.5	11.3	32.2	32.7	27.8
27	3	2	d	54	15.4	32.2	32.7	27.8
27	3	2.5	d	67.5	19.5	32.2	32.7	27.8
27	2	0.75	d	20.3	7.9	31.94	32.56	27.5
27	2	1	d	27	10.9	31.94	32.56	27.5
27	2	1.5	d	40.5	16.9	31.94	32.56	27.5
27	1.5	0.5	d	13.5	6.9	31.44	32.14	27.4
27	1.5	0.75	d	20.3	10.9	31.44	32.14	27.4
27	1.5	1	d	27	14.9	31.44	32.14	27.4
28	1.5	0.5	d	14	7.1	33.1	33.6	28.4
28	1.5	0.75	d	21	11.2	33.1	33.6	28.4
28	1.5	1	d	28	15.3	33.1	33.6	28.4
30	3.5	1	d	30	6.9	35.2	35.7	30.9
30	3.5	1.5	d	45	11	35.2	35.7	30.9
30	3.5	2	d	60	15	35.2	35.7	30.9
30	3.5	2.5	d	75	19	35.2	35.7	30.9
30	3.5	3	d	90	23	35.2	35.7	30.9
30	2	0.5	d	15	5.6	34.94	35.74	30.5
30	2	0.75	d	22.5	9	34.94	35.74	30.5



The size and the installation parameters of the series of wire screw in the metric series

Nominal Diameter(d)	Thread Pitch(p)	Nominal Length			Cylinder Number(N)	The Outer Diameter Of The Free State Dz		Drill Diameter (do)
		x	d	L		min	max	
30	2	1	d	30	12.3	34.94	35.74	30.5
30	2	1.5	d	45	19	34.94	35.74	30.5
30	1.5	0.5	d	15	7.8	34.64	35.44	30.4
30	1.5	0.75	d	22.5	12.3	34.64	35.44	30.4
30	1.5	1	d	30	16.7	34.64	35.44	30.4
33	3.5	1	d	33	7.8	38.3	38.8	33.9
33	3.5	1.5	d	49.5	12.2	38.3	38.8	33.9
33	3.5	2	d	66	16.6	38.3	38.8	33.9
33	3.5	2.5	d	82.5	21.1	38.3	38.8	33.9
33	3.5	3	d	99	25.5	38.3	38.8	33.9
33	2	0.5	d	16.5	6.4	38.3	38.8	33.5
33	2	0.75	d	24.8	10.1	38.3	38.8	33.5
33	2	1	d	33	13.8	38.3	38.8	33.5
33	2	1.5	d	49.5	21.2	38.3	38.8	33.5
33	1.5	0.5	d	16.5	8.7	38.3	38.8	33.4
33	1.5	0.75	d	24.8	13.6	38.3	38.8	33.4
33	1.5	1	d	33	18.5	38.3	38.8	33.4
36	4	0.75	d	27	5.2	42.1	42.6	37
36	4	1	d	36	7.3	42.1	42.6	37
36	4	1.5	d	54	11.6	42.1	42.6	37
36	4	2	d	72	15.8	42.1	42.6	37
36	3	0.5	d	18	4.4	42.1	42.6	36.8
36	3	0.75	d	27	7.1	42.1	42.6	36.8
36	3	1	d	36	9.9	42.1	42.6	36.8
36	3	1.5	d	54	15.4	42.1	42.6	36.8
36	2	0.5	d	18	6.9	42.1	42.6	36.5
36	2	0.75	d	27	11	42.1	42.6	36.5
36	2	1	d	36	15	42.1	42.6	36.5
36	1.5	0.5	d	18	9.5	42.1	42.6	36.4
36	1.5	0.75	d	27	14.8	42.1	42.6	36.4
36	1.5	1	d	36	20	42.1	42.6	36.4
39	2	0.5	d	19.5	7.7	45.1	45.6	39.5
39	2	0.75	d	29.3	12.1	45.1	45.6	39.5
39	2	1	d	39	16.4	45.1	45.6	39.5
48	3	0.5	d	24	6.2	55	55.5	48.8
48	3	0.75	d	36	9.9	55	55.5	48.8
48	3	1	d	48	13.6	55	55.5	48.8
56	4	0.5	d	28	5.4	64	65	57



The size and the installation parameters of the series of wire screw in the metric series

Nominal Diameter(d)	Thread Pitch(p)	Nominal Length			Cylinder Number(N)	The Outer Diameter Of The Free State Dz		Drill Diameter (do)
		x	d	L		min	max	
56	4	0.75	d	42	8.6	64	65	57
56	4	1	d	56	11.8	64	65	57
60	3	0.5	d	30	7.9	69	70	60.8
60	3	0.75	d	45	12.4	69	70	60.8
60	3	1	d	60	16.9	69	70	60.8
60	4	0.5	d	30	5.8	69	70	61
60	4	0.75	d	45	9.2	69	70	61
60	4	1	d	60	12.6	69	70	61
60	4	1.5	d	90	19.5	69	70	61

Common metric (M, MJ) series of wire screw specifications

M2 × 0.4	9 × 1	16 × 1	24 × 0.75	39 × 2	52 × 1.5
2 × 0.25	9 × 0.75	16 × 0.75	M27 × 3	39 × 1.5	52 × 1
M2.2 × 0.45	9 × 0.5	16 × 0.5	27 × 2	39 × 1	M56 × 5.5
2.2 × 0.35	M10 × 1.5	M18 × 2.5	27 × 1.5	M42 × 4.5	56 × 4
M2.5 × 0.45	10 × 1.25	18 × 2	27 × 1	42 × 4	56 × 3
2.5 × 0.35	10 × 1	18 × 1.5	27 × 0.75	42 × 3	56 × 2
M3 × 0.5	10 × 0.75	18 × 1	M30 × 3.5	42 × 2	56 × 1.5
3 × 0.35	10 × 0.5	18 × 0.75	30 × 3	42 × 1.5	56 × 1
M3.5 × 0.6	M11 × 1.5	18 × 0.5	30 × 2	42 × 1	M60 × 5.5
3.5 × 0.35	11 × 1.25	M20 × 2.5	30 × 1.5	M45 × 4.5	60 × 4
M4 × 0.7	11 × 1	20 × 2	30 × 1	45 × 4	60 × 3
4 × 0.5	11 × 0.75	20 × 1.5	30 × 0.75	45 × 3	60 × 2
M5 × 0.8	11 × 0.5	20 × 1	M33 × 3.5	45 × 2	60 × 1.5
5 × 0.5	M12 × 1.75	20 × 0.75	33 × 3	45 × 1.5	60 × 1
M6 × 1	12 × 1.5	20 × 0.5	33 × 2	45 × 1	M64 × 6
6 × 0.75	12 × 1.25	M22 × 2.5	33 × 1.5	M48 × 5	64 × 4
6 × 0.5	12 × 1	22 × 2	33 × 1	48 × 4	64 × 3
M7 × 1	12 × 0.75	22 × 1.5	33 × 0.75	48 × 3	64 × 2
7 × 0.75	12 × 0.5	22 × 1	M36 × 4	48 × 2	64 × 1.5
7 × 0.5	M14 × 2	22 × 0.75	36 × 3	48 × 1.5	64 × 1
M8 × 1.25	14 × 1.5	22 × 0.5	36 × 2	48 × 1	M68 × 6
8 × 1	14 × 1.25	M24 × 3	36 × 1.5	M52 × 5	68 × 4
8 × 0.75	14 × 1	24 × 2	36 × 1	52 × 4	68 × 3
8 × 0.5	M16 × 2	24 × 1.5	M39 × 4	52 × 3	68 × 2
M9 × 1.25	16 × 1.5	24 × 1	39 × 3	52 × 2	68 × 1.5



Unified thread UNC wire screw type size and installation parameters

Thread unf series for fine teeth

Wire Screw Thread Specification D*p	Wire Screw Thread Nominal Length N*d	Drilling And Tapping Parameters			After Installation Parameters		The Parameters Are Free	
		L2	Brick do	L1	L4	L3	Dz	N (≈)
4-40 0.112-40	1d	2.9	3	5.7	2.5	2.2	3.66 ~ 4.04	3.2
	1.5d	4.3		7.1	3.9	3.6		5.1
	2d	5.8		8.6	5.4	5.1		7.2
5-40 0.125-40	1d	3.2	3.4	6	2.8	2.5	4.01 ~ 4.39	3.7
	1.5d	4.8		7.6	4.3	4.1		5.9
	2d	6.4		9.2	6	5.7		8.2
6-32 0.138-32	1d	3.5	3.7	7.1	3.1	2.7	4.52 ~ 4.90	2.8
	1.5d	5.3		8.8	4.9	4.5		4.8
	2d	7.0		10.6	6.6	6.2		6.8
8-32 0.164-32	1d	4.2	4.4	7.7	3.8	3.4	5.20 ~ 5.56	4.0
	1.5d	6.25		9.8	5.9	5.5		6.0
	2d	8.3		11.9	8	7.5		8.7
10-24 0.190-24	1d	4.8	5.1	9.6	4.3	3.8	6.19 ~ 6.58	3.3
	1.5d	7.2		12	6.7	6.2		5.4
	2d	9.6		14.4	9.1	8.6		7.5
12-24 0.216-24	1d	5.5	5.8	10.3	5	4.4	6.86 ~ 7.24	4.0
	1.5d	8.2		13	7.7	7.1		6.3
	2d	11.0		15.7	10.5	9.9		8.8
1/4"-20	1d	6.4	6.7	12.1	5.8	5.1	7.86 ~ 8.38	3.9
	1.5d	9.5		15.2	8.9	8.2		6.2
	2d	12.7		18.4	12.1	11.4		8.6
3/8"-16	1d	9.5	9.9	16.7	8.7	7.9	11.48 ~ 11.99	4.8
	1.5d	14.3		21.4	13.5	12.7		7.7
	2d	19.1		26.2	18.3	17.5		10.6
7/16"-14	1d	11.1	11.6	19.3	10.2	9.3	13.36 ~ 13.99	4.9
	1.5d	16.7		24.8	15.8	14.9		7.9
	2d	22.2		30.4	21.3	20.4		10.7
1/2"-13	1d	12.7	13.1	21.5	11.7	10.7	15.16 ~ 15.80	5.2
	1.5d	19.1		27.8	18.1	17.1		8.3
	2d	25.4		34.2	12.4	23.4		11.4
5/8"-11	1d	15.9	16.4	26.3	14.7	13.6	18.84 ~ 19.48	5.7
	1.5d	23.8		34.2	22.6	21.5		9.0
	2d	31.8		42.1	30.6	29.4		12.3
3/4"-10	1d	19.1	19.6	30.5	17.8	16.5	22.36 ~ 23.00	6.3
	1.5d	28.6		40	27.3	26		9.9
	2d	38.1		49.5	36.8	35.5		13.5
1"-8	1d	25.4	26.1	39.7	23.8	22.2	29.62 ~ 30.38	6.8
	1.5d	38.1		52.4	36.5	34.9		10.6
	2d	50.8		65.1	49.2	47.6		14.5



Unified thread UNC wire screw type size and installation parameters

Fine teeth unified thread (UNF) series

Wire Screw Thread Specification D*p	Wire Screw Thread Nominal Length N*d	Drilling And Tapping Parameters			After Installation Parameters		The Parameters Are Free	
		L2	Brick d0	L1	L4	L3	Dz	N (≈)
8-36 0.164-36	1d	4.2	4.3	7.3	3.8	3.4	5.18 ~ 5.68	4.5
	1.5d	6.3		9.4	5.9	5.5		7.2
	2d	8.3		11.5	7.9	7.6		9.7
10-32 0.19-32	1d	4.83	5.0	8.4	4.4	4	5.99 ~ 6.50	4.1
	1.5d	7.24		10.8	6.8	6.5		6.9
	2d	9.6		13.2	9.2	8.9		10
1/4"-28	1d	6.35	6.6	10.4	5.9	5.5	7.77 ~ 8.28	5.0
	1.5d	9.5		13.6	9	8.6		8.6
	2d	12.7		16.8	12.2	11.8		11.8
5/16"-24	1d	7.9	8.2	12.7	7.4	6.9	9.65 ~ 10.16	5.9
	1.5d	11.9		16.7	11.4	10.9		9.4
	2d	15.9		20.6	15.4	14.9		12.8
3/8"-24	1d	9.5	9.8	14.3	9	8.4	11.37 ~ 11.88	7.3
	1.5d	14.3		19.1	13.8	13.2		11.5
	2d	19.1		23.8	18.6	18		15.6
7/16"-20	1d	11.1	11.4	16.8	10.5	9.8	13.3 ~ 13.7	7.0
	1.5d	16.7		22.4	16.1	15.4		11.1
	2d	22.2		27.9	21.6	20.9		15.0
1/2"-20	1d	12.7	13.0	18.4	12.1	11.4	15.03 ~ 15.67	7.9
	1.5d	19.7		24.8	18.5	17.8		12.8
	2d	25.4		31.1	24.8	24.1		17.3
9/16"-18	1d	14.3	14.6	20.6	13.6	12.9	16.91 ~ 17.55	7.9
	1.5d	21.5		27.8	20.8	20.1		12.0
	2d	28.6		34.9	27.9	27.2		16.0
5/8"-18	1d	15.9	16.2	22.2	15.2	14.5	18.61 ~ 19.25	9.4
	1.5d	23.8		30.2	23.1	22.4		14.5
	2d	31.8		38.1	31.1	30.4		19.7
3/4"-16	1d	19.1	19.4	26.2	18.3	17.5	22.25 ~ 22.88	10.1
	1.5d	28.6		35.7	27.8	27		15.6
	2d	38.1		45.2	37.3	36.5		21.0
7/8-14	1d	22.2	22.6	30.4	21.3	20.4	25.93 ~ 26.69	10.3
	1.5d	33.3		41.5	32.4	31.5		15.9
	2d	44.5		52.6	43.6	42.7		21.6
1"-14	1d	25.4	25.9	33.6	24.5	23.6	29.69 ~ 30.45	11.8
	1.5d	38.1		46.3	37.2	36.3		18.1
	2d	50.8		59	49.9	49		24.5
1"-12	1d	25.4	26.0	34.9	24.3	23.3	29.69 ~ 30.45	10.0
	1.5d	38.1		47.6	37	36		15.6

**Common thread (UN) series of steel wire spiral specifications**

No2-56UNC	3/8-16UNC	5/8-18UNF	1-20UNEF	1 3/8-12UNF
No2-64UNF	3/8-20UNF	5/8-20UNEF	1-28UN	1 3/8-16UN
No3-48UNC	3/8-24UNEF	5/8-24UNEF	1-32UN	1 3/8-18UNEF
No3-56UNF	3/8-28UNEF	5/8-28UNEF	1 1/16-18UNEF	1 3/8-20UN
No4-40UNC	3/8-32UNEF	5/8-32UNEF	1 1/16-20UN	1 3/8-28UNF
No4-48UNF	7/16-14UNC	11/16-24UNEF	1 1/8-7UNC	1 7/16-12UN
No5-40UNC	7/16-16UN	11/16-28UN	1 1/8-8UN	1 7/16-18UNEF
No5-44UNF	7/16-20UNF	11/16-32UN	1 1/8-12UNF	1 1/2-6UNC
No6-32UNC	7/16-28UNEF	3/4-10UNC	1 1/8-16UN	1 1/2-8UN
No6-40UNF	7/16-32UNEF	3/4-12UN	1 1/8-18UNEF	1 1/2-12UNF
No8-32UNC	1/2 -13UNC	3/4-16UNF	1 1/8-20UN	1 1/2-16UN
No8-36UNF	1/2 -16UNF	3/4-20UNEF	1 1/8-28UN	1 1/2-18UNEF
No10-24UNC	1/2-20UNF	3/4-32UN	1 3/16-12UNEF	1 1/2-20UN
No10-32UNF	1/2-28UNEF	13/16-20UNEF	1 3/16-18UNEF	1 1/2-28UN
No12-24UNC	1/2-32UNEF	7/8-9UNC	1 1/4-7UNC	1 5/8-12UN
No12-28UNF	9/16-12UNC	7/8-12UN	1 1/4-8UN	1 5/8-18UNEF
No12-32UNEF	9/16-16UNF	7/8-14UNF	1 1/4-12UNF	1 3/4-5UNC
1/4-20UNC	9/16-18UNF	7/8-16UN	1 1/4-16UN	1 3/4-6UN
1/4-28UNF	9/16-20UNF	7/8-20UNEF	1 1/4-18UNEF	1 3/4-8UN
1/4-32UNEF	9/16-24UNEF	7/8-28UN	1 1/4-20UN	1 3/4-12UN
5/16-18UNC	9/16-28UNEF	7/8-32UN	1 1/4-28UN	1 3/4-16UN
5/16-20UNF	9/16-32UNEF	15/16-20UNEF	1 5/16-12UN	1 3/4-20UN
5/16-24UNF	5/8-11UNC	1-8UNC	1 5/16-18UNEF	1 7/8-12UN
5/16-28UN	5/8-12UNF	1-12UNF	1 3/8-6UNC	2-12UN
5/16-32NEF	5/8-16UNF	1-16UN	1 3/8-8UN	2 1/4-12UN



Steel Wire For A Screw Tap



Steel wire for a screw tap for processing steel wire with bottom hole of internal threads, a screw structure size in accordance with the standards of the state "fine machine tap handle GB3464-83 standard requirements such as manufacturing, materials, such as W18Cr4V can use machine can also be hand, according to the scope of its use can be divided into three types:

- (1) Light alloy machine and hand tap;
- (2) Ordinary steel machine and hand tap;
- (3) Special tap.

We can customize the tap according to the special request of our customers.

Choose the type of tap:

Straight Flute

Its strongest commonality, hole or blind hole, non-ferrous metal or black metal processing, the price is the cheapest, but is poorly targeted, what to do, nothing to do the best. The cutting cone can have two, four, six teeth, a cone for blind hole, and a long cone for the hole. As long as the bottom hole is deep enough, you should try to use the cutting taper long enough to share the teeth of the cutting load and the longer life.



EX-SFT

It is suitable for machining blind hole thread, the chip back out, because of the spiral Angle, tap before actual cutting Angle will increase with the increase of helical Angle. Experience tells us that the spiral Angle of processing black metal is small, usually at about 30 degrees, ensuring the strength of the helical teeth. The spiral Angle, which is made of non-ferrous metal, is about 45 degrees, and the cutting is sharp.





Thread Forming Tap

It is suitable for processing of non-ferrous metals, and the working principle of the cutting tap is different, it is carried out on the metal extrusion, plastic deformation, the formation of the internal thread. Extrusion forming the internal thread of metal fibre is continuous, tensile and shear strength is higher, work surface roughness is better also, but squeeze taps required high bottom hole, too big, base metal quantity is little, causing large diameter internal thread transgressions, strength is not enough. Too small, the metal that is enclosed is nowhere to go, causing the tap to break.

The calculation is: The diameter of the bottom hole = the diameter of the internal thread.



Special tap

a. Interrupted Thread Tap

(For nylon and plastic tapping)



b. Double Tap

(The auto repair industry is dedicated, eliminating the reaming process)



c. 加强丝锥

(适用于强度高的基体攻丝)



On thread of different materials can be found in the processing, the material density, the material that has high strength, such as the thread of steel Hole because of its thick sugar, rigidity and high strength, bolt can be repeatedly used by precession spin out, the screw hole will not be damaged; For the thread hole on aluminum alloy parts, the roughness and strength is low, after bolt precession spin out repeatedly, the screw hole is easy to hurt bad, affect the use of artifacts. The screw holes in aluminum alloy are used to prevent the damage of the alloy screw holes.。 Because aluminum alloy die casting surface under 1 mm prone to porosity, so use the conventional process prone to such as drilling, tapping screw thread broken clasp, and USES the extrusion forming process of the threaded hole, its high strength. Extrusion forming is cutting, so theoretically inner hole formed by the surface material quality requirements and within the thread on the unit length of equal size, thus can calculate extruding screw thread bottom hole size.



Wire Screw Socket Set Wrench

Wire installation wrench is used for a screw steel wire within the tap of a screw to install, its basic principle is to make the wire through a lead screw, a screw force outside diameter shrinkage, in order to load the bottom hole smoothly.



Manual Setting Wrench

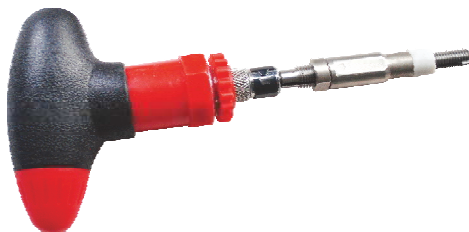
1. Equipped with handle wire screw socket set wrench .

a. T-groove mounting wrench

b. Threaded head mounting plate (suitable for fine thread screw mounting)



2. Unscrew socket set wrench



Semi-automatic Installation Wrench

Semi-automatic mounting wrench has two kinds of electric pneumatic, It is characterized by high efficiency and fast installation, Used in the installation of the batch wire screw and the assembly line .

1. 电动安装扳手

2. 气动安装扳手





Wire Screw Mounting Handle Removal Tool

Thrust device: Use instant force to break the handle of the wire screw

a. Manual thrust device

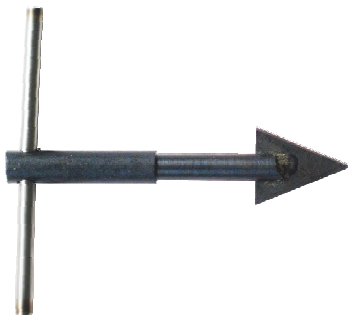


b. Automatically thrust device

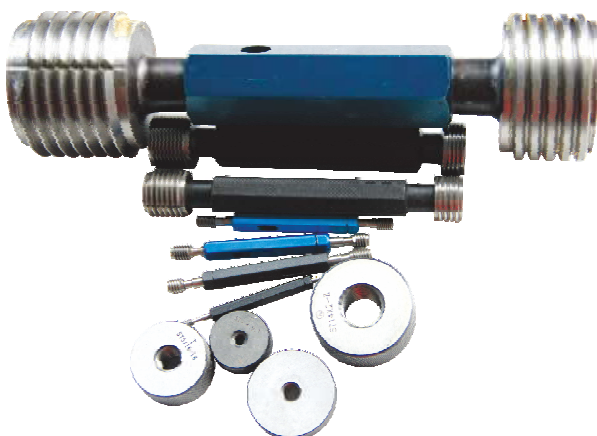


Wire Screw Sleeve Dismantlement Tool

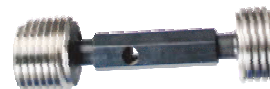
Sleeve device: Used to remove the wire screw in the bottom hole.



Special Screw Thread Gauge For Wire Screws



a. Dedicated internal thread plug gauge
(Used to detect the precision of thread inside the wire screw)



b. Special internal thread ring gauge
(Internal thread for detecting the precision of steel wire screw sleeve)





The Assembly Process Of Wire Screw Sleeve

The wire screw assembly consists of four main steps of drilling, tapping, installing wire screw and breaking the handle.

1. Drill

To drill holes with the standard drills in the table, the depth of the drill is greater than or equal to 1, 2; Be careful not to drill the hole into a taper, not to use the drill bit that is very badly worn, and not to fall in where the damage may be caused. Bored after allowing dimpling deburring properties should not exceed 10. 4 p depth, because too much dimpling against steel screw assembly screwing and cause does not adapt.



2. Tapping

With specified thread specifications of steel wire for a screw tap tapping, tapping must exceed the length of the wire length, a screw for hole, the whole tapping; Tapping screw holes within the field of precision decide the standard tolerance zone, the user to properly select tapping method, and lubrication, blind hole tapping into the appropriate, in case of broken tap. After tapping, threaded hole should be clean, generally using compressed air gun to blow, blind hole should also use the long gun with radial hole cleaning up from bottom to top, also can use cleaning method to clean up the threaded hole; When the thread precision is high, the thread plug is used to check the thread.



3. Install

Steel wire inside installation wrench, a screw to install the handle groove embedded core axis rotation installation wrench handle make the steel wire by installing a screw plate hand lead screw thread on the screwing tap, and make it from the substrate surface with 1-1.5 p empty thread.

The continuous torque of the wire screw assembly is difficult to install, and the sleeve will be solved by turning the shaft of the wrench into a counterclockwise rotation.

Above a small amount of installation of steel wire with a screw and 14 x2 coarse thread steel wire installed a screw can be used when the "T" type slot or thread head of simple tools Installation, but be careful not to exert on the wire to install a screw handle bigger Axial force in case of "button"



Fast installation using electric or pneumatic steel wire Lo sets of cases of semi automatic installation of wrenches in the assembly line or the requirements, but must be skilled operation, avoid the screw sleeve and the bottom of the damage.

After the installation of steel wire Lo sets, with the formation of the corresponding level gauge inspection standard internal thread hole precision level gauge, sometimes through end may be difficult but it is screwed into the screw sleeve, but is conducive to the positioning and tighten the screws are screwed into the screw sleeve after.



4.Break to install the handle



When through hole, the wire threaded sleeve mounting handle broken, generally with the thrust device mounted in alignment with 200g about the handle, the hammer was about to remove, the above 18x2.5 coarse wire Lo sets and more than 14x1.25 fine pitch wire Lo sets, can clamp on the flexure mounting handle can break off from the slotted. The design, structure can make the slotted screws can be from any steel screw set screw.

5.Remove the wire screw

Problems such as jumping teeth or for other reasons need to be taken out of steel wire Lo sets during the installation process, should use the cone sleeves with edge alignment tool, handle it with a hammer, hand operated press rotated handle reverse threads direction out of steel wire Lo sets, and no damage to the bottom thread.





Inspection Tools For The Production Of Wire Screw Sets

Tool microscope



Projector



Peel Force Tester



A Corner Of The Factory Floor



Self-Tapping Thread Insert

Brief Introduction

With the development of sophisticated technology, the application of screws is of great importance in the whole machinery industry. For materials that are less strength, such as cast iron, non-ferrous metals (copper, lead, zinc, magnesium), plastic, wood.....since they can't afford the necessary tension, that makes when screws packed in or out, it cause damage to the products itself, and increase spending on the costs and unnecessary troubles.

In the past, larger size or thicker screws were used to solve the problem. This kind of solution add the manufacturing costs and can't solve the problem fundamentally, also weaken the market competitiveness of the product. Using Self-Tapping Thread Insert, all these problems can be solved thoroughly, in turn, reduce the cost and improve the quality.

Self-Tapping Thread Insert can be directly screwed into the base material without pre-attack the thread, and maintain the original size of teeth-broken thread. For new products, it can increase the thread strength, prevent the screw loose and improve product grade.

Self-Tapping Thread Insert has been widely applied in automobile industry, military, home appliances, construction machinery, office machinery, electronic products... In the advanced countries, widely used and approved by the majority of the industry.



Advantages And Usage

1. Self-Tapping Thread Insert is embedded in the base material after forming.
2. Self-Tapping Thread Insert don't need to use the taps. It can reduce the working hours and costs.
3. Strengthen the thread. Self-Tapping Thread Insert can increase the contact area with the finished product and bear withstand the high tensile strength. So lower strength materials can be used when designing the product.



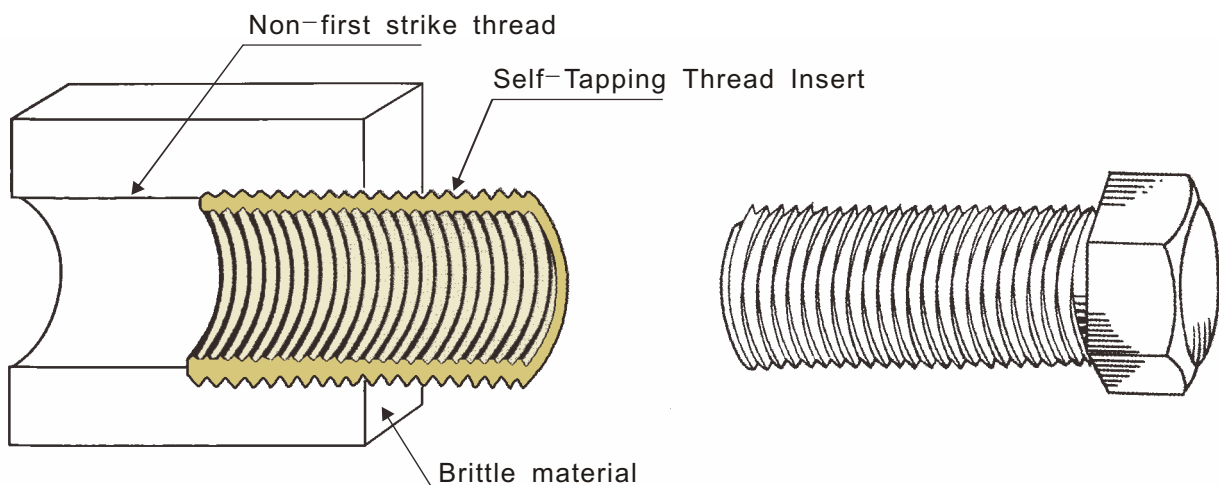
4. Protect the screw tooth. Shockproof effect can prevent the screw loose.
5. Moth crushing tooth regeneration. Using the self-tapping thread insert can help to repair worn or crushed thread, the original size screw can still be used.
6. The corrosion resistance of fast steel products with heat treatment and lead plating (self-tapping thread insert) is excellent.
7. When the base material contains bubbles, it also has good bonding density.
8. The same specification self-tapping thread insert is suitable for a variety of different materials, which is economical.
9. Easy to install, with only one type of loading tool, low cost and low rate.
10. There are various kinds of materials and specifications to choose. The material of self-tapping thread insert contains quick cutting steel, stainless steel, brass.

The material of Self-Taping thread insert: quick cutting steel, stainless steel, brass.

Material code: Quick cutting steel(multicolored plated steel)	Product code:16
Copper	Product code:80
Stainless Steel(SUS 303)	Product code:50
Stainless Steel(SUS 316)	Product code:60

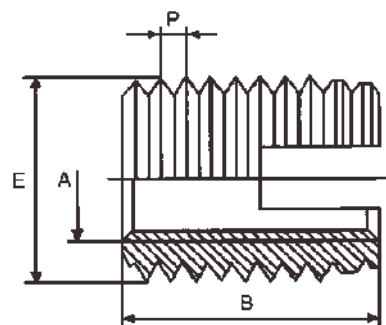
Application Scope of Self-Tapping Thread Insert

- ◆ Low strength metal materials - aluminum alloys, magnesium alloys, cast iron, copper, lead, zinc...
- ◆ Non-metallic materials - plastic, wood, Bakelite, synthetic resin...





The Specification of Self-Tapping Thread Insert (302 Groove Shape)

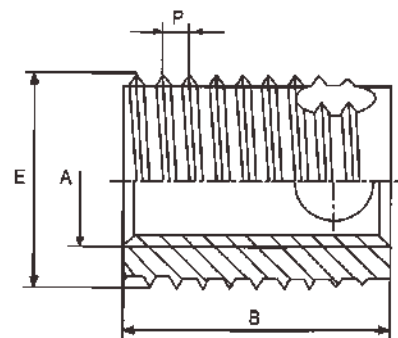


Dimensions unit(mm)

Product Code	Internal Thread		External Thread	Length		Minimum Drilling Depth	Drilling Diameter		
	Metric System A	British System	E	B	T		Plastic	Aluminum Alloy	Cast Iron
302 0 020...	M2	—	4.5	6	8		4.0—4.1	4.1—4.2	4.2—4.3
302 0 025...	M2.5	No.2	4.5	6	8		4.0—4.1	4.1—4.2	4.2—4.3
302 0 030...	M3	No.4	5	6	8		4.5—4.6	4.6—4.7	4.7—4.8
302 0 035...	M3.5	No.6	6	8	10		5.3—5.4	5.5—5.6	5.6—5.7
302 0 040...	M4	No.8	6.5	8	10		5.8—5.9	6.0—6.1	6.1—6.2
302 0 050...	M5	No.10	8	10	13		7.1—7.2	7.3—7.5	7.5—7.6
302 0 061...	M6(a)	No.12	9	12	15		8.1—8.2	8.3—8.5	8.5—8.6
302 0 060...	M6	1/4"	10	14	17		9.0—9.2	9.2—9.3	9.3—9.4
302 0 080...	M8	5/16"	12	15	18		10.6—10.8	10.9—11.2	11.2—11.4
302 0 100...	M10	3/8"	14	18	22		12.6—12.8	12.9—13.2	13.2—13.4
302 0 120...	M12	7/16"	16	22	26		14.6—14.8	14.9—15.2	15.2—15.4
302 0 140...	M14	1/2"	18	24	28		16.6—16.8	16.9—17.2	17.2—17.5
302 0 160...	M16	5/8"	20	22	27		18.6—18.8	18.9—19.2	19.2—19.5
302 0 180...	M18	—	22	24	29		20.6—20.8	20.9—21.2	21.2—21.5
302 0 200...	M20	—	26	27	32		24.6—24.8	24.9—25.2	25.2—25.5
302 0 220...	M22	3/4"	26	30	36		24.6—24.8	24.9—25.2	25.2—25.5
302 0 240...	M24	7/8"	30	30	36		28.6—28.8	28.9—29.2	29.2—29.5
302 0 270...	M27	1"	34	30	36		32.6—32.8	32.9—33.2	33.2—33.4
302 0 300...	M30	—	36	40	46		34.6—34.8	34.9—35.2	35.2—35.4



The Specification of Self-Tapping Thread Insert (307/ 308 Three hole type)



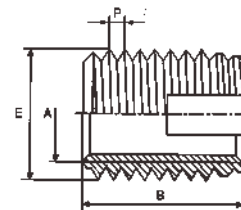
Dimensions unit(mm)

Product Code	Internal Thread		External Thread	Length	Minimum Drilling Depth	Drilling Diameter	
	Metric System	British System	E	B	T	Metal	Aluminum Alloy/Plastic
307 0 030...	M3	No.4	5	4	6	4.7-4.8	4.6-4.7
308 0 030...	M3	No.4	5	6	8	4.7-4.8	4.6-4.7
307 0 035...	M3.5	No.6	6	5	7	5.6-5.7	5.5-5.6
308 0 035...	M3.5	No.6	6	8	10	5.6-5.7	5.5-5.6
307 0 040...	M4	No.8	6.5	6	8	6.1-6.2	6.0-6.1
308 0 040...	M4	No.8	6.5	8	10	6.1-6.2	6.0-6.1
307 0 050...	M5	No.10	8	7	9	7.6-7.7	7.4-7.6
308 0 050...	M5	No.10	8	10	13	7.6-7.7	7.4-7.6
307 0 060...	M6	1/4"	10	8	10	9.5-9.6	9.3-9.5
308 0 060...	M6	1/4"	10	12	15	9.5-9.6	9.3-9.5
307 0 080...	M8	5/16"	12	9	11	11.3-11.5	11.1-11.3
308 0 080...	M8	5/16"	12	14	17	11.3-11.5	11.1-11.3
307 0 100...	M10	3/8"	14	10	13	13.4-13.5	13.1-13.3
308 0 100...	M10	3/8"	14	18	22	13.4-13.5	13.1-13.3
307 0 120...	M12	7/16"	16	12	15	15.2-15.4	15.0-15.2
308 0 120...	M12	7/16"	16	22	26	15.2-15.4	15.0-15.2
307 0 140...	M14	1/2"	18	14	17	17.2-17.4	17.0-17.2
308 0 140...	M14	1/2"	18	24	28	17.2-17.4	17.0-17.2
307 0 160...	M16	5/8"	20	14	17	19.2-19.4	19.0-19.2
308 0 160...	M16	5/8"	20	24	28	19.2-19.4	19.0-19.2

***Short Design:307 / Long Design:308



Self-Tapping Thread Insert (313 Groove thin wall type)

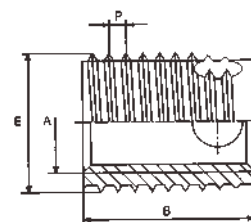


Dimensions unit(mm)

Product Code	Internal Thread		External Thread	Length		Minimum Drilling Depth	Drilling Diameter		
	Metric System	British System	E	B	T		Plastic	Aluminum Alloy	Cast Iron
313									
313 0 030...	M3	No.4	4.5	6	8		4.0	4.1	4.2
313 0 035...	M3.5	No.6	5	6	8		4.5	4.6	4.7
313 0 040...	M4	No.8	6	6	8		5.3	5.5	5.6
313 0 050...	M5	No.10	7	8	10		6.3	6.4	6.5
313 0 060...	M6	1/4"	8	10	13		7.1	7.3	7.5
313 0 080...	M8	5/16"	10	12	15		8.6	8.9	9.3
313 0 100...	M10	3/8"	12	15	18		10.6	10.9	11.3
313 0 120...	M12	7/16"	14	18	22		12.6	12.9	13.2

***Example of looking for product code: self-tapping thread insert313, internal thread M8, multicolored plated steel 313 080-16

Self-Tapping Thread Insert (347/348 Three hole thin wall type)



Dimensions unit(mm)

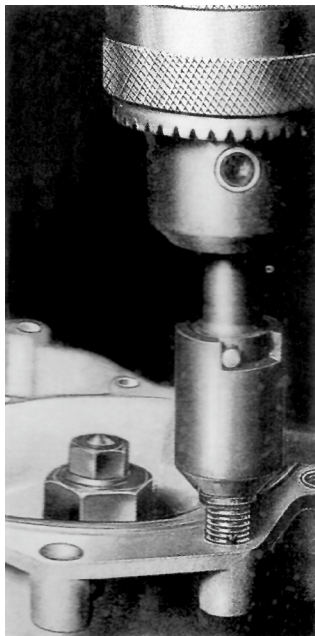
Product Code	Internal Thread		External Thread	Length B		Minimum Drilling Depth	Drilling Diameter	
	Metric System	British System	E	347	348	T	Cast Iron	Aluminum Alloy/Plastic
347/348								
347/348 0 035...	M3.5	No.6	5	5	8	10	4.7-4.8	4.6-4.7
347/348 0 040...	M4	No.8	6	6	8	10	5.6-5.7	5.4-5.6
347/348 0 050...	M5	No.10	6.5	7	10	13	6.1-6.2	6.0-6.1
347/348 0 060...	M6	1/4"	8	8	12	15	7.5-7.7	7.4-7.6
347/348 0 080...	M8	5/16"	10	9	14	17	9.4-9.6	9.3-9.5
347/348 0 100...	M10	3/8"	12	10	18	22	11.2-11.5	11.1-11.3
347/348 0 120...	M12	7/16"	14	12	22	26	13.2-13.5	13.1-13.3
367/368 0 140...	M14	1/2"	16	14	24	28	15.1-15.4	15.0-15.2
367/368 0 160...	M16	5/8"	18	14	24	28	17.1-17.4	17.0-17.2

***Example of looking for product code: self-tapping thread insert347/348, internal thread M6, multicolored plated steel 347/348 0 060-16

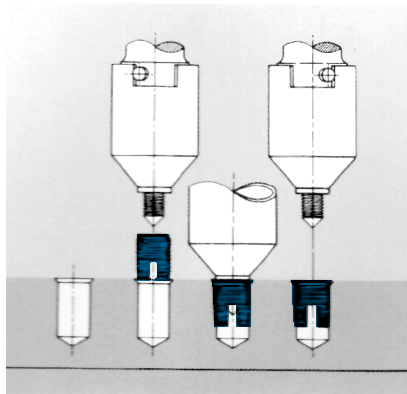


Assembly Method

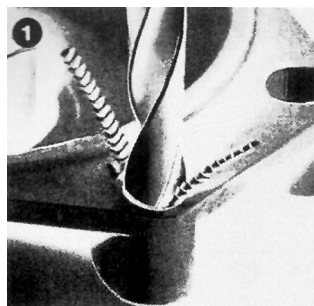
Use a quick exit assembly tool
(The fast assembly method with
tool No. 620)



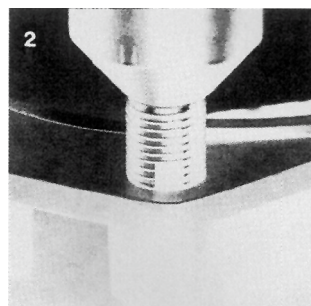
Assembly process diagram



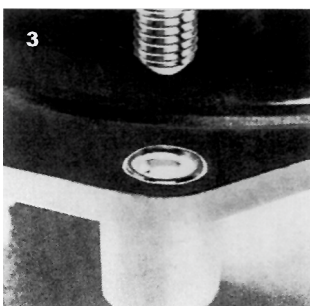
(1) Drill a hole in the work item that specifies the diameter and depth



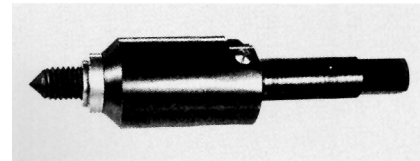
(2) Put the self-tapping thread insert to the assembly tool, and go straight into the hole.



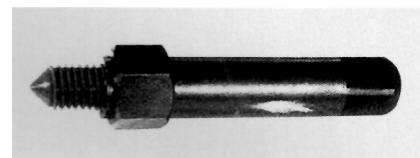
(3) Tools reversal, the assembly exits easily, and assembly complete.



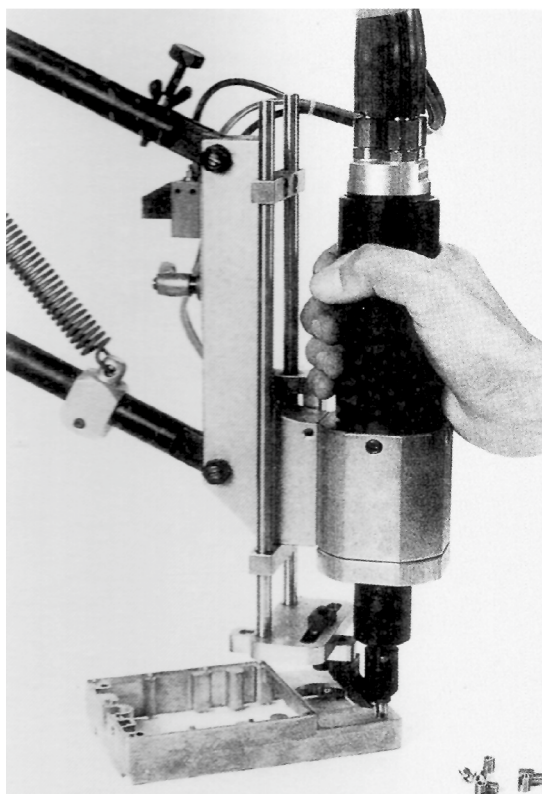
Fast assembly method Tool No. 620



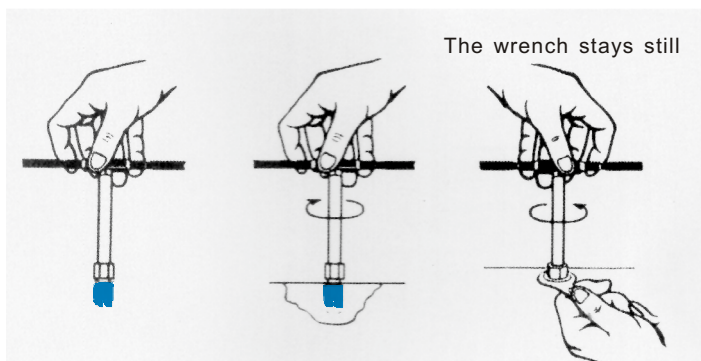
Manual assembly Tool No. 610



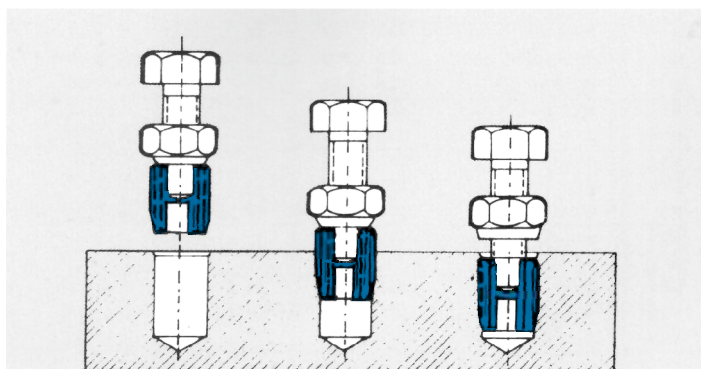
Various fast assembly tools in the pictures
can be designed by users accordingly.



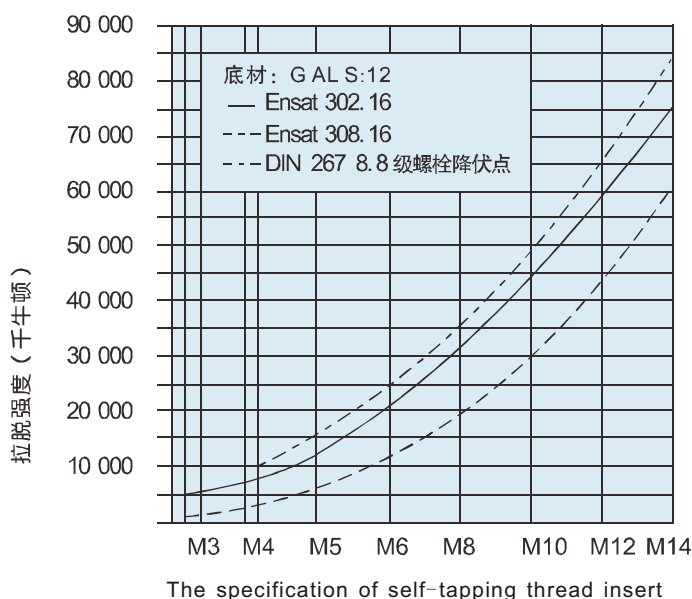
Assembly method with tool No. 610



General screw and nut assembly method



The graph of pull-out strength



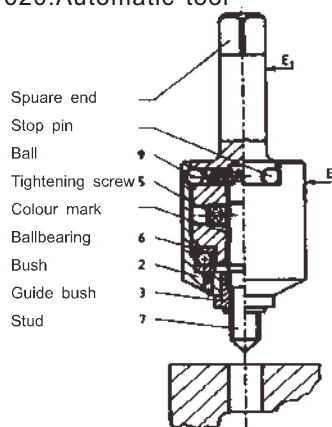
The self-tapping thread insert is with high pull-out strength, enough to withstand the conclusion of high strength screws without broken teeth.

The maximum working torque value allowed during assembly.

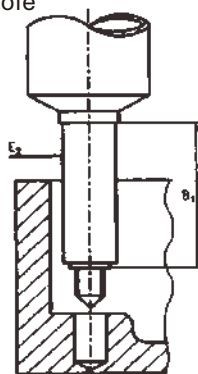
Ensats M 2.5:	1,5	Nm
Ensats M 3:	2,5	Nm
Ensats M 4:	5,5	Nm
Ensats M 5:	10	Nm
Ensats M 6:	15	Nm
Ensats M 8:	28	Nm
Ensats M 10:	40	Nm
Ensats M 12:	60	Nm

The dimensions of assembly tools

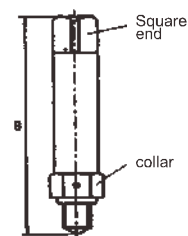
620:Automatic tool



621:Automatic tool with deep hole



610:Manual tool



螺纹径	Production Driver 620:						Tool 621:			Hand Tool 610:				
	part no.	外套径 E	柄径 E1	长度 B	四角对边	重量 kg	part no.	杆长 B1	杆径 E2	part no.	长度 B	四角对边	六角螺帽对边	重量 kg
M2.5	620 0 025	18	8	82	6.3	0.063	621 0 025	40	4	610 0 030	56	5	7	0.02
M3	620 0 030	18	8	82	6.3	0.063	621 0 030	40	7	610 0 040	58	5	7	0.02
M4	620 0 040	18	8	83	6.3	0.063	621 0 040	40	7	610 0 050	75	8	13	0.05
M5	620 0 050	24	12.5	101	10	0.165	621 0 050	50	12	610 0 060	76	8	13	0.05
M6	620 0 060	24	12.5	102	10	0.165	621 0 060	50	12	610 0 080	24	8	13	0.05
M8	620 0 080	24	12.5	105	10	0.165	621 0 080	50	12	610 0 100	96	12.5	17	0.13
M10	620 0 100	32	16	131	12.5	0.385	621 0 100	60	15	610 0 120	99	12.5	17	0.14
M12	620 0 120	32	16	134	12.5	0.385	621 0 120	60	18	610 0 140	102	12.5	17	0.14
M14	620 0 140	50	22	166	18	1.16	621 0 140	60	20					
M16	620 0 160	50	22	166	18	1.16	621 0 160	60	22					
M18	620 0 180	50	22	166	18	1.16	621 0 180	60	24					
M20	620 0 200	58	24	195	18	1.95	621 0 200	60	26					
M22	620 0 220	58	24	195	18	2.00	621 0 220	60	28					
M24	620 0 240	70	30	220	24	3.25	621 0 240	60	32					
M27	620 0 270	70	30	220	24	3.25	621 0 270	60	35					
M30	620 0 300	70	30	220	24	3.25	621 0 300	60	38					