

Shenzhen Boerane Technology Co., Ltd

Tangless Thread Insert and Installation Tool



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Shenzhen Boerane Technology Co., Ltd was established in 2004 as a proficient production and manufacturing enterprise that seamlessly integrates technology research, product manufacturing, and sales. Their product range includes Key Locking Inserts, Self Tapping Inserts, Wire Thread Inserts, Tailless Thread Inserts, Installation Tools, and Thread Repair Kits. With robust technical capabilities, advanced design standards, cutting-edge production equipment, and precision testing tools, the company specializes in offering comprehensive technical support throughout the entire process of threaded insert design and utilization.

Boerane is committed to technological innovation and refined product processing, having achieved success in fundamental research, new product development, process innovation, equipment enhancement, production control, quality management, and market expansion.

Their threaded insert products adhere to various international standards, catering to the aerospace, shipbuilding, high-voltage electrical components, and general mechanical sectors. The company also customizes products for European, American, and other foreign customers, following global standards. Boerane holds certifications for the "ISO9001:2015 Quality Management System" and "IATF 16949:2016", demonstrating its commitment to responsible business practices.

Operating across 7000 square meters, the company comprises two plants covering 2000 and 1000 square meters, boasting an annual output exceeding 5 million USD. With over 80 employees, including 5 senior executives and a 12-member R&D team, Boerane remains dedicated to professionalism and quality.

Business goal centers on "Professional Focus, Building a Brand," and business purpose revolves around "Quality Assurance, Reliable Price." Upholding the values of integrity and pioneering, Boerane promises customers high-quality products and services in line with their commitment to excellence.

Product Capability

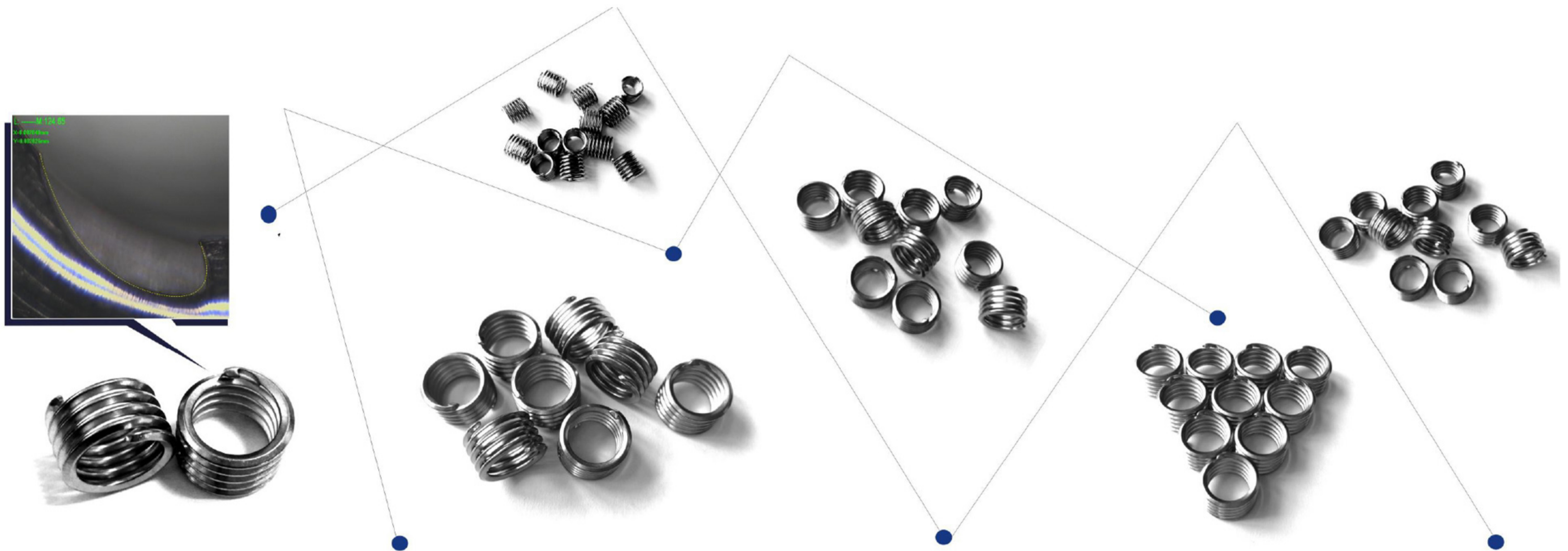


Auto-lathe turning
 OD 0.5–20mm Tol.±0.01mm
 CNC lathe turning
 OD 0.5–250mm Tol.±0.05mm
 CNC Milling
 800X600mm (LxW), Tol.±0.05mm
 Grinding: Tol.±0.002mm
 Screw heading & rolling:
 Metric M8-M36
 Unified Imperial #0-2"
 Stamping: 1200 T max



- 01 Automatic Lathe
- 02 CNC Lathe
- 03 CNC Machine
- 04 Screw Machine
- 05 Stamping Equipment
- 06 Injection machine
- 07 Ultraprecision Machining
- 08 Precision Grinding

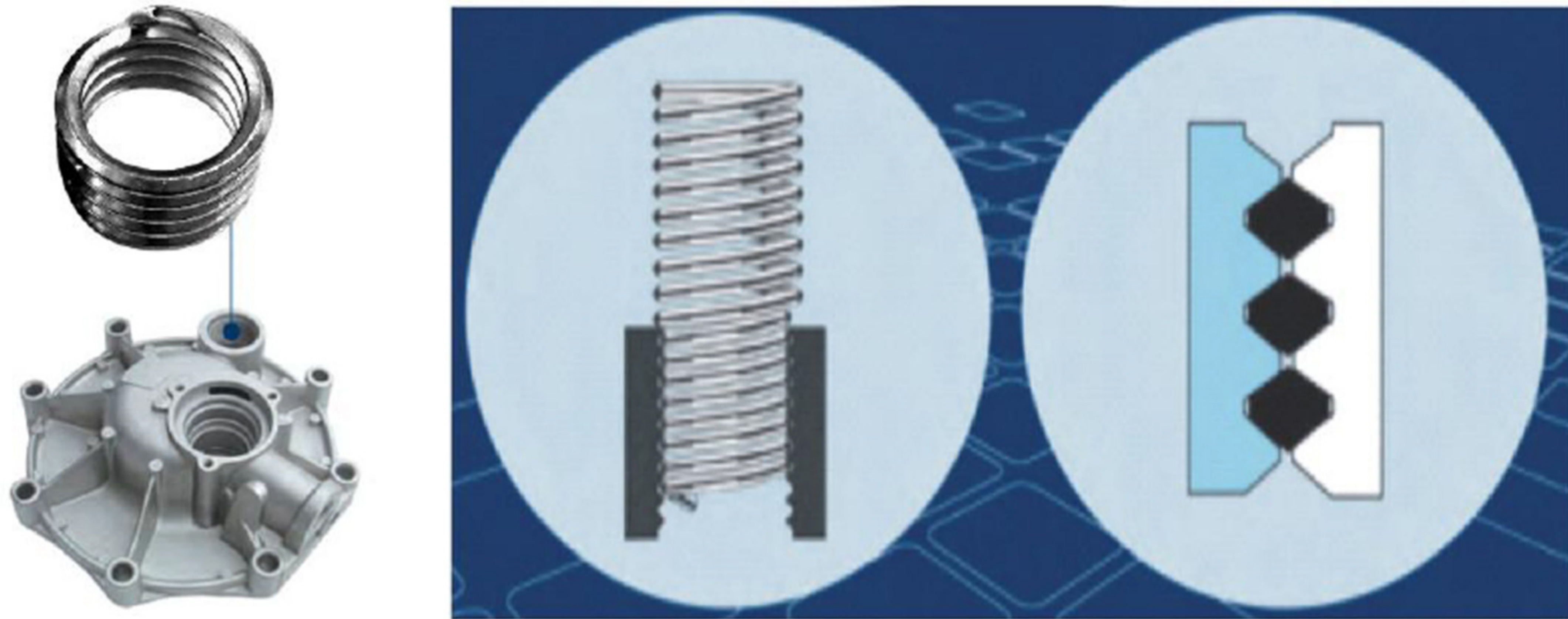




Tainless threaded insert

The tailless threaded insert is also known as No Tang thread insert, No tang wire threaded sleeve, No tail sleeve, and no tang bushing.

The tailless threaded insert is the same as the ordinary wire threaded insert. It is a high-end threaded fastener. It is made of high-strength, high-precision and corrosion-resistant stainless steel raw wire which is rolled into a diamond shape and then rolled, it is shaped like a spring and is installed in a specific threaded hole of the body. Its inner surface forms a standard thread, when it is matched with a screw (bolt), the threaded joint strength and wear resistance can be significantly improved. Especially in low-strength materials such as Aluminum, Magnesium, Castings, and Plastics. At the same time, the force of the thread is improved, the threaded connection is formed into an elastic connection, the pitch and the half-angle error between the inner and outer threads are eliminated, the load on the thread is evenly distributed, the base thread is protected from being damaged, and extended using time. The tailless threaded insert has excellent corrosion resistance, high temperature resistance and wear resistance, ensuring suitability in various environments, preventing thread rust, jamming, tripping.



The Tailless threaded insert contains all the advantages of the wire screwthreaded inserts

1. Enhanced the bearing capacity of the threaded connection and the anti-fatigue strong force, so that the screw and the threaded bottom hole of the threaded sleeve form an elastic connection, thereby effectively eliminating the pitch and the half-angle error between the internal and external threads, which can be within a prescribed length. The load on each thread is evenly distributed, thereby increasing the strength of the internal thread and damping, improving the threading ability and fatigue resistance of the part.

2. Abrasion resistance: The tailless threaded insert is made of hard cold rolled stainless steel wire. The hardness of the screw surface can reach HRC43-50. The mirror-like surface (accuracy can reach 2-4 μ m) reduces friction and wear. The torque generated by the friction on the screw can be reduced by 90%, so that the maximum tightening torque and the screw tension can be obtained with the minimum tightening torque to prevent the screw from loosening, and the screws of various materials and grades are optimally used.

3. Corrosion resistance: Due to the excellent corrosion resistance of stainless steel screw sleeves, it ensures its suitability under most materials and general environmental conditions, so that the assembly using the screw thread insert will not rust.

4. Material Saving: Compared with the internal thread without the threaded insert, under the same strength conditions, after using the thread insert, in order to make the best use of the yield limit, you can choose to use the smaller size and higher strength screws. This maximizes material savings, weight reduction and volume reduction.

5. Others: can maximize design flexibility, broaden the design selection range, simplify the design structure and assembly, for example: can replace the bolt and nut connection to make it simpler.



Tailless threadedinsert



wire screw

There is no tang screw thread insert compared to the wires crew thread insert

1. The tailless threaded insert has no installation tang. It has no directional selection during installation, can be installed in both directions. The wire screw thread insert can only be installed in one direction because of the installation tang. The single installation without the direction, the tailless thread insert greatly improves the installation efficiency.

2. The tailless threaded insert has no installation tang. After the tailless insert is screwed into the threaded hole the installation process has been completed. But after the threaded screw sleeve is screwed into the threaded hole, the installation tang needs to be broken and cleaned out, especially the cleaning of the installation tang is particularly difficult, time-consuming and laborious, and may be impossible to clean. The using of a tailless thread insert saves costs and improves efficiency. Tailless thread inserts are not replaceable on special workpieces.

The production standard adopts the production standard size of the wire screw thread insert.

Type

Free Running

The Free Running tailless insert is the most common type it can be used in most applications.

Self-Locking

Self-locking thread insert being locked by polygonal deformation of one or more turns of the thread which can greatly enhance the locking strength to prevent vibration from flinching.

In order to distinguish between the two types, the normal type is generally green and the locking type is red.



customization

There are several types of surface treatments

- ◆ Dry film lubricant
- ◆ Cadmium Plating
- ◆ Nickel Plating
- ◆ Silver Plating



colour

The more common colors are red, blue, yellow, green, purple and black. The stainless steel true color is most used.

Tainless sleeve specification sheet

SIZE	Serial Number		D-Free Coill (Outer Diameter)			NC (Number of Coils)									
						PC1D		PC1.5D		PC2D		PC2.5D		PC3D	
	Free Running	Solf-locking	Min	Max	Median	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
M3x0.5	2TLF	2TLL	3.6	4.4	4.0	4.3	3.4	7.2	5.8	10.1	8.2	13.1	10.5	16.0	12.9
M4x0.7	4TLF	4TLL	4.9	5.6	5.2	4.0	3.4	6.8	5.7	9.6	8.1	12.3	10.5	15.1	12.8
M5x0.8	5TLF	5TLL	6.0	6.8	6.4	4.5	3.9	7.6	6.5	10.6	9.2	13.7	11.8	16.7	14.4
M6x1.0	6TLF	6TLL	7.2	8.0	7.6	4.3	3.8	7.2	6.4	10.1	9.1	13.1	11.7	16.0	14.3
M7x1.0	7TLF	7TLL	8.2	9.2	8.7	5.3	4.6	8.7	7.7	12.1	10.7	15.6	13.7	19.0	16.7
M8x1.25	8TLF	8TLL	9.5	10.4	9.9	4.7	4.2	7.8	7.1	10.9	9.9	14.1	12.8	17.2	15.6
M10x1.5	10TLF	10TLL	11.8	12.5	12.2	4.9	4.6	8.2	7.7	11.5	10.8	14.7	13.8	18.0	16.9
M10x1.25	10TLFF	10TLLF	11.7	12.7	12.2	6.1	5.6	10.0	9.2	13.8	12.7	17.7	16.3	21.5	19.8
M12x1.75	12TLF	12TLL	14.1	15.0	14.6	5.1	4.8	8.5	7.9	11.9	11.1	15.2	14.2	18.6	17.3
M12x1.5	12TLFF1	12TLLF1	14.1	15.2	14.6	6.1	5.6	10.0	9.2	13.8	12.7	17.7	16.2	21.5	19.8
M12x1.25	12TLFF2	12TLLF2	13.8	15.0	14.4	7.7	7.0	12.4	11.2	17.0	15.5	21.6	19.7	26.3	23.9
M14x2.0	14TLF	14TLL	16.4	17.4	16.9	5.3	5.0	8.7	8.2	12.1	11.4	15.6	14.6	19.0	17.9
M14.x1.5	14TLFF1	14TLLF1	16.1	17.3	16.7	7.5	6.9	12.0	11.1	16.5	15.3	21.0	19.4	25.5	23.6
M14x1.25	14TLFF2	14TLLF2	15.8	17.0	16.4	9.3	8.6	14.7	13.6	20.2	18.6	25.6	23.6	31.0	28.6
M16x2.0	16TLF	16TLL	18.4	19.6	19.0	6.3	5.9	10.2	9.5	14.2	13.2	18.1	16.9	22.0	20.5
M16x1.5	16TLF1	16TLL1	18.1	19.6	18.9	8.8	8.0	13.9	12.8	19.1	17.5	24.3	22.3	29.4	27.0
10-32	10/32TLF	10/32TLL	0.233	0.256	0.244	4.3	3.8	7.2	6.4	10.1	9.0	13.0	11.6	15.9	14.2
8-32	8/32TLF	8/32TLL	0.203	0.220	0.211	3.5	3.2	6.1	5.5	8.6	7.8	11.2	10.1	13.7	12.4
1/4-20	UNC1/4TLF	UNC1/4TLL	0.312	0.330	0.321	3.3	3.1	5.7	5.3	8.1	7.6	10.5	9.9	13.0	12.1
5/16-18	UNC5/16TLF	UNC5/16TLL	0.381	0.400	0.390	3.9	3.7	6.7	6.3	9.5	8.9	12.2	11.5	15.0	14.1
3/8-16	UNC3/8TLF	UNC3/8TLL	0.452	0.472	0.462	4.3	4.1	7.2	6.8	10.1	9.6	13.1	12.4	16.0	15.2
1/2-13	UNC1/2TLF	UNC1/2TLL	0.594	0.622	0.608	4.8	4.5	8.0	7.5	11.1	10.6	14.3	13.6	17.5	16.6

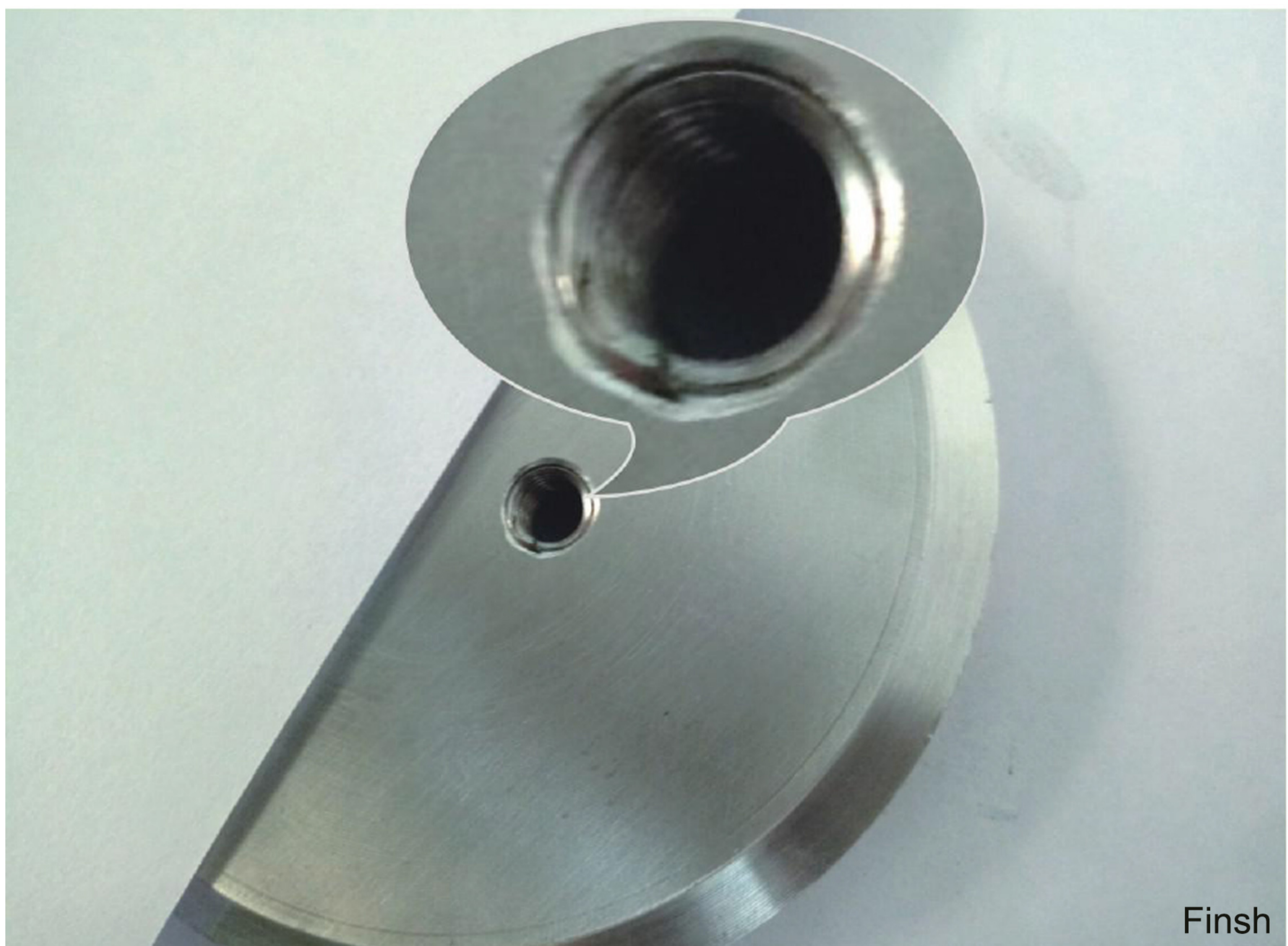
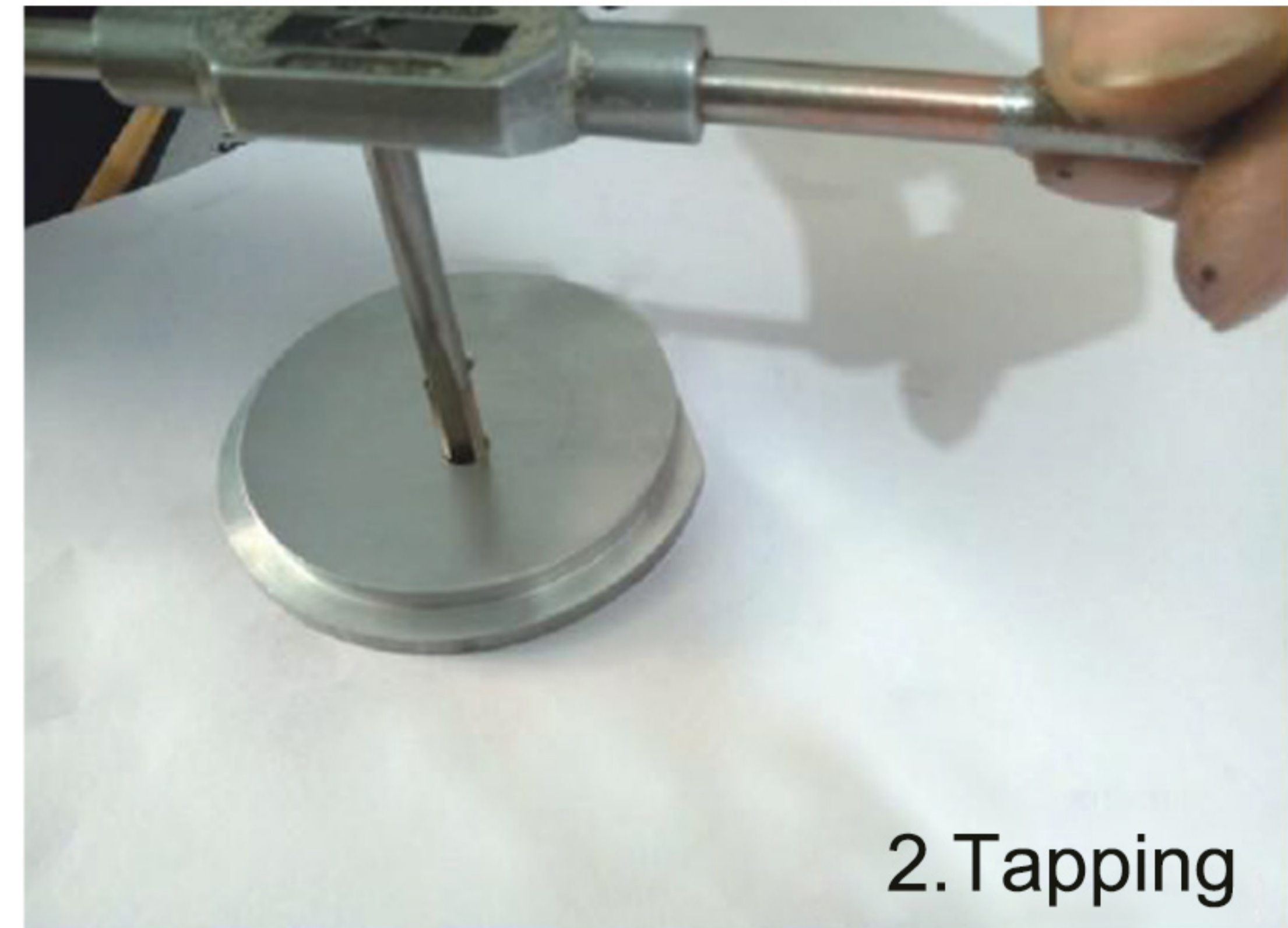
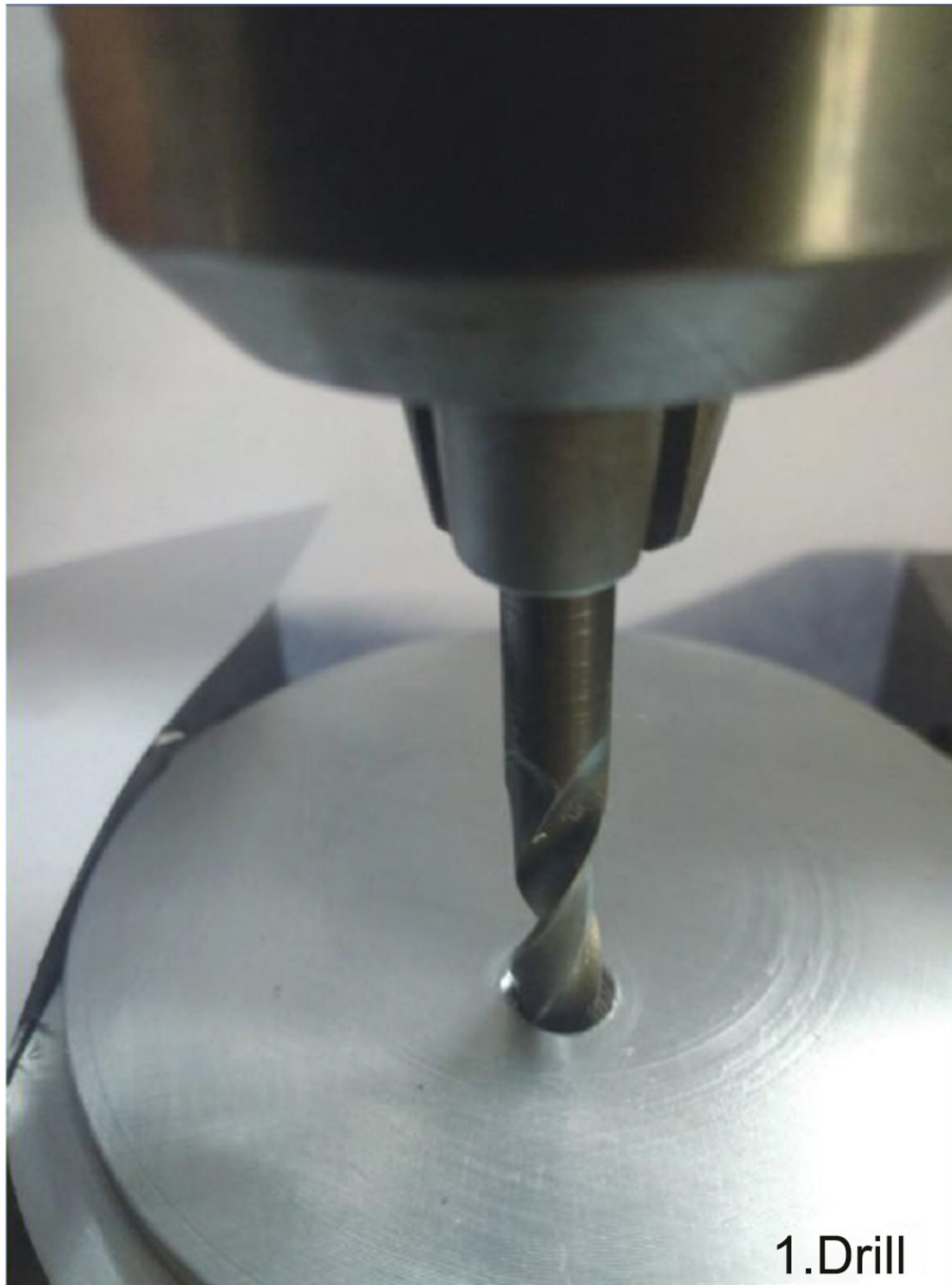
Design, order all kinds of size and length

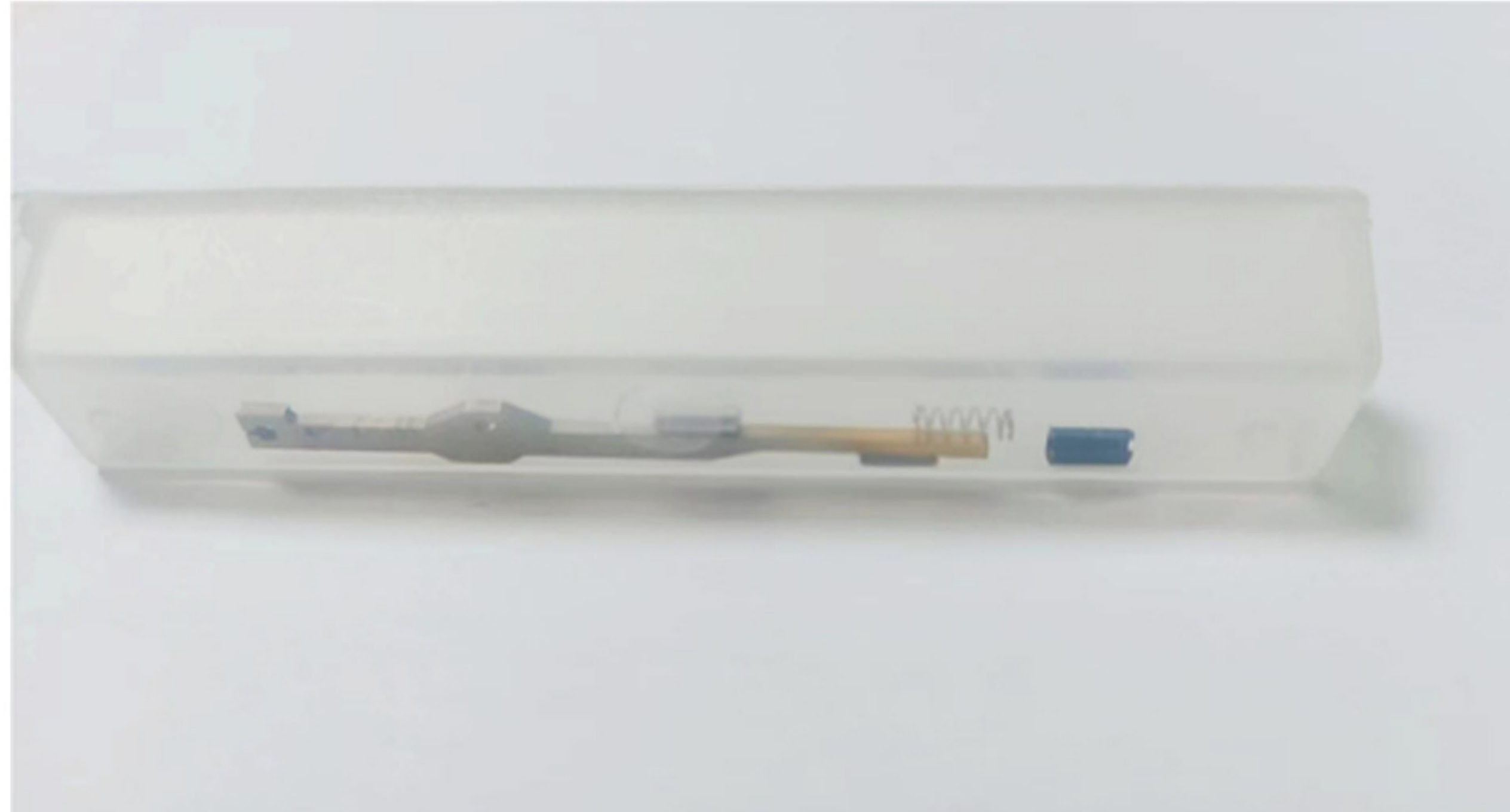


Tailless tool

The tailless sleeve is installed by the tailless sleeve groove, and the blade on the installation head is effectively matched with the tailless thread insert groove, and can be inserted into the threaded hole by rotating clockwise. The installation head can be equipped with manual installation, electric installation and pneumatic installation.

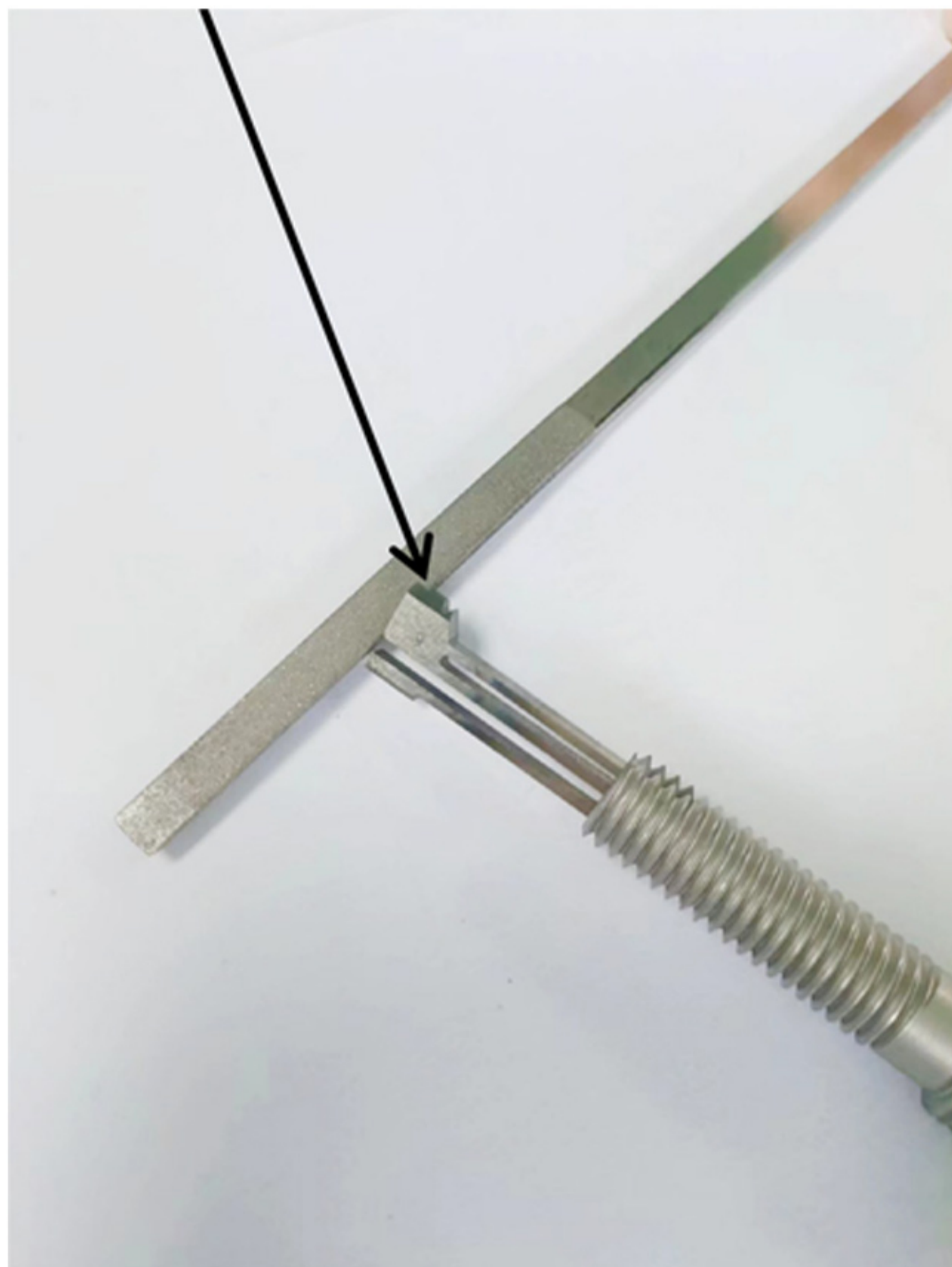
Installation Steps



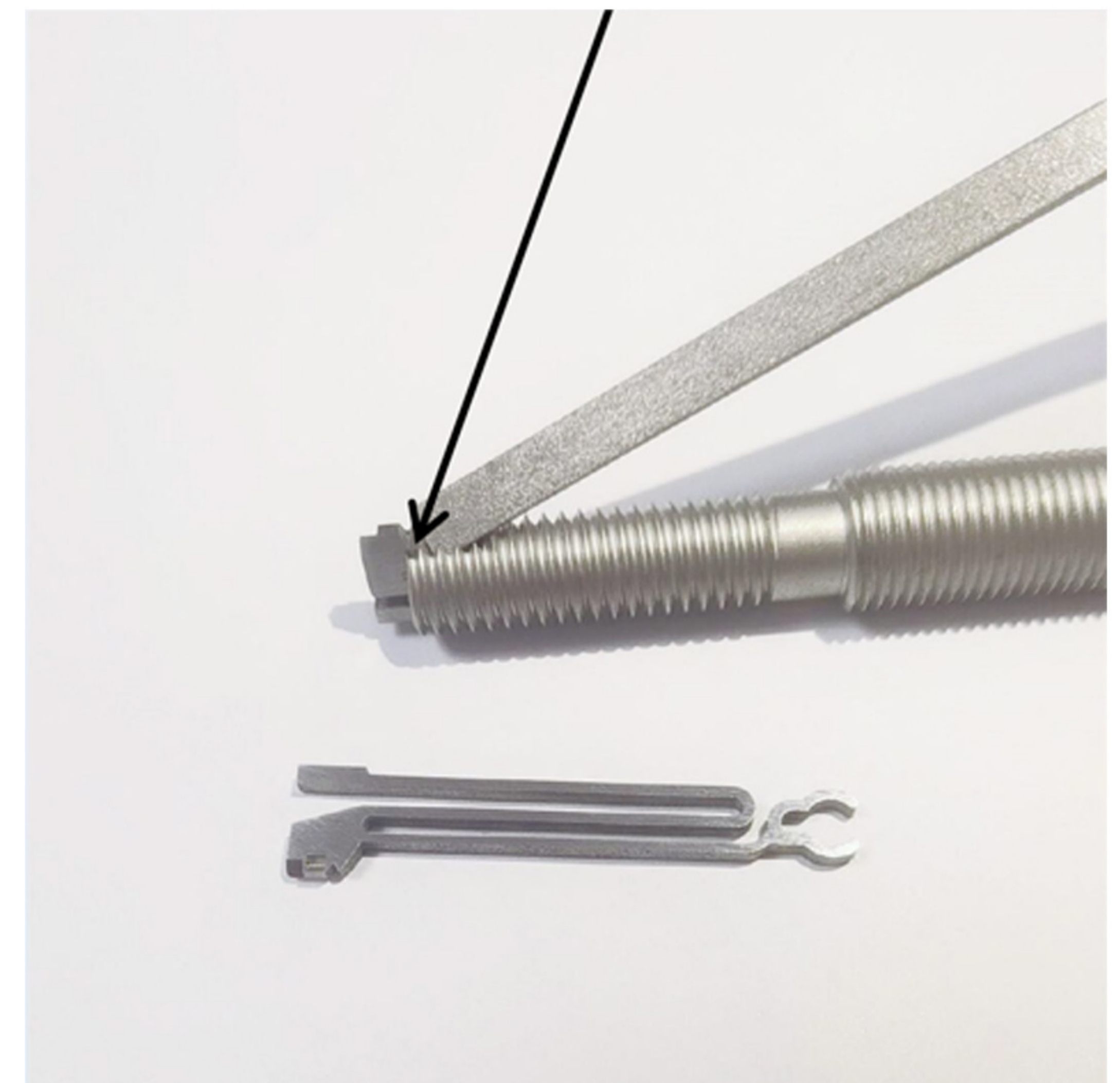


Installation and removal of shrapnel

Push into the hole, installation of shrapnel is completed



Push outward to take out the shrapnel





M2-M4



M5-M12

PARTS



Replacement parts:

- 1 spring
- 3 pins
- 1 blade

TAILLESS TOOL

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Tool parts

Threaded rod, nut, hexagonal, shrapnel, PTFE cap, positioning cap

SPECIFICATION SHEET

TAILLESS TOOL							
SIZE	six squares	hexagonal diagonal	Hexagonal length	Adjusting cap diameter	Nut diameter	Shrapnel length	Total length
M2	6.33	7.31	17.5	9.5	9.5	42.3	68.5
M2.5	6.33	7.31	17.5	9.5	9.5	42.3	68.5
M3	6.33	7.31	17.5	9.5	9.5	42.3	68.9
M4	6.33	7.31	17.5	11	11	44.3	76
M5	6.33	7.31	17.5	12	11	23	73
M6	6.33	7.31	17.5	12	11	35.4	76
M8	6.33	7.31	17.5	14	16	38.3	78
M10	6.33	7.31	17.5	16	16	43.3	83
M12	6.33	7.31	17.5	18	18	44.1	83