佩尔科技®

PEIERTECH

One Stop Solution for Nitinol Material,
Component and Assembly

www.peiertech.com

COMPANY PROFILE

ISO13485：2016
MD84459

Peiertech was established in Jiangyin since September 2002.
Peiertech specializes in NiTi wires and NiTi tubes for medical devices, produces customized precision medical components such as Nitinol components, stents, vale frames, and guide tubes.

Our company performs customized processing and assembling of medical devices in our Class 10k Controlled Environment Room (CER) and associated facilities.

ISO 13485-Certified by BSI since July 2004, covering:"Production, Processing and Assembly of Medical Part/ Components and Production and Distribution of Medical Ni-Ti wires and Ni-Ti tubes."

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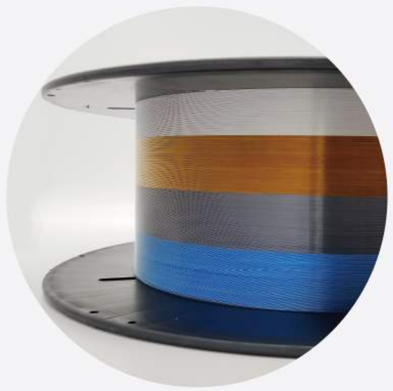
PRODUCTS & SERVICES

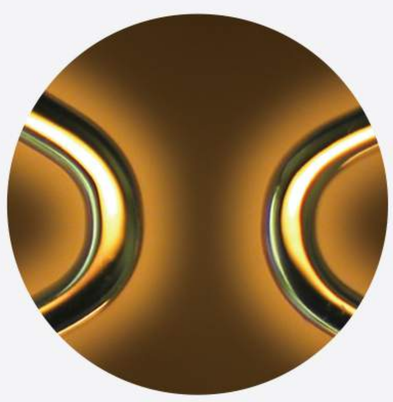


NITINOL WIRE

NITINOL TUBE

NITINOL STONE BASKET

NITINOL STENT



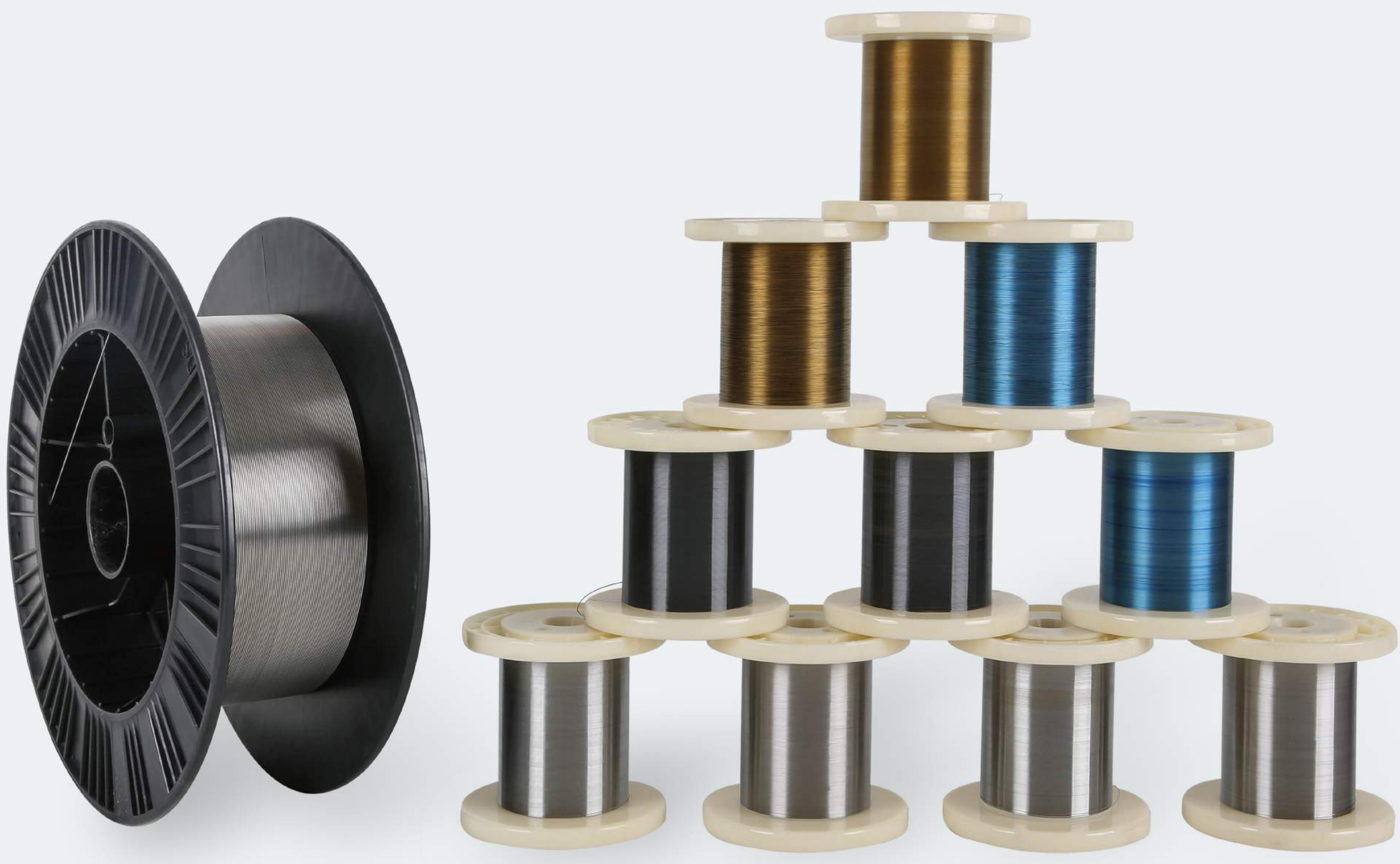
ELECTRO-POLISHING

LASER CUTTING

LASER WELDING

A_f TESTER

ASSEMBLY



Nitinol Material

- Our nitinol material products include nitinol wires, nitinol tubing, nitinol ropes and shapeset nitinol components.
- Chemical composition: Per ASTM F2063 or GB24627
- A_f temperature range:-40°C~85°C

Nitinol Round Wire

- ◎ Diameter Range: ϕ0.013-ϕ4.00mm
- ◎ Surface State Options:
  Black
  Light Oxide (Amber)
  Cleaned
  Gloss™
  Ground
- ◎ Shape: Round, Square, Flat, Rope
- ◎ Medical Application:
  Guide Wire, Coil
  Braided Device (Braided Stent, Occluder Device, etc)
  IUD
  Shapeset Components
  Coated Wire
  Dental File
  Arch Wire
  Suture Wire
- ◎ Dimensional tolerances: according to the finished diameter range

Diameter	Tolerances
2.00mm≤D≤4.00mm	±0.02mm
1.50mm<D<2.00mm	±0.01mm
1.00mm<D≤1.50mm	±0.01mm
0.35mm<D≤1.00mm	±0.007mm
0.26mm<D≤0.35mm	±0.007mm
0.15mm<D≤0.26mm	±0.005mm
0.08mm<D≤0.15mm	±0.004mm
0.05mm<D≤0.08mm	±0.003mm
0.013mm≤D≤0.05mm	±0.002mm

* Other size and tolerance please discuss with Peiertech.

Nitinol Flat Wire

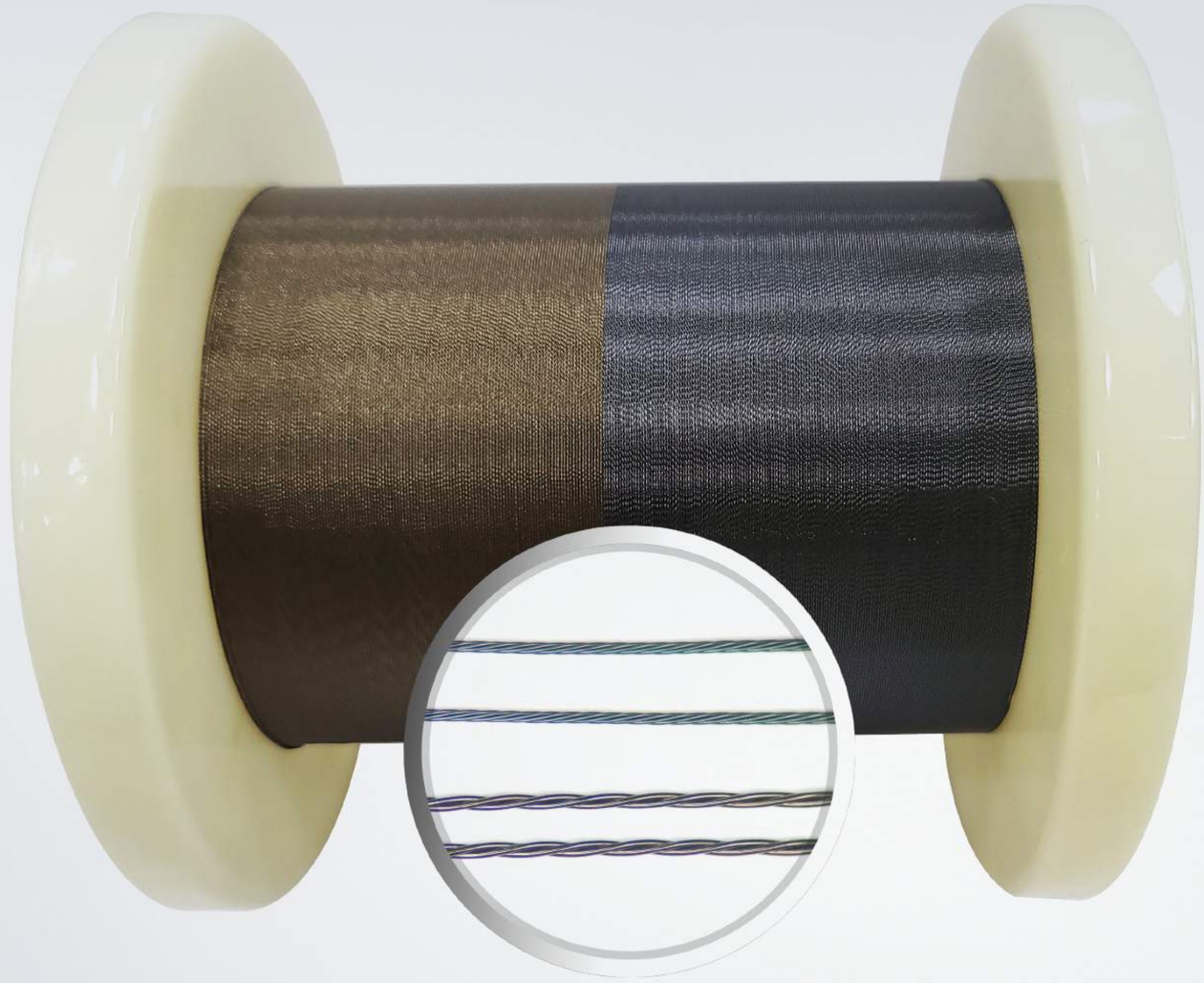
Dimensional tolerances: according to the finished size range

Dimensional and tolerances of the thickness of the flat wire (γ: Width-thickness ratio T: Thickness)

Width-Thickness Ratio γ	Thickness	Tolerance of Thickness
2< γ ≤7	0.013≤T≤0.05mm	±0.005mm
	0.05<T≤0.8mm	±0.1Tmm

Dimensional and tolerances of the width of the flat wire (γ: Width-thickness ratio W: Width)

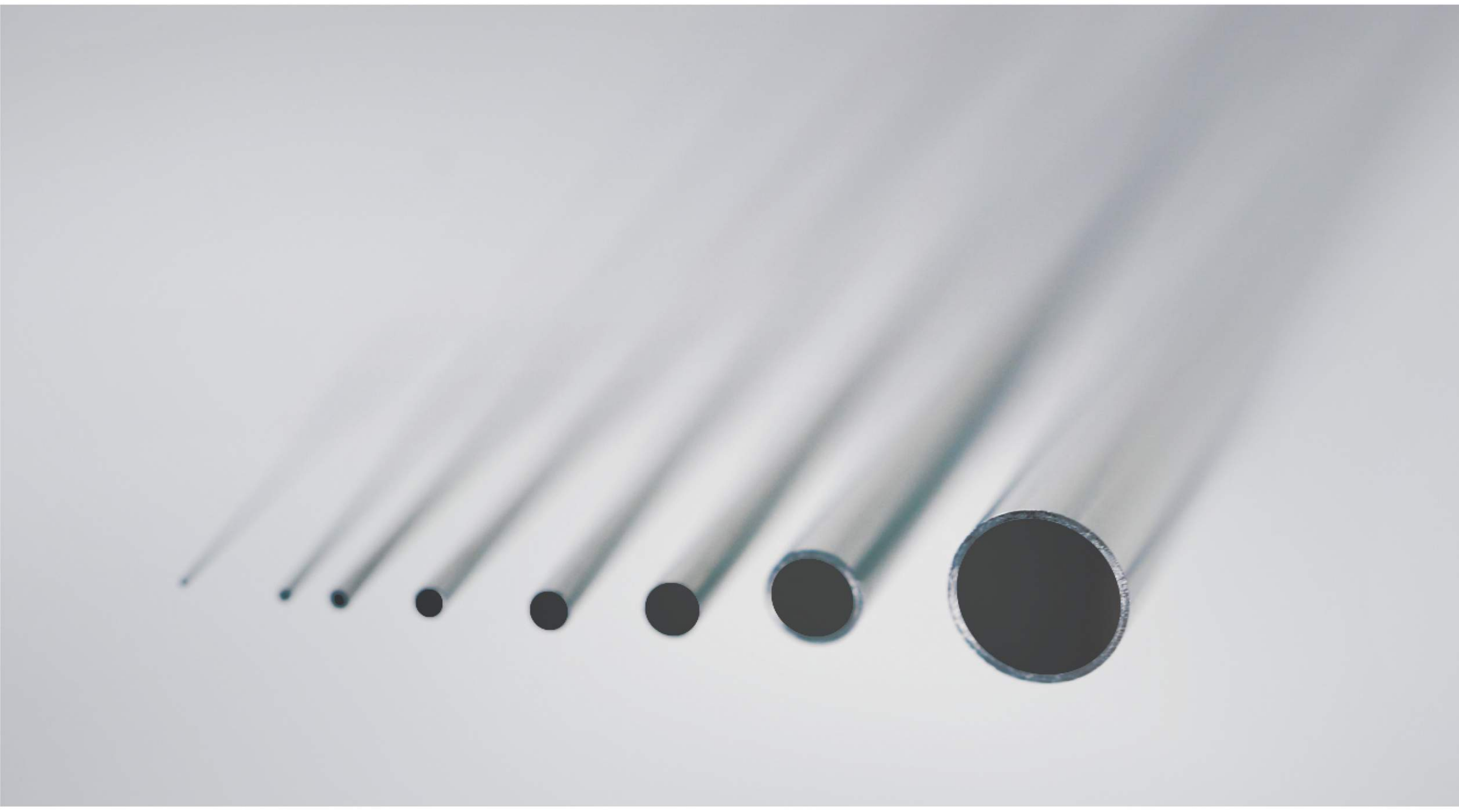
Width-Thickness Ratio γ	Width	Tolerance of Width
2< γ ≤7	0.1≤W≤2.5mm	±0.1Wmm
	0.045≤W≤0.1mm	±0.01mm



Nitinol Ropes

Nitinol ropes are formed by wrapping several filaments of nitinol wires together. They exhibit the superelastic property of nitinol material, while also demonstrate the excellent flexibility, controllability and miniaturization of stainless steel wire cables.

Structure		Diameter Range (mm)	Diameter Tolerances (mm)
	1*2	0.15＜D≤0.30	+0.03/-0
	1*3	0.15＜D≤0.45	+0.03/-0
		0.45＜D≤0.60	+0.06/-0
	1*7	0.15＜D≤0.45	+0.03/-0
		0.45＜D≤0.70	+0.06/-0
		0.70＜D≤1.20	+0.10/-0



Nitinol Tube

◎ Applied Standard:
ASTM F2633-13 Wrought Seamless Nickel-Titanium Shape Memory Alloy Tube for Medical Devices and Surgical Implants

◎ Surface Finish:
Outer surface: Oxide / Center-less-ground
Inner surface: Etched / Oxide
*Other finishes can be discussed with Peiertech.

◎ Medical Application:
Guide Tube
Needle
Nitinol Curved Needle
Dental Products
Nitinol Tube Components
Stent

◎ Dimensional tolerances of Guide Tube:

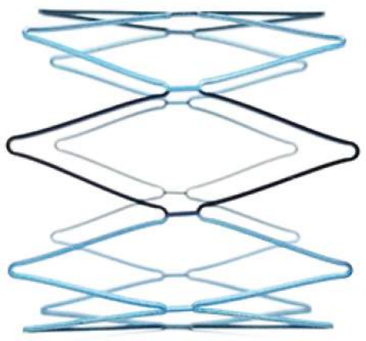
Nominal OD	OD Tolerances	ID Tolerances
OD≤0.3mm	±0.005mm	±0.010mm
0.3mm<OD≤0.5mm	±0.005mm	±0.010mm
0.5mm<OD≤1.0mm	±0.010mm	±0.010mm
1.0mm<OD≤1.5mm	±0.010mm	±0.010mm
1.5mm<OD≤2.5mm	±0.010mm	±0.020mm
2.5mm<OD≤3.5mm	±0.020mm	±0.030mm
3.5mm<OD≤5.0mm	±0.020mm	±0.040mm
5.0mm<OD≤10.0mm	±0.020mm	±0.040mm
10.0mm<OD	±0.050mm	±0.050mm

◎ Dimensional tolerances of Stent Tube:

Nominal OD	OD Tolerances	WT Tolerances
OD<0.3mm	±0.010mm	±0.010mm
0.3mm≤OD≤0.6mm	±0.015mm	±0.015mm
0.6mm<OD≤1.5mm	±0.020mm	±0.015mm
1.5mm<OD≤2.5mm	±0.020mm	±0.020mm
2.5mm<OD≤3.5mm	±0.020mm	±0.020mm
3.5mm<OD≤5.0mm	±0.030mm	±0.025mm
5.0mm<OD≤10.0mm	±0.050mm	±0.030mm
10.0mm<OD	±0.050mm	±0.050mm

Precision Components

NITINOL COMPONENTS



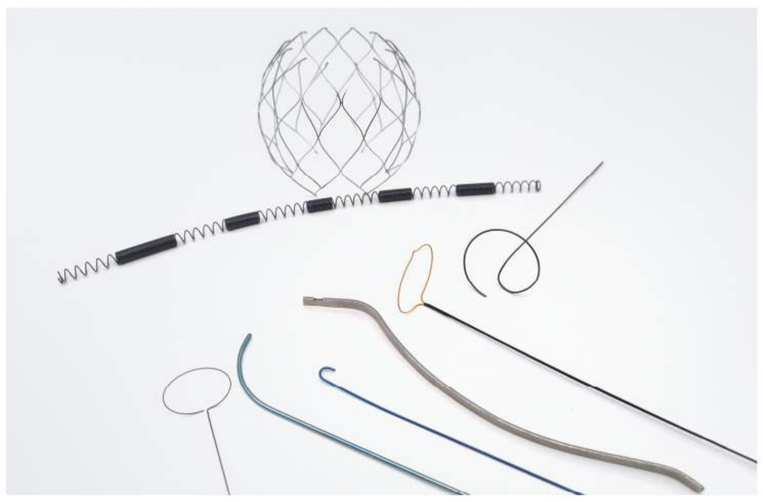
Peiertech provides laser-micromachining and premium finishing to the medical device and precision instrument industries worldwide. Experienced contract manufacturing with technological mastery.

Peiertech is driving the quality trend in precision manufacturing of devices that utilize our exclusive micromachining and finishing technologies. Putting together superior engineering with 20 years of tubular laser-micro manufacturing and design expertise.

01 Nitinol Shapesetting

Provides customized shapesetting of components from nitinol wire, tube and sheet.

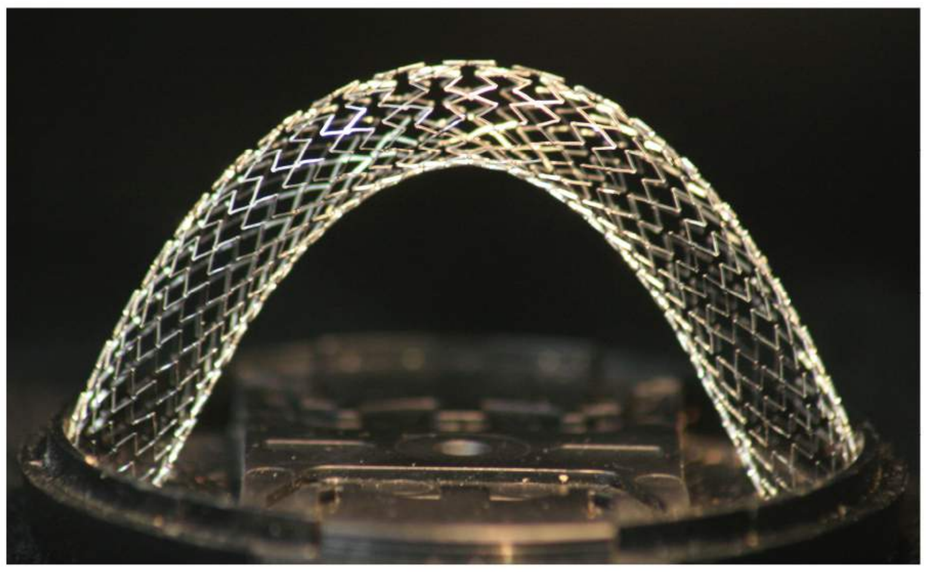
Typical products include nitinol snare, nitinol stone basket, nitinol curved needle, superelastic springs, themo-mechanical spring, superelastic clip rings, superelastic spring plates and discs, etc.



02

Nitinol Stent

Nitinol Stent Specialty: Turn-key professional contract manufacturing for Nitinol stent by cutting, shapesetting, electropolishing, passivation and marker fixation in-house



03

Nitinol Wire Grinding

Peiertech provides custom grinding of Nitinol guide wires and mandrels.

04

Precision Spring / Microcoiling Capabilities

- Materials: Stainless Steel, Nitinol, Platinum-Iridium Alloy, Platinum-Tungsten Alloy, Gold-Plated Tungsten Wire, etc.
- Capabilities: Round, Flat, Square or Other special cross-sectional wire springs, including Compression Springs, Torsion Springs, Extension springs, etc.
- OD: ≥0.15mm; Wire Diameter: ≥0.015mm.
- Applications:

  Medical Devices : Microcatheter coils, radiopaque marking coils, guidewire coils, etc.

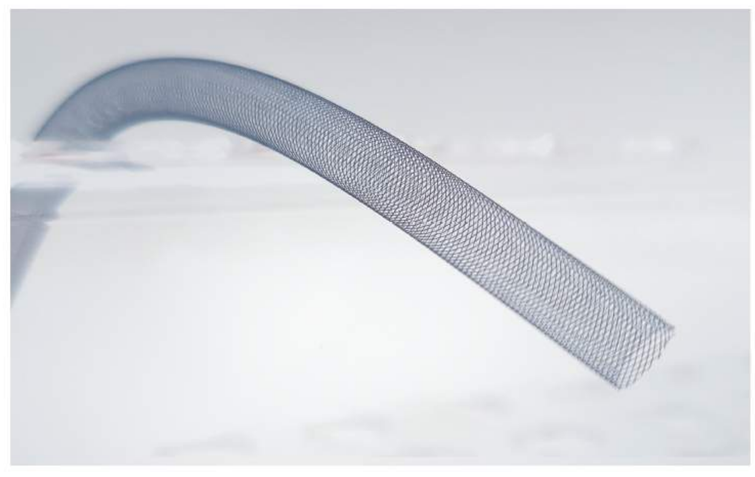
  Automotive: Valve Temperature Control Springs, Compression Springs, etc.

  Industry: Shower Temperature Control Springs, Dehumidification Cabinet Temperature Control Tension Springs, etc.

05 Braiding

Provides customized braiding services for various types of stents, catheter, and support tubes

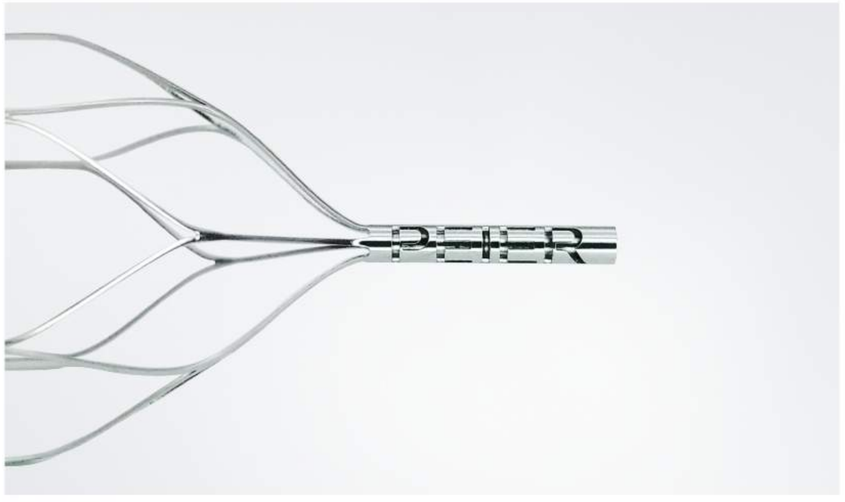
- # of strands: 36-wire / 48-wire / 72-wire / 96-wire
- Braiding materials: Nitinol Wires (Round / Flat wire), Stainless steel Wires (Round / Flat wire), Stainless Steel Wire (Round / Flat wire), Radiopaque wires (Pt/Ta/Pt-Ir), Nylon, etc.
- Diameter Range of Round wires: 0.01mm - 0.2mm
- Braiding Structure: 1×2, 2×2, 1×1, etc.
- Braiding Length: ≤2m
- Braiding OD: ϕ 3- ϕ 50mm
- Braiding PPI: 0-300PPI. Multi segment variable pitch.

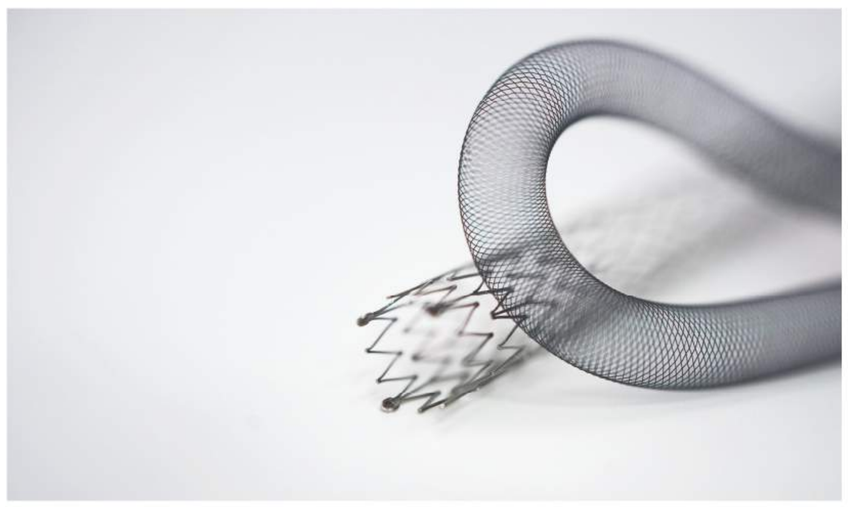


Laser Precision Processing and Post Processing

01

Laser Cutting





- ◎ Applicable cutting materials: SS300 series, L605, MP35N, Nitinol, Mg-alloys, Zn-alloys, Ta-alloys, etc.
- ◎ Applicable tube dimensions: OD0.20~30.00mm, WT0.04~0.80mm
- ◎ Minimum Cutting Kerf Width: 15-40μm
- ◎ Cutting tolerance: ±7μm
- ◎ Product Categories:
- · Stent: All the stents from tiny neurovascular, coronary, TAA, AAA, Filters, heart valve frames as well as all type of self-expandable Nitinol peripheral stents
- · Guide Tube: flexible and torqueable delivery system shafts, such as stainless spiral cut guide tube, superelastic Nitinol guide tube.

02

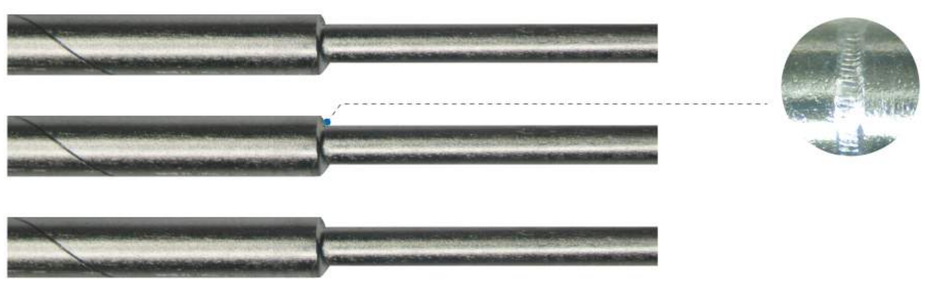
Sheet Laser Cutting

- ◎ Applicable cutting materials: NiTi, SS, Al, Ceramic, Glass, Sapphire, Carbon Steel, Tungsten Steel, Brass, Copper, Carbon Fiber, etc.
- ◎ Applicable sheet dimension: Up to 450mm ×450mm ×5mm

03

Laser Welding

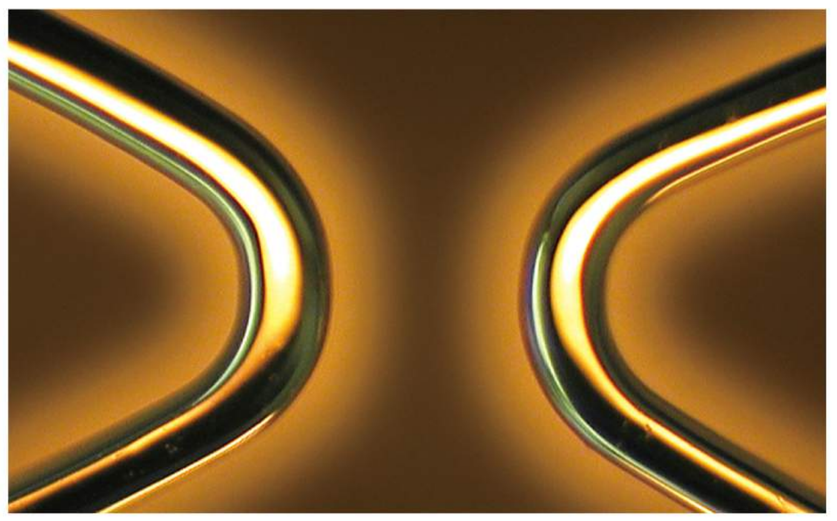
- Applicable Materials: SS-SS, NiTi-NiTi, NiTi-Ta, NiTi-PtIr, CoCr-CoCr
- Product Categories: Cover all types of components for interventional and disposable devices.



04

Electro-Polishing

Expertise solution to do electro-polishing for all kinds of metals, including Nitinol, L605, Mg-alloys, SS300 Series, etc. Proven high corrosion resistance.



05

Laser Marking

06

Ball Forming

07

Tube Processing

A Needle

B NiTi Tube Cutting and Shapesetting

C Slotted Tube

D Laser Cut Spiral Tube

E Endoscopic bending Section

F Curved Needle for Bone Cement Delivery

Medical Device CDMO

- Most of our assembly is carried out in Controlled Environment Room (CER) with strong advantages of Precision Assembly
- Clean-room: Class 10K and 100K
- Proven High Volume Performance
- Helps Customer to:

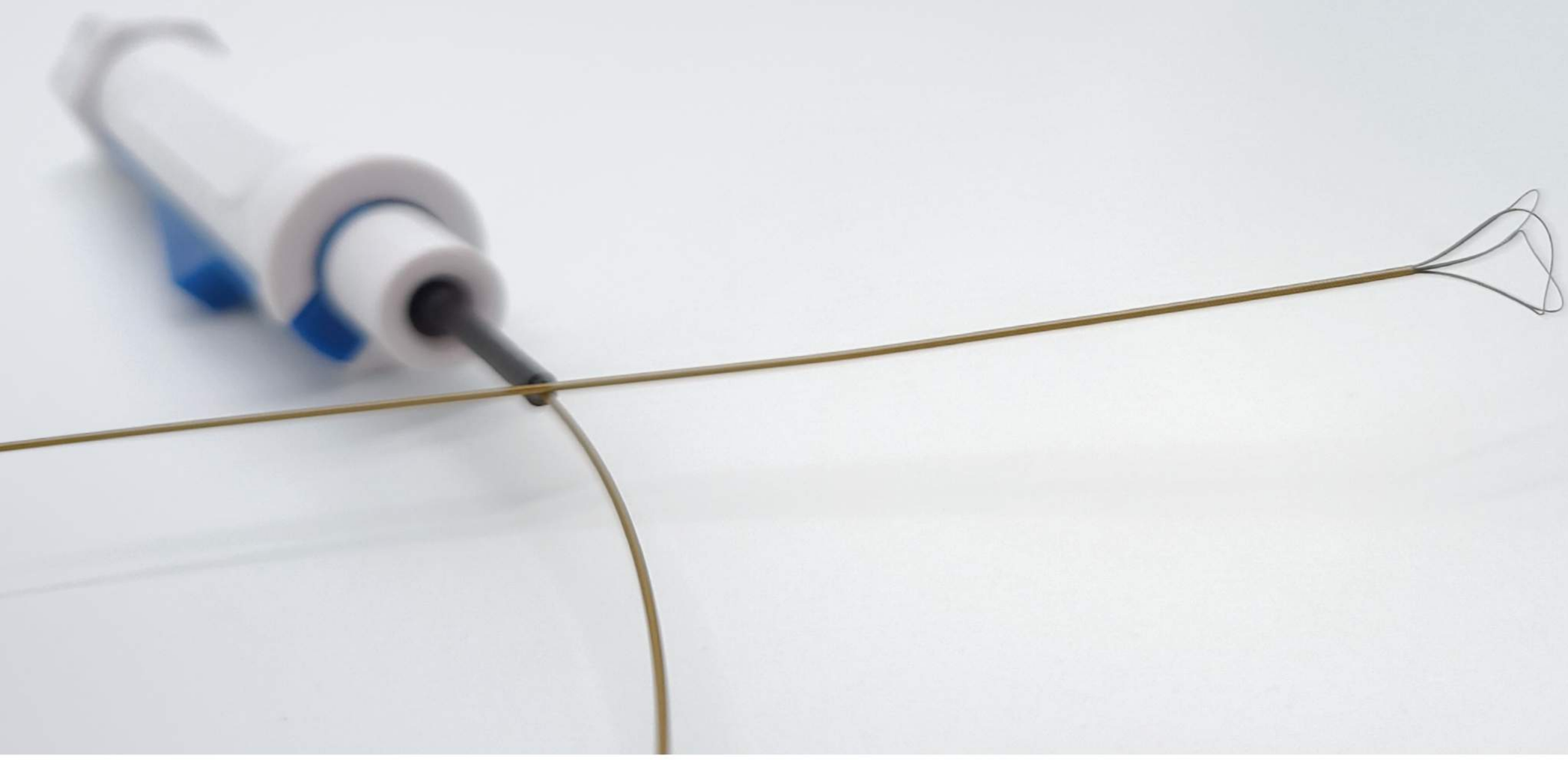
  Reduce time to market

  Reduce supply risk

  Reduce manufacturing costs

  Enhance product quality

Nitinol Stone Retrieval Basket



Nitinol Stone Basket contract manufacturing per customer design.

- Tipped or tipless baskets are available
- Nitinol Materials: highly durable and maintains shape and form
- Stable Support: good kink-resistance and excellent supporting performance
- Excellent Flexibility, quickly and easily access target
- Reduced tissue trauma during operation in confined spaces

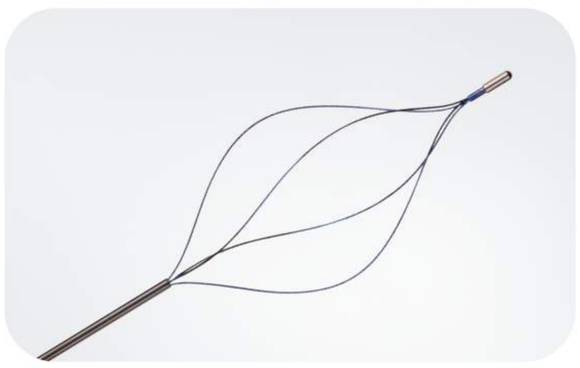
Nitinol Urology Basket

3-Wire Stone Basket

Model	Length	Basket Width	Open Length	Sheath	Sheath OD
1.7F	1200mm	8mm/11mm	8mm/11mm	Braided Tube (Amber)	Φ0.53±0.03
1.9F	1200mm	8mm/11mm	8mm/11mm		Φ0.60±0.03
2.2F	1200mm	8mm/11mm	8mm/11mm		Φ0.70±0.03

4-Wire Stone Basket

Model	Length	Basket Width	Open Length	Sheath	Sheath OD
Tipless 1.9F	1200mm	10mm	18.5mm	PI Tube (Amber)	Φ0.60±0.03
Tipless 2.1F	1200mm	10mm	18.5mm		Φ0.66±0.03

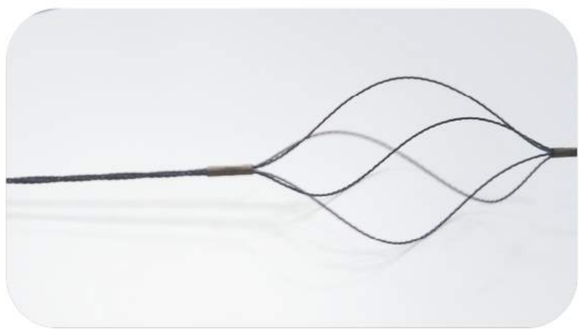


Model	Length	Basket Width	Open Length	Sheath	Sheath OD
Metal Head 2.5F	900mm 1200mm	15mm	33mm	Peek Tube (Black)	Φ0.80±0.03

Stone Retrieval Coil

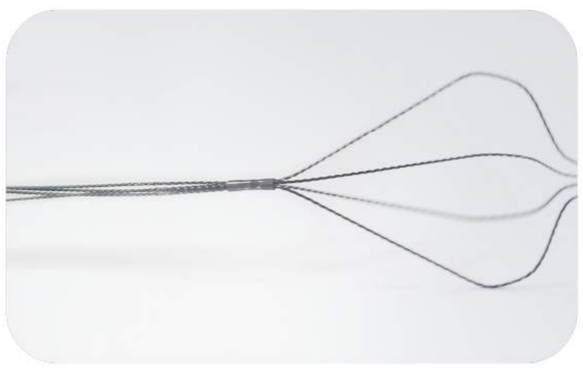
Model	Length	Open Length	Sheath	Handle	Sheath OD
3F	1200mm	10mm	Peek Tube (Black)	Without	Φ0.98±0.05

Nitinol Billary-Stone Retrieval Basket



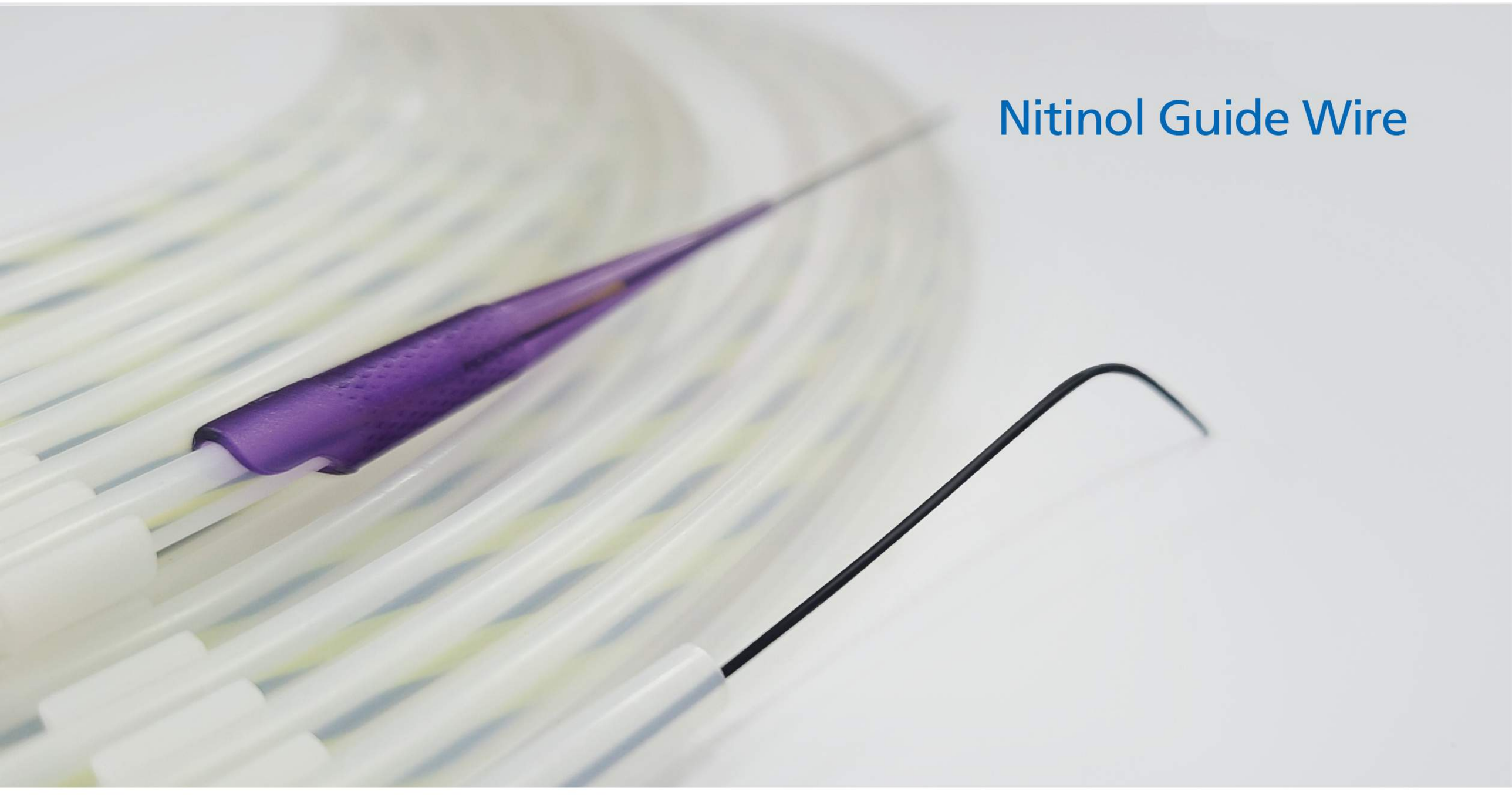
Spiral Shape Stone Extraction Basket

* Spiral Shape Basket can be customized according to the drawing.



Diamond Shape Stone Extraction Basket

* Diamond Shape Basket can be customized according to the drawing.



Nitinol Guide Wire

Custom medical nitinol guide wire:

- NiTi core material:

  Excellent straightness and superelasticity, and kink-resistant;

  Excellent pushability and torqueability;

  Achieve better guiding capability with 1:1 proximal to distal torque;

- Striped PTFE jacket: Provide good tactile and visual feedback for advancement
- Hydrophilic tip allows smooth navigation soft distal tip minimizes risk of tissue injuries

Zebra Hydrophilic Guide Wire

Model	Spec	PTFE Colour	Tip Shape	Connection Methods
AL81N1500	0.032”-1500mm	Blue and White	Straight	With / Without Overlapping Segments
AL89N1500	0.035”-1500mm			
AL81N2600	0.032”-2600mm	Yellow and Black		
AL89N2600	0.035”-2600mm			
AL81N4500	0.032”-4500mm			
AL89N4500	0.035”-4500mm			
AJ81N1500	0.032”-1500mm	Blue and White	Angled	
AJ89N1500	0.035”-1500mm			
AJ81N2600	0.032”-2600mm	Yellow and Black		
AJ89N2600	0.035”-2600mm			
AJ81N4500	0.032”-4500mm			
AJ89N4500	0.035”-4500mm			

* For models other than the above recommened spicifications, please contac us.

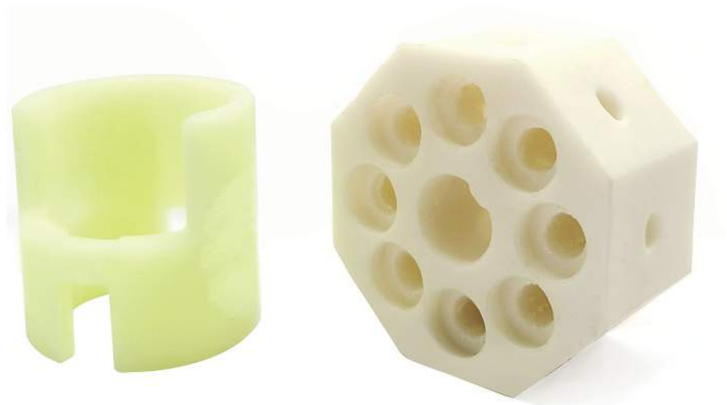
Zebra Guide Wire

Model	Spec	PTFE Colour	Tip Shape
BL81N/S1500	0.032”-1500mm	Blue and White	Straight
BL89N/S1500	0.035”-1500mm		
BL81N/S2600	0.032”-2600mm	Yellow and Black	
BL89N/S2600	0.035”-2600mm		
BL81N/S4500	0.032”-4500mm		
BL89N/S4500	0.035”-4500mm		

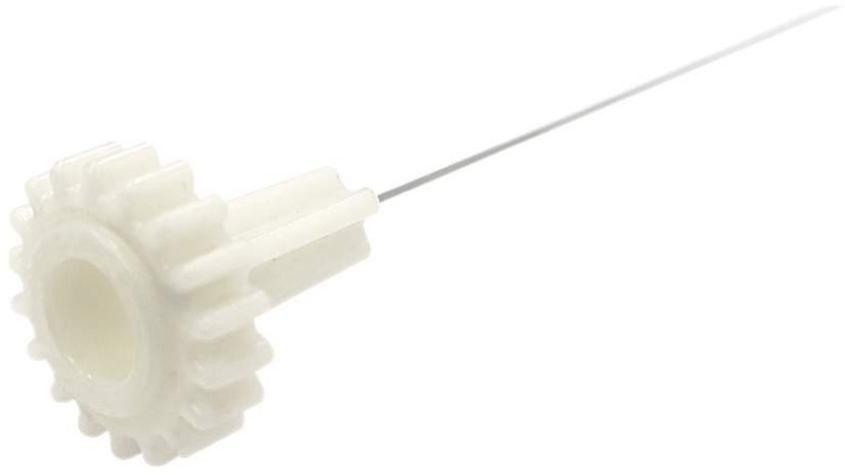
*For models other than the above recommened spicifications, please contac us.

PTFE Coating/ Parylene Coating

Providing PTFE Coating and Parylene Coating on the surface of Nitinol and SS materials.



3D Printing



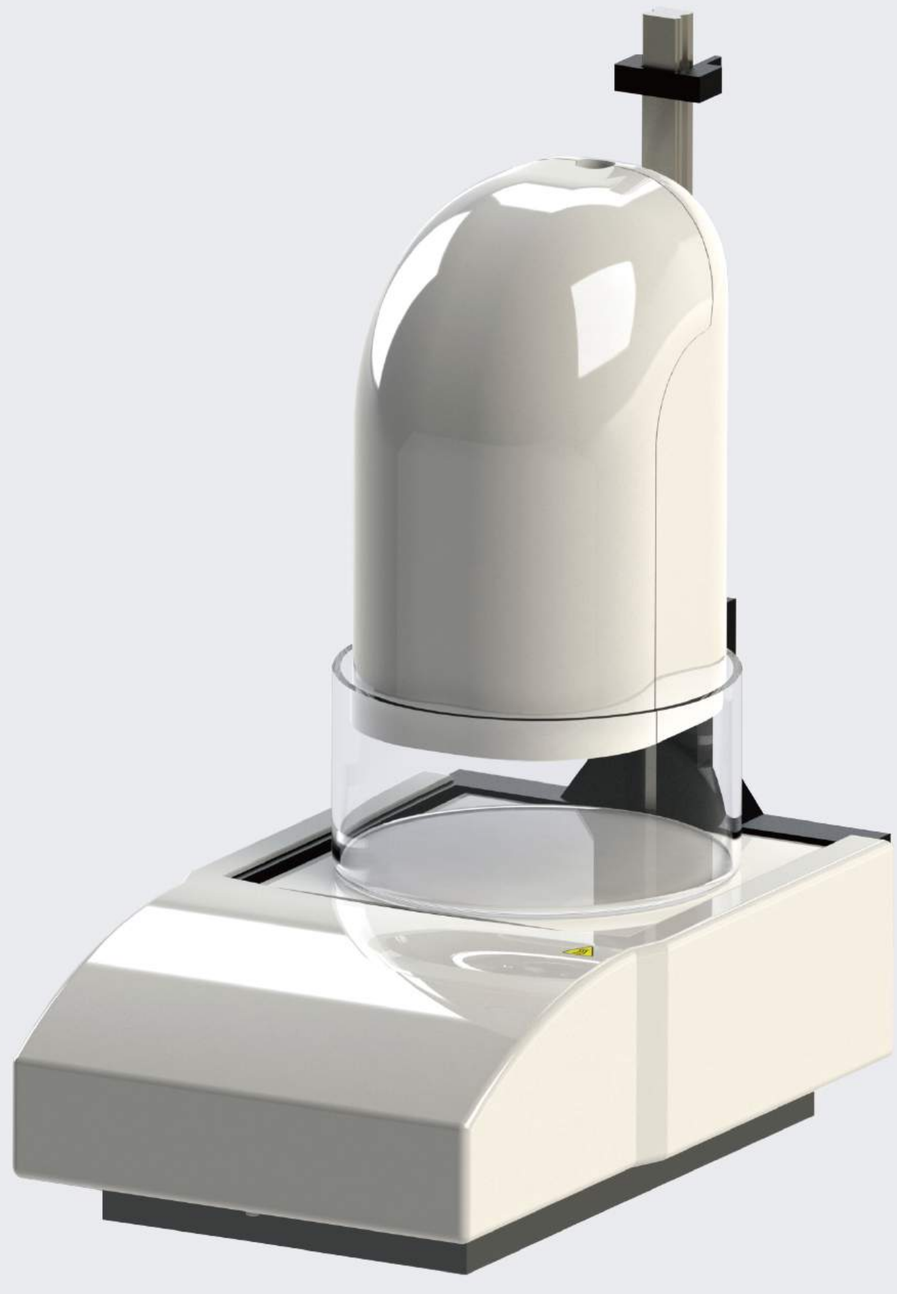
Injection Molding

Mandrel

Precision Machining

A_f Tester

per ASTM F2082M-16



Non-Contact A_f Measurement System

Advanced Vision Technology

· Improved Repeatability

·Ease of Use

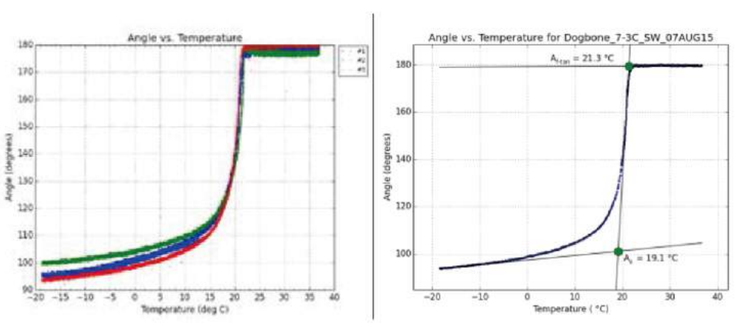
·High Throughput

Repeatability

·Repeatability range down to 0.5 °C

· Fewer sources of error than LVDT

· Automatic plotting and A_s/A_f determination



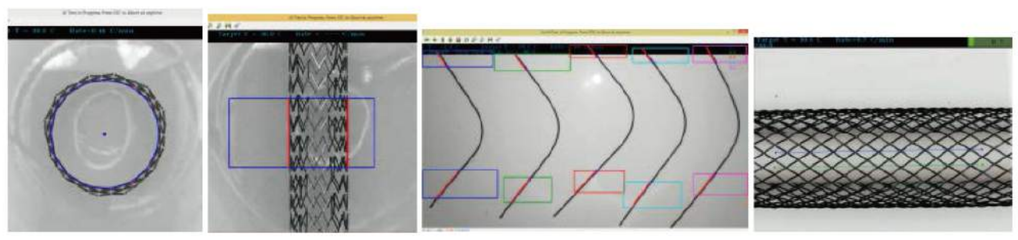
Ease of Use

· 4 methods for testing various device shapes

· Automatic Report Generation (PDF/DOC)

· User permissions management

· Simple fixturing



High Throughput

· Measure up to 10 samples at one run

· Quick temperature reset

·Scaleable fixturing