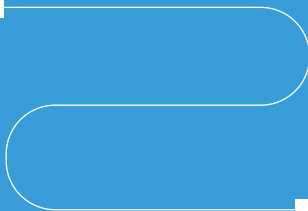




PRECISION MEDICAL NEEDLE CANNULAS

TOPKEY:Top Quality ,Top Solutions

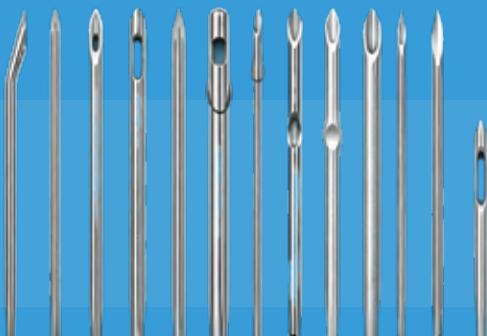
MEDICAL NEEDLES
CANNULAS



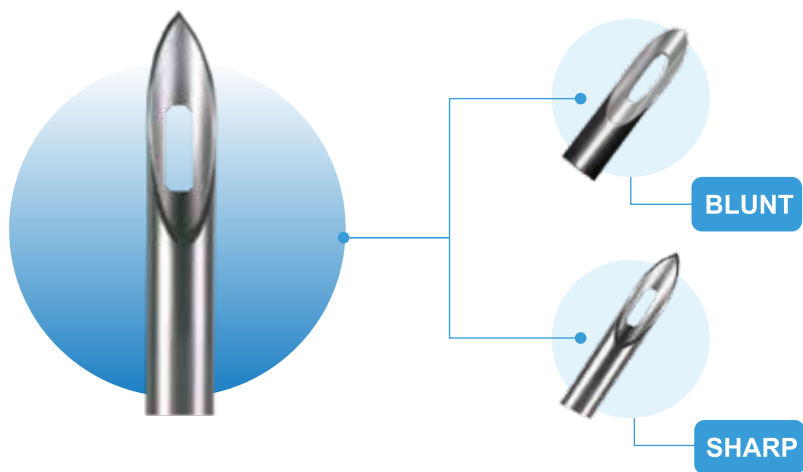
CUSTOMIZED
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CONTACT US:

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info@topkeymedical.com



A.V. FISTULA NEEDLE



Technical Parameters:

Gauge

15G(1.83mm) ~ 17G(1.47mm)

Wall Thickness

TW(Customized)

Lengths

25mm 32mm 38mm

A.V. FISTULA NEEDLE

Needle Introduction

Manufactured from precision medical-grade stainless steel tubing, AV fistula needle cannulas are designed as critical components for reliable vascular access during hemodialysis. Automated precision grinding, controlled electropolishing, ultrasonic cleaning, and uniform silicone coating ensure consistent bevel geometry, a smooth surface finish, low penetration resistance, and dependable flow performance. Available with customized bevel profiles, back-eye configurations, wall thicknesses, and lengths to meet different dialysis needle designs and assembly requirements.

Key Advantages

Precision Multi-Bevel Tip: Controlled bevel geometry and symmetry reduce penetration resistance and vascular trauma.

Smooth Back-Eye Design: Precision-finished back eye provides an additional flow path and helps reduce the risk of vessel-wall occlusion during hemodialysis access.

Thin-Wall High-Flow Cannula: Controlled OD, ID, and wall thickness provide high flow capacity with sufficient column rigidity.

Electropolished & Siliconized Surface: Electropolishing and uniform siliconization reduce surface friction for smoother insertion.

Custom Specifications: 15G, 16G, 17G cannulas, lengths, bevel angles, back-eye profiles, and wall thicknesses can be customized.

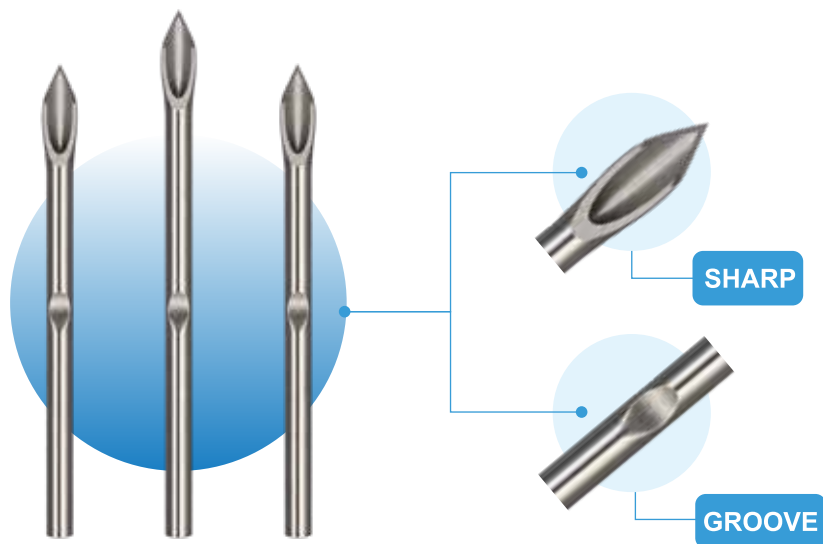
Quality Control (ISO 13485 QMS)

100% High-Speed Online Vision Inspection: Automated inspection of bevel geometry, back-eye profile, tip eccentricity, fishhooks, and burrs.

Micro-Cleanliness & Residue Monitoring: Testing for particulates, residual oils, and cleaning residues.

Full-Dimension & Penetration Testing: Verification of OD, ID, wall thickness, straightness, and batch penetration force.

IV CATHETER CANNULA



Technical Parameters:

Gauge

14G(2.0mm) ~ 24G(0.6mm)

Product Type

I Y straight safety retraction types

Wall Thickness

RW TW

Lengths

19mm ~ 45mm (± 1 mm)

IV CATHETER CANNULA

Needle Introduction

Manufactured from medical-grade stainless steel tubing, our IV catheter cannula components are precision-machined on Japanese high-precision fully automated grinding machines, ensuring stable quality and superior performance consistency.

Key Advantages

Precision Back-Bevel Grinding: *Tightly controlled bevel symmetry and edge sharpness between the primary bevel and back-bevels deliver ultra-low penetration resistance, significantly reducing the risk of vessel blowout and tissue trauma.*

Ultraclean Washing & Degreasing: *Multi-stage ultrasonic cleaning and Water for Injection (WFI) rinsing thoroughly eliminate processing lubricants and metallic microparticles, complying with medical-grade biosafety standards.*

Zero-Burr & Non-Flared Tip Control: *Micro-edges are clean and uniform, completely free of burrs, roll-overs, or tip eccentricity.*

Ultra-Tight Tolerances & Superior Straightness: *Strict tolerances for OD, ID, wall thickness, and straightness guarantee seamless, uniform assembly with catheter tubes and needle hubs.*

Custom End Chamfering & Cut-to-Length: *Customizable tube lengths, side slotting, proximal end chamfering, and sandblasting to customer prints.*

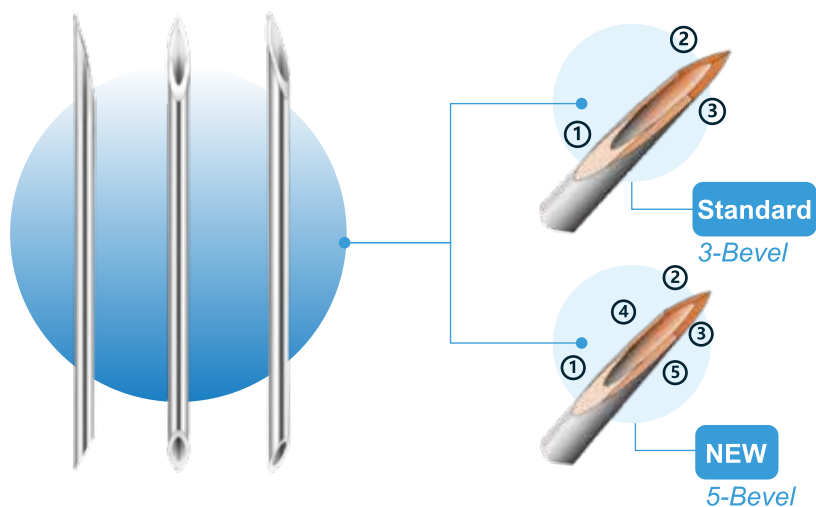
Quality Control (ISO 13485 QMS)

100% High-Speed Online Vision Inspection: *Real-time automated inspection and rejection for tip geometry, bevel length, eccentricity, fishhooks, and edge burrs.*

Micro-Cleanliness & Particulate Monitoring: *Regular lot testing for surface residual oils and microscopic particulate levels.*

Full-Dimension & Penetration Force Verification: *Rigorous verification of OD, wall thickness tolerances, and lot penetration forces to ensure stable product consistency.*

INSULIN PEN NEEDLE



Technical Parameters:

Gauge

30G(0.3mm)~34G(0.18mm)

Wall Thickness

RW TW ETW UTW

Lengths

16mm 17mm 18mm 19mm 20mm

INSULIN PEN NEEDLE

Needle Introduction

Featuring a dual-ended needle design, the patient end is optimized for low-force penetration subcutaneous injection, while the cartridge end ensures clean penetration through the cartridge rubber septum. Precision-ground on Japanese automated grinding machines for consistent quality and high performance.

Key Advantages

Precision Multi-Bevel Grinding: Available in standard 3-bevel and advanced 5-bevel configurations, offering ultra-low penetration resistance to maximize patient comfort.

Anti-Fragmentation Cartridge-End Tip: The cartridge end is mechanically optimized for clean elastomeric septum piercing, preventing coring, rubber fragmentation, and fluid-path clogging while preserving seal integrity.

Ultraclean Washing & Degreasing: Multi-stage ultrasonic cleaning and WFI rinsing thoroughly remove processing greases and metallic particulates from both internal and external surfaces.

Zero-Burr & Anti-Fishhook Tip: Cutting edges are pristine and smooth, free of roll-overs, burrs, or fishhooks.

Tight Thin-Wall Tolerances: Tight wall-thickness increases the effective lumen, helps reduce flow resistance during drug delivery.

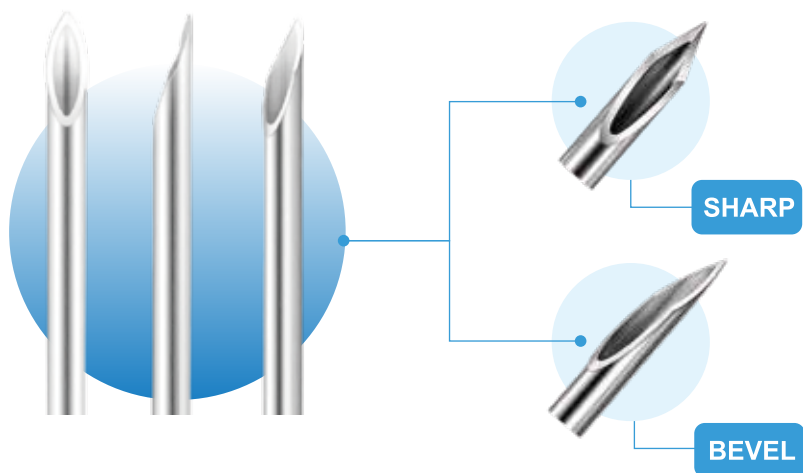
Quality Control (ISO 13485 QMS)

100% High-Speed Online Vision Inspection: Dual-end inspection and auto-rejection for tip angles, bevel lengths, eccentricity, fishhooks, and micro-burrs.

Micro-Cleanliness & Residue Monitoring: Strict verification of particulate contamination and degreasing residue thresholds.

Full-Dimension & Penetration Force Testing: Tight auditing of OD, wall thickness tolerances, and dual-end piercing forces for batch consistency.

Aesthetic Injection NEEDLE



Technical Parameters:

Gauge

27G (0.4mm)~32G (0.23mm)

Wall Thickness

RW TW ETW UTW

Lengths

4mm 6mm 12mm 13mm

Aesthetic Injection NEEDLE

Needle Introduction

Fabricated from precision medical-grade stainless steel tubing, these cannulas serve as needle components for mesotherapy, microneedle arrays, aesthetic injection devices. Precision-ground on Japanese automated grinding equipment for consistent quality.

Key Advantages

Ultra-Fine Gauges & High-Flow Thin-Wall Design: Precise OD, ID, and wall thickness controls maximize effective inner lumen while maintaining column strength, meeting demanding micro-dose injection needs.

Low-Trauma & Zero-Burr Needle Tip: Precision-ground and micro-deburred cutting edges help reduce penetration force and support patient comfort.

Ultraclean Washing & Degreasing: Multi-stage ultrasonic cleaning and WFI rinsing eliminate grinding fines and oils, ensuring optimal surface readiness for silicone coating, assembly, sterilization.

High Straightness & Uniform Flow Delivery: Strict straightness and dimensional tolerances ensure needle rigidity in high-speed automated assembly and eliminate flow fluctuations during use.

Custom Specifications & Flexible Geometry: Customizable ultra-fine outer diameters, tailored bevel angles, and application-specific needle lengths.

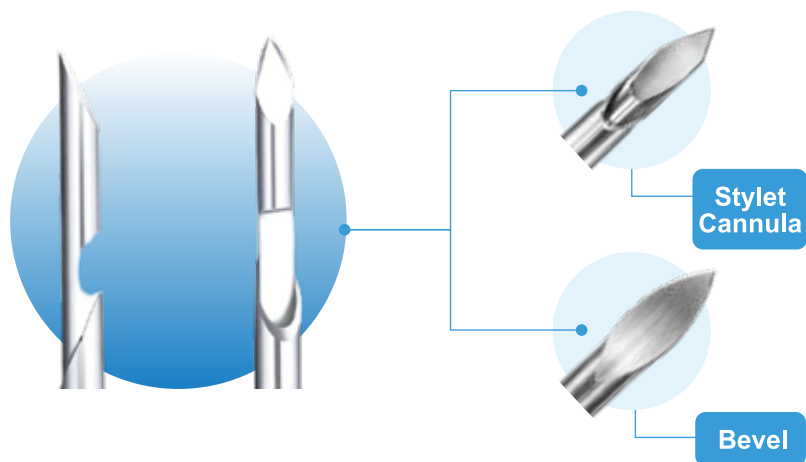
Quality Control (ISO 13485 QMS)

100% High-Speed Online Vision Inspection: Real-time screening and auto-sorting of bevel geometry, length, eccentricity, fishhooks, and micro-burrs.

Micro-Cleanliness & Residue Monitoring: Rigorous testing of lumen cleanliness, residual oils, and particulate contamination.

Full-Dimension & Penetration Performance Testing: Batch verification of OD, ID, wall thickness, straightness, penetration resistance, and fluid delivery consistency.

BIOPSY NEEDLE



Technical Parameters:

Gauge

10G(3.4mm) ~ 22G(0.7mm)

Wall Thickness

Customized

Lengths

100 – 250 mm (± 1 mm)

BIOPSY NEEDLE

Needle Introduction

Fabricated from high-strength medical-grade stainless steel tubing and solid rods, these coaxial components (inner trocars with specimen notches and outer cutting cannulas) are designed for soft tissue and bone marrow biopsy systems. Precision-machined using Japanese high-speed grinding, laser notch cutting, and ultrasonic cleaning for uncompromised sample integrity.

Key Advantages

High-Precision Laser Notch Cutting: Smooth, burr-free specimen notch edges with tight depth and length controls ensure intact, high-volume core tissue yields.

Ultra-Sharp Outer Cutting Edge: Precision multi-bevel or reverse-bevel outer cannulas slice tissue cleanly with minimal resistance, preventing crush artifacts.

Precision Coaxial Clearance: Closely controlled inner/outer needle tolerances and straightness ensure smooth, zero-jam gliding during high-speed spring-fired cutting.

Ultraclean Washing & Degreasing: Multi-stage ultrasonic cleaning and WFI rinsing eliminate micro-grinding debris and oil residues, satisfying medical biocompatibility standards.

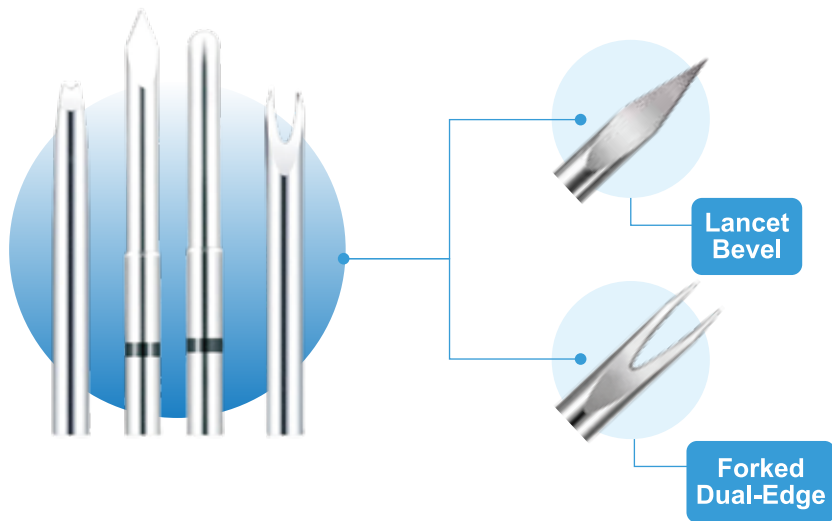
Quality Control (ISO 13485 QMS)

100% High-Speed Online Vision Inspection: Real-time screening and auto-sorting of bevel geometry, notch dimensions, coaxial alignment, and burrs.

Micro-Cleanliness & Particulate Monitoring: Regular lot testing for residual oils and particulate matter.

Full-Dimension & Cutting Force Verification: Tight control over dimensions, coaxial sliding friction, and batch cutting performance.

COAXIAL NEEDLE



Technical Parameters:

Gauge

10G(3.4 mm) ~ 22G(0.7 mm)

Wall Thickness

Customized

Lengths

50 ~ 200mm(± 5 mm)

COAXIAL NEEDLE

Needle Introduction

Consisting of an outer guide cannula and an inner trocar stylet made from high-strength medical-grade stainless steel tubing and bar stock, these systems provide single-puncture, multiple-access guidance for interventional radiology, biopsies, and ablations. Manufactured via Japanese precision grinding and cold drawing.

Key Advantages

Precision Micro-Clearance Fit: Tight clearance between inner and outer components prevents wobble and binding while providing a flush, step-free tip transition that helps reduce tissue coring.

High Bending Rigidity & Straightness: High-tensile thin-wall tubing prevents deflection during deep-seated lesion punctures, maximizing directional steering control.

Ultraclean Washing & Degreasing: Multi-stage ultrasonic cleaning and WFI rinsing ensure complete removal of grinding oils and metallic fines.

Echogenic Tip Enhancement & Depth Markings: Optional sandblasted or laser-textured echogenic features improve visibility under ultrasound, while laser-etched depth markings support insertion-depth control.

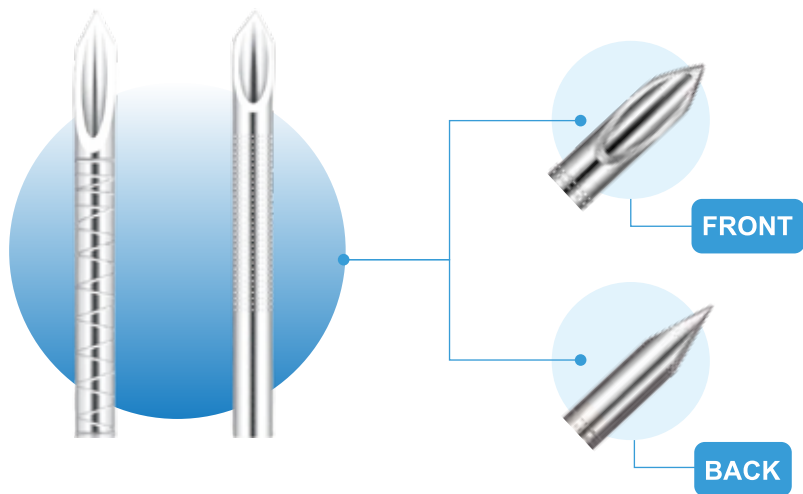
Quality Control (ISO 13485 QMS)

100% High-Speed Online Vision Inspection: Real-time screening and auto-rejection of bevel geometry, burrs, inner/outer flush alignment, and tip integrity.

Micro-Cleanliness & Residue Monitoring: Regular sampling for residual oils, particulate matter, and cleaning residues.

Full-Dimension & Mechanical Verification: Strict tolerance auditing of ID, OD, wall thickness, sliding friction, and batch penetration forces.

Follicular Puncture Needle



Technical Parameters:

Gauge

16G(1.6mm) ~ 19G(1.0mm)

Wall Thickness

TW(Customized)

Lengths

300mm ~ 400 mm(± 5 mm)

Follicular Puncture Needle

Needle Introduction

Available as single-lumen needles or dual-lumen flushing sets, these cannulas are fabricated from ultra-smooth, thin-wall medical stainless steel tubing for transvaginal ovum retrieval in ART procedures. Precision-machined on automated Japanese equipment to protect oocyte-cumulus complex integrity.

Key Advantages

Ultra-Sharp Multi-Bevel Tip: Precise micro-bevel geometry minimizes penetration resistance across the vaginal wall and ovarian capsule, reducing bleeding and trauma.

Mirror-Finish Inner Lumen: Ultra-low internal surface roughness minimizes fluid shear stress under aspiration vacuum, preventing mechanical damage to oocytes and cumulus–oocyte complexes.

High-Visibility Echogenic Tip: Distal micro-etched or sandblasted bands provide distinct, blind-spot-free visualization under transvaginal ultrasound.

Ultraclean Washing & Endotoxin Control: Multi-stage ultrasonic cleaning and WFI rinsing ensure endotoxin and particulate levels satisfy stringent reproductive medicine standards.

Thin-Wall High-Flow Geometry: Maximizes internal aspiration throughput without compromising needle column puncture rigidity.

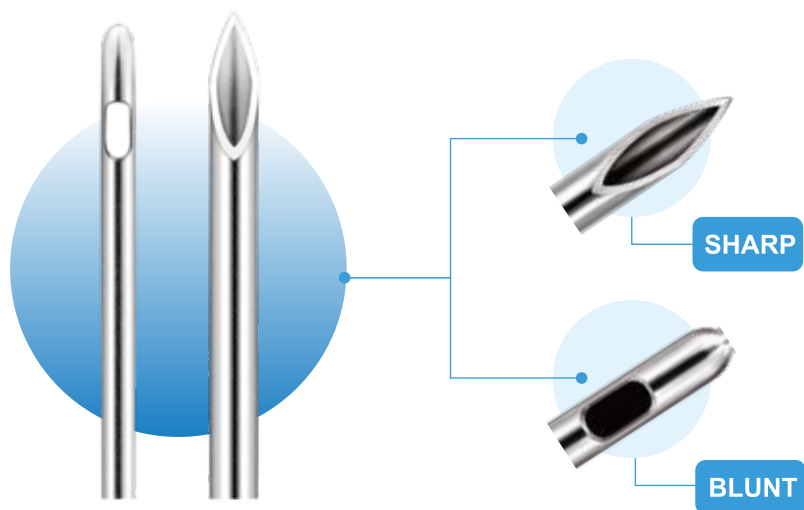
Quality Control (ISO 13485 QMS)

100% High-Speed Online Vision Inspection: Real-time verification and auto-rejection for bevel geometry, length, burrs, and echogenic band dimensions.

Micro-Cleanliness, Particulate & Endotoxin Audits: Lot testing for surface oils, micro-debris, and bacterial endotoxin levels.

Full-Dimension & Penetration Testing: Tight control over OD/ID tolerances, wall uniformity, and batch penetration performance.

PLUGGING NEEDLE



Technical Parameters:

Gauge

18G(1.2mm) ~ 25G(0.5mm)

Wall Thickness

RW TW(Customized)

Lengths

50mm ~ 200mm(± 5 mm)

PLUGGING NEEDLE

Needle Introduction

Covering bone cement delivery cannulas, vascular closure needles, and tissue glue injection components, these needles are manufactured from high-yield thin-wall medical stainless steel tubing to handle high injection pressures during percutaneous plug deployment. Produced on precision Japanese equipment.

Key Advantages

High-Pressure Rating & Mirror-Smooth Lumen: High-yield-strength tubing with ultra-low internal roughness minimizes delivery resistance and prevents clogging of high-viscosity materials.

Robust Puncture Bevel: Symmetrical, sharp bevel geometry delivers strong bone- and dense-tissue penetration with directional tracking stability.

Precision Coaxial Clearance & Seal Fit: Tight, smooth fit between inner stylet and outer cannula prevents backflow and tissue debris entrapment.

Ultraclean Washing & Degreasing: Multi-stage ultrasonic cleaning and WFI rinsing eliminate grinding lubricants and metallic fines.

Echogenic Enhancement & Depth Scaling: Distal sandblasted markings enhance ultrasound and DSA positioning, supported by laser depth bands and custom proximal chamfers.

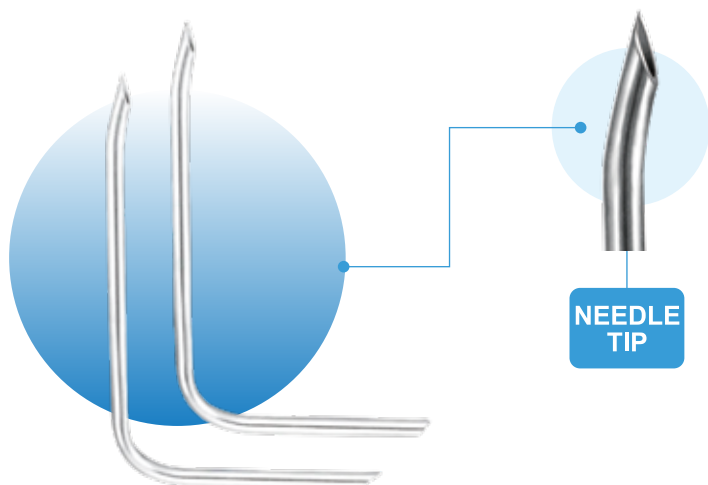
Quality Control (ISO 13485 QMS)

100% High-Speed Online Vision Inspection: Real-time screening and auto-sorting of tip angles, burrs, flush tip alignment, and surface flaws.

Micro-Cleanliness & Residue Monitoring: Strict lot-by-lot inspection for particulate contamination and degreasing residues.

Full-Dimension & Delivery Clearance Testing: Strict verification of ID/OD tolerances, coaxial glide resistance, and penetration force.

INFUSION PORT HUBER NEEDLE



Technical Parameters:

Gauge

19G(1.1mm) ~ 22G(0.7mm)

Wall Thickness

RW TW(Customized)

Lengths

12mm ~ 37mm(± 1 mm)

INFUSION PORT HUBER NEEDLE

Needle Introduction

Available in straight and custom right-angle configurations, these non-coring needles are fabricated from high-strength medical-grade stainless steel tubing for repeated, long-term access to implantable port septums. Precision-ground and cold-bent on automated Japanese equipment to maximize port lifespan.

Key Advantages

True Non-Coring Deflected Bevel: Engineered with a specialized heel deflection angle and offset back-bevel that parts rather than cuts silicone, designed to reduce septum coring, leakage, and catheter embolisms.

Precision Cold Bending: Smooth bend transitions free of kinks, micro-cracks, or lumen necking maintain unimpeded fluid flow and precise hub alignment.

Fatigue-Resistant High-Toughness Alloy: High fatigue resistance prevents tip deformation, fishhooking, or fracturing during repeated septum punctures or contact with titanium port bottoms.

Ultraclean Washing & Degreasing: Thorough multi-stage ultrasonic washing and WFI rinsing eliminate bending lubricants and grinding residues.

Zero-Burr, Low-Force Penetration: Micro-polished cutting edges penetrate skin and dense elastomeric septa with minimal drag, improving patient comfort.

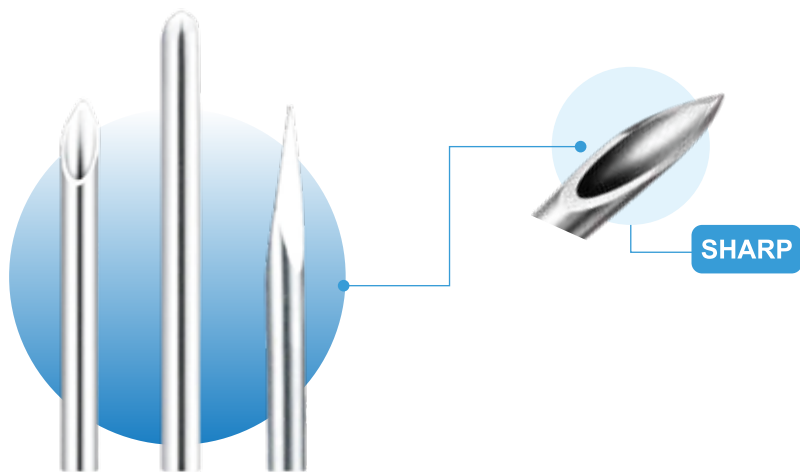
Quality Control (ISO 13485 QMS)

100% High-Speed Online Vision Inspection: Real-time verification and sorting of deflection angles, burrs, bend angles, and tip concentricity.

Micro-Cleanliness & Residue Monitoring: Strict lot-by-lot inspection for particulate contamination and degreasing residues.

Fragmentation & Penetration Force Testing: Validated silicone septum non-coring/fragmentation tests and batch penetration force verification.

SPECIAL-SHAPED NEEDLE



Technical Parameters:

Gauge

14G(2.1mm) ~ 34G(0.18mm)

Wall Thickness

RW TW

Lengths

4mm ~ 50mm(± 1 mm)

SPECIAL-SHAPED NEEDLE

Needle Introduction

Encompassing multi-faceted, stepped, offset, lateral-cutting, and asymmetrical custom tip profiles, these needles are fabricated from premium medical-grade cold-drawn stainless steel tubing for specialized micro-surgical, ophthalmic, and interventional access. Ground on high-precision Japanese machinery for exceptional batch repeatability.

Key Advantages

Complex Micro-Edge Grinding: Advanced capabilities in compound multi-facet grinds, reverse back-cuts, stepped micro-tapers, and radius grinds for demanding incision and puncture needs.

Micro-Deburred, Zero-Burr Edges: Precision electropolishing eliminates roll-overs, microscopic burrs, and fishhooks to prevent tissue tearing.

Ultra-Narrow Tolerances & Straightness: Strict control over OD, ID, wall thickness, and runout ensures smooth alignment with outer cannulas or molded hubs.

Ultraclean Washing & Degreasing: Multi-stage ultrasonic cleaning and WFI rinsing leave internal and external surfaces free of lubricants and particles.

Fully Tailored Geometry & End Machining: Custom bevel angles, lengths, proximal chamfering, side-hole drilling, or locating slots built to customer prints.

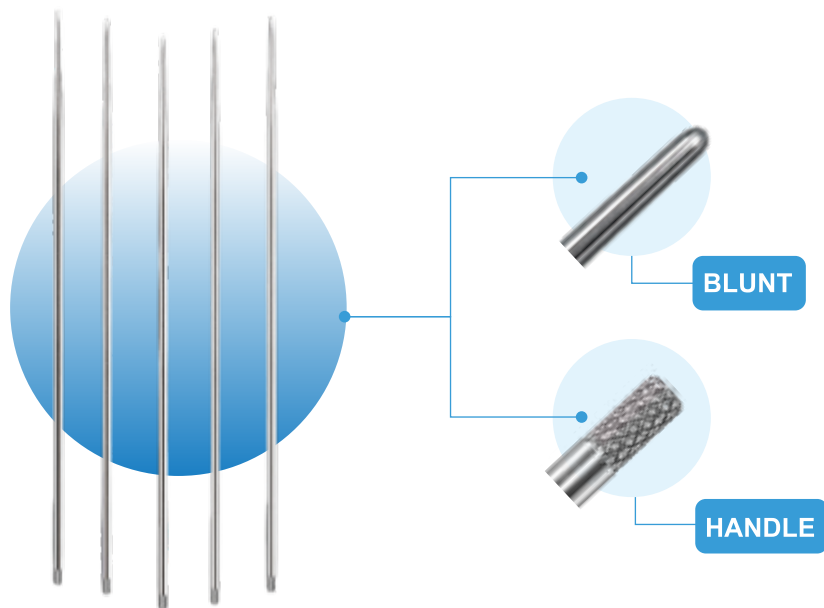
Quality Control (ISO 13485 QMS)

100% High-Speed Online Vision Inspection: Real-time screening of custom tip geometries, micro-burrs, eccentricity, and edge angles with automatic defect sorting.

Micro-Cleanliness & Residue Monitoring: Strict lot-by-lot inspection for particulate contamination and degreasing residues.

Full-Dimension & Penetration Testing: Batch auditing of OD, ID, wall uniformity, and penetration resistance.

Subcutaneous Tunneling Needle



Technical Parameters:

Gauge

1.2mm 3.0mm

Wall Thickness

Customized

Lengths

200mm ~ 500mm (± 0.5 mm)

Subcutaneous Tunneling Needle

Needle Introduction

Precision-machined from solid medical-grade stainless steel rods, these subcutaneous tunneling needles are designed to create smooth subcutaneous tracts for guiding implantable catheters, drainage tubes, and leads. Fabricated on Japanese precision automated equipment to provide exceptional column stiffness and clean, burr-free surfaces.

Key Advantages

Atraumatic Dome-Shaped Blunt Tip: Precision-formed dome blunt tip advances smoothly, minimizing tearing or shearing trauma to surrounding subcutaneous vessels and tissue.

Ultraclean Washing & Degreasing: Multi-stage ultrasonic cleaning and WFI rinsing thoroughly strip away all processing greases and metallic micro-debris, satisfying biosafety standards.

Electropolished Low-Friction Shaft: Advanced surface electropolishing produces a mirror-smooth finish that significantly lowers subcutaneous tissue drag.

Custom Curvature & Stepped Geometry: Tailored shaft curvature radius, straightness, stepped transitions, and effective working lengths built to customer prints.

Versatile Proximal Hub Fittings: Supports custom barbed connectors, knurled anti-slip bands, threaded locks, and internal threads to ensure high catheter retention pull-off force.

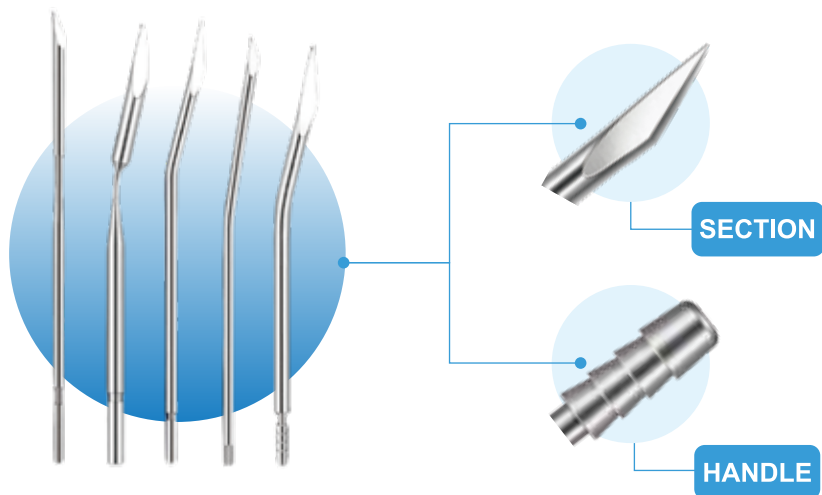
Quality Control (ISO 13485 QMS)

100% High-Speed Online Vision Inspection: Real-time sorting and auto-rejection for dome roundness, surface micro-scratches, burrs, and hub machining dimensions.

Micro-Cleanliness & Residue Monitoring: Strict lot-by-lot inspection for particulate contamination and degreasing residues.

Full-Dimension & Mechanical Testing: Rigorous verification of OD, bend curvature tolerances, column rigidity, and hub tensile pull-off resistance.

IRREGULAR NEEDLE KNIFE



Technical Parameters:

Blade

Medical-grade stainless steel

Handle

Polypropylene with anti-slip texture

Size Range

10Fr ~ 25Fr (1Fr = 0.33mm)

IRREGULAR NEEDLE KNIFE

Needle Introduction

Fabricated from high-strength medical-grade stainless steel rods, these micro-knife needle components provide precision cutting and puncture performance for minimally invasive endoscopic procedures and soft-tissue release. Precision-machined on automated Japanese equipment with razor-sharp, burr-free edges.

Key Advantages

Precision Micro-Edge Profiling: Supports non-standard geometric grinds (beveled micro-blades, stepped shoulders, micro-hooks) with smooth edges for ultra-low tissue incision resistance.

High Axial Rigidity & Straightness: Premium high-modulus stainless steel rods resist buckling and torque twist, ensuring smooth, snag-free extension through tortuous endoscopic channels.

Ultraclean Washing & Degreasing: Ultrasonic cleaning and WFI rinsing thoroughly strip away grinding oils and metallic dust.

Zero Burrs & Ultra-Narrow Tolerances: Precision-controlled OD and micro-honed edges ensure smooth integration with insulating sheaths and automated subassemblies.

Custom Stop Collars & Dimensions: Supports custom blade profiles, working lengths, end chamfers, and mechanical stroke-limiting steps.

Quality Control (ISO 13485 QMS)

100% High-Speed Online Vision Inspection: Real-time contour verification of profile dimensions, burrs, hook defects, and edge angles with automatic defect sorting.

Micro-Cleanliness & Residue Monitoring: Strict lot-by-lot inspection for particulate contamination and degreasing residues.

Full-Dimension & Mechanical Testing: Tight control over OD, straightness, and batch cutting/puncture forces.