



Where medical devices come to life.

Custom and Specialty Needles

Custom Needles for Unique Needs

Some customers need custom needle geometries along with exact fittings, handles and other features. In addition to the specialty needles Tegra Medical offers, our custom services include:

- Insert molding of custom fittings such as luer hubs for leak-free connections; handles in the material, shape and size you need; and PEEK molding (cold and hot runner) for the cleanest edges.
- Specialty coatings for dielectric properties and lubricity.
- Finishing services for echogenicity, polishing, laser marking/abrading, and grit blasting
- Hermetic sealing of hypodermic tubing.
- Needles with slots for holding implants or sensors, or for venting.
- Coaxial needle assemblies.
- Custom marking or pad printing for improved identification and handling.
- Custom diameters, including the ability to swage the diameter, offering a gradual reduction in outside diameter (OD) and inside diameter (ID) measurements.

REAL-LIFE CUSTOM NEEDLES

Examples of how Tegra Medical can custom-manufacture needles and hypotubing:

- Sampling — using tip-forming and EDM, produce a pencil-pointed cannula with a side port for fluid transfer through a septum for scientific, lab, or medical use.
- Biopsy — with electrochemical machining, Nitinol shape setting, and laser marking, produce a needle for any orientation, with custom depth markings and company logo.
- Flexible drill — with laser cutting/welding and Swiss machining, create a custom, flexible cannula with a drill point that can traverse any path to get to its mark.

CAPABILITIES FOR CUSTOM NEEDLES

Our wide range of capabilities provide a nearly limitless choice of options for your custom-manufactured needles:

- Laser cutting – to create custom laser-cut patterns for producing flexible needles that can traverse any path.
- Laser marking and chemical etching – to apply custom depth marks or logos.
- Laser welding – for combining materials or attaching fittings to your needles.
- Precision grinding – to create stepped diameters or multiple transitions along the length of your product.
- CNC Swiss machining – for applying a machined feature or even a custom fitting or hub to your needle.



- EDM – for burr-free drilling of holes and custom geometry.
- Electrochemical machining/deburring – burr-free machining for slots, vents, or notches.
- Nitinol shape setting – for custom deployment of needles through an introducer.
- Wire/tube forming – for retention features or fluid paths in co-axial needle assemblies.
- Tip Forming – using various cold-working and grinding processes we can produce needles in any geometry (e.g., pencil points, hermetically sealed tips, etc.).
- Insert molding – for optimal product quality and reliability.
- Cleaning and finishing – validated finishing and cleaning options including ultrasonic cleaning, electrochemical deburring/polishing, electropolishing and citric passivation.
- Assembly/packaging/sterilization – your custom needles assembled and sterile-packaged, all ready for your next steps.

SPECIALTY NEEDLES

When you don't need custom needles, our specialty points and types include:

POINTS

- Trocar/cone trocar
- Arrowhead
- Franseen
- Regular medical
- Whitacre
- Tuohy
- Conical
- Single facet
- Backside
- Truncated cone
- Tapered point
- Quincke

TYPES

- Biopsy
- Vertebroplasty
- Guidewire introducer
- Bone marrow
- Huber
- Spinal
- Drug delivery
- Aspiration
- Epidural

QUALITY

As with all of our work, we offer design for manufacturability and assembly to ensure that these custom products will meet all functional requirements and be cost-effective. The quality of our custom and specialty needles is renowned. We've implemented robust quality procedures and cGMP practices to satisfy all quality requirements and customer specifications.

Tegra Medical* offers an array of prototyping and manufacturing services with 200,000 sq. ft. of manufacturing in four locations. We use the latest in process controls to give you peace of mind and the highest quality product. Call us to find out how we can help you be more successful.

