

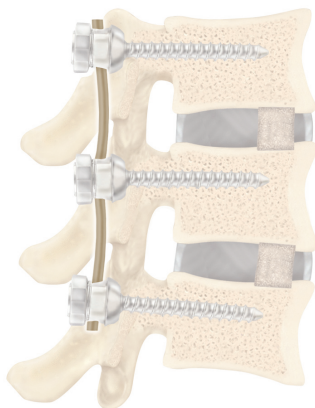
# EPI™ Spinal Stabilization Rods

## Biocompatible PEEK-Optima®

Available now from IDEX Health & Science — EPI Spinal Stabilization Rods for medical device manufacturers developing high quality, ultraclean implantable alternatives to titanium stabilizers.

- ▶ Stabilizing rods in a range of radii, lengths, and diameters
- ▶ Safe, stable PEEK-Optima
  - ▶ Excellent mechanical performance
  - ▶ Repeat sterilization capability
  - ▶ Biocompatibility
- ▶ Tight tolerances on concentricity & dimensions
- ▶ Ultraclean manufacturing and packaging
- ▶ Superior surface finishes
- ▶ Laser marking
- ▶ ISO 13485 facilities

As the medical device industry began serious evaluation of high-performance implantable biomaterials to replace titanium stabilization rods in spinal-fusion surgery, IDEX Health & Science began to research and develop the sequence of combined manufacturing processes required to produce a suitable alternative.



The result, spinal stabilization rods manufactured from Biocompatible PEEK-Optima. Available in a range of radii, lengths, and diameters, these stabilizing rods are delivered with the surface finish, cleanliness, and precision demanded by spine device manufacturers. In a class 10,000 clean room, the rods are finished and packaged for consistency and sterility, batch to batch.

Again leading the market in plastics processing, IDEX Health & Science can now partner with you to customize PEEK-Optima stabilizing rods in an array of lengths, curvatures, and diameters. With special capabilities in machining, heating, bending, marking, cleaning, and packaging — all to exacting standards of sterility and validation — IDEX Health & Science is equipped and trained to meet immediate delivery needs for curved PEEK-Optima rods.

With a 48 year history of providing medical device manufacturers with Eastern Plastics precision-machined plastic components and assemblies, IDEX Health & Science offers complete engineering, manufacturing, and multiple clean room assembly capabilities, certified to ISO 13485 and 9001:2000 standards.

## Precision Machining

- ▶ 75+ Multiple axis CNC turning machines
- ▶ 20+ CNC lathes/screw machines
- ▶ Machining capabilities up to 9 axis
- ▶ Ultra-close tolerances to +/- 0.000005" (+/- 0.000127 mm)
- ▶ ID/OD Lapping
- ▶ Flat lapping/polishing
- ▶ Surface finishes of 16 micro inch (Ra) or better available on all materials
- ▶ Grinding
- ▶ Centerless grinding
- ▶ Holes as small as 0.004" (102 µm) in plastics and 0.007" (178 µm) in metals
- ▶ Long, straight holes to 100:1 aspect ratios possible
- ▶ Small diameter cross holes
- ▶ Interrupted cuts
- ▶ Squares, hexes, contours and other difficult to turn features
- ▶ Metal coatings (including gold electroplating and anodizing)
- ▶ Electropolishing
- ▶ Investment welding and precision TIG welding
- ▶ Laser marking
- ▶ Precision deburring and cleaning processes

## Injection Molding

- ▶ Press capability up to 55 tons
- ▶ Universal presses
- ▶ Fill small features down to 0.006" (152 µm)
- ▶ Insert molding
- ▶ Over molding
- ▶ Prototype molding
- ▶ Rapid prototyping
- ▶ On site design and production of single- and multi-cavity molds
- ▶ Short to medium run tooling and manufacturing: 500–4,000,000 parts/year
- ▶ CAD/CAM, including IGES compatible data transfer
- ▶ 3D design and modeling using SolidWorks®
- ▶ Mold flow and FEA analysis capabilities

## Extrusion

- ▶ Formed tubing assemblies
- ▶ IDs and walls as small as 0.0015" (38 µm)
- ▶ ODs as large as 5/16" (0.313", 8 mm)
- ▶ Multilumen, tapered, oval, profile, and other custom shapes
- ▶ Integrated process controls and closed loop feedback system
- ▶ Real time, online inspection and SPC data acquisition for both OD and ID
- ▶ Bump tubing capabilities
- ▶ On line and offline tubing cutting capabilities
- ▶ Necking, flaring, tipping, thermoforming, annealing, marking, bonding and other value added services available

## Assembly/Finishing

- ▶ Ready to install solutions
- ▶ Systems integration
- ▶ Functional testing and inspection
- ▶ Lot and date traceability
- ▶ Kitting and assembly of component parts
- ▶ Adhesive
- ▶ Ultrasonic Welding
- ▶ Diffusion Bonding
- ▶ Threaded Fasteners
- ▶ Inserts
- ▶ Microscopic deburring
- ▶ Deburring
- ▶ Coating
- ▶ Polishing (lapping, buffing, flame, chemical)
- ▶ Ultrasonic cleaning
- ▶ Inserting/welding
- ▶ Tip forming
- ▶ Thermoforming
- ▶ Necking
- ▶ Flaring
- ▶ Bonding
- ▶ Swaging
- ▶ Foil marking
- ▶ Laser marking
- ▶ Annealing

## Clean Room Services

- ▶ Class 1000, 10,000 and 100,000 clean room facilities
- ▶ Injection molding
- ▶ Extrusion
- ▶ Assembly
- ▶ Ultrasonic cleaning

## Materials Expertise

- ▶ High performance engineered thermoplastics, including PEEK™, PEEK-OPTIMA® and PEEK CLASSIX®
- ▶ Largest processor of PEEK components in the world
- ▶ Custom materials compounding
- ▶ Most other engineering plastics
- ▶ Sapphire, ruby and ceramics
- ▶ Stainless steel, titanium and metal alloys
- ▶ Performance enhancing surface coatings

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