

Catheter Solutions

Whether micro, braided and coiled, or steerable and/or deflectable catheters, within the Spectrum Plastics Group, we have your solution.



Manufacturing Capabilities

Materials

- PEBAX®, Nylon, polyurethane, polyethylene, customer specified resins
- Catheter Liners: PTFE, FEP, Nylon, PEBAX®, Polyimide, customer specified liners
- Braid or coil reinforced composite shaft

Braided Catheter Capabilities

- Patterns (standard, diamond, and half load)
- 16 and 24 carrier braiders
- 1, 2, or 3 wire ends/carrier
- Fully programmable variable braid density/PPI
- Longitudinal (tri-axial) wires in steel, nitinol, and high tensile, nonmetallic fibers, up to 8 longitudinal wires/shaft

Braid wire options (stainless steel)

- Flat wire
 - 0.0005" x 0.0025" (0.013mm x 0.064mm)
 - 0.001 x 0.003" (0.025mm x 0.076mm)
 - 0.0007" x 0.003 (0.018mm x 0.076mm)
 - 0.001" x 0.005 (0.025mm x 0.127mm)
 - Custom configurations available upon request

- Round wire (available in 1 end, 2 end, or 3 end configurations)
 - 0.001 (0.025mm)
 - 0.002" (.051 mm)
 - 0.003" (.076 mm)
 - Custom configurations available upon request

Radiopaque features

- Encapsulated marker bands: Gold, platinum, tungsten
- Extruded marker bands featuring Polymer with high loading of conventional radiopaque fillers
 - Tungsten (bilayer, trilayer) (W) (up to 80% by weight)
 - Barium sulfate (BaSO₄)
 - Bismuth trioxide (Bi₂O₃)
 - Bismuth subcarbonate (BiCO₃)

Finishing and Forming Operations

- Flaring
- Tipping
- Insert molding
- Custom hubs

Deflectable & Steerable Catheters

Materials

Shaft materials:

- PEBA^X®, Nylon, polyurethane, polyethylene, customer specified resins
- Catheter Liners: PTFE, FEP, Nylon, PEBA^X®, Polyimide, customer specified liners
- Braid or coil reinforced composite shaft

Pull wires:

- High Tensile Stainless steel
- Stranded cable

Dimensional Information

- Shaft diameters from 4F to 35F
- Lumen tolerance typically +/- .001"
- OD tolerance typically +/- .002"

Braided & Coil reinforced Catheters

- Custom-Configured, Reinforced Shafts up to 35F
- Ultra-thin walls – industry leading capabilities and tolerances
- Braids with optional longitudinal wire reinforcement increase stability and pushability.

- Liner options achieve lubricity, clarity, and cost considerations
- Custom-configure the stiffness of the tip and shaft segments to match your application.
- Braid configurations and materials customizable for flexibility, kink resistance and pushability.

	Braid	Coil
Torque Response	Excellent	Poor
Flexibility	Excellent	Good
Kink Resistance	Excellent	Good

Multi-lumen delivery systems

Our proprietary processes allow us to manufacture braid or coil reinforced multi-lumen catheters with greater precision and lower cost. Commonly used in structural heart therapies and electrophysiology catheters.

- Up to 20 separate lumens
- Individual lumens may be coil reinforced, PTFE lined, FEP lined, polyimide lined
- May be combined with deflectable catheter design

