

Optinova Mandrels

Solutions for Medical Applications.



Optinova's PTFE or Acetal (POM) mandrels are ideal as processing aids in the manufacturing of braided or coil reinforced shafts for interventional and endoscopic delivery devices.



Key advantages

- **Reliable Performance:** tight tolerances to enable consistent diameter and roundness for catheter shaft manufacturing.
- **Material Options:** Optinova offers both PTFE and Acetal (POM) mandrels for various manufacturing needs and application requirements.
- **PTFE Benefits:** Ideal for small-sized high demanding applications. Low friction and shrinks in diameter when stretched, simplifying superior post-manufacturing mandrel removal. High temperature tolerance makes it ideal for post-processing operations that require elevated temperatures.
- **Acetal (POM) Benefits:** Ideal for medium-sized shafts, cost-effective for large volume production and has a smooth surface for easy removal.
- **Customization:** Apply additives for durability, lower friction, and other optimizations. Acetal available in single and multilayer options, with multilayer improving dimensional stability, flexibility and roundness.
- **Rapid Prototyping:** For your needs in customized development

Applications

- Manufacturing aid for braided or coil-reinforced shafts
- Transport aid of ultra-thin wall delicate extrusions such as catheter jackets or CRM lead components

Technical specifications

Feature		PTFE	Acetal (POM)
OD Dimensional range single layer		0.5-5 mm (0.02-0.20")	1 -6 mm (0.04-0.24")
OD Dimensional range multi layer		N/A	1 -6 mm (0.04-0.24")
Tolerances		+/- 0.025 mm (0.001")	+/- 0.025-0.051 mm (0.001-0.002")
Tensile strength at break	MPa	20 -34	40-70
Elongation at break	%	200-400	10-200
Flexural modulus	Mpa	275-620	1400-3000
Hardness		55-65	85
Density	g/cm ²	2.17	1.3-1.4
Coefficient of friction	°C	0.10	0.35
Melting Point	°C	330	160-175
Min/Max Service Temp.	%	-240/+260	-40/+100
Water absorption		<0.01	0.2-1
ETO		X	X
Steam		X	X
Radiation		--	X

For more technical information, please contact us at our sales offices or visit our website: [optinova.com/contacts](https://www.optinova.com/contacts)

Tight tolerances enable a consistent diameter and roundness for **catheter shaft manufacturing**.



We empower customers through highly reliable tubing solutions.



Medical-grade certifications



We provide the full catheter tubing system:

- Mandrels
- Etched PTFE Liners
- Braided Tubing
- PEBA Jackets
- FEP Heat Shrink
- And more...

We empower customers through highly reliable tubing solutions.

Founded in 1971, Optinova is a world-leading extrusion partner for advanced medical and industrial tubing. With sales offices around the world and four extrusion plants in Finland, Thailand, and the US, we are serving partners from 50+ countries across industries.

Contact Us

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