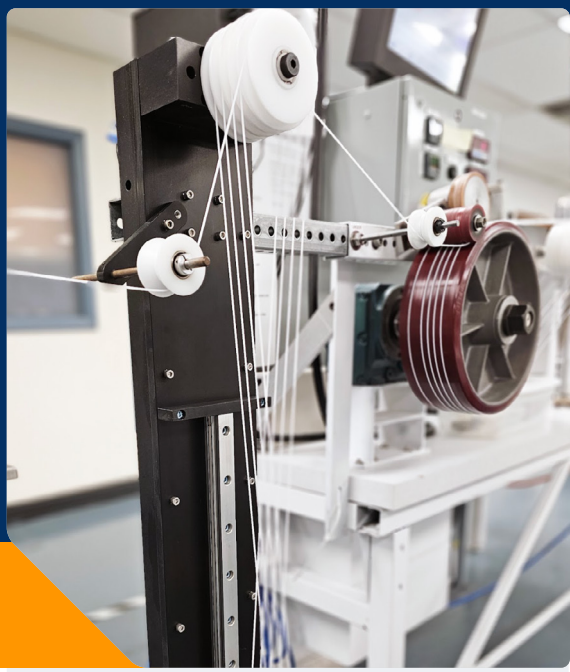
APTYX

High-Performance Acetal Core Mandrel for Precision Manufacturing

HIGH YIELDS. LOW RISK.



1 OPTIMAL FINISH

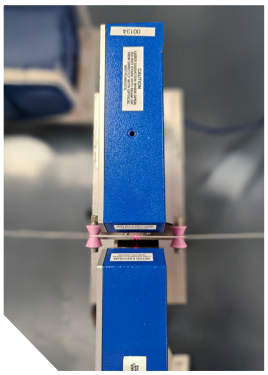
2 SUPERIOR STRENGTH

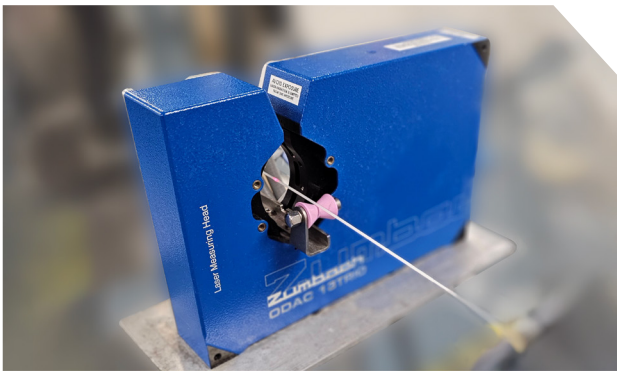
3 UNMATCHED PRECISION

Build Better Catheters. Faster.

As the medical device industry continues to push the boundaries of miniaturization and functionality, component precision and reliability have never been more critical. Acetal core mandrels, widely used in the manufacturing of catheter shafts and other tubular medical devices, are essential to achieving tight dimensional tolerances and repeatable processing results.

Aptyx offers advanced acetal core mandrel capabilities that support the stringent requirements of today's interventional and diagnostic devices. With surface finishes engineered for optimal release characteristics, tensile strength greater than or equal to 6000 psi/32 lbs of force (lbf), and outer diameter (OD) tolerances held to as tight as ±0.0003", Aptyx empowers medical device OEMs to innovate confidently.





APPLICATIONS IN MEDICAL DEVICE MANUFACTURING

- Balloon Catheter
- Multi-Lumen Tubing
- Laser-Cut Hypotubes
- Heat-Shrink Reflow

WHERE PRECISION MEETS PERFORMANCE

Acetal core mandrel delivers:

- ✓ High dimensional stability
- ✓ Low moisture absorption
- ✓ Excellent machinability
- ✓ Smooth surface characteristics
- ✓ Moderate thermal resistance (up to 180°F / 82°C)

Our Processing Excellence Delivers Unmatched Yields

1 OPTIMAL SURFACE FINISH FOR CATHETER BUILDS

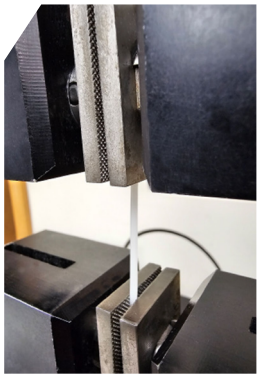
- Achieved through precision proprietary techniques.
- Enables low friction removal after extrusion or heat-shrink processing.
- Reduces the risk of lumen deformation or sticking.

Optimal surface finish from beginning to end of 25,000 ft. run.

200X View

2 TENSILE STRENGTH: GREATER THAN OR EQUAL TO 6000 PSI/32 LBS OF FORCE (LBF)

- Withstands demanding processing steps such as vacuum forming and high-temperature reflow.
- Maintains structural integrity during long-length tubing assemblies.
- Reduces breakage risk during high-speed manufacturing.



Pull test	Result
Start Sample 1	36.47
Start Sample 2	35.73
Start Sample 3	35.11
Start Sample 4	36.18
Start Sample 5	35.21
End Sample 1	35.10
End Sample 2	35.57
End Sample 3	35.25
End Sample 4	35.69
End Sample 5	35.29
Average	35.6

Pull test result exceeding 32psi across a 25,000 ft. run.

3 OD TOLERANCES OF ±0.0003" TO ±0.0005"

- Ovality less than or equal to 0.001.
- Critical for producing tight-tolerance lumens in multi-layer or thin-wall constructions.
- Supports device applications such as:
  - Neurovascular and coronary catheters
  - Electrophysiology introducers
  - Delivery systems for structural heart implants

OD Readings	Specification	Result
Min	0.0712"	0.0714
Max	0.0718"	0.0714
Range Avg	<=0.0006"	0.0001
XYZ Avg (calulcated OD)	0.0715"	0.0714
Calculated OD Cpk	>1.0	2.28

Ovality Readings	Specification	Result
Min	N/A	0.0002
Max	N/A	0.0005
XYZ Calculated Ovality Avg (X)	N/A	0.0003
StDev (S)	N/A	0.0000

Proven process control in-line & post-inspection

Why Partner With Aptyx

- ✓ Rapid prototyping with customizable diameters and lengths.
- ✓ Scalable production from pilot runs to high-volume programs.
- ✓ Material science support to optimize mandrel selection and surface treatment.
- ✓ Integrated capabilities from D&D to manufacturing, assembly, and packaging simplify your supply chain.