

Quick-Turn Precision Extrusion

Development applications for medical devices require quick turnaround manufacturing solutions and flexible short-run design iterations. The Contract Manufacturing Division of Lubrizol Life Science Health (LLS Health) offers precision extrusion solutions to optimize the clinical outcome of thermoplastic and silicone custom extrusions for the medical device industry.

Cost-Effective, Quick-Turn Solutions

Rapid extrusion services reduce product development timelines and can provide for concurrent evaluation of multiple design options thereby increasing speed to market and commercialization.

Complete Support for Rapid Product Development

Supported by a dedicated R&D team and equipment, LLS Health engineering and production resources are available to work with you to support quick design changes, short lead times for custom designed products and pilot production runs.

With centers of excellence for both thermoplastic and silicone precision extrusion, dedicated development lines and in-house tooling capabilities, we can support your next extrusion development program and small-volume custom extrusion needs.

Integrated Systems, Tooling, Process and Quality Control

LLS Health understands the need for rapid extrusion services to operate in the same quality environment as production extrusion. It is for this reason that our quick turn operations are ISO 13485:2016 certified with the same quality equipment used in-house for full scale production.

From leading commercial extrusion equipment to precision tooling and high-quality visual inspection systems, count on our integrated manufacturing platform to support your thermoplastic and silicone medical device extrusion needs.

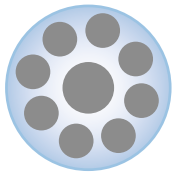
Expertise in Thermoplastic Extrusion - Speed, Efficiency, Experience and Quality

Our expertise spreads across a range of materials from Pebax, Nylon 12, Nylon 11, Thermoplastic Polyurethane (TPU) (Pellethane®, Tecoflex™, and Tecothane™ TPUs), Polyblend, HDPE, LDPE to options of radio-opaque materials like Pebax and thermoplastic polyurethane (Tecoflex™ TPU).

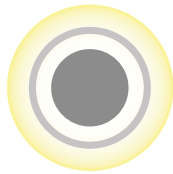
Our expertise includes:

- Sizes from OD 0.0.020" - 0.200", depending on raw material
- Lot size (feet): 100 feet - 500 feet
- Single lumen
- Balloon extrusion
- Lead extrusion
- Coextrusion / Trilayer
- Options of multiple color and radio-opaque additives
- Annealing
- Precision cutting
- Small production lot sizes
- Expedited turnaround times to accommodate project demands

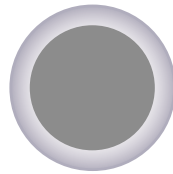
Thermoplastic Geometries



Lead Tubing



Balloon/Coextrusion/Trilayer Tubing

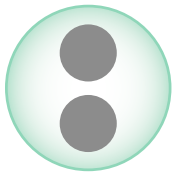


Single Lumen

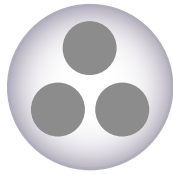
Expertise in Silicone Extrusion - Speed, Efficiency, Experience and Quality

- Single lumen, range from 0.010" - 0.750"
- Multi lumen
- 35 to 80 durometer
- Restricted material (less than 30-day implant)
- Options of multiple color and radio-active additives
- Addition of identification or radio- opaque stripes
- Small production lot sizes
- Expedited turnaround times to accommodate project demands

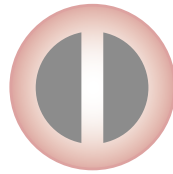
Silicone Geometries



Dual Lumen Round OD with Round IDs



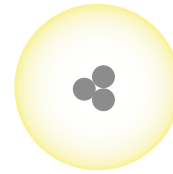
Tri-Lumen Round OD with Round IDs



Dual Lumen Double "D"



Tape Profile



Wire Jacketing



Dual Lumen Foley Catheter Mainshaft

About Lubrizol Life Science Health - The Health business team partners with customer to speed their innovative medical devices and differentiated pharmaceutical products to market. Our dedicated team provides best-in-class polymers and excipients, along with state-of-the-art product design, development, and manufacturing services, with the ultimate goal of creating solutions that improve patient outcomes.

For more information visit www.Lubrizolmeddevicecm.com or email LLS_CM@lubrizol.com.