

MINITUBES

Vascular Implant Tubing

ENGINEERED TO MEET UNIQUE STENT CHALLENGES

Cardiovascular implant designers indeed face difficult challenges. At Minitubes, we have succeeded in understanding them in depth, in order to offer a tubing quality that meets the highest demands.



- A choice of alloys for both balloon-expandable and self-expandable designs.
- An extreme selection of raw materials for biocompatibility and micro/macro material homogeneity.
- Seamless tube for safety.
- Controlled grain size for optimized electropolishing and improved fatigue resistance.
- New limits in dimensional accuracy on Outer Diameter and Wall Thickness for improved laser cutting and strut dimensional consistency.
- Very smooth ID and OD for optimized electropolishing and subsequent coating.
- Controlled mechanical properties for controlled physical behavior and minimized recoil.
- Controlled straightness for improved laser cutting.
- Proven Inspection Methods (high-end instruments, adequate sampling, statistical analysis,...) for reliable characterization and improved yield in customer's production.
- Full certification for easy customer's device registration and material traceability.

MATERIALS

Meet or exceed ASTM and ISO requirements.

Exceptionally clean material to limit the threat of inclusions.

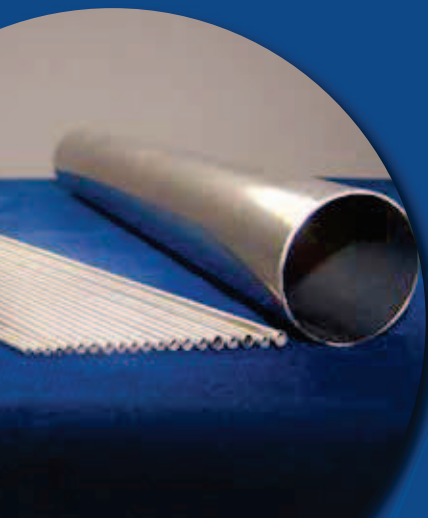
Melt to melt consistency, ensured by a restricted range of chemical composition.

- Stainless Steel (316L per ASTM F 138)
 - Most proven material for a wide range of implanted devices
 - Best value for biocompatible and precise tubing
- CoCr (L605 per ASTM F90, MP35N/35NLT per ASTM F562, Phynox per ASTM F1058)
 - Higher strength and ductility for thinner struts and improved deliverability
 - Enhanced radiopacity
- Nitinol (per ASTM F2063)
 - Selected raw material with low inclusion content to promote fatigue resistance
 - Typical superelastic properties suitable for self-expanding devices
- Other medical grade alloys such as Titanium, Tantalum, ... with special properties meeting your needs.
- Proprietary alloys : partnership to turn your patented alloy into the tube size you need.

ATTRIBUTES

Per Customer Specification or Minitubes Specifications PRD018 or PRD019.

Dedicated engineering team to review your own specific requirements.



- OD up to 31mm (1.22”), from coronary to heart valve applications
With tolerance down to +/- 0.010mm (0.0004”)
and circularity < 0.005mm (0.0002”)
- WT down to 0.05mm (0.002”)
With tolerance down to +/- 0.005mm (0.0002”)
and concentricity < 0.010mm (0.0004”)
- Mechanical and metallurgical properties tailored to the application:
Control over UTS, YS, elongation and grain size
- OD finish typically down to Ra 0.1µm (RMS 4)
and ID finish down to Ra 0.2µm (RMS 8)

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