

# MINITUBES

== PUSHING YOUR LIMITS ==



**Mini tubes,  
Grand vision.**

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THE SPECIALIST IN CUSTOM MANUFACTURING OF SMALL PRECISION TUBES



# Every day, Minitubes helps hearts beat and industries push forward



For four generations, Minitubes has built its expertise on the dedication of its people, and their refusal to accept a material's limits as the final word. We remain a family-owned company, one that puts people first and measures its success by the success of its customers' products.

◦ **HIGH PRECISION METAL TUBES BUILT TO YOUR SPEC, NOT OFF A SHELF**

Designing and manufacturing tailor-made tubes and derived components for high value niche markets

◦ **DRIVING PROGRESS IN MEDICAL AND INDUSTRIAL APPLICATIONS**

Contributing to life-saving innovations (stents, heart valves) and leading industrial technologies

◦ **PUSHING THE LIMITS OF PRECISION, TOGETHER**

Partners in growth. An extension of your team. Co-creators of what's next

◦ **ENGINEERING EXCELLENCE THROUGH RE-IMAGINATION**

Developing proprietary manufacturing processes

◦ **QUALITY IN EVERYDAY OPERATIONS**

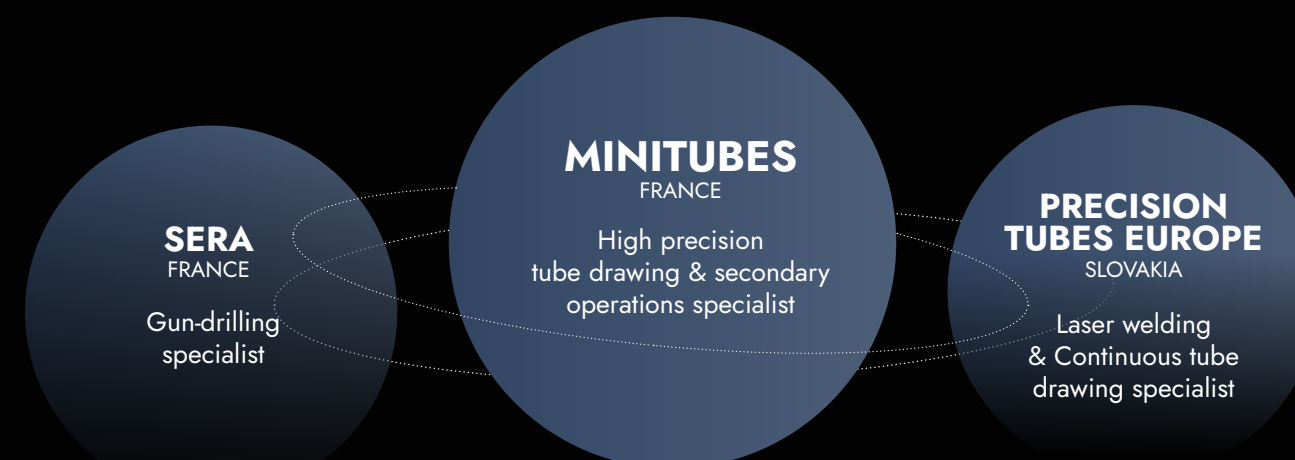
Driven by continuous improvement, beyond ISO 9001 and ISO 13485



From Grenoble, in the French Alps,  
Minitubes supports global leaders in advanced medical  
and industrial technologies



## 3 PRODUCTION SITES



# We make custom precision metal tubes and components built from them

## LIFE SCIENCES

In vitro diagnostic probes, tubes, and parts for endoscopy and chromatography



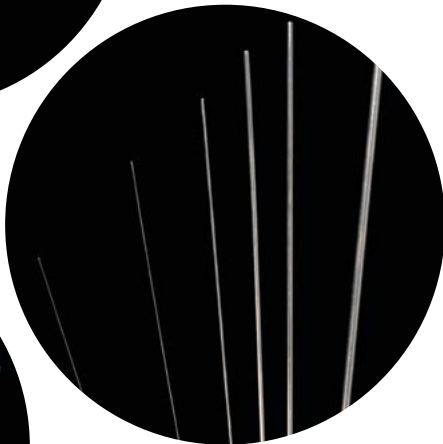
## CARDIOVASCULAR IMPLANTS

Tubes for stents, tubes for heart valves



## CATHETERS & DELIVERY DEVICES

Tubes for catheters and delivery devices



## INDUSTRIAL TECHNOLOGIES

Tubes and parts for other medical, aeronautics, defense & space, automotive, electronics...

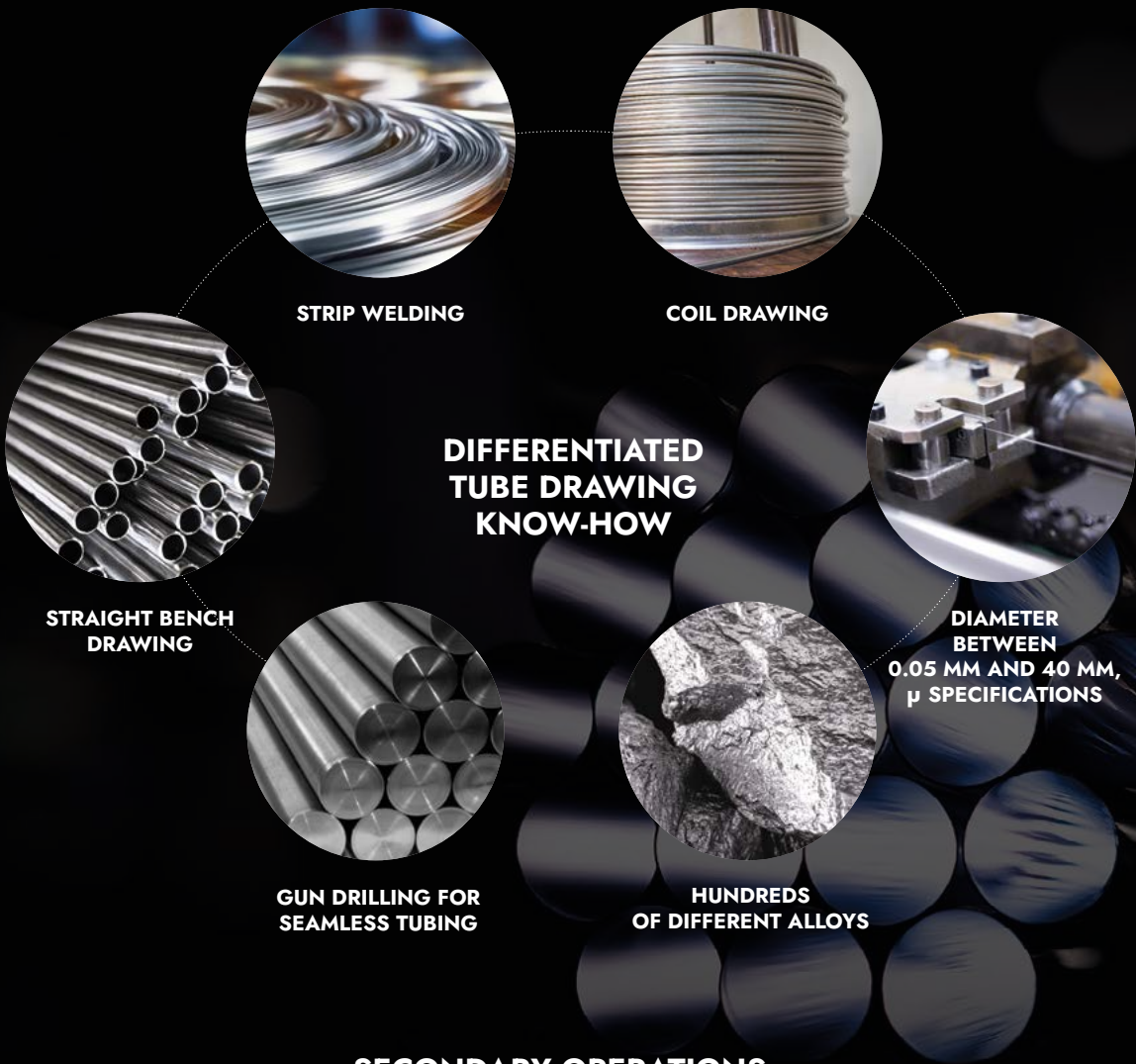


## NEED A TUBE THAT DOESN'T EXIST YET? WE'LL MAKE IT.

With diameters from 0.05 mm (2 thou) to 40 mm (1.6"), thin or thick walls, and over 100 available alloys, we offer tubes and tubular components for the most demanding industries.

Minitubes masters a range of techniques to provide innovative solutions, from design to the production of prototypes and large series.

# What we can make, and how



## SECONDARY OPERATIONS

Either in-house ou through a network of trusted partners

- **AGING** : Precipitation hardening
- **SURFACE FINISH** : Cleaning, etching, passivation, polishing, coating, tumbling
- **SHAPING** : Cutting (shear, electro chemical, abrasive, screw-machining, wire EDM, laser), machining
- **ASSEMBLY** : Welding, brazing, mechanical adjustments, crimping, gluing
- **COATING** : FEP / PTFE : polymer coatings (fluoropolymers) for the inside/outside of tubes - Silicone - Plating (gold, silver, platinum) for specific conductivity or resistance
- **HEAT TREATMENTS** & specific aging
- **CNC MACHINING & ASSEMBLY** of complex parts combining several technologies (cones, machined blocks, needle feedthroughs, etc.)
- **LASER CUTTING** : ability to work on complex geometries

## ALLOYS AND MATERIALS



### Cobalt Alloys

L605®, MP35N®, 35N LT®, Phynox®, Elgiloy®



### Stainless steels

304, 304L, 305, 316, 316L, 316LVM, 316Ti, 321, 347, 904L, 17-7 PH



### And much more...

**Customer patented alloys**  
**Precious alloys** : Gold, platinum, platinum iridium, silver  
**Nickel and its alloys** : Ni 200, Ni 201, Monel®, Inconel® 600, 601, 625, 718, x750, ...  
**Refractory metal, Titanium, Beryllium copper** ...



# We don't just sell you a tube. We co-develop your solution.

Bring us your hardest tube problem.

We'll design, prototype, and produce  
the answer with you. Challenge us!

## WE RUN THE WHOLE PROJECT FOR YOU

- Dedicated, expert-led teams spanning sales, product, and process
- Project management synchronizing multiple programs, facilities, and subcontractors
- Expertise in processes and prototyping: Metallurgy, Chemistry, and tube forming

## WE HELP YOU ITERATE FAST

Turnaround in 3 to 6 weeks to allow your R&D team to quickly iterate

## WE MAKE IT BETTER, BATCH AFTER BATCH

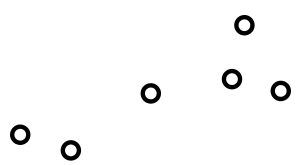
Through Manufacturing Excellence, Process Change and Innovation, enabling increased reliability and Value Improvement Projects

## WE KEEP YOU SUPPLIED, ALWAYS

- **Capacity** Management and ramp-up
- **Holding** strategic inventory of materials and tooling to guarantee the customer's continuous supply
- **Active management** of our Business Continuity Plan

## WE WORK YOUR WAY

We adapt to your systems and processes, not the other way around.



## QUALITY

Certified processes, continuous improvement, and close customer dialogue, at Minitubes, quality is not a department, it is a culture.



## CSR

We are equally committed to responsible practices: green mobility, employee engagement, circular economy, and a low-carbon approach are fully embedded in our everyday actions.

# Mini tubes, Grand vision.



**For four generations,** Minitubes has pushed the limits of precision metal tubing. Today the company is a development partner to the world's leading medical-device makers, with its tubing at the core of stents and heart valves, as well as to the aerospace, watchmaking, and other sectors where tolerances are measured in microns and failure is not an option.

Minitubes takes on the work others turn down, transforming its customers' most demanding specifications into components that perform. It masters metals few can process and holds every step to medical and aerospace-grade standards, from a single prototype to full production.

That expertise deepens with every project and every long-term partnership. It is what allows Minitubes to keep building, for its customers and for the generations of the company still to come.



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