



## OVERVIEW

High Precision Tubing Solutions  
for Demanding Applications

OIL & GAS • ENERGY • AEROSPACE  
MEDICAL • CHEMICAL PROCESS

## HIGH PRECISION TUBES FOR DEMANDING ENVIRONMENTS

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### TUBING EXCELLENCE

With over 70 years of engineering expertise in supplying high precision tubes, Fine Tubes and Superior Tube work closely with customers worldwide, developing high specification tubing solutions to help them solve their technical challenges. We manufacture high performance tubes for supercritical applications in an ever expanding range of stainless steel, nickel, titanium and zirconium alloys.

V

### TUBING MATERIALS

#### ALLOYS

##### STAINLESS STEEL

303SE, 304, 304L, 310, 316, 316L, 316LN, 316LVM, 316TI, 317L, 321, 347, 35NLT, 6Mo, 904L, 15-5PH, 16-6 PH, 17-4PH, 17-7PH, 21-6-9, 42-6, 446, FV607, Nitronic 50™, Duplex S31803, Super Duplex (S32750 and S32760)

##### NICKEL

36% Ni-Fe, 42% Ni-Fe, 59, 75, 188, 200, 201, 211, 263, 29-17 (Kovar), Monel 400, 600, 625, 690, 718, 800-H-HT, 825, C22, C276, C902, HX, K500, L605, MP35N™, X750, Waspaloy™

##### TITANIUM

Ti CP (Grade 1 and Grade 2), Ti 3AL-2.5V (Grade 9), Ti 6AL-4V (Grade 5), Ti 6AL-4V ELI (Grade 23), Ti A-40

##### ZIRCONIUM

Zircaloy 2, Zircaloy 4

#### SIZE RANGE



Seamless, welded or welded and redrawn with outside diameters from 0.25 mm (0.010 in) up to 50 mm (2 in).



Straight lengths up to 20 m (65 ft) and coils up to 10,000 m (33,000 ft) with orbital joints.



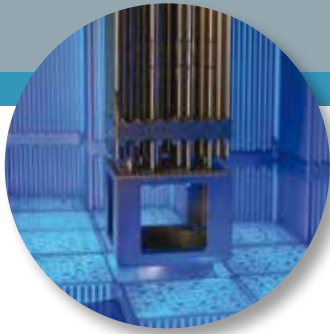
Profiles include round, rectangular, square, oval and elliptical.



Wall thicknesses from less than 0.05 mm (0.002 in) up to 3.8 mm (0.150 in).

For further details, please see our interactive size range chart on our websites:

[www.finetubes.com/products/sizes](http://www.finetubes.com/products/sizes) or [www.superiortube.com/products/our-sizes](http://www.superiortube.com/products/our-sizes)



## TUBING SOLUTIONS

### OIL & GAS

For the most challenging subsea and downhole conditions including seawater, high temperature and sour oil well environments we use materials such as austenitic, super austenitic, duplex and super duplex stainless steels, as well as titanium and nickel alloys for our tubing. We also hold NORSOK M-650 approval for 6Mo and Super Duplex S32750 tubing. Seamless tubes are mainly used for hydraulic and instrumentation applications, in onshore control panels, topside processing facilities, on subsea manifolds and templates. Applications for seam welded & redrawn tubes are umbilicals, subsea control lines and chemical injection tubes.

### ENERGY

As long established suppliers to the nuclear industry, our core products include specialised stainless steel tubes for fuel cans, control rods and tie bars. We also manufacture precision tubes in zirconium alloys for fuel cans, in nickel alloys for heat exchangers and in titanium alloys for the fabrication of condensers. Our control and instrumentation tubes are widely used within the AGR, PWR, CANDU and PHWR. For the conventional and solar power industry we also supply specialist heat exchanger tubing.

### AEROSPACE

We develop high strength tubing for aircraft engines and airframes in today's leading military and civil aircraft programmes. This includes tubing for hydraulic and pneumatic control systems, torque control rods, transmission, landing gear and instrumentation. Our materials such as titanium 3Al-2.5V, titanium 6Al-4V and Ti CP offer excellent strength/weight ratios for 3,000 or 5,000 psi systems. We also specialise in high temperature nickel alloys and stainless steel grades such as 21-6-9. Besides our AS9100 approved quality system, we have NADCAP certification on heat treatment, non-destructive testing and fusion welding.

### MEDICAL

Medical tubes are used in critical cardiovascular and trauma procedures. Our process capability delivers precise control of tube dimensions. We supply high specification tubing for heart valves, trauma and orthopaedic implants, surgical instruments, catheters, stents and orthodontic applications. Materials include a range of titanium alloys along with conventional or vacuum melt stainless steels in circular or bespoke profiles.

### CHEMICAL PROCESS

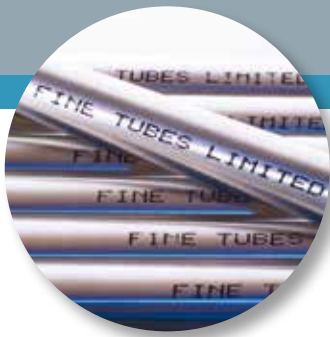
High quality tubes in the chemical process industry are used in a variety of applications, such as flow meters, measurement systems, condenser tubes, shell and tube heat exchangers, paper production and acetic acid alloy plants. Typical materials include austenitic stainless grades in standard or modified analysis, as drawn or electropolished.

#### PRODUCTION FACILITIES:

- Pilger mills
- Multi-roll rolling mills
- Draw benches
- Tube welding mills - In-line weld mills
- Controlled atmosphere heat treatment
- Bright annealing/hydrogen furnace
- Vacuum annealing
- Pickling & passivation plant
- NDT ultrasonic & eddy current testing
- Hydrostatic testing
- Radiographic examination
- Electropolishing capabilities
- Full chemical and physical laboratory analysis

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## GLOBAL PRESENCE

Through the partnership between U.K.-based Fine Tubes and U.S.-based Superior Tube, both companies can offer increased capabilities, leading to significantly reduced lead times, an extended product portfolio, increased global reach and outstanding customer service.

Our tubing experts deliver high precision tubing to customers in over 35 countries worldwide.

In addition to tube mills in the United Kingdom and the United States, we have sales offices in Germany, France, India and the United States, as well as an extensive network of partners in Asia, Europe and the Middle East.

Fine Tubes and Superior Tube are collectively a unit of AMETEK, Inc., a leading global manufacturer of electronic instruments and electromechanical devices.



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