

TITANIUM

Titanium and titanium alloys are used where strength, low weight and resistance to high temperatures are important. This alloy is immune to corrosive attack by salt seawater or marine atmospheres. Often used in propeller shafts, rigging and other parts of boats that are exposed to seawater. It also exhibits exceptional resistance to wide range of acids, alkalis natural waters and industrial chemicals. Titanium is a strong, lightweight metal. It is as strong as steel but 45% lighter. It is also twice as strong as aluminium. The heat transfer properties of titanium approximate those of admiralty brass and copper nickel.

- Excellent Corrosion Resistance
- Superior Strength
- High Heat Transfer Efficiency

Grade 1 - 4

are unalloyed and considered commercially pure or "CP". Generally the tensile and yield strength goes up with grade number for these "pure" grades. The difference in their physical properties is primarily due to the quantity of interstitial elements. They are used for corrosion resistance applications where cost and ease of fabrication and welding are important.

Grade 7

contains 0.12 to 0.25% Palladium. This grade is similar to Grade 2. The small quantity of Palladium added gives it enhanced crevice corrosion resistance at low temperatures and high pH.

Grade 9

contains 3.0% Aluminium and 2.5% Vanadium. This grade is a compromise between the ease of welding and manufacturing of the "pure" grades and the high strength of Grade 5. It is commonly used in aircraft tubing for hydraulics and in athletic equipment.

Grade 11

contains 0.12 to 0.25% Palladium. This grade has enhanced corrosion resistance.

Grade 12

contains 0.3% Molybdenum and 0.8% Nickel.

Grade 16

contains 0.04 to 0.08% Palladium. This grade has enhanced corrosion resistance.

Grade 17

contains 0.04 to 0.08% Palladium. This grade has enhanced corrosion resistance.

TITANIUM TUBES & PIPES

Types:

Seamless or Welded

Grade:

Gr.1, Gr.2, Gr.3, Gr.4, Gr.7, Gr.9, Gr.11, Gr.12, Gr.16, Gr.17

Dimensions

Dimensions of our normal product range: We are always trying to improve our range so please contact us if you are looking for other dimensions:

Seamless Ø 2.0 - 114.0 mm	wall 0.3 - 8.0 mm
Welded Ø 120.0 - 965.0 mm	wall 1.65 - 12.7 mm

Strictly implements the standard specifications of:

ASTM B338 / ASME SB338

ASTM B861 / ASME SB861

ASTM B862 / ASME SB862

TITANIUM SLABS, PLATES, & SHEETS

Grade:

Gr.1, Gr.2, Gr.3, Gr.7, Gr.9, Gr.12

Dimensions

Width up to 2000 mm	Length up to 5000 mm
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Water cut to precision size is available, and free of oxide

Strictly implements the standard specifications of:

ASTM B265 / ASME SB265

TITANIUM RODS, BARS, SECTIONS & PROFILES

Grade:

Gr.1, Gr.2, Gr.3, Gr.4, Gr.5, Gr.7, Gr.9, Gr.12

Dimensions

Custom sizes are available.

Strictly implements the standard specifications of:

ASTM B348 / ASME SB348

TITANIUM FORGINGS

Grade:

GR.1, Gr.2, Gr.5, Gr.7, Gr.12

Strictly implements the standard specification of:
ASTM B381 / ASME SB381

TITANIUM WIRES

Grade:

Gr.2, Gr.5, Gr.7

Dimensions

Ø 0.05 - 5.0 mm

Strictly implements the standard specification of:
ASTM B863
Welding wires to AWS A5.16

TITANIUM PIPE FITTINGS

Elbows (45°, 90°, 180°)
Reducers (Concentric, Eccentric)
Rees (Straight, reducing), stub ends, caps, flanges.

Strictly implements the standard specification of:
ASTM B363

TITANIUM CLAD MATERIAL

In metallurgy, cladding is the bonding together of dissimilar metals. It is distinct from welding or gluing as a method to fasten the metals together. Cladding is often achieved by extruding two metals through a die as well as pressing or rolling sheets together under high pressure.

Cladding is often used to manufacture coins from different metals. This allows a cheaper metal to be used as a filler.

TITANIUM CLAD COPPER

Excellent corrosion resistance, and conductivity.
Great application in field of electroplating, electrolysis, hydrometallurgy.

TITANIUM CLAD STEEL

Excellent corrosion resistance, with cheaper cost.
Widely used for tube sheets of heat exchangers, shells and related industries.