TITANIUM GRADE 2 TUBING

Titanium Grade 2 is an unalloyed, commercially pure titanium. It is the most commonly used grade of titanium because of its strength, weldability, and outstanding resistance to corrosion. Good ductility and formability make it a popular alloy choice for tubing or piping systems, heat exchangers, reaction and pressure vessels, and flue-gas desulphurization systems. Titanium Gr2 is used across industries such as chemical processing, petrochemical processing, aerospace, and marine.

PRODUCT SPECIFICATIONS

ASTM B338

SIZE RANGE

Outside Diameter (OD)	Wall Thickness
.125″–.500″	.035″

CHEMICAL REQUIREMENTS

TITANIUM GRADE 2 (UNS R50400)
COMPOSITION %

N	Nitrogen	0.03 max
C	Carbon	0.08 max
H	Hydrogen	0.015 max
Fe	Iron	0.30 max
O	Oxygen	0.25 max
Residuals, each		0.1 max
Residuals, total		0.4 max
Ti	Titanium	Balance

DIMENSIONAL TOLERANCES

OD	OD Tolerance	Wall Tolerance
.125″–.500″	+.003″/-.000″	± 10%

MECHANICAL PROPERTIES

Yield Strength	40 ksi min
Tensile Strength	50 ksi min
Elongation (min 2″)	20%
Hardness (Rockwell B Scale)	80 HRB max

OD	Wall	ID	Lbs./Ft.	Bursting PSI	Working PSI
1/8″ (.125″)	.035	.055	.0183	40,400	10,100
1/4″ (.250″)	.035	.180	.0462	19,200	4,800
3/8″ (.375″)	.035	.305	.0731	12,400	3,100
1/2″ (.500″)	.035	.430	.100	9,200	2,300

All pressure ratings are approximate and for illustration purposes only. Values are not guaranteed or warrantied.

TYPICAL APPLICATIONS

Heat exchangers
Oil & gas components
Power generation
Seawater cooling
Desalination equipment
Chlorate manufacturing
Reactor autoclaves

FABRICATION

Titanium Grade 2 responds well to cold forming using standard methods. It can be readily machined, but special attention must be paid to maintaining sharp tools and the liberal use of coolant. As with machining austenitic stainless steels, cuts should be deep and continuous with slow feeds and speeds.