

ASTM F136 Ti-6Al-4V ELI Titanium Bar

Diameter (mm): $\Phi 3 - \Phi 300$ (Customizable upon request)

Length (mm): 1000 - 6000 (Customizable upon request)

Standard: ASTM F136

Lead Time:

Standard Sizes: 7 to 15 business days

Custom Orders: Approximately 1 month

ASTM F136 Ti-6Al-4V ELI Titanium Bar - High-Purity Medical Grade Titanium Alloy Overview
The ASTM F136 Ti-6Al-4V ELI Titanium Rods (Grade 23) is a high-purity version of Ti-6Al-4V, designed specifically for medical applications. With a low oxygen content (maximum 0.13%), it offers improved plasticity and fracture toughness compared to standard Ti-6Al-4V (Grade 5). This titanium alloy is ideal for use in a wide range of medical implants, surgical instruments, and dental implants due to its exceptional biocompatibility, high strength, light weight, and corrosion resistance.

Specifications for Medical Grade Titanium Bar

Grade	Grade 23
Origin	Baoji, China
Payment Method	Stock Orders: Full payment required before shipment Custom Orders: 30% deposit, balance due before shipment
Tech	Forged, Rolled
Shape	Round rods, Hexagonal rods, Rectangular rods, etc.
Finish	machine polishing, grinding polishing, sandblasting
Application	Clinical Medicine, Surgical Implantation, Medical Device Manufacturing
Delivery Status	Cold working state (Y), Annealed state (M)
Packing	Special export thickened wooden box packing
Quality Certifications	ISO9001, AS9100
MOQ	100kg

Chemical Composition for ASTM F136 titanium rods

Element	Composition, (%) (mass/mass)
Ti	balance
C,max	0.08
Al	5.5-6.50
V	3.5-4.50
Fe,max	0.25
O,max	0.13
N,max	0.05
H,max	0.012

Mechanical Properties of ASTM F136 Ti-6Al-4V ELI Titanium Bar

Nominal Diameter or Distance Between Parallel Sides,in.(mm)	Tensile Strength min, psi(Mpa)	Yield Strength(0.2% Offset) Min, psi (Mpa)	Elongation in 4D or 4W, min, %			Reduction of Area, Min, %		
			L	LT	ST	L	LT	ST
<0.187(<4.75mm)	125000(860)	115000(795)	10	-	-	-	-	-
0.187-≤1.75(4.75-≤44.45)	125000(860)	115000(795)	10	-	-	25	-	-
1.75-≤2.50(44.45-≤63.50)	120000(825)	110000(760)	8	-	-	20	-	-
2.50-≤4.00(63.50-≤101.60)	120000(825)	110000(760)	8	8	8	15	15	15

Independent third-party agencies perform all testing before each shipment. A complete inspection report is included with every order, ensuring full traceability and compliance with international standards.

Equivalent Grades for ASTM F136 Ti-6Al-4V ELI Titanium Rods

ASTM Standard	Composition	China(GB/T) Standard	DIN Standard	UNS Standard
Grade23	Ti-6Al-4V ELI	TC4ELI	3.7165	UNS R56401

Customization Services for ASTM F136 Ti-6Al-4V ELI Titanium Bar

Size Customization: We offer diameters ranging from $\Phi 3\text{mm}$ to $\Phi 300\text{mm}$, with custom lengths available to meet your specific needs.

Surface Treatment: In addition to standard machining polishing and sandblasting, we can provide specialized surface treatments such as hard anodizing and coating upon request.

Material Inspection: We provide a complete inspection report for each batch, ensuring that the material complies with ASTM F136 and other international standards.

ASTM F136 Ti-6Al-4V ELI Titanium Rods Applications - Medical, Surgical & Dental Uses

Clinical Medicine: Bone implants, artificial joints, dental implants, etc.

Surgical Instruments: Precision surgical tools, microsurgical instruments, etc.

Medical Devices: Vascular stents, monitoring equipment, medical sensors, etc.

ASTM F136 Titanium Bar Manufacturing Process - From Raw Material to Final Product

Raw Material Procurement: We source high-quality Grade 0/1 sponge titanium with low impurity elements to produce titanium ingots.

Melting & Alloying: Titanium, aluminum, and vanadium are melted together to form Ti-6Al-4V ELI titanium alloy ingots.

Forging & Rolling: The alloy ingots are forged and rolled into titanium bars of the desired size.

Heat Treatment: Annealing is applied to enhance material properties and reduce internal stresses.

Surface Treatment: The bars are then machined, polished, and sandblasted according to customer requirements.

Size Customization & Inspection: We provide precise size customization and carry out rigorous quality inspections.

Packaging & Shipment: The final products are packed in reinforced wooden crates to ensure safe transportation.

Titanium Bar FAQ - Common Questions About Titanium Bars)

1. How do you ensure the quality of the ASTM F136 titanium bars?

All ASTM F136 Ti-6Al-4V ELI titanium bars undergo strict third-party testing. Every order includes a detailed inspection report, accompanied by a certificate of quality issued by our company to ensure the products fully comply with ASTM F136 and international quality standards.

2. What is the packaging like?

Our ASTM F136 titanium bars are packaged in custom reinforced wooden crates to protect against damage during transit. Prior to shipment, we will provide photos or videos for customer approval to ensure the packaging is secure and reliable. This packaging solution is suitable for long-distance and international deliveries.

3. How can I purchase ASTM F136 titanium rods?

Please send your required specifications to info@zctitanium.com or click on the "Contact Us" button to reach us. Our sales team will promptly contact you with a quote and shipping details.

4. Do you offer samples?

Yes, we offer free samples for testing. However, you will need to cover the shipping and customs fees. You can test our products to ensure they meet your needs and quality standards. Please contact our sales team to request a sample.