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TECHNICAL DATASHEET

[Titanium Grade 5]

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► GENERAL DESCRIPTION

Ti-6Al-4V (Grade 5) is the most widely used $\alpha+\beta$ titanium alloy, offering high strength, excellent corrosion resistance, and good fatigue performance while maintaining a low density. It also provides good machinability and biocompatibility, making it one of the key materials for aerospace, medical implant, and high-end industrial applications.

► DESIGNATIONS & STANDARDS

DIN	ASTM	UNS	JIS
3.7164	F1472/ISO5832-3	R56400	TAB6400

► PRODUCT FORMS & APPLICABLE STANDARDS

Product Form	Applicable Standards
Plate / Sheet	ASTM B265 Grade 5; ASTM F1472; ISO 5832-3; AMS 4911; JIS H4600 Class 60
Bar / Rod	ASTM B348 Grade 5; ASTM F1472; ISO 5832-3; AMS 4928; JIS H4650 Class 60
Wire	ASTM B863 Grade 5; ASTM F1472; ISO 5832-3

► CHEMICAL COMPOSITION (MASS %) *In accordance with: [ISO5832-3]*

Element	Al	V	Fe	O	C	N	H	Ti
Content (%)	5.5-6.75	3.5-4.5	≤0.30	≤0.20	≤0.08	≤0.05	≤0.015	Balance

► HEAT TREATMENT

Condition	Tensile Strength (MPa)	Yield Strength (MPa)	Elongation (4D)	Reduction of Area (%)
Sheet and strip	≥860	≥780	≥8	10 × t
Bar	≥860	≥780	≥10	not applicable

► APPLICATIONS

Condition	Dimension
Medical	Orthopedic instruments / Dental parts / Spinal instruments / External fixators / Implant-related structural parts
Aerospace	Aircraft structural parts / Engine parts / Blades / Brackets / Fasteners / Landing gear-related parts
Industrial	High-strength corrosion-resistant shafts / Chemical equipment parts / Marine fasteners / Sports equipment parts
Mechanical engineering	Lightweight robotic arms / Joint connectors / Weight-reduction structural parts / High-strength grippers / UAV/robot frames

► AVAILABLE FORMS

Available Form	Size Range	Surface Finish	Length (Customizable)	Tolerance (Customizable)	Delivery Condition
Plate	T0.5-T200.0mm	Milled / Bright	L:200/250/300 W:200/300/500/1000	-0.0/+1.0mm	Annealed
Bar	φ1.0-φ200.0mm	Ground / Precision Polished	3M/PCS	h6-h9	Annealed
Wire	φ1.0-φ3.0mm	Ground / Precision Polished	1M/PCS	h6-h9	Annealed

Available Form	Diameter(mm)	Thickness(mm)	Surface
Titanium disc	φ98.0*T	10.0/12.0/14.0/16.0/18.0/20.0/22.0/25.0	Milling+Vacuum packaging
Titanium square plate	150*140*T; 205*145*T; 250*155*T	10.0/12.0/14.0/16.0/18.0/20.0/22.0/25.0	Milling+Vacuum packaging

Materials, specifications or special requirements not shown in the table can all be customized. Please contact our sales team.

► TESTING & CERTIFICATION

TESTING CAPABILITIES	QUALITY & TRACEABILITY
- Chemical: OES · O/N/H analyzer - Mechanical: tensile · Rockwell/Vickers · impact - NDT: ultrasonic testing (UT) - Metallography: optical & electron microscope - Dimensional: straightness / roundness / coaxiality	- ERP full-process traceability · heat-number control - Batch consistency control - Third-party testing: on request, at extra cost - Standards: ASTM · ISO · EN · AMS · DIN - MTC with each shipment

CERTIFICATION: ISO 13485 · ISO 9001

THIRD-PARTY TESTING: SGS



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