

Medical Titanium Screws

Our **medical-grade titanium screws** are engineered to provide long-term safety and stability in the human body. Through stringent manufacturing processes and quality control, we ensure these screws offer reliable support for bone healing across various clinical applications, including orthopedics, trauma surgery, maxillofacial surgery, and spinal surgery.

Technical Specifications for Medical Titanium Screws

Material Grades	Grade 1, Grade 2, Grade 4, Grade 5 (Ti-6Al-4V), Grade 23 (Ti-6Al-4V ELI)
Standards	Compliance: Conforms to ASTM F136, ASTM F67, ISO 5832-3, ISO 10642, DIN 963 / DIN 964, ANSI/ASME B18.3, and other international standards. We also provide complete third-party inspection reports. <ul style="list-style-type: none"> • Nominal Diameter: M1.5 – M10 • Length: 4mm – 60mm • Tolerance: H7-H9(Custom sizes available upon request)
Product Dimensions	Thread Pitch (Customizable): <ul style="list-style-type: none"> • Fine Thread: 0.35mm, 0.4mm, 0.45mm • Standard Thread: 0.5mm, 0.6mm • Cortical Bone Thread: 0.75mm, 1.0mm • Cancellous Bone Thread: 1.25mm, 1.5mm Drive Types: Cross Slot, Hex Slot, Internal Hexagon, Star Drive, etc. <ul style="list-style-type: none"> • Shot Blasting: Creates a uniform roughness with $Ra = 2-4\mu m$ for enhanced osseointegration.
Mechanical Surface Treatments	<ul style="list-style-type: none"> • Polishing: Achieves a mirror finish, reducing tissue adhesion, with $Ra \leq 0.8\mu m$ after polishing. • Thread Rolling: Ensures continuity of thread fibers for improved strength.

Titanium Alloy Screws vs. Traditional Materials

Property	Medical Titanium Screws	Stainless Steel Screws	Cobalt-Chromium Screws	Alloy
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Property	Medical Titanium Screws	Stainless Steel Screws	Cobalt-Chromium Screws	Alloy
Biocompatibility	Excellent, no allergic reactions	Good, may cause nickel allergy	Good, may cause cobalt-chromium allergy	cause
Elastic Modulus	110 GPa (closer to bone)	200 GPa	230 GPa	
Imaging Compatibility	Minimal artifact, MRI safe	Noticeable artifact, MRI conditional	Noticeable artifact, MRI conditional	MRI
Corrosion Resistance	Excellent, no gap corrosion	Good, possible crevice corrosion	Good, possible crevice corrosion	crevice
Long-Term Stability	Excellent, no metal disease reports	Good, possible corrosion or discoloration	Good, possible local corrosion or discoloration	local corrosion
Bone Integration Ability	Excellent	Limited	Limited	

Your Trusted Partner for Medical Titanium Solutions

We are not just a supplier; we are your strategic partner in providing **high-quality titanium screws** for medical applications. Our comprehensive services include:

- **OEM/ODM Customization:** Tailored designs to meet your specific requirements, including custom sizes, head structures, and drive types.
- **Stable Production and Timely Delivery:** Leveraging our robust supply chain and production lines, we ensure consistent availability and on-time delivery for large orders.
- **Professional Technical Support:** We offer complete technical documentation, including inspection reports, material certificates, and any other required documents.

With over a decade of experience in manufacturing titanium products, we are committed to providing full product support and customization to help you supply high-quality medical titanium screws. Whether standard sizes or custom specifications, we are equipped to handle your needs, ensuring timely deliveries and adherence to international quality standards.