TITANIUM * 64 * STRESS RELIEF HEAT TREATMENT

Description

Titanium Ti-64 undergoes a transformation that enhances its mechanical properties and overall performance. This heat treatment process involves heating the material to a specific temperature and then gradually cooling it. The resulting benefits include reduced internal stresses, improved dimensional stability, and increased resistance to fatigue. Stress relief heat treatment for Ti-64 is particularly advantageous for parts that require prolonged use under high mechanical stress or fluctuating temperature conditions, ensuring they remain reliable and durable over time. This treatment enables the production of components with enhanced strength and resilience, making Titanium Ti-64 a preferred choice for a wide range of critical applications, including aerospace, medical, and industrial sectors.

Benefits

- Enhanced Mechanical Properties
- Reduced Internal Stresses
- Dimensional Stability
- Improved Fatigue Resistance
- Extended Component Lifespan
- Versatility

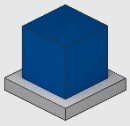
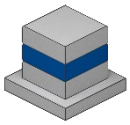
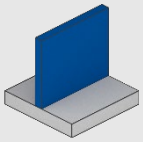
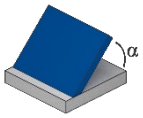
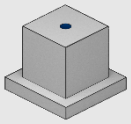
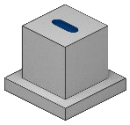
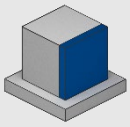
Application

- Aerospace
- Medical
- Energy
- Automotive
- Military
- Industrial and Manufacturing

Data sheet

	Units	**Print direction**	**Titanium * 64**
DIN	-	-	3.7165
Wire diameter	mm	-	1.0
Density	g/cm³	-	4.4
Ultimate tensile Strength	MPa	XY XZ	881 ± 27 855 ± 12
Yield strength	MPa	XY XZ	786 ± 22 760 ± 16
Elongation at break	%	XY XZ	11 ± 0 12 ± 1
Hardness Vickers	HV	-	331

Technical specifications

	Description		Standalone Printer (M450)	Robot Integration
Maximum dimensions	Largest printable size		145 x 168 x 430 mm3	3000 x 3000 x 2500 mm3
Min feature size in z-direction	Print layer height		0.6 – 1.2 mm	0.6 – 1.2 mm
Minimum Wall Thickness	Smallest wall thickness available for printing		2.0 mm (smaller possible on request)	2.0 mm (smaller possible on request)
Unsupported Overhang	Minimum angle at which a wall can be printed without requiring support		>70°	>70° standard 0° when two external axes are used
Holes	Minimum diameter available for printing holes		2.0 mm (smaller possible on request)	2.0 mm
Slot width	Minimum width of a slot		1.2 mm	1.2 mm
General Tolerances	Expected tolerance (dimensional accuracy)		± 0,5% With a minimum of 0,5 mm (smaller possible on request)	± 0,5% With a minimum of 0,5 mm (smaller possible on request)