



TITAN

Grade 5 ELI

non-ferrous alloys
Titanium

Material No.	DIN Abbreviation	AFNOR	AISI/SAE/ASTM	ISO	Euro Standard EN	Others
3.7165	TiAl6V (former Ti 6 4)	T6V	AISI F136	5832-3	TiAl6V4	

Distinctive feature & main attribute: a castable aluminium-vanadium alloyed titanium according to ELI standard (Extra Low Interstitial) as well as ISO 5832-3 and ASTM F-136 standard, being the most common of all titanium alloys, excelling in moderate strength and good strength of weight. Titan Grade 5 has higher mechanical properties than Titan Grade 4, with a remarkable corrosion resistance against oxidizing acids, mixed acids and chloride solutions, pitting corrosion and stress corrosion cracking.

Use & application range: this material covers the requirement of surgical, dental implants and instruments, the watch industry and many more.

REFERENCE ANALYSIS %	C	Fe	O	N	H	Al	V	Ti
	max. 0.08	max. 0.25	max. 0.13	max. 0.05	max. 0.015	5.50 6.50	3.50 4.50	balance

EXECUTION DELIVERY FORM STANDARD SIZES AVAILABILITY	<ul style="list-style-type: none"> • Execution in 3 m (2 m) round bars • Standard size in stock: see Programme range • Other sizes on request
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TOLERANCES	<ul style="list-style-type: none"> • High precision cold drawn, ground, polished; ISO h6 (h7) • $\varnothing \geq 2.00$ mm, pointed & chamfered • Tighter tolerances on request
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MECHANICAL PROPERTIES	At delivery status according to ISO & ASTM standard: <ul style="list-style-type: none"> • Tensile strength (R_m): ≥ 900 MPa • Proof stress ($R_p 0.2$): ≥ 795 MPa • Elongation A (ϵ): ≥ 10 %
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CUTTING RATES	<ul style="list-style-type: none"> • Speed (v): $v_c \sim 20 - 40$ m/min • Feed (f): $\sim 0.08 - 0.15$ mm/revolution • Cutting angle (δ): $\sim -100/+120$ Value depending on the lubrication oil, cutting tools and shape of parts. Use only tools of well polished cutting surface. <ul style="list-style-type: none"> • Cutting oil: e.g. ORTHO NFX of Motorex
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