



TECHNICAL DATASHEET

High nitrogen stainless steel FT 010 – Version 0

This nitrogen-doped austenitic stainless steel offers better tensile strength, wear resistance, and resistance to pitting and crevice corrosion than the 316LVM grade.

Obtained through slag remelting, this grade contains no ferrite and the inclusion cleanliness of its microstructure renders it non-magnetic and biocompatible with human tissue.

This alloy is used in the manufacture of heavy-use orthopaedic implants and osteosynthesis devices, such as very thin screws or high-mobility prostheses.

➤ NAMES

Europe		USA	Other
number	symbol		Rex 734®
1.4472	X4CrNiMnMo21-9-4	UNS S31675	M30NW

APPLICATIONS	ADVANTAGES
Orthopaedic implants and osteosynthesis devices	Yield strength up to twice as high as the 316LVM in annealed state High corrosion resistance Good forgeability
STANDARDS	SHAPES
ISO 5832-9 ASTM F1586	BAR Diameter 8-70 mm Length 3000-3500 mm Tolerance Ø≤20 mm: h8-h9 – Ø>20 mm: h9-h11

➤ CHEMICAL COMPOSITION

%	C	Si	Mn	P	S	N	Cr	Mo	Ni	Cu	Nb	Fe
min			2			0.25	19.5	2	9		0.25	residue
max	0.08	0.75	4.25	0.025	0.01	0.5	22	3	11	0.25	0.8	



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➤ MECHANICAL PROPERTIES

Product	Diameter	Tensile strength (Rm) (Mpa)	Yield strength (Rp0.2) (Mpa)	Elongation after fracture (%)
Rapid quenched (annealed)	All	740	430	35
Cold-worked (half-hard)	≤ 20	1000	700	20
Super cold-worked (hard)	≤ 20	1100	1000	10



➤ PHYSICAL PROPERTIES

Density (g/cm ³)	7.9
Modulus of elasticity at 20°C (N/mm ²)	195 x10 ³
Thermal conductivity at 20°C (W/m °C)	14
Mean coefficient of thermal expansion at 20-200°C (mm °C)	16.6 x10 ⁻⁶
Relative permeability	≤1.01

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