

MEDICAL & LIFE SCIENCES

Meeting the unique requirements of the Medical and Life Science industries as both a high quality raw material supplier and a manufacturer of high precision tubes used across Medical Trauma, Cardiovascular & Life Science applications.

As a 'raw material' manufacturer we take complete control of the melt, extrusion and cold production steps to ensure full quality control and traceability.

As a high specification tube manufacturer we use our production facilities in Issoudun, France to meet the toughest of challenges for mechanical property, tolerance control, surface finish and NDT.

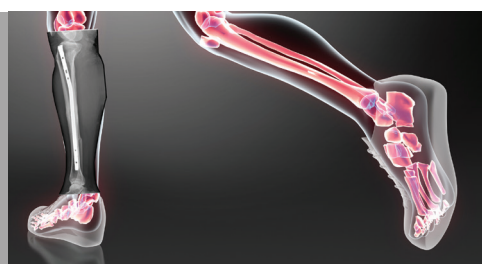
Products & Applications

Trauma

Nails & Screws for internal fracture fixation.

Dimensions:

Outside diameter from 6.0 to 20 mm. Wall Thickness from 1.0 to 5.0 mm.



Equipment

Surgical Tools & Instruments: endoscopic equipment, needles.

Dimensions:

Outside diameter from 1.6 to 25 mm. Wall thickness from 0.1 to 2.0 mm.



Life Sciences

Precision Tubing used in Liquid Chromatography applications.

Dimensions:

Outside diameter from 1.6 (1/16") to 8 mm (0.314").

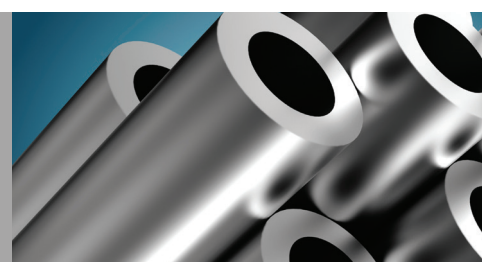


Re-Draw Raw Materials

Austenitic grades. AOD and re-melt options.

Dimensions:

Outside diameter from 38 to 63.5 mm. Wall thickness from 3.2 to 20 mm.



Medical Grades

DMV designation	Nearest equivalent standard		Typical chemical composition ¹⁾					
	UNS	EN	C _{max}	Cr	Ni	Mo	Cu	Others
DMV 304	S30400	1.4301	0.06	18.5	9.5			
DMV 316LVM	S31673	1.4441	0.025	17.5	14	2.8	<=0.10	N <=0.10
DMV 316L	S31603	1.4404	0.03	17.0	12.0	2.25		
DMV 316Ti	S31635	1.4571	0.08	17.0	11.5	2.25		
DMV 174PH	S17400	1.4542	0.07	17.0	4.0		4.0	

¹⁾All figures in weight percentage. In case of order, the limits of the order specification will apply.

Mechanical Properties

DMV designation	Nearest equivalent standard		Density		Min. mechanical prop. at RT			
	UNS	EN			Rp0.2 Yield Strength		Rm Tensile Strength	
			g/cm ³	lb/in ³	MPa	ksi	MPa	ksi
DMV 304	S30400	1.4301	7.9	0.29	205	30	515	75
DMV 316LVM	S31673	1.4441	7.9	0.29	220	32	600	87
DMV 316L	S31603	1.4404	8.0	0.29	170	25	485	70
DMV 316Ti	S31635	1.4571	8.0	0.29	205	30	515	75
DMV 174PH	S17400	1.4542	7.9	0.29	1140	165	1170	170

Tolerances

Outside Diameter	Hot Extruded		Cold Finished Tubes			
			D2	D2	D3	D4
EN ISO 1127 tolerance class	D2		D2	D2	D3	D4
Permissible deviation	± 1.0% (min. ± 0.5 mm (±0.0197"))		± 1.0% (min. ± 0.5 mm (±0.0197"))	± 0.75% (min. ± 0.3 mm (±0.0012"))	± 0.5% (min. ± 0.1 mm (±0.0039"))	
Wall Thickness	Hot Extruded			Cold Finished		
	≤ 5 mm (0.1969")			> 5 mm (0.1969")		
EN ISO 1127 tolerance class	T1		T2	T3	T4 (on request)	
Permissible deviation	± 15.0% (min. ± 0.6 mm (±0.0236"))		± 12.5% (min. ± 0.4mm (±0.0157"))	± 10% (min. ± 0.2 mm (±0.0074"))	± 7.5% (min. ± 0.05mm (±0.002"))	

Adding Value, Adding Service

Providing profiles or components according to individual customer requirements.

Global Manufacturing, Local Service

Bringing together our manufacturing facilities in Germany, France, Italy and USA, our global sales team is at your service, ensuring we provide the optimum solution to your requirements.



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Material solutions and tube expertise

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