

TRAFILTUBI TUBI DI ACCIAIO TRAFILATI A FREDDO

LE MIGLIORI SOLUZIONI TECNOLOGICHE

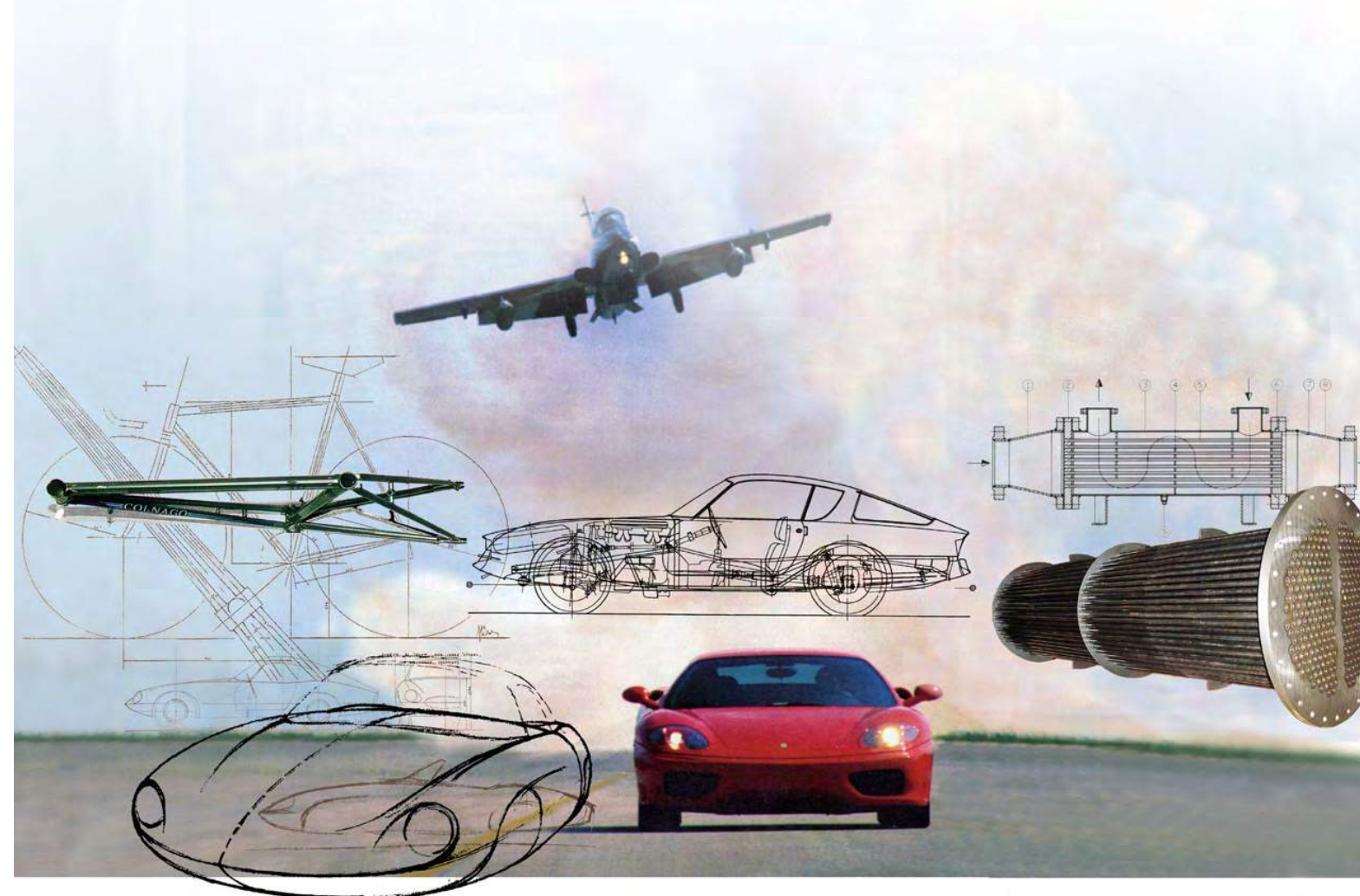
Trafiltubi è specializzata nella produzione di tubi trafilati a freddo in acciai speciali e acciai inossidabili, per applicazioni estreme e ad alta tecnologia.

Trafiltubi garantisce il miglior servizio sulle specifiche richieste del cliente: soluzioni tecnologiche personalizzate, qualità e consegne rapide anche in piccole quantità.

THE BEST TECHNOLOGICAL SOLUTIONS

Trafiltubi is specialized in cold draw tubes and special steel processing for hi-technology applications.

Trafiltubi guarantees the best personalized service suitable for any special customer's requirement: technological solutions, quality and quick deliveries.



Telai dinamici altoresistenziali • Autoveicoli e veicoli da competizione settori ciclo, karting, auto e moto • Aeronautica
Scambiatori, evaporatori e impieghi ad alte temperature in genere • Industrial design
High tech frames • Automotive and competition vehicles • Aeronautics and light aeronautics
Heat exchangers, evaporators and high temperature applications • Furniture and industrial design



TRAFILTUBI

TUBI DI ACCIAIO TRAFILATI A FREDDO

Seamless Cold Drawn Alloy and Stainless Tubes for high performance applications

According to Customers specifications, our tubes can be treated, in controlled atmosphere, by: hardening and tempered, normalized, annealed, hard worked and tempered, in order to obtain personalized mechanical characteristics.

SPECIAL STEELS

HinoxTUBE®

X4CrNiMo16.5.1 - APX4

Composition: ___Carbon 0,06 - Chromium 16,00 - Nickel 4,00 - Molybdene 1,00

Aptitudes: Austeno-martensitic stainless steel tube, characterized by excellent weldability until 0,4 mm thick; high resistance to organic and some mineral acids, sea water and saline atmosphere, and good aptitude at the polishing; excellent level of micro cleanliness; good bending performance; good toughness, consistency and resistance to fatigue. The high quality of the elastic module (211.000 MPa: double and triple if compared to titanium and aluminium), permits to realise extremely light frames, having a good grade of rigidity. It has excellent dimensional stability that assures the geometrical stability of the frame during the time of using.

Mechanical characteristics:

- Tensile strenght /Rm: 1000/1300 MPa
- Yeld point / Rp_{0,2} ≥ 900 MPa
- Elongation/E% : ≥ 12%

Applications:

- Welded components and constructions for the highest performances
- Atomic energie; energy and power generation
- Aerospace, Aeronautics and Marine industry
- Automotive and karting
- Bicycle and other competition vehicles
- Transport field
- Medical and radiological equipment
- Food industry
- Construction/architecture



15CrMoV6

15CDV6 - 14CrMoV6.9 - SCV

Composition: ___Carbon 0,15 - Chromium 1,40 - Molybdene 0,90 - Vanadium 0,25

Aptitudes: Special steel tube, characterized by hi toughness, consistency and resistance to fatigue; high level of micro cleanliness. Excellent weldability, good bending performance, excellent mechanical characteristics.

Mechanical characteristics:

- tensile strenght / Rm: 1000/1300 MPa
- yeld point / Rp_{0,2} ≥ 800 MPa
- E/A5d : ≥ 12%

Applications:

- High resistance frames
- Aerospace and Aeronautics
- Automotive and karting
- Bicycle and other competition vehicles
- High performance welded constructions
- General engineering

25CrMo4

25CD4

Composition: ___Carbon 0,25 - Chromium 1,00 - Molybdene 0,20

Aptitudes: Special steel tube, characterized by toughness, consistency and resistance to fatigue; high level of microcleanliness, excellent weldability, good bending performance, good mechanical characteristics.

Mechanical characteristics:

- Tensile strenght/Rm: 700/900 MPa
- Yeld point/ Rp_{0,2} ≥ 500 MPa
- E/A5d : ≥ 15 %

Applications:

- High resistance frames
- Aeronautics
- Automotive and karting
- Bicycle and other competition vehicles
- High performance welded constructions
- General engineering

Prompt delivery Warehouse

Since 1966, TRAFILTUBI Srl is highly specialised in the production of cold drawn tubes made of special steels and characterised by exceptional strength and lightness. Our processes are supported by plants for non destructive controls, and by an internal laboratory, certified either for micrographical analysis, and for mechanical and chemical tests.

Our tubes have differentiated diameters, from 4 mm up to 100 mm, and can have variable thickness (even on the same tube) from 0,5 mm to 10 mm. Our specialisation comprehends also the production of profiles of any shapes (squared, rectangular, elliptical, drop or star shapes, or others according to Customer's specifications).

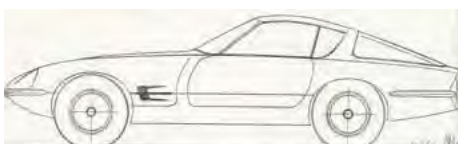
But, overall, we always find specific solutions to the technological exigencies of our Customers, and we can offer supplies also of small lots for prompt delivery. About that, we invite you to contact us and check our "Prompt delivery warehouse", regarding the products you can receive immediately, also in very small quantity.

TRAFILTUBI srl

Via Corelli 180 - 20090 Novegro di Segrate (Milano)
tel. 39-(0)2-70200080 fax +39-(0)2-7560251
www.trafiltubi.com info@trafiltubi.com

**COMPANY WITH QUALITY MANAGEMENT SYSTEM CERTIFIED BY DNV
= ISO 9001:2000 =**

Trafiltubi also continues the historical tradition of Gilco Design



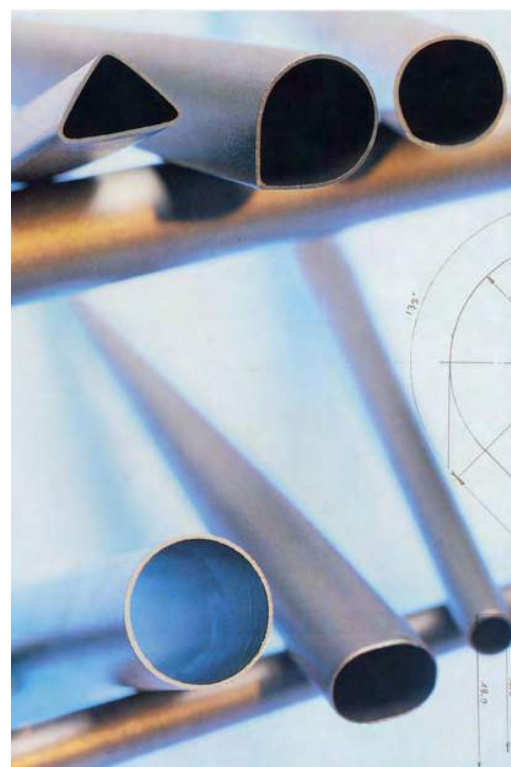
www.gilcodesign.com



TRAFILTUBI • GRADI DEGLI ACCIAI INOSSIDABILI E CORRISPONDENZE INDICATIVE CON LE NORME						
TIPOLOGIA ACCIAI	DENOMINAZIONE					
	UNI (ITALIA)	AISI / UNS (U.S.A.)	AFNOR (FRANCIA)	BSI (UK)	DIN (GERMANIA)	EN 10088 / WERNSTOFF
AUSTENITICI	X 5 CrNi 1810	304	Z 6 CN 18-09	304S15	X 5 CrNi 18 10	1.4301
	X 2 CrNi 1910	304 L	Z 2 CN 18-10	304S11	X 2 CrNi 19 11	1.4306
	X 8 CrNi 1910	304 H				
	X 16 CrNi 2314	309	Z 15 CN 24-13	309S24	X 15 CrNiSi 20 12	1.4828
	X 22 CrNi 2520	310		310S24	X 12 CrNi 25 21	1.4845
	X 6 CrNi 2520	310 S	Z 12 CN 25-20		X 12 CrNi 25 20	1.4842
	X 5 CrNiMo 1712	316	Z 6 CND 17-11	316S31	X 5 CrNiMo 17 12 2	1.4401
	X 8 CrNiMo 1712	316 H				
	X 2 CrNiMo 1712	316 L	Z 2 CND 17-12	316S11	X 2 CrNiMo 17 13 2	1.4404
	X 6 CrNiMoTi 1712	316 Ti	Z 6 CNDT 17-12	320S31	X6CrNiMoTi 1712 2	1.4571
	X 5 CrNiMo 1815	317		317S16		
	X 2 CrNiMo 1815	317 L	Z 2 CND 19-15	317S12	X 2 CrNiMo 18 16 4	1.4438
	X 6 CrNiTi 1811	321	Z 6 CNT 18-10	321S31	X 6 CrNiTi 18 10 X 12 CrNiTi 18 9	1.4541
	X 8 CrNiTi 1811	321 H		321S20		
	X 6 CrNiNb 1811	347	Z 6 CNNb 18-10	347S31	X 6 CrNiNb 18 10	1.4550
X 8 CrNiNb 1811	347 H					
FERRITICO-AUSTENITICI	X2 Cr Ni Mo N 22-5-3	S31803	Z2CND22-05-03			1.4462
AUSTENO-MARTENSITICI	X4 Cr Ni Mo 16.5.1		APX4			

TRAFILTUBI • CARATTERISTICHE MECCANICHE ACCIAI INOSSIDABILI

GRADO	SOLUBILIZZATO		
	Rs (MPa) min	Rm (MPa) Min	A% (min)
304	205	515	35
304 L	170	485	35
304 H	205	515	35
309	205	515	35
310	205	515	35
310 S	205	515	35
316	205	515	35
316 H	205	515	35
316 L	170	485	35
316 Ti	170	485	35
317	205	515	35
317 L	205	515	35
321	205	515	35
321 H	205	515	35
347	205	515	35
347 H	205	515	35
S31803	450	680/880	25
APX4	800	1000	15

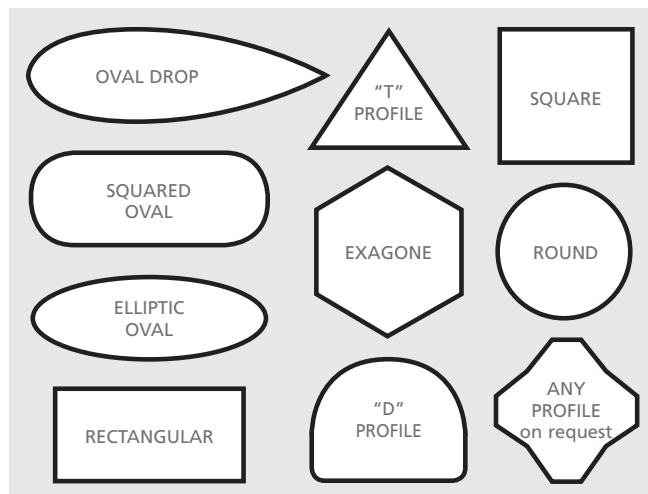


Tubi standard e sagomati a richiesta Standard and moulded profiles on request



Oltre a una vasta gamma di tubi in misure standard, TRAFILTUBI è in grado di fornire ai propri clienti tubi speciali con diversi spessori e sagomati nelle più svariate forme, anche su disegno.

Although Trafiltubi has already hundreds of different matrixes (drawing benches), in stock, it is possible to manufacture in short lead times any new shape on customer's request.



TRAFILTUBI - Dimensioni standard dei tubi tondi - Round tubes: Size range - Tubes ronds: Dimensions standard																	
Ø ext		Peso metrico - Weight in kg per meter - Poids pour mètre															
mm	toll stand.	Spessore (mm) Toll +/-10% - Thickness (mm) Toll +/-10% - Epaisseur (mm) Toll +/-10%															
		0,5	0,75	1	1,25	1,5	1,75	2	2,5	3	3,5	4	4,5	5	6	7	8
6		0,068	0,097	0,123	0,146	0,166	0,183	0,197									
7		0,080	0,116	0,148	0,177	0,203	0,226	0,246									
8		0,092	0,134	0,173	0,208	0,240	0,270	0,296	0,339								
9		0,105	0,153	0,197	0,239	0,277	0,313	0,345	0,401								
10		0,117	0,171	0,222	0,270	0,314	0,356	0,394	0,462	0,518							
11,00	+/-0,10	0,130	0,190	0,250	0,300	0,350	0,400	0,440	0,520	0,590	0,650						
12,00		0,140	0,210	0,270	0,330	0,390	0,440	0,490	0,590	0,670	0,730	0,790					
14,00		0,170	0,240	0,320	0,390	0,460	0,530	0,590	0,710	0,810	0,910	0,990	1,050	1,110			
16,00		0,190	0,280	0,370	0,450	0,540	0,610	0,690	0,830	0,960	1,080	1,180	1,260	1,360	1,480		
18,00		0,220	0,320	0,420	0,520	0,610	0,700	0,790	0,960	1,110	1,250	1,380	1,500	1,600	1,770	1,900	
20,00		0,240	0,360	0,470	0,580	0,680	0,790	0,890	1,080	1,260	1,420	1,580	1,720	1,850	2,070	2,240	2,370
22,00		0,260	0,390	0,520	0,640	0,760	0,870	0,990	1,200	1,400	1,600	1,770	1,940	2,100	2,370	2,590	2,760
24,00		0,290	0,430	0,570	0,700	0,830	0,960	1,080	1,320	1,550	1,770	1,970	2,160	2,340	2,660	2,930	3,160
26,00		0,310	0,470	0,620	0,760	0,910	1,050	1,180	1,450	1,700	1,940	2,170	2,380	2,590	2,960	3,280	3,550
28,00		0,340	0,500	0,670	0,820	0,980	1,130	1,280	1,570	1,850	2,110	2,370	2,610	2,830	3,250	3,620	3,940
30,00		0,600	0,540	0,710	0,890	1,050	1,220	1,380	1,690	2,000	2,290	2,560	2,830	3,080	3,550	3,970	4,340
32,00		0,390	0,580	0,760	0,950	1,130	1,300	1,480	1,820	2,140	2,460	2,760	3,050	3,330	3,850	4,310	4,730
34,00		0,410	0,610	0,810	1,010	1,200	1,390	1,580	1,940	2,290	2,630	2,960	3,270	3,570	4,140	4,660	5,130
35,00	+/-0,15	0,430	0,630	0,840	1,040	1,240	1,430	1,630	2,000	2,370	2,720	3,060	3,380	3,700	4,290	4,830	5,320
36,00		0,440	0,650	0,860	1,070	1,280	1,480	1,680	2,060	2,440	2,800	3,160	3,490	3,820	4,440	5,000	5,520
38,00		0,460	0,690	0,910	1,130	1,350	1,560	1,770	2,190	2,590	2,980	3,350	3,720	4,070	4,730	5,350	5,920
40,00		0,490	0,730	0,960	1,190	1,420	1,650	1,870	2,310	2,740	3,150	3,550	3,940	4,310	5,030	5,690	6,310
45,00	+/-0,20		0,820	1,080	1,350	1,610	1,870	2,120	2,620	3,110	3,580	4,040	4,490	4,930	5,770	6,560	7,300
50,00			0,910	1,210	1,500	1,790	2,080	2,370	2,930	3,480	4,010	4,540	5,050	5,550	6,510	7,420	8,280
55,00				1,330	1,660	1,980	2,300	2,610	3,240	3,850	4,440	5,030	5,600	6,160	7,250	8,280	9,270
58,00	+/-0,25			1,400	1,750	2,090	2,430	2,760	3,420	4,070	4,700	5,320	5,930	6,530	7,690	8,800	9,860
60,00				1,450	1,810	2,160	2,510	2,860	3,540	4,210	4,870	5,520	6,160	6,780	7,990	9,140	10,250
65,00				1,580	1,960	2,350	2,730	3,110	3,850	4,580	5,310	6,010	6,710	7,390	8,730	10,010	11,240
70,00	+/-0,30			1,700	2,120	2,530	2,940	3,350	4,160	4,950	5,740	6,510	7,270	8,010	9,470	10,870	12,230
75,00				1,820	2,270	2,720	3,160	3,600	4,470	5,320	6,170	7,000	7,820	8,630	10,200	11,730	13,210
80,00	+/-0,35			1,950	2,430	2,900	3,380	3,850	4,780	5,690	6,600	7,490	8,370	9,240	10,940	12,600	14,200
85,00						3,090	3,590	4,090	5,080	6,060	7,030	7,990	8,930	9,860	11,680	13,460	15,180
90,00	+/-0,40					3,270	3,810	4,340	5,390	6,430	7,460	8,480	9,480	10,480	12,420	14,320	

a seconda della qualità - depending of the steel quality - selon la nuance

Specifiche tecniche / Technical specifications

TRATTAMENTO TERMICO (in atmosfera controllata):
HEAT TREATMENT (controlled atmosphere):

Solubilizzazione
Solution treatment

Solubilizzazione in bianco
Bright annealed

Ricottura di distensione
Stress-relieved annealed

TRATTAMENTO SUPERFICIALE
SURFACE TREATMENT

Decappaggio
Pickling

Rettifica
Rectification

Satinatura
Smoothness



TUTTE LE ATTREZZATURE DEL LABORATORIO TRAFILTUBI
SONO CERTIFICATE "SIT" E IMPIEGATE PER LE SEGUENTI PROVE:
ALL THE EQUIPMENT IN OUR LAB IS STI CERTIFIED AND IS USED FOR:

**PROVE MECCANICHE
MECHANICAL TESTS**

- Prove di trazione
- Tensile test
- Prove di durezza
- Hardness test
- Prove di allargamento
- Flaring test
- Prove di schiaccio
- Flattening test

**CONTROLLI NON DISTRUTTIVI
NON DESTRUCTIVE TESTS**

- Correnti indotte
- Eddy Current
- Liquido penetrante
- Penetrant liquid
- Ultrasuoni
- Ultrasonic test
- Prova idraulica
- Hydrostatic test

**MICROGRAFIE
MICROGRAPHY**

- Decarburizzazione
- Decarburization
- Controllo dimensionale
- Dimensional control
- Dimensione del grano
- Grain size
- Corrosione intergranulare
- Intergranular corrosive test

**ANALISI CHIMICHE
CHEMICAL ANALYSIS**

- Analisi chimiche con spettrometro
- Chemical analysis by spectrometer
- Analisi di precisione per via umida della percentuale di carbonio
- High precision Carbon text

**CONTROLLI DIMENSIONALI
DIMENSIONAL CHECK**

- Rugosità superficiale
- Roughness test

TRAFILTUBI È CERTIFICATA / TRAFILTUBI IS CERTIFIED:

- ISO 9001 : 2000
- ISO 9001 : 2000
- PED (DISPOSITIVI IN PRESSIONE - 97/23/CE e DLGS 93)
- PED (PRESSURE EQUIPMENT DIRECTIVE - 97/23/CE)
- CONFORMITA' WESTLAND HELICOPTERS LTD (WHL)
- SUB-TIER SUPPLIER TO WHL WESTLAND-AGUSTA

TRAFILTUBI srl

Via Corelli 180 • 20090 Novegro di Segrate (Milano)
tel +39 02 70200080 • fax +39 02 7560251
www.trafiltubi.com • info@trafiltubi.com

