



HYDRAULIC AND INSTRUMENTATION APPLICATIONS

STAINLESS STEEL AND HIGH
NICKEL ALLOYS SEAMLESS
TUBULAR SOLUTIONS



TUBACEX
GROUP

Tubacex: A Global Leader in Seamless Stainless and High Nickel Alloys Pipes and Tubes

Continuous innovation during the last 30 years has allowed the Companies of the Tubacex Group to become world leaders in the supply of seamless tubes made of stainless steel and nickel alloys.

Worldwide presence

Through our commercial offices

Competitiveness

Thanks to our lean manufacturing process

Service

Cooperation with our customers

Flexibility

In materials chemical composition & deliveries

Reliability

Of a fully integrated company



The Tubacex Group has become one of the world's main seamless stainless steel and nickel alloy tubular solutions providers.

Founded in 1963, Tubacex brings the experience of a world leader combined with a strong R&D effort which is needed to fulfill the future needs of the industry.

The Tubacex Group, exporting into more than 100 countries worldwide, has a share of around 15% of the world market of seamless stainless steel tubular solutions, with a total workforce of around 2,400 employees. The headquarters are located in Llodio, 25 Km (15 miles) from the seaport city of Bilbao, in northern Spain.

The Tubacex Group's integrated production process includes a steel making plant, several extrusion and cold finishing mills, trepanning facilities, fitting and special components producers and wide network of service centers which provide a wide range of added value operations to the group's portfolio.

Hydraulic & Instrumentation Tubes from Tubacex Group

Hydraulic & Instrumentation Tubes are important components in hydraulic and instrumentation systems to protect and partner with other components, devices or instruments to secure the safe and trouble-free operations of oil and gas plants, petrochemical processing, power generation and other critical industrial applications.

Consequently, demand on the quality of tubes is very high.

Tubacex Group has high competence in the development and manufacturing of these precision tube products. Our experience journey started in 1962 in Austria and continues with the newly established Innovation Centre in Spain and Production Footprint in Asia.

- **Bright Annealed**
Reduce contamination with smart surface
- **Controlled Hardness**
Effective sealing with ferrules
- **End Capped**
Maintain high cleanliness
- **Fixed Lengths**
Efficient work planning & material control
- **High Roundness**
Effective sealing at connections
- **High Cleanliness**
Reduce contamination-risks in the system
- **100% Eddy-Current and / or Hydrostatic Tested**
Secure high & consistent quality
- **100% PMI Tested**
Eliminate risk & hazards
- **Controlled Dimensional Tolerances**
Secure high performance with other components in the system
- **Dual Grade & Specification Marked & Certified**
Conform to a large variety of technical requirements

Instrumentation & Control Lines | Safety Systems
Sampling & Analyzer Lines | Hydraulic Systems
Pneumatic Lines | Process Impulse Lines
Signal Transmission Lines | Subsea Equipment
Fuel & CNG Lines | Compressors

Oil & Gas



- On-shore Installations
- Off-shore Installations
- Vessels

Petrochemical



- Oil Refining
- Chemical Processing
- Petrochemical Processing

Transportation



- Automotive & Rail
- Aerospace
- Marine & Shipbuilding

Power Generation



- Thermal Power Plants
- Nuclear Power Plants
- Renewal Energy Solutions

Water



- Desalination Plants
- Water Treatment Plants

Other Industries



- Medical & Pharmaceutical
- Pulp & Paper
- Food Processing

Production Footprint



Tubacex Group's Hydraulic & Instrumentation Tubes product portfolio is based on manufacturing units at these 4 strategic locations.

- **Ternitz, Austria**

High precision tubes are produced in Ternitz by state-of-the-art technology. This highly famous unit, Schoeller-Bleckmann, has its roots date back to 1924.

- **Greenville, Pennsylvania, U.S.A.**

High precision tubes are produced in Greenville by advanced manufacturing and testing technologies. This highly reliable unit, Salem Tube, has maintained a reputation as a premier supplier for more than 40 years.

- **Umbergaon, India**

High precision tubes are produced in Umbergaon by proven technologies. This newly modernized unit, Tubacex Prakrash, fully applies the renowned Tubacex Production System (TxPS) which stands for High Productivity and Quality.

- **Llodio, Spain**

High precision tubes are produced in Llodio by proven technology that delivers high quality products consistently. This unit, Tubacex Tubos Inoxidables, is well recognized by the industries for a wide range of tubular products.

High Pressure Product Line



Salem Tube has its position as a specialized supplier of tubes in the market by continuously evolving its High Added Value and innovative tubing portfolio. Growth into more demanding market segments is at the very core of the recent launch of medium and high pressure tubing: a product used to transport fluids and gases under extreme pressures.

The characteristic surrounding these products are very stringent as the materials are constantly exposed to working pressures of up to 60,000 PSI. Additionally, the product is designed to withstand some of the most demanding and harsh environments. As a consequence, tube producers are to focus on a number of critical design criteria. Exact properties must be built into the design to address, not only safety and security, but also the ability to partner with valves and fittings.

This industry dictates five specific Outside Diameter sizes that corresponds to 14 different internal diameters directly related to specific pressure applications. Medium and high pressure tubing is recognized not only for the aforementioned characteristics, but also for specific wall to outside diameter ratios. The resulting product must allow a cone and threading to be cut into the ends so that it can fit flawlessly into the matching valves and fittings.

Nominal OD size	OD tolerance	ID tolerance	Service Rating
1/4" (6.35 mm) HP	0.243" / 0.250" (6.17 mm/6.35 mm)	0.079" / 0.083" (2.00 mm/2.10 mm)	60,000 psi
1/4" (6.35 mm) Medium	0.243" / 0.250" (6.17mm/6.35 mm)	0.104" / 0.109" (2.64 mm/2.77 mm)	20,000 psi
3/8" (9.52 mm) HP	0.365" / 0.375" (9.27 mm/9.52 mm)	0.121" / 0.125" (3.07 mm/3.17 mm)	60,000 psi
3/8" (9.52 mm) Medium	0.365" / 0.375" (9.27mm/9.52 mm)	0.198" / 0.203" (5.03 mm/5.16 mm)	20,000 psi
9/16" (14.3mm) HP	0.552" / 0.563" (14.0 mm/14.3 mm)	0.182" / 0.187" (4.62 mm/4.75 mm)	60,000 psi
9/16" (14.3mm) HP	0.552" / 0.563" (14.0 mm/14.3 mm)	0.245" / 0.250" (6.22 mm/6.35 mm)	40,000 psi
9/16" (14.3mm) Medium	0.552" / 0.563" (14.0 mm/14.3 mm)	0.307" / 0.312" (7.79 mm/7.92 mm)	20,000 psi
9/16" (14.3mm) Medium	0.552" / 0.563" (14.0 mm/14.3 mm)	0.354" / 0.359" (8.99 mm/9.12 mm)	15,000 psi
3/4" (19.1 mm) HP	0.740" / 0.750" (18.9 mm/19.1 mm)	0.245" / 0.250" (6.22 mm/6.35 mm)	66,000 psi
3/4" (19.1 mm) Medium	0.740" / 0.750" (18.9 mm/19.1 mm)	0.432" / 0.437" (10.9 mm/11.1 mm)	20,000 psi
3/4" (19.1 mm) Medium	0.740" / 0.750" (18.9 mm/19.1 mm)	0.510" / 0.515" (12.9 mm/13.1 mm)	15,000 psi
1" (25.4mm) HP	0.990" / 1.000" (25.1 mm/25.4 mm)	0.432" / 0.437" (10.9 mm/11.1 mm)	43,000 psi
1" (25.4mm) Medium	0.990" / 1.000" (25.1 mm/25.4 mm)	0.557" / 0.562" (14.1 mm/14.3 mm)	20,000 psi
1" (25.4mm) Medium	0.990" / 1.000" (25.1 mm/25.4 mm)	0.682" / 0.687" (17.3 mm/17.5 mm)	15,000 psi

Pressure tubing is created from seamless starting hollows and will be processed to the final dimensions by cold drawn production and hydrogen bright annealing methods. By design the tensile strength of the pressure tube is significantly higher than that of same size annealed product, tubes must complete the cycle in a semi harden condition to achieve the desired outcome.

Tubes are produced in accordance with either customer specific specifications, or to an internal specification that meets the industry standards for 300 series austenitic stainless steel. Final applications for medium and high pressure tubes are where higher strength and corrosion resistance are important.

Chemical composition of the material must conform to current ASTM A213-A269 specifications for the following grades: Type 304/304L and 316/316L (Type 317/317L to ASTM A213 only)



Tubacex Service Solutions (TSS), the service arm of Tubacex Group, maintains a stock program that includes a wide range of Hydraulic & Instrumentation Tubes.

- **Spain**

Tubes with OD from 6 to 42 mm in various steel grades are stocked in this semi-automatic distribution centre centrally located in Spain for efficient distribution to Europe, Asia and other parts of the world.

- **France**

Tubes with OD from 6 to 42 mm in various steel grades are stocked in this strategic location to serve a selection of important European markets.

- **Austria**

Tubes with OD from 6 to 42 mm in various steel grades are stocked in this strategic location to serve a selection of important European markets.

- **Houston, U.S.A.**

Tubes in 304/L and 316/L in imperial sizes with OD from 1/8" to 1" are stocked in this central location to provide high service level to the oil & gas, petrochemical and general industries.

- **Brazil**

Tubes in selected steel grades and size range stocked for the regional market.

- **Shanghai, China**

Tubes in 316/316L with min. 2.5% Moly in imperial sizes with OD from 1/4" to 1/2" are available in stock for immediate delivery to all Chinese cities.

- **India**

Tubes in selected steel grades and size range are stocked in this central Asian location. Thanks to its close proximity to the well-connected Mumbai port, we are able to offer high service level to the Asia Pacific region, Middle East and South Africa.

- **Dubai**

Tubes in selected steel grades and size range stocked for the regional market.

- **Iran**

Tubes in selected steel grades and size range stocked for the regional market.

Service is the other main driver of the Tubacex Group's vision. This means excellent service in the existing portfolio, along with the development of new value added services that can complement and enrich the Tubacex Group's product portfolio.

Service

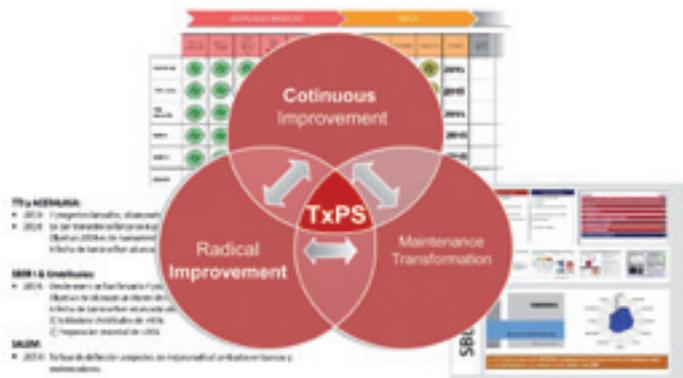


Excellent service in the existing portfolio - Tubacex Production System

TxPS, the acronym of Tubacex Production System, is the standard Management System for the entire Tubacex Group focused on:

- Implementing an continuous improvement system in all areas
- Involving all personnel from all areas
- Ensuring that the improvements are sustained over time

TxPS is based on action on three levels: yearly management plan, daily management and specific action for radical improvement.



New Services to develop and complete our offer - Tubacex Services

To further increase our service capabilities we are developing final added value operations for small niches:

- Final treatments
- Special packages
- Others

The Group has developed a new unit called Tubacex Services, with resources devoted exclusively to the development of those added value operations to the Group's portfolio. This unit is already developing specialized process as Shot peening in a new mill in Santander (north of Spain).

Global Service Center Network - Tubacex Service Solutions

In addition, the group network of service centers in Europe, America and Asia offers availability and proximity service to our customers through companies such as Cotubes, Tubos Mecánicos, MIS and Tubacex America.



Quality and Approvals

Tubacex Group holds several approvals as a manufacturer of seamless tube and pipe, and can deliver tubular products in accordance with most international standards.

Management system certificates

ISO 9001

API Q1



Approvals and other certifications*

- Approved manufacturer according to TÜV, Lloyd's register, DNV, Germanischer Lloyd's, BV, Norsok etc.
- PED 97/23/EC
- AD2000, werkblatt W0
- JIS Mark scheme
- ASME Quality system as material organization for ferrous and non ferrous material

* Not valid for all production units. Please contact your local sales office for detailed information.

Safety and environmental responsibility

Tubacex Group is highly engaged with the environment and it is ISO 14001 certified. Additionally Occupational Health and Safety is also a key element of our culture. The company is OHSAS 18001 certified.



The Tubacex Group's Vision remarks the aspiration of becoming a global supplier, benchmark in the development of innovative tubular solutions in advanced materials. Creativity and Innovation, along with customer satisfaction, are the values behind this vision.

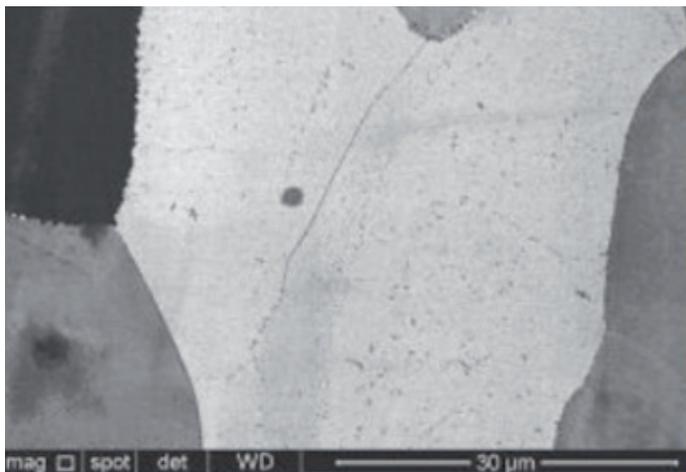
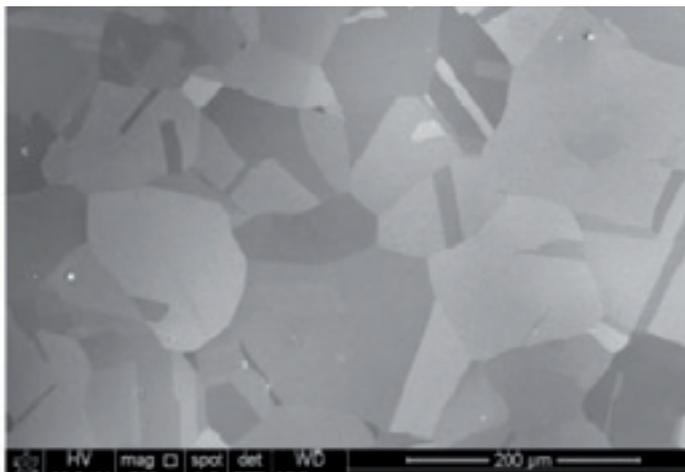
Innovation

The Tubacex Group has made a significant effort in innovation in recent years, which is constantly being reflected in results and in the sales figure.

The Group has a corporate innovation unit called Tubacex Innovación, with human and technical resources devoted exclusively to Innovation activities, consisting of product R&D projects and development projects for the different industrial plans of the Group's companies, in which technological development is required.

Tubacex Innovation

- Steel Portfolio Management
- R&D Projects Management
- New Products Development
- Known grades. Performance Improvement. New requirements
- Participation in Industrialization Projects
- Participation in Continuous Improvement Projects
- Investigation and analysis of Metallurgical claims
- Heat treatments design
- Group Laboratories Standarization
- Technical support to Sales and Engineering
- Customers Assistance



Important approvals with potential customers have also been obtained, which will enable sales of high value-added products to increase in the future. Since 2008, and more notably in the past two years, we have entered all of the strategic sectors that were defined as targets, namely: OCTG, umbilical offshore tubes, ultra supercritical boilers and recently, fertilizers. This has been possible thanks not only to R&D activities, but also to significant investment in recent years, in excess of €150M, and the improved processes in all of the Group's plants.

A milestone in 2014 was the opening of a new laboratory specifically devoted to R&D, which is located in the Zamudio Scientific and Technology Park (Bizkaia). This new laboratory will accelerate the development of the R&D unit, in skills such as metallurgical and metallographic knowledge, which is key for the development of new materials and processes. The creation of the new laboratory will act as a base for the future growth of the R&D capacities of the Tubacex Group, enabling closer collaboration with customers in the development of new solutions for the energy sector.

Grades and Standards

Steel grades

Tubacex Grade	Grade	UNS	Steel Name	Steel No.	Elements (Typical Values) in %					PRE	Mechanical properties at room temperature min values acc. to int. standards				
					C	Cr	Ni	Mo	Others		Min. Values	Max. Hardness [HRB]	Yield R _{p0.2min} [MPa]	Tensile R _{m min} [MPa]	Elong. [%]
TX C01	TP304	S30400	X5 Cr Ni 18 10	1.4301	max. 0.03	18.5	10.2	—	—	—	90	205	515	40	
	TP304L	S30403	X2 Cr Ni 19 11	1.4306											
			X2 Cr Ni 18 9	1.4307											
TX C20	TP316	S31600	X5 Cr Ni Mo 17 12 2	1.4401	—	17.0	12.0	2.2	—	24	90	205	515	40	
	TP316L	S31603	X2 Cr Ni Mo 17 13 2	1.4404											
TX C21	TP316	S31600	X5 Cr Ni Mo 17 12 2	—	max. 0.03	16.5	12.0	2.7	—	25	80	207	517	40	
	TP316L	S31603	X2 Cr Ni Mo 17 12 2												
TX C30	TP316Ti	S31635	X6 Cr Ni Mo Ti 17 12 2	1.4571	0.06	17.0	12.0	2.2	Ti ≥ 5x(C+N)	23	90	205	515	35	
TX T09	TP321	S32100	X6 Cr Ni Ti 18 10	1.4541	0.06	17.5	11.0	—	Ti ≥ 5x(C+N)	—	90	210	515	40	
	TP321H	S32109	X12 Cr Ni Ti 18 9	1.4878											
TX D05	2205	S31803 S32205	X2 Cr Ni Mo N 22 5 3	1.4462	max. 0.03	22.5	5.5	3.0	N 0.17	35	28	450	680	40	
TX D07	2507	S32750	X2 Cr Ni Mo N 25 7 4	1.4410	max. 0.03	25.5	7.0	3.5	N 0.28	41	32	550	800	20	
TX K03	Alloy 825	N08825	Ni Cr 21 Mo	2.4858	max. 0.025	21.5	40	2.7	Cu 1.7; Ti 0.8	28	240	241	586	30	
TX K06	TP904L	N08904	X1 Ni Cr Mo Cu N 25 20 5	1.4539	max. 0.02	20.0	25.0	4.5	Cu 1.4; N 0.06	36	190	230	530	35	
TX K14	6Moly	S31254	X1 Cr Ni Mo Cu N 20 18 7	1.4547	max. 0.02	20.0	18.0	6.25	Cu 0.75; N 0.2	42	210	300	650	35	
TX K16	Alloy 625	N06625	Ni Cr 22 Mo 9 Nb	2.4856	max. 0.03	21.5	min. 58	9.0	Nb 3.65	46	200	276	690	30	
—	Alloy 400	N04400	Ni Cu 30 Fe	2.4360	max. 0.3	—	min. 63	—	Cu 31	—	—	195	585	32	

Tolerances

Metric sizes

316/316L

OD < 6 mm, tolerances according to ASTM A632

Size OD, mm	Tolerances OD, mm	Wall thickness %
<4.76-2.38	+0.08/-0	+/-10

304/304L, 316/316L, 316Ti

OD 6-42 mm EN 10305-1

Size OD, mm	Tolerances OD, mm	Wall thickness %
6-30	+/-0.08	+/-10
32-40	+/-0.15	+/-10
42	+/-0.20	+/-10

UNS S31254

Size OD, mm	Tolerances OD, mm	Wall thickness %
6-25	+/-0.13	+/-10

Imperial sizes

316/316L

OD < 0.2362" (< 6 mm) according to ASTM A632

Size OD, inch	Tolerances OD, inch	Wall thickness %
<0.2362"-0.1874" (<6-4.76 mm)	+0.00394"/-0 (+0.10/-0 mm)	+/-10
<0.1874"-0.0937" (<4.76-2.38 mm)	+0.00315"/-0 (+0.08/-0 mm)	+/-10
<0.0937" (<2.38 mm)	+0.00197"/-0 (+0.05/-0 mm)	+/-10

316/316L

OD 0.25" to 1" (6.35-25.4 mm) according to EN 10305-1

Size OD, inch	Tolerances OD, inch	Wall thickness %
0.25" to 1" (6.35-25.4 mm)	+/-0.00315" (+/-0.08 mm)	+/-10

UNS N08904

Size OD, inch	Tolerances OD, inch	Wall thickness %
≤1" (≤25.4 mm)	+/-0.00394" (+/-0.10 mm)	+/-10

UNS S32750 and S31254

Size OD, inch	Tolerances OD, inch	Wall thickness %
≤0.75" (≤19.05 mm)	+/-0.00512" (+/-0.13 mm)	+/-10

Standards

304/304L (1.4306) and 316/316L (1.4404)

ASTM A213 A269
ASME SA213
PED 97/23/EC EN 10216-5 TC1
OD < 6 mm acc to A632
NACE MR0175/ISO 15156
AD2000-Merkblatt W2/W10

UNS S31254 (1.4547)

ASTM A213 A269
ASME SA213
PED 97/23/EC EN 10216-5 TC1
NACE MR0175/ISO 15156

UNS S32750 (1.4410)

ASTM A789
PED 97/23/EC EN 10216-5 TC1
NACE MR0175/ISO 15156

316Ti (1.4571)

PED 97/23/EC EN 10216-5 TC1
AD2000-Merkblatt W2/W10

UNS N08904 (1.4539)

ASTM A213 A269
ASME SA213
PED 97/23/EC EN 10216-5 TC1
NACE MR0175/ISO 15156
AD2000-Merkblatt W2/W10

Dimension and Pressure

Maximum Allowable Working Pressure (MAWP) According to ASME B31.3 (2014)

Outside Diameter (mm)	Wall Thickness (mm)	Imperial Sizes			Weight (kg/m)	304/304L	316/316L	316/316L	316Ti	321/321H	904L	6Moly
		OD	WT	Gauge		TX C01 1.4306 (bar)	2% Mo. TX C20 1.4404 (bar)	2.5% Mo. TX C21 (bar)	TX C30 1.4571 (bar)	TX T09 1.4541 (bar)	N08904 TX K06 1.4539 (bar)	S31254 TX K14 1.4547 (bar)
6	1.0				0.125	470	470	470	470	470	486	705
6	1.5				0.169	738	738	738	738	738	764	1107
6.35	0.71	1/4"	0.028"	22 BWG	0.100	301	301	301	301	301	312	453
6.35	0.89	1/4"	0.035"	20 BWG	0.122	386	386	386	386	386	400	580
6.35	1.24	1/4"	0.049"	18 BWG	0.159	562	562	562	562	562	582	843
6.35	1.65	1/4"	0.065"	16 BWG	0.194	770	770	770	770	770	797	1155
7.94	0.89	5/16"	0.035"	20 BWG	0.157	303	303	303	303	303	313	454
7.94	1.24	5/16"	0.049"	18 BWG	0.208	437	437	437	437	437	452	655
7.94	1.65	5/16"	0.065"	16 BWG	0.260	602	602	602	602	602	623	903
8	1.0				0.175	341	341	341	341	341	353	511
8	1.5				0.244	537	537	537	537	537	556	806
8	2.0				0.300	738	738	738	738	738	764	1107
9.53	0.89	3/8"	0.035"	20 BWG	0.193	248	248	248	248	248	257	373
9.53	1.24	3/8"	0.049"	18 BWG	0.257	356	356	356	356	356	369	534
9.53	1.65	3/8"	0.065"	16 BWG	0.326	491	491	491	491	491	508	736
9.53	2.11	3/8"	0.083"	14 BWG	0.391	653	653	653	653	653	676	980
9.53	2.41	3/8"	0.095"	14 BWG	0.430	767	767	767	767	767	794	1151
10	1.0				0.225	267	267	267	267	267	277	401
10	1.5				0.319	417	417	417	417	417	432	626
10	2.0				0.400	580	580	580	580	580	598	870
12	1.0				0.275	220	220	220	220	220	228	330
12	1.5				0.394	341	341	341	341	341	353	511
12	2.0				0.500	470	470	470	470	470	486	705
12.7	0.89	1/2"	0.035"	20 BWG	0.263	183	183	183	183	183	190	275
12.7	1.24	1/2"	0.049"	18 BWG	0.356	261	261	261	261	261	270	391
12.7	1.65	1/2"	0.065"	16 BWG	0.456	356	356	356	356	356	368	533
12.7	2.11	1/2"	0.083"	14 BWG	0.559	468	468	468	468	468	485	702
14	1.0				0.325	187	187	187	187	187	193	280
14	1.5				0.467	288	288	288	288	288	298	432
14	2.0				0.600	395	395	395	395	395	409	593
14	2.5				0.720	508	508	508	508	508	526	763
15	1.0				0.350	174	174	174	174	174	180	261
15	1.5				0.506	267	267	267	267	267	277	401
15	2.0				0.650	366	366	366	366	366	379	549
15.88	1.24	5/8"	0.049"	18 BWG	0.454	205	205	205	205	205	212	308
15.88	1.65	5/8"	0.065"	16 BWG	0.588	279	279	279	279	279	288	418
16	1.0				0.375	162	162	162	162	162	168	244
16	1.5				0.544	249	249	249	249	249	258	374
16	2.0				0.700	341	341	341	341	341	353	511
16	2.5				0.844	437	437	437	437	437	452	655
18	1.0				0.425	144	144	144	144	144	149	215
18	1.5				0.619	220	220	220	220	220	228	330
18	2.0				0.800	300	300	300	300	300	310	449
18	2.5				0.966	383	383	383	383	383	396	574
19.05	0.89	3/4"	0.035"	20 BWG	0.405	120	120	120	120	120	124	180
19.05	1.24	3/4"	0.049"	18 BWG	0.553	169	169	169	169	169	175	254
19.05	1.65	3/4"	0.065"	16 BWG	0.718	229	229	229	229	229	237	344
19.05	2.11	3/4"	0.083"	14 BWG	0.895	299	299	299	299	299	309	448
19.05	2.41	3/4"	0.095"	13 BWG	1.000	345	345	345	345	345	357	518
19.05	2.77	3/4"	0.109"	12 BWG	1.130	403	403	403	403	403	417	604
20	1.5				0.694	197	197	197	197	197	204	295
20	1.6				0.737	211	211	211	211	211	218	316
20	2.0				0.900	267	267	267	267	267	277	401
20	2.5				1.094	341	341	341	341	341	353	511
20	3.0				1.271	417	417	417	417	417	432	626
22	1.5				0.769	178	178	178	178	178	184	267
22	2.0				1.000	241	241	241	241	241	250	362
24	2.0				1.102	220	220	220	220	220	228	330
24	3.0				1.578	341	341	341	341	341	353	511

Dimension and Pressure

Maximum Allowable Working Pressure (MAWP) According to ASME B31.3 (2014)

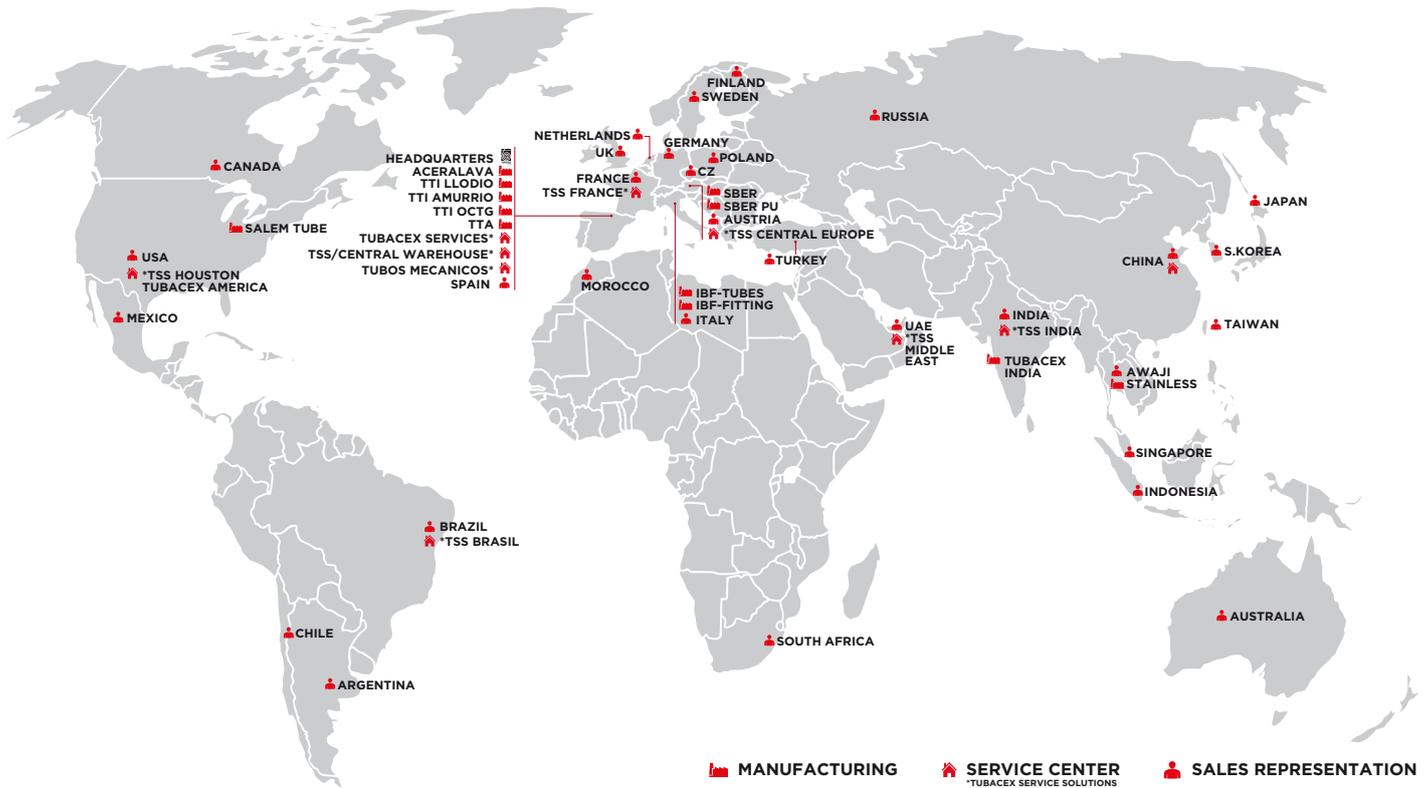
Outside Diameter (mm)	Wall Thickness (mm)	Imperial Sizes			Weight (kg/m)	304/304L	316/316L 2% Mo.	316/316L 2.5% Mo.	316Ti	321/321H	904L N08904	6Moly S31254
		OD	WT	Gauge		TX C01 1.4306 (bar)	TX C20 1.4404 (bar)	TX C21 (bar)	TX C30 1.4571 (bar)	TX T09 1.4541 (bar)	TX K06 1.4539 (bar)	TX K14 1.4547 (bar)
25	1.5				0.877	156	156	156	156	156	161	233
25	2.0				1.150	211	211	211	211	211	218	316
25	2.5				1.407	267	267	267	267	267	277	401
25	3.0				1.650	326	326	326	326	326	337	489
25	4.0				2.103	449	449	449	449	449	464	673
25.4	1.24	1"	0.049"	18 BWG	0.750	126	126	126	126	126	130	188
25.4	1.65	1"	0.065"	16 BWG	0.981	169	169	169	169	169	175	254
25.4	2.11	1"	0.083"	14 BWG	1.230	219	219	219	219	219	227	329
25.4	2.41	1"	0.095"	13 BWG	1.390	253	253	253	253	253	262	379
25.4	2.77	1"	0.109"	12 BWG	1.570	294	294	294	294	294	304	440
28	1.5				0.994	138	138	138	138	138	143	207
28	2.0				1.300	187	187	187	187	187	193	280
28	3.0				1.594	288	288	288	288	288	298	432
28	5.0				2.880	508	508	508	508	508	526	763
30	2.0				1.402	174	174	174	174	174	180	261
30	2.5				1.719	220	220	220	220	220	228	330
30	3.0				2.025	267	267	267	267	267	277	401
30	4.0				2.601	366	366	366	366	366	379	549
30	5.0				3.130	470	470	470	470	470	486	705
32	2.0				1.502	162	162	162	162	162	168	244
35	2.0				1.650	148	148	148	148	148	153	222
35	2.5				2.022	187	187	187	187	187	193	280
35	3.0				2.401	227	227	227	227	227	235	340
35	4.0				3.105	309	309	309	309	309	320	463
35	5.0				3.756	395	395	395	395	395	409	593
38	2.0				1.800	136	136	136	136	136	140	204
38	3.0				2.626	208	208	208	208	208	215	312
38	4.0				3.401	283	283	283	283	283	292	424
38	5.0				4.126	361	361	361	361	361	373	541
38	6.0				4.808	442	442	442	442	442	457	663
40	2.0				1.903	129	129	129	129	129	133	193
40	3.0				2.779	197	197	197	197	197	204	295
40	5.0				4.382	341	341	341	341	341	353	511
42	2.0				2.000	122	122	122	122	122	127	184
42	3.0				2.926	187	187	187	187	187	193	280

Shaded Items Available In Stock

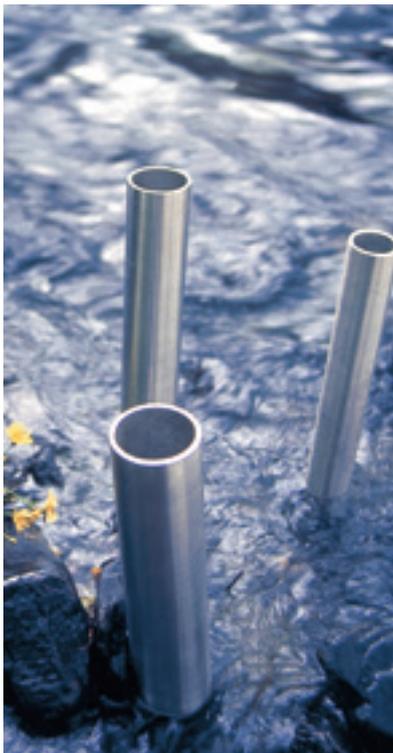
Design Pressure For Seamless Pipe / Tube acc. to ASME B31.3 (2014) 304.1.2. Straight pipe under internal pressure.

Valid for temperatures up to 37.78°C (100°F).

Tubacex Around The World



Currently the Tubacex Group is exporting into more than 100 countries worldwide from its manufacturing sites and warehouses. The company has 15 commercial offices and a wide network of agents in several countries that lead to a global presence.



MANUFACTURING COMPANIES

Acería de Álava, S.A.
STEEL MELTING SHOP
Amurrio. SPAIN

Tubacex Tubos Inoxidables, S.A.
HOT EXTRUSION PLANT
Llodio. SPAIN

COLD FINISHING PLANT
OCTG FINISHING PLANT
Amurrio. SPAIN

Schoeller Bleckmann Edelstahlrohr, GmbH
COLD FINISHING PLANT
HOT EXTRUSION PLANT
SPECIAL TUBE PLANT
Ternitz. AUSTRIA

Salem Tube, Inc.
COLD FINISHING PLANT
Greenville. PA. USA

IBF, S.p.a.
TUBES DIVISION
Vituone - Milano. ITALY
FITTINGS DIVISION
San Nicolò - Piacenza. ITALY

Tubacex Prakash
COLD FINISHING PLANT
Umbergaon. INDIA

Tubacex Awaji
STAINLESS FITTINGS
Amphur Muang-Samutprakarn.
THAILAND

Tubacex Taylor Accesorios, S.A.
BUTT WELDING FITTINGS
Artzeniega. SPAIN

Tubacex Services, S.L.
TUBE FINISHING SERVICES
Santander. SPAIN

SERVICE & DISTRIBUTION COMPANIES

Tubacex Service Solutions, S.A.
STAINLESS STEEL LONG PRODUCTS
DISTRIBUTION
Amurrio. SPAIN

Tubacex America, Inc. / TSS Houston
STAINLESS STEEL LONG PRODUCTS
DISTRIBUTION
Houston. UNITED STATES

Metaux Inox Services, S.A.S. / TSS France
STAINLESS STEEL LONG PRODUCTS
DISTRIBUTION
Satolas & Bonce. FRANCE

Tubos Mecánicos, S.A.
CARBON & ALLOYED MECHANICAL
TUBING DISTRIBUTION
Barcelona. SPAIN

TSS Central Europe
STAINLESS STEEL LONG PRODUCTS
DISTRIBUTION
Ternitz. AUSTRIA

TSS Brasil
STAINLESS STEEL LONG PRODUCTS
DISTRIBUTION
Sao Paulo. BRAZIL

TSS India
STAINLESS STEEL LONG PRODUCTS
DISTRIBUTION
Gandhidham. INDIA

TSS Middle East
STAINLESS STEEL LONG PRODUCTS
DISTRIBUTION
Dubai. UAE



HEAD OFFICE:
TUBACEX GROUP.
Tres Cruces, 8. P.O. Box nº 22
01400 LLODIO (ÁLAVA) SPAIN
Phone: +(34) 94 671 93 00
Fax: +(34) 94 671 93 14
+(34) 94 672 50 62/74
e-mail: sales@tubacex.com

MAIN SALES OFFICES AROUND THE WORLD

NETHERLANDS:
TUBACEX NORTH EUROPE
Phone: + 31 (0) 162 690 430
Fax: + 31 (0) 162 690 435
e-mail: salesnetherlands@tubacex.com

SPAIN:
TUBACEX SERVICE SOLUTIONS S.A.
Phone: + (34) 945 39 36 00
Fax: + (34) 945 39 34 22
e-mail: tss@tubacex.com

GERMANY:
TUBACEX GERMANY
Phone: + (49) 2150 70 567-0
Fax: + (49) 2150 70 567-20
e-mail: salesgermany@tubacex.com

UNITED STATES OF AMERICA & CANADA:
TUBACEX AMERICA
Phone: + (1) 713 856 2700/13
Fax: + (1) 713 856 2799
e-mail: sales@tubacex-usa.com

ITALY:
TUBACEX ITALIA
Phone: + (39) 02 669 5505
Fax: + (39) 02 673 845 92
e-mail: salesitaly@tubacex.com

UAE - DUBAI:
TUBACEX MIDDLE EAST
Phone: + (971) 4 701 72 12
Fax: + (971) 4 701 72 13
e-mail: salesmiddle-east@tubacex.com

AUSTRIA:
TUBACEX CENTRAL & EAST EUROPE
Phone: + (43) 2630 3160
Fax: + (43) 2630 369 47
e-mail: salesaustria@tubacex.com

INDIA:
TUBACEX INDIA
Phone: + (91) 22 40015324
Fax: + (91) 22 40015350
e-mail: sales@tubacexindia.com

CZECH REPUBLIC:
TUBACEX CZECHIA
Phone: + (42) 06 03 817 985
e-mail: salesczechia@tubacex.com

CHINA:
TUBACEX NORTH EAST ASIA
Phone: + (86) 21 5298 0242
Fax: + (86) 21 5298 0241
e-mail: tubacexasia@tubacex.com.cn

POLAND:
TUBACEX POLAND
Phone: + (48) 32 253 99 67
Fax: + (48) 32 206 82 48
e-mail: salespoland@tubacex.com

SINGAPORE:
TUBACEX SOUTH EAST ASIA
Phone: + (65) 6100 6126
e-mail: sales-sg@tubacex.com

RUSSIA:
TUBACEX CIS
Phone: + (7) 916 644 22 51
Fax: + (7) 495 959 21 80
e-mail: sales-cis@tubacex.com

KOREA:
TUBACEX KOREA
Phone: + (82) 10 4800 5080
Fax: + (82) 2 6021 4180
e-mail: saleskorea@tubacex.com

FRANCE:
TUBACEX FRANCE
Phone: + (33) 1 48 79 30 50
Fax: + (33) 1 48 79 18 06
e-mail: salesfrance@tubacex.com