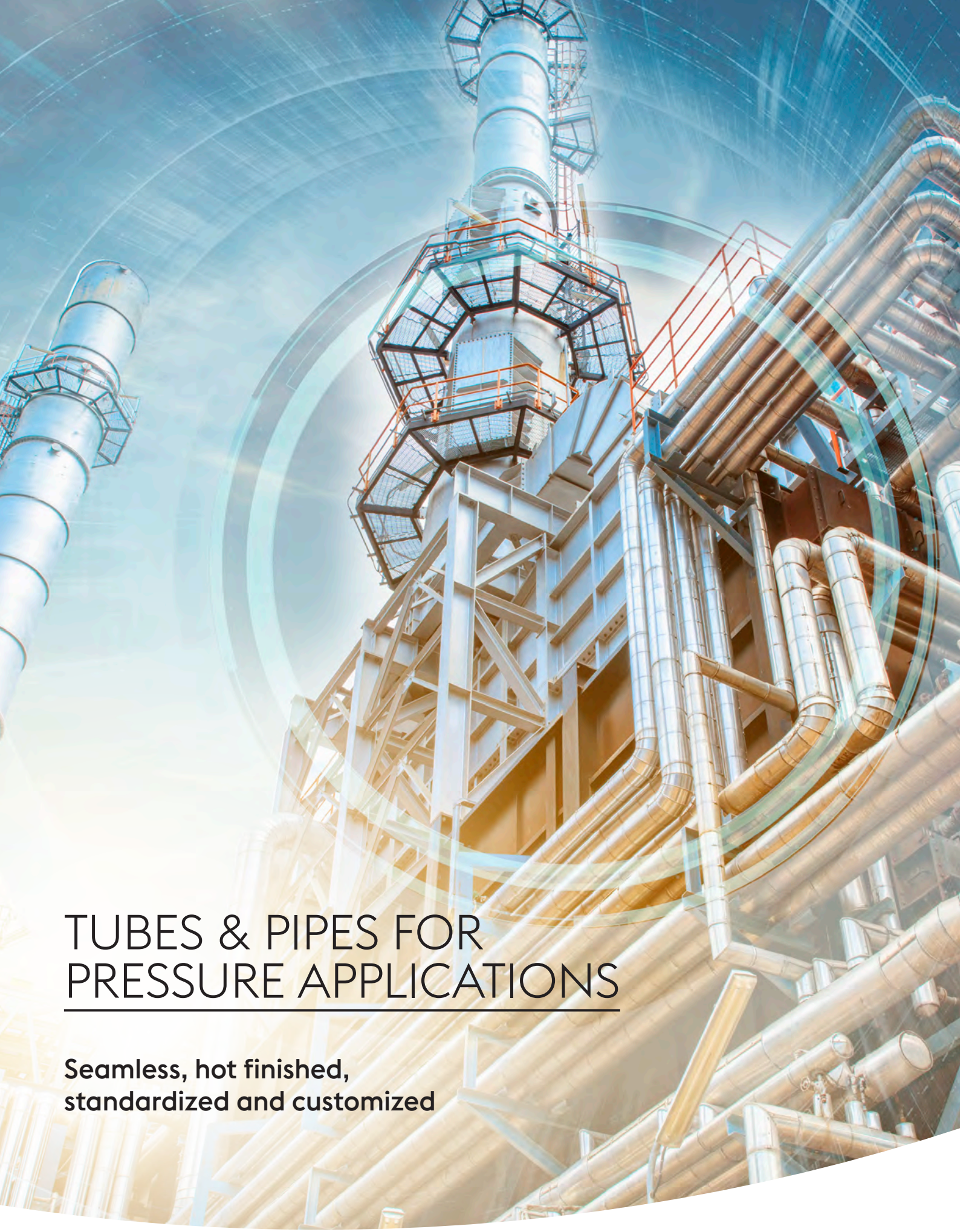


TUBES & PIPES FOR PRESSURE APPLICATIONS

Seamless, hot finished, standardized and customized

voestalpine Tubulars GmbH & Co KG
www.voestalpine.com/tubulars

voestalpine
ONE STEP AHEAD.

PERFORMANCE IN TUBULARS

Our world is based on high tech seamless pipes that can withstand the toughest conditions, day in, day out. We promise highest performance based on the core values customization, innovation and sustainability.

CUSTOMIZATION

INNOVATION

SUSTAINABILITY

FIELDS OF APPLICATION

Seamless hot finished tubes and pipes for pressure applications are mainly used in:

- Refineries - for hydrocarbon processing/ media extraction
- Power plants (Power Generation) – as unalloyed and medium alloyed steel grades
- The chemical and petrochemical industry – as components
- The nuclear industry – with extended testing procedures

PRODUCT CHARACTERISTICS & CUSTOMER BENEFITS

AT YOUR CHOICE: STANDARDIZED OR CUSTOMIZED
» FIND THE OPTIMAL PRODUCT SOLUTION WITH US

Carbon steel and low alloyed tubes and pipes are manufactured in size ranges between 26.70 to 200.00 mm (1.050 and 7 ⅞ inch) in grades according to international standards as well as to customer specifications.

For various customized solutions we can offer tests with internationally recognized test certificates, because our testing facilities have an accreditation in the field of mechanical materials testing according to ISO/IEC 17025: 2017.

CERTIFIED, SAFE AND RELIABLE
» IT COULD BE THAT EASY FOR YOU

Numerous certifications according to national and international standards proof the quality of voestalpine Tubulars and the conformity with environmental, safety, health and other important rules, regulations and values.

Certifications related to Tubes and Pipes for Pressure Applications:

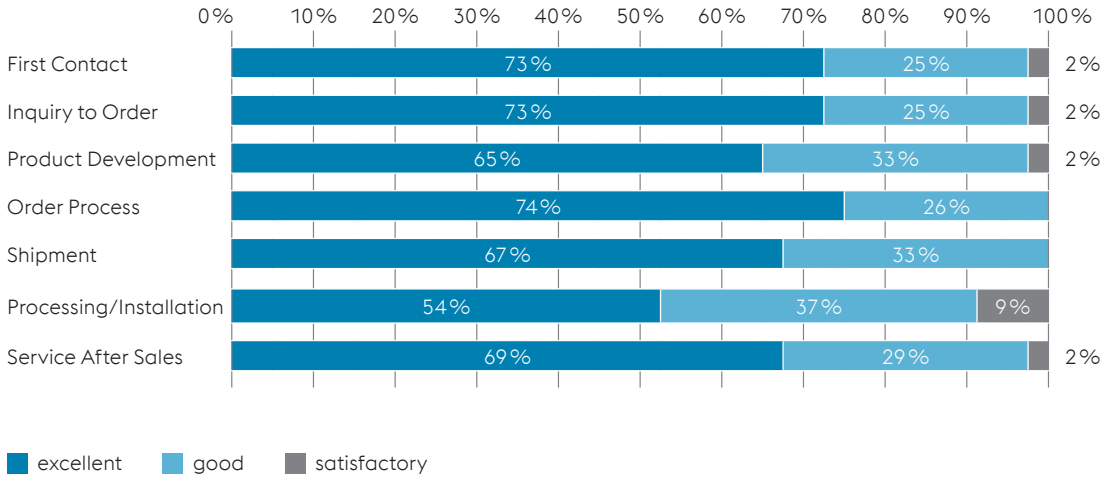
- Pressure-Equipment-Directive: voestalpine Tubulars runs a quality management system, which has undergone a specific assessment for materials of pressure equipment (PED 2014/68/EU Annex I, section 4.3) and is certified by a competent body (TUEV SUED).
- Pressure components: TUEV AD 2000 W0 / TRD 100 and AD 2000 W4.

All certificates are available in the download area of our web page: www.voestalpine.com/tubulars or in the myTubulars App

All our customers in this field of application certify in our annual customer satisfaction survey, carried out by a third party company, that we are a reliable partner throughout the whole process – from first contact/ inquiry to service after sales.

RESULTS OF OUR CUSTOMER SATISFACTION SURVEY

Satisfaction with voestalpine Tubulars:

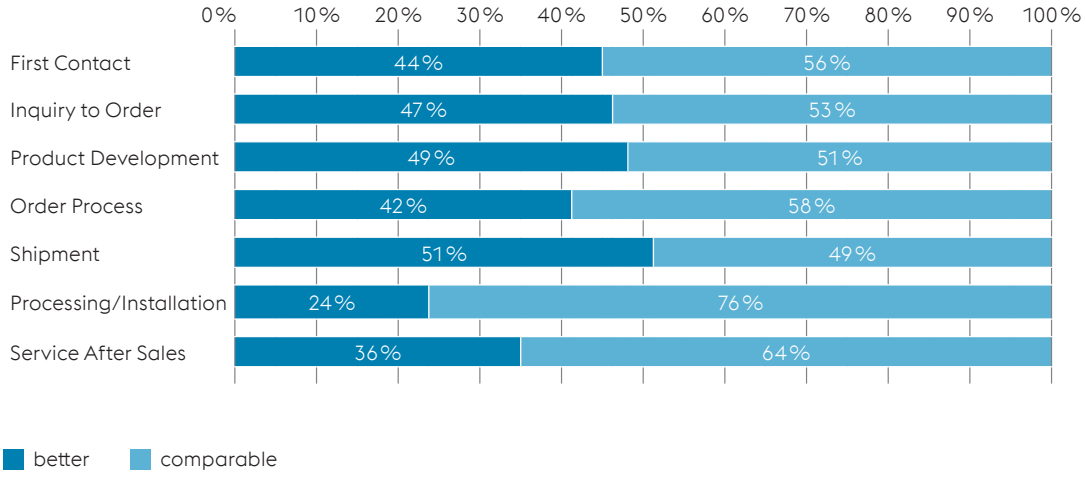


OUR RANGE OF STANDARDIZED PRODUCT SOLUTIONS
» JUST MAKE YOUR CHOICE

The main standards for our products for pressure applications are ASTM and EN.

Find out more about our standardized product solutions – have a look on the following pages of this brochure.

Rating compared to competition:



PRODUCT SOLUTIONS ACC. TO ASTM

ASTM APPLICATIONS

- Seamless Carbon Steel Pipes for High Temperature Service acc. to ASTM A106/A106M & ASME SA 106
  available steel grades: GRADE A, GRADE B, GRADE C
- Seamless Carbon Steel Pipes for Low-Temperature Service and Other Applications with Required Notch Toughness acc. to ASTM A333/A333M & ASME SA 333
  available steel grades: GRADE 6, GRADE 1
  available soon: GRADE 3
- Seamless Ferritic Alloy-Steel Pipes for High-Temperature Service acc. to ASTM A335/A335M & ASME SA 335
  available steel grades: GRADE P1, GRADE P11, GRADE P12, GRADE P22, GRADE P5, GRADE P9, GRADE P91, GRADE P92
- Seamless Carbon-Molybdenum Alloy-Steel Boiler and Superheater Tubes acc. ASTM A209/A209M & ASME SA 209
  available steel grades: GRADE T1, GRADE T1a
- Seamless Medium-Carbon Steel Boiler and Superheater Tubes acc. ASTM A210/A210M & ASME SA 210
  available steel grades: GRADE A-1, GRADE C
- Seamless Ferritic Alloy-Steel Boiler, Superheater and Heat-Exchanger Tubes acc. to ASTM A213/A213M & ASME SA 213
  available steel grades: GRADE T1, GRADE T11, GRADE T12, GRADE T22, GRADE T5, GRADE T9, GRADE T91, GRADE T92

DIMENSIONS & LENGTHS

Combinations of pipe sizes (outside diameter range from 26.70 - 200.00 mm/ 1.050 – 7.875 inches), special intermediate walls as well as minimum, average and heavy walls (up to 28.58 mm / 1.125 inches), lengths up to 17.0 m, heat treatment conditions and testing methods available upon request.

PIPE END FINISHING OPTIONS

We offer the following end preparation opportunities: plain ends, beveled ends, threaded & coupled ends.

TESTING METHODS

The following testing methods are available:

- Hydrostatic test (hydraulic leak tightness)
- Eddy-current examination of the pipe for the detection of discontinuities on external surface acc. to ASTM E 309
- Electromagnetic non-destructive examination for the verification of the hydraulic leak tightness acc. to ASTM E309 or ASTM E570 (as an option of the manufacturer or upon clients' request)
- Flux leakage examination for the detection of external surface and internal surface imperfections in longitudinal and transverse orientation acc. to ASTM E570
- Ultrasonic examination of pipe body for the detection of external surface and internal surface imperfections in longitudinal and transverse orientation acc. to ASTM E213
- Please Note: Not all tests are available for all sizes. Description of defects acc. to the relevant product specification. Other testing methods upon request.

ASTM RANGE

NOMINAL PIPE SIZE	OUTSIDE DIAMETER		WALL THICKNESS		SCHEDULE	WEIGHT	
inch	mm	inch	mm	inch		kg/m	ppf
¾	26.70	1.050	2.87	0.113	STD 40	1.69	1.13
			3.91	0.154	XS/80	2.20	1.47
1	33.40	1.315	3.38	0.133	STD 40	2.50	1.68
			4.55	0.179	XS/80	3.24	2.17
			6.35	0.250	160	4.24	2.85
1 ¼	42.20	1.660	3.56	0.140	STD 40	3.39	2.27
			4.85	0.191	XS/80	4.47	3.00
			6.35	0.250	160	5.61	3.76
			9.70	0.382	XXS	7.77	5.22
1 ½	48.30	1.900	3.68	0.145	STD 40	4.05	2.72
			5.08	0.200	XS/80	5.41	3.63
			7.14	0.281	160	7.25	4.86
			10.15	0.400	XXS	9.56	6.41
2	60.30	2.375	3.91	0.154	STD 40	5.44	3.66
			5.54	0.218	XS/80	7.48	5.03
			8.74	0.344	160	11.10	7.47
			11.07	0.436	XXS	13.44	9.04
2 ½	73.00	2.875	5.16	0.203	STD 40	8.63	5.80
			7.01	0.276	XS/80	11.41	7.67
			9.53	0.375	160	14.92	10.02
			14.02	0.552	XXS	20.39	13.71
3	88.90	3.500	5.49	0.216	STD 40	11.29	7.58
			7.62	0.300	XS/80	15.27	10.26
			11.13	0.438	160	21.35	14.34
			15.24	0.600	XXS	27.68	18.60
3 ½	101.60	4.000	5.74	0.226	STD 40	13.57	9.12
			8.08	0.318	XS/80	18.63	12.52
			16.15	0.636	XXS	34.03	22.87
4	114.30	4.500	6.02	0.237	STD 40	16.07	10.80
			8.56	0.337	XS/80	22.32	15.00
			11.13	0.438	120	28.32	19.02
			13.49	0.531	160	33.54	22.53
			17.12	0.674	XXS	41.03	27.57
4 ½	127.00	5.000	6.27	0.247	STD 40	18.67	12.55
			9.02	0.355	XS/80	26.24	17.63
			18.03	0.710	XXS	48.45	32.56
5	141.30	5.563	6.55	0.258	STD 40	21.77	14.63
			9.53	0.375	XS/80	30.97	20.80
			12.70	0.500	120	40.28	27.06
			15.88	0.625	160	49.11	32.99
			19.05	0.750	XXS	57.43	38.59
6	168.30	6.625	7.11	0.280	STD 40	28.26	18.99
			10.97	0.432	XS/80	42.56	28.60
			14.27	0.562	120	54.20	36.43
			18.26	0.719	160	67.56	45.39
			21.95	0.864	XXS	79.22	53.21
7	193.70	7.625	7.65	0.301	STD 40	35.10	23.57
			12.70	0.500	XS/80	56.69	38.08
			22.23	0.875	XXS	94.00	63.14

PRODUCT SOLUTIONS ACC. TO EN

EN 10216 APPLICATIONS

» Part 1: Non-alloy steel tubes with specified room temperature properties
available steel grades: P235TR1, P235TR2

» Part 2: Non-alloy and alloy steel tubes with specified elevated temperature properties
available steel grades: P235GH, P265GH, 20MNNB6, 16MO3, 13CRMO4-5, 10CRMO9-10, 25CRMO4
available soon: X11CRMO5, X11CRMO9-1, X10CRMOVNB9-1, X10CRWMOVNB9-2

PRODUCT RANGE EN

OUTSIDE DIAMETER			WALL THICKNESS																	
mm		4.00	4.50	5.00	5.60	6.30	7.10	8.00	8.80	10.00	11.00	12.00	12.50	13.00	14.20	16.00	17.50	18.00	19.00	20.00
	inch	0.157	0.177	0.197	0.220	0.248	0.280	0.315	0.346	0.394	0.433	0.472	0.492	0.512	0.559	0.630	0.689	0.709	0.748	0.787
31.80	1.252	2.74	3.03	3.31	3.62															
33.70	1.327	2.92	3.24	3.54	3.88															
35.00	1.380	3.06	3.39	3.71	4.06	4.47														
38.00	1.496	3.35	3.72	4.07	4.47	4.93														
42.40	1.669	3.79	4.21	4.61	5.08	5.61	6.18	6.79												
44.50	1.752	4.00	4.44	4.87	5.37	5.94	6.55	7.20	7.75											
48.30	1.902	4.37	4.86	5.34	5.90	6.53	7.21	7.95	8.57											
51.00	2.008	4.64	5.16	5.67	6.27	6.94	7.69	8.48	9.16	10.11										
54.00	2.126	4.93	5.49	6.04	6.68	7.41	8.21	9.18	9.81	10.85	11.66									
57.00	2.244	5.23	5.83	6.41	7.10	7.88	8.74	9.67	10.46	11.59	12.48									
60.30	2.374	5.55	6.19	6.82	7.55	8.39	9.32	10.32	11.18	12.40	13.37	14.29								
63.50	2.500	5.87	6.55	7.21	8.00	8.89	9.88	10.95	11.87	13.19	14.24	15.24	15.72	16.19						
70.00	2.756	6.51	7.27	8.01	8.89	9.90	11.01	12.23	13.28	14.80	16.01	17.16	17.73	18.27	19.54					
73.00	2.874	6.81	7.60	8.38	9.31	10.36	11.54	12.82	13.93	15.54	16.82	18.05	18.65	19.24	20.59					
76.10	2.996	7.11	7.95	8.77	9.74	10.84	12.08	13.44	14.61	16.30	17.66	18.97	19.61	20.23	21.68					
82.50	3.248	7.74	8.66	9.56	10.62	11.84	13.20	14.70	15.99	17.88	19.40	20.86	21.58	22.28	23.92	26.24				
88.90	3.500	8.38	9.37	10.35	11.50	12.83	14.32	15.96	17.38	19.46	21.13	22.76	23.55	24.33	26.16	28.77	30.81			
95.00	3.740	8.98	10.04	11.1	12.35	13.78	15.39	17.16	18.71	20.96	22.79	22.56	25.43	26.29	28.30	31.17	33.45	34.18	35.61	
101.60	4.000	9.63	10.78	11.91	13.26	14.81	16.55	18.47	20.14	22.59	24.58	26.52	27.47	28.41	30.61	33.78	36.30	37.11	38.70	40.25
108.00	4.252	10.26	11.49	12.7	14.14	15.80	17.67	19.73	21.53	24.17	26.31	28.41	29.44	30.46	32.85	36.30	39.06	39.95	41.70	43.40
114.30	4.500	10.88	12.19	13.48	15.01	16.78	18.77	20.97	22.90	25.72	28.02	30.27	31.38	32.48	35.05	38.79	41.78	42.75	44.65	46.51
121.00	4.764	11.54	12.93	14.3	15.94	17.82	19.94	22.29	24.35	27.37	29.84	32.26	33.45	34.62	37.40	41.43	44.67	45.72	47.79	49.82
127.00	5.000	12.13	13.59	15.04	16.77	18.75	20.99	23.48	26.65	28.85	31.47	34.03	35.30	36.55	39.50	43.80	47.26	48.39	50.61	52.78
133.00	5.236	12.79	14.26	15.78	17.59	19.69	22.04	24.66	26.95	30.33	33.10	35.81	37.15	38.47	41.60	46.17	49.85	51.05	53.42	55.73
139.70	5.500	13.39	15.00	16.61	18.52	20.73	23.22	25.98	28.41	31.99	34.91	37.79	39.21	40.62	43.95	48.81	52.74	54.02	56.56	59.04
146.00	5.748		15.70	17.39	19.39	21.70	24.32	27.23	29.78	33.54	36.62	39.66	45.16	46.81	46.16	51.30	55.46	56.82	59.51	62.15
152.40	6.000		16.41	18.18	20.27	22.70	25.44	28.49	31.16	35.12	38.36	41.55	45.16	46.81	48.40	53.82	58.22	59.66	62.51	65.30
159.00	6.260		17.15	18.99	21.19	23.72	26.60	29.79	32.60	36.75	40.15	43.50	45.16	46.81	50.71	56.43	61.07	62.59	65.60	68.56
165.10	6.500		17.82	19.74	22.03	24.67	27.67	30.99	33.92	38.25	41.80	45.31	47.04	48.76	52.84	58.83	63.70	65.30	68.46	71.57
168.30	6.626		18.18	20.14	22.47	25.17	28.23	31.63	34.61	39.04	42.67	46.26	48.03	49.79	53.96	60.10	65.08	66.72	69.96	73.15
177.80	7.000			21.31	23.78	26.65	29.89	33.50	36.68	41.38	45.25	49.07	50.96	52.83	57.29	63.84	69.18	70.94	74.41	77.83
193.70	7.626						32.67	36.64	40.13	45.30	49.56	53.77	55.86	57.93	62.86	70.12	76.04	77.99	81.86	85.67

- Part 3: Alloy fine grain steel tubes
  available steel grades: P275*, P355*, P460*, P620*, P690* (* = all variations acc. to Table 2)
- Part 4: Non-alloy and alloy steel tubes with specified low temperature properties
  available steel grades: P215NL, P255QL, P265NL
- Various VdTUEV Werkstoffblaetter (material leaflets) available soon

WALL THICKNESS							
21.00	22.00	23.00	24.00	25.00	26.00	27.00	28.00
0.827	0.866	0.906	0.945	0.984	1.024	1.063	1.102
45.06	46.66						
48.32	50.08	51.79					
51.79	53.71	55.59	57.41				
54.90	56.97	58.99	60.96	62.89			
58.00	60.22	62.39	64.51	66.59			
61.47	63.86	66.19	68.48	70.72			
64.74	67.28	69.77	72.21	74.60			
68.05	70.75	73.40	76.00	78.55			
71.47	74.33	77.14	79.90	82.62			
74.63	77.64	80.60	83.51	86.38			
76.29	79.38	82.42	85.41	88.35			
81.21	84.53	87.80	91.03	94.21			
89.44	93.16	96.82					

DIMENSIONS & LENGTHS

Combinations of pipe sizes (outside diameter range from 26.70 - 200.00 mm / 1.050 - 7.875 inches), lengths up to 17.0 m, heat treatment conditions and testing methods upon request.

TESTING METHODS

The following testing methods are available:

- Hydrostatic test (hydraulic leak tightness)
- Electromagnetic non-destructive examination for the verification of the hydraulic leak tightness acc. to EN ISO 10893 Part 1 (as an option of the manufacturer or upon clients' request)
- Eddy-current examination of the pipe for the detection of imperfections acc. to EN ISO 10893 Part 2
- Flux leakage examination for the detection of longitudinal and transverse imperfections acc. to EN ISO 10893 Part 3
- Ultrasonic examination of pipe body for the detection of imperfections acc. to EN ISO 10893 Part 8
- Ultrasonic examination of the pipe body for the detection of longitudinal and/or transverse imperfections acc. to EN ISO 10893 Part 10
- Ultrasonic thickness testing acc. to EN ISO 10893 Part 12

Please Note:
Not all tests are available for all sizes.
Description of defects acc. to the relevant product specification (EN 10216 Part 1-4) and test category (TC1/TC2).
Other testing methods upon request.

= Standard production sizes, weight in kg/m

= Special/intermediate production sizes, available upon request

SERVICES

myTubulars

myTubulars APP
CONVERSION CALCULATOR, CONTACT FINDER AND “NEW” NOTIFICATION

The myTubulars App offers new possibilities to take a look into the world of voestalpine Tubulars. Explore the great features like the Virtual Reality Tour through our mill, the conversion tool for numerous important units or our practical Contact Finder. As an additional feature, you can see when a product catalog or certificate is updated (marked as “new”).

myTubulars is available for all iOS and Android devices for free in the App stores.

GET THE APP!

Download on the App Store

GET IT ON Google Play

Follow us
on social Media!

WHY TUBULARS?

Support from material and product selection, in-house material and product development, to final product and installation consulting from one source.

PRODUCT DEVELOPMENT

PROCESS DEVELOPMENT

PRODUCT SELECTION

TESTING FACILITIES

Support from material and product selection, in-house material and product development, to final product and installation consulting from one source.

NEW PRODUCT DEVELOPMENT
REQUEST FROM OUR CUSTOMER

METLAB

MATERIAL COMPOSITION

TECHMET

TUBULARS TESTING FACILITIES

TESTING & FINE TUNING
TOGETHER WITH METLAB & TECHMET

FINAL TESTING &
APPROVAL OF PRODUCT

PRESSURE_APPLICATIONS/EDITION 2020/12

voestalpine Tubulars GmbH & Co KG
Alpinestrasse 17
8652 Kindberg-Aumuehl, Austria
T. +43/50304/23-0
F. +43/50304/63-532
sales@vatubulars.com
www.voestalpine.com/tubulars

voestalpine
ONE STEP AHEAD.