



VAGT®

Still going strong



voestalpine Tubulars GmbH & Co KG  
[www.voestalpine.com/tubulars](http://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

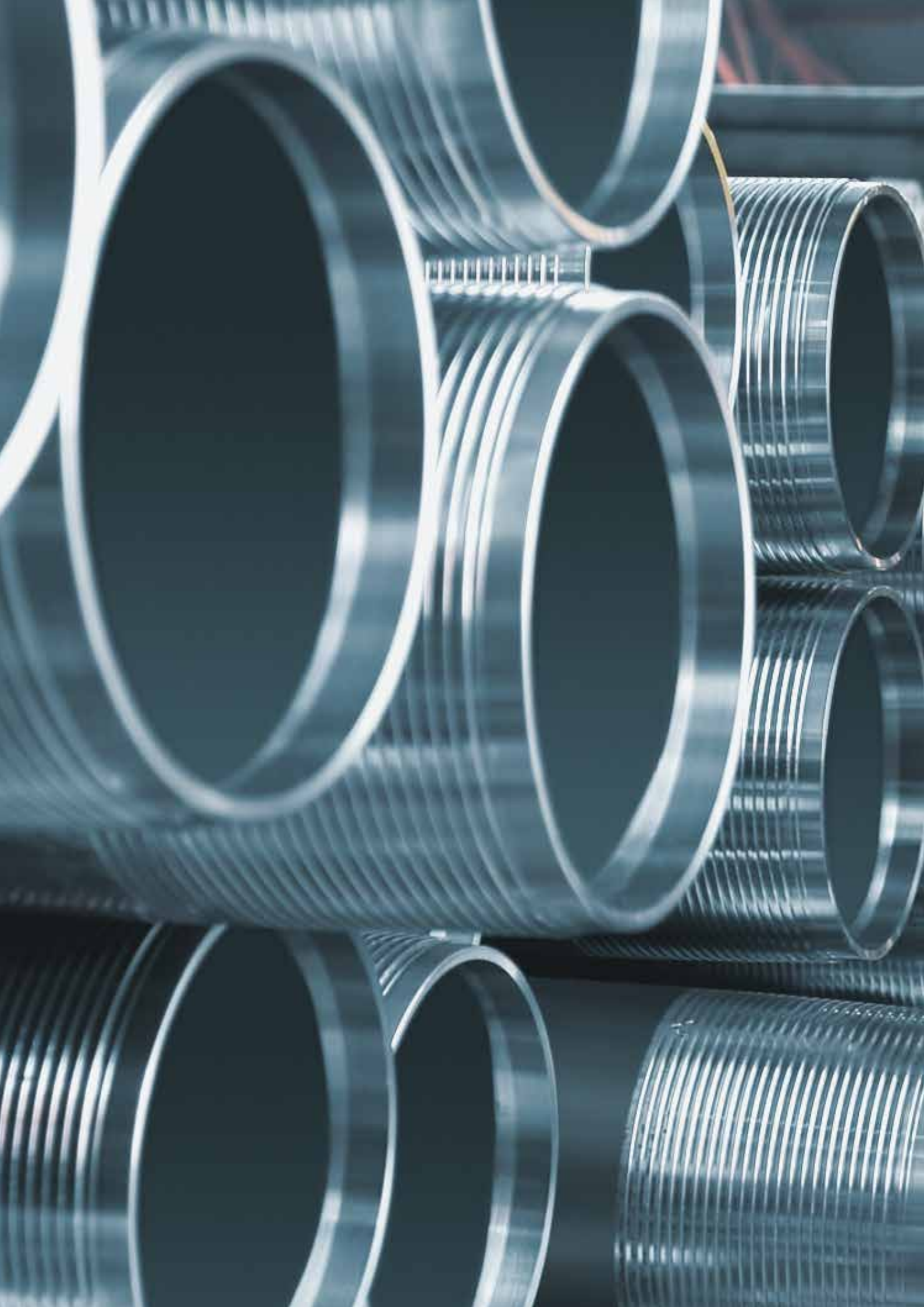
# PRODUCTION, R&D, SALES LOCATIONS AND LICENSEES



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# DESIGN CHARACTERISTICS

voestalpine Tubulars Proprietary Connections like VAGT® offer benefits which are not addressed by the API specification or exceed the API standards.



## PRODUCT CHARACTERISTICS & CUSTOMER BENEFITS

### METAL TO METAL SEAL » ENSURES WELL INTEGRITY

The high contact pressure in the seal area is reinforced by the internal shoulder.

### SMOOTH INTERNAL PROFILE » MINIMIZES TURBULENCES

The flush internal profile minimizes turbulences and provides good conditions for internal pipe coating.

### FAST & EASY MAKE-UP » SAVES RUNNING TIME

The tapered buttress thread design ensures a high stress performance and allows easy make-up even under severe conditions.

The internal shoulder reinforces the contact pressure in the seal area and acts as a positive make-up stop.



# GRADES

VAGT® is available in API standard and proprietary grades. Also tailor-made customer specifications can be fulfilled upon request.

## Our tools in manufacturing the VA series include but are not limited to

- » Steel with special chemical composition
- » Unique melting, refining and casting practices
- » Controlled processes in the pipe rolling, heat treatment, straightening and end finishing operations
- » Tighter tolerances
- » Restricted mechanical properties
- » Special testing and inspection methods

Some of the product names explain the application, e.g. deep well, sour service, low temperature.

### The applications for other grades are defined as follows:

- » **VA-High Collapse-Series**  
for use in high external pressure environments
- » **VA-Mild Sweet Gas-Series**  
for mildly corrosive environments where – in combination with an adequate inhibition program – a higher corrosion resistance can be expected compared to regular API grades

Specified Minimum Yield Strength [psi]	Grade API Spec 5CT	HIGH COLLAPSE	ENHANCED PROPERTIES	EXTREME PROPERTIES
55,000	J55			
	K55			
75,000				
80,000	N80-Q	VA-HC-N80-Q	VA-EP-N80-Q	VA-XP-N80-Q
	L80-1	VA-HC-L80-1	VA-EP-L80-1	VA-XP-L80-1
	L80-13Cr			
90,000	C90-1	VA-HC-C90-1	VA-EP-C90-1	VA-XP-C90-1
95,000	R95	VA-HC-R95	VA-EP-R95	VA-XP-R95
	T95-1	VA-HC-T95-1	VA-EP-T95-1	VA-XP-T95-1
110,000	C110	VA-HC-C110	VA-EP-C110	
	P110	VA-HC-P110	VA-EP-P110	VA-XP-P110
125,000	Q125-1	VA-HC-Q125-1	VA-EP-Q125-1	VA-XP-Q125-1
140,000				
150,000				

On request in combination with:



### PROPRIETARY GRADES – THE VA SERIES

SOUR SERVICE			DEEP WELL		LOW TEMPERATURE	MILD SWEET GAS	MILD SWEET GAS	SWEET GAS
	with High Collapse	with Enhanced Properties		with High Collapse		Ferrite Pearlite	Quenched & Tempered	
					VA-LT-J55	VA-FP-55-1CR		
					VA-LT-K55			
						VA-FP-75-1CR		
					VA-LT-N80-Q	VA-FP-80-1CR	VA-N80-Q-1CR/VA-N80-Q-3CR	
					VA-LT-L80-1		VA-L80-1-1CR/VA-L80-1-3CR	
VA-SS-80	VA-SS-80-HC	VA-SS-80-EP						
					VA-LT-C90-1			
VA-SS-90	VA-SS-90-HC	VA-SS-90-EP						
					VA-LT-R95		VA-R95-1CR/VA-R95-3CR	
					VA-LT-T95-1			
VA-SS-95	VA-SS-95-HC	VA-SS-95-EP						VA-95-13CR
					VA-LT-C110			
VA-SS-110	VA-SS-110-HC	VA-SS-110-EP						
VA-S-110	VA-S-110-HC	VA-S-110-EP						
					VA-LT-P110		VA-P110-1CR/VA-P110-3CR	
					VA-LT-Q125-1			
VA-S-125	VA-S-125-HC	VA-S-125-EP	VA-D-125	VA-D-125-HC				
			VA-D-140	VA-D-140-HC				
			VA-D-150	VA-D-150-HC				

LOW TEMPERATURE

EP/XP

EP/XP

HC

# DIMENSIONS

PIPE OUTSIDE DIAMETER		NOMINAL WEIGHT		WALL THICKNESS		INSIDE DIAMETER		DRIFT DIAMETER		COUPLING LENGTH	
inch	mm	lb/ft	kg/m	inch	mm	inch	mm	inch	mm	inch	mm
1.9	48.26	2.75	4.11	0.145	3.68	1.610	40.89	1.516	38.51	4.016	102.00
		3.65	5.47	0.200	5.08	1.500	38.10	1.406	35.72	4.016	102.00
2 3/8	60.32	4.60	6.69	0.190	4.83	1.995	50.67	1.901	48.29	5.000	127.00
		5.10	7.57	0.218	5.54	1.939	49.25	1.845	46.87	5.000	127.00
		5.80	8.67	0.254	6.45	1.867	47.43	1.774	45.05	5.000	127.00
2 7/8	73.02	6.40	9.29	0.217	5.51	2.441	62.01	2.348	59.63	5.630	143.00
		7.80	11.57	0.276	7.01	2.323	59.01	2.230	56.63	5.630	143.00
		8.60	12.74	0.308	7.82	2.259	57.39	2.166	55.01	5.630	143.00
3 1/2	88.90	7.70	11.28	0.216	5.49	3.068	77.92	2.943	74.74	6.575	167.00
		9.20	13.29	0.254	6.45	2.992	76.00	2.867	72.82	6.575	167.00
		10.20	14.97	0.289	7.34	2.922	74.22	2.797	71.04	6.575	167.00
		12.70	18.90	0.375	9.52	2.750	69.86	2.625	66.68	6.575	167.00
		13.70	20.62	0.413	10.50	2.673	67.90	2.548	64.72	6.575	167.00
		14.70	22.16	0.450	11.43	2.600	66.04	2.475	62.86	6.575	167.00
4	101.60	9.50	13.82	0.226	5.74	3.548	90.12	3.423	86.94	7.126	181.00
		10.70	15.86	0.262	6.65	3.476	88.30	3.351	85.12	7.126	181.00
		13.20	19.63	0.330	8.38	3.340	84.84	3.215	81.66	7.126	181.00
4 1/2	114.30	10.50	15.51	0.224	5.69	4.052	102.92	3.927	99.74	7.913	201.00
		11.60	17.18	0.250	6.35	4.000	101.60	3.875	98.42	7.913	201.00
		12.60	18.50	0.271	6.88	3.958	100.54	3.833	97.36	7.913	201.00
		13.50	19.78	0.290	7.37	3.920	99.56	3.794	96.38	7.913	201.00
		15.20	22.67	0.337	8.56	3.826	97.18	3.701	94.00	7.913	201.00
		17.00	25.37	0.380	9.65	3.740	95.00	3.615	91.82	7.913	201.00
5	127.00	18.90	28.31	0.430	10.92	3.640	92.46	3.515	89.28	7.913	201.00
		13.00	19.67	0.253	6.43	4.494	114.14	4.369	110.96	9.173	233.00
		15.00	22.71	0.296	7.52	4.408	111.96	4.283	108.78	9.173	233.00
		18.00	27.25	0.362	9.19	4.276	108.62	4.151	105.44	9.173	233.00
		21.40	32.30	0.437	11.10	4.125	104.80	4.000	101.62	9.173	233.00
		23.20	34.94	0.478	12.14	4.044	102.72	3.919	99.54	9.173	233.00
5 1/2	139.70	24.10	36.35	0.500	12.70	4.000	101.60	3.875	98.42	9.173	233.00
		15.50	23.45	0.275	6.98	4.950	125.74	4.825	122.56	9.331	237.00
		17.00	25.73	0.304	7.72	4.892	124.26	4.767	121.08	9.331	237.00
		20.00	30.12	0.361	9.17	4.778	121.36	4.653	118.18	9.331	237.00
		23.00	34.17	0.415	10.54	4.670	118.62	4.545	115.44	9.331	237.00
		26.00	38.65	0.476	12.09	4.548	115.52	4.423	112.34	9.331	237.00
5 3/4	146.05	16.40	24.95	0.276	7.00	5.199	132.05	5.074	128.87	9.659	245.35
		17.90	27.21	0.303	7.70	5.144	130.65	5.019	127.47	9.659	245.35
		19.70	29.78	0.335	8.50	5.081	129.05	4.956	125.87	9.659	245.35
		20.40	31.40	0.354	9.00	5.039	128.00	4.914	124.82	9.659	245.35
6 5/8	168.28	20.00	30.11	0.288	7.32	6.050	153.66	5.924	150.48	9.724	247.00
		24.00	36.19	0.352	8.94	5.922	150.42	5.797	147.24	9.724	247.00
		28.00	42.24	0.417	10.59	5.792	147.12	5.667	143.94	9.724	247.00
		32.00	47.52	0.475	12.06	5.676	144.18	5.551	141.00	9.724	247.00
7	177.80	23.00	34.68	0.317	8.05	6.366	161.70	6.241	158.52	10.118	257.00
		26.00	39.20	0.362	9.19	6.276	159.42	6.151	156.24	10.118	257.00
		29.00	43.77	0.408	10.36	6.184	157.08	6.059	153.90	10.118	257.00
		32.00	48.19	0.453	11.51	6.094	154.78	5.969	151.60	10.118	257.00
		35.00	52.51	0.498	12.65	6.004	152.50	5.879	149.32	10.118	257.00
		38.00	56.50	0.540	13.72	5.920	150.36	5.794	147.18	10.118	257.00



All VAGT® accessories are available on request. The shown values are based on T & C pipe lengths of L = 10.0m (32.81ft).  
 Special clearance couplings and 20° beveled couplings have a lower load on coupling face.  
 Available on request: special clearance couplings with reduced or alternative outside diameters or 20° beveled couplings (standard chamfer of 45°).  
 Blanking dimensions for accessories are available as a download on our web page [www.voestalpine.com/tubulars](http://www.voestalpine.com/tubulars)

	OUTSIDE DIAMETER COUPLING				VOLUME (REGULAR)				MAKE UP LOSS	
	REGULAR		ALTERNATIVE		DISPLACEMENT		PRODUCTION			
	inch	mm	inch	mm	us gal/ft	lit/m	us gal/ft	lit/m	inch	mm
	2.201	55.90	2.374	60.30	0.148	1.84	0.106	1.31	1.732	44.0
	2.217	56.30	2.374	60.30	0.148	1.84	0.092	1.14	1.732	44.0
	2.697	68.50	2.874	73.01	0.231	2.87	0.162	2.02	2.205	56.0
	2.697	68.50	2.874	73.01	0.231	2.87	0.153	1.91	2.205	56.0
	2.776	70.50	2.874	73.01	0.231	2.87	0.142	1.77	2.205	56.0
	3.197	81.20	3.500	88.90	0.338	4.20	0.243	3.02	2.520	64.0
	3.327	84.50	3.500	88.90	0.339	4.21	0.220	2.73	2.520	64.0
	3.327	84.50	3.500	88.90	0.339	4.21	0.208	2.59	2.520	64.0
	3.862	98.10	4.252	108.00	0.502	6.23	0.384	4.77	3.000	76.2
	3.862	98.10	4.252	108.00	0.502	6.23	0.365	4.54	3.000	76.2
	3.917	99.50	4.252	108.00	0.502	6.23	0.348	4.33	3.000	76.2
	4.035	102.50	4.252	108.00	0.503	6.24	0.309	3.83	3.000	76.2
	4.138	105.10	4.252	108.00	0.503	6.25	0.292	3.62	3.000	76.2
	4.138	105.10	4.252	108.00	0.503	6.25	0.276	3.43	3.000	76.2
	4.390	111.50	4.748	120.60	0.655	8.14	0.514	6.38	3.272	83.1
	4.390	111.50	4.748	120.60	0.655	8.14	0.493	6.12	3.272	83.1
	4.500	114.30	4.748	120.60	0.656	8.15	0.455	5.65	3.272	83.1
	4.862	123.50	5.201	132.10	0.829	10.30	0.670	8.32	3.665	93.1
	4.862	123.50	5.201	132.10	0.829	10.30	0.653	8.11	3.665	93.1
	4.862	123.50	5.201	132.10	0.829	10.30	0.639	7.94	3.665	93.1
	4.961	126.00	5.201	132.10	0.830	10.31	0.627	7.79	3.665	93.1
	4.961	126.00	5.201	132.10	0.830	10.31	0.597	7.42	3.665	93.1
	5.106	129.70	5.252	133.40	0.831	10.32	0.571	7.09	3.665	93.1
	5.106	129.70	5.252	133.40	0.831	10.32	0.541	6.71	3.665	93.1
	5.563	141.30	-	-	1.026	12.74	0.824	10.23	4.252	108.0
	5.563	141.30	-	-	1.026	12.74	0.793	9.85	4.252	108.0
	5.563	141.30	-	-	1.026	12.74	0.746	9.27	4.252	108.0
	5.563	141.30	-	-	1.026	12.74	0.694	8.63	4.252	108.0
	5.563	141.30	-	-	1.026	12.74	0.667	8.29	4.252	108.0
	5.563	141.30	-	-	1.026	12.74	0.653	8.11	4.252	108.0
	6.051	153.70	-	-	1.240	15.40	1.000	12.42	4.331	110.0
	6.051	153.70	-	-	1.240	15.40	0.976	12.13	4.331	110.0
	6.051	153.70	-	-	1.240	15.40	0.931	11.57	4.331	110.0
	6.051	153.70	-	-	1.240	15.40	0.890	11.05	4.331	110.0
	6.051	153.70	-	-	1.240	15.40	0.844	10.48	4.331	110.0
	6.535	166.00	-	-	1.359	16.87	1.103	13.70	4.409	112.0
	6.535	166.00	-	-	1.359	16.87	1.079	13.41	4.409	112.0
	6.535	166.00	-	-	1.359	16.87	1.053	13.08	4.409	112.0
	6.535	166.00	-	-	1.358	16.87	1.036	12.87	4.409	112.0
	7.390	187.70	-	-	1.802	22.38	1.493	18.54	4.528	115.0
	7.390	187.70	-	-	1.802	22.38	1.431	17.77	4.528	115.0
	7.390	187.70	-	-	1.802	22.38	1.369	17.00	4.528	115.0
	7.390	187.70	-	-	1.802	22.38	1.315	16.33	4.528	115.0
	7.657	194.50	-	-	2.009	24.95	1.654	20.54	4.724	120.0
	7.657	194.50	-	-	2.009	24.95	1.607	19.96	4.724	120.0
	7.657	194.50	-	-	2.009	24.95	1.560	19.38	4.724	120.0
	7.657	194.50	-	-	2.009	24.95	1.515	18.82	4.724	120.0
	7.657	194.50	-	-	2.009	24.95	1.471	18.27	4.724	120.0
	7.657	194.50	-	-	2.009	24.95	1.430	17.76	4.724	120.0

# PERFORMANCE PROPERTIES TUBING

(METRIC UNITS)

PIPE OUTSIDE DIAMETER		NOMINAL WEIGHT	WALL THICKNESS	GRADE 55				GRADE 75				GRADE 80				
inch	mm			Pi	Pc	Sy	L	Pi	Pc	Sy	L	Pi	Pc	Sy	L	
		lb/ft	mm	MPa		kN		MPa		kN		MPa		kN		
1.9	48.26	2.75	3.68	50.60	53.30	195	180	69.00	72.80	267	246	73.70	77.80	285	263	
		3.65	5.08	69.80	71.40	261	194	95.20	97.40	356	265	101.70	104.00	380	282	
2 3/8	60.32	4.60	4.83	53.10	55.80	319	242	72.40	76.10	435	330	77.30	81.10	465	353	
		5.10	5.54	60.90	63.20	354	242	83.10	86.20	483	330	88.70	92.00	515	353	
hi.gr.		(5.10)	(5.54)	GRADE 80		361	353	GRADE 95		493	418	GRADE 95		526	418	
		5.80	6.45	70.90	72.40	414	325	96.70	98.80	564	443	103.30	105.40	603	473	
2 7/8	73.02	6.40	5.51	50.00	52.90	443	289	68.30	72.20	604	396	72.90	77.00	645	421	
		7.80	7.01	63.70	65.80	551	452	86.80	89.80	752	616	92.70	95.70	803	658	
		8.60	7.82	71.00	72.50	607	452	96.90	98.90	828	616	103.40	105.50	884	658	
		3 1/2	88.90	7.70	5.49	41.00	41.10	545	403	55.90	51.80	744	550	59.70	54.30	794
9.20	6.45			48.10	51.00	633	406	65.60	69.00	864	554	70.10	72.70	922	591	
		10.20	7.34	54.80	57.50	713	488	74.70	78.30	972	666	79.80	83.60	1038	711	
		12.70	9.52	71.00	72.60	899	669	96.90	98.90	1226	912	103.40	105.50	1308	974	
hi.gr.		(12.70)	(9.52)	GRADE 80		900	900	GRADE 95		1227	1156	GRADE 95		1311	1156	
		13.70	10.50	78.30	78.90	980	829	106.90	107.60	1337	1131	114.10	114.80	1428	1208	
		14.70	11.43	85.30	85.00	1013	829	116.30	115.90	1382	1131	124.20	123.60	1474	1208	
		4	101.60	9.50	5.74	37.50	35.20	656	498	51.20	43.60	894	679	54.60	45.40	954
10.70	6.65			70.90	45.40	752	497	59.20	57.70	1025	678	63.20	60.60	1095	724	
		13.20	8.38	54.70	57.30	930	685	74.60	78.20	1269	935	79.70	83.50	1354	998	
		4 1/2	114.30	10.50	5.69	33.00	27.60	736	517	45.00	33.00	1004	706	48.10	34.10	1072
11.60	6.35			36.80	34.20	816	517	50.30	42.10	1113	706	53.70	43.80	1189	753	
		12.60	6.88	70.90	39.50	880	517	54.50	49.50	1200	706	58.10	51.70	1282	753	
		13.50	7.37	42.80	44.30	938	703	58.30	56.10	1280	959	62.30	58.90	1367	1024	
		15.20	8.56	49.70	52.50	1069	703	67.80	71.70	1458	959	72.30	76.40	1556	1024	
		(15.20)	(8.56)	GRADE 80		1078	1024	GRADE 95		1470	1215	GRADE 95		1570	1215	
hi.gr.		17.00	9.65	56.00	58.60	1202	985	76.40	80.00	1640	1343	81.60	85.30	1751	1434	
		18.90	10.92	63.40	65.50	1274	985	86.40	89.40	1738	1343	92.30	95.30	1853	1434	

Pi ... internal yield pressure | Pc ... collapse resistance (VA-HC-grades on special request) | Sy ... joint yield strength | L ... max. load on coupling face (on alternative couplings L is higher or equal to Sy) | hi.gr. ... higher coupling grade

	GRADE 90				GRADE 95				GRADE 110			
	Pi	Pc	Sy	L	Pi	Pc	Sy	L	Pi	Pc	Sy	L
	MPa		kN		MPa		kN		MPa		kN	
	82.90	53.30	320	296	87.40	92.30	338	312	101.20	106.80	391	361
	114.40	71.40	428	318	120.60	123.30	451	335	139.60	142.80	522	388
	87.00	55.80	523	397	91.80	96.40	552	418	106.20	111.20	638	484
	99.80	63.20	580	397	105.30	109.20	612	418	121.80	126.50	708	484
	GRADE 110		592	484	GRADE 110		625	484	GRADE 125		723	550
	116.20	72.40	678	532	122.50	125.10	715	561	141.80	144.90	828	650
	82.00	52.90	726	474	86.50	89.20	766	500	100.10	100.30	889	578
	104.30	65.80	903	740	110.00	113.70	952	781	127.30	131.60	1102	904
	116.40	72.50	995	740	122.70	125.30	1094	781	142.00	145.10	1214	904
	67.10	41.10	893	660	70.80	61.10	942	696	81.90	67.10	1090	806
	78.80	51.00	1038	665	83.20	83.30	1094	702	96.20	93.30	1266	812
	89.70	57.50	1168	800	94.60	99.20	1232	844	109.50	114.90	1426	977
	116.40	72.60	1471	1096	122.70	125.30	1553	1156	142.10	145.10	1798	1338
	GRADE 110		1474	1338	GRADE 110		1555	1338	GRADE 125		1800	1520
	128.40	78.90	1606	1359	135.40	136.30	1694	1433	156.70	157.90	1960	1659
	139.70	85.00	1658	1359	147.40	146.80	1750	1433	170.60	170.00	2027	1659
	61.40	35.20	1073	814	64.80	50.40	1133	860	75.00	54.50	1312	995
	71.10	45.40	1232	815	75.00	68.70	1299	859	86.80	76.10	1504	994
	89.60	57.30	1524	1123	94.50	99.10	1607	1184	109.40	114.70	1860	1370
	54.10	27.60	1206	848	57.10	36.60	1272	894	66.00	38.30	1427	1035
	60.40	34.20	1337	848	63.70	48.40	1411	894	73.70	52.30	1632	1035
	65.40	39.50	1442	848	69.00	58.00	1521	894	79.80	63.50	1760	1035
	70.10	44.30	1537	1152	73.90	66.60	1622	1215	85.50	73.70	1877	1406
	81.40	52.50	1750	1152	85.80	88.00	1847	1215	99.30	98.90	2139	1406
	GRADE 110		1766	1406	GRADE 110		1863	1406	GRADE 125		2155	1598
	91.80	58.60	1970	1613	96.80	101.30	2078	1702	112.00	117.30	2405	1969
	103.80	65.50	2085	1613	109.50	113.20	2201	1702	126.70	131.10	2549	1969

Other Grades on request. | Performance properties for proprietary and other grades or for special clearance couplings on request.

# PERFORMANCE PROPERTIES TUBING

(US CUSTOMARY-UNITS)

PIPE OUTSIDE DIAMETER		NOMINAL WEIGHT	WALL THICKNESS	GRADE 55				GRADE 75				GRADE 80			
inch	mm	lb/ft	inch	Pi	Pc	Sy	L	Pi	Pc	Sy	L	Pi	Pc	Sy	L
				psi		1000lb		psi		1000lb		psi		1000lb	
1.9	48.26	2.75	0.145	7335	7744	44	41	10006	10563	60	55	10683	11278	64	59
		3.65	0.200	10125	10354	59	43	13812	14124	80	59	14747	15080	85	63
2 3/8	60.32	4.60	0.190	7701	8093	72	54	10505	11037	98	74	11216	11762	105	79
		5.10	0.218	8833	9166	80	54	12050	12502	109	74	12865	13343	116	79
hi.gr.		(5.10)	(0.218)	GRADE 80		81	79	GRADE 95		111	94	GRADE 95		118	94
		5.80	0.254	10284	10500	93	73	14029	14329	127	100	14979	15286	135	106
2 7/8	73.02	6.40	0.217	7258	7672	100	65	9900	10471	136	89	10570	11168	145	95
		7.80	0.276	9233	9543	124	102	12595	13024	169	139	13448	13880	180	148
3 1/2	88.90	8.60	0.308	10300	10515	136	102	14051	14344	186	139	15002	15301	199	148
		7.70	0.216	5940	5968	122	90	8103	7515	167	123	8652	7881	178	132
hi.gr.		9.20	0.254	6979	7397	142	91	9520	10007	194	125	10165	10544	207	133
		10.20	0.289	7942	8339	160	110	10834	11356	219	150	11567	12125	233	160
hi.gr.		12.70	0.375	10301	10529	202	150	14052	14344	276	205	15003	15301	294	219
		(12.70)	(0.375)	GRADE 80		202	202	GRADE 95		276	260	GRADE 95		295	260
4	101.60	13.70	0.413	11361	11443	220	186	15498	15606	301	254	16547	16650	321	272
		14.70	0.450	12368	12328	228	186	16871	16809	311	254	18013	17926	331	272
4 1/2	114.30	9.50	0.226	5435	5105	147	112	7420	6323	201	152	7915	6584	214	163
		10.70	0.262	6296	6586	169	112	8588	8371	230	152	9170	8789	246	163
hi.gr.		13.20	0.330	7934	8319	209	154	10823	11349	285	210	11555	12117	304	224
		10.50	0.224	4789	4003	165	116	6532	4786	226	159	6974	4946	241	169
hi.gr.		11.60	0.250	5344	4960	183	116	7290	6106	250	159	7783	6352	267	169
		12.60	0.271	5790	5729	198	116	7898	7179	270	159	8433	7498	288	169
hi.gr.		13.50	0.290	6202	6425	211	158	8461	8136	288	216	9034	8542	307	230
		15.20	0.337	7204	7614	240	158	9827	10399	328	216	10492	11080	350	230
hi.gr.		(15.20)	(0.337)	GRADE 80		242	230	GRADE 95		330	273	GRADE 95		353	273
		17.00	0.380	8121	8499	270	221	11078	11603	369	302	11828	12371	394	322
hi.gr.		18.90	0.430	9190	9500	286	221	12536	12966	391	302	13385	13822	417	322

Pi ... internal yield pressure | Pc ... collapse resistance (VA-HC-grades on special request) | Sy ... joint yield strength | L ... max. load on coupling face (on alternative couplings L is higher or equal to Sy) | hi.gr. ... higher coupling grade

	GRADE 90				GRADE 95				GRADE 110			
	Pi	Pc	Sy	L	Pi	Pc	Sy	L	Pi	Pc	Sy	L
	psi		1000lb		psi		1000lb		psi		1000lb	
	12019	12688	72	66	12677	13383	76	70	14670	15487	88	81
	16591	16965	96	71	17499	17894	101	75	20251	20708	117	87
	12619	13241	118	89	13309	13981	124	94	15402	16128	144	109
	14473	15011	130	89	15266	15838	138	94	17666	18347	159	109
	GRADE 110		133	109	GRADE 110		140	109	GRADE 125		162	124
	16851	17186	152	120	17773	18144	161	126	20568	21015	186	146
	11892	12386	163	106	12543	12937	172	112	14515	14547	199	130
	15129	15620	203	166	15957	16490	214	176	18467	19068	248	203
	16877	17215	224	166	17801	18173	236	176	20601	21044	273	203
	9733	8547	201	148	10266	8857	212	156	11881	9731	245	181
	11435	11574	233	150	12062	12081	246	158	13958	13532	285	183
	13013	13633	263	180	13726	14387	277	190	15884	16664	320	220
	16878	17215	331	246	17802	18173	349	260	20602	21044	404	301
	GRADE 110		331	301	GRADE 110		350	301	GRADE 125		405	342
	18616	18738	361	306	19635	19768	381	322	22723	22901	441	373
	20265	20174	373	306	21374	21291	394	322	24735	24656	456	373
	8905	7078	241	183	9399	7310	254	193	10883	7904	295	223
	10316	9581	276	183	10881	9962	292	193	12592	11041	337	223
	13000	13632	342	252	13712	14378	361	266	15868	16639	417	307
	7846	5192	271	191	8276	5308	286	201	9577	5555	331	233
	8756	6817	301	191	9236	7020	317	201	10688	7585	367	233
	9487	8122	324	191	10007	8412	342	201	11580	9210	396	233
	10163	9297	346	259	10719	9659	365	273	12405	10689	422	316
	11804	12212	393	259	12450	12763	415	273	14408	14344	481	316
	GRADE 110		397	316	GRADE 110		419	316	GRADE 125		485	359
	13307	13923	443	363	14035	14692	467	383	16243	17012	541	443
	15058	15562	469	363	15883	16418	495	383	18380	19014	573	443

Other Grades on request. | Performance properties for proprietary and other grades or for special clearance couplings on request.

# PERFORMANCE PROPERTIES CASING

(METRIC UNITS)

PIPE OUTSIDE DIAMETER		NOMINAL WEIGHT	WALL THICKNESS	GRADE 55				hi.gr.:80		GRADE 75			
inch	mm	lb/ft	mm	Pi	Pc	Sy	L	Sy h	L h	Pi	Pc	Sy	L
				MPa		kN		kN		MPa		kN	
5	127.00	13.00	6.43	33.60	28.60	923	901	923	923	45.80	34.30	1259	1228
		15.00	7.52	39.30	38.30	1070	901	1070	1070	53.60	47.80	1459	1228
		18.00	9.19	48.00	50.90	1289	901	1289	1289	65.50	68.70	1758	1228
		21.40	11.10	58.00	60.50	1360	901	1533	1312	79.10	82.50	1854	1228
		23.20	12.14	63.40	65.60	1360	901	1660	1312	86.50	89.40	1854	1228
		24.10	12.70	66.30	68.30	1360	901	1728	1312	90.50	93.10	1854	1228
5 ½	139.7	15.50	6.98	33.10	27.90	1103	957	1103	1103	45.20	33.30	1505	1306
		17.00	7.72	36.70	33.90	1213	957	1213	1213	50.00	41.60	1655	1306
		20.00	9.17	43.50	45.60	1425	957	1425	1394	59.40	58.00	1944	1306
		23.00	10.54	50.00	52.90	1472	957	1621	1394	68.30	72.20	2007	1306
		26.00	12.09	57.40	60.00	1472	957	1837	1394	78.30	81.80	2007	1306
5 ¾	146.05	16.40	7.00	31.80	25.60	1159	1159	1159	1159	43.40	30.20	1581	1581
		17.90	7.70	35.00	30.90	1268	1268	1268	1268	47.70	37.60	1730	1730
		19.70	8.50	38.60	37.30	1392	1392	1392	1392	52.70	46.40	1899	1899
		20.40	9.00	40.90	41.00	1470	1470	1470	1470	55.80	51.70	2004	2004
6 ⅝	168.28	20.00	7.32	28.80	20.50	1403	1403	1403	1403	39.40	23.10	1914	1914
		24.00	8.94	35.20	31.40	1696	1696	1696	1696	48.10	38.30	2314	2314
		28.00	10.59	41.70	42.60	1989	1739	1989	1989	56.90	53.80	2713	2372
		32.00	12.06	47.50	50.50	2244	1739	2244	2244	64.80	67.60	3060	2372
7	177.80	23.00	8.05	30.00	22.50	1627	1514	1627	1627	41.00	25.90	2219	2065
		26.00	9.19	34.30	29.80	1845	1514	1845	1845	46.80	36.00	2517	2065
		29.00	10.36	38.60	37.30	2065	1514	2065	2065	52.70	46.40	2817	2065
		32.00	11.51	42.90	44.60	2234	1514	2279	2205	58.60	56.60	3047	2065
		35.00	12.65	47.20	50.10	2234	1514	2487	2205	64.40	66.70	3047	2065
		38.00	13.72	51.20	54.00	2234	1514	2680	2205	69.80	73.60	3047	2065
				GRADE 95				hi.gr.:110		GRADE 110			
inch	mm	lb/ft	mm	MPa		kN		kN		MPa		kN	
5	127.00	13.00	6.43	58.00	38.30	1595	1556	1595	1595	67.20	40.30	1846	1801
		15.00	7.52	67.90	55.90	1849	1556	1845	1801	78.50	61.00	2140	1801
		18.00	9.19	82.90	82.90	2228	1556	2228	1801	96.00	92.90	2578	1801
		21.40	11.10	100.30	104.50	2348	1556	2649	1801	116.00	121.00	2719	1801
		23.20	12.14	109.60	113.30	2348	1556	2719	1801	126.80	131.20	2719	1801
		24.10	12.70	114.60	117.90	2348	1556	2719	1801	132.70	136.50	2719	1801
5 ½	139.7	15.50	6.98	57.30	37.10	1906	1655	1906	1906	66.30	38.80	2206	1915
		17.00	7.72	63.30	47.90	2097	1655	2097	1915	73.30	51.60	2426	1915
		20.00	9.17	75.20	69.10	2463	1655	2463	1915	87.10	76.60	2850	1915
		23.00	10.54	86.50	89.20	2542	1655	2801	1915	100.10	100.30	2944	1915
		26.00	12.09	99.20	103.60	2542	1655	2944	1915	114.80	119.90	2944	1915
5 ¾	146.05	16.40	7.00	54.90	33.00	2003	2003	2003	2003	63.60	34.90	2318	2318
		17.90	7.70	60.40	42.60	2192	2192	2192	2192	69.90	45.40	2537	2537
		19.70	8.50	66.70	54.00	2406	2406	2406	2406	77.20	58.80	2784	2784
		20.40	9.00	70.70	60.90	2539	2539	2539	2539	81.80	66.90	2939	2939
6 ⅝	168.28	20.00	7.32	49.90	26.20	2425	2425	2425	2425	57.70	27.80	2806	2806
		24.00	8.94	60.90	43.50	2932	2932	2932	2932	70.50	46.40	3393	3393
		28.00	10.59	72.10	63.60	3437	3005	3437	3437	83.50	70.10	3977	3478
		32.00	12.06	82.10	81.50	3877	3005	3877	3478	95.10	91.20	4487	3478
7	177.80	23.00	8.05	51.90	28.60	2812	2616	2812	2812	60.10	30.60	3254	3028
		26.00	9.19	59.20	40.60	3189	2616	3189	3028	68.60	43.00	3690	3028
		29.00	10.36	66.80	54.00	3570	2616	3570	3028	77.30	58.80	4131	3028
		32.00	11.51	74.20	67.20	3859	2616	3939	3028	85.90	74.30	4468	3028
		35.00	12.65	81.60	80.30	3859	2616	4299	3028	94.40	89.90	4468	3028
		38.00	13.72	88.50	92.60	3859	2616	4468	3028	102.40	104.30	4468	3028

Pi ... internal yield pressure | Pc ... collapse resistance (VA-HC-grades on special request) | Sy ... joint yield strength | hi.gr. ... higher coupling grade  
 Sy h ... yield strength (pipe or coupling with higher grade) | L h ... max. load on coupling face with higher grade

hi.gr.:95		GRADE 80				hi.gr.:95		GRADE 90				hi.gr.:110	
Sy h	L h	Pi	Pc	Sy	L	Sy h	L h	Pi	Pc	Sy	L	Sy h	L h
kN		MPa		kN		kN		MPa		kN		kN	
1259	1259	48.90	35.40	1344	1312	1344	1344	55.00	37.40	1512	1476	1512	1512
1459	1459	57.20	50.00	1558	1312	1558	1556	64.30	54.00	1753	1476	1753	1753
1758	1556	69.90	72.40	1878	1312	1878	1556	78.60	79.40	2112	1476	2112	1801
2091	1556	84.50	88.00	1878	1312	2233	1556	95.10	99.00	2225	1476	2512	1801
2265	1556	92.30	95.40	1978	1312	2348	1556	103.90	107.30	2225	1476	2719	1801
2348	1556	96.60	99.30	1978	1312	2348	1556	108.70	111.70	2225	1476	2719	1801
1505	1505	48.30	34.40	1607	1394	1607	1607	54.30	36.30	1807	1569	1807	1807
1655	1655	53.40	43.40	1767	1394	1767	1655	60.10	46.40	1988	1569	1988	1915
1944	1655	63.40	60.90	2076	1394	2076	1655	71.30	66.40	2335	1569	2335	1915
2211	1655	72.90	77.00	2141	1394	2361	1655	82.00	85.30	2409	1569	2656	1915
2506	1655	83.60	87.20	2141	1394	2542	1655	94.10	98.10	2409	1569	2944	1915
1581	1581	46.30	31.00	1688	1688	1688	1688	52.10	32.40	1899	1899	1899	1899
1730	1730	50.90	39.00	1847	1847	1847	1847	57.30	41.50	2078	2078	2078	2078
1899	1899	56.20	48.40	2028	2028	2028	2028	63.20	52.20	2281	2281	2281	2281
2004	2004	59.50	54.10	2138	2138	2138	2138	67.00	58.70	2405	2405	2405	2405
1914	1914	42.00	24.00	2043	2043	2043	2043	47.30	25.50	2299	2299	2299	2299
2314	2314	51.30	39.70	2471	2471	2471	2471	57.70	42.30	2779	2779	2779	2779
2713	2713	60.80	56.40	2896	2532	2896	2896	68.40	61.20	3258	2849	3258	3258
3060	3005	69.20	71.20	3268	2532	3268	3005	77.90	78.10	3676	2849	3676	3478
2219	2219	43.70	26.40	2370	2205	2370	2370	49.20	27.80	2666	2480	2666	2666
2517	2517	49.90	37.30	2687	2205	2687	2616	56.20	39.60	3023	2480	3023	3023
2817	2616	56.30	48.50	3008	2205	3008	2616	63.30	52.20	3384	2480	3384	3028
3109	2616	62.50	59.40	3250	2205	3319	2616	70.40	64.60	3656	2480	3734	3028
3393	2616	68.70	70.20	3250	2205	3623	2616	77.30	77.00	3656	2480	4076	3028
3656	2616	74.50	78.50	3250	2205	3859	2616	83.90	88.40	3656	2480	4392	3028
hi.gr.:125		GRADE 125				hi.gr.:150							
kN		MPa		kN		kN							
1846	1846	76.40	41.40	2099	2048	2099	2099						
2140	2048	89.30	65.40	2433	2048	2433	2433						
2578	2048	109.20	102.20	2932	2048	2932	2458						
3066	2048	132.00	137.50	3090	2048	3487	2458						
3090	2048	144.20	149.00	3090	2048	3708	2458						
3090	2048	150.90	155.10	3090	2048	3708	2458						
2206	2177	75.40	40.60	2509	2177	2509	2509						
2426	2177	83.40	54.40	2759	2177	2759	2612						
2850	2177	99.00	83.30	3241	2177	3241	2612						
3242	2177	113.80	110.70	3345	2177	3687	2612						
3345	2177	130.50	136.30	3345	2177	4014	2612						
2318	2318	72.30	37.00	2636	2636	2636	2636						
2537	2537	79.50	47.20	2885	2885	2885	2885						
2784	2784	87.80	62.70	3166	3166	3166	3166						
2939	2939	93.00	72.10	3340	3340	3340	3340						
2806	2806	65.60	28.70	3191	3191	3191	3191						
3393	3393	80.10	48.40	3858	3858	3858	3858						
3977	3955	94.90	75.80	4523	3955	4523	4523						
4487	3955	108.10	100.30	5103	3955	5103	4746						
3254	3254	68.30	32.00	3701	3443	3701	3701						
3690	3443	78.00	44.50	4196	3443	4196	4132						
4131	3443	87.90	62.80	4698	3443	4698	4132						
4558	3443	97.70	80.80	5078	3443	5183	4132						
4975	3443	107.30	98.70	5078	3443	5658	4132						
5078	3443	116.40	115.50	5078	3443	6094	4132						

L ... max. load on coupling face

# PERFORMANCE PROPERTIES CASING

(US CUSTOMARY-UNITS)

PIPE OUTSIDE DIAMETER		NOMINAL WEIGHT	WALL THICKNESS	GRADE 55				hi.gr.:80		GRADE 75			
inch	mm	lb/ft	inch	Pi	Pc	Sy	L	Sy h	L h	Pi	Pc	Sy	L
				psi		1000lb		1000lb		psi		1000lb	
5	127.00	13.00	0.253	4870	4148	208	202	208	208	6644	4975	283	276
		15.00	0.296	5696	5555	241	202	241	241	7770	6933	328	276
		18.00	0.362	6961	7382	290	202	290	290	9495	9964	395	276
		21.40	0.437	8415	8774	306	202	345	295	11479	11965	417	276
		23.20	0.478	9195	9514	306	202	373	295	12543	12966	417	276
		24.10	0.500	9619	9906	306	202	389	295	13122	13503	417	276
5 ½	139.70	15.50	0.275	4806	4046	248	215	248	248	6556	4830	338	294
		17.00	0.304	5316	4917	273	215	273	273	7251	6033	372	294
		20.00	0.361	6314	6613	320	215	320	313	8613	8412	437	294
		23.00	0.415	7258	7672	331	215	364	313	9900	10471	451	294
		26.00	0.476	8325	8702	331	215	413	313	11356	11864	451	294
5 ¾	146.05	16.40	0.276	4610	3713	261	261	261	261	6289	4380	355	355
		17.90	0.303	5071	4482	285	285	285	285	6918	5453	389	389
		19.70	0.335	5598	5410	313	313	313	313	7637	6730	427	427
		20.40	0.354	5932	5946	330	330	330	330	8093	7498	450	450
6 ¼	168.28	20.00	0.288	4184	2973	315	315	315	315	5707	3350	430	430
		24.00	0.352	5110	4554	381	381	381	381	6970	5555	520	520
		28.00	0.417	6053	6178	447	391	447	447	8257	7803	610	533
		32.00	0.475	6893	7324	504	391	504	504	9403	9804	688	533
7	177.80	23.00	0.317	4355	3263	366	340	366	366	5941	3756	499	464
		26.00	0.362	4972	4322	415	340	415	415	6782	5221	566	464
		29.00	0.408	5605	5410	464	340	464	464	7646	6730	633	464
		32.00	0.453	6227	6468	502	340	512	496	8495	8209	685	464
		35.00	0.498	6844	7266	502	340	559	496	9336	9674	685	464
		38.00	0.540	7423	7832	502	340	603	496	10126	10674	685	464
				GRADE 95				hi.gr.: 110		GRADE 110			
inch	mm	lb/ft	inch	psi		1000lb		1000lb		psi		1000lb	
5	127.00	13.00	0.253	8417	5555	359	350	359	359	9740	5845	415	405
		15.00	0.296	9844	8107	416	350	416	405	11392	8847	481	405
		18.00	0.362	12030	12023	501	350	501	405	13921	13474	580	405
		21.40	0.437	14543	15156	528	350	596	405	16830	17549	611	405
		23.20	0.478	15891	16432	528	350	611	405	18390	19028	611	405
		24.10	0.500	16624	17099	528	350	611	405	19239	19797	611	405
5 ½	139.70	15.50	0.275	8306	5381	429	372	429	429	9612	5627	496	430
		17.00	0.304	9187	6947	471	372	471	430	10631	7484	545	430
		20.00	0.361	10912	10022	554	372	554	430	12628	11109	641	430
		23.00	0.415	12543	12937	572	372	630	430	14515	14547	662	430
		26.00	0.476	14387	15025	572	372	662	430	16650	17389	662	430
5 ¾	146.05	16.40	0.276	7968	4786	450	450	450	450	9221	5062	521	521
		17.90	0.303	8765	6178	493	493	493	493	10143	6584	570	570
		19.70	0.335	9675	7832	541	541	541	541	11197	8528	626	626
		20.40	0.354	10254	8832	570	570	570	570	11864	9703	660	660
6 ¼	168.28	20.00	0.288	7231	3800	545	545	545	545	8368	4032	631	631
		24.00	0.352	8831	6309	659	659	659	659	10219	6730	763	763
		28.00	0.417	10461	9224	773	676	773	773	12106	10167	894	782
		32.00	0.475	11913	11820	872	676	872	782	13786	13227	1009	782
7	177.80	23.00	0.317	7527	4148	632	588	632	632	8710	4438	732	681
		26.00	0.362	8593	5888	717	588	717	681	9944	6236	830	681
		29.00	0.408	9687	7832	802	588	802	681	11210	8528	929	681
		32.00	0.453	10762	9746	868	588	885	681	12454	10776	1005	681
		35.00	0.498	11828	11646	868	588	966	681	13688	13038	1005	681
		38.00	0.540	12828	13430	868	588	1005	681	14846	15127	1005	681

Pi ... internal yield pressure | Pc ... collapse resistance (VA-HC-grades on special request) | Sy ... joint yield strength | hi.gr. ... higher coupling grade  
 Sy h ... yield strength (pipe or coupling with higher grade) | L h ... max. load on coupling face with higher grade



hi.gr.: 95		GRADE 80				hi.gr.:95		GRADE 90				hi.gr.:110	
Sy h	L h	Pi	Pc	Sy	L	Sy h	L h	Pi	Pc	Sy	L	Sy h	L h
1000lb		psi		1000lb		1000lb		psi		1000lb		1000lb	
283	283	7093	5134	302	295	302	302	7980	5424	340	332	340	340
328	328	8296	7252	350	295	350	350	9333	7832	394	332	394	394
395	350	10138	10500	422	295	422	350	11405	11516	475	332	475	405
470	350	12256	12763	445	295	502	350	13788	14358	500	332	565	405
509	350	13392	13836	445	295	528	350	15066	15562	500	332	611	405
528	350	14010	14402	445	295	528	350	15761	16200	500	332	611	405
338	338	7000	4989	361	313	361	361	7875	5265	406	353	406	406
372	372	7742	6294	397	313	397	372	8710	6730	447	353	447	430
437	372	9196	8832	467	313	467	372	10346	9630	525	353	525	430
497	372	10570	11168	481	313	531	372	11892	12371	541	353	597	430
563	372	12125	12647	481	313	572	372	13640	14228	541	353	662	430
355	355	6715	4496	379	379	379	379	7554	4699	427	427	427	427
389	389	7386	5656	415	415	415	415	8310	6019	467	467	467	467
427	427	8154	7020	456	456	456	456	9173	7571	513	513	513	513
450	450	8629	7846	480	480	480	480	9717	8513	540	540	540	540
430	430	6094	3481	459	459	459	459	6855	3698	517	517	517	517
520	520	7442	5758	555	555	555	555	8372	6135	625	625	625	625
610	610	8816	8180	651	569	651	651	9918	8876	733	640	733	733
688	676	10039	10326	735	569	735	676	11294	11327	826	640	826	782
499	499	6343	3829	533	496	533	533	7136	4032	599	558	599	599
566	566	7241	5410	604	496	604	588	8147	5743	680	558	680	680
633	588	8163	7034	676	496	676	588	9184	7571	761	558	802	681
699	588	9070	8615	731	496	746	588	10203	9369	822	558	839	681
763	588	9968	10181	731	496	814	588	11214	11168	822	558	916	681
822	588	10811	11385	731	496	868	588	12162	12821	822	558	987	681
hi.gr.:125		GRADE 125				hi.gr.150							
1000lb		psi		1000lb		1000lb							
415	415	11077	6004	472	460	472	472	472	472				
481	460	12955	9485	547	460	547	547	547	547				
580	460	15832	14822	659	460	659	659	659	552				
689	460	19139	19942	695	460	784	784	784	552				
695	460	20913	21610	695	460	834	834	834	552				
695	460	21878	22495	695	460	834	834	834	552				
496	489	10931	5888	564	489	564	564	564	564				
545	489	12090	7890	620	489	620	620	620	587				
641	489	14361	12081	729	489	729	729	729	587				
729	489	16507	16055	752	489	829	829	829	587				
752	489	18934	19768	752	489	902	902	902	587				
521	521	10486	5366	593	593	593	593	593	593				
570	570	11535	6846	649	649	649	649	649	649				
626	626	12733	9094	712	712	712	712	712	712				
660	660	13488	10457	750	750	750	750	750	750				
631	631	9516	4162	717	717	717	717	717	717				
763	763	11622	7020	867	867	867	867	867	867				
894	889	13766	10993	1017	889	1017	1017	1017	1017				
1009	889	15677	14547	1147	889	1147	1147	1147	1067				
732	732	9905	4641	832	774	832	832	832	832				
830	774	11308	6454	943	774	943	943	943	929				
929	774	12748	9108	1056	774	1056	1056	1056	929				
1025	774	14163	11719	1141	774	1165	1165	1165	929				
1118	774	15566	14315	1141	774	1272	1272	1272	929				
1141	774	16882	16751	1141	774	1369	1369	1369	929				

L ... max. load on coupling face

# MAKE UP TORQUE

## RECOMMENDED OPTIMUM MAKE-UP TORQUE FOR REGULAR COUPLINGS

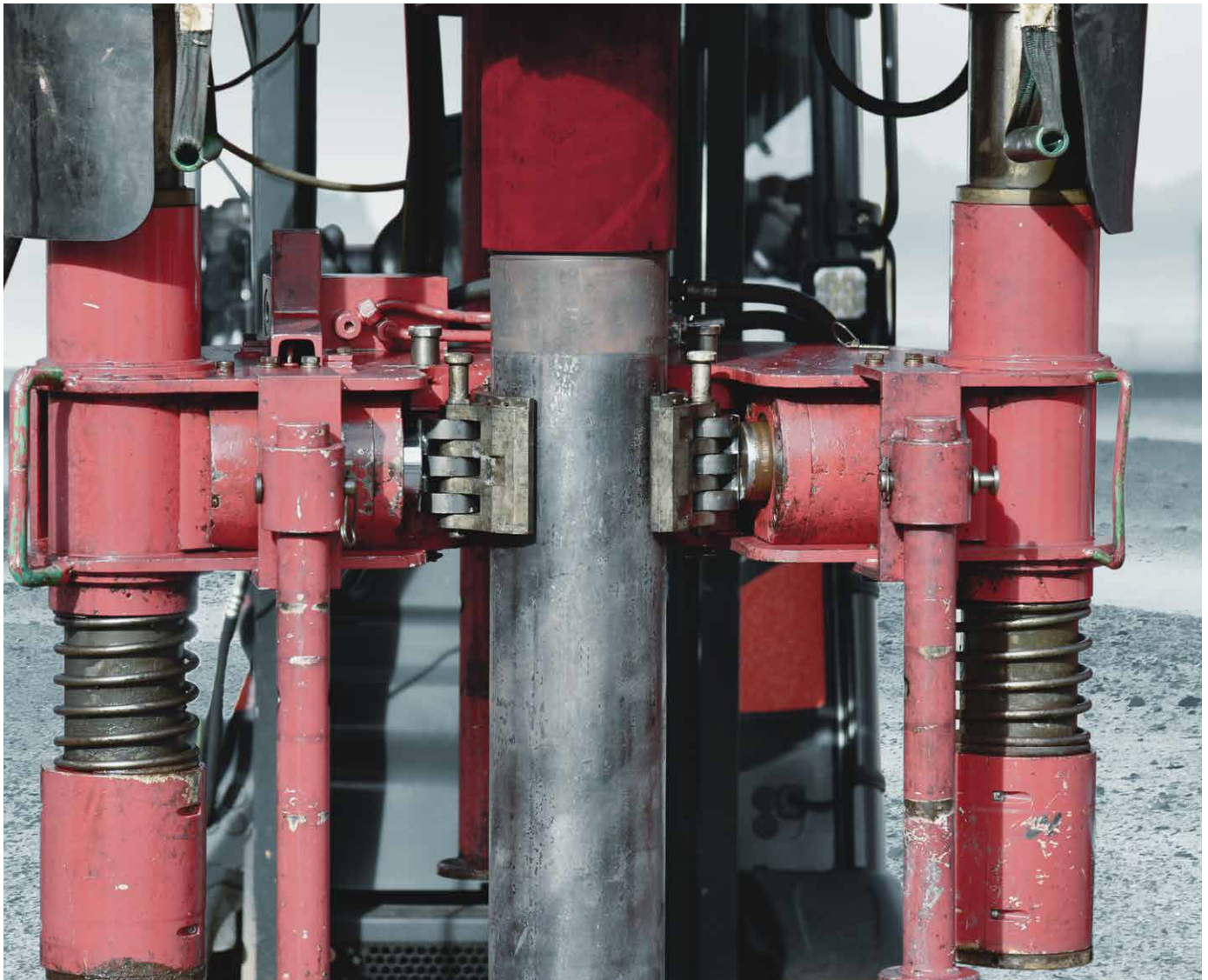
PIPE OUTSIDE DIAMETER		NOMINAL WEIGHT		WALL THICKNESS		GRADE 55	GRADE 75	GRADE 80	GRADE 90	GRADE 95	GRADE 110	GRADE 125
inch	mm	lb/ft	kg/m	inch	mm	ft.lb (1ft.lb=1.3558 Nm)						
1.9	48.26	2.75	4.11	0.145	3.68	560	650	670	720	740	800	870
		3.65	5.47	0.200	5.08	710	810	830	880	910	990	1060
2 3/8	60.32	4.60	6.69	0.190	4.83	1180	1360	1410	1500	1540	1680	1810
		5.10	7.57	0.218	5.54	1260	1440	1480	1570	1620	1760	1890
		5.80	8.67	0.254	6.45	1510	1730	1780	1890	1950	2110	2270
2 7/8	73.02	6.40	9.29	0.217	5.51	1770	2040	2100	2240	2300	2500	2700
		7.80	11.57	0.276	7.01	2240	2550	2630	2780	2860	3090	3320
		8.60	12.74	0.308	7.82	2330	2640	2720	2870	2950	3180	3410
3 1/2	88.90	7.70	11.28	0.216	5.49	2010	2330	2420	2580	2660	2910	3150
		9.20	13.29	0.254	6.45	2320	2720	2820	3020	3120	3420	3720
		10.20	14.97	0.289	7.34	2600	3030	3140	3360	3460	3790	4110
		12.70	18.90	0.375	9.52	3170	3660	3780	4020	4140	4510	4870
		13.70	20.62	0.413	10.50	3720	4300	4450	4750	4890	5340	5770
4	101.60	14.70	22.16	0.450	11.43	4140	4840	5020	5370	5540	6050	6600
		9.50	13.82	0.226	5.74	2110	2540	2650	2860	2960	3290	3610
		10.70	15.86	0.262	6.65	2540	3090	3230	3500	3630	4050	4450
4 1/2	114.30	13.20	19.63	0.330	8.38	2870	3420	3560	3840	3980	4400	4810
		10.50	15.51	0.224	5.69	3210	3750	3890	4170	4300	4720	5120
		11.60	17.18	0.250	6.35	3590	4230	4390	4710	4870	5350	5830
		12.60	18.50	0.271	6.88	3670	4310	4480	4800	4950	5440	5910
		13.50	19.78	0.290	7.37	4210	4930	5120	5480	5660	6210	6740
		15.20	22.67	0.337	8.56	4410	5130	5310	5680	5860	6410	6940
5	127.00	17.00	25.37	0.380	9.65	4930	5650	5840	6200	6380	6930	7460
		18.90	28.31	0.430	10.92	5130	5860	6040	6400	6580	7130	7670
		13.00	19.67	0.253	6.43	3980	4630	4800	5130	5290	5780	6260
		15.00	22.71	0.296	7.52	4520	5280	5480	5860	6050	6630	7200
		18.00	27.25	0.362	9.19	5060	5920	6140	6570	6780	7440	8070
		21.40	32.30	0.437	11.1	5900	6980	7250	7780	8050	8870	9660
5 1/2	139.70	23.20	34.94	0.478	12.14	6020	7100	7370	7900	8170	8980	9780
		24.10	36.35	0.500	12.70	6080	7160	7430	7960	8230	9040	9840
		15.50	23.45	0.275	6.98	4800	5700	5930	6380	6600	7290	7950
		17.00	25.73	0.304	7.72	5420	6490	6760	7300	7560	8380	9170
		20.00	30.12	0.361	9.17	5970	7150	7460	8050	8340	9240	10120
5 3/4	146.05	23.00	34.17	0.415	10.54	6160	7350	7620	8240	8530	9440	10310
		26.00	38.65	0.476	12.09	6340	7530	7830	8420	8720	9620	10500
		16.40	24.95	0.276	7.00	5820	6810	7060	7550	7790	8540	9270
		17.90	27.21	0.303	7.70	6460	7620	7920	8500	8790	9670	10530
6 5/8	168.28	19.70	29.78	0.335	8.50	6870	8120	8430	9060	9370	10320	11240
		20.40	31.40	0.354	9.00	6990	8360	8710	9400	9730	10780	11800
		20.00	30.11	0.288	7.32	6570	7920	8270	8940	9270	10300	11300
		24.00	36.19	0.352	8.94	8210	10010	10310	10690	10890	11470	12020
7	177.80	28.00	42.24	0.417	10.59	8540	10250	10450	10860	11040	11650	12220
		32.00	47.52	0.475	12.06	8800	10510	10700	11070	11260	11830	12380
		23.00	34.68	0.317	8.05	7760	9490	9870	10730	11000	11730	12260
		26.00	39.20	0.362	9.19	8510	10250	10550	11140	11390	11940	12500
		29.00	43.77	0.408	10.36	8720	10460	10750	11330	11580	12130	12680
7	177.80	32.00	48.19	0.453	11.51	8910	10650	10940	11510	11750	12310	12830
		35.00	52.51	0.498	12.65	9070	10860	11210	11630	11870	12390	12900
7	177.80	38.00	56.50	0.540	13.72	9210	11140	11380	11750	11920	12480	12980

This table shows the values at printing date of this brochure. Actual values available in the Datasheet Generator on our Web Page or in the myTubulars App.

Recommended make-up-torque using a thread compound with a friction factor of 1.0.

Maximum torque: optimum + 15 %.  
Minimum torque: optimum - 10 %.

Recommended torques for regular and alternative couplings are identical. Recommended torque for special clearance couplings on request.  
Higher coupling grade: use recommended torque for the corresponding pipe grade.  
Special clearance and 20° beveled couplings have a lower load on coupling face.



A scenic landscape featuring a wooden deck in the foreground, a calm lake in the middle ground, and lush green trees in the background. The sun is shining through the trees on the left, creating a bright, hazy atmosphere. The sky is filled with soft, white clouds.

# DryTec®

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DryTec® – the dope free  
solution.**

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



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**MATERIAL DEVELOPMENT**



**PROCESS DEVELOPMENT**



**PRODUCT SELECTION**



**FIELD SERVICE**

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