



VAtitan®-TC

Combines speed and strength



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

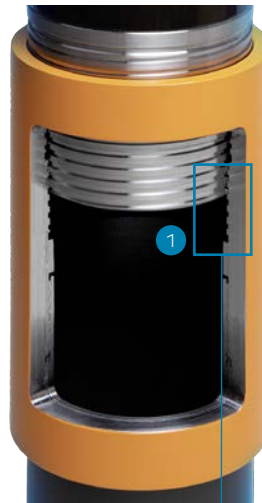
voestalpine Tubulars Proprietary Connections like VAtitan®-TC offer benefits which are not addressed by the API specification or exceed the API standards.



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CASING DESIGN

- 5 ½ - 7 inches
- Multifaceted wedge type thread profile
- Two step connection
- 6 turns from stab point to final position



PRODUCT CHARACTERISTICS & CUSTOMER BENEFITS

ENGINEERED FOR LONG LATERALS

» HELPS YOU TO REACH THE TOTAL DEPTH

The connection performance is fit for purpose tested for multi-fractured horizontal wells. The testing includes extreme over-torque, fatigue life, and combined loads. The connection was developed to endure the high torques needed for rotating casing to the bottom of even the most ambitious lateral lengths.

EXTREME TORQUE CAPABILITY

» ENSURES YOUR CONNECTION IS NOT THE LIMITATION

The connection has been physically validated to demonstrate structural integrity even during extreme over-torque scenarios where yield torque is exceeded.

FAST & EASY MAKE-UP

» SAVES RUNNING TIME

The two step connection design ensures easy handling. The deep stabbing increases the efficiency and speed during installation.

ROTATION DURING CEMENTING

» IMPROVES THE QUALITY OF THE CEMENT BOND

The robust connection design further enables high torque rotation during cementing operations.



GRADES

VA Titan®-TC 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
55,000	J55		
	K55		
75,000			
80,000	N80-Q	VA-HC-N80-Q	VA-EP-N80-Q
	L80-1	VA-HC-L80-1	VA-EP-L80-1
90,000	C90-1	VA-HC-C90-1	VA-EP-C90-1
95,000	R95	VA-HC-R95	VA-EP-R95
	T95-1	VA-HC-T95-1	VA-EP-T95-1
110,000	C110	VA-HC-C110	VA-EP-C110
125,000	P110	VA-HC-P110	VA-EP-P110
	Q125-1	VA-HC-Q125-1	VA-EP-Q125-1
140,000			
150,000			

On request in combination with:



PROPRIETARY GRADES – THE VA SERIES

EXTREME PROPERTIES	SOUR SERVICE			DEEP WELL		LOW TEMPERATURE	MILD SWEET GAS	MILD 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-XP-N80-Q						VA-LT-N80-Q	VA-FP-80-1CR	
VA-XP-L80-1						VA-LT-L80-1		VA-L80-1-1CR/VA-L80-1-3CR
	VA-SS-80	VA-SS-80-HC	VA-SS-80-EP					
VA-XP-C90-1						VA-LT-C90-1		
	VA-SS-90	VA-SS-90-HC	VA-SS-90-EP					
VA-XP-R95						VA-LT-R95		
VA-XP-T95-1						VA-LT-T95-1		
	VA-SS-95	VA-SS-95-HC	VA-SS-95-EP					
						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-XP-P110						VA-LT-P110		VA-P110-1CR/VA-P110-3CR
VA-XP-Q125-1						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

DIMENSIONS

PIPE OUTSIDE DIAMETER	NOMINAL WEIGHT		WALL THICKNESS		INSIDE DIAMETER		DRIFT DIAMETER	
	inch/mm	lb/ft	kg/m	inch	mm	inch	mm	inch
5 1/2" 139.7	20.00	29.76	0.361	9.17	4.778	121.36	4.653	118.19
	23.00	34.23	0.415	10.54	4.670	118.62	4.545	115.45
6" / 152.4	24.50	36.43	0.400	10.16	5.200	132.08	5.075	128.91
7" 177.80	26.00	39.20	0.362	9.19	6.276	159.42	6.151	156.25
	29.00	43.77	0.408	10.36	6.184	157.08	6.059	153.91

Further pipe sizes available upon request.

PERFORMANCE PROPERTIES

(METRIC UNITS)

PIPE OUTSIDE DIAMETER	WALL THICKNESS	GRADE 80						GRADE 85					
		Pi	Pc	Sy	L	B	Ty	Pi	Pc	Sy	L	B	Ty
inch/mm	mm	bar	bar	kN	kN	°/30.48m	Nm	bar	bar	kN	kN	°/30.48m	Nm
5 1/2" 139.7	9.17	634	609	2070	2070	66.7	41600	673	637	2200	2200	70.8	44200
	10.54	729	769	2360	2120		44700	774	815	2510	2250		47600
6" / 152.4	10.16	644	626	2500	1900	61.1	44100	684	656	2660	2020	64.9	46600
7" 177.80	9.19	499	373	2690	2050	52.4	47700	530	385	2850	2180	55.7	50600
	10.36	563	485	3010	2050		51200	598	504	3190	2180		54500

PIPE OUTSIDE DIAMETER	WALL THICKNESS	GRADE 100						GRADE 110					
		Pi	Pc	Sy	L	B	Ty	Pi	Pc	Sy	L	B	Ty
inch/mm	mm	bar	bar	kN	kN	°/30.48m	Nm	bar	bar	kN	kN	°/30.48m	Nm
5 1/2" 139.7	9.17	791	716	2590	2590	83.3	52100	871	765	2850	2850	91.7	57200
	10.54	910	929	2950	2650		56000	1001	1002	3240	2910		61600
6" / 152.4	10.16	804	739	3130	2370	76.4	55000	884	790	3440	2610	84.0	60500
7" 177.80	9.19	623	415	3360	2560	65.5	59700	686	430	3690	2820	72.0	65500
	10.36	703	557	3760	2560		64100	773	588	4130	2820		70600

Pi ... internal yield pressure | Pc ... collapse resistance (VA-HC-grades on special request) | Sy ... joint yield strength | L ... load on coupling face
B ... max. bending (uniaxial) | Ty ... connection yield torque

All VATitan®-TC accessories are available on request. The values shown are based on T&C pipe lengths of L = 10.0m (32.81ft).

For further dimensions please check availability in the datasheet generator.

Blanking dimensions for accessories are available as a download on our web page: www.voestalpine.com/tubulars

COUPLING LENGTH		COUPLING OUTSIDE DIAMETER		VOLUME				MAKE UP LOSS	
				DISPLACEMENT		PRODUCTION			
inch	mm	inch	mm	us gal/ft	l/m	us gal/ft	l/m	inch	mm
11.654	296.00	6.300	160.02	1.246	15.47	0.931	11.57	5.294	134.46
11.654	296.00	6.300	160.02	1.246	15.47	0.890	11.05	5.294	134.46
11.654	296.00	6.693	170.00	1.479	18.37	1.103	13.70	5.294	134.46
11.654	296.00	7.657	194.50	2.011	24.97	1.607	19.96	5.294	134.46
11.654	296.00	7.657	194.50	2.011	24.97	1.560	19.38	5.294	134.46

GRADE 90						GRADE 95					
Pi	Pc	Sy	L	B	Ty	Pi	Pc	Sy	L	B	Ty
bar	bar	kN	kN	°/30.48m	Nm	bar	bar	kN	kN	°/30.48m	Nm
713	664	2330	2330	75.0	49400	791	716	2590	2590	83.3	49400
820	854	2650	2380		53100	910	929	2950	2650		53100
725	684	2820	2140	68.7	52200	804	739	3130	2370	76.4	52200
562	396	3020	2300	58.9	56500	623	415	3360	2560	65.5	56500
633	523	3380	2300		60900	703	557	3760	2560		60900

GRADE 125						GRADE 135					
Pi	Pc	Sy	L	B	Ty	Pi	Pc	Sy	L	B	Ty
bar	bar	kN	kN	°/30.48m	Nm	bar	bar	kN	kN	°/30.48m	Nm
990	833	3240	3240	104.2	64900	1069	874	3500	3500	112.5	70200
1138	1107	3690	3310		70000	1229	1173	3980	3580		75700
1006	862	3910	2970	95.5	68700	1086	905	4230	3210	103.1	74200
780	445	4200	3200	81.8	74400	842	454	4530	3460	88.4	80400
879	628	4700	3200		80300	949	650	5070	3460		86600

Performance properties for proprietary and other grades on request. For further details please check the datasheet generator. Other Grades on request.

PERFORMANCE PROPERTIES

(US CUSTOMARY-UNITS)

PIPE OUTSIDE DIAMETER	WALL THICKNESS	GRADE 80						GRADE 85					
		Pi	Pc	Sy	L	B	Ty	Pi	Pc	Sy	L	B	Ty
inch/mm	inch	psi	psi	1000lb	1000lb	%/100ft	ftlb	psi	psi	1000lb	1000lb	%/100ft	ftlb
5 1/2" 139.7	0.361	9190	8830	466	466	66.7	30700	9760	9240	495	495	70.8	32600
	0.415	10560	11160	530	476		33000	11220	11820	564	506		35100
6" / 152.4	0.400	9330	9080	563	427	61.1	32500	9920	9510	598	454	64.9	34400
7" 177.80	0.362	7240	5410	604	460	52.4	35200	7690	5580	642	489	55.7	37300
	0.408	8160	7030	676	460		37800	8670	7310	718	489		40200

PIPE OUTSIDE DIAMETER	WALL THICKNESS	GRADE 100						GRADE 110					
		Pi	Pc	Sy	L	B	Ty	Pi	Pc	Sy	L	B	Ty
inch/mm	inch	psi	psi	1000lb	1000lb	%/100ft	ftlb	psi	psi	1000lb	1000lb	%/100ft	ftlb
5 1/2" 139.7	0.361	11490	10390	583	583	83.3	38400	12640	11100	641	641	91.7	42200
	0.415	13200	13480	663	595		41300	14530	14540	729	655		45400
6" / 152.4	0.400	11670	10720	704	534	76.4	40600	12830	11460	774	587	84.0	44600
7" 177.80	0.362	9050	6020	755	576	65.5	44000	9960	6230	830	633	72.0	48300
	0.408	10200	8080	845	576		47300	11220	8530	929	633		52100

Pi ... internal yield pressure | Pc ... collapse resistance (VA-HC-grades on special request) | Sy ... joint yield strength | L...load on coupling face
B ... max. bending (uniaxial) | Ty ... connection yield torque

MAKE UP TORQUE

PIPE OUTSIDE DIAMETER	NOMINAL WEIGHT		WALL THICKNESS		GRADE 80		GRADE 85		
	inch/mm	lbs/ft	kg/m	inch	mm	Nm	ft.lbs	Nm	ft.lbs
5 1/2" 139.7		20,0	29,76	0,361	9,17	21000	15500	22000	16200
		23,0	34,23	0,415	10,54	21000	15500	22000	16200
6" / 152.4		24,5	36,43	0,400	10,16	21000	15500	22000	16200
7" 177.80		26,00	39,20	0,362	9,19	24000	17700	25000	18400
		29,00	43,77	0,408	10,36	24000	17700	25000	18400

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 + 10%.

Minimum torque: optimum - 10%.

Special clearance and 20° beveled couplings have a lower load on coupling face.

In addition to torque, positional make-up is also an important part of the acceptance criteria for make-up.

Further details are available in the running procedures in the download area of our Web Page www.voestalpine.com/tubulars and in the myTubulars App.

GRADE 90							GRADE 95					
Pi	Pc	Sy	L	B	Ty	Pi	Pc	Sy	L	B	Ty	
psi	psi	1000lb	1000lb	%/100ft	ftlb	psi	psi	1000lb	1000lb	%/100ft	ftlb	
10340	9630	525	525	75.0	34500	10910	10020	554	554	79.2	36400	
11880	12380	597	536		37200	12540	12930	630	566		39200	
10500	9920	633	480	68.7	36500	11080	10320	669	507	72.6	38500	
8150	5740	679	518	58.9	39500	8600	5890	717	547	62.2	41700	
9180	7580	760	518		42600	9690	7840	803	547		44900	

GRADE 125							GRADE 135					
Pi	Pc	Sy	L	B	Ty	Pi	Pc	Sy	L	B	Ty	
psi	psi	1000lb	1000lb	%/100ft	ftlb	psi	psi	1000lb	1000lb	%/100ft	ftlb	
14360	12080	729	729	104.2	47900	15510	12680	787	787	112.5	51800	
16510	16060	829	744		51600	17830	17020	895	804		55800	
14580	12500	880	667	95.5	50700	15750	13130	950	721	103.1	54700	
11310	6450	944	719	81.8	54900	12220	6580	1019	777	88.4	59300	
12750	9110	1056	719		59200	13770	9430	1141	777		63900	

Performance properties for proprietary and other grades on request. For further details please check the datasheet generator. Other Grades on request.

GRADE 90		GRADE 95		GRADE 100		GRADE 110		GRADE 125		GRADE 135	
Nm	ft.lbs	Nm	ft.lbs	Nm	ft.lbs	Nm	ft.lbs	Nm	ft.lbs	Nm	ft.lbs
23000	17000	24000	17700	26000	19200	28000	20700	32000	23600	35000	25800
23000	17000	24000	17700	26000	19200	28000	20700	32000	23600	35000	25800
24000	17700	25000	18400	26000	19200	29000	21400	33000	24300	35000	25800
26000	19200	28000	20700	29000	21400	32000	23600	37000	27300	40000	29500
26000	19200	28000	20700	29000	21400	32000	23600	37000	27300	40000	29500



voestalpine
Engineering

SERVICES



myTubulars

myTubulars APP PRODUCT DATASHEETS, FIELD SERVICE AND LICENSEES

Generate datasheets and load envelopes containing dimension and performance data for products provided by voestalpine Tubulars with our Datasheet Generator. You can quickly and easily check the product application against field requirements in advance also on your tablet or smartphone by using the myTubulars App.

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

GET THE APP!

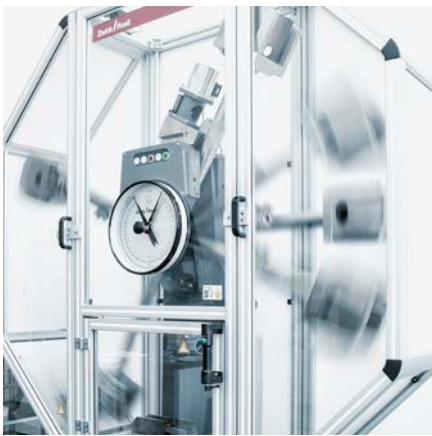


Field Service during the installation can be provided upon request. Please visit the Customer Service site on our web page www.voestalpine.com/tubulars



WHY voestalpine Tubulars?

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



PRODUCT DEVELOPMENT



CONNECTION DEVELOPMENT



MATERIAL DEVELOPMENT



PROCESS DEVELOPMENT



PRODUCT SELECTION



FIELD SERVICE

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ONE STEP AHEAD.