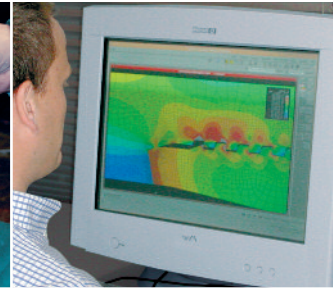
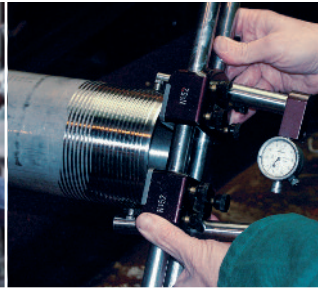


VAM® TOP HC

Beyond the TOP in compression

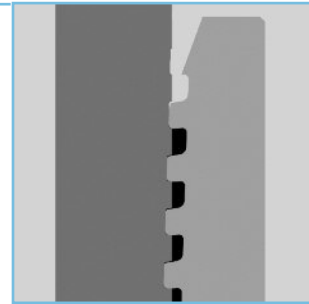


VAM® 21
VAM® TOP
VAM® TOP HC
VAM® TOP HT
VAM® SLIJ II
VAM® FJL
VAM® HTF
DINO VAM®
BIG OMEGA™
VAM® TOP FE
VAM® HW ST
VAM® MUST

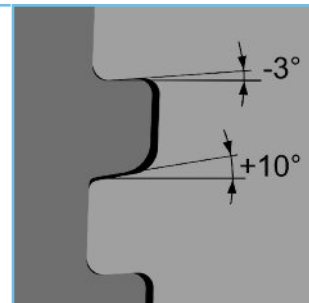
VAM[®] TOP HC



Thread run-out

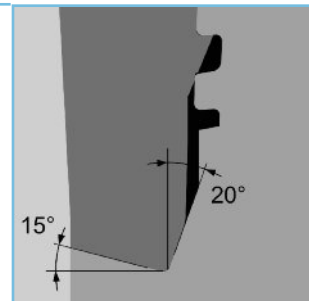


Thread form



$\text{\O} 5''$ to $7 \frac{3}{4}''$ – 5TPI
Taper 1:16

Seal geometry



Joint yield strengths are calculated from the minimum specified material yield stress and the critical joint cross sectional area, pipe or coupling, as appropriate.

Size (OD)	Nominal weight	Wall thickness		Drift diameter	Coupling (OD) reg.	Make-up loss	Coupling length	Pipe body section	Coupling CCS*	VAM® TOP HC regular yield strength (1000 lb.)											
		inch	mm							inch	mm	65 ksi	75 ksi	80 ksi	85 ksi	90 ksi	95 ksi	100 ksi	110 ksi	120 ksi	125 ksi
inch	lb./ft.	inch	mm	inch	inch	inch	inch	sq. in.	sq. in.	ksi	ksi	ksi	ksi	ksi	ksi	ksi	ksi	ksi	ksi	ksi	ksi
5 127.00	15.00	0.296	7.52	4.283	5.470	4.191	10.394	4.374	4.462	284	328	350	372	394	416	437	481	525	547	590	612
	18.00	0.362	9.19	4.151	5.577	4.191	10.394	5.275	5.385	343	396	422	448	475	501	528	580	633	659	712	739
	20.30	0.408	10.36	4.059	5.648	4.191	10.394	5.886	6.009	383	441	471	500	530	559	589	647	706	736	795	824
	21.40	0.422	10.72	4.031	5.669	4.191	10.394	6.069	6.202	394	455	486	516	546	577	607	668	728	759	819	850
	23.20	0.478	12.14	3.919	5.750	4.191	10.394	6.791	6.925	441	509	543	577	611	645	679	747	815	849	917	951
5 1/2 139.70	17.00	0.304	7.72	4.767	5.978	4.382	10.748	4.962	5.069	323	372	397	422	447	471	496	546	595	620	670	695
	20.00	0.361	9.17	4.653	6.071	4.382	10.748	5.828	5.944	379	437	466	495	525	554	583	641	699	729	787	816
	23.00	0.415	10.54	4.545	6.156	4.382	10.748	6.630	6.756	431	497	530	564	597	630	663	729	796	829	895	928
6 5/8 168.28	26.00	0.476	12.09	4.423	6.248	4.382	10.748	7.513	7.659	488	563	601	639	676	714	751	826	902	939	1014	1052
	23.20	0.330	8.38	5.840	7.154	4.427	10.866	6.526	6.659	424	489	522	555	587	620	653	718	783	816	881	914
	24.00	0.352	8.94	5.796	7.191	4.427	10.866	6.937	7.080	451	520	555	590	624	659	694	763	832	867	936	971
	28.00	0.417	10.59	5.666	7.297	4.427	10.866	8.133	8.289	529	610	651	691	732	773	813	895	976	1017	1098	1139
7 177.80	32.00	0.475	12.07	5.550	7.390	4.427	10.866	9.177	9.357	597	688	734	780	826	872	918	1009	1101	1147	1239	1285
	26.00	0.362	9.19	6.151	7.565	4.776	11.535	7.549	7.693	491	566	604	642	679	717	755	830	906	944	1019	1057
	29.00	0.408	10.36	6.059	7.644	4.776	11.535	8.449	8.634	549	634	676	718	760	803	845	929	1014	1056	1141	1183
	32.00	0.453	11.51	6.000 A	7.717	4.776	11.535	9.317	9.512	606	699	745	792	839	885	932	1025	1118	1165	1258	1304
	35.00	0.498	12.65	5.879	7.787	4.776	11.535	10.172	10.376	661	763	814	865	915	966	1017	1119	1221	1272	1373	1424
	38.00	0.540	13.72	5.795	7.852	4.776	11.535	10.959	11.172	712	822	877	932	986	1041	1096	1205	1315	1370	1479	1534
7 5/8 193.68	41.00	0.590	14.99	5.695	7.929	4.776	11.535	11.881	12.124	772	891	950	1010	1069	1129	1188	1307	1426	1485	1604	1663
	29.70	0.375	9.53	6.750	8.213	4.868	11.732	8.541	8.716	555	641	683	726	769	811	854	940	1025	1068	1153	1196
	33.70	0.430	10.92	6.640	8.305	4.868	11.732	9.720	9.917	632	729	778	826	875	923	972	1069	1166	1215	1312	1361
	35.80	0.465	11.81	6.570	8.362	4.868	11.732	10.460	10.664	693	800	853	906	960	1013	1066	1173	1255	1308	1440	1493
	39.00	0.500	12.70	6.500	8.419	4.868	11.732	11.192	11.416	727	839	895	951	1007	1063	1119	1231	1343	1399	1511	1567
	42.80	0.562	14.27	6.376	8.518	4.868	11.732	12.470	12.726	811	935	998	1060	1122	1185	1247	1372	1496	1559	1683	1746
7 3/4 196.85	45.30	0.595	15.11	6.310	8.569	4.868	11.732	13.141	13.412	854	986	1051	1117	1183	1248	1314	1446	1577	1643	1774	1840
	47.10	0.625	15.88	6.250	8.614	4.868	11.732	13.744	14.023	893	1031	1100	1168	1237	1306	1374	1512	1649	1718	1855	1924
	46.10	0.595	15.11	6.500 A	8.693	4.915	11.850	13.374	13.642	869	1003	1070	1137	1204	1271	1337	1471	1605	1672	1805	1872

* Coupling CCS = Coupling Critical Cross Section

A: Alternate drift

1000 lb. = 4.44822 kN

Note: VAM® TOP HC in 4 1/2" OD is no more promoted. Please select standard VAM® TOP.
Reminder: 4 1/2" VAM® TOP HC was not compatible and interchangeable with VAM® TOP.

External pressure equal to collapse pressure calculated from API Bul. 5 C 3 section 1. Minimum internal yield pressure are calculated from API Bul. 5 C 3 section 3, formula 3.1.1.

External pressure (psi)												Minimum internal yield pressure (psi)												Nominal weight	Size (OD)
65 ksi	75 ksi	80 ksi	85 ksi	90 ksi	95 ksi	100 ksi	110 ksi	120 ksi	125 ksi	135 ksi	140 ksi	65 ksi	75 ksi	80 ksi	85 ksi	90 ksi	95 ksi	100 ksi	110 ksi	120 ksi	125 ksi	135 ksi	140 ksi	lb./ft.	inch mm
6280	6940	7250	7540	7830	8110	8370	8850	9280	9480	9830	9980	6730	7770	8290	8810	9320	9840	10360	11400	12430	12950	13990	14500	15.00	5
8730	9960	10500	11010	11520	12020	12520	13470	14380	14820	15670	16070	8240	9500	10140	10770	11400	12040	12670	13940	15200	15840	17100	17740	18.00	127.00
9740	11240	11990	12740	13490	14240	14990	16490	17930	18550	19740	20320	9280	10710	11420	12140	12850	13570	14280	15710	17140	17850	19280	19990	20.30	
10050	11590	12360	13140	13910	14680	15460	17000	18550	19320	20860	21610	9600	11080	11820	12550	13290	14030	14770	16250	17720	18460	19940	20680	20.80	
10370	11960	12760	13560	14360	15150	15950	17550	19140	19940	21540	22330	9940	11470	12240	13000	13770	14530	15300	16820	18350	19120	20650	21410	21.40	
11240	12970	13830	14700	15560	16430	17290	19020	20750	21620	23340	24210	10870	12550	13380	14220	15060	15890	16730	18400	20080	20910	22590	23420	23.20	
5510	6040	6290	6510	6730	6940	7140	7480	7760	7890	8090	8170	6290	7250	7740	8220	8710	9190	9670	10640	11610	12090	13060	13540	17.00	5 1/2
7540	8410	8830	9230	9630	10020	10400	11110	11760	12090	12670	12950	7470	8610	9190	9760	10340	10910	11490	12640	13780	14360	15510	16080	20.00	139.70
9070	10460	11160	11810	12380	12930	13480	14540	15560	16060	17020	17480	8580	9900	10560	11220	11880	12540	13200	14530	15850	16510	17830	18490	23.00	
10280	11860	12650	13440	14230	15020	15810	17390	18970	19760	21340	22140	9840	11360	12120	12870	13630	14390	15150	16660	18170	18930	20450	21200	26.00	
4430	4790	4950	5080	5210	5320	5420	5570	5720	5840	6040	6120	5670	6540	6970	7410	7850	8280	8720	9590	10460	10900	11770	12200	23.20	6 5/8
5090	5550	5760	5950	6140	6310	6470	6730	6930	7020	7140	7180	6040	6970	7440	7900	8370	8830	9300	10230	11160	11620	12550	13020	24.00	168.28
7010	7800	8170	8530	8880	9220	9550	10160	10720	11000	11480	11710	7160	8260	8810	9360	9910	10460	11020	12120	13220	13770	14870	15420	28.00	
8650	9800	10320	10830	11330	11830	12300	13230	14100	14540	15360	15750	8160	9410	10040	10670	11290	11920	12550	13800	15060	15680	16940	17570	32.00	
4810	5220	5410	5580	5740	5890	6020	6230	6390	6450	6590	6690	5880	6790	7240	7690	8150	8600	9050	9960	10860	11310	12220	12670	26.00	7
6100	6730	7030	7300	7580	7840	8090	8530	8920	9110	9420	9560	6630	7650	8160	8670	9180	9690	10200	11220	12240	12750	13770	14280	29.00	177.80
7360	8200	8610	8990	9370	9740	10110	10780	11410	11710	12270	12530	7360	8490	9060	9630	10190	10760	11330	12460	13590	14160	15290	15860	32.00	
8590	9670	10190	10680	11170	11650	12130	13030	13890	14320	15110	15490	8090	9340	9960	10580	11210	11830	12450	13700	14940	15560	16810	17430	35.00	
9250	10680	11390	12100	12810	13430	14010	15130	16210	16740	17770	18260	8780	10130	10800	11480	12150	12830	13500	14850	16200	16880	18230	18900	38.00	
10030	11580	12350	13120	13890	14660	15440	16980	18520	19300	20840	21560	9590	11060	11800	12540	13280	14010	14750	16230	17700	18440	19910	20650	41.00	
4310	4640	4790	4910	5030	5130	5220	5350	5570	5670	5850	5930	5590	6450	6890	7320	7750	8180	8610	9470	10330	10760	11620	12050	29.70	7 5/8
5720	6300	6560	6810	7050	7270	7490	7870	8190	8340	8580	8690	6410	7400	7900	8390	8880	9380	9870	10860	11840	12340	13320	13820	33.70	193.68
6630	7350	7690	8010	8330	8640	8930	9480	9970	10200	10620	10800	6940	8000	8540	9070	9600	10140	10670	11740	12810	13340	14410	14940	35.80	
7530	8400	8820	9220	9610	10000	10380	11080	11740	12060	12650	12920	7460	8610	9180	9750	10330	10900	11480	12620	13770	14340	15490	16070	39.00	
8880	10240	10820	11350	11890	12410	12930	13930	14880	15350	16240	16680	8380	9670	10320	10960	11610	12250	12900	14190	15480	16120	17410	18060	42.80	
9350	10790	11510	12230	12950	13670	14290	15440	16560	17100	18160	18670	8880	10240	10920	11610	12290	12970	13660	15020	16390	17070	18440	19120	45.30	
9780	11290	12040	12790	13540	14300	15050	16550	18060	18700	19900	20490	9320	10760	11480	12190	12910	13630	14340	15780	17210	17930	19360	20080	47.10	
9210	10630	11340	12050	12750	13320	13900	15000	16070	16600	17600	18090	8730	10080	10750	11420	12090	12760	13440	14780	16120	16790	18140	18810	46.10	7 3/4
																								196.85	

* Coupling CCS = Coupling Critical Cross Section

Note: VAM® TOP HC in 4 1/2" OD is no more promoted. Please select standard VAM® TOP.
Reminder: 4 1/2" VAM® TOP HC was not compatible and interchangeable with VAM® TOP.

1 ksi = 1000 psi
1 psi = 0.006895 Mpa
0.06895 bar

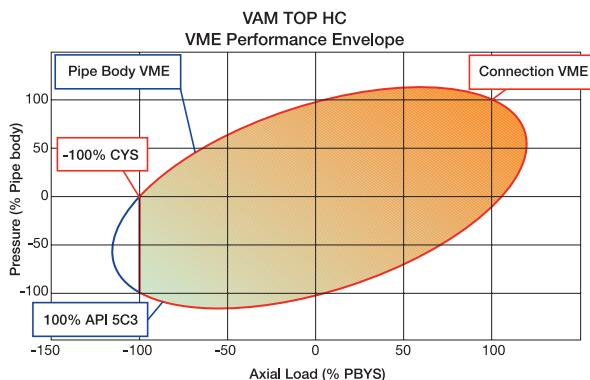
VAM® TOP HC (High Compression) is a T&C connection based on the main features of the VAM® TOP connection. This connection has been designed for various high-compression applications where it may be necessary to apply extreme compressive loads to the string (elevated temperature inducing compression, compaction, subsidence ...).

New metal-to-metal seal

- A patented metal-to-metal seal system offers from 5" to 7 3/4" excellent gas-tight sealing, even under the most severe combined loads.
- Sealing integrity remains constant despite repeated make-ups and break-outs.
- Seal geometry protects against galling.

Reverse angle torque shoulder

- A reverse angle torque shoulder provides a positive torque stop which allows for accurate power-tight make-up and minimizes hoop stresses in the connection.
- The "wedge" effect caused by the reverse angle gives the connection superior structural strength.
- The shoulder design was optimized in order to resist adverse conditions such as combined compression and external pressure or combined bending, compression, and torque.
- The torque shoulder dimension on VAM® TOP HC is significantly larger than VAM® TOP and with a mixture of reduced torque, this enables the connection to withstand extreme compressive loads that are achievable for the pipe body (see the corresponding gas-tight VME performance envelope).



Connection Yield Strength = 100% Pipe Body Yield Strength for standard design

BENEFITS

- **Extreme compression resistance (improved with regards to VAM® TOP one)**
- **Excellent gas-tight sealing under combined loads**
- **Excellent resistance to bending and torque**
- **Excellent resistance to external pressure and compression**
- **Easy to use and repair**

Improved hook thread design

- A modified hook thread profile with 3° reverse angle on the load flank not only provides the connection with superior tension strength but also increases its resistance to compression.
- The excellent structural strength including the increased bending and compression resistance, makes this connection especially suited for highly deviated and long horizontal wells.
- Optimized thread geometry minimizes the risk of galling, even when thread lubricants are poorly applied.

Coupling design

- Coverage of the vanishing threads, long internal shoulder, and coupling critical cross sections greater than those of the pipe body contribute to a high-performance, 100% efficient connection.

Streamlined internal profile

- A pin ID chamfer, tight tolerances on the coupling center and a long shoulder combine to minimize turbulence and energy loss inside the connection for high-velocity gas flows encountered.

Popular VAM® connections



VAM® TOP

VAM® TOP is a T&C connection ideal for tubing and production casing strings applications. VAM® TOP provides gastight sealing under the most severe conditions including great depths, highly deviated holes, and hostile environments. It outperforms the majority of today's premium connections designed according to casing and tubing requirements.



VAM® FJL

(Flush Joint Liner)

100% flush ID and OD to provide maximum clearance with optimum strength for liners, moderate depth casing, and tight-hole tubing strings.



DINO VAM®

A cost effective T&C connection for surface and intermediate casing applications. Increased running reliability and reduced rig costs result from its deep stabbing, non cross-threading and fast make-up. Sealing and structural strength are provided by a coarse 3 TPI tapered, hooked thread design.

SUMITOMO METAL INDUSTRIES, LTD.

HEAD OFFICE:

Tokyo Office

Triton Square Office Tower Y
8-11, Harumi 1-Chome, Chuo-ku,
Tokyo 104-6111, Japan
Phone +81 (3) 4416-6280
Fax +81 (3) 4416-6288

OVERSEAS OFFICES:

Singapore Office

5 Shenton Way #25-07, UIC
Building 068808
Singapore
Phone +65 (6) 220-9193
Fax +65 (6) 224-0386

London Office

Horatio House
77-85 Fulham Palace Road
London W6 8JB England
Phone +44 (20) 8748-4480
Fax +44 (20) 8748-8350

Sumitomo Metal Industries (Middle East)

PO Box 262517
Level 10, JAFZA View 18
Jebel Ali Free Zone
Dubai, U.A.E.
Phone +971-4-886-5900
Fax +971-4-886-5901

OVERSEAS AFFILIATE:

Houston Office

820 Gessner, Suite 1670
Houston, TX, 77024
Phone +1 (713) 654-7111
Fax +1 (713) 654-1261



URL <http://www.sumitomo-tubulars.com>
<http://www.sumitomometals.co.jp>

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