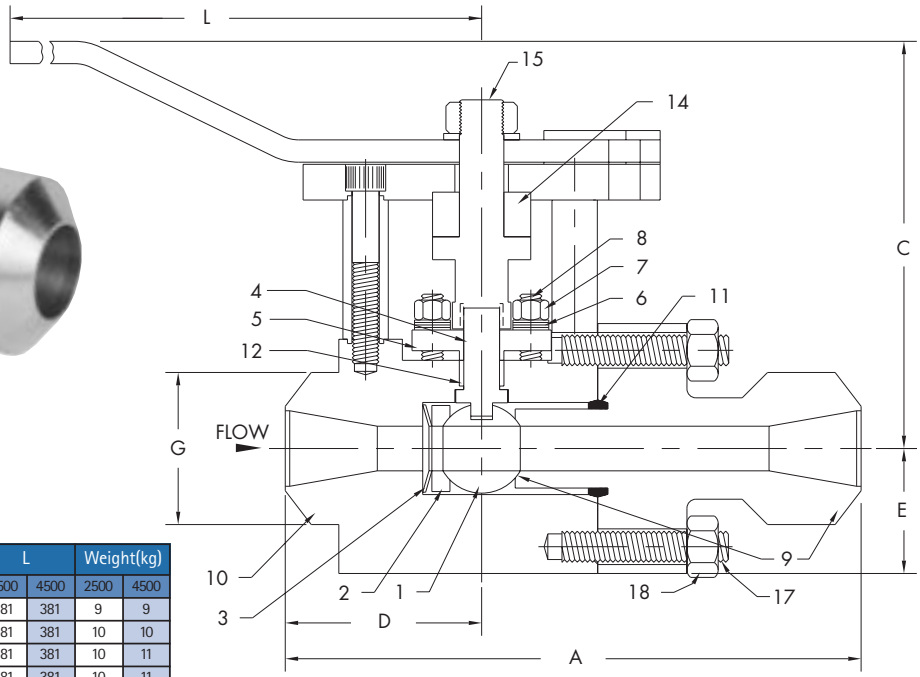
V1-1

VALVTECHNOLOGIES

Forged, High Pressure Valves
ANSI 900-4500
15mm-100mm



BUTT WELD ENDS

Nominal Size		A		C		D		E		G	L		Weight(kg)	
IN	DN	2500*	4500**	2500	4500	2500	4500	2500	4500		2500	4500	2500	4500
1/2	15	152	203	149	149	70	70	44	44	21	381	381	9	9
3/4	20	152	203	149	149	70	70	44	44	27	381	381	10	10
1	25	203	203	149	149	70	70	44	44	34	381	381	10	11
1 1/4	32	203	203	149	149	70	70	44	44	42	381	381	10	11
1 1/2	40	203	203	149	149	70	203	44	57	48	381	381	10	19
2	50	254	203	165	149	97	83	54	57	60	381	381	15	19
2 1/2	65	254	283	165	N/A	97	97	54	108	73	381	N/A	15	24
3	80	292	283	N/A	N/A	102	97	76	76	89	N/A	N/A	37	25
4	100	292	283	N/A	N/A	102	97	76	76	114	N/A	N/A	39	25

BILLS OF MATERIAL

ITEM	DESCRIPTION	A182-F22	A105	A182-F316	A182-F91	QTY
1	BALL ***	A182-F6a/RAM31	A182-F6a/RAM31	A182-F6a/RAM31	A638-Gr. 660/RAM31	1*
2	UPSTREAM SEAT	A182-F22 Cl.3/H.F.	A182-F22 Cl.3/H.F.	A182-F316/H.F.	A182-F22 Cl.3/H.F.	1*
3	BELLEVILLE SPRING	UNS N07718	UNS N07718	UNS N07718	UNS N07718	1*
4	STEM	A638-Gr.660/H.F.	A638-Gr.660/H.F.	A638-Gr.660/H.F.	A638-Gr.660/H.F.	1
5	GLAND	A182-F22 Cl.3/H.F.	A182-F22 Cl.3/H.F.	A182-F22 Cl.3/H.F.	A182-F22 Cl.3/H.F.	1
6	GLAND LOAD SPRING	AISI 302	AISI 302	AISI 302	AISI 302	24
7	GLAND NUT	A194 Gr. 8M	A194 Gr. 8M	A194 Gr. 8M	A194 Gr. 8M	4
8	GLAND STUD	A193 Gr. B8M	A193 Gr. B8M	A193 Gr. B8M	A193 Gr. B8M	4
9	END CAP/INTEGRAL SEAT	A182-F22 Cl.3/RAM31	A105/RAM31	A182-F316/RAM31	A182-F91/RAM31	1*
10	BODY	A182-F22 Cl.3	A105	A182-F316	A182-F91	1
11	BODY GASKET	A564 TYPE 630 (H1150)	A564 TYPE 630 (H1150)	A564 TYPE 630 (H1150)	A564 TYPE 630 (H1150)	1*
12	GLAND PACKING	AISI 316/GRAFOIL	AISI 316/GRAFOIL	AISI 316/GRAFOIL	AISI 316/GRAFOIL	3*
14	THRUST BEARING	A29-1020/H.F.	A29-1020/H.F.	A29-1020/H.F.	A29-1020/H.F.	1
15	DRIVE SLEEVE	A29-4130	A29-4130	A29-4130	A29-4130	1
17	BODY STUD	A193 Gr. B8M	A193 Gr. B8M	A193 Gr. B8M	A193 Gr. B8M	8**
18	BODY NUT	A194 Gr. 8M	A194 Gr. 8M	A194 Gr. 8M	A194 Gr. 8M	8**

* Recommended Spare Parts
** Quantity is 6 for 15mm through 40mm
***Ball Material is Inconel 718 for class 3500# and 4500# valves
A182-F91 trim, the gland material is A182-F316/H.F. for sizes 50mm and above

Testing Procedure: As a standard, all valves are seat leak tested with 3.5 Bar of air for 3 minutes with the minimum acceptable passing criteria, being zero bubbles during the 3-minute test. This test exceeds ANSI B16.104/FCI 70-2 Class VI leakage standards. Additionally a 69 Bar nitrogen seat test is performed for 3 min utes with zero bubbles. Furthermore, 3500/4500 ASME/ANSI Class valves are seat leak tested at 276 Bar of nitrogen for 3 minutes with zero bubbles.

V1-1 VALVE C_V's

NOMINAL Size		PIPE I.D.	TRANSITION ANGLE	BORE[2]	C_V BASED ON PIPE I.D.	MAXIMUM C_V OF VALVE
IN	DN					
1/2	15	Sch XXS 6.5	0	16	20	32
3/4	20	Sch XXS 11	0	16	32	32
1	25	Sch XXS 15	0	16	44	44
1 1/4	32	Sch XXS 23	15°	16	31	44
1 1/2	40	Sch XXS 28	15°	16	22	44
2-2500#	50	Sch XXS 38	7.5°	27	80	136
21/2-4500#	50	28	5°	16	19	44
2 1/2	66	Sch XXS 45	12.5°	27	58	136
3-2500#	80	Sch XXS 59	10°	38	162	284
4-2500#	100	Sch XXS 80	21°	38	91	284
3-4500#	80	48	15°	27	60	143
4-4500#	100	66	15°	27	43	143

Since the pipe I.D. and corresponding transition from valve I.D. to pipe I.D. has a critical impact on the C_V of the valve, we have devised the above table. This table gives the C_V based on industry standard pipe and also the maximum C_V of the valve only.

Notes:
1. For C_V with other pipe I.D., consult factory.
2. For C_V with other valve bore, consult factory.
3. C_V values are approximate, contact factory for exact C_V values.

Integral Seat, Four-Year Zero Leakage Guarantee

V1-1 PRESSURE TEMPERATURE RATINGS

A182-F22 (2 1/4 Cr.- 1 Mo.)

MODEL No.*	ANSI Rating	TEMPERATURE, °C - PRESSURE, BARG																	
		-29 to 38	93	149	204	260	316	343	371	399	427	454	482	510	538	566	593	621	649
B7L1	900(1)	155	148	140	134	132	125	122	118	110	105	101	93	78	54	36	23	14	9
B8L1	1500 2250(2)	388	370	350	335	331	313	304	294	275	263	252	232	195	135	90	57	35	21
B0L1	2500 3100(2)	534	521	498	480	463	431	419	404	379	362	347	320	269	186	125	78	49	29
BAL7	3500 4000(2)	690	685	662	640	607	556	541	522	489	466	448	413	347	240	161	101	63	38
BBL7	4500(1)	776	776	753	730	684	625	608	587	550	525	504	465	391	270	181	113	71	42

A105 (Carbon Steel)**

MODEL No.*	ANSI Rating	TEMPERATURE, °C - PRESSURE, BARG													
		-29 to 38	93	149	204	260	316	343	371	399	427	454	482	510	538
B7C1	900(1)	155	140	136	131	124	113	111	110	104	85	56	36	21	11
B8C1	1500 2250(2)	388	349	339	328	310	283	278	276	261	213	138	89	53	27
B0C1	2500 3100(2)	534	481	468	451	427	390	383	380	359	293	191	122	74	37
BAC1	3500 4000(2)	690	620	603	583	550	503	494	490	463	378	246	158	95	47
BBC1	4500(1)	779	698	679	655	619	566	555	551	521	425	276	177	107	53

** per ASME/ANSI B16.34 Permissible, but not recommended for prolonged usage above 427°C.

A182-F316 (316 Stainless Steel)

MODEL No.*	ANSI Rating	TEMPERATURE, °C - PRESSURE, BARG																	
		343	371	399	427	454	482	510	538	566	593	621	649	677	704	732	760	788	816
B723	900(1)	92	90	88	87	87	86	80	72	71	63	49	38	30	24	20	16	12	9
B823	1500 2250(2)	230	225	221	218	216	215	200	181	178	158	122	96	76	60	50	39	30	21
B023	2500 3100(2)	316	310	304	301	298	296	275	249	245	217	169	132	105	83	68	54	42	30
BA21	3500 4000(2)	408	399	393	388	384	382	355	322	316	280	218	170	135	107	88	69	54	38
BB21	4500(1)	459	449	442	437	432	430	400	362	355	315	245	191	152	121	99	78	60	43

A182-F91 (9Cr.-1 Mo.)

MODEL No.*	ANSI Rating	TEMPERATURE, °C - PRESSURE, BARG																	
		-29 to 38	93	149	204	260	316	343	371	399	427	454	482	510	538	566	593	621	649
B791	900(1)	155	155	151	146	138	125	122	118	110	105	101	93	76	75	74	67	50	31
B891	1500 2250(2)	388	388	377	365	344	313	304	294	275	263	200	232	200	188	186	167	124	76
B091	2500 3100(2)	534	534	519	503	474	431	419	404	379	362	299	320	275	259	256	230	171	105
BA91	3500 4000(2)	690	690	670	649	611	556	541	522	489	466	431	413	355	334	331	296	221	135
BB91	4500(1)	776	776	753	730	687	625	608	587	550	525	504	465	400	376	372	333	248	152

(1) Standard Rating
(2) Interpolated Rating
NOTE: Working Pressures are in accordance with ASME/ANSI B16.34-1996; Standard Class Interpolated Ratings.
F-22 Limited Class 2250, 3100 & 4000 are available upon request.
* Add SW or BW to complete Model Number.

VALVTECHNOLOGIES

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