



Bronze for Steam Service
ASME Section VIII

**WSVB Series
SAFETY VALVES**

WSVB Series is a dependable cast bronze high capacity safety valve ideal for use on piping systems and unfired pressure vessels. These rugged safety valves feature a top guided design and patented "soft seat" for dramatically reduced seat leakage, a common concern of those using valves with metal to metal seating. Flow ratings are National Board certified in accordance with ASME Section VIII.

Applications:

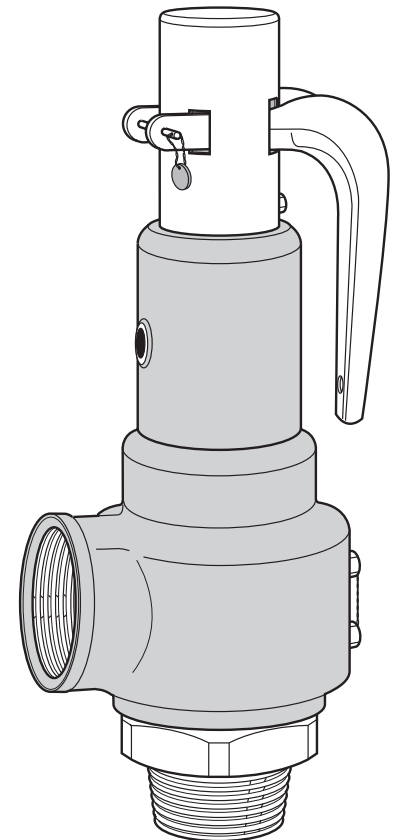
Overpressure protection of sterilizers, distillers and cookers. Pneumatic conveying equipment, air compressors, receivers and dryers. Steam accumulators, pressure vessels and pressure piping systems.

Features:

- Stainless steel springs are standard
- Teflon® PEA seat resists corrosive boiler chemicals
- Set pressures to 250 psig Steam
- Inlet sizes: 1/2" to 2-1/2" NPT
- High-capacity full nozzle design available in 6 orifice sizes
- Two control rings for maximum performance & adjustability
- Rust-proofed steel stem and spring washers
- Tapped body drain allows piping of condensate away from equipment
- Reduced repair costs: soft seat easily replaced
- Registered in all Canadian Provinces under CSA B51 CRN OGN OG2663.1C

19 Series Bronze Safety Valves Materials

Component	Material
Cap	Aluminum
Stem Nut (2)	Steel-Plated
Cap Locking Screw	Brass
Lift Lever	Steel-Plated
Body	Bronze
Spring Washer (2)	Steel-Plated
Guide Ring	Brass
Disc	Brass
Guide Ring Screw	Brass
Nozzle Ring Screw	Brass
Seat Retainer	Brass
Seat Insert	Teflon® PFA
Stem	Steel-Plated
Lift Washer	Steel-Plated
Lever Pin	Steel-Plated
Adj. Screw Locknut	Brass
Adjusting Screw	Brass
Pivot (2)	Steel - Plated
Spring	Stainless Steel
"E" Ring	Stainless Steel
Stem Pin	Stainless Steel
O-Ring	Silicone
Nozzle Ring	Brass
Nozzle	Brass
Seal & Wire	Lead/Steel
Nameplate	Aluminum



Watson McDaniel reserves the right to change the designs and/or materials of its products without notice



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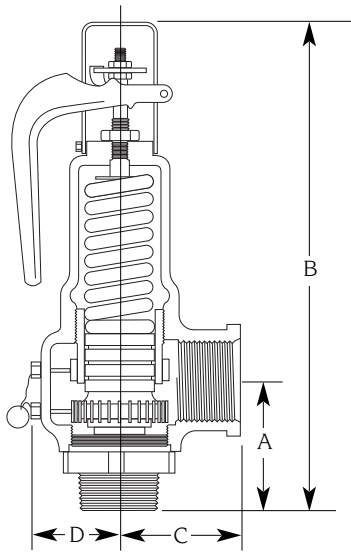
Manufacturers of:

**PRESSURE & TEMPERATURE REGULATORS - RELIEF VALVES - STEAM TRAPS - CLEAN STEAM PRODUCTS
LIQUID DRAINERS - PRESSURE PUMPS - EJECTORS - SPECIALTY PRODUCTS**



SP-400

(1/01)



WSVB Series Bronze Safety Valves

Valve No.	Orifice Designation	Size Inlet x Outlet	A	B	C	D	Weight Each
19-202	D	1/2 X 3/4	1-25/32	6-1/8	1-23/64	27/32	1.50
19-301	D	3/4 X 3/4	1-27/32	6-3/16	1-23/64	27/32	1.50
19-302	E	3/4 X 1	1-61/64	6-5/8	1-3/4	1-1/16	1.90
19-401	E	1X1	2-5/64	6-3/4	1-3/4	1-1/16	2.08
19-402	F	1 X 1-1/4	2-3/8	8-25/32	2	1-7/16	3.90
19-501	F	1-1/4 X 1-1/4	2-7/16	8-27/32	2	1-7/16	4.05
19-502	G	1-1/4 X 1-1/2	2-11/16	10-3/16	2-3/8	1-11/16	7.03
19-601	G	1-1/2 X 1-1/2	2-3/4	10-1/4	2-3/8	1-11/16	6.98
19-602	H	1-1/2 X 2	3-3/64	11-9/32	2-3/4	2-1/16	11.20
19-701	H	2 X 2	3-7/64	11-11/32	2-3/4	2-1/16	11.33
19-702	J	2 X 2-1/2	3-7/16	13-5/8	3-1/2	2-7/16	19.20
19-801	J	2-1/2 X 2-1/2	3-13/16	14	3-1/2	2-7/16	19.80

“UV” STEAM

ASME Section VIII - Pressure Vessels

Steam Capacity Chart - 90% of Actual Capacity at 10% Accumulation Capacity in Pounds of Saturated Steam Per Hour

SET PRESSURE PSIG	VALVE SIZE	ORIFICE DES.	VALVE SIZE	ORIFICE DES.	VALVE SIZE	ORIFICE DES.	VALVE SIZE	ORIFICE DESIG.	VALVE SIZE	ORIFICE DES.	VALVE SIZE	ORIFICE DES.
	1/2" x 3/4"	"D"	3/4" x 1"	"E"	1" x 1-1/4"	"F"	1-1/4" x 1-1/2"	"G"	1-1/2" x 2"	"H"	2" x 2-1/2"	J
	3/4" x 3/4"	.405 DIA	1" x 1"	.541 DIA	1-1/4" x 1-1/4"	.676 DIA	1-1/2" x 1-1/2"	.866 DIA	2" x 2"	1.082 DIA	2-1/4" x 2-1/4"	1.386 DIA
15	179	320	320	499	819	1278	2099					
20	207	369	369	576	945	1474	2420					
25	234	417	417	652	1070	1669	2741					
30	262	467	467	728	1195	1865	3062					
35	292	521	521	812	1333	2080	3415					
40	322	574	574	896	1471	2295	2768					
45	352	628	628	980	1609	2510	4121					
50	382	682	682	1064	1746	2725	4474					
55	412	736	736	1148	1884	2940	4827					
60	443	790	790	1232	2022	3155	5180					
65	473	843	843	1316	2160	3370	5533					
70	503	897	897	1400	2298	3585	5886					
75	533	951	951	1484	2435	3800	6239					
80	563	1005	1005	1568	2573	4015	6592					
85	593	1059	1059	1652	2711	4230	6946					
90	623	1112	1112	1736	2849	4445	7299					
95	654	1166	1166	1820	2987	4660	7652					
100	684	1220	1220	1904	3124	4875	8005					
105	714	1274	1274	1988	3262	5090	8358					
110	744	1328	1328	2072	3400	5305	8711					
115	774	1381	1381	2156	3538	5520	9064					
120	804	1435	1435	2240	3676	5735	9417					
125	835	1489	1489	2324	3818	5950	9770					
130	865	1543	1543	2408	3951	6165	10123					
135	895	1597	1597	2492	4089	6380	10476					
140	925	1751	1751	2576	4227	6595	10829					
145	955	1704	1704	2660	4365	6810	11182					
150	985	1758	1758	2744	4502	7025	11525					
160	1046	1866	1866	2912	4778	7455	12241					
170	1106	1973	1973	3080	5054	7885	12947					
180	1166	2081	2081	3248	5329	8315	13654					
190	1227	2189	2189	3416	5605	8745	14360					
200	1287	2296	2296	3584	5881	9175	15066					
210	1347	2404	2404	3752	6156	9605	15772					
220	1408	2512	2512	3920	6432	10035	16478					
230	1468	2619	2619	4088	6707	10465	17184					
240	1528	2727	2727	4256	6983	10895	17890					
250	1590	2834	2834	4424	7259	11325	18596					
APPROX. IPSI INCRMTS.	6.0	10.8	16.8	27.6	43.0	70.6						

KEY

PRESSURE PSIG	SUFFIX NUMBER
15	-04
20	-05
25	-06
30	-07
35	-08
40	-09
45	-10
50	-11
55	-12
60	-13
65	-14
70	-15
75	-16
80	-17
85	-18
90	-19
100	-20
105	-22
110	-23
115	-24
120	-25
125	-30
130	-31
135	-32
140	-33
145	-34
150	-35
155	-36
160	-37
165	-38
170	-39
175	-40
180	-41
185	-42
190	-43
195	-44
200	-45
205	-46
210	-47
215	-48
220	-49
225	-50
230	-51
235	-52
240	-53
245	-54
250	-55
Special settings available upon request	