

SPECIALTY PRODUCTS

WSVB Series

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Safety Valves "UV" Steam-ASME Section VIII Pressure Vessels

Model	WSVB
Sizes	1/2", 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2"
Connections	NPT
Body Material	Bronze
PMO Max. Operating Pressure	250 PSIG (steam)
TMO Max. Operating Temperature	406 °F

TYPICAL APPLICATIONS

The **WSVB** Safety Relief Valves are used for over-pressure protection on unfired pressure vessels in saturated steam systems.

HOW IT WORKS

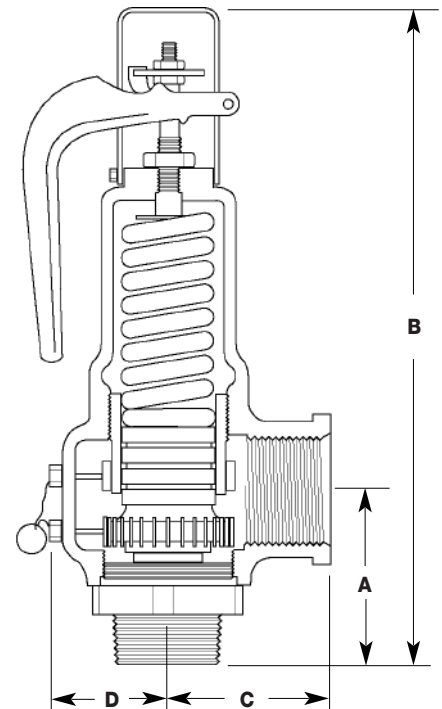
As safety valves open on a non-compressible fluid application, the disc lifts directly proportional to the increase in system pressure over the valve set point. Safety relief valves not only provide over pressure protection resulting from thermal expansion of liquids, but will respond with a rapid full opening "pop" action on systems which contain or generate steam, air or gas.

FEATURES

- **Stainless Steel springs**
- **Teflon®-PFA seat resists corrosive boiler chemicals**
- **Two control rings for maximum performance & adjustability**
- **Tapped body drain allows piping of condensate away from equipment**

SAMPLE SPECIFICATION

Safety valves shall be cast bronze construction with stainless steel springs, Teflon-PFA seats and stainless steel stems. Units shall be qualified to the ASME Boiler Code, Section VIII and suitable for steam service.



DIMENSIONS & WEIGHTS – inches / pounds

Model No.	Orifice Size	Inlet x Outlet MNPT x FNPT	A	B	C	D	Weight (lbs)
WSVB-12M-13S-D	D	1/2" x 3/4"	2.21	6.52	1.37	0.84	1.6
WSVB-13M-13S-D	D	3/4" x 3/4"	2.21	6.52	1.37	0.84	1.6
WSVB-13M-14S-E	E	3/4" x 1"	2.50	7.16	1.75	1.06	2.0
WSVB-14M-14S-E	E	1" x 1"	2.64	7.30	1.75	1.06	2.2
WSVB-14M-15S-F	F	1" x 1 1/4"	2.95	9.34	2.00	1.44	4.1
WSVB-15M-15S-F	F	1 1/4" x 1 1/4"	2.95	9.34	2.00	1.44	4.3
WSVB-15M-16S-G	G	1 1/4" x 1 1/2"	3.38	11.01	2.37	1.69	7.4
WSVB-16M-16S-G	G	1 1/2" x 1 1/2"	3.38	11.01	2.37	1.69	7.6
WSVB-16M-17S-H	H	1 1/2" x 2"	3.63	11.96	2.75	2.06	11.5
WSVB-17M-17S-H	H	2" x 2"	3.63	11.96	2.75	2.06	11.6
WSVB-16S-18S-J	J	1 1/2" FNPT x 2 1/2" FNPT	3.80	14.00	3.50	2.06	20.0
WSVB-17M-18S-J	J	2" x 2 1/2"	4.06	14.25	3.50	2.06	19.9
WSVB-18M-18S-J	J	2 1/2" x 2 1/2"	4.50	14.68	3.50	2.06	20.8

MATERIALS

Body	Bronze
Guide Ring	Brass
Disc	Brass
Seat Insert	Teflon®-PFA
Stem	SST

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CAPACITIES – Pounds of saturated steam per hour (lbs/hr)						
Set Pressure (PSIG)	Orifice "D" .129" Diameter	Orifice "E" .230" Diameter	Orifice "F" .359" Diameter	Orifice "G" .586" Diameter	Orifice "H" .919" Diameter	Orifice "J" 1.509" Diameter
15	179	320	499	820	1279	2100
20	207	369	576	945	1474	2421
25	234	418	652	1070	1670	2742
30	262	467	729	1195	1865	3063
35	292	521	813	1333	2080	3416
40	322	574	897	1471	2295	3769
45	352	628	981	1609	2510	4122
50	383	682	1065	1747	2725	4475
55	413	736	1149	1885	2941	4828
60	443	790	1233	2022	3156	5181
65	473	844	1317	2160	3371	5535
70	503	897	1401	2298	3586	5888
75	534	951	1485	2436	3801	6241
80	564	1005	1569	2574	4016	6594
85	594	1059	1653	2712	4231	6947
90	624	1113	1737	2849	4446	7300
95	654	1167	1821	2987	4661	7653
100	684	1220	1905	3125	4876	8007
105	715	1274	1989	3263	5091	8360
110	745	1328	2073	3401	5306	8713
115	775	1382	2157	3539	5521	9066
120	805	1436	2241	3677	5736	9419
125	835	1489	2325	3814	5951	9772
130	866	1543	2409	3952	6167	10125
135	896	1597	2493	4090	6382	10479
140	926	1651	2577	4228	6597	10832
145	956	1705	2661	4366	6812	11185
150	986	1759	2745	4504	7027	11538
155	1017	1812	2829	4641	7242	11891
160	1047	1866	2913	4779	7457	12244
165	1077	1920	2997	4917	7672	12597
170	1107	1973	3081	5055	7887	12951
180	1167	2081	3249	5331	8317	13657
190	1228	2189	3417	5606	8747	14363
200	1288	2296	3585	5882	9177	15069
210	1349	2404	3753	6158	9608	15776
220	1409	2512	3921	6433	10038	16482
230	1469	2619	4089	6709	10468	17188
240	1530	2727	4257	6985	10898	17894
250	1590	2834	4425	7260	11328	18601
Approx. 1 PSI Incr.	6.0	10.8	16.8	27.6	43.0	70.6

Notes: 1) Ratings are 90% of actual capacity.
 2) For Set Pressures over 250 PSIG, consult factory.
 3) For other sizes, consult factory.