

TYPE 40 — A.S.M.E. STANDARD — STEAM OR AIR
TYPE 41 — A.S.M.E. STANDARD — STEAM OR AIR
TYPES 42, 43, 44 — LIQUIDS • SAFETY AND RELIEF VALVES

Bronze Body
Bronze or Stainless Steel Trim

Type 40 (side outlet) and Type 41 (top outlet) Bronze Pop Safety Valves

Pressure Settings:

Steam to 250 psi 406°F.
 Air/Gas to 300 psi 300°F.

Consult factory regarding stainless steel trim for higher pressure settings. These valves meet A.S.M.E. requirements and are NB Certified. Regulators and pressure adjustment screws are both sealed after final tests before shipment.

Recommended for installation on, or protection of steam boilers, generators, unfired pressure vessels, line pressure reducing valves, etc. Sizes ½" through 2½". For larger sizes, consult factory.

Types 42, 43, 44 (Liquids) Bronze Relief Valves

Relief Valves: These RELIEF VALVES are furnished for any service where the pressure media does not attack bronze and the temperature is not higher than 406°F. and maximum pressure not higher than 300 psi designed for protection against overpressure in pumps, pipe lines, tanks, etc.

Constructed of bronze with stainless steel spindle. Springs adjustable ±5 psi above or below the set pressure.

Type 42 is standard for use where set pressure is fairly constant. Special locking caps are available at additional cost.

Type 43 is standard with handwheel for ease in changing the set pressure.

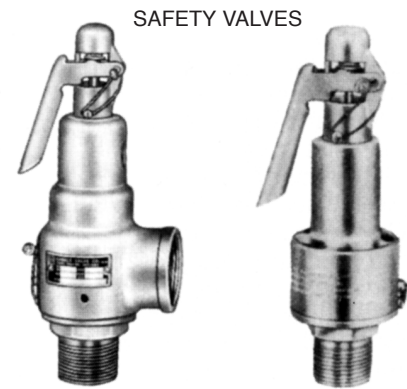
Type 44 has lifting lever required for some applications where inspection tests are advisable to show valve is operative.

DATA REQUIRED WHEN ORDERING:

- Size
- Orifice
- Set pressure
- Media
- Capacity
- 3% or 10% accumulation

Lbs./Hour Steam, 90% basis, 3% Accumulation: The capacities shown on page 21 are for saturated steam and apply to valves for use on power boilers in accordance with current A.S.M.E. Code, Section 1.

Lbs./Hour Steam, 90% basis, 10% Accumulation: The capacities shown on page 21 are for saturated steam and are in accordance with A.S.M.E. Unfired Pressure Vessel Code, Section VIII.



TYPE 40

TYPE 41

SCFM Air, 10% Accumulation: The capacities shown on page 21 are for air service.

RELIEF VALVES



TYPE 42

TYPE 43

TYPE 44

In all the designs, the outlet opening is in the base casting. This makes it unnecessary to break the connection

to take valve apart for cleaning. Size ½" through 3".

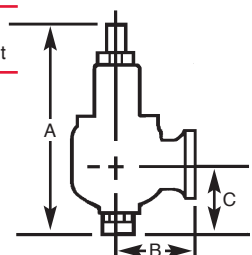
CAPACITIES IN GALLONS OF WATER PER MINUTE AT 25% OVERPRESSURE

TYPES 42, 43, 44 RELIEF VALVES

Set Pressure Psig	Capacity (GPM)								
	½	¾	1	1¼	1½	2	2½	3	3½
25	8	11	16	37	56	95	152	218	
50	11	14.5	22.5	51	75	109	217	315	
75	13	16	27	60	83	120	265	385	
100	16	20	32.5	68	90	131	306	446	
125	18	22.5	36	76	98	142	341	500	
150	20	25	39	81	105	151.5	376	547	
175	21.5	27	42	87	111.5	158	405	589	
200	23	31	45	92	117	165	430	630	
225	24	34	48	96	124	171.5	459	668	
250	25	36.5	50.5	100	130	177	484	706	
275	25.5	39	53	104	135.5	183	506	747	
300	26	42	55	107.5	142	189	530	785	

DIMENSIONS—WEIGHTS (approximate)

Size	A		B	C	Weight
	Type 42-43	Type 44			
½	5	5½	1½	1½	1
¾	6½	7	1½	2¼	2
1	7	8	2½	2½	4
1¼	8	9	2½	3	6
1½	9	10	2½	3	8
2	9½	10	2½	3½	11
2½	10	13	3	3½	16
3	12	14	3	4	25



STEAM/AIR CAPACITIES—TYPES 40 AND 41

To correct capacities for superheat or temperature other than 60°F, consult factory.

Orifice Area	D .121 Sq. In.			E .216 Sq. In.			F .338 Sq. In.			G .554 Sq. In.			H .863 Sq. In.			J 1.414 Sq. In.		
	Lbs./Hr. Steam	Lbs./Hr. Steam	SCFM Air	Lbs./Hr. Steam	Lbs./Hr. Steam	SCFM Air	Lbs./Hr. Steam	Lbs./Hr. Steam	SCFM Air	Lbs./Hr. Steam	Lbs./Hr. Steam	SCFM Air	Lbs./Hr. Steam	Lbs./Hr. Steam	SCFM Air	Lbs./Hr. Steam	Lbs./Hr. Steam	SCFM Air
	3% Acc.	10% Acc.	10% Acc.	3% Acc.	10% Acc.	10% Acc.	3% Acc.	10% Acc.	10% Acc.	3% Acc.	10% Acc.	10% Acc.	3% Acc.	10% Acc.	10% Acc.	3% Acc.	10% Acc.	10% Acc.
10	133	152	54	237	271	96	371	423	151	607	694	247	946	1081	385	1550	1771	630
15	157	179	64	281	319	114	440	500	178	721	819	292	1123	1276	454	1840	2091	744
20	182	206	73	325	368	131	509	576	205	835	944	336	1300	1471	524	2131	2410	858
25	207	234	83	370	417	148	579	653	232	948	1070	381	1478	1666	593	2421	2730	972
30	232	261	93	414	466	166	648	729	259	1062	1195	425	1655	1861	663	2711	3050	1086
35	257	291	104	458	520	185	717	813	289	1176	1333	474	1832	2076	739	3001	3401	1211
40	282	321	114	503	573	204	787	897	319	1290	1470	523	2009	2291	815	3292	3753	1336
45	307	351	125	547	627	223	856	981	349	1403	1608	572	2186	2505	892	3582	4105	1461
50	331	381	136	592	681	242	926	1065	379	1517	1746	621	2363	2720	968	3872	4456	1586
55	356	411	146	636	734	261	995	1149	409	1631	1884	671	2540	2934	1045	4163	4808	1711
60	381	442	157	680	788	281	1064	1233	439	1745	2022	720	2718	3149	1121	4453	5160	1837
65	406	472	168	725	842	300	1134	1317	469	1858	2159	769	2895	3364	1197	4743	5511	1962
70	431	502	179	770	896	319	1205	1401	499	1974	2297	818	3076	3578	1274	5039	5863	2087
75	457	532	189	815	949	338	1276	1486	529	2091	2435	867	3258	3793	1350	5338	6215	2212
80	482	562	200	861	1003	357	1347	1570	559	2209	2573	916	3440	4008	1426	5637	6566	2337
85	508	592	211	907	1057	376	1419	1654	589	2326	2710	965	3623	4222	1503	5936	6918	2462
90	534	622	221	952	1110	395	1490	1738	619	2443	2848	1014	3805	4437	1579	6235	7270	2588
95	559	652	232	998	1164	414	1562	1822	648	2560	2986	1063	3988	4651	1656	6534	7621	2713
100	585	682	243	1044	1218	434	1633	1906	678	2677	3124	1112	4170	4866	1732	6833	7973	2838
105	610	712	254	1089	1272	453	1705	1990	708	2794	3262	1161	4353	5081	1808	7132	8325	2963
110	636	742	264	1135	1325	472	1776	2074	738	2911	3399	1210	4535	5295	1885	7431	8676	3088
115	661	773	275	1181	1379	491	1848	2158	768	3029	3537	1259	4718	5510	1961	7730	9028	3213
120	687	803	286	1226	1433	510	1919	2242	798	3146	3675	1308	4900	5725	2038	8029	9380	3339
125	713	833	296	1272	1487	529	1991	2326	828	3263	3813	1357	5083	5939	2114	8328	9731	3464
130	738	863	307	1318	1540	548	2062	2410	858	3380	3950	1406	5265	6154	2190	8627	10080	3589
135	764	893	318	1364	1594	567	2134	2494	888	3497	4088	1455	5448	6368	2267	8926	10430	3714
140	789	923	329	1409	1648	586	2205	2578	918	3614	4226	1504	5630	6583	2343	9225	10780	3839
145	815	953	339	1455	1701	606	2277	2662	948	3731	4364	1553	5813	6798	2420	9524	11130	3964
150	841	983	350	1501	1755	625	2348	2746	978	3849	4502	1602	5995	7012	2496	9823	11480	4090
160	892	1043	371	1592	1863	663	2491	2915	1037	4083	4777	1700	6360	7442	2649	10420	12190	4340
170	943	1104	393	1683	1970	701	2634	3083	1097	4317	5053	1798	6725	7871	2802	11010	12890	4590
180	994	1164	414	1775	2077	739	2777	3251	1157	4551	5328	1897	7090	8300	2954	11610	13590	4841
190	1045	1224	436	1866	2185	778	2920	3419	1217	4786	5604	1995	7455	8729	3107	12210	14300	5091
200	1096	1284	457	1957	2292	816	3063	3587	1277	5020	5879	2093	7820	9159	3260	12810	15000	5341
210	1148	1344	478	2049	2400	854	3206	3755	1337	5254	6155	2191	8185	9588	3413	13410	15700	5592
220	1199	1404	500	2140	2507	892	3349	3923	1396	5489	6430	2289	8550	10010	3565	14000	16410	5842
230	1250	1465	521	2231	2615	931	3492	4091	1456	5723	6706	2387	8915	10440	3718	14600	17110	6092
240	1301	1525	543	2323	2722	969	3634	4259	1516	5957	6981	2485	9280	10870	3871	15200	17810	6343
250	1352	1585	564	2414	2829	1007	3777	4428	1576	6191	7257	2583	9645	11300	4024	15800	18520	6593
260	1403	1645	586	2505	2937	1045	3920	4596	1636	6426	7533	2681	10000	11730	4177	16400	19220	6843
270	1455	1705	607	2597	3044	1084	4063	4764	1696	6660	7808	2779	10370	12160	4329	16990	19920	7094
280	1506	1766	628	2688	3152	1122	4206	4932	1755	6894	8084	2877	10730	12590	4482	17590	20630	7344
290	1557	1826	650	2779	3259	1160	4349	5100	1815	7128	8359	2975	11100	13020	4635	18190	21330	7594
300	1608	1886	671	2871	3367	1198	4492	5268	1875	7363	8635	3073	11460	13450	4788	18790	22030	7845

Approx. 1 PSIG Increments

5	6	2	9	11	4	14	17	6	24	28	10	37	43	15	60	70	25
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Approx. 5 PSIG Increments

25	30	11	46	54	19	72	84	30	118	138	49	183	215	77	299	350	125
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Approx. 10 PSIG Increments

51	60	21	92	107	38	143	168	60	235	275	98	365	430	153	598	700	250
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Valves set under 15 PSIG are not stamped with A.S.M.E. Code Symbol stamp.

DIMENSIONS • WEIGHTS (approximate) • TYPES 40 AND 41

Type	Inlet Male NPT	Orifice	Outlet Female NPT	A	B	C	Weight	Type	Inlet Male NPT	Orifice	Outlet Female NPT	A	B	C	Weight
40	½	D	¾	6½	1½	2½	1½	40	1¼	G	1½	9%	2½	3½	5½
40	¾	D	¾	6½	1½	2½	1½	40	1½	G	1½	10	2½	3½	5½
41	½	D	—	6½	—	—	1½	41	1¼	G	—	9%	—	—	5
40	¾	E	1	7½	1½	2½	2½	40	1½	H	2	10%	2½	3½	7½
40	1	E	1	7½	1½	2½	2½	40	2	H	2	11%	2½	4½	8
41	¾	E	—	7½	—	—	2½	41	1½	H	—	10%	—	—	7½
40	1	F	1¼	8½	2	2½	3½	40	2	J	2½	13%	3½	4½	15½
40	1¼	F	1¼	8½	2	2½	3½	40	2½	J	2½	14	3½	4½	15½
41	1	F	—	8½	—	—	3½	41	2	J	—	13%	—	—	15

Model 40-S available only ½" x ¾", ¾" x 1", 1" x 1¼", 1¼ x 1½", 1½" x 2", and 2" x 2½".