

# SERIES 69 RELIEF VALVES

## Series 69

The Aquatrol Series 69 is an industry standard relief valve used for liquid relief and by-pass. Engineered and designed for heavy duty, industrial and commercial usages. A single piece bonnet to eliminate leakage while allowing for simple cleaning. Easy removable sealed hex-cap to adjust pressure.

Valves are calibrated (set to pressure) based on a range of flow-rates (GPM) versus seat size and set pressure. Standard valve is set to pressure to achieve flow rate maximum and minimums within each set pressure range. See capacity chart for details.

Temperatures -60°F (-51°C) to 406°F (208°C), low reduced to -320°F (-196°C) with PTFE option, high increased to 425°F (218°C) with stainless option.

**Usages:** Include liquid by-pass, regulation, continuous relief and over-protection. Used on pumping stations, tanks, hydraulics, fluid / piping lines, oil fields, gas lines and more where a Liquid or Water Relief Valve is needed.

**Features:**

- Field adjustable by simple removal of the hex-cap
- Metal to metal precision lapped seating
- Back pressure tested
- Ease of cleaning and maintenance with simple bonnet removal.
- Stainless steel springs
- Single piece - 100% leak free bonnet
- Cryogenic compatible

**Options:**

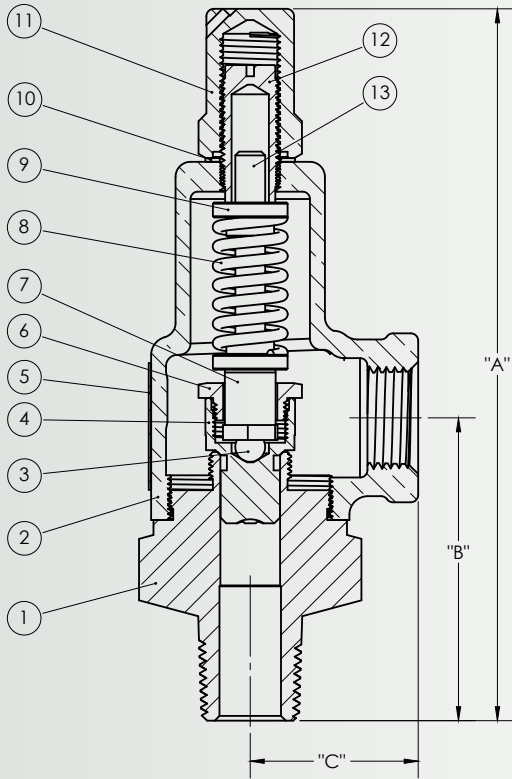
- BSPT and BSPP connections
- Female inlet
- Viton embedded o-ring at hex cap
- Packed lift lever
- Wide range (WR) adjustable (150 psig increments)
- Stainless steel body and disc
- Low Lead Configurations (for a potable Water Relief Valve)
- PTFE Seating
- Tamper proof wire seal
- O2 Cleaning
- Adjustable wheel handle

## Wide Range:

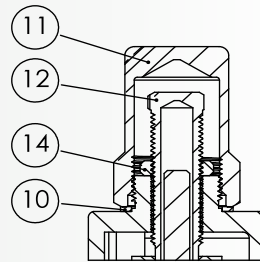
Series 69 is available with a wider adjustable range (as an option). Valves are set to the mid-level pressure (or as specified). Typical wide-range is 150 psig increments. Note: Flow rates are not showing.



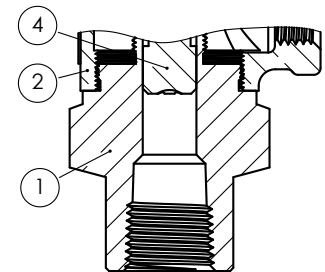
# DIMENSIONS AND MATERIALS



SERIES 69			
ITEM	DESCRIPTION	BRASS OPTION	STAINLESS OPTION
1	Body	B16/B283	SA479-316 SS
2	Bonnet	B584-C84400	B584-C84400
3	Ball	Stainless	Stainless
4	Disc	B62-C83600	SA479-316 SS
5	Nameplate	Stainless	Stainless
6	Disc Nut	B16 Brass	B16 Brass
7	Spring Support	B16 Brass	B16 Brass
8	Spring	302/17-7 SS	302/17-7 SS
9	Spring Plate	B16 Brass	B16 Brass
10	Hood Seal	PTFE	PTFE
11	Hood	B16 Brass	B16 Brass
12	Pressure Screw	B16 Brass	B16 Brass
13	Spring Post	B16 Brass	B16 Brass
14	Lock-nut	B16 Brass	B16 Brass

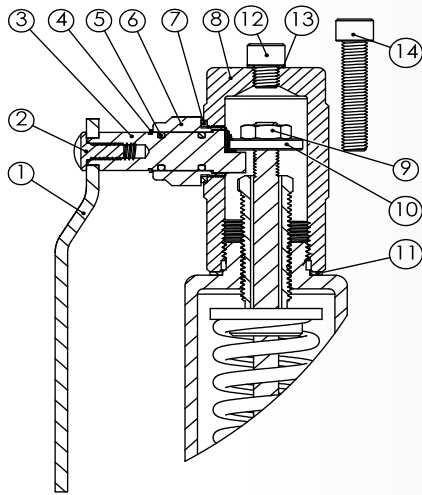


Hood Configuration for 1" and up

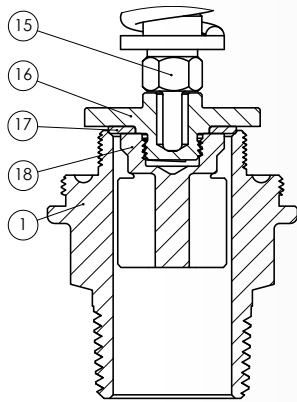


Female Connections "A" Dimensions same as Male

SERIES 69								
SERIES	SIZE ID	INLET	OUTLET	DN	DIMENSIONS - in (mm)			WEIGHT Lbs. (Kg)
					A	B	C	
69	A1	1/2"	1/2"	15	6" (152)	2-1/2" (64)	1-3/8" (35)	1.7 (0.8)
69	A2	1/2"	3/4"	15	6" (152)	2-1/2" (64)	1-3/8" (35)	1.7 (0.8)
69	B1	3/4"	3/4"	20	6-1/4" (159)	2-5/8" (67)	1-1/2" (38)	2.2 (1)
69	B2	3/4"	1"	20	6-1/4" (159)	2-5/8" (67)	1-1/2" (38)	2.2 (1)
69	C1	1"	1"	25	7-3/8" (187)	2-7/8" (73)	1-3/4" (44)	3 (1.4)
69	C2	1"	1-1/4"	25	7-3/8" (187)	2-7/8" (73)	1-3/4" (44)	3 (1.4)
69	D1	1-1/4"	1-1/4"	32	8-1/4" (210)	3-3/8" (86)	2" (51)	4 (1.8)
69	D2	1-1/4"	1-1/2"	32	8-1/4" (210)	3-3/8" (86)	2" (51)	4 (1.8)
69	E1	1-1/2"	1-1/2"	40	9-1/2" (241)	3-1/2" (89)	2-1/8" (54)	5.8 (2.6)
69	E2	1-1/2"	2"	40	9-1/2" (241)	3-1/2" (89)	2-1/8" (54)	5.8 (2.6)
69	F1	2"	2"	50	11" (279)	3-7/8" (98)	2-5/8" (67)	9.7 (4.4)
69	F2	2"	2-1/2"	50	11" (279)	3-7/8" (98)	2-5/8" (67)	9.7 (4.4)
69	G1	2-1/2"	2-1/2"	65	13" (330)	5-1/4" (133)	3-5/8" (92)	19 (8.6)
69	G2	2-1/2"	3"	65	13" (330)	5-1/4" (133)	3-5/8" (92)	19 (8.6)
69	H1	3"	3"	80	13-1/4" (337)	5-5/8" (143)	3-5/8" (92)	19 (8.6)



PACKED LIFT LEVER OPTION		
ITEM	DESCRIPTION	MATERIAL
1	Handle	B16 Brass
2	Handle Screw	Steel/Plated
3	Cam	B16 Brass
4	Retaining Ring	Steel/Plated
5	O-Rings	Viton
6	Cam Nut	B16 Brass
7	O-Ring	PTFE
8	Hood	B16 Brass
9	Jam Nut	18-8 SS
10	Lifter Nut	B16 Brass
11	Hood Seal	PTFE
12	Plug	Gag Screw Option 18-8 / PTFE
13	Seal	
14	Gag Screw	



PTFE SOFT SEAT OPTION			
ITEM	DESCRIPTION	BRASS	STAINLESS
1	Body	B16/B283	SA479-316 SS
15	Support	B16 Brass	B16 Brass
16	Disc	B16 Brass	SA479-316 SS
17	Insert	PTFE	PTFE
18	Disc Wings	B16 Brass	SA479-316 SS

SERIES	INLET SIZES	METALS	MIN. TEMP °F (°C)	MAX. TEMP <sup>3,4</sup> °F (°C)	MAX PRESSURE <sup>1,2</sup> psig (barg)	SERVICES	CERTIFICATIONS
Series 69	1/2" to 3"	Brass/Bronze	-60° (-51°)	406° (208°)	600 (41.4)	Liquid	Non-Code
	1/2" to 3"	Stainless/Bronze	-320° (-196°)	425° (218°)	600 (41.4)	Liquid	Non-Code
	1/2" to 3"	No Lead	-60° (-51°)	406° (208°)	600 (41.4)	Liquid	Non-Code
	1/2" to 3"	Stainless/No Lead	-320° (-196°)	425° (218°)	600 (41.4)	Liquid	Non-Code

<sup>1</sup> PTFE disc lowers minimum temperature to -320°F

SERIES 69 PART NUMBERS									
69	C	1	A	1	M	3	U	1	125
SERIES	INLET	OUTLET	METALS	CONNECTION	SEATING	CAP	SERVICE	OPTIONS	SET
69	A- 1/2" B- 3/4" C- 1" D- 1-1/4" E- 1-1/2" F- 2" G- 2-1/2" H- 3"	1- Same Size as Inlet 2- Next Larger than Inlet	A- Brass/Bronze B- 316 SS Nozzle-Disc w/Bronze L- No Lead Nozzle-Disc-Bonnet M- 316 Nozzle-Disc/No Lead Bonnet	1- NPT MxF 2- NPT FxF 3- BSPT MxF 4- BSPT FxF 8- BSPP MxF 9- BSPP FxF	M- Metal P- PTFE	2- Closed cap 3- Packed lift lever 5- Closed Cap with Test Gag 6- Packed Lever with Test Gag 8- Closed Cap With O-Ring W- Wheel Handle	U- Non-Code Liquid	1- None 2- Chrome Plating 3- O2 Cleaned T- Tamper Proof Seal	Ex.125

# LIQUID CAPACITY

## SERIES 69 LIQUID CAPACITY GPM AT 25% OVER SET PRESSURE

FLOW FACTOR	1.586	3.088	4.820	6.821	8.769	13.019	17.540	22.135
psig	A 1/2"	B 3/4"	C 1"	D 1-1/4"	E 1-1/2"	F 2"	G 2-1/2"	H 3"
5	4.0	7.7	12	17	22	33	44	55
10	5.6	10.9	17	24	31	46	62	78
20	7.9	15	24	34	44	65	88	111
30	9.7	19	30	42	54	80	107	136
40	11	22	34	48	62	92	124	157
50	13	24	38	54	69	103	139	175
60	14	27	42	59	76	113	152	192
70	15	29	45	64	82	122	164	207
80	16	31	48	68	88	130	175	221
90	17	33	51	72	93	138	186	235
100	18	35	54	76	98	146	196	247
120	19	38	59	84	107	159	215	271
140	21	41	64	90	116	172	232	293
160	22	44	68	96	124	184	248	313
180	24	46	72	102	132	195	263	332
200	25	49	76	108	139	206	277	350
225	27	52	81	114	147	218	294	371
250	28	55	85	121	155	230	310	391
275	29	57	89	126	163	241	325	410
300	31	60	93	132	170	252	340	429
325	32	62	97	137	177	262		
350	33	65	101	143	183	272		
375	34	67	104	148	190	282		
400	35	69	108	153	196	291		
450	38	73	114					
500	40	77	121					
550	42	81	126					
600	43	85	132					

## SERIES 69 LIQUID CAPACITY LPM AT 25% OVER SET PRESSURE

FLOW FACTOR	1.586	3.088	4.820	6.821	8.769	13.019	17.540	22.135
barg	A 1/2"	B 3/4"	C 1"	D 1-1/4"	E 1-1/2"	F 2"	G 2-1/2"	H 3"
0.2	11	22	35	49	63	94	126	160
0.5	18	35	55	78	100	148	200	252
1	26	50	78	110	141	210	283	357
2	36	70	110	155	200	297	400	504
3	44	86	135	190	245	363	490	618
4	51	100	155	220	283	420	565	713
5	57	111	174	246	316	469	632	798
6	63	122	190	269	346	514	692	874
7	68	132	206	291	374	555	748	944
8	72	141	220	311	400	593	799	1009
9	77	149	233	330	424	629	848	1070
10	81	157	246	348	447	663	894	1128
12	89	172	269	381	489	727	979	1236
14	96	186	291	411	529	785	1058	1335
16	102	199	311	440	565	839	1131	1427
18	108	211	330	466	600	890	1199	1513
20	114	223	347	492	632	938	1264	1595
22	120	233	364	516	663	984		
24	125	244	381	538	692	1028		
27.5	134	261	407	576	741	1100		
28	135	263	411					
30	140	273	425					
32	145	281	439					
34	149	290	453					
36	153	299	466					
38	158	307	479					
40	162	315	491					
41.3	164	320	499					

Set pressures not limited to this chart.  
Specify when ordering.

