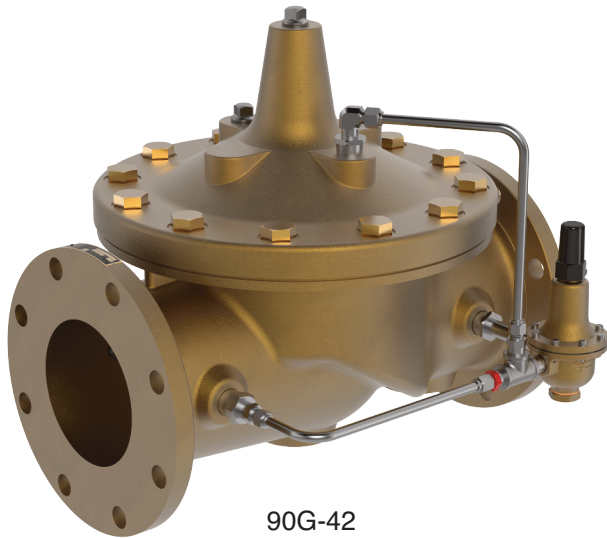




— MODEL — **90-42**

# Seawater Service Pressure Reducing Valve



90G-42  
Globe Pattern

- **Globe or Angle Pattern**
- **Proven Reliable Design**
- **Available in Cast Bronze, Iron and Steel**
- **Accurate Pressure Control**
- **In Line Service**

Cla-Val 90G-42 (globe) and 90A-42 (angle) Pressure Reducing Valves are indispensable in any fire protection system. Our diaphragm actuated design is proven highly reliable and easy to maintain. We offer both a globe or angle pattern with a full range of adjustments. These valves are available in cast bronze, iron or steel and all special alloys. Ductile iron and cast steel valves are supplied with internal and external epoxy coating of the main valve wetted surfaces.



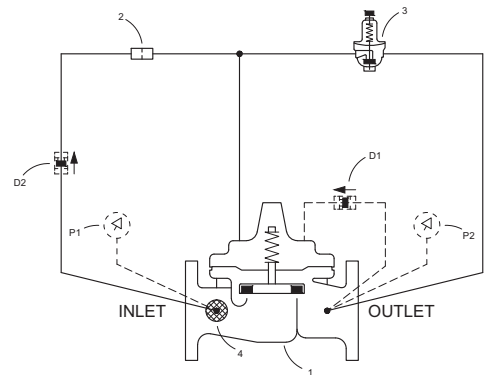
If **UL Listed** is required for **Model 90-42 Seawater Service** use **Model 90-21KX** when ordering. **UL Listed sizes limited to 1 1/2" - 8" sizes.**

## Function

Cla-Val Model 90G-42 (globe) and 90A-42 (angle) Seawater Service Pressure Reducing Valves automatically reduce a higher inlet pressure to a steady lower outlet pressure regardless of changing flow rate and/or varying inlet pressure. The valves pilot control system is very sensitive to slight downstream pressure fluctuations, and will automatically open or close to maintain the desired pressure setting. The downstream pressure can be set over a wide range by turning the adjustment screw on the CRD pilot control. The adjustment screw is protected by a screw-on cover, which can be sealed to discourage tampering.

## Schematic Diagram

Item	Description
1	Model 100S/2100S Hytrol (Globe or Angle)
2	X58C Restriction Tube Fitting
3	CRD Pressure Reducing Control
4	X46A Flow Clean Strainer



**Sizes:** Threaded Ends: 1" - 3"  
Globe Flanged: 2" - 36"  
Angle Flanged: 2" - 16"

**End Details:** Cast Steel ANSI B16.5  
Bronze ANSI B16.24  
Stainless Steel ANSI B16.5  
Ductile Iron ANSI B16.42

**Pressure Ratings:** 150 Class 250 psi Max.  
300 Class 400 psi Max.

### Temperature

**Range:** Water 180°F Max.

**Materials:** **Main valve body & cover**  
Ductile Iron ASTM A-536\*  
Cast Steel ASTM A216-WCB\*  
Naval Bronze ASTM B61  
Stainless Steel ASTM A743-CF-8M  
Ni. AL. Bronze ASTM B148  
Super Duplex SST  
Monel QQ-N-281 Class B  
**Main valve trim:**  
ASTM B61 Bronze Seat,  
Monel Trim

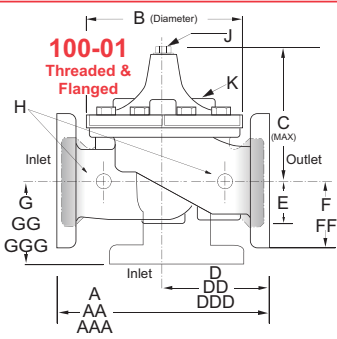
### Pilot control system:

Cast Bronze with Monel Trim  
Monel, Super Duplex Stainless Steel optional  
Stainless Steel 316 Tubing & Fittings

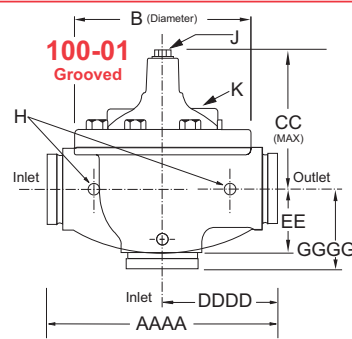
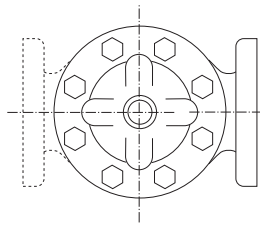
**Adjustment Ranges:** 15 - 75 psi  
30 - 300 psi

Main valve and pilot valve diaphragm and disc:  
Buna-N® synthetic rubber

\*The 90G-42 (globe) and 90A-42 (angle) in cast steel are supplied with standard internal and external epoxy coating



### Model 90-42 Dimensions



### When Ordering Please Specify

1. Model No. 90-42
2. Size
3. Globe or Angle
4. Main Valve Body and Cover Material
5. Threaded, Flanged or Grooved
6. Pressure Class
7. Adjustment Range

Valve Size (Inches)	1	1 1/4	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	30	36
A Threaded	7.25	7.25	7.25	9.38	11.00	12.50	—	—	—	—	—	—	—	—	—	—	—	—
AA 150 ANSI	—	—	8.50	9.38	11.00	12.00	15.00	20.00	25.38	29.75	34.00	39.00	41.38	46.00	52.00	61.50	63.00	76.00
AAA 300 ANSI	—	—	9.00	10.00	11.62	13.25	15.62	21.00	26.38	31.12	35.50	40.50	43.50	47.64	53.62	63.24	64.50	76.00
AAAA Grooved End	—	—	8.50	9.00	11.00	12.50	15.00	20.00	25.38	—	—	—	—	—	—	—	—	—
B Dia.	5.62	5.62	5.62	6.62	8.00	9.12	11.50	15.75	20.00	23.62	28.00	32.75	35.50	41.50	45.00	53.16	56.00	66.00
C Max.	5.50	5.50	5.50	6.50	7.56	8.19	10.62	13.38	16.00	17.12	20.88	24.19	25.00	39.06	41.90	43.93	54.60	61.50
CC Max. Grooved End	—	—	4.75	5.75	6.88	7.25	9.31	12.12	14.62	—	—	—	—	—	—	—	—	—
D Threaded	3.25	3.25	3.25	4.75	5.50	6.25	—	—	—	—	—	—	—	—	—	—	—	—
DD 150 ANSI	—	—	4.00	4.75	5.50	6.00	7.50	10.00	12.69	14.88	17.00	19.50	20.81	—	—	30.75	—	—
DDD 300 ANSI	—	—	4.25	5.00	5.88	6.38	7.88	10.50	13.25	15.56	17.75	20.25	21.62	—	—	31.62	—	—
DDDD Grooved End	—	—	—	4.75	—	6.00	7.50	—	—	—	—	—	—	—	—	—	—	—
E	1.12	1.12	1.12	1.50	1.69	2.06	3.19	4.31	5.31	9.25	10.75	12.62	15.50	12.95	15.00	17.75	21.31	24.56
EE Grooved End	—	—	2.00	2.50	2.88	3.12	4.25	6.00	7.56	—	—	—	—	—	—	—	—	—
F 150 ANSI	—	—	2.50	3.00	3.50	3.75	4.50	5.50	6.75	8.00	9.50	10.50	11.75	15.00	16.50	19.25	22.50	25.60
FF 300 ANSI	—	—	3.06	3.25	3.75	4.13	5.00	6.25	7.50	8.75	10.25	11.50	12.75	15.00	16.50	19.25	24.00	25.60
G Threaded	1.88	1.88	1.88	3.25	4.00	4.50	—	—	—	—	—	—	—	—	—	—	—	—
GG 150 ANSI	—	—	4.00	3.25	4.00	4.00	5.00	6.00	8.00	8.62	13.75	14.88	15.69	—	—	22.06	—	—
GGG 300 ANSI	—	—	4.25	3.50	4.31	4.38	5.31	6.50	8.50	9.31	14.50	15.62	16.50	—	—	22.90	—	—
GGGG Grooved End	—	—	—	3.25	—	4.25	5.00	—	—	—	—	—	—	—	—	—	—	—
H NPT Body Tapping	.375	.375	.375	.375	.50	.50	.75	.75	1	1	1	1	1	1	1	1	2	2
J NPT Cover Center Plug	.25	.25	.25	.50	.50	.50	.75	.75	1	1	1.25	1.5	2	1.5	1.5	1.5	2	2
K NPT Cover Tapping	.375	.375	.375	.375	.50	.50	.75	.75	1	1	1	1	1	1	1	1	2	2
Stem Travel	0.4	0.4	0.4	0.6	0.7	0.8	1.1	1.7	2.3	2.8	3.4	4.0	4.5	5.1	5.63	6.75	7.5	8.5
Approx. Ship Wt. Lbs.	15	15	15	35	50	70	140	285	500	780	1165	1600	2265	2982	3900	6200	7703	11720
Valve Size (mm)	25	32	40	50	65	80	100	150	200	250	300	350	400	450	500	600	750	900
A Threaded	184	184	184	238	279	318	—	—	—	—	—	—	—	—	—	—	—	—
AA 150 ANSI	—	—	216	238	279	305	381	508	645	756	864	991	1051	1168	1321	1562	1600	1930
AAA 300 ANSI	—	—	229	254	295	337	397	533	670	790	902	1029	1105	1210	1362	1606	1638	1930
AAAA Grooved End	—	—	216	228	279	318	381	508	645	—	—	—	—	—	—	—	—	—
B Dia.	143	143	143	168	203	232	292	400	508	600	711	832	902	1054	1143	1350	1422	1676
C Max.	140	140	140	165	192	208	270	340	406	435	530	614	635	992	1064	1116	1387	1562
CC Max. Grooved End	—	—	120	120	146	175	184	236	308	371	—	—	—	—	—	—	—	—
D Threaded	83	83	83	121	140	159	—	—	—	—	—	—	—	—	—	—	—	—
DD 150 ANSI	—	—	102	121	140	152	191	254	322	378	432	495	528	—	—	781	—	—
DDD 300 ANSI	—	—	108	127	149	162	200	267	337	395	451	514	549	—	—	803	—	—
DDDD Grooved End	—	—	—	121	—	152	191	—	—	—	—	—	—	—	—	—	—	—
E	29	29	29	38	43	52	81	110	135	235	273	321	394	329	381	451	541	624
EE Grooved End	—	—	52	64	73	79	108	152	192	—	—	—	—	—	—	—	—	—
F 150 ANSI	—	—	64	76	89	95	114	140	171	203	241	267	298	381	419	489	572	650
FF 300 ANSI	—	—	78	83	95	105	127	159	191	222	260	292	324	381	419	489	610	650
G Threaded	48	48	48	83	102	114	—	—	—	—	—	—	—	—	—	—	—	—
GG 150 ANSI	—	—	102	83	102	102	127	152	203	219	349	378	399	—	—	560	—	—
GGG 300 ANSI	—	—	102	89	110	111	135	165	216	236	368	397	419	—	—	582	—	—
GGGG Grooved End	—	—	—	83	—	108	127	—	—	—	—	—	—	—	—	—	—	—
H NPT Body Tapping	.375	.375	.375	.375	.50	.50	.75	.75	1	1	1	1	1	1	1	1	2	2
J NPT Cover Center Plug	.25	.25	.25	.50	.50	.50	.75	.75	1	1	1.25	1.5	2	1.5	1.5	1.5	2	2
K NPT Cover Tapping	.375	.375	.375	.375	.50	.50	.75	.75	1	1	1	1	1	1	1	1	2	2
Stem Travel	10	10	10	15	18	20	28	43	58	71	86	102	114	130	143	171	190	216
Approx. Ship Wt. Kgs.	7	7	7	16	23	32	64	129	227	354	528	726	1027	1353	1769	2812	3494	5316

Cla-Val Control Valves operate with maximum efficiency when mounted in horizontal piping with the main valve cover UP, however, other positions are acceptable. Due to component size and weight of 8 inch and larger valves, installation with cover UP is advisable. We recommend isolation valves be installed on inlet and outlet for maintenance. Adequate space above and around the valve for service personnel should be considered essential. A regular maintenance program should be established based on the specific application data. However, we recommend a thorough inspection be done at least once a year. Consult factory for specific recommendations.

### Selection Guidelines - Flow Capacity Table

Size	1	1 1/4	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	30	36
Max. Flow Rate (GPM of Water)	100	125	160	262	373	576	992	2251	3900	6150	8720	10540	13700	17500	21700	31300	48000	62500

\*For UL Listed, see Cla-Val Model 90-21 for sizes and pressure class information.