

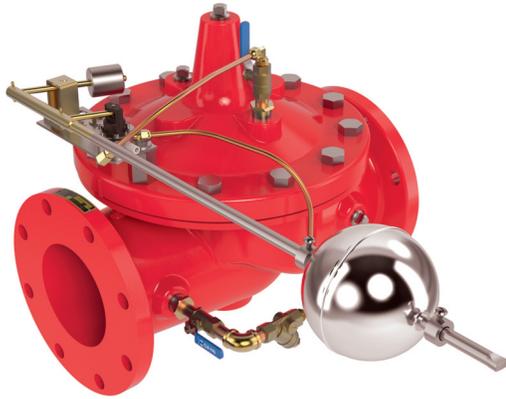


(Sizes 1/2"-6") **124-01**

MODELS (Full Internal Port)
(Reduced Internal Port)

(Sizes 3"-8") **624-01**

Float Valve



- Accurate and Repeatable Level Control
- On-Off or Non-Modulating Action
- Fully Adjustable High and Low Level Settings
- Simple Design, Proven Reliable
- Easy Installation and Maintenance

The Cla-Val Model 124-01/624-01 Float Valve is a non-modulating valve that accurately controls the liquid level in tanks. This valve is designed to open fully when the liquid level reaches a pre-set low point and close drip-tight when the level reaches a preset high point.

This is a hydraulically operated, diaphragm valve with the pilot control and float mechanism mounted on the cover of the main valve. The float positions the pilot control to close the valve when the float contacts the upper stop. The high and low liquid levels are adjusted by positioning the stop collars on the float rod. The difference between high and low levels can be adjusted to as little as one inch, or to as much as eighteen inches.

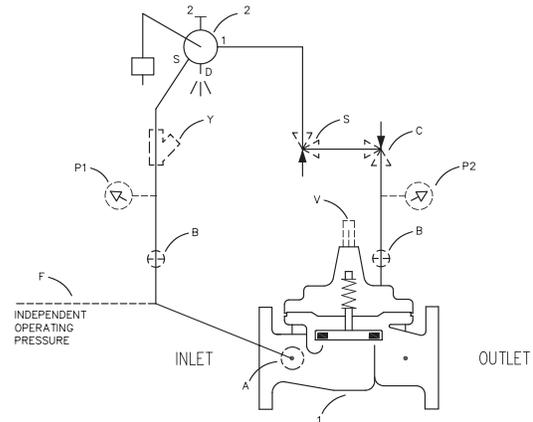
Level settings can be as much as eleven and one half feet below the valve. The float mechanism may be located remotely from the main valve. See the technical data sheet on Model CF1-C1 Float Control for additional information.

Schematic Diagram

Item	Description
1	Hytrol (Main Valve)
2	CF1-C1 Float Control

Optional Features

Item	Description
A	X46A Flow Clean Strainer
B	CK2 (Isolation Valve)
C	CV Flow Control (Closing)
F	Independent Operating Pressure
P	X141 Pressure Gauge
S	CV Speed Control (Opening)
V	X101 Valve Position Indicator
Y	X43 "Y" Strainer



Typical Applications

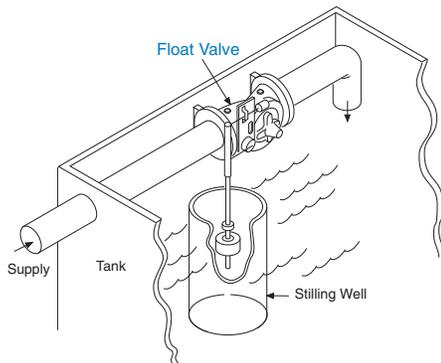
The Model 124-01/624-01 Float Valve is commonly mounted above the high water level in a tank. Globe pattern valves are supplied standard with the float control mounted on the cover as illustrated, with a horizontal discharge. Angle valves are configured to discharge downward.

Note: 1. We recommend protecting tubing and valve from freezing temperatures.
2. Must be inspected periodically.

A clear independent source of air or water may be used to operate the valve (option F). The pressure from this independent source must at all times be equal to or greater than pressure at the valve inlet.

If minimum flowing line pressure is less than 10 psi, consult factory.

If the float control is remotely mounted from the main valve, the control may be installed at any elevation above the valve, provided the flowing line pressure in psi is greater than the vertical distance in feet between the valve and the float control. See the technical data sheet on Model CF1-C1 for additional information.



Installation

A stilling well (8" minimum diameter) must be provided around the float. When the valve is mounted on top of the tank roof, a 2" clearance hole should be provided for side movement of the float rod where the rod goes through the top of the tank.

Model 124-01 (Uses 100-01 Hytrol Main Valve)

Dimensions (In inches)

Pressure Ratings (Recommended Maximum Pressure - psi)

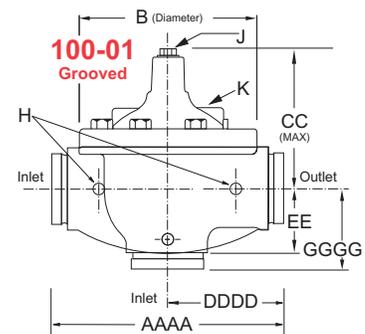
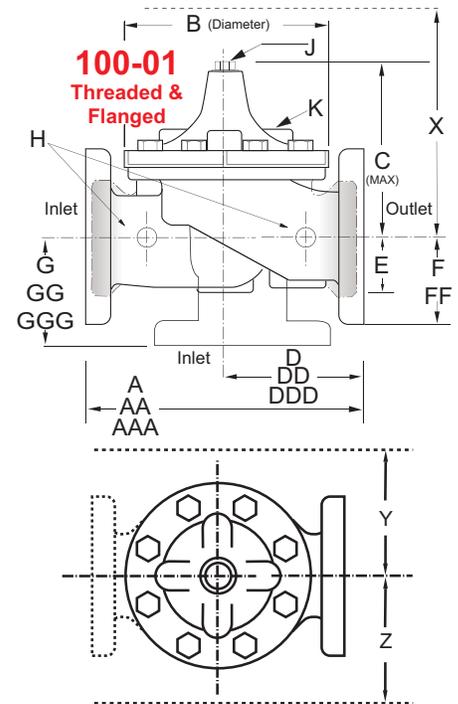
Valve Body & Cover		Pressure Class			
		Flanged		Threaded	
Grade	Material	ANSI Standards*	150 Class	300 Class	End‡ Details
ASTM A536	Ductile Iron	B16.42	250	400	400
ASTM A216-WCB	Cast Steel	B16.5	285	400	400
UNS 87850	Bronze	B16.24	225	400	400

Note: * ANSI standards are for flange dimensions only.
 Flanged valves are available faced but not drilled.
 ‡ End Details machined to ANSI B2.1 specifications.
Valves for higher pressure are available; consult factory for details

Materials

Component	Standard Material Combinations		
Body & Cover	Ductile Iron	Cast Steel	Bronze
Available Sizes	½" - 6"	½" - 6"	½" - 6"
Disc Retainer & Diaphragm Washer	Cast Iron	Cast Steel	Bronze
Trim: Disc Guide, Seat & Cover Bearing	Bronze is Standard Stainless Steel is Optional		
Disc	Buna-N® Rubber		
Diaphragm	Nylon Reinforced Buna-N® Rubber		
Stem, Nut & Spring	Stainless Steel		

For material options not listed, consult factory.
 Cla-Val manufactures valves in more than 50 different alloys.



Model 124-01 Dimensions (inches)

Valve Size (Inches)	½	¾	1	1 ¼	1 ½	2	2 ½	3	4	6
A Threaded	3.50	3.50	5.12	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
AAA 300 ANSI	—	—	—	—	9.00	10.00	11.62	13.25	15.62	21.00
AAAA Grooved End	—	—	—	—	8.50	9.00	11.00	12.50	15.00	20.00
B Dia.	3.12	3.12	5.62	5.62	5.62	6.62	8.00	9.12	11.50	15.75
C Max.	3.00	3.00	5.50	5.50	5.50	6.50	7.56	8.19	10.62	13.38
CC Max. Grooved End	—	—	—	—	4.75	5.75	6.88	7.25	9.31	12.12
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
DDD 300 ANSI	—	—	—	—	4.25	5.00	5.88	6.38	7.88	10.50
DDDD Grooved End	—	—	—	—	4.25	4.75	5.88	6.00	7.50	10.00
E	0.88	0.88	1.12	1.12	1.12	1.50	1.69	2.06	3.19	4.31
EE Grooved End	—	—	—	—	2.00	2.50	2.88	3.12	4.25	5.50
F 150 ANSI	—	—	—	—	2.50	3.00	3.50	3.75	4.50	5.50
FF 300 ANSI	—	—	—	—	3.06	3.25	3.75	4.13	5.00	6.25
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
GGG 300 ANSI	—	—	—	—	4.25	3.50	4.31	4.38	5.31	6.50
GGGG Grooved End	—	—	—	—	3.00	3.25	4.31	4.25	5.00	6.00
H NPT Body Tapping	.125	.125	.375	.375	.375	.375	.50	.50	.75	.75
J NPT Cover Center Plug	.125	.125	.25	.25	.25	.50	.50	.50	.75	.75
K NPT Cover Tapping	.125	.125	.375	.375	.375	.375	.50	.50	.75	.75
Stem Travel	—	—	0.4	0.4	0.4	0.6	0.7	0.8	1.1	1.7
Approx. Ship Wt. Lbs.	3	3	15	15	15	35	50	70	140	285

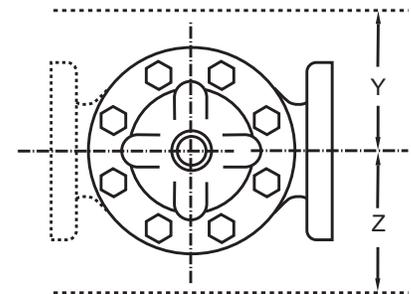
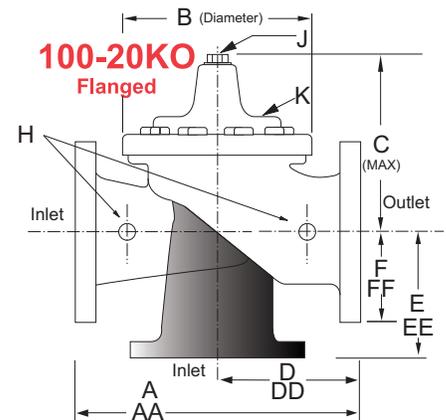
Model 624-01 (Uses 100-20 Hytrol Main Valve)

Dimensions
(In inches)

Pressure Ratings (Recommended Maximum Pressure - psi)

Valve Body & Cover		Pressure Class		
		Flanged		
Grade	Material	ANSI Standards*	150 Class	300 Class
ASTM A536	Ductile Iron	B16.42	250	400
ASTM A216-WCB	Cast Steel	B16.5	285	400
UNS 87850	Bronze	B16.24	225	400

Note: * ANSI standards are for flange dimensions only.
Flanged valves are available faced but not drilled.
Valves for higher pressure are available; consult factory for details



Materials

Component	Standard Material Combinations		
	Ductile Iron	Cast Steel	Bronze
Body & Cover	Ductile Iron	Cast Steel	Bronze
Available Sizes	3" - 8"	3" - 8"	3" - 8"
Disc Retainer & Diaphragm Washer	Cast Iron	Cast Steel	Bronze
Trim: Disc Guide, Seat & Cover Bearing	Bronze is Standard Stainless Steel is Optional		
Disc	Buna-N® Rubber		
Diaphragm	Nylon Reinforced Buna-N® Rubber		
Stem, Nut & Spring	Stainless Steel		

For material options not listed, consult factory.
Cla-Val manufactures valves in more than 50 different alloys.

Model 624-01 Dimensions (inches)

Valve Size (Inches)	3	4	6	8
A 150 ANSI	10.25	13.88	17.75	21.38
AA 300 ANSI	11.00	14.50	18.62	22.38
B Dia.	6.62	9.12	11.50	15.75
C Max.	7.00	8.62	11.62	15.00
D 150 ANSI	—	6.94	8.88	10.69
DD 300 ANSI	—	7.25	9.38	11.19
E 150 ANSI	—	5.50	6.75	7.25
EE 300 ANSI	—	5.81	7.25	7.75
F 150 ANSI	3.75	4.50	5.50	6.75
FF 300 ANSI	4.12	5.00	6.25	7.50
H NPT Body Tapping	.375	.50	.75	.75
J NPT Cover Center Plug	.50	.50	.75	.75
K NPT Cover Tapping	.375	.50	.75	.75
Stem Travel	0.6	0.8	1.1	1.7
Approx. Ship Wt. Lbs.	45	85	195	330

124-01 Valve Selection	100-01 Pattern: Globe (G), Angle (A), End Connections: Threaded (T), Grooved (GR), Flanged (F) Indicate Available Sizes																		
	Inches	½	¾	1	1¼	1½	2	2½	3	4	6	8	10	12	14	16	18	20	24
	mm	15	20	25	32	40	50	65	80	100	150	200	250	300	350	400	450	500	600
Main Valve 100-01	Pattern	G	G	G, A	G, A	G, A	G, A	G, A	G, A	G, A	G, A	See the 124-02/624-02 Technical Data Sheet for larger sizes.							
	End Detail	T	T	T	T	T, F, Gr*	T, F, Gr	T, F, Gr*	T, F, Gr	F, Gr	F, Gr*								
Suggested Flow (gpm)	Maximum	19	33	55	93	125	210	300	460	800	1800								
	Maximum Intermittent	24	42	68	120	160	260	370	580	990	2250								
Suggested Flow (Liters/Sec)	Maximum	1.2	2.1	3.5	6	8	13	19	29	50	113								
	Maximum Intermittent	1.5	2.6	4.3	7.6	10	16	23	37	62	142								

100-01 Series is the full internal port Hytrol.

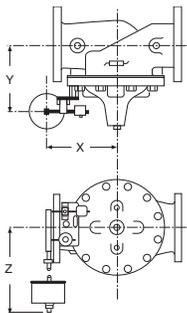
*Globe Grooved Only

624-01 Valve Selection	100-20 Pattern: Globe (G), Angle (A), End Connections: Flanged (F) Indicate Available Sizes																
	Inches	3	4	6	8	10	12	14	16	18	20	24	30	36	42	48	
	mm	80	100	150	200	250	300	350	400	450	500	600	750	900	1000	1200	
Main Valve 100-20	Pattern	G	G, A	G, A	G, A	See the 124-02/624-02 Technical Data Sheet for larger sizes.											
	End Detail	F	F	F	F												
Suggested Flow (gpm)	Maximum	260	580	1025	2300												
	Suggested Flow (Liters/Sec)	Maximum	16	37	65												145

100-20 Series is the reduced internal port size version of the 100-01 Series.

Pilot System Dimensions (In Inches)

We recommend providing adequate space around valve for maintenance work



124-01 1/2" to 6"
624-01 3" to 8"
GLOBE

124-01 Float Valve (Globe)

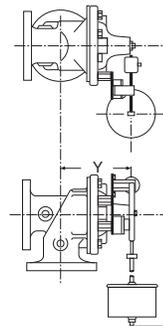
Size	½"-¾"	1"	1¼"-1½"	2"	2½"	3"	4"	6"
X	2.50	5.50	6.00	6.25	6.75	7.25	8.00	10.25
Y	4.25	4.75	6.75	7.00	7.75	8.25	9.50	10.50
Z (MAX)*	29.75	28.50	28.25	28.50	28.75	29.00	29.25	29.25

124-01 Float Valve (Angle)

Size	1½"	2"	2½"	3"	4"	6"
X	6.00	6.25	6.75	7.25	8.25	10.50
Y	6.75	7.00	7.75	7.06	9.00	10.00
Z (MAX)*	28.25	28.50	28.75	29.00	29.25	29.25

Note: Above Dimensions cover Threaded, Flanged and Grooved connections.

*Z(Max.) is with standard float rod.



1 1/2" to 8"
ANGLE

624-01 Float Valve (Globe)

Size	3"	4"	6"	8"
X	6.25	7.25	8.00	10.25
Y	7.06	7.50	8.75	9.75
Z (MAX)*	28.50	29.00	29.25	29.25

624-01 Float Valve (Angle)

Size	4"	6"	8"
X	7.25	8.25	10.50
Y	7.50	8.75	9.75
Z (MAX)*	29.00	29.25	29.25

Pilot System Specifications

Pressure Rating

300 psi Max.

Temperature Rating

Water: to 180°F. Max.

Materials

In contact with operating fluid:
Nylon-reinforced Delrin, Stainless Steel,
Monel, with Buna-N® seals
Float linkage and float rod: Brass and PVC
Base plate: 316 Stainless Steel
Float: 304 Stainless Steel

Float

5 3/8" diameter.

Float Rod

Standard: Two 12" sections PVC rod, 6" & smaller 12" extension increments at additional cost. Larger counterweight required if float rod length exceeds 5'.

Optional: 24" stainless steel rod, with 24" extension increments at additional cost. Larger counterweight required if float rod length exceeds 2'.

If maximum temperature exceeds 160°F. specify stainless steel float rod.

Adjustment Range

Level Differential:
1" min. to 18" max. with PVC rod.
1" min to 40" max. with stainless steel rod.

Operating Fluids

Clean liquids or gases compatible with specified materials.

When Ordering, Please Specify

1. Catalog No. 124-01 or No. 624-01
2. Valve Size
3. Pattern - Globe or Angle
4. Pressure Class
5. Threaded or Flanged
6. Float Rod Material and Length
7. Float Ball Material
8. Desired Options
9. When Vertically Installed