



Model 139-01/639-01

(full port) (reduced port)

Programmable Timer Control Valve Sizes 1/2" through 4"



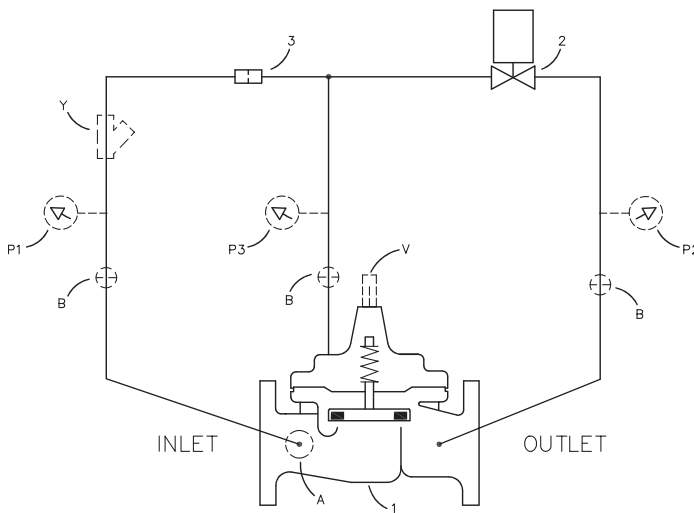
Product Features and Benefits

- Precise Valve On-Off Control
- Completely Self-contained
- High Energy Efficiency
- Retains Stored Data Even After Battery is Depleted
- Direct Control of Valve Opening and Closing 4 Times Daily
- Settings for the IP-68 submersible Timer Control can be input at the factory prior to shipping
- Combines with Pressure, Flow or Level Control
- Ideal for Remote Valve Location Control

Product Enhancements

Get more from your valve by adding any of the following optional features.

- KO Anti-Cavitation Trim
- Epoxy Coating
- X141 Pressure Gauge
- Stainless Steel Tubing and Fittings
- X43H-Style Strainer
- Stem Upgrade to Delrin® or Dura-Kleen®
- X101/X101C Position Indicator
- X133VF Metering Kit
- X105L Limit Switch Assembly
- X117C/D Position Transmitter
- X142PT Pressure Tracker



Schematic Diagram

Item	Description
1	Hytrol (Main Valve)
2	CTC Electronic Timer Control
3	X58C Restriction Assembly

Optional Features

Item	Description
A	X46A Flow Clean Strainer
B	CK2 (Isolation Valve)*
D	Check Valves with Isolation Valve
P	X141 Pressure Gauge
V	X101 Valve Position Indicator
Y	X43 "Y" Strainer

*Standard on 1-1/4" and larger

How It Works

The Cla-Val Model 139-01/639-01 Programmable Timer Control Valve is an on-off control valve for applications using a programmable time schedule. Using the CTC Electronic Timer Control up to four opening and closing times per day can be set for a weekly schedule.

Timer function and parameters are changed using downloadable software from the Cla-Val website www.cla-val.com and special USB cable part number 20519203A. Future software and firmware upgrades will be available from Cla-Val website. Powered by a long-life lithium battery, the CTC control offers powerful valve control for remote locations and other valve automation applications.

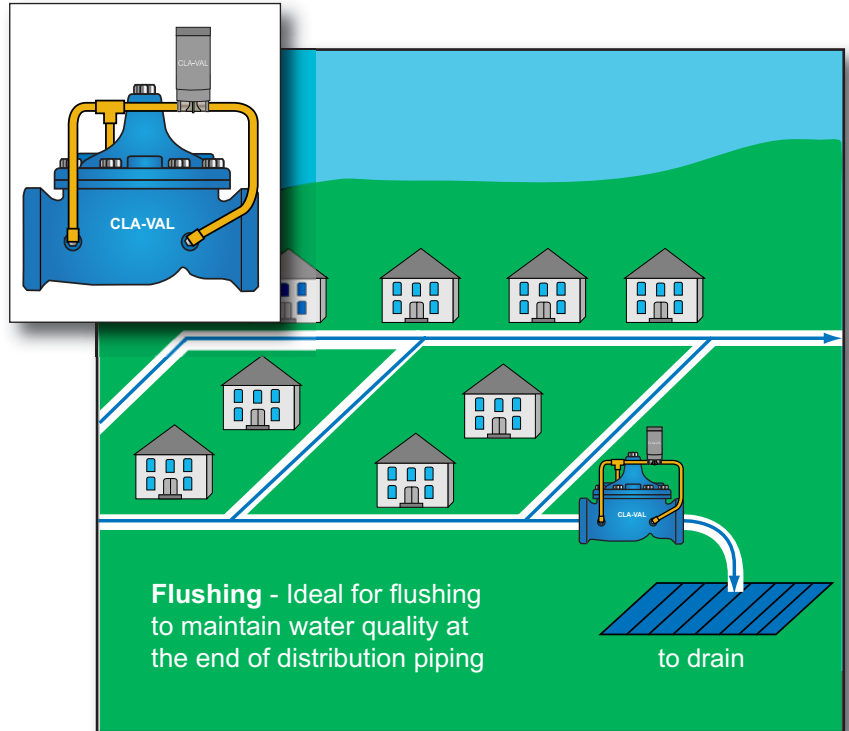


Model 139-01: Cla-Val Time Based Control Valves

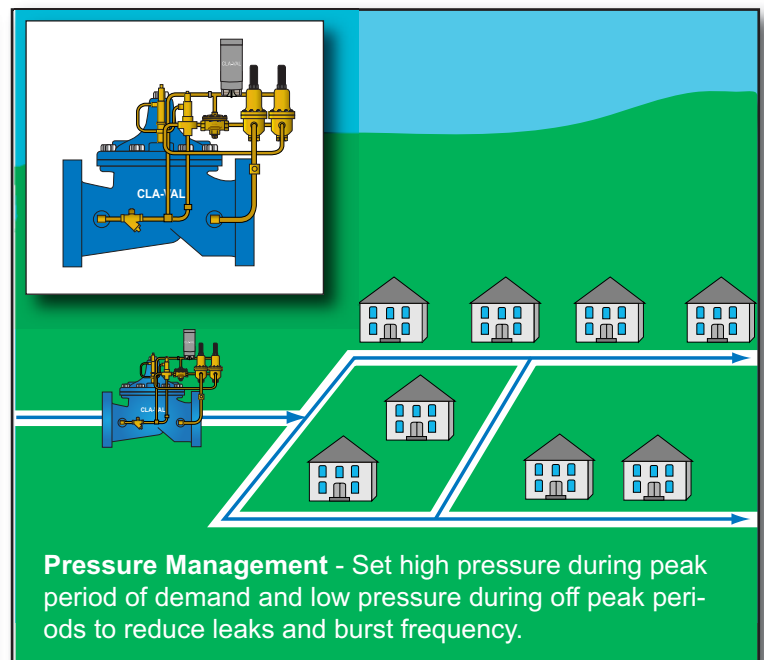
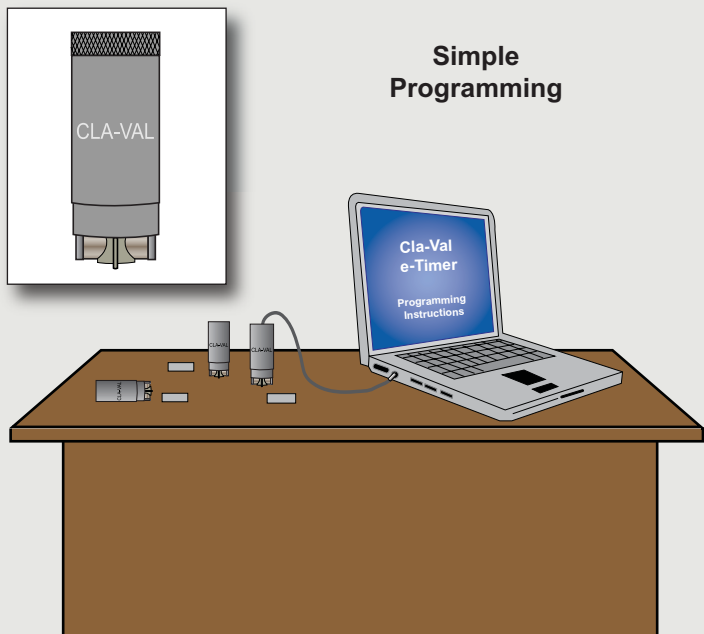
Simple • Reliable • Easy to Program

Features and Benefits

- Five-minute set-up from start-to-finish in the office or in the field using downloadable software from www.cla-val.com or...
- Settings for the IP-68 submersible Timer Control can be input at the factory prior to shipping for fast and easy installation/start-up
- Valve can be programmed to open and close up to four times per day
- Once the cable is removed after programming, only the owner can change settings
- 9 Volt replaceable DC power battery with three-year life (at 20° C) allows water company personnel to "set-it-and-forget-it"
- If battery is depleted, stored data is retained and becomes accessible once the battery is replaced
- Low cost alternative for pressure management



Simple Programming



To learn more, visit www.cla-val.com and type
139-01 or CTC in the search field
or Call 800.942.6326

Pressure Ratings (Recommended Maximum Pressure - psi)

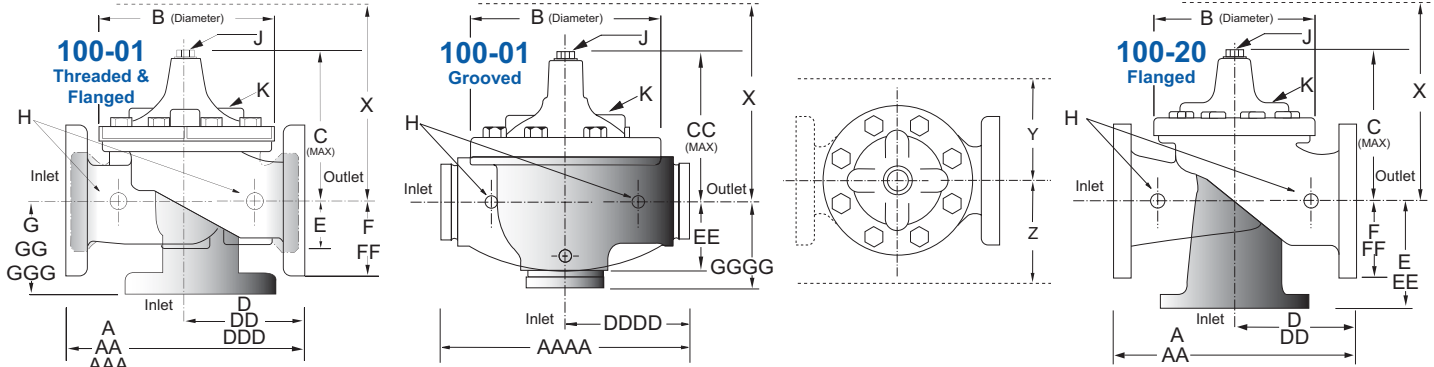
Valve Body & Cover		Pressure Class			
		Flanged			Threaded
Grade	Material	ANSI Standards*	150 Class	300† Class	End‡ Details
ASTM A536	Ductile Iron	B16.42	250	640	400
ASTM A216-WCB	Cast Steel	B16.5	285	720	400
ASTM B62	Bronze	B16.24	225	500	400

Note: * ANSI standards are for flange dimensions only.
 Flanged valves are available faced but not drilled.
 ‡ End Details machined to ANSI B2.1 specifications.
 † Consult factory when Maximum Operating Pressure Differential (MOPD) is greater than 400 PSID

Materials

Component	Standard Material Combinations		
Body & Cover	Ductile Iron	Cast Steel	Bronze
100-01 Available Sizes	3/8" - 4"	1" - 4"	1" - 4"
100-20 Available Sizes	3" - 4"	3" - 4"	3" - 4"
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 100-01 Dimensions (Full Internal Port) (In Inches)

*1½ Size Only Note: The top two flange holes on valve size 36 are threaded to 1 1/2"-6 UNC.

Valve Size (Inches)	3/8	1/2 - 3/4	1	1¼-1½	2	2½	3	4	6	8	10	12	14	16	18	20	24	30	36
A Threaded	2.75	3.50	5.12	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.	2.50	3.12	4.38	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.	2.00	3.00	2.75	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	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	—	—	—	—	—
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	—	—	—	—	—
DDDD Grooved End	—	—	—	4.75	—	6.00	7.50	—	—	—	—	—	—	—	—	—	—	—	—
E	1.25	0.88	1.63	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	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	—	—	—	—	—
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	—	—	—	—	—
GGGG Grooved End	—	—	—	3.25	—	4.25	5.00	—	—	—	—	—	—	—	—	—	—	—	—
H NPT Body Tapping	—	.125	.25	.375	.375	.50	.50	.75	.75	1	1	1	1	1	1	1	1	2	2
J NPT Cover Center Plug	.125	.125	.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	—	.125	.25	.375	.375	.50	.50	.75	.75	1	1	1	1	1	1	1	1	2	2
Stem Travel	—	—	—	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.	3	3	8	15	35	50	70	140	285	500	780	1165	1600	2265	2982	3900	6200	7703	11720
X Pilot System	8	9	9	11	13	14	15	17	29	31	33	36	40	40	43	47	68	79	85
Y Pilot System	5	6	6	9	9	10	11	12	20	22	24	26	29	30	32	34	39	40	45
Z Pilot System	5	6	6	9	9	10	11	12	20	22	24	26	29	30	32	34	39	42	47

Model 100-20 Dimensions (Reduced Internal Port) (In Inches)

Note: The top two flange holes on valve sizes 36 thru 48 are threaded to 1 1/2"-6 UNC.

Valve Size (Inches)	3	4	6	8	10	12	14	16	18	20	24	30	36	42	48
AA 150 ANSI	10.25	13.88	17.75	21.38	26.00	30.00	34.25	35.00	42.12	48.00	48.00	63.25	65.00	76.00	94.50
AA 300 ANSI	11.00	14.50	18.62	22.38	27.38	31.50	35.75	36.62	43.63	49.62	49.75	63.75	67.00	76.00	94.50
B Dia.	6.62	9.12	11.50	15.75	20.00	23.62	27.47	28.00	35.44	35.44	35.44	53.19	56.00	66.00	66.00
C Max.	7.00	8.62	11.62	15.00	17.88	21.00	20.88	25.75	25.00	31.00	31.00	43.94	54.60	61.50	61.50
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	8.00	9.50	11.00	11.75	15.88	14.56	17.00	19.88	25.50	28.00	31.50
FF 300 ANSI	4.12	5.00	6.25	7.50	8.75	10.25	—	12.75	15.88	16.06	19.00	22.00	27.50	28.00	31.50
H NPT Body Tapping	.375	.50	.75	.75	1	1	1	1	1	1	1	1	2	2	2
J NPT Cover Center Plug	.50	.50	.75	.75	1	1	1.25	1.25	2	2	2	2	2	2	2
K NPT Cover Tapping	.375	.50	.75	.75	1	1	1	1	1	1	1	1	2	2	2
Stem Travel	0.6	0.8	1.1	1.7	2.3	2.8	3.4	3.4	4.5	4.5	4.5	6.5	7.5	8.5	8.5
Approx. Ship Wt. Lbs.	45	85	195	330	625	900	1250	1380	1500	2551	2733	6500	8545	12450	13100
X Pilot System	13	15	27	30	33	36	36	41	40	46	55	68	79	85	86
Y Pilot System	10	11	18	20	22	24	26	26	30	30	30	39	40	45	47
Z Pilot System	10	11	18	20	22	24	26	26	30	30	30	39	42	47	49

139-01 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
	mm	15	20	25	32	40	50	65	80	100
Basic Valve 100-01	Pattern	G	G	G, A	G, A	G, A	G, A	G, A	G, A	G, A
	End Detail	T	T	T	T	T,F,Gr*	T,F,Gr	T,F,Gr*	T,F,Gr	F, Gr
Suggested Flow (gpm)	Max. Continuous	19	33	55	93	125	210	300	460	800
	Max. Intermittent	24	42	68	120	160	260	370	580	990
Suggested Flow (Liters/Sec)	Max. Continuous	1.2	2.1	3.5	6	8	13	19	29	50
	Max. Intermittent	1.5	2.6	4.3	7.6	10	16	23	37	62

100-01 Series is the full internal port Hytrol *Globe Grooved Only
For 100-01 basic valves • Suggested flow calculations are based on flow through Schedule 40 Pipe. • Max continuous flow is approx. 20 ft/sec (6.1 meters/sec).
• Max intermittent is approx. 25 ft/sec (7.6 meters/sec).

639-01 Valve Selection	100-20 Pattern: Globe (G), Angle (A), End Connections: Threaded (T), Grooved (GR), Flanged (F) Indicate Available Sizes									
	Inches								3	4
	mm								80	100
Basic Valve 100-20	Pattern								G	G, A
	End Detail								F	F
Suggested Flow (gpm)	Max. Continuous								260	580
Suggested Flow (Liters/Sec)	Max. Continuous								16	37

100-20 Series is the reduced internal port size version of the 100-01 Series.
For 100-20 basic valves • Suggested flow calculations are based on flow through the valve seat. • Max continuous flow is approx. 26 ft/sec (7.9 meters/sec).

For sizing questions or cavitation analysis, consult Cla-Val with system details.

CTC Electronic Timer Control Specifications

Pressure Connection: 1/4" NPT
Operating Pressure: Maximum 145 psi (10 bar)
Temperature Range: 14°F to 176°F (-10°C to +80°C)
Enclosure Protection: IP-68 (submersible)
Battery Type: Lithium 9V/PP3
Fluids: Water, others compatible with materials
Materials: Enclosure: PVC
Valve Body: Glass Fired Nylon Body
Seals: Buna-N®
Programming Interface: Custom USB cable (1 m, supplied standard); Windows NT, 2000, XP, Vista
Programming Software is free download from Cla-Val website.

When Ordering, Please Specify

1. Catalog No. 139-01 or No. 639-01
2. Valve Size
3. Pattern - Globe or Angle
4. Pressure Class
5. Threaded or Flanged
6. Trim Material
7. Desired Options



CLA-VAL™

E-139-01/639-01 (R-6/2010)

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