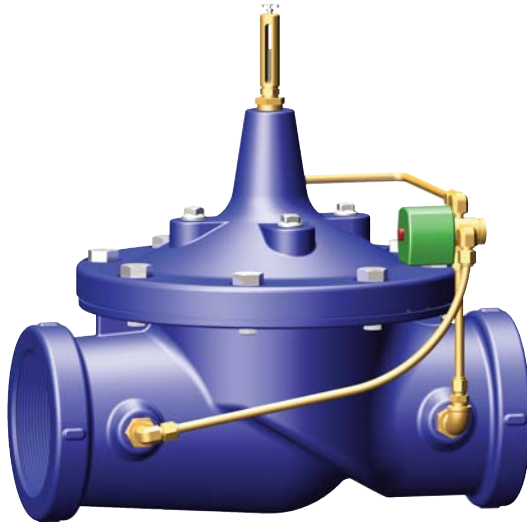


Solenoid Control Valve



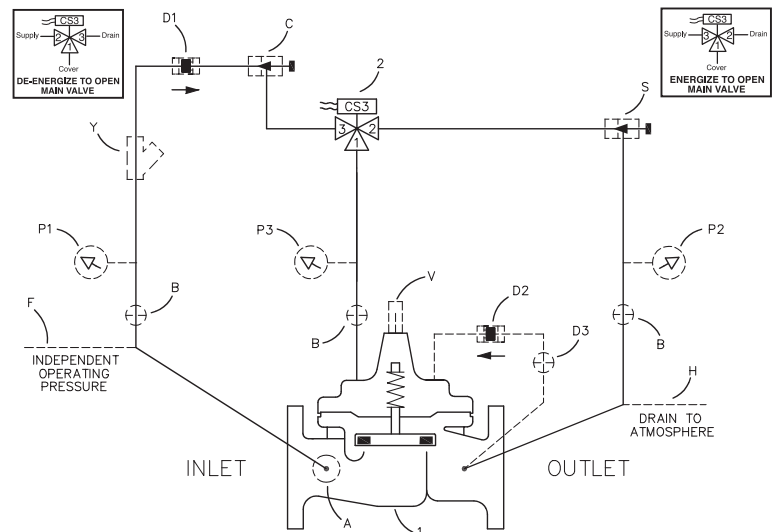
- **Fast Acting Solenoid Control**
- **Reliable, Drip-Tight Shut-Off**
- **Simple Design, Proven Reliable**
- **Optional Check Feature**
- **Easy Installation and Maintenance**

The Cla-Val Model 136-01/636-01 Solenoid Control Valve is an on-off control valve that either opens or closes upon receiving an electrical signal to the solenoid pilot control. This valve consists of a Hytrol main valve and a three-way solenoid valve that alternately applies pressure to or relieves pressure from the diaphragm chamber of the main valve. It is furnished either normally open (de-energized solenoid to open) or normally closed (energized solenoid to open).

If the check feature option is added and a pressure reversal occurs, the downstream pressure is admitted into the main valve cover chamber and the valve closes to prevent return flow.

Schematic Diagram

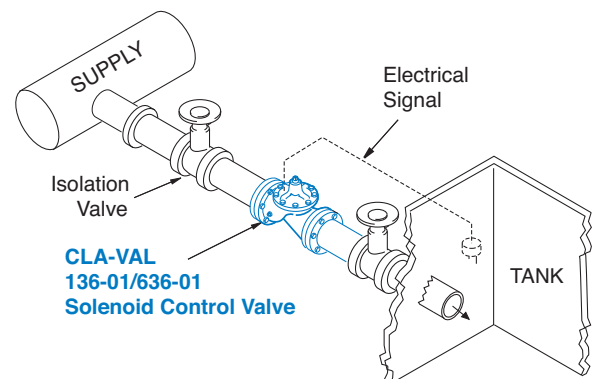
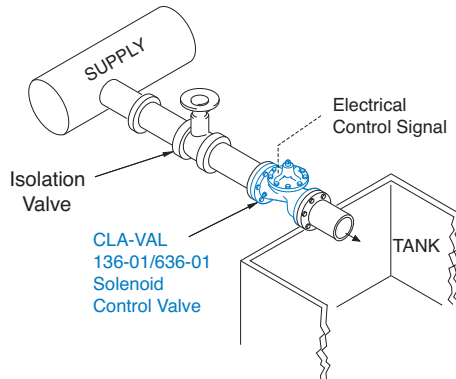
Item	Description
1	Hytrol (Main Valve)
2	CS3 Solenoid Control



Optional Features

Item	Description
A	X46A Flow Clean Strainer
B	CK2 (Isolation Valve)
C	CNA Closing Speed Control
D	Check Valves with Isolation Valve
P	X141 Pressure Gauge
S	CNA Needle Valve (Opening)
V	X101 Valve Position Indicator
Y	X43 "Y" Strainer

Typical Applications



Industrial uses for the solenoid control valve are many and include accurate control of process water for batching, mixing, washing, blending or other on-off type uses.

Liquid level control can be provided by using a float switch or electrode probe which sends an electrical signal to open or close the valve as needed.

Model 136-01 (Uses Basic Valve Model 100-01)

Pressure Ratings (Recommended Maximum Pressure - psi)

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

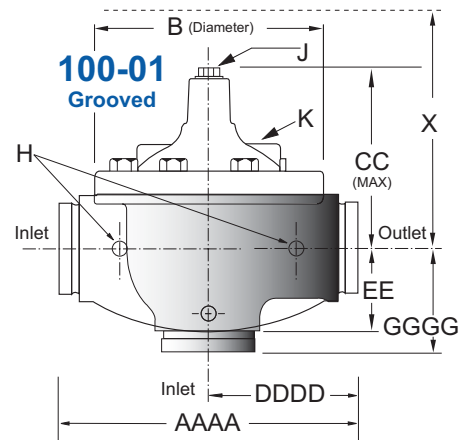
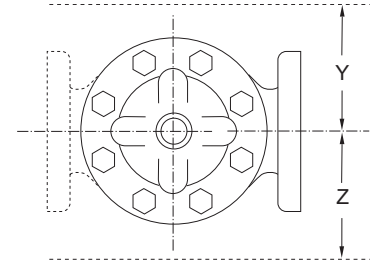
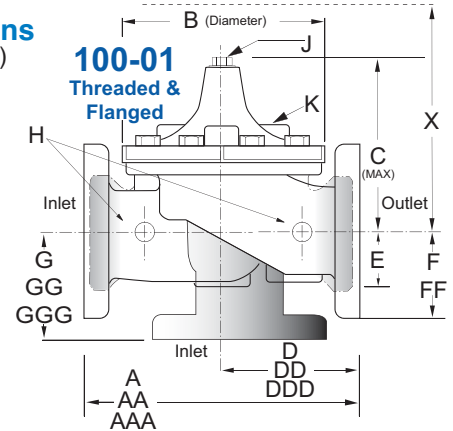
Valves for higher pressure are available; consult factory for details

Materials

Component	Standard Material Combinations		
Body & Cover	Ductile Iron	Cast Steel	Bronze
Available Sizes	1/2" - 4"	1/2" - 4"	1/2" - 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.

Dimensions (In inches)



Model 136-01 Dimensions (In Inches)

Valve Size (Inches)	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
A Threaded	3.50	3.50	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
AAA 300 ANSI	—	—	—	—	9.00	10.00	11.62	13.25	15.62
AAAA Grooved End	—	—	—	—	8.50	9.00	11.00	12.50	15.00
B Dia.	3.15	3.15	5.62	5.62	5.62	6.62	8.00	9.12	11.50
C Max.	3.00	3.00	5.50	5.50	5.50	6.50	7.56	8.19	10.62
CC Max. Grooved End	—	—	—	—	4.75	5.75	6.88	7.25	9.31
D Threaded	3.25	3.25	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
DDD 300 ANSI	—	—	—	—	4.25	5.00	5.88	6.38	7.88
DDDD Grooved End	—	—	—	—	—	4.75	—	6.00	7.50
E	0.88	0.88	1.12	1.12	1.12	1.50	1.69	2.06	3.19
EE Grooved End	—	—	—	—	2.00	2.50	2.88	3.12	4.25
F 150 ANSI	—	—	—	—	2.50	3.00	3.50	3.75	4.50
FF 300 ANSI	—	—	—	—	3.06	3.25	3.75	4.13	5.00
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
GGG 300 ANSI	—	—	—	—	4.25	3.50	4.31	4.38	5.31
GGGG Grooved End	—	—	—	—	—	3.25	—	4.25	5.00
H NPT Body Tapping	.125	.375	.375	.375	.375	.375	.50	.50	.75
J NPT Cover Center Plug	.125	.25	.25	.25	.25	.50	.50	.50	.75
K NPT Cover Tapping	.125	.375	.375	.375	.375	.375	.50	.50	.75
Stem Travel	—	—	0.4	0.4	0.4	0.6	0.7	0.8	1.1
Approx. Ship Wt. Lbs.	3	3	15	15	15	35	50	70	140
X Pilot System	11	11	11	11	11	13	14	15	17
Y Pilot System	9	9	9	9	9	9	10	11	12
Z Pilot System	9	9	9	9	9	9	10	11	12

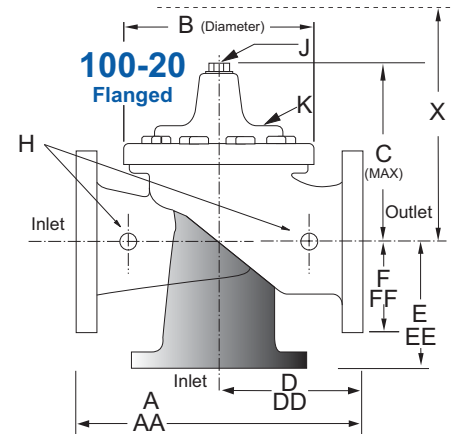
Model 636-01 (Uses Basic Valve Model 100-20)

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
ASTM B62	Bronze	B16.24	225	400

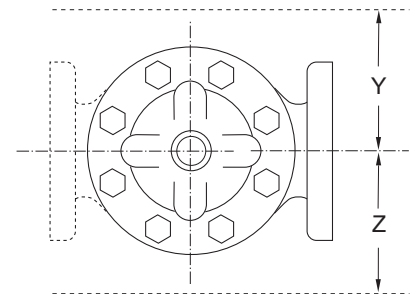
Note: * ANSI standards are for flange dimensions only.
Flanged valves are available faced but not drilled.
Valves for higher pressure are available; consult factory for details



Materials

Component	Standard Material Combinations		
	Ductile Iron	Cast Steel	Bronze
Body & Cover	Ductile Iron	Cast Steel	Bronze
Available Sizes	3" - 6"	3" - 6"	3" - 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 636-01 Dimensions (In Inches)

Valve Size (Inches)	3	4	6
A 150 ANSI	10.25	13.88	17.75
AA 300 ANSI	11.00	14.50	18.62
B Dia.	6.62	9.12	11.50
C Max.	7.00	8.62	11.62
D 150 ANSI	—	6.94	8.88
DD 300 ANSI	—	7.25	9.38
E 150 ANSI	—	5.50	6.75
EE 300 ANSI	—	5.81	7.25
F 150 ANSI	3.75	4.50	5.50
FF 300 ANSI	4.12	5.00	6.25
H NPT Body Tapping	.375	.50	.75
J NPT Cover Center Plug	.50	.50	.75
K NPT Cover Tapping	.375	.50	.75
Stem Travel	0.6	0.8	1.1
Approx. Ship Wt. Lbs.	45	85	195
X Pilot System	13	15	27
Y Pilot System	10	11	18
Z Pilot System	10	11	18

136-01 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, F	T, F, Gr*	T, F, Gr	T, F, Gr*	T, F, Gr	F, Gr
Suggested Flow (gpm)	Maximum	19	33	55	93	125	210	300	460	800
	Maximum Intermittent	24	42	68	120	160	260	370	580	990
Suggested Flow (Liters/Sec)	Maximum	1.2	2.1	3.5	6	8	13	19	29	50
	Maximum 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

636-01 Valve Selection	100-20 Pattern: Globe (G), Angle (A), End Connections: Flanged (F) Indicate Available Sizes			
	Inches	3	4	6
	mm	80	100	150
Basic Valve 100-20	Pattern	G	G, A	G, A
	End Detail	F	F	F
Suggested Flow (gpm)	Maximum	260	580	1025
Suggested Flow (Liters/Sec)	Maximum	16	37	65

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

Pilot System Specifications

Temperature Range

Water: to 180°F

Fluids

Air, water, light oils

Rubber Parts:

Buna-N® Rubber Synthetic Rubber

Solenoid Control

Body:

Brass ASTM B283

Enclosure:

NEMA Type 1,2,3,3S,4,4X general purpose watertight*

NEMA Type 6,6P,7,9 Watertight Explosion Proof available.

Voltages:

110, 220 -50Hz AC
24, 120, 240, 480 - 60Hz AC
6, 12, 24, 120, 240 - DC
Others available at additional cost

Max. operating pressure differential:
200 psi*

Coil:

Insulation molded Class F
Watts AC 6
AC Volt Amps Inrush 30
AC Volt Amps Holding 16
Watts DC 10.6
Manual operator available at additional cost.

*Supplied unless otherwise specified

Note: Flowing Pressure Differential: 5 psi minimum

When Ordering, Please Specify

1. Catalog No. 136-01 or No. 636-01
2. Valve Size
3. Pattern - Globe or Angle
4. Pressure Class
5. Threaded or Flanged
6. Materials Desired
7. Energized or de-energized to open Main Valve
8. Solenoid Enclosure, Voltage & Hertz, Coil Insulation, and Max. Operating Pressure Differential
9. Desired Options
10. When Vertically Installed