

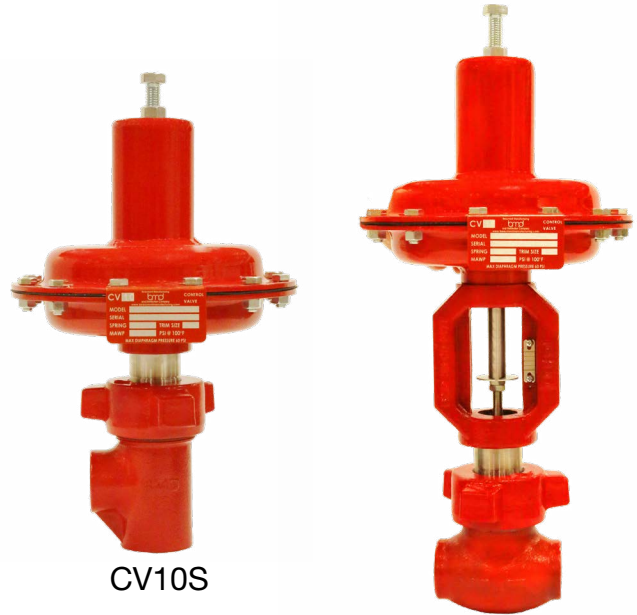
Control Dump Valves CV10S & CV15S Models

The CV10S and CV15S control valves are compact, cage-guided valves also known as dump valves. They are ideally suited for a wide range of applications such as pressure control, level control and flow control. Typical installations include separators, scrubbers, wellheads and other production equipment.

The CV10S is a close-coupled design, and the CV15S is an open-yoke design.

The hammer union makes maintenance easy by allowing the topworks to be removed without taking the valve out of line. This feature reduces the amount of time needed to inspect and replace the valve trim.

The valves are available in a variety of material options and different trim sizes. A NACE option is also available for sour service.



CV10S

CV15S

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Specifications

Sizes: 1"

Connections: Female NPT

Body Type: Globe, angle

Trim Characteristic: Quick open, modified % (throttling)

Trim Size: 0.25", 0.375" (3/8"), 0.50", 0.75" and 1.00"

Pressure Rating:

4000 psi (-50° F to 200° F), 3755 psi at 400° F

Temperature Range:

CV10 (close coupled): -50° F to 200° F (-46° C to 93° C)

CV15 (open yoke): -50° F to 400° F (-46° C to 204° C)

Shutoff: ANSI Class IV

Actuator Sizes: No. 35 (35 in² area), non-adjustable

Input Signal Ranges: 3-15 psi, 6-30 psi

Materials:

Body: LCC

Packing Plug: Nickel-plated, A105 steel

A350 LF2 (low-temp option)

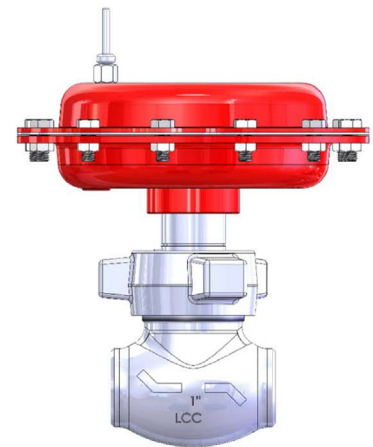
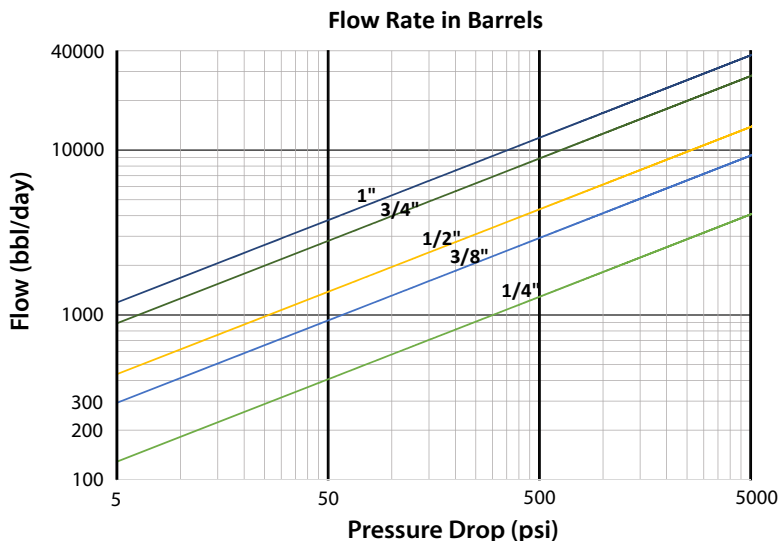
Hammer Nut: A105 steel, A350 LF2 (low-temp option)

Trim: 17/4 stainless, carbide (optional)

Actuator Housing: Carbon steel

Yoke: A395 ductile iron

Flow Rates



CV10S with
Non-Adjustable Housing

Cv Valves

Body Size	Orifice Size (in.)	Body Style / Valve Opening (% Travel)												
		Modified Percent											Quick Open	
		Globe Body											Angle Body	Globe Body
		10	20	30	40	50	60	70	80	90	100	100	100	100
1 Inch	0.25	0.284	0.506	0.657	0.767	0.875	0.989	1.10	1.20	1.32	1.40	1.64	1.68	1.92
	0.375	0.311	0.621	0.942	1.28	1.64	2.07	2.51	2.93	3.35	3.70	4.23	3.82	4.34
	0.50	0.502	1.05	1.59	2.09	2.61	3.14	3.72	4.27	4.96	5.62	6.61	5.70	6.72
	0.75	0.882	1.760	2.760	3.82	4.93	6.17	7.49	8.85	10.00	11.00	15.10	11.60	15.20
	1.00	1.01	2.02	3.44	5.07	6.78	8.42	10.3	12.4	14.3	15.4	20.8	15.5	20.9

Shut-Off Pressures

Maximum Shut-Off Pressures For Reverse-Acting (fail closed) Actuator

Trim Size (in.)	Flow Direction	Signal to No. 35 Actuator			
		3-15 Spring		6-30 Spring	
		3-15 psig	0-20 psig	6-30 psig	0-35 psig
0.25	Up	3800	4000	4000	4000
0.375		2050	3280	3410	4000
0.50		1100	1680	1830	2300
0.75		320	560	690	950
1.00		110	220	320	490
0.25	Down	4000	4000	4000	4000
0.375		4000	4000	4000	4000
0.50		3350	4000	4000	4000
0.75		1580	2300	2530	3270
1.00		770	1100	1240	1680

Maximum Shut-Off Pressures For Direct-Acting (fail open) Actuator

Trim Size (in.)	Flow Direction	Signal to No. 35 Act. ¹		Flow Direction	Signal to No. 35 Act. ¹	
		3 -15 Spring	6 -30 Spring		3 -15 Spring	6 -30 Spring
0.25	Up	4000	4000	Down	4000	4000
0.375		2700	4000		4000	4000
0.50		1370	2880		3800	4000
0.75		410	1080		1750	1940
1.00		140	520		860	940

¹Controller supply must have at least 5 psi beyond the signal pressure required.

Maximum Shut-Off Pressures For Non-Adjustable Actuators

Trim Size (in.)	Flow Direction	Signal to No. 35 Act. ²		Flow Direction	Signal to No. 35 Act. ²	
		Reverse Acting	Direct Acting ¹		Reverse Acting	Direct Acting ¹
0.25	Up	4000	4000	Down	4000	4000
0.375		2700	4000		4000	4000
0.50		1800	2880		2500	2600
0.75		600	1000		1250	750
1.00		120	500		720	400

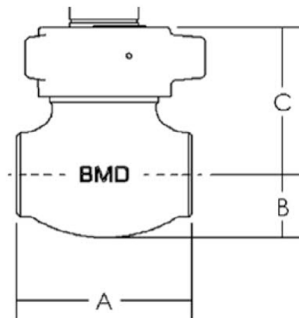
¹Controller supply must have at least 5 psi beyond the signal pressure required.

² 25 psi minimum supply required.

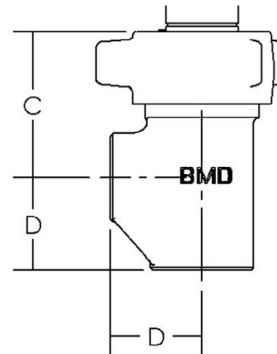
Dimensions

End Connection	Body Dimension				
	1" Globe Body			1" Angle Body	
	A	B	C	C	D
NPT	4.44	1.59	3.70	3.51	2.22

1" Globe



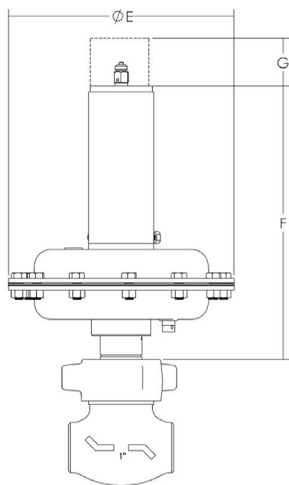
1" Angle



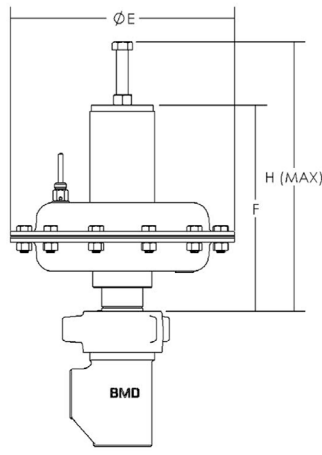
Actuator Size	CV10S and CV15S Actuator Dimensions (in.)								
	Direct				Reverse				
	E	F (CV10)	F (CV15)	G ¹	E	F (CV10)	F (CV15)	H (CV10)	H (CV15)
No. 35, 3-15	9.50	11.51	17.14	5.50	9.50	8.76	14.39	10.91	16.54
No. 35, 6-30	9.50	13.13	18.76	7.00	9.50	10.63	16.26	11.91	17.54
Non-Adjustable	9.50	4.55	10.18	-	9.50	4.55	10.18	7.30	12.90

¹Height required to remove spring cover.

CV10S

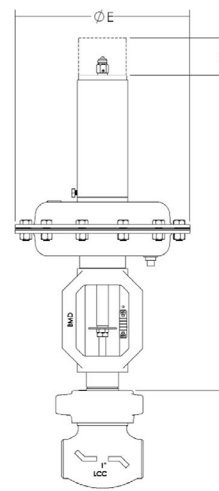


Direct

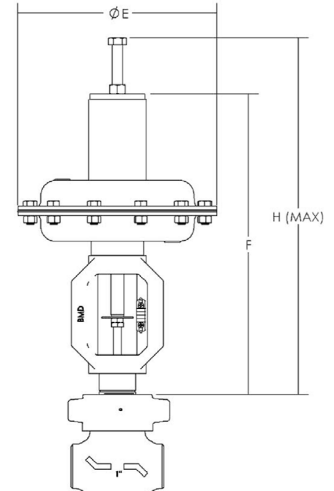


Reverse

CV15S

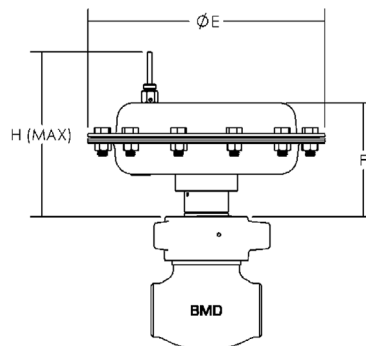


Direct



Reverse

Non-Adjustable Reverse



Weights

End Connection	Valve Weights with No. 35 Actuator			
	1" Globe		1" Angle	
	lb	kg	lb	kg
NPT	24	10.8	24	10.8

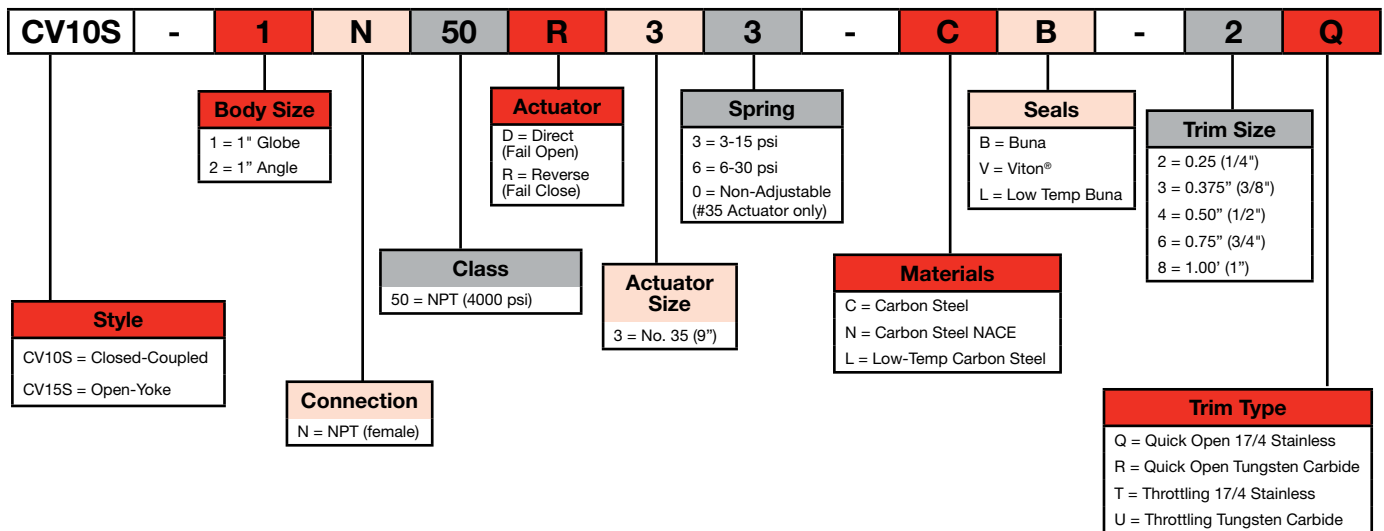
End Connection	Valve Weights with Non-Adjustable Actuator			
	1" Globe		1" Angle	
	lb	kg	lb	kg
NPT	23	10.4	22	9.9

How to Order

Options are listed below. All configurations may not be available. Call your sales representative or FW Murphy for more information. Repair kits are available.

Example Model No. **CV10S-1N50R33-CB-2Q**

CV10S Series Dump Valve, 1" Globe Body, Threaded Ends, No. 35 Reverse Act, 3-15 Spring, Carbon Steel with Buna Seals, 0.25" Quick Open SST Trim



FW Murphy is the exclusive BMD distributor for new equipment packages.