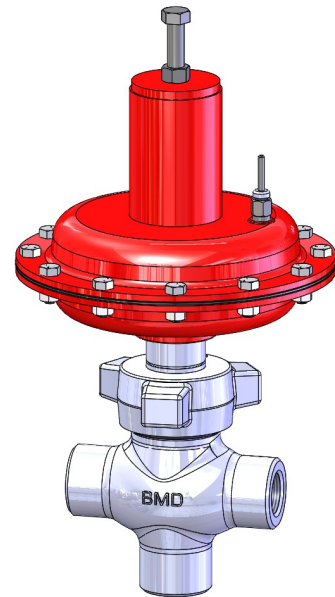


CV10 Control Valve

The CV10 is a close coupled control valve also known as a dump valve. It's 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 CV10's 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 CV10 is available in a variety of material options and different trim sizes. A NACE option is also available for sour service.



Specifications

Sizes: 1" and 2"

Connections: Female NPT, Flanged, Butt Weld, Socket Weld

Body Type: Globe, Tee (1" only), Angle (2" only)

Trim Characteristic: Quick Open, Modified Percent (Throttling)

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

Pressure Rating: 4000 psi

Temperature Range: -40° F to 200° F (-40° C to 93° C)

Shutoff: ANSI Class IV

Actuator Sizes: No. 35 (35 in² area), No. 70 (70 in² area)

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

Materials:

Body: WCC Steel, LCC (Low Temp Option)

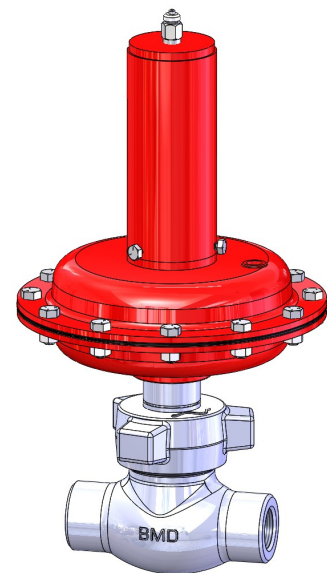
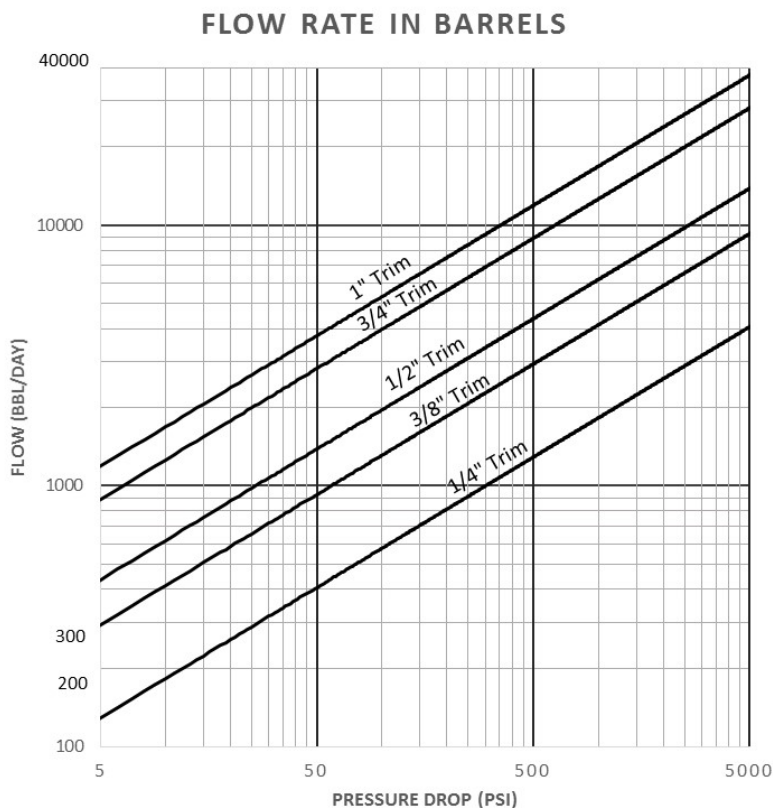
Packing Plug: A105 Steel, Nickel Plated, A350 LF2 (Low Temp Option)

Hammer Nut: A105 Steel, A350 LF2 (Low Temp Option)

Trim: 17/4 Stainless, Carbide (Optional)

Actuator Housing: Carbon Steel

Flow Rates



Cv Values

Body Size	Trim Size (in.)	Body Style / Valve Opening (% Travel)													
		Modified Percent											Quick Open		
		Globe Body											Angle Body	Globe Body	Angle 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	
2 Inch	0.25	0.284	0.506	0.657	0.77	0.88	0.99	1.10	1.20	1.32	1.40	1.66	1.68	1.98	
	0.375	0.311	0.621	0.942	1.28	1.64	2.07	2.51	2.93	3.35	3.70	4.35	3.82	4.47	
	0.50	0.592	1.170	1.760	2.34	2.95	3.70	4.57	5.50	5.95	6.08	6.90	6.19	7.00	
	0.75	0.882	1.81	2.98	4.11	5.74	7.03	8.49	10.1	11.5	12.9	15.2	13.0	15.8	
	1.00	1.080	2.120	3.580	5.43	7.46	9.27	11.40	13.70	15.80	17.10	21.10	18.00	22.00	

Shut-Off Pressures

Maximum Shut-Off Pressures for Reverse Acting (Fail Closed) Actuators

Trim Size (in.)	Flow Direction	Signal to No. 35 Actuator				Signal to No. 70 Actuator			
		3 - 15 Spring		6 - 30 Spring		3 - 15 Spring		6 - 30 Spring	
		3-15 psig	0-20 psig	6-30 psig	0-35 psig	3-15 psig	0-20 psig	6-30 psig	0-35 psig
0.25	Up	3800	4000	4000	4000	4000	4000	4000	4000
0.375		2050	3280	3410	4000	3210	4000	4000	4000
0.50		1100	1680	1830	2300	1650	3190	4000	4000
0.75		320	560	690	950	530	940	2020	2800
1.00		110	220	320	490	230	420	960	1460
0.25	Down	4000	4000	4000	4000	4000	4000	4000	4000
0.375		4000	4000	4000	4000	4000	4000	4000	4000
0.50		3350	4000	4000	4000	4000	4000	4000	4000
0.75		1580	2300	2530	3270	2080	2800	3780	4000
1.00		770	1100	1240	1680	970	1460	2510	2950

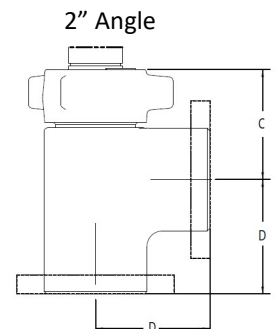
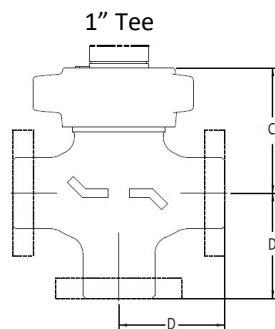
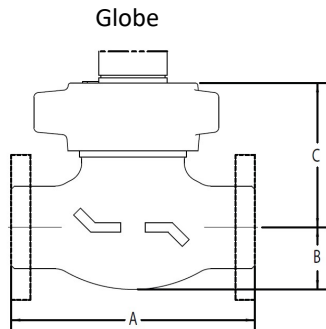
Maximum Shut-Off Pressures for Direct Acting (Fail Open) Actuators

Trim Size (in.)	Flow Direction	Signal to No. 35 Act. ¹		Signal to No. 70 Act. ¹		Flow Direction	Signal to No. 35 Act. ¹		Signal to No. 70 Act. ¹	
		3-15 Spring	6-30 Spring	3-15 Spring	6-30 Spring		3-15 Spring	6-30 Spring	3-15 Spring	6-30 Spring
0.25	Up	4000	4000	4000	4000	Down	4000	4000	4000	4000
0.375		2700	4000	4000	4000		4000	4000	4000	4000
0.50		1370	2880	2540	4000		3800	4000	4000	4000
0.75		410	1080	730	2020		1750	1940	4000	4000
1.00		140	520	230	960		860	940	1840	2790

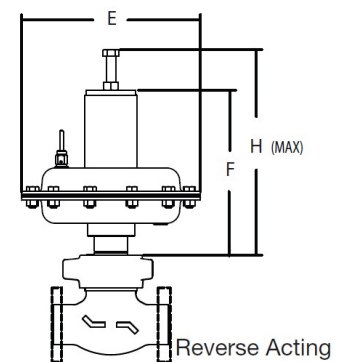
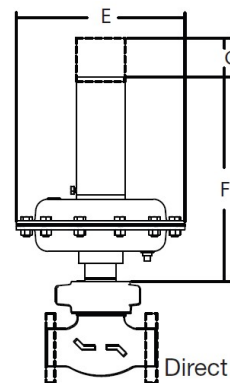
1. Controller supply must have at least 5 psi beyond the signal pressure required.

Dimensions & Weights

End Connection	Body Dimension									
	1" Globe Body			2" Globe Body			1" Tee Body		2" Angle Body	
	A	B	C	A	B	C	C	D	C	D
NPT	6.25	1.56	3.71	7.50	1.69	3.71	3.71	3.13	3.60	3.75
150RFF	7.25	1.56	3.71	10.00	1.69	3.71	3.71	3.63	3.60	5.00
300RFF	7.75	1.56	3.71	10.50	1.69	3.71	3.71	3.88	3.60	5.25
600RFF	8.25	1.56	3.71	11.25	1.69	3.71	3.71	4.13	3.60	5.63
600 RTJ	8.25	1.56	3.71	11.38	1.69	3.71	3.71	4.13	3.60	5.69
900/1500 RFF	9.38	1.56	3.71	12.88	1.69	3.71	3.71	4.69	3.60	6.44
900 /1500 RTJ	9.38	1.56	3.71	13.00	1.69	3.71	3.71	4.69	3.60	6.50



Actuator Size	Actuator Dimension (in.)					
	Direct			Reverse		
	E	F	G	E	F	H
No. 35, 3-15	9.50	11.51	5.50	9.50	8.76	10.91
No. 35, 6-30	9.50	13.13	7.00	9.50	10.63	11.91
No. 70, 3-15	12.50	13.10	7.00	12.50	10.63	13.24
No. 70, 6-30	12.50	16.42	10.00	12.50	12.38	15.00



Direct Acting

Reverse Acting

End Connection	Valve Weights with No. 35 Actuator							
	1" Globe		1" Tee		2" Globe		2" Angle	
	lbs	kg	lbs	kg	lbs	kg	lbs	kg
NPT	25	11.3	28	12.7	32	14.5	32	14.5
ANSI 150	30	13.6	34	15.4	42	19.1	42	19.1
ANSI 300	33	15.0	37	16.8	46	20.9	46	20.9
ANSI 600	35	15.9	39	17.7	48	21.8	48	21.8
ANSI 900/1500	42	19.1	47	21.3	76	34.5	76	34.5

End Connection	Valve Weights with No. 70 Actuator							
	1" Globe		1" Tee		2" Globe		2" Angle	
	lbs	kg	lbs	kg	lbs	kg	lbs	kg
NPT	40	18.1	43	19.6	47	21.3	47	21.3
ANSI 150	45	20.4	49	22.2	57	25.9	57	25.9
ANSI 300	48	21.8	52	23.6	61	27.7	61	27.7
ANSI 600	50	22.7	54	24.5	63	28.6	63	28.6
ANSI 900/1500	57	25.9	62	28.1	91	41.3	91	41.3

How to Order

Example Model No. **CV10-1N50R33-CB-2Q**

CV10 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

Body Size			CV10-1 N 50 R 3 3 - C B - 2 Q
1 - 1" Globe	3 - 1" Tee		
2 - 2" Globe	4 - 2" Angle		
Connection			
N - NPT (female)	B - Buttweld	W - Socket Weld	
F - RFF	J - RTJ		
Class			
50 - NPT (4000psi)	60 - 600	40 - Shd 40 (Buttweld)	
10 - 150	90 - 900	80 - Shd 80 (Buttweld)	
30 - 300	15 - 1500	16 - Shd 160 (Buttweld)	
Actuator			
D - Direct	R - Reverse		
Actuator Size			
3 - #35 (9")	7 - #70 (12")		
Spring			
3 - 3-15 psi	6 - 6-30 psi		
Materials			
C - Carbon Steel	N - Carbon Steel NACE	T - Stainless Steel L - Low Temp Carbon Steel	
Seals			
B - Buna	V - Viton®	L - Low Temp Buna	
Trim Size			
2 - 0.25"	4 - 0.50"	8 - 1.00"	
3 - 0.375" (3/8")	6 - 0.75"		
Trim Type			
Q - Quick Open Stainless	T - Throttling Stainless		
R - Quick Open Tungsten Carbide	U - Throttling Tungsten Carbide		

Repair Kits Available



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