

CV Series Profile2™ Proportional Control Ball Valves

1/2" TO 6" PVC AND CPVC



KEY FEATURES

- PVC and CPVC
- Reversible Seats
- True Union Design
- Manual or Actuated
- Precise Flow Control

TYPICAL APPLICATIONS

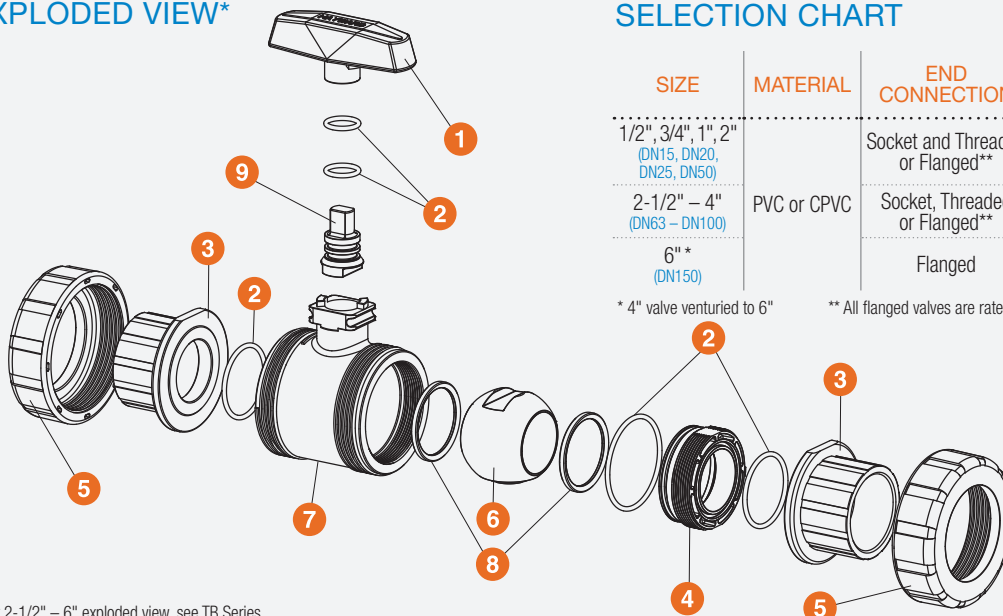
- Fill Station Lines
- Lateral Take-Off Line Flow Control
- Flow Reduction in Systems with Oversized Pumps
- Control Flow From Tanks

MATERIALS

- PVC Cell Class 12454 per ASTM D1784
- CPVC Cell Class 23447 per ASTM D1784
- FPM and EPDM O-Ring Seals

TECHNICAL INFORMATION

EXPLODED VIEW*



* For 2-1/2" – 6" exploded view, see TB Series

SELECTION CHART

SIZE	MATERIAL	END CONNECTION	SEALS	PRESSURE RATING
1/2", 3/4", 1", 2" (DN15, DN20, DN25, DN50)	PVC or CPVC	Socket and Threaded or Flanged**	FPM or EPDM	250 PSI @ 70°F Non-Shock
2-1/2" – 4" (DN63 – DN100)		Socket, Threaded or Flanged**		235 PSI @ 70°F Non-Shock
6"* (DN150)		Flanged		150 PSI @ 70°F Non-Shock

* 4" valve venturied to 6"

** All flanged valves are rated to 150 PSI @ 70°F Non-Shock

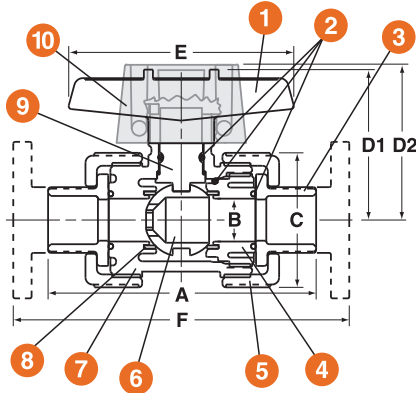
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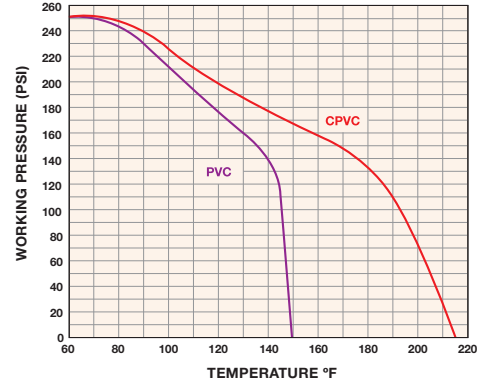
TECHNICAL INFORMATION, CONTINUED

PARTS LIST

1. Handle
2. O-Ring Seals
3. End Connector
4. Seal Retainer
5. Union Nut
6. Ball
7. Body
8. PTFE Seat
9. Stem
10. Actuator Mounting Pad



OPERATING TEMPERATURE / PRESSURE



DIMENSIONS – INCHES / MILLIMETERS

SIZE in / DN	A in / mm	B in / mm	C in / mm	D1 in / mm	D2 in / mm	E in / mm	F in / mm
1/2 / 15	4.77 / 121	.50 / 13	2.25 / 57	2.81 / 71	2.63 / 67	3.50 / 89	6.75 / 171
3/4 / 20	4.85 / 123	.75 / 19	2.63 / 67	3.02 / 77	2.81 / 71	3.50 / 89	7.13 / 181
1 / 25	5.44 / 138	.93 / 24	3.00 / 76	3.26 / 83	3.05 / 77	4.00 / 102	8.00 / 203
2 / 50	8.00 / 203	1.94 / 49	4.75 / 120	4.43 / 113	4.00 / 102	5.00 / 127	11.38 / 289
3 / 80*	10.56 / 268	2.75 / 70	6.66 / 169	6.46 / 164	6.17 / 157	10.50 / 267	14.60 / 371
4 / 100*	12.30 / 312	3.81 / 97	8.56 / 217	7.62 / 194	6.64 / 169	10.50 / 267	17.26 / 438
6 / 150*	N/A	3.81 / 97	8.56 / 217	7.62 / 194	6.64 / 169	10.50 / 267	19.26 / 489

Dimensions are subject to change without notice – consult factory for installation information

* Metric End Connections Available In: BSP – Straight Thread, BSP TR – Tapered Thread and Metric Socket

PROPORTIONAL VALVE FLOW COEFFICIENTS

1/2" PROFILE2 PROPORTIONAL CONTROL VALVE				3/4" PROFILE2 PROPORTIONAL CONTROL VALVE				1" PROFILE2 PROPORTIONAL CONTROL VALVE			
OPENING ANGLE	SLOW OPEN	FAST OPEN	FULL PORT VALVE	OPENING ANGLE	SLOW OPEN	FAST OPEN	FULL PORT VALVE	OPENING ANGLE	SLOW OPEN	FAST OPEN	FULL PORT VALVE
15°	.10	.10	.10	15°	.10	.10	.10	15°	.50	1.0	1.2
30°	.30	.50	.30	30°	.70	1.2	.70	30°	1.9	3.4	3.5
45°	1.4	2.7	1.1	45°	2.8	5.3	2.5	45°	3.7	7.0	7.5
60°	2.6	4.3	2.5	60°	5.3	8.5	5.3	60°	8.0	13.0	15.3
75°	4.9	5.2	7.2	75°	9.4	10.1	14.4	75°	14.7	18.8	27.8
90°	5.4	5.4	8.0	90°	10.4	10.4	16.0	90°	21.0	21.0	29.0
2" PROFILE2 PROPORTIONAL CONTROL VALVE				3" PROFILE2 PROPORTIONAL CONTROL VALVE				4" PROFILE2 PROPORTIONAL CONTROL VALVE			
OPENING ANGLE	SLOW OPEN	FAST OPEN	FULL PORT VALVE	OPENING ANGLE	SLOW OPEN	FAST OPEN	FULL PORT VALVE	OPENING ANGLE	SLOW OPEN	FAST OPEN	FULL PORT VALVE
15°	1.0	2.5	10.0	15°	3.0	10.0	10.0	15°	5.0	18.0	38.0
30°	4.0	11.0	16.0	30°	12.0	26.0	26.0	30°	30.0	55.0	90.0
45°	11.0	25.0	35.0	45°	30.0	50.0	55.0	45°	65.0	114.0	165.0
60°	21.0	44.0	72.0	60°	60.0	79.0	110.0	60°	120.0	183.0	250.0
75°	37.0	54.0	117.0	75°	89.0	112.0	212.0	75°	185.0	200.0	458.0
90°	56.0	56.0	150.0	90°	128.0	128.0	490.0	90°	215.0	215.0	600.0

PRESSURE LOSS CALCULATION FORMULA

$$\Delta P = \left[\frac{Q}{C_v} \right]^2$$

ΔP = Pressure Drop

Q = Flow in GPM

Cv = Flow Coefficient