Actuator Ready

NSF

Certified to NSF/ANSI 61 & 372

CVH Series Profile2™ Proportional Control Ball Valves

1/2" TO 2" / DN15 TO DN50 PVC AND CPVC

KEY FEATURES & BENEFITS

- Profile2™ Characterized Ball
- System2™ Sealing Technology provides longer cycle life
- 250 PSI / 16 Bar, non-shock at 70°F/23°C full pressure rating
- Consistent operating torque with adjustment-free design
- Lockout/Tagout mechanism that secures directly to valve body for enhanced safety
- Ergonomic handle for improved grip and comfort
- ISO mounting flange simplifies actuation
- Permanent markings, eliminates labels
- Integral footpad for skid or panel mount
- FPM or EPDM seals
- Double O-Ring stem seals
- Reversible PTFE seats – Standard
- Easy replacement for existing Hayward TB and CV Series
- NSF / ANSI 61 and NSF / ANSI 372 Listed

OPTIONS

- Pneumatic or Electric Actuators
- Stem Extensions
- Manual Limit Switch
- Coupling for Actuator

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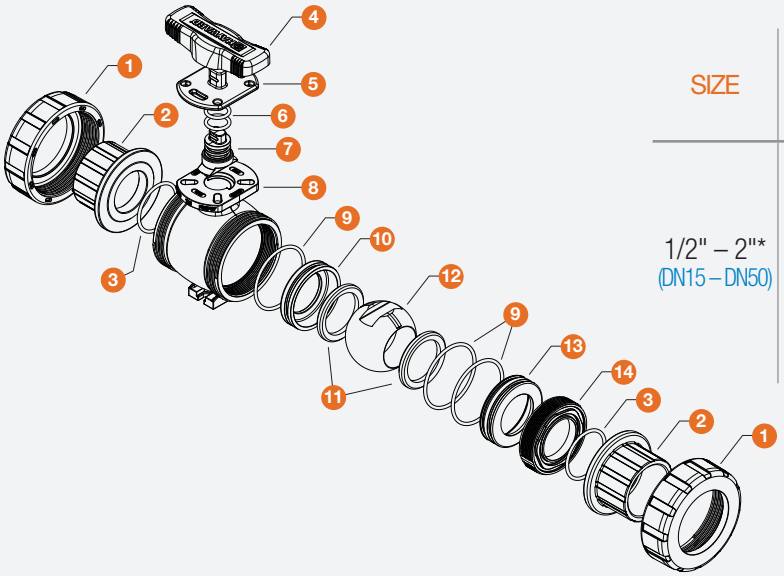
MATERIALS

- PVC per ASTM D1784 Cell Class 12454
- CPVC per ASTM D1784 Cell Class 23447
- GFPP per ASTM D4101 Cell Class 85580 (Handle & Lock Plate)

TECHNICAL INFORMATION

EXPLODED VIEW



SELECTION CHART

SIZE	BODY MATERIAL	SEALS	END CONNECTION	PRESSURE RATING
1/2" – 2"* (DN15 – DN50)	PVC or CPVC	FPM or EPDM	Socket or Threaded	250 PSI @ 70°F 16 Bar @ 21°C Non-Shock
			Flanged	150 PSI @ 70°F 10 Bar @ 21°C Non-Shock

* Does not include sizes 1-1/4" and 1-1/2".

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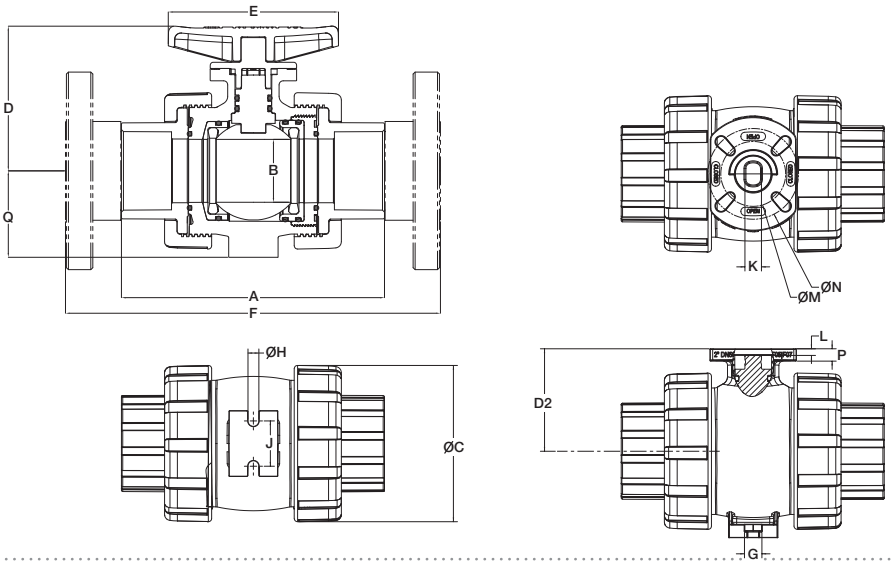
1/2 TO 2" / DN15 TO DN50 PVC AND CPVC

TECHNICAL INFORMATION, *CONTINUED*

PARTS LIST / 2D DRAWINGS

1. Nut (2)
2. End Connector (2)
3. End Connector O-Ring (2)
4. Handle
5. Lock Plate
6. Stem O-Rings (2)
7. Stem
8. Body
9. Seat Carrier O-Ring (3)
10. Closed End Seat Carrier
11. Seats (2)
12. Ball (control)
13. Open End Seat Carrier
14. Seat Retainer

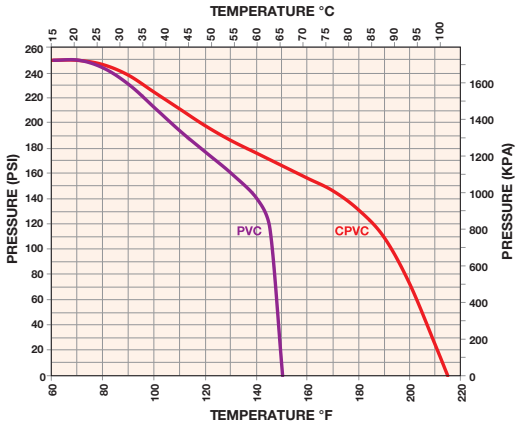


DIMENSIONS – INCHES / MILLIMETERS

SIZE	A	B	C	D1	D2	E	F	G	H	J	K	L	M	N	P	Q
inches / DN	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm
1/2 / 15	4.65 / 118	0.53 / 13	2.25 / 57	2.82 / 72	1.75 / 44	3.50 / 89	6.65 / 169	0.45 / 11	0.27 / 7	0.75 / 19	0.50 / 13	0.17 / 4	1.97 / 50	N/A	0.29 / 7	1.37 / 35
3/4 / 20	4.79 / 122	0.72 / 18	2.62 / 67	2.98 / 76	1.91 / 49	3.50 / 89	7.17 / 182	0.45 / 11	0.27 / 7	0.75 / 19	0.50 / 13	0.17 / 4	1.97 / 50	N/A	0.29 / 7	1.56 / 40
1 / 25	5.34 / 136	0.94 / 24	3.00 / 76	3.25 / 83	2.18 / 55	4.00 / 102	8.05 / 204	0.45 / 11	0.27 / 7	1.00 / 25	0.50 / 13	0.20 / 5	1.97 / 50	N/A	0.29 / 7	1.75 / 44
2 / 50	7.99 / 203	1.91 / 49	4.75 / 121	4.40 / 112	3.11 / 79	5.17 / 131	11.51 / 292	0.53 / 13	0.33 / 8	1.38 / 35	0.50 / 13	0.20 / 5	1.97 / 50	2.76 / 70	0.34 / 9	2.63 / 67

* Dimensions are subject to change without notice - consult factory for installation information.

PRESSURE / TEMPERATURE CHART*



* Flanged valves rated to 150 PSI at 70°F non-shock

PROPORTIONAL VALVE FLOW COEFFICIENTS

1/2" PROFILE2 PROPORTIONAL CONTROL VALVE

OPENING ANGLE	SLOW OPEN	FAST OPEN	FULL PORT VALVE
15°	.10	.10	.10
30°	.30	.50	.30
45°	1.4	2.7	1.1
60°	2.6	4.3	2.5
75°	4.9	5.2	7.2
90°	5.4	5.4	8.0

3/4" PROFILE2 PROPORTIONAL CONTROL VALVE

OPENING ANGLE	SLOW OPEN	FAST OPEN	FULL PORT VALVE
15°	.10	.10	.10
30°	.70	1.2	.70
45°	2.8	5.3	2.5
60°	5.3	8.5	5.3
75°	9.4	10.1	14.4
90°	10.4	10.4	16.0

1" PROFILE2 PROPORTIONAL CONTROL VALVE

OPENING ANGLE	SLOW OPEN	FAST OPEN	FULL PORT VALVE
15°	.50	1.0	1.2
30°	1.9	3.4	3.5
45°	3.7	7.0	7.5
60°	8.0	13.0	15.3
75°	14.7	18.8	27.8
90°	21.0	21.0	29.0

2" PROFILE2 PROPORTIONAL CONTROL VALVE

OPENING ANGLE	SLOW OPEN	FAST OPEN	FULL PORT VALVE
15°	1.0	2.5	10.0
30°	4.0	11.0	16.0
45°	11.0	25.0	35.0
60°	21.0	44.0	72.0
75°	37.0	54.0	117.0
90°	56.0	56.0	150.0

PRESSURE LOSS CALCULATION FORMULA

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

ΔP = Pressure Drop

Q = Flow in GPM

Cv = Flow Coefficient

WEIGHT – LBS / KG

SIZE	Weight with Socket/Threaded Ends	Weight with Flanged Ends	Weight Bare Stem with Socket/Threaded Ends	Weight Bare Stem with Flanged Ends
inches / DN	lbs / kg	lbs / kg	lbs / kg	lbs / kg
1/2 / 15	0.70 / 0.32	1.12 / 0.51	0.59 / 0.27	1.01 / 0.46
3/4 / 20	0.90 / 0.41	1.50 / 0.68	0.79 / 0.36	1.39 / 0.63
1 / 25	1.18 / 0.54	1.98 / 0.90	1.05 / 0.48	1.85 / 0.84
2 / 50	3.87 / 1.76	6.37 / 2.89	3.62 / 1.64	6.12 / 2.78

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