

ECO Valve

...because we all live downstream

Back Pressure / Pressure Relief Valves



- **available in PVC, CPVC, PVDF, polypropylene and 316L stainless steel**
- **long life single sealing diaphragm (laminated PTFE, Viton, EPDM or PVC)**
- **field adjustable pressure setting 7 - 150 PSIG (48 - 1034 kPa)**
- **CPVC bonnet for higher temperature and chemical resistance rating**

 PRIMARY FLUID
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ECO Valve Back Pressure/Pressure Relief Valve

Description:

Back Pressure/Pressure Sustaining/Anti Syphon

ECO Valve is a diaphragm style two port back pressure/pressure sustaining valve designed to provide and control a continuous pressure on the discharge side of a positive discharge style pump, such as metering pumps. ECO Valve assists with the proper seating of the valve check assembly and accurate filling of the pump housing chamber for a more efficient and accurate running pump. (Factory set @ 50 psig / 345kPa)

Pressure Relief

ECO Valve is also designed to be used as a 2 port off line pressure relief valve to help protect the discharge side of positive displacement pumps from system failure due to over pressure caused by a blockage or

accidental valve closure on the downstream side of the pump. (Factory set @ 50 psig / 345kPa)



Flanged



NPT/BSPT

Features

- no moving parts in wetted chamber; superior choice for “dirty” fluid applications
- high flow capacity with lower pressure drop
- optional diaphragm materials
- colour coded caps indicate size
- sizes from 1/4” to 4” (DN 8 to DN 100)
- 10 configurations: threaded, socket, union and flanged
- injection mould design with fewer moving parts
- high ambient temperature range
- gauge port available in either flow direction



Union



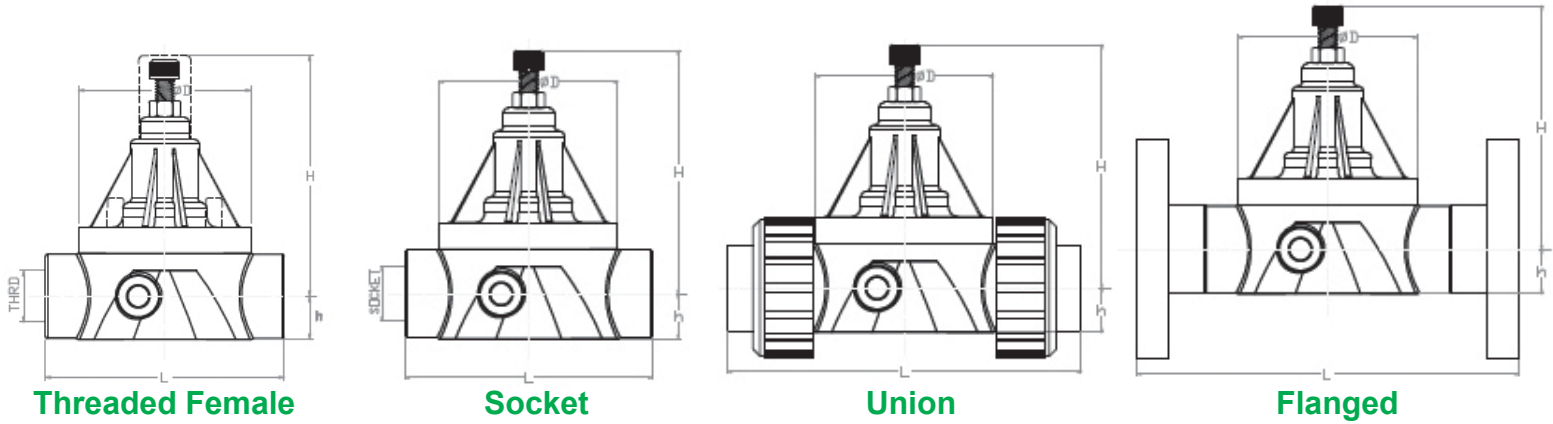
Socket

Ideal for metering pump/chemical dosing applications

Designed for long life and ease of installation and maintenance

Exceptional 3 year warranty

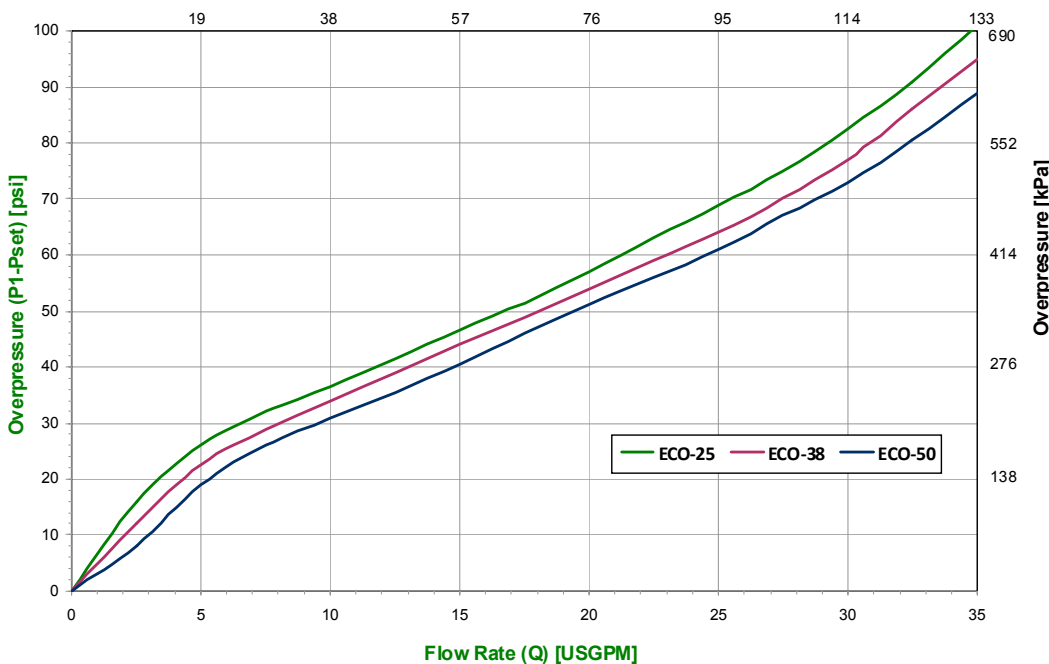
Body Configuration Models ECO-25, ECO-38, ECO-50



Nominal Size		PVC, CPVC, PP & PVDF						
NPS	DIN	ØD	h	H	L	L	L	L
inch	DN	inch	mm	inch	mm	inch	mm	inch
Series A		Thread		Socket		Flanged		Union
1/4"	8	2.5	0.66	4.48	3.4	3.4	N/A	6.0
		63.5	16.7	113.9	86.4	86.4		152.4
3/8"	10	2.5	0.66	4.48	3.4	3.4	N/A	6.0
		63.5	16.7	113.9	86.4	86.4		152.4
1/2"	15	2.5	0.66	4.48	3.4	3.4	5.4	6.0
		63.5	16.7	113.9	86.4	86.4	137.2	152.4

Nominal Size		316L Stainless Steel					
NPS	DIN	ØD	h	H	L	L	L
inch	DN	inch	mm	inch	mm	inch	mm
Series A		Thread		Socket		Flanged	
1/4"	8	2.5	0.6	4.47	2.5	2.5	N/A
		63.5	15.2	113.5	63.5	63.5	
3/8"	10	2.5	0.49	4.58	2.5	2.5	N/A
		63.5	12.4	116.3	63.5	63.5	
1/2"	15	2.5	0.6	4.72	2.5	2.5	6.15
		63.5	15.2	119.9	63.5	63.5	156.2

Overpressure vs. Flow Rate
1/4", 3/8" & 1/2" ECO VALVE
Flow Rate (Q) [LPM]



The overpressure vs. flow rate curve is based on a valve spring pressure of 50 PSIG (345 kPa).

P1 = working pressure
P set = 50 PSIG (345 kPa)

Example:

ECO-25
100 PSIG - 50 PSIG = 50 PSIG = 17 USGPM

690 kPa - 345 kPa = 345 kPa = 64 LPM

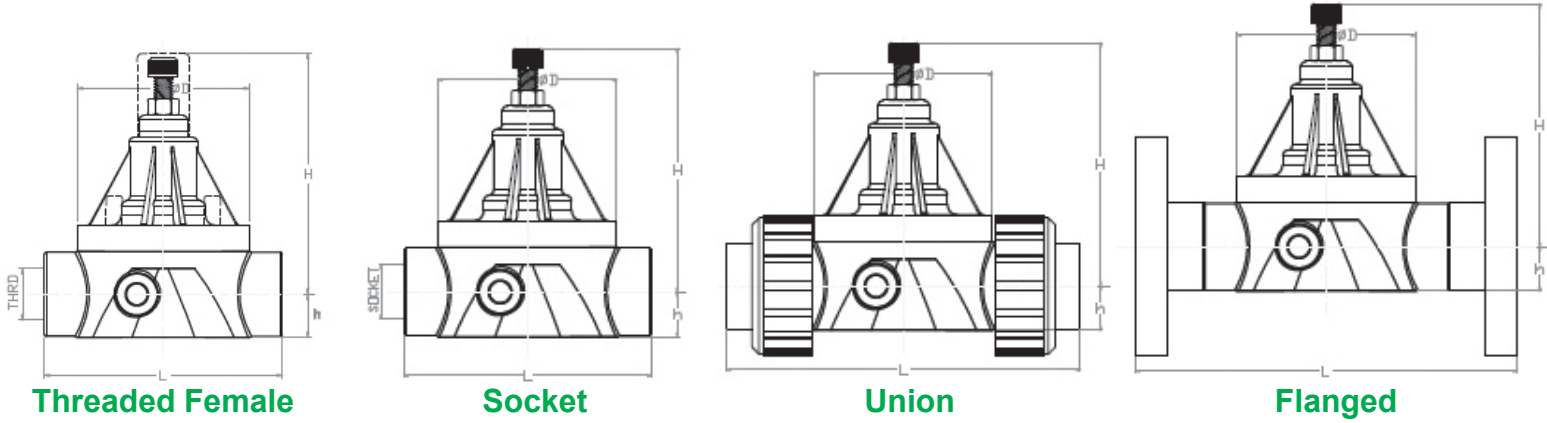
Maximum Pressure PSIG (kPa) vs. Temperature

Temperature		Valve Material							
C°	F°	PVC		CPVC		PP		PVDF	
		PSIG	kPa	PSIG	kPa	PSIG	kPa	PSIG	kPa
20	68	150	1034	150	1034	150	1034	150	1034
30	86	110	758	150	1034	150	1034	150	1034
40	104	70	483	150	1034	100	689	150	1034
50	122	30	207	140	965	65	448	150	1034
60	140	NR	NR	130	896	36	248	150	1034
70	158	NR	NR	105	724	NR	NR	135	931
80	176	NR	NR	75	517	NR	NR	120	827

The maximum pressure rating for valves regardless of size is 150 PSIG (1034 kPa) at 73° F (22°C)

NR = not recommended

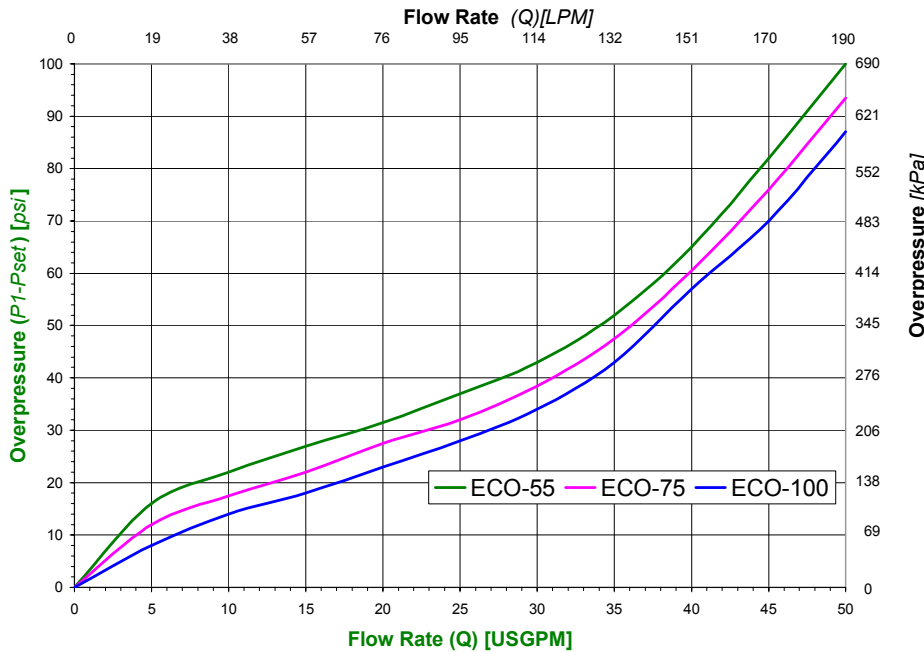
Body Configuration Models ECO-55, ECO-75, ECO-100



Nominal Size		PVC, CPVC, PP & PVDF						
NPS	DIN	ØD	h	H	L	L	L	L
inch	DN	inch	inch	inch	inch	inch	inch	inch
	DN	mm	mm	mm	mm	mm	mm	mm
Series B					Thread	Socket	Flanged	Union
1/2"		3.5	0.88	4.8	4.85	4.85	6.93	7.30
High Flow	15	88.9	22.4	121.9	123.2	123.2	176.0	185.4
3/4"		3.5	0.88	4.8	4.85	4.85	7.17	7.30
	20	88.9	22.35	121.92	123.19	123.19	182.10	185.4
1"		3.5	0.88	4.8	4.85	4.85	7.48	7.30
	25	88.9	22.4	121.9	123.2	123.2	190.0	185.4

Nominal Size		316L Stainless Steel						
NPS	DIN	ØD	h	H	L	L	L	L
inch	DN	inch	inch	inch	inch	inch	inch	inch
	DN	mm	mm	mm	mm	mm	mm	mm
Series B					Thread	Socket	Flanged	
1/2"		3.50	0.63	4.8	3.5	3.5	7.17	
High Flow	15	88.9	16.0	121.9	88.9	88.9	182.1	
3/4"		3.5	0.73	4.8	3.5	3.5	7.50	
	20	88.9	18.5	121.9	88.9	88.9	190.5	
1"		3.5	0.86	4.8	3.5	3.5	7.66	
	25	88.9	21.8	121.9	88.9	88.9	194.6	

Overpressure vs. Flow Rate
1/2", 3/4" and 1" ECO VALVE



The overpressure vs. flow rate curve is based on a valve spring pressure of 50 PSIG (345 kPa).

P1 = working pressure
P set = 50 PSIG (345 kPa)

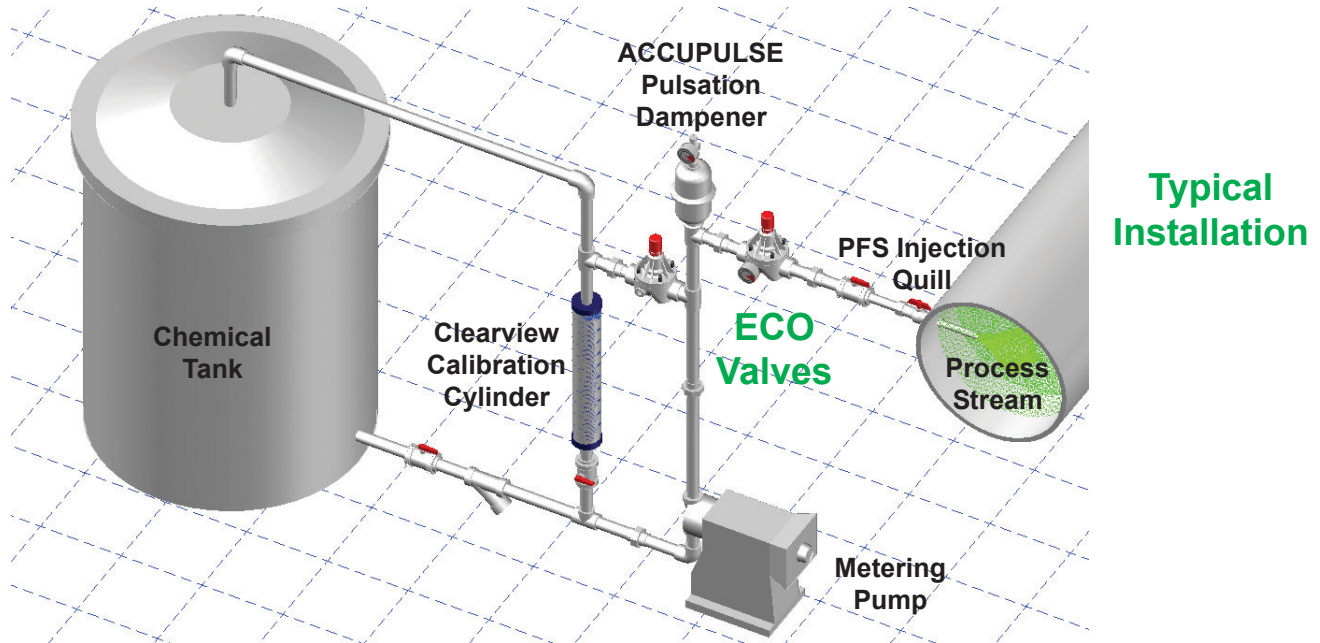
Example:
ECO-55
100 PSIG - 50 PSIG = 50 PSIG = 34 USGPM
690 kPa - 345 kPa = 345 kPa = 128.4 LPM

Maximum Pressure PSIG (kPa) vs. Temperature									
Temperature		Valve Material							
C°	F°	PVC		CPVC		PP		PVDF	
		PSIG	kPa	PSIG	kPa	PSIG	kPa	PSIG	kPa
20	68	150	1034	150	1034	150	1034	150	1034
30	86	110	758	150	1034	150	1034	150	1034
40	104	70	483	150	1034	100	689	150	1034
50	122	30	207	140	965	65	448	150	1034
60	140	NR	NR	130	896	36	248	150	1034
70	158	NR	NR	105	724	NR	NR	135	931
80	176	NR	NR	75	517	NR	NR	120	827

The maximum pressure rating for valves regardless of size is 150 PSIG (1034 kPa) at 73° F (22°C)

NR = not recommended

ECO Valve Back Pressure/Pressure Relief Valve



Ordering Information

Example: Part # ECO - 50A - PVC - P - NL

**Back Pressure/Pressure Relief Valve
2 Port Design**

Sizes Available:

25 = DN 8 = 1/4"
 38 = DN 10 = 3/8"
 50 = DN 15 = 1/2"
 55 = DN 15 = 1/2" (High Flow)
 75 = DN 20 = 3/4"
 100 = DN 25 = 1"
 110 = DN 25 = 1" (High Flow)
 125 = DN 32 = 1 1/4"
 150 = DN 40 = 1 1/2"
 200 = DN 50 = 2"
 220 = DN 50 = 2" (High Flow)
 300 = DN 80 = 3"
 400 = DN 100 = 4"

Connections Available:

A = NPT
 B = BSPT
 C = Socket (ASTM)
 D = Socket (DIN)
 E = Flanged (ANSI)
 F = Flanged (DIN)
 G = Union X NPT (plastic only)
 H = Union X BSPT (plastic only)
 I = Union X Socket (ASTM) (plastic only)
 J = Union X Socket (DIN) (plastic only)

Options

NL = gauge port - NPT (left to right flow)
 BL = gauge port - BSP (left to right flow)
 NR = gauge port - NPT (right to left flow)
 BR = gauge port - BSP (right to left flow)

Diaphragms

P = PVC (standard on all PVC valves)
 T = Teflon backed EPDM (standard on all except PVC valves)
 E = EPDM
 V = Viton

Body Materials

PVC = polyvinylchloride
 PP = polypropylene
 PVDF = polyvinylidene fluoride
 CPVC = chlorinated polyvinyl chloride (Corzan)
 S/S = 316L Stainless Steel

Note: Viton "O" ring seals are standard on all union style valves. EPDM and Teflon encapsulated rings are available for an additional charge. Please contact our sales order desk for pricing.

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