

PEB / PESB Series

Best-in-class Professional Series Plastic Irrigation Valves

Features

- Durable glass-filled nylon construction with fabric-reinforced rubber diaphragm for long life and reliable performance
- Globe configuration
- Normally closed, forward flow design
- Slow closing to prevent water hammer and subsequent system damage
- Low flow capability for a wide range of applications
- One-piece solenoid design with captured plunger and spring for easy servicing. Prevents loss of parts during field service
- Flow control handle adjusts water flows as needed
- Manual internal bleed manually operates the valve without allowing water into the valve box; allows pressure regulator to be adjusted without turning the valve on at the controller first
- Manual external bleed permits flushing debris from the system. Recommended for system start up and after repairs
- Stainless steel studs molded into the body. Bonnet can be attached and removed more easily and more often without damaging threads
- Nylon scrubber scrapes a stainless steel screen to clean and break down grit and plant material. Prevents debris build-up and clogging (PESB Series only)
- Five-year trade warranty

Specifications

- Pressure: 20 to 200 psi (1.4 to 13.8 bar)
- Flow without PRS-D option: 0.25 to 300 GPM (0.06 to 68 m³/h; 0.02 to 18.9 l/s)
- Flow with PRS-D option: 5 to 200 GPM (1.14 to 45 m³/h; 0.32 to 12.60 l/s)
- Temperature: Up to 150° F (66° C)
- 24VAC 50/60Hz (cycles/sec) solenoid power requirement
- Inrush current: 0.41A (9.9VA) at 50/60Hz
- Holding current: 0.14A (3.43VA) at 50/60Hz
- Solenoid coil resistance: 30-39 Ohms, nominal

Options

- Accommodates optional, field installed PRS-D pressure regulating module to ensure optimum sprinkler performance. Regulates up to 100 psi (6.9 bar)
- Accepts latching solenoid for use with Rain Bird battery-operated controllers up to 150 psi (10.35 bar)
- Compatible with ESP-LXD decoders
- Optional purple flow control handle for non-potable water applications PEB-NP-HAN1 (1"); PEB-NP-HAN2 (1 1/2" and 2")



PEB Cutaway



PESB Cutaway



150-PEB



150-PESB

How to Specify

100 - PEB - PRS-D

Size
100: 1" NPT
150: 1 1/2" NPT
200: 2" NPT
300: 3" NPT

Model
PEB
PESB

Optional Feature
PRS-Dial: pressure
regulating module
(must be ordered
separately)

Note: Valve and PRS-Dial module must be ordered separately. For non-U.S. applications, it is necessary to specify NPT or BSP thread type.

Dimensions

Model	Height	Length	Width
• 100-PEB and 100-PESB:	6½" (16.5 cm)	4" (10.2 cm)	4" (10.2 cm)
• 150-PEB and 150-PESB:	8" (20.3 cm)	6" (15.2 cm)	6" (15.2 cm)
• 200-PEB and 200-PESB:	8" (20.3 cm)	6" (15.2 cm)	6" (15.2 cm)
• 300-PESB:	13¾" (34.6 cm)	8" (20.3 cm)	7" (17.8 cm)

Note: The PRS-Dial option adds 2" (5.1 cm) to valve height

Models

- 100-PEB and 100-PESB: 1" NPT
- 150-PEB and 150-PESB: 1½" NPT
- 200-PEB and 200-PESB: 2" NPT
- 300-PESB: 3" NPT **NEW**

BSP threads available; specify when ordering

Recommendations

1. Rain Bird recommends flow rates in the supply line not to exceed 7.5 ft/sec (2.29 m/s) in order to reduce the effects of water hammer
2. For flows below 5 gpm (1.14 m³/h; 19.2 l/m), Rain Bird recommends use of upstream filtration to prevent debris from collecting below the diaphragm
3. For flows below 10 gpm (2.27 m³/h; 37.8 l/m) Rain Bird recommends the flow control stem be turned down two full turns from the fully open position
4. For PRS-Dial applications, Rain Bird recommends the installation of a pressure-regulating master valve or inline pressure regulator when the inlet pressure exceeds 100 psi (6.9 bar)

PEB and PESB Series Valve Pressure Loss (psi)			
Flow gpm	100-PEB 1"	150-PEB 1½"	200-PEB 2"
0.25	0.8	-	-
0.5	1.0	-	-
1	1.3	-	-
5	1.7	-	-
10	1.8	-	-
20	2.9	3.9	-
30	5.6	3.6	-
40	10.0	3.5	-
50	15.6	3.6	4.8
75	-	5.4	4.5
100	-	9.6	5.2
125	-	14.6	8.2
150	-	21.2	11.8
175	-	-	15.5
200	-	-	19.5

Notes

1. Loss values are with flow control fully open
2. PRS-Dial recommended for use in shaded area only

PEB and PESB Series Valve Pressure Loss (bar)				METRIC
Flow m³/h	Flow l/m	100-PEB 2.5cm	150-PEB 3.8cm	200-PEB 5.1cm
0.06	1	0.06	-	-
0.3	5	0.09	-	-
0.6	10	0.10	-	-
1.2	20	0.12	-	-
3	50	0.15	-	-
6	100	0.32	0.26	-
9	150	0.68	0.24	-
12	200	-	0.26	0.33
15	250	-	0.33	0.32
18	300	-	0.42	0.32
21	350	-	0.57	0.34
24	400	-	0.74	0.41
27	450	-	0.92	0.51
30	500	-	1.14	0.64
33	550	-	1.38	0.77
36	600	-	-	0.90
39	650	-	-	1.04
42	700	-	-	1.18
45	757	-	-	1.34

300 PESB Series Valve Pressure Loss (psi)		
Flow gpm	300-PESB 3" (Globe)	300-PESB 3" (Angle)
60	6.6	6.8
80	5.1	5.9
100	3.2	3.5
120	1.8	1.8
140	1.8	2.1
160	2.0	2.1
180	2.2	2.0
200	2.7	2.5
250	4.0	3.4
300	4.9	4.5

300 PESB Series Valve Pressure Loss (bar)			METRIC
Flow m³/h	Flow l/m	300-PESB 3" (Globe)	300-PESB 3" (Angle)
13.63	227.12	0.46	0.47
18.17	302.83	0.35	0.41
22.71	378.54	0.22	0.24
27.25	454.25	0.12	0.12
31.80	529.96	0.12	0.14
36.34	605.66	0.14	0.14
40.88	681.37	0.15	0.14
45.42	757.08	0.19	0.17
56.78	946.35	0.28	0.23
68.14	1135.62	0.34	0.31