

Valves

Introduction

Spray/Bodies

Spray Nozzles

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Valves

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Central Controls

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Resources



The Toughest, Most Reliable Valves In their Class

Relentless research, testing and retesting have led to a product you can stand behind. The Rain Bird® PGA valve is the preferred valve for high-end residential and light commercial jobs.

Major Products

Primary Applications	DV	DVF	ASVF	HV	HVF	PGA	PEB	PESB/PESB-R	EFB-CP	BPES	QC
Manual Bleed	I/E	I/E	I/E	I/E	I/E	I	I/E	I/E	I/E	E	
Flow Control		•	•		•	•	•	•	•	•	
Bottom Inlet	DV-A		•			•				•	•
Low Flow	•	•	•	•	•		•	•	•		
PRS-Dial Compatible						•	•	•	•	•	
Dirty Water								•	•	•	
Non-Potable Water						•	•	•	•	•	•
Sites Requiring Brass									•	•	•
Sites Requiring Plastic	•	•	•	•	•	•	•	•			
Decoder System Compatible						•	•	•	•	•	

• DV/DVF available in globe, angle, slip x slip, and male x barb configurations. • Flows below 3 gpm (0.68 m³/h; 0.19 l/s) install 200 mesh filter upstream. • I/E = Internal/External
 • The PESB-R and EFB-CP are specifically designed with chlorine-resistant components for reclaimed water applications.



Water Saving Tips

- The PRS-Dial is an excellent means of regulating outlet pressure at the valve regardless of incoming pressure fluctuations. It helps ensure optimal pressure performance at the head.
- Rain Bird valves provide excellent filtration characteristics for maximum reliability in a wide range of environments.
- PESB-R and EFB-CP reclaimed valves provide reliable operation in all water conditions. Valve diaphragms are composed of EPDM, a rubber material which is chlorine and chemical resistant.

DV / DVF Series

Diaphragm Valve – The Industry Leader for Over 25 Years

Features

- Double-filtered (diaphragm and solenoid) pilot-flow design for maximum reliability and grit resistance
- Buna-N, balanced diaphragm with self-cleaning 90 mesh (200 micron) pilot water filter and captive spring
- Energy-efficient, low-power encapsulated solenoid with captured plunger and 90-mesh (200 micron) solenoid filter
- Unique, easy-to-turn patented pressure assisted flow control mechanism (DVF models only)
- External bleed to manually flush system of dirt and debris during installation and system start-up
- Internal bleed for spray-free manual operation
- Accepts Rain Bird TBOS latching solenoid for use with most battery-operated controllers
- Operates in low-flow and Landscape Drip applications when a 200 mesh filter is installed upstream
- **Not recommended for use with two-wire control systems**

Specifications

- Pressure: 15 to 150 psi (1,0 to 10,4 bar)
- 075-DV Non-Flow Control Model: 0.2 to 22 GPM (0,05 to 5,0 m³/h; 0,01 to 1,39 l/s). For flows below 3 GPM (0,68 m³/h; 0,19 l/s) or any Landscape Drip application, use a 200 mesh filter installed upstream
- 100-DV Non-Flow Control Model: 0.2 to 40 gpm (0,05 to 9,085 m³/h; 0,01 to 2,52 l/s). For flows below 3 gpm (0,68 m³/h; 0,19 l/s) or any Landscape Drip application, use a 200 mesh filter installed upstream
- 100-DVF Flow Control Model: 0.2 to 40 gpm (0,05 to 9,085 m³/h; 0,01 to 2,52 l/s); For flows below 3 gpm (0,68 m³/h; 0,19 l/s) or any Landscape Drip application, use a 200 mesh filter installed upstream
- Water Temperature: Up to 110° F (43° C)
- Ambient air temperature: Up to 125° F (52° C)
- 24 VAC 50/60 Hz (cycles per second) solenoid power requirement: 0.450A inrush current; 0.250A holding current
- Solenoid coil resistance: 38 Ohms



075-DV



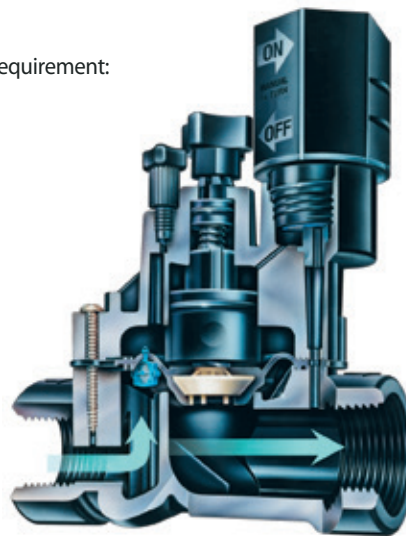
100-DVF-MB



100-DV-A



100-DVF



DVF Cutaway

How To Specify

100 - DV - MB

Optional Configuration:
MB: Male x Barb
A: Angle
SS: Slip x Slip

Model

DV: Remote Control Valve
DVF: Remote Control Valve with Flow Control

Size

075: 3/4" (20/27);
100: 1" (26/34)

This specifies a 100-DV valve, 1" (26/34) male x barb with flow control. Note: For non-U.S. applications it is necessary to specify NPT or BSP thread type (1" only).

DV / DVF Series (cont.)

Dimensions

DV Valves

- Height: 4½" (11.4 cm)
- Height (Angle): 5½" (14 cm)
- Length: 4¾" (11.1 cm)
- Length (Angle): 3¾" (9.5 cm)
- Length (MB): 5¾" (14.6 cm)
- Width: 3½" (8.4 cm)

DVF Valves

- Height: 5¾" (14.2 cm)
- Length: 4¾" (11.1 cm)
- Length (MB): 5¾" (14.6 cm)
- Width: 3½" (8.4 cm)

Models

- 075-DV: ¾" (20/27) NPT
- 100-DV: 1" (26/34) NPT female x female*
- 100-DV-SS: 1" (26/34) slip x slip
- 100-DV-A: 1" (26/34) NPT female x female
- 100-DV-MB: 1" (26/34) male x barb
- 100-DVF: 1" (26/34) NPT female x female*
- 100-DVF-SS: 1" (26/34) slip x slip
- 100-DVF-MB: 1" (26/34) male x barb

* Available with BSP threads

Recommendations

1. Rain Bird recommends flow rates that result in discharge velocities in the supply line not to exceed 7.5 ft/sec (2.3 m/s) in order to reduce the effects of water hammer.
2. Rain Bird residential valves cannot be used with PRS pressure regulating modules.
3. **Not recommended for use with two-wire systems.**

DV and DVF Valve Pressure Loss (psi)		
Flow gpm	075-DV ¾" psi	100-DV/100-DVF 1" psi
1	3.2	3.3
3	3.9	3.6
5	4.2	3.8
10	5.0	3.8
20	7.7	5.1
30	-	6.4
40	-	8.6

DV and DVF Valve Pressure Loss (bar)			METRIC
Flow m³/h	l/m	075-DV ¾" bar	100-DV/100-DVF 1" bar
0.23	4	0.22	0.23
0.60	10	0.26	0.24
1.20	20	0.29	0.26
3.60	60	0.45	0.32
4.50	75	0.53	0.35
6.00	100	-	0.41
9.00	150	-	0.59

100-DV Angle, MxB Valve Pressure Loss (psi)		
Flow gpm	Angle 1" psi	Male x barb 1" psi
1	2.8	2.5
3	3.0	2.9
5	3.2	3.0
10	3.9	3.1
20	4.3	4.3
30	5.4	7.4
40	8.2	12.7

100-DV Angle, MxB Valve Pressure Loss (bar)			METRIC
Flow m³/h	l/m	Angle 1" bar	Male x barb 1" bar
0.23	4	0.19	0.17
0.60	10	0.20	0.19
1.20	20	0.22	0.21
3.60	60	0.28	0.26
4.50	75	0.30	0.30
6.00	100	0.35	0.44
9.00	150	0.56	0.86

Note: DV/DVF Male x barb not recommended for flows exceeding 30 gpm (6.81 m³/h, 113.56 l/m)

ASVF Series

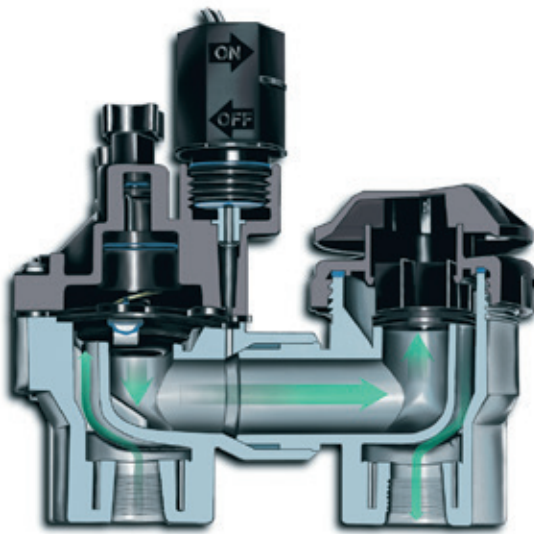
Anti-siphon Valve with Flow Control – The Industry Leader for Over 20 Years

Features

- Combination of the reliable DVF Angle valve and atmospheric backflow preventer in one unit
- Incorporates all features of DV/DVF Series valves
- I.A.P.M.O. and A.S.S.E listing approved
- City of Los Angeles listing approved
- **Not recommended for use with two-wire control systems**

Specifications

- Pressure: 15 to 150 psi (1,0 to 10,4 bar)
- 075-ASVF Flow: 0.2 to 22 GPM (0,05 to 5,0 m³/h; 0,01 to 1,39 l/s). For flows below 3 GPM (0,68 m³/h; 0,19 l/s) or any Landscape Drip products application, use a 200 mesh filter installed upstream
- 100-ASVF Flow: 0.2 to 40 GPM (0,05 to 9,085 m³/h; 0,01 to 2,52 l/s). For flows below 3 GPM (0,68 m³/h; 0,19 l/s) or any Landscape Drip products application, use a 200 mesh filter installed upstream
- Water temperature: Up to 110° F (43° C)
- Ambient air temperature: Up to 125° F (52° C)
- 24 VAC 50/60 Hz (cycles per second) solenoid power requirement: 0.450A inrush current; 0.250A holding current
- Solenoid coil resistance: 38 Ohms



ASVF Cutaway

Installation Notes

- Anti-siphon valve must be installed upright
- Anti-siphon unit must be installed at least 6" (15,2 cm) above the highest point of water in the pipe and sprinklers it serves
- No valve can be located downstream of the anti-siphon valve
- Anti-siphon valves must not be subjected to operating pressure for more than twelve (12) hours in any twenty-four (24) hour period
- Uniform Plumbing Code Sec. 1003 (2) 602.2 Consult local codes

Dimensions

- Height: 6¼" (15.8 cm)
- Length: 6¼" (15.5 cm)
- Width: 3⅓" (8.1 cm)

Models

- 075-ASVF: ¾" (20/27)
- 100-ASVF: 1" (26/34)

Models available in NPT threads only

Recommendations

1. Rain Bird recommends flow rates that result in discharge velocities in the supply line not to exceed 7.5 ft/sec (2.3 m/s) in order to reduce the effects of water hammer.
2. Rain Bird residential valves cannot be used with PRS pressure regulating modules.
3. Not recommended for use with two-wire systems.



100-ASVF

ASVF Valve Pressure Loss (psi)

Flow gpm	075-ASVF ¾" psi	100-ASVF 1" psi
1	2.8	2.9
3	3.4	3.1
5	3.8	3.3
10	4.6	3.9
20	6.5	5.0
30	-	7.8
40	-	13.4

ASVF Valve Pressure Loss (bar)

		METRIC	
Flow m ³ /h	l/m	075-ASVF ¾" bar	100-ASVF 1" bar
0.23	3.8	0.19	0.20
0.6	10	0.23	0.21
1.2	20	0.26	0.23
3.6	60	0.39	0.31
4.5	75	0.45	0.34
6.0	100	-	0.47
9.0	150	-	0.91

* Rain Bird recommends flow rates in the supply line not to exceed 7.5 ft/sec (2.3 m/s) in order to reduce the effects of water hammer

HV Series

High Value Valve. High Performance. Big Savings.

Features

- Patented, eccentric, balanced pressure, Buna-N diaphragm with self-cleaning 90-mesh (200 micron) pilot water filter and captured stainless steel spring – Eccentric design provides smoother closing, less water hammer
- Only four durable, captured multi-drive bonnet screws that come out with half the number of turns for fast and easy servicing – at least twice as fast as the competition
- Glass-filled polypropylene body for strength (slip by slip model bodies are PVC)
- All popular model configurations available
- Compact design, 2.54" spin radius for tight installations
- Reverse flow, normally closed design
- External bleed to manually flush system of dirt and debris during installation and system start-up
- Internal bleed for spray-free manual operation
- Operates in low-flow and Landscape Drip applications when a 200 mesh filter is installed upstream

Specifications

- Pressure: 15 to 150 PSI (1,0 to 10,3 bar)
- Flow: 0.2 to 30 GPM (0,05 to 6,82 m³/h; 0,01 to 1,89 l/s); for flows below 3 GPM (0,68 m³/h; 0,19 l/s) or any Landscape Drip application, use a 200 mesh filter installed upstream
- Operating Temperatures: Water temperature up to 110° F (43° C); ambient temperature up to 125° F (52° C)
- 24 VAC 50/60 Hz (cycles/sec.) solenoid
- Inrush current: 0.290A at 60 Hz
- Holding current: 0.091A at 60 Hz
- Solenoid Coil resistance: 70-85 Ohms (40° F - 110° F)



HV Valve Pressure Loss (psi)

Flow (gpm)	1" HV (psi)	1" HV-MB (psi)
1	1.57	1.73
3	2.07	2.03
5	2.38	2.25
10	3.33	2.80
20	4.59	4.45
30	6.14	7.85
40	8.23	13.68

HV Valve Pressure Loss (psi)

HV Valve Pressure Loss (psi)		METRIC	
Flow (m ³ /h)	Flow (l/s)	1" HV (bar)	1" HV-MB (bar)
0.25	0.06	0.11	0.12
0.75	0.21	0.14	0.14
1.00	0.28	0.16	0.16
2.00	0.56	0.23	0.19
5.00	1.39	0.32	0.31
7.50	2.08	0.42	0.54
9.10	2.52	0.57	0.94

* Rain Bird recommends flow rates in the supply line not to exceed 7.5 ft/sec (2.3 m/s) in order to reduce the effects of water hammer

Dimensions

- Height: 4.62" (11.7 cm)
- Height (F): 5.62" (14.3 cm)
- Height (MB): 4.50" (11.4 cm)
- Length: 4.4" (11.2 cm)
- Length (MB): 5.68" (14.4 cm)
- Width: 3.1" (7.9 cm)

Models

- 100-HV-NPT: 1" (26/34) NPT female x female*
- 100-HV-SS: 1" (26/34) slip x slip
- 100 HV-MB: 1" (26/34) male x barb
- 100 HVF: 1" (26/34) NPT female x female*
- 100 HVF-SS: 1" (26/34) slip x slip

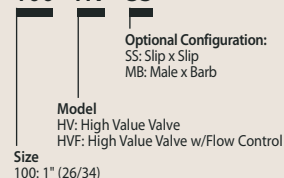
*Available with BSP threads

Recommendations

1. Rain Bird recommends flow rates that result in discharge velocities in the supply line not to exceed 7.5 ft/sec (2.3 m/s) in order to reduce the effects of water hammer.
2. Rain Bird residential valves cannot be used with PRS pressure regulating modules.
3. Not recommended for use with two-wire systems.

How To Specify

100 - HV - SS



Note: For non-U.S. applications it is necessary to specify NPT or BSP thread type (1" only)

PGA Series

Plastic Globe and Angle Valves. The Toughest, Most Reliable Valves In their Class

Features

- Water-tight seal between the body and bonnet for maximum confidence, even in the most extreme conditions
- Robust construction and electrical design for quiet performance you can count on
- Filtered pilot flow to resist debris and clogging
- Slow closing to prevent water hammer and subsequent system damage
- Normally closed, forward flow design Accepts latching solenoid for use with Rain Bird battery-operated controllers
- Multi-drive screws (Phillips, flathead, hexagonal) for easy maintenance*
- Manual internal bleed operates the valve without allowing water into the valve box. This allows the pressure regulator to be adjusted without turning the valve on at the controller
- One-piece solenoid design with captured plunger and spring for easy servicing. Prevents loss of parts during field service
- Three-year trade warranty
- Accommodates optional, field-installed PRS-D pressure regulating dial to ensure optimum sprinkler performance
- Accepts latching solenoid for use with Rain Bird battery-operated controllers
- Optional purple flow control handle for non-potable water applications PGA-NP-HAN1 (1" and 1 1/2"); PGA-NP-HAN2 (2")



Extreme Durability

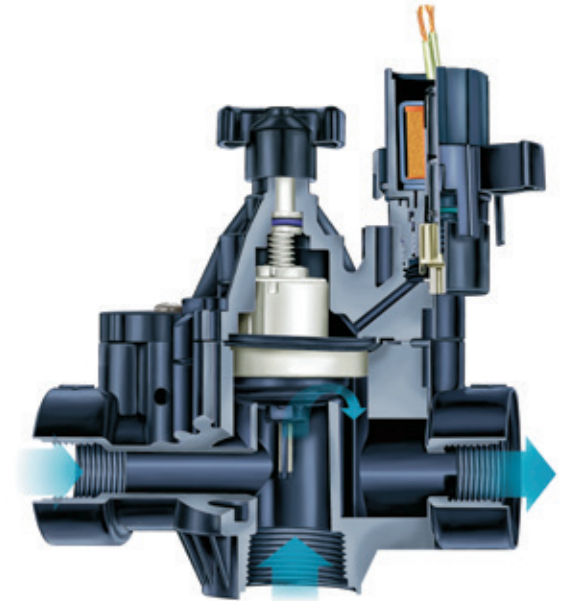
The PGA valve maintains a strong, worry-free seal between the body and bonnet, no matter the conditions. PGA valves were exposed to extreme temperature swings and intense pressures. The result—zero leaks.*



Pressure-Resistant Seal

The PGA valve's body-to-bonnet seal is built to overcome the intense water pressure typical of many commercial sites. Faced with repeated pressure surges well into the triple digits, our valves outlasted the nearest competitor more than 2 1/2 times to 1.*

* Based on 2013 testing conducted at Rain Bird's Product Research Facility in Tucson, AZ.



PGA Cutaway



150-PGA

How To Specify

100 - PGA - PRS-D

Model PGA	Optional Feature PRS-Dial: pressure regulating module (must be ordered separately)
Size 100: 1" (26/34) 150: 1 1/2" (40/49) 200: 2" (50/60)	

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.

PGA Series (cont.)

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

Specifications

- Pressure: 15 to 150 psi (1.04 to 10.4 bar)
- Flow without PRS-D option: 2 to 150 gpm (0.45 to 34.05 m³/h; 7.8 to 568 l/m)
- Flow with PRS-D option: 5 to 150 gpm (1.14 to 34.05 m³/h; 19.2 to 568 l/m)
- Water temperature: Up to 110° F (43° C) - refer to chart
- Ambient temperature: Up to 125° F (52° C)
- 24VAC 50/60Hz (cycles/sec) solenoid power requirement
- Inrush current: 0.41A (9.9VA) at 60Hz
- Holding current: 0.14A (3.43VA) at 60Hz
- Solenoid coil resistance: 30-39 Ohms, nominal

Dimensions

Model	Height	Length	Width
• 100-PGA	7 ¼" (18.4 cm)	5 ½" (14.0 cm)	3 ¼" (8.3 cm)
• 150-PGA	8" (20.3 cm)	6 ¾" (17.2 cm)	3 ½" (8.9 cm)
• 200-PGA:	10" (25.4 cm)	7 ¾" (19.7 cm)	5" (12.7 cm)

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

Models

- 100-PGA: 1" (26/34)
- 150-PGA: 1 ½" (40/49)
- 200-PGA: 2" (50/60)

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

PGA Series Valve Pressure Loss (psi)

Flow gpm	100-PGA Globe 1"	100-PGA Angle 1"	150-PGA Globe 1½"	150-PGA Angle 1½"	200-PGA Globe 2"	200-PGA Angle 2"
1	5.1	4.3	-	-	-	-
5	5.5	5.0	-	-	-	-
10	5.9	5.5	-	-	-	-
20	6.0	5.6	-	-	-	-
30	6.4	5.5	1.9	1.3	-	-
40	7.0	7.5	3.2	2.0	1.2	1.0
50	-	-	4.8	3.0	1.5	0.9
75	-	-	11.1	6.5	3.0	1.7
100	-	-	19.2	11.7	5.5	3.0
125	-	-	-	-	8.6	4.8
150	-	-	-	-	12.0	6.5

PGA Series Valve Pressure Loss (bar)

PGA Series Valve Pressure Loss (bar)							METRIC	
Flow m ³ /h	Flow l/m	100-PGA Globe 2.5 cm	100-PGA Angle 2.5 cm	150-PGA Globe 3.8 cm	150-PGA Angle 3.8 cm	200-PGA Globe 5.1 cm	200-PGA Angle 5.1 cm	
0.23	3.8	0.35	0.30	-	-	-	-	
0.6	10	0.36	0.32	-	-	-	-	
1.2	20	0.38	0.35	-	-	-	-	
3	50	0.41	0.38	-	-	-	-	
6	100	0.43	0.38	0.10	0.07	-	-	
9	150	0.48	0.51	0.22	0.14	0.08	0.07	
12	200	-	-	0.38	0.23	0.12	0.07	
15	250	-	-	0.61	0.36	0.17	0.10	
18	300	-	-	0.86	0.51	0.24	0.13	
21	350	-	-	1.16	0.70	0.33	0.18	
24	400	-	-	-	-	0.43	0.23	
27	450	-	-	-	-	0.54	0.30	
30	500	-	-	-	-	0.66	0.36	
34	568	-	-	-	-	0.83	0.45	

PGA Series Temperature Rating

Water Temperature	Continuous Pressure
73° F	150 psi
80° F	132 psi
90° F	112 psi
100° F	93 psi
110° F	75 psi

PGA Series Temperature Rating

PGA Series Temperature Rating		METRIC
Water Temperature	Continuous Pressure	
23° C	10.4 bar	
27° C	9.1 bar	
32° C	7.7 bar	
38° C	6.4 bar	
43° C	5.2 bar	

PEB / PESB Series

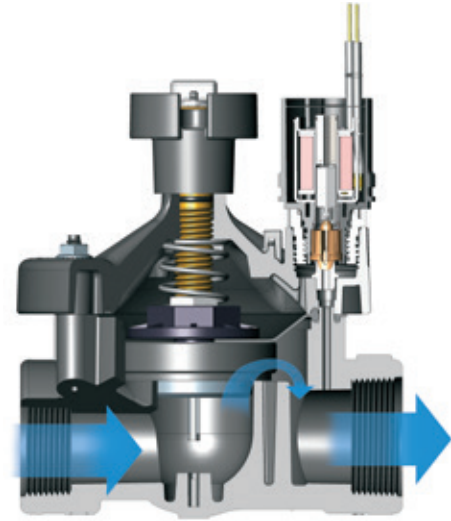
Best-in-class Professional Series Plastic Irrigation Valves

Features

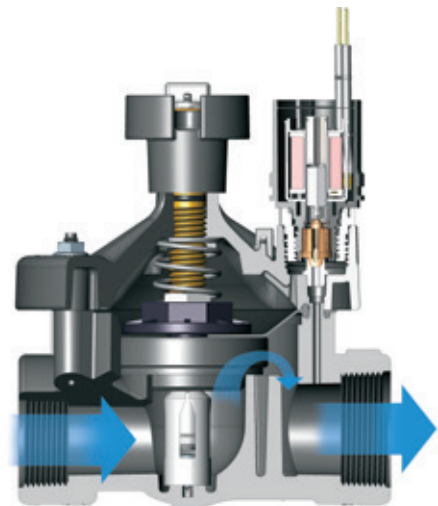
- Durable glass-filled nylon construction with fabric-reinforced rubber diaphragm for long life and reliable performance
- Globe configuration
- Normally closed, forward flow design
- Slow closing to prevent water hammer and subsequent system damage
- Low flow capability for a wide range of applications
- 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 200 GPM (0,06 to 45 m³/h; 0,02 to 12,60 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 60Hz
- Holding current: 0.14A (3.43VA) at 60Hz
- Solenoid coil resistance: 30-39 Ohms, nominal



PEB Cutaway



PESB Cutaway



150-PEB



150-PESB

How To Specify

100 - PEB - PRS-D

Size
100: 1" (26/34)
150: 1½" (40/49)
200: 2" (50/60)

Model
PEB

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.

PEB / PESB Series (cont.)

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")

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)

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

Models

- 100-PEB and 100-PESB: 1" (26/34)
- 150-PEB and 150-PESB: 1½" (40/49)
- 200-PEB and 200-PESB: 2" (50/60)

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

PEB and PESB Series Valve Pressure Loss (bar) METRIC

Flow m³/h	Flow l/m	100-PEB 2.5 cm	150-PEB 3.8 cm	200-PEB 5.1 cm
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

Notes

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

PESB-R Series Valves

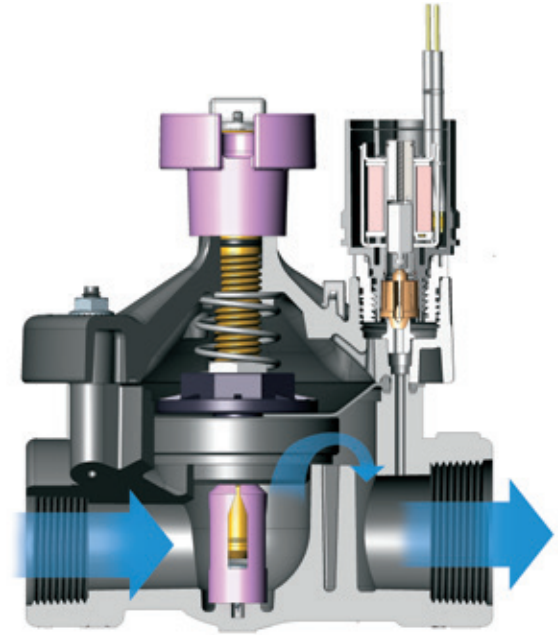
Durable Plastic – chlorine resistant Professional Plastic Irrigation Valves for reclaimed water irrigation applications

Features

- Plastic diaphragm and scrubber components molded of chlorine- and chemical-resistant plastic material
- Durable glass-filled nylon construction for long life and heavy-duty performance at 200 psi (13,80 bars) pressure
- Stainless steel studs molded into the body. Bonnet can be attached and removed easily without damaging threads
- One-piece solenoid design with captured plunger and spring for easy servicing. Prevents loss of parts during field service
- External bleed protects the solenoid ports from debris when system is flushed
- Internal bleed operates the valve without allowing water into the valve box; allows pressure regulator to be adjusted without turning on the valve at the controller first
- Slow closing to prevent water hammer and subsequent system damage
- Scrubber mechanism scrapes stainless steel screen clean to break down grit and plant material
- Purple flow control handle standard on PESB-R Series valves
- Five-year trade warranty

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



PESB-R Cutaway

Valves

150-PESB-R



How To Specify

100 - PESBR - PRS-D

Size	Model	Optional Feature
100: 1" (26/34)	PESB-R: scrubber model	PRS-Dial: pressure regulating module (must be ordered separately)
150: 1½" (40/49)		
200: 2" (50/60)		

Note: Valve and PRS-Dial module must be ordered separately.

PESB-R Series (cont.)

Specifications

- Pressure: 20 to 200 psi (1.38 to 13.80 bar)
- Flow: 0.25 to 200 gpm (0.06 to 45.40 m³/h; 0,02 to 12,60 l/s)
- Flow with PRS-Dial: 5 to 200 gpm (1.14 to 45.40 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 60Hz
- Holding current: 0.14A (3.43VA) at 60Hz
- Solenoid coil resistance: 30-39 Ohms, nominal

Dimensions

Model	Height	Length	Width
• 100-PESB-R	6½" (16.5 cm)	4" (10.2 cm)	4" (10.2 cm)
• 150-PESB-R	8" (20.3 cm)	6" (15.2 cm)	6" (15.2 cm)
• 200-PESB-R	8" (20.3 cm)	6" (15.2 cm)	6" (15.2 cm)

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

Models

- 100-PESB-R: 1" (26/34)
- 150-PESB-R: 1½" (40/49)
- 200-PESB-R: 2" (50/60)

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; 19.21 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

PESB-R Series Valve Pressure Loss (psi)			
Flow gpm	100-PESB-R 1"	150-PESB-R 1½"	200-PESB-R 2"
0.25	1.6	-	-
0.5	3.0	-	-
1	1.8	-	-
5	2.9	-	-
10	2.9	-	-
20	2.6	3.5	-
30	5.8	3.1	-
40	10.2	2.3	-
50	16.0	2.1	3.7
75	-	4.3	3.3
100	-	7.5	4.7
125	-	11.9	8.6
150	-	17.0	12.6
175	-	-	14.8
200	-	-	18.9

PESB-R Series Valve Pressure Loss (bar)				METRIC
Flow m ³ /h	Flow l/m	100-PESB-R 2.5 cm	150-PESB-R 3.8 cm	200-PESB-R 5.1 cm
0.06	1	0.11	-	-
0.3	5	0.13	-	-
0.6	10	0.15	-	-
1.2	20	0.20	-	-
3	50	0.19	-	-
6	100	0.32	0.22	-
9	150	0.69	0.16	-
12	200	-	0.16	0.25
15	250	-	0.24	0.24
18	300	-	0.33	0.25
21	350	-	0.45	0.30
24	400	-	0.59	0.38
27	450	-	0.75	0.53
30	500	-	0.91	0.67
33	550	-	1.10	0.82
36	600	-	-	0.92
39	650	-	-	1.00
42	700	-	-	1.13
45	757	-	-	1.30

Notes

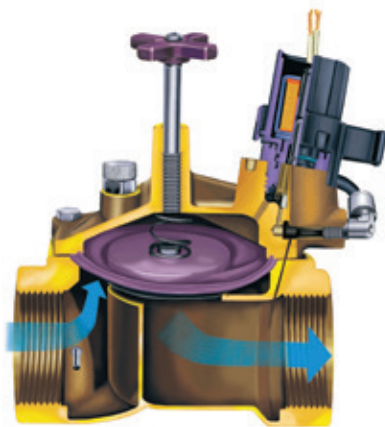
1. Loss values are with flow control fully open
2. PRS-Dial recommended for use in shaded area only

EFB-CP Series Brass Valves

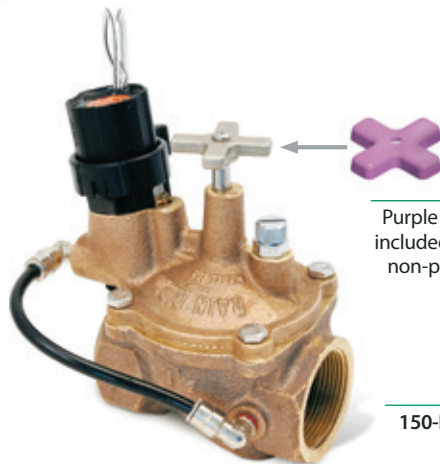
Highly durable Brass Irrigation Valves - Globe Configuration

Features

- Reliable performance even in dirty water applications. Self-flushing filter resists debris build-up
- Rugged red brass construction for longer life
- Durable, fabric-reinforced diaphragm composed of EPDM, a rubber material which is chlorine and chemical resistant
- Normally closed, reverse flow design ensures valve will fail in the closed position if a tear or rip in the diaphragm occurs. Prevents flooding, water waste and landscape damage
- Slow closing to prevent water hammer and subsequent system damage
- One-piece solenoid design with captured plunger and spring for easy servicing. Prevents loss of parts during field service
- Manual internal bleed operates the valve without allowing water into the valve box. Allows pressure regulator adjustment without turning on the controller
- Manual external bleed permits flushing debris from the system. Recommended for system start up and other repairs
- Contamination-proof, self-flushing filter screen resists debris build-up. Water flow continuously flushes the screen, dislodging particles and debris before they can accumulate and clog the filter
- Reclaimed water compatible: all models now feature EPDM diaphragms and chlorine-resistant parts as standard equipment
- Three-year trade warranty



EFB-CP Cutaway



Purple handle cover included to designate non-potable water

150-EFB-CP

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

Specifications

- Pressure: 15 to 200 psi (1,04 to 13,80 bar)
- Flow with/without PRS-D: 5 to 200 GPM (1.14 to 45,40 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 60Hz
- Holding current: 0.14A (3.43VA) at 60Hz
- Solenoid coil resistance: 30-39 Ohms, nominal

Dimensions

Model	Height	Length	Width
• 100-EFB-CP:	6" (15.2 cm)	4½" (11.4 cm)	3¼" (8.3 cm)
• 150-EFB-CP:	6½" (16.5 cm)	5½" (14 cm)	4½" (11.4 cm)
• 200-EFB-CP:	7" (17.8 cm)	6¾" (17.1 cm)	5¾" (14.6 cm)

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

Models

- 100-EFB-CP: 1" (26/34)*
- 150-EFB-CP: 1½" (40/49)*
- 200-EFB-CP: 2" (50/60)*

* 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; 19.21 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

How To Specify

100 - EFB-CP - PRS-D

Size
100: 1"
150: 1½"
200: 2"

Model
EFB-CP

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

Note: Valve and PRS-Dial module must be ordered separately.

EFB-CP Series (cont.)

EFB-CP Series Valve Pressure Loss (psi)			
Flow gpm	100 EFB-CP 1"	150 EFB-CP 1½"	200 EFB-CP 2"
5	0.2	-	-
10	0.7	-	-
15	1.2	-	-
20	2.1	2.3	0.5
30	5	2.9	0.6
40	8.2	2	0.8
50	13	3.3	1.1
60	-	4.6	1.8
80	-	7.5	2.4
100	-	11.8	3.8
120	-	16.6	5.9
140	-	-	7.8
160	-	-	10
180	-	-	12.5
200	-	-	15.8

EFB-CP Series Valve Pressure Loss (bar)				METRIC
Flow m³/h	Flow l/m	100 EFB-CP 2.5 cm	150 EFB-CP 3.8 cm	200 EFB-CP 5.1 cm
1	19	0.01	-	-
3	50	0.07	-	-
6	100	0.27	0.19	0.04
9	150	0.56	0.14	0.05
12	200	-	0.25	0.09
15	250	-	0.38	0.14
18	300	-	0.51	0.16
21	350	-	0.70	0.23
24	400	-	0.91	0.30
27	450	-	1.13	0.40
30	500	-	-	0.49
33	550	-	-	0.58
36	600	-	-	0.68
39	650	-	-	0.79
42	700	-	-	0.92
45	757	-	-	1.09

Notes

1. Loss values are with flow control fully open
2. PRS-Dial module recommended for all flow rates

300-BPES Brass Valves

3" Brass Master Valve - Globe and angle configuration

Features

- Unique hybrid construction featuring durable red brass body and glass-filled nylon bonnet for long life at a value price
- Normally closed, forward flow design
- Slow closing to prevent water hammer and subsequent system damage
- Robust solenoid provides dependable performance even during constant operation
- Flow control handle adjusts water flows as needed and incorporates a brass thread insert for longer life
- Manual internal bleed operates the valve without allowing water into the valve box. Allows pressure regulator adjustment without turning the valve on at the controller
- Manual external bleed permits flushing debris from the system. Recommended for system start up and repairs
- Highly efficient operation with extremely low pressure loss
- Patented nylon scrubber scrapes a stainless steel screen to clean and break down grit and plant material. Prevents debris build-up and clogging
- Three-year trade warranty

Options

- Accommodates field-installed PRS-D pressure regulating module to ensure optimum sprinkler performance
- Purple flow control handle for non-potable water applications (BPE-NP-HAN)
- Latching solenoid for use with Rain Bird battery-operated controllers up to 150 psi (10,4 bar)

Specifications

- Pressure: 20 to 200 psi (1,4 to 13,8 bar)
- Flow with/without PRS-D option: 60 to 300 gpm (13,6 to 68,1 m³/h; 3,78 to 18,90 l/s)
- Temperature: up to 140° F (60° C)
- Power: 24 VAC 50/60 Hz (cycles per second) solenoid
- Inrush current: 0.41 A (9.8 VA) at 60Hz
- Holding current: 0.28 A (6.7 VA) at 60Hz
- Coil resistance: 28 Ohms, nominal

How To Specify

300 - BPES - PRS-D

Model
BPES

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

Size
3" (80/90)

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.



300-BPES

BPES 3" Valve Pressure Loss (psi)		
Flow gpm	Globe	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

BPES 3" Valve Pressure Loss (bar)			METRIC
Flow m ³ /h	Flow l/m	Globe	Angle
13.6	227	0.46	0.47
24	400	0.19	0.21
36	600	0.14	0.14
48	800	0.21	0.19
60	1000	0.29	0.26
68	1136	0.34	0.31

Notes

1. Loss values are with flow control fully open
2. PRS-Dial module recommended for all flow rates

Dimensions

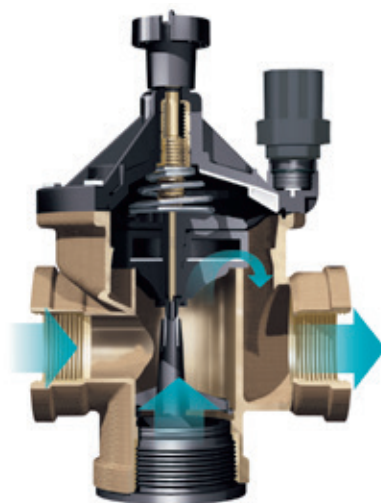
Model	Height	Length	Width
• 300	13 ⁵ / ₈ " (34.61 cm)	8" (20.32 cm)	7" (17.78 cm)

Models

- 300-BPES: 3" (80/90)
- 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.



BPES Cutaway

DB Series Wire Connector

Connections Made Easy

Features and Benefits

- Install Faster – the DB Series Wire Connector is quick to install and provides reliable moisture sealing for controller and valve electrical connections you can count on
- Simplify Inventory – This is the only wire connector you'll need! It is ideal for use on two wire decoder control systems
- Avoid Call Backs – Locating and repairing a corroded wire splice costs your business time and money. Avoid unnecessary service call backs
- Use for standard controllers, valve boxes and soil moisture sensors
- Wire combinations ranging from 22ga to 8ga
- Use on connections from 24 VAC to 600 VAC
- UL 486D certified for direct burial
- The Strain Relief ensures wires are secure and won't pull apart
- Waterproof silicone sealant protects against corrosion
- UV-resistant material ensures product performance does not degrade even after long periods of exposure to sunlight

Models

- DBRY20: Direct Bury Silicone Tube, Red Yellow Wire Nut, Bag of 20



DBRY20

Wire Combinations (for solid and stranded wire)

DBRY20	
2-3 #10	2#18
2-5 #12	1 #8 w/2 #18
2-5 #14	3 #10 w/1 #18
4-6 #16	3 #12 w/3 #18
3 #14 w/2 #18	

The combinations listed are only a sample of the most common wire combinations.

PRS-Dial

Pressure Regulating Module

Features

- The PRS-Dial is an excellent means of regulating outlet pressure at the valve regardless of incoming pressure fluctuations. The visible scale makes adjustment quick and easy. The regulator fits all Rain Bird PGA, PEB, PESB, PESB-R, EFB-CP, and BPES series valves
- Regulates and maintains constant outlet pressure between 15 and 100 psi (1.04 to 6.9 bar) within ± 3 psi (± 0.21 bar)
- Adjustment knob with detents permits fine-tune setting in 1/3 psi (0.02 bar) increments. Dial cartridge makes installation and adjustment quick, easy and accurate Improved spike reduction capabilities reduce water hammer
- Ergonomic design with snap-tight cover to prevent vandalism
- Waterproof dial cartridge eliminates fogging and binding
- Dial cartridge retrofits into all existing PRS-D units
- Schrader valve connects pressure hose gauge, ordered separately
- Easy field installation. PRS-Dial threads underneath the solenoid and adapter
- Corrosion-resistant glass-filled nylon for rugged performance

Operating Range

- Pressure: Up to 100 psi (6.9 bar)*
- Regulation: 15 to 100 psi (1.04 to 6.9 bar)
- Flow: Refer to chart

* While the PRS-Dial unit can withstand pressures up to 200 psi (13.8 bar), accurate pressure regulation can be maintained only up to 100 psi (6.9 bar)

Model

- PRS-D

Application Information

- Proper operation requires inlet pressure to be a minimum of 15 psi (1.04 bar) higher than desired outlet pressure
- For areas with very high pressure or uneven terrain, install sprinklers with PRS pressure regulating stems and/or SAM check valves
- When inlet pressure exceeds 100 psi (6.9 bar), a pressure regulating master valve or inline pressure regulator is required
- Rain Bird does not recommend using the pressure regulating module for applications outside the recommended flow ranges
- To reduce the effects of water hammer, Rain Bird recommends flow rates in the supply line not to exceed 7.5 ft/sec (2.29 m/s)
- 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

† Note: Valve and PRS-Dial module must be ordered separately.

Valve Flow Ranges*

Model	gpm	m ³ /h	l/m
100-PGA	5-40	1.14-9.08	19.2-151
150-PGA	30-100	6.81-22.70	113-378
200-PGA	40-150	9.08-34.05	151-568
100-PEB	5-50	1.14-11.35	19.2-189
150-PEB	20-150	4.54-34.05	76-568
200-PEB	75-200	17.03-45.40	284-757
100-PESB/PESB-R	5-50	1.14-11.35	19.2-189
150-PESB/PESB-R	20-150	4.54-34.05	76-568
200-PESB/PESB-R	75-200	17.03-45.40	284-757
100-EFB-CP	5-50	1.14-11.35	19.2-189
125-EFB-CP	20-80	4.54-18.16	76-302
150-EFB-CP	20-120	4.54-31.78	76-529
200-EFB-CP	20-200	4.54-45.40	76-757
300-BPES	60-300	13.62-68.10	227-1136

* These are the valve flow ranges. The PRS-Dial regulates only up to 100 psi (6.9 bar)



Quick-Coupling Valves

Convenient water access in potable and non-potable systems

Features

- Optional locking cover on models 33-DLRC, 44-LRC, 5-LRC, 33-DNP, 44-NP, and 5-NP (use 2049 key to unlock). Metal cover on model 7 only
- One-piece body design (models 3-RC, 5-RC and 7)
- Two-piece body design for easy servicing (models 33-DRC, 44-LRC, 44-RC, 33-DNP, and 44-NP)
- Strong corrosion-resistant stainless steel spring prevents leakage
- Thermoplastic cover for durability
- 33-DNP, 44-NP, and 5-NP covers marked with "Do Not Drink!" warnings in English and Spanish
- Three-year trade warranty

Specifications

- Pressure: 5 to 125 psi (0.35 to 8.63 bar)
- Flow: 10 to 125 gpm (2.27 to 28.38 m³/h; 37.8 to 473 l/m)
- 33-DNP, 44-NP and 5-NP flow: 10 to 70 gpm (2.27 to 15.89 m³/h; 37.8 to 265 l/m)

Dimensions (height)

- 3-RC: 4¹/₄" (10.8 cm)
- 44-RC: 6" (15.2 cm)
- 7: 5³/₄" (14.6 cm)
- 33-DRC: 4³/₈" (11.1 cm)
- 44-LRC: 6" (15.2 cm)
- 33-DNP: 4³/₈" (11.1 cm)
- 33-DLRC: 4⁵/₈" (11.7 cm)
- 5-RC: 5¹/₂" (14.0 cm)
- 44-NP: 6" (15.2 cm)
- 5-LRC: 5¹/₂" (14.0 cm)
- 5-NP: 5¹/₂" (14.0 cm)

Models

- 3-RC: 3/4" (20/27) Rubber Cover, 1-Piece Body
- 33-DRC: 3/4" (20/27) Double Track Key Lug, Rubber Cover, 2-Piece Body
- 33-DLRC: 3/4" (20/27) Double Track Key Lug, Locking Rubber Cover, 2-Piece Body
- 44-RC: 1" (26/34) Rubber Cover, 2-Piece Body
- 44-LRC: 1" (26/34) Locking Rubber Cover, 2-Piece Body
- 5-RC: 1" (26/34) Rubber Cover, 1-Piece Body
- 5-LRC: 1" (26/34) Locking Rubber Cover, 1-Piece Body
- 7: 1 1/2" (40/49) Metal Cover, 1-Piece Body
- 5-RC-BSP: 1" (26/34) Rubber Cover, 1-Piece Body, BSP threaded
- 5-LRC-BSP: 1" (26/34) Locking Rubber Cover, 1-Piece Body, BSP threaded
- 33-DNP: 3/4" (20/27) Non-potable, Purple Locking Rubber Cover, 2-Piece Body
- 44-NP: 1" (26/34) Non-potable, Purple Locking Rubber Cover, 2-Piece Body
- 5-NP: 1" (26/34) Non-potable, Purple Locking Rubber Cover, 1-Piece Body

Note: For non-US applications, it is necessary to specify NPT or BSP thread type

Quick-Coupling Valves Pressure Loss (psi)

Flow	3-RC	33-DRC 33-DLRC 33-DNP	44-RC 44-LRC 44-NP	5-RC 5-LRC 5-NP	7
gpm	3/4"	3/4"	1"	1"	1 1/2"
10	1.8	2	-	-	-
15	4.7	4.3	2.2	-	-
20	7.2	7.6	4.4	-	-
30	-	-	11.5	4.1	-
40	-	-	-	7.3	-
50	-	-	-	11	1.7
60	-	-	-	15.7	2.5
70	-	-	-	21.5	3.6
80	-	-	-	-	4.9
100	-	-	-	-	8.4
125	-	-	-	-	14

Quick-Coupling Valves Pressure Loss (bar)

Flow	3-RC	33-DRC 33-DLRC 33-DNP	44-RC 44-LRC 44-NP	5-RC 5-LRC 5-NP	7	METRIC
m ³ /h	l/m	1.9 cm	1.9 cm	2.5 cm	2.5 cm	3.8 cm
2.3	38	0.12	0.12	-	-	-
4	67	0.41	0.42	0.23	-	-
5	83	0.57	0.62	0.40	-	-
6	100	-	-	0.62	-	-
7	117	-	-	0.83	0.30	-
8	133	-	-	-	0.40	-
9	150	-	-	-	0.50	-
10	167	-	-	-	0.61	-
12	200	-	-	-	0.85	0.13
14	233	-	-	-	1.15	0.18
16	267	-	-	-	1.50	0.25
22	367	-	-	-	-	0.54
28	473	-	-	-	-	0.97



Quick-Coupling Valve Cutaway



Quick Coupling Valves

Valve Keys

Quick-Coupling Keys

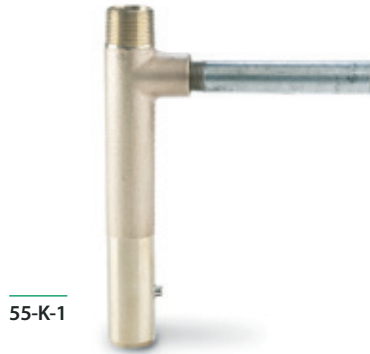
Features

- Key threads into top of quick-coupling valve to provide water access

Models

- 33-DK: 3/4" (20/27)
- 44-K: 1" (26/34)
- 55-K-1: 1" (26/34)*
- 7-K: 1 1/2" (40/49)*

* Available with BSP threads; specify when ordering



55-K-1

Corresponding Valve Keys			
Valve	Key	Top Pipe Threads	
		Male	Female
3-RC	33-DK	3/4"	1/2"
33-DRC/33-NP	33-DK	3/4"	1/2"
44-RC/44-NP	44-K	1"	3/4"
5-RC/5-NP	55-K-1	1"	-
7	7-K	1 1/2"	1 1/4"

Corresponding Valve Keys			METRIC
Valve	Key	Top Pipe Threads	
		Male	Female
3-RC	33-DK	20/27	15/21
33-DRC/33-NP	33-DK	20/27	15/21
44-RC/44-NP	44-K	26/34	20/27
5-RC/5-NP	55-K-1	26/34	-
7	7-K	40/49	33/42

Valves

SH Series

Hose Swivel

Features

- Attaches water hose to quick-coupling valve key
- Swivels up to 360°
- Allows hose to be pulled in any direction
- Prevents hose damage

Specifications

- SH-0: 3/4" (20/27) female pipe thread x 3/4" (20/27) male hose thread
- SH-1: 1" (26/34) female pipe thread x 3/4" (20/27) male hose thread
- SH-2: 1" (26/34) female pipe thread x 1" (26/34) male hose thread
- SH-3: 1 1/2" (40/49) female pipe thread x 1" (26/34) male hose thread

Models

- SH-0
- SH-1
- SH-2*
- SH-3

*Available with BSP threads



SH-0

Locking Cover Key

Features

- Locks and unlocks the optional locking cover on quick-coupling valves
- Operates the valve marker compression lock
- Compatible with models 33-DLRC, 33-DNP, 44-LRC, 44-NP, 5-LRC, and 5-NP

Model

- 2049 Cover Key



2049

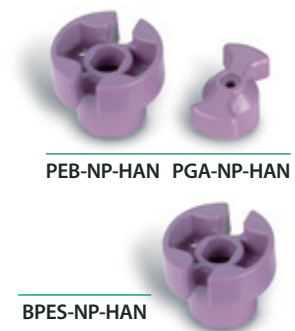
Purple Valve Handle Assembly

Features

- Purple flow control handle identifies valve as part of a non-potable system
- Easily field installed
- Sizes for all Rain Bird Commercial Valves

Models

- PGA-NP-HAN1 (1" and 1 1/2" PGA Valves)
- PGA-NP-HAN2 (2" PGA Valves)
- PEB-NP-HAN1 (1" PEB/PESB Valves)
- PEB-NP-HAN2 (1 1/2" and 2" PEB/PESB Valves)
- BPE-NP-HAN (3" BPE/BPES Valves)



PEB-NP-HAN PGA-NP-HAN

BPES-NP-HAN

PVB Professional Series Valve Boxes

The PVB Series valve box provides rugged, no-nonsense dependability, with a price tag that can meet any budget

Features

- Light & durable construction
- Side ridges for additional side wall support
- Pre-molded pipe slots
- Bottom flanges to help prevent sinking
- Four colors: available in green, black, tan and purple
- Multiple configurations designed to provide tight seals and easy maintenance access
- Earth-friendly, LEED-compliant material made of 100% recycled materials (black boxes and black lids only)



6" Round Valve Box	10" Round Valve Box	Mini Standard Valve Box	Standard Valve Box	Standard Extension	Jumbo Valve Box	Jumbo Extension
SIZE						
Top Opening: 6 1/2" diameter Bottom Opening: 8 3/8" diameter	Top Opening: 10" diameter Bottom Opening: 12 1/8" diameter	Top Opening: 15" L x 9 1/2" W Bottom Opening: 18" L x 12 1/2" W x 10" H	Top Opening: 18 1/4" L x 13" W Bottom Opening: 21 1/4" L x 15 1/8" W x 12" H	Top Opening: 17" L x 11 3/4" W Bottom Opening: 18 7/8" L x 13 3/8" W x 6 3/4" H	Top Opening: 22 1/4" L x 16 3/8" W Bottom Opening: 25 1/4" L x 19 3/8" W x 12" H	Top Opening: 21 3/8" L x 15 7/8" W Bottom Opening: 22 1/8" L x 16 3/8" W x 6 3/8" H
ADDITIONAL FEATURES						
<ul style="list-style-type: none"> • Snap-in overlapping lid • Skid-resistant texture • Body built with three ridges for additional sidewall support 	<ul style="list-style-type: none"> • Overlapping lid with bolt hole and twist lock • Skid-resistant lid texture • Body built with double ridges for additional sidewall support 	<ul style="list-style-type: none"> • Our compact alternative to a standard size box • Drop-in lid • Skid-resistant lid texture 	<ul style="list-style-type: none"> • Drop-in lockable lid • Skid-resistant lid texture • Double ledge lid support • Ridge adds additional support to sidewalls 	<ul style="list-style-type: none"> • Overlapping lockable lid • Skid-resistant lid texture • Body can be used to extend the PVB Standard series • Body can be used as a 6" deep box 	<ul style="list-style-type: none"> • Drop-in lockable lid • Skid-resistant lid texture • Double ledge lid support • Ridge adds additional support to sidewalls 	<ul style="list-style-type: none"> • Overlapping lockable lid • Skid-resistant lid texture • Body can be used to extend the PVB Jumbo series • Body can be used as a 6" deep box
MODELS						
<ul style="list-style-type: none"> • PVB6RND: 6" round black body & overlapping green lid • PVB6RNDP: 6" round black body & overlapping purple lid • PVB6RNDT: 6" round black body & overlapping tan lid 	<ul style="list-style-type: none"> • PVB10RND: 10" round black body & overlapping green lid • PVB10RNDP: 10" round purple body & overlapping purple lid • PVB10RNDT: 10" round tan body & overlapping tan lid 	<ul style="list-style-type: none"> • PVBMS: 10" mini-standard black body & drop-in green lid 	<ul style="list-style-type: none"> • PVBSTD: 12" standard black body & drop-in green lid • PVBSTDP: 12" standard purple body & drop-in purple lid • PVBSTDT: 12" standard tan body & drop-in tan lid 	<ul style="list-style-type: none"> • STDEXT body can extend the Standard Valve box by 6" in height • STDEXT body can be used as a 6" deep box to reduce digging • PVBSTDEXT: 6" black body & overlapping green lid • PVBSTDEXTT: 6" tan body & overlapping tan lid 	<ul style="list-style-type: none"> • PVBJMB: 12" black body & drop-in green lid • PVBJMBP: 12" purple body & drop-in purple lid • PVBJMBT: 12" tan body & drop-in tan lid 	<ul style="list-style-type: none"> • PVBJBEXT: 6" black body & overlapping green lid • PVBJBEXTP: 6" purple body & overlapping purple lid • PVBJBEXTT: 6" tan body & overlapping tan lid

6" Round Lids

PVB6RNDGL:
6" round green lid

10" Round Lids

PVB10RNDGL:
10" round green lid

12" Standard Lids

PVBSTDGL:
12" standard green lid

12" Jumbo Lids

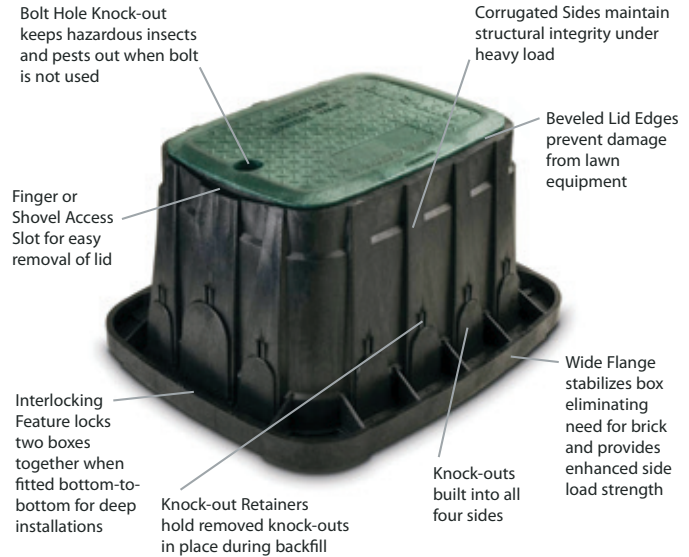
PVBJMBGL:
12" jumbo green lid

VB Series Valve Boxes

Commercial grade boxes that are loaded with a rich set of industry-leading features

Features

- **Strength and Stability** – Multiple sizes and shapes are designed with corrugated sides and wide flange bases for maximum durability, compression strength, and stability
- **Smart Lid Design** – Designed with no holes to keep out pests, beveled edges to minimize damage potential from turf equipment, and for easy hand and shovel access
- **Flexible Installations** – Interlocking stacking capabilities, extension models and pipe hole knockouts support deeper and flexible installations
- **Environmentally Friendly** – Earth-friendly, LEED-compliant material made of 100% recycled materials (black boxes and black lids only)



7 Inch Round Valve Box	10 Inch Round Valve Box	Standard Valve Box	Standard Extension	Jumbo Valve Box	Jumbo Extension	Super Jumbo Valve Box	Maxi Jumbo Valve Box
SIZE							
Bottom Diameter: 9.9 inches (25,1 cm) Height: 9.0 inches (22,9 cm)	Bottom Diameter: 13.75 inches (34,9 cm) Height: 10.0 inches (25,4 cm)	Length: 21.8 inches (55,4 cm) Width: 16.6 inches (42,2 cm) Height: 12.0 inches (30,5 cm)	Length: 20.0 inches (50,8 cm) Width: 14.75 inches (37,5 cm) Height: 6.75 inches (17,1 cm)	Length: 26.3 inches (66,8 cm) Width: 19.8 inches (50,3 cm) Height: 12.1 inches (30,7 cm)	Length: 24.4 inches (62,0 cm) Width: 17.9 inches (45,5 cm) Height: 6.75 inches (17,1 cm)	Length: 33.1 inches (84,1 cm) Width: 23.8 inches (60,5 cm) Height: 15.0 inches (38,1 cm)	Length: 40.3 inches (102,4 cm) Width: 27.1 inches (68,8 cm) Height: 18.0 inches (45,7 cm)
ADDITIONAL FEATURES							
<ul style="list-style-type: none"> • Easily removable knock-outs simplify pipe placement and reduce installation time • Four equally spaced knock-outs accommodate up to 2.0" diameter pipe 	<ul style="list-style-type: none"> • Easily removable knock-outs simplify pipe placement and reduce installation time • Four equally spaced knock-outs accommodate up to 2.0" diameter pipe 	<ul style="list-style-type: none"> • Two large center knock-outs accommodate up to 3 1/2" (8.9 cm) diameter pipe and eleven knock-outs accommodate up to 2" (5.0 cm) diameter pipe 	<ul style="list-style-type: none"> • Extension models support deeper and more flexible installations 	<ul style="list-style-type: none"> • Easily removable knock-outs simplify pipe placement and reduce installation time • Two large center knock-outs accommodate up to 3.5" diameter pipe. (Extensions do not have knock-outs) 	<ul style="list-style-type: none"> • Extension models support deeper and more flexible installations 	<ul style="list-style-type: none"> • Easily removable knock-outs simplify pipe placement and reduce installation time • Thirteen large knock-outs accommodate up to 3.5" diameter pipe 	<ul style="list-style-type: none"> • Easily removable knock-outs simplify pipe placement and reduce installation time. Six large knock-outs on the ends accommodate up to 5.0" diameter pipe and 12 knock-outs on the sides accommodate up to 3.0" diameter pipe
MODELS							
<ul style="list-style-type: none"> • VB7RND: 7" Round Body & Green Lid 	<ul style="list-style-type: none"> • VB10RND: 10" Round Body & Green Lid • VB10RNDNB: 10" Round Body Only • VB10RNDGL: Green Lid • VB10RNDPL: Purple Lid • VB10RNDDBKL: Black Lid • VB10RNDH: 10" Round Body & Locking Green Lid 	<ul style="list-style-type: none"> • VBSTD: Standard Body & Green Lid • VBSTDDB: Standard Body Only • VBSTDGL: Green Lid • VBSTDPL: Purple Lid • VBSTDDBKL: Black Lid • VBSTDH: Standard Body & Locking Green Lid 	<ul style="list-style-type: none"> • VBSTD6EXTB: Standard Extension Body Only 	<ul style="list-style-type: none"> • VBJMB: Jumbo Body & Green Lid • VBJMBB: Jumbo Body Only • VBJMBGL: Green Lid • VBJMBPL: Purple Lid • VBJMBBKL: Black Lid • VBJMBH: Jumbo Body & Locking Green Lid 	<ul style="list-style-type: none"> • VBJMB6EXTB: Jumbo Extension Body Only 	<ul style="list-style-type: none"> • VBSPRH: Super Jumbo Body & 2 Lock Green Lid • VBSPRPH: Super Jumbo Body & 2 Lock Purple Lid 	<ul style="list-style-type: none"> • VBMAXH: Maxi-Jumbo Body & 2 Lock Green Lid • VBMAXPH: Maxi-Jumbo Body & 2 Lock Purple Lid

LOCKING SYSTEMS

- VB-LOCK-H: Hex head 3/8" x 2 1/4" (1.0 x 5.7 cm) bolt, washer, and clip
- VB-LOCK-P: Penta head 3/8" x 2 1/4" (1.0 x 5.7 cm) bolt, washer, and clip



24 VAC Solenoid Valves Wire Sizing – 50Hz

9.8 VA Valves (EZ) with 26.5 Volt Transformers - Equivalent Feet of Circuit								
80 psi (5.5 bar) Water Pressure at Valve								
Common Wire Size	Control Wire Size							
	18 ●	16 ●	14 ●	12 ●	10 ●	8 ●	6 ●	4 ●
18	3700							
16	4600	6000						
14	5400	7400	9600					
12	6000	8600	11800	15200				
10	6500	9600	13700	18700	24200			
8	6900	10400	15400	21800	29700	38500		
6	7100	10900	16600	24300	34600	47100	60600	
4	7300	11300	17500	26300	38800	55100	74600	97000
100 psi (6.9 bar) Water Pressure at Valve								
Common Wire Size	Control Wire Size							
	18 ●	16 ●	14 ●	12 ●	10 ●	8 ●	6 ●	4 ●
18	3200							
16	4000	5200						
14	4700	6400	8300					
12	5200	7400	10200	13200				
10	5600	8300	11900	16200	20900			
8	5900	9000	13300	18900	25700	33300		
6	6100	9500	14300	21100	29900	40700	52400	
4	6300	9800	15100	22800	33500	47700	64600	83900
125 psi (8.6 bar) Water Pressure at Valve								
Common Wire Size	Control Wire Size							
	18 ●	16 ●	14 ●	12 ●	10 ●	8 ●	6 ●	4 ●
18	2900							
16	3500	4600						
14	4100	5700	7400					
12	4600	6600	9000	11700				
10	5000	7400	10500	14400	18600			
8	5300	8000	11800	16800	22800	29600		
6	5400	8400	12700	18700	26600	36200	46600	
4	5600	8700	13400	20200	29800	42300	57300	74600
150 psi (10.4 bar) Water Pressure at Valve								
Common Wire Size	Control Wire Size							
	18 ●	16 ●	14 ●	12 ●	10 ●	8 ●	6 ●	4 ●
18	2600							
16	3200	4100						
14	3700	5000	6600					
12	4100	5900	8100	10400				
10	4500	6600	9400	12800	16600			
8	4700	7100	10500	15000	20400	26400		
6	4900	7500	11400	16700	23800	32300	41600	
4	5000	7800	12000	18100	26600	37800	51300	66600
200 psi (13.8 bar) Water Pressure at Valve								
Common Wire Size	Control Wire Size							
	18 ●	16 ●	14 ●	12 ●	10 ●	8 ●	6 ●	4 ●
18	2400							
16	2900	3800						
14	3400	4700	6100					
12	3800	5500	7500	9700				
10	4100	6100	8800	11900	15500			
8	4400	6600	9800	13900	19000	24600		
6	4500	7000	10600	15500	22100	30100	38700	
4	4600	7200	11100	16800	24800	35200	47700	62000

Commercial Valve Wire Sizing Procedure

Step 1

Determine actual distance, along wire run, from controller out to the first valve on a circuit and between each succeeding valve on a multiple valve circuit. Example: (Two watt solenoid, 26.5 volt transformer, 50Hz, at 150 psi water pressure at valves.)

Step 2

Calculate the equivalent circuit length for each valve circuit on the controller. (See chart to left)

Step 3

Selecting Common Wire Size: Using the longest equivalent length calculated above, go to the appropriate valve chart and select a common wire and a control wire that are as close to the same size as possible (the common wire size should always be equal to or one size larger than the control wire size.) In the example above, the circuit for station #3 has the longest equivalent length, 7000 feet. In the chart (for this example use the chart for 150 psi water pressure at the valve and a 26.5 volt transformer) select a wire size combination of size 14 and 12 wire. Select common wire as size 12 wire. Since one common wire shall be used for all valves on the controller, you have now established the common wire size for that controller as size 12 wire.

Step 4

Sizing Circuit Control Wires: Reading only from the row for the common wire size selected in Step 3 (size 12), proceed to select each control wire size from the chart using the calculated equivalent length for each circuit.

Station #1: Equiv. Length = 1 valve x 2000 ft. = 2000 ft. select size 18 control wire

Station #2: Equiv. Length = (1 valve x 1000 ft.) + (2 valves x 2000 ft.) = 5000 ft. select size 16 control wire

Station #3: Equiv. Length = (1 valve x 500 ft.) + (2 valves x 1000 ft.) + (3 valves x 1500 ft.) = 7000 ft. select size 14 control wire

24 VAC Solenoid Valves Wire Sizing – 60Hz

9.8 VA Valves (EZ) with 26.5 Volt Transformers - Equivalent Feet of Circuit								
80 psi (5.5 bar) Water Pressure at Valve								
Common Wire Size	Control Wire Size		14 ●	12 ●	10 ●	8 ●	6 ●	4 ●
	18 ●	16 ●						
18	3200							
16	4000	5200						
14	4700	6400	8300					
12	5200	7500	10200	13200				
10	5700	8300	11900	16200	21000			
8	6000	9000	13300	18900	25800	33400		
6	6200	9500	14400	21100	30100	40900	52600	
4	6300	9800	15200	22900	33700	47800	64800	84200
100 psi (6.9 bar) Water Pressure at Valve								
Common Wire Size	Control Wire Size		14 ●	12 ●	10 ●	8 ●	6 ●	4 ●
	18 ●	16 ●						
18	2900							
16	3500	4600						
14	4100	5600	7300					
12	4600	6600	9000	11700				
10	5000	7400	10500	14300	18600			
8	5300	8000	11800	16700	22800	29500		
6	5400	8400	12700	18700	26500	36100	46500	
4	5600	8700	13400	20200	29700	42200	57200	74400
125 psi (8.6 bar) Water Pressure at Valve								
Common Wire Size	Control Wire Size		14 ●	12 ●	10 ●	8 ●	6 ●	4 ●
	18 ●	16 ●						
18	2400							
16	3000	3900						
14	3500	4800	6300					
12	3900	5600	7700	9900				
10	4300	6300	9000	12200	15800			
8	4500	6800	10000	14300	19400	25200		
6	4600	7100	10800	15900	22700	30800	39700	
4	4700	7400	11400	17200	25400	36100	48800	63500
150 psi (10.4 bar) Water Pressure at Valve								
Common Wire Size	Control Wire Size		14 ●	12 ●	10 ●	8 ●	6 ●	4 ●
	18 ●	16 ●						
18	2200							
16	2700	3500						
14	3100	4300	5600					
12	3500	5000	6800	8800				
10	3800	5600	8000	10900	14100			
8	4000	6000	8900	12700	17300	22400		
6	4100	6300	9600	14100	20100	27400	35300	
4	4200	6600	10200	15300	22600	32100	43400	56500
200 psi (13.8 bar) Water Pressure at Valve								
Common Wire Size	Control Wire Size		14 ●	12 ●	10 ●	8 ●	6 ●	4 ●
	18 ●	16 ●						
18	1800							
16	2300	2900						
14	2600	3600	4700					
12	3000	4200	5800	7500				
10	3200	4700	6800	9200	12000			
8	3400	5100	7600	10800	14700	19000		
6	3500	5400	8200	12000	17100	23300	30000	
4	3600	5600	8600	13000	19200	27300	36900	48000

Commercial Valve Wire Sizing Procedure

Step 1

Determine actual distance, along wire run, from controller out to the first valve on a circuit and between each succeeding valve on a multiple valve circuit. Example: (Two watt solenoid, 26.5 volt transformer, 60Hz, at 150 psi water pressure at valves.)

Step 2

Calculate the equivalent circuit length for each valve circuit on the controller. (See chart to left)

Step 3

Selecting Common Wire Size: Using the longest equivalent length calculated above, go to the appropriate valve chart and select a common wire and a control wire that are as close to the same size as possible (the common wire size should always be equal to or one size larger than the control wire size.) In the example below, the circuit for station #3 has the longest equivalent length, 7000 feet. In the chart (for this example use the chart for 150 psi water pressure at the valve and a 26.5 volt transformer) select a size 12 wire for both common and control wire. Since one common wire shall be used for all valves on the controller, you have now established the common wire size for that controller as size 12 wire.

Step 4

Sizing Circuit Control Wires: Reading only from the row for the common wire size selected in Step 3 (size 12), proceed to select each control wire size from the chart using the calculated equivalent length for each circuit.

EXAMPLE:

Station #1: Equiv. Length = 1 valve x 2000 ft. = 2000 ft. select size 18 control wire

Station #2: Equiv. Length = (1 valve x 1000 ft.) + (2 valves x 2000 ft.) = 5000 ft. select size 16 control wire

Station #3: Equiv. Length = (1 valve x 500 ft.) + (2 valves x 1000 ft.) + (3 valves x 1500 ft.) = 7000 ft. select size 12 control wire