

Ref	Part Description	075-ASVF	100-ASVF
SOLENOID			
1	Solenoid Handle	—	—
2	Solenoid Repair Kit	20858801	20858801
3	Solenoid O-Ring	—	235532
4	Solenoid Filter	—	—
BONNET ASSEMBLY			
5	BONNET ASSEMBLY	—	—
6	Flow Control Handle	—	—
7	Bonnet	—	—
8	External Bleed Screw	—	—
9	Stem	—	—
10	Stem O-Ring	—	—
11	Piston	—	—
12	Piston O-Ring	—	—
DIAPHRAGM REPAIR KIT			
13	DIAPHRAGM REPAIR KIT	21074603	21074603
14	Bonnet screws (6)	—	—
15	Diaphragm Spring	—	—
16	Diaphragm Assembly w/Filter	—	—
PLUNGER/CAP & COVER ASSEMBLY			
17	PLUNGER/CAP & COVER ASSEMBLY	—	—
18	Cap & Cover	—	—
19	Plunger	—	—
20	Plunger Gasket	—	—
21	Cap Seal	—	—
22	BODY NPT	—	—

Note: Part numbers enclosed in brackets () are not available individually, but may be sold in assemblies or kits.

Série BPE e BPES**Válvulas elétricas****Aplicações**

As válvulas 300-BPE e 300-BPES foram projetadas para tolerar grandes aumentos de pressão, água residuária e fragmentos de obstrução. Para uma proteção adicional, o modelo BPES é equipado com um mecanismo patenteado de filtragem para combater partículas entupidoras.

Características

- Construção híbrida especial apresentando corpo de bronze e chapéu fabricado em náilon reforçado com fibra de vidro para vida útil longa e desempenho resistente a uma pressão de 13,8 bars (200 psi)
- Configuração angular e esférica oferecem flexibilidade no desenho e instalação
- Desenho de solenóide de uma peça com êmbolo maciço e mola para facilidade de serviço; previne a perda de peças durante serviço no campo
- Drenagem manual externa e interna: a drenagem externa não permite que fragmentos passem pelas portas do solenóide quando o sistema é enxaguado; a drenagem interna opera a válvula sem permitir que a água penetre a caixa da válvula; permite que o regulador de pressão seja ajustado sem antes necessitar ligar a válvula no controlador
- Fechamento lento para prevenir golpe de aríete e subsequentes danos ao sistema.
- Operação altamente eficiente com perda de pressão extremamente baixa
- A alavanca de controle de fluxo ajusta o fluxo hidráulico conforme necessário
- Somente BPES: purificador de náilon mantém a tela de aço inoxidável livre de resquícios de areia e material de planta; previne o acúmulo de resíduos e entupimentos
- Admite um módulo regulador de pressão PRS-B, opcional, instalado em campo para assegurar o rendimento máximo do aspersor
- Aceita um solenóide de engate para uso com os controladores operados à bateria Rain Bird
- Compatível com o modelo A de solenóide (verde) Rain Bird para aplicações que requerem operação constante (necessita do adaptador de B para A Rain Bird)
- Alavanca roxa opcional de controle de fluxo para aplicações de água não-potável



Modelo BPES

Dados Técnicos

- Pressão: 1,4 a 13,8 bars (20 a 200 psi)
- Fluxo com/sem opção PRS-B: 14 a 68 m³/h; 3,78 a 18,90 l/s (60 a 300 GPM)
- Temperatura: Até 43° C (110° F)

Dados Elétricos

- Requisito de energia do solenóide é de 24 VCA de 50/60 ciclos (Hz); corrente de entrada de 0,41 A (9.9 VA); corrente de manutenção de 0,23 A (5.5 VA).

Continuação

Dimensões

- 300-BPE/BPES
 Altura: 34,6 cm (13⁵/₈"")
 Comprimento: 20,3 cm (8")
 Largura: 17,8 cm (7")

Modelos

- 300-BPE: 7,2 cm (80/90) *(3")
- 300-BPES: 7,2 cm (80/90) *(3")

*Disponível no modelo BSP. Especifique roscas NPT ou BSP ao adquirir.



300-BPES-NP-HAN

BPE & BPES Perda de Pressão

SISTEMA MÉTRICO (bar)

Vazão m ³ /h	Vazão l/s	L	A
14	3,89	0,52	0,47
20	5,56	0,51	0,48
30	8,33	0,32	0,29
40	11,11	0,14	0,13
50	13,89	0,18	0,15
60	16,67	0,26	0,20
68	18,89	0,34	0,24

L= Modelo de ligação em linha

A= Modelo de ligação em ângulo

* Os valores de perda ocorrem com o controle do fluxo completamente aberto.

1) Rain Bird recomenda que as taxas de fluxo na linha de suprimento não excedam a 7,5 pés por segundo (2,3 m/s) para poder reduzir os efeitos de golpe de aríete.

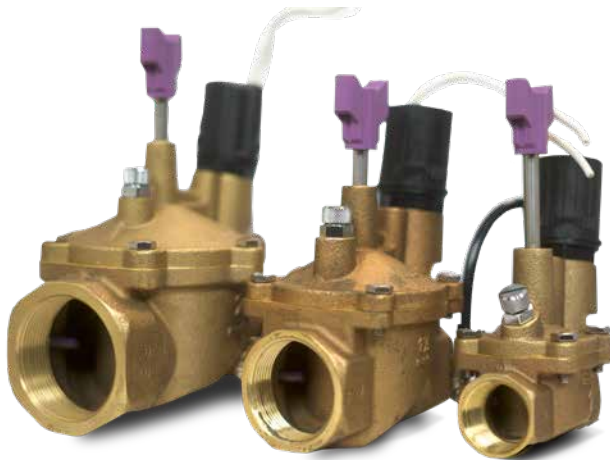


EFB-CP Series Valves

Classic Hardware. Classic Performance.

TECHNICAL SPECIFICATIONS

MODELS:



EFB-CP Series Valves

Electric remote control valves don't come any better than EFB-CP Series valves, which are reclaimed ready in order to handle the harsh conditions in non-potable water situations. Need a contamination-proof, self-flushing screen that cleans itself and resists debris build-up in dirty water? The EFB-CP's the one! Rain Bird brass valves offer long life and superior performance in high pressure applications.

FEATURES:

- Diaphragm made of chlorine and chemical resistant materials in order to handle the harsh conditions of non-potable water
- Red brass body and bonnet for longer life and more rugged performance at 200 psi (13.80 bar)
- Reverse flow feature ensures valve will fail in the closed position if a tear or rip in the diaphragm occurs. Prevents flooding, water waste and landscape damage
- Fluid resistor slows flow through the solenoid, reducing closing speed and preventing water hammer and system damage
- One-piece solenoid design with captured plunger and spring prevents loss of parts
- Low power requirement allows for longer wire runs without increased wire gauge size
- Manual internal and external bleed
- Adjustable flow control
- 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

OPERATING RANGE:

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; 19.2 to 757 l/m)

Temperature

up to 150° F (66° C)

OPTIONS (ORDER SEPARATELY):

- Accommodates optional, field installed PRS-D pressure regulating module
- Accepts latching solenoid for use with Rain Bird battery-operated controllers up to 150 psi (10.35 bar)
- Compatible with ESP-LXD decoders

ELECTRICAL SPECIFICATIONS:

Power

24 VAC 50/60 Hz (cycles/sec) solenoid

Inrush current

0.41A (9.84 VA) at 60 Hz

Holding current

0.14A (3.43VA) at 60Hz

DIMENSIONS:

100EFB-CP

Height: 6" (15.2 cm)
Length: 4 1/2" (11.4 cm)
Width: 3 1/4" (8.3 cm)

150EFB-CP

Height: 6 1/2" (16.5 cm)
Length: 5 1/2" (14 cm)
Width: 4 1/2" (11.4 cm)

200EFB-CP

Height: 7" (17.8 cm)
Length: 6 3/4" (17.1 cm)
Width: 5 3/4" (14.6 cm)

The PRS-D option adds 2" (5.1 cm) to valve height.

MODELS:

100EFB-CP 1"
150EFB-CP 1 1/2"
200EFB-CP 2"

** BSP threads available; specify when ordering.*

HOW TO SPECIFY:

100 - EFB-CP - PRS-D

Size	Model	Optional Feature
100: 1"	EFB-CP	PRS-Dial; pressure regulating module
150: 1 1/2"		
200: 2"		

Note:

Valve and PRS-D module must be ordered separately.



SPECIFICATIONS:

The electric remote control valve shall be a normally closed 24 VAC 50/60 Hz (cycles/sec) solenoid actuated globe pattern with a balanced pressure diaphragm design. The valve pressure rating shall not be less than 200 psi (13.80 bar). The valve shall have the following characteristics (circle one):

Flow rate: _____ gpm m3/h l/m

Pressure loss not to exceed: _____ psi bar

The valve body and bonnet shall be constructed of heavy cast red brass; diaphragm shall be of EPDM rubber. All other internal parts shall be made of bronze, brass, and stainless steel to ensure corrosion resistance.

The valve shall have both internal and external manual open/close control (internal and external bleed) for manually opening and closing the valve without electrically energizing the solenoid. The valve shall have internal manual bleed to prevent flooding of the valve box.

The valve shall house a fully-encapsulated, one-piece solenoid. The solenoid shall have a captured plunger with a removable retainer for easy servicing and a leverage handle for easy turning. This 24 VAC 50/60 Hz solenoid shall open with 19.6 VAC minimum at 200 psi (13.80 bar). At 24 VAC, average inrush current shall not exceed 0.41 amps. Average holding current shall not exceed 0.28 amps.

The valve shall have a stainless steel flow control stem with cross handle for regulating or shutting off the flow of water. The valve must open or close in less than one minute at 200 psi (13.80 bar), and less than 30 seconds at 20 psi (1.38 bar).

The valve construction shall be such as to provide for all internal parts to be removable from the top of the valve without disturbing the valve installation.

The valve shall have a contamination proof (CP) self-flushing stainless steel screen located at the valve inlet to filter out grit and prevent clogging of hydraulic control ports and assure reliable operation.

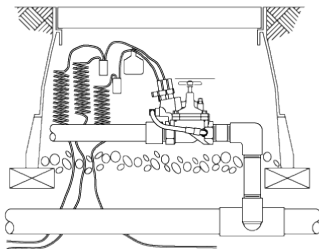
OPTIONAL FEATURE SPECIFICATION:

When so indicated on the design, the 1", 1 1/2", and 2" electric remote control valves shall have a pressure regulating module (PRS-D) capable of regulating outlet pressure between 15 and 100 psi (±3 psi) (1.04 and 6.90 bar (±0.21 bar)).

The PRS-D module shall have an adjusting knob for setting pressure and Schrader valve connection for monitoring pressure. Pressure shall be adjustable from the PRS-D when the valve is internally manually bled or electrically activated.

Brass Valves Pressure Loss (psi)			
FLOW GPM	EFB-CP		
	100	150	200
5	0.2		
10	0.7		
15	1.2		
20	2.1	2.3	0.5
30	5.0	2.9	0.6
40	8.2	2.0	0.8
50	13.0	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	-	-	10.0
180	-	-	12.5
200	-	-	15.8

Brass Electric Remote Control EFB-CP Valve



Brass Valves Pressure Loss (bar)				
FLOW M ³ /H	FLOW L/M	EFB-CP		
		100	150	200
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-D module recommended for all flow rates.

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.

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The Intelligent Use of Water™
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Válvulas da Série GB, EFB-CP e EFB-CP-R

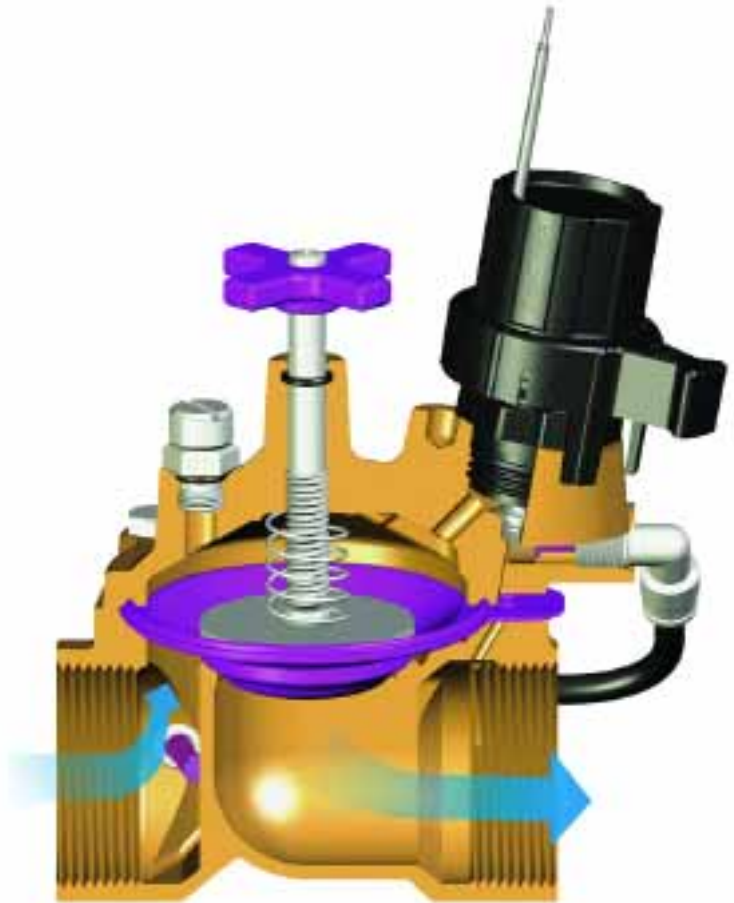
Aplicações

Válvula elétrica de controle remoto feitas de latão com resistência superior e para aplicações comerciais e residenciais. Construídas para resistir a situações extremas e que requerem performance e resistência. Para utilização em água limpa a especificação ideal é a válvula da série GB. Para águas com partículas onde necessitamos de filtros auto-limpantes e livres de contaminação a especificação ideal é a EFB-CP.

E, temos também, o lançamento da válvula ESB-CP-R, que foi projetada para operar com águas residuais, ela possui o diafragma que mantém sua flexibilidade ao longo de vários anos em operação. Este diafragma é construído de EPDM que é uma borracha de alta resistência mecânica a química, suportando altos teores de cloro e outros agressores químicos presentes nestas águas.

Características

- Configuração em linha
- Corpo e parte superior feita em latão vermelho para vida longa e performance confiável a 13,8 bars.
- Resistência de fluxo interno o que ocasiona um fechamento lento para prevenir golpes de aríete e os conseqüentes prejuízos para o sistema
- Válvula de fluxo reverso. Esta característica faz com que a válvula somente falhe na posição fechada se ocorrer algum dano ao diafragma, evitando assim desperdício de água.
- Abertura manual sem fuga de água, por rotação do solenóide 1/4 de volta
- Solenóide com punho ergonômico
- Conjunto solenóide/ pistão numa só peça
- Solenóide emergido em resina de proteção.
- Intervalo alargado de pressão de funcionamento
- Filtro auto-limpante na série EFB-CP e EFB-CP-R
- Solenóide de baixo consumo de energia
- Regulador de fluxo.
- Purga externa e interna manual através de parafuso de purga.
- Filtro livre de contaminação e auto-limpante nos modelos EFB-CP e EFB-CP-R. No modelo EFB-CP este filtro é de nylon e no modelo EFB-CP-R o filtro é de aço inoxidável. O fluxo da água continuamente limpa o filtro durante o funcionamento evitando o acúmulo de partículas e o conseqüente entupimento da válvula.



Opcionais

- Possibilidade de instalação de um regulador de pressão PRS-Dial ajustável de 1,0 a 6,9 bar (em opção).
- Admite solenóide de impulso (latching), Rain Bird que lhe permite funcionar com programadores a pilhas Rain Bird.

Importante

- Não exceder 10 bar de pressão de funcionamento quando utilizar solenóide de impulso

Especificações

- Vazão: 1,14 a 45,4 m³/h ou 0,32 a 12,60 l/s;
- Pressão: 1,4 a 13,8 bar
- Temperatura: 66°C máx.

Especificações Elétricas

- Solenóide: 24 V, 50 Hz
- Corrente de chamada: 0,41A (9,9 A)
- Corrente de manutenção: 0,23A (5,5 VA)

Continuação

Modelos

- 100GB: 1"
- 125 GB: 1-1/4"
- 150 GB: 1-1/2"
- 200 GB: 2"
- 100EFB-CP: 1"
- 125EFB-CP: 1-1/4"
- 150EFB-CP: 1-1/2"
- 200EFB-CP: 2"
- 100EFB-CP-R: 1"
- 150EFB-CP-R: 1-1/2"
- 200EFB-CP-R: 2"

Perda de Carga

SISTEMA MÉTRICO (bar)

Vazão m ³ /h	Vazão l/s	EFB-CP				EFB-CP-R		
		100	125	150	200	100	150	200
1	0,32	0,18	-	-	-	0,01	-	-
2	0,56	0,23	-	-	-	0,04	-	-
3	0,83	0,28	-	-	-	0,08	-	-
4	1,11	0,37	-	-	-	0,15	0,04	0,03
5	1,39	0,49	0,18	0,21	0,08	0,25	0,07	0,03
6	1,67	0,62	0,19	0,23	0,09	0,33	0,09	0,03
7	1,94	0,74	0,21	0,25	0,09	0,47	0,12	0,04
8	2,22	0,80	0,27	0,24	0,09	0,59	0,15	0,05
9	2,50	0,86	0,33	0,23	0,10	0,75	0,19	0,06
10	2,78	1,05	0,42	0,25	0,10	0,91	0,23	0,07
12	3,33	1,46	0,60	0,29	0,10	1,25	0,33	0,10
14	3,89	-	0,82	0,37	0,12	-	0,46	0,13
16	4,44	-	1,08	0,47	0,15	-	0,58	0,17
22	6,11	-	1,08	0,47	0,24	-	1,09	0,34
28	7,77	-	-	0,80	0,42	-	1,62	0,50
34	9,44	-	-	1,36	0,63	-	-	0,71
40	11,10	-	-	-	0,87	-	-	0,99
45	12,60	-	-	-	1,10	-	-	1,22

Notas

- 1 Valores de perda de carga para o controle de fluxo totalmente aberto.
- 2 Módulo regulador de pressão PRS-D aplicável para todas as taxas de vazão.

Recomendações

- 1 A Rain Bird recomenda que as vazões da linha de alimentação nunca ultrapassem 2,29 m/s para diminuir os efeitos de Golfe de Aríete.
- 2 Para vazões menores que 1,14 m³/h; 0,32 l/s, a Rain Bird recomenda o use de uma filtragem antes da válvula para evitar impurezas na parte inferior do diafragma.
- 3 Para vazões abaixo de 2,27 m³/h; 0,63l/s, a Rain Bird recomenda que o regulador de fluxo esteja duas voltas fechado.



LFV Series

Low Flow Valve

Low Flow DV Valve

The only valves in the industry made specifically for drip irrigation systems, the unique patented design of the LFV allows it to effectively handle particles at low flow rates. These valves contain all of the features of reliable Rain Bird DV valves, coupled with a unique diaphragm design that allows particles to pass through at extremely low flow rates, preventing weeping of the valve.

Features

- 1/2" diameter seat allows diaphragm to lift higher and pass larger particles at low flows
- Patent-pending double knife diaphragm design eliminates need for filtration at low flow rates
- Low flow valve allows the filter to be safely placed downstream of the valve
- Double-filtered pilot-flow design for maximum reliability
- Balanced-pressure diaphragm for long life
- External bleed to manually flush system of dirt and debris during installation and system start up
- Internal bleed for spray-free manual operation
- Energy efficient, low-power encapsulated solenoid with captured plunger and 90-mesh (200 micron) solenoid filter
- Buna-N diaphragm with self-cleaning 90-mesh (200 micron) pilot water filter and captive spring
- Operates in low-flow and Xerigation® applications
- 11/4" (3,2 cm) stainless steel phillips head screws
- Accepts latching solenoid for use with Rain Bird battery-operated controllers

- Available as: 3/4" (20/27) and 1" (26/34) FPT
1" (26/34) BSP inline configuration
- Standard in XCZLF-100-PRF and XCZ-075-PRF

Operating Range

- Pressure: 15 to 150 psi (1,0 to 10,4 bar)
- LFV075 Flow: 0.2 to 8 gpm
(0,05 to 1,82 m3/h; 0,01 to 0,50 l/s)
- LFV100 and ILFV100 Flow: 0.2 to 10 gpm
(0,05 to 1,82 m3/h; 0,01 to 0,50 l/s)
- Water Temperature: Up to 110° F (43° C)
- Ambient air temperature up to 125° F (52° C)

Electrical Specifications

- 24 VAC 50/60 Hz (cycles per second) solenoid power requirement
- 0.30 A (7.2 VA) inrush current
- 0.19 A (4.56 VA) holding current
- Solenoid coil resistance: 38 Ohms

Dimensions

- Height: 4 1/2" (11,4 cm)
- Length: 4 3/8" (11,1 cm)
- Width: 3 1/3" (8,4 cm)

Models

- LFV075: 3/4" Low Flow Valve
- LFV100: 1" Low Flow Valve
- ILFV100: 1" Low Flow Valve with 1" BSP threads



How To Specify

LFV - **100**
Size
 075: 3/4" (20/27)
 100: 1" (26/34)

Model
 Low Flow Remote Control Diaphragm Valve

Note: For non-U.S. applications it is necessary to specify ILFV-100 BSP thread type (1" only)

Specifications

LFV075 and LFV100 Electric Remote Control Valves

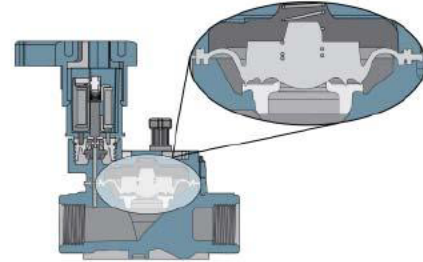
The valve shall be normally closed 24 VAC 50/60 Hz (cycles per second) solenoid actuated, balanced pressure type capable of a flow rate of _____gpm (l/s; m³/h) with a pressure loss not to exceed _____ psi (bar). The valve pressure rating shall not be less than 150 psi (10,4 bar). The valve body and bonnet shall be constructed of high impact weather resistant plastic, stainless steel and other chemical/UV resistant materials. The valve shall have a one unit diaphragm constructed of durable Buna-N rubber material with a clog resistant metering orifice, and a double knife seal. The valve shall have a 1/2" diameter seat. The valve shall have one 90-mesh (200 micron) pilot filter attached to the diaphragm. The valve shall have one fully encapsulated solenoid with captured plunger. The valve shall have one 90-mesh (200 micron) pilot filter attached to the diaphragm. The valve shall have one fully encapsulated solenoid with captured plunger. The valve shall have one 90-mesh (200 micron) filter attached to the solenoid base.

The valve body shall have one of the following: a 3/4" globe configuration (20/27) or 1" (26/34) (FNPT) inlet and outlet.

The valve shall be actuated by a low power 0.30 A (7.2 VA) in-rush current and 0.19 A (4.56 VA) holding current. The valve shall be capable of on/off control by turning the solenoid 1/4 turn. The valve shall provide a flush mode that is manually activated by 1/2 turn of the bleed screw where external porting is permissible.

The valve shall be as such to provide for all internal parts to be removable from the top of the valve without disturbing the valve installation.

The remote control valve is manufactured by Rain Bird Corporation.



Low Flow Valve

Pressure Loss Characteristics

Flow GPM	Flow GPH	LFV-075 (psi)	LFV-100 (psi)
0.2	12	3.0	3.0
1.0	60	3.2	3.4
2.0	120	3.3	3.8
4.0	240	3.6	5.0
6.0	360	4.2	6.4
8.0	480	6.8	7.5

METRIC

Flow l/hr	Flow l/s	LFV-075 (bars)	LFV-100 (bars)
45,42	0,01	0,21	0,21
227	0,06	0,22	0,23
454	0,13	0,23	0,26
908	0,25	0,25	0,34
1362	0,38	0,28	0,44
1817	0,50	0,47	0,52

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The Intelligent Use of Water™
www.rainbird.com



ASVF Anti-siphon Valve Operation Manual

DAS-075 | ASVF 3/4"

DAS-100 | ASVF 1"



ASVF Anti-siphon Valve Operation Manual

For use with all standard sprinkler controllers with 24 volt AC output. The DAS I ASVF valves are diaphragm anti-siphon valves with flow control and atmospheric vacuum breaker.

NOTE: These Rain Bird valves are designed for use with static water pressures of a MAXIMUM of 150 PSI. For higher

pressures, a pressure regulator should be installed. These valves are for outdoor watering use only.

For dirty water sources like wells, lakes, ditches, etc. be sure to install a 100 mesh (or finer) wire filter or screen filter before the electric valves. For use in cold water less than 110°F (43.3°C), applications only.

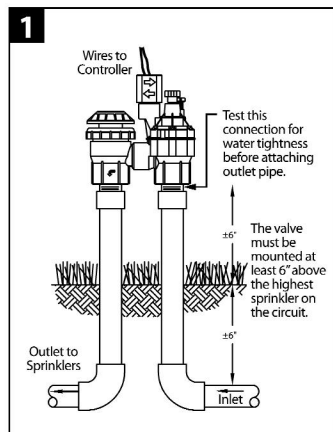
Anti-Siphon Valves for Backflow Prevention

The DAS/ASVF models meet or exceed most building code requirements for connecting a sprinkler system to a city water supply.

These valves prevent the possibility of back siphoning of water from sprinkler lines into the drinking water.

The anti-siphon valves must be installed at least 6 inches above the highest sprinkler or elevated piping in the circuit to meet most codes, (See Diagram 1.) (Consult local building code.)

CAUTION: Do not use this anti-siphon valve as a main line backflow device, nor as a master valve. It is not designed nor approved to be under constant water pressure on both sides of valve. This valve must not be operated continuously for more than twelve (12) hours. Do not install any other valves down stream. If installed incorrectly with constant pressure on both sides of valve, it is possible the valve will fail or burst.



How to Select the Right Valve Size

The valve size (3/4" or 1") is determined by the water flow (measured in gallons per minute, or GPM) of the main line or the sprinkler circuit.

3/4" VALVES: 13 GPM or less.

1" VALVES: 14 GPM or more.

1" valves and pipes allow longer runs and more sprinkler heads per circuit, as well as potentially reducing the total number of valves required.

Assembly of Sprinkler Valves to Pipe

A sprinkler system is made up of one or more groups of sprinklers (called circuits) each operated by its own control valve. Study the illustrations and follow the instructions for proper assembly.

1. Before connecting and testing the assembly, thoroughly flush the main line to prevent debris from damaging the valves.
2. On the inlet side of the control valve, use galvanized steel pipe or thick-walled, Schedule 40 PVC, white plastic pipe, as this pipe is under constant pressure. On the outlet side of the control valve, thin-walled PVC pipe or flexible polyethylene pipe may be used.
3. To assure a watertight connection, use only one to two turns of Teflon tape on the threaded valve-to-pipe connections. DO NOT USE PIPE SOLVENT OR PIPE DOPE. THIS MAY DAMAGE THE VALVE. DO NOT OVERTIGHTEN. Screw adapters into place finger tight. Tighten adapters one to two additional turns.
4. Install a master shutoff valve before all electric valves, so that the water can be conveniently turned off if a valve needs servicing.
5. When grouping valves, allow sufficient spacing between valves to unscrew the valve from the pipe (about 6 inches).

- Do not connect the outlet side (piping to sprinkler heads) without first testing for leaks. If the outlet side is connected and there is a leak, the pipe would have to be cut in order to tighten the connection.

Valve Operation

Your Rain Bird valve offers two features with which you should become familiar.

FLOW CONTROL: This feature allows you to control the amount of water going to your sprinklers. To allow more water through the valve, turn the black knob counter-clockwise UNTIL RESISTANCE IS FELT. This is fully open position.

To reduce the amount of water, turn the black knob clockwise. If you keep turning, you can turn the valve all the way off. In this case, the valve will not open.

MANUAL CONTROL: This allows you to override your automatic controller and turn your sprinklers on AT THE VALVE. The valve can be turned on manually with the external bleed screw or with the internal solenoid bleed. The solenoid (black cylinder with wires) is wired to your

controller and turns the valve off and on electronically.

To operate manually with the internal bleed, turn the solenoid 1/4 turn counter-clockwise; this opens the valve.

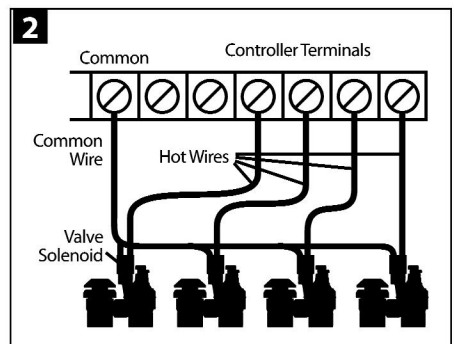
The sprinklers will continue to run until you turn the solenoid back in the clockwise direction (snugly), but do not over-tighten.

To turn on (open) the valve with the external bleed, turn the external bleed screw counter-clockwise, 1/2 turn. Water will exit the external bleed while the valve is on. To turn off the valve, turn the external bleed screw clockwise until snug. Do not over-tighten.

TO OPERATE YOUR VALVE ELECTRONICALLY, BE SURE THE SOLENOID IS TURNED ALL THE WAY TO THE CLOCKWISE POSITION.

Connection, Testing and Wiring These Valves

- Shut off the water main or the master shutoff valve and connect the valve or valve assembly to the main supply pipe. Be sure the water lines are flushed and clean.
- Test the pipe and valve connections for water tightness as follows:
 - Turn the flow control clockwise (down) to off before turning on the water supply.
 - Turn on the water and check for leaks.
- Now complete the hookup by connecting the outlet pipes from the valves to the sprinklers.
- Set flow control adjustment before making wiring connections.
- WIRE CONNECTIONS (Diagram 2).** Use 18 gauge wire to connect the wires to the controller. Wiring that is to be buried alongside the pipes should be APPROVED for UNDERGROUND use. For all splices, use water tight connectors. (Do not exceed 600 ft.)
- Each valve has two wires. Either one may be used as the "HOT" wire which is connected directly to a station output terminal in the controller. The other wire is "COMMON" and may be joined to the common wires of other valves with one wire running to the common terminal of the controller. Check operation using the controller.

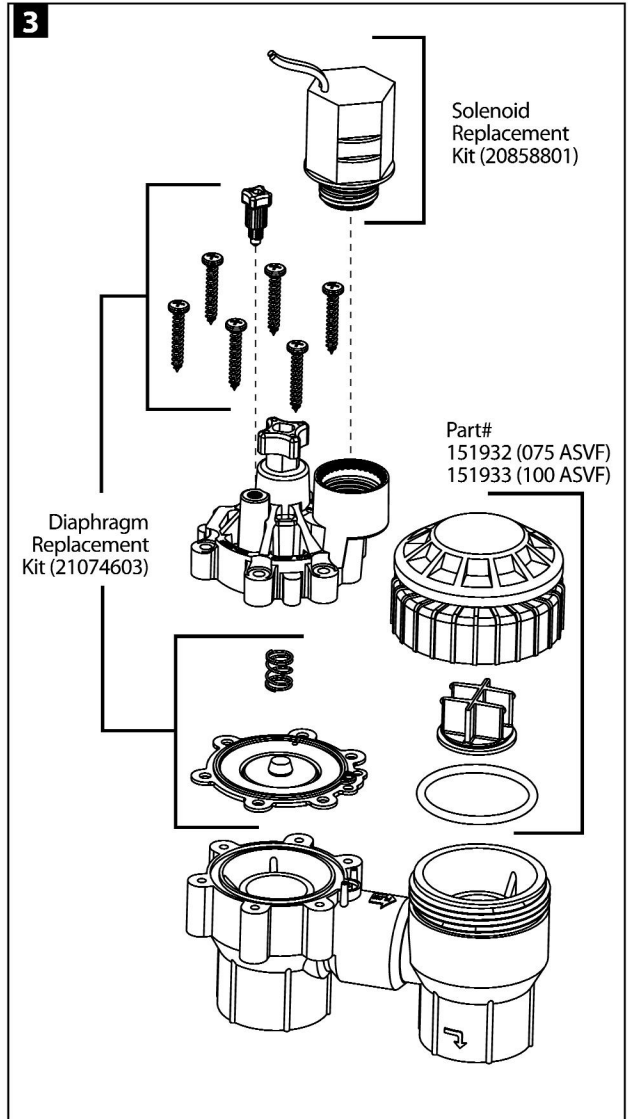


Repair Kits

Two types of repair kits are available (Diagram 3).

1. 20858801 Solenoid Replacement Kit. The 20858801 will replace a defective solenoid on models DAS-075/ASVF and DAS-100/ASVF.
2. 21074603 Diaphragm Replacement Kit. The 21074603 will replace a defective diaphragm on models DAS-075/ASVF and DAS-100/ASVF.

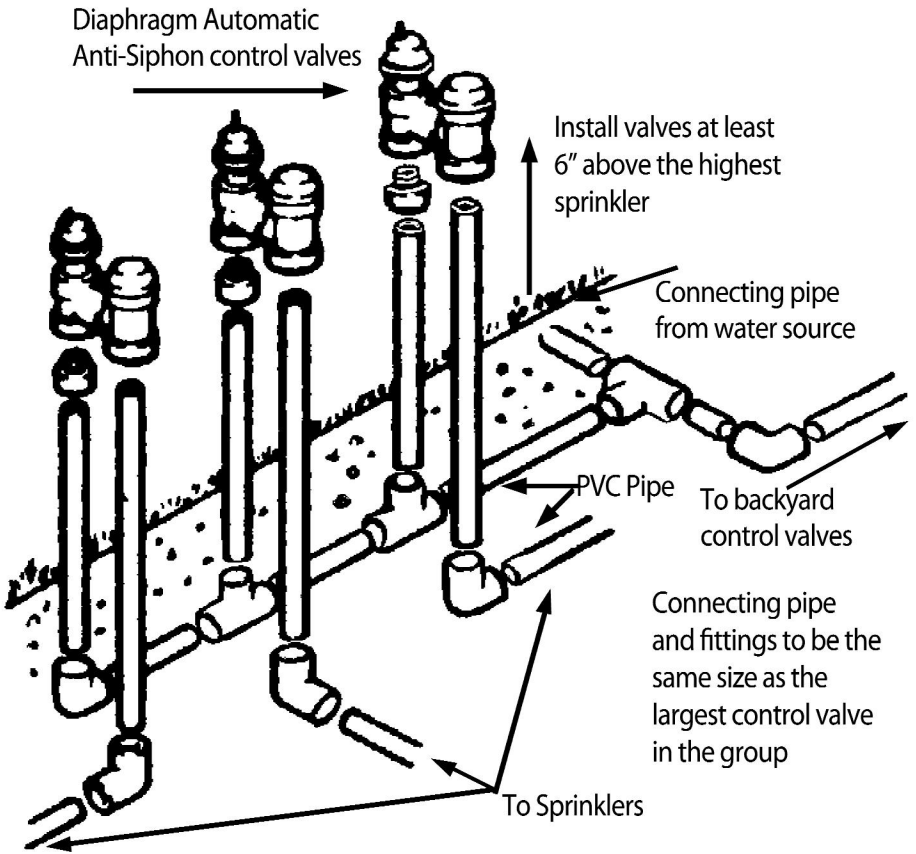
For technical assistance call us at 1-800-RAIN-BIRD.

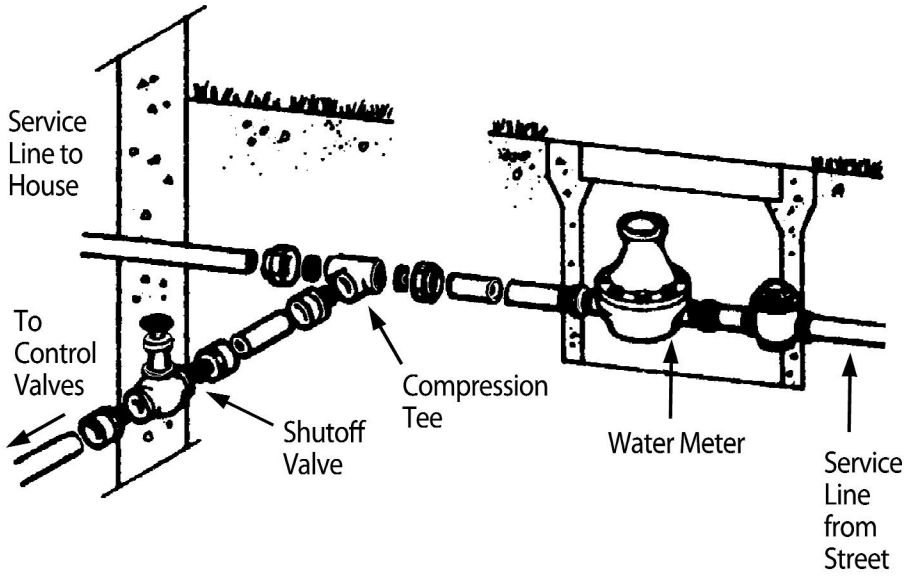


Troubleshooting Guide

Symptom	Solution
Water Won't Shut Off (seeping or full flow)	<ol style="list-style-type: none"> 1. Incorrect controller setting (check length of run time) 2. Loose solenoid (should be tight) 3. Loose bleed screw - check and tighten (finger tight only) 4a. Diaphragm filter clogged. Use manual, external bleed to flush valve. If this does not improve operation, remove top of valve (6 screws). Remove diaphragm and inspect filter for debris. (Check 4b at the same time.) Clean diaphragm filter and reassemble valve. 4b. Diaphragm/valve seat fouled or damaged. Remove diaphragm and inspect diaphragm and valve seat for damage or debris. Clean or replace diaphragm and reassemble valve.
Valve Won't Turn On Manually	<ol style="list-style-type: none"> 1. Flow control turned off. Check by turning black knob counterclockwise until encountering resistance. Do not force beyond point of resistance. Turn knob back clockwise, approximately one half turn. 2. Water supply off at meter or system control shut-off. (Check this first by manually bleeding the valve with either bleed screw or by turning solenoid counterclockwise). 3. Blocked ports. If valve will turn on with manual, external bleed screw but NOT by turning the solenoid for internal bleed, remove the solenoid (rod check solenoid cavity for debris. Visually check small square hole at edge of cavity and carefully run a straightened wire through the center round hole to clear tube of possible debris. Take care not to scratch sides of center port tube as any change in size can affect valve operation.
Valves Won't Turn On Electronically (with controller)	<ol style="list-style-type: none"> 1. Controller settings incorrect. Check programming, start times, run times and day schedules. 2. If none of the valves are working, check the common (ground) wire for a tight connection or damage. If only one or part of the valves do not work, check wiring for damage (staples, nails, cracks) between controller and valve location. 3. Check all of reasons in Section B. 4. Faulty solenoid. Turn off water supply. Switch solenoid with one from a nearby operational valve. If original valve works with second solenoid, replace original solenoid. (Install water-tight wire connections on all valves at this time to avoid future solenoid shorts and/or failures.) 5. Controller not supplying power to valve(s). Check fuse. If blown, replace fuse with same size. (Do not change sizes. A different size fuse will damage controller during operation and will void the warranty.) If fuse is OK, either use a volt/ohm meter to check controller output (24 VAC) at each terminal screw (station/valve connection) OR disconnect an operating solenoid from a valve and take it to the controller. Attach one wire to the "C" terminal (common/ground) and attach the other wire to the station which is not working. Activate the controller in manual start. The solenoid should click (pull the plunger up into the solenoid tube) and it may hum. If nothing happens, (and the controller is still under warranty) you should either return your controller to the store or call your installer. If it's no longer under warranty, you will need to purchase a new controller. Be sure to install water-tight connectors on your wiring and a surge protector (if you live in areas highly prone to lightning). This will help to avoid future problems.

Approved Valve Group Installation Using PVC Pipe and Fittings





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The Intelligent Use of Water™

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Fax: +971 4 8819672

PEB and PESB Series Valves

Designed to Outperform. Engineered to Outlast.

Pressure surges? Effluent water? Clogging debris? No problem. PEB and PESB Series valves offer long life and efficient, trouble-free performance—even under harsh conditions. Constructed of heavy-duty, glass-filled nylon, these valves resist clogging. And the PESB model features an innovative scrubber to actively fight dirt, debris and particles.

Features

- Body constructed of durable glass-filled nylon for long life and heavy-duty performance at 200 psi (13.80 bar) pressure
- Stainless steel studs molded into the body. Bonnet can be attached and removed more 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
- Low flow operating capability (0.25 gpm; 0.06 m³/h; 1.2 l/m) for a wide range of applications. For flows below 5 gpm (1.14 m³/h; 19.2 l/m) or any Xerigation® application, install Rain Bird Y filter upstream
- Slow closing to prevent water hammer and subsequent system damage
- PESB only: Scrubber scrapes its stainless steel screen clean to break down grit and plant material. Prevents debris build-up and clogging

Options (order separately)

- Accommodates optional, field installed PRS-D pressure regulating module to ensure optimum sprinkler performance
- Optional purple flow control handles for non-potable water applications
 - PEB-NP-HAN1 (1")
 - PEB-NP-HAN2 (1½" and 2")
- Accepts latching solenoid for use with Rain Bird battery-operated controllers up to 150 psi (10.35 bar)

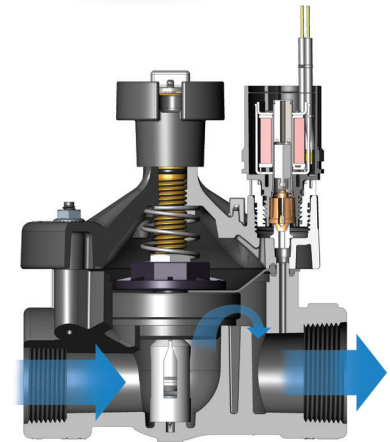
Operating Range

- Pressure: 20 to 200 psi (1.38 to 13.80 bar)
- Flow: 0.25 to 200 gpm (0.06 to 45.40 m³/h; 1.2 to 757 l/m)

- Flow with PRS-D: 5 to 200 gpm (1.14 to 45.40 m³/h; 19.2 to 757 l/m)
- Temperature: up to 150° F (66° C)

Electrical Specifications

- Power: 24 VAC 50/60 Hz (cycles/sec) solenoid
- Inrush current: 0.41 A (9.84 VA) at 60 Hz
- Holding current: 0.14A (3.43VA) at 60Hz
- Coil resistance: 30-39 Ohms
- Compatible with ESP-LXD decoders



PESB Cutaway

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)

Flow m ³ /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-D module recommended for all flow ranges.

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.

Dimensions

Size	Height	Length	Width
100	6½" (16.5 cm)	4" (10.2 cm)	4" (10.2 cm)
150	8" (20.3 cm)	6" (15.2 cm)	6" (15.2 cm)
200	8" (20.3 cm)	6" (15.2 cm)	6" (15.2 cm)

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

Models

- 100PEB and 100PESB 1"
- 150PEB and 150PESB 1½"
- 200PEB and 200PESB 2"

BSP threads available, specify when ordering.

How To Specify

100	-	PEB	-	PRS-D
Size 100: 1" 150: 1½" 200: 2"		Model PEB PESB: scrubber model		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.

Specifications

The electric remote control valve shall be a normally closed 24 VAC 50/60 Hz (cycles/sec) solenoid actuated globe pattern design. The valve pressure rating shall not be less than 200 psi (13.80 bar). The valve shall have the following characteristics (circle one):

Flow rate: _____ gpm m³/h l/m

Pressure loss not to exceed: _____ psi bar

The valve body shall be constructed of heavy-duty glass-filled UV-resistant nylon and have stainless steel studs and flange nuts; diaphragm shall be of nylon reinforced nitrile rubber.

The valve shall have both internal and external manual open/close control (internal and external bleed) to manually open and close the valve without electrically energizing the solenoid. The valve's internal bleed shall prevent flooding of the valve box.

The valve shall house a fully-encapsulated, one-piece solenoid. The solenoid shall have a captured plunger with a removable retainer for easy servicing and a leverage handle for easy turning. This 24 VAC 50/60 Hz solenoid shall open with 19.6 VAC minimum at 200 psi (13.80 bar). At 24 VAC, average inrush current shall not exceed 0.41 amps. Average holding current shall not exceed 0.28 amps.

The valve shall have a brass flow control stem for accurate manual regulation and/or shut-off of outlet flow. The valve must open or close in less than 1 minute at 200 psi (13.80 bar), and less than 30 seconds at 20 psi (1.38 bar).

The PESB valve shall have a self-cleaning stainless steel screen designed for use in dirty water applications.

The valve construction shall be such as to provide for all internal parts to be removable from the top of the valve without disturbing the valve installation.

Optional Feature Specification

PRS-D Pressure Regulating Module:

100PEB-PRS-D 100PESB-PRS-D

150PEB-PRS-D 150PESB-PRS-D

200PEB-PRS-D 200PESB-PRS-D

When so indicated on the design, the 1", 1½" and 2" electric remote control plastic valves shall have a pressure regulating module (PRS-D) capable of regulating outlet pressure between 15 and 100 psi (±3 psi) (1.04 and 6.90 bar (±0.21 bar)).

The PRS-D module shall have an adjusting knob for setting pressure and Schrader valve connection for monitoring pressure. The pressure shall be adjustable from the PRS-D when the valve is internally manually bled or electrically activated.

Non-Potable Flow Control Handle *

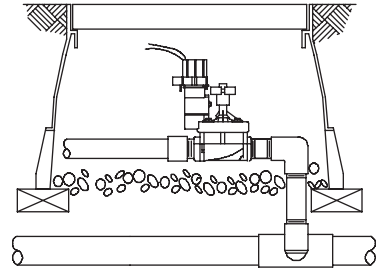
PEB-NP-HAN1 - Fits 1"

PEB-NP-HAN2 - Fits 1½" and 2"

When so indicated on the design, the valve shall have a purple flow control handle to indicate to the user that non-potable water is being used. There shall be no difference between the black and purple handles except for the color.

**Rain Bird offers the PESB-R reclaimed water valve and conversion kits for reclaimed water application. Please see Tech Spec D37338B, the Rain Bird catalog, or visit www.rainbird.com for more information.*

Plastic Electric Remote Control PEB or PESB Valve (with PRS-D)



Jar Top Series Valves

Versatility, Value, Convenience

The Rain Bird Jar Top Valve (JTV) provides versatility, reliability, affordability, and ease of service for residential and light commercial applications. The threaded bonnet design allows for tool-free access and maintenance, eliminating the need to remove and replace multiple screws.

Features

Reliability

- Double-filtered pilot flow for maximum reliability
- Balanced-pressure diaphragm for long life
- Buna-N diaphragm with self-cleaning 90-mesh (200 micron) pilot water filter and stainless steel spring
- Energy efficient, low-power encapsulated solenoid with captured plunger

Versatility

- Operates in low-flow and Xerigation® applications when the RBY filter is installed upstream
- Accepts latching solenoid for use with Rain Bird battery-operated controllers
- Available in multiple fitting types
- External bleed to manually flush system of dirt and debris during installation and system start up
- Internal bleed for spray-free manual operation
- Available with optional flow control feature

Ease of Service

- Threaded bonnet provides easy removal with no screws
- Trouble-free service with few parts
- Drop-in diaphragm for effortless maintenance

Operating Range

- Pressure: 15 to 150 PSI (1,0 to 10,3 bar)
- Flow: 1 to 30 GPM (0,23 to 6,82 m³/h; 0,06 to 1,89 l/s); for flows below 3 GPM (0,68 m³/h; 0,19 l/s) or any Xerigation® application, use RBY-100-200MX filter installed upstream
- Operating Temperatures: Water temperature up to 110° F (43° C); ambient temperature up to 125° F (52° C)

Electrical Specifications

- 24 VAC 50/60 Hz (cycles/sec.) solenoid
- Inrush current: 0.30 A (7.2 VA) at 60 Hz
- Holding current: 0.19 A (4.6 VA) at 60 Hz
- Coil resistance: 42-55 Ohms

Dimensions

- Height: 5" (12,7 cm)
- Length: 4" (10,2 cm)
- Length (MxM): 5.4" (13,7 cm)
- Length (MxB): 5.8" (14,7 cm)
- Width: 3 1/8" (7,9 cm)

Models:

- 100-JTV: 1" (26/34) female x female threaded*
- 100-JTV-SS: 1" (26/34) slip x slip
- 100-JTV-MM: 1" male x male*
- 100-JTV-MB: 1" male x barb
- 100-JTVF: 1" female x female with flow control*
- 100-JTVF-SS: 1" slip x slip with flow control
- 100-JTVF-MM: 1" male x male with flow control*
- 100-JTVF-MB: 1" male x barb with flow control

* BSP threads available; specify when ordering

Valve Pressure Loss (psi)

GPM	JTV/JTVF psi	Male x Barb psi	Male x Male psi
1.0	2.5	3.1	3.6
3.0	2.8	3.5	3.8
5.0	3.1	3.9	4.1
10	4.1	4.8	5
15	5.3	5.7	6
20	6.2	7.0	7.2
30	9.3	11.2	11.7

Valve Pressure Loss (bar) Metric

m³/h	l/s	JTV/JTVF bar	Male x Barb bar	Male x Male bar
0.23	0.06	0.17	0.10	0.25
0.68	0.19	0.19	0.18	0.26
1.14	0.32	0.21	0.21	0.28
2.27	0.63	0.28	0.26	0.34
3.41	0.95	0.37	0.36	0.41
4.54	1.26	0.43	0.55	0.50
6.81	1.89	0.64	1.09	0.81

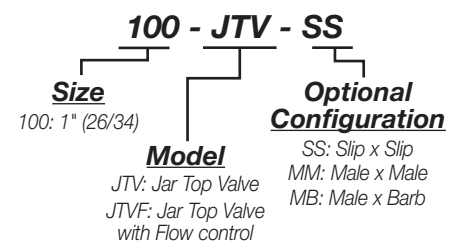


Male x Barb



Male x Male

How to Specify/Order:



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



Specifications

ELECTRIC REMOTE CONTROL VALVE

The valve shall be normally closed 24 VAC 50/60 Hz solenoid actuated, balanced pressure type capable of a flow rate of 30 GPM (6,82 m³/h; 1,89 l/s) with a pressure loss not to exceed _____. The valve pressure rating shall not be less than 150 psi (10,3 bars). The valve body and bonnet shall be constructed of high impact weather resistant plastic, stainless steel and other chemical/UV resistant materials. The valve shall have a diaphragm constructed of durable Buna-N rubber material with a clog resistant metering orifice. The valve shall have one 90-mesh (200 micron) pilot filter attached to the diaphragm. The valve shall have one fully encapsulated solenoid with captured plunger.

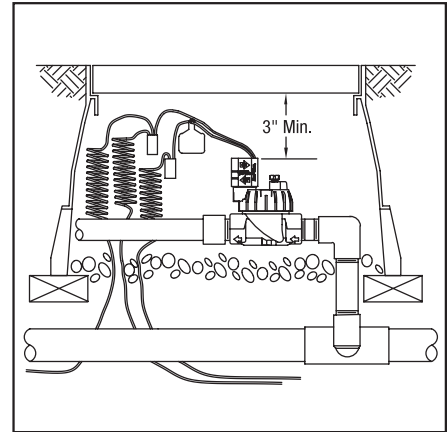
The valve body shall be a 1" globe configuration (26/34) with a _____ inlet and _____ outlet.

The valve shall be actuated by a low power 0.30 A (7.2 VA) inrush current and 0.19 A (4.6 VA) holding current. The valve shall be capable of on/off control by turning the solenoid ¼ turn. The valve shall provide a flush mode that is manually activated by ½ turn of the bleed screw where external porting is permissible.

The valve shall be of a threaded bonnet design and provide for all internal parts to be removable from the top of the valve without disturbing the valve installation.

The diaphragm shall be a drop-in design which can be installed into the valve body with no special alignment tab.

The remote control valve shall be manufactured by Rain Bird Corporation, Glendora, California.



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Rain Bird Technical Service

(800) 247-3782 (U.S. only)

www.rainbird.com

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

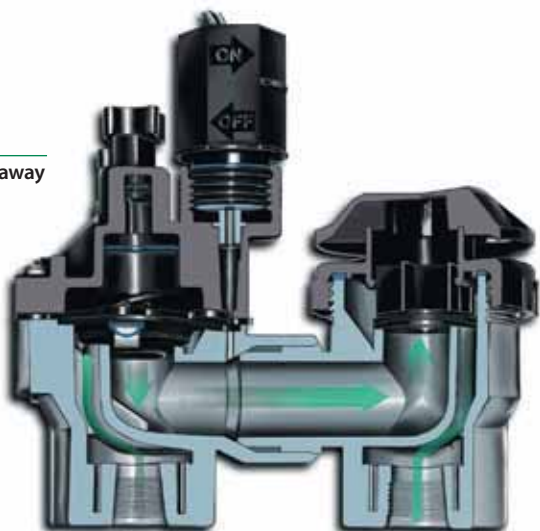
ASVF Valve Pressure Loss (bar)

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

* See Xerigation section (page 206) for RBY Filter flow loss data. 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

ASVF Cutaway



Quick-Coupling Valves

Convenient water access in potable and non-potable systems

Features

- Industrial-strength brass quick-coupling valves for convenient water access in potable and non-potable systems.
- Rugged, red brass construction for long life and reliable performance.
- Reliable leak proof operation with strong corrosion-resistant stainless steel spring.
- 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-DLRC, 33-DRC, 44-LRC, 44-RC, 33-DNP, 44-NP, and 44-NP ACME)
- Thermoplastic rubber cover for durability
- 33-DNP, 44-NP, 44-NP ACME, 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)

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



Quick Coupling Valves



Quick-Coupling Valve Cutaway



33-DNP, 44-NP, 44-NP ACME



7



3-RC, 5-RC, 5-LRC



33-DRC, 33-DLRC, 44-RC, 44-LRC

- 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
- 44-NP ACME: 1" (26/34) Non-potable, Purple Locking Rubber Cover, 2-Piece Body, ACME thread
- 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

Dimensions (height)

- 3-RC: 4 1/4" (10.8 cm)
- 33-DRC: 4 3/8" (11.1 cm)
- 33-DLRC: 4 5/8" (11.7 cm)
- 44-RC: 6" (15.2 cm)
- 44-LRC: 6" (15.2 cm)
- 5-RC: 5 1/2" (14.0 cm)

- 5-LRC: 5 1/2" (14.0 cm)
- 7: 5 3/4" (14.6 cm)
- 33-DNP: 4 3/8" (11.1 cm)
- 44-NP: 6" (15.2 cm)
- 44-NP ACME: 6" (15.2 cm)
- 5-NP: 5 1/2" (14.0 cm)

How To Specify

33 - DLRC

Model	Cover	Thread
33	RC	Blank: NPT
44	DRC	BSP: 5-RC, 5-IRC only
5	DLRC	ACME: 44-NP only
7	LRC	
	DNP	
	NP	

Note: This specifies a 33-DLRC valve: 3/4" (20/27) quick coupling type; optional locking cover.

Specifications

33-DNP, 44-NP, 44-NP ACME - Two Piece Quick Coupling Valve (Non-Potable)

The quick coupling valve shall be a two piece type capable of having a discharge rate of ___ units with a pressure loss not to exceed ___ units.

The valve shall be constructed of red brass and shall have a purple, thermoplastic, locking rubber cover with molded-in warnings of "DO NOT DRINK" in English and Spanish, for use on systems using non-potable water.

The valve shall be opened and closed by a brass key of the same manufacturer having a ___" (MNPT) and ___" (FNPT) outlet. The valve throat shall have a key-way with detent positions for regulating water flow.

QUICK COUPLING VALVES - 3-RC, 5-RC, 5-LRC, 7 - One Piece Quick Coupling Valve

The quick coupling valve shall be a one-piece type capable of having a discharge rate of ___ units with a pressure loss not to exceed ___ units.

The valve body shall be constructed of red brass. The cover shall be a durable, protective self-closing rubber cover. When so specified, the cover shall be a locking rubber cover (LRC).

The valve shall be opened and closed by a brass key of the same manufacturer having a ___" (MNPT) and ___" (FNPT) outlet. The valve throat shall have a key-way with detent positions for regulating water flow.

*** Cover Key - Model 2049**

- Locks and unlocks the optional locking cover (LRC) on quick coupling valves.
- Operates the valve marker compression lock.

33-DRC, 33-DLRC, 44-RC, 44-LRC - Two Piece Quick Coupling Valve

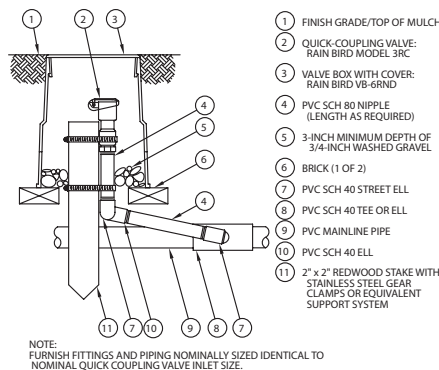
The quick coupling valve shall be a two piece type capable of having a discharge rate of ___ units with a pressure loss not to exceed ___ units.

The valve body shall be constructed of red brass. The cover shall be a durable, protective self-closing rubber cover. When so specified, the cover shall be a locking rubber cover (LRC).

The valve shall be opened and closed by a brass key of the same manufacturer having a ___" (MNPT) and ___" (FNPT) outlet. The valve throat shall have a key-way with detent positions for regulating water flow.

Quick Coupling Valve Keys

TOP PIPE THREADS					
VALVE	KEY		MALE		FEMALE
3-RC	33DK	3/4"	19 mm	1/2"	13 mm
33-DRC	33DK	3/4"	19 mm	1/2"	13 mm
33-NP	33DK	3/4"	19 mm	1/2"	13 mm
44-NP	44K	1"	25 mm	3/4"	19 mm
44-NP ACME	44KA	1"	25 mm	3/4"	19 mm
44-RC	44K	1"	25 mm	3/4"	19 mm
5-RC	55K1	1"	25 mm	—	—
5-NP	55K1	1"	25 mm	—	—
7	7K	1 1/2"	38 mm	—	—



Quick-Coupling Valves Pressure Loss (psi)

Flow	3-RC	33-DRC 33-DLRC 33-DNP	44-RC 44-LRC 44-NP 44-NP ACME	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) METRIC

Flow	3-RC	33-DRC 33-DLRC 33-DNP	44-RC 44-LRC 44-NP 44-NP ACME	5-RC 5-LRC 5-NP	7
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

*Loss values are with flow control fully open.

1) 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.

2) For flows below 5 gpm (1 m³/h; 32 l/s) Rain Bird recommends use of upstream filtration to prevent debris from collecting below the diaphragm.

3) For flows below 10 gpm (2 m³/h; 63 l/s) Rain Bird recommends that the flow control stem be turned down two full turns from the fully open position.

PRS-B module is recommended for use only at flow rates in areas below solid line.

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