RAIN BIRD®

Tech Spec

PGA Series Valves

Versatility at an affordable price.

Whether the job calls for a globe or angle valve, PGA Series valves are the right choice. Loaded with features, these heavy-duty PVC valves are economical, easy to install and built to withstand constant 150 psi (10.35 bar) pressure and 2 to 150 gpm (0.45 to 34.05 m^3/h; 7.8 to 568 l/m) flows.

The PGA Series from Rain Bird – built to last… and last!

Features

- Globe and angle configuration for flexibility in design and installation
- PVC and glass reinforced nylon construction
- Filtered pilot flow to resist debris and clogging of solenoid ports
- Slow closing to prevent water hammer and subsequent system damage
- Manual internal bleed operates the valve without allowing water into the valve box
- One-piece solenoid design with captured plunger and spring for easy servicing Prevents loss of parts during field service
- Non-rising flow control handle adjusts water flows as needed
- Normally closed, forward flow design

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

Operating Range

- Pressure: 15 to 150 psi (1.04 to 10.35 bar)
- Flow: 2 –150 gpm (0.45 to 34.05 m^3/h; 7.8 to 568 l/m)
- Flow with PRS-D: 5 –150 gpm (1.14 to 34.05 m^3/h; 19.2 to 568 l/m)
- Water Temperature: up to 110° F (43° C)
- Ambient Temperature: up to 125° F (52° C)

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 (3.43 VA) at 60 Hz
- Coil resistance: 30-39 Ohms

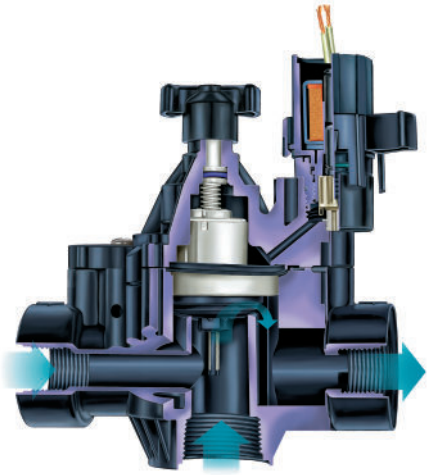
Models

- 100PGA 1″
- 150PGA 1½″
- 200PGA 2″
- *BSP threads available; specify when ordering.*

Dimensions

Size	Height	Length	Width
100PGA	7¼″ (18.4 cm)	5½″ (14.0 cm)	3¼″ (8.3 cm)
150PGA	8″ (20.3 cm)	6¾″ (17.2 cm)	3½″ (8.9 cm)
200PGA	10″ (25.4 cm)	7¾″ (19.7 cm)	5″ (12.7 cm)

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



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)

Flow m^3/h	Flow l/m	100-PGA Globe 2.5cm	100-PGA Angle 2.5cm	150-PGA Globe 3.8cm	150-PGA Angle 3.8cm	200-PGA Globe 5.1cm	200-PGA Angle 5.1cm
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

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 m^3/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 m^3/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 Temperature Rating

Water Temp.		Continuous Pressure	
73˚ F	(23˚ C)	150 psi	(10.35 bar)
80˚ F	(27˚ C)	132 psi	(9.10 bar)
90˚ F	(32˚ C)	112 psi	(7.70 bar)
100˚ F	(38˚ C)	93 psi	(6.40 bar)
110˚ F	(43˚ C)	75 psi	(5.20 bar)

How To Specify

100 - PGA - PRS-D

Size
100: 1"
150: 1½"
200: 2"

Model
PGA

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/angle pattern design. The valve pressure rating shall not be less than 150 psi (10.35 bar). The valve shall have the following characteristics (circle one):

Flow rate: _____ gpm m^3/h l/m

Pressure loss not to exceed: _____ psi bar

The valve body and bonnet shall be constructed of high-impact, water-resistant PVC for the body and glass-filled nylon for the bonnet with stainless steel screws.

The valve shall have manual open/close control (internal bleed) for manual opening and closing of 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 150 psi (10.35 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 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 150 psi (10.35 bar), and less than 30 seconds at 20 psi (1.38 bar).

The valve construction shall provide for all internal parts to be removable from the top of the valve without disturbing the valve installation. The body shall have a removable O-ringed plug for installation in either globe or angle configuration.

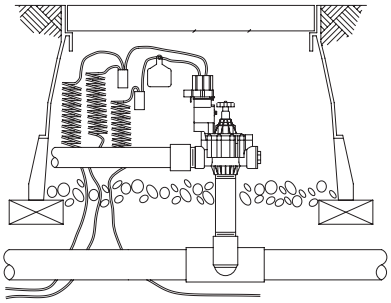
Optional Feature Specification

PRS-D Pressure Regulating Module 100PGA-PRS-D, 150PGA-PRS-D, 200PGA-PRS-D

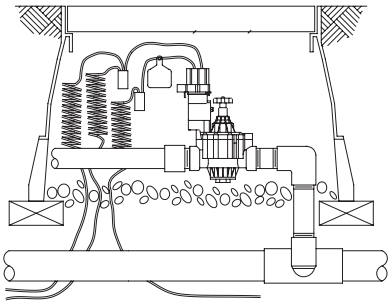
When so indicated on the design, the electric remote control valve shall have a pressure regulating module (PRS-D) capable of regulating outlet pressure between 15 and 100 psi (±3 psi) (1.04 and 6.90 bar (±0.21 bar)).

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.

Plastic Electric Remote Control
PGA Valve (with PRS-D) using bottom inlet



Plastic Electric Remote Control
PGA Valve (with PRS-D) using side inlet



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