

PGA Series Valves

with TBOS Latching Solenoid

TECHNICAL SPECIFICATIONS

MODEL:



PGA Series Valve
with TBOS Latching
Solenoid

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 34.05m³/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 and less risk of losing parts during field service
- Non-rising flow control handle adjusts water flows as needed
- Normally closed, forward flow design

OPERATING RANGE:

Pressure

Pressure: 15 to 150 psi (1.04 to 10.35 bar)

Flow with/without PRS-D

2–150 gpm (0.45 to 34.05 m³/h; 7.8 to 568 l/m)
5–150 gpm (1.14 to 34.05 m³/h; 19.2 to 568 l/m)

Temperature

Water Temperature: up to 110° F (43° C)
Ambient Temperature: up to 125° F (52° C)

OPTIONS (ORDER SEPARATELY):

- Accommodates optional, field installed PRS-D pressure regulating module

ELECTRICAL SPECIFICATIONS:

Power

9.0 VDC Latching Solenoid
6.5 VDC minimum @ 165 psi
7.1 VDC minimum @ 220 psi

Inrush current

400 mA

Coil Resistance

4.5 ohms +/- 0.5 ohms

DIMENSIONS:

100PGA

Height: 7 1/4" (18.4 cm)
Length: 5 1/2" (14.0 cm)
Width: 3 1/4" (8.3 cm)

200PGA

Height: 10" (25.4 cm)
Length: 7 3/4" (19.7 cm)
Width: 5" (12.7 cm)

150PGA

Height: 8" (20.3 cm)
Length: 6 3/4" (17.2 cm)
Width: 3 1/2" (8.9 cm)

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

MODELS:

I100PGA9V 1"
I150PGA9V 1 1/2"
I200PGA9V 2"
**BSP Threads Only*

HOW TO SPECIFY:

100 - PGA9V - PRS-D

Size	Model	Optional Feature
100: 1"	PGA Valve with	PRS-Dial: pressure
150: 1 1/2"	TBOS Latching	regulating module
200: 2"	Solenoid	(must be ordered separately)

Note:

Valve and PRS-Dial module must be ordered separately.



SPECIFICATIONS:

The electric remote control valve shall be a normally closed 9 VDC latching 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 m3/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. This 9 VDC latching solenoid shall open with 6.5 VDC minimum at 165 psi (11.38 bar). At 9 VDC, average inrush current shall be 0.40 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.

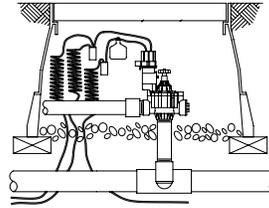
OPTIONAL FEATURE SPECIFICATION:

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

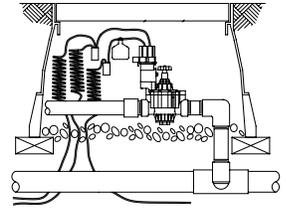
When so indicated on the design, the electric remote control valve shall have a pressure regulating module (PRS-D) capable of regulating outlet pressure between 15 and 100 psi (+/- 5 psi) (1.04 and 6.90 bar (+/- 0.35 bar)).

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



PGA Series Valve Pressure Loss (psi)						
FLOW GPM	I100-PGA9V GLOBE 1"	I100-PGA9V ANGLE 1"	I150-PGA9V GLOBE 1½"	I150-PGA9V ANGLE 1½"	I200-PGA9V GLOBE 2"	I200-PGA9V ANGLE 2"
2	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

Notes

- Loss values are with flow control fully open.
- PRS-D module recommended for all flow ranges.

Recommendations

- 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.
- 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.
- 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 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)

PGA Series Valve Pressure Loss (bar)							
FLOW M³/H	FLOW L/M	I100-PGA9V GLOBE 2.5CM	I100-PGA9V ANGLE 2.5CM	I150-PGA9V GLOBE 3.8CM	I150-PGA9V ANGLE 3.8CM	I200-PGA9V GLOBE 5.1CM	I200-PGA9V 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

Rain Bird Corporation
 6991 East Southpoint Rd.
 Tucson, AZ 85756
 (520) 741-6100

Rain Bird Corporation
 970 West Sierra Madre Ave.
 Azusa, CA 91702
 (626) 812-3400

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 www.rainbird.com