



Iron Gate Feed Pump Manual

INSTALLATION AND OPERATING INSTRUCTIONS IRON GATE® IRON FILTER SYSTEM



Manufactured by:

R.E Prescott Co., Inc.

10 Railroad Avenue • Exeter, New Hampshire • 03833

Phone: (603) 772-4321 • Fax: (603) 772-1089

REPRESCOTT.COM

Iron Gate® Feed Pump System Instructions

Description

The Iron Gate® Feed Pump System consists of the Iron Gate® Manifold Kit, the Auto Feed Pump (Figure 4), the Dwell tank, and Iron Gate® Filter.

Installation / Start Up

Assembling Iron Gate® Manifold Kit (Item No. 81875)

Remove components of Iron Gate® Manifold Kit and assemble as pictured in Figure 2. Figure 1 shows all manifold kit pieces.



Figure 1 – Parts List



Figure 2 – Assembly

Assembling Auto Feed Pump

1. Connect ¼" discharge fitting of feed pump to Air In fitting on Iron Gate® Manifold.
2. Attach 12 Volt AC Auto Connect to the Meter Control using the 6 ft. MxF 3.5 mm cord. See Figure 4.

For more information, refer to Feed Pump Manual.

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Assembling Air Release Tank

Air Release Tank comes preassembled, attach to Iron Gate® Manifold as seen in Figure 3.

Iron Gate Filter Assembly

Iron Gate® Filter should come preassembled. If not, Iron Gate® Filter Media needs to be installed; follow instructions below.

1. Remove Automatic Backwashing Valve from the top of empty mineral tank.
2. Plug the top of the distributor tube so that no mineral falls down the tube during filling.
3. Add specified amount of gravel to the bottom of the mineral tank so that the base of the distributor tube is sufficiently covered.
4. Pour media into the tank until it reaches 18" from the top of the mineral tank.
5. Remove the plug from distributor tube.
6. Reinstall the Automatic Backwashing Valve to the top of the mineral tank. Be careful not to disturb the o-ring that is located in the distributor tube opening and also on the flange that meets the top of the mineral tank. Leaks could result.
7. Attach to the Iron Gate® Filter to Iron Gate® Manifold as seen in Figure 3.

Final Assembly

Tighten all connections into and out of the Iron Gate® Manifold such that they are watertight. Set unit in its final position and plug in Meter Control Transformer. Refer to appropriate control valve manual for inlet/outlet plumbing, drain line positioning, fitting assembly, power supply, and start up of control valve.



Figure 3 – Iron Gate Filter Assembly

Operation

Auto Feed Pump

The Auto Feed Pump is equipped with a 12 V AC relay. For auto operation, connect male 3.5mm jack of the Auto Feed Pump to female 3.5mm 12 V AC output on Iron Gate Manifold using 6ft 3.5mm M/F Auto Connect cord.

For more information, refer to Feed Pump Manual and Auto Feed Pump Brochure.

Note: Auto Feed Pump requires solution tank. (purchased separately)

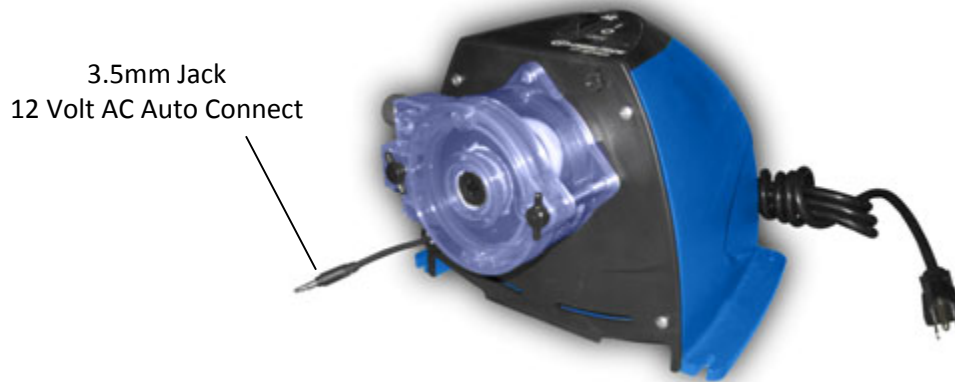


Figure 4 – Auto Feed Pump

Meter Control Manual

Meter Control monitors water use, operates the Auto Feed pump, and beeps when threshold gallons is met.

Flow display

The meter control will provide a visual digital display of real time flow in gallons per minute; provide a total gallons record and a peak flow rate record. The total gallons and the peak flow may be cleared in Programming mode.

Threshold visual and audible signals:

Program a threshold value between 10,000 and 9,990,000 gallons and the meter control will provide visual indication at 80% and 90% of the threshold level and an audible beep at 100% of the threshold level. This feature is useful as an indicator or reminder for future service or preventative maintenance.

Threshold connection:

Connection Opt 2 is energized with 12 VAC when the threshold level is reached. This may be used to interface internet, signal alarms or other devices.

4-20 milliamp connection:

Connection J2 is a 4-20 milliamp linear signal proportional to flow. This may be used to control a chemical feed pump, VFD, chart recorder or other devices.

Flow switch connection:

Connection Opt 1 can be energized with 12 VAC when flow is greater than 0.5 GPM. When flow stops Opt 1 remains energized for an adjustable time delay off.

Batch switch connection:

Connection Opt 1 can also be energized every certain number of gallons for an adjustable time period. This feature is adjustable between 1 to 990 gallons and .1 to 90 minutes to batch operate air pumps, chemical feed pumps, CO2 solenoids to lower pH and more.

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Meter Control Operation Buttons:

- Flow button: Flow rate in gallons per minute.
- Total Flow button: Total gallons registered since last memory cleared.
- Peak Flow button: Highest flow rate since last memory cleared.

Lights:

- Green Light: Power on light.
- Yellow Alert Light: Blinks at 80% threshold gallons.
- Red Alert Light: Blinks at 90% threshold gallons.
- See **PROGRAMMING** section below to set threshold gallons.

Alarm Beep:

- 3 Beeps every 15 seconds at 100% threshold gallons.
- Push any button to silence beep for two days.
- See **CLEAR MEMORY** section below to stop beep.

Clear Memory (Stops Beeping)

Clear memory will stop 100% Threshold Beep, zero out Total Flow and Peak Flow values. Be sure to write these values down and the date for future reference.

- Press all 3 buttons simultaneously and screen displays **CLR MEMORY NO**.
- Press Total Flow or Peak Flow button and screen displays **CLR MEMORY YES**.
- Press Flow button.
- Memory is cleared.

Programming: *Press all three buttons of the display simultaneously for 3 seconds.*

- Flow Button: Toggles to next screen, also acts as the **Enter** Button.
- Total Flow Button: Toggles the values **up**.
- Peak Flow Button: Toggles the values **down**.

Screen One: **CLR MEMORY YES / NO**

- **YES** to clear memory of Total Flow and Peak Flow.
- **NO** to continue on with programming.

Screen Two: **SET PULSES** (factory set at 80)

- Set pulses per gallon (PPG) for Hall Effect meter.

Screen Three: **SET THRESHOLD TOTAL 2 YES or NO**

- **YES** to use threshold function.
- **NO** to turn off threshold function, skips screen four.

Screen Four: **SET THRESHOLD TOTAL 2** (factory set at 80)

- Set threshold gallons.
- Yellow light blinks at 80% threshold.
- Red light blinks at 90% threshold.
- Alarm beeps at 100% threshold.
- Opt2 connection is powered with 12 VAC at 100% threshold. (30 milliamps max.)

Screen Five: **SET GAL/MIN** (no factory setting)

- Set GPM for the 20 milliamp output level.
- Zero flow is a fixed 4 milliamp output.
- Watch polarity. 4-20mA output at J2 connection.

Factory Settings:		
CLR MEMORY		no
SET PULSES		80
SET THRESHOLD TOTAL	2	yes
SET THRESHOLD TOTAL	2	80 GAL X1000
SET		5 GAL MIN

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Screen Six: SET GAL 1

- Set the gallon batch to energize Opt1
- Set between 1 and 990 gallons.
Air Pump factory setting is 20 gal.
Feed Pump setting is 1 gal for 10 GPM peak flow.
- A setting of zero energizes Opt1 like a flow Switch, sensitive at .5 GPM.

SET
1
1.0 GAL

Screen Seven: SET MIN 1

- Set delay off in minutes for Opt1 connection
- Set between 0.1 and 90 minutes.
Feed Pump setting is 0.10 min.
- Opt1 is 12 VAC (30 milliamps max.)

SET
1
0.10 min

Meter Control Connections

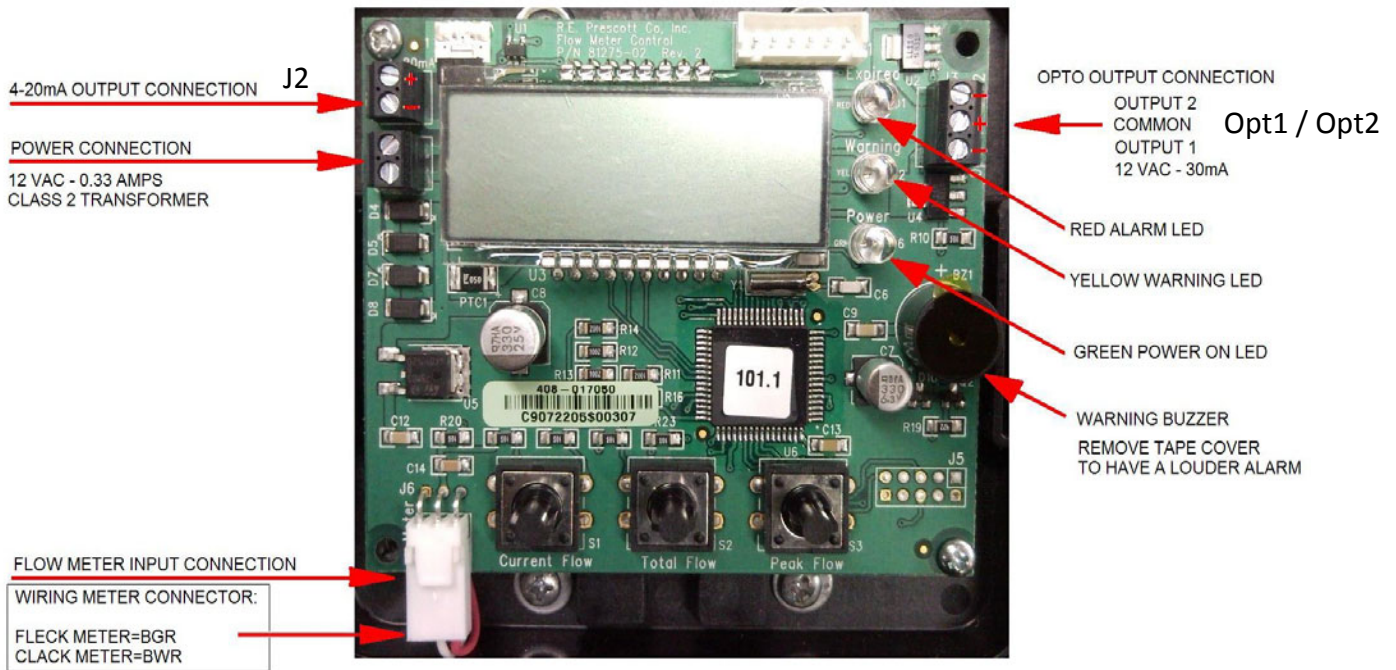


Figure 5 – Meter Control Board

Meter Pulse Setting

Model	Size	4-20mA range	PPG
Iron Gate® meter	1" male IPS Connections	0-25 GPM max	80 PPG

