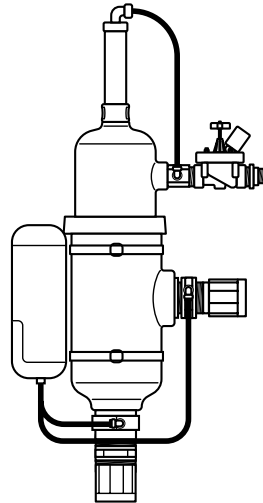




## HN-G-01/ 02 Filter Series

### Quick Start Guide



#### NOTICE:

Changes or modifications not expressly approved by Rain Bird could void the user's authority to operate the equipment.

#### ⚠ WARNING

It is extremely dangerous to open the filter, or control tubing while under pressure. Always depressurize before performing any maintenance or troubleshooting.

Rain Bird Corporation  
6991 East Southpoint Rd.  
Tucson, AZ  
85756



QR code links to digital manual

# 1. Estimate flow rate and record pressure

Place a 5 gallon bucket at the water source and allow it to flow without restriction into the bucket.  
Time how long it takes to fill to the 5 gallon point.

Example

$$\frac{\text{Volume of Bucket (in gallons)}}{\text{Time to fill bucket (in seconds)}} \times 60 = \text{GPM}$$

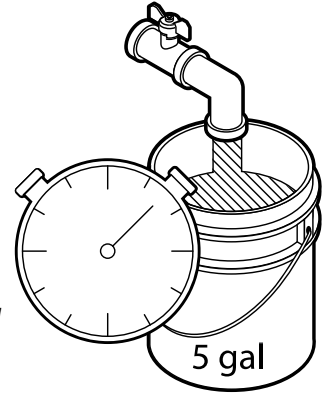
$$\frac{5}{7} \times 60 = 43 \text{ GPM}$$

## Backwash requirements

A 1" filter requires 30 GPM at 40 PSI to backwash properly.

A 2" filter requires 40 GPM at 40 PSI to backwash properly.

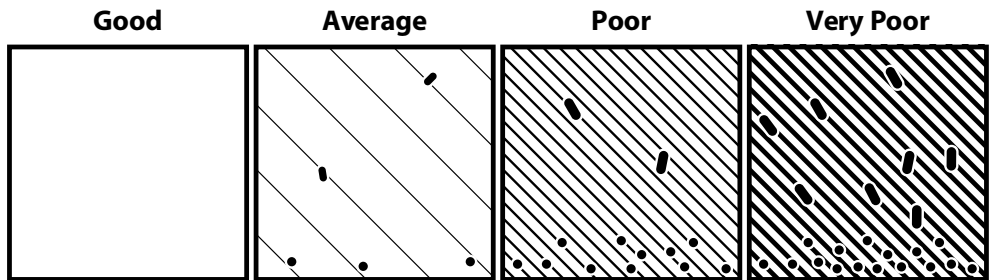
If this flow and pressure for backwash can't be maintained while irrigating, the flow to irrigation must be stopped (using an optional controlled outlet valve) while the filter backwashes.



Static (and dynamic) pressures over 100 PSI require a pressure regulator.

# 2. Rank your water source

Flow is dependent on Water Source Quality and the micron size of the screen. The following chart defines the maximum flows allowable based on Water Source Quality and screen micron size. Most applications will follow the Average, Poor or Very Poor lines. Water source should be rated at worst case scenario if water quality varies during the year (such as algae blooms during summer). A general guide to Water Quality is also shown below.



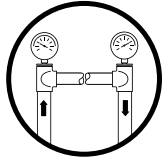
		Good		Average		Poor		Very Poor	
		< 20 ppm		< 40 ppm		< 80 ppm		< 110 ppm	
Example		Well Water, municipal supply or equal.		Clear lake water or equal		River water.		Brown or green water (mud/algae).	
Contamination		Very little, 100% clear, similar to drinking water quality.		95% clear water, small contaminants. No real discoloration of the water.		Light to medium discoloration.		Heavy discoloration. Medium algae, visible silt/dirt etc.	
Maximum Flow									
Filter Size		1"		2"		1"		2"	
Screen size	400 micron (47 mesh)	40 GPM 9 m <sup>3</sup> /h	100 GPM 22.7 m <sup>3</sup> /h	40 GPM 9 m <sup>3</sup> /h	100 GPM 22.7 m <sup>3</sup> /h	36 GPM 8.2 m <sup>3</sup> /h	55 GPM 12.5 m <sup>3</sup> /h	Not recommended	35 GPM 8 m <sup>3</sup> /h
	200 micron (88 mesh)	40 GPM 9 m <sup>3</sup> /h	100 GPM 22.7 m <sup>3</sup> /h	37 GPM 8.4 m <sup>3</sup> /h	85 GPM 19.3 m <sup>3</sup> /h	33 GPM 7.6 m <sup>3</sup> /h	50 GPM 11.4 m <sup>3</sup> /h		30 GPM 6.8 m <sup>3</sup> /h
	150 micron (100 mesh)	40 GPM 9 m <sup>3</sup> /h	95 GPM 21.6 m <sup>3</sup> /h	33 GPM 7.5 m <sup>3</sup> /h	70 GPM 15.9 m <sup>3</sup> /h	Not recommended	40 GPM 9 m <sup>3</sup> /h	Not recommended	
	100 micron (150 mesh)	30 GPM 6.8 m <sup>3</sup> /h	75 GPM 17 m <sup>3</sup> /h	25 GPM 5.7 m <sup>3</sup> /h	45 GPM 10.2 m <sup>3</sup> /h	Not recommended	Not recommended	Not recommended	

### 3. Installation Example

How your filter is installed will depend on how your system is structured and the specific requirements of your site. This example illustrates a stand-alone filter installation with minimal added components in discharge plumbing like what is located on a municipal feed water source (or pumped water where the pump is located remotely).



The drain line can be swivelled 360 degrees to any discharge direction by loosening the band clamp (remembering to tighten it afterward).



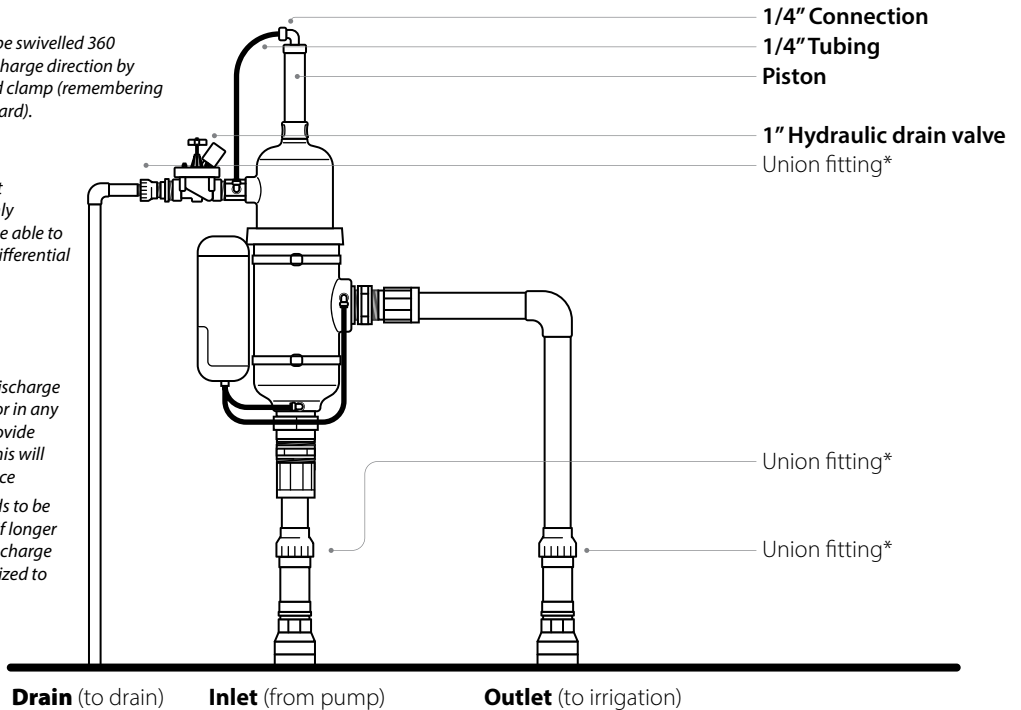
Gauges on the inlet and outlet are highly recommended to be able to monitor pressure differential visually.



Drain should not discharge under water level, or in any way that would provide back pressure, as this will impede performance



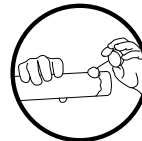
The discharge needs to be unobstructed and if longer than 20 feet the discharge line should be up-sized to 1.25" or 1.5" PVC.



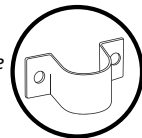
\* User to supply

Unions are required for ease of maintenance and in order to make installation easier. With unions, at all recommended spots, the filter may be removed for service and any threaded connections can also be easily accessed if any of these need to be tightened up or resealed due to movement during shipping or installation. The drain will be a 1" union. The inlet and outlet will be either 1" or 2" unions depending on the model ordered. Unions will make servicing and winterizing the filter much easier. A bypass loop with bypass valve is also recommended so that the filter can be bypassed during service if required.

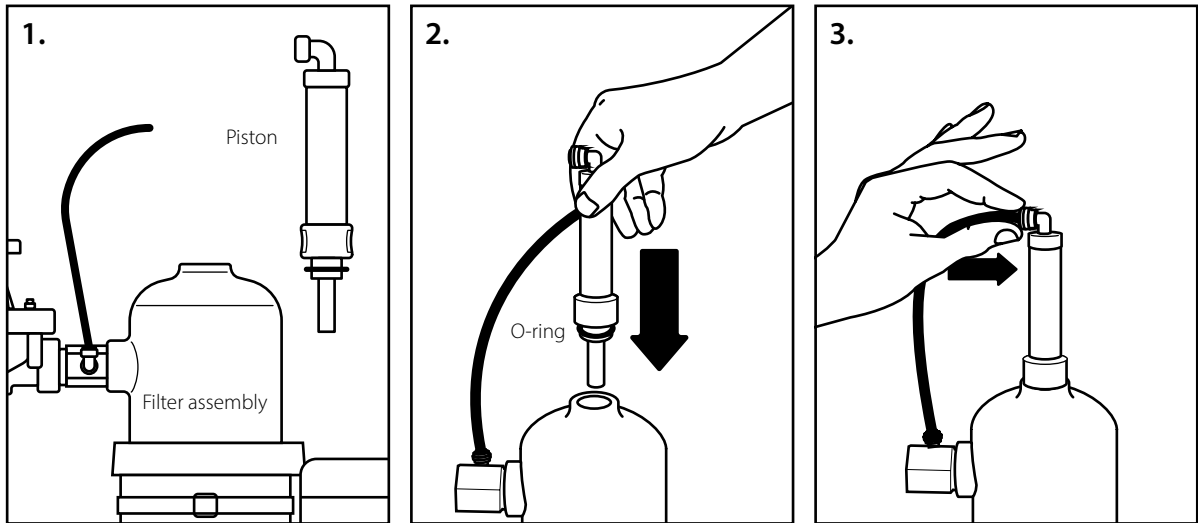
Follow standard PVC solvent welding procedure to plumb the filter into the irrigation line.



The Inlet, Outlet and Drain line pipes need to be supported so that no stress is transferred to the filter. Pipe support is attached to pipe with a pipe attachment. Can take various forms like this:



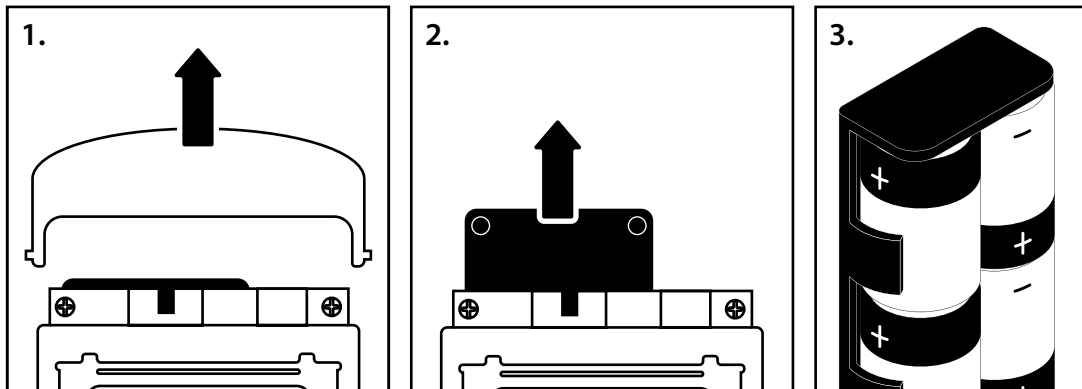
## 4. Mechanical Installation



1. The Filter unit ships without the piston installed
2. Ensure that the o-ring is in place on the threads of the cylinder. Push the piston into the main body of filter. Ensure that the push to connect fitting at the top of the piston lines up with the 1/4" black tubing.
3. Push the 1/4" tubing into the push to connect fitting at the top of the Piston.

## 5. Electrical Installation

### 5.1 Battery



1. Remove the top gray cover (push up the sides over the indent).
2. Remove the black battery tray and install the 4x "D Cell" batteries as shown.
3. The controller will come to life. It goes to sleep quickly, holding down any of the three lower buttons for a few seconds wakes it back up.
4. Press the far right (M) button on backwash controller to test that the installation has been succesful, a Backwash sequence should occur.

### 5.2 12v DC Power Adapter

5. Plug the power adapter (supplied) in to a 110v ac outlet (if outlet is outdoors a 4 gang weather protected GFCI should be used)
6. The controller will come to life. It goes to sleep quickly, holding down any of the three lower buttons for a few seconds wakes it back up.
7. Press the far right (M) button on backwash controller to test that the installation has been succesful, a Backwash sequence should occur.