Model # GOLDLINE-50

System Conforms to NSF/ANSI Standard 58 for Performance Class
System Tested and Certified by NSF International against NSF/ANSI Standard 58 for the reduction of the claims specified on the Performance Data Sheet (page 3)

Please read this manual carefully before attempting installation.
The Goldline reverse osmosis drinking water system is designed for easy installation and maintenance. You will insure a successful installation as well as reliable operation by carefully reading this manual and following the operational guidelines. Please note that routine maintenance is essential to the longevity and performance of the system. Filters should be changed every six months (see below) depending on the quality of the feed water supply. The Goldline RO installation should comply with all state and local laws and regulations. Manufacturer recommends a TDS test every six months by your authorized dealer. This system is acceptable for treatment of influent concentrations of no more that 27 mg/L nitrate and 3 mg/L nitrite in combination measured as N and is certified for nitrate/nitrite reduction only for water supplies with a pressure of 40 psig or greater. Manufacturer recommends a Nitrate/Nitrite test every six months by your authorized dealer. This reverse osmosis system contains a replaceable component critical to the efficiency of the system. Replacement of the reverse osmosis component should be with one of identical specifications, as defined by the manufacturer, to assure the same efficiency and contaminant reduction performance.

Caution: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts.
1. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
   Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts.
2. No iron present in feed water to R.O. System
4. Hardness of more than 7 grains may shorten membrane life
5. Manufacturer recommends a TDS test every six months
6. Efficiency rating means the percentage of the influent water to the system that is available to the user as reverse osmosis treated water under operating conditions that approximate typical daily usage.
7. Recovery rating means the percentage of the influent water to the membrane portion of the system that is available to the user as reverse osmosis treated water when the system is operated without a storage tank or when the storage tank is by passed.
8. This system is acceptable for treatment of influent concentrations of no more that 27 mg/L nitrate and 3 mg/L nitrite in combination measured as N and is certified for nitrate/nitrite reduction only for water supplies with a pressure of 40 psi or greater.
9. The Goldline-50 installation should comply with all state and local laws and regulations.
10. This Reverse Osmosis System contains a replaceable treatment component critical for effective reduction of total dissolved solids. The product water shall be tested periodically to verify that the system is performing satisfactorily.
11. See owners manual for manufacturer's limited warranty, installation, operation and maintenance requirements.
12. This system has been tested and shown to operate at its calculated recovery rating, or efficiency rating, or both under standard test conditions. Test parameters: 25º± 1ºC, 50 psi and pH of 7.5.
13. Chlorine in the influent water may affect the RO membrane polymers.

This system has been tested according to NSF/ANSI 58 for reduction of substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 58. Testing was performed under standard laboratory conditions, actual performance may vary.

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Ave. Influent (mg/L)</th>
<th>Ave. Effluent (mg/L)</th>
<th>Ave. % Reduction</th>
<th>US EPA MCL or Min% reduction (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barium</td>
<td>9.4</td>
<td>0.58</td>
<td>93.8</td>
<td>2.0</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.03</td>
<td>0.0004</td>
<td>98.7</td>
<td>0.005</td>
</tr>
<tr>
<td>Chromium (Hexavalent)</td>
<td>0.29</td>
<td>0.026</td>
<td>91.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Chromium (Trivalent)</td>
<td>0.32</td>
<td>0.017</td>
<td>94.8</td>
<td>0.1</td>
</tr>
<tr>
<td>Copper</td>
<td>3.0</td>
<td>0.033</td>
<td>98.9</td>
<td>1.3</td>
</tr>
<tr>
<td>Fluoride</td>
<td>8.6</td>
<td>0.4</td>
<td>95.6</td>
<td>1.5</td>
</tr>
<tr>
<td>Lead</td>
<td>0.15</td>
<td>0.002</td>
<td>98.7</td>
<td>0.010</td>
</tr>
<tr>
<td>Radium 226/228</td>
<td>25 pCi/L</td>
<td>5 pCi/L</td>
<td>N/A</td>
<td>5 pCi/L</td>
</tr>
<tr>
<td>Selenium</td>
<td>0.099</td>
<td>0.004</td>
<td>96.0</td>
<td>0.05</td>
</tr>
<tr>
<td>Turbidity</td>
<td>11 NTU</td>
<td>0.1 NTU</td>
<td>99.0</td>
<td>0.5 NTU</td>
</tr>
<tr>
<td>TDS</td>
<td>738</td>
<td>45</td>
<td>93.8</td>
<td>187</td>
</tr>
<tr>
<td>CYST</td>
<td>13,000 #/mL</td>
<td>4.0 #/mL</td>
<td>99.9</td>
<td>99.95%</td>
</tr>
<tr>
<td>Nitrite</td>
<td>2.9</td>
<td>0.60</td>
<td>79.2</td>
<td>1.0</td>
</tr>
<tr>
<td>Nitrate</td>
<td>27</td>
<td>5.9</td>
<td>78.2</td>
<td>10.0</td>
</tr>
</tbody>
</table>

A performance indicator will monitor the performance of the RO membrane, a critical component for the reduction of the above contaminants.

Daily Production Rate 11.19 gpd
Recovery rate 23.87%
Pressure Drop at Rated Flow 5 psi
System Weight 30 lbs
Efficiency Rating 8.67%
Min. / Max. Pressure 30/100 psi
Min. / Max. Temperature 4º/38ºc (40º/100º F)
Production Storage Capacity 2.4 gallons

Test parameters: 25º± 1ºC, 50 psi and pH of 7.5

Recommended Replacement of Membrane and Filters

<table>
<thead>
<tr>
<th>Component</th>
<th>Replacement Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>R.O. Membrane</td>
<td>1204694 2 to 5 years</td>
</tr>
<tr>
<td>Sediment Prefilter</td>
<td>1227867-V 6 months</td>
</tr>
<tr>
<td>Carbon Block Prefilter</td>
<td>32-250-125-975 6 months</td>
</tr>
<tr>
<td>Carbon Block Prefilter</td>
<td>32-250-125-975 6 months</td>
</tr>
<tr>
<td>Post Carbon Filter</td>
<td>CL10ROT40-B 6 months</td>
</tr>
</tbody>
</table>

WOA certified for the reduction of:

TDS, Barium, Cadmium, Hexavalent and Trivalent Chromium, Lead, Radium 226/228, Selenium, Fluoride, Nitrite, Nitrate, Copper, CYST

Refer to owners manual for additional maintenance and warranty information
Starting Your Installation

Preparation
Check the following list of components to ensure that all parts are packed with your system.

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Each</td>
<td>Storage Tank</td>
</tr>
<tr>
<td></td>
<td>RO System</td>
</tr>
<tr>
<td></td>
<td>Faucet</td>
</tr>
</tbody>
</table>

Compression fittings are used on the supply feed and drain connector. To insure an optimal seal, tubing should be cut with the end square. An angled cut or distortion of the tubing will not provide an efficient seal and may cause leaks.

To install a tube, push it through the collet until it seats firmly. To remove a tube, push in the collet and pull out the tube.

Determine the location for the installation of the RO system. Avoid locations where the system might come in contact with hot water pipes or other hazards. Determine the location for the faucet. Check to see that drilling the faucet hole will not damage pipes or wires running underneath the sink. Determine the location for the storage tank. A maximum distance from tank to faucet of 15 feet is possible. The system will produce a faster flow at the faucet with the shortest tubing run from tank to faucet.

Check to see that no damage has occurred during shipment, all connectors are secure, and there are no leaks once the system is hooked up. Close inspection of the system should be performed during the first week of operation.

Shutting Off the Water
Locate the water shut-off valve for the cold water feed line you choose to use for the supply. Accidentally hooking up the system to the hot supply line will permanently damage the membrane (See Conditions for operation). To assure you are using the cold water line, turn on both the hot and cold faucet. After the water is warm to the touch, feel the pipes under the sink. It will be easy to identify the hot and cold pipes.

Close the cold water valve. Turn on the cold water faucet only to assure that the line is completely shut off and the line is drained. If no shut off valve is located under the sink, turn off the main supply at the entry to the house.

Compression fittings are used on the supply feed and drain connector. To insure a optimal seal, tubing should be cut with the end square. An angled cut or distortion of the tubing will not provide an efficient seal and may cause leaks.
Installation

Supply Feed Installation

(A) Flex Line: Loosen nut and separate cold water riser tube from faucet shank. Gently bend riser tube so that slip joint fits onto faucet shank. Replace the existing cone washer with new washer provided in installation kit onto cold water riser tube. Reinstall riser tube onto slip joint adapter and tighten.

(B) Solid Copper Riser Tube: Same procedure as flex tubing except you must cut a piece of the riser tube about 3/4” to 1” so the slip joint adapter can fit between faucet and riser tube (Teflon tape must be used on slip joint adapter to prevent leaks).

Using the opening in the drain outlet saddle as a guide, drill a 1/4” hole in the drain pipe. Clean debris from the saddle and threads.

Mounting the Tank Ball Valve

(1) Wrap the threads on the top of the water storage tank 3 times with plumbers (Teflon) tape only. Make sure it is tight, but not over tight. (2) Connect the tank ball valve assembly to the top of the water storage tank. (3) Connect the tube from the RO membrane to the water storage tank.

Note: Do not tamper with the air valve on the storage tank. It has been preset and screwed on with blue cap by the manufacturers.

Drain Clamp Installation

Select a location for the drain hole based on the design of the plumbing. Position the drain outlet saddle on the drain pipe. Allow adequate space for drilling. Tighten the bolts evenly on both sides. Avoid overtightening.

RO Membrane Installation

Disconnect the easy fitting as shown in the diagram below. Remove the membrane housing head by turning counter clockwise.
Drilling the Faucet Hole

The product water faucet may be installed on any flat surface at least 2” in diameter. Check the underside of the location for interference.

Porcelain/Enamel Sinks

A 1” variable speed drill is recommended for this procedure. A spring loaded Relton style drill set is strongly recommended to prevent chipping. The plastic sleeve supplied on the pilot drill is to be positioned on the drill bit against the drill chuck. This prevents the chuck from contacting the porcelain after the pilot hole has been completed. Avoid high motor RPM during the initial cutting of the porcelain as this can cause chipping.

Drilling with the recommended Relton cutter

Using a carbide tipped drill bit, drill a pilot hole completely through the porcelain and the material underneath. Place the spring loaded porcelain saw into the drill chuck. Make sure the pilot guide is inserted tightly. Insert the pilot guide into the pilot hole. Push down gently on the drill motor to apply light pressure to the porcelain surface. Start the drill motor turning as slowly as possible. After the initial cut has started, motor speed may be gradually increased. The cut may require three to four minutes to complete. Going faster could result in excessive chipping. This saw is used to cut a smooth, chip-free, beveled groove through the porcelain to the metal base.

Place the finish hole saw into the drill chuck. Make sure the pilot guide is inserted tightly. Insert the pilot guide into the pilot hole. Begin cut using a slow speed and light pressure until the metal has been penetrated.

Stainless Steel Sink

Make a small indent to mark the desired drilling location using a center punch. Drill a pilot hole with a 1/8” metal drill bit. Enlarge the hole using a 1” metal drill bit.

Air Gap Faucet Installation

Once the hole has been drilled place the chrome washer under the faucet body. Next, insert the rubber gasket under the chrome washer and locate the RO faucet in the hole. Install the lock washer and nut and then tighten firmly while aligning the faucet in the desired direction. Finally, connect the Easy Fit 3/8” fittings (in the installation kit) on the faucet shank using teflon tape.

Optional Ice Maker Hook-Up

If your refrigerator is less than 25 feet to your R.O. unit, 1/4” polypropylene plastic tubing is recommended. If your refrigerator is greater than 25 feet from your R.O. unit, 3/8” tubing is recommended. Do not use copper tubing as an objectionable ice cube taste can result.

To begin, install a tee in the blue tubing between the final filter and the faucet. Next, it is recommended to install a ball valve in the line to the ice maker. This will allow storage tank pressure to increase sufficiently for the ice maker solenoid to operate properly. Leave the ball valve in the closed position until the tank is full after start up procedure is completed, open ball valve.
Do Not Use the First Two Reservoirs of Water

Allow the reservoir to fill for 12 hours. Dispense this water to drain. This process removes the factory installed sanitizing solution from the entire system and sends it to the drain. Repeat this process one more time. Allow the tank to fill for 12 hours and dispense this water to the drain.
Goldline-50

Please Call Your Local Water Professional or Good Water Warehouse For Parts Replacement

1. Supply Feed  3095-8
2. 1/4" Male Connector  CI010822W
3. Filter Housing  1H4WHWH
4. Filter Housing 'O-Ring  143026
5. 5 Micron Filter  1227867-V
6. Carbon Block  32-250-125-975
7. Carbon Block  32-250-125-975
8. 1/4" Nipple  N-14
9. 1/4" Male Elbow  CI480822W
10. Check Valve  SCV-CI480821W
11. Bracket  A-FM60W
12. ASO Valve  FC-ASV4000JG
13. 2.5 Clips  PPC212W
14. Membrane Housing  144376
15. 1/4" Male Connector  CI010822W
16. In-Line GAC  CL10ROT40-B
17. Double Clip  PPC205W
18. Stem Adaptor  PI051222S
19. Reducing Tee  PI301208S
20. Ball Valve  7070590
21. Tank  TKE-3200W
22. Air Gap Faucet  N103H3PIAG
23. Drain Connector  PDC60438M
24. Membrane  1204694
25. Flow Restrictor  PFR402Q-300
26. TDS Monitor  PURCHECK-1-3/8
**Activation, Care, & Troubleshooting**

### Activating the System For the First Time

Make sure all water supply/drain lines are secure and free from leakage. Slowly turn the saddle valve counterclockwise until fully open. Check stem seal for leakage. If necessary tighten stem nut lightly. Turn storage tank valve one quarter turn counterclockwise to open the valve (the handle should be in line with the tubing as it enters the connection). Open the product water faucet and let the water flow until all the air has been expelled from the system. This will take about an hour. Close the product water faucet. In 30 minutes, check the connections for leaks and correct if necessary.

### Replacement Filter Procedures

Before starting the filter replacement shut off cold water supply, drain the storage tank by turning on the RO faucet, and shut off the storage tank ball valve. Once you have completed the preparation, first begin by twisting the housings counter clockwise with a filter wrench and remove the old filters. Then wash out the inside of the housing with mild soap and a few drops of household bleach and rinse out thoroughly. Finally, lube the O-ring on the filter housing, insert the new filters, and screw on the housing in a clockwise direction.

### System Sanitization

It is recommended to sanitize your system **once per year** when you are changing the filters. Start by shutting off the cold water supply and draining the storage tank by turning on the RO faucet. Once this is completed remove the filters and membrane and put 1/2 teaspoon of household bleach in the sediment filter housing. Then run water through the system until water begins pouring out the RO faucet. Close the faucet, allow the bleach to remain in the system for three minutes, and then slowly drain the water from the system for five minutes. Finally, reinstall the filters and membrane.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Reason</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water has an offensive odor / taste</td>
<td>Carbon post filter is depleted</td>
<td>Drain storage tank &amp; replace post filter</td>
</tr>
<tr>
<td>Water has an offensive odor / taste</td>
<td>Filters are depleted</td>
<td>Replace filters &amp; sanitize system</td>
</tr>
<tr>
<td>Not enough product H₂O Pressure</td>
<td>Storage tank air pressure is low</td>
<td>Empty storage tank and set pressure to 8 psi (55kPa)</td>
</tr>
<tr>
<td>Not enough water</td>
<td>Low water pressure</td>
<td>If line pressure is below 30 psi install a booster pump</td>
</tr>
<tr>
<td>Not enough water</td>
<td>Water supply is blocked</td>
<td>Clear restriction, rotate valve on feed water</td>
</tr>
<tr>
<td>Not enough water</td>
<td>Storage tank is depleted</td>
<td>Consider an increase in tank or membrane capacity</td>
</tr>
<tr>
<td>Not enough water</td>
<td>Clogged pre-filter cartridge</td>
<td>Replace prefilter, drain tank and sanitize system</td>
</tr>
<tr>
<td>No drain water</td>
<td>Clogged flow restrictor</td>
<td>Replace flow restrictor, check TDS monitor</td>
</tr>
<tr>
<td>No water</td>
<td>Water supply is turned off</td>
<td>Turn water on</td>
</tr>
<tr>
<td>Under sink is wet</td>
<td>Leak from valve, faucet or fitting</td>
<td>Dry everything with towels to isolate leak, identify and fix.</td>
</tr>
</tbody>
</table>
GoldLine Limited Warranty

The Goldline reverse osmosis system is warranted to be free from defects in materials and workmanship under normal use within the operating parameters listed below. For a period of three years from the date of purchase Good Water Warehouse will repair or replace any part of the reverse osmosis system with the exception of the filters and membrane.

Conditions of Warranty

The above warranty does not apply to any part of the Goldline reverse osmosis system that is damaged because of neglect, misuse, alteration, accident, misapplication, physical damage, fouling, and/or scaling of the membrane by minerals, bacterial attack, sediment or damage caused by fire, freezing, hot water, or an act of God.

Good Water Warehouse assumes no warranty liability in connection with this reverse osmosis system other than as specified herein. Good Water Warehouse shall not be liable for consequential damages of any kind or nature due to the use of Goldline-50 product.

Good Water Warehouse Inc. will provide warranty service under the following conditions:
1) Contact your local dealer who will obtain return authorization instructions.
2) Ship the unit or part freight prepaid for warranty evaluation or service. Unit must be returned in the original carton or packaged to prevent possible damage. Systems or parts covered under the warranty shall be repaired (or, at our option replaced) and returned without charge.

### Conditions for Operation of TFC - Thin Film Composite Membrane

*Used in the Goldline-50*

<table>
<thead>
<tr>
<th>Source Water Supply - TFC</th>
<th>Chemical Parameters - TFC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community / Private</td>
<td>Hardness (CaO3) ≤ 170 mg/L (&lt; 10 gpg)</td>
</tr>
<tr>
<td>System Pressure min/max</td>
<td>Iron (Fe) ≤ 0.1 mg/L</td>
</tr>
<tr>
<td>Temperature</td>
<td>Manganese (Mn) ≤ 0.05 mg/L</td>
</tr>
<tr>
<td>pH Range 3.0 to 11.0</td>
<td>Hydrogen Sulfide (H2S) ≤ 0.00 mg/L</td>
</tr>
<tr>
<td>Maximum supply TDS level 1800 mg/L</td>
<td></td>
</tr>
<tr>
<td>Turbidity &lt; 1.0 net turbidity (NTU)</td>
<td><strong>Production Rate</strong></td>
</tr>
<tr>
<td></td>
<td>Daily Production Rate 11.19 gallons per day</td>
</tr>
</tbody>
</table>

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