



Installation / Operation Manual

Nitro and Nitro Pro Filter

with *Signature 2 Series* Control Valve

General Specifications	Series	
	NTF15 / NTP15	NTF25 / NTP25
Filtration (See "Filter Media" section for application)	Smart Blend™	
Filter Media Capacity (cu. ft.)	1.50	2.50
Mineral Tank (Vortech)	10 x 54	13 x 54
Service Flow Rate - Continuous (gpm)	5	8
Service Flow Rate - Intermittent (gpm)	7	10
Backwash Flow Rate (gpm)	5.0	7.0
Gallons Used / Backwash	130	182
Space Required	10 x 10 x 62	13 x 13 x 62
Approximate Shipping Weight	142	218

Installation Requirements

A level floor position ahead of piping into water heater

Unit must be installed at least 10 feet ahead of the inlet to a water heater to prevent damage due to back-up hot water.

DO NOT install the unit in an area of direct sunlight or where freezing temperatures may occur!

Locate the unit near an unswitched, 120 volt / 60 Hz grounded electrical outlet.

Check for distance and proper drain installation (e.g. floor drain, washing machine standpipe).

Determine type and size of piping required for filter connection (e.g. copper, galvanized, PVC plastic).

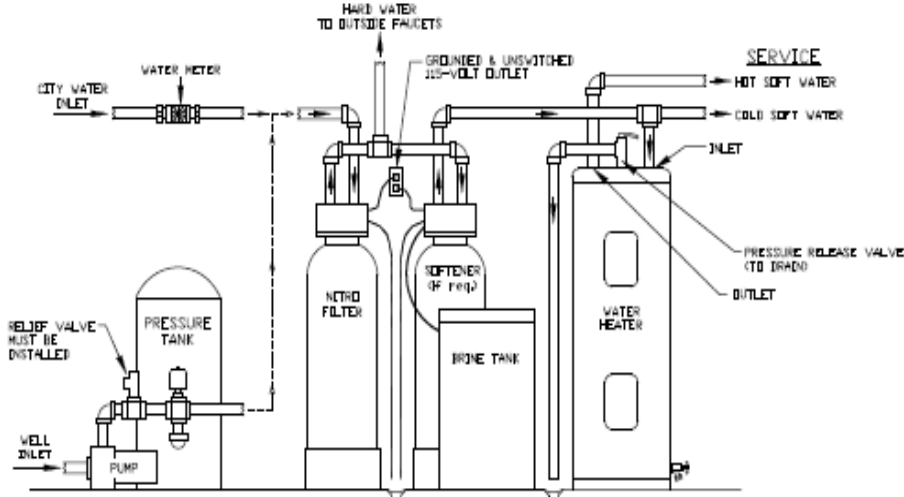
Note : If household plumbing is galvanized and you intend to make the installation with copper (or vice versa), obtain di-electric unions to prevent dissimilar metal corrosion.

Note : Where the drain line is elevated above the control valve or exceeds 20 feet in length to reach the drain, use 3/4" I.D. drain line tubing instead of 1/2" I.D. Drain line tubing is not included.

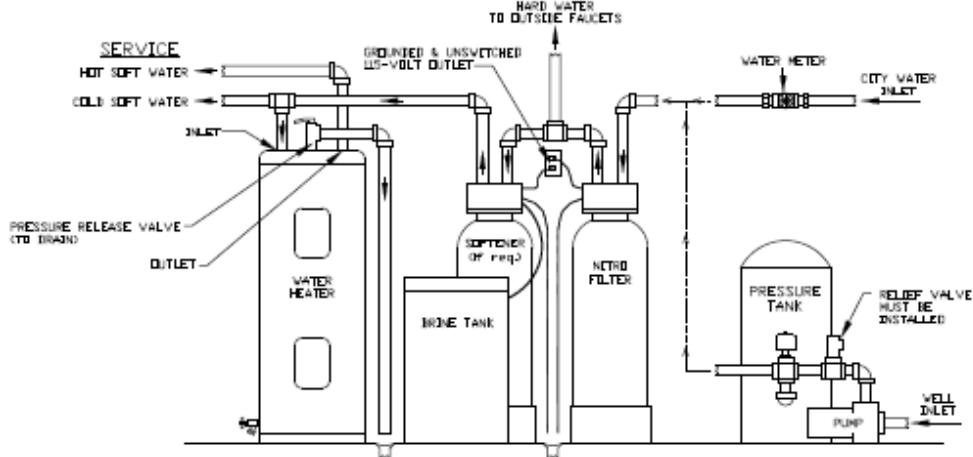
Caution : If sweat soldering copper pipe (remember to always use lead free solder and flux), cover yoke and bypass valve with wet rags to prevent heat damage to connections and control valve. If using PVC or plastic pipe, primers and solvent cements specifically recommended for use with potable water are required.

Note : All plumbing lines not requiring "soft" water should be connected "upstream" of the softener, if installed. (See Typical Installation Diagrams.)

TWO TANK SETUP
(Incoming Water from Left-Side)



TWO TANK SETUP
(Incoming Water from Right-Side)



Installation Procedure

- Water Supply Connection and Bypass Valve -

To allow for filter servicing, swimming pool filling or lawn sprinkling, a manual Bypass Valve has been installed at the factory. The Bypass allows raw water to be manually routed around the filter.

1. Position filter at desired location for installation. If a water softener is to be installed, the filter should be positioned first and then the softener. (See Installation Diagrams.)
2. The filter material is shipped separately from the mineral tank. The tank must be loaded with material after tank has been placed at the desired location.
 - A. Remove the control valve by unscrewing from the tank.
 - B. Use a cork or tape to place over top of distributor tube to prevent material from entering tube while filling.
 - C. Place media funnel in hole on top of tank.
 - D. Pour several gallons of water in the tank. (Fill tank about 1/3 full.)
 - E. Pour in the required filter media. **No gravel is required.** The required quantity & type of media is listed in the filter specifications.
 - F. After installing filter media, add the included pack of aeration balls.
 - G. After filling the tank with material, use a garden hose or several buckets to fill the tank with water.
Note : This will permit the filtering media to become soaked while preparing the installation and will prevent the control valve from being plugged with floating material on initial backwash.
 - H. Remove funnel and clean filter media from tank threads.
 - I. Remove cork or tape from distributor tube.
 - J. Replace control valve on mineral tank.
 - K. Connect aeration tubing from control valve to TubeLok fitting in the tank. Make certain to push the tubing into the fitting far enough to feel two distinct resistance points. This will be approximately 3/8".
3. Turn **OFF** main water supply and **OPEN** nearest faucet to relieve pressure.
4. Cut main line and install appropriate elbows and extensions.

Caution : *Raised arrows located on the sides of control valve body and bypass valve indicate proper direction of water flow. Install inlet and outlet piping in direction of arrows.*

- Drain Line Connection -

1. Pull out clip and remove drain line assembly located on the right side of control valve. Remove drain line hose elbow and wrap threads with Teflon tape. Reinstall drain line hose elbow. Replace drain line assembly and reinstall clip.

Caution : *Hand tighten only!*

2. Install 1/2" I.D. drain line tubing (not included) from hose elbow to an open drain. A 4" gap between end of the drain line and the open drain is required to prevent waste water backflow. Keep the drain line as short as possible. An overhead drain line can be used if necessary, but should discharge below the control valve. A syphon trap (taped loop) at the outlet of the drain line is advisable to keep the drain line full and assure correct flow during backwash. Elbows or other fittings must be kept at a bare minimum.

Note : Where the drain line is elevated above the control valve or exceeds 20 feet in length, 3/4" I.D. drain line tubing should be used.

- Electrical Connection -

1. Connect the power cord and plug power supply into a 115 volt / 60 Hz receptacle.

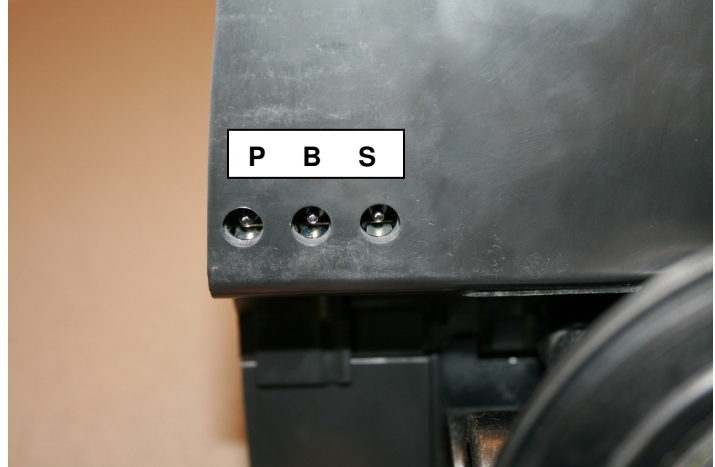
Note : Do not plug into an outlet controlled by a wall switch or pull chain that could inadvertently be turned off

Electronic Connections

P = Power Supply

B = Powered in Backwash Cycle Only

S = Powered in Entire Regen. Cycle



Installation Procedures

1. Move the bypass valve slowly to the **Service** position or open the main valve and allow water to flow to the mineral tank.
2. When the water stops flowing into the tank, open a treated water tap and allow air to be released from the lines. Allow several minutes during this time to follow steps on valve for setting the time. Once time of day is set, go back to main menu. Then close the tap. Open the bypass valve or main valve completely. The days for backwash and air draw are already programmed.

Anytime media (other than very fine mineral on initial startup) is apparent in the service lines, it usually indicates one of the following problems :

- A. The unit is plumbed in backward allowing the media to be carried in the service line.
 - B. The distributor tube inside the tank is not seated inside the valve or is damaged in some way.
 - C. If the media flows to the drain during backwash, after a reasonable period of soaking, check the drain line flow control to be sure that excessive water is not going to the drain allowing mineral to siphon out of the tank.
3. Hold down set/change button for five (5) seconds. (A "1" will appear), release and repeat. The unit will now enter backwash. Allow the unit to perform an entire cycle. This will rinse media and charge up the air chamber.
 4. Once unit is back in service, clean water will be available, approximately "60" minutes. Any water used during a cycle will be untreated.

- Nitro Pro Programming -

1. If a Oxyclean NP will be used, connect the Oxyclean tank to the Signature II Control Valve using the brass compression fitting located on the right side of the control valve.
2. Push and hold both buttons at the same time for five (5) seconds to enter master programming mode.
3. Push Menu/Enter button to select the second menu item (J-0).
4. Push the Set/Change button and change J-0 to J-1 and press the Menu/Enter button. This will activate the Oxyclean NP Option.
5. No other changes in programming are necessary.

- Final Checkout -

1. Be certain that the bypass valve is in **Service** position or main valve is completely on.
2. Check electrical supply to be certain the cord is connected to an uninterrupted 115 volt outlet.
3. Be certain the warranty card is filled out and mailed in.
4. Leave this manual with the homeowner.

Important Notice - The plumbing system, piping, pressure tank, hot water tanks, softeners, etc. that have been exposed to iron bearing water may need to be cleaned of the precipitated iron that has been collected in them or iron bleed thru may be a problem. We suggest all tanks be drained and flushed thoroughly.



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“LIMITED” WARRANTY

Water Treatment Equipment

During the time periods and subject to the conditions hereinafter set forth, CSI Water Treatment, will repair or replace to the original user or consumer, any portion of your new CSI Water Treatment product which proves defective due to defective materials or workmanship of CSI Water Treatment. Contact your nearest authorized CSI Water Treatment dealer for warranty service. At all times CSI Water Treatment shall have and possess the sole right and option to determine whether to repair or replace defective equipment, parts, or components. Damage due to conditions beyond the control of CSI Water Treatment is **NOT COVERED BY THIS WARRANTY**. (Contact parcel or freight company for claims on freight damage in transit.)

WARRANTY PERIODS :

ITEM	*10 YRS	*7 YRS	*5 YRS	*1 YRS
Residential Mineral Tanks	●			
Commercial Mineral Tanks			●	
Proprietary Control Valves		●		
Other Softener/Filter Control Valves			●	
Brine Tank (30" or smaller)			●	
Brine Tank (39" or larger)				●

ITEM	*5 YRS	*1 YRS
Brine Tank Components		●
MicroLine™ Reverse Osmosis Systems	●	
Other Residential RO Systems		●
Other Accessories & Parts		●
Commercial Reverse Osmosis – 1 year from ship date		
- Pumps & membranes are pro-rated per month		

* From Date of Installation

LABOR, ETC., COSTS : CSI Water Treatment shall **IN NO EVENT** be responsible or liable for the cost of field labor or other charges incurred by any customer removing and/or reattaching any CSI Water Treatment product, part or component thereof.

THIS WARRANTY WILL NOT APPLY : (a) To defects or malfunctions resulting from failure to properly install, operate or maintain the unit in accordance with printed instructions provided; (b) to failures as a direct result of the incoming water quality, (c) to failures resulting from abuse, accident or negligence; (d) to normal maintenance services and parts used in connection with such service; (e) to units which are not installed in accordance with applicable local codes, ordinances and good trade practices; (f) if the unit is moved from its original installation location; (g) unit is used for purposes other than for what it was designed and manufactured, and (h) filter media and exchange resins.

RETURN OF REPLACED COMPONENTS : Any item to be replaced or repaired under this Warranty must be returned to CSI Water Treatment in Ashland, Ohio, or such other place as CSI Water Treatment may designate, freight prepaid.

PRODUCT IMPROVEMENTS : CSI Water Treatment reserves the right to change or improve its products or any portions thereof without being obliged to provide such change or improvement of units sold and/or shipped prior to such change or improvement.

WARRANTY EXCLUSIONS : As to any specific CSI Water Treatment product, after the expiration of the time period of the warranty applicable thereto as set forth under the heading "Warranty Periods" above, **THERE WILL BE NO WARRANTIES, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.**

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. No warranties or representations at any time made by any representative of CSI Water Treatment shall vary or expand the provisions hereof.

LIABILITY LIMITATION : IN NO EVENT SHALL CSI WATER TREATMENT BE LIABLE OR RESPONSIBLE FOR CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES RESULTING FROM OR RELATED IN ANY MANNER TO ANY CSI WATER TREATMENT PRODUCT OR PARTS THEREOF.

Some states do not allow the exclusion of limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

The Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

In the absence of suitable proof of installation date, the effective date of this warranty will be based upon the date of manufacture plus thirty (30) days.

Direct all notices, etc. To : Service Department, CSI Water Treatment, 710 Orange Street, Ashland, Ohio 44805

Date : October, 2011