



**MASTER**  
*Water Conditioning Corp.*

## **Installation and Operation Manual**



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### **MUN-BY Residential Upflow Acid Neutralizer**

2022



## **MUNBY UPFLOW ACID NEUTRALIZER**

### **OPERATION:**

The MUNBY Neutralizer requires no backwashing. The water enters the unit from the bottom of the tank and passes upward through the acid neutralizing bed. This unique design eliminates the need for a control valve and the extra water needed to regenerate an automatic filter. The MUNBY is designed for use on a water supply that is clear, iron free, manganese free, sediment free and a pH below 7.0. Never install these units for any other purpose except pH correction. All warranties will be void if a 20-micron prefilter is not installed on the inlet side of the MUNBY unit. Please contact Master Water Conditioning with any questions pertaining to the MUNBY installation. The unit is equipped with an upper strainer assembly to prevent mineral loss and a dome plug for recharging the neutralizing media. Since the filter increases hardness, we recommend installing a water softener after the system to remove the hardness.

### **COMPONENTS SUPPLIED WITH THE MUN UNIT:**

- MUNBY Valve made of Noryl® with upper strainer made of ABS
- Tailpiece Kit
- MUNBY tank made of non-corrosive materials and supplied with a dome plug, distributor pipe, and neutralizing media.

### **COMPONENTS SUPPLIED BY THE INSTALLER:**

- 20 Micron Cartridge Filter
- Inlet, Outlet and Bypass Ball valves for external installation piping
- All external installation piping

### **NEUTRALIZING MEDIA:**

**Calcite:** A crushed and carefully screened white marble material used to increase the pH of the water to eliminate the corrosiveness of the water by increasing the pH. Calcite dissolves into the water which increases the alkalinity and hardness. Calcite is sacrificial, and must be added to the system periodically, typically once or twice a year.

**NS-Mix:** NS-Mix is a blended neutralizing media consisting of 80% calcite and 20% magnesium oxide by weight. The NS-Mix increases the alkalinity of the water to raise the pH value to a neutral state (pH>7.0). NS-Mix has the same sacrificial properties as Calcite.

**OPERATING LIMITS:**

The unit is designed to function with minimum water pressures of 20 psi, a maximum water pressures of 100 psi, and a maximum water temperature of 100 degrees F. Untreated water must be clear, sediment free, iron of less than 0.3 ppm and manganese of less than 0.05 ppm.

**SPECIFICATION TABLE:**

<b>Model Number</b>	<b>Flow Rate (gpm)</b>	<b>Tank Dimensions (in)</b>	<b>Neutralizing Media Capacity (ft<sup>3</sup>)</b>
MUN1040BY	4	10 x 40	1
MUN10BY	5	10 x 54	1.5
MUN13BY	7	13 x 54	2
MUN1665BY	12	16 X 65	4

**NEUTRALIZING MEDIA LOADING:**

1. Place conditioner in desired position. Keep unit far enough away from walls and other obstructions to allow for servicing the unit.
2. Remove the In and Out valve assembly from top of tank and make sure riser tube is secured to the vortech plate. The distributor is permanently attached to the vortech plate centering is not necessary. The top of the distributor will be 5/8" above the top of the tank.
3. Cover the top opening of the distributor pipe before filling the tank with media.
4. Pour the appropriate media provided with the unit into the top of the tank.
5. Remove the material used to cover the top of the distributor pipe and clean the tank threads of any media.

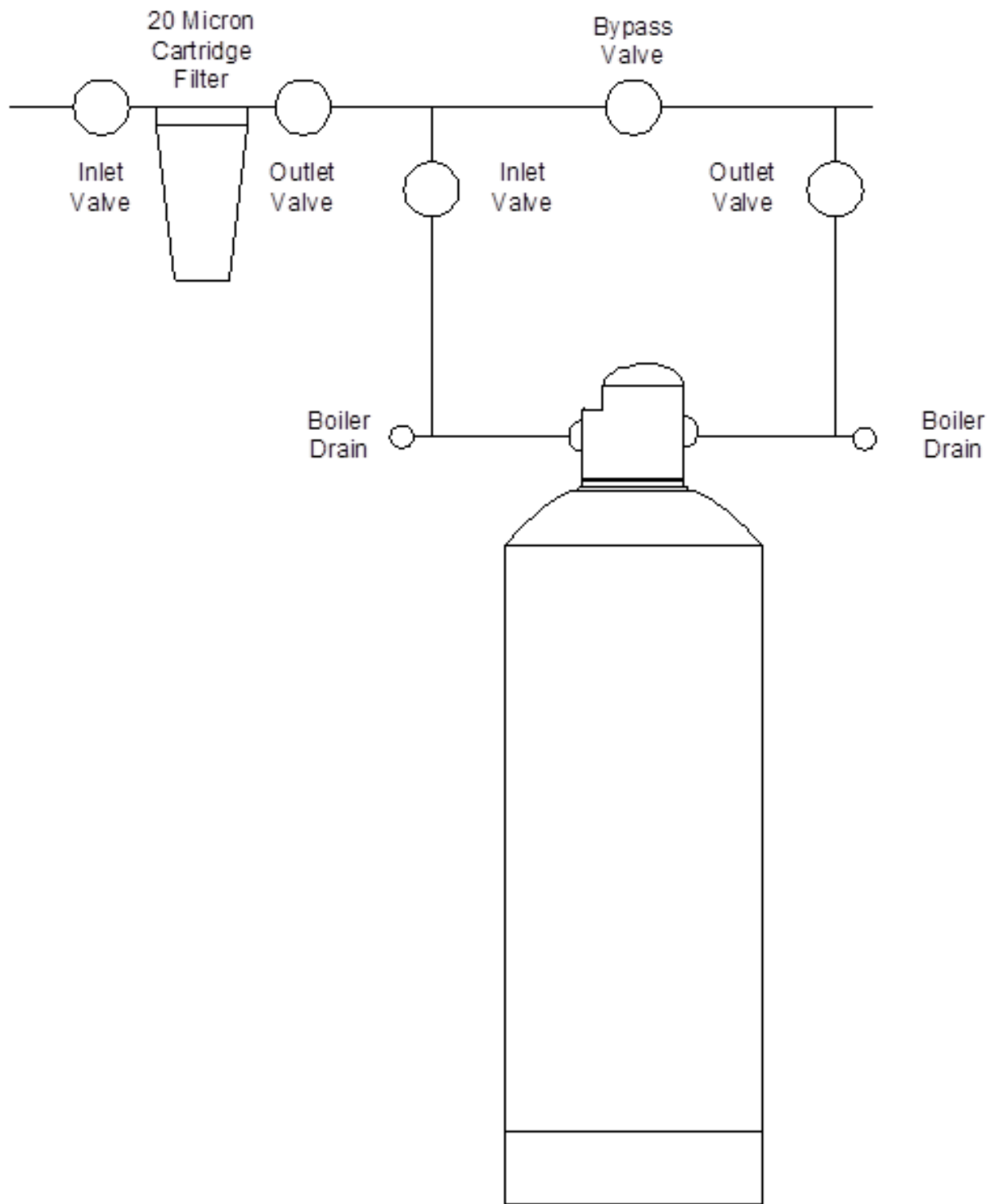


Figure 1. Installation and Piping Schematic

**IN AND OUT VALVE:**

1. Thread the In and Out valve assembly onto the tank. Do not overtighten.
2. Locate the bypass valve assembly that is packaged with the system. The bypass valve has two red handles that indicate flow direction, two threaded connections for the tail piece kit and two O-ring seal connections with nuts for the In and Out valve. Align the insert connection ends with O-rings and nuts to the inlet and outlet connections of the control valve. Hand tighten the nuts.
3. Locate and assemble the tail piece kit. Align tail piece assembly to the bypass valve threaded inlet and insert until the nut can be tightened. Hand tighten the nuts.

#### **SERVICE LINE PIPING:**

1. Pipe water filter into the service lines. Plumb the inlet plumbing into the UPFLOW INLET port of the in-out valve. Plumb the outlet plumbing into the DOWNFLOW INLET port of the in-out valve. Plumbing the unit for UPFLOW configuration will prevent channeling of the media bed. Always follow local plumbing codes when installing our water treatment equipment.
2. If sweat fittings are used, be sure soldering is done in such a manner as not to allow heat to reach the control valve or bypass. If using copper pipe, make all sweat connections away from the tank, strainer and head assemblies or the heat will damage them and void warranty. Use unions on the inlet and outlet connections.
3. Pipe a boiler drain into the inlet and outlet piping as shown in Figure 1.
4. Open the inlet stop valve and outlet boiler drain. Close inlet boiler drain, bypass valve and outlet stop valve.

#### **FILLING FILTER WITH WATER**

1. Direct water from the outlet boiler drain to a floor drain. Run water until the water becomes clear. When clear, close outlet boiler drain, and inlet stop valve. Open the inlet boiler drain, bypass valve and outlet valve. Direct water from the inlet boiler drain to a floor drain until the water becomes clear. When clear, close inlet boiler drain and bypass valve and open the inlet stop valve. The unit has been thoroughly purged.
2. The unit is now in the service position. If stains re-occur, recharge the unit with the proper neutralizing mineral. See recharging instructions attached.
3. If you choose not to pipe in boiler drains, then you should rinse the system by running water at an outside spigot or slop sink until the water is clear and has no fines or color. You should thoroughly rinse the system of its fines and color before placing the unit into service position.

# 12 YEAR LIMITED WARRANTY

As of November 2022

This Residential Water Conditioner is warranted for a period of **one year** from date of purchase by first user against defects in materials and workmanship. In addition, the complete inlet/out valve is warranted for **one year**. The mineral tank (excluding mineral) is warranted against rust, corrosion or bursting for a period of **twelve years** from date of manufacture. Except as specifically set forth in this paragraph, Master Water Conditioning Corporation makes no other warranties, express or implied.

This warranty shall be void if the conditioner is moved from the place of original installation, or if damage is caused by misuse, misapplication, accident, freezing, flood, fire or if not installed in accordance with instructions furnished by Master Water Conditioning Corporation.

This warranty shall be void in the event of damages from external sources or where the conditioner has been operated at pressure in excess of 100 pounds per square inch or at a temperature in excess of 100 degrees F., or below 32 degrees F. Incidental costs or consequential damages are not covered by this warranty.

All defective parts shall be returned prepaid to Master Water Conditioning Corporation for inspection. Master shall not be liable for labor charges other than Master factory repairs.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow limitations on duration of implied warranties or exclusion of incidental or consequential damages, so the above limitations may not apply to you.

All claims must be submitted in writing to Master Water Conditioning Corporation at 224 Shoemaker Road, Pottstown, Pennsylvania 19464, within thirty (30) days from the discovery of the defect. Master Water Conditioning Corporation thereafter will correct defective parts and workmanship or rusting, corrosion or bursting within sixty (60) days.



224 Shoemaker Rd. Pottstown, Pa. 19464