



MASTER
Water Conditioning Corp.

Installation and Operation Manual



MUN Series Flow-Through Residential Neutralizers

2009 Version

Table of Contents

Page No.	Topic	Description
1	Model # and Packaging	Packaging Information
	Components	Components Supplied
	Components	Components Needed
2	System	System Description
	MUN System	System Positioning
	MUN Tank Loading	Loading for 1040, 10 & 13
	MUN Piping	Service Piping for 1040, 10 & 13
3	System Schematic	Piping layout for 1040, 10 & 13
	Filling MUN with Water	Details for Filling MUN Tank with Water for 1040, 10 & 13
4	MUN Tank Loading	Loading for 1665
	MUN Piping	Piping layout for 1665
5	Bypass Valve	Bypass Valve Operation for 1665
	Filling MUN with Water	Details for filling MUN 1665 Tank with Water
6	Filling MUN with Water Cont'd	Details for filling MUN 1665 Tank with Water, cont'd
	Final Check	Final Installation Check
	Parts	Parts List / Schematic
7	Parts	Parts List / Schematic
8	Recharging MUN	Recharging MUN-1040, MUN-10 & MUN-13
9	Recharging MUN	Recharging MUN 1665
10	Warranty	Warranty

Installation and Operating Instructions for
MUN UPFLOW NEUTRALIZER

Model #:

_____	MUN 1040	Neutralizer/Vortech
_____	MUN 10	Neutralizer/Vortech
_____	MUN 13	Neutralizer/Vortech
_____	MUN 1665	Neutralizer

Table 1

Model Number	Service Flow GPM	Service Pipe Size	CF Filter Media	Vortech		GRAVEL	
				Yes	No	Yes	No
Mun 1040	5.0	3/4"-1"	1.0	X			X
Mun 10	5.0	3/4"-1"	1.5	X			X
Mun 13	8.0	3/4"-1"	2.0	X			X
Mun 1665	12.0	3/4"-1"	4.0		X	X	

COMPONENTS SUPPLIED WITH MUN 1040, 10 & 13 UNIT:

- Tank assembly with top and bottom connections
- 3/4" or 1" PVC inlet and outlet connection kit
- NS Mix and/or Calcite media

COMPONENTS SUPPLIED WITH MUN 1665 ONLY:

- Tank assembly with dome plug
- MUN top mount valve
- MUN bypass valve assembly
- 3/4" or 1" PVC inlet and outlet connection kit
- Gravel and NS Mix and/or Calcite media

COMPONENTS SUPPLIED BY THE INSTALLER:

- 20 Micron Cartridge Filter with either 3/4" or 1" connections
- Bypass Ball valves, outlet pipe union and face piping
- Painters mask needed in the loading of the mineral tank

System Description:

The MUN Neutralizing Filter is an upflow neutralizing system which requires no backwashing. The water enters the unit from the bottom of the tank and passes upward through the neutralizing bed. This unique design eliminates the need for an automatic control valve and the extra water needed to regenerate an automatic filter. The unit is designed to function within a water pressure range of 20 to 100 psi and a water temperature range of 50F to 100F. Untreated water must be turbidity free (clear water), sediment free, iron free and manganese free. Never install these units for any other purpose except for pH correction.

NOTE: THIS MUN IS NOT INTENDED TO BE USED FOR TREATING WATER THAT IS MICROBIOLOGICALLY UNSAFE OR OF UNKNOWN QUALITY WITHOUT ADEQUATE DISINFECTION WHETHER BEFORE OR AFTER THE SYSTEM

Filter Positioning:

1. Place Filter in desired position, far enough from walls and other obstructions to allow for servicing the unit.

Filter Tank Loading MUN 1040, 10 & 13 Only:

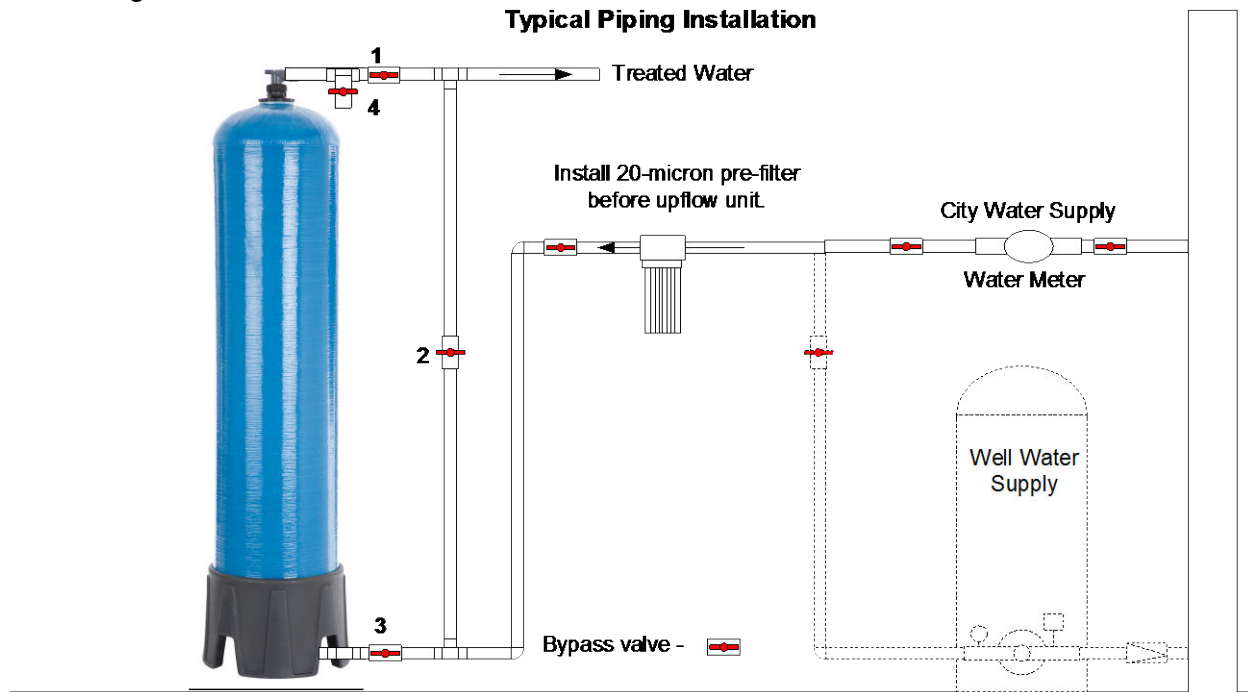
1. Remove swivel elbow assembly with D1225-10 basket from the top of the mineral tank by turning counter clockwise.
2. Pour all filter media provided with the unit into the top of the tank. See below for your specific model number to determine the amount of media to load into the mineral tank.
SEE TABLE 1 FOR MEDIA VOLUME

Service Piping MUN 1040, 10 & 13 Only:

1. Pipe MUN into the service lines following all local plumbing codes.
2. The inlet and outlet connections of the MUN unit are 3/4" ID or 1" OD PVC. Please make sure to follow the PVC primer and solvent instructions. Only use ASTM/NSF certified primer and solvent.
3. Optional copper and SharkBite fitting packages are available.

4. We recommend installing a union on the outlet (top of unit) to allow for easy removal of the top fitting for future servicing of the MUN.

Figure 1



Filling Tank with Water MUN 1040, 10 & 13 Only:

1. Connect a garden hose to valve 4.
2. Put unit in the Flush position by closing valves 1&2 and opening valve 3 fully and valve 4 one quarter.
3. The flushing process will purge dust from the new neutralizing bed. Seeing discolored water is normal. Keep in this position until the water clears.
4. Once water runs clear from the garden hose put the unit into the Service position by closing valves 2&4 and opening valves 1&3 fully.

Table 2

Position	Valve # 1	Valve # 2	Valve # 3	Valve # 4
Service	Open	Closed	Open	Closed
Bypass	Closed	Open	Closed	Closed
Flushing	Closed	Closed	Open	Open

Filter Tank Loading MUN 1665 Only:

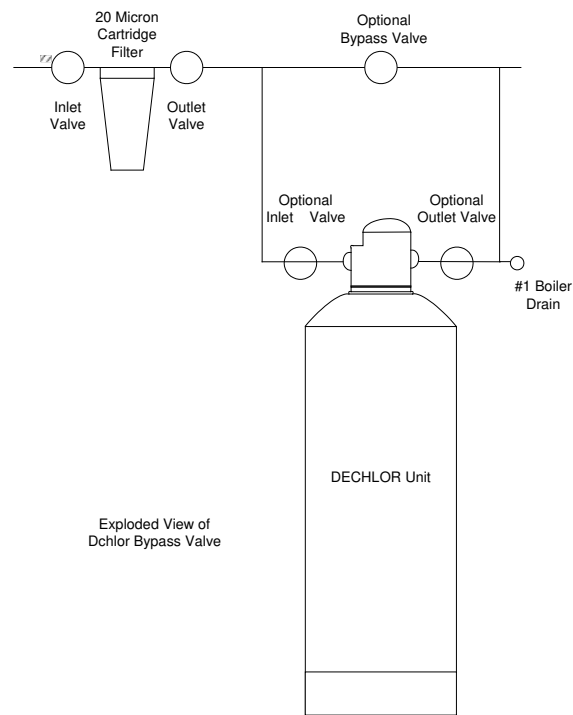
1. Remove the dome plug from the tank.
2. Use the white plastic funnel material to pour the neutralizing media into the tank.

Note: The gravel support bed is already loaded in tank.

SEE TABLE 1 FOR MEDIA VOLUME

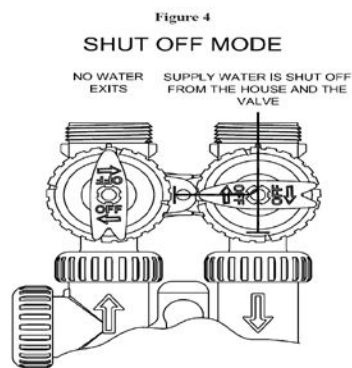
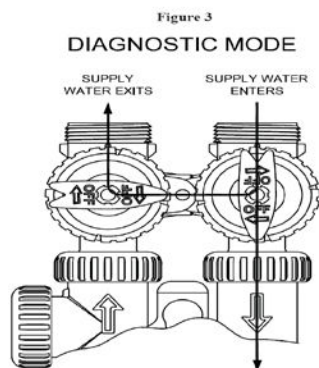
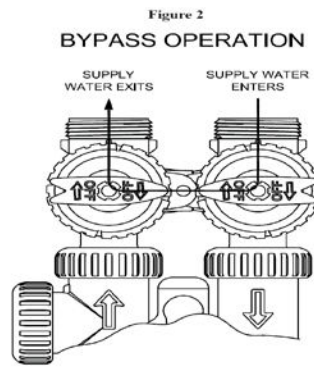
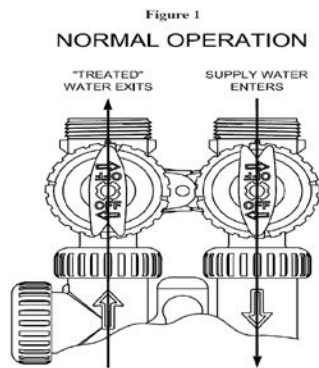
Service Piping MUN 1665 Only:

Figure 2



1. Attach the inlet and outlet fittings to the MUN bypass valve be careful to not overtighten or damage can occur.
2. Pipe MUN into the service lines following all local plumbing codes.
3. The inlet and outlet connections of the MUN unit are 3/4" ID or 1" OD PVC. Please make sure to follow the PVC primer and solvent instructions. Only use ASTM/NSF certified primer and solvent.
4. Optional copper and SharkBite fitting packages are available.

BYPASS VALVE OPERATION



Filling Tank with Water MUN 1665 Only:

1. Open inlet valve on MUN bypass. Water will enter the tank from the bottom.
2. The water will fill the tank upwards and purge air from the open dome hole so carefully monitor the water flow.
3. Once water is 3" below the dome hole, close the inlet valve on the bypass.
4. Clean dome hole threads and secure dome plug to the tank.
Note: Do not overtighten the dome plug or it can be damaged.
5. Connect a garden hose to the #1 boiler drain, open valve 1/4 turn to control water flow through garden hose.
6. Open inlet valve on MUN bypass and water will begin flushing from the garden hose. This will purge dust from the new neutralizing bed. Seeing discolored water is normal. Keep in this position until the water clears.
7. Once water runs clear from the garden hose close the #1 boiler drain.

- Put the MUN system into the Service position by opening the outlet valve on the MUN bypass.
Note: If optional external inlet/outlet/bypass valves are used, please assure that the bypass is closed and the inlet/outlet valves are open.

Table 3

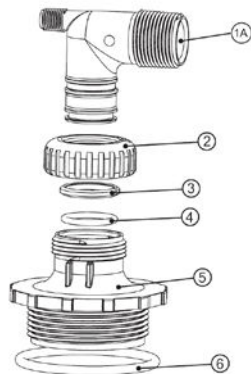
Position	Inlet Valve	Outlet Valve	#1 Boiler Drain
Service	Open	Open	Closed
Bypass	Closed	Closed	Closed
Flushing	Open	Closed	Open

Final Check:

- Check all piping for leaks.
- Make sure the bypass valves are in the proper position.
- Run water at a sink to assure that all media fines have been purged. Water should be clear.

PARTS LIST:

Swivel Elbow Assembly



No.	Order No.	Description
1A	V3149	WS1 Fitting 1" PVC Male NPT Elbow
1B	V3189	WS1 Fitting 3/4" & 1" PVC Solvent Elbow
2	V3151	WS1 Nut 1" Quick Connect
3	V3150	WS1 Split Ring
4	V3105	O-ring 215
5	D1285	Fitting 2-1/2" - 8
6	V3180	O-ring 337



D1288
2.5" Bottom Outlet Fitting



D1225-10
D1288 Strainer – 10 Segments



Order No. V3007-01

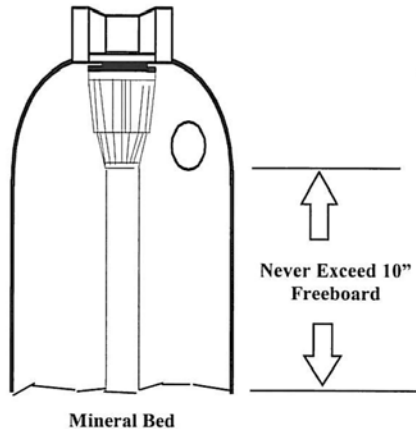


Bottom Outlet Fitting With Sharkbite



Bottom Outlet Fitting With Copper

IMPORTANT FILTER RECHARGING INSTRUCTIONS



MUN-10 and MUN-13 units must be recharged with NS-Mix.

NS-Mix is a mixture of Calcite and Mag Oxide, which is used to increase the pH of the water supply. NS-Mix is shipped in 50 pound boxes.

Required tools for servicing unit:

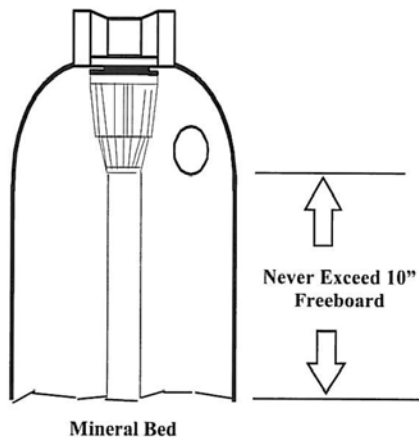
**1- Small Bucket 1- Small garden hose 2-pair of channel lock pliers
1- 6' of 1/2" ID tubing 1- 3/4" or 1/2" pvc pipe 4' long 1-towel**

For MUN-1040, MUN-10, MUN-13 Only:

1. Turn the water off to the unit by closing number 3 valve and number 1 valve.
2. Place bucket under number 4 valve and open up valve to remove pressure off of the vessel.
3. Remove the elbow fitting on the top of the unit and the union between the elbow fittings.
4. Remove the top of the large black fitting on top of the tank turning it counter clock wise.
5. Install garden hose the to optional valve located at the bottom of the mineral tank. Put hose into the bucket and drain down the unit until it is even with the mineral in top of the tank and close the valve. If you don't have a drain plumbed in the line, take your 1/2 tubing and siphon the water out of the top of the tank into your bucket.
6. Take your pvc pipe and install it into the top of the tank opening and stir the media around and check for any large clumps of media. If the media is clumped up, break it apart with the pvc pipe.
7. Add the media to the tank. Don't fill more then 10" from the top opening of the tank.
8. Reinstall the fittings and follow the installations instructions as if it were a new installations.

For MUN-1665 Only:

IMPORTANT FILTER RECHARGING INSTRUCTIONS



MUN-1665 units can be recharged with Calcite or NS-Mix.

NS-Mix is a mixture of Calcite and Mag Oxide, which is used to increase the pH of the water supply. NS-Mix is shipped in 50 pound boxes.

INSTRUCTIONS

1. Close inlet and outlet stop valves located on conditioner's service piping.
2. Connect hose to boiler drain. (See Figure #2)
3. Open boiler drain to vent pressure from tank.
4. Remove 1 1/4" black, PVC dome plug located near top of tank.
5. Put syphon hose in dome hole & syphon water from tank.
6. Insert yard stick into dome hole and force through mineral bed. This will reduce the chance of channeling.
7. Insert funnel into dome hole and pour NS-Mix into tank until the mineral bed is 10" below the dome hole.
8. Open inlet stop valve and allow water to flow into the tank until water level reaches the dome hole. Close inlet valve.
9. Be sure that dome hole threads are clean. Tighten dome plug into dome hole.
10. Open inlet stop valve and allow water to run through boiler drain and hose to suitable drain for 30 minutes or until water runs clear.
11. Close boiler drain.
12. Open outlet stop valve. Unit is now in SERVICE POSITION.

Recharging Neutralizers should be done at least once a year.

12 YEAR LIMITED WARRANTY

As of Oct. 1, 1995

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 control valve is warranted for **five years**. The control valve body (excluding internals and electrical parts) is warranted for **six years**. The mineral tank, plastic brine tank or cabinet 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 greater than 100 degrees F. or less than 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.

Failure to notify Master by completing, signing and returning the registration card within twenty (20) days of the purchase shall void the warranty.



MASTER
Water Conditioning Corp.

224 Shoemaker Rd. Pottstown, Pa. 19464