



Quick Start Up and Installation Guide

MetalMaster™

READ FIRST

*Please refer to this guide before viewing the 740/760 Control Operation Manual
(included with the control valve)*



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System Capabilities

Effective Operating Conditions:

Pressure Range: 35-125 psi (0.7-8.8 bar)

Service Flow Rate: up to 10gpm

Iron (Ferrous) Max.: 20ppm*

Manganese: 5ppm

Total Dissolved Solids (tds): < 500ppm*

Feed Water Turbidity Range: up to 1 NTU*

Iron Bacteria: None*

Temperature Range: 35-125°F (4-52°C)

pH Range: 5-9 pH*, optimal 7 pH

Hardness/Scale: Does not soften water*

Hydrogen Sulfide (H2S) Max.: 5 ppm

Feed Water Silt Index: 5*

Oil Tolerance: < 1ppm*

Tannins: < 0.5ppm*

*May require a separate or adjunct specialty system to address the particular water condition(s) and, if necessary, to protect this system. For assistance addressing your specific water condition(s), please contact a Vitasalus Water Filtration/Treatment Specialist.

Performance/Specifications Data:

	MetalMaster™ (MM-6)	MetalMaster™ (MM-8)	MetalMaster™ (MM-10)
System Plumbing Sizes:	Includes 1" PVC Fittings	Includes 1" PVC Fittings	Includes 1" PVC Fittings
Media Volume:	100 lbs.	135 lbs.	171 lbs.
Service Flow Rate:	Up to 6gpm	Up to 8gpm	Up to 10gpm
Backwash Rate:	4-5gpm	4-5gpm	4-5gpm
Required Installation Space:	approx. 50" high x 15" wide x 10" deep	approx. 50" high x 15" wide x 10" deep	approx. 60" high x 15" wide x 12" deep
Tank Size:	8x44 (10" at black base)	10x44 (10" at black base)	10x54 (12" at black base)
Operating Pressure:	35-125psi	35-125psi	35-125psi
Operating Temperature:	36—120°F (2—38.9°C)	36—120°F (2—38.9°C)	36—120°F (2—38.9°C)

Congratulations on your purchase of the MetalMaster™ Water Treatment and Filtration System, an effective chemical-free, oxidation-based technology exclusively available through Vitasalus/Equinox Products. The MetalMaster™ System is capable of removing high levels of iron, manganese, sulfur/ hydrogen sulfide (Rotten-egg odor), silt and turbidity.

This system utilizes unique and premium-grade MetalMaster™ media designed to significantly outperform other historically popular media such as Green Sand or Pyrolox®.

The MetalMaster™ System is designed to be used in place of traditional forms of iron treatment, and can be installed on either well or municipal water supplies. It can be used as a stand-alone unit or as the perfect companion to softeners, RO systems, carbon-based filters, etc.

No salt or chemicals are used to regen or backwash the media. The media is an all-natural proprietary blend which is completely safe for the eco-system and your septic tank/field. The media is very robust and designed not to break down and boasts an indefinite lifespan.

Included Installation Components

- (1) Control Valve and Power Supply
- (1) Bypass
- (2) 1" PVC Tube Adapters
- (2) Tube Adapter Gaskets (Black)
- (2) Tube Adapter Nuts (Black)
- (1) White Drain Line Elbow (Not Pictured) *
- (1) White External 7gpm Flow Control Adapter (Not Pictured) *

*** NOTE:** Hand-tighten ONLY White External 7gpm Flow Control Adapter onto Control Valve Drain Port and then hand-tighten ONLY White Drain Line Elbow onto the External 7gpm Flow Control Adapter.



Equipment Installation

General Warning and Safety Precautions

Read all precautions, installation and operating instructions carefully and completely before installing the unit. *A licensed/experienced plumber should install the MetalMaster™ to properly validate warranty.*

1. Do not install this filter where the line pressure may exceed 125 psi (8.6 bar). Operating pressure range is 10-125 psi (0.7-8.6 bar).
2. Install on cold water lines ONLY. Operating temperature range is 35°-125°F (2-52 °C). Protect unit from freezing and direct sunlight.
3. Install after pressure tank if on private well
4. Do not install unit on its side.
- 5. If an irrigation/sprinkler system is present upstream of the MetalMaster™ then a check valve MUST be installed somewhere before the MetalMaster™ to validate its warranty.**
6. Installation of the filter must comply with existing state or local plumbing codes.
7. This product is not intended for use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the unit.
8. The MetalMaster™ system should be installed in a dry location protected from the elements.

Additional Information

- The drain line can be connected to a drain outside the house such as a downspout gutter drain, sump pit or any location allowing the drain water to exit the home (similar to a washing machine type drain). Generally, the drain should be no farther than 20 feet from where the MetalMaster is installed.
- As all installation locations are unique, you will need to supply non-collapsible, flexible ½" I.D. (Inside Diameter) plastic tubing for the drain line; this can be found at a local hardware store. The drain tubing will run from your control valve to the drain or you can use the hose barb fittings supplied with the MetalMaster™ and connect a 5/8" drain line. NOTE: The drain line should generally be ½" diameter for under 10ft run or ¾" diameter for greater than 10ft run.
- The control valve requires a 3-prong, 120V, grounded outlet that is not controlled by an on/off switch. The unit is supplied with a 15' power cord; an extension cord and surge protector can be used.

Equipment Installation

Prior to Installation:

Position the system where you intend to install it.

Please be sure to place the MetalMaster™ after the pressure tank or bladder tank. The filter needs pressure for the backwash.

Before attaching control valve, remove the black cover cap from tank (see image 1) and remove red plug (if present) positioned on the white riser tube (see image 2)



Image 1

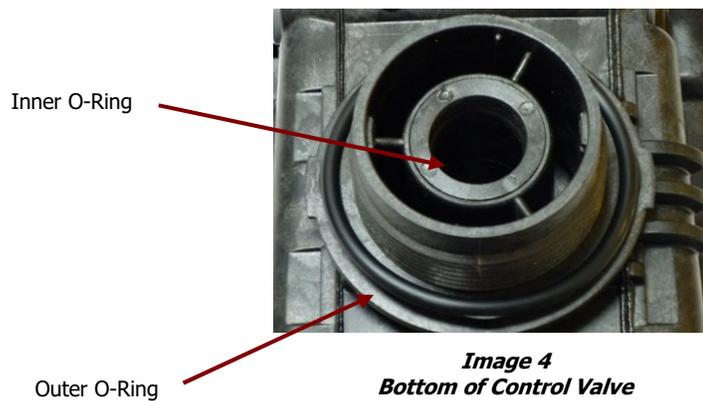


Image 2

Before attaching the control valve, apply a light coat of regular cooking vegetable or olive oil, or an FDA approved Silicone lubricant to the top surface of the media tank with your finger (see image 3). Also, lubricate the small o-ring inside the port where the control valve attaches to the riser tube (see image 4). Lubrication will help to create a good seal.



Image 3



DO NOT apply or use lubricants, oils or grease that are petroleum based



Tighten the control valve *HAND TIGHT ONLY*

Equipment Installation

Initial Start Up: (Turning Water ON)

Setting the Time on the Control Valve:

Please refer to page 3 and 4 in the Control Valve Operation Manual (740/760 Control) or please call Vitasalus, Inc. Technical Support toll free at 1-877-284-5042

Initial Backwashing Procedure:

After all connections are made and the main supply water for the system is turned on, position the valve into "In Bypass" (See Image 1)

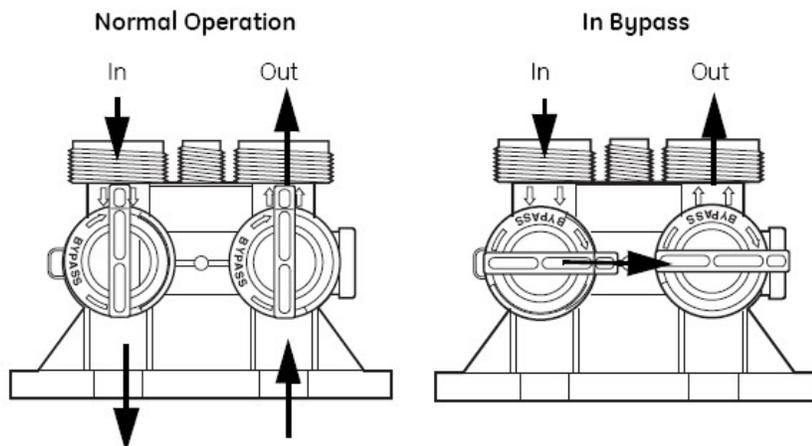


Image 1

1. Hold the REGEN button on the controller down for 5 seconds. This will initiate a manual regeneration. The controller will indicate that the motor is turning the camshaft to the cycle C1 (Backwash) position by flashing an hourglass. The controller will display the total regen time remaining.

2. Fill the media tank with water

- A. While the controller is in cycle C1 (Backwash), open the incoming bypass valve **very slowly** to approximately the 1/4 open position.



Warning: If opened too rapidly or too far, media may be lost out the tank into the valve or the plumbing. In the 1/4 open position you should hear air slowly escaping from the valve drain line

- B. When all of the air has been purged from the media tank (water begins to flow steadily from the drain line), gradually open the incoming bypass valve all of the way. This will purge the final air from the tank.
- C. Allow water to run to drain until the water runs clear from the drain line. This purges any refuse from the media bed.
- D. Allow the controller to complete the entire regeneration
- E. Turn off the water supply or incoming bypass and let the system stand for about five to ten minutes. This will allow any air trapped to escape from the tank.

Equipment Installation

Continued Initial Backwashing Procedure:

F. Open bypass to "Normal Operation"

G. Finally, turn on a faucet plumbed after the MetalMaster™. Run the faucet until the water runs clear.

**Note: The water may look cloudy initially; this will eventually pass after all air bubbles dissipate.*

H. Your MetalMaster™ Water Treatment and Filtration System is now ready for use. Enjoy!

Helpful Hints

- Upon initial backwash, mineral dust can clog a drain. We suggest that you run the drain line to an alternative source. After the drain line runs clear return it to the existing drain
- During the initial backwash you may see a lot of black media going down the drain. You may even see that you have lost a few handfuls of MetalMaster media, this is normal.
- On occasion, the backwash may need to be initiated a 2nd time to clear any remaining media dust

Manufacturers Guarantee, Warranty and Return Policy

6 Month Satisfaction Guarantee:

This water filtration system comes with a 6-month 100% satisfaction guarantee since we are so confident about its high-quality materials, workmanship, and performance. In fact, if you're not completely satisfied after having it properly installed by a licensed plumber and using your MetalMaster™ Whole House Water Filtration System, call us within 6 months of delivery, and we'll give you a 100% refund plus pay for return shipping. (Note: for details please refer to our Return Policy below.)

- 5 Year Pro-Rated Warranty on the Control Valve
- 10 Year Pro-Rated Warranty on the Tank

WARRANTY SERVICE IS AVAILABLE BY CALLING VITASALUS FOR A WRA NUMBER BEFORE RETURN. NUMBER MUST BE ON THE OUTSIDE OF POSTAGE PREPAID BOX, WITH PROOF OF PURCHASE.

Warranty Policy and Limitations:

All Water Filtration products are warranted to be free from defects in materials and workmanship for a period of one (1) year. There are no forms or warranty cards necessary from our customers as warranty registration is automatic and begins on the day our customers receive their product.

We cannot, and will not, be responsible for a recommended solution that falls short resulting from lack of information/disclosure by the customer. Our representatives base all product recommendations on information provided by our customers; if other conditions (i.e. water, installation space, power, water pressure, etc.) exist which were not previously disclosed, then additional/other products may be required to make the overall solution successful. However, as always, we are committed to positively working with the customer to help remedy any troubled solution by providing the customer with the most effective and affordable options available.

Under no circumstances will Vitasalus/Equinox Products financially cover, or be responsible for, any service, 100% satisfaction guarantee, or warranties, that have resulted from improper application, poor handling, neglectful damage, set-up, installation, start-up procedure, and/or lack of thorough follow through of installation procedures found on or with the unit, and in any service guides, product manuals, and/or related website pages.

Return Policy:

For the return of any product you must first call to get a Return Merchandise Authorization (RMA) number. This RMA number must be written on the outside of the shipping box, or the receiving department will refuse the shipment. The RMA number is only valid for 30 days.

For returns that do not qualify for our 100% satisfaction guarantee due to improper installation, improper use, neglectful damage, unused product, and/or problems that are not due to performance issues, a restocking fee/charge of 15% will be assessed within 30 days, 30% within 60 days, and no refund/credit after 60 days unless stated otherwise for water filtration units, otherwise, NO EXCEPTIONS. After a RMA has been issued by a Vitasalus, Inc. Customer Service Representative, product must be returned freight pre-paid, in original packaging.

Re-Ordering, Replacement Parts & Accessories

Company Information

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Troubleshooting

1) Is the system in bypass? Triple Check!!

2) Any kinks, restrictions, blockages in drain line?

3) How often is the unit backwashing and length of backwash?

4) How many gallons per minute does the well produce?

1. Flip breaker (turn off switch) on submersible pump or jet pump
2. Drain water throughout the plumbing including pressure/bladder tank
3. Locate a drain spigot before or after the pressure/bladder tank
4. Place a 5 gallon bucket beneath the spigot
5. Turn on submersible pump or jet pump
6. Determine how long it takes to fill a 5 gallon bucket in 1 minute

Example:

- Fill 5 gallon bucket in 1 minute = 5 gallons per minute
- Fill 5 gallon bucket in 45 seconds = 7.5 gallons per minute
- Fill 5 gallon bucket per 30 seconds = 10 gallons per minute

5) Is there any slime/film/oily sheen in the toilet holding tank

1. Lift cover off the back of the toilet holding tank
2. Physically run your finger along the inner walls and/or surface
3. Check for a slime/film/oily sheen, otherwise it should feel rough and coarse like porcelain

Clues which indicate that iron bacteria may be present in well water:

Iron bacteria often produce unpleasant tastes and odors commonly reported as:

- swampy
- oily or petroleum
- cucumber
- sewage
- rotten vegetation
- musty

The taste or odor may be more noticeable after the water has not been used for some time.

- Iron bacteria will usually cause yellow, orange, red, or brown stains and colored water
- It is sometimes possible to see a rainbow colored, oil-like sheen on the water
- Iron bacteria produce a sticky slime which is typically rusty in color, but may be yellow, brown, or grey
- A feathery or filamentous growth may also be seen, particularly in standing water such as a toilet tank

Troubleshooting

Problem	Possible Cause	Solution
Flowing or dripping water at drain line after regeneration	Debris is preventing or clogging valves and/or flow restrictor and drain port	a. Remove the flow restrictor off the drain port on the back of the control valve. It will have a black elbow and hose connected to it
		b. Make sure there is no media, rust or sediment clogging up these orifices
		c. Take a shop vacuum and suction the drain port free of any media, rust or sediment buildup
		d. While doing this, check that the last 4 flaps toward the back of the cam shaft are seated properly. These are your drain valves. While vacuuming, push open each of these flaps to eliminate any debris that may prevent full closure.
Significant Pressure Loss	Media, Rust or Sediment clogging up orifices	See Above
	Inlet and Outlet Ports are not connected correctly	Check that water is flowing into the inlet port and exiting the outlet port
Reoccurring backwashes	Regeneration button was pressed more than one time during initial set up	Press the up arrow and square button simultaneously for 5 full seconds, this will cancel a backwash
Four dashes displayed -- :--	Power failure occurred	Press SET to reset the time display
Media Discharge into household appliances	Unit was not flushed thoroughly prior to installation	Connect the inlet side only, must be flushed for 15-20 minutes prior to tying into your plumbing. Flush the system until the water runs clear. At this point, water volume may be increased to finish the initial flushing process
After testing, results for heavy metals have not decreased and/or results not typical for claims made by company	See Above	See Above
	Well is not producing required gallons per minute for system backwash Levels are too high for systems capabilities Tannins and Iron Bacteria compromising systems performance	Check for adequate flow rate or gallons per minute coming from well. Verify levels of elements prior to entering system Check for slime, film and/or oily sheen in toilet tank. If water coloration is brown or yellow coming out of MetalMaster, check for tannins.

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