

# Water Pre-Filtration System Installation Instructions

MEDIVATORS®  
**DSD·SSD**  
Endoscope Reprocessing Systems

## DSD-201LT, DSD EDGE, SSD-102LT



**WARNING: DO NOT over-tighten filter housings (hand-tighten only). Over tightening will result in failure of the pre-filter components, which can lead to flooding or water leaks.**

Plumbing fittings should be hand tightened followed by one complete turn with the appropriate wrench.

## PURPOSE

These instructions cover the installation of the Water pre-filtration system P/N 78399-991. The water pre-filtration is shipped in a box separate from the machine.

The hardware included in the kit:

- Water filter unit
- Regulator and gauge
- Eight foot flexible water hose
- Filter wrench
- Reducing bushing 1/2" x 1/4"
- Threaded nipple 3/8" x 2"
- Elbow 1/2" x 3/8"
- Miscellaneous mounting screws
- 3/8" plugs for regulator



Figure 1. Water Pre-filtration System Kit

## CUSTOMER REQUIREMENTS:

These criteria must be met to ensure proper operation of the reprocessor. It is the responsibility of the customer to provide qualified personnel to install the plumbing (pre-filter assembly, regulator, drain for the DSD-201LT and the pre-filter assembly, regulator, thermostatic mixing valve or equivalent and drain for DSD EDGE Reprocessor) prior to install. It is also the customer's responsibility to connect the DSD EDGE Reprocessor, DSD-201LT or SSD-102LT to the water supply at the time of installation.

## WATER SUPPLY (POTABLE)

### FOR DSD EDGE ENDOSCOPE REPROCESSING SYSTEM ONLY:

The incoming water connection to the DSD EDGE Reprocessor is situated on the right side of the cabinet. The adapter attached to the unit is a 3/8" female NPT fitting. Water connections on the pre-filtration system are 1/2" female NPT.

- The incoming hot and cold water lines must be a minimum of 1/2" (12.7 mm) diameter water line providing a minimum flow rate of 3.2 gallons per minute (GPM) (12 l/min) at temperature of 95°F ± 4°F (35°C ± 2°C). *ON DEMAND* To maintain this specific temperature of the supply water, a thermostatic mixing valve will be necessary prior to the pre-filtration system. This valve requires both hot and cold water lines for proper operation. The customer is responsible for obtaining and installing the valve or any other water tempering method. Refer to the water temperature and flow specifications to find the best match of mixing valve or other tempering method for your facility. This valve should be located no more than four (4) feet (122 cm) from the machine and easily accessible to the operator.
- The incoming water pressure at the input of the re-filtration system must be a minimum of 40 PSI (2.75 BAR) *DYNAMIC PRESSURE* and not to exceed 90 PSI (6.2 BAR).
- A shut off valve and water mixing valve must be installed before the pre-filtration system. It is important that the shut off valve and water mixing valve be mounted within the operator's reach.
- The pre-filter assembly with regulator is wall mounted and has the dimensions of 16"H x 18"W x 6"D (41 cm H x 46 cm W x 15 cm D). The incoming water connection to the pre-filter assembly is 1/2" NPT on the left hand side. All fittings and hoses for the output of the pre-filter assembly are included.
- The mixing valve must be accessible and located as close as possible to the pre-filtration system to minimize the loss of water temperature. The thermostatic mixing valve should be no further than four (4) feet (122 cm) from the DSD EDGE Reprocessor. The mixing valve should be followed by a thermometer (with readings in Celsius), then followed by a bypass valve to a drain. Installation of a by-pass valve will assist in accelerating the stabilization of the water temperature supplied to the machine after long periods of inactivity. The valve should be located between the thermostatic mixing valve and the pre-filtration system. The output of the valve is to the drain. Opening this valve facilitates the ability to accelerate the water heat up time, and reducing the incidence of low temperature alarms on the DSD EDGE Reprocessor.
- The facility is responsible for the installation of the pre-filtration system, water mixing valve and the connection of the incoming water line to the DSD EDGE Reprocessor and pre-filtration system.
- Ensure water hardness is less than 12 gpg (200 ppm) for optimal performance.
- De-ionized water (DI water), due to its corrosive nature, is not recommended for use in MEDIVATORS reprocessors.
- Reverse Osmosis (RO water) can be used however, not necessary since potable water can be used with the MEDIVATORS reprocessors. If RO water is utilized, the pre-filter system must still be used.
- One pre-filter system per DSD EDGE Reprocessor.
- The DSD EDGE Reprocessor System requires a thermostatic mixing valve with a temperature range of 95°F ± 4°F (35°C ± 2°C). It is the responsibility of the facility to purchase, install and maintain this device. **PRODUCT BULLETIN: SUGGESTED LIST OF THERMOSTATIC MIXING VALVES FOR MEDIVATORS ADVANTAGE PLUS AND DSD EDGE ENDOSCOPE REPROCESSOR**, PN 50097-480 has a list of suggested thermostatic mixing valves. This document can be found at [www.medivators.com](http://www.medivators.com).

**NOTE:** An emergency eye wash valve typically will not meet the water temperature specifications for the DSD EDGE Reprocessor.

- Facility water pressure can vary greatly. The majority of thermostatic mixing valves require a pressure differential of less than 10 PSI (0.70 bar) between the hot and cold water supplies for optimum operation. Therefore Medivators require the addition of pressure regulators on each of the hot and cold water supply lines prior

to entering the thermostatic mixing valves. This too is the responsibility of the facility to purchase, install and maintain these devices if they are determined to be necessary. Consult a qualified plumber to assist in determining if pressure regulators are necessary.

The MEDIVATORS endoscope reprocessors do not require backflow protection for the incoming water supply, nor is a backflow protection device installed in the reprocessor.

If building or plumbing codes require backflow protection, then please consult your local codes, standards and/or guidelines, for applicable requirements.

NOTE: Photographs at the end of this document show an example of a backflow protection device installed on the incoming water line. Medivators does not require the use of these specific devices, nor endorse any specific manufacturer or brand. The photographs are representative of what a backflow device would look like at an actual customer facility, and are for reference purposes only.

### **FOR DSD-201LT and SSD-102LT:**

Water connection to the unit is on the right side of the cabinet. The adapter attached to the unit is a 3/8" female NPT fitting. Water connections on the Pre-filtration system are 1/2" female NPT.

- The incoming water line must be a minimum of 1/2" (12.7 mm) diameter providing a minimum flow rate of 3.2 gal/min (12 liters/min) at a maximum temperature of 110°F (43°C). (Cold water supply is preferred.)
- The incoming water pressure to the pre-filter must be a minimum of 40 PSI (2.75 BAR) and should not exceed 90 PSI (6.2BAR).
- A shut off valve must be installed before the pre-filtration system. It is important that the valve be mounted within the operators' reach.
- The facility is responsible for the installation of the pre-filtration system and the connection of the incoming water line to the reprocessor and pre-filtration systems.
- Ensure water hardness is less than 12 gpg (200 ppm) for optimal performance.
- De-ionized water (DI water), due to its corrosive nature, is not recommended for use in MEDIVATORS reprocessors.
- Reverse Osmosis (RO water) can be used however, not necessary since potable water can be used with the MEDIVATORS reprocessors. If RO water is utilized, the pre-filter system must still be used.
- One pre-filter unit per DSD-201 or SSD-102.

The MEDIVATORS endoscope reprocessors do not require backflow protection for the incoming water supply, nor is a backflow protection device installed in the reprocessor.

If building or plumbing codes require backflow protection, then please consult your local codes, standards and/or guidelines, for applicable requirements.

## REGULATOR INSTALLATION AND SET UP:

- The pressure regulator requires the water to flow through in one direction for proper operation. On the bottom of the regulator is an arrow indicating water flow. Verify the proper flow direction when installing the water regulator.
- Install the regulator between the pre-filter assembly and the DSD EDGE Reprocessor/DSD-201LT/SSD-102LT.

NOTE: Use a minimum of 1/2" (12.7 mm) piping for all waterline plumbing.

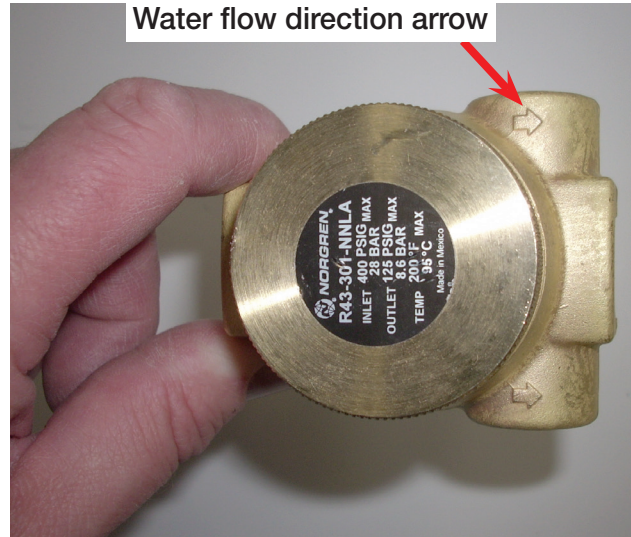


Figure 2. Regulator

## REGULATOR ADJUSTMENT:

The regulator pressure can only be accurately set when water is flowing (dynamic pressure) into the reprocessor. Once the machine is connected to the water supply, adjust the regulator during the initial flush cycle. Set the regulator to provide a water pressure to the reprocessor of 40 PSI (2.75 BAR).

## FILTRATION SYSTEM

The water filter housing is shipped with a 1.0 micron filter in housing #1 and a 0.45 micron filter in housing # 2.

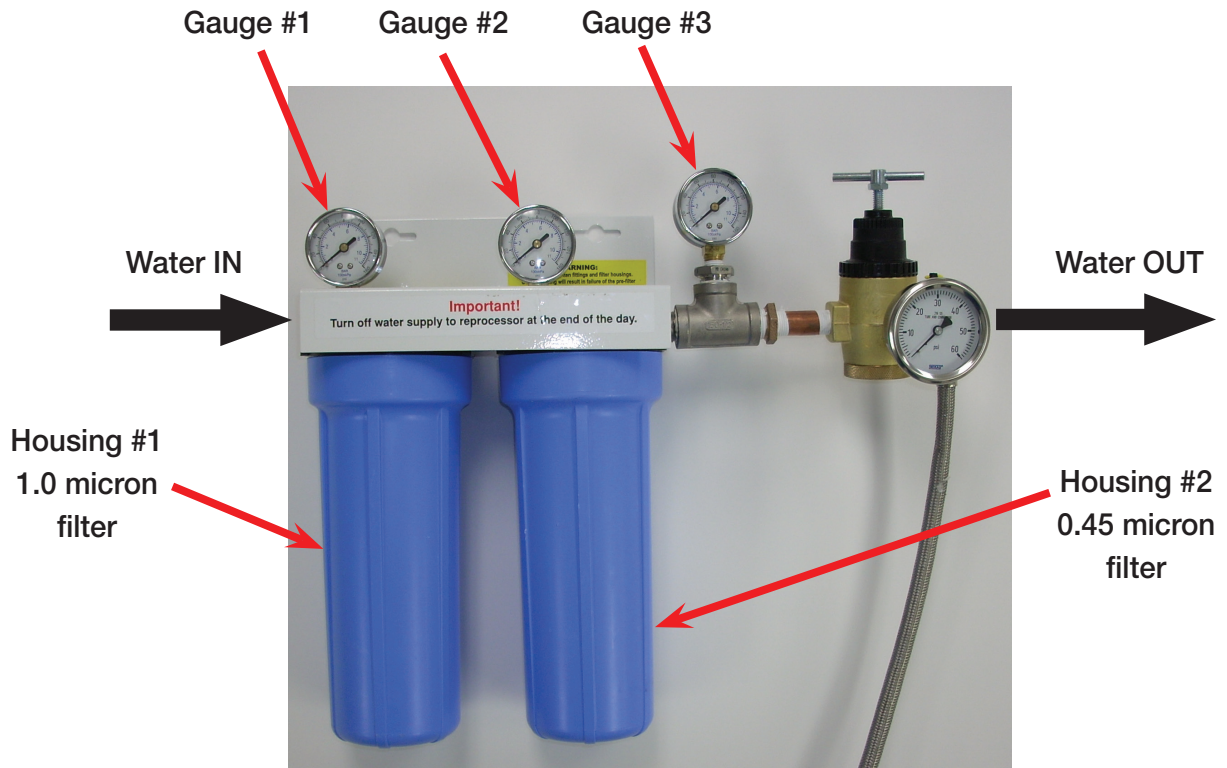


Figure 3. Components of Pressure filter assembly

The accumulation of particulates in a filter can cause the water pressure to drop below the minimum required level. A pressure differential of 5 PSI or greater between gauges on each side of a filter indicates a need for replacement. For example, if the pressure on gauge #2 is 35 PSI when the pressure on gauge #1 is 40 PSI, a filter change is required.



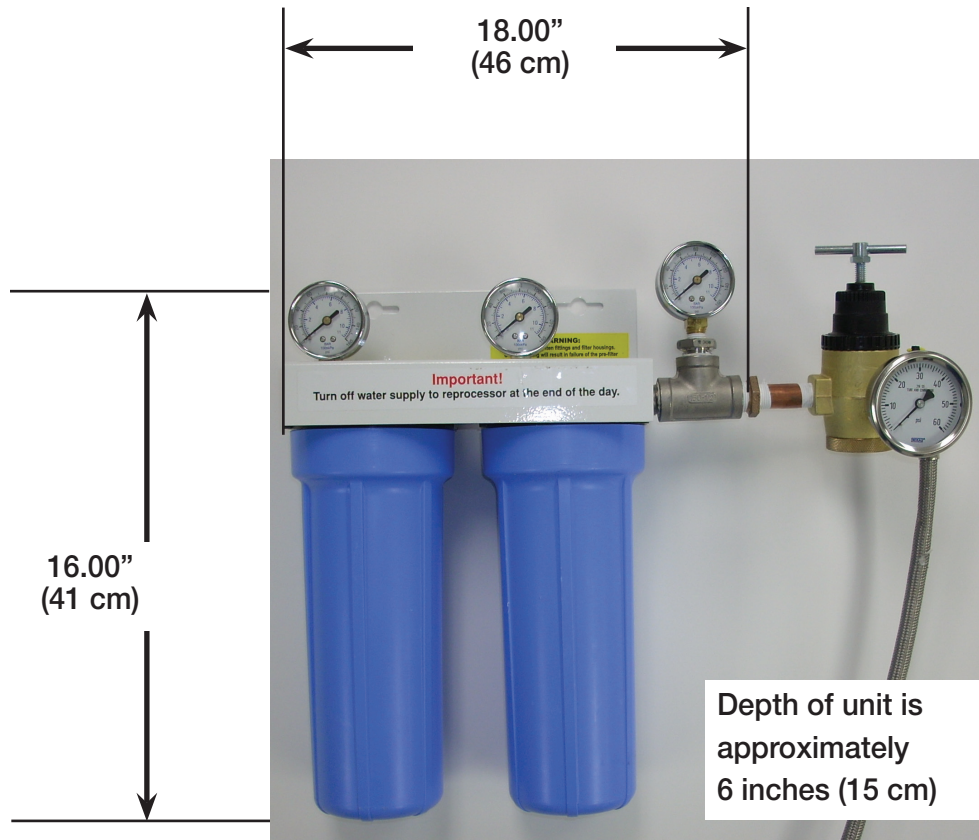


Figure 4. Dimensions of pressure filter assembly

## INSTALLATION

Dimensions of the water filter are shown in figure 4.

- *If not already installed, an incoming water shut-off valve must be installed upstream of the pre-filter system.*
- When mounting the pre-filtration system to sheet rock wall, suitable mounting hardware must be use to hold to the unit solidly to the wall.
- The shut off valve must be easily accessible to the user to shut off when not in use.
- Mount the filter assembly on the wall where the filters can be easily changed and the gauges checked.
- Connect the output of the filter assembly to the input of the regulator.
- Connect the output of the regulator to the DSD EDGE Reprocessor/DSD-201LT/SSD-102LT using the stainless steel hose. The other end of the hose will be attached to the water inlet of the repressor on the right side of the machine. The installation kit ships with hardware that should fit most installations. If not, hardware may be sourced locally.

**NOTE: TURN OFF THE WATER SUPPLY AT THE END OF EACH DAY OR IF THE UNIT WILL NOT BE IN USE AND UNATTENDED FOR ANY LENGTH OF TIME.**

## WATER FILTERS CHANGES

- The filters in the Pre-filter housing should be changed every three months.
- The filter wrench is only for removing the filter housings. NEVER tighten the filter housings with a filter wrench.
- A thin film of silicone grease applied to the O-ring will aid in both sealing of the housing and ease of removal at the time of the next filter change. Silicone grease can be obtained from Medivators; the part number is 17599-463. The O-ring in the housing should be replaced at least once a year to prevent leaks. The part number for the O-ring is 43100-083.

## SAMPLE INSTALLATION OF A TEMPERATURE REGULATOR FOR USE WITH DSD EDGE ENDOSCOPE REPROCESSING SYSTEM

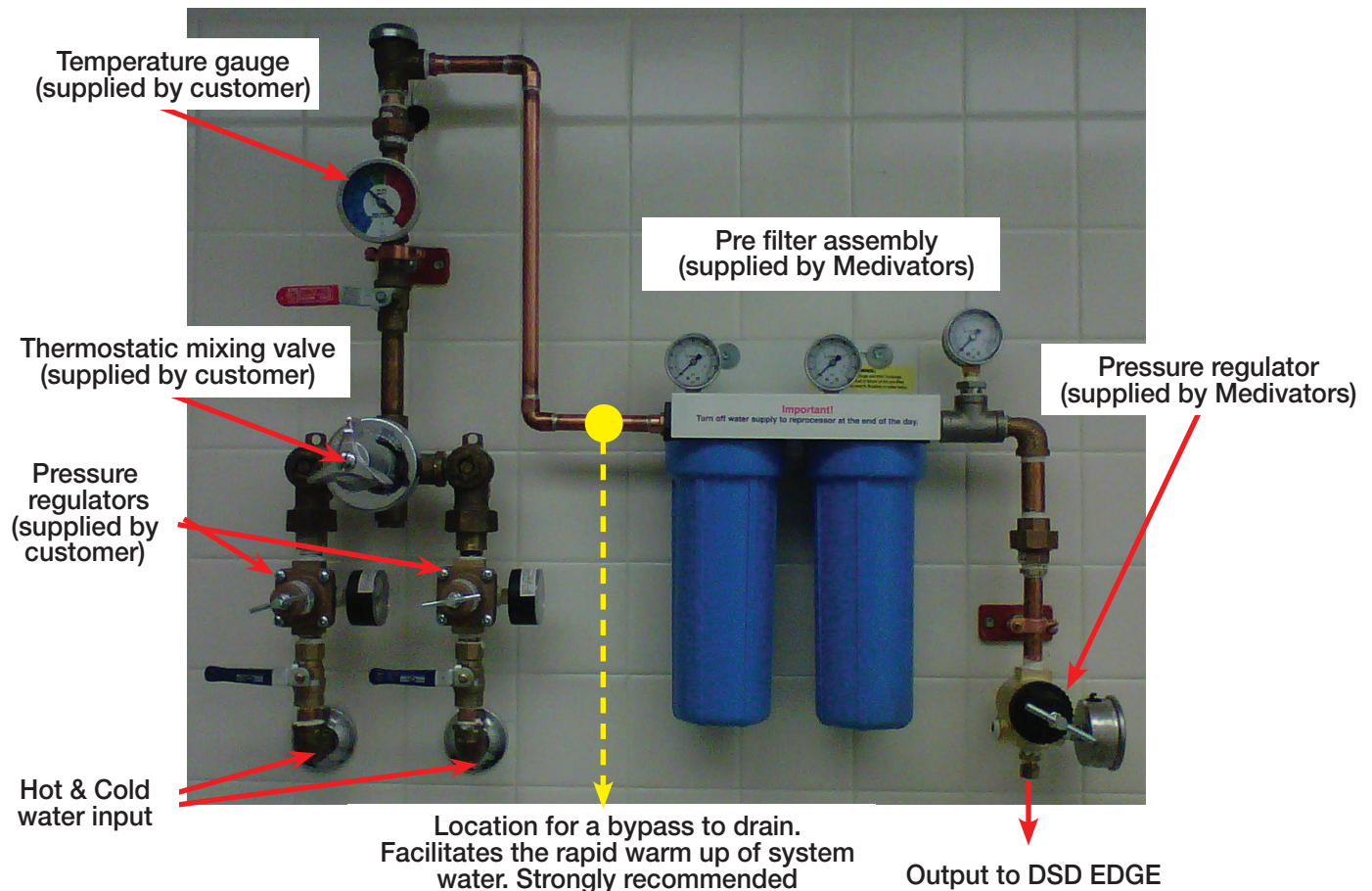


Figure 5. Example of DSD EDGE Reprocessor Water System  
(All within 4 feet (122 cm) of DSD EDGE Reprocessor and easily accessible)

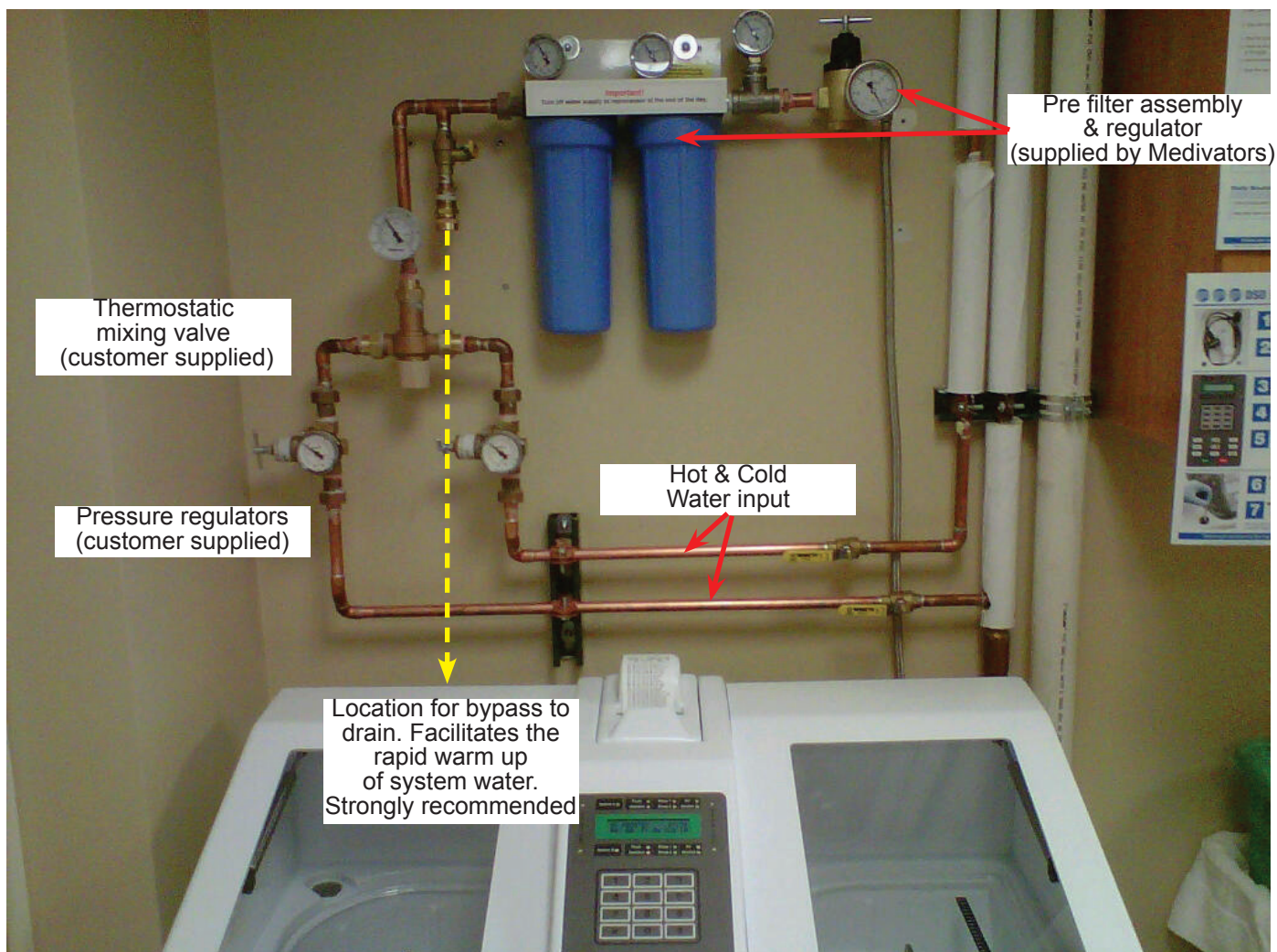


Figure 6. Sample of DSD EDGE Reprocessor Installation



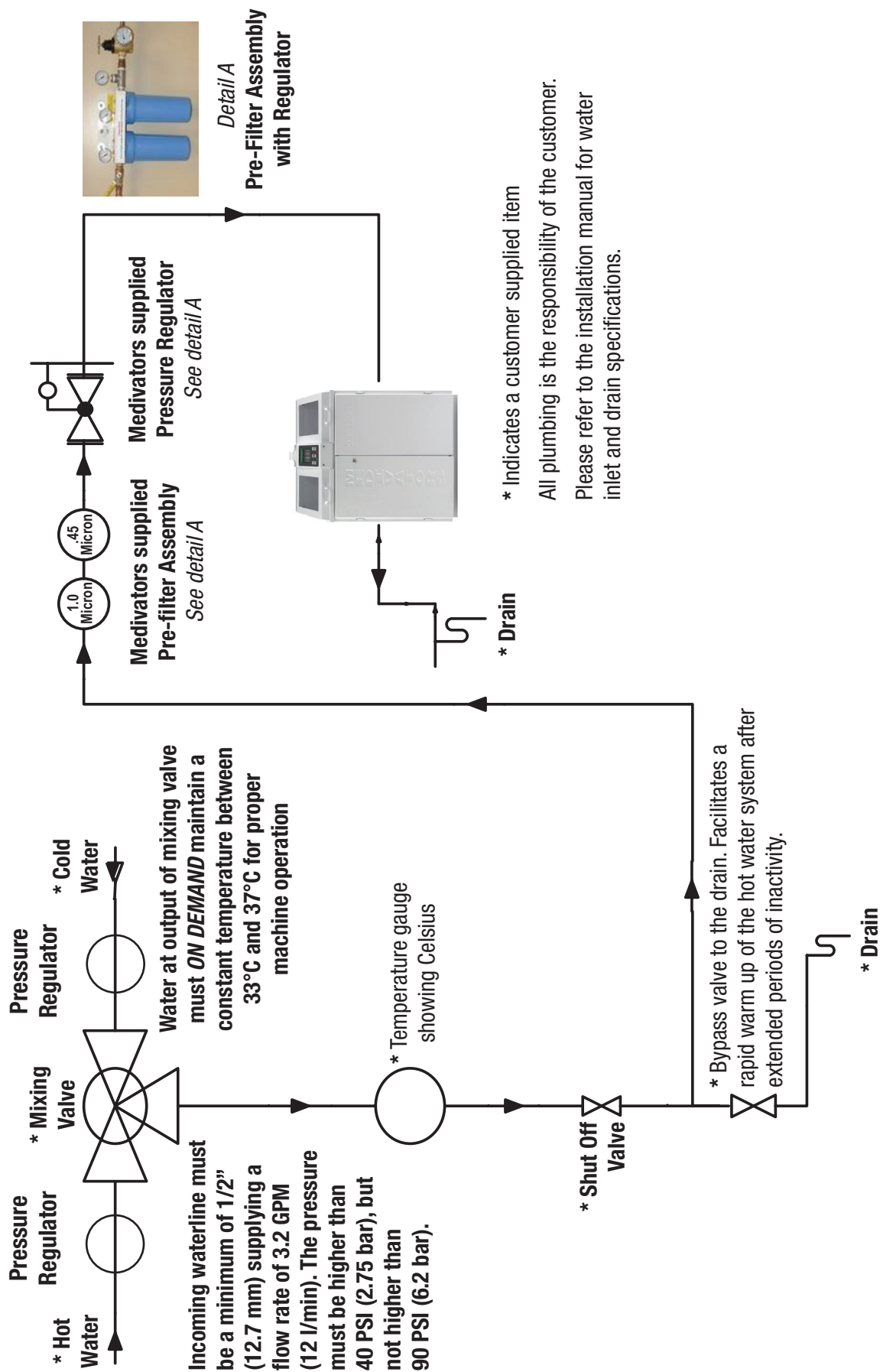


Figure 7. Water and Drain Diagram DSD EDGE



Figure 8. Sample Installation of a DSD-201LT/SSD-102LT

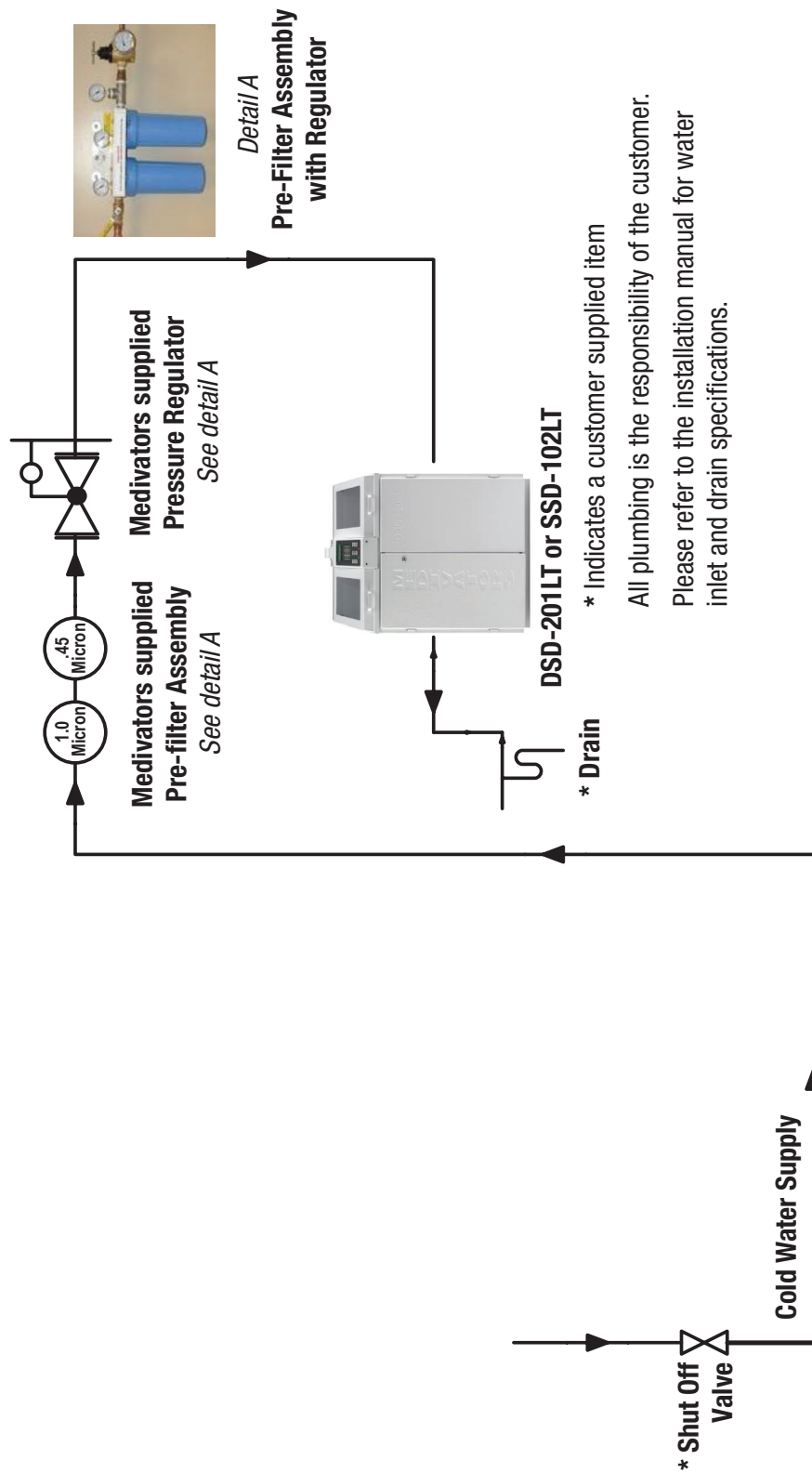



Figure 9. Water and drain diagram for DSD-201LT and SSD-102LT



Manufactured in the USA by:

Medivators Inc.  
14605 28th Avenue North   
Minneapolis, MN 55447 USA  
Toll Free: +1.800.444.4729

Medivators BV  
Sourethweg 11 

EC	REP
----	-----

  
6422PC Heerlen  
The Netherlands  
Tel: +31.45.5.471.471

Cantel Medical Asia/Pacific Pte. Ltd.  
1A International Business Park  
#05-01 Singapore 609933  
Tel: +65.6227.9698

Cantel Medical Devices (China) Co. Ltd.  
Unit 804-805, Innov Tower Block A,  
Hongmei Road, Xuhui 200233 Shanghai  
Tel: +86 21 60161380  
Fax: +86 21 61210913

[www.medivators.com](http://www.medivators.com)  
© 2015 Medivators Inc. 50097-363/H