

# DRAIN MASTER INSTALLATION INSTRUCTIONS

## DM20RP or DM20RPMS

**PLEASE, BEFORE YOU TRY IT YOUR WAY,  
TRY IT OUR WAY.....**

**Our valves install differently than a manual valve, please read the instructions before you begin installation.**

### What you will need to do this install:

- Basic mechanical /electrical knowledge
- 12 VDC power source (to connect the switch to)
- Drain Master Kit – DM20RP or DM20RPMS – includes valve, seal, nuts, bolts, lubricant, switch, and instructions.
- 7/16” wrench/socket
- 5AMP in line glass type fuse (not supplied) available at auto stores
- **If you want to mount the switch farther then the valve/switch wire length allows, you will need connectors and 20 or 18 gauge wire.**



### Special Notes:

- ◆ Make sure you have good access to the manual override wherever you choose to install your valve.
- ◆ Do not place fingers in running area of valve.
- ◆ Installation is simple and can be accomplished in a short time.
- ◆ Never install the Drain Master with the motor/gear/gate housing down. Can be installed horizontally or vertically. (See Note with picture below on how to install).
- ◆ PLEASE DO NOT OPERATE Drain Master prior to installation on the RV. The gate has a sharp edge and the motor is powerful and very fast. YOU COULD GET HURT. You assume liability for your actions.
- ◆ Do not use any other lubricant than the DOW 111 we have provided.

### STEP 1:

EMPTY AND FLUSH HOLDING TANKS!!!  
This will make your installation an uneventful success.

### STEP 2:

Remove the four bolts holding the existing manual dump valve to plumbing.

### STEP 3:

Separate plumbing enough to remove existing manual valve.

### STEP 4:

Remove the 2 seals from pipe flanges or from existing manual valve. **\*\*The old seals will not work with your new valve.\*\***

### STEP 5:

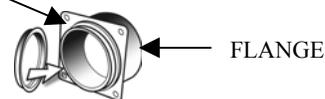
Clean pipe flanges, check for cracks, replace flange if necessary. Remove caution card from gate area on new valve.

### STEP 6:

Use manual override to close gate if it is not already closed. This will make the following steps easier.

### STEP 7:

Now you are ready to install the new valve. **Use the seals that came with your new valve (this is very important).** Coat the area of the seal that comes in contact with the gate using the supplied lubricant (Dow 111). Place the seals over the flange lip (Flange lip is on existing plumbing).  
**\*\*\*\*\*VERY IMPORTANT STEP\*\*\*\*\***



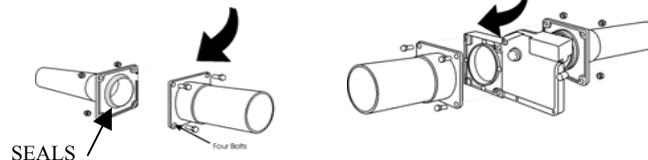
### STEP 8:

With the remaining lube, apply to both sides of gate.



### STEP 9:

Separate pipe flanges and insert Drain Master making sure the seals are in their correct position, **on the flanges.** (See Step 7) Rotate the valve to align the four bolt holes with the flange holes and insert the four new bolts and nuts. See pictures below:



### STEP 10:

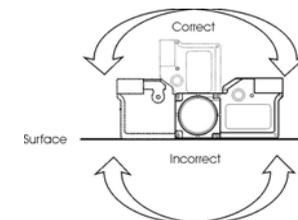
Install the four bolts and hand tighten. Use a 7/16” wrench and in a criss cross pattern, snug the nuts down 1/4 turn at a time. Tighten the four bolts evenly, being careful not to over tighten. The components are plastic and can crack. The tightening spec is 20 inch pounds.

### STEP 11:

Add water to holding tank and check for leaks.

### NOTE: HOW TO INSTALL

Drain Master can be installed in any position other than in housing down position. See picture below:



**If you have questions or need help with an install, please call us toll free  
PHASE FOUR INDUSTRIES  
877-787-8833 or see our Troubleshooting guide on  
the web at [http://phasefourindustries.com/dm21\\_2.pdf](http://phasefourindustries.com/dm21_2.pdf)**

## SWITCH INSTALLATION INSTRUCTIONS



**Regular Switch**



**LED Switch**

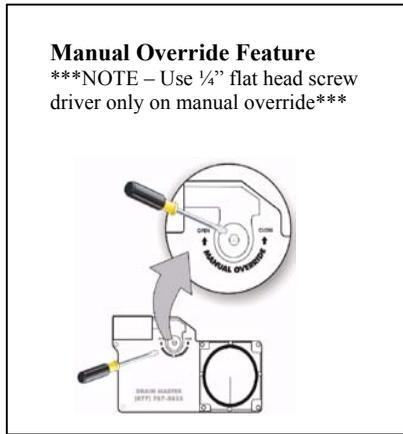
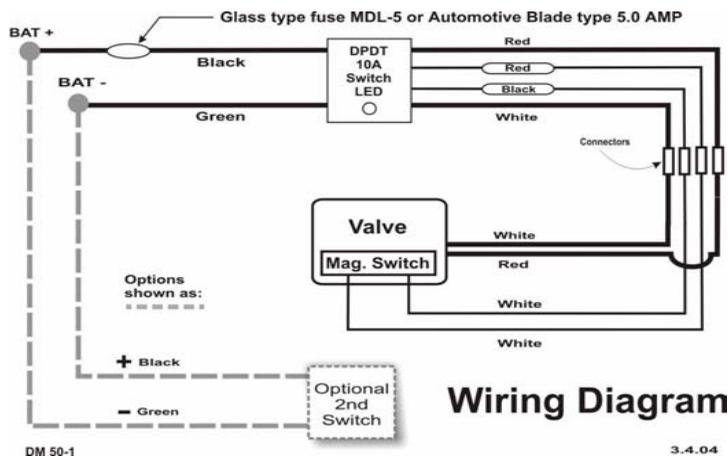
**The switch to operate Drain Master comes wired so that all you need to do is:**

1. Insert the switch through the black switch plate being sure that the red and white wires on the switch are on top toward open.  
**\*\*Red & white wire must be on top toward open or your valve will operate in the opposite direction.**
2. Install the switch in a convenient location on your coach, mount with four screws (included).
3. You will need to install a 5 AMP in line glass type fuse to protect the motor.  
 -The fuse needs to be in line between the battery positive source and the switch. You may use an existing spare fuse on a fuse block or use an in line type.

**Note: If you want to mount the switch farther from the Drain Master than the wire length allows, simply add butt connectors (not included) to the 4 wires and mount the switch in the location you desire. Never use wire smaller than 20 gauge.**

**IMPORTANT:** Connect -

- Black lead on switch – fused connect to positive 12VDC only
- Green lead on switch – connect to negative (ground)
- Red wire from switch – connect to red wire on valve
- White wire from switch – connect to white wire on valve
- If you have the LED switch version, the two labels on the switch that are labeled “To Mag Switch” need to be connected to the two wires on the magnetic switch. See schematic below. You can also visit our web site for a larger viewing of this diagram. ([www.drainmaster.com](http://www.drainmaster.com))



### OPERATING INFORMATION

**NOTE: DO NOT HOLD SWITCH DOWN LONGER THAN 2 SECONDS**

Congratulations on your purchase of a quality product from Phase Four Industries.

Your new Drain Master is extremely easy to use but may require maintenance. After installation has been completed according to the installation instructions you are ready to open the Drain Master for the first time.

- Push the switch up toward the word “open” and listen for the Drain Master to make a sound. **The Drain Master will open in approx. 1 second** which means you do not have to hold the switch in the open position for more than 2 seconds.

**NOTE:** If the valve does not open, check to be sure you have 12VDC to the black wire and that the green wire is ground. One of these two wires is usually the problem. Check to see that the unit does not open when you push the switch toward the “Close” position. If this happens, your switch is upside down. Be sure you have not overtightened the four bolts holding the Drain Master to the couplings and that the seals were installed correctly.

#### \*\*\*NEW FEATURES\*\*\*

- Please note on the new LED feature – if you have the DM20-RP and wish to upgrade this to the LED version, remember it is much easier to use the upgrade kit before you have the valve installed.
- Double sided, manual override –(Make sure you install your valve with easy access to the manual override). Should you ever lose power to your RV, you can open or close the valve manually. To do this you will need a 1/4” standard slot screw driver. On either side of the Drain Master, you will see the words *Manual Override* on the upper center area. The words Open and Close with directional arrows provide directions in which you turn the slotted shaft in the middle of this wording. Turn in the direction you need. There will be resistance as you are overriding a safety clutch. Turn until the shaft stops. When convenient, check and correct electrical problems.
- NOTE: Unless you have specifically ordered a weatherproof switch for your valve, the switch is not weatherproof, and should be mounted in an area protected from moisture. Weatherproof switch is available for purchase.