

# Installation, Maintenance, & Repair Series 800M4 and LF800M4

Anti-Siphon Pressure Vacuum Breaker  
featuring Replaceable Seats

Sizes: 1/2" - 2" (15 - 50mm)

Models: 800M4FR, 800M4QT, LF800M4FR, LF800M4QT

**WARNING**



Read this Manual **BEFORE** using this equipment. Failure to read and follow all safety and use information can result in death, serious personal injury, property damage, or damage to the equipment. Keep this Manual for future reference.



Local building or plumbing codes may require modifications to the information provided. You are required to consult the local building and plumbing codes prior to installation. If this information is not consistent with local building or plumbing codes, the local codes should be followed.

**Need for Periodic Inspection/Maintenance:** This product must be tested periodically in compliance with local codes, but at least once per year or more as service conditions warrant. Corrosive water conditions, and/or unauthorized adjustments or repair could render the product ineffective for the service intended. Regular checking and cleaning of the product's internal components helps assure maximum life and proper product function.

## Testing

For field testing procedure, refer to Watts installation sheets IS-TK-DP/DL, IS-TK-9A, IS-TK-99E and IS-TK-99D found on [www.watts.com](http://www.watts.com).

For other repair kits and service parts, refer to our Backflow Prevention Products Repair Kits & Service Parts price list PL-RP-BPD found on [www.watts.com](http://www.watts.com).

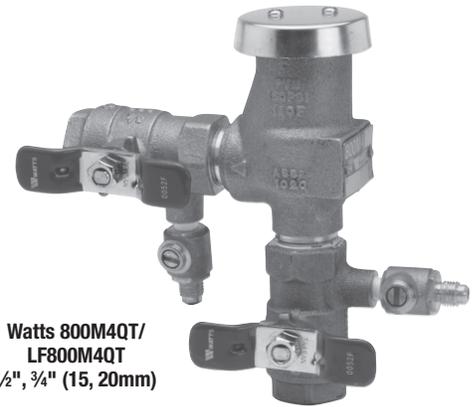
For technical assistance, contact your local Watts representative.

## Pressure — Temperature

Working Temperature: 33°F - 140°F (0.5°C - 60°C)

Maximum Pressure: 150psi (10.3 bar)

Minimum Pressure: 15psi (103 kPa)



Watts 800M4QT/  
LF800M4QT  
1/2", 3/4" (15, 20mm)



Watts 800M4QT/  
LF800M4QT  
1" - 2" (25 - 50mm)

## Installation

### Requirements:

1. Install 12" (305mm) above highest point of downstream piping see Fig. 1.
2. Install bonnet side up and allow for accessibility for testing/service.
3. Install where discharge or spillage is not objectionable.
4. Do not undersize supply or oversize the valve in relation to demand.
5. Do not install where backpressure can occur.
6. Protect from freezing - for Freeze Protection specify Model 800M4FR or LF800M4FR. Freeze protection can also be provided using a WattsBox insulated enclosure. Send for ES-VWB for additional information.
7. ASSE Standard 1020 requires that the atmospheric vent valve remains open until the valve body pressure exceeds 1 lb. Until this pressure is reached, some amount of spillage will occur at the atmospheric vent. In order to minimize this leakage on **start-up** close the down stream shutoff valve and open inlet shutoff valve quickly.

### Service:

1. Open test cocks to drain in cold climates if only operated seasonally.
2. **Replace** rubber goods every 5 years.

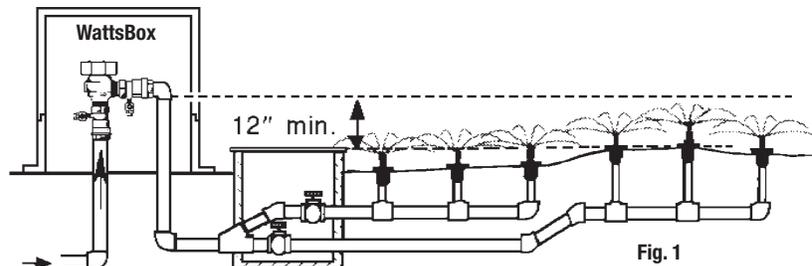
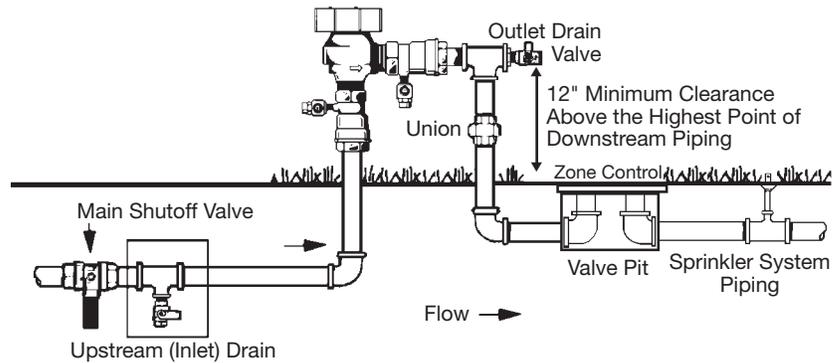


Fig. 1

## Freeze Protection Guidelines

### Purging of a PVB Assembly with Pressurized Air

1. Close main shutoff valve.
2. Open upstream drain, test cocks and isolation ball valves to depressurize line.
3. Purge with pressurized line.
4. Leave test cocks and isolation ball valve handles in 45° angle to drain ball valves and prevent casting damage.



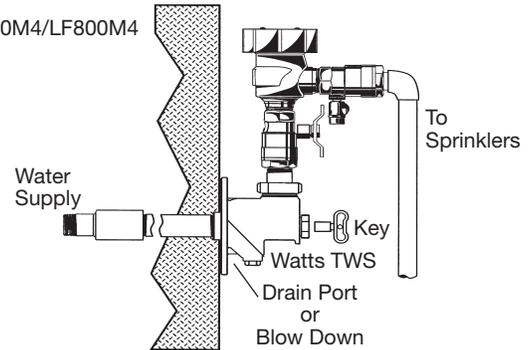
## Typical Installation

### Using TWS Hydrant

#### NOTICE

PVB's must be installed a minimum of 12" (305mm) above the highest point of water in the sprinkler system. (See Fig. 1)

TWS with Watts Series 800M4/LF800M4 Pressure Vacuum Breaker



## Service and Replacement Parts

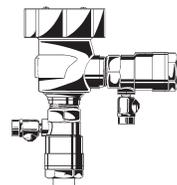
Internal parts can be removed, repaired or inspected without removing the valve from the piping.

### Disassembly

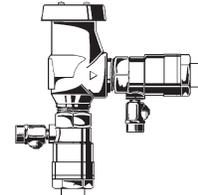
1. Shut off the supply pressure and drain the valve.
2. Remove the two hood screws and the hood.
3. Place a wrench on the parallel flats of bonnet and stem assembly. Turn counter clockwise and remove.
4. Remove the vent assembly.
5. Press down on the spring retainer and disengage it from the retaining lugs. Then turn 90° and remove.
6. Remove the spring retainer and spring. Note that the large diameter of the spring is down on the guide assembly.
7. Remove the check disc holder and guide assembly.
8. Disassemble the check disc holder assembly.
9. Remove seat (if required) by turning counterclockwise.

### Reassembly

Reassemble in the reverse order utilizing the new parts from the repair kit.



Watts 800M4QT/LF800M4QT  
1" - 2" (25 - 50mm)



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1/2", 3/4" (15 - 20mm)

#### †Fits 800M4FR/LF800M4FR Model

Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

For repair kits and parts, refer to our Backflow Prevention Products Repair Kits & Service Parts price list PL-RP-BPD found on [www.watts.com](http://www.watts.com).

**WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.  
For more information: [www.watts.com/prop65](http://www.watts.com/prop65)

**Limited Warranty:** Watts Regulator Co. (the "Company") warrants each product to be free from defects in material and workmanship under normal usage for a period of one year from the date of original shipment. In the event of such defects within the warranty period, the Company will, at its option, replace or recondition the product without charge.

**THE WARRANTY SET FORTH HEREIN IS GIVEN EXPRESSLY AND IS THE ONLY WARRANTY GIVEN BY THE COMPANY WITH RESPECT TO THE PRODUCT. THE COMPANY MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. THE COMPANY HEREBY SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

The remedy described in the first paragraph of this warranty shall constitute the sole and exclusive remedy for breach of warranty, and the Company shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if this product does not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemical, or any other circumstances over which the Company has no control. This warranty shall be invalidated by any abuse, misuse, misapplication, improper installation or improper maintenance or alteration of the product.

Some States do not allow limitations on how long an implied warranty lasts, and some States do not allow the exclusion or limitation of incidental or consequential damages. Therefore the above limitations may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights that vary from State to State. You should consult applicable state laws to determine your rights. **SO FAR AS IS CONSISTENT WITH APPLICABLE STATE LAW, ANY IMPLIED WARRANTIES THAT MAY NOT BE DISCLAIMED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF ORIGINAL SHIPMENT.**

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