

# Installation, Maintenance, & Repair

## Series 800M4 and LF800M4

### Anti-Siphon Pressure Vacuum Breaker featuring Replaceable Seats

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

Models: 800M4FR, 800M4QT, 4800M4QT, LF800M4FR, LF800M4QT

#### **WARNING**

You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product. **FAILURE TO COMPLY WITH PROPER INSTALLATION AND MAINTENANCE INSTRUCTIONS COULD RESULT IN PRODUCT FAILURE WHICH CAN CAUSE PROPERTY DAMAGE, PERSONAL INJURY AND/OR DEATH.** Watts is not responsible for damages resulting from improper installation and/or maintenance.

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.

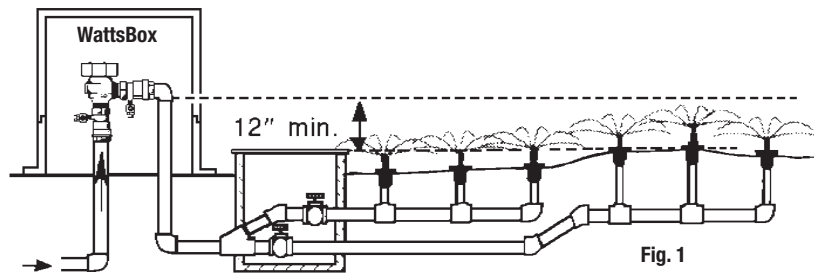
### Installation

#### 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-WB 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:

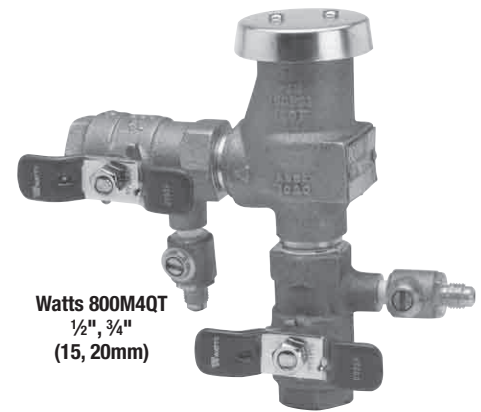
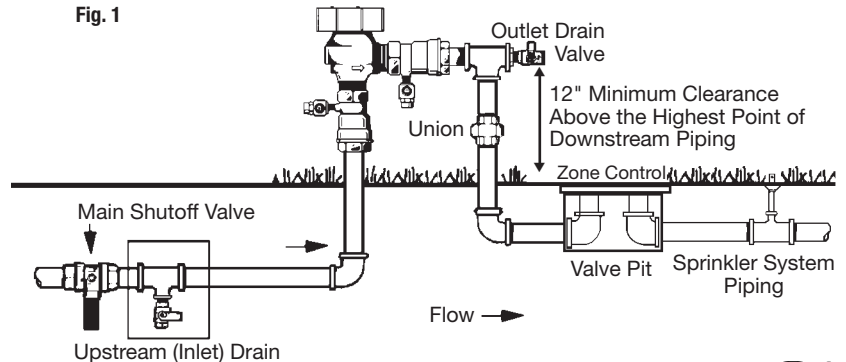
1. Open test cocks to drain in cold climates if only operated seasonally.
2. **Replace** rubber goods every 5 years.



### 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.



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



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

### Pressure — Temperature

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

Maximum Pressure: 150psi (10.3 bar)

Min. Pressure: 15psi (103 kPa)

### Testing

For field testing procedure, send for IS-TK-DL, IS-TK-9A, IS-TK-99E AND IS-TK-99D.

For other repair kits and service parts, send for PL-RP-BPD.

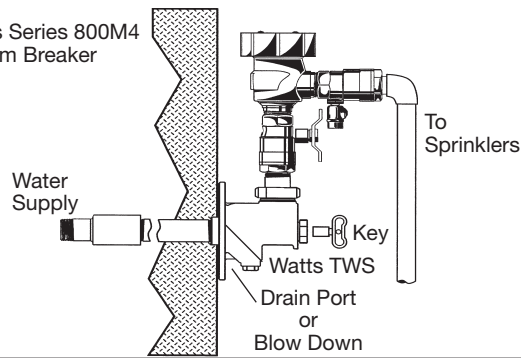
For technical assistance, contact your local Watts representative.



# Typical Installation

## Using TWS Hydrant

TWS with Watts Series 800M4 Pressure Vacuum Breaker



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

# Service and Replacement Parts

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

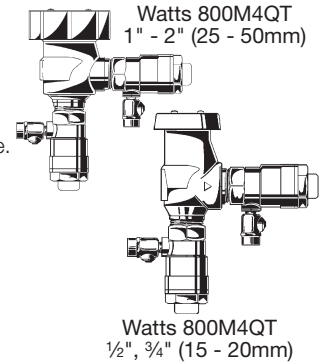
## Disassembly

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.



## Repair Kits Series 800M4 or LF800M4

ORDERING CODE	KIT NO.	SIZE	
		in.	mm

### Total Repair Kits:

LEAD FREE	0887727	RK 800M4-T	1/2, 3/4	15, 20
	0887728	RK 800M4-T	1	25
	0887729	RK 800M4-T	1 1/4 - 2	32 - 50

Kit consists of: Check Valve Repair Kit, Vent Float Repair Kit, Bonnet Assembly Repair Kit, Seat Repair Kit.

### Check Kits:

LEAD FREE	0887703	†RK 800M4 CK	1/2, 3/4	15, 20
	0887704	†RK 800M4 CK	1	25
	0887705	†RK 800M4 CK	1 1/4 - 2	32 - 50

Kit consists of: Check Disc Assembly (Disc & Disc Holder), Bonnet O-ring and Check Spring.

### Vent Float Kits:

LEAD FREE	0887709	RK 800M4 V	1/2, 3/4	15, 20
	0887710	RK 800M4 V	1	25
	0887711	RK 800M4 V	1 1/4 - 2	32 - 50

Kit consists of: Float Vent Disc Assembly (Vent Float, Seal & Spring) and Bonnet O-ring.

### FR Vent Float Kit:

LEAD FREE	0887725	RK 800M4 FRV	1/2, 3/4	15, 20
	0887715	RK 800M4 FRV	1	25
	0887716	RK 800M4 FRV	1 1/4 - 2	32 - 50

Kit consists of: Float, Vent Spring and Bonnet O-ring.

### Note: †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 one quarter of one percent (0.25%) of lead by weight.

**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.**

ORDERING CODE	KIT NO.	SIZE	
		in.	mm

### Bonnet Assembly Kits:

LEAD FREE	0887700	RK 800M4 B	1/2, 3/4	15, 20
	0887701	RK 800M4 B	1	25
	0887702	RK 800M4 B	1 1/4 - 2	32 - 50

Kit consists of: Bonnet, Bonnet O-ring, Vent Spring, Hood & Hood Screws.

### For Retrofit of Standard and LF Models M2 & M4 to M4FR:

LEAD FREE	0887726	Retro 800M4 FR	1/2, 3/4	15, 20
	0887718	Retro 800M4 FR	1	25
	0887717	Retro 800M4 FR	1 1/4 - 2	32 - 50

Kit consists of: Float, Spring, Bonnet and Bonnet O-ring.

### Rubber Parts Kits:

LEAD FREE	0887706	RK 800M4 RT	1/2, 3/4	15, 20
	0887707	RK 800M4 RT	1	25
	0887708	RK 800M4 RT	1 1/4 - 2	32 - 50

Kit consists of: Vent Disc, Check Disc and Bonnet O-ring.

### Seat Kits:

LEAD FREE	0887712	RK 800M4 S	1/2, 3/4	15, 20
	0887713	RK 800M4 S	1	25
	0887714	RK 800M4 S	1 1/4 - 2	32 - 50

Kit consists of: Seat, Seat O-ring and Bonnet O-ring.

### CALIFORNIA PROPOSITION 65 WARNING

**WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (California law requires this warning to be given to customers in the State of California.)

For more information: [www.watts.com/prop65](http://www.watts.com/prop65)



A Watts Water Technologies Company



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