



# WATER MOTOR ALARM



## DATA SHEET #SVL900



### General

The Water Motor Alarm is a mechanical, water powered device signaling the flow of water in an automatic sprinkler system. The unit is usually installed on a wall with the motor inside the building and the gong outside for maximum audibility.

Unless otherwise ordered, the wall setup will be furnished. This will fit wall thickness from 2" to 13". If thicker, specify. A riser mounting kit is available that will fit pipe sizes from 2-1/2" to 8" inclusive, in vertical or horizontal position.

The water motor gong and mechanism are made of aluminum, stainless steel and other non-corrosive materials to prevent rust and staining. Red enamel is standard finish for the gong shell.

### Operation

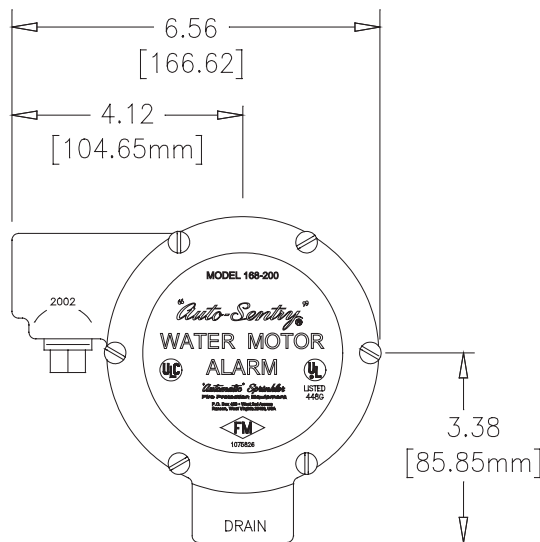
For proper operation of this device, total length of alarm line piping should not exceed 75 feet. The Water Motor should not be located more than 20 feet above the sprinkler control valve.

Alarm line piping must be galvanized and at least 3/4" in size. If pressure is low or if longer runs of piping are necessary, larger size piping shall be used.

Not more than three sprinkler systems shall be connected to one Water Motor Alarm and the systems controlled by the valves should be in the same fire area.

For all types of sprinkler systems employing water motor operated alarms, an approved 3/4" strainer shall be installed in the alarm line of each valve. This strainer is included in "Automatic" Sprinkler valve trim.

Piping shall be pitched so that after operation it will drain back to the valve through a corrosion resistant orifice not larger than 1/8 inch. Drains shall be conducted to a place where there is no possibility of damage to either persons or property when alarm is operating. Drain pipes shall be so arranged as not to expose any part of the sprinkler system to frost. Wherever possible, drains should be located in a warm place.

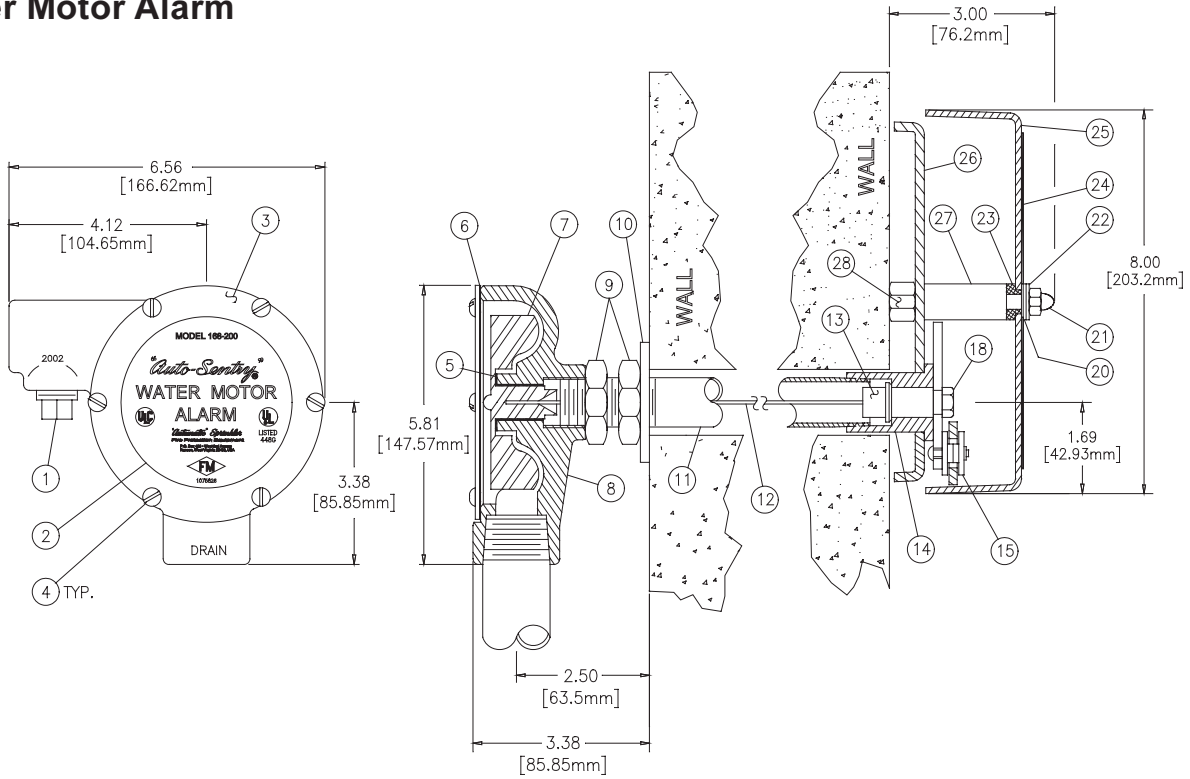


Water Motor Assembly



Gong Assembly

# Water Motor Alarm



## Parts List

- "Automatic" Water Motor Alarm - Symbol No. 168-200

Item Number	Part Name	Symbol No.	Part No.
	<b>Water Motor Assembly</b>		
1	Sump Plug 1/2"	-	2096103
2	Water Motor Alarm Label	75-826	1075826
3	Cover	168-204	1168204
4	Machine Screw – #10-11 x 5/16" long – 6 required	-	1419945
5	Flanged Bushing	-	1601796
6	Gasket	168-105	1168105
7	Impeller	168-203	1168203
8	Body	168-202	8168202
	<b>Mounting Assembly</b>		
9	Locknut – 3/4-14	-	1415205
10	Washer 1"	-	1425042
11	Connecting Nipple	168-122	8168122
12	Drive Shaft	168-123	8168123
	<b>Alarm Assembly</b>		
13	Striker Shaft	168-112A	8168212
14	Striker Shaft Bushing	168-211	8168211
15	Hex Head Screw – 3/8-24 UNF x 1/2" long	-	1420145
16	Striker Frame Assembly	168-223	8168223
17	Washer 5/16"	168-107	1168107
18	Acorn Nut 5/16-18	-	1415089
19	Lockwasher 5/16"	-	1425059
20	Flanged Bushing	168-108	1168108
21	Water Motor Alarm Gong Label	75-834	1075834
22	Gong Shell	168-221	8168221
23	Back Plate	168-209	1168209
24	Gong Support Stud	168-215	8168215
25	Hex Nut 3/8-16	-	1601826

## **Installation**

**Note:** Installation can be made by one person by following this procedure.

1. Locate and drill holes through the wall for both the connecting nipple and the drain outlet; 1-1/4" and 1-5/8" in diameter.
2. Cut the non-threaded end of the 3/4" connecting nipple 5/8" longer than the thickness of the wall. Thread the cut end with 3/4" NPT.
3. Screw the new thread into the striker bushing (handtight).
4. Slide the nipple and striker bushing assembly through the hole in the back plate, then through the wall from outside the building.
5. On the inside of the wall, slide the washer onto the nipple and secure with a locknut handtightened onto the nipple.
6. Screw the second locknut onto the nipple.
7. Handtighten the water motor body onto the nipple and secure with the second locknut.
8. Pipe the water motor body back to the water control valve (alarm, dry pipe or deluge) with 3/4" pipe.
9. On the outside of the wall, loosen the striker bushing enough to permit correct positioning of the back plate.

**Note:** Axis of striker shaft bushing must be vertically below the center of the back plate. This will result in the striker disc contacting the lower inside edge of the gong shell.

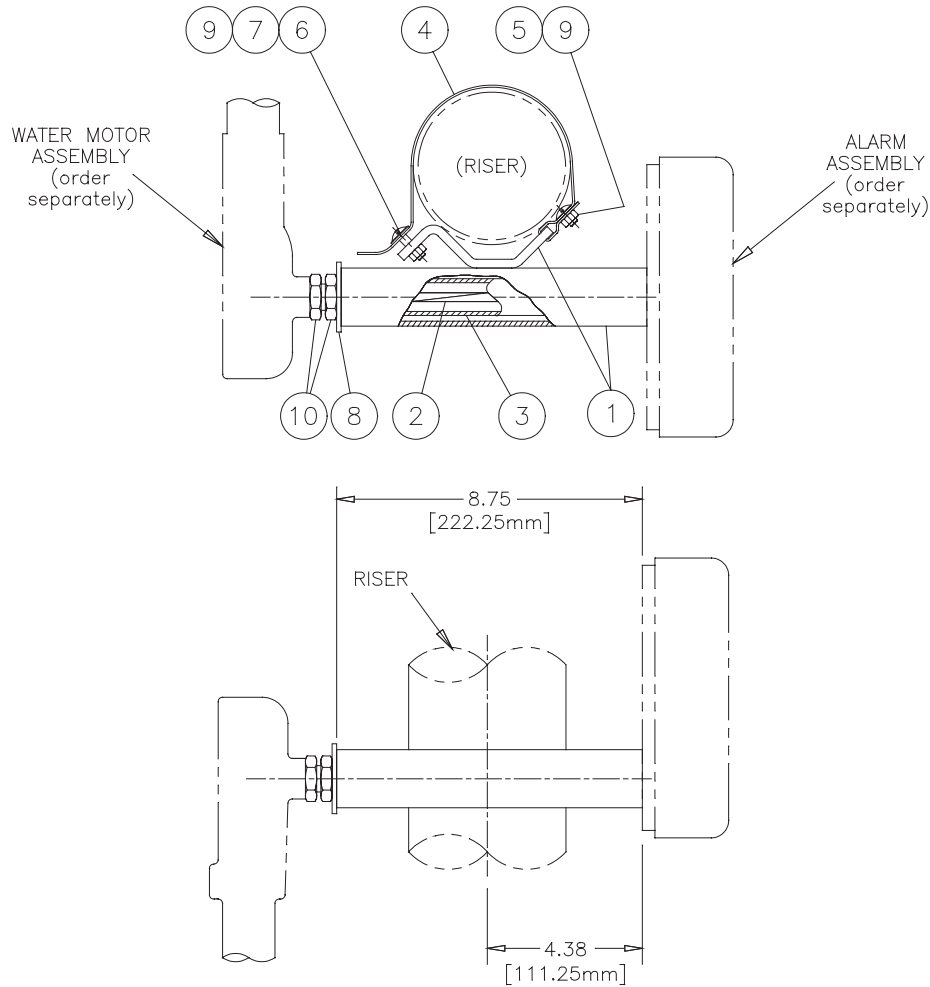
10. Hold the back plate and secure by wrench tightening the striker bushing being careful not to overtighten or distort the back plate.
11. Mount the gong shell on the gong support stud along with the plastic flange bushing, plastic washer, stainless steel lockwasher, and plated acorn nut.
12. Install 1" drain piping from the water motor body to the drain location. The drain must discharge through an open fitting.
13. Inside the building, remove the cover and gasket on the water motor. Remove the impeller.
14. Cut the drive shaft 2-1/8 inches longer than the connecting nipple. Remove burrs.
15. Insert the drive shaft through the connecting nipple into the striker shaft. Rotate slightly until the shaft slips into the slot in the striker shaft. The drive shaft end should be inside the bearing in the water motor body when properly installed. Replace the impeller by rotating and pushing into place.

**Caution:** Do not lose flanged bearing for the impeller.

**Note:** Assembly can now be tested by turning the impeller by hand. It should rotate freely and the striker should ring the gong. Replace the water motor gasket and cover.

16. Test proper operation of the water motor alarm by flowing water through the alarm line.

## Water Motor Alarm Riser Mounting Kit



### Parts List

- "Automatic" Water Motor Alarm Riser Mounting Kit - Symbol No. S168-150

Item Number	Part Name	Symbol No.	Part No.
1	Strap – Galvanized Iron	-	1421803
2	Machine Screw – 1/4-20 x 1/2" – Zinc Plated	-	1420589
3	Mounting Bracket Assembly	S168-151	8168154
4	Connecting Nipple	168-152	8168152
5	Drive Shaft – 3/32 x 5/16 x 11-1/2	168-153	8168153
6	Washer – Flat 1" – U.S. Std. – Zinc Plated	-	1425042
7	Locknut – 3/4-14 NPSL Malleable – Galvanized	-	1415205
8	Nut – 1/4-20 Hex – Zinc Plated – 2 required	-	1600752
9	Washer – 1/4" U.S. Flat – Steel – Zinc Plated	-	1425036
10	Machine Screw – 1/4-20 x 1" – Zinc Plated	-	1420590

This information is only a general guideline. The company reserves the right to change any portion of this information without notice. Terms and conditions of sale apply and are available on request.

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