

## WATER MOTOR ALARM MODEL WM

### GENERAL DESCRIPTION

Globe's Model WM Water Motor Alarm is a hydraulically operated outdoor alarm for use with fire protection systems. It is light weight yet durable, and can be used in conjunction with alarm check, dry pipe, deluge, and preaction valves to sound a local alarm. This water-powered system eliminates the need for an electrical alarm and will operate even if electrical power is lost.

Globe's Model WM Water Motor Alarm features a one-gong system which sounds an alarm outside the building.

The Water Motor Alarm is suitable for mounting to any type of rigid wall and with the standard offering can accommodate a wall thickness up to 16" (406.4 mm). It is provided with a listed and approved strainer for use in the alarm line. The Gong, Gong Mount, and Water Motor Housing are fabricated from corrosion resistant cast aluminum. The polymer drive bearings do not require lubrication.

The WM utilizes a lightweight, impeller design which can produce a very high decibel sound level. As water passes through the water motor, the impeller turns and the shaft rotates. The rotating shaft drives a striker assembly which rings the gong, sounding a continuous alarm as long as the water flow continues.



**WATER MOTOR ALARM  
MODEL WM**

### TECHNICAL DATA

#### Approvals

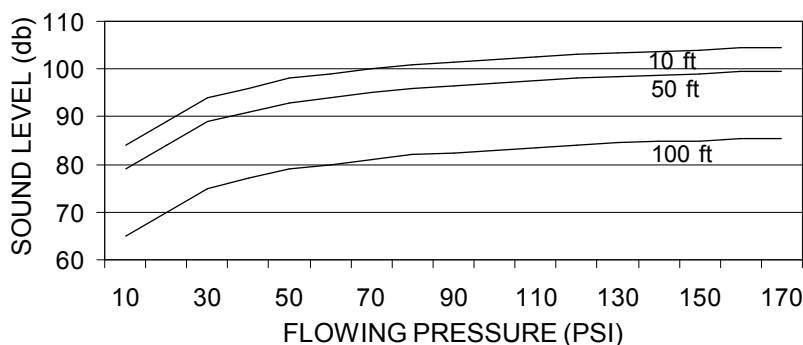
- cULus
- FM
- LPCB Approved
- NYC-DOB MEA 326-91-M

#### Maximum System Working Pressure

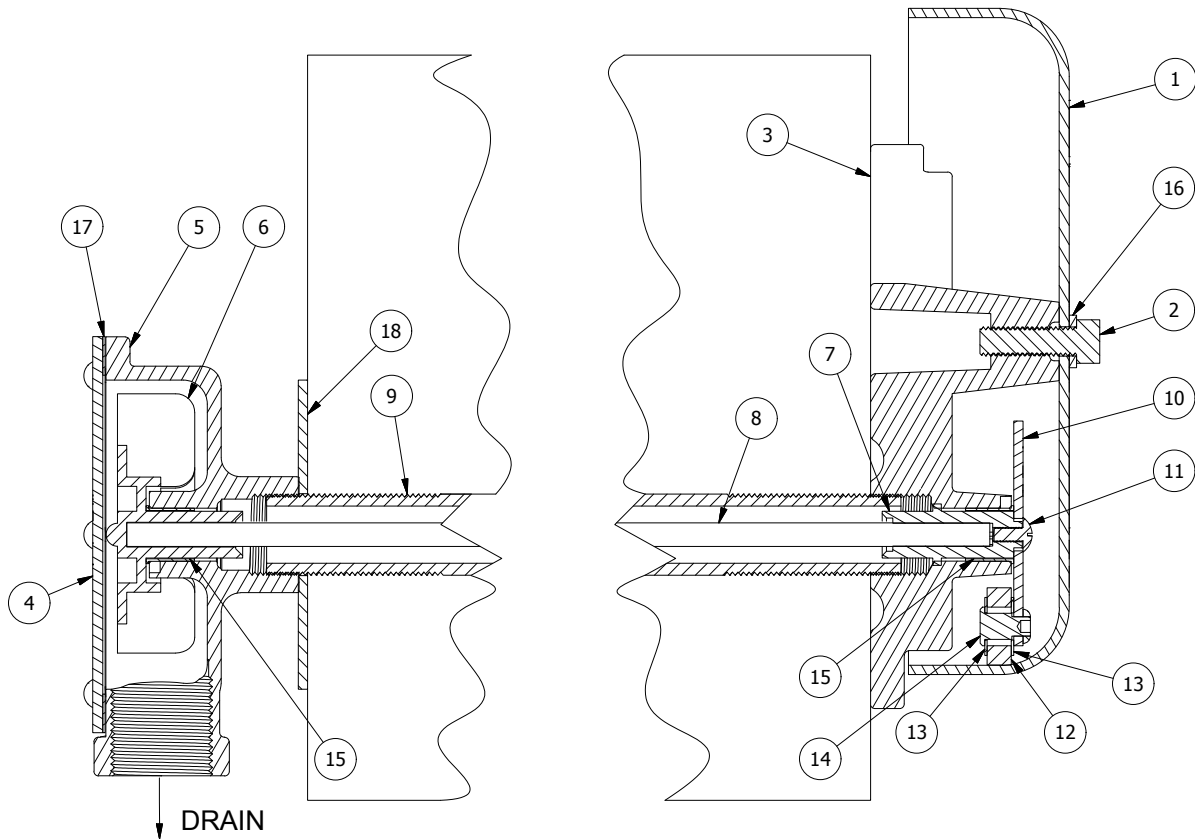
- Working Pressure Rating - 175 psi (12 bars).

#### Materials of Construction

- See Figure 2



**FIGURE 1: SOUND LEVEL VS FLOWING PRESSURE**



ITEM	DESCRIPTION	MAT'L	P/N	ITEM	DESCRIPTION	MAT'L	P/N
1	Gong Shell	Aluminum	325506	10	Striker Arm	Mild Steel	325510
2	Hex Head Cap Screw	Zinc	325521	11	Cap Screw	Zinc Plated	325520
3	Gong Mounting Bracket	Aluminum	325504	12	Knocker	Phenolic	325513
4	Motor Cover	Aluminum	325509	13	Knocker Retaining Washer	Stainless Steel	325516
5	Impeller Housing	Aluminum	325502	14	Knocker Retaining Rivet	Stainless Steel	325514
6	Impeller	Delrin	325507	15	Bearing-Thompson	Type 6 Nylon	325518
7	Striker Shaft	Delrin	325508	16	3/8 Helical Spring Lock Washer	Steel	325522
8	Drive Shaft	Aluminum	325515	17	Backing Plate Gasket	Velumoid	325511
9	Threaded Pipe	Galvanized Pipe	325517	18	Wall Plate	Mild Steel	325528

**FIGURE 2: WATER MOTOR ALARM MODEL WM**

## INSTALLATION

- STEP 1.** Locate and cut a hole in the wall to accommodate a 3/4" pipe through which the impeller driven shaft will pass.
- STEP 2.** Cut 3/4" pipe (Item 9) to 2" longer than wall thickness. Thread both ends with 3/4"NPT.
- STEP 3.** Cut drive shaft (Item 8) to 2" longer than pipe length.
- STEP 4.** Attach 3/4" pipe (Item 9) to gong bracket (Item 3) without detaching gong. Position this assembly on outside wall, sliding 3/4" pipe through pre-drilled hole. (Note: In some cases, the gong must be removed and holes in the gong bracket (Item 3) must be used to secure gong bracket to wall to prevent unwanted rotation.) On the inside wall, slide 4" x 4" wall plate (Item 18) over protruding 3/4" pipe and secure with 3/4" jam nut. Pipe and gong assembly are now attached securely through wall.
- STEP 5.** From impeller housing (Item 5) remove six cover screws, cover (Item 4), backing plate gasket (Item 17) and impeller (Item 6).
- STEP 6.** Attach impeller housing to 3/4" pipe (Item 9) and tighten.
- STEP 7.** Insert drive shaft (Item 8) through 3/4" pipe so that it engages with striker shaft (Item 7).
- STEP 8.** Place impeller in housing and rotate to engage with drive shaft. Once engaged, turn several times to assure assembly is free to move.
- STEP 9.** Replace backing plate gasket and plate, then secure with six screws.
- STEP 10.** Attach piping from alarm valve, or retard chamber, dry pipe valve, deluge or preaction valve to impeller housing fitting. Run drain to safe location.
- STEP 11.** Test alarm for proper operation, by flowing water through the alarm test valve or waterflow test connection.

# MAINTENANCE

- The 3/4" strainer located between the alarm, dry pipe, deluge or preaction valve and impeller housing should be cleaned periodically to assure sufficient water flow to sound alarm.
- The cleanout plug on the impeller housing should be periodically removed and the housing cleaned to avoid debris and accumulation that could hinder alarm operation.
- The inside of the gong should be checked periodically for accumulation of foreign matter and cleaned accordingly, in accordance with the applicable Inspection and Maintenance standard typically NFPA 25.

# GLOBE® PRODUCT WARRANTY

Globe agrees to repair or replace any of its own manufactured products found to be defective in material or workmanship for a period of one year from date of shipment. For specific details of our warranty please refer to Price List Terms and Conditions of Sale (Our Price List).

# ORDERING INFORMATION

## MODEL WM WATER MOTOR ALARM

SPECIFY: Model WM, PN:

- WM Water Motor Gong . . . . .325500
- WM Water Motor Gong Domestic Galvanized  
. . . . .323535-DG

# REPLACEMENT PARTS

## EXTENDED DRIVE SHAFT

Specify: WM Extended Drive Shaft , Length, PN:

- \*20" . . . . .325515
- 24" . . . . .325515-24"
- 30" . . . . .325515-30"
- 36" . . . . .325515-36"
- 40" . . . . .325515-40"
- 48" . . . . .325515-48"

*\*Standard Offering*

## STRIKER ARM REPLACEMENT PART KIT

- Striker Arm Kit . . . . .325510-A

*Striker Arm Replacement Part Kit Includes: Knocker, Striker Arm, 2 Retaining Washers, and Knocker Retaining Rivet*

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Standish, MI 48658  
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