



Water Motor Alarm Gong Model E



General Description

The *Model E water motor alarm gong* is a self-contained, hydraulically operated alarm gong which sounds continuously whenever the fire protection system is activated. Designed with functional simplicity and sound engineering practice, the *Model E water motor alarm gong* is always ready to function in the event of a fire.

It can be used with both wet and dry alarm valves plus deluge valves and is suitable for internal or external installation on any wall with a thickness up to 360mm.

The *Model E water motor alarm gong* is supplied as standard with a Y-strainer to prevent debris in the piping system from entering the rotor.

Operation

When the fire protection system activates, water flows from the alarm valve outlet, through a 3/4 inch (DN20) strainer (F) to the *water motor alarm gong* inlet. Water then flows through a nozzle, which restricts the flow before striking the impeller. A rotating turbine drives the striker assembly which impacts against the *gong* (1) sounding the alarm. The alarm will sound as long as water continues to flow from the system to the Water Alarm Motor. Water drains from the rotor assembly (6) through an outlet that should be connected to drain.

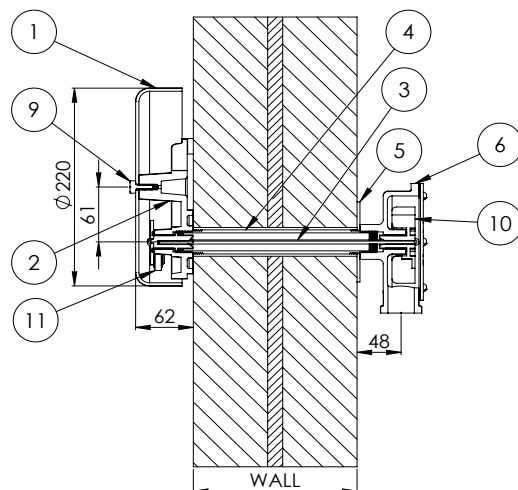
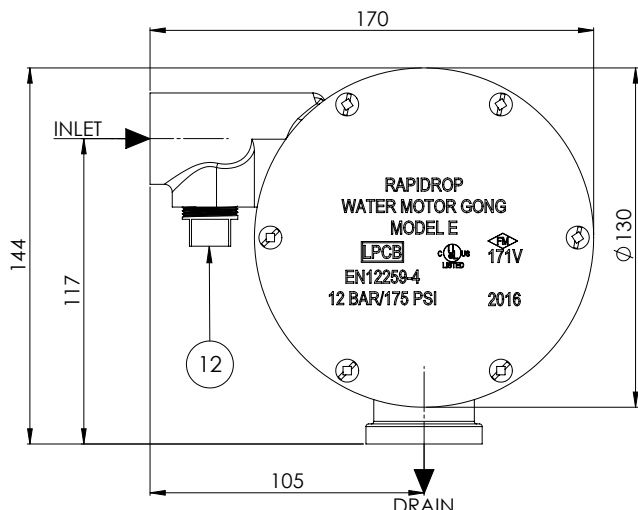
After operation, the *water motor alarm gong* does not require resetting.

If the alarm line ball valve is used to silence the gong, this valve must be reopened after the fire protection system is reset.

Technical Details

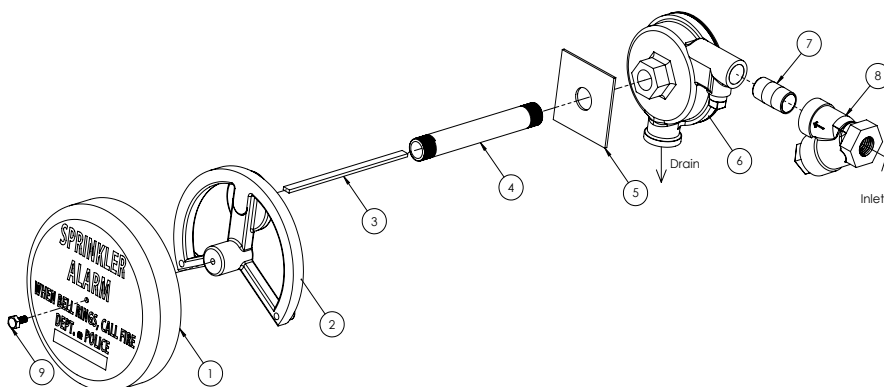
Approvals	UL, FM, LPCB, CE
Maximum Working Pressure	12bar/175psi
Inlet connection	3/4"NPT
Outlet connection	1" NPT
Use	Indoor/Outdoor

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Installation

1. Cut a 28mm (approx.) hole in the wall. Use template (last page) to position.
2. Measure the thickness of the wall.
3. Cut the *sleeve* (4) so its length is 25mm longer than the thickness of the wall and thread both ends [$\frac{3}{4}$ " NPT / BSP]
4. Cut the *drive bar* (3) so its length is 100mm longer than the thickness of the wall.
5. Unscrew (9) the *gong body* (1) from the *gong frame* (2).
6. Attach the *Sleeve* (4) to the *gong frame* (2) and position this assembly through the wall with the *gong frame* on the exterior surface. Fix the *gong frame* (2) to the wall using suitable screws.
7. Insert *drive bar* (3) through the *sleeve* (4) into the slot of the *striker* (11).
8. Slide the *spacer* (5) over the *sleeve* (4).
9. Screw the *water motor body* (6) onto the *sleeve* (4) ensuring that the *drive bar* (3) slots into the *impeller* (10). Align the *water motor body* (6) so the 1" NPT outlet faces downward and the $\frac{3}{4}$ " NPT inlet is horizontal.
10. Rotate the *striker* (11) by hand to ensure it rotates freely.
11. Attach the *gong body* (1) back to the *gong frame* (2).
12. Connect the alarm valve to the inlet of the *water motor body* (6) using corrosion-resistant piping (e.g. galvanized steel, brass) $\frac{3}{4}$ " (DN20) diameter. Install the $\frac{3}{4}$ " *Y-strainer* (8) on this line with the arrow matching flow direction. Make sure it is easily accessible for cleaning.



Components

No.	Description
1	Gong Body
2	Gong Frame
3	Drive Bar (460mm)
4	Sleeve [DN20, $\frac{3}{4}$ " pipe] (NOT PROVIDED)
5	Spacer
6	Water Motor
7	Inlet Pipework [DN20, $\frac{3}{4}$ " pipe](NOT PROVIDED)
8	Y-Strainer
9	Gong Hex Screw
10	Impeller
11	Striker
12	Clean Out Plug



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Design

- The *water motor alarm gong* must be mounted to a rigid vertical surface.
- The *Y-strainer* must be installed at the inlet to the water motor alarm.
- To obtain the highest sound level, the *water motor alarm gong* needs to be located as close as possible to the alarm or deluge valve.
- The alarm line piping from the alarm or deluge valve to the *water motor alarm gong* must be made of galvanized steel, brass, or other corrosion resistant material.
- The *clean out plug* (12) needs to be located vertically below the inlet to the *water motor*.
- The alarm line piping must be positioned so that it automatically drains back to the alarm or deluge valve.
- Piping from the drain must be minimum 1 inch (DN25) in size throughout and directed to an open drain, in order to ensure proper drainage for obtaining maximum sound pressure level.
- The drain outlet must be directed so that there will be no accidental damage to property or danger to people during or after operation of the alarm.

Maintenance, Tests and Inspection

All components of *Model E water motor alarm gong* are fabricated from corrosion-resistant materials. The *Model E water motor alarm gong* does not require any lubrication but it should be periodically examined and tested to ensure that the nozzle and drain are clean and free of obstruction. The 3/4 inch (DN20) Strainer (8) should be regularly cleaned to ensure sufficient flow to the *water motor alarm gong*.

The *clean out plug* (12) should be periodically removed to avoid any accumulation of debris and scale that may have passed through the *Y-strainer* (8). The inside of the *water motor alarm gong* should be checked for the accumulation of foreign material.

Important Installation Information

- Rapidrop *Model E water alarm gong* must only be installed by a competent person in accordance with requirements of the local authority having jurisdiction. Deviations from these standards will invalidate warranty.
- It is the responsibility of the installing contractor to include a copy of this document in the sprinkler system installation, operating and maintenance manual.
- Alterations to Rapidrop products will void any warranty.
- *Model E water alarm gong* should be inspected and maintained during routine sprinkler system inspections by a competent person in accordance with national codes/requirements.
- Failure to follow these instructions could cause improper operation, resulting in personal injury and/or property damage.
- For further details and technical support please contact your Rapidrop sales representative.



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Template

