



# Data Sheet 5.13

## Issue B

### Retard Chamber For Variable Pressure Wet Pipe Sprinkler Systems Model: E



#### Product Description

The Rapidrop Model E Retard Chamber is required in installations that will be subject to pressure variations, as are generally associated with public water supplies, in order to help prevent false alarms. The Model E is specifically intended for use as a separately ordered item for the Model B, D, E Alarm Check Valve (Data Sheet 5.1)

The unit is manufactured from cast iron and has a capacity of approximately 3.8 litres and weighs (dry) 8.5 kg. The Rapidrop Model E Retard Chamber is approved in conjunction with the Rapidrop Model B, D, and E Alarm Check Valve and trim kit.

#### Operation

When water flows steadily into the sprinkler system due to sprinkler operation, the Waterway Clapper in the Alarm Check Valve opens. Water is then permitted to flow into the centrally located groove in the Seat Ring and out through the Alarm Port towards the Restriction Assembly. When the flow through the Inlet Restriction of the Restriction Assembly exceeds the flow out through the Outlet Restriction, the Retard Chamber begins to fill. Subsequently, the Water Motor Alarm and/or the Pressure Alarm Switch activate. The alarm continues to operate as long as the Waterway Clapper remains open. When the Clapper closes as a result of discontinued water flow, water in the alarm lines automatically drains out through the drain orifice in the Restriction Assembly. In the case of variable pressure systems, a transient surge in supply pressure that is sufficient only to open the Clapper momentarily will not cause a false alarm. The volume of the Retard Chamber is sufficiently large enough that it will not fill to operate the connected alarm devices. Any water in the alarm line is then automatically drained, further reducing the possibility of a false alarm due to a successive transient surge in supply pressure.

#### Technical

Model	Model E
Material	Cast iron body
Connection	3/4" BSPT (F)
Weight	8.5 Kg
Capacity	3.8 Litres
Maximum working pressure	12 bar (175 psi)
Finish	Red Ral 3000
Approvals	UL, ULC Listed, FM and LPCB Approved



The Retard Chamber has UL, FM and LLCB approval as part of the Rapidrop trim kit

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