



Fig. 1 · Type 13 E Steam Trap

1. Design and principle of operation

The steam trap basically consists of the controller housing including seat and the operating element with firmly connected plug. The operating element consists of a metal bellows filled with a water-alcohol mixture. The device operates according to the tension

principle (liquid evaporation). Any change of temperature of the discharging condensate causes travel changes of the operating element and also the connected plug. Restriction or enlargement of the free area between the seat and plug is also a result.

The steam pressure curve of the liquid steam mixture in the metal bellows largely corresponds to that of the water. An increased temperature of the water-alcohol mixture causes, for example, increased pressure in the operating element (2) and also result in closing of seat (4) and plug (3). In this closing state, the accumulated condensate cools down, as well as the water-alcohol mixture. The pressure in the operating element decreases, and the valve opens; the condensate and any air which exists is discharged.

2. Installation

The steam trap may only be installed in **horizontally running** pipelines. The direction of flow must agree with the arrow on the housing.

The instrument can be used as a globe or angle valve if the screw plug (5) is screwed accordingly.

The steam trap must be installed directly behind the outlet of the unit. For those units in which the heating register is to be kept free of condensate, install it approximately 1 m from the outlet connection in the non-insulated pipeline. The condensate pipe behind the outlet should be installed with a slight gradient.

4. Dimensions in mm and weights

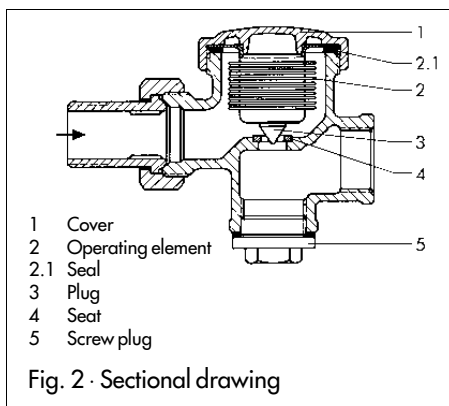
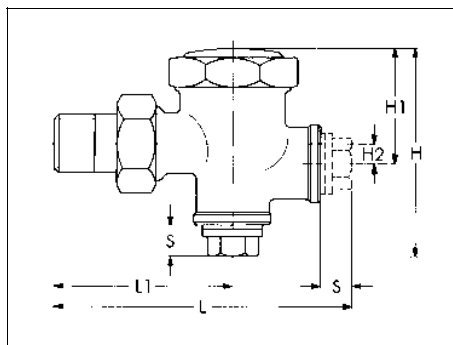


Fig. 2 · Sectional drawing

2.1 Strainer

In order to ensure proper operation of the controller, it is recommended to install a SAMSON Strainer Type 1 directly preceding the device.

3. Maintenance

First relieve all pressure from the plant and drain it before disassembling the controller and exchanging a defective operating element (2). Unscrew the cover (1) only in a cooled-down condition, replace the seal (2.1) on the operating element.

Connection	G1/2	G1/2	G1
L	132	138	151
L1	80	85	95
H	85	90	98
H1	38	40	43
H2	10	10	10
S	12	12	15
Weight (approx. kg)	0,8	0,9	1,3



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