



**OPERATING & MAINTENANCE  
INSTRUCTIONS FOR EXHEAT  
RFA-OS TYPE FLAMEPROOF  
OVERSINK WATER HEATER**

## **1.0 GENERAL**

- 1.1 All work should be carried out by suitable qualified personnel.
- 1.2 Heaters must be handled with care & stored in dry conditions.
- 1.3 Adequate withdrawal space must be provided to allow the removal of the heater assembly.
- 1.4 Carefully remove all protective packaging & visually inspect unit for any transit damage.
- 1.5 All prevailing rules, regulations & bylaws in force at the time & place of installation must be observed.
- 1.6 Heaters must only be immersed in the fluid they are designed to heat.
- 1.7 The introduction of alternative fluids even in small concentrations for purposes such as sterilising may cause serious damage to the heater & will invalidate the warranty.
- 1.8 Any modification not carried out by Exheat Limited or its approved agent will invalidate certification & warranty.
- 1.9 For Hazardous area heaters reference must be made to EN 60079-17.
- 1.10 All electrical testing must be carried out in a non-hazardous area.
- 1.11 Precautions must be taken to prevent damage to machined surfaces & threads of flameproof enclosures.
- 1.12 Ensure that any special conditions for safe use detailed on the hazardous area certification are complied with.

## **2.0 INSTALLATION Refer to Fig.1 & 2**

- 2.1 The heater should be securely fixed in position & all terminal connections checked for tightness before energising.
- 2.2 The unit must be wall mounted allowing one metre above the highest draw off point to ensure good flow.
- 2.3 Do not mount heater too high on wall. To avoid splashing, the end of the swivel outlet should be approximately 150mm above top of sink.
- 2.4 Screw in two top mounting screws only & hang heater on these. Mark position of third fixing hole through bottom mounting bracket & then secure heater to wall, see fig 2 for details.
- 2.5 Always ensure that the wall is sufficiently strong to carry the weight of the unit when it is full of water.

## **3.0 PIPEWORK CONNECTIONS**

- 3.1 The installation must conform to any local authority byelaws.
- 3.2 Before proceeding to next operation remove heater base cover. Unscrew captive screw in base cover & slide base cover forward for removal.
- 3.3 The heater is suitable for connection to standard water supply.
- 3.4 With inlet valve fully open flow through heater is best limited to a flow rate of 6 litres/min.
- 3.5 An isolating valve must be fitted to the cold water mains supply to allow for servicing.
- 3.6 Ensure that valve inlet & outlet are free from any obstructions such as packing materials. Connect to heater inlet pipe marked with blue arrow, by means of the coupling nut & olive supplied.
- 3.7 Do not screw inlet valve down hard. Water always expands when heated, & therefore, a small amount of water will drip from the swivel outlet for a short while after use.
- 3.8 To attach swivel outlet ensure that the inlet & outlet are free from any obstructions & that the ancillary parts are present. Fit coupling end of swivel outlet up into outlet pipe, tighten nut but allow swivel outlet to move smoothly.
- 3.9 **Important warning** - the outlet acts as a vent & under no circumstances must any other swan-necks, pipe-work outlets or fittings be connected to the heater outlet other than a genuine supplied or approved fitting.

#### **4.0 ELECTRICAL SUPPLY CONNECTIONS Refer to Fig.3**

4.1 Refer to wiring diagram (Fig.3)

4.2 The cable entry is positioned on the side of the terminal box.

4.3 Before connection ensure that the supply corresponds with that specified on the rating label.

4.4 Ensure that the sizes & types of cable to be used are suitably rated for the load & temperature of the unit.

4.5 Each heater must be protected by a suitably rated over current device.

4.6 The cables must enter the heater terminal box via a certified Ex d cable gland (not supplied) & be fitted by a qualified person.

4.7 The HFT series terminal boxes are secured by four (4) screws securing the lid. When re-fitting ensure that the "O" ring seal is in good condition & correctly located.

4.8 The installer or end user must connect to the Exheat supplied terminals within the terminal box – **DO NOT** – connect to or disturb factory fitted heating element wiring.

#### **5.0 EARTH CONNECTION**

5.1 **WARNING** – these heaters **MUST BE EARTHED**.

5.2 The external earth connection is located adjacent to one of the terminal box cable entries.

5.3 An internal earth connection is provided inside the terminal box.

#### **6.0 OPERATION**

6.1 **Important** – the unit **MUST** be full of water before switching on the electricity supply & at all times whilst energised.

6.2 Heat is transferred by means electric heating elements.

6.3 Control of the heater is facilitated by thermostats, & reference should be made to the wiring diagram to ensure that these are correctly connected & set prior to energising the heater.

6.4 Where a manual reset cut-out is installed, the terminal box cover will have to be removed to enable a reset to be carried out.

6.5 The unit **MUST NOT** be used if suspected of being frozen. If water ceases to flow switch off the electricity supply immediately at the isolating switch. If the unit is to be serviced or drained disconnect the electricity supply before commencing the operation.

#### **7.0 MAINTENANCE**

7.1 All prevailing site safety regulations shall be adhered to at all times.

7.2 Before & whilst any maintenance activity is carried out, it must be ensured that there are no hazardous gases present.

7.3 Equipment is to be fully isolated from the electricity supply before & whilst any work is being carried out.

7.4 Any damage or faults should be notified to Exheat Limited immediately.

7.5 For equipment certified for use in hazardous areas reference should be made to EN 60079-17 (especially table 1) in addition to the following recommendations.

7.6 Any replacement parts required must be obtained directly from Exheat. The use of any other parts will void any certification and warranty.

#### **7.7 3 Monthly**

a. Generally inspect the equipment for external damage or leaks.


## **7.8 6 Monthly**

- a. Isolate the electrical supply & remove the cover.
- b. Internals should be clean & dry.
- c. Insure terminals are intact & secure.
- d. Heating element insulation resistance to be at least 2 megaohm.
- e. Refit cover with new gasket or “O” ring if required.
- f. Earth continuity must be maintained between all earth points & main structure.

## **7.9 Annually**

- a. Check all above.
  - b. Check for element failure or low insulation resistance.
  - c. Check operation of level switch by draining & re-filling unit with electrical fully isolated.
- 7.10 Only Exheat Limited or its approved agent to carry out element or level switch replacement in hazardous area heaters otherwise the certification will be invalidated.
- 7.11 If heater is being left unused for a period greater than 3 months carry out 8.8 above.

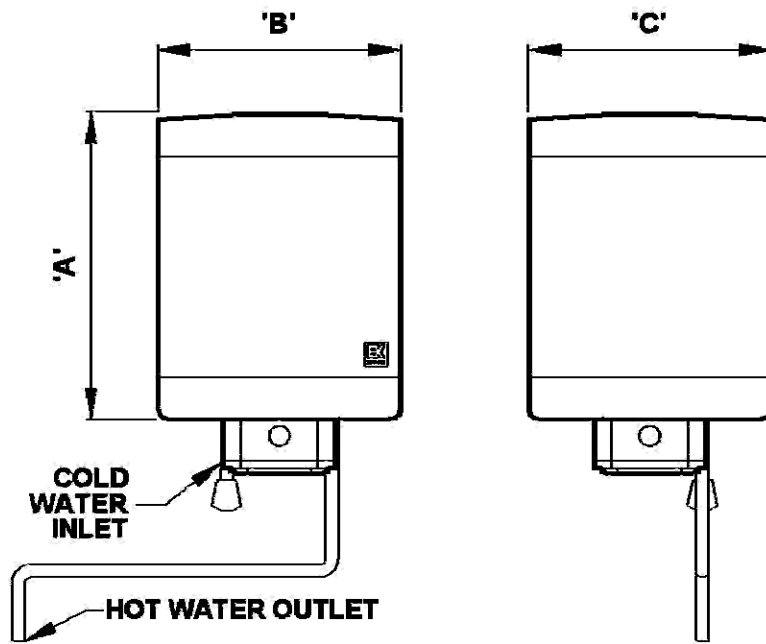
## **8.0 Marking**

- 8.1  II 2 G/D  
Ex d IIC T4 to T6

## **9.0 Certification**

- 9.1 LCIE 01 ATEX 6027 X

Fig.1



Model	Capacity (Litres)		Dimensions (mm)							Weight (kg)	
	Hot	Cold	A	B	C	D	E	F	G	Empty	Full
RFA-OS7	25	8	298	232	237	227	100	50	17	8	15
RFA-OS10	50	24	371	232	234	300	100	50	17	10	2

Fig.2

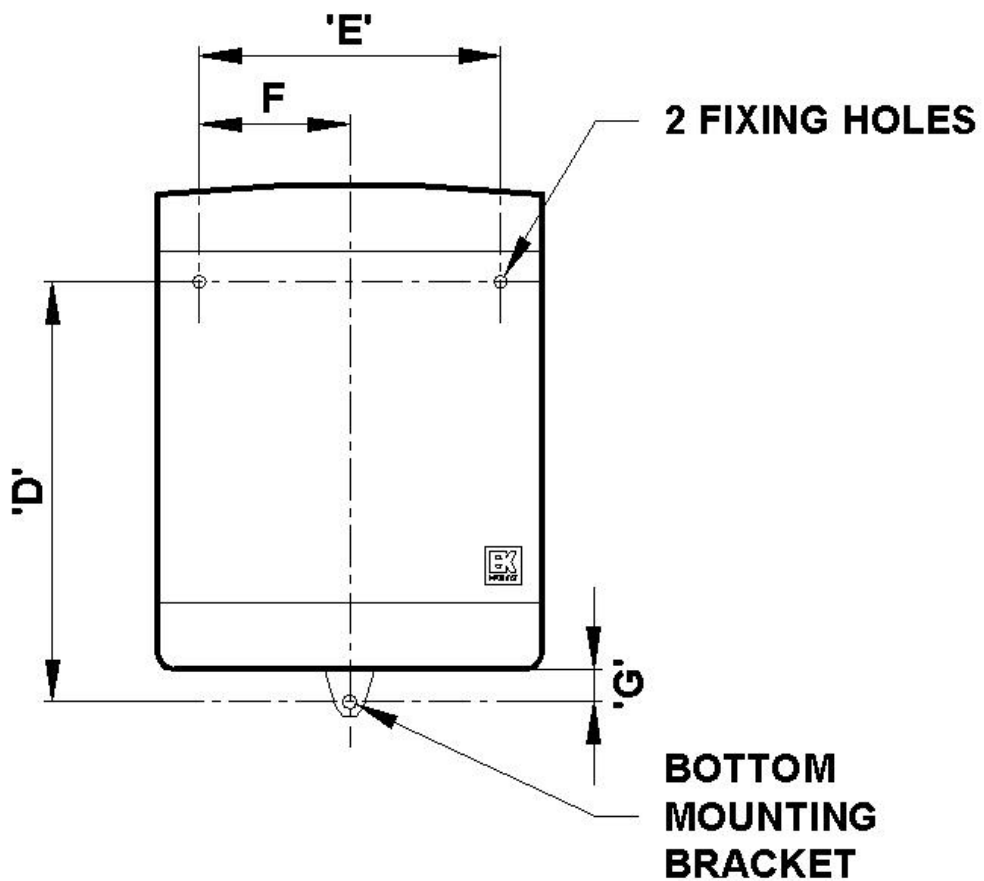
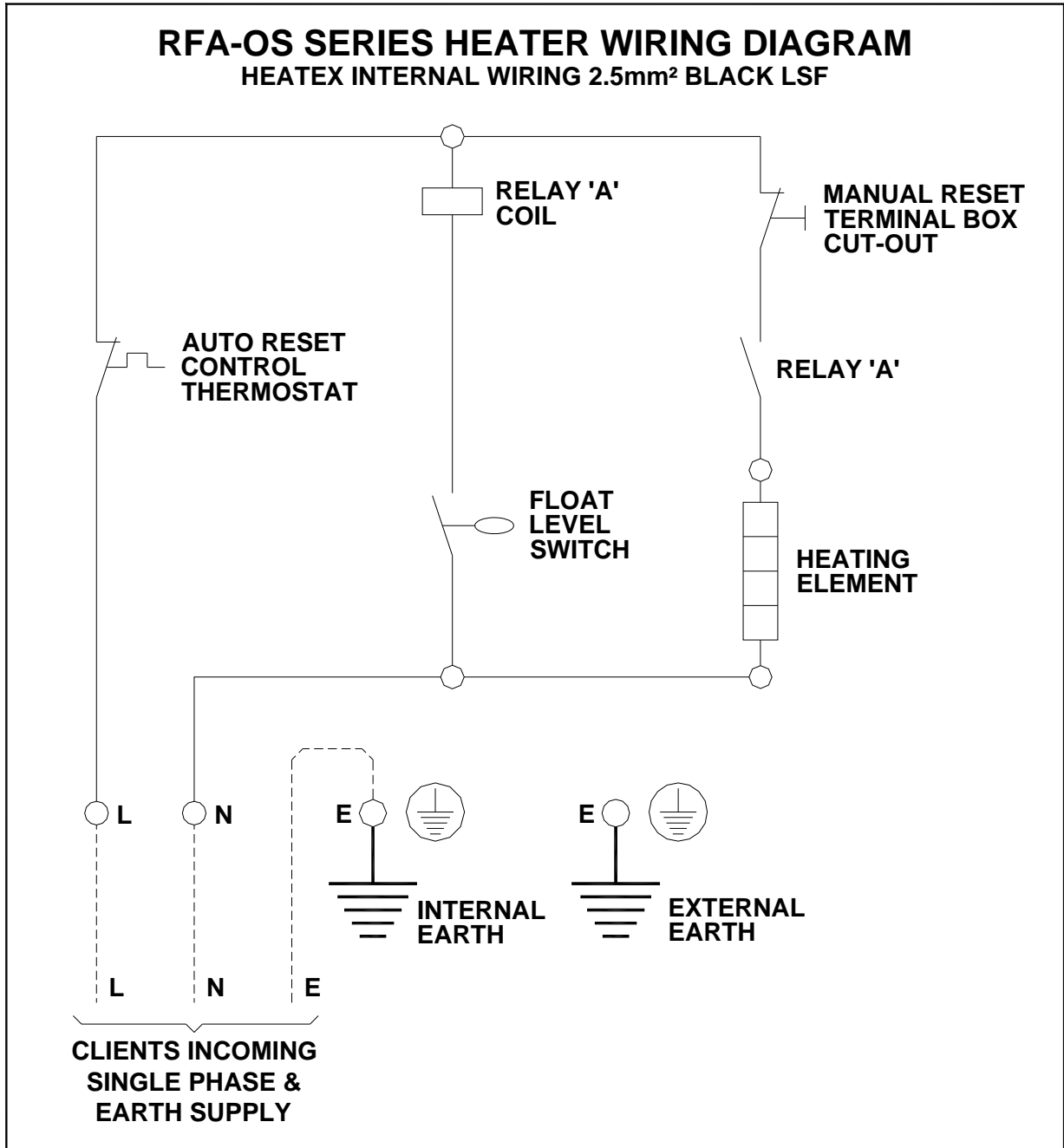


Fig.3





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**94/9/EC**

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