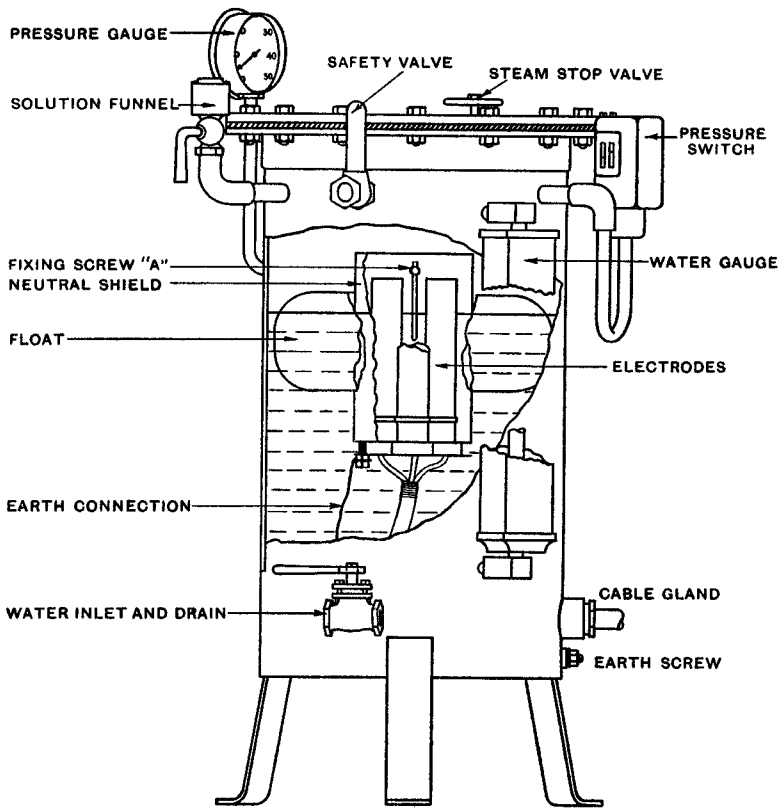
FLOATING ELECTRODE STEAM RAISER

Cat. No. H.O.4980

Maximum Load 20 kW. Maximum Working Pressure 15 lbs. per sq. in.

MADE IN ENGLAND.



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INSTALLATION.

Unbolt and take off top cover of steam raiser, and remove all packing material from interior. Connect water supply to horizontal inlet on 3-way valve. Mount control-gear on wall and connect incoming mains and outgoing flexible cable in accordance with wiring diagrams provided with control panel. If a pressure switch is not fitted, make sure that the appropriate terminals in control panel are connected together. If dash-pots are fitted to overload trips fill them with the correct grade of oil. **Set overload trips at 25% above normal full load at which steam raiser is to operate.** Make sure that both internal and external connections are securely made.

STARTING UP.

With the top cover off, half fill the steam raiser with water and turn off the cock. Make sure that the electrode assembly floats freely and level in the water. With the cover still removed, switch on the current by means of the switch on the control panel. The current will be indicated by the ammeter and will increase rapidly as the water heats-up, finally remaining steady when the water around the electrodes boils. This will take only a few minutes. The position of the electrodes in the float must then be adjusted until the current is about 90% of the desired maximum value. To adjust the electrodes, switch off the current and slacken the three fixing screws (A). Then raise or lower the electrodes and neutral shield inside the float. Raising the electrodes will decrease the current taken and lowering them will increase it. Switch on again and observe the current. Repeat the procedure until with the water boiling the current is 90% of the desired value. The fixing screws (A) should then be tightened and the top cover bolted on. When operating under pressure, the current will rise slightly above the value obtained with the steam raiser open, so giving the desired load. If a pressure regulator is fitted, set it to the required working pressure and adjust the differential. The maximum load of 20 kW. is obtained on 400V. three phase with a current of 29 amps.

If the requisite current cannot be attained, refer to "Special Conditions" overleaf.

ALWAYS DISCONNECT THE ELECTRICITY SUPPLY BEFORE CARRYING OUT ADJUSTMENTS.

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(Continued)

OPERATION.

Fill the steam raiser with water until the level in the gauge glass is about 2 inches from the top. Switch on and the full output of steam will be obtained in a few minutes. The steam raiser will operate for about 1 to 1½ hours before requiring refilling with water. To shut down simply open the switch of the control panel. **With some water, due to the precipitation of salts during evaporation, the current may increase above the desired value. The steam raiser should then be completely drained and refilled with fresh water. In some instances to obtain stable working conditions it will be necessary to drain under pressure after each operation.**

When working with the steam outlet fully open and no external back pressure, the pressure on the gauge may fall to 1 lb. per square inch or less. As the steam raiser gives constant evaporation at all times, it will give a satisfactory performance, providing the pressure is sufficient to drive the steam to where it is required. Higher pressures are not required, and may be detrimental to efficient sterilizing and damage rubber components. To obtain the maximum evaporation at all times, the float should be adjusted to give the maximum evaporation at the lowest pressure which will give a satisfactory performance.

It is misleading to make comparisons with fuel-fired steam raisers, which work at high pressure to provide a reserve to deal with fluctuations in firing. Such high pressures quickly fall when a steam raiser is working on full output.

MAINTENANCE.

When used with hard water periodical de-scaling will be necessary, the nature of the water determining how often this must be carried out. The scale will be found to accumulate chiefly on the electrodes and neutral shield and may be removed by scraping or employing a de-scaling solution. The contacts of the control panel should be inspected from time to time, and if showing signs of burning should be cleaned with a **smooth** file. A few drops of light machine oil should be applied occasionally to the bearings of the contactor switch.

SPECIAL CONDITIONS.

The steam raiser is suitable for use with the majority of water supplies. In certain districts, the nature of the water gives rise to conditions requiring special treatment. Should it be found that the desired value of current cannot be obtained even though the electrodes are lowered to their fullest extent, a small quantity of common salt should be added to the water to increase the current. This should be Introduced through the filling cup and only sufficient—usually a teaspoonful—to give the desired load should be added. Should the required load or more than the required load be obtained even though the electrodes are raised to their fullest extent, special small diameter electrodes can be supplied. If satisfactory results cannot be achieved a sample of the water (about 1 quart) in a clean sterile bottle should be sent to the G.E.C. for testing.

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Wholesale only

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Branches throughout Great Britain and in all the principal markets of the world.

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