

OFFICE OF THE WATER AUTHORITY
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Distribution : To all Licensed Plumbers and Authorized Persons

Dear Sir,

WSD Circular Letter 3/90

Installation of Unvented Electric Thermal Storage Type Water Heaters

Following the government announcement on 7 September 1990 regarding amendment made to Part IV of the Second Schedule of the Waterworks Regulations, electric thermal storage type water heaters of storage capacity not exceeding 200 litres may be installed by direct connection to the water main and without the provision of an individual expansion pipe subject to the following two conditions :-

- (a) all safety devices are correctly incorporated and
- (b) the installation conforms with Waterworks requirements.

For your information and guidance, I attach herewith copy of the notes indicating the installation requirements for unvented electric thermal storage type water heaters.

It is also the requirement of this office that installation of unvented electric thermal storage type water heaters must be carried out by a licensed plumber who has successfully completed a training course organised by the Electrical Industry Training Centre of the Vocational Training Council specially designed for the installation and maintenance of this type of water heaters. Prior to installation, application should be submitted to this Authority for the approval of the plumbing arrangements. A list of licensed plumbers who have completed the training course is being maintained by this office.

Your attention is drawn to that licensed plumbers without having received the relevant training are not permitted to carry out the installation of unvented electric storage type water heaters.

There is no change to the Waterworks Regulations and requirements pertaining to the installation of electric thermal storage type water heaters being supplied from a storage tank and provided with an individual expansion pipe.

Yours faithfully,

Signed

(K. Y. MAK)
for Water Authority

c.c. Hong Kong Plumbing and Sanitary Ware Trade Association Ltd
The Association of Registered Fire Services Installation
Contractor of HK
Institute of Plumbing Hong Kong Council
Housing Department
Architectural Services Department
Hong Kong Institute of Architect
All Chief Engineers/Regions
SE/Region(2)
E/Region (CS)
I/Region (CS)
CE/RA
SE/RA(1)
SE/RA(3)
E/RA(2)
E/RA(4)
WWO 15/3318/81
WWO 3318/50

KHW/KYM/OCY/fy

**Installation of Unvented Electric
Thermal Storage Type Water Heaters**

**(These notes should be read in conjunction with Part IV,
Second Schedule of the Waterworks Regulations and the amendments thereof)**

1. Electric thermal storage type water heater
 - (i) having a storage capacity not exceeding 200 litres;
 - (ii) having a guaranteed test pressure at least 1½ times the static head available at the water heater; and
 - (iii) not being provided with an vent pipe but fitted with
 - (a) a thermostat;
 - (b) a thermal cut-out;
 - (c) a non-resettable temperature relief valve; and
 - (d) a pressure relief valve

may be connected directly to the main or via a storage cistern.

2. The thermostat of an unvented electric thermal storage type water heater shall have a maximum setting temperature of 80°C.
3. The thermal cut-out shall comply with BS 3955 and set at 85°C. The thermal cut-out should be wired with the thermostat in series and require manual re-setting that is only possible when the enclosure of the water heater is dismantled.
4. The non-resettable temperature relief valve shall comply with BS 6283 and have a set temperature of 90°C. A manual test easing gear shall be provided.
5. The pressure relief valve shall comply with BS 6283 and have a set pressure not greater than the maximum designed pressure of the water heater or 1000 KPa. A manual test easing gear shall be provided.
6. A combined temperature and pressure relief valve in lieu of temperature relief valve and pressure relief valve may be incorporated in the heater.

7. Every system incorporating an unvented electric thermal storage type water heater shall be provided with
 - (i) A supply pipe that branches off from the feed pipe at a point above the top of the water heater, or some other device to prevent the water from draining down from the water heater if there is a failure at the source of the water supply;
 - (ii) an anti-vacuum valve complying with BS 6282 or some other device to prevent heated water from being syphoned back to supply pipe; and
 - (iii) a vessel to accommodate the expansion of heated water where that expansion is constrained by a non-return valve, or a similar device, incorporated at the inlet of the water heater.

8. The drain pipe provided for the relief valves shall be installed in such a manner that the water released from the valves shall be discharged to a safe and visible location.

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