

Electric Water Heaters

In Hong Kong, it is common to install a water heater at home for providing hot water. For household electric water heaters, the most common types are the instant type, unvented (high pressure) storage type and open-outlet (low-pressure) storage type. Selection of water heaters depends on the availability of electricity supply and the usage demand.

Instant type electric water heaters will consume higher power (usually from 6kW 1-phase to 20kW 3-phase). If heated water is for supplying a washing basin or bath tub, a single phase instant type water heater can serve the purpose. For heated water to be supplied to more than one outlet points, a 3-phase instant type water heater is required, which is not very common in general domestic home.

If several outlet points are required but the electricity supply of the building is not sufficient for an instant type water heater, storage type electric water heater can be a choice (usually from 3kW to 4kW 1-phase). In addition to heating element and thermostat, unvented (high pressure) storage type water heaters are equipped with a thermal cut-out to control the water temperature in the storage tank. The storage tank of this type water heater is designed to withstand certain pressure and a pressure relief valve is also fitted for relieving excessive pressure in the tank. For open-outlet (low-pressure) storage type electric water heaters, they are designed to supply only one serving point and the outlet is controlled by a special water mixer which maintains a vented passage for the air inside the tank to the atmosphere. When water is heated up, small amount of steam may come out from the shower head. Therefore, on/off water control valve must not be installed to the water outlet to block the pressure relieving path. Otherwise, pressure will be built up in the tank and eventually lead to an explosion.

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