

The 'RECOH-MULTIVERT'® heat exchanger



Heat recovery from waste water of a shower by swimming pools, sports facilities, hotels, etc.

Heating swimming pools requires a great deal of gas. Energy bills are high! Saving on gas is therefore of great importance to limit the business' operating costs.

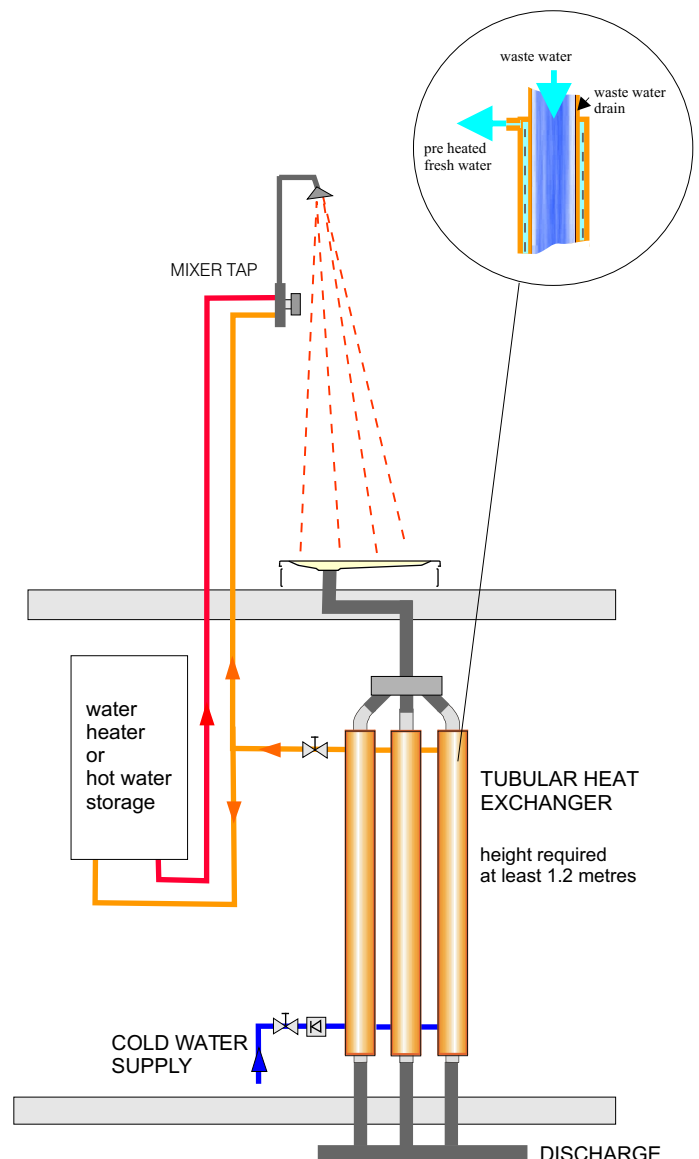
The usual measures for reducing energy consumption are proper insulation of the building, installing double glazing and reclaiming heat from the ventilation system. Solar collectors are sometimes also installed.

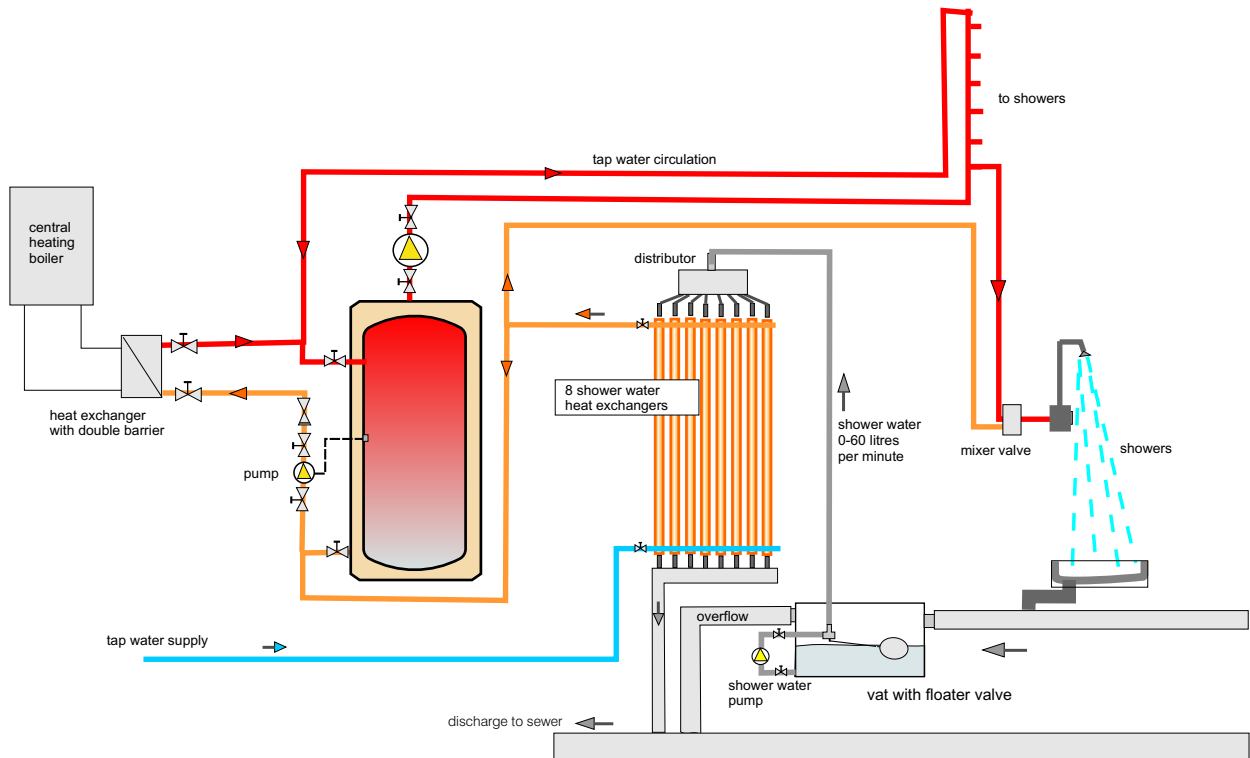
Alongside the energy required to heat the swimming pool and its water, a great deal of energy is required for the showers. Usually nothing is done to reclaim the energy used for the showers. However, this is an increasingly large item on the swimming pool's energy bill.

The gas consumption for the showers can amount to more than half the total energy consumption of a swimming pool! Using the Hei-tech system for heat recovery from waste water of a shower can result in major savings.

The energy consumption for heating shower water at a swimming pool can be greatly reduced by preheating the tap water on its way to the boiler with the waste water from the showers. Installing a Hei-tech heat exchanger can result in a 40 - 60% saving on the energy consumption of the showers. This makes it one of the most profitable investments that can be made in the field of energy saving.

The Hei-tech system for heat reclamation from shower water is in principle very simple and efficient. The waste water from the showers collects in a drain. The water from the drain is pumped to a heat exchanger. There the heat is reclaimed and the water continues to the sewer. The heat reclaimed from the waste water is then transferred to the tap water on its way to the boiler using a heat exchanger. The heat exchanger has a double barrier between the waste water from the showers and the clean tap water, in accordance with the VEWIN/KIWA guidelines.





The Recoh-multivert consists of:

1 A heat exchanger unit.

This unit consists of 6, 8 or 10 tubular heat exchangers. The shower water is equally subdivided across the heat exchanger using a distributor. There is a double barrier between the waste water from the showers and the tap water.

2 A drain unit.

This is a small vat into which the waste water from the showers runs. The waste water is pumped to the heat exchanger from this vat. If the water level in the vat rises the pump starts working. There is an overflow to the sewer so the waste water can flow away in the event of a malfunction.

3 Regulating volume flow.

The number of people showering varies greatly. In order to achieve proper efficiency, the volume flow of the pump has to be continuously adapted to the amount of water coming from the showers. This is done using a float valve which allows more water through if the water level in the vat rises and less if it decreases.

The exact set up of the system depends on the situation in situ and requires a thorough approach. For example, the capacity of the heat exchangers, the size of the pumps and the capacity of the drain all depend on, among other things, the number of showers and their frequency of use.

We can draw up a proposal on the basis of a number of details and can provide an estimate of the possible savings.



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