

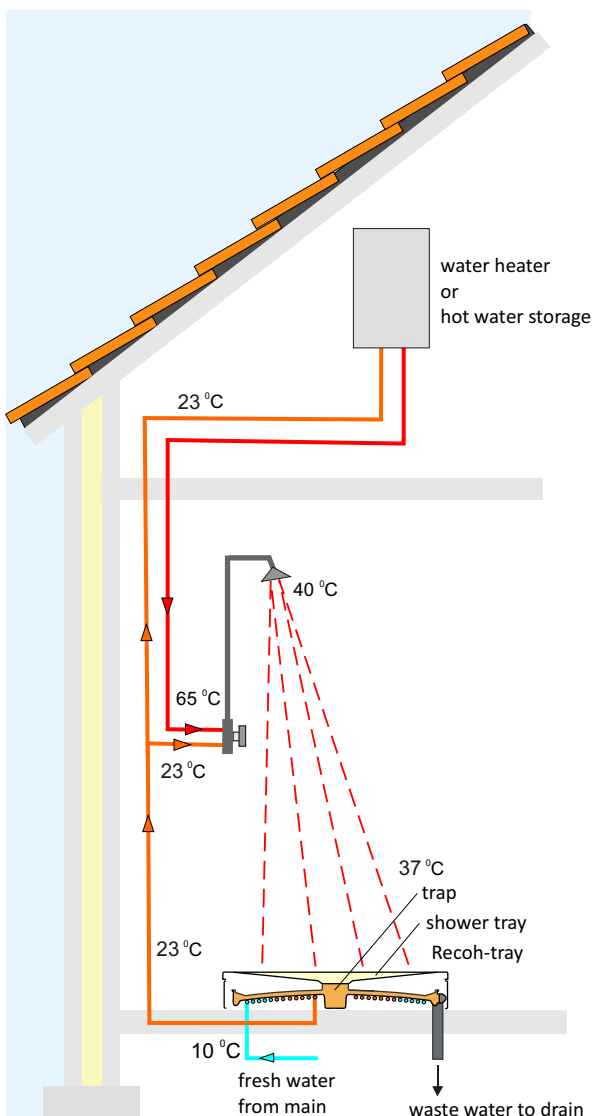
Recoh-tray[®] heatexchanger

For heat recovery from waste water of a shower



Reducing energy consumption is a must nowadays, a matter of survival. Since houses are better insulated, energy consumption for space heating has been drastically reduced. On the other hand, hot water consumption has been increasing annually. People are taking more, longer showers.

The most efficient and economical way of reducing shower energy consumption is to recover energy from waste water. Savings of about 40% can be achieved. If a small thermal solar energy system is used too, almost no energy is required.



When you take a shower much of the heat goes straight down the drain with the waste water. Hei-tech has developed a heat exchanger, the 'Recoh-tray', which instantaneously preheats the mains cold water to the shower and/or water heater. The 'Recoh-tray' has been successfully applied in the Netherlands for the past few years, particularly in newly built homes and apartments.

The 'Recoh-tray' is designed to reduce energy consumption during domestic hot water usage. The hot waste water from the shower passes the heat exchanger on its way down the drain. The heat is exchanged with the water from the mains water en route, to both the water heater and the shower.

The 'Recoh-tray' can be mounted underneath a special shower tray without increasing that tray's height.

Due to the very high efficiency, you will require less than 60% of the energy you currently use for instant water heating. Or, if you use a hot water storage system, you will need less than half the water you currently use.

It is also possible to just preheat the fresh water going directly to the shower. Efficiency will then be slightly lower.

The waste water flows across a spherical copper shell from the centre to the outside. Underneath the shell approx. 20 metres of copper pipe is connected to the shell.

The fresh water flows through this pipe and is thereby preheated. There is a double wall between the waste water and the fresh water, in accordance with Dutch KIWA requirements. This is compulsory in most countries.

There is a trap in the centre of the heat exchanger which prevents smells or vapour entering the bathroom.

The 'Recoh-tray' is a straightforward, simple design without pumps or controllers. It is completely made of copper which means it has a long working life.

The heat exchanger holds less than one litre. This means the heat exchanger starts working almost immediately after you start taking a shower.



Due to the relatively flat service of the shell, the velocity of the flow is relatively low. It might therefore be necessary to brush the surface once a year. This can be done quite easily and in only a few minutes using a special brush tool which is available for purchase. However, flushing with water and soap now and then might be sufficient. It depends on the condition of the waste water.

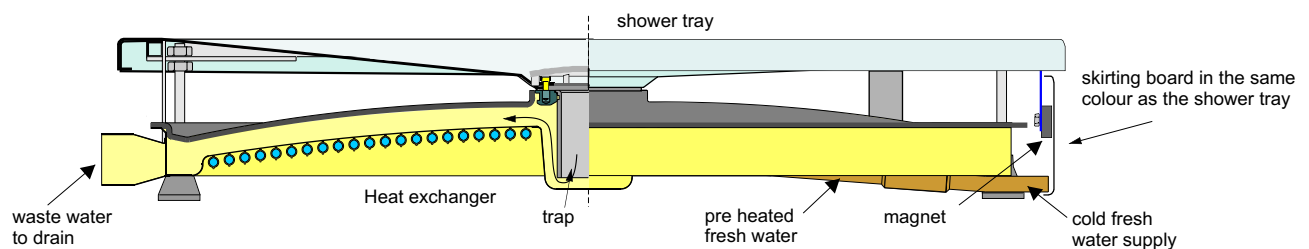
The efficiency of the Recoh-tray' was measured by the Dutch KIWA/Gastec Certification and is 39.6% with a fresh water flow of 9.2 litres/minute. Due to this efficiency the pay-back time of the 'Recoh-tray' is therefore extremely short, only 4 to 7 years!



The advantages

- Small investment
- High energy savings.
- Short pay-back time.
- Easy to install.
- Maintenance free.
- Reliable.
- Long life time.
- No pumps or controllers.
- No electricity required.

Recoh-tray, with removable skirting board (in the same colour as the shower tray).



The Recoh®-tray has been successfully applied in The Netherlands in recent years.

Besides The Netherlands, the Recoh® series is also sold in other countries like the United Kingdom, Ireland, Denmark, Sweden, France, Belgium, Luxemburg, Greece and the United Arab Emirates.

With the heat exchangers of Hei-Tech you save money and make a positive contribution to climate change worldwide.