



Save Energy Systems

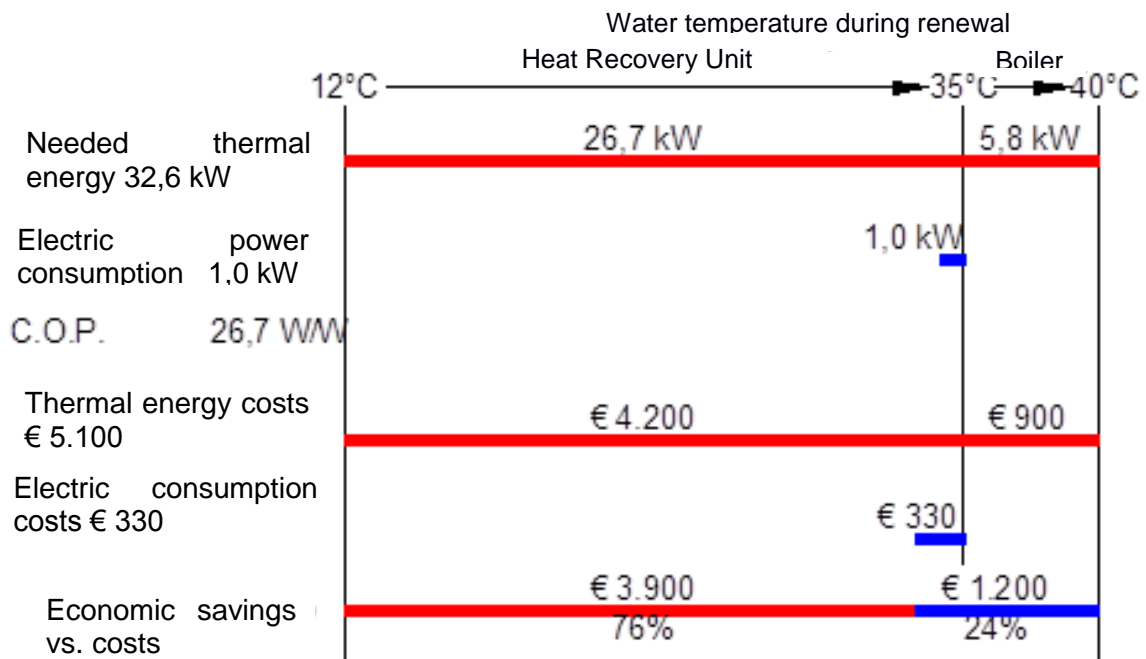
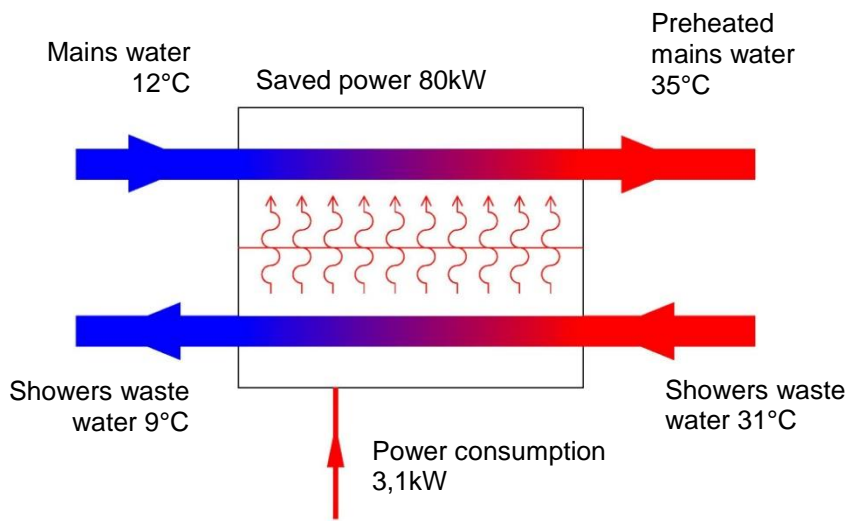
EnerPlus Italia

EnerWaterShower

HIGH EFFICIENCY SHOWERS WASTE WATER HEAT RECOVERY UNIT

Calculation of savings (for illustrative purposes)

Note: power rates refer to a medium capacity of 3m³/h
 Costs and savings are calculated on an annual basis and refer to 10m³/day



The diagram shows that **economic savings** cover **76%** of sanitary water heating costs.

General description

The showers waste water heat recovery units are custom-made systems designed to obtain the highest energy and financial savings with the lowest investment for the entire product life cycle.

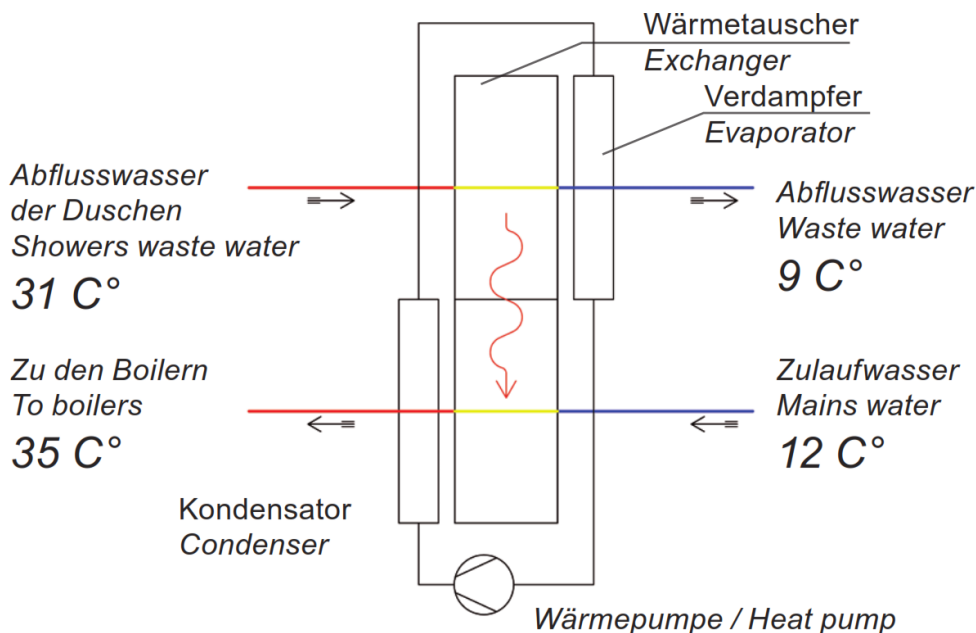
They are integrated systems equipped with

- a static heat recovery section using a high efficiency 2-phase plate heat exchanger of the last generation. The project foresees a delta of temperature between the flows equal to 2 °C with the very high energy savings
- heat pump section sized to obtain the highest compressors efficiency rates (C.O.P.>6)
- tank for temporary storage of showers waste water
- filter for showers waste water
- tank for temporary storage of sanitary water pre-heated with saved thermal energy.
- control panel with the indication of water inlet and outlet temperatures
- electric switchboard for the protection and command of the entire unit.

The units provide the performances indicated in the technical description attached to the offer and are completely autonomous. Sanitary water heating is guaranteed in the percentages indicated in the project

with less than 24% of thermal and electric energy consumption

Operating scheme



Technical Specifications

Bearing framework

The self-supporting external framework is made of painted galvanized steel. For ground installation or wall fixing, lifting devices or a basement are available upon request.

The front door with lock prevents unauthorized access to the components.

Static heat recovery section

It is made of a high efficiency 2-phase plate heat exchanger of the last generation. The 2-phase mode decreases the delta of temperature between the flows ensuring the highest energy savings.

The device is realized with the latest stainless steel alloys which produce a high energy exchange thus eliminating any routine maintenance.

Heat pump energy recovery circuit

It is equipped with high efficiency scroll compressors realized using the latest technologies on the market (C.O.P.>6) with an integrated protection system with automatic reset. It is mounted on vibration dampers that eliminate vibration and noise .

The refrigerant is made of a modern high quality blend, totally ecological and ideal for the temperatures of the system.

The refrigerating circuit is equipped with control and protection devices: pressure switches for high and low pressure, antifreeze thermostats, throttling device, refrigerant discharge system and reserve. It is also equipped with devices that ensure a total protection of the system and a longer life.

Water flows control system

Constant flow control valves in the inlet and outlet circuit with solenoid valves ensure that water flow rates indicated in the project are respected. The daily water renewal of the pool can vary from 0 to 130% of the nominal flow rate indicated in the table of the offer.

A pressure-control valve is placed downstream of mains water emission point to ensure the best operating conditions.

Control panel

The control panel of the unit is equipped with all the measuring and control devices. It has four temperature indicators, two for the inlet flow and two for the outlet flow, ON/OFF switch, protection systems and alarm and functioning indicators as well as a built-in clock with daily programs.

Tank for temporary water storage

Considering the differences in flow rates of showers waste water it is necessary to use temporary water tanks, one for waste water and the other for pre-heated mains water to be sent to the boiler of the existing installation. The size of water storage tanks will be decided according to the size of existing installations.

Description of products

The offer includes

- Heat recovery unit
- Heat exchangers
- Control panel with flow rates control system
- set of control probes
- circulator with mechanical filter

Description of installations (quote upon request)

Showers waste water treatment unit

- Connection to mains water (already made by the customer near the treatment unit and with shut-off valve)
- Connection to the system for the heating and storage of pre-heated sanitary water
- Connection to drainage system (showers waste water)
- Connection to pre-heated sanitary water storage tank
- connection to the electrical panel (already installed by the customer near the treatment unit)

Showers waste water storage tank

- delivery and installation of showers waste water storage tank
- connection and change of showers drain system
- connection to showers drain system
- connection to overflow pipe
- storage tank cleaning system
- electrical connection to circulation pump

Not included:

Connections to water and electricity, masonry works, handling and lifting operations, waste water storage tank and anything else not specifically mentioned in the offer.

EnerWater (Shower) selection table

No. of showers taken in one hour peak time

	10	20	30
Product code	00.010	00.020	00.030

No. of showers taken in one hour peak time

	40	50	60	70	80	100	100	130	150
Product code	01.040	01.048	01.055	01.070	01.080	01.095	1100	01.125	01.145

EnerWaterShower 1.040 technical data

Unit performance

- thermal power for mains water **38,6 kW**
- medium electric power consumption **2,6 kW**
- coefficient of performance C.O.P. **14,8 kW/kW**
- saved power for every m³ of renewed water **24,4 kWh/kWh**

Special technical features

- water-water heat exchanger with stainless steel plates of the last generation **1 n.**
- scroll heat pump R407C **1 n.**
- compressors power consumption **2,5 kW**

Mains water circuits

- daily renewal (% renewal regulation) **40 (0/130%) m³/g**

Showers waste water circuits

- daily renewal (% renewal regulation) **40 (0-130%) m³/g**

Approximate sizes and weight

Weight: 150 kg

Length 800 mm – Width 600 mm – Height 1300 mm

Efficiency parameters refer to the above-mentioned volumes and with a pool /mains water temperature of 28.8/14°C

