Showersave® MultiVert II (MVII)

Central heat recovery for buildings with multiple showers — wonderfully simple.

Applications

For installers, consultants and property owners of:

- Apartment buildings
- Hotels
- Student housing
- Sports facilities
- Swimming pools
- Healthcare facilities



Key features

- ROI <1.5 years in >80% of our projects
- Recognised under BREEAM (ENE 01) and LEED (EA credits)
- Individually certified heat exchangers (Kiwa, WRAS, DVGW, CSTB, Passive House Institute)
- Made of copper: the heat exchangers are Legionella-safe and recyclable
- Proven technology: Showersave heat exchangers have been installed more than 200,000 times worldwide since 2005
- Low maintenance and largely self-cleaning

Showersave® MultiVert II (MVII)

Introduction

In sports halls, swimming pools, apartment buildings and hotels, domestic hot water is often generated centrally. The hot water that disappears into the drain after use still contains a lot of usable energy. The MVII recovers a large part of this residual heat. This means lower energy consumption and therefore less unnecessary CO2 emissions. It also reduces the load on the grid at peak times.



Efficient heat recovery

The MVII extracts heat from the warm shower wastewater and transfers it to the cold mains water flowing to the storage vessel.

- No mixing of water streams
- Only transfer of energy
- Efficient use of available residual heat

In practice, an energy saving of 30 to 50% on hot water for shower use is typically achieved. The exact efficiency depends, among other things, on the length of the heat exchangers used.

Unique central system

The MVII has been specifically developed for situations with multiple showers and a central hot water supply.

Each unit consists of four coupled Showersave heat exchangers that function together as one central unit. By connecting multiple showers centrally to a single hot water supply and a single drainage system, the available residual heat can be efficiently recovered and used at a central level.

Proven technology and certification

Each heat exchanger in the MVII is individually certified. The MVII as an assembled system does not have its own system certificate. The effective efficiency is determined per project through project-specific calculations.

- High reliability and long service life
- Stable and reproducible performance
- High heat transfer thanks to copper construction
- Low environmental impact
- Limited fouling under normal use

Operating principle

In each heat exchanger, the waste water and the mains water flow in opposite directions:

- Warm wastewater flows downward on the inside
- Cold mains water flows in the opposite direction and is pre-heated

The heat exchangers feature double separation between wastewater and mains water, in accordance with EN 1717. This fully safeguards drinking water safety.

The heat exchangers are made of copper for optimal heat conduction. For applications with aggressive wastewater, the wastewater side is optionally available in a corrosion-resistant version.

Due to its relatively small water content, the system responds quickly as soon as simultaneous flow occurs.

Installation

The MVII can be applied flexibly:

- Gravity setup: installed in a plant room below the showers
- Level (same-floor) setup: using a pump unit

The central placement avoids installation in individual bathrooms and simplifies management and maintenance.

Maintenance

The MVII is largely self-cleaning due to the flow of wastewater. For continued proper operation, the following is recommended:

- Periodic inspection (e.g. annually)
- Cleaning via inspection openings

Sizing and design

Each MVII installation is designed on a project-specific basis. Sizing depends on:

- Number of showers
- Simultaneity of use
- Flow rates
- Usage profile

Calculation tools are available for various applications such as hotels, apartments and swimming pools.

Scalable for any project: multiple units can be combined for larger flow volumes.

A bypass is optionally available for peak-flow protection on the domestic water side (used for occasional high simultaneous demand).

Efficiency and payback period

Project-specific calculations provide insight into:

- Expected energy savings
- System efficiency
- Payback period (ROI)

Parameters such as the heat exchanger used, shower duration, occupancy rate, pipe losses and energy prices are taken into account. Based on practical experience, calculated performance generally corresponds well with the results actually achieved in the project.

Technical data (summary)

- Construction: 4 coupled heat exchangers with central distribution and drainage unit
- Material: copper (wastewater side optionally corrosion-resistant)
- Domestic water connection: 35 mm
- Wastewater connection: 110 mm
- Temperature: 70°C continuous / 80°C peak

Dimensions

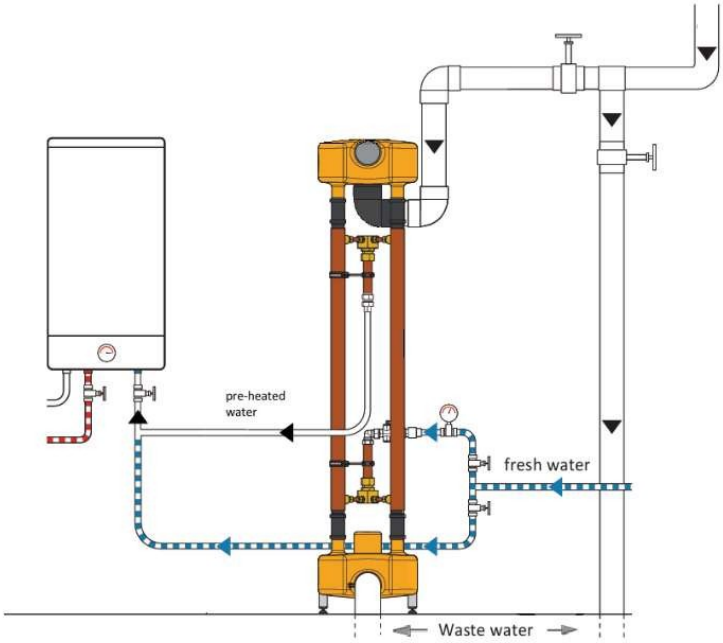
The MVII is available with the Showersave QB1-12, QB1-16 or QB1-21 heat exchanger. The choice of variant depends on the available space and the desired efficiency, and is determined per project.

- MVII-12: height 1900 mm
- MVII-16: height 2310 mm
- MVII-21: height 2730 mm

Applications

The MVII is particularly well suited for:

- Apartment buildings
- Hotels
- Student housing
- Sports facilities
- Swimming pools
- Healthcare facilities



Sustainability and certification

Heat recovery is explicitly recognised under BREEAM (ENE 01) and LEED (EA credits), as it reduces the energy demand for domestic hot water and the associated CO_2 emissions.

The exact contribution depends on the project and is determined through energy performance calculations.

Summary

The MVII is an efficient and reliable solution for central heat recovery from shower water. By combining multiple showers in a single system, the available residual heat is used optimally, achieving substantial energy savings with a solid technical basis and predictable performance.

Interested in the MVII for your market or a specific project? Contact us for a tailored project calculation.

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