



HEAT RECOVERY EXCHANGER FOR WASTEWATER IN BATHROOMS AS-SHOWER

INSTALLATION & OPERATING INSTRUCTIONS



The heat exchanger is designed for wastewater heat recovery in bathrooms up to the water maximum pressure of 16 bar and temperature up to 90°C. It is not appropriate to tread on the exchanger.

Placements

The exchanger should be laid on or hung up to a horizontal surface. The most suitable place could be directly under the shower pan, but it can be placed to the ceiling under the bathroom.

Connections

On the cold-water side, flexible armoured hoses with cap nuts and flat gaskets can be used especially in cases, where the exchanger is placed directly under the shower pan (i.e. for easier handling). As the exchanger is of a counter-current type, the clean water inlet must be always closer to the wastewater outflow. If this arrangement is not respected, about 60% efficiency can be lost.

A DN40 plastic pipe should be used for the wastewater connection. The pipe sockets on the exchanger are designed in a way preventing their confusion. The inlet socket is fitted with an O-ring, which is more rigid than ordinary seals. Therefore, it will be necessary to apply a grease preparation over it thoroughly before the installation. The wastewater inlet pipe (DN40) will be then inserted into the exchanger some 50 to 60 mm inside from the socket face. Wastewater flows over the drain trap to the exchanger and then it continues to a sewer.



Cleaning

Deposits that are normally formed in drain piping tend to produce insulating deposits on the exchanger, which logically decreases its efficiency. Therefore, it is necessary – from time to time – to remove this slime. Biological cleaning agents proved to be the simplest solution. They contain organic-waste consuming bacteria.

For example, let us see how the FREELINE preparation should be used:

About one gram (on a knife tip) of the preparation is mixed in a plastic container with half a litre of lukewarm water. After twenty minutes, pour the mixture slowly into the siphon before the exchanger and allow for a suitable dwell time (overnight, if possible). After this time, the shower can be normally used. The bacteria take their effect for five to six days. Under the normal conditions of use, six-month cleaning intervals should be sufficient.

Recommendations

If the preheated water supply is connected directly to a shower mixer tap, then a thermostatic type could be suitably used. This will save some problems with adjusting the right temperature, because the water stream on the cold-water side is already lukewarm, which continuously reduces the consumption of hot water coming from the boiler. However, if the lukewarm water stream is led from the exchanger to the boiler, then a standard mixer tap presents no difficulties.

Technical parameters of the shower exchanger

Water pressure	max. 16 bar
Water temperature	max. 90 ⁰ C
Exchanger casing	ABS plastic (vacuum forming)
Absorber	Stainless steel pressed sheet (AISI 316 Class)
Wastewater connection	DN 40
Clean (cold) water connection	G ¾"
Dimensions	552 × 144 × 87 mm
Weight	1,900 g