



REFERENCE

INNOVATIONS IN EQUIPMENT &
PLANT MANUFACTURING

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Refrigerated cabinets heat up the shower water

HOTEL BASEL

Following the overall refurbishment, energy consumption at the Hotel Basel has fallen sharply. The new, highly efficient energy centre, which generates hot water from the waste heat of the refrigeration machines, has made a major contribution to this. Omlin Energiesysteme AG planned and built the plant.

Life pulsates in the Hotel Basel. Guests enjoy the fine cuisine in the boulevard restaurant in the heart of the old town. Others relax in the hotel lobby from their forays through the city or take a relaxing hot shower in their room. Nobody needs to have a guilty conscience – even if everyone is talking about climate change and the energy revolution.

The hot water is prepared in the basement of the Hotel Basel with the highest energy efficiency. „Around two thirds of the hot water required is generated by heat recovery (WRG) from the chillers – and that for a hotel

with 73 rooms and three restaurants,“ explains Martin Omlin, who planned and built the innovative system together with Omlin Energiesysteme AG. As soon as the WRG can no longer supply enough energy, the district heating supply of the IWB is automatically switched on.

A POWERFUL QUARTET

Absolute top energy values can only be achieved if absolute top people are at work. In this case the strong quartet consists of hotel owner Raeto Steiger, Cornelia and Martin Omlin from Omlin Energiesysteme AG in Birsfelden (BL) and Beat Meister from Apaco AG in Grellingen (BL). What they have achieved in constructive teamwork deserves the highest respect. The ultra-modern hot water preparation system is a showpiece of the first order and will hopefully find many imitators. Naturally, there is a lot of refrigeration in the Hotel Basel: in addition to the air conditioning in the rooms, there is a freezer room for food and refrigerated display cases and drawers for drinks. Everything runs via refrigeration

| A joint effort that is a joy to work with: (from left) Cornelia and Martin Omlin, Beat Meister and Raeto Steiger

machines, which in turn generate a lot of waste heat. „The challenge was to use this waste heat as efficiently as possible to produce hot water,“ explains Martin Omlin.

WASTE HEAT USED VERY EFFICIENTLY

An important key to success was the correct dimensioning of the two energy storage systems. The boilers each have a capacity of 2600 litres and are therefore designed exactly so that the waste heat can be used as directly and efficiently as possible for hot water preparation. „If the boilers were too small, less waste heat could be used, and the excess energy would simply go to waste,“ says Beat Meister from Apaco AG. The company made the boilers to measure and welded them together on site from four parts each.

« If the boilers were too small, less waste heat could be used, and the excess energy would simply dissipate. »

Beat Meister, Apaco AG

The „ZS-Box by Omlin“, a modular system with sophisticated sanitary technology developed and patented by Omlin Energiesysteme AG, is also used in the plant. Thanks to the „ZS-Box“, the circulation loss in the pipes is reduced by 90 percent, which makes a significant contribution to the efficiency of hot water preparation.

A GREAT DEAL OF EXPERTISE REQUIRED

The Hotel Basel has recorded a stable high occupancy rate throughout the year. A building with few fluctuations in energy supply and energy consumption is predestined for the WRG, explains Beat Meister. The fact that the plant achieves such high efficiency values is thanks to the great expertise of Omlin Energiesysteme AG and the good cooperation of all those involved, Meister adds.

The Memograph from Endress + Hauser (Schweiz) AG, a measuring and analysis device that measures and records all energy values, proves that around 65 percent of hot water can be covered by the heat recovery system over the year.



Photos: Roif Zenklisen

Successful renovation: The lobby of the Hotel Basel appears bright and friendly.

Hotel owner Raeto Steiger, too, repeatedly takes a satisfied look at the memograph. Steiger does not regret his decision to have the hot water supply renewed as part of the overall renovation of the hotel and to save a lot of energy since then. By the way, there were hardly any alternatives for a more energy-efficient hot water system: a solar installation could not be realised because of the location in the core zone of the old town.

A comparison of the district heating consumption before and after the renovation shows very impressively that such investments are worthwhile in any case. Not only the environment benefits, but also the owner's wallet. And not least the hotel guests, who can take a hot shower without a guilty conscience.

« About two thirds of the hot water required is produced by heat recovery from the refrigeration machines. »

Martin Omlin, Omlin Energiesysteme AG

SUSTAINABILITY PAYS OFF!

Following the renovation, energy costs at the Hotel Basel have fallen by 50 percent. Thanks to the new energy centre, which converts the waste heat from the cooling system into hot water much more efficiently, the hotel now also subscribes to 25 percent less district heating from the IWB. This will further reduce costs.