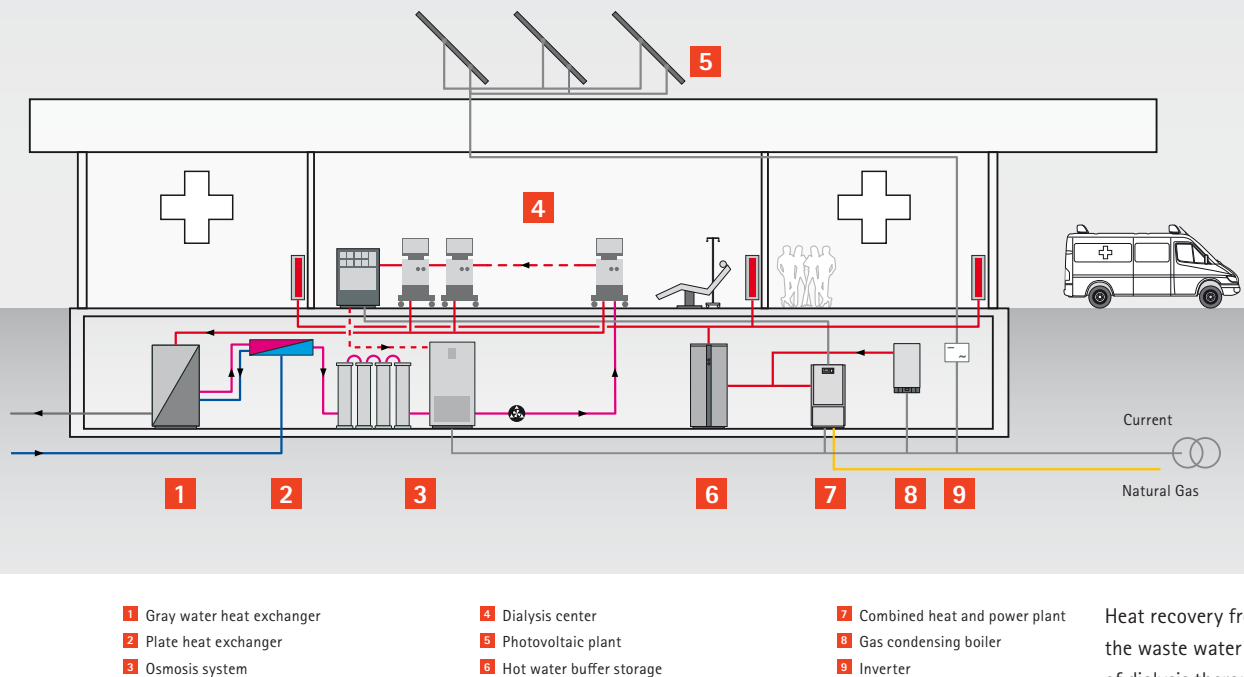


Information

Central heat recovery in dialysis therapy saves on energy costs and protects the environment



Dialysis is a very energy-intensive procedure: on average, 150 liters of water are required for a standard therapy session. The dialysis fluid must be heated from an incoming water temperature of about 12°C to normal body temperature of 37 °C. The energy costs of a dialysis center with 30 stations amount to far more than 13,000¹ euros per year* for this alone. What's more, the heated water flows directly into the drain after the dialysis, unused.

The high energy costs and the energy contained in the waste water were the impetus for the family-owned companies B. Braun Avitum and Viessmann Deutschland to collaborate on this project: cross-system heat recovery in dialysis therapy. The new construction or renovation of dialysis centers provides the ideal conditions for making this concept a reality.

The energy savings principle is relatively simple: The residual heat in the waste water is used to pre-heat the required fresh water.

Up to 17 percent² savings per year

Using heat exchangers, energy at the level of 16 °C can be extracted from the 37 °C waste water, pre-heating the cold 12 °C line water to 28 °C. The integrated heating system of the dialysis unit then heats the remaining difference of 9°C.

This results in significantly lower energy costs. A cogeneration heating system, with a photovoltaic plant for producing its own electricity, provides additional energy saving options.

Heat recovery from the waste water of dialysis therapy (1-4) is a closed system. A cogeneration heating system, with a photovoltaic plant for producing its own electricity (5-9), provides additional energy savings.

¹Based on an average dialysis center with 106 patients and three therapies per week per patient, at an average electricity price in Germany of 0.22 euros/kWh (as of: 06/16).

²The measured values result from the comparison of the current electricity bill of a renal care center over the period of one year.

B. Braun is one of the leading manufacturers of medical technology and pharmaceutical products worldwide, as well as a provider of medical services. B. Braun is a system provider which develops effective solutions and trailblazing standards for the health care industry in close partnership with users and partners.

Following successful collaboration over many years, the Lauer company is now a part of the B. Braun corporate world. Lauer has specialized in dialysis water preparation for more than 20 years. This allows synergies already in use to be expanded further, and for customers to be offered a consistent overall concept from a single source, under the guideline of a good treatment quality with minimal consequential costs.



Our modular product system for hemodialysis:

- Dialysis machines
- Dialysis management systems
- Dialyzers
- Bloodlines
- Vascular accesses
- Dialysis fluid filters
- Solutions
- Concentrates
- Machine disinfection
- Dialysis water preparation (AQUAsystem)

Healthcare systems around the world are under enormous cost pressure. Innovative and flexible AQUAsystem solutions help to reduce operating costs, resulting in resource-friendly and cost-efficient dialysis treatment.

AQUAbase

AQUAbase is our single-stage standard water preparation system.

AQUAboss

AQUAboss offers the selection between single and double stage systems. A variety of selection options make them our premium systems.

AQUAstream

The design concept allows a constant flow in the connection to the dialysis machine. Our solution for hygienic ring line systems without dead space.

AQUAsupport

We provide customer-specific service packages in the areas of planning, design, training, technical service and maintenance.

AQUAvision

AQUAvision is our network-compatible, specially developed software for visualizing and monitoring all dialysis water preparation processes.

AQUAclav

With our steam sterilization service for stainless steel ring line systems, their dialysis water preparation will meet pharmaceutical standards.

