Heating and cooling system in the container.

For a data center.

Compact, energy-efficient and customized.

Simultaneous heating and cooling from the container.

Commercial buildings have very high requirements in terms of ecological and energy-efficient heating and cooling. Offices need to be cooled in summer and heated in winter. Technical and server rooms with a lot of waste heat, on the other hand, require continuous climatic conditions and must be cooled at the same time. In addition, the used energy should be used as efficiently as possible and the waste heat from the server rooms should be used sensibly. Riedel Kooling has developed a tailor-made container concept for a wide range of temperature requirements for existing buildings or new buildings, which can be connected to an existing system and covers the increasing demand efficiently and cost-savingly.

An energy saving solution with high efficiency.

Efficient and economical.
The container concept offers highly efficient heating and cooling of buildings with a heat recovery system for simultaneous heat and cold generation. For example, the heating of buildings or also the return of energy to a machining process (e.g. electroplating tanks) by means of waste heat from cold water generation. The plant ensures efficient operation and savings in operating costs due to the precise design of all components.

High coefficient of performance.
The combination of reversible high-efficiency heat pumps and buffer storage tanks, as well as the precisely fitting connection to existing components, achieves demand-based heating and cooling operation in the building with high coefficient of performance. With the same electrical input, 2.5 times more heating and cooling energy is available. This significantly reduces CO_2 emissions.

Compact and individual.
The entire heating and cooling system is housed in a single container to save space. The compact and ready-to-connect as well as individually designed system is quickly installed. The heating and cooling demand is precisely adapted to the system and energy requirements with defined hydraulic and electrical interfaces.

Fail-safe.
100 % cold redundancy ensures maximum fail-safety. Thus, at any time the server rooms are permanently cooled.

Plug & Play.
The heating and cooling system in the container is completely prefabricated with all components, delivered ready for connection and set up and commissioned outdoors in less than three days.

Simultaneous heating and cooling.
With heat recovery.

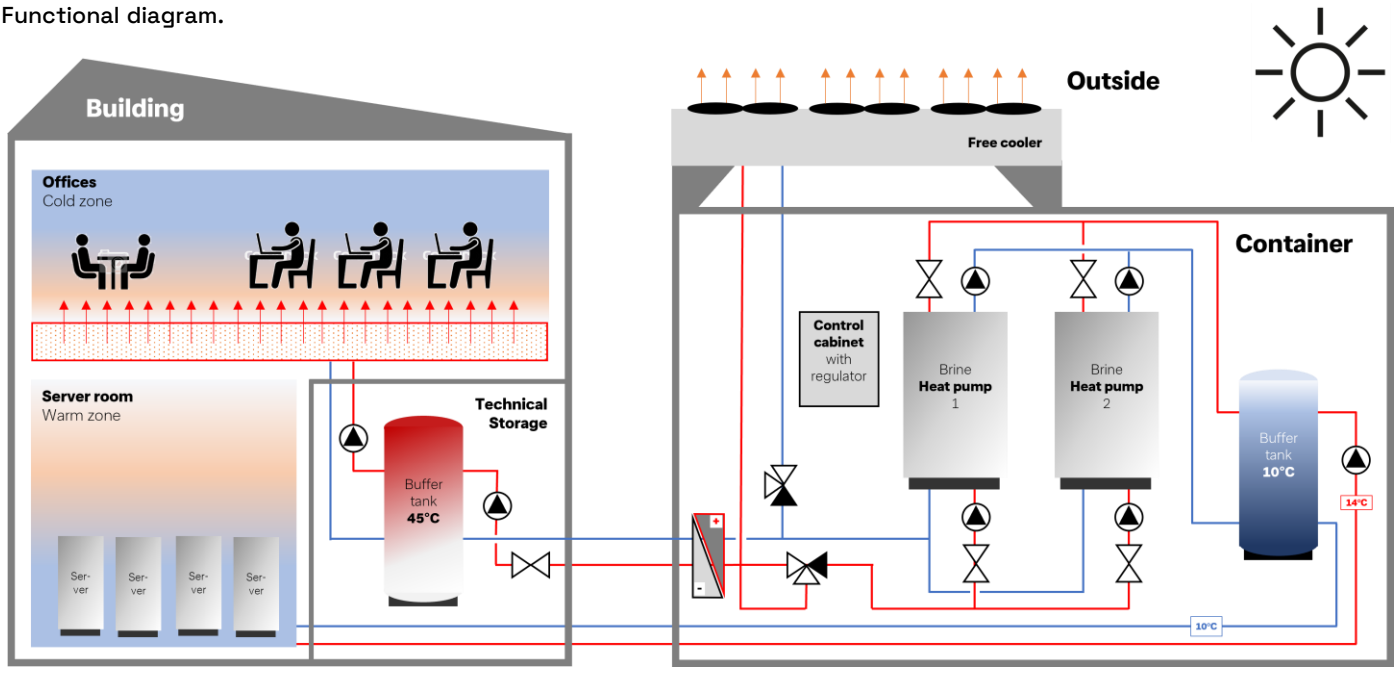
Riedel Kooling develops the energy saving solutions holistically and individually according to the customer's requirements. From the analysis of the overall operational processes in manufacturing areas, to the design and planning of the energy-saving system, to the coordination of installation. Each plant is commissioned by its own experienced experts.

The container concept is a compact and demand-oriented solution, which is planned customer-specific, equipped individually and according to requirements and put into operation.

A coordinated control system for the entire plant is integrated to match the hydraulic concept. Installation close to the building in the outdoor area provides more space in the building and is also particularly quiet at only 45 db(A).

The customer-specific equipment also allows further options e.g., free cooling. The container can be used in new construction or modernization in almost all industries or commercially used objects.

Functional diagram.



Planning of the overall energy concept.
Data center with office, meeting and server rooms.
Useful area approx. 2000 m²

Waste heat recovery from the individual servers.

Concept development and coordination of all trades.

Advice and support.
During the implementation and installation of the plant.

Commissioning by Riedel Kooling factory customer service.

Full-service contract with spare parts stocking.

Monitoring of the plant.

Data and facts.

Heating load, power.	**100 kW**
Cooling load, power.	**90 kW**
Heating capacity brine/water heat pump.	**120 kW**
Cooling capacity brine/water heat pump.	**90 kW**
Design temperature heating.	**45 °C / 40 °C**
Design temperature cooling.	**12 °C / 16 °C**
Hydraulic separator cold.	**500 liters**
Buffer tank warm. As part of the existing plant.	**2.000 liters**

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