Automotive supplier.

Energy-saving solution.

For industrial applications.

No compromise on precision and reliability.

"We save a third of the energy required."

Less energy costs, more system: From concept development to commissioning – Riedel Kooling transforms individual cooling units into highly efficient and future-proof cooling systems. In this case, at a globally active supplier for the automotive industry.

An energy saving system with high efficiency.

Plasma temperatures of around 600 °C are generated at the automotive supplier's plant when engine components are covered with a special PVD-coating.

The results are particularly high-quality components that many large companies rely on. As demand has risen, production has also grown strongly in recent years - and with it the need for cooling. The existing equipment is still functioning but is consuming vast amounts of electricity.

"The decision to question our previous cooling concept was a big step - but it was the right one,"comments the responsible project manager on the company's decision in favor of an intelligent energy-saving system: "We now have an environmentally friendly, absolutely reliable cooling system - saving a third of our energy requirements."

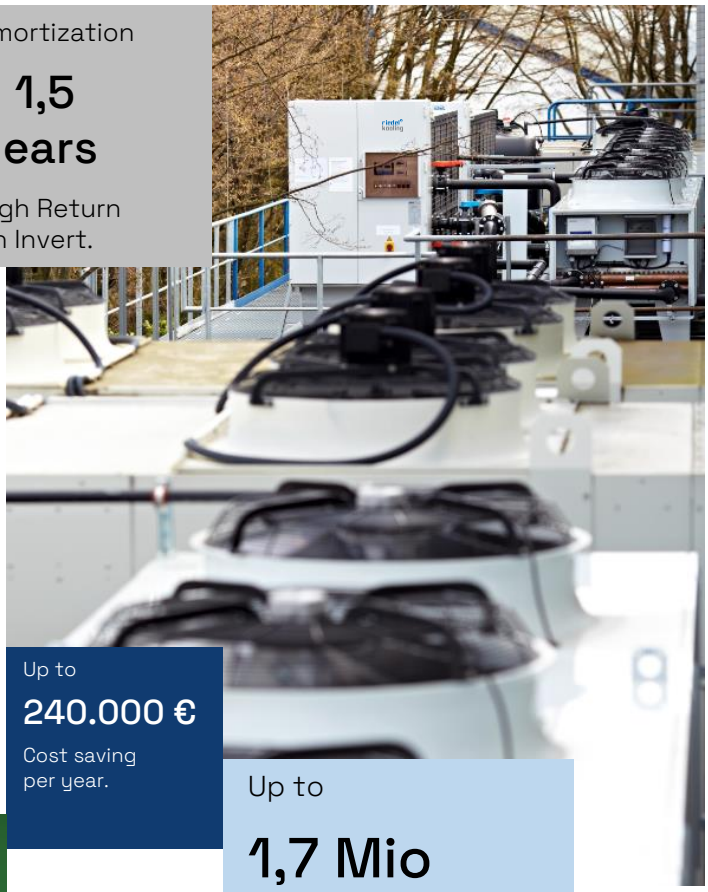
Before the modernization, each coating machine was cooled by its own chiller, which drove up energy and service costs and made for uncomfortable temperatures in the factory hall.

As early as the concept planning stage, we calculate exactly how much savings potential the modernization will bring, and which technical system solution makes the most sense for the customer.

Amortization

< 1,5 years

High Return On Invert.



Up to

240.000 €

Cost saving per year.

Saving.

364 t CO_2

per year.

Up to

1,7 Mio kWh

less Power consumption.

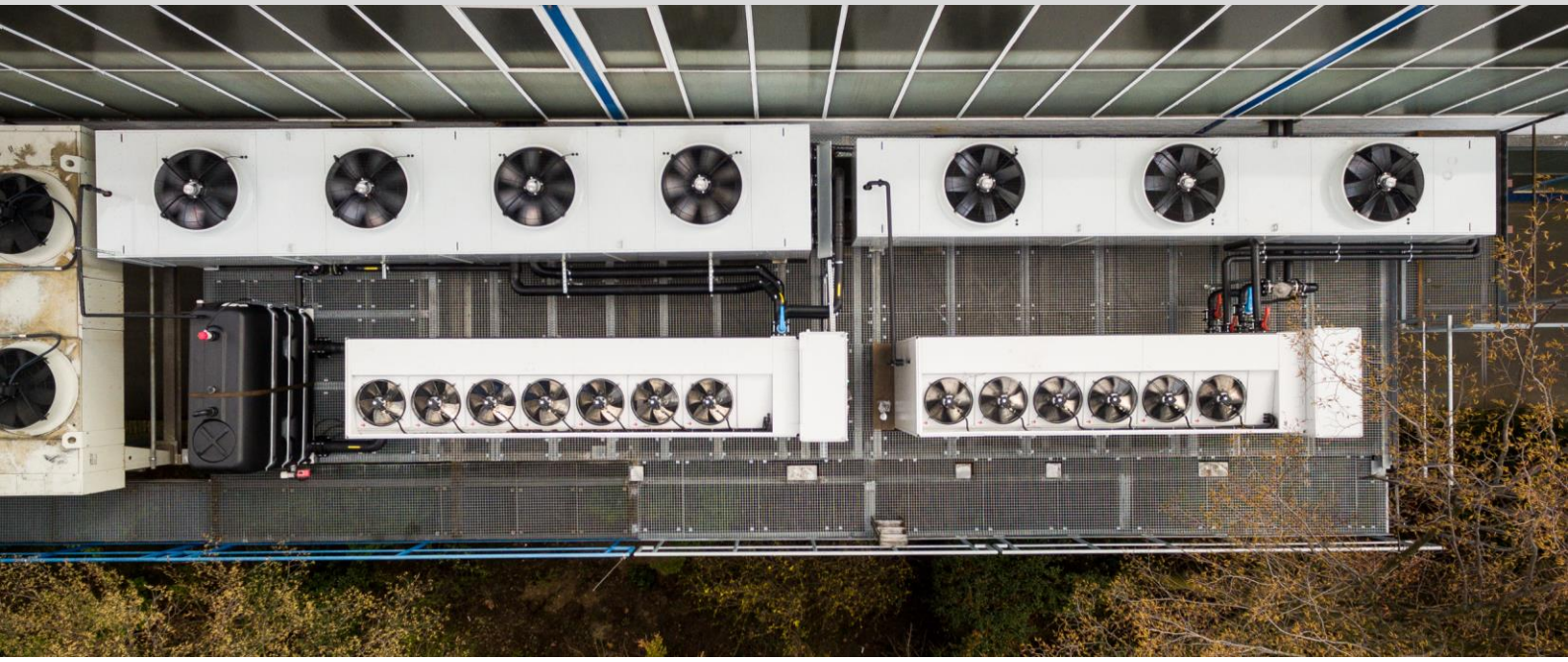
Future-proof and economical.
Clear evidence of maximum efficiency.

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.

Two chillers from Riedel Kooling are in use at the automotive supplier. A PC2241 for process cooling and a PC2001 for air conditioning, each combined with water-guided free coolers. This customized solution guarantees constantly always the right temperature.

Process cooling and air conditioning were separated from each other because they require different supply temperatures. The entire new cooling system is relocated to the outside area and is controlled centrally via a control center.

The energy-saving system enables the automotive supplier to reduce annual electricity consumption for production and air conditioning by 1.7 million kWh. This will result in a cost saving of 240,000 euros per year.



Planning of the overall energy concept.
Constant, precise cold supply whenever it is needed.
In summer and winter operation.

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 overall concept.

Cooling of the coating plants and control cabinet air conditioning.

Central cooling unit.
at 19 °C process water temperature. **300 kW**

Outdoor installation without using glycol.

Self-draining special recirculating chillers.

Anti-freeze package.

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Metal forming and stamping technology

Energy-saving solution.

For industrial applications.

Positive energy and CO_2 balance.
Efficient central cooling with energy-saving circuitry.

At a leading precision company for metal structures, stamping, drawing and coating technology as well as container construction, the challenge was to organize the production processes even more efficiently with different manufacturing methods and at the same time improve the working and environmental conditions. Since precision is especially important here, powerful laser and machine tools are required, which, in addition to the production halls, require high energy and power and precise cooling. Extensive energy measures ensure pleasant hall temperatures, optimized and stable production processes in year-round shift operation, an improvement in the CO_2 balance and a reduction in energy costs.

An energy saving system that works sustainably.

Optimization of environmental conditions.
Before the energy-saving solution was put into operation, extreme temperatures prevailed in the laser cutting and welding hall due to the machining process and the waste heat it generates. In the summer hall doors had to open. This caused increased ambient noise. The installation created comfortable working temperatures for employees in all production halls and reduced ambient noise.

Precise cooling and high operational reliability.
With the conversion of the individual decentralized coolers into a central cooling unit with energy-saving circuitry, operational downtimes were reduced to the highest level and the operational reliability of the production facilities was achieved for continuous shift operation.

Reduction of energy costs by approx. 40 %.
At the same time, **approx. 243 tons of CO_2 are saved.**

Few repairs and service intervals.
With the new cooling unit, the dimensional accuracy was improved. There is less wear and tear on equipment and maintenance and servicing costs have been minimized.

Efficient.
IE5
High performance pumps.

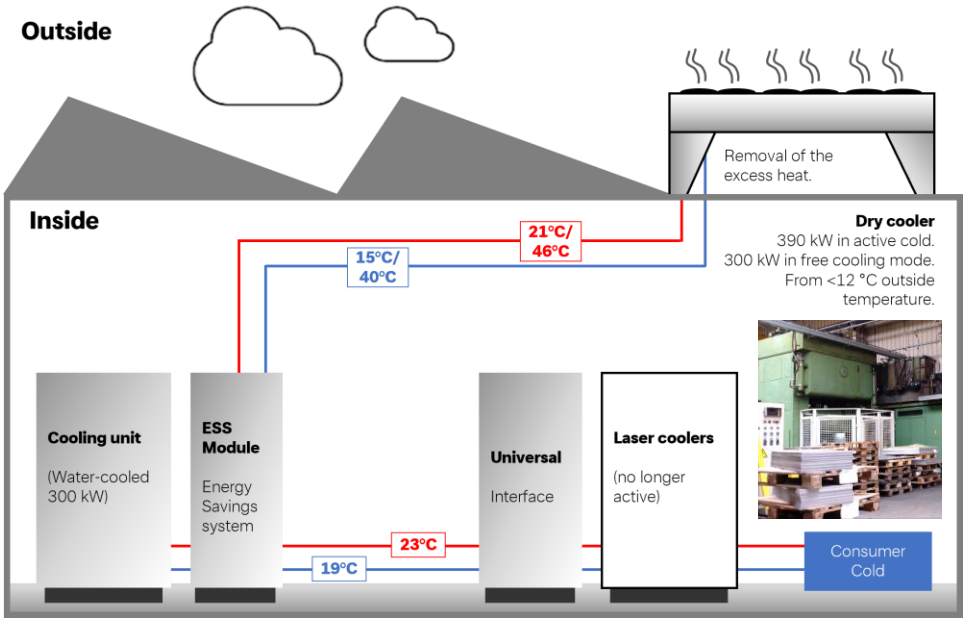
Amortisation.
< 2 years
High Return On Invest.

Up to
40% less energy consumption
Compared to the previously installed, individual cooling systems.

Future-proof. Efficient and economical.
Energy saving system for metal processing industry.

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 our own experienced experts

It took only a few weeks to implement the energy-saving system, from reviewing the requirements to planning and installing the new system components. The construction phases were coordinated in such a way that, despite ongoing production with shift operation and full capacity utilization at the customer, there were no restrictions in production and production-related areas.



Installation of a central cooling system (Plug&Play). 300 kW at 19 °C process water temperature including an energy-saving circuit and passive cooling from an outside temperature of 12 °C.

With the specially developed system interface, the production process was optimized, and the hydraulic complexity reduced. The hall air conditioning in the welding shop was realized via convectors with a required cooling capacity of approx. 80 kW.

Highly efficient and precisely controlled cooling for the three high-performance presses was achieved by using heat exchangers as system separators with approx. 30 kW each. The decentralized temperature control is now controlled via thermostatic temperature controllers.

Planning and optimization of the overall hydraulic process.
Constant, precise cold supply whenever it is needed.
In summer operation as well as in winter operation.

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.

1x Precision cooler. **300 kW**
Water cooled with integrated energy saving circuit.

2x Highly efficient recirculating chiller/dry coolers.
Extremely quiet operation. Conforms with all technical conditions to the specifications of TA Lärm.

2x High efficiency process water pumps.
Electronically controlled, redundant design.

Heat exchanger integrated in the process water return as return flow boost for maximum energy utilization during the heating period.

3x Heat exchanger and cooling water valves. **per 20 kW**
For oil cooling in the precision hydraulic presses.

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