Weber Hydraulik does it all: biomass, solar energy & energy efficiency

"We are proud to make a sustainable contribution to climate and environmental protection. This motivates us to continue working on these topics in the future."

Kurt Sperrer, Managing Director

Thanks to a diverse mix of measures, Weber Hydraulik has its energy consumption under control despite increasing production. Waste heat recovery, concrete core activation, innovative lighting technology and biomass heating: energy efficiency is a top priority for the metal processing company. Weber Hydraulik is convinced that innovative energy technologies bring more than "just" low operating costs.

A solution for every machine: Weber Hydraulik – specialist for individual hydraulic systems

Weber Hydraulik is a specialist for the development and production of customised hydraulic solutions. Its systems are used throughout the globe for lifting and lowering multi-tonne loads (i.e. in the automotive industry, as mobile machinery, commercial vehicles and agricultural machinery). It is also one of the four largest manufacturers of rescue equipment in the world. The demand for Weber Hydraulik products is growing rapidly – almost 10% growth for several years in a row.

What was achieved?

Heat recovery
(waste heat from air compressors)
Reduction of heating demand in 2018: 165 MWh

PV self-consumption system
160 kW_p
Electricity production: 156,000 kWh/year
Reduction of electricity costs: 16,000 Euro/year

Biomass contracting
Wood chips from local farmers replace 120,000 litres of heating oil per year

Compressed air optimisation
Savings in 2018: around 7,000 Euro

Conversion to LED
90% already implemented

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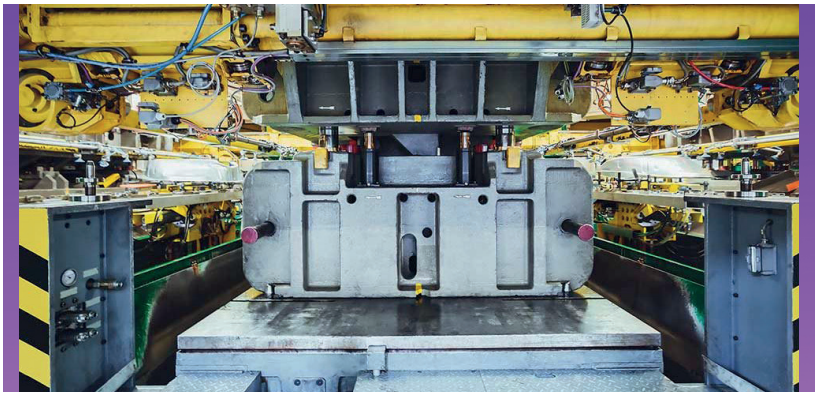

Heat recovery for compressors: Reducing heating costs and improving indoor climate

Metalworking is energy-intensive. Growth and increasing production typically meant higher energy costs. Hence efficient processes and innovative technologies are an absolute must for Weber Hydraulik. Waste heat from air compressors and hydraulic power units supplies heat for process water and space heating through concrete core activation. This innovative technology is already used on 4,000 m^2 at the site in Losenstein and has been made standard for new buildings. Heating demand is reduced by 14 % – 15,000 Euro per year – while greatly improving the indoor climate in the offices and production hall.

Solar power: maximising self-consumption

High and constant electricity demand makes Weber Hydraulik a perfect candidate for self-consumption of PV electricity. The company is exploiting this potential: since 2019, a 160 kW_p PV system saves around 16,000 Euro in electricity costs per year. Self-consumption systems are specifically dimensioned so that the company can use almost all of the solar power itself. High self-consumption often means shorter payback times – for Weber's system only 7 to 8 years.

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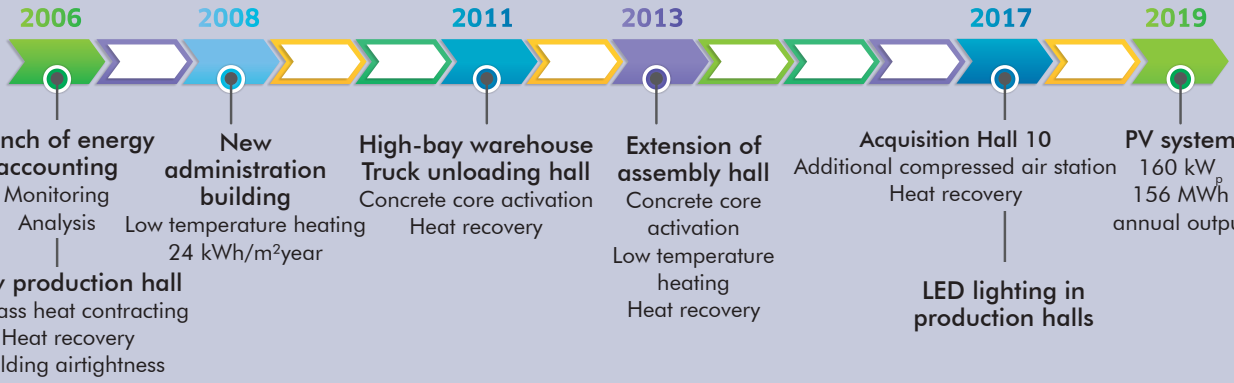
"The installation of our biomass heating system in 2006 was the starting point: We succeeded in reducing our heating costs despite increasing floor area. Since then, we have been going all out in terms of energy efficiency and perfecting our energy use."

Albert Koppenberger, Head of Operational Maintenance

WEBER-HYDRAULIK

Step-by-step measures for energy efficiency



Switching to biomass without investment costs

Using renewable energy has become a tradition at Weber Hydraulik. In 2006, an expansion brought on the need for a new heating system. Since then, a 500 kW wood chip heating plant efficiently supplies space and process heat from local and sustainable resources. The plant was implemented and financed using the energy contracting model. This allowed the company to switch to biomass without investment costs. Around 12,000 Euro in heating costs are saved each year compared to an oil heating system.

But that's not all: LED & Young Resources

The company has perfected energy efficiency in other areas as well. 90% of the lighting system has already been converted to LED. Pressure lines are regularly checked for leaks. Apprentices are trained on energy efficiency topics in the "Young Resource" project. During weekends and plant shutdowns, the young employees track down the sources of wasted electricity. 80 MWh of electricity have been saved since the start of the project.

Next step: intelligent cooling

The next step towards an efficient energy future is already planned: concrete core activation for cooling as well as heating. Intelligent concrete core cooling will be used for the first time in a new, 6,000 m² multi-storey production hall.

More than energy savings

The company wants to invest further in energy efficiency. The advantages of efficiency measures go far beyond mere cost reductions. For example, biomass heat contracting represents a convenient all-in model. In addition to planning and financing the heating system, the contractor looks after operation, maintenance and fuel deliveries. Weber has nothing to worry about when it comes to heating. These extra advantages often convince even the last sceptics in the company.

The company – key facts & figures

Weber Hydraulik GmbH

Founding year
1969

Products
High-quality hydraulic cylinders and rescue equipment

Location
Losenstein

Employees
380 (at the site in Losenstein)

Annual turnover
88 million Euro (2019)

Ownership structure
Weber Hydraulik GmbH is a subsidiary of a German family-owned business headquartered in Baden-Württemberg

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