



CASE STUDY

REDUCED ENERGY CONSUMPTION

Saving successfully together!

Aerzener Maschinenfabrik GmbH realises energy saving potentials in cooperation with Pfannenberg Europe GmbH.



AERZEN

Pfannenberg
ELECTRO-TECHNOLOGY FOR INDUSTRY





“Pfannenber fits perfectly with our needs in terms of comprehensive service and high product quality.

We place great trust in Pfannenber’s energy-efficient cooling units. We have not only achieved the jointly identified savings potential with cooling units from Pfannenber, we have even exceeded it! We are very pleased about this, so that we would make the decision again at any time.”

Christian Wegner

Energy Manager
Aerzener Maschinenfabrik GmbH

Situation

[Aerzener Maschinenfabrik GmbH](#) has been developing high-performance machines for industry since 1864. The company has developed from a manageable family business into a “global player” that supplies reliable, powerful and energy-efficient blowers and screw compressors all over the world. According to Christian Wegner, the name AERZEN has become a seal of quality: “Whenever you see the name “AERZEN” on a machine, you know exactly what you get.”

Challenge

The company is certified according to DIN EN ISO 50001, the international standard for energy management systems. The aim is to provide continuous support to improve energy-related performance in terms of energy efficiency, energy use and energy consumption.

Accordingly, AERZEN has committed itself to identifying energy saving potentials and introducing measures to reduce energy consumption on an annual basis.

As a manufacturing company at AERZEN, many metalworking machines are involved in the production process, so there is a high energy demand. Extensive tests in recent years have identified a large potential for energy savings in the control cabinet air-conditioning units.



Picture above:
Cooling unit DTS 6X1E on the control cabinet of a milling machine.

Picture right:
The X-Series units are available as standard and are also cut-out compatible with Green Series cooling units. This made it possible to quickly convert the units while the machine was running.



Solution

As a "Trusted Advisor", Pfannenber not only recommends products, but also provides holistic advice to its customers. In order to determine the savings potential in the area of air conditioning at AERZEN as precisely as possible, detailed calculations and a joint on-site inspection were carried out.

As a result, over 70 cooling units were identified that could be replaced with more energy-efficient units. The savings potential predicted by this convinced Aerzener Maschinenfabrik to implement this measure.

The choice fell deliberately on the cooling units of the X-series from Pfannenber.

Benefits

These are ideal for the use in industries with high heat loads. This is where the remarkable energy efficiency of the products comes into play.



Picture above:
Opened control cabinet with two X-Series cooling units DTI 6X1E.

In addition, the X-Series units are robust and cut-out compatible, which ensures that the machine processes run smoothly.

These product features and also the extensive advice provided by the Pfannenber Sales team encouraged AERZEN to make this product selection. The implementation was then carried out quickly and thoroughly by service technicians.

After the X-Series had been in operation for over a year, it was found that the forecast regarding energy savings had even been exceeded.

"Overall, the coordination with AERZEN was very professional and friendly, from the consultation to the implementation."



Christoph Kähler

Global Product Manager
Pfannenber Europe GmbH

X-Series cooling units (1000 W - 2800 W)

- Energy saving
- Compatible
- Quick assembly
- UL-certified



At a glance:

Situation	Energy saving through the right control cabinet air conditioning
Installation time	Replacement of 70 cooling units realised within approx. 3 weeks
Challenges	<ul style="list-style-type: none"> ▪ Realise significant savings potential ▪ Replacement of 70 cooling units during machine operation
Product solutions	<ul style="list-style-type: none"> ▪ X-Series cooling units: DTS/DTI 6X1E 230 V 7035 ▪ X-Series cooling units: DTS/DTI 6X2E 230 V 7035 ▪ Compact cooling unit DTS 6201C 230 V MC 7035 ▪ Top-mounted cooling unit DTT 6801 400 V MC 7035 ▪ Filterfan PF 43.000 IP 55 ▪ Exhaust filter PFA 40.000
Success factors	<ul style="list-style-type: none"> ▪ Joint on-site inspection to identify the equipment & process flows. ▪ Calculations of savings potentials & energy-efficient product selection ▪ Close communication between all parties involved



Picture above:
The operating unit (Premium Controller), specially developed for the X-series, enables communication between the cooling unit and the machine control system, as well as integration into modern production processes.



Picture right:
An X-Series cooling unit DTS 6X1E was mounted on the door of the control cabinet to cool the sensitive control cabinet electronics of a milling machine. The large distances between the intake and outlet openings ensure a long airflow. This ensures a safe flow through the control cabinet.