



Asking the right questions leads to increased plate heat exchanger performance

Co-location data center receives fouling solution in free-cooling application

Data centers account for nearly 20 percent of the world's energy use and seven percent of CO2 emissions. Maintaining plate heat exchangers (PHE) is critical to building more sustainable data center operations and requires proper expertise and experience to yield desired results.

A co-location customer put an RFP out for service when they discovered their plate heat exchangers had decreased performance, were experiencing fouling and pressure drops. Two other service providers could not diagnose the root cause of the problems. Alfa Laval sent a trusted service advisor to do a site walkthrough and free performance inspection of their four heat exchangers.

It was recommended that 281, 17-year-old plates be replaced in each heat exchanger. The order was managed at an Alfa Laval service center where the plates and gaskets were assembled quickly, efficiently and in the correct order. Alfa Laval field service technicians performed the

turnkey plate back installation quickly to reduce customer downtime. With Alfa Laval, you have one partner to optimize the performance of all your plate heat exchangers, no matter what brand.

Alfa Laval has been a leader in heat exchange technology since 1933. This free cooling co-location customer was impressed with Alfa Laval's trouble-shooting expertise and installation prowess. In the end, the customer benefitted from no more fouling and pressure drops and experienced the associated energy savings from properly performing heat exchangers.



The benefits of a gasketed plate-and-frame heat exchanger

- Enables bypassing of chiller for free cooling when outdoor temperature and climate allows
- Reduced use of water and pumping costs thanks to cleaner pipes and minimized flushing needs
- Reduced maintenance costs for downstream cooling equipment
- Improved uptime with no unplanned shutdown due to corrosion issues
- Simple and easy cleaning of heat exchanger by single operator in just a few hours
- Performance certified according to AHRI

Alfa Laval's contribution

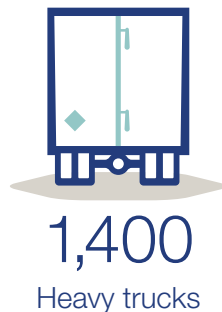
Our yearly new installations

Every year, new Alfa Laval plate heat exchangers enable free cooling in data center operations, resulting in 144 GWh of energy savings and a CO₂ emissions reduction of 33,000 tonnes. This is the equivalent of heating:



Total installed base contribution

Annually, Alfa Laval heat exchangers provide a total of 530 GWh of energy savings through free cooling in data centers. They also reduce CO₂ emissions by 120,000 tonnes, or the amount generated by:



Imagine if...

...by 2030, all data centers utilized the waste heat from the servers. They would reduce CO₂ emissions by 680 million tonnes every year, while saving a combined 3,000 TWh, the equivalent of what it takes to heat:



The customer

This global co-location customer provides hosting solutions to more than half of the Fortune 500 companies.

The challenge

Determine the reason for fouling and decreased pressure.

Reduce maintenance costs

Eliminate unnecessary downtime caused by performing maintenance and plate installation on a fixed schedule.

The solution

Site walk through with a performance audit revealed replacing 281 plates would improve performance and efficiency.

Benefits

With Alfa Laval's troubleshooting and heat transfer experience, the free cooling customer eliminated fouling and pressure drops and experienced increased energy savings.

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How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.us