



## Summary

<b>Industry:</b>	Aerospace
<b>Application:</b>	Cooling Water Booster Set
<b>Actual Saving:</b>	£57,000.00
<b>Payback Period:</b>	2 years



## Booster Set For Cooling Water Circuit

ERIKS works closely with supplier to meet customer needs

### ISSUE

A major aerospace component manufacturer operated 6 fixed speed end suction pumps on the sites cooling water circuit. These 6 pumps were each driven by 22kw motors, all fixed speed machines and were designed to pump water around the sites cooling water circuit irrespective of whether cooling water was required.

The site knew these pumps were inefficient and wanted to investigate the supply & installation of a modern purpose built cooling water supply system.

### SOLUTION

ERIKS Pump Technology in conjunction with Grundfos undertook a site pump audit to determine if there were any savings to be achieved in replacing the old systems pump sets based on energy savings and payback time.

The pump audit included the measurement of 3 values; Flow (m<sup>3</sup>/hr), differential head(m), and consumed electrical energy (kw). The flow was measured using an ultrasonic clamp on flow meter. The differential head was calculated using two direct pressure transmitters. The consumed electrical power was measured using a power meter that measured voltage and current. The power meter then calculates the power consumption.

From the data extracted ERIKS could see that the current installation consumed 910,916 m<sup>3</sup> pa (based on 24/7/365 operation). To produce this flow capacity the current system absorbed 935,533kWh as opposed to the proposed Grundfos solution which only absorbs 221,275kWh. This would provide a saving of 714, 258 kWh pa, equal to a saving of £ 57,141.00 pa and a ROI of 1.5 years.

The measurement shows that the existing pump sets were both oversized for the normal operation, but more importantly the way they controlled the existing pumps meant that efficiency was compromised. The booster set solution from ERIKS / Grundfos shows an efficiency increase up to 72% when compared to the existing 11%.

ERIKS / Grundfos recommended replacing the existing pumps to a Grundfos Hydro MPCF 4(5) CR120-3 booster set complete with external variable speed drives in the booster set.

### OTHER BENEFITS

- The pumps are equipped with a service friendly cartridge shaft seals
- Pump changeover is automatic and depends on load, time and fault.
- The system performance is adapted to the demand through cutting in / out the required

### FURTHER COMMENTS...

This application is an excellent example of how ERIKS Pump Technology look at systems and are able to identify energy saving products which have very clear benefits in real time costs savings to the client.

### MORE INFORMATION

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