

INDUSTRIAL COOLING:

ACHIEVING ANNUAL SAVINGS OF \$245,000

GRUNDFOS
iSOLUTIONS | A SMART SOLUTION
FOR YOU

FIND OUT HOW GRUNDFOS iSOLUTIONS DELIVERED SIGNIFICANT ENERGY SAVINGS AND SYSTEM OPTIMIZATIONS FOR A LEADING ENGINE AND TURBINE MANUFACTURER

A leading UK engine and turbine manufacturer turned to the deep application knowledge of Grundfos when it needed an Energy Check of its cooling systems. With Grundfos iSOLUTIONS and our unique partnership approach, the manufacturer has secured a number of significant savings.

33%

ENERGY SAVINGS

\$245,000

SAVED A YEAR

1.8 YEARS

PAY-BACK TIME

be
think
innovate

GRUNDFOS 



EXISTING SYSTEM

Existing pumps:

x19 Grundfos CR 32-10

Existing control mode:

Fixed speed

Existing operation mode:

Uncontrolled, all pumps running at full speed (100%)

Measured P1:

30.4 hp per pump

NEW SYSTEM

New selected system:

All existing pump replaced by x19 Grundfos CRE 32-7 with integral pressure sensors and small pressure tanks

New control mode:

Constant pressure, with a pressure setpoint to respond to system needs - 183 PSI discharge pressure instead of 232 PSI

New operating mode:

VFD operating mode controlled by a digital signal from the pressure sensor, with a start/stop input signal from a PLC and output relays for run and faults

New load profile:

Constant pressure operation at reference duty point of 132 GPM @ 179 PSI

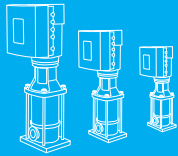
SOLUTION & OUTCOME

The new solution is based on E-pumps, CRE 32-7 pumps with pressure sensors, and a small break tank. The new control mode is constant pressure, while pumps automatically stop when they are not needed.



EASY OPERATION

Grundfos iSOLUTIONS ensures pump operations always match system loads, resulting in maximum efficiency and minimum energy use. Our controls and integrated frequency converters increase system intelligence and flexibility and reduce life-cycle costs.



FULL CONTROL

Uncontrolled pumps have a huge influence on how efficiently other individual components in a unit cooling circulation system work, and they exert a major influence on overall system performance. That's why Grundfos iSOLUTIONS and E-pumps were chosen for this critical process.



MAXIMIZED RELIABILITY

To guarantee performance, Grundfos performed a full system audit and provided a written commitment on expected future system performance before the retrofit. This has resulted in maximum reliability for the entire cooling system.

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