

INDUSTRIAL COOLING:

REACHING OPTIMAL SYSTEM PERFORMANCE

GRUNDFOS iSOLUTIONS



FIND OUT HOW GRUNDFOS iSOLUTIONS ENABLED A MAJOR US ADHESIVES MANUFACTURING COMPANY TO OPTIMISE PERFORMANCE AND SAVE SIGNIFICANT OPERATING COSTS WITH ONLY 1.57 YEARS PAY-BACK TIME

For the major US adhesives manufacturing company supplying industrial adhesives worldwide, improved system reliability and minimum system loss were key drivers for choosing Grundfos iSOLUTIONS in its cooling tower application. Thanks to constant temperature control, the company now has less system complexity with no need for traditional regulation valves.

MINIMUM
SYSTEM LOSS

77%
ENERGY SAVINGS

€41,112
SAVED A YEAR



EXISTING SYSTEM:

Existing pumps details (Loop A):

x2 end-suction pumps

Existing pumps details (Loop B):

x2 end-suction pumps

Existing control mode: Fixed speed

Existing operation model:

Uncontrolled, all x4 pumps running at full speed (100%)

Loop A: 49.07 kW/pump

Loop B: 20.72 kW/pump

NEW SYSTEM:

New system details (Loop A):

x2 Grundfos NK 125-400/368 + CUE 3X 380-500v 22kW IP55 + temperature sensor

New system details (Loop B):

x2 Grundfos NB 125-250/262 + CUE 3x380-500v 22kW IP55 + temperature sensor

New control mode: Temperature control – Constant temperature

New operation mode:

Pumps will adjust their speed depending on how much flow is needed to guarantee a constant temperature in the heat exchange pipe

New measured P1: 10.61 kW/pump (-77.77%) + 4.79 kW/pump (-76.89%)

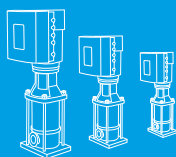
SOLUTION & OUTCOME

Based on decades of cooling application knowledge, Grundfos delivered an out-the-box ready solution with built-in controls. This has enabled reliable process optimisation with improvements to the entire existing pump system.



EASY OPERATION

As pump and control is built to compliment each other, operation is made easier and ensures reliable process optimisation.



FULL CONTROL

Constant temperature control is built into the pump. This benefits most systems in terms of reliability, user-friendliness, process adaptability and operating efficiency.



REDUCED OPEX

Investing in intelligent control and high-efficiency pumps has improved operation, minimised downtime, reduced repair, and resulted in energy savings of 367,511.04 kWh per year.