Winchester University

OCHSNER Heat Pump Case Study

OCHSNER
HEAT PUMPS

A Gold Tier Green University, Winchester has continued to set itself apart from it's counter parts through it's replacement of 35 gas boilers with OSHSNER low energy air source heat pumps.

Summary of Changes

This ambitious decarbonisation project, with the installation commencing in 2020 with OCHSNER heat pump commissioning following from 2021 onwards, represents a significant investment in sustainable technology and a major step towards the university's carbon neutrality goals.

The core of this extensive heating upgrade is a powerful and sophisticated combination of 36 OCHSNER AIR 41 units to date, spanning 17 buildings. These have been installed in a carefully engineered array of systems across the campus ranging from stand alone units to cascading systems up to 6 heat pumps, providing a total heating capacity of almost 1.5 MW. This strategic deployment ensures that the university can meet its diverse heating demands efficiently and reliably, marking one of the largest OCHSNER heat pump projects in the UK higher education sector and setting a new benchmark for sustainable campus energy solutions.

For more information regarding OCHSNER heat pumps contact our England and Wales team below.

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The AIR 41 - Heating and Cooling

Indoor unit: 1289 x 600 x 680 [mm]
Outdoor unit: 1104 x 2224 x 965 [mm]
Flow temperature max: 65 [°C]
Possible building heat load: 23-38 [kW]
SCOP: 3.83
Energy efficiency class: A++

The OCHSNER Heating Solution

The success of a decarbonisation project like the one at the University of Winchester hinges on selecting the right technology. The OCHSNER AIR 41 air source heat pump was chosen specifically for its unique combination of features that make it exceptionally suited for large, complex, and sensitive environments.

Silent Operation

A university campus is a bustling environment where noise levels must be kept to a minimum to avoid disrupting lectures, study sessions, and student life. The OCHSNER AIR 41 excels in this area thanks to its innovative split design.

Unlike conventional monobloc heat pumps, the primary sound-producing component, the compressor, is located inside the building within the sound proof indoor unit. The external unit contains only the whisper-quiet fan. This design dramatically reduces external noise, making the AIR 41 one of the quietest heat pumps on the market and ideal for deployment in close proximity to occupied buildings like lecture halls and accommodation blocks without causing any acoustic disturbance.

Ideal for Heritage and Listed Buildings

Working with historic and listed buildings presents unique challenges, as planning regulations rightly demand minimal aesthetic and structural impact. The AIR 41 is perfectly designed for these scenarios.

The split system results in a significantly lighter and more aesthetic outdoor unit, as it doesn't house the heavy compressor. This reduces the structural load on historic roofs or walls and allows for more discreet, flexible placement options. They can even be placed up to 16 meters away from the building.

Engineered for Decades of Reliability

A key consideration for a large-scale investment is the longevity of the equipment. OCHSNER have been manufacturing heat pumps since 1978 and are renowned for their robust Austrian engineering and are built with top components including a stainless steel power-coated shell to withstand the elements. The AIR 41 is no exception, with a designed operational lifespan projected to last well over 20-25 years, with some OCHSNER heat pumps installed exceeding 37 years of operation.

This exceptional durability is, once again, enhanced by the split design. By housing the compressor and sensitive electronics safely indoors, they are shielded from the damaging effects of harsh weather, temperature extremes, and humidity. This protected environment not only prevents premature wear and tear but also ensures consistent, reliable performance year after year, guaranteeing a secure, long-term return on investment for the university and other clients.

At the forefront of innovation since 1978, Ochsner heat pumps are engineered with cutting-edge technology to surpass the highest performance and environmental benchmarks. Each Ochsner system is a testament to our commitment to harnessing natural resources with exceptional efficiency to minimise the ecological footprint of your home. Our dedication to a sustainable future is matched by our pursuit of designing whisper-quiet heat pumps that preserve the peace and quiet of your living environment.

By choosing Ochsner, you are not just selecting a superior heating and cooling system; you are embracing a philosophy of environmental stewardship and technological leadership. Experience the Ochsner difference: where innovation, efficiency, and silence converge.

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