

e-Series modular chiller installation provides efficient cooling for ASDA head office

Chillers



ASDA House in Leeds is benefiting from energy-efficient cooling with the installation of ten Mitsubishi Electric e-series modular chillers, replacing its existing outdated system.

e-series



Case Study

ASDA Head Office, Leeds

The site, ASDA's three-story head-office, operates as the central hub for the company and houses several functions, including office and meeting spaces, cafeterias, and customer support teams.

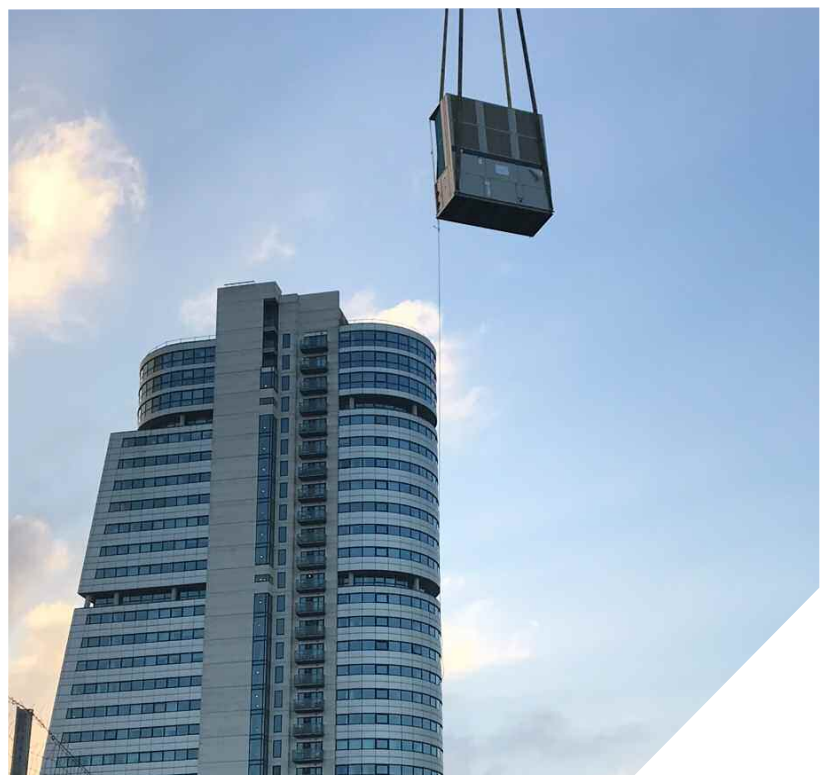
The building needed a new, reliable, energy efficient chiller system to replace the existing McQuay and Trane units.

ASDA House needed a chiller system which was able to meet the significant cooling demands of the building as efficiently as possible. As the company's head office, ASDA House also needed its cooling system to be extremely reliable to deliver a comfortable working environment to the employees working in the offices.

With a site located in the heart of Leeds city centre next to the river Aire, the site faces access restrictions, making ease and speed of installation a crucial factor. With only an eight-hour window on a Saturday to remove the old units and install the new chillers, it was essential there was a modular solution that could work on a "plug-and-play" basis, sitting on the existing blocks and connecting to the building's existing duct work.

Following a consultation with Mitsubishi Electric, the team were keen to use Mitsubishi Electric's e-Series chillers, based on the range's efficiency credentials and flexibility.

ASDA worked with DDA Ltd consulting engineers and Yorkshire Building Services (YBS) installers to deliver ten e-Series EACV-P900YA-N chillers, providing 900kW of cooling to the wing of the building.



“ For ASDA, it was important that it invested in a system which would operate flexibly at a variety of load conditions, but was also available in modular form. ”

Tim Anderson
Yorkshire Building Services
(YBS)

“The installation restrictions were quite challenging, given ASDA House’s location in the city centre, but thanks to the Mitsubishi Electric e-Series chillers modular design, we were able to quickly get these up and running. It’s also possible to relocate the chillers if needed, which is a significant bonus.” said Tim Anderson of YBS

The e-Series is designed with a common internal header pipe which helps to simplify the design, installation and maintenance of the range. It also helps to reduce space requirements, leading the e-Series to be the perfect solution in a restricted urban environment. Low noise levels were a key requirement for the same reasons: by using highly efficient components and a uniquely shaped heat exchanger within the chiller, the e-Series range offers market-leading low noise levels - no unit exceeds more than 65 dB(A) from any one side.

The e-series design also incorporates two high efficiency inverter-driven scroll compressors, allowing each unit to operate between 8-100% of full capacity. This broad operating range gives the e-Series exceptional part-load efficiencies, which is how the system will operate for the majority of the time.



The decision to adopt a more reliable, modular solution presents ASDA with a great opportunity to evaluate the e-Series chillers, before rolling it out more widely across its estate.

An important reason for the selection of the e-Series was the product's resilience. This is delivered through the modular design of the system; and with over twenty compressors, if a single compressor fails, 95% of the peak load can still be provided without interruption.

"A modularised engineering approach, alongside many years of experience and development with our in store refrigerated cooling systems has resulted in significant reductions in trading risk, enhanced efficiencies and industry leading refrigerant leakage reductions. Trialling this same engineering concept for the heating and cooling of our buildings we hope to achieve this same level of risk mitigation, performance and reliability. This could also pave the way for a more meaningful adoption of next generation HFO refrigerant technology through these low charge system designs." Brian Churchyard at ASDA said.



Installation Summary

CHILLERS

Equipment:

- 10 x EACV-P900YA-N e-Series cooling only chillers



EACV-P900YA-N

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Note: The fuse rating is for guidance only. Please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air-conditioning equipment and heat pump systems contain a fluorinated greenhouse gas: R410A(GWP:2088), R32(GWP:675), R407C (GWP:1774) or R134a (GWP:1430). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. In case of Regulation (EU) No 626/2011 from IPCC 3rd edition, these are as follows: R410A(GWP:1975), R32(GWP: 550), R407C (GWP:1650) or R134a (GWP:1300).



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