



CASE STUDY

Sector:
Office fit out
Contract:
Mechanical Install

Airmaster installed a new high efficiency Mitsubishi Hybrid system to the new modernised office space at AESSEAL, whose global headquarters are based in Rotherham, South Yorkshire.

Over the years, regulations have been ever-changing to lower the impact of air conditioning refrigerants on the environment and reduce global warming. The team at AESSEAL tasked Airmaster to provide them with sustainable air conditioning systems which target both their energy efficiency-conscious operations and further reduce their impact on global warming. The system will also ensure the internal office environment is adaptable to the constant climate changes.

The project installation was for a highly energy-efficient Mitsubishi Electric R32 Hybrid HVRF system which has a lower global warming potential (GWP) of 675 over its R410a VRF predecessor in 2018. This system also utilises a hybrid between refrigerant and hydraulic water to provide simultaneous heating and



cooling to the office space, further reducing the GWP potential.

Primary ductwork modifications were carried out to deliver fresh air to the void-mounted fan coil units which precondition the air prior to distribution into the office space. Then new secondary ductwork



which was connected, thermally insulated, and balanced onto linear grilles was installed the full length of the office space. Hybrid systems utilise part refrigerant / part hydraulic water, therefore requiring a category 5 break tank, PRV, pressure monitoring and distribution pipe work to the HVRF selector box for filling of the hydraulic water circuits of the system.

The system is controlled via a central touch screen intelligent controller, allowing multi functional zoning, time control and system diagnostics, along with integration to the building's automatic BMS controls system using BACnet protocol.

This project was completed in August 2024, with the second phase of the project commencing in February 2025 in another part of the large AESSEAL Rotherham facilities. This will be followed by additional works later in the year to de-carbonise the building further by removing the existing gas boilers and installing more energy-efficient systems utilising similar technology as their warehouse heating. It's been great to work alongside such a forward-thinking company who share our desire to move towards systems with higher efficiency and lower GWP potential.



"The installation of the first-floor hybrid system was completed with the utmost professionalism, integrity and care. The support from Airmaster in the office was outstanding, along with the support the engineers showed, which was brilliant! The lead time from placing the order to the kit arriving and being installed was a really good turnaround. I have had feedback from those within the office saying how grateful they are for the upgrade, and how they can tell the difference with the new system."

Billie Clark
Facilities Maintenance &
Project Co-ordinator, AESSEAL



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