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# AHU Refurbishment

Astrea Bioseparations  
Isle of Man

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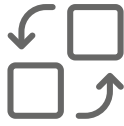
Bio-pharmaceutical AHU Refurb

by Mansfield Pollard



## ENERGY UPGRADE

Replacement of belt driven fan with direct drive AC plug fans with inverters



## AHU REMODELLING

Bulkhead redesign to accommodate upgraded fans and DX coil



## DX COOLING

Precision cooling control via DX coil with additional circuits for future expansion



## INCREASED PRESSURE

Positive pressure capability increased by 45% from 1352 Pa to 1980 Pa

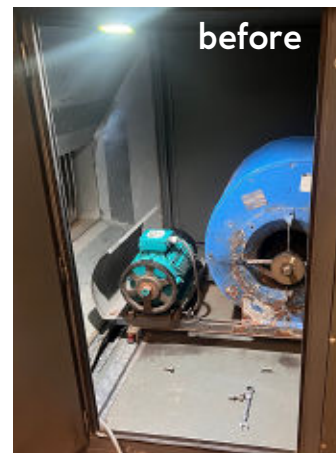
## THE PROJECT

Astrea Bioseparations is a world renowned Gamma Biosciences company with a manufacturing plant in Ballasalla on the Isle of Man. Modernisation of the facility was to include a full refurbishment of critical air handling units serving the laboratories and cleanrooms on site. Positive and negative pressurisation of the labs had been a historical problem and with energy efficiency and future-proofing of lab capability being key project drivers, Mansfield Pollard were engaged to deliver an all encompassing solution.

The cooling capability of the existing AHU was inadequate for the current levels of critical laboratory processes. A DX coil with two operational circuits to match the existing heat pumps was installed with two additional non-piped circuits included for future expansion of the cooling duty (when further heat pumps are installed). A remodeling of the bulkheads to accommodate the new coil plus oversized drain tray was also designed to accommodate the installation of duplex direct drive AC plug fans (with inverters) to facilitate a 20% increase in duty and the potential to increase positive pressure by 45% to 1980 Pa.

All filter frames were fully refurbished to minimise air leakage and filter bypass.

FAN SECTION



FILTER FRAMES



BULKHEAD

