



SPRUCE AHU CASE STUDY //



This Spruce AHU unit is installed on a retail store where it provides heating and cooling via a direct expansion CO2 coil from the integral heat pump.

The unit can produce an air off of 30°C with an airflow of 8m³. The variable speed inverter compressors maximize the seasonal efficiency and achieve stable thermodynamic regulation in any load condition. The graph above shows the load tracking.

The integral heat pump minimises space take, as well as install cost as there is now LTHW circuit. The low refrigerant charge means that CO2 is safe in this application, non-toxic and non-flammable it is quickly dispersed in the air flow. Unit is fitted with leak detection and alarms.

Whilst only installed in the spring of 2023 this unit has already performed well. The installation was quick and simple, with commissioning and optimisation following on.

Data is being gathered from the digital control system and will be published shortly.