



Aldi Project Fresh Nationwide 2019



PROJECT

Tech Refrigeration & Air Conditioning were appointed by ALDI Ireland to carry out the majority of CO2 refrigeration upgrades in its Project Fresh 2018 Scheme and all of the CO2 refrigeration upgrades scheduled for Project Fresh 2019. We upgraded 7 stores with CO2 plant in 2018 and are on track to complete all 14 stores scheduled for 2019. Tech's Aldi project team create, co-ordinate and manage precise work programs and project design files for approval on each project to ensure client satisfaction prior to all project start. Each store is completed within a 15 day program including 5 day shutdown.



PRODUCT

Plant used: EWS-DT-H3D-L1-DD-Carel-3-R744 Dual Temperature CO2 Pack.

The EFHS pack operates as a dual pressure booster system with 2 X 3 MT compressors & 1 LT semi-hermetic reciprocating compressors. The EFHS pack possesses a high efficiency oil separator with a coalescing oil filter and reservoir. The oil separator is able to reduce the oil in the fluid down to 10ppm. Since oil separation efficiency is completely independent of speed, the system is guaranteed to operate at its maximum efficiency even when the system capacity falls down to 1% under any operating conditions. When the compressors require oil, it is fed automatically at high pressure to the oil regulator. The oil separator has its own oil receiver. The Pack is equipped with an on board high pressure liquid receiver, low level liquid alarm and dual pressure relief valve (PRV) arrangement. The main electronic pack controller operating the compressors will also control the gas cooler fans in conformity with the given load. This happens through a pressure transducer and temperature probe on the Gas Cooler Drain Line. For manual control, in the event of main controller failure, an electronic backup controller will take control and this will have its own transducer to monitor the pressure/temperature and operate accordingly.



APPLICATION

CO2 is a natural component of our atmosphere that is essential to life. It has no ozone depletion potential and insignificant global warming potential, so CO2 has no regulatory liability, unlike HFCs. Other benefits of CO2 are that it is a natural substance, it is cheap, readily available, not poisonous in any common concentration and is non-flammable. In practical applications, CO2 systems deliver very high performance, the main reasons being better heat exchange, very low pumping power when CO2 is used as a secondary fluid, and in cold climate the possibility of operating with a very low condensing pressure in the winter.

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