

CASE STUDY

SULLAIR JOINS FORCES WITH INNOVATIVE OEM, DELIVERING EXTRAORDINARY CRYOCOOLER TECHNOLOGY SOLUTIONS



PRODUCTS

Oil free compressor solutions for AFCryo's CryoCube



LINES

Oil-free, service and spare parts



INDUSTRY

Mixed (Food & Bev, Pharma, Defence, Aviation)



The brief

Our client is AFCryo, a New Zealand based OEM, formed in 2017 as a joint venture between Absolut System (based in France) and Fabrum Solutions (NZ). Collaboration between these two companies emerged from recognition that together they could offer world leading cryocooler technologies for a myriad of applications.

One such product is the CryoCube, a game changing innovation that - to achieve its full potential - required product partnerships with internationally recognised brands (including Sullair), to achieve global reach and deliver worldwide support capabilities.

AFCryo has customers that are involved in

- Helium recovery and Liquid Nitrogen generation
- High temperature superconductivity testing

For the purpose of this case study, AFCryo's client is a pharmaceutical ingredients manufacturer involved in:

- Vaccine and serum co-ingredient development as part of the COVID-19 response

The brief from AFCryo's Pharma client was to provide a secure supply of pharmacopoeia compliant liquid and gas, for their operations. With the unique safety requirements of the COVID-19 environment, it was important that the solution was fully tested and approved for before shipping, so that the unit was fully operational on delivery to the client. This 'plug and play' type scenario when delivered on site, meant the unit need only positioning and a power supply on arrival.

The solution

The client's needs could be perfectly met by the CryoCube, thanks in no small part to the outstanding level of service and support that comes with the product; a motivating factor in the strategic partnership of AFCryo with a globally positioned brand like Sullair.

AFCryo's core business is in making cryocoolers, the heart of which is a patented dual diaphragm pressure wave generator, and a virtual compressor with no moving parts that delivers rugged, low maintenance and efficient cryocooling. To create an end to end, full air to liquid system, AFCryo was able to solve a number of challenges that have existed in the market, and through strong brand partnerships, developed the CryoCube. The cube is a mobile system that is effectively a custom sized shipping container, containing the cryocooler, combined with an oil free air compressor (supplied by Sullair) and a PSA nitrogen gas generator. It can be put on to any vehicle and shipped anywhere in the world, and assuming available power source, be producing product within an hour of delivery on site.

In the case of the Pharma client, the CryoCube offered guaranteed production of liquid and gas, to international pharmacopeia standards, fully factory acceptance tested and approved before it left for delivery to the client. Sullair air compressors provide a fit for purpose, quiet, energy efficient solution essential to the CryoCube's overall function. The robustness of the CryoCube is fundamentally dependant on the specifics of its components, but also the partnerships with the OEMs involved in its production.

Nigel Bartlett of AFCryo explains, "we see Sullair as a partner not a supplier. We got them on board not just for the product specifications and installation, but for their entire support capabilities. The value we see is around how quickly we can respond in the event that there is a challenge to overcome".

The result

The immediate result is that the Pharma client has been able to become fully independent of reliance on an external supply of liquid. The long-term advantages of that will continue to reveal themselves.

"From a client's risk point of view at the operations level - all they're interested in is having a full tank of liquid nitrogen when they need it", explains Nigel Bartlett. "In partnership with Sullair, we take care of the rest". The CryoCube partnership model means not only can the client's liquid production be guaranteed and on hand at all times, the remote monitoring component of the product and proactive servicing take a completely pre-emptive approach, which eliminates any margin for non-user error or interruption of supply. Jean-Philippe Leclercq from Sullair said "when things are going well it's so easy, but when things aren't there's a whole chain of supply between the end user, AFCryo, and Sullair, down to the factory and all of our team - the product technicians, support people, spare parts and so on. We at Sullair are well equipped to respond quickly and accordingly."



Sullair is an internationally recognised brand with a good quality proposition. Because of our relationship with Sullair in Australasia, within 24 hours of an issue, someone with a Sullair or Hitachi jacket can be on site to help us.

- Nigel Bartlett, AFCryo

