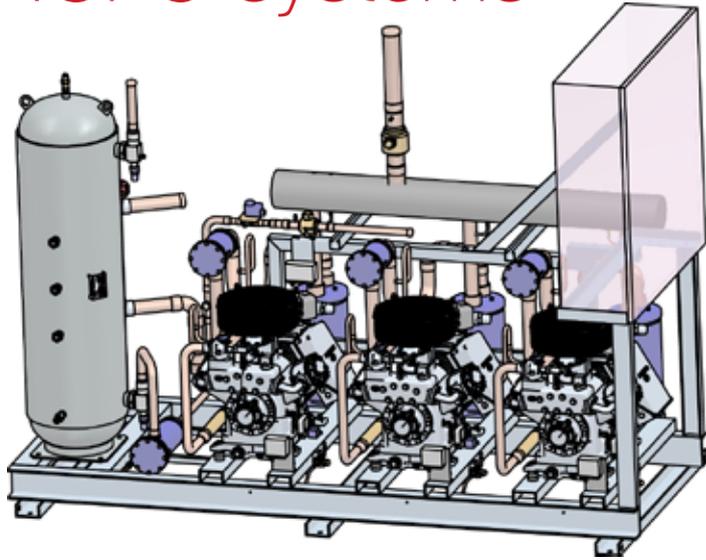


Studies in success



Complete retrofit solutions for HCFC systems



The Kirby customised 3 compressor Dorin Rack manufactured by Heatcraft delivered improved temperature control and reduced maintenance costs.

Heatcraft Australia recently worked together with PAC Refrigeration Services to design and supply a customised compressor rack solution for a Markwell Fisheries Seafood Processing Plant.

The existing plant was also carefully decommissioned and retrofitted prior to installing the new equipment to ensure a successful changeover.

Increasing maintenance costs, temperature instability and the desire to find a more energy efficient solution for the site, prompted the customer to engage the services of PAC Refrigeration Services.

The existing plant equipment included a condensing unit with a Mycom open drive reciprocating compressor, operating on R408A and 3 plate evaporators used to snap freeze the produce. The evaporators were custom built for the application and the plant had varying loads when in operation.

The Solution

As the existing equipment was over 20 years old and had been operating on mineral oil, non-condensable material needed to be removed, prior to the installation of the new customised Kirby compressor rack.

At a glance...

The Business Need:

Increasing maintenance costs, temperature instability and the desire to find a more energy efficient solution for the site, prompted the customer to engage the services of PAC Refrigeration Services.

The Solution:

A customised Kirby custom built 3 compressor Dorin rack using R404A with integrated switchboard.

The existing plant was also carefully decommissioned and retrofitted prior to installing the new equipment to ensure a successful changeover.

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Custom built plate evaporators are used to snap freeze the produce.



With assistance from Heatcraft Field Engineer, Glenn Finnigan, PAC Electrical and Refrigeration Mechanic, Jason Fisher, connected an additional condensing unit to the plant for the purpose of flushing out the system. Each evaporator was isolated and flushed out using Polyol Ester (POE) oil with a “sacrificial condensing unit”. The customers’ flushing pump was also used to flush out the steel pipe work to remove system contaminants (see inset images).

As part of the retrofit, a superheat monitor was custom built and supplied by Heatcraft to evaluate superheat and shut down the plant if a high or low superheat situation occurred, protecting the investment and ensuring that the changeover was completed effectively.

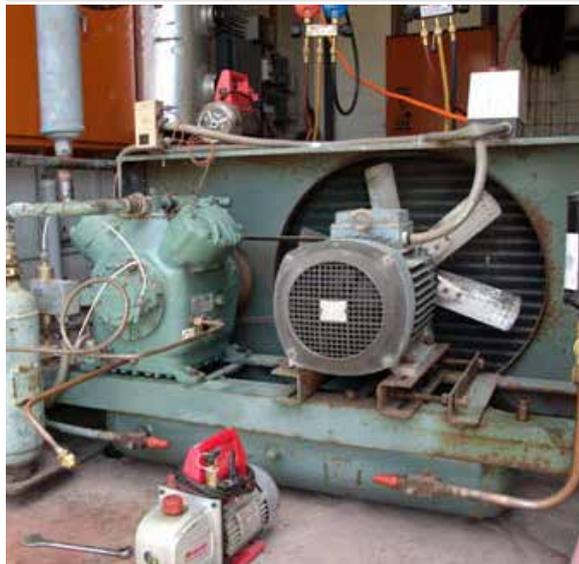
With the system decommissioned and clean of impurities, a Kirby custom built 3 compressor Dorin rack with switchboard was installed using R404A, a non ODP refrigerant that has optimal efficiency for the application.

Since commissioning and through a routine maintenance schedule, the customer has experienced improved temperature control with an overall reduction in maintenance costs. The customised compressor rack is able to adapt to the business’s seasonality and changes in demand, which has lead to overall energy savings.

For all your HCFC retrofit needs including R22 applications contact Heatcraft on 13 23 50. To contact PAC Refrigeration Services, call Jeff Gaw on 07 5598 2224.

Heatcraft’s complete Retrofit Solutions Checklist

- Rack systems with and without complete control solution (in-situ monitoring)
- Control system upgrade options
- System oil check
- Refrigerant diagnoses through the Heatcraft Gas2Go® Doctor Service
- Refrigerant options - with complete retrofit guidelines
- Pump down / Reclaim cylinders
- Latest vacuum pump and recovery units
- Condensing units
- Compressors
- Expansion / Control valves - mechanical and electronic
- Filter driers
- Seal kits
- Oil for all your needs
- Superheat (performance) measurement tools
- Electronic gauges
- Nitrogen



A sacrificial unit was connected to remove non-condensables and contaminants