

# 4 – Pipe Chiller Case Study

## HEATING

Solid fuel heaters  
Gas fires  
Heat pumps  
Radiators  
Under floor  
Solar

## COOLING

Heat pumps  
Chillers  
Fan Coil Units  
Packaged Rooftops

## BOILERS

Domestic > 45kW  
Commercial > 6000kW  
Stokers  
Hoppers

## VENTILATION

Fans  
Air Handlers  
Ducting  
Grilles/diffusers

## ENGINEERING

Pressure vessels  
High temperature  
Conveyors  
Biofuel plants  
Product development

## SHEETMETAL

Stainless steel  
Galvanised  
CNC cutting  
Kitchen hoods

## PLUMBING

Domestic  
Commercial  
Drainlaying  
Gas Fitting



The 4-pipe chiller installations suit clients with a long term perspective due to their longer life span and their ability to be retrofitted.

4-pipe has a system life of 20-25 years\* when compared to a typical 10-12 years\* for a VRF or split system.

The higher capital cost at the start of a project is more than recovered when the alternatives are replaced 2 or even 3 times compared to the 4 pipe

\* these life spans are indicative only and based on CIBSE tables and independent reports that can be supplied

## AD Instruments

### Vogel St Dunedin

In 2012 Rayners was requested by Donald Reid Properties to come up with a design build HVAC system for their new facility in Vogel Street Dunedin.

The client was an owner occupier with a long term horizon, was looking for low running cost and was wanting adaptability should the building layout change over time so we offered a 4-pipe system.

Due to concerns with the high cost of the 4-pipe system the architects engaged an engineer to provide a VRF design which went to competitive tender.

Although the VRF system came in almost 20% less than the 4-pipe the client opted for the 4-pipe design.

Key factors in their decision were:

- Water in the building rather than gas
- Ability to retrofit the system at any time without reliance on proprietary equipment
- Higher life expectancy of the plant
- Favourable Life cycle cost analysis for the 4-pipe system over a 30 year window

Stage 1 of this project was commissioned in April 2013

## SERVICES AVAILABLE

System Design

Design and Build

Turn key

Contract Works

Installation and Setup

Maintenance

Technical Support

Compliance



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