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New Zealand
Energy Solutions

Energy Recovery Technology

'Boost' Technology is now available to NZ Processing industry

Enersol NZ is now able to provide practical energy efficient equipment designed locally to deliver alternative heating options at lower energy and capital cost.

This will help business that has existing refrigeration and requires volumes of hot water and reduce the challenge of increasing power costs or struggling to reduce their energy footprint.

This special service is based in Canterbury but available NZ wide - focused on energy efficiency for refrigeration, heat recovery and providing pre-cooling water systems to protect product quality (snap-chilling).

Enersol 'Boost' has a number of benefits over earlier technology

- ability to always provide very hot water (85+ degrees C at the unit)
- provides very effective sub cooling to refrigeration unit (20-33%) so reduces run time on hot and cold days – eCOP up to 8.
- can improve stability of refrigeration unit performance – reduce hunting.
- can add option to switch to extract heat directly from water if refrigeration run time is low to ensure hot water is always produced at lower energy cost than electric elements.
- can add a pre-chilled cooler water system in one unit
- the combination of reduced chilling time plus full heat recovery for water heating means a very high payback in power savings is normal.
- capital cost is modest compared to other heating options with 'Boost' providing greater energy savings
- servicing costs will be low

Boost Origins

The 'Boost' unit technology has developed from the domestic hot water heat pump market; with patents that sort out many of the issues experienced by the domestic variants. Because of the high temperatures able to be generated Enersol was asked to develop a unit that would improve the options available to industry.

Installation

The 'Boost' is designed to be easy to retro-fit and is a simple plug and play installation easily fitted by your refrigeration, electrical and plumbing serviceman.

The Hot Water delivery is plumbed in insulated copper pipe to your storage cylinders which are generally coupled together as communicating tanks.



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Design and Manufacture

The internal base equipment in the 'Boost' uses Scroll Compressors set up to work within the manufacturers "standard design envelope" which sets it apart from many of the competitor products. The thick walled copper heat exchangers are made to Enersol design using refrigerant grade copper (very pure copper and seamless) and the long thermal length means purchasers are less likely to face corrosion issues experienced in some of the alternative heat recovery devices.

Additional mechanical protection to ensure reliability incorporates a liquid receiver and suction accumulators allowing for anomalies in refrigeration charge (ie. Does not require critical charge). As a result the unit is robust and can be serviced by any competent refrigeration engineer. Other protection devices are provided including external fault diagnostics.

Serviceability

The 'Boost' is designed to be robust but serviceability is provided for as we are aware that this is mechanical equipment and over its long life will require some level of service so the design is specifically focused on easy and simple serviceability with CIP ports included to allow easy cleaning without need to strip machinery down.

There is no interconnected wiring between 'Boost' and refrigeration controllers reducing any chance of installation conflicts.



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