

# OEM Technology Solutions partners AustCold Refrigeration

**AustCold Refrigeration is skilled and experienced in providing systems that are technically complex and incorporate extensive use of Programmable Logic Controllers (PLCs) and embedded systems. AustCold is recognised as having proven expertise with systems operating in the most hazardous conditions.**

The company has been in business for 25 years and has a diverse customer base in Australia with projects ranging from, the Victorian Hospitals' co-generation system, to an oil rig off the coast of Western Australia to coolrooms for Toorak Wines, to a major test system manufactured for Herman Research. In parallel to the local customer base, AustCold has developed an international customer base, which includes customers in Pakistan, Hong Kong, Philippines, China, Russia, Japan, Indonesia, Middle-East, Thailand and Malaysia.

OEM Technology Solutions, formerly the Engineering Services Division of Dominion Electronics, has partnered AustCold on many of these projects providing the embedded control system hardware and software. Hans Polle, Managing Director of AustCold said, "the relationship with OEM Technology Solutions commenced in the infancy of the project for co-generation of power in six Victorian Hospitals, when I saw OEM Technology Solutions' advertisement in a trade publication for an embedded microprocessor control system. Initially OEM Technology Solutions supplied the electronic controllers and software services but now supplies the whole control panel, fully manufactured and tested, for many other projects as well."

The co-generation system for the Victorian Hospital system involved six hospitals that essentially generated their own power and any excess that they didn't need was fed back into the electricity grid for resale. The hospitals included; Royal Melbourne, St Vincents, Alfreds, Geelong and Bendigo.



*Top: Fuel gas compressor, Mitsubishi Motors, Japan  
Above: Compressor control panel  
Below: Varanus Island*

**OEM Technology Solutions apply technology, innovative engineering and design services to develop products & systems to deliver a competitive edge to our customers.**

## OUR SERVICES

- Research
- Design
- Development
- Manufacture
- Validation
- Commissioning
- Support

## OUR SKILLS

- Complex Solutions
- Systems Engineering
- Electronics
- Software
- Mechanical Design
- Production
- Integration
- Testing



The generation system is fuelled using natural gas from the street. The gas is compressed using an AustCold industrial compressor package to a suitable pressure for input into the 5 megawatt turbine. The AustCold fuel gas compressor is controlled by a PK2100 controller manufactured by Zworld Engineering and sold by OEM Technology Solutions. The PK2100 forms the heart of a comprehensive control panel. The control panel is the brain of the machine and performs, start monitoring, safety control, alarm if transient conditions occur, trip if untoward conditions occur and control of remote devices.



The fuel gas compressor packages have also now been delivered to Japan where a number of large manufacturers such as Mitsubishi Motors, Sanyo Special Steels and Honda Motors Corporation are implementing this power generation concept. Dominion has supplied all eleven panels that are operating exceptionally well. OEM Technology Solutions CEO, James McLeod was responsible for designing the software and supervised the implementation and commissioning of the highly sophisticated control systems for AustCold.

AustCold is recognised for its leading edge, innovative technology. Mr Polle has had the foresight to ensure the company has a proven standard process control panel, which has been tested, thoroughly in the field in a number of different applications Mr Polle said, "AustCold has enjoyed a close working relationship with OEM Technology Solutions which is ongoing."

OEM Technology Solutions has worked with AustCold on many other projects that require customised solutions such as refrigeration compressor packages; a boil-off compressor for Toyo Engineering for the production of ammonia in China; an ethylene glycol refrigerated chiller package for Mitsubishi Heavy Industries in the Philippines; water cooled condensing unit for the production of ammonia for a joint Pakistan and US project; a compressor system for the production of concrete by Peter Ellen International in Hong Kong and an icecream freezer compressor package in Victoria.

"One of the most interesting projects that OEM Technology Solutions and AustCold have partnered on was for South Fremantle Engineering for Apache Energy on Varanus Island off the Western Australia coast" according to Mr McLeod.

An oil rig five miles away from the island pumps raw material to a plant on the island whereupon Austcold provides the large capacity refrigeration compressor package that is instrumental in separating the condensates. In addition, large capacity storage of the volatile products is greatly simplified by refrigeration. The requirements for these units are exacting with most operating in hazardous environs and installed at remote locations like Varanus Island. OEM Technology Solutions provides the expertise and panel for the process control of this process.

**NSW based AustCold Refrigeration is a significant engineering and contracting company specialising in the design, manufacture and installation of industrial refrigeration and gas compression systems.**



*Top left: Cogeneration for Victorian hospitals  
Centre: Final commissioning, Varanus Island  
Bottom: Stand alone flash gas compressor, Varanus Island*



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