

iRAC SERIES

VARISPEED COMPRESSOR TECHNOLOGY

Bitzer iRAC Introduction

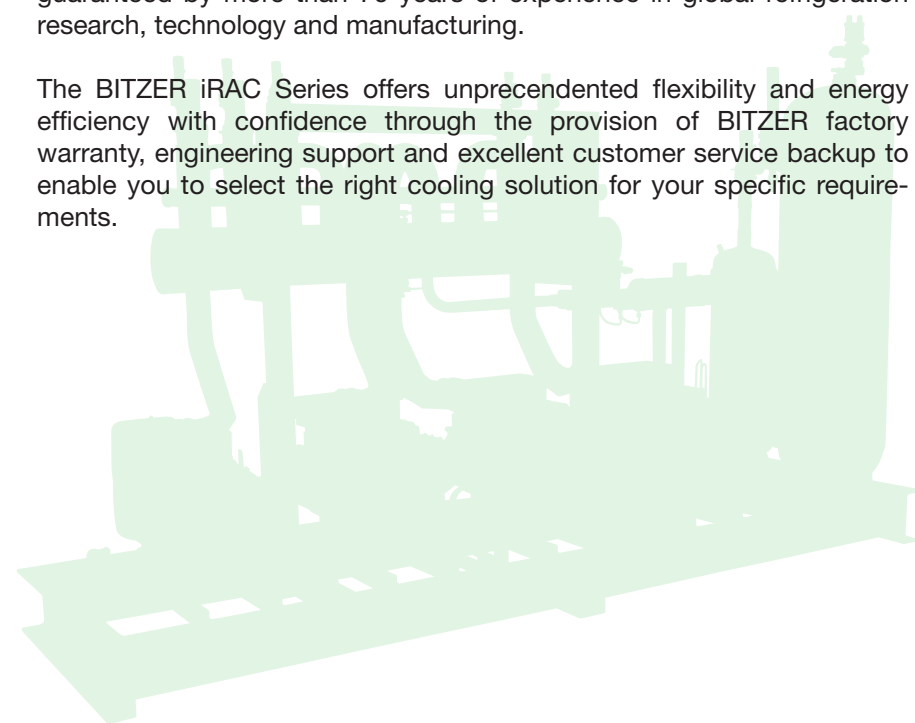
The BITZER iRAC Series is the large capacity, heavy duty range of highly efficient and robust multiple compressor refrigeration packs designed with all piping, ready for on site connection, including all required components, controls and safety devices.

This series includes the frequency controlled octagon (FI) and Second Generation ecoline compressors optimised for R134a. The combination of these technologies makes the iRAC Series ideally suited for large super-markets, cold storage facilities and industrial process cooling.

The BITZER iRAC Series offers the refrigeration designer operational flexibility, since modern refrigeration systems operate at the highest calculated load conditions for only several hours throughout a normal operational year. This requires innovative solutions to ensure energy efficient system load matching during periods of part load. The Octagon Varispeed and Second Generation BITZER semi hermetic compressor combination can operate with stepless capacity control to improve energy costs and product quality. This provides the iRAC with a strong advantage over other compressor technologies.

This large capacity series offers owners and contractors the confidence to utilize the factory assembled products and expertise of one of the world's most successful refrigeration compressor manufacturers. This product is marked by the original BITZER OEM design and the highest quality is guaranteed by more than 70 years of experience in global refrigeration research, technology and manufacturing.

The BITZER iRAC Series offers unprecedented flexibility and energy efficiency with confidence through the provision of BITZER factory warranty, engineering support and excellent customer service backup to enable you to select the right cooling solution for your specific requirements.



iRAC Series

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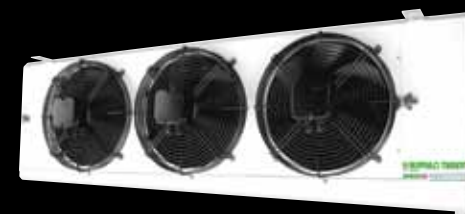
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PS Series Evaporator

- Crisp white powder coated evaporator panels
- Innovative design in Coil Geometry
- Venturi-Effect Technology incorporated in distributor
- Stainless steel fastenings



Delta Series B

- Durable, marine grade housing
- 4-10 fans (500mm, 630mm & 800mm)
- Statically & dynamically balanced fans for economic and quiet operation



VB Series

- Compact design
 - Evaporative pre-cooler assembly
 - 4 - 10 fans (630mm & 800mm)
- Three options of low noise models

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Issue: MAY 2011

Other Products Available

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BITZER iRAC Benefits for Refrigeration Contractor

BITZER offers the iRAC Series large capacity multiple compressor refrigeration racks to our contracting customers as a factory assembled system: designed and built by BITZER Australia trained staff to ensure compatibility of all components which offer durability, reliability and energy efficient performance in a compact system design. The iRAC offers the highest possible operational efficiency over a wide application range using Octagon Varispeed Compressors Technology providing stepless capacity modulation of the system.

Safety has been high on our designers' priority, with all of the necessary pressure control and relief valve protection fitted as standard, as well as provision for correct mechanical handling of the assembly ensures safety first.

Installation times are significantly reduced through innovative design. Attention has been given to the positioning of all required connection points to allow ease of access. With a complete offering of all required components pre assembled on the rack, minimal labour is required to complete the iRAC installation.

Maintenance times are also reduced with the addition of extra service valves, innovative design of components and positioning on the system for prompt access and excellent serviceability.

The BITZER iRAC oil management system offers unparalleled reliability and operational security with its function fully independent of suction pressure and compressor operation, allowing flexible control of multiple suction groups. In combination with the innovative suction header design, oil return is accurately controlled to maintain stable compressor operation through a wide application range.

Noise and vibration controls have been critically reviewed and kept at extremely low levels through advanced compressor technology developments and innovative anti vibration methods adopted on the system.

System gas loss integrity has been enhanced through the use of pre-formed pipe work and highly robust pipe fixings providing a significant reduction in the use of mechanical joints.

With full BITZER technical support, you can be assured of professional assistance during the installation and operation of your project.



Optional fully intergrated electrical panel with microprocessor control

- ❑ Accurate and efficient system control
- ❑ System monitoring
- ❑ Equal run time of compressors
- ❑ Fault diagnosis



Octagon Varispeed Compressor

- ❑ Optimum capacity adaption with integrated FL (25Hz - 87Hz)
- ❑ High system efficiency
- ❑ Integrated maintenance free suction gas-cooled frequency inverter.



BITZER Second Generation Ecoline Compressor

- ❑ High reliability and performance
- ❑ Serviceability
- ❑ Compactness
- ❑ Quiet operation



Large volume vertical receiver manufactured to Australian Standards

- ❑ Reduced operating refrigerant charge
- ❑ Pressure relief valve fitted as standard
- ❑ Three liquid sight glass indicator levels
- ❑ Multiple positions offered for optional liquid level arm
- ❑ Full port flange service valves



Anti-vibration mounting pads/ Raised compressor rails

- ❑ Safe mechanical handling
- ❑ Improved service access



Suction distribution header

- ❑ Multiple integrated suction filter assemblies
- ❑ Oil return balancing system (suction side)
- ❑ Large volume provides excellent liquid separation and vaporisation of returning liquid.
- ❑ Metal clad insulation



Traxon electro-magnet oil management system

- ❑ Accurate metering of compressor oil supply
- ❑ Low Level alarm for each compressor
- ❑ Easy adoption of satellite systems



Hidden discharge header

- ❑ Reduced exposure to burn injuries
- ❑ Rigid mounting of discharge header
- ❑ Reduced vibration levels



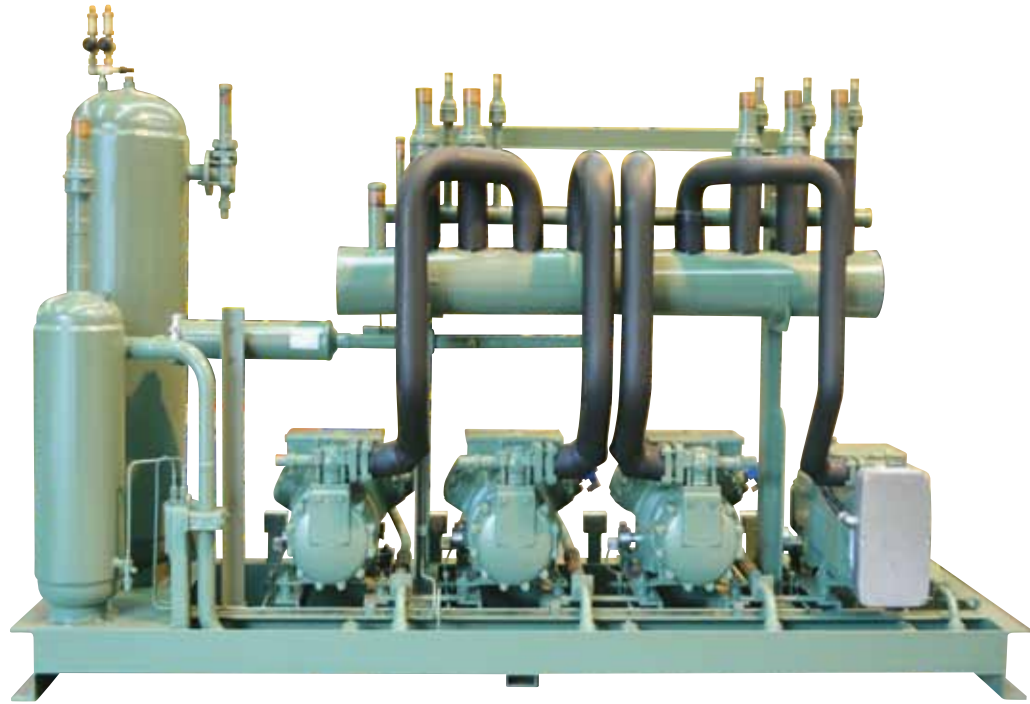
High efficiency centrifugal oil separator

- ❑ High volume two stage oil separation
- ❑ Built in oil reservoir
- ❑ Easy view oil sight glass
- ❑ According to Australian Standards



Demountable oil filter assembly

- ❑ Demountable oil filter assembly
- ❑ Standard size replaceable element
- ❑ 99% removal of 3 micron sized particles
- ❑ Welded rotalock stubs
- ❑ 3/8" Rotalock connections
- ❑ NO flares NO threaded (bsp) connections
- ❑ 1/4" shcraeder access at base



BITZER iRAC Benefits for The System Owner

Flexibility, energy efficiency and durability are paramount design considerations of the BITZER iRAC refrigeration systems. BITZER iRAC refrigeration systems are offered with the very latest technology, BITZER Octagon Varispeed Semi Hermetic Compressors, offering the highest possible refrigeration efficiency with lowest operating costs for both chiller and freezer room temperature applications.

The use of multiple compressors within a common system offers many advantages over a single large compressor as it allows full exploitation of lower power demand when ambient temperature, or the required cooling duty fall below designed maximum conditions.

Greater reliability and dependability is assured through multiple smaller compressors rather than a single large compressor in case of mechanical or electrical failure. With the multiple compressor concept, the refrigeration plant can easily be designed to meet additional enterprise growth and subsequent increased heat load without over-size for current demand.

Factory assembled iRAC systems by BITZER factory trained staff provides innovation, reliability and extended operating life through the optimized use of each individual component as part of a totally engineered package.

Reduced installation times and minimal maintenance down time are delivered through excellent access to all major components with additional system isolation points installed as standard.

Utilizing BITZER iRAC factory assembled refrigeration packages provide system owners the greatest confidence in delivering guaranteed high food quality, low operating costs and excellent customer satisfaction.