



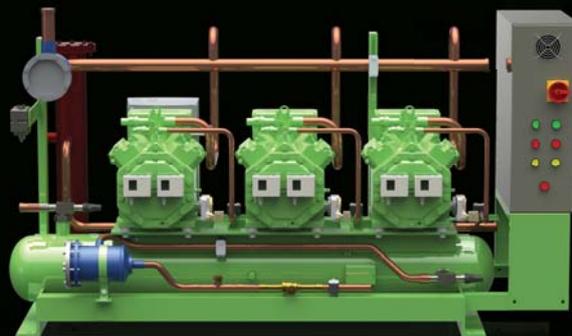
THE HEART OF FRESHNESS

MULTIPLE COMPRESSOR SYSTEMS

COMPRESSOR PACKAGES

ORIGINAL MANUFACTURED EQUIPMENT

Multiple
Compressor
Systems





Multiple Compressor Systems

BITZER Australia for over 50 years has built and designed multiple compressor packages to provide the industry with complete factory assembled finished products ready for installation. Our rack packages are built by BITZER Australia trained staff at our St Marys, NSW facility. This supports manufacturing in Australia and provides confidence to our customers knowing they can have specific equipment manufactured to their requirements within a reasonable time frame and that BITZER staff designing and building the products have an understanding of local conditions.

This series of multiple compressor rack packages continues to provide flexibility, energy efficiency, durability and customer satisfaction. BITZER continues to produce racks from a standard platform and template to ensure consistency. With our local industry knowledge and understanding of our customer's specifications, every rack is unique.

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

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

Features include:

- BITZER Ecoline Compressors
- Two to five compressor packages
- Electro-magnet oil management system
- Suction gas distributor / header with liquid protection with suction demountable filters
- Demountable liquid line drier, sight glass assembly
- High efficient oil separators with oil level sight glasses
- Solid metal base in several platforms
- Demountable oil filter assembly
- Fully insulated suction lines
- Anti vibration mounting pads
- Mechanical safety pressures as requested
- Manufactured under ISO 9001 control
- Optional CRll capacity control

The BITZER Ecoline Compressors

The influence of refrigeration on the environment has increasingly become the focus of public discussion. Therefore energy efficiency of refrigeration systems is an essential criterion. The lower the energy consumption, the more favourable are the environmental balance and life cycle costs. Thus several regions (such as the EU) Directives and Standards have come in order to define minimum requirements to energy efficiency.

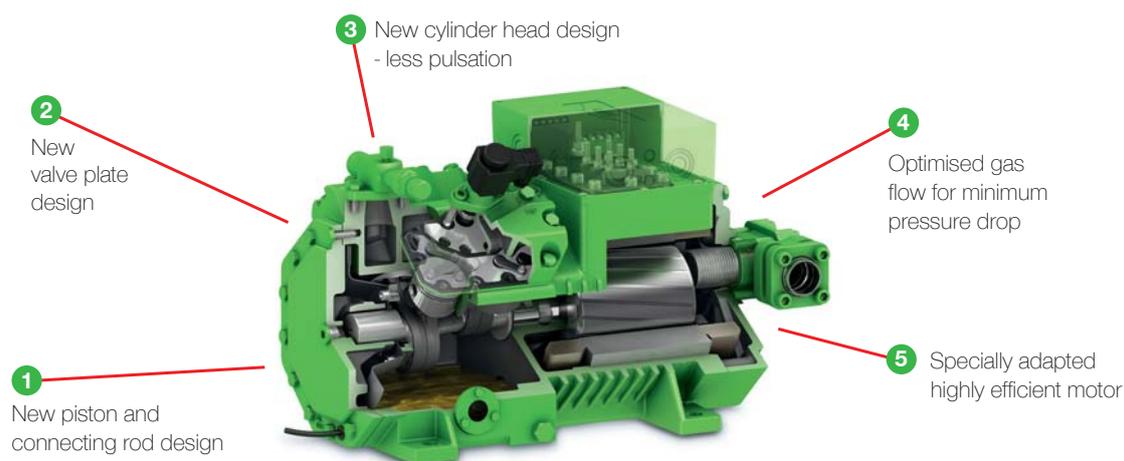
With this in mind BITZER a few years ago released the ECOLINE series which was optimised for R134a. This includes the extra high efficiency, moderate pressure levels (reduced leakage rates) and the lowest GWP value of all non-flammable HFC refrigerants.

All semi hermetic reciprocating compressor models have now been added to the ECOLINE series and it has been further developed for universal use with different refrigerants at an extended application range.

The COP of the new BITZER ECOLINE models have been improved by up to 12% compared to previous models. This is achieved with further optimised valve plates, reduced flow losses and discharge gas pulsations, as well as specially adapted highly efficient motors.

The compressors are designed for operation with frequency inverter ranging between 30 to 70 Hz. Thus the cooling capacity of the plant can be adjusted exactly to the demand, making it the perfect choice for your installation.

The Special Highlights of the BITZER ECOLINE Compressors



Mini Rack

THE BITZER AUSTRALIA Mini Rack design is suitable for small capacities utilising the BITZER ECOLINE OCTAGON compressor. The Mini Rack offers compressor combinations between two and four compressors and mounts on a receiver base frame. Various compressor combinations can be selected to match the load of your system perfectly however it is our preference to select the same model and or equal capacity compressor.

The Mini Rack is perfectly suited for small supermarkets, pubs, clubs, marine applications and various multiple small load evaporators. The key to keeping the Mini Rack as compact as possible is the use of the horizontal receiver base frame providing maximum liquid storage in the most compact design.

The two and three compressor racks are manufactured on the same frame for standardisation, with the four compressor rack moving to a larger base frame and receiver.

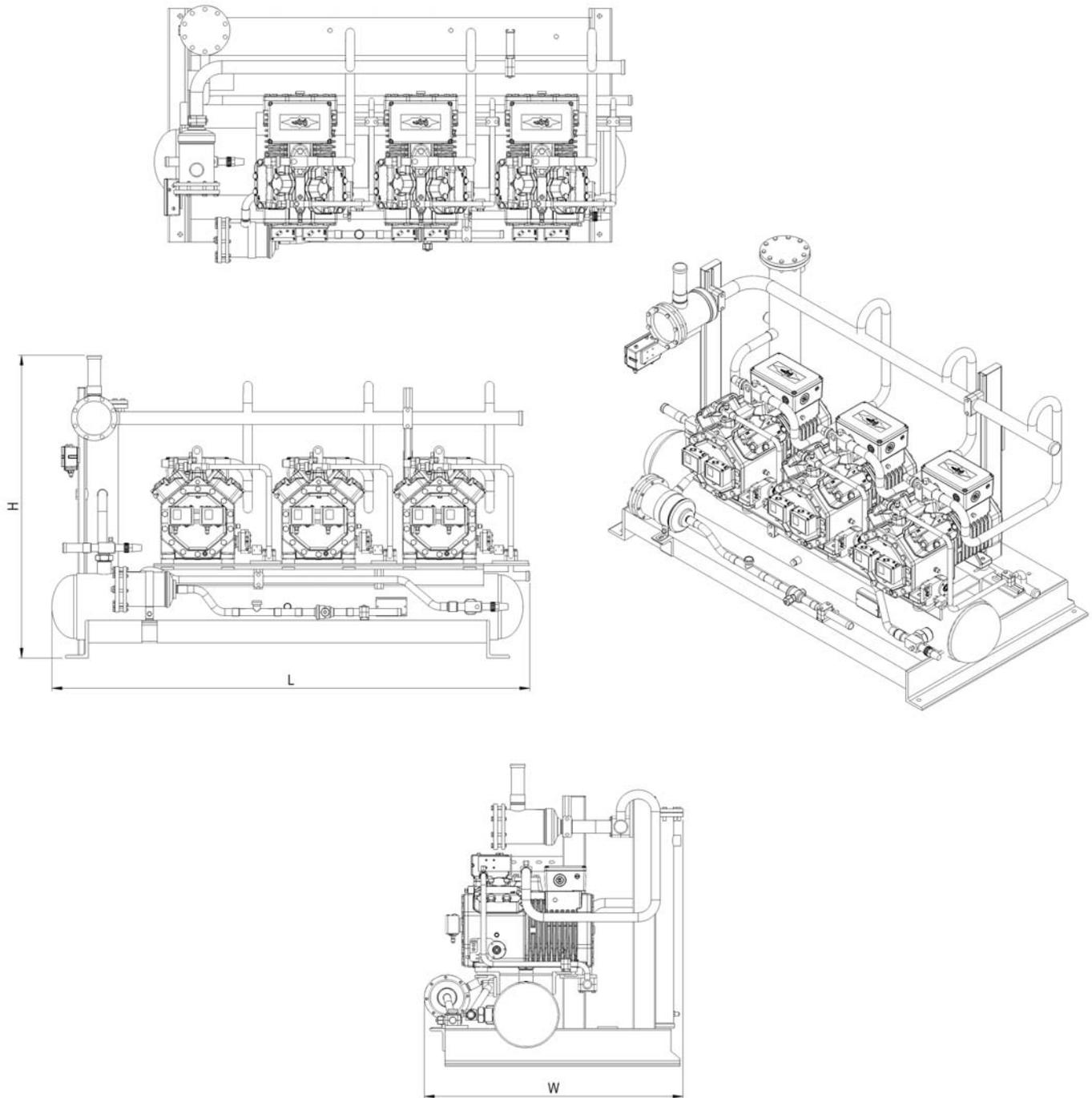
Features include:

- BITZER ECOLINE OCTAGON compressor
- Horizontal Receiver Base
- Suction manifold
- Oil separator
- Electro-magnet oil management system
- Single liquid and suction outlets
- Liquid and suction de-mountable filter assemblies
- Optional individual suction accumulators to each compressor
- Optional fully wired switch board and controller (See IQ Rack)

IQ option shown below:



Mini Rack - Dimensional Drawings



| Compressor Package | L | W | H |
|------------------------|-------|-----|-------|
| 2-3 Compressor package | 1,565 | 850 | 1,000 |
| 4 Compressor package | 1,950 | 850 | 1,300 |

Dimensions are shown in millimetres.

Dimensions provided are subject to change at the time of quotation or ordering depending on the specifications of the package.



Maxi Rack

The BITZER AUSTRALIA Maxi Rack provides the largest range of capacity adaption allowing multiples of two to five compressors to be matched and installed in parallel configuration.

Greater flexibility 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 concepts, various combinations of compressors enable the perfect solution for every application. The refrigeration plant can easily be designed to meet additional growth and subsequent increased heat load without oversize for current demand.

Based upon customer specifications, service and ease of installation is a priority for the design of the Maxi Rack. This ensures that the contractor installing and servicing the rack is done safely. Logical positioning of components allows the most flexibility to service the rack.

Features additional to standard:

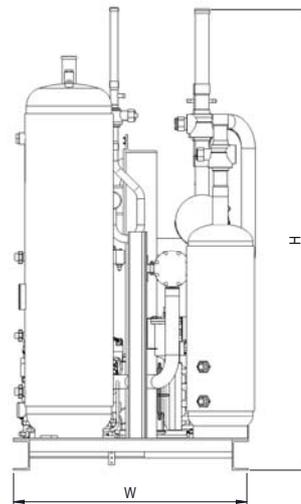
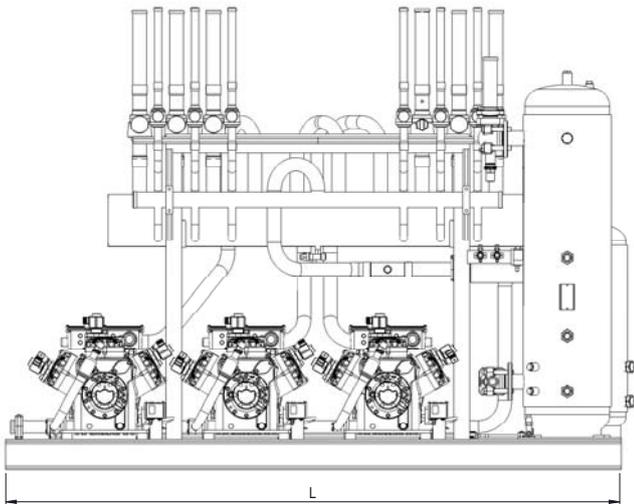
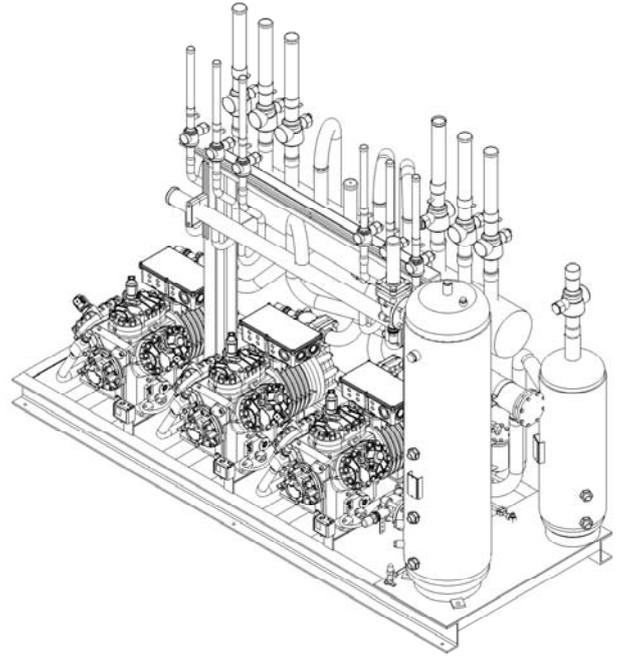
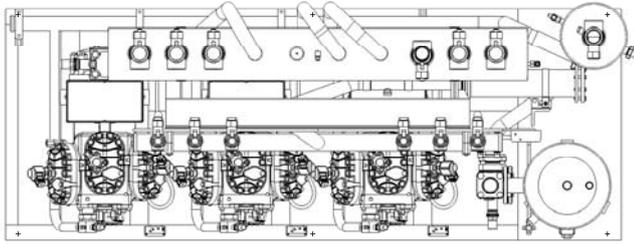
- Large Volume Vertical Receivers with full port flanged valves
- Discharge header run 16 gauge copper
- Raised compressor mounts
- Solid metal frame

Optional Features:

- Suction and liquid isolation valves
- CRII capacity control
- Liquid receiver level alarm
- Additional mechanical pressure controls
- Dual Suction Headers



Maxi Rack - Dimensional Data



| Compressor Package | Length | Width | Height |
|----------------------|--------|-------|--------|
| 2 compressor package | 2,070 | 950 | 1,890 |
| 3 compressor package | 2,500 | 950 | 1,890 |
| 4 compressor package | 3,075 | 950 | 1,890 |
| 5 compressor package | 3,830 | 950 | 1,927 |

Dimensions are shown in millimetres.

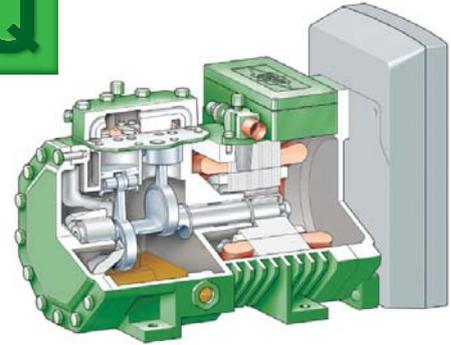
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IQ Rack

The BITZER AUSTRALIA IQ Rack range takes the strengths of the Mini and Maxi Rack design and enhances their features by adding a fully wired IP rated switchboard incorporating an electronic control rack system while also including the latest BITZER ECOLINE VARISPEED compressors. This series offers high operational efficiencies over a wide application range which is extremely beneficial when considering Australian regulations and customer specifications.

The BITZER ECOLINE VARISPEED compressor is a market leader integrating the frequency inverter (FI) with the latest ECOLINE compressor. With the IQ rack incorporating this technology along with the second generation ECOLINE compressor economised for HFC refrigerants, this combination is ideally suited for supermarkets, cold storage facilities and industrial process cooling.

The large capacity series offers owners and contractors the confidence to utilise the factory assembled products and expertise of the world's most successful refrigeration compressor manufacturer. This product is guaranteed by more than 70 years of experience in global refrigeration research technology and manufacturing.

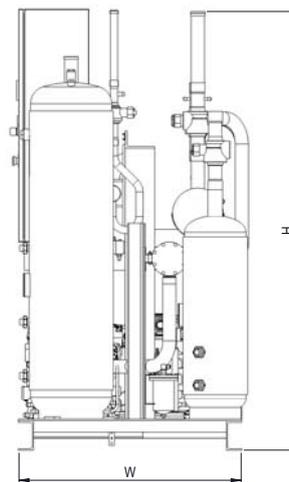
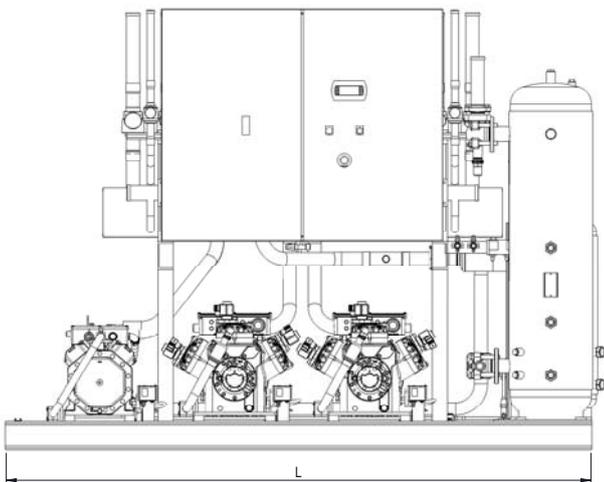
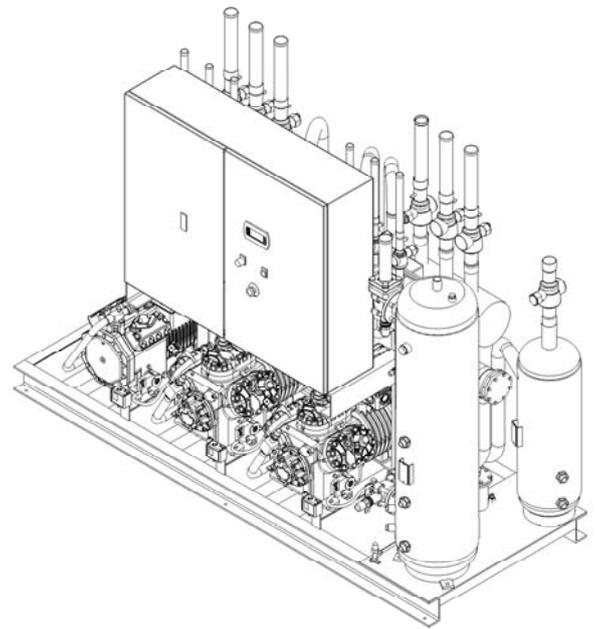
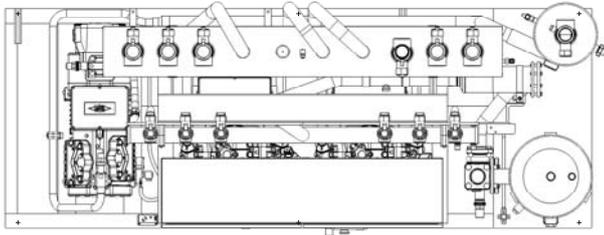


The additional optional features of the IQ Rack above the multiple compressor rack are:

- BITZER ECOLINE VARISPEED compressor
- External VSD fitted to lead compressor (optional)
- Fully wired IP rated switchboard
 - Australian standard approved
 - High quality compressor contactors and overloads
 - Compressor phase protection
 - Full wiring diagram
 - Compressor isolation switches
 - Compressor run signal lamps
 - Electronic pre-configured rack control system
 - Accurate and efficient control of:
 - Variable speed Compressor
 - Staged compressor and unloaders
 - Variable condenser fan control
 - Variable speed condenser fan control



IQ Rack - Dimensional Drawings



| Compressor Package | L | W | H |
|-----------------------------|-------|-----|-------|
| 2-3 compressor IQ mini Rack | 1,795 | 850 | 1,000 |
| 4 compressor IQ mini Rack | 2,165 | 850 | 1,300 |
| 2 compressor IQ Rack | 2,070 | 950 | 1,890 |
| 3 compressor IQ Rack | 2,500 | 950 | 1,890 |
| 4 compressor IQ Rack | 3,075 | 950 | 1,890 |
| 5 compressor IQ Rack | 3,830 | 950 | 1,927 |

Dimensions are shown in millimetres.

Dimensions provided are indicative and subject to change at the time of quotation or ordering depending on the specifications of the package.

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Note: The ISO standard only applies to the BITZER NSW and VIC branches