

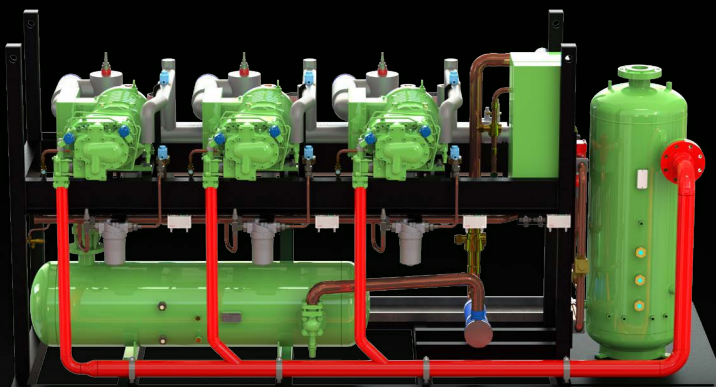
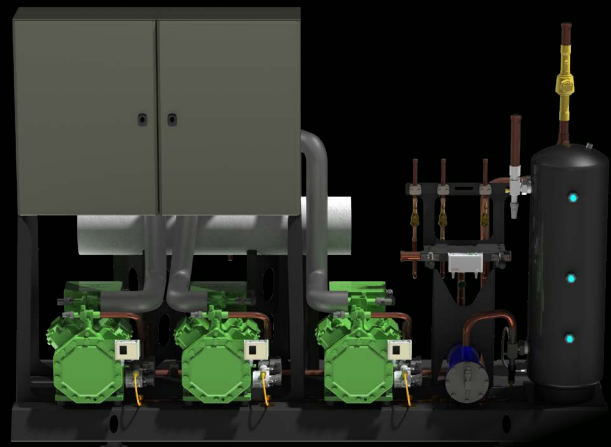


DAS HERZ DER FRISCHE

MULTIPLE COMPRESSOR SYSTEMS

# PARALLEL COMPRESSOR RACKS

BA-507-3 AUS



## 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:

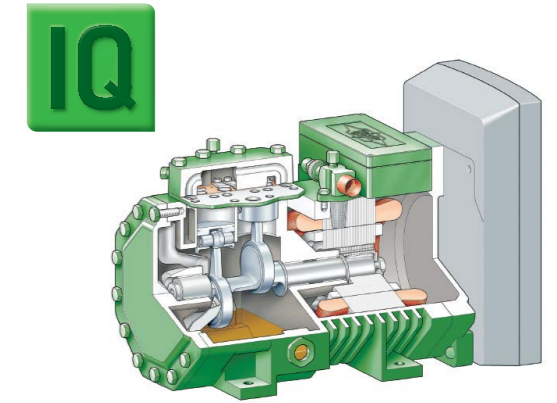
- // BITZER Ecoline Compressors
- // Two to five compressor packages
- // Suction gas distributor / header with liquid protection with suction demountable filters
- // Demountable liquid line drier, sight glass assembly
- // Highly efficient oil separators with oil level sight glasses
- // Solid metal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

## IQ RACK

The BITZER AUSTRALIA IQ Rack series offer 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

## THE BITZER ECOLINE COMPRESSORS

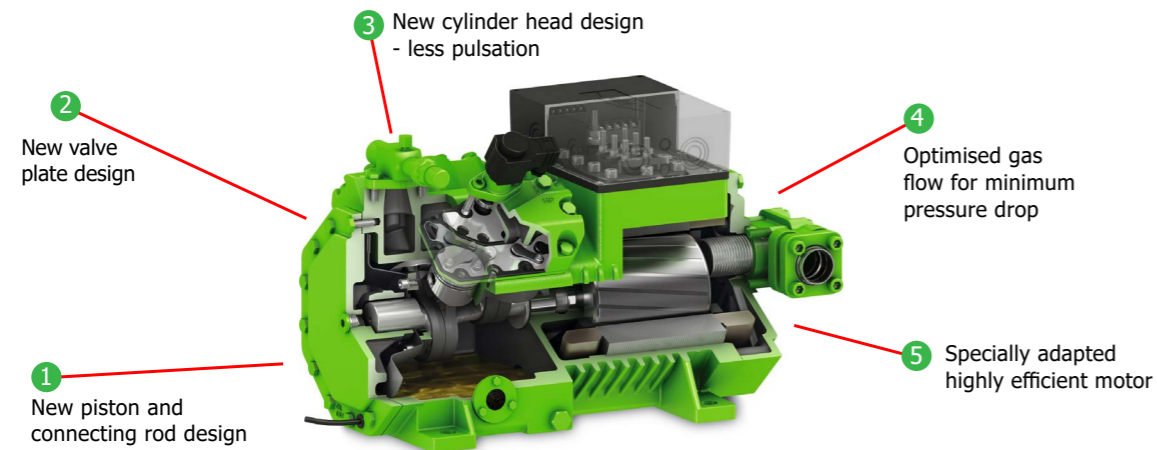
The influence of refrigeration on the environment has increasingly become the focus of public discussion. Therefore, energy efficiency of refrigeration systems is an essential criterion. The lower the energy consumption, the more favourable are the environmental balance and life cycle costs. Thus, several 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 has been optimised especially 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. This includes, R134a, R404A, R407A, R407C, R407F, R507A and new transition refrigerants such as R513A, R448A and R449A.

BITZER ECOLINE compressors can also be used at very low condensing temperatures a beneficial seasonal energy efficiency ratio beyond comparison.

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.

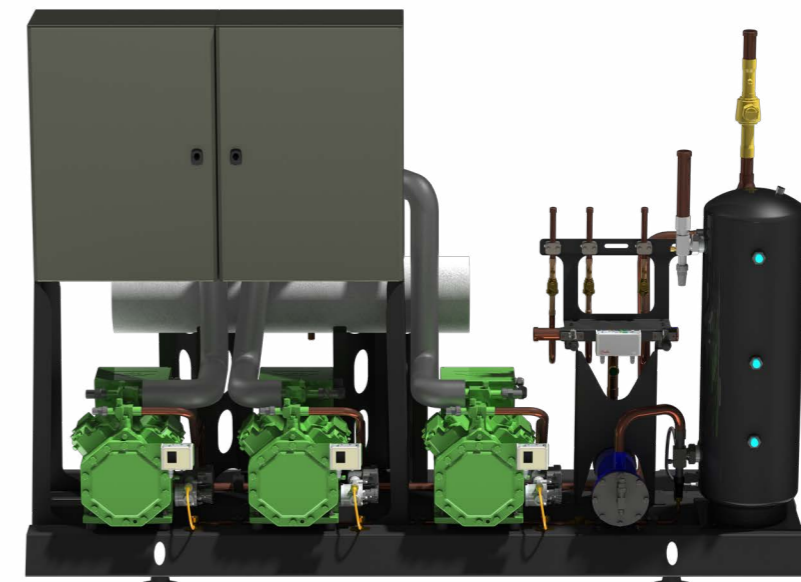
The Mini Rack is perfectly suited for small supermarkets, pubs, clubs, and various multiple small load evaporators.

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.

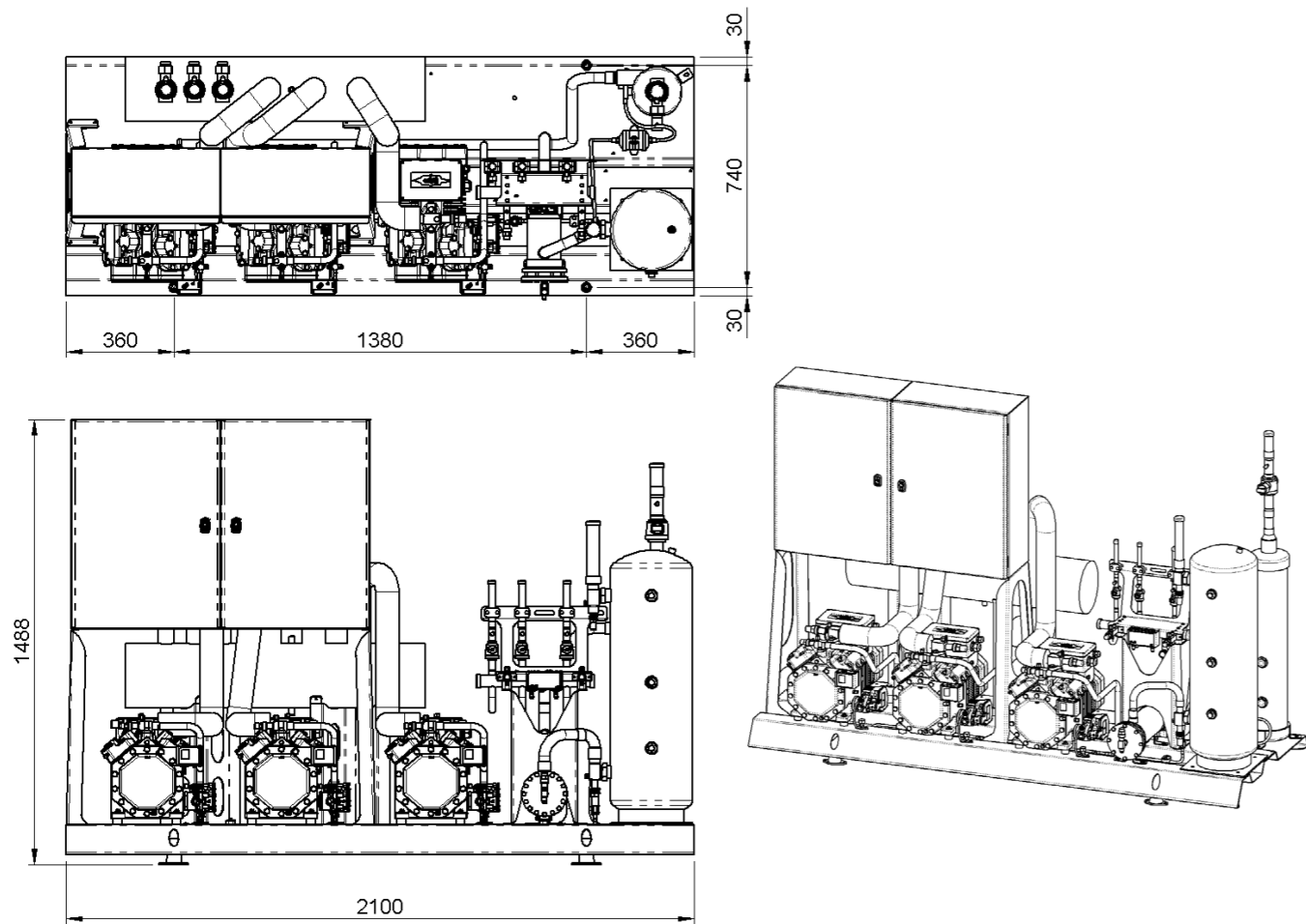
### Features include:

- // BITZER ECOLINE OCTAGON Compressors
- // 2,3 and 4 Compressors Racks
- // Suction Gas Header
- // Insulated Suction Lines
- // Suction Demountable Filters
- // Vertical Liquid Receiver
- // Oil Filter Assembly
- // Oil Return Sight Glass
- // Anti-Vibration Mounting Pad
- // Electrical Board & Control (Optional)
- // Highly Efficient Oil Separator

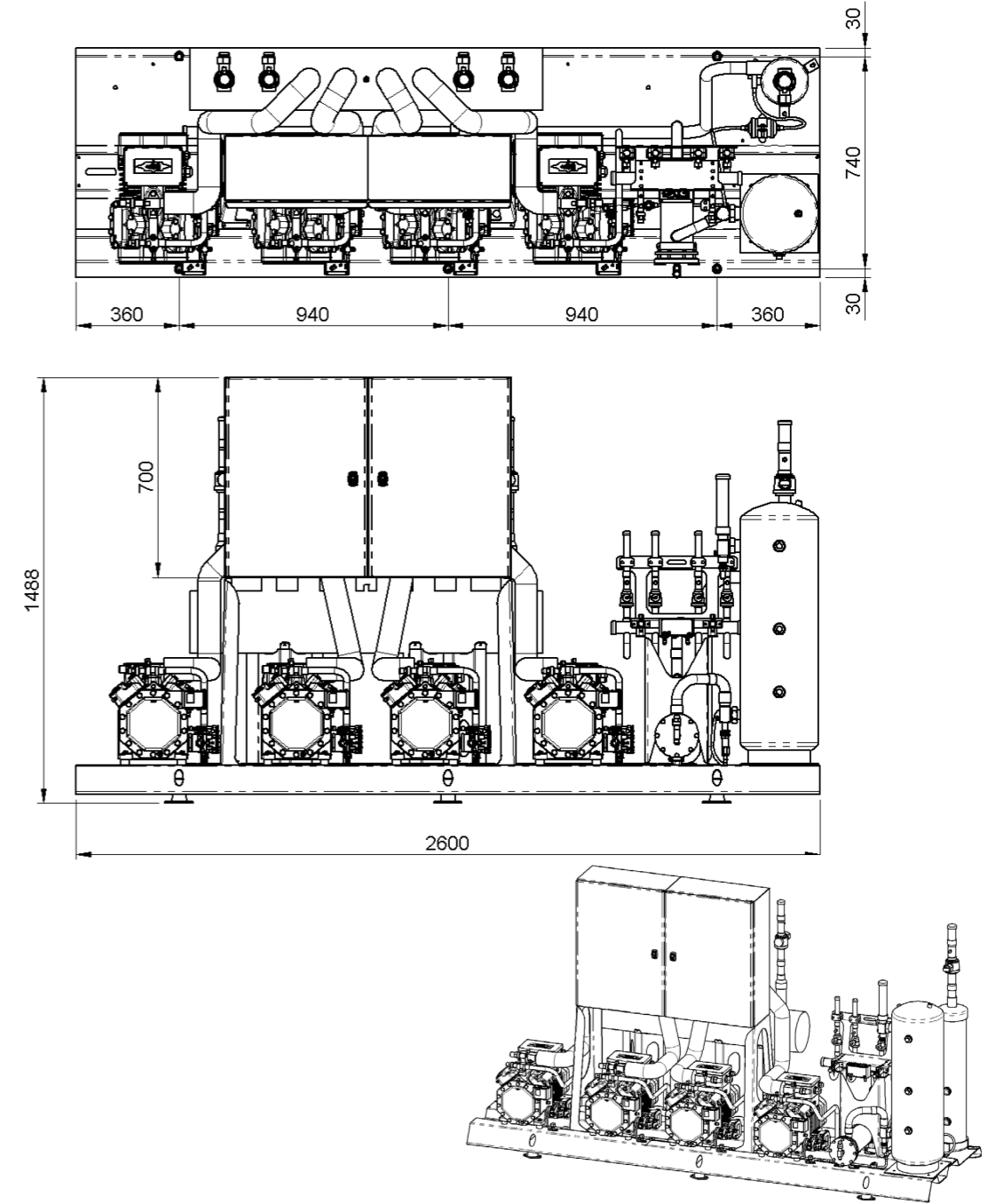
### IQ option shown below:



### MINI RACK - DIMENSIONAL DRAWINGS



Unit Model	Suction Line Connection (inch)	Discharge Line Connection (inch)	Receiver Inlet Connection (inch)	Liquid Line Connection (inch)	Weight (kg)
MINI-2 4FES-5	2 x 1-3/8	7/8	1-1/8	2 x 7/8	370
MINI-2 4EES-6	2 x 1-3/8	7/8	1-1/8	2 x 7/8	376
MINI-2 4DES-7	2 x 1-3/8	1-1/8	1-3/8	2 x 7/8	382
MINI-2 4CES-9	2 x 1-3/8	1-1/8	1-3/8	2 x 7/8	390
MINI-2 4BES-9	2 x 1-3/8	1-1/8	1-3/8	2 x 7/8	390
MINI-3 4FES-5	3 x 1-3/8	1-1/8	1-3/8	3 x 7/8	455
MINI-3 4EES-6	3 x 1-3/8	1-1/8	1-3/8	3 x 7/8	461
MINI-3 4DES-7	3 x 1-3/8	1-3/8	1-5/8	3 x 7/8	467
MINI-3 4CES-9	3 x 1-3/8	1-3/8	1-5/8	3 x 7/8	475
MINI-3 4BES-9	3 x 1-3/8	1-3/8	1-5/8	3 x 7/8	475



Unit Model	Suction Line Connection (inch)	Discharge Line Connection (inch)	Receiver Inlet Connection (inch)	Liquid Line Connection (inch)	Weight (kg)
MINI-4 4FES-5	4 x 1-3/8	1-3/8	1-5/8	4 x 7/8	540
MINI-4 4EES-6	4 x 1-3/8	1-3/8	1-5/8	4 x 7/8	546
MINI-4 4DES-7	4 x 1-3/8	1-5/8	1-5/8	4 x 7/8	552
MINI-4 4CES-9	4 x 1-3/8	1-5/8	1-5/8	4 x 7/8	560
MINI-4 4BES-9	4 x 1-3/8	1-5/8	1-5/8	4 x 7/8	560

## MAXI RACK

The BITZER AUSTRALIA Maxi Rack provides the largest range of capacity adaption allowing BITZER ECOLINE or ECOLINE VARISPEED compressors configured with multiples of two to five compressors 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. The Maxi Rack can optionally come fully pre-wired with all motor starter control circuits and pre-configured rack controller.

### Features additional to standard:

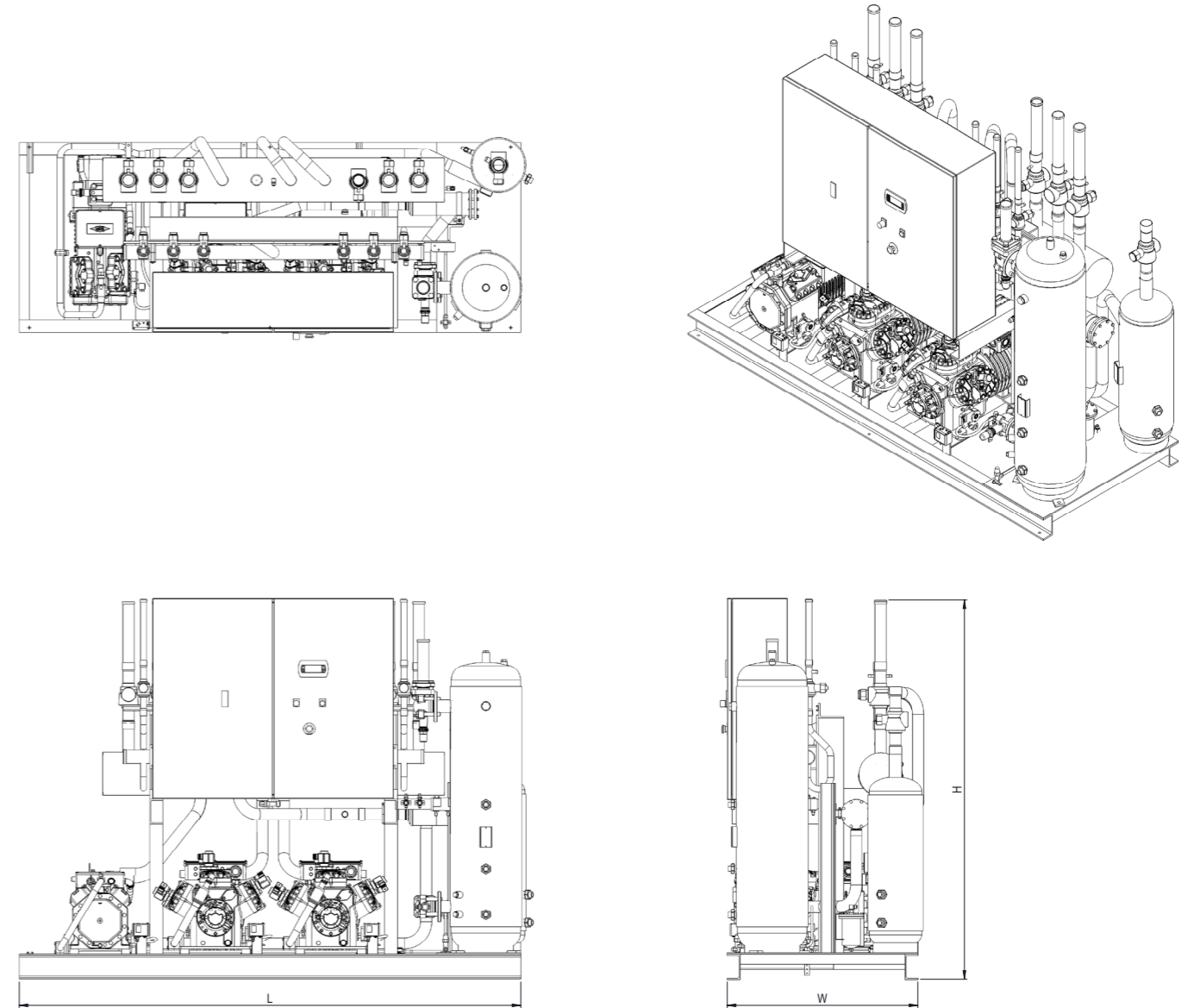
- // Large Volume Vertical Receivers with full port flanged valves
- // Discharge header
- // Raised compressor mounts
- // Solid metal frame

### Optional Features:

- // Suction and liquid isolation valves
- // CRII capacity control
- // Liquid receiver level alarm
- // Additional mechanical pressure controls
- // Electrical Board and Control



## MAXI RACK - DIMENSIONAL DATA



Compressor Package	Length	Width	Height
2 Compressor Package	2080	1100	1950
3 Compressor Package	2500	1100	1950
4 Compressor Package	3075	1100	1950
5 Compressor Package	3830	1100	1950

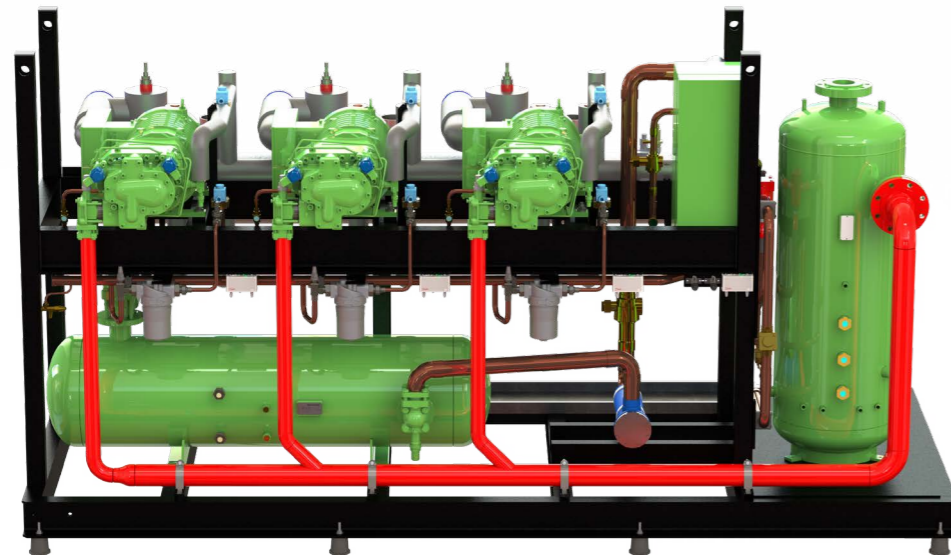
Dimensions are shown in millimetres.  
Dimensions provided are indicative and subject to change at the time of quotation or ordering depending on the specifications of the package.

## SCREW RACK

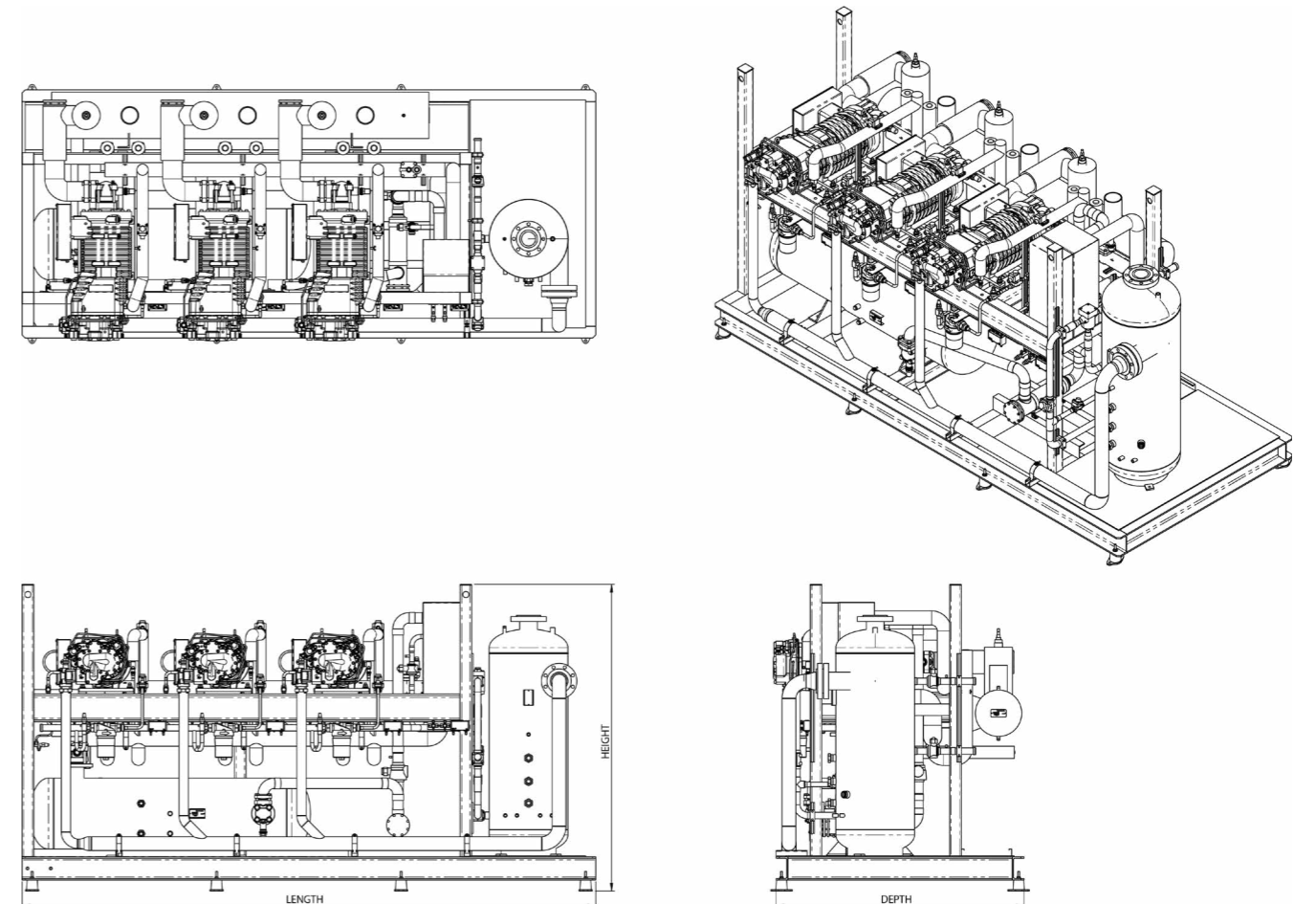
The BITZER AUSTRALIA Screw Rack offers high flexibility and large capacity range on a compact platform. The unit includes oil circuit system, suction header/ accumulator, suction filters, oil filters and pressure controls as standard. This unit has many optional accessories available to suit the demands of most applications. The units are available in semi-hermetic and open drive configurations.

### Features:

- // Fast Installation
- // High Flexibility
- // Simple Serviceability
- // Multiple Compressor Operation
- // Semi-hermetic/Open Drive
- // Highest Quality and Reliability
- // Large Volume Header
- // Oil Circuit System
- // Suction Header/Accumulator
- // Suction Filters
- // Oil Filter & Pressure Control



## SCREW RACK - DIMENSIONAL DATA



Compressor Package	Length	Width	Height
2 Compressor Package	2,940	1,600	1,997
3 Compressor Package	3,700	1,600	1,997
4 Compressor Package	4,460	1,600	1,997

Dimensions are shown in millimetres.



NOTES:

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---



NOTES:

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---



**BITZER Australia Pty Ltd**

134-136 Dunheved Circuit // St Marys 2760 // NSW // Australia

Tel +61 1300 BITZER

[www.bitzer.com.au](http://www.bitzer.com.au) // [info@bitzer.com.au](mailto:info@bitzer.com.au)

**BITZER New Zealand Pty Ltd**

Unit 5, 5-7 Henry Rose Place // Albany // Auckland // New Zealand

Tel +64 [9] 415 2030

[www.bitzer.com.au](http://www.bitzer.com.au) // [info@bitzer.com.au](mailto:info@bitzer.com.au)