EXPANDED



THE MAGAZINE OF BITZER AUSTRALIA



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INTRODUCING THE ECOLITE: Versatile & user friendly





REGULAR CONTRIBUTORS



SIMON WOOD
MANAGING DIRECTOR



SHANNON EGAN // GENERAL MANAGER BITZER GREEN POINT



RENÉ LE MIERE // MARKETING & BUSINESS DEVELOPMENT MANAGER



IAN SUFFIELD // NATIONAL ENGINEERING MANAGER



EDMUND TUTTY // ENGINEERING MANAGER HEAT EXCHANGE

CREDITS

Editor René Le Miere rene.lemiere@bitzer.com.au

Design, Production & Copywriting Leonie Waldron leonie.waldron@bitzer.com.au

Publisher BITZER Australia 134-136 Dunheved Circuit, St Marys NSW 2760 +61 (2) 8801 9300 www.bitzer.com.au

Enquiries marketing@bitzer.com.au

Responsible in terms of press law Simon Wood

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INTRODUCING THE ECOLITE

BITZER'S NEWEST CONDENSING UNIT IS VERSATILE & USER-FRIENDLY

The seven air-cooled models in the new ECOLITE series have been designed for low and medium temperature applications and come in an attractive housing.

The three LHL3E ECOLITE condensing units with one fan as well as the four LHL5E units with two fans open up a wide range of applications, from 1.5 kW to 5 kW in the low temperature range and from 3.5 kW to 16 kW in the medium temperature refrigeration range.

All seven models have been designed as standard for both low and medium temperature applications and for a multitude of applications – for example, in cold stores, display counters and small shops.

'The adaptability of the ECOLITE models to various applications is outstanding,' said Stefan Dorn, Product

Manager System Solutions at BITZER. 'The reasons for this are its compact, low noise design as well as the use of efficient components in combination with the capacity control of the semi-hermetic compressors.'

Thanks to the mechanical VARISTEP capacity control, all ECOLITE condensing units offer smooth adjustment of the capacity in a range from 50 to 100 per cent. In the LHL5E, the ECOLITE series offers optional capacity control from 10 to 100 per cent. The condensing units have also been specially developed for low noise operation and have a robust and corrosion-resistant housing for outdoor use. Thanks to their compact construction, they can also be easily integrated even when space is limited.

Another advantage of the ECOLITE series is that it only requires a small amount of refrigerant. To achieve this, BITZER integrated efficient condensers

with a high thermal transmission rate into the unit. ECOLITE condensing units are easy to use, reliable, and have control software developed by BITZER.

'Users benefit from the fact that all components are precisely matched to one another,' said Dorn.

'The entire series is Ecodesign-compliant and has been designed for use with common refrigerants. This also includes refrigerants with low global warming potential (GWP) such as HFO (hydrofluoroolefin) mixtures,' said Dorn. 'Installation and commissioning the condensing units is very easy and efficient in terms of time, thanks to the extensive standard equipment and the plug-and-play concept.'

For more information contact your local BITZER team or visit our website.



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ECOLITE // LHL5E

MAXIMUM ADAPTABILITY. VERSATILE APPLICATION.

The seven ECOLITE models of the BITZER condensing unit family feature optimal usability thanks to a simple plug and play concept. Perfect adaptability allows for a wide range of applications in different climate areas and temperature ranges. The ECOLITE condensing units conform to the MEPS 2018 and can be used for all common refrigerants as well as A1 HFO blends. Boost efficiency by combining the mini-channel condenser with a semi-hermetic BITZER ECOLINE compressor and use BEST SOFTWARE for overall support of all condensing units. The VARISTEP function, which is standard, ensures maximum adaptability of ECOLITE for all kinds of applications. Learn more at www.bitzer.de



COMMERCIAL REFRIGERATION



HFO BLEND READY



ECODESIGN CONFORM



SOFTWARE

SUPPORT ACROSS NEW ZEALAND

BITZER HAS INKED AGREEMENTS WITH TWO MAJOR DISTRIBUTION PARTNERS FOR NZ - REALCOLD AND EUROTEC.



"BITZER is a household name in the industry and now we have a direct line of supply. This is great news for our customers and serves to strengthen our offering to the market. We have always strived to provide New Zealand's most comprehensive range, and becoming a key wholesale partner of BITZER is a step in the right direction."

Realcold intend to stock a select range of popular BITZER products and genuine spare parts as well as supporting spare parts supply for the BUFFALO TRIDENT heat exchanger range, with BITZER's Auckland warehouse providing additional backup.

"We're excited to be able to offer worldclass compressors, condensing units and heat exchange equipment to the NZ market."

Eurotec's Refrigeration Business Unit Manager, Suyash Baichoo, also sees significant benefits to adding the BITZER brand into the fold.

"Adding a global brand such as BITZER and its BUFFALO TRIDENT brand to our offering is a win-win: the range complements our existing business units and we are well placed to take the newly launched BITZER Green

Point concept to the market with our strong refrigeration engineering competence. Our team of engineers are able to support contractors and end users to make informed capital plant equipment investment decisions with our knowledge of low carbon footprint refrigeration systems."

Although the Green Point brand is well established internationally it has only recently been launched in Australia, and as local NZ agents, Eurotec are able to offer full turn key projects, technical support, commissioning assistance, spare parts & oil, data monitoring and other support services to the NZ market.

"Eurotec is actively involved in the food, environmental, HVAC&R, manufacturing & process industries, and we are already heavily involved in other types of turnkey services from our Auckland, Wellington and Christchurch offices. Plus, we have mobile capabilities, leaving us in the unique position of being able to supply and support a wide range of BITZER and BUFFALO TRIDENT engineered equipment."

BITZER Australia's Managing Director, Simon Wood, says

the two newly appointed partners will enable BITZER and Green Point to better service local customers.

"We identified both Realcold and Eurotec as reputable and trusted companies that could revitalise BITZER in the New Zealand market. Realcold is well placed as a strong wholesale partner, whilst Eurotec's unique business model makes the company the perfect agent for our service arm Green Point."

"This is another in a series of positive changes happening within BITZER. Along with the recent addition of technical sales engineer Simon Hiebendaal, and the support of our capable customer service staff in Auckland, that BITZER now has a national wholesale chain and a trusted service partner bolstering our off-the-shelf product sales and making logistics much more streamlined."

For more information contact Realcold or Eurotec, or learn more about BITZER at www.bitzer.com.au or www.bitzergreenpoint.com.au

Can I still call BITZER for technical assistance?

OF COURSE!

WE ARE ALWAYS
HAPPY TO ASSIST.
OUR CAPABLE NEW
ZEALAND TEAM
(SIMON HIEBENDAAL,
ADELE WEBB & MELISSA
LATHWOOD) CAN STILL
ASSIST WITH ANY DAY TO
DAY ENQUIRIES YOU MAY
HAVE AS WELL AS TECHNICAL
RECOMMENDATIONS AND
SUPPORT.

WE CAN THEN PUT YOU IN TOUCH WITH YOUR LOCAL REALCOLD OR EUROTEC BRANCH TO PURCHASE PRODUCTS, OR DIRECT YOU TO BITZER GREEN POINT TO ARRANGE SERVICES SUCH AS COMMISSIONING THAT MAY BE CARRIED OUT LOCALLY VIA GREEN POINT SERVICE AGENT EUROTEC.

THE QUOTA: PART II

IN THE PREVIOUS ISSUE WE LOOKED AT HOW REGULATIONS SUCH AS THE QUOTA SYSTEM AND LICENSING HAVE AN EFFECT ON THE SELECTION OF GASES ENTERING THE AUSTRALIAN MARKET.

IN THE SECOND PART OF THIS STORY, WE EXPLORE POTENTIAL SCENARIOS THAT COULD UNFOLD, DEPENDING ON THE STRENGTH OF THE

Within Australia, the HFC phase-down encompasses a gradual reduction in the maximum amount of bulk HFCs that are permitted to be imported into Australia. This came into force on 1 January 2018 and is managed through a quota system on imports.

In the previous issue of EXPANDED we discussed how the quota works and how quota is allocated to importers.

The day to day business under this quota system is where we see the real life market forces start to come into effect.

HOW IS THE QUOTA INFLUENCING GAS MANUFACTURERS. AND VICE VERSA?

Already in Europe we are seeing refrigerant prices skyrocket, and this is partly due to the gas suppliers seeking to maintain their profits.

Here's an example: R134a has a GWP and essentially a CO2-e value of 1.43 tonnes per kilogram. R404A has a GWP of 3.92 tonnes per kilogram. Therefore, because R404A has nearly four times greater CO2-e value cost per kilogram, R404A is going up in cost by the gas importers while R404A is still in demand.

The quota also affects the actual volume of refrigerant that is going

starts to effect the types of refrigerant the importers bring in, the broader selection of refrigerants now available

"MORE VOLUME CAN **BE BOUGHT AND** SOLD - RESULTING IN MORE PROFIT - IF THE IMPORTER ALLOCAT THEIR OUOTA TO REFRIGERANT WITH HIGHER GWP.

will gradually deter the market from purchasing more costly refrigerants.

On the other hand, an importer with a lower quota will push a lower GWP refrigerant (for example R449A which is

almost a drop-in for R404A, however it has a GWP of 1.397 tonnes per kg) and in turn they are able to see 3 times the amount in volume compared to CO2-e.

Also what must be considered is the using up of quota over a finite period of time: if a company does not import its complete quota during one

period, during the next period they are penalised by restrictions on the amount they can apply for. In fact, the residual amount of quota which they did not use is then divided up amongst other licence holders - their competitors. Essentially, this cayeat is in place to

stop an importer from stockpiling. But, an importer may want to hold on to their quota and therefore buy (and

"THE AMOUNT

OF QUOTA A GAS

THE CHOICE OF

MARKET.

PUSH OUT TO THE

IMPORTER HAS WILL

MOST LIKELY DRIVE

REFRIGERANTS TH

promote heavily to the market) the gas that maintains their level of quota as long as possible.

The interesting point is this: 'naturals' such as CO2, ammonia and propane are not regulated and fall outside this quota, therefore if all the trade moved to natural or low-GWP refrigerants

immediately, the phase down would only affect the service market and not new installations.

WHAT CAN YOU DO?

Here's how you can 'vote with your feet' for low-GWP gases:

- New installations should only be done with low GWP refrigerants
- Retrofit existing equipment from R-404A / R-507A to lower GWP refrigerants when systems are prone to leakage and/or other failures
- · Reduce leakages
- Reduce the refrigerant quantity per system as much as possible
- Recover, recycle and reclaim refrigerants



A WHOLE NEW WORLD OF HEAT EXCHANGERS



BITZER Australia has recently signed an agreement to exclusively market all commercial and industrial Güntner heat exchanger products in Australia and New Zealand.

Although we're winding down our manufacturing plant in Victoria, the Buffalo Trident name lives on as a brand that represents high quality heat exchange products with a German pedigree.

BITZER will be introducing the new Buffalo Trident range over the coming months as we work behind the scenes to ensure the transition from old to new is as seamless as possible.

We look forward to bringing our customers a highly extensive range of evaporators, air cooled condensers, evaporative condensers, dry coolers, CO2 transcritical coils, and more.

Every 'old' unit has an equivalent replacement product so let us introduce the new range to you!



- Max. operating pressure up to 80 bar (only CX-units)
- Surface-corrugated aluminium fins for high heat transfer
- EC fans for high energy efficiency
- Thermally-decoupled tray (condensation free)
- · Wide range of sizes and configurations available to suit all requirements



GASC SERIES

- · Slim, compact design
- Maximum operating pressure up to 80 bar (only CX-units)
- Internally-ribbed special copper tubes for HFC and CO2
- Surface-corrugated aluminium fins for high heat transfer
- Thermally-decoupled tray (condensation free)
- EC fans for high energy efficiency
- Cable push-in connector simplifies fan replacement



BCM & BCLE SERIES ARE NOW GHN SERIES



- Special copper tubes for HFC, coolant and CO2. Stainless steel tubes for NH3 or steel, hot-dip galvanised
- Surface-corrugated aluminium fins for high heat transfer
- · Corrosion-resistant aluminium alloy casing
- Fans positioned at an angle (from 710 mm) improve the air throw and defrosting behaviour
- Hinged and thermally-decoupled (condensation free) tray with separate drip plate



BDC SERIES AND LDVB SERIES ARE NOW GCHV SERIES



- Capacity range: 40 1450 kW
- Can be supplied for all refrigerants
- Large selection of accessories
- Undulating aluminium fin heat exchanger for ease of cleaning and high heat transfer
- Staggered tube pattern; various fin spacings available
- Fans suitable for All Noise Protection Requirements



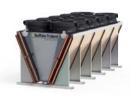
RC SERIES IS NOW GCHC SERIES



- 4 400kW Capacity
- Optimised for use in commercial refrigeration
- EC fans 0 10 V
- · Small footprint, high power density
- TÜV approval for propane
- CO2 up to 120 bar
- Extremely compact casings available in horizontal or vertical design



VB SERIES IS NOW **GVD SERIES**



- 300 1900kW Capacity
- For medium to high capacities in process cooling and air-conditioning
- Low noise fans suitable for all noise protection requirements
- High operational reliability and leak safety



VARIABLE CAPACITY PRODUCES SIGNIFICANT ENERGY SAVINGS

ROB ADAM REFRIGERATION USED BITZER AND BUFFALO TRIDENT EQUIPMENT TO INCREASE EFFICIENCY, ACHIEVING A 38% REDUCTION IN ENERGY USAGE. HERE'S HOW:

Rob Adam Refrigeration is a Sydney based commercial refrigeration specialist with an emphasis on designing, estimating and installing energy efficient equipment.

Rob Adam Refrigeration completed a major refrigeration renovation project at Revesby Workers Club, involving the installation of two BITZER compressor racks, replacing 20 condensing units and 17 BUFFALO TRIDENT EVD-ice evaporators. Power consumption was tracked throughout the project, however the 'before' consumption is actually higher, as three large condensing units (operating 3 glycol tanks) were not logged as they were running on a separate electrical supply board. The following information details how Rob Adam Refrigeration used BITZER and BUFFALO TRIDENT equipment to increase efficiency, achieving a 38% reduction in energy usage.

Revesby Workers Club recently installed BITZER variable capacity refrigeration rack systems to operate the majority of the clubs medium temperature refrigeration systems. Two BITZER variable capacity rack systems were installed that replaced 20 traditional fixed capacity refrigeration condensing units. Traditional fixed capacity units are sized to meet the required demand at peak summer temperatures and as such operate at this capacity all year regardless of temperature. These type of units are either running at full capacity or are switched off regardless of the actual demand required.

Whilst providing sufficient refrigeration capacity in all conditions, the sizing and the on / off operation of fixed capacity type units is not energy efficient and the old units also required constant maintenance to prevent regular breakdowns which can

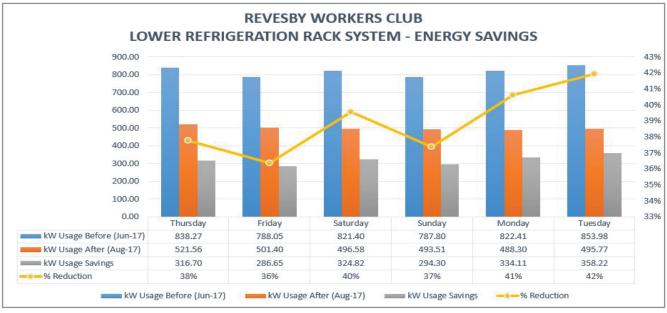
lead to potential loss of stock and trading disruptions.

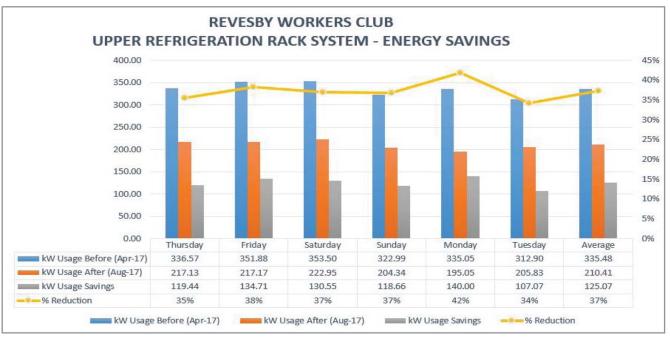
The introduction of variable capacity systems provides vastly increased reliability and operation whilst operating at peak energy efficiency. The racks achieve this by providing refrigeration capacity for numerous refrigeration loads whilst only operating at the required capacity at any given time, determined by the demand required.

The new racks operate all of the clubs medium temperature refrigeration systems, including 44 refrigerated cabinets, 18 cool rooms and five glycol tanks. As part of the installation process, Rob Adam Refrigeration monitored the power consumption before and after the installation of the variable capacity rack systems.



Rack photo courtesy Australian National Construction Review www.ancr.com.au
Read more about this project at https://issuu.com/ancr/docs/australian_national_construction_re_bebb17d97c2cb0/152





Re-published with the permission of Rob Adam Refrigeration.

POWER CONSUMPTION / ENERGY SAVINGS

POWER CONSUMPTION / ENERGY SAVINGS				
DATE	kW USAGE BEFORE (APR/JUN 2017)	kW USAGE AFTER (AUG 2017)	kW USAGE SAVINGS	% REDUCTION
LOWER BOARD	818.65	499.52	319.13	39%
UPPER BOARD	335.48	209.59	125.89	37%
TOTAL	1154.13	709.11	445.02	38%

A data logger was used to monitor the energy consumption in both the upper and lower electrical distribution boards that supplied power for the traditional fixed capacity units which were being removed, and from the same point after the installation of the advanced technology variable capacity racks. Power consumption was monitored over a six day period in April/June before the installation, and again in August after the installation was complete. Above is a summary of the overall savings achieved which are further detailed in the attached charts for both refrigeration racks. It should be also noted that the power consumption of the fixed capacity units would have increased significantly in the hotter summer months.

The reduced energy consumption exceeded expectations and the club was very happy with the results.

Project Contacts:

Rob Adam & Scott Parkinson, Rob Adam Refrigeration BITZER NSW Sales & Engineering teams

www.bitzer.com.au 13

IN THE FIELD



COMMISSIONING WITH EASE: BITZER AUSTRALIA & GREEN POINT

Sunnyspot Packhouse is located a short drive outside Esk in country Queensland, on top of the Great Dividing Range. Daryl Boardman and his family own and operate an avocado farm, and pack avocados for other producers in the local area at the Sunnyspot facility.

David Capp at Absolute Cool worked with BITZER's Glen Stubberfield on this cold room upgrade. The project included installation and commissioning of an ECOSTAR condensing unit and a BUFFALO TRIDENT evaporator.

Glen called on the assistance of BITZER Green Point service agent

David West to assist with the ECOSTAR commissioning. When David Capp was asked to upgrade the farms pull down rooms, BITZER was first to come to mind. Quality, reliability and many years of service were important.

When the prospect of high system efficiency was requested of BITZER, we offered the new ECOSTAR condensing unit running on R134a, complete with VSD, and BUFFALO TRIDENT BBM evaporator fitted with EVD-ice electronic superheat control.

This is a very sweet combination with BITZER conservatively saying that energy savings were expected to be 25% plus. In fact, 35% plus was

believed to be closer to the correct number.

After installation, BITZER offered some assistance to apply for a little-known Government grant that offered a reduction in the finance rate for high efficiency installs.

Happy client and happy contractor: where to next?

Project Contacts:
David Capp, Absolute Cool
David West, West Refrigeration
Glen Stubberfield, BITZER Queensland



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HITTING THE SPOT

BITZER'S NEW SPOT APP CONTAINS EVERYTHING YOU NEED ON THE GO

A helpful new tool for airconditioning and refrigeration professionals has been released on the App Store and Google Play: the BITZER SPOT App.

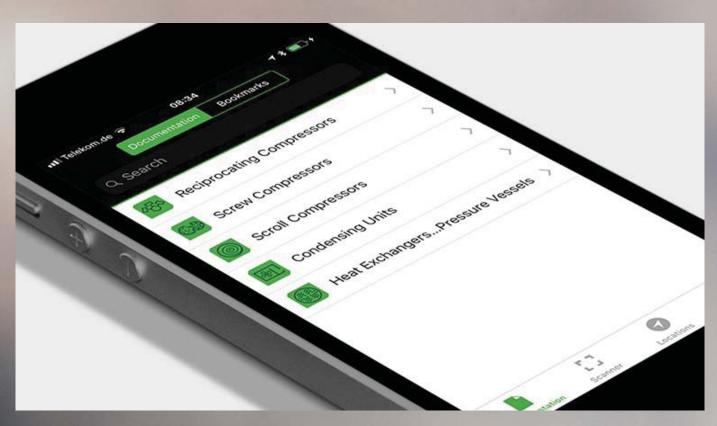
The app enables users to verify the authenticity of their BITZER products. Additionally, the BITZER SPOT App contains extensive documentation and a directory of all BITZER and Green Point service points as well as all certified dealers.

PRODUCT PIRACY CONTROLS

To verify the authenticity of a BITZER product, users can simply use the BITZER SPOT App to scan the QR code on the product which protects BITZER customers from counterfeits. With this app, the specialist for refrigeration compressors offers its customers effective protection from system failures and high costs. Scanning the code notifies the user that the article is a genuine BITZER product.

EXTENSIVE DOCUMENTATION

The BITZER SPOT App has a whole series of useful functions for users: when the QR code is scanned, the app automatically shows the extensive documentation for the product concerned, sorted by subject groups. Users can add this information to their favourites, download it and share it. This means that they can access the information even in offline mode. Thanks to a filter which is intuitive to use, BITZER customers can find every document quickly and easily.



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INFORMATION ABOUT LOCATIONS

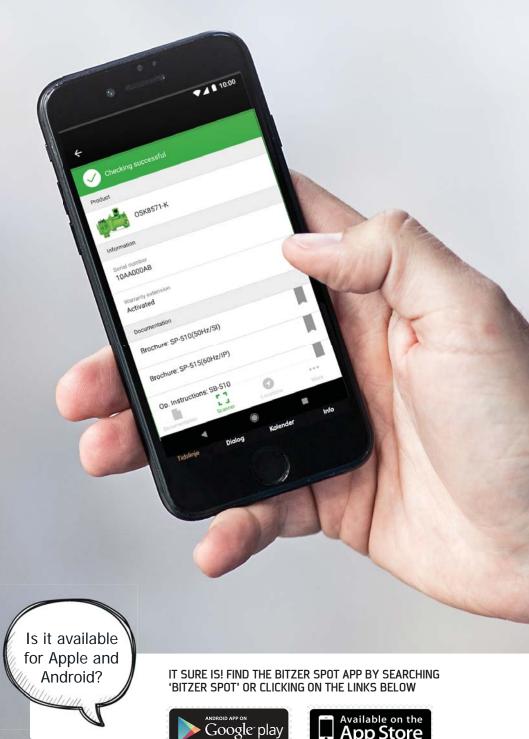
The convenient site directory is also really helpful: the app knows the addresses and contact details of all BITZER and Green Point service points as well as of all certified dealers and other distributors.

Users can place a call directly from the app, can write an e-mail and add the data to their address book. If the user has activated the location function, the app will sort the site information by subject groups and by the site's distance from the user. The route-planning function will then show the shortest way to the required destination.

Alternatively, customers can also manually access the contact details of the BITZER and Green Point sites as well as of the partners.

In future versions of the app, BITZER plans to integrate more functions.

The app is free to download.



CHILLVENTA 2018 IS NEARLY HERE!

BITZER is at the heart of the world's refrigeration and air conditioning systems: feel it beat twice as strong at Chillventa 2018! This year for the first time BITZER has two stands at the fair in Nuremberg, featuring one highlight after the other. Stay tuned to our Facebook or LinkedIn pages for more info!

Stands 326 + 626 in Hall 7 Chillventa 16 - 18 October 2018 Nuremberg, Germany





OLD SCHOOL

OUR TRUSTED DISTRIBUTION PARTNERS

All products from BITZER Australia and BUFFALO TRIDENT are available through our trusted wholesale partners.

AUSTRALIA





tel: 1300 ACTROL enquiries@actrol.com.au www.actrol.com.au



tel: 1800 671 500 sales@airefrig.com.au www.airefrig.com.au

NEW ZEALAND





tel: 0800 11 66 90 sales@realcold.co.nz www.realcold.co.nz



HVAC • Refrigeration • Electrical • Measurement

tel: 09 579 1990 sales@eurotec.co.nz www.eurotec.co.nz

MAINTENANCE ON THE HIGH SEAS

BITZER GREEN POINT HELPS 'OCEAN SHIELD' STAY COOL

Recently the team from BITZER Green Point WA conducted an AC & Refrigeration systems service and inspection on board 'Ocean Shield' whilst the vessel was in port in Perth.

Services included oil testing and oil replacement in 6 CSH screw compressors, replacement of liquid and suction filters, and reprogramming control logic so that the screw compressors started unloaded.

A remanufactured compressor (supplied by Green Point Singapore and installed by

the crew) was also commissioned by Green Point Service Agent Cool Technology with support from John O'Reilly our WA Green Point Commissioner.

This was an urgent and timesensitive project performed quickly and professionally by BITZER Green Point.



Over 20,000 fans on Facebook; over 349,000 views on YouTube; nearly 4,500 followers on our global LinkedIn page... have you followed BITZER on social media yet?



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DISCOVER



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