

# **Evaporative Air Conditioning Product Range**



Whole of home cooling for Australian family homes



# What is ducted evaporative cooling and how does it work?

Ducted evaporative cooling is a whole of home solution that allows you to cool the entire house using just one system. And with power prices in Australia now higher than average prices paid by comparable OECD countries, never before has evaporative cooling been more clearly the best way to keep your cooling energy costs at a manageable level.\*

The outdoor unit is usually located on the roof of the home and installed on a dropper duct. Cool air is drawn from outside, passed though moistened filter pads then circulated throughout the home via a network of ducts.

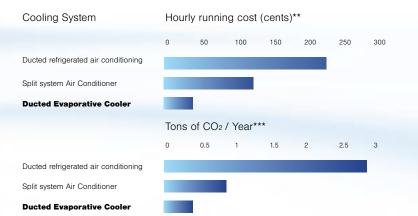
A ducted evaporative cooling system delivers clean fresh, naturally cooled air throughout your home. Doors and windows are left open to exhaust the air. The clean filtered air leaves your home free of any contaminants.

### Key benefits of ducted evaporative cooling

The key benefit of ducted evaporative cooling is whole of home cooling that is significantly cheaper to install and significantly cheaper to run than standard ducted refrigerated aircondtioning systems that usually operate as a zoned system.

Evaporative cooling is the healthy choice, circulating clean, fresh, naturally cooled air throughout your home, compared to recirculated air used in ducted refrigerated aircondtioning systems. The clean, filtered air is soft and gentle on the eyes and nose and does not dry out the skin which is often better for hay fever and many asthma sufferers.

Evaporative cooling is environmentally friendly, producing less CO<sup>2</sup> greenhouse gases than a standard ducted refrigerated or wall hung split system



\*Source – Mark Intell Report prepared for One Big Switch, July 2016 \*\*SA Gov Summer Cooling Guide 2015-16. Based on a conditioned area of 125m2 \*\*\*SAEV Victoria. Choosing a cooling system November 2002

### Why choose Bonaire®?

### Australian manufactured.

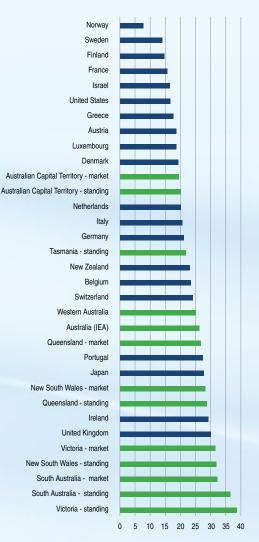
As a leading manufacturer of evaporative coolers, Bonaire has been providing homes with fresh, natural airconditioning for over 60 years. We are dedicated to manufacturing world class evaporative coolers.

Using proven technology we create intelligent, user friendly systems that maximise efficiency whilst being economical to own and operate. We are ISO9001 quality accredited and constantly strive to introduce product improvements and refinements to ensure that the Bonaire name is synonymous with quality and innovation.

All Bonaire products are backed by our own company operated service division providing the highest levels of after sales service to our customers.



# Household prices exclusive of taxes (market exchange rates)



Australian cents per kWh

### **Built for Australian conditions**

Bonaire coolers have been designed and manufactured to provide effective and efficient cooling to suit Australia's harsh temperature extremes. The quality, durability, and reliability of the Bonaire product is now recognised worldwide resulting in the products being sold to many countries around the world.

### Bonaire® provides you with Peace of Mind

### **Bonaire Specialists**

In order to ensure that your Bonaire system is correctly designed and installed we have a network of authorised and accredited specialist Dealers.

These specialists undertake regular training to maintain their expertise in system requirements which will ensure your Bonaire cooler is installed to the highest standards.

### Bonres® Unit Selection Guide

At Bonaire we understand that every home is different. That's why we have developed Bonres<sup>®</sup> sizing and design software that enables your Bonaire specialist dealer to accurately select the perfect Bonaire evaporative cooler for your home.

After using the Bonres<sup>®</sup> unit selection guide and having the Bonaire ducted cooler correctly installed and commissioned by a licensed Bonaire specialist, if the Bonaire unit does not perform to specification, Bonaire will repair or replace the Bonaire unit free of charge, or refund your money.

### Combine the benefits of Bonaire evaporative cooling with Bonaire ducted gas heating.

Bonaire lets you enjoy complete heating and cooling comfort all year round at the touch of a button. Bonaire's ducted evaporative cooler can be combined with a Bonaire ducted gas central heater using just one controller.

You have the choice of installing Bonaire heating at the same time as your Bonaire cooling, or simply add it at a

later date.

Bonaire's range of ducted gas heaters suit any size home or budget, have low running costs and are easy to install.

Ask your Bonaire dealer for a Bonaire ducted gas heating brochure.







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# Bonaire Pinnacle<sup>®</sup>. The Pinnacle in Evaporative Cooling

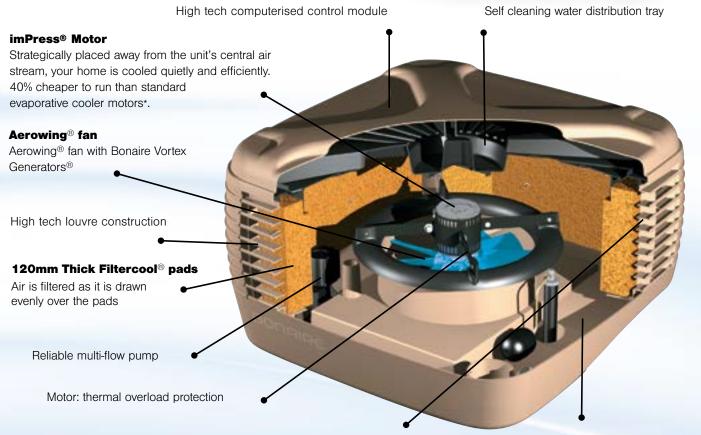
The engineering team at Bonaire continually research and source the latest developments in evaporative cooling technology.

This has culminated in the development of an evaporative cooler that provides the ultimate in efficient cooling that operates at considerably less running costs than standard coolers and include some of the most advanced operational features of evaporative coolers today.

### That evaporative cooler is the Bonaire Pinnacle.

So if you are looking for the ultimate in ducted evaporative cooling, then the Bonaire Pinnacle is the only choice for you.





Air is drawn evenly from all four louvre pads

Self-cleaning EZI drain tank

<sup>®</sup> imPress is a registered trademark of Regal Beloit Australia Pty Ltd

### The Bonaire Pinnacle<sup>®</sup> now comes with a standard 7 year warranty

For added peace of mind, the Bonaire Pinnacle comes as standard with a 7 year warranty Both the cabinet and parts are also covered by extensive warranties. Note: Domestic warranty only. Unit warranty for commercial applications is one year parts and labour. For further information on warranty terms and conditions please refer to Bonaire's warranty information booklet.



# **Bonaire Pinnacle® Evaporative Cooling**

### Innovative ImPress® Motor Technology

Developed for use in the Australian solar car "Desert Rose" from Charles Darwin University that won the prestigious award for Technical Innovation in the World Solar Challenge, the ImPress motor used in the Bonaire Pinnacle utilises axial flux motor technology delivering energy savings up to 40%\* on standard motors with reduced noise.

### Advanced Bonaire Aerowing® Fan Design

Exclusive to Bonaire, the Bonaire Aerowing Fan was designed with the assistance of a leading aircraft designer. The secret to this fan's performance is its unique "paddle" fan blade design with Bonaire Vortex Generators<sup>®</sup> on top of each fan blade. This enables the fan to achieve more airflow and less noise as the fan spins at less RPM than other noisier fan blades.

### Stylish Strong Cabinet Design

Bonaire's sleek design fits snuggly onto the profile of your roof. The sloped base tank holds less water than many flat based units. All Bonaire units are constructed using an injected moulded high strength plastic that is UV stabilised.

### **Bonaire Humidity Control**

The Bonaire Pinnacle humidity control function allows you to select how often the Filtercool<sup>®</sup> filter pads are moistened, assisting the operational effectiveness of your Bonaire unit on humid days.

### Bonaire Air Ioniser

The Bonaire Air Ioniser electrically charges the air molecules in the airstream. Negative ions are generated, purifying the air before it is discharged into your home.

### Bonaire Water Management System

The Bonaire Pinnacle uses a water quality salinity sensor to determine the optimal time that the water in your cooler needs to be replaced. This ensures efficient unit operation and limits potential excessive calcium build up. After operation the Bonaire water tank is drained dry and clean.

### Pad Clean Function

Bonaire's Pad clean function enables you to clean the Filtercool<sup>®</sup> filter pads before unit operation ensuring that your Bonaire cooler operates at maximum efficiency.

### Bonaire PreCool®

Bonaire's PreCool function enables the Filtercool<sup>®</sup> filter pads to be pre-moistened before unit operation meaning that you will have cool, fresh air as soon as the Aerowing fan starts operating.

### **Bonaire Exhaust Function**

Available on the Bonaire Pinnacle where an Filtercool<sup>®</sup> duct shutter has not been installed, the Bonaire Exhaust Function allows you to run the fan in reverse drawing hot air or cooking odours from your home.

\*40% cost saving based on the running costs of a 950W ImPress® motor versus a standard 950W induction motor operating for 960 hours with electricity costs at \$0.35 per kW/Hr.















# *Stepped* Bonaire Integra®II. The Premium Choice

The Bonaire Integra II has many of the features of the Bonaire Pinnacle, utilising the same stylish cabinet design, 120mm Filtercool<sup>®</sup> filter pads and advanced Bonaire Aerowing<sup>®</sup> fan. Bonaire Integra II also comes with Bonaire PreCool<sup>®</sup> and Pad Clean functions.

# BOULER

### Techdrive® Motor Technology

The specifically developed motor is designed to run quietly. The motor windings are triple coated to ensure durability and longevity of the cooler operation.

### Bonaire H<sub>2</sub>Optimiser®

This clever device is designed to manage the water quality in your cooler by minimising water usage whilst still ensuring that the system has the correct amount of water to guarantee efficient operation and limit potential damage from excessive calcium build up.

### Bonaire Maxicooler®

In today's modern Australia our homes are becoming larger to accommodate bigger families. In past years, to cool larger homes with evaporative coolers often meant two units. Available on both Bonaire Pinnacle and Bonaire Integra II, the Bonaire Maxicooler<sup>®</sup> extra air units have been developed to cool much larger homes.

### The Enviroseal® Duct Shutter

Available as standard on both Bonaire Pinnacle and Bonaire Integra II, during the months when your unit is not in use. Bonaire's Enviroseal duct shutter keeps warm air in and draughts out. It's fully automatic and fits into the duct of your evaporative cooling system. Installation of the Bonaire Enviroseal contributes to bushfire protection as it is compliant with AS 3959-2009 up to BAL29.

### Warranty

The Bonaire Integra II come with a 5 year parts and labour domestic warranty. Both the cabinet and parts are also covered by extensive warranties. Ask your Bonaire dealers about the extended 7 year warranty option.

Note: Domestic warranty only. Unit warranty for commercial applications is one year parts and labour. For further information on warranty terms and conditions please refer to Bonaire's warranty information booklet.



The Duct Shutter

he Duct Shutter in





Bonaire Integra and Bonaire Pinnacle colours.







IMME

Bonaire Summer Breeze®. The Value Choice

The Bonaire Summer Breeze is the value for money choice.

Ideal for both new homes and changeover installations, the Bonaire Summer Breeze has been specifically developed to provide a quick easy changeover for many old evaporative coolers. All units can be installed on a standard sized dropper duct.



So when it comes to replace your old evaporative cooler, by

choosing a Bonaire Summer Breeze you get a more efficient unit usually with far more features than you have ever had before.

The Bonaire Summer Breeze has an injected moulded polymer cabinet construction and sloping base tank. It comes standard with Bonaire H<sub>2</sub>Optimiser water management, and is available in three colours: Charcoal, Terracotta Red and Beige.

### Techdrive<sup>®</sup> Motor Technology

The specifically developed motor is designed to run quietly. The motor windings are triple coated to ensure durability and longevity of the cooler operation.



Advanced engineering design puts the Bonaire Summer Breeze at the forefront of airflow delivery. The Summer Breeze unit draws air evenly over all four Filtercool<sup>®</sup> pads to deliver optimal airflow performance.

### Warranty

The Bonaire Summer Breeze comes with a 5 year parts and labour domestic warranty. Both the cabinet and parts are also covered by extensive warranties.

Note: Domestic warranty only. Unit warranty for commercial applications is one year parts and labour. For further information on warranty terms and conditions please refer to Bonaire's warranty information booklet.













# A choice of state of the art controllers

### **Navigator® Remote Control**

If you are after the very latest in controls and technology,

the Navigator wireless radio frequency control is for you. This controller allows you to change settings without leaving the comfort of your armchair.

Wireless radio

frequency

.



- Multiple controller option up to 4 controllers
- Able to operate from room to room
- Thermostat comfort sensing from any room with an outlet
- Large, clear and easy-to-read backlit LCD display
- Customised operational settings
- Diagnostics and error reporting
- Optional controlling of multiple appliances
- Easy to operate in 4 selectable operating modes
- 24 hour programmable start and stop times
- Bonaire 4, 5 and 6 star Gas Central Heating and Bonaire Dual Cycle

NB: Blue screen for cooling, orange for heating

• Solar mode selector and solar panel power input indicator when connected to Pinnacle solar kit.

### **Slimline Digital Manual Control**

- Slimline Digital Controller
- Easy to operate and simple timer operation
- Small, compact and slimline



- Clear and easy-to-read
   LCD display
- Compatible with 3 star ducted gas heating.

# Bonaire Fire Rated Evaporative Coolers

Installation of the Bonaire Enviroseal contributes to bushfire protection as it is compliant with AS3959.2009 up to bushfire attack level (BAL) 29. As further protection against bushfire, Bonaire units can be fitted with an optional stainless steel ember protection mesh. Talk to your local dealer for more information about this option.

### **Navigator® Hard Wired Control**

The wall mounted Navigator Controller has all of the features of the wireless, but is fixed in the living areas of your home. It will maintain temperatures and



operation and allow all setting changes from a fixed location.

- Large, clear and easy-to-read backlit LCD display
- Customised operational settings
- Diagnostics and error reporting
- Optional controlling of multiple appliances
- Easy to operate in 4 selectable operating modes
- 24 hour programmable start and stop times
- Bonaire 3, 4, 5 and 6 Star Gas Central heating and Bonaire Dual Cycle.
- Multiple control option 1 wall mounted and up to 3 Navigator Remote Controls
- Solar mode selector and solar panel power input indicator when connected to Pinnacle solar kit.

### My Climate® Wi-Fi

Bonaire's My Climate Wi-Fi control allows you to control your ducted evaporative cooler, ducted gas heater or dual cycle airconditioner from your Smart Device. My Climate Features:

- Wi-Fi control that is compatible with most smart devices
- Utilises existing home Wi-Fi network or mobile network.
- Remote access function allows you to turn on your appliance from work or when you are out.
- Directly syncs with the main thermostat control.
- My Climate Wi-Fi control requires installation of a Navigator hard wired or remote wireless thermostat.







As electricity prices continue to go up and up, Bonaire has developed the solution. Bonaire's solar panel enhanced cooling option allows you to operate your Pinnacle cooler in solar mode on a lower fan speed until a higher cooling

effect is required. This clever option automatically switches your unit to mains electricity when the output of the solar panel is not sufficient to run your cooler. The solar panel continues to generate power, even in Winter.\* This means the amount of electricity generated by the Pinnacle solar panel over a year is over two times the amount of electricity used by a Bonaire Pinnacle over a year\*\*

Pinnacle Electricity consumption

Solar Panel Electricity generated

The state of the art

Kilowatt Hours

50

100

150

200

250

300

350

The amount of electricity generated by the 260W Pinnacle solar panel over a year in Melbourne vs. the amount of electricity used by the Pinnacle operating for 300 hours per year in Melbourne

# Bonaire Pinnacle Solar Features:

- Cheapest form of whole of home cooling with no annual power costs
- Run your cooler during the day whilst you are at work or out without worrying about the running costs
- Automatically switches to mains power supply when required
- Provides additional solar power back into the household grid saving you money
- Simple and easy to install with solar panel mounted on top of unit
- Install the solar panel kit now or wait to later
- Solar panel manufactured in Australia for Australian conditions

Australian made Pinnacle solar panel is installed on the top of the evaporative cooling unit and can be installed in all four directions to maximise the solar banefit. The unique patented



rod and clamp mounting system securely attaches the solar panel to the cooler. This design has been proven in wind tunnel testing conducted by the University of Adelaide School of Civil, Environmental and Mining Engineering. The solar panel is connected to an intelligent micro inverter that converts DC into AC power that is in turn connected to the cooler control box.

- \* Bi-directional meter may need to be fitted or Smart Meter reprogrammed to allow surplus power to be exported to the mains grid.
- \*\* Based on Sustainability Victoria guide of the running costs of an evaporative cooler per annum, based on a house area of 166 square meters with 300 hours usage, a 60% duty cycle for air conditioners and an electricity tariff of 28 cents/kWh, April 2014.

<sup>\*\*\*</sup> Based on Tindo Solar Panel model Karra-260 installed in Melbourne. Panel is unshaded is facing North based on Solar Radiation Data Handbook. Specification of panel subject to change without notice. Refer Tindo Karra Solar System Owner's Manual Issue No. 4b.

# Select the Bonaire $^{\scriptscriptstyle (\! B\!)}$ cooler that's right for you

Standard Features	Bonaire Pinnacle	Bonaire Integra II	Bonaire Summer Breeze					
imPress super-efficient axial flux motor •								
Techdrive motor		•	•					
Quiet Aerowing low RPM fan	•	•	•					
Maxicooler extra air model for larger homes	•	•						
Super strong cabinet	•	•	•					
Sloping base tank design	•	•	•					
Water management with salinity sensor	•							
H <sub>2</sub> Optimiser water management system		٠	•					
120mm Filtercool Filter Pads for greater efficiency	•	٠						
Enviroseal duct shutter	•	•						
PreCool Function	•	•						
Pad Clean Function	•	•						
Humidity Control	•							
Air Ioniser	•							
Exhaust Function*	•							
7 Year Parts & Labour Warranty	•							
5 Year Parts & Labour Warranty		•	•					
7 Year Warranty Option		•						
10 Year Cabinet Parts Warranty	•	•	•					
25 Year Cabinet Corrosion Warranty	•	•	•					
Australian owned and operated company	•	•	•					
Low running costs	•	•	•					
Whole of home cooling	•	•	•					
*Exhaust function only available if Enviroseal duct shutter is not install	ed.							
Optional Features								
WiFi Control	•	•	•					
RF Remote Navigator control	•	•						
Hard Wired Navigator control	•	•	•					
Slimline Manual Digital Control		•	•					
Enviroseal duct shutter			•					
Solar enhanced cooling kit	•							
Colours								
Charcoal	•	•						
Terracotta Red	•	•						
Beige	•	•	•					
Green		<ul> <li>VSM65 and VSL75 only</li> </ul>						



# **Technical Data**

### **Bonaire Pinnacle Unit Specifications**

Models	Motor Size	Height	Height	Width	Dry Weight	Dropper Size
		Front	Back			
	Watts	(mm)	(mm)	(mm)	(kg)	(mm)
PES160	560	683	573	1192	61	550 x 550
PEM180	880	790	681	1192	65	550 x 550
PEL200	880	1047	937	1192	80	550 x 550
PEH220 Maxicooler	880	1047	937	1192	80	800 × 550

### Solar panel specifications

Length	1667mm	Open Circuit Voltage	38.1V			
Width	1000mm	Short Circuit Current	8.6A			
Depth	40mm	Maximum Power Point Voltage	30.4V			
Power	260W	Maximum Power Point Current	8.8A			

### Bonaire Integra II Unit Specifications

Models	Motor Size	Height	Height	Width	Dry Weight	Dropper Size
		Front	Back			
	Watts	(mm)	(mm)	(mm)	(kg)	(mm)
VSS55	600	683	573	1192	61	550 x 550
VSM65	950	790	681	1192	65	550 x 550
VSL75	950	1047	937	1192	80	550 x 550
VSH85 Maxicooler	950	1047	937	1192	80	800 × 550

### Bonaire Summer Breeze Unit Specifications

Models	Motor Size	Height	Height	Width	Dry Weight	Dropper Size
		Front	Back			
	Watts	(mm)	(mm)	(mm)	(kg)	(mm)
SBB800	600	790	680	1100	55	550 x 550
SBB950	750	990	880	1100	65	550 x 550
SBB1200	950	990	880	1100	67	550 x 550

### Unit Sizing and Performance

All evaporative air conditioners vary in performance according to the architectural features of a home and different climatic conditions in Australia. The Australian Standard AS2913-2000 for Evaporative air conditioning equipment (Standard), Appendix A, provides a method by which cooling performance of evaporative air conditioner systems can be calculated. However, this Calculation of Rated Cooling Performance, is not an integral part of the Standard and is an "informative" appendix for information and guidance only.

Bonaire has adopted an alternative method by which it calculates the performance of evaporative air conditioning systems than that provided in the Standard for information and guidance purposes, and recommends using the Bonres<sup>®</sup> Unit Selection Guide as the only reliable method of determining the cooling capacity of a Bonaire unit in your home.





### **Office Locations**



# bonaire.com.au

BONAIRE® A CLIMATE TECHNOLOGIES BRAND ABN 13 001 418 042

Your nearest Bonaire stockist is:-

In the interest of continued product improvement, Bonaire reserves the right to alter specifications without notice.

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