



BONAIRE®

The leaders in heating and cooling



Commercial Evaporative Cooling

The Bonaire System Advantage

Bonaire has been providing innovative commercial evaporative cooling solutions for over 60 years on projects with applications which have been as varied as they are simple or complex. Our aim has always been, and will continue to be, to provide cooling systems that strive to maximise energy efficiency and reduce operating costs whilst delivering effective and consistent cooling. Bonaire is proud to be Australian made and owned

Whether you are looking to condition an area as small as a plant room or as large as a major manufacturing plant, Bonaire has the evaporative cooler to suit your application.

With a variety of output capacities and outlet configurations, the Bonaire Commercial range gives designers the flexibility to provide effective cooling for applications in new or existing projects.

The Bonaire commercial range is designed to offer a standard range of units that will accommodate most applications.

Over and above the standard range Bonaire also offers numerous non-standard options which are designed to further enhance the capabilities of the coolers and afford a more tailored cooling solution.

Bonaire evaporative air conditioners have for many years provided economic and effective cooling for a range of applications including: -

- Commercial kitchens
- Club premises
- Sporting venues
- Warehouses and storage facilities
- Retail warehouses and showrooms
- Community halls and churches
- Schools and other educational campuses
- Hotels and restaurants
- Aged Care facilities



Bonaire B Series

These light weight yet durable units are designed to provide effective cooling for small to medium sized applications. They incorporate all the features of the larger units but with the size and flexibility to be easily handled and installed.

All units are available in down, side or top discharge.

Cabinet

Constructed from marine grade aluminium powder coated in standard beige colour. The cabinet is further strengthened with the stainless steel fasteners which combine to provide a rigid durable structure. Stainless steel and custom coloured cabinets are available as options.

Water reservoir

Vacuum formed high impact ABS polymer providing a durable, corrosion free component for the life of the product.

Fan and Motor

The centrifugal fan is statically and dynamically balanced to work at peak efficiency ensuring low noise and optimum air flow. All bearings are fully sealed for reliability and low maintenance. The Bonaire B18 and B23 units are also manufactured with a variable speed motor option. The B36 is driven with a TEFC three phase two speed motor with a fixed pulley.

Pad Frames

The one piece louvre is manufactured from impact resistant, UV stabilised polypropylene coloured to match the aluminium cabinet. The pad frames are fitted with Filtercool™ pads as standard with Wood Wool available as an option. Pad frames are easily removable for maintenance and service.

Water Management

All units are fitted with a Dialflo control for effective management of bleed and water distribution. The units are also available with a non-timed dump valve or a Salinity Control drain valve as an option. Both allow a superior level of water quality management and can assist in compliance with any state or regulatory requirements.

Controls

The Bonaire B series controls are designed to be functional and simple to operate. The 2 speed control has simple on/off switching for Pump On/Off and High/Low fan speeds.

Additionally, the variable speed control comes with a programmable timer.



Variable pitch pulley



Variable speed control



Two speed control

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

Bonaire C Series

These heavy duty large capacity units are designed to provide effective cooling for medium to very large sized applications.

Cabinet

For strength and durability the cabinet is constructed from marine grade aluminium powder coated in standard beige colour. The cabinet is further strengthened with the stainless steel fasteners which combine to provide a rigid durable structure. Stainless steel and custom coloured cabinets are available as options.

Water reservoir

Vacuum formed high impact ABS polymer providing a durable, corrosion free component for the life of the product. The reservoir is rib free for easy cleaning.

Fan and Fan Housing

All units have a heavy duty, forward curved centrifugal double inlet fan which is statically balanced to work at peak efficiency ensuring low noise and optimum air flow.

Blower wheels are fitted in a three piece vacuum formed scroll and supported on a heavy duty aluminium mounting frame. Fan shafts are precision ground to close tolerances for bearing fitment and coated with a corrosion inhibitor.

Fan Motor and drives

Motors are three phase, two speed, totally enclosed fan cooled built to tropic proof standard IP55 Class F. Variable speed drives are available as an option. "B" section V belts are used on all models with either single or twin drives dependant on model size. Fixed cast alloy pulleys are fitted to all models as standard however variable pitch is available on some models as an option.

Pad Frames

Pad frames are one piece aluminium powder coated to match the aluminium cabinet. There are two pads per side with a total of six pads on all units except the 1900C which has eight. The pad frames are fitted with Filtercool™ pads as standard with Wood Wool available as an option on most models.

Water Management

Each unit is fitted with an externally mounted Dialflo control which enables adjustment to the volume of water supplied to the pads and the bleed off. The units are fitted as standard with a bleed funnel and are also available with a non-timed dump valve or a Salinity Control drain valve as an option.

Electrical

Units are prewired and fitted with thermal overload relays and contactors. An externally accessed isolation switch is fitted to each unit and all units are factory tested prior to shipment.

Controls

All units have a simple function control switch that controls On/Off, High/Low fan speeds, and Pump On/Off functions.



Isolation switch



Two speed control

Bonaire Seasonmaker DF Series

The Seasonmaker DF Series is a unique range of evaporative air conditioning units designed as a compact commercial unit which is easy and simple to install, operate and maintain.

Available in two sizes that can cool up to 200 square metres*, the DF Series utilises simple to use variable speed controls delivering large volumes of air at up to 90% saturation efficiency. This makes them ideal for most commercial and industrial applications from shearing sheds to glass houses and large factories.

Lower Running costs

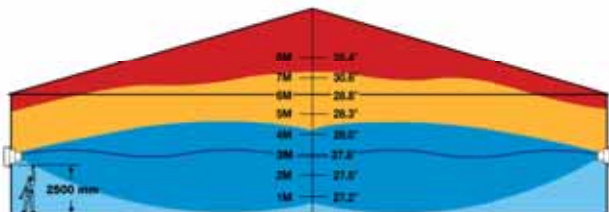
The DF series is also up to 30% cheaper to run than comparable commercial ducted evaporative units. It employs the latest in aerodynamic research technology to ensure the most efficient operation and maximum airflow.

Low Maintenance Costs

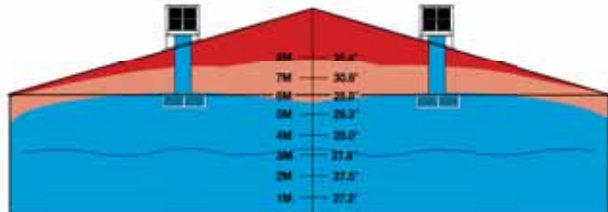
Maintenance costs are lower due to the DF's unique direct drive fan – as there are no fan bearings, belts or pulleys to adjust, wear or maintain. The DF's Filtercool™ filter pads and louvres are easy to remove and each DF unit has Bonaire's patented Dialflo water management system – the most reliable water management system on the market.

Air Stratification

The Seasonmaker DF series cools the air from the ground-up so it only cools the needed space as opposed to traditional roof-mounted units that need to cool the entire air space. Please refer to the air stratification models below.



Side-mounted DF Seasonmaker installation



Roof mounted traditional installation

Simple and easy to install

As the unit is side-mounted through the wall, it is significantly cheaper to install because:

- No roof bearers are required
- No roof flashing is required
- No plenums are required
- No costly unit stands are required
- No roof walkways are required
- No cranes need to be organised for installation
- No clearance issues with gantry cranes and forklifts
- No electrician needed to wire the unit. Just plug it in and turn it on!

This makes the Seasonmaker DF series up to 40% cheaper to install than comparable commercial ducted evaporative air conditioning units.



*Depends on geographic location

Commercial Cooler Options

Cabinets

Bonaire commercial coolers cabinets are all manufactured, as a standard, using a marine grade aluminium powder coated in a base beige colour. Whilst beige is the standard colour there are a small number of regularly used Grey and Off White colours available as an option. Other nonstandard colours are available on request.

The units can also be manufactured using stainless steel components. This can vary from cabinet only through to include the blower wheel and shaft. Ask your local representative for details of these units.



Fan Options

Fan Shaft: - Generally manufactured in precision ground steel however they are also available as an option in stainless steel.

Blower wheel: - Constructed as standard using galvanised steel. They are also available in a powder coat finish.



Roof Stands

The Bonaire Commercial series incorporates a range of roof stands to suit every model and configuration.

The stands are manufactured for a galvanised steel 'U' channel and are designed to be adjustable to accommodate roof pitches up to 26° and greater for some models. The stands are supplied in kit form for easy transport and assembly on site.



Fire retardant pads for B Series coolers

The requirement for evaporative coolers to become more fire resistant has led to the development of a fire retardant filter medium called Cool- X. Cool - X uses a base wood wool material which is coated with an anti-bacterial ceramic coating, packed into a V form filter pad and fitted to the Bonaire B series pad frame.

Features of the Cool - X pads include: -

- Fire retardant ceramic coating
- Patented anti sag V form profile
- Cobalt blue water flow sufficiency colour indicator.
- Similar saturation efficiency as normal untreated pads
- *Minimal reduction in airflow*

COOL-X



Variable Speed Drives

On high speed the maximum specified air flow is delivered and reduces to 55-65% on low speed.

Where a greater control of the air flow is required we offer as an option, units manufactured with operation through a variable speed control (Variable Frequency Drive). The specifications of the units fitted with these controls is modified to incorporate a single speed motor instead of the two speed.

The control is supplied complete with wiring diagram ready to connect to a separate proprietary control which is generally supplied by the electrical contractor undertaking the installation.

Variable frequency drives are commonly used to control the speed of electric motors to achieve energy and process optimisation.



Bonaire Unit Specifications



Bonaire B Series

| Model | Airflow Litres per second | Discharge Dimensions mm (Down)* | Motor size kW | Volts/Ph/Hz | Full Load AMPS** | Motor and fan pulleys mm | Overall Dimensions W x L x H mm*** | Shipping Operating weight kg | Pad Velocity m/s |
|-------|------------------------------|------------------------------------|------------------|-------------|---------------------|-----------------------------|---------------------------------------|---------------------------------|---------------------|
| B18 | 2,300 | 554 x 554 | 0.75 | 240/1/50 | 4.55 | VSP115/254 | 1098 x 1055 x 1036 | 83/96 | 1.3 |
| B23 | 2,800 | 605 x 605 | 0.75 | 240/1/50 | 4.55 | VSP100/305 | 1310 x 1267 x 1295 | 91/117 | 1.1 |
| B33 | 3,600 | 605 x 605 | 1.5 | 240/1/50 | 7.85 | VSP125/305 | 1310 x 1267 x 1295 | 101/127 | 1.5 |
| B36 | 4,051 | 605 x 605 | 1.5 | 415/3/50 | 3.75 | 102/305 | 1310 x 1267 x 1295 | 110/136 | 1.7 |

Bonaire C Series

| Model | Airflow Litres per second | Discharge Dimensions mm (Down)* | Motor size kW | Volts/Ph/Hz | Full Load AMPS** | Motor and fan pulleys mm | Overall Dimensions W x L x H mm*** | Shipping Operating weight kg | Pad Velocity m/s |
|-------|------------------------------|------------------------------------|------------------|-------------|---------------------|-----------------------------|---------------------------------------|---------------------------------|---------------------|
| 600C | 4,575 | 710 x 710 | 1.5 | 415/3/50 | 3.9 | 102/406 | 1500 x 1487 x 1310 | 165/215 | 1.28 |
| 700C | 5,500 | 710 x 710 | 2.2 | 415/3/50 | 5.2 | 114/406 | 1500 x 1487 x 1310 | 165/215 | 1.54 |
| 800C | 7,500 | 820 x 820 | 2.2 | 415/3/50 | 5.2 | 102/457 | 1500 x 1487 x 1510 | 204/255 | 1.76 |
| 900C | 9,100 | 820 x 820 | 4.0 | 415/3/50 | 8.5 | 114/457 | 1500 x 1487 x 1510 | 237/288 | 2.13 |
| 1200C | 11,850 | 950 x 950 | 4.0 | 415/3/50 | 9.0 | 89/457 | 1838 x 1835 x 1870 | 346/490 | 1.74 |
| 1400C | 14,500 | 950 x 950 | 7.5 | 415/3/50 | 16.6 | 102/457 | 1838 x 1835 x 1870 | 395/539 | 2.13 |
| 1500C | 15,850 | 950 x 950 | 10.0 | 415/3/50 | 21.0 | 127/457 | 1838 x 1835 x 1870 | 410/554 | 2.03 |
| 1700C | 17,050 | 1100 x 950 | 10.0 | 415/3/50 | 21.0 | 114/457 | 2142 x 2135 x 2075 | 450/595 | 1.87 |
| 1900C | 19,375**** | 1100 x 950 | 15.0 | 415/3/50 | 28.0 | 125/500 | 2142 x 2135 x 2075 | 520/665 | 1.74 |

Bonaire Seasonmaker DF Series

| Model | Airflow Litres per second | Discharge Dimensions mm | Motor size kW | Volts/Ph/Hz | Overall Dimensions W x L x H mm*** | Shipping Operating weight kg |
|-------|------------------------------|----------------------------|------------------|-------------|---------------------------------------|---------------------------------|
| DF1 | 1,840 | 550 x 550 | 425 | 240/1/50 | 1160 x 720 x 1205 | 60/69 |
| DF2 | 3,670 | 550 x 550 | 2x425 | 240/1/50 | 2254 x 720 x 1205 | 122/139 |

For further information please phone

Victoria (03) 8795 2400

SA (08) 8307 5100

WA (08) 9454 1010

Dubbo (02) 6882 2733

www.bonaire.com.au



Your nearest Bonaire stockist is: -

* Discharge dimensions are predominantly for down discharge models. For dimension on side and top discharge models refer to the Bonaire Commercial Technical Manual.
 Includes motor and pump * Dimensions are overall including louvres. Refer Bonaire Commercial Technical Manual for mounting dimensions. **** 1900C airflow is for down and top discharge only. Refer the Bonaire Commercial Technical Manual for side discharge airflow.