

Commercial Centrifugal Evaporative Air Conditioning



Low running costs



All natural



Highly effective



The Bonaire design advantage.

As Australia's leading cooling and heating brand, Bonaire has been providing Australians with innovative, efficient cooling and heating solutions for over 60 years. Using the latest technology we create intelligent, user friendly cooling and heating systems that strive to maximise energy efficiency and reduce operating costs. Bonaire is proud to be Australian made and owned.

Whether you want to cool your home, small factory or large industrial plant, Bonaire has the complete centrifugal evaporative air conditioning product range, with a variety of output capacities to suit most commercial or industrial cooling applications.

Designed for versatility of installation with side, top and bottom discharge outlets the Bonaire centrifugal range gives designers flexibility in the use of the units in new systems and permits the replacement of old units in existing systems.

The latest technology in evaporative cooling and many engineering refinements are incorporated in the Bonaire centrifugal range to ensure efficient cooling is combined with minimum maintenance and low operating costs.

Bonaire evaporative air conditioners offer economic installation and running costs, for a range of air conditioning solutions:

- Club premises
- Community halls and churches
- Showrooms and shopping centres
- Sporting venues
- Schools and universities
- Wine storage
- Commercial kitchens
- Warehouses
- Hotels and restaurants
- Aged care facilities

Bonaire evaporative air conditioners are ideal for environments that would benefit from non-recycled air or where smoke or fumes need to be expelled, such as steel mills, foundries, factories, laundries and laboratories.



The Bonaire B Series.

These lightweight units are designed to incorporate all the features of larger commercial units including a motor positioning system which gives the units a unique low centre of gravity. All units are available in bottom, side or top discharge.



Full metal strength.

For strength and durability, the unit is constructed from silicon polyester coated marine grade aluminium. This strength is reinforced with the use of stainless steel fasteners. The result is an extremely rigid and durable cabinet structure.

Polymer components.

Polymer components are used in non-stressed areas where there is a need to avoid corrosion or where weight reduction is required. The fan housing, louvre panels, water pump filter, tank and distribution system, are constructed using polymer.

Pump.

The pump has encapsulated motor windings for long life and a filter strainer for improved pump operation.

High-tech louvre design.

The one-piece louvre is made from impact resistant UV stabilised polypropylene that is fully impregnated with colour. The unique 'stay clean' water distribution trough allows even saturation across the filter, ensuring better cooling.

Centrifugal fan and fan motor.

The Centrifugal Nicotra Fan is statically and dynamically balanced to work at peak efficiency, ensuring low noise and greater airflow. It has sealed bearings for reliability and low maintenance. The drive behind the B18, B23 and B33 is a PSC single phase motor and the B36 is a TEFC 3 phase motor. Your Bonaire unit delivers quieter, smoother cooling power rated to Australian standards AS 2913-87.

Ease of maintenance.

Bonaire's units are easy to maintain and service. Drop in louvre panels and motor access panel, provide easy access to the formed polymer tank making it easy to clean, keeping maintenance costs to a minimum.



Bonaire options.

Bonaire gives you the choice of either aspen or CELdek filters. A variable speed motor option is available on the B18 and B23 models on a made to order basis.

Controls.

Bonaire controls are simple to use. The 2 speed control has simple ON/OFF switching for vent and cool. The variable speed controls have ON/OFF switching and a dial to select the fan speed. Additionally, the controls come with a programmable water management system. There is also a programmable 2, 4 and 8 hour ON/OFF timer control option on the variable speed single phase units.



2 speed control - suits B33



Variable speed - programmable



Suits B18 / B23 / B36

Water management.

The B series comes fitted with a unique Dialflo control for the simple management of bleed control and water distribution flow. An optional dump valve can be fitted to better manage water quality and for commercial applications to assist in conformance to any state or regulatory requirements.



Dump valve

Variable pitch pulley option.

Available as a made-to-order option to further customise your Bonaire unit to meet your specific needs. This enables additional airflow for higher static systems.

Roof Stands

Roof Stands are available as an accessory only. Engineered for ease of installation, these save time and money.

Warranty.

The B Series is supported with a two years parts and labour warranty for domestic and commercial applications.



Commercial and Domestic Applications



The Bonaire C Series.

The largest commercial evaporative air conditioner in our range the Bonaire C series is ideal for larger industrial applications.



General construction.

For strength and durability, the unit is constructed from silicon polyester-coated marine-grade aluminium, with a lightweight polymer fan housing and water tray for the 700C to 1500C.

Fan wheel and drives.

All units have heavy-duty, forward-curve centrifugal double-inlet fans, made from Galvabond steel, or can be made-to order with a silicon polyester coating. Blower wheels are quiet, trouble-free, dynamically balanced and are supported by a heavy-gauge aluminium mounting frame. Fan shafts are precision ground to close tolerances for precision bearing fitment and are protected with an epoxy coating.

Fan motor drives.

"B" section "V" Belts are used on all models with single and twin drives being used subject to model size. Fixed cast alloy pulleys are used on all models as standard.

Fan motor.

Motors are 3-phase, 2 speed and totally enclosed fan cooled, built to tropic proof standard IP55 Class F.

Water tray.

Fitted with overflow drains and made from lightweight, polymer for strength and corrosion resistance. The tank is moulded in one piece and is rib-free for easy cleaning and maintenance.

Water distribution.

Water is pumped through 20mm diameter PVC tubes to the distribution troughs, housed in the top of the filter pad frames.

Water pump.

The high volume, low pressure pump is designed to give an evenly balanced flow to each CELdek filter pad. The pump is constructed from moulded ABS plastic, has a stainless steel motor shaft and has a built-in thermal overload, all ensuring long life. The unit may have up to 2 water pumps depending on the model.

Filter pad frames.

Drop-in filter pad frames are convenient and easy to handle, allowing ease of inspection and maintenance.

Filter cooling media.

75mm CELdek filters are fitted as standard for consistent saturation efficiency and low maintenance. For hard water areas, units are available on request with aspen filters.

Dump valves.

A 24V solenoid-operated dump valve to drain the unit when not in use is available as an optional extra to assist conformance to any state or regulatory requirements.



Dump Valve

Plumbing.

700C - 1500C Fitted with 1/2" BSB Float Valve.

Protective panels.

To protect the CELdek filters, protective panels are fitted to the unit. These panels are made from silicon polyester-coated marine-grade aluminium and come in the same colour as the chassis.

Water management system – dialflo.

The externally mounted dial control is easy to use and adjusts both the volume of water supplied to the filter pads and the bleed-off rate. Once set the system operates continuously and is a non-clog system using low pressure large orifice fittings.

Access panel.

Bottom and top discharge units are fitted with a blank access panel for easy access to the electrical starter box assembly and the 3-phase motor. The motor is housed near the bottom of the unit, on a heavy-gauge marine-grade aluminium tray, for ease of maintenance.

Electrical system.

All units are pre-wired and fitted with thermal overload relays and contactors for external access. Isolating switches are mounted and isolate the control circuits on each unit (700C - 1500C). All units are factory tested.

Control switch.

All units have a simple function control switch that controls on/off, hi/lo and cool/vent functions.

Cabinet options.

For extremely corrosive environments, units can be constructed in 304/2B grade stainless steel upon request. Or if appearance is critical, the unit is available in an extensive range of colours.

Roof Stands

Roof Stands are available as an accessory only. Engineered for ease of installation, these save time and money.

Warranty.

For commercial and domestic applications, you can enjoy a 2 year warranty on all electrical equipment including fan and pump motors, plus a 2 year warranty (parts only) on the cabinet structure.



The Bonaire Seasonmaker DF.

The Seasonmaker DF Series is a new unique range of advanced designed evaporative air conditioning units. Available in two sizes they are ideal for most commercial and industrial applications.



The Ultimate Commercial Cooler.

The Seasonmaker DF Series is a new unique range of advanced designed evaporative air conditioning units. Available in two sizes that can cool over 200 square metres, the DF Series utilises simple to use variable speed controls, delivering large air volumes at up to 90% cooling saturation efficiency. This makes them ideal for most commercial and industrial applications – from shearing sheds to glass houses to large factories.

The Seasonmaker DF series is especially recommended for environments that would benefit from non-recycled air or where smoke or fumes need to be expelled.

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 walk ways are required
- No cranes need to be organised for installation
- 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.

Portable Air Conditioning.

Both the DF1 and DF2 are available with an optional trolley** to provide fully portable cooling. This makes them ideal for:

- Workshops
- Warehouses
- Sporting events
- Factories
- Farm sheds
- Marquees at major display events



DF1 Series with trolley option



*Depends on geographical location. **Note: finger guard kit must be installed when DF unit is installed on a trolley.

Lower Running costs.

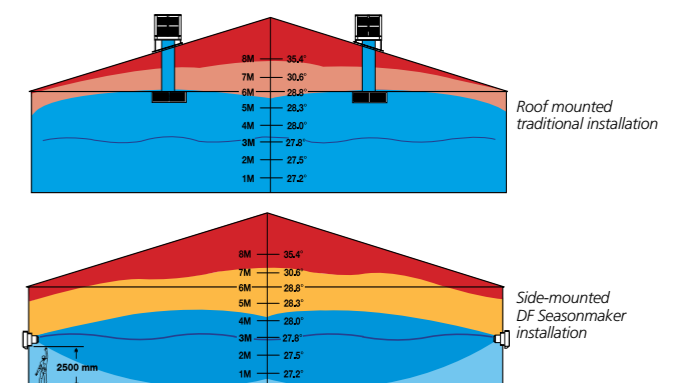
The DF series is also up to 30% cheaper to run than comparable commercial ducted evaporative units. It employs the latest in aerodynamic research technology to ensure the most efficient operation and maximum airflow.

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 CELdek 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.



Warranty.

The Seasonmaker DF Series is supported with a two years parts and labour warranty for domestic and commercial applications.



Commercial and Domestic Applications

The benefits of Bonaire ducted evaporative air conditioning.

An uncooled work place in the height of summer can persuade even the most conscientious worker they'd rather be somewhere else. Only by lowering temperatures and providing an adequate airflow from Bonaire fresh air-conditioning can the perfect, healthy environment be provided to lift productivity and lower production costs.

Bonaire maintains comfort levels for profit maintenance.

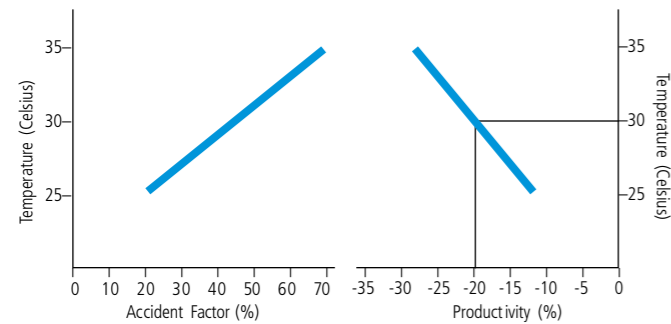
As outside temperatures soar into the thirties, temperatures inside factories and work places can increase significantly.

Productivity suffers, industrial relations become strained and company profitability becomes a depressing subject.

Industrial research studies have shown that accident rates increase along with workplace temperatures. Similarly, productivity drops as temperatures rise. Bonaire evens out performance ups and downs for increased profits.

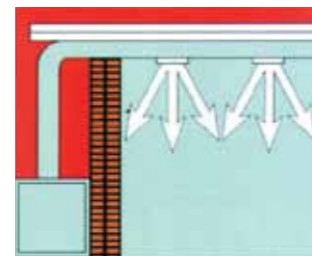
As the temperature rises from 20°C to 30°C the potential for accidents doubles and productivity reduces by 20%.

Installing a Bonaire evaporative air conditioner creates a comfortable working atmosphere, minimising the risk of accidents and increasing productivity.



Discharge.

All units are available in top, side and down discharge to give maximum design options.



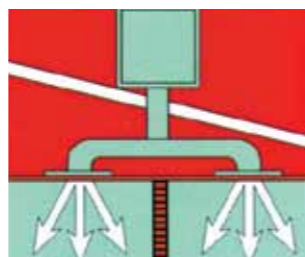
Top discharge ground mounted



Side discharge roof installation



Side discharge through wall installation



Bottom discharge

Bonaire's trusted quality.

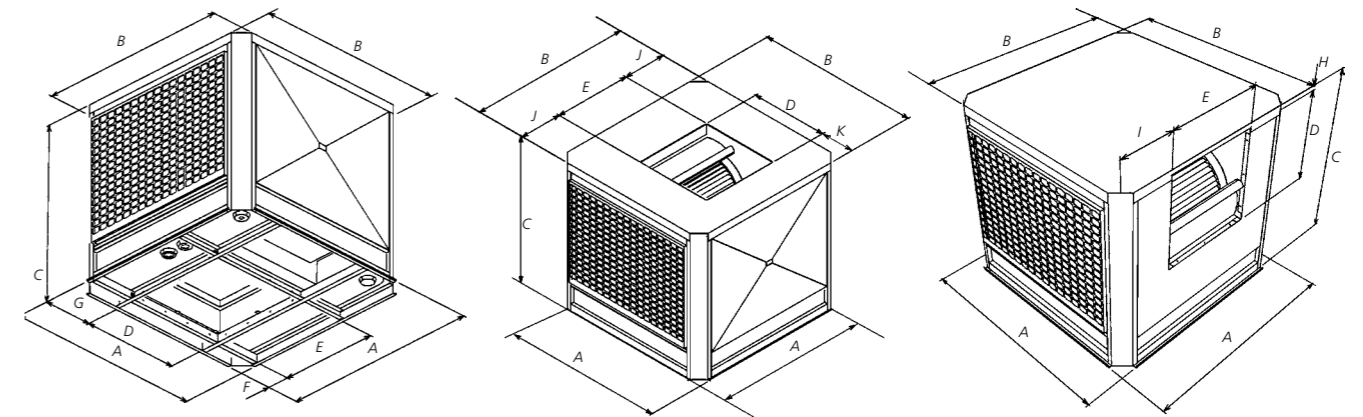
All Bonaire cooling appliances are manufactured to the highest possible standards, using premium quality materials at our state of the art Adelaide production plant. Bonaire understands the importance of continually improving design, engineering and

manufacturing processes to ensure that customers only receive the best cooling and heating solutions. All Bonaire systems are quality tested before they leave our factory, further strengthening customers peace of mind.



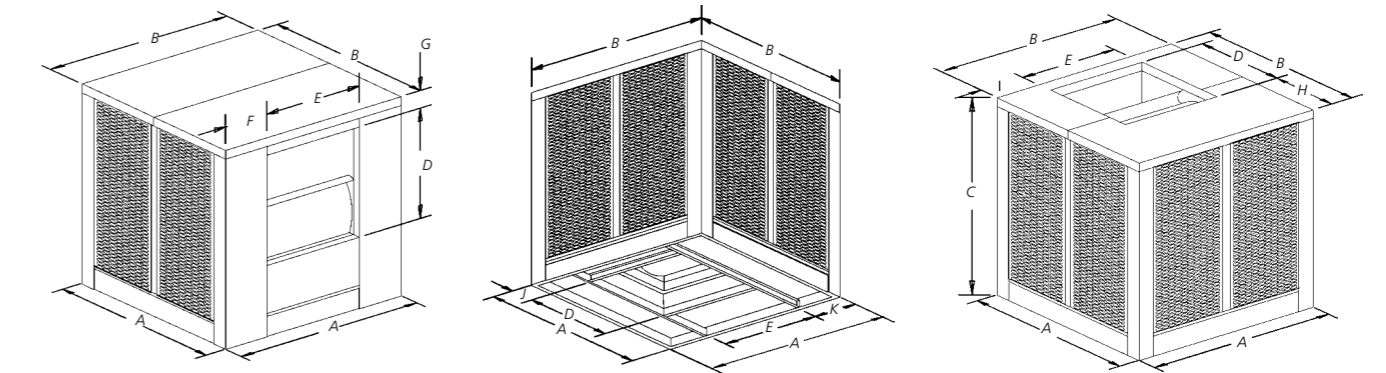
Bonaire unit dimensions.

Bonaire B Series



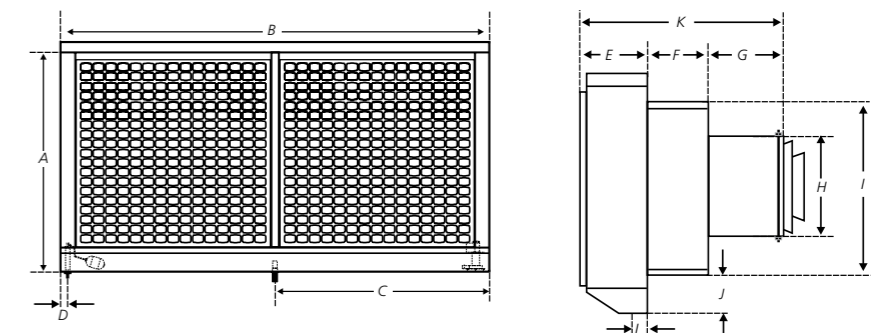
	A	B	C	DD D x E	SD D x E	TD D x E	DD F	SD G	TD H	DD I	SD J	TD K
B18	1012	974	1036	554 x 554	498 X 469	501 X 472	131	229	120	251	251	161
B 23, 33, 36	1220	1186	1295	605 x 605	554 x 554	554 x 554	134	307.5	260	316	316	252

Bonaire C Series



	A	B	C	DD D x E	SD D x E	TD D x E	DD J	SD K	TD F	DD G	SD H	TD I
700	1470	1474	1310	710 x 710	700 x 700	700 x 700	189	380	387	56	409	387
900	1470	1474	1510	820 x 820	810 x 810	810 x 810	147	325	332	71	172	332
1200 / 1400 / 1500	1808	1812	1870	950 x 950	935 x 935	935 x 935	237	429	439	123	347	439

Seasonmaker DF Series



Model	A	B	C	D	E	F	G	H	I	J	K	L**
DF 1	1205	1160	580	45	320	300	350	500	863	185	970	75
DF 2	1205	2254	1172	45	320	300	350	500	863	185	970	75

** L - Center line for float valve and overflow.

Bonaire unit specifications.

B & C Series

Model	Fan Speed		Free Air Discharge		Discharge Dimensions mm	Motor Size kW	Volts/Phase/Hz	Std Motor and Fan Pulley	Overall Dimensions L x B x H	Cooling Medium	Shipping Weight Operating Weight Kg	Pad Area M	Air Velocity Through Pad m/s
	RPM	M/Hr	L/S										
B18	Hi	491	9360	2600	550 x 550	0.75	240/1/50	3.5:10	1098 x 1055 x 1036	CELDEK/ASPEN	83/96	1.43	1.3
B23	Hi	390	11484	3190	600 x 600	0.75	240/1/50	3.25:12	1310 x 1257 x 1295	CELDEK/ASPEN	91/117	2.12	1.1
B33	Hi	486	14040	3900	600 x 600	1.5	240/1/50	4:12	1310 x 1257 x 1295	CELDEK/ASPEN	101/127	2.12	1.5
B36	Hi	512	14583	4051	600 x 600	1.5	415/3/50	4:12	1310 x 1257 x 1295	CELDEK/ASPEN	110/136	2.12	1.7
700C	Hi	410	19798	5500	710 x 710	2.2	415/3/50	4.5:16	1470 x 1474 x 1310	CELDEK/ASPEN	165/216	3.58	1.54
	Lo	275	12850	3570									
900C	Hi	360	32757	9100	820 x 820	4.0	415/3/50	4.5:18	1470 x 1474 x 1510	CELDEK/ASPEN	237/288	4.26	2.13
	Lo	245	20160	5600									
1200C	Hi	280	42660	11850	950 x 950	4.0	415/3/50	3.5:18	1808 x 1812 x 1870	CELDEK/ASPEN	346/490	6.82	1.74
	Lo	190	23760	6600									
1400C	Hi	320	52200	14500	950 x 950	7.5	415/3/50	4:18	1808 x 1812 x 1870	CELDEK/ASPEN	395/539	6.82	2.13
	Lo	215	31680	8800									
1500C	Hi	400	57060*	15850*	950 x 950	10.0	415/3/50	5:18	1808 x 1812 x 1870	CELDEK/ASPEN	410/554	6.82	2.3
	Lo	260	39240*	10900*									

*Free air value only for comparison purposes. Minimum static of 210pa required.

Seasonmaker DF Series

Part	DF1	DF2
Electrical System	240V Single Phase/50Hz	240V Single Phase/50Hz
Unit Controller	Variable Speed Controller	Variable Speed Controller
Fan Housing	Injection Moulded	Injection Moulded
Fan Drive	Direct Drive	Direct Drive
Fan Motor	425W	2 x 425W Fan motors
Fan Motor Rated Load (watts in)	670W	2 x 670W
Filter Cooling Medium	CELdek Pad 100mm thick	CELdek Pad 100mm thick
Water Management System	Bonaire patented Dialflo	Bonaire patented Dialflo
Water Pump	20 l/m	26 l/m
Air Output	1840 l/sec/high setting	3670 l/sec/high setting
Weight		
Net	48kg	97kg
Shipping	60kg	122kg
Operating	69kg	139kg
Cabinet Dimensions		
Height	1,205mm	1,205mm
Width	1,160mm	2,254mm
Depth	970mm	970mm
Warranty	2 years parts and labour	2 years parts and labour

For further information please phone:

VIC/ACT/NSW/QLD (03) 8795 2424

WA (08) 9454 1010

SA (08) 8307 5300

www.bonaire.com.au

Your nearest Bonaire stockist is:-

WARNING: This brochure contains general information only. No tolerances are stated and specifications may have changed since this publication. If you require certified and accurate dimensions or any other details which may affect your installation, please contact Climate Technologies. E&OE.



The leaders in heating and cooling

www.bonaire.com.au

A CLIMATE TECHNOLOGIES BRAND. ABN 13 001 418 042. 26 Nylex Avenue, Salisbury 5108.

In the interest of continued product improvement, Bonaire reserves the right to alter specifications without notice E & OE. Colours represented are as accurate as the printing process will allow. For further information on warranty terms and conditions please refer to Bonaire's warranty information booklet. Domestic warranty only. Unit warranty for commercial applications is one year parts and labour.

BON622 September 2009