Technical specifications

Specifications		TBA 550
Air Flow	High Speed at 80pa L/sec (m^3/h)	3010 (10840)
Cooling Capacity*	KW	14.7
Power consumption (total)	Watts	1360
Fan	Diameter (mm)	541
Motor	Type	PSC
	Speed (RPM)	1360/var
	Rating (Watts)	950
	Current (amp)	6.0
	Capacitor (uF)	5.6
	Supply Volts (±10%)	230V 50Hz
	Overload	Auto reset
	Enclosure rating	IP 35
Pump	Type	Centrifugal, Encapsulated Synchronous 2 pole
	Input Power (Watts)	40
	Flow Rate (L/min)	19 @ 1.2m head
	Overload	Auto reset
	Enclosure rating	IP X 4
Cooling Pads (Chillcel™)	Size (mm)	525x850x90 (4pcs)
	Area (m^2)	1.8
	Velocity (m/s)	1.7
Water	Capacity (L)	23
	Drain (mm)	40 (Configurable to local regulations)
Shipping	Height (mm)	902
	Length (mm)	1150
	Width (mm)	1150
	Volume (m^3)	1.2
	Mass (kg)	66
	Operating (kg)	89
Connecting Duct (raw edged)	Length x Width (mm)	550 x 550

*Cooling Capacity calculated at ambient of 38˚C dry bulb & 21˚C wet bulb with Room temperature of 27.4˚C.
From tests carried out to Australian Standard 2913

Breezair®
Advanced natural **cooling**

Intelligent technology: Breezair **TBA Series**

TBA 550 - A paradigm shift in evaporative cooling technology

Sets new standards in technologically advanced design, improved air delivery, significantly reduced noise levels and greatly improved ease of installation and use.

Clever use of modern injection moulding technology has minimised individual parts — both functional and aesthetic parts are combined in single mouldings that provide efficient function and completely contemporary styling that blends really well with today's building designs.

The overall design concept and certain innovations within the TBA have been registered and patented internationally.

Two-way digital controls have pushed through the old boundaries of Evaporative Air Conditioning control systems to provide the best Comfort monitoring and deviation correction ever seen in this industry, plus rapid diagnosis and memorising of fault conditions.

Lightweight materials and "snap together" assembly make the TBA 550 a ***b-r-e-e-z-e*** to install — contractors love them!

Winner of the 2002 "Engineering South Australia" Award
- The Institution of Engineering, Australia

General specifications

Product **Features:**

Permatuf®: corrosion proof cabinet
Designed to enhance the aesthetics of your property, the Breezair TBA cabinet is a very attractive machine that blends beautifully with modern architecture. And, a Breezair cabinet will not corrode or rust. The UV stabilised structural polymer material is the same type used to make acid baths, battery cases and some space satellite components.

Axial Fan: super powerful and quiet
The better the fan, the more efficient the system. The Breezair purpose designed axial fans are inherently balanced, with aerofoil blades to provide energy efficient, high pressure performance at very low noise levels.

Tornado®[1] Pump: the perfect pump for the job
At last, a pump that will last! The Tornado pump, designed, manufactured and tested by Breezair, is your guarantee of reliability. The pump features very safe material choices, encapsulated motor with overload cut-out, stainless steel shaft, bearings fully protected from water and a marvellous impact-start feature that will overcome any tendency for the pump to be locked up with residue during prolonged off periods. The strong synchronous motor has constant speed independent of voltage fluctuations and runs very cool.

AUTOWeatherseal: automatic duct closure
In order to stop air convection currents from either allowing cold air to enter, or your valuable heat to escape in winter, the Breezair AUTOWeatherseal shuts when the fan stops and blocks these currents from circulating. The result — a more comfortable environment in winter and no need to add any further covers during the off season.

AQUAflow™: non-clogging water distribution
The unique Breezair water distributor maximises cooling efficiency by supplying a continuous and balanced flow of water across the cooling pads. This is quite different from all other brands that are subject to flow variations for many reasons. The balanced flow ensures highest evaporation efficiency and maximum cooling.

Senso-clean™: intelligent water management
With the high demand for healthy lifestyles, the Breezair TBA Evaporative Air Conditioners feature a special valve that is digitally controlled to maintain a clean, dry water reservoir at all times that the machine is shut down for long periods. The cooling pads remain dry and clean and ready for the next run.

Chillcel® pads: strong, long lasting cooling pads
Chillcel pads are made from organic paper materials, cleverly manufactured into honeycomb panels that have excellent structural and cooling strength. Their life expectancy has been proven over decades of use worldwide to be up to 7 years, depending on the environment. They are easily cleaned and replaced when necessary.

Thermostat Control
The TBA550 cooler features the Breezair thermostat for fully automatic control.

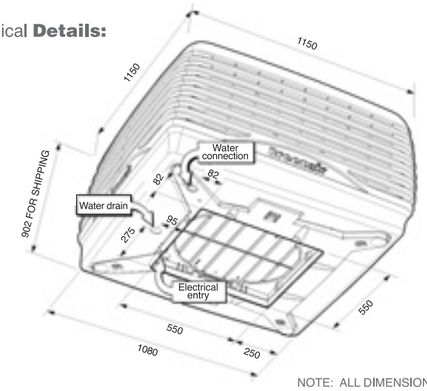
Digital Smartbox™: state-of-the-art digital electronic control
The Breezair TBA550 has a new digital control module that monitors, manages and controls all the air conditioner features to provide ultimate comfort conditions, temperature sensing, water quality supervision completely reliably and safely. The module also incorporates diagnostic features and memory to aid trouble shooting and minimise down-time. A number of user choice parameters are available to allow individual set up of your environment.

WATERManager System: automatic water management device
The Breezair WATERManager will ensure optimum machine life with minimum maintenance by constantly checking water quality. As the water in your air conditioner evaporates away, it leaves behind the impurities and salts, which then become deposited on the cooling pads and cause the cooling power to fall. Water quality is sensed by a probe that feeds a signal back to the electronic module that then ejects some dirty water and allows fresh water to enter.

Totally Enclosed Motor
The Breezair fan motor is fully enclosed to international standards and excludes any moisture ingress from all sources. The advanced design is rigorously tested and completely reliable.

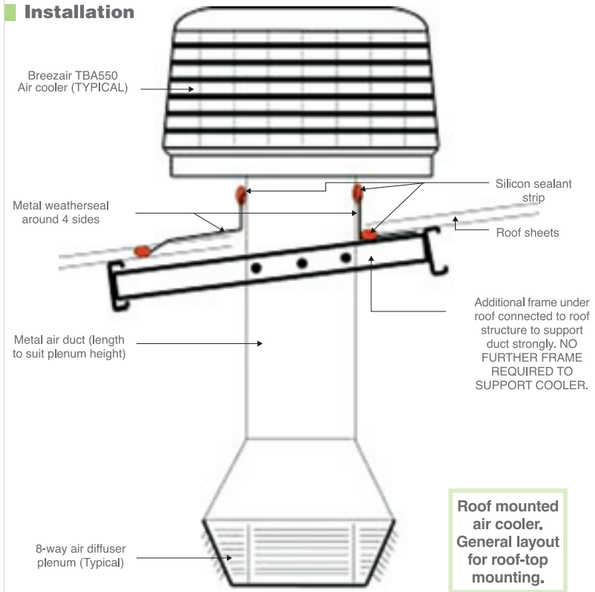
[1] registered trademark in Australia

Technical **Details:**



NOTE: ALL DIMENSIONS ARE IN MM

Installation



Roof mounted air cooler. General layout for roof-top mounting.

Cooler Discharge **Air Temperature Chart**

Ambient Dry Bulb Temperature	Ambient Relative Humidity %								
°C	10	20	30	40	50	60	70	80	90
10	3.2	4.0	4.8	5.6	6.4	7.2	8.0	8.6	9.4
15	6.6	7.8	8.8	9.8	10.8	11.7	12.6	13.4	14.3
20	10.1	11.4	12.8	13.9	15.2	16.2	17.2	18.2	19.2
25	13.4	15.0	16.6	18.0	19.4	20.6	21.8	22.9	24.0
30	16.6	18.6	20.4	22.0	23.6	25.0	26.4	27.7	28.9
35	19.8	22.2	24.2	26.2	28.0	29.6	31.0	32.4	33.7
40	23.0	25.6	28.1	30.4	32.3	33.9	na	na	na
45	25.9	29.2	32.0	34.4	na	na	na	na	na
50	29.0	32.7	35.8	na	na	na	na	na	na

• This chart represents approximate supply air temperatures based on 80% saturation efficiency at sea level. From tests carried out to Australian Standard 2913

Fan Curves