

# Technical Specifications

Specifications		EXH 170	EXH 210
Airflow	Industry standard (cfm)	7500	9500
Cooling capacity*	0.3 IWG-(BTU/hr)	45,000	51,000
Power consumption (total)	Watts max	1290	2040
	Watts min	100	100
Total max cooler current	Amps	5.8	7.6
Fan	Dia x width (inches)	18 1/8" x 15"	18 1/8" x 15"
	Variable speed range (rpm)	170 to 556	170 to 584
Motor	Output Watts max/min	750/60 @200-264V	1500/60 @200-264V
	Type	Direct drive	Direct drive
	Variable speed range (rpm)	170 to 556	170 to 584
Controller	Voltage/phases/Hz (input)	208-230/1/60	208-230/1/60
	Voltage/phases/Hz (output)	(75-220)/3/(28-110)	(75-220)/3/(28-110)
Pump	Type	Centrifugal	Centrifugal
	Motor	Synchronous	Synchronous
	Rating Watts (input)	30	30
	Flow rate (gal/min)	5.1@3.9ft head	5.1@3.9ft head
	Voltage/phases/Hz	208-230/1/60	208-230/1/60
Cooling pad Chillcel™	Size (inches)	31 1/2" x 25" x 3 1/2"	31 1/2" x 25" x 3 1/2"
		31 1/2" x 25" x 4"	
	Number of pads	4	4 (2 each)
	Pad area (sq. feet)	22	22
	Maximum velocity (fpm)	227 (@0.3wg)	268 (@0.3wg)
	Saturation efficiency %	87.4	86.1
	Water	Tank capacity (gal)	3.6
Inlet (inches)		1/2" male BSP	1/2" male BSP
Shipping	Dimensions including pallet (inches)	45 1/2" x 45 1/2" x 38 1/2" (H)	45 1/2" x 45 1/2" x 38 1/2" (H)
		42	
	Volume (cu. feet)	42	42
	Mass - shipping (lbs)	197	197
	Mass - net unit (lbs)	184	184
Mass - operating (lbs)	212	212	

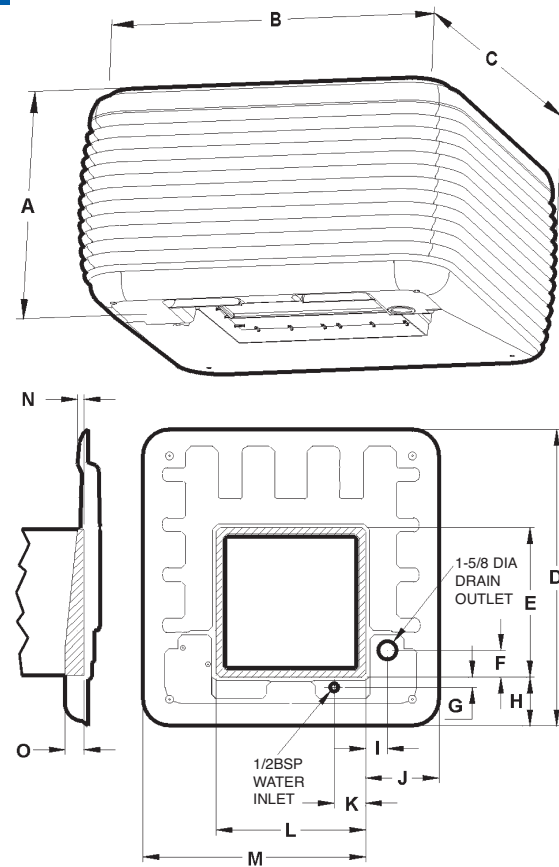
\*This cooler has been tested in accordance with the requirements of the California Energy Commission Appliance Efficiency Regulations, Section 1603 and 1604

## Cooler Discharge Air Temperature Chart

Ambient Dry Bulb Temperature	Ambient Relative Humidity %								
	10	20	30	40	50	60	70	80	90
50	36.2	37.9	39.6	41.2	42.8	44.3	45.8	47.2	48.7
60	42.9	45.1	47.2	49.3	51.3	53.2	55.0	56.7	58.4
70	49.2	52.1	54.7	57.3	59.7	61.9	64.1	66.1	68.1
80	55.3	58.9	62.2	65.2	68.1	70.7	73.3	75.6	77.8
90	61.4	65.7	69.6	73.3	76.5	79.7	82.4	85.1	87.7
100	67.2	72.5	77.1	81.3	85.1	88.5	91.7	na	na
110	72.9	79.1	84.5	89.3	93.6	97.5	na	na	na
120	78.7	86.0	92.2	97.5	na	na	na	na	na
130	84.5	92.8	99.9	na	na	na	na	na	na

This chart represents approximate air temperatures based on 90% saturation efficiency at sea level. From tests carried out to Australian Standard 2913

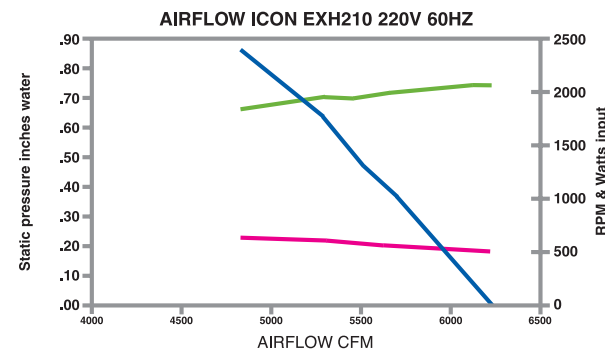
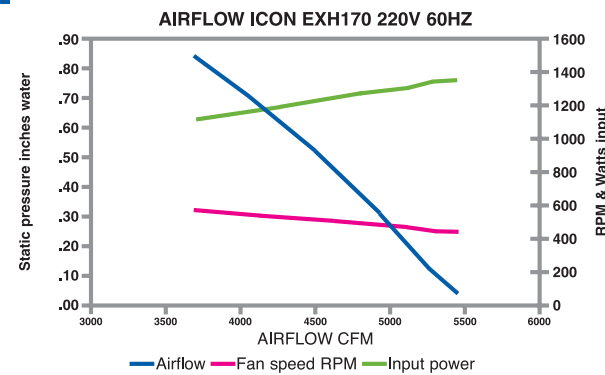
## Cabinet Details



Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
170/210	34	45.5	45.5	45.2	21.65	3.25	2.5	8.25	81	11.75	3.66	21.65	32	1.5	3.33

Note: All dimensions are in inches

## Fan Curves



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THE WORLD'S MOST QUIET EVAPORATIVE COOLER

# Icon Series



# Icon

## ECM Variable Speed Direct Drive Motor



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**Breezair™**  
 Global leaders in natural climate control solutions.™



# How evaporative cooling works

Evaporative cooling takes place when water and warm air converge. The simple process of evaporation cools the air by several degrees.



## The healthy advantage

Evaporative cooling is an economical and remarkably efficient way to cool a large area, such as your home or business.

Doors and windows are kept open – and they actually **contribute** to the cooling efficiency. The result: **100% fresh air**, with no recirculated fumes, germs or odors.

Even better, as the surrounding temperature rises, the cooler it becomes inside – and the benefits don't stop there!

## How do Breezair evaporative coolers operate?

All Breezair coolers contain large Chillcel™ cooling pads. When the cooler is operating, the media is kept consistently wet. The quiet, powerful fan in the Breezair cooler draws hot, ambient air into the water-soaked Chillcel™ pads. The water absorbs much of the heat through the natural evaporation process – resulting in a cool, refreshing breeze.

The combination of a reduced temperature and constant air flow produces a more comfortable environment – at work or at home.

## Keep your cool – as you keep your energy bills down.

A Breezair system can use up to **90%** less energy than conventional air conditioning. That contributes to a tremendous savings on your monthly summer cooling bills!

The advantages to the environment are obvious with this green, environmentally conscious alternative. The advantages to your budget are obvious right away.



## Non-clogging Water Distribution System

- Unique water flow distributor (patented worldwide by Breezair)
- Fully balanced and continuous water distribution to all Chillcel™ cooling pads
- Maintains perfect pad saturation, maximizing cooling efficiency

## Harmony SensorTouch® Wall Controller

- Variable speed
- Programmable climate control
- Auto mode, manual mode, timer
- Drain function

## Horizon SensorTouch® Remote Control

- Variable speed
- Programmable climate control
- Auto mode, manual mode, timer
- Drain function



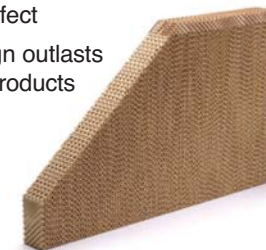
## Tornado Water Pump

- Impact start
- Fully encapsulated motor windings
- Thermal overload protectors
- Top and bottom ball bearings
- Pumps in 1/2" water



## Long Life Chillcel™ Cooling Pads

- Breezair unique Chillcel™ pads provide maximum cooling
- Honeycomb design with water distribution header block optimizes the cooling effect
- Durable design outlasts competitive products



## Control Power Module

- Advanced electronic controls ensure that the Icon operates at optimum efficiency at all times
- Smart, reliable & durable



## Microprocessor

- Constantly analyzes water quality, water consumption and power output



## Integrated Diagnostics Module

- Automatically monitors cooler operations and provides self diagnostics



## Water Manager and Auto Drain Function

- Monitors water quality by sensing total dissolved solids in cooler sump
- Automatic water draining when cooler is not in use
- Prevents algae growth
- Drain option setting

# The intelligent choice for large and small spaces

It is a proven fact! For what it costs to operate a single light bulb, you can cool your entire home with a Breezair Icon. The Icon is:

- **Energy efficient**
- **Cleaner and healthier**
- **Easier and less expensive to install**
- **Productivity enhancing**
- **Environmentally friendly**
- **Simple to maintain**



# The Breezair Icon Series is the world's most quiet evaporative cooler

The Breezair Icon is a new generation of centrifugal fan evaporative coolers. It incorporates electronically commutated (ECM) direct drive motor technology. The result is a more economical, reliable, efficient cooling choice that requires less frequent maintenance.

The Icon series has all of the features of the traditional Breezair coolers – plus many more. The Auto Drain, the Tornado water pump and the long life Chillcel™ pads are features incorporated within the Icon cooler.

Using the revolutionary ECM direct drive variable speed motor technology, the Icon employs an efficient centrifugal fan. These well-designed advantages contribute to make the Breezair Icon the world's most quiet ducted evaporative cooling system.

Advanced electronic controls manage and monitor the motor. This ensures that the system operates at its optimum efficiency at all times.

The Icon adjusts its motor speed automatically to accommodate different ducting systems and back pressures.

The cooler's quiet operation makes it suitable for all commercial and residential installations where fan or motor noise may be a problem.

## Our cutting-edge technology is very cool.

For more than 30 years, the secret of Breezair's energy-efficient performance has been state-of-the-art technology, innovative design and superior cooling.

## New Icon Series Direct Drive Motor/Fan

- Combined motor and fan
- Ultra quiet centrifugal fan
- Responsive to duct sizing & back pressure
- Designed to deliver optimum air output



## Exclusive Breezair ECM Direct Drive Motor

- Super efficient over operating range
- Electronically commutated for optimum efficiency
- Corrosion-resistant construction
- Reduced energy use
- Variable speed
- Unsurpassed reliability
- Quietness beyond belief



# Breezair™

## The Only Cabinet with a 25-year Warranty!

- Injection molded
- High-strength structural polymer
- UV resistant
- Non-rusting



## Breezair Icon offers these built-in safety features!

- Circuit breaker
- Thermally-protected variable speed motor and pump
- On-board isolation switch