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REZNOR®

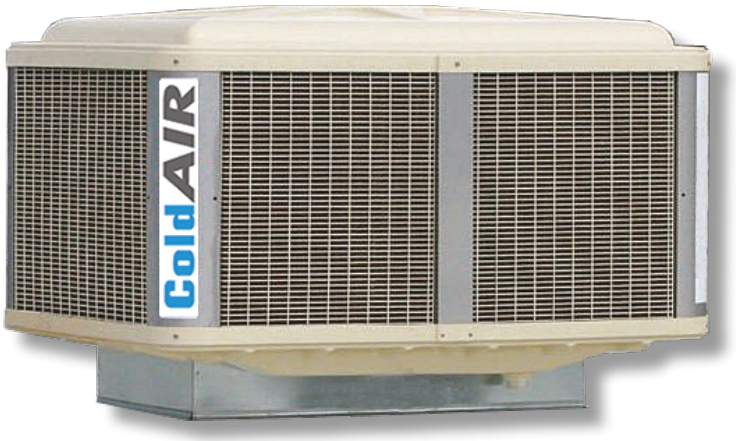
Trusted Heating Solutions

ColdAir

Evaporative Cooling Systems



NORTEK™
GLOBAL HVAC



ColdAIR

Evaporative Cooling Systems

ColdAIR evaporative cooling systems is the low cost environmentally friendly alternative to costly air conditioning.

ColdAIR evaporative cooling systems are fast becoming the standard way to cool industrial and commercial premises, by drawing air through continually wetted pads that surround the unit.
The evaporation of the moisture into the air reduces its temperature, whilst the process also filters it, removing airborne contaminants.

Evaporative cooling systems are designed with energy efficiency in mind, typically consuming only 20% of the energy used by traditional air conditioning systems and with the ability to install without any structural alterations to your existing building.

The Problem

To improve the air quality of a working area on a hot summer day, it is necessary to have a large number of air changes, preferably with filtered cooled air.

In the case of large factories and warehouses, installation and running costs often prohibit the option of air conditioning systems.

Moreover, the frequent opening of doors due to routine activity have a detrimental effect on the efficiency of an air conditioning system.



External Warm Air
Inlet Cold Air
Expelled Stale Warm Air

Features & Benefits

- Consumes 80% less energy than conventional air conditioning systems
- Door and windows can be left open with no loss efficiency
- 100% fresh filtered air
- Low installation, operating and maintenance costs
- Low energy consumption
- No refrigerant chemicals, no environmental damages
- Improvement of the working conditions increase productivity
- Spot cooling capability
- Wall / window / roof mounting
- Possibility to only ventilate in the cooler seasons

Wall / window model WA



Roof top model RA





4 way diffuser box

The Solution

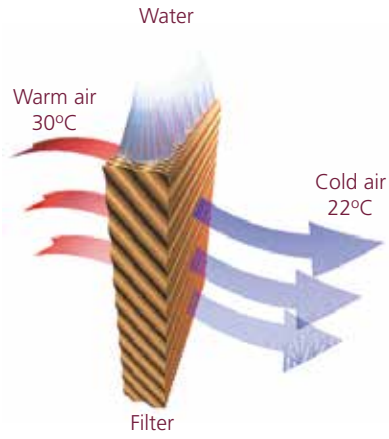
The solution is to install a ColdAIR evaporative cooling system that cools the air using a natural principle and is on average 75% cheaper to install than air conditioning.

As the air passes through special wet filters, it loses part of its heat due to the evaporation of the water and thus the air temperature is reduced.

The absence of refrigerants, associated with an air conditioning plant, produces a system with minimal energy requirements and many air changes for a very low cost.

Prevention of Legionella

- System design to maximise the evaporation of the water into the air without the water atomising
- Low air velocity over the evaporative filters - this avoids formation of water droplets
- Automatic control managing the water supply and discharge
- Automatic cleaning cycle, replacing the complete reservoir of water
- The water in the cooler operates at temperatures below the level for the formation of bacteria
- The cooler automatically discharges the complete reservoir if power fails



Outlet Air Temperatures With Different Inlet Conditions							
Relative Humidity	**20%**	**30%**	**40%**	**50%**	**60%**	**70%**	**80%**
°C Ext	°C Int.						
20°C	12.0°C	13.0°C	14.5°C	15.5°C	16.5°C	17.5°C	18.5°C
25°C	16.0°C	17.0°C	18.5°C	20.0°C	21.0°C	22.0°C	23.0°C
30°C	19.5°C	21.0°C	22.5°C	24.0°C	25.0°C	26.5°C	28.0°C
35°C	23.0°C	25.0°C	26.5°C	28.5°C	30.0°C	31.5°C	32.5°C

Technical Data							
Model			**WA 100**	**WA 150**	**RC 100**	**RA 150**	**RA 200**	**RC 200**
Flow rate	Max Med Min	m^3/h	10000 7500 5000	13000 9700 6500	10000 5000	13000 9700 6500	20000 15000 10000	19000 10000
Equivalent refrigerating capacity		kW	15	19	15	19	30	30
Voltage supply		V	230V - 50Hz	230V - 50Hz	400V - 50Hz	230V - 50Hz	230V - 50Hz	400V - 50Hz
Current		A	3.7	4.8	3.5	4.8	7	7
Total electrical power		kW	0.9	1.2	1.6	1.2	1.8	3.2
Water consumption (average) (1)		l/h	34	39	34	43	64	64
Input water connection	Ø	''	3/8	3/8	3/8	3/8	3/8	3/8
Drain water connection	Ø	mm	60	60	60	60	60	60
Air duct dimensions L x W		mm	600 x 600	600 x 600	600 x 600	600 x 600	1185 x 590	850 x 470
Duct maximum length		m	5+ 1 bend	5+ 1 bend	See manual	5+ 1 bend	5+ 1 bend	See manual
Cellulose pads: Thickness Area Average saturation efficiency		 mm m^2	 100 2 88%	 100 2 88%	 100 2.7 88%	 100 2.7 88%	 100 3.4 88%	 100 3.4 88%
Dimensions: L x W x H		mm	1300 x 670 x 1300	1300 x 670 x 1300	1150 x 1150 x 1050	1150 x 1150 x 1050	1610 x 1150 x 1050	1610 x 1150 x 1050
Weight (empty - full)		kg	60 - 75	63 - 78	87-108	67 - 88	120 - 146	160 - 186
Noise: Outdoor (2) Indoor		 dBA dBA	Min / Max speed 49 / 65 49 / 66	Min / Max speed 50 / 66 50 / 67	Min / Max speed 55 / 61 56 / 62	Min / Max speed 50 / 66 50 / 67	Min / Max speed 53 / 68 53 / 70	Min / Max speed 58 / 65 60 / 66

(1) Test conditions: E. Temp. = 33°C - R.Hum 60%

(2) Open field test, 4m distance

Other products in the Reznor range:-

- Warm air heaters
- Radiant heating
- Destratification fans
- Heating & ventilation units
- Packaged rooftop units
- Air induction systems
- Gas fired heater modules
- Evaporative cooling

GB/REZ/COLDAIR/02/0620

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