



# AIR CONDITIONING UNIT

Conventional rooftop units at best utilise minimum fresh air recirculation to improve the summer peak ambient operation but the heat rejection system still relies on peak ambient air. If the hidden evaporative energy of water is introduced as part of an adiabatic system, the overall energy consumption can be significantly reduced.

**EcoComfort** units optimise this hidden energy both directly and indirectly via a heat recovery unit between the supply and extract air streams. The overall C.O.P. is further improved by placing the

mechanical refrigeration condenser within the extract air stream after the adiabatic indirect cooling operation which provides lower air-on temperatures, hence, lower condensing pressures.

## FEATURES ;

### EXTRACT FAN

High efficiency extract fan provides not only extract from the space but the same air stream is utilised for the heat rejection coil airflow.

### FILTERS

High efficiency panel filters ensure clean air for a full fresh air operation all year round. They can be easily changed via sectional panel construction.

### CONTROLS

Unit requires only power supply and room thermostat on/off and temperature input. The rest of the controls and all the necessary safety features are incorporated for a fully automated cooling and heating operation all year round.

### AIR COILS

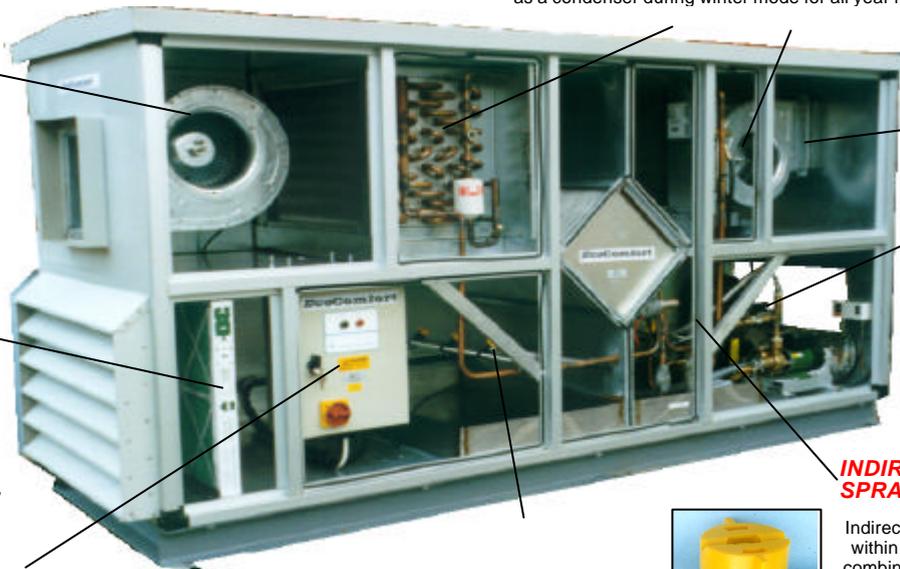
Depending on the outside air temperature EcoComfort unit either heats or cools the supply air. The extract fan acts as a condenser fan during summer mode and the cooling coil acts as a condenser during winter mode for all year round

### SUPPLY FAN

High efficiency supply fan provides full fresh air flow for the space.

### COMPRESSOR

High efficiency reciprocating/scroll compressor provides both heating and cooling as a heat pump system utilising Environmentally Friendly refrigerants.



### INDIRECT SPRAY NOZZLES



Indirect spray nozzles are positioned within the return air stream and the combination of heat recovery and the indirect adiabatic cooling effect is transferred to the incoming air stream without increasing the humidity. Wet cooler air is further used for the condenser air flow which is considerably lower than the ambient, hence, considerable energy saving.

If the outside humidity is less than an adjustable pre-set value, the direct spray nozzles are activated in order to provide Free Cooling. As soon as humidity exceeds the level they are isolated.

## BENEFITS:

### REDUCED RUNNING COST

Lower condensing temperatures and all year round Free Cooling concept provides reliable and lower annual electric running costs.

### QUICK RESPONSE

Water is introduced via a heat recovery unit which provides a large evaporation surface and inline mechanical refrigeration effectively responds to any load changes.

### FLEXIBLE SYSTEM

Combination of refrigeration, direct and indirect adiabatic cooling systems suit both dry desert as well as high humidity tropical operating conditions.

### TECHNICAL SUPPORT

EPS offers full system design support to assist in proper selection and integration into existing or new installations as part of our customer commitment. Please consult our technical sales team at [sales@epsLtd.co.uk](mailto:sales@epsLtd.co.uk) for your specific application or visit our web site [www.epsLtd.co.uk](http://www.epsLtd.co.uk).

### GREEN SOLUTION

Smaller refrigeration machinery together with less electricity consumption reduces environmental impact significantly.

### IMPROVED INDOOR AIR QUALITY

Full fresh air and adiabatic cooling improves indoor air quality.

### LOWER MAINTENANCE

Lower condensing temperatures together with full outside air and adiabatic cooling process minimise the mechanical refrigeration running hours.

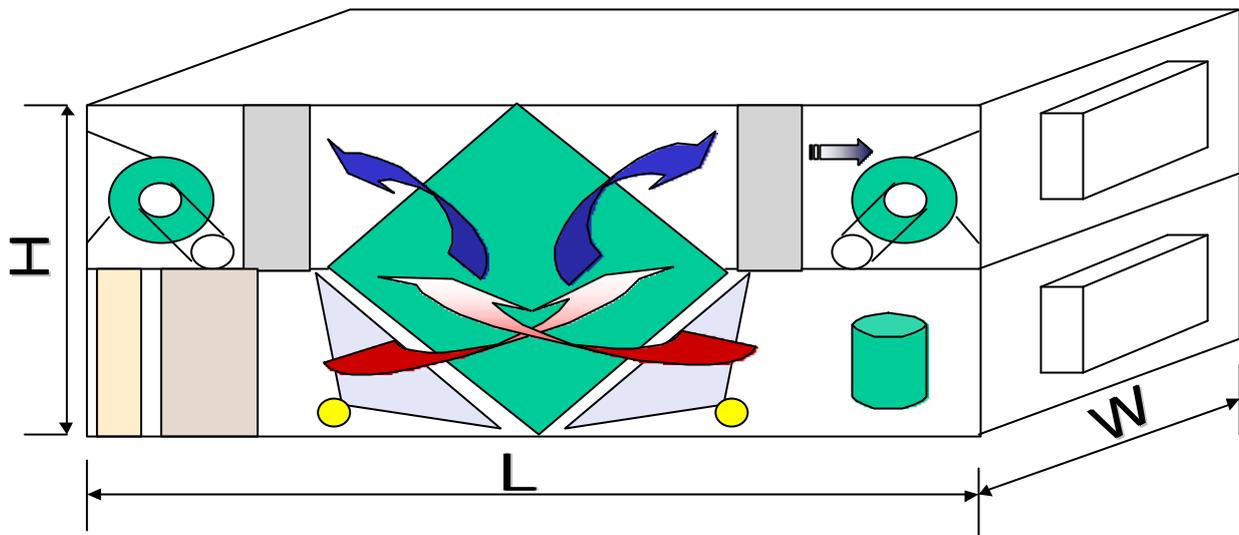
### REDUCED WATER CONSUMPTION

Water is used whenever is required at significantly reduced volume.



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# EcoCOMFORT



## EcoCOMFORT DATA

0200V1

Model	Flow Rate m3/s	Dimensions			Weight (kg)	Peak Power kW	FLA Amps	LIST PRICE (£ - Ex-works)
		L(mm)	W(mm)	H(mm)				
25	0.25	2325	880	1300	815	2.64	4.23	6865.34
40	0.40	2638	1090	1400	1060	7.04	11.27	8072.00
68	0.68	2950	1300	1500	1330	7.59	12.15	9682.82
90	0.90	3263	1510	1600	1528	14.08	22.54	11027.51
112	1.12	3575	1720	1700	1801	14.52	23.25	12840.17
134	1.34	3888	1930	1800	1982	14.96	23.95	13955.84
156	1.56	4200	2140	1900	2214	19.80	31.70	15121.30
178	1.78	4513	2350	2000	2449	24.09	38.57	16933.96
200	2.00	4825	2560	2100	2650	25.03	40.07	17999.85
222	2.22	5138	2770	2200	2851	25.63	41.04	19065.75
244	2.44	5450	2980	2300	3052	26.07	41.74	20131.64
266	2.66	5763	3190	2400	3254	27.23	43.59	21197.53
288	2.88	6075	3400	2500	3455	27.23	43.59	22263.42
310	3.10	6388	3610	2600	3656	30.86	49.41	23329.31
332	3.32	6700	3820	2700	3681	34.98	56.01	24395.20

### Notes

- 1) Units are based R134a refrigerant. Consult our technical team for other refrigerant options.
- 2) Supply 380~415 V / 3 Ph / 50 operation. Consult technical team for other voltages.
- 3) Units require main water supply at least 1 Barg main pressure.



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