



Touch screen PLC  
control as standard

# Calorex Delta System

Hybrid Fresh Air Dehumidification System

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A hybrid fresh air dehumidification and ventilation system with dynamic heat pump energy recovery to swimming pool water and air, enabling a comfortable environment for your pool in the most efficient way.

The Delta is the ultimate environmental control system with a range to suit pools of every size. Whether the pool is for your family and friends or part of a commercial venture in a club, hotel or leisure centre, you need to be sure that the pool hall structure is protected, as well as ensuring that running costs and energy usage is kept to an absolute minimum. The Delta provides all that and more!

## Why choose Calorex?

Calorex is the leading British manufacturer of swimming pool heat pumps and dehumidifiers. With almost 40 years of design expertise, Calorex is renowned for its innovation, range and quality of products, with an expert sales and services team dedicated to meeting customer requirements. Calorex's presence is international with thousands of Calorex units operating in over 60 countries worldwide.

## Delta takes control!

Indoor swimming pools constantly evaporate large volumes of moisture into the space around them. Unless this moisture is removed, humidity will rise creating an uncomfortable environment and structural damage.

Totally self-contained, the Delta will remove moisture and recover energy which is then re-used to heat your pool water and air. By utilising this method of heat recovery, energy costs are kept to a minimum. Typically, for every unit of power that a Calorex heat pump consumes, it will convert 2.4 times this amount to usable heat. The potential energy savings are huge. In fact, compared to traditional heating and ventilation methods, cost savings of over 50% are achievable while corresponding CO<sub>2</sub> emissions can be dramatically reduced by as much as 70%.

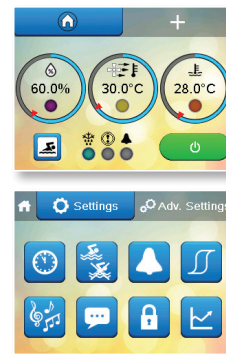
## Touch screen PLC control as standard

Calorex has developed new touch screen technology which allows you to control the temperature and humidity levels of your pool room straight from your smartphone or computer! All Delta units are supplied with an Ethernet connection that can be connected to an internet hub (not included). This will allow you to monitor and control actual conditions in your pool hall remotely. BMS compatibility via BACnet.

## Fresh air heat recovery/summer cooling

The Delta range is provided with automatic modulating fresh air. This alleviates potential build-up of airborne chemicals, provides a greater degree of air temperature control during warm weather and allows a slight negative pressure to be created within your pool hall which will prevent migration of pool hall air to adjacent rooms.

During cold weather, energy is recovered from exhausted air to reheat the fresh air supply. With models 4 to 16 this process will automatically reverse during hot weather to air condition the incoming fresh air.

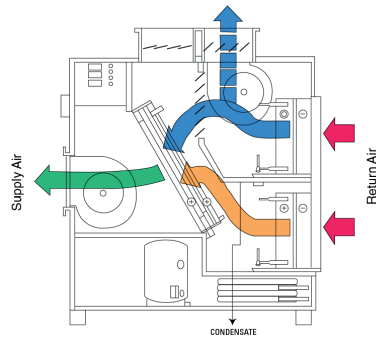


Smart controls



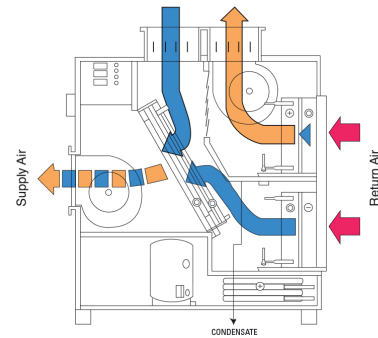
## Operating modes

### Night Set Back



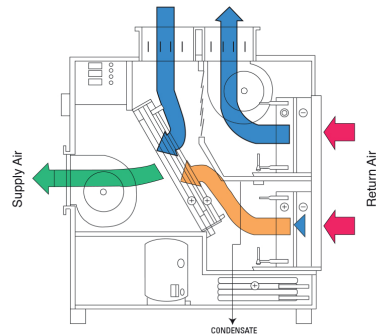
Air temperature set back is a standard feature on each Delta and is controlled by the unit's time clock. Pool hall temperature is lowered during a chosen set back period for maximum economy. Dampers are automatically adjusted to balance air flows. Unoccupied set back / air heating can be linked to opening / closing of a pool cover.

### Air Conditioning



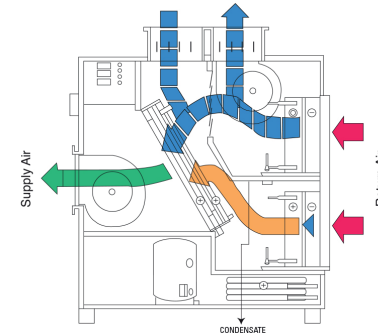
Air conditioning mode. Delta 4 and above all incorporate a true air conditioning facility as standard. This comes into operation automatically whenever the air temperature rises beyond the set point. Surplus warm air is then discharged via the exhaust duct whilst cooler air is introduced to the pool hall.

### Full Dehumidification & Heat Recovery



Delta system shown operating on maximum dehumidification. Dampers fully open. Full heat recovery to pool water and hall air.

### Light Dehumidification & Heat Recovery



Delta 1/2 operating on light dehumidification with full heat recovery and reduced fresh air stream. LPHW heat available when required.

### Key to colours

- Warm Dry Air
- Hot Dry Air
- Cool Dry Air
- Warm Humid Air

Note - Schematics show typical internal configuration for Delta 4 and above. Delta 1 & 2 differ slightly.

Deltas 1-12 offer a choice of 'air-off' positions for the supply air. 'Mirror-image' versions are available for Delta 4-12 models.

The larger Delta 14 & 16 models also offer many options including front or rear 'air off' positions.

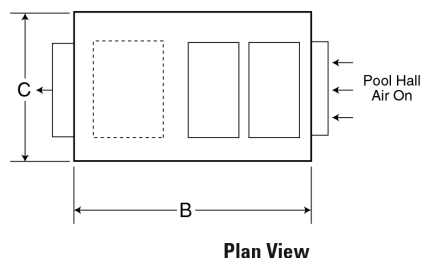
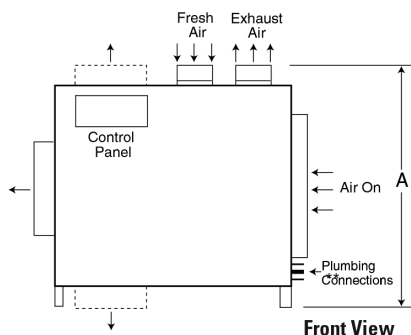
Ideally suited for use with ground source heat pumps / air source heat pumps. Please contact us for more details.

## Specifications

	1	2	4	6	8	10	12	4	16
<b>POOL AIR RE-CIRCULATION FAN</b>									
Air Flow m <sup>3</sup> / hr	2500	2600	3000	4000	5000	6000	7000	10000	12000
<b>EXHAUST / FRESH AIR FAN</b>									
Air Flow m <sup>3</sup> / hr (Stepped Control)	120-1200	130-1300	150-1500	200-2000	250-2500	300-3000	350-3500	670-6700	850-8000
<b>HEAT TO AIR kW</b>									
Via Heat Pump - (Mode A)	1.3	1.5	1.4	1.5	1.6	2	2.5	6	7
Via Heat Pump - (Mode B)	3.8	4.9	5.1	6.6	8	10	12.1	30	35
Via LPHW @ 80°C	20	22	25	30	35	38	42	85	90
Maximum Available (Mode B + LPHW)	23.8	26.9	30.1	36.6	43	48	54.1	115	125
<b>HEAT TO POOL WATER kW</b>									
Via Heat Pump - (Mode A)	4	5.5	5.8	8	10	12.5	15	35	43
Via Heat Pump - (Mode B)	1.7	2.2	2.3	3	3.7	4.6	5.5	12	14
Via LPHW @ 80°C	23	23	33	33	33	40	40	65	65
Maximum Available (Mode A + LPHW)	27	28.5	38.8	41	43	52.5	55	100	108
<b>COOLING DUTY</b>									
Cooling Duty (Sensible) kW	-2*	-2.5*	-2.9	-3.9	-4.7	-5.9	-7.1	-13	-15
Cooling Duty (Total) kW * = Cooling in Mode A	-3*	-4*	-4.2	-5.5	-6.7	-8.4	-10.1	-23.0	-28
<b>FUSE CAPACITY (AMPS)</b>									
Single Phase	32	32	40	50	-	-	-	-	-
Three Phase	16	16	20	25	25	32	32	50	63
<b>Recommended Boiler Capacity kW @ 80°C</b>	43	45	58	63	68	78	82	150	155
<b>LPHW Connection - Copper Stubs (mm)</b>	28	28	28	28	28	35	35	■	■
<b>Total Power Consumed (Nominal) kW</b>	2.6	2.9	2.9	3.4	4.4	5.9	7.4	12.3	17
<b>Weight - unpacked (kg)</b>	300	310	350	360	370	410	460	954	1020

\* Refrigerated air conditioning fitted to Delta 4 and above. ■ LPHW connection on Delta 14 & 16 is 11/2" BSP (male) thread

	Model	1 & 2	4, 6, 8	10,12	14,16
Dim mm	A	1685	1968	1968	2120
	B	1530	1620	1620	2638
	C	654	704	854	1126
Weight kg		300	350	410	954
		310	360	460	1020



- Pool water connections on all models are 1 1/2" ABS stubs.
- 'Air Off' options: Top left, bottom left or left-hand end for standard Delta units 1-12 as shown opposite. Additional options apply for Delta 4-16; please enquire.
- Diagrams shown relate to Delta units 1-12. Details of the Delta 14 & 16 differ slightly.

\*\* LPHW connections on Delta 14 & 16 are fitted on the top face (at the opposite end to the 'Air On')



## Major cash back incentive!

Aside from the fact that they are the best available, the Delta 14 and 16 also offer a major cash incentive for commercial projects. They are the only specialist swimming pool heat pump heat recovery machines to be included in the ECA Scheme (Government cash-back allowance). Because they are recognised as providing low carbon and energy efficient environmental control solutions they benefit from a 100 per cent write-off against taxable profits in the first year.

In addition to the ECA Capital Allowances, organisations can also apply for a Carbon Trust loan on any Delta system, thus claiming tax relief on the capital sum in the first year with the added benefit of an extended repayment term.

## Service & back up

A quality product requires the back-up and support of a first-class service team and that is exactly what you will get with Dantherm Ltd. With a nationwide network of dedicated engineers you can have peace of mind that should you require it, your Delta will receive superior care in years to come. All Deltas include a commission once they have been installed, plus to give further peace of mind, Dantherm Ltd offer extended service level agreements.

For further information, please contact H&V at Certikin on 01993 777200 or email [enquiries@certikin.co.uk](mailto:enquiries@certikin.co.uk).

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Contact your Certikin stockist for prices and availability.

This literature is intended as a guide.  
The company reserves the right to change the specifications without notice.