

calorex[®]


POOLS & LEISURE
(IRELAND)

Certikin
brings water to life

Variheat Series 3 Air Handling Equipment



**A complete environmental control system
designed specifically for indoor swimming pools**



The Variheat Series 3 is an advanced environmental control system designed specifically to control indoor pool hall environmental and water conditions. This unique range of equipment maximises energy efficiency to ensure running costs are kept to an absolute minimum. This Variheat system provides an ideal solution for domestic and light-commercial projects incorporating air distribution ductwork.

Features of the Variheat

The many optional features of the Variheat Include:

- Modular Construction for maximum plant room flexibility
- Fully Automatic Humidity, Water Temperature and Air Temperature control
- Energy Recovery to Pool Hall Air and/or Pool Water
- Fresh Air Ventilation and Cooling
- Air conditioning facility via external Condenser unit

Each Variheat is Custom Built to your requirements, with Fully Automatic Operation, Fully Factory Tested and with a Full Parts and Labour Warranty.

Humidity Control

Humidity is controlled by an ultra-efficient heat pump. Moisture is extracted from the wet pool hall air and drained to waste. During the dehumidification process, all the energy is stripped from the air, upgraded and converted to heat that can be put back into the pool or the pool hall air. This recovered heat is totally free of charge and would otherwise be thrown away through wasteful fresh air ventilation systems.

Pool Hall Air Heating

The Series 3 Variheat offers much more than energy efficient humidity control. To maintain optimum comfort in the pool hall, whilst still keeping low operating costs, it is necessary to heat the pool hall air. In addition to the energy recovered by dehumidification, the Variheat can be supplied with additional air heating capability. This will ensure the pool hall environment can be maintained at optimum comfort levels, even when the recovered energy on its own is insufficient to maintain the air temperature. You can choose from either an electric air heater or connect your Variheat to a central heating boiler. Choosing a Variheat with an air heating facility will save time and space, making the need for radiators unnecessary.

An economy switch on the Variheat control panel allows the users to turn off air heating and dehumidification, leaving the Variheat only heating the pool water. This control can be used whenever the pool is to be operated with the external doors and windows open, for instance in the summer.

Pool Water Heating

In addition to energy recovery to the pool water, a pool water heat exchanger can also be built in to the Series 3 Variheat to maintain the swimming pool at the ideal temperature for swimming. The high capacity heat exchangers ensure the pool water is brought up to temperature quickly. Whenever energy is available from the dehumidification process, the Variheat's clever controls always ensure that the free heat is used first, before drawing heat from a boiler.

Ventilation

The correct balance of fresh air input and exhaust is essential to maintain the internal air quality. The Series 3 Variheat can come with an optional fresh air ventilation module. The ventilation module operates fully automatically under the control of the air temperature and humidity sensors, bringing in just the right quantity of fresh air to minimise odours, dilute chemical contamination in the air, limit temperature rises in the summer and to assist with the dehumidification of the pool hall. It always ensures that the pool hall is maintained under a slight negative pressure, preventing wet swimming pool air migrating to other parts of the building.

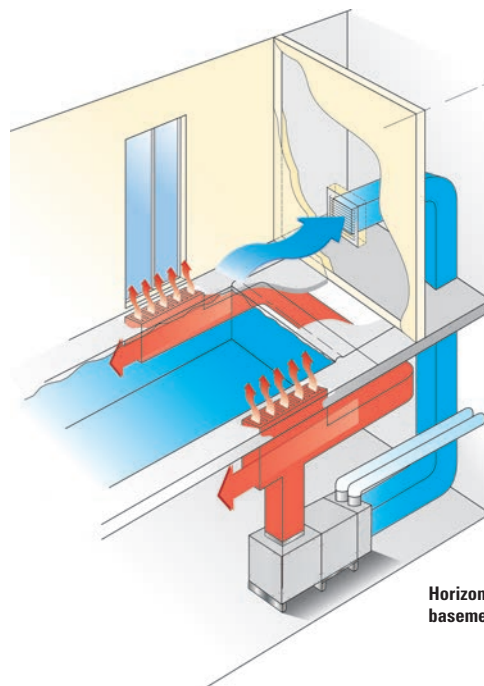


Air Conditioning

An optional air conditioning facility is available to offset heat gains from any external roof or wall glazing in the summer. Using an external condensing module, excess temperature build up can be dealt with easily and effectively by discharging excess heat to atmosphere. But here is the clever part, The heat is only thrown away when there is no air temperature or water heating demand. Even the solar gains can be used to heat the pool water for free if there is a water heating demand.

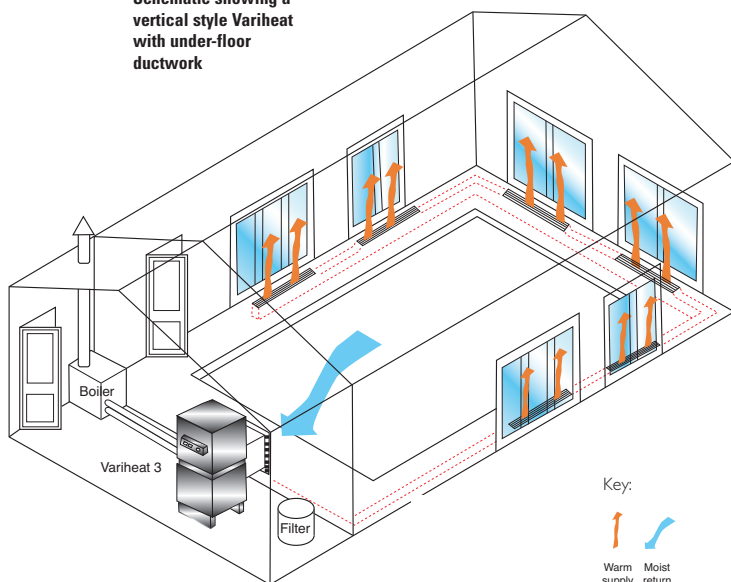
Ultimate Build Flexibility

The Series 3 Variheat's compact design takes up minimal plant room space. Each unit is carefully built specifically to suit the individual layout requirements of each and every plant room. With vertical or horizontal configurations, and with fan outlets available on any face, there is complete flexibility across the whole range.



Horizontal style unit in basement plant room

Schematic showing a vertical style Variheat with under-floor ductwork



Primary Hot Water Supply

All Variheats provide a high proportion of heating via their efficient heat pump circuit. Models fitted with a Low Pressure Hot Water facility will also need to be connected to a boiler. However, the Variheat can also be connected to lower temperature hot water, eg Bio Mass boilers, Air Source and Ground Source Heat Pumps. A simple upgrade is necessary which must be advised at the time of ordering. Why not ask Calorex to supply your Ground Source and Air Source Heat Pumps, and avoid any confusion about compatibility issues.

Why Choose Calorex?

- High quality equipment designed and built in the UK
- All equipment fully factory tested prior to despatch
- Thousands of Calorex units successfully installed in over 30 countries
- Leading manufacturers of specialist swimming pool air handling units
- Nationwide network of approved Calorex service agents
- Application and support from Certikin International Ltd, the exclusive UK agent
- Free comprehensive design service for individual equipment selection
- Free after sales technical back-up

Control Panels

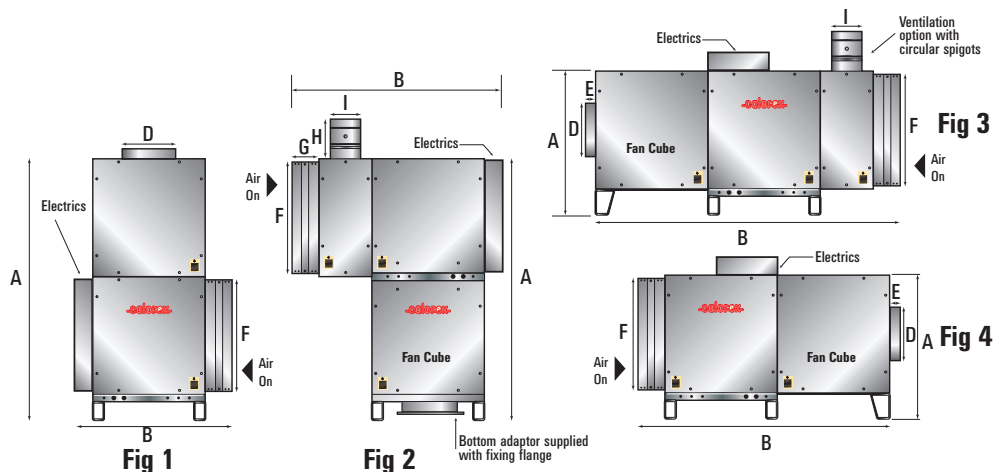
The comprehensive control panel with informative diagnostics may be mounted on the Variheat unit or remotely in the plant room. An optional water proof control panel is available for mounting up to 20 metres away from the Variheat, within the pool hall if required. All parameters are simply adjusted on clear digital displays. When a swimming pool cover is in place, the air temperature can be set-back to a lower temperature. This facility can be adjusted to coincide with the cover usage on an integral time clock, or linked electrically if an automatic pool cover is used.

Remote air sensors are also available for mounting in the pool hall if required.

For free design advice relating to Calorex air handling units and / or distribution ductwork, please contact us on

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MODEL	AW600VH	AA600VH	AW900VH	AA900VH	AW1200VH	AA1200VH	AW1500VH	AA1500VH
DEHUMIDIFICATION 30°C 60%RH - l/hr	4.6	4.6	6.5	6.5	8.5	8.5	10.1	10.1
AIRFLOW Main fan airflow - M ³ /hr Fresh air module - M ³ /hr	2000 900	2000 900	2500 900	2500 900	3500 900	3500 900	4300 900	4300 900
HEAT TO AIR (kW) Energy recovery from heat pump (Mode B) Via LPHW @ 82°C Max available (Mode B + LPHW)	5.1 11 14	5.1 11 14	7.1 13.5 18.6	7.1 13.5 18.6	10 24 30	10 24 30	14 28 36	14 28 36
HEAT TO WATER (kW) Energy recovery from heat pump (Mode A) Via LPHW @ 82°C Max available (Mode A + LPHW)	5.5 18 23.5	0 0 0	7.4 30 37.4	0 0 0	10 30 40	0 0 0	12.5 40 52.5	0 0 0
ELECTRICAL DATA (AMPS) Supply / Fuse 1 Phase 240v / 50hz Supply / Fuse 3 Phase 415v / 50hz	25 16	25 16	30 16	30 16	42 25	42 25	- 20	- 20
Total Power Consumed (KW)	2.5	2.5	3.3	3.3	4	4	5.6	5.6
Recommended Boiler Capacity (KW)	29	11	44	13.5	54	24	68	28



	Model 600 / 900			Model 1200 / 1500			Spigot Ref	VSD600 / 900	VSD1200 / 1500
	Length (B)	Width (C)	Height (A)	Length (B)	Width (C)	Height (A)			
Fig 1	957mm	698mm	1514mm	1059mm	800mm	1718mm	Air On spigot size (mm)	662 High x 615 Wide	786 High x 692 Wide
Fig 2	1310mm	698mm	1530mm	1412mm	800mm	1734mm			
Fig 3	1869mm	698mm	838mm	2073mm	800mm	940mm	Air Off (Top or Side) spigot	289mm x 333mm	289mm x 333mm
Fig 4	1514mm	698mm	838mm	1718mm	800mm	940mm			

Dimensions / profiles vary for models with Electric Air heating and/or refrigerant cooling modifications. Width of each model is scheduled as dimension (C) above.
I = 225mm on all models.

Notes

- Five 'Air-Off' outlet options are available per Variheat. The outlet can be positioned on any external face of the fan cube.
- Bottom outlet versions, for 'Air-Off' to underfloor ductwork, are supplied complete with bridging sleeve and floor fixing flange.
- Plumbing connections, where applicable, are available on either side of the Variheat.
- Any of the Variheat units in this range of equipment can be supplied with or without a ventilation module.
- The pair of ventilation spigots can be positioned on the top of the ventilation module, or on either of the two vertical sides.

If you require further technical information please do not hesitate to contact us



Certikin International Ltd
www.certikin.co.uk



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