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Certikin
brings water to life

Variheat Series 3 Air Handling Equipment



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

VARIHEAT SERIES 3



The Variheat Series 3 is an advanced environmental control system designed specifically to control indoor pool hall 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

- Humidity control
- Multiple functions
- Heat Recovery
- Heating options
- Ventilation options
- Low running costs
- Air cooling options
- Automatic operation
- Built to requirements
- Fully tested
- Fully guaranteed

Humidity Control

Humidity is controlled by an efficient compressor driven heat pump circuit. Moisture is extracted from the warm moist air as it condenses internally and then drained to waste. During this dehumidification process, energy is also stripped from the warm moist air, substantially upgraded and converted to recovered heat. This recovered heat is provided free of charge and distributed into the pool water and/or pool hall air.

Pool Hall Air Heating

The Variheat Series 3 offers much more than efficient humidity control. For optimum comfort levels within the pool hall, it is sensible to heat the internal air. For maximum effectiveness, the Variheat can be built with the inclusion of an air heating facility. This will ensure the heat losses via the pool hall building can be dealt with at all times. Two methods of air heating are available; either an electric element type or an internal Low Pressure Hot Water (LPHW) heat exchanger circuit. Choosing a Variheat with an air heating facility will save time, materials and space associated with alternative heating systems. By using the **economy switch**, the Air heating and dehumidification circuits can also be switched off to enable only pool water heating (if required).

Pool Water Heating

In addition to the Air Heating facility, a pool water heat exchanger can also be built in to the Variheat Series 3. The high capacity range of heat exchangers fitted to these Variheats ensure the pool water is brought up to temperature quickly. Simple connections are provided for plumbing to a source of primary hot water.

Ventilation

A correct balance of fresh air input and exhausted air from the pool hall will help maintain good internal air quality. If independent ventilation equipment is not proposed, the Variheat Series 3 is available with a Ventilation module option. This module is built on to the Variheat, which means that all pool air handling equipment is housed within the plant room. Small circular spigots are provided for ducting both 'supply' and 'extract' air flows to the outside atmosphere.

Pool Hall Air Cooling

An optional air cooling facility is available. This utilises external condensing module(s) in conjunction with the Variheat equipment. The Variheat can be factory built to incorporate a refrigerant cooling circuit. Details available upon request.

Ultimate Build Flexibility

Variheat Series 3 units are carefully designed, selected and built specifically to suit the individual requirements of each and every project. Whether a simple or complex plant room layout, this equipment offers complete flexibility across the whole range. Combining these factors with the vast number of air flow configurations available, the Variheat Series 3 clearly offers ultimate flexibility.

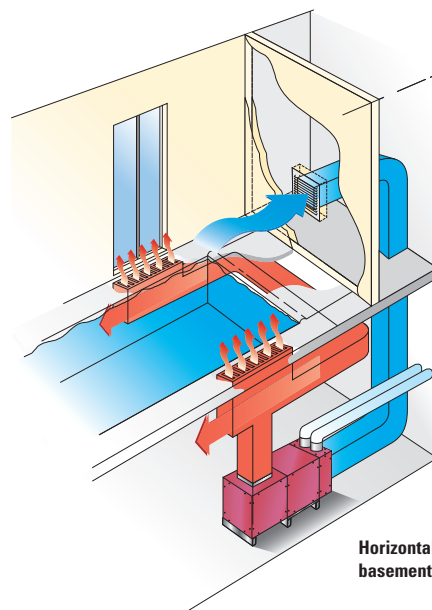


Control Panels

A comprehensive control panel is provided with every unit built. Informative displays indicate the design parameters for the project and diagnostic indicators are provided for information. All parameters can be simply adjusted to digitally displayed requirements. For projects using a floating pool cover, the air temperature set-back facility can be adjusted to coincide with the cover usage. This ensures energy savings during unoccupied periods. The control panel can either be mounted on the Variheat or, for awkward plant rooms, mounted in an adjacent remote location. Also, for clients keen to have instant access to the controls without venturing into the plant room, an alternative poolside control panel can be provided as an optional extra. A remote air sensor facility is also available as an optional extra.

Automated Package Design

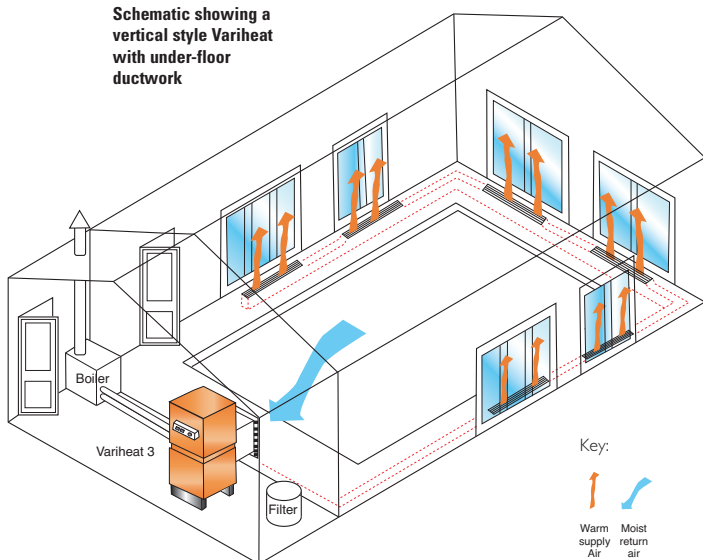
All Variheat Series 3 units are fully automatic to ensure optimum comfort levels and minimal running costs at all times. The package design of this unique equipment means that extremely compact units can be installed, ready assembled, taking up minimal plant room space. Furthermore, with all sensors and controls integral, choosing to fit a Variheat Series 3 will save valuable installation time on site.



Horizontal style unit in basement plant room

are also available as an option. Please contact Certikin's H&V division for further design advice.

Schematic showing a vertical style Variheat with under-floor ductwork



Primary Hot Water Supply

All variheats provide a high proportion of heating via their heat pump circuit. Models fitted with an LPHW facility will also require the supply of low pressure hot water. Typically this has been by way of a boiler supplying 80°C primary hot water. However, the Variheat can be assessed in conjunction with lower temperature hot water associated with modern design concepts. Please enquire.

Pool Hall Air Distribution

An important factor linking pool hall comfort levels with the Variheat equipment is the air distribution system. Correct design and installation of ductwork and grilles will ensure good air movement within the pool hall and minimal condensation levels. The high capacity fans built into the Variheat equipment provide powerful air flows suitable for a vast range of ductwork designs. The ultimate build flexibility of the Variheat Series 3 units means that almost any ductwork / plant room layout can be catered for. Low pressure fans

Why Choose Calorex?

- High quality equipment designed and built in the UK
- All equipment 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 Calorex approved service agents available
- Combined support from Certikin International Ltd, the exclusive UK agent
- Free comprehensive design service for individual equipment selection
- Free after sales technical back-up

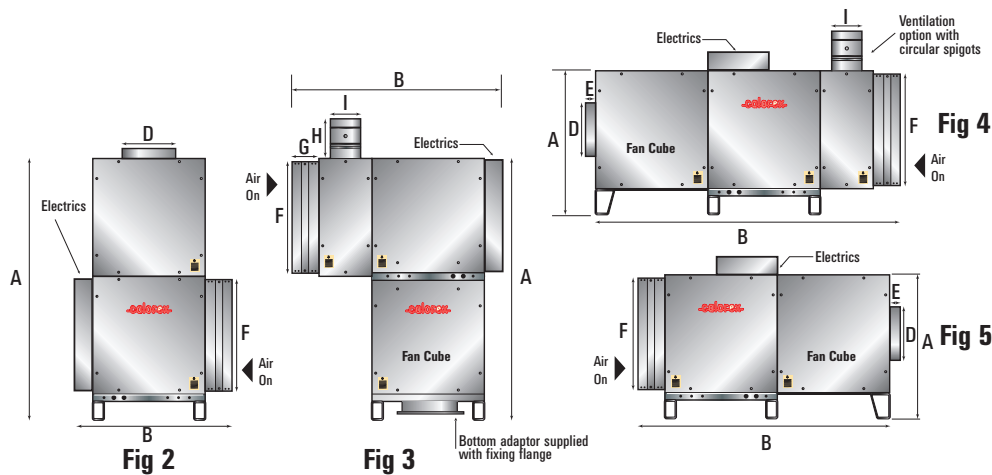
For free design advice relating to Calorex air handling units and / or distribution ductwork, please contact us on

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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	9	9	11	11
30°C 70%RH - l/hr	5.5	5.5	7.8	7.8	10.8	10.8	13.2	13.2
AIRFLOW								
Main fan airflow - M3/hr	2000	2000	2500	2500	3500	3500	4230	4230
Fresh airflow (option) - M2/hr	150	150	200	200	250	250	300	300
HEAT TO AIR (kW)								
Net via heat pump (Mode B)	5.1	5.1	7.1	7.1	10	10	12	12
Via LPHW @ 8°C	11	11	13	13	23	23	26	26
Max available (Mode B + LPHW)	16.1	16.1	20.1	20.1	32.8	32.8	38	38
HEAT TO Water (kW)								
Net via heat pump (Mode A)	5.5	0	7.4	0	10	0	12.5	0
Via LPHW @ 8°C	18	0	30	0	30	0	40	0
Max available (Mode A + LPHW)	23.5	0	37.4	0	40	0	52.5	0
ELECTRICAL DATA (AMPS)								
Supply / Fuse 1 Phase 230v / 50hz	20	20	30	30	40	40	-	-
Supply / Fuse 3 Phase 400v / 50hz	15	15	15	15	20	20	25	25
POWER INPUT (KW)								
	2.5	2.5	3.3	3.3	4.4	4.4	5.6	5.6
RECOMMENDED BOILER CAPACITY (KW/BTU)								
	29/100000	11/37500	44/150000	13.5/46000	54/184250	24/81900	66/232000	28/95500



	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 2	957mm	698mm	1514mm	1059mm	800mm	1718mm	Air On spigot size (mm)	662 High x 615 Wide	786 High x 692 Wide
Fig 3	1310mm	698mm	1530mm	1412mm	800mm	1734mm	Air Off (Top or Side) spigot	289mm x 333mm	289mm x 333mm
Fig 4	1869mm	698mm	838mm	2073mm	800mm	940mm			
Fig 5	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.

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

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