

# Heatline

## *Duct mounted heater batteries*

- ▶f Integrated controls
- ▶f Modulating heater control
- ▶f Optional versatile LCD room unit with built in sensor and timers
- ▶f Easy installation
- ▶f Suitable for circular (HLC) square ducts (HLD) and stab-in (HLS) in various sizes
- ▶f Extensive built-in safety features
- ▶f Single or three phase supply options



**DUTIES UP TO  
32 kW**



**VES Heater Batteries**  
*part of a complete range of innovative, flexible products  
from the HVAC experts*

# Heatline

## Heatline Duct mounted heater batteries

The VES Heatline duct mounted heater battery brings new versatility to existing and new ventilation installations.

Intelligent control options can synchronise with a BMS or LCD room unit. Coupled with a thyristor or valve and actuator, this is the ideal solution to accurately heat individual spaces. Heatline is simple to install, commission and maintain.

### Heatline circle spigot



### Heatline square spigot



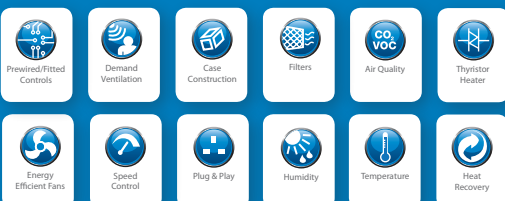
### Heatline Heater batteries Features and benefits

**Energy saving**  
Meet regulations, minimise noise and maximise performance.

**Simple installation and maintenance**  
Simple connection and pre-installed features save on site costs and reduce lead times. Carefully designed maintenance features minimise downtime and total cost of ownership.

**Robust Construction**  
Excellent build quality ensures air tight performance.

**Safety features**  
Versatile location, handling and access options meet the widest range of project requirements.



## Energy Saving

Intelligent controls enhance performance whilst saving energy and money.

# Duct mounted heater batteries



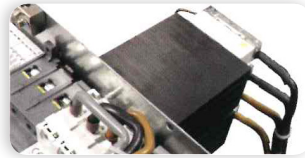
**Energy efficient**  
Heating individual rooms avoids the requirement to waste energy heating an entire building.



**Sensors**  
Sensors available for energy efficient demand heating.



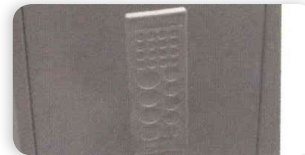
**LPHW modulating heater control**  
Fitted four port valve for modulating temperature output to accurately heat individual spaces.



**EHB modulating heater control**  
Single or three phase thyristor for modulating temperature output to accurately heat individual spaces.



**Inbuilt controls**  
Fitted and pre wired integral controls with fitted isolator to reduce on site wiring. Can interface with a BMS or LCD room unit.



**Cable gland entry**  
Supplied with cable entry gland for simple and efficient site wiring.



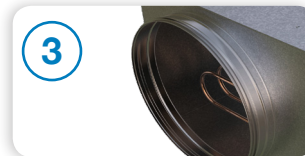
**LPHW coil connection enclosure**  
Coil connections, valve and actuator are fully enclosed within case work to help prevent damage during transit and installation.



**LPHW mounting feet**  
Mounting feet supplied fitted on LPHW units.



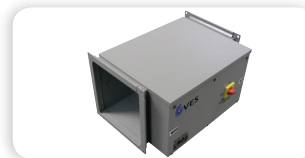
**Square spigot modules**  
Square spigot connections with 30mm flange fitted at both ends to enable easy connection to square ductwork.



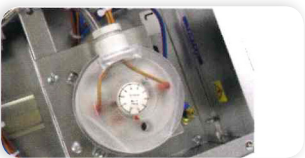
**Circular spigot modules**  
Circular spigot connections fitted at both ends. Spigots up to Ø560 have a double rubber gasket.



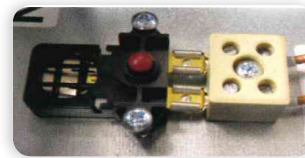
**Plantroom**  
Plantroom units are supplied natural galvanised finish. Powdercoat finish available.



**Weatherproof**  
Weatherproof units are supplied powder coated to RAL7004. Other alternate powdercoat colours available.



**Airflow safety switch**  
Fitted airflow pressure switch to shut off heater in the event of airflow failure.



**Safety cutout**  
Fitted thermal cutout safety device on electric unit to shut off heater battery.

## BlueSense Energy Saving Package



Heatline unit with integral controls



EC fan with full control



Sensor options

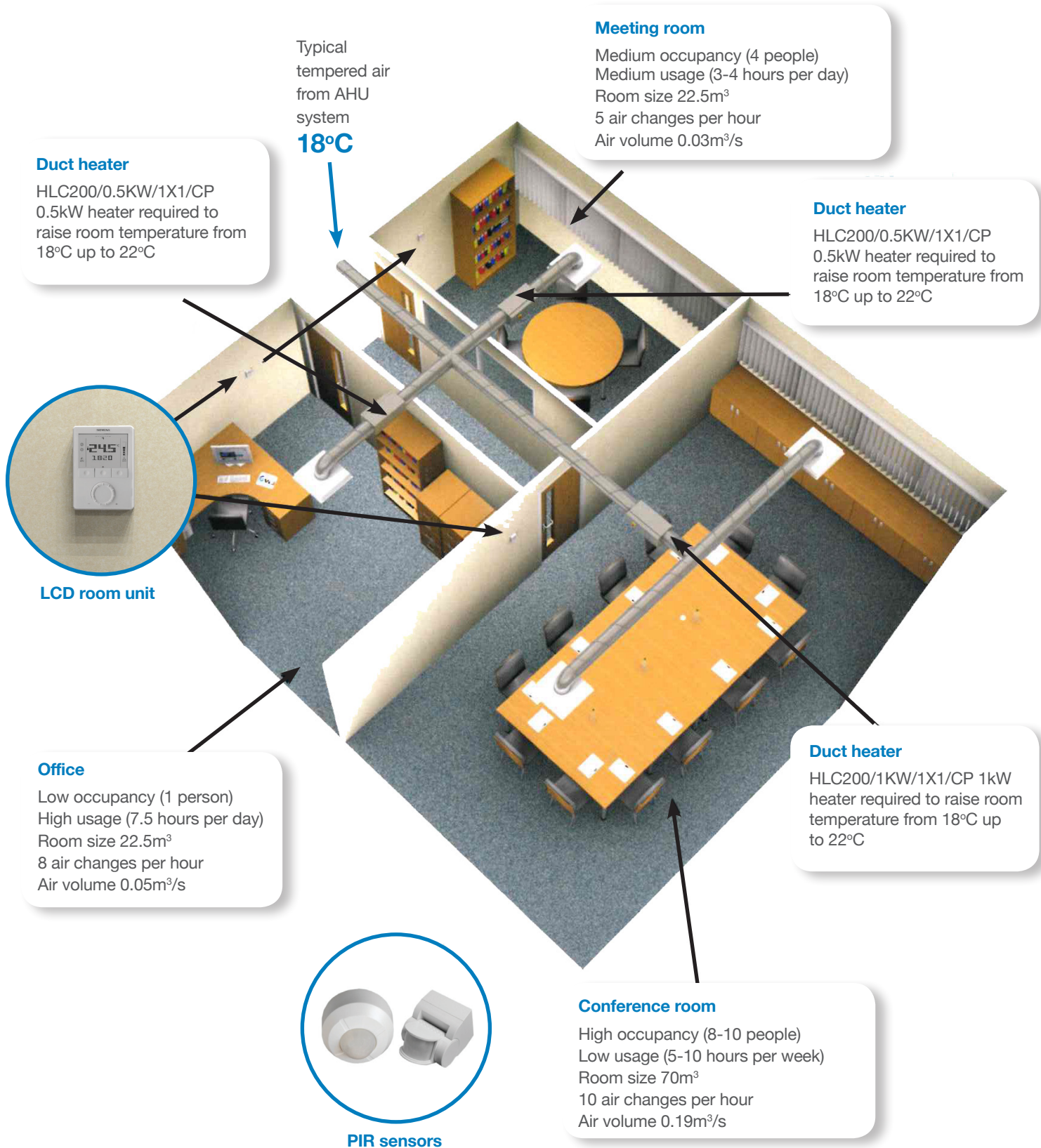


The sign of energy saving products, services and expertise

# Heatline

## Heatline application

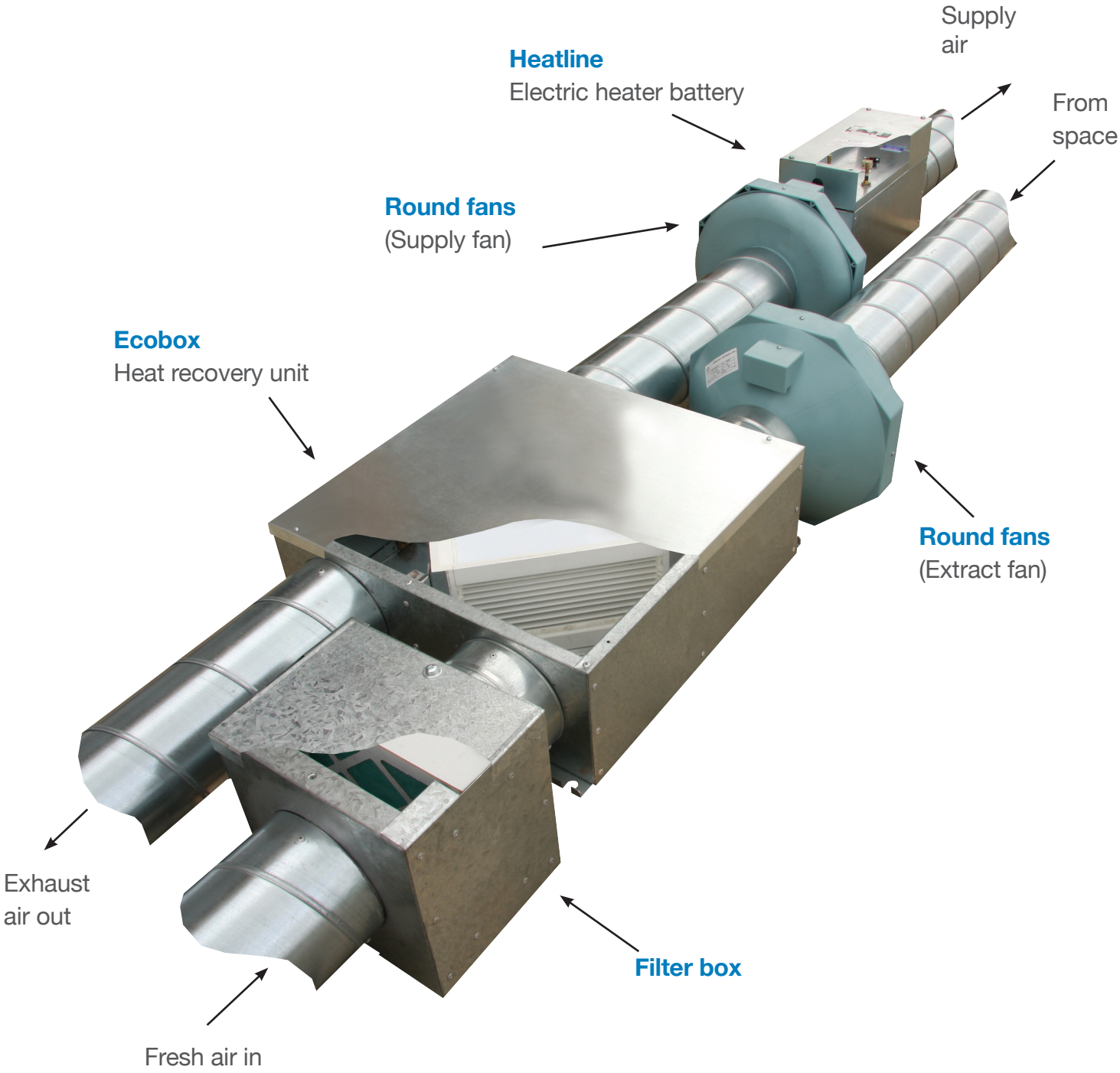
The heatline range of units can be used in conjunction with other VES products - extract and supply fans, twin fans and air handlers.



**Note:** Data for design guidance only. Detailed information is available upon request.

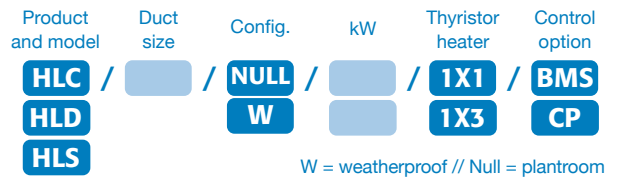
## Versatile heat recovery solution

This image illustrates a compact ceiling void solution, incorporating heatline heater batteries.



## Heatline electric

Circular or square duct or stab-in electric heater batteries, complete with fitted controls.



## Standard features

- ▶ Responsive to 0-10 DC control signal from remote source, to control temperature
- ▶ Modulating thyristor control
- ▶ Volt free run and trip indication
- ▶ Fan control up to 4Amps 230 VAC 50Hz
- ▶ Main isolating switch, lockable handle
- ▶ Independent safety circuitry

- ▶ Fitted interlock airflow pressure and manual reset thermal cut-out switches
- ▶ Easy installation to new or existing ductwork system
- ▶ Bespoke sizes are also available

## LCD room unit features

- ▶ LCD room unit with built in sensor and temperature adjustment
- ▶ On/off/auto control with built in 7 day time clock
- ▶ Adjustable commissioning and control parameters

Product	Duct size	Config	kW	Thyristor heater phases *	Control option
HLC	100 to 600	Null or /W	/0.5kW to /32kW	/1x1 or /1x3	/BMS or /CP
HLD	100 to 600	Null or /W	/0.5kW to /32kW	/1x1 or /1x3	/BMS or /CP
HLS	100 to 600	Null or /W	/0.5kW to /32kW	/1x1 or /1x3	/BMS or /CP

\* 3 phase only available on sizes 400 and up

## 1 phase

Duct size	kW rating	Duct size	kW rating
100	0.5kW	250	2kW
	1kW		3kW
	1.5kW		4.5kW
	2kW		6kW
150	1kW	315	3kW
	1.5kW		4.5kW
	2kW		6kW
	2.5kW		7.5kW
200	1kW	400	3kW
	1.5kW		4.5kW
	2kW		6kW
	3kW		7.5kW
	4.5kW		9kW

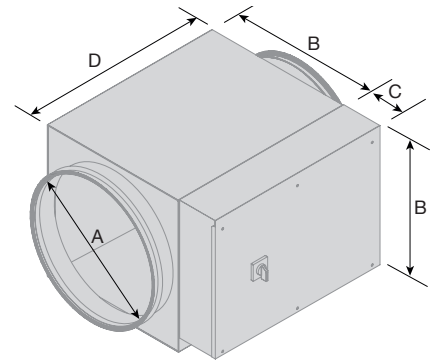
## 3 phase

Duct size	kW rating	Duct size	kW rating
400	4.5kW	560	12kW
	6kW		15kW
	7.5kW		18kW
	9kW		21kW
	12kW		24kW
450	15kW	600	27kW
	6kW		15kW
	7.5kW		18kW
	9kW		21kW
	12kW		24kW
600	15kW	600	27kW
	18kW		32kW
	21kW		
	24kW		

## Electric dimensions

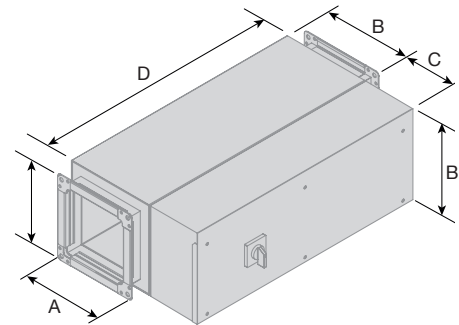
### HLC plantroom / circle spigot

Duct dia. (A)	Height/width (B)	Control box (C)	Length (D)	Weight (kg)
97	185	120	550	8
147	203	120	550	9
197	240	120	550	9
247	290	120	550	10
312	355	120	550	12
397	440	120	550	17
447	490	120	550	20
557	600	120	550	27
600	670	120	550	33



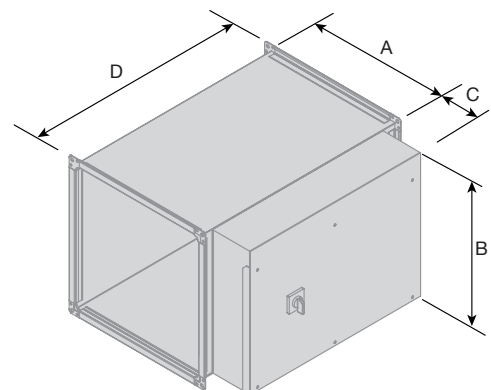
### HLD plantroom 100-150 / square spigot

Duct sq. (A)	Height/width (B)	Control box (C)	Length (D)	Weight (kg)
100	185	120	630	8
150	185	120	630	9



### HLD plantroom 200-600 / square spigot

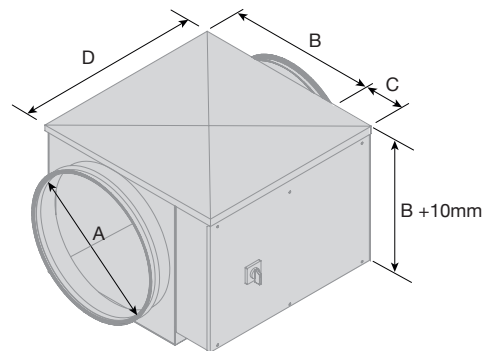
Duct sq. (A)	Height (B)	Control box (C)	Length (D)	Weight (kg)
200	200	120	630	9
250	250	120	630	10
315	315	120	630	12
400	400	120	630	17
450	450	120	630	20
560	560	120	630	27
600	600	120	630	33



## Electric dimensions

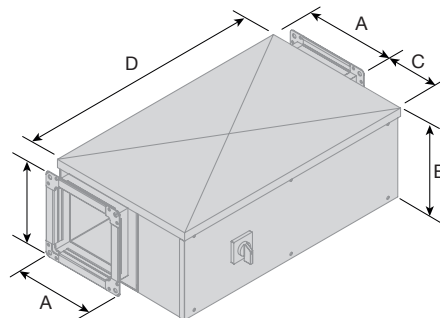
### HLC weatherproof / circle spigot

Duct dia. (A)	Height/width (B)	Control box (C)	Length (D)	Weight (kg)
97	195	120	550	10
147	213	120	550	11
197	250	120	550	12
247	300	120	550	13
312	365	120	550	15
397	450	120	550	21
447	500	120	550	25
557	610	120	550	33
600	680	120	550	40



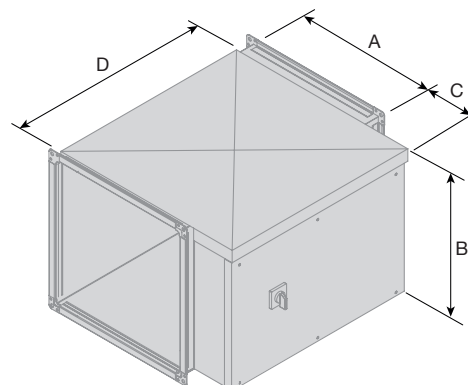
### HLD weatherproof 100-150 / square spigot

Duct sq. (A)	Height (B)	Control box (C)	Length (D)	Weight (kg)
100	195	120	630	10
150	195	120	630	11



### HLD weatherproof 200-600 / square spigot

Duct sq. (A)	Width (B)	Control box (C)	Length (D)	Weight (kg)
200	210	120	630	12
250	260	120	630	13
315	325	120	630	15
400	410	120	630	21
450	460	120	630	26
560	570	120	630	33
600	610	120	630	40

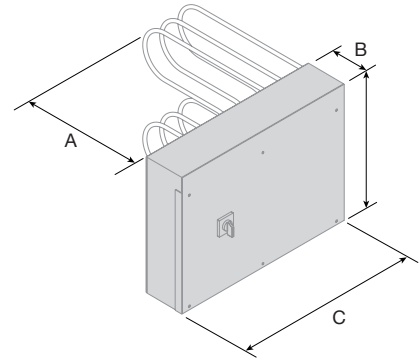




## Electric dimensions

### HLS

To suit duct (A)	Control box (B)	Length (C)	Weight (kg)
100	120	550	6
150	120	550	6
200	120	550	6
250	120	550	8
315	120	550	9
400	120	550	12
450	120	550	15
560	120	550	19
600	120	550	25



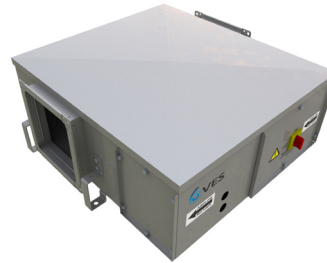
## Heatline LPHW

Duct mounted modulating low pressure hot water (LPHW) heater complete with circular or square connections and fitted controls. Suitable for drop rod mounting and floor fixing.

Product and model: **HLC** / **HLD** / **HL**  
 Duct size: **200** / **250** / **315** / **400** / **450**  
 Config.: **NULL** / **W**  
 Heating: **W**  
 Control option: **BMS** / **CP**  
*W = weatherproof // Null = plantroom*



HLC plantroom (weatherproof available)



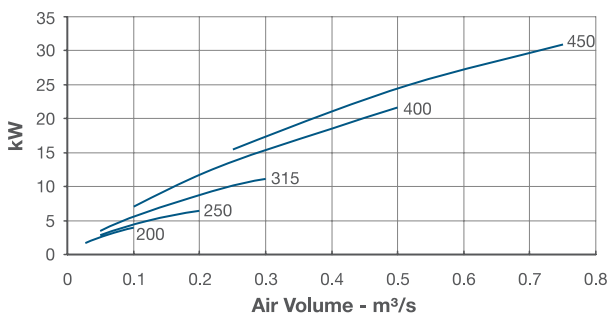
HLD plantroom (weatherproof available)

### Standard features

- ▶ LPHW heater supplied with fitted and pre-wired valve and actuator, fully enclosed and protected
- ▶ Factory fitted and pre-wired frost protection stat
- ▶ Modulating LPHW control
- ▶ Volt free run and trip indication
- ▶ Fan control up to 4 Amps 230 VAC 50Hz
- ▶ Main isolating switch, lockable handle
- ▶ Independent safety circuitry
- ▶ Fitted interlock airflow pressure switch
- ▶ Easy installation to new or existing ductwork system
- ▶ 0-10 DC input signal for BMS control

### LCD room unit features

- ▶ LCD room unit with built in sensor and temperature adjustment
- ▶ On/off/auto control with built in 7 day time clock
- ▶ Adjustable commissioning and control parameters



Product	Duct size	Config	Heating	Control option
HLC	200 to 450	Null or /W	/W	/BMS or /CP
HLD	200 to 450	Null or /W	/W	/BMS or /CP

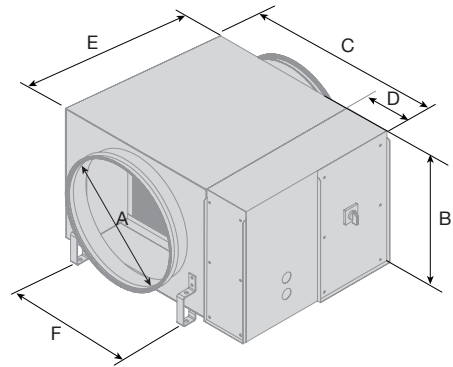
Duct size	Air volume m³/s	Max. air off temp. °C	Max. output (kW)	Water flow rate (l/s)	Water pressure (kPa)	Air P.D (Pa)
200	0.025	49	1.6	0.04	0.9	1
	0.05	38.5	2.6	0.06	2.7	3
	0.08	32.5	3.4	0.08	4.3	6
	0.10	28	4	0.09	6.1	9
250	0.05	42.5	2.9	0.06	3.7	2
	0.10	32	4.5	0.10	8.5	5
	0.15	26	5.6	0.12	13.1	10
	0.20	21.5	6.4	0.14	17.1	18
315	0.05	53	3.5	0.08	1.5	2
	0.10	42	5.7	0.13	3.4	3
	0.18	34	8.2	0.18	7	5
	0.25	28	10.1	0.22	10.1	9
	0.30	25.5	11.1	0.25	12.2	12
400	0.10	54	7.1	0.16	3	1
	0.20	43	11.7	0.26	7.9	3
	0.35	35	16.9	0.38	15.8	5
	0.50	29	21.7	0.46	23.5	9
450	0.25	46	15.5	0.34	8.5	3
	0.50	35.5	24.5	0.54	20.1	5
	0.75	29	30.9	0.69	31.4	10

Based on air on temp -5°C

## LPHW dimensions

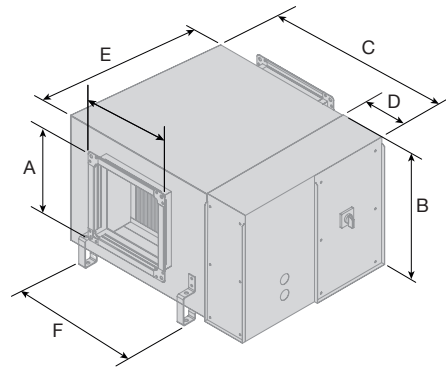
### HLC plantroom/round spigot

Duct dia. (A)	Height (B)	Width (C)	Control box (D)	Length (E)	Mounting centres (F)	Weight (kg)
197	230	650	180	585	300	17
247	290	650	180	585	350	19
312	365	770	180	585	415	23
397	540	900	180	585	500	32
447	565	1150	180	585	550	40



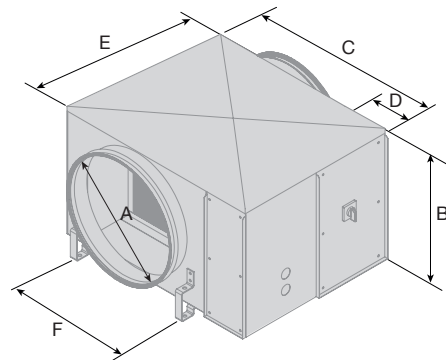
### HLD plantroom/square spigot

Duct dia. (A)	Height (B)	Width (C)	Control box (D)	Length (E)	Mounting centres (F)	Weight (kg)
200	230	650	180	665	300	17
250	290	650	180	665	350	19
315	365	770	180	665	415	23
400	540	900	180	665	500	32
450	565	1150	180	665	550	40



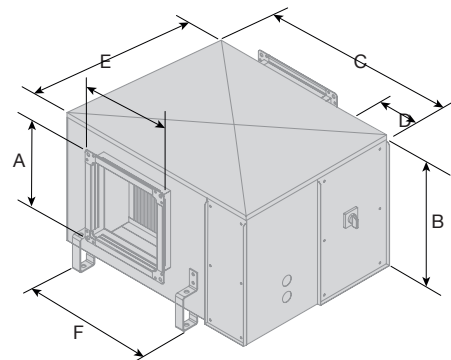
### HLC weatherproof/round spigot

Duct dia. (A)	Height (B)	Width (C)	Control box (D)	Length (E)	Mounting centres (F)	Weight (kg)
197	240	650	180	585	300	20
247	300	650	180	585	350	22
312	375	770	180	585	415	27
397	550	900	180	585	500	36
447	575	1150	180	585	550	45



### HLD weatherproof/square spigot

Duct dia. (A)	Height (B)	Width (C)	Control box (D)	Length (E)	Mounting centres (F)	Weight (kg)
200	240	650	180	665	300	20
250	300	650	180	665	350	22
315	375	770	180	665	415	27
400	550	900	180	665	500	35
450	575	1150	180	665	550	45



## Product specification

### Heatline *Stab-in Electric Heater*

#### 1.1. General

- A. Provide a stab-in electric heater unit to meet the performance and configuration as indicated in the schedule and detail drawings. The stab-in electric heater unit shall be of the Heatline type as manufactured by VES Andover Ltd, a company covered by BS EN ISO 9001:2008.

#### 1.2. Unit Construction

- A. The unit shall be provided pre-assembled comprising of a rigidly constructed single skinned galvanised sheet steel terminal box, electric element heater battery, and integrated control system.
- B. Access for maintenance shall be via a removable controls package and heater element assembly.
- C. The unit terminal box shall be provided in high quality galvanised steel.
- D. The unit shall be designed for duct installation.

#### 1.3. Heater battery

- A. The unit shall be fitted with electric element heating as indicated in the schedule and detail drawings.
- B. The electric heater battery shall be suitable for single or three-phase supply with thyristor control as indicated in the schedule and detail drawings.
- C. The electric heater battery shall consist of a number of elements of a number of elements sized to suit the steps and phases as indicated in the schedule and detail drawings. The elements shall consist of a tubular incolloy shroud containing compressed magnesium oxide powder packed around a nickel chromium resistance wire. The elements shall be evenly spread across the open area of the duct.
- D. Where multiple elements are required to achieve the steps and phases as indicated in the schedule, elements shall be linked by copper bus bar or terminated with electrical connectors.
- E. The electric heater battery shall be fitted as standard with 130°C non-adjustable thermal safety cut-out, with manual reset.
- F. All electric heaters shall be 1500V flash tested, and resistance tested for correct component assembly. Test certificates shall be available on request.

#### 1.4. Controls

- A. The unit shall be supplied with a fitted controls package as standard
- B. The controls package shall include as standard volt-free fan run and trip indication, 1 or 3 phase thyristor heat control, and fan control up to 4A 230V @ 50Hz.
- C. The controls package shall include as standard a lockable door isolator.
- D. The controls package shall include as standard an independent safety circuit, including thermal and airflow pressure safety cut out switches.
- E. The controls package shall be available with optional LCD room control unit or inputs responding to 0-10Vdc control signal from remote source to control temperature.
- F. The room control unit shall include as standard a built-in room sensor, temperature adjustment, on/off/auto/DC control, time clock setup and fan run-on timer adjustment, fault display, commissioning and control parameters and a tamper proof case design with PIN code access.

### Heatline *Duct Mounted Electric Heater*

#### 1.1. General

- A. Provide a duct mounted electric heater unit to meet the performance and configuration as indicated in the schedule and detail drawings of the Heatline type as manufactured by VES Andover Ltd a company covered by BS EN ISO 9001:2008.

#### 1.2. Unit Construction

- A. The unit shall be provided pre-assembled comprising of a rigidly constructed single skinned galvanised sheet steel case, electric element heater battery, and integrated control system.
- B. Square spigots shall be fitted with 30mm flanges as indicated in the schedule and detail drawings.
- C. Circular spigots shall be fitted with rubber gasket seals as indicated in the schedule and detail drawings.
- D. The unit casework shall incorporate high quality leak resistant neoprene gaskets on service doors and panels.
- E. Access for maintenance shall be via a removable controls package and heater element assembly.
- F. Plantroom unit casework and spigots shall be provided in high quality galvanised steel.
- G. Weatherproof units shall be supplied powdercoated signal grey RAL7004 as standard. Alternative colour according to schedule.
- H. Weatherproof units shall be supplied with a weather lid.
- I. The unit shall be designed for duct mounting.

#### 1.3. Heater battery

- A. The unit shall be fitted with electric element heating as indicated in the schedule and detail drawings.
- B. The electric heater battery shall be suitable for single or three-phase supply with thyristor control as indicated in the schedule and detail

drawings.

- C. The electric heater battery shall consist of a number of elements sized to suit the steps and phases as indicated in the schedule and detail drawings. The elements shall consist of a tubular incolloy shroud containing compressed magnesium oxide powder packed around a nickel chromium resistance wire. The elements shall be evenly spread across the open area of the duct.
- D. Where multiple elements are required to achieve the steps and phases as indicated in the schedule, elements shall be linked by copper bus bar or terminated with electrical connectors.
- E. The electric heater battery shall be fitted as standard with 130°C non-adjustable thermal safety cutout, with manual reset.
- F. All electric heaters shall be 1500V flash tested, and resistance tested for correct component assembly. Test certificates shall be available on request.

#### 1.4. Controls

- A. The unit shall be supplied with a fitted controls package as standard
- B. The controls package shall include as standard volt-free fan run and trip indication, 1 or 3 phase thyristor heat control, and fan control up to 4A 230V @ 50Hz.
- C. The controls package shall include as standard a lockable door isolator.
- D. The controls package shall include as standard an independent safety circuit, including thermal and airflow pressure safety cut out switches.
- E. The controls package shall be available with optional LCD room control unit or inputs responding to 0-10Vdc control signal from remote source to control temperature.
- F. The room control unit shall include as standard a built-in room sensor, temperature adjustment, on/off/auto control, time clock setup and fan run-on timer adjustment, fault display, commissioning and control parameters and a tamper proof case design with PIN code access.

## Heatline *Duct Mounted LPHW Heater*

#### 1.1. General

- A. Provide a duct mounted LPHW heater unit to meet the performance and configuration as indicated in the schedule and detail drawings. The duct mounted LPHW heater unit shall be of the Heatline type as manufactured by VES Andover Ltd, a company covered by BS EN ISO 9001:2008.

#### 1.2. Unit Construction

- A. The unit shall be provided pre-assembled comprising of a rigidly constructed single skinned galvanised sheet steel case, LPHW coil, and integrated control system.
- B. The unit shall have square or circular duct spigots as indicated in the schedule and detail drawings.
- C. Square spigots shall be fitted with 30mm flanges as indicated in the schedule and detail drawings.
- D. Circular spigots shall be fitted with rubber gasket seals as indicated in the schedule and detail drawings.
- E. The unit casework shall incorporate high quality leak resistant neoprene gaskets on service doors and panels.
- F. Access for maintenance shall be via a removable controls package and coil assembly.
- G. Plantroom unit casework and spigots shall be provided naturally finished in high quality galvanised steel.
- H. Weatherproof units shall be supplied powdercoated single grey RAL7004 as standard. Alternative colour according to schedule.
- I. The unit shall be designed for duct mounting.

#### 1.3. Heater battery

- A. The unit shall be fitted with a LPHW coil heater as indicated in the schedule and detail drawings.
- B. The hot water heater battery shall comprise of copper tubes and aluminium fins, with galvanised sheet steel casework. The flow and return pipe connections shall be handed as indicated in the schedule and detail drawings.
- C. The hot water heater battery shall be available with alternative fin coatings by special order, as indicated in the schedule.
- D. The hot water heater battery shall be fitted with a pre-wired valve and actuator.
- E. Hot water heater battery shall be fitted with a pre-wired freeze protection capillary thermostat laced over the coil air off face.

#### 1.4. Controls

- A. The unit shall be supplied with a fitted controls package as standard
- B. The controls package shall include as standard volt-free fan run and trip indication, valve and actuator heat control, and fan control up to 4A 230V @ 50Hz.
- C. The controls package shall include as standard a lockable door isolator.
- D. The controls package shall include as standard an independent safety circuit, including an airflow pressure safety cut out switch.
- E. The controls package shall be available with optional LCD room control unit or inputs responding to 0-10Vdc control signal from remote source to control temperature.
- F. The room control unit shall include as standard a built-in room sensor, temperature adjustment, on/off/auto control, time clock setup and fan run-on timer adjustment, fault display, commissioning and control parameters and a tamper proof case design with PIN code access.

Download specification from [www.ves.co.uk](http://www.ves.co.uk)

Other products and services from the complete range of VES HVAC solutions

### Air Handling Units

- ▶ Supply and extract, combined or separate
- ▶ Heat recovery including crossflow plate heat exchangers, thermal wheels and run-around coils
- ▶ Plantroom or weatherproof, flat or stacked
- ▶ Fitted silencers, inverters and controls
- ▶ Matching DX condensing units
- ▶ Various case constructions including EN 1886 certified units

### Duct Fans

- ▶ In-line centrifugal, with forward or backward curved impellers
- ▶ Round, axial and mixed flow fans
- ▶ Fitted silencers available on all units
- ▶ Manual and automatic speed controllers available

### Twin Fans

- ▶ For ceiling void, plantroom and weatherproof
- ▶ Many models and configurations
- ▶ Fitted auto-changeover system

### Hybrid Units

- ▶ Natural ventilation enhanced by a low power fan
- ▶ Utilises a combination of automatic mechanical ventilation and manually operated windows to achieve classroom comfort conditions
- ▶ Simple user interface with indication of operating mode
- ▶ Slimline, lightweight construction, saving space and easing installation
- ▶ Available in a range of sizes with the ability to add heating coils when required

### Roof Extract Units

- ▶ Three ranges for volume and pressure
- ▶ Curb and soaker sheet bases

### Wall and Ceiling Fans

- ▶ All types for commercial, industrial and domestic premises

### Kitchen Hood Extract Fans

- ▶ Heavy duty high temperature fans for hot greasy air
- ▶ Motors out of airstream
- ▶ Single inlet fans, in-line and vertical jet roof units

### Control Panels

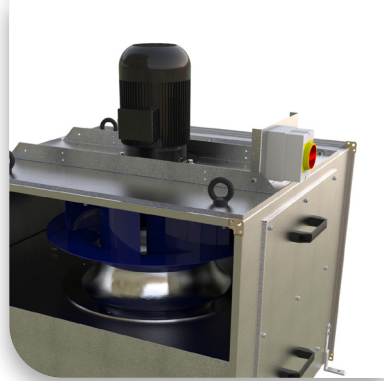
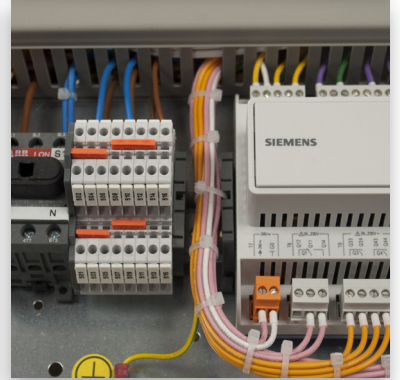
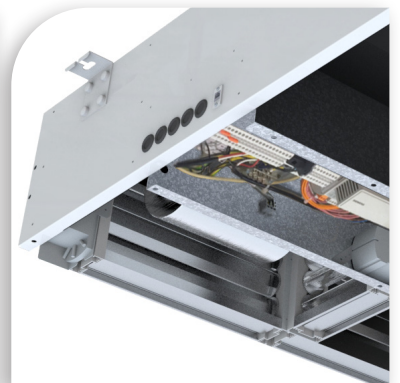
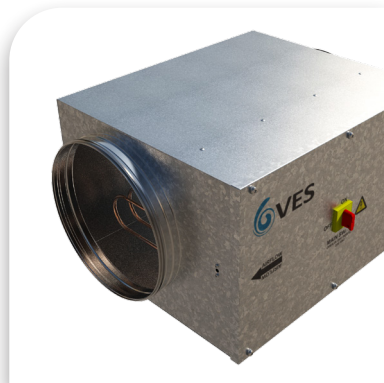
- ▶ Off the shelf and built to order panels
- ▶ Air quality sensors and energy savers
- ▶ Intelligent control software
- ▶ A range of remotes including touch screen

### Noise Control

- ▶ Matching silencers available for all ventilation products
- ▶ Silencers designed to meet noise criteria
- ▶ Cleanable silencers
- ▶ Weatherproof silencers

### Specialist Site Services

- ▶ Plant refurbishment
- ▶ Energy saving upgrades
- ▶ Noise reduction
- ▶ Site surveys
- ▶ Kitchen ventilation
- ▶ AHU flat pack installation
- ▶ Maintenance
- ▶ Spares



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VES reserves the right to amend product specifications and details without notice.