

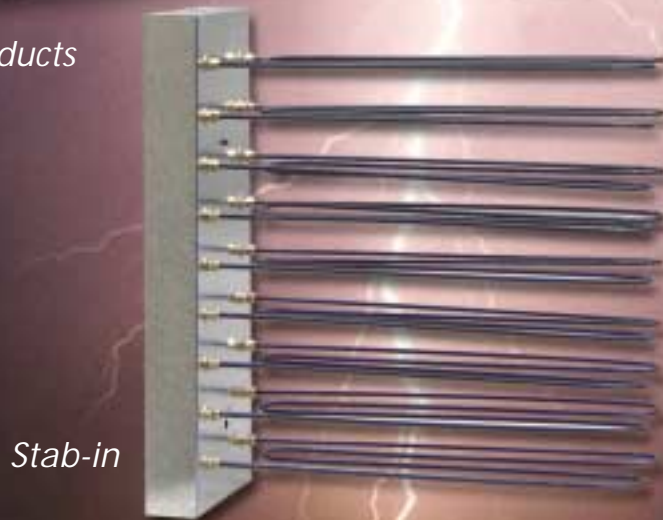
ELECTRIC AIR HEATER BATTERIES



For rectangular ducts



For round ducts



Stab-in

- Manufactured by VES
- Huge choice of duty output and size
- Step or proportional control
- Quick deliveries



Some like it hot

ELECTRIC AIR HEATERS

INTRODUCTION

From our stocks of electric heater elements we can manufacture a very wide range of units combining kW output, any number of steps, and a choice of housings, in a short delivery period.

SPECIFICATION

The sheathed elements are tubular incolloy, with an internal nickel chromium resistance wire centrally located and insulated in compressed magnesium oxide powder.

The elements are formed and arranged to be evenly spread over the open area of the duct. They are secured into the terminal box with air tight glands, the element having a 50mm cold end. The elements are either linked with a copper busbar or fitted with a terminal as necessary to achieve step requirements.

Heaters are designed to have a surface temperature of 400°C (black heat) at an air velocity of 2.5m/sec. It is not advisable to design for a velocity of lower than 2.0m/sec.

All heater batteries are fitted with a non-adjustable high temperature safety cutout which operated on rise in temperature above 130°C ± 5°C, and can be manually reset. Automatic resetting thermal cutouts are not recommended. Uneven step ratings available.

The electric heater is suitable for horizontal or vertical airflow. It is important that the thermal cutout is mounted at the highest point of the heater elements.

The heater control system should ensure that the heater is switched off before the fan to ensure that the elements are cooled.

INSPECTION PROCEDURE

The heaters are given a flash test to 1500V, together with a resistance test for load insulation, tightness of glands and terminals, clearance check between element terminals and cover, and operation of thermal cutout. Test certificates available on request.

HEATER SELECTION

Calculate heater rating:

$$\text{Output} = \text{Air Volume} \times \text{Constant} \times \text{Temperature Rise}$$

$$\text{kW} = \text{m}^3/\text{sec} \times 1.21 \times \Delta\text{T}^\circ\text{C}$$

Specify exact requirements:

- kW loading
- Number of steps
- Type of step - 1 phase or 3 phase
- State if uneven steps are required
- Stab-in or duct mounting
- Duct size - width x height or diameter
- Air volume
- Horizontal or vertical airflow

*VES manufacture a wide range of control panels.
See Powerstation leaflet for full details or call the sales office.*

415v Three Phase Electric Heater Batteries

240v Single Phase Electric Heater Batteries

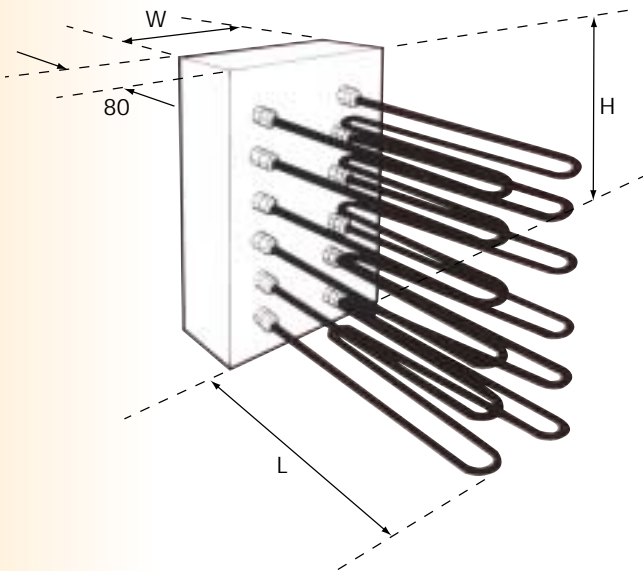
EHB kW	NUMBER OF STEPS								
	1	2	3	4	5	6	8	9	
1.50	.								
3.00	.	.							
3.75	.								
4.00	.								
4.50	.		.						
5.00	.								
6.00	.	.		.					
7.50	.	.			.				
8.00	.	.							
9.00		
10.00	.	.							
12.00		
13.50	
15.00				
16.00	.	.		.					
18.00		
20.00				
21.00	.	.	.						
22.50			
24.00		
25.00	.	.			.				
27.00	
30.00		
32.00		
36.00	
39.00					
40.00		
40.50	
42.00		
45.00	
48.00		
50.00	.	.			.				
52.00	.	.		.					
54.00	
57.00					
60.00		
63.00			
64.00		
67.50	
70.00	.	.			.				
72.00	
81.00	
90.00	
108.00	

EHB kW	NUMBER OF STEPS								
	1	2	3	4	5	6	8	9	
0.50	.								
1.00	.	.							
1.50	.		.						
2.00	.	.		.					
2.50	.	.			.				
3.00			
3.75	.		.						
4.00		
4.50	
5.00				
6.00			
7.50			
8.00		
9.00	
10.00		
11.25	.		.		.				
12.00	
13.50	
15.00	
16.00		
18.00	
20.00		
21.00	
22.50	
24.00	
25.00			
27.00	
30.00	



Working for you

STAB-IN HEATERS TYPE EHS



The VES stab-in heater can be mounted on a cut out on the duct. Standard terminal box sizes are as listed.

Non-standard terminal boxes made to order.

All heaters are labelled with loading, voltage, minimum air volume, and serial no.

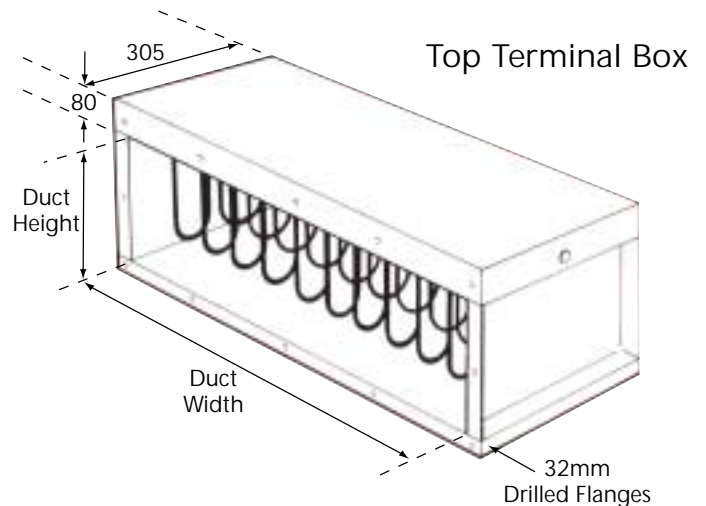
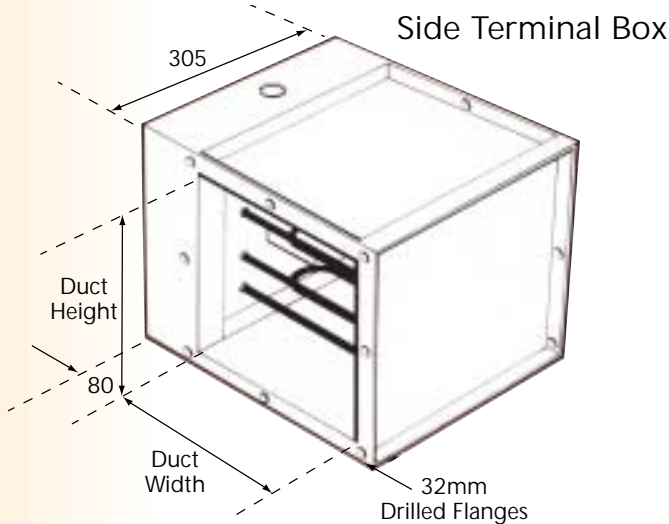
STANDARD STOCK SIZES

SIZE	TERMINAL BOX Height	TERMINAL BOX Width	DUCT CUT-OUT Height	DUCT CUT-OUT Width
EHS-1	180	220	100	190
EHS-2	220	220	175	190
EHS-3	300	220	270	190
EHS-4	400	280	370	250
EHS-5	500	280	450	250

The length 'L' of elements will be determined by the duct width.

DUCT MOUNTING HEATERS TYPE EHD

VES duct mounting housings are made to match the designed duct size. The terminal box can be on the side or the top. Duct velocity can be between 2.0 and 6.0m/sec.



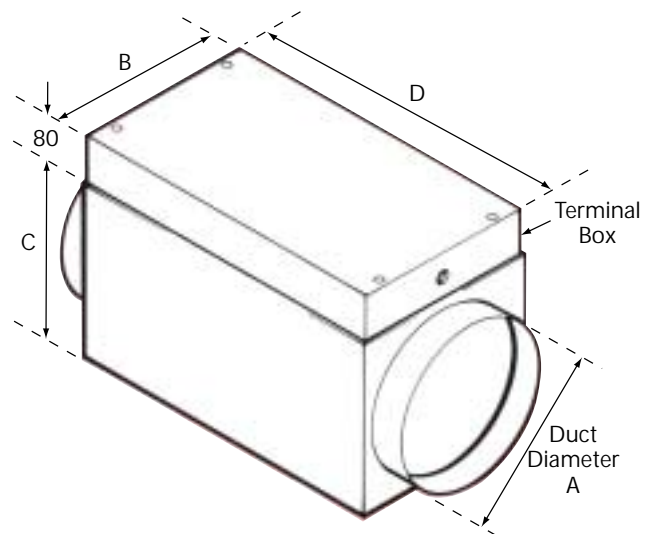
EHC CIRCULAR HEATERS

DIMENSIONS			
A	B	C	D
100	125	125	350
125	150	150	350
150	175	175	425
200	225	225	425
250	275	275	500
315	340	340	500

All other diameters available.

Circular spigots are 50mm long.

A is central on B x C.



Some like it hot

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

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RESISTANCE TO AIRFLOW

Velocity m/sec	2.0	3.0	4.0	5.0	6.0
Pressure Drop n/m ²	5	10	15	20	25



ISO 9001-2000
Cert. No. Q5375

Leaflet No. 795-5/03