

Accessories

By fitting optional equipment this product can operate automatically under normal running conditions. The optional controls fit within the casing of the unit and are supplied with easy to fit instructions.

For a full list of optional extras and accessories for you product please see Pages 10-11.

To order accessories or spares please contact either your supplier
Or Smith's Environmental Products Ltd.

Technical designation UVC 90, 120

Products with this symbol (crossed out wheelie bin) cannot be disposed as household waste. Old electrical and electronic equipment must be recycled at a facility capable of handling these products and their waste by-products. If you are purchasing replacement equipment your retailer may offer a 'take back' scheme, or will be able to give details of the nearest approved authorised treatment facility. Proper recycling and waste disposal will help conserve resources whilst preventing detrimental effects on our health and the environment.

WEEE Registered Code : WEE/ED0093VW



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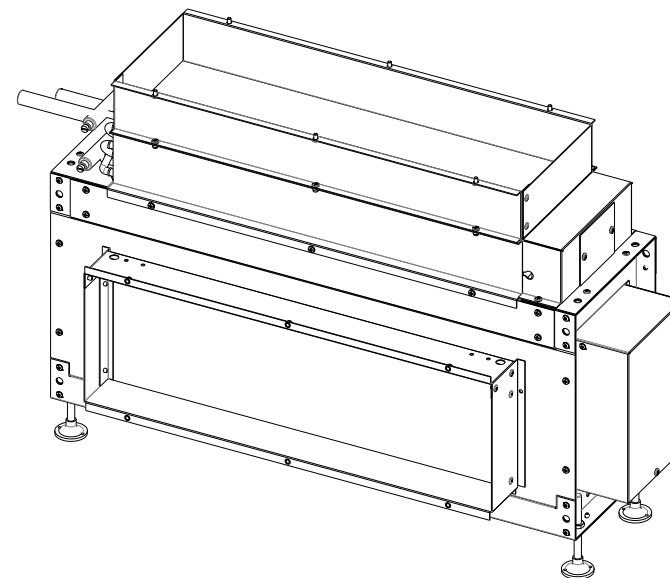
In light of our policy of continuous development Smith's Environmental Products Ltd
Reserve the right to alter specifications without prior notice.



Caspian Universal Concealed 90, 120, 150 & 180 Series Fan Convectors.

Suitable for Low, High &
Ceiling Level Installations

Installation & User Guide



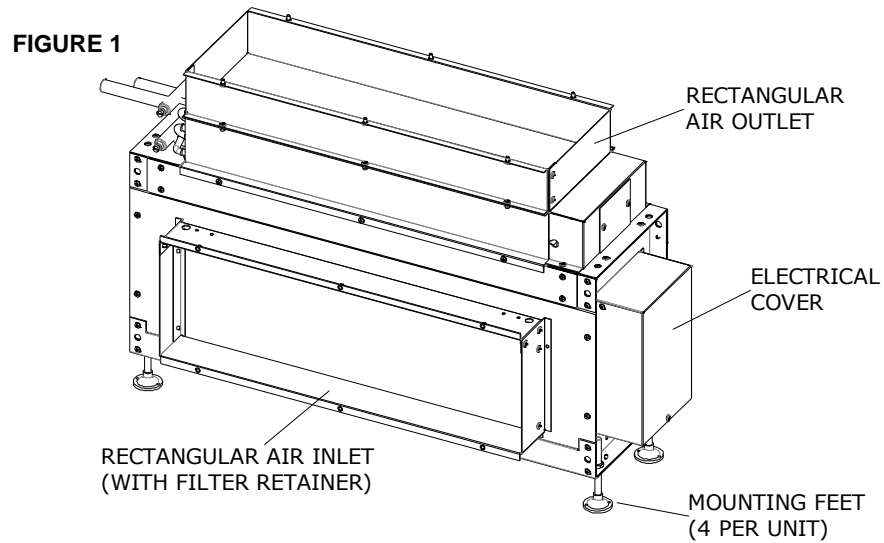
User Information.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance. Cleaning and user maintenance shall not be made by children without supervision. (refer EN 60335-1 clause 7.12).

Introduction

The unit is supplied in a standard mode which includes a rectangular air outlet duct, a rectangular air inlet duct (Not fitted) and four mounting feet (Not fitted).

Dependent on the installation you may require right angle ducts, extension ducts, double / triple spigot outlets and grilles, these items and ancillary controls are supplied as accessories (Listed on pages 11 & 12) and should be added to your order if required.



Flexible ducts and other extensions should be sourced from a ductwork supplier (Please refer to page 10 for dimensional diagrams).

This product is designed to heat areas where the unit is to be concealed.

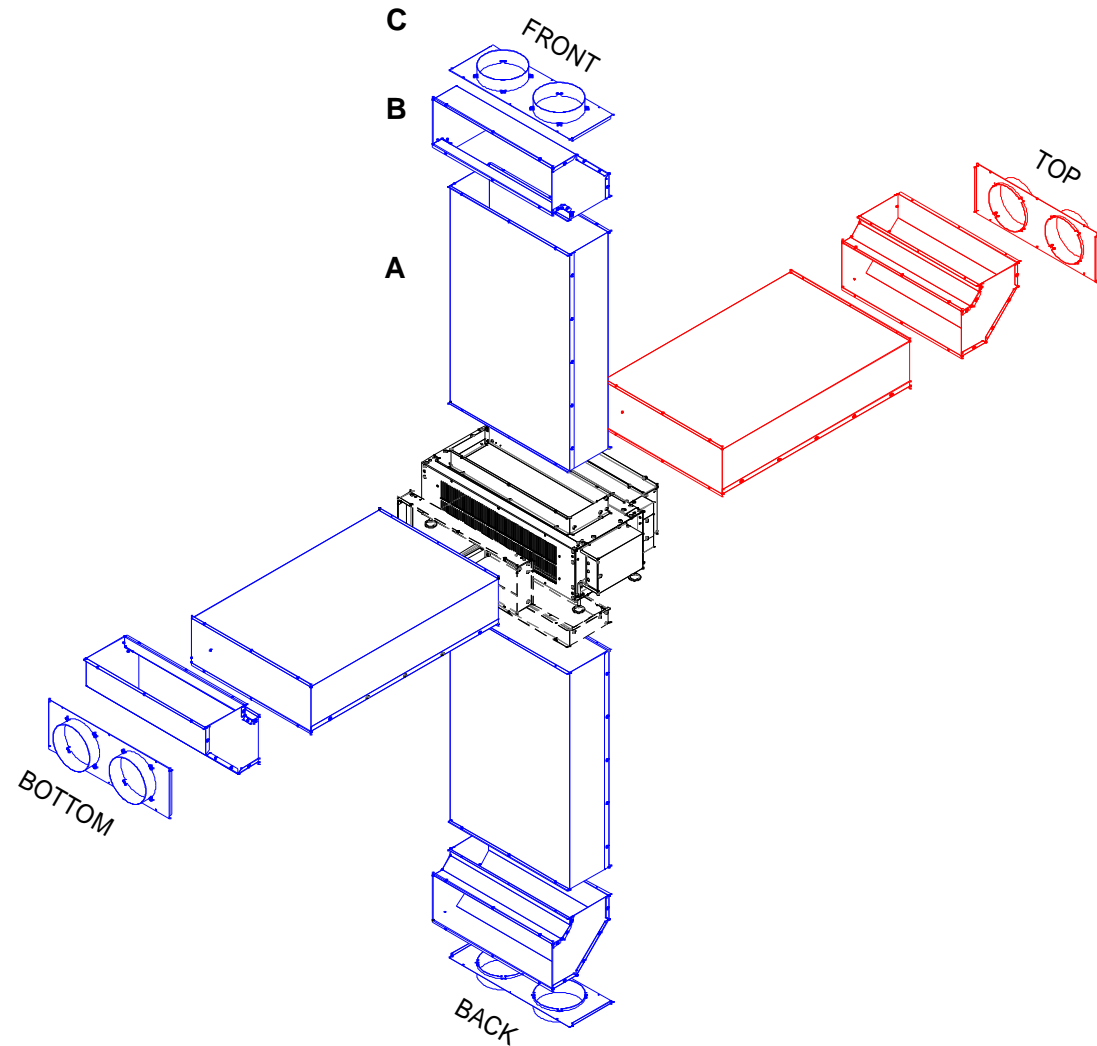
The unit can be mounted on feet (supplied) or hung by threaded rod or chains. When hanging unit by rod or chains ensure fixings are strong enough to take the whole weight of the product and any ancillary accessories used.

Fixing holes are available to accommodate hanging or mounting in any aspect, the unit can be mounted horizontally or vertically in most applications.

Outlet air can be ducted via a straight duct outlet. (Supplied).
At a right angle, via cranked duct or 200mm spigot adapter (optional accessories).

Air draw (return air) can be from either side, bottom, or via right angle cranked duct in any combination.

Suitable applications include- concealed behind walls and panelling, in custom made box sections, above suspended ceilings, concealed over doors, under wooden floors and staging.



(EXPLODED DIAGRAM WITH BASE UNIT SHOWN IN CENTRE LAYING ON ITS BACK, ALL OTHER PARTS AVAILBLE SEPERATLY)

Optional extras and Accessories

Air Inlet: air inlet should be through one of 3 options (front, bottom, back inlet) shown in blue

If air inlet is not through the front of the unit the filter retainer should be moved to the required position

Air Outlet: air outlet must always be through the top of the unit shown in red.
By fitting optional equipment this product can operate automatically under normal running conditions. The optional controls fit within the casing of the unit and are supplied with easy to fit instructions.

<u>Inlet / Outlet Ducting & Grilles</u>	
<u>Straight 1 Metre Duct (Marked as “A” in exploded diagram, See Right)</u>	<u>STR1MDCT</u>
A Straight 1 Metre duct for either inlet/ outlet of the product. May be cut to size if necessary. Available sizes (90/120/150 &180)	
<u>90 Degree Duct (Marked as “B” in exploded diagram, See Right)</u>	<u>90DEGDCT</u>
A 90 degree duct used to turn entering/ exiting air of the product, for either inlet/ outlet. Available sizes (90/120/150 &180)	
<u>200mm Spigot Adaptor (Marked as “C” in exploded diagram, See Right)</u>	<u>200SGAD</u>
Spigot adaptor that will fit either directly to the heater or an accessory duct. Size 90 x 2 Spigots, Size 120 x 3 Spigots, Size 150 x 4 spigots and size 180 x 5 spigots	
<u>Punched Steel Grille</u>	<u>PSG</u>
Punched steel grille for either inlet/ outlet. Painted in white polyester powder coat (RAL 9010) Available sizes (90/120/150 &180)	
<u>Aluminium Linear Grille</u>	<u>ALG</u>
Aluminium framed louvre grille for either inlet/ outlet. Available sizes (90/120/150 &180)	
<u>Electrical Controls</u>	
<u>Proportional Heat Output controller</u>	<u>PHOC</u>
As the room temperature increases to a comfortable temperature the fan speed of the unit will reduce. This replaces the standard unit controller. (This controller is pre-set and non-adjustable)	
<u>External Control Harness</u>	<u>EXTCH</u>
Allows for the standard unit controller to be relocated externally from the heater	
<u>Adjustable low temperature cut-out</u>	<u>ALTC T3</u>
This enables the end user to precisely select the temperature at which the fans will switch on when combined with different heat sources.	
<u>Wall Mounted Controller</u>	<u>WMCEC</u>
This enables the end user to control the fan speed from a wall mounted control.	
<u>Miscellaneous</u>	
<u>Caspian 22mm Flexible Hoses</u>	<u>CAS22FH</u>
Replacement air inlet filters for all models. Available in two sizes (90/ 120)	
For accessories or spares please contact either your supplier or Smith’s Environmental Products Ltd.	

This product must **not** be installed directly in wet rooms or high humidity areas.

This product is designed for use on standard two-pipe pumped central heating systems with a maximum water temperature of 86°C and a maximum pressure of 6 bar (88lbs/in²) pipe connections are 22mm and either pipe may be used as flow or return. Suitable valves should be fitted to supply pipework to enable servicing and or balancing.

This product is classified as a fixed appliance and the electrical connection should be via a 3amp fused spur. The fused spur must not be directly below the heater but should be accessible after completion of the installation. All heaters must be earthed. It is recommended that this heater is wired via a remote room thermostat.

To conform with building regulations part I (part j in Scotland) a remote room thermostat can be used in conjunction with this heater. Refer to manufacturers instructions supplied with the thermostat.

It is recommended that these heaters be fitted with flexible pipe connections to compensate for any movement when used in a hanging installation.

Flexible connections are available as an accessory (see page 10)

Controls

These heaters are fitted with EC motors and a variable speed controller is mounted in the machine. When installation is complete set the controller to the desired speed and refit the electrical cover (See fig 1)

Alternatively for easy access the controller can be fitted outside of the heater in a single wall pattress at a suitable location. The External Control Harness kit is available to facilitate the remote fixing of the controller. (See Page 10, “Electrical Controls”)

Please note the guarantee may be invalidated if this product is not installed and used in accordance with these instructions.

Installation guide

Depending where the heater is to be fitted and the orientation of the heater (Free standing or hung) suitable fixings should be installed.

If free standing the heater we would recommend the use of wooden batons fixed to the floor for the feet to be fixed to. (See “**Surface mounting**” below)

Note if hanging the heater suitable fixings should be used to accept the weight of the unit.

Do not install directly to the cross frames of a suspended ceiling as they will not be strong enough to take the weight of the heater.

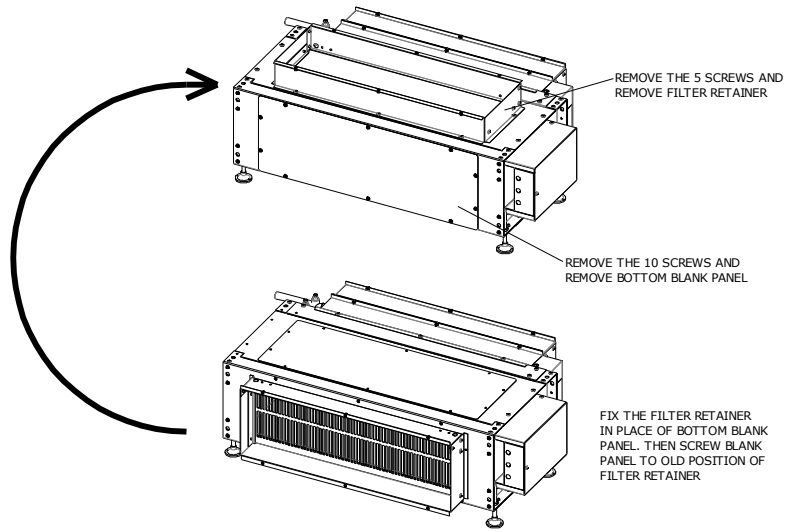
Prepare apertures for flow and return air ducts where the unit is to be installed i.e. behind wall / panel or suspended ceiling.

Before commencing the installation choose the position of the return air entry to the unit, This can be through one of three options: Front, back or bottom.

The heater comes with a cover plate fitted to the bottom return air entry point.

If using bottom return air entry remove bottom blank panel and fit rectangular filter holding duct. Be aware that the slot for the filter should always face upwards.

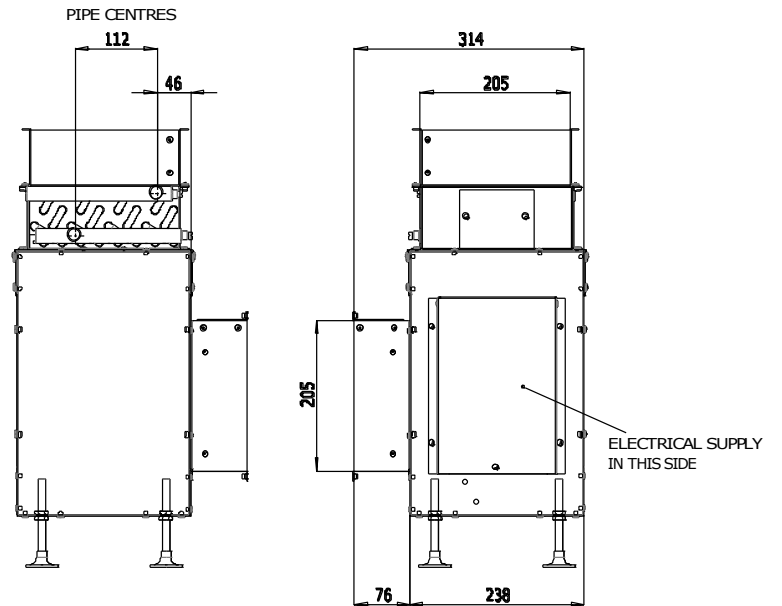
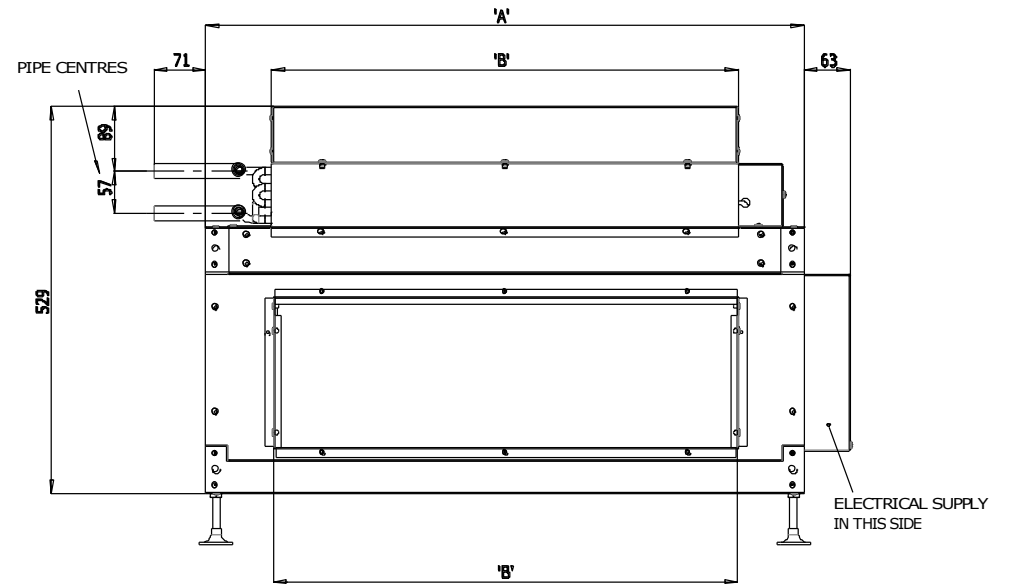
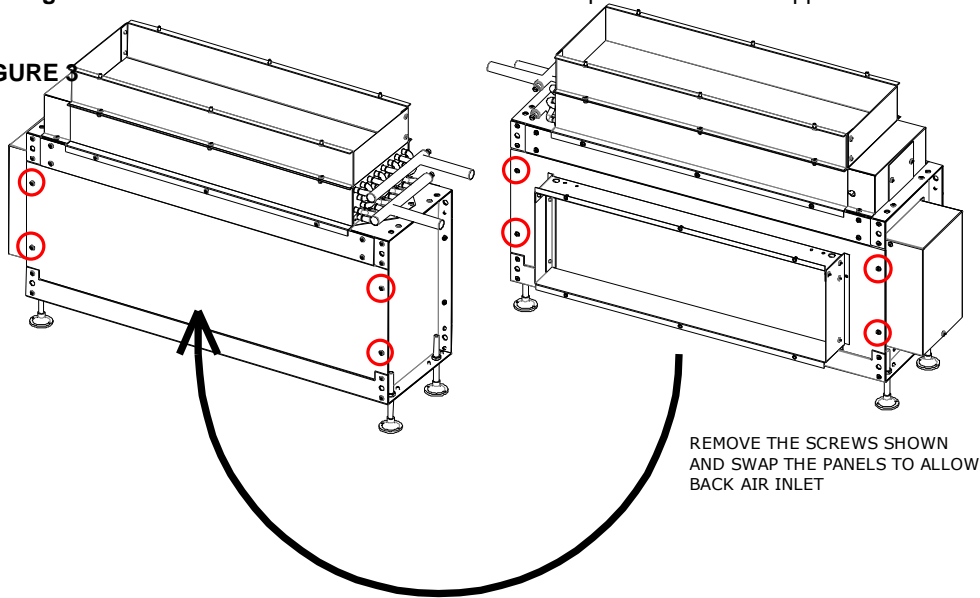
FIGURE 2



Refit plate to opening on side of unit.

If fitting duct to rear of unit remove whole front and rear plates refit on the opposite side.

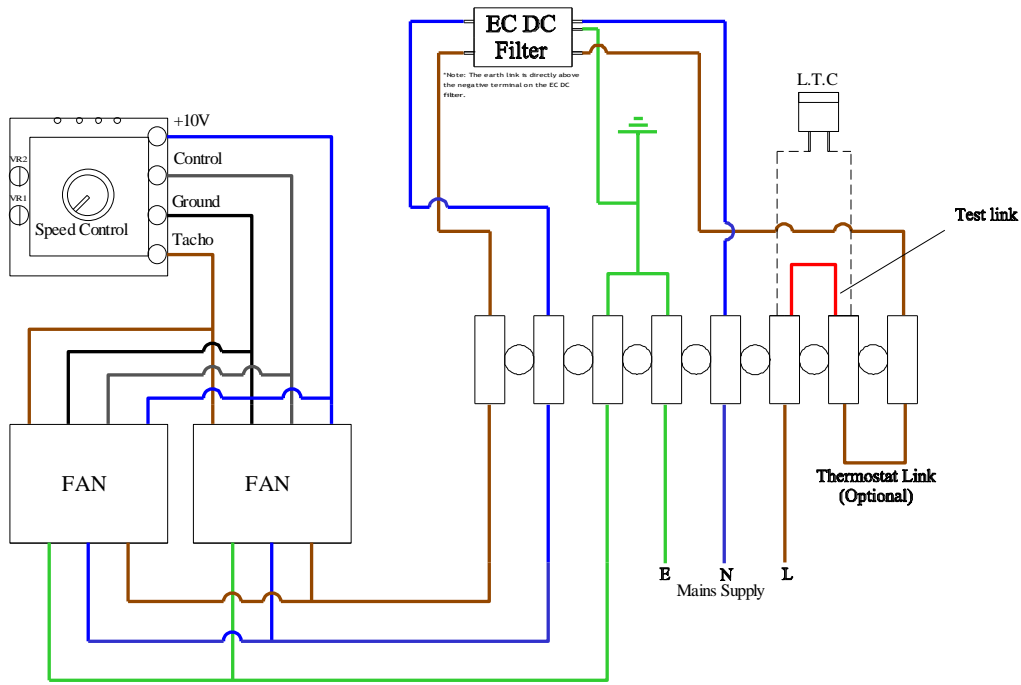
FIGURE 3



	Size 90	Size 120	Size 150	Size 180
"A"	820	1120	1420	1720
"B"	640	940	1240	1540

(Dimensions in millimetres)

Caspian Concealed Recessed 90 / 120 Wiring Diagram



Test link:

Each heater is fitted with a test link to ensure the correct function of the unit before connecting the heat exchanger to the hot water system.

This link should be removed and the LTC wires (Shown as dashed lines) fitted in its place.

- 1) Isolate the unit from the electrical supply and remove the front panel
- 2) Locate the electrical panel and remove and discard the red test wire.
- 3) Connect the low temperature cut-out (LTC) wires in place of the red test wire
- 4) Re-attach the front panel and re-energise the power supply

Failure to remove the test link and fit the LTC wires will cause the unit to run continuously

Surface mounting

1. Fit feet (supplied) to the unit at the appropriate height and position and drill suitable size holes through the plastic base of the foot to secure.
2. Stand unit on batons (not supplied) and mark position of batons and feet.
3. Remove unit if necessary and fix batons to surface area (floor or other)
4. Mount unit on batons and fix feet to batons with appropriate fixings.
5. Connect unit to pipework (appropriate service valves should be fitted at this point, unless already on flow and return pipework).
6. Open valves from the hot water system to the heater and check for leaks.
7. Identify the electrical (connection) cover on the end of the heater and remove (Shown in figure 1)
8. Connect unit to an appropriate electrical supply via a 3amp fused spur.
9. Connect any ancillary controls to appropriate connections on heater.
10. Refit cover.
11. Switch on electrical supply and heating.
12. Test heater functions are working correctly and remove test link and fit Low temperature cut-out (LTC) wires (See page 8).
13. Switch off electric supply and fit appropriate ducts and / or extensions to the heater and install any front covers or ceiling sections.
14. Install appropriate inlet and outlet grilles.

Suspended mounting

1. Decide on elevation of heater and note which part of the heater will be facing upwards.
2. Fit suitable fixings to attach the chains or threaded rod to the ceiling or prepared hanging brackets.
3. If using chains fit appropriate hanging eyes to the upside of the unit. (not supplied)

Installation Notes:

Suspended Mounting Continued...

4. Connect heater to chains or rods and secure.
5. Connect heater to pipework. (Appropriate isolation valves should be fitted at this point unless already fitted to flow and return pipework).
6. Open valves from the hot water system to the heater and check for leaks
7. Identify the electrical connection cover on the end of the heater and remove. (Shown in figure 1)
8. Connect to an appropriate electrical supply via 3amp fused spur.
9. Connect any ancillary controls to appropriate connections in the heater.
10. Refit cover.
11. Switch on electrical supply and heating.
12. Test heater functions are working correctly and remove test link and fit Low temperature cut-out (LTC) wires (See page 8).
13. Switch off electric supply and fit appropriate ducts and /or extensions flexible or rigid to the heater.
14. Install appropriate air inlet / outlet grilles and attach to ducts.
15. Switch on electrical supply, heating and any ancillary controls and test unit functions.

Please note this unit is fitted with a low temperature cut out that will not let the unit function when the water temperature in the unit is below 35°C.

Guarantee Statement

Thank you for purchasing a Smith's heater.

It has been designed and manufactured to the highest quality standards to ensure it gives you efficient and trouble-free service for many years.

To back up our commitment, included with your product is a **free five year parts and labour guarantee.**

This gives you peace of mind that in the unlikely event of the product failing within the first five years, we will repair or replace the product completely free of charge provided the product has been installed, used and maintained in accordance with the instructions.

It is important to register within 7 days. This will ensure you receive a prompt and efficient service, if your product requires attention within the guarantee period. If you do not register your product, you will be required to produce a proof of purchase prior to receiving this service.

If you experience any problems with the use of your product, please contact our **after-sales office** on 01245 324560.

Smith's Environmental Products Ltd manufactures a complete range of heaters for domestic and commercial applications.

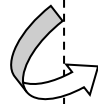
If you require any further information, please contact us on **01245 324900** or visit our website at **www.SmithsEP.com**.

Your statutory rights are not affected by this guarantee.

Please pull this registration card from the booklet and fill in all parts and return.



please fold along here



Smith's Environmental Products Ltd

Units 1 & 2 Blackall Industrial Estate

Hamberts Road

South Woodham Ferrers

Chelmsford

Essex

CM3 5UW

**Please
affix
stamp
here**

**Guarantee Registration Card
& Customer Satisfaction Survey**

Dear Valued Customer

We hope our product suits all your requirements; it would help us immensely if you could find the time to fill in this form, your response will help us maintain the quality standards we all expect today.

Customer name _____ Date ____/____/____

Email Address _____@_____

Product Name _____

Tick as appropriate

	V Good	Good	Fair	Poor
Product	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delivery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sales & Ordering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Response to any problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments _____

Thank you for your time to fill in this survey, the response will help us to serve your needs more effectively. Please return by fax to 01245324422.

Quality Control Manager: Ron Brown ron.brown@smithsep.co.uk

User Details

User Name Mr/Mrs/Miss/Ms/Other

Initials Surname

Address

.....

..... Post Code:

Telephone:

Product & Model installed (e.g. Space Saver SS5)

.....

Room Installed (e.g. Kitchen):

Your details will only be held by Smiths Environmental Products Ltd and used solely to provide customer services and product information.
 If you do not wish to be contacted, please put an x in the box.

Installer Details

Company name:

Principal contact: Mr/Mrs/Miss/Ms/Other:

Initials: Surname:

Address:

.....

..... Post Code:

Telephone:

Date of installation/...../.....

Room Installed (e.g. Kitchen):

Your details will only be held by Smiths Environmental Products Ltd and used solely to provide customer services and product information.
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