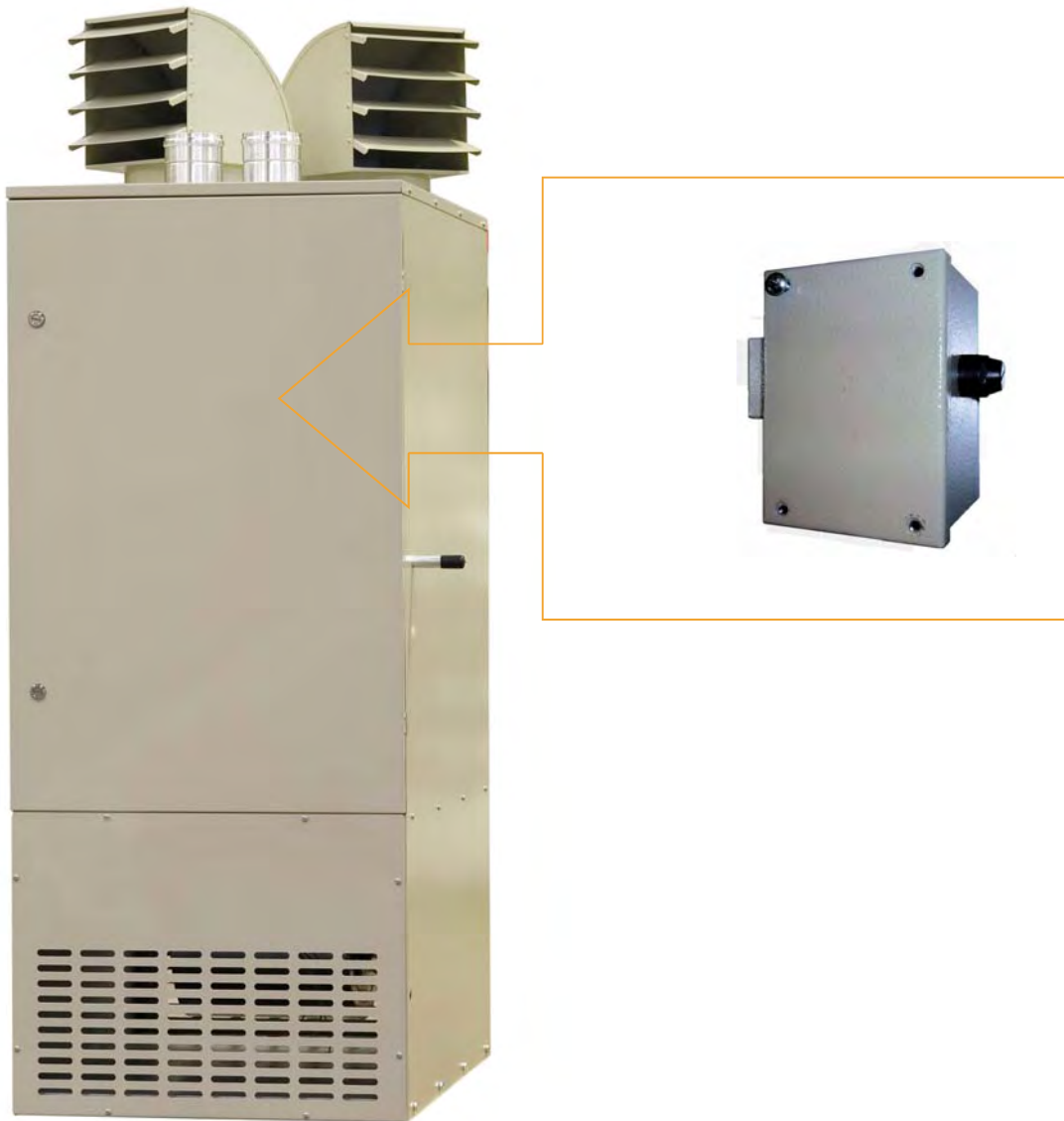


# **BENSON PV CABINET HEATERS**

## **NEW FAN CONTROL / LIMIT STAT RETROFIT**



### **WARNINGS**

Benson equipment must be installed and maintained in accordance with the current OFTEC Regulations for oil fired products, and the relevant provisions of the Gas Safety (Installations and Use) Regulations 1998 for gas fired products. Due account should also be taken of any obligations arising from the Health and Safety at Works Act 1974 or relevant codes of practice. In addition the installation must be carried out in accordance with the current IEE wiring regulations (BS 7671), BS 6896: Industrial & Commercial) and any other relevant British Standards and Codes of Practice by a qualified installer. All external wiring MUST comply with the current IEE wiring regulations.

The original Honeywell fan control/overheat limit thermostat is no longer available for the PV range of warm air cabinet heaters.

This bulletin describes the parts required and method of fitting a replacement fan control and overheat limit thermostat to these heaters.

The functions of the original Honeywell controller will now operate from two separate components, a 110° C limit thermostat and a fan control thermostat housed within an enclosure. The new components fit into the original Honeywell sensing tube hole.

**WARNING: DISCONNECT BOTH ELECTRICAL AND GAS SUPPLIES BEFORE CARRYING OUT ANY WORK ON THIS HEATER.**

3 replacement fan control/limit thermostat assembly kits are available, part No's **20-45-590** (models 120-145)  
**33-66-556** (models 72-95)  
**33-66-555** (models 30-50)

These kits contain:

**20-45-590:**

- 1 off fan control/limit thermostat housing
- 1 off overheat thermostat
- 1 off fan control thermostat
- 6 off M5 x 12mm self tappers
- 5 off loose female insulated crimp terminals
- 1 off gasket

**33-66-556:**

- as above PLUS
- 1 off large adapter plate

**33-66-555:**

- as above PLUS
- 1 off small adapter plate

**Procedure**

**1: Remove original Honeywell fan control/limit stat:**

Remove single retaining screw securing the lid of the original fan/limit stat as shown.



Disconnect the five cables (black, red, grey, blue and earth) by releasing the quick connectors with a screwdriver as shown.

*Note: The earth cable ring crimp will need to be cut off and discarded.*

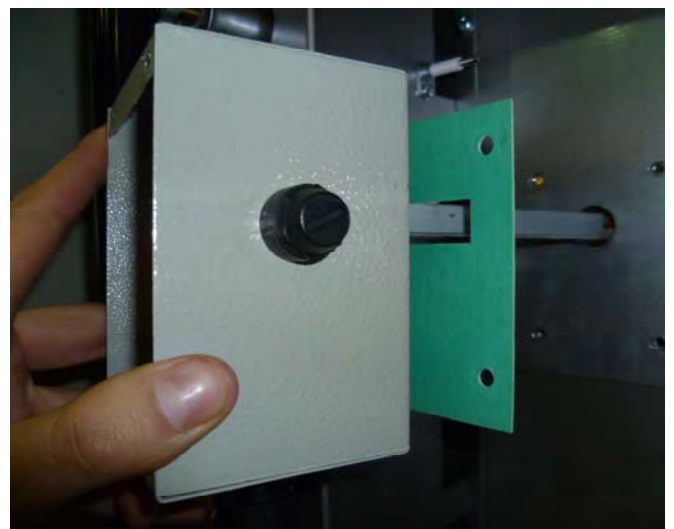


Unscrew and withdraw cable gland (save for later), then remove fixing screws then remove unit from heater.

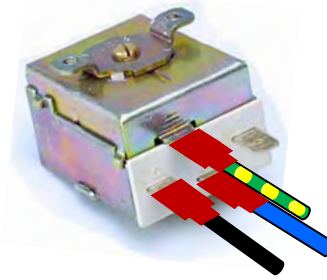


**2: Fit replacement fan control/limit stat assembly models 120-145:**

Slide gasket over sensing tube as shown. Fit assembly into original hole.

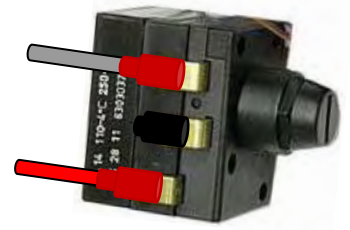


Fix in position using the original holes.



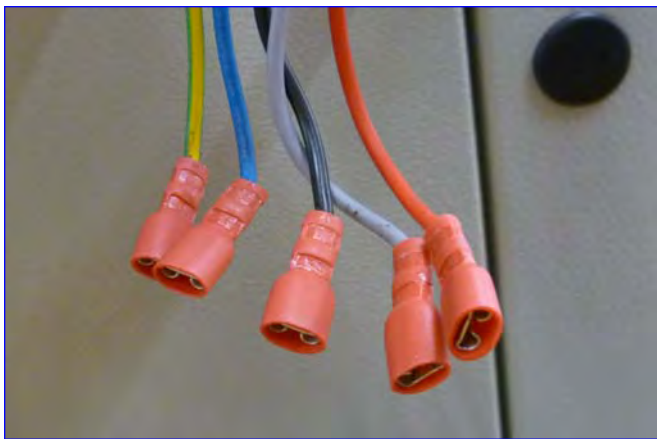
Fan control thermostat wiring connections

Overheat thermostat wiring connections



Fit lid to box using 4 screws provided

Fit the supplied female spade crimps to the original cables .



Fit original cable gland into new assembly and connect new fan control/limit thermostats as follows:

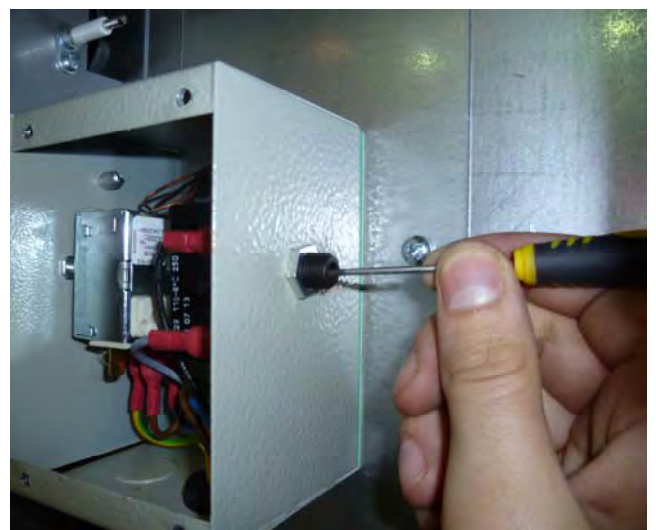
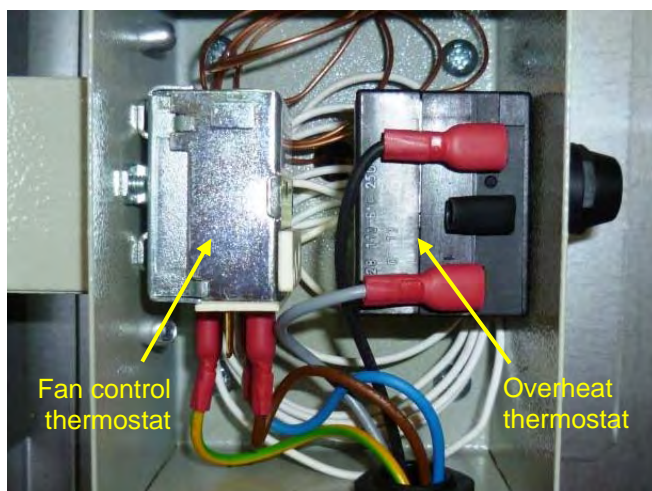
Fan control thermostat: **Black to terminal C**  
**Blue to terminal 2**  
**Green/Yel to Earth terminal**

Overheat thermostat: **Red to terminal 2**  
**Grey to terminal 1**

Upon completion the heater should be tested for correct operation of the fan control and overheat limit.

#### 4: Overheat thermostat reset:

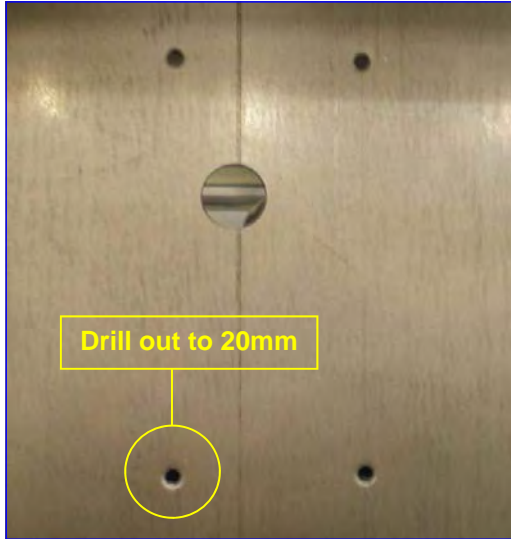
In the event of the overheat thermostat tripping, once the cause has been remedied, it can be reset by removing the protective screw cap, then pushing in the green button as shown below.



**5a: Fitting replacement fan control/limit stat assembly models 72-95:**

The fitting method for these models is the same as previously described except the addition of an adapter plate, to be fitted as follows: The picture below shows the original holes with bracket and original Honeywell removed.

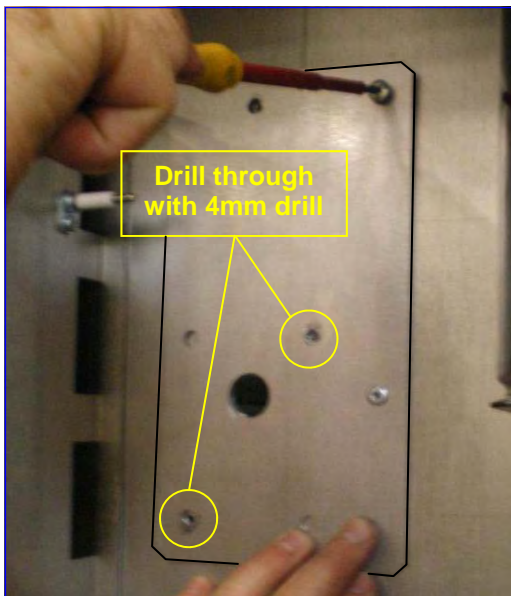
The bottom left hole should be drilled out to 20mm.



The adapter plate (outlined for clarity) is fitted using the top two existing holes as shown.

The two diagonal holes shown below should be drilled out to 4mm for the replacement fan/limit stat.

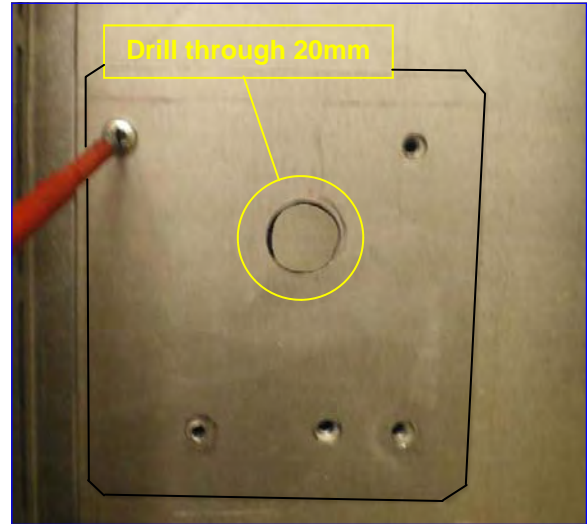
Continue fitting replacement overheat/fan stat as previously described.



**5b: Fitting replacement fan control/limit stat assembly models 30-50:**

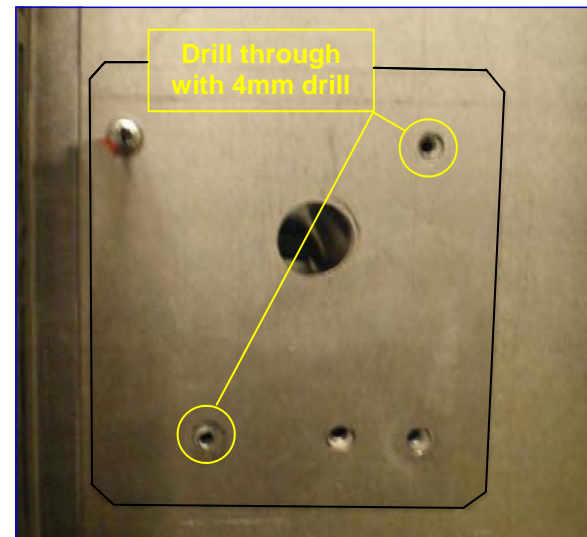
The fitting method for these models is the same as previously described except the addition of an adapter plate, to be fitted as follows:

With the 20mm hole in the adapter plate (outlined for clarity) facing toward the top and the right hand side, fix into place using the existing top left hole, then using as a template, drill through the heater casing using a 20mm hole cutter as shown.



Drill two 4mm holes diagonally as shown for the replacement fan/limit stat.

Continue fitting replacement overheat/fan stat as previously described.



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