

## ONE ROOM - HEAT TRANSFER DUCT

### SPECIFICATION

MAXIMUM OPERATING TEMPERATURE:  
ELECTRICAL SUPPLY:  
AIRFLOW MAXIMUM:

50°C  
220/240V AC 50Hz 80W  
320m<sup>3</sup>/hr (89 litres/sec) 

**COMPONENT CHECKLIST** - Having opened the carton and located these instructions, please read them fully prior to installation and familiarise yourself with all the various components of this Heat Transfer Duct as listed below:

- |  |   |
|--|---|
| 1 x Ø150mm "In line" Fan Module              | 1 x Ø150mm Adjustable Cone Outlet Diffusers |
| 2 x 3 metre lengths of Ø150mm Insulated Duct | 2 x 5 metre rolls of Ducting Tape           |
| 1 x Ø150mm Circular Intake Grill             | 1 x UT-M1 Thermostat & Screw Set            |

**HINTS** – Before commencing installation it is important that you consider the following points;

- Before making any holes in ceilings check for access behind the ceiling, taking care to avoid ceiling joists, etc.
- Check the distance you want to run the duct, the shorter the duct length the more efficient the fan is.
- The hot layer of air is dispersed across the whole ceiling so it is not necessary to install the Intake Grill directly above the wood-fire. The Intake Grill must be located in the same room as the wood-fire, and to keep the duct length to a minimum the Intake Grill should be located **"AS CLOSE AS POSSIBLE TO THE OUTLET"** and at least 1 metre from directly above the wood-fire to avoid excessively high temperatures.
- Although the fan is ball bearing mounted and very quiet, it is recommended to mount the fan on a solid surface such as the top plate of a wall partition or, even better, suspended in "strops" from the Rafters, as this will ensure the quietest operation and eliminate any resonance. Strops are not supplied due to the variety of possible installation requirements, a strong 4mm – 6mm rope or cord is suitable as a "strop" material.
- Straight runs of ducting without tight bends are most efficient with the inner duct stretched reasonably tight to assist efficient airflow. If longer runs of ducting are necessary, ducting extensions with duct connector sleeves should be used.

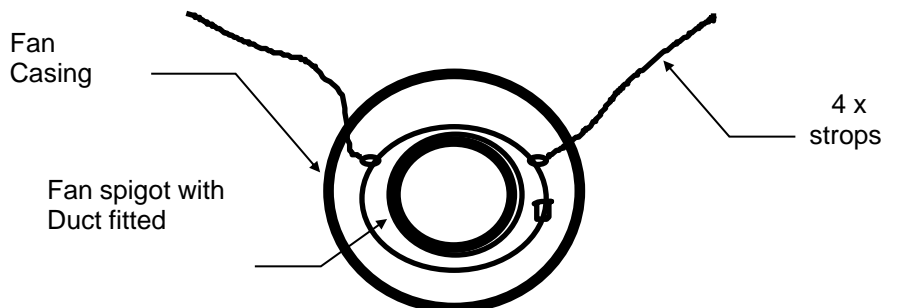
**INSTALLATION** - Once you have familiarised yourself with the various components and settled on the location for the Intake Grill and Outlet Diffuser, proceed as follows:

1. **INTAKE GRILL** – Having carefully selected the Intake Grill location cut a hole in the ceiling using the template provided with the Intake Grill, taking care to cut an accurate / neat hole — Making sure the spring loaded arms are pushed "upwards", insert the Intake Grill into the hole in the ceiling. The spring loaded arms will spring outwards securing the Intake Grill into the ceiling.
2. **OUTLET DIFFUSER** – After selecting the best location for the Outlet Diffuser in the room to be heated cut a hole in the ceiling using the template provided with the Outlet Diffuser. Making sure the spring loaded arms are pushed "upwards" insert the Outlet Diffuser into the hole in the ceiling, the spring loaded arms will spring outwards securing the Outlet Diffuser into the ceiling.
3. **DUCTING** – Keeping the ducting as straight as possible without tight bends, stretch the inner duct over the various connection points and secure with the duct tape supplied. Then stretch the "insulation wrap" to cover the maximum amount of exposed surface of the Fan Module connection spigots as possible as this will reduce heat loss.

**NOTE;**

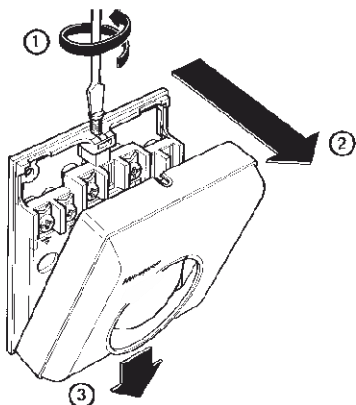
- Fit one of the Ø150mm ducts between the Intake Grill and the Fan Module.
  - Fit the second Ø150mm duct between the Fan Module and the Outlet Diffuser.
4. **FAN MODULE** – Having decided on the best mounting option for the Fan Module in the roof space cavity, being either secured direct onto the top plate of a wall partition or suspended by "strops" from the Rafters, ensure the Fan Module is pointing in the right direction to give the correct airflow (airflow direction arrow label is fitted to Fan Module). If using the "mounting on strops" option, locate four suitable hanging points and using 4mm – 6mm rope/cord as "strops" support the Fan Module in its final "resting" place approximately 400mm above the ceiling.

Fan Module "strop mounted" option



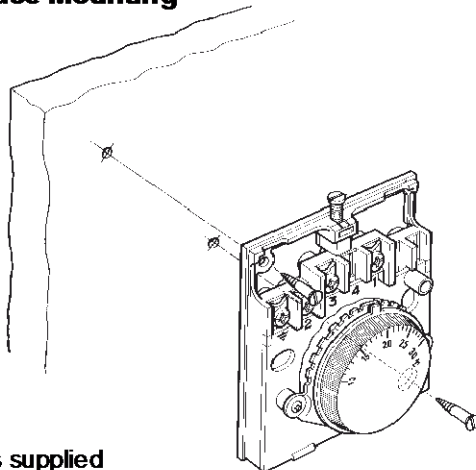
## THERMOSTAT INSTRUCTIONS

### 1 - Cover Removal



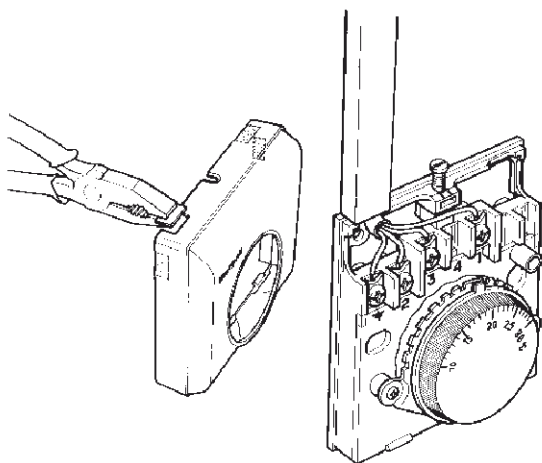
**CAUTION:** Isolate power supply and make safe before wiring the unit to prevent electric shock and equipment damage. Installation should be carried out by a competent person.

### 2 - Surface Mounting

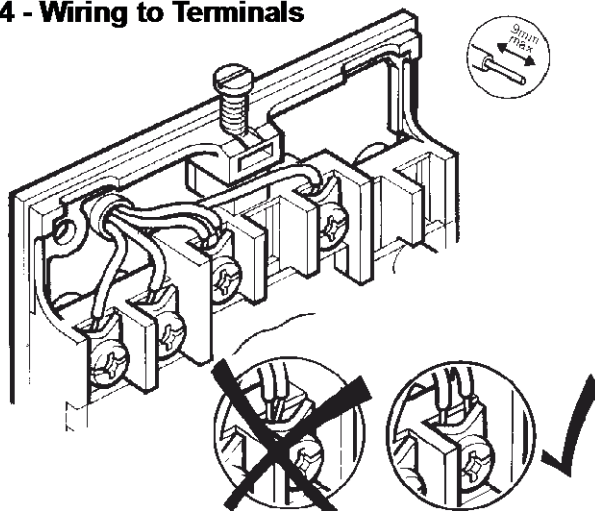


Screws supplied

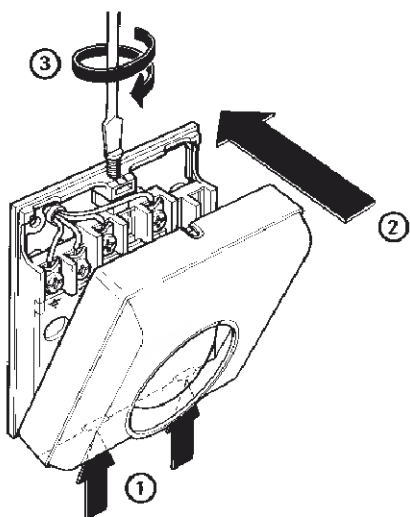
### 3 - Surface Wiring



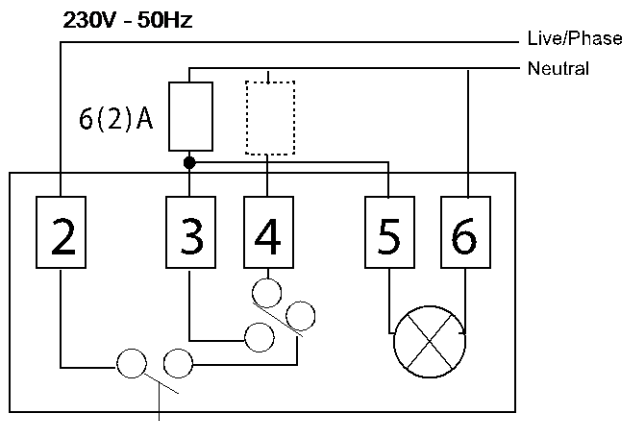
### 4 - Wiring to Terminals



### 5- Completion



### 6 - Wiring Diagram



**Note:**

- The UT-M1 Thermostat requires 230V AC to operate.
- In order to correctly adjust the system to room temperature, install the thermostat as far from heat sources, draughts or particularly cold walls (thermal bridges).

## CAUTION

- Before wiring the appliance be sure to turn off the mains power.
- The appliance must be wired to the electric mains through a switch capable of disconnecting voltage as per the current New Zealand safety standards.
- Thermostat should only be installed by fixed wiring, a flexible cord should not be used.
- Installation and electrical wiring of this appliance must be made by a qualified technician and in compliance with the current standards.

Once installed the Pioneer Heat Transfer Duct has two means of variable adjustment, which enable you to fine-tune the system to suit your home;

**OUTLET DIFFUSER** has an adjustable centre cone enabling the airflow to be regulated. To adjust the Outlet Diffuser rotate the central cone by turning Clockwise to decrease and anticlockwise to increase the airflow.

**THERMOSTAT** is adjustable enabling you to set the temperature at which the system automatically turns on. Set the Thermostat to the desired temperature (20 deg. C is a good starting point) and once the temperature is exceeded, all excess heat will be distributed to other parts of your home while maintaining the pre-set 20 deg. C in the room with the Thermostat fitted. To increase the amount of heat being distributed to the rest of the home, either decrease the Thermostat setting or increase the output of the wood-fire.

**IMPORTANT** - This system does not generate heat it simply transfers it. The insulation factor of the ducting and rate of air movement ensures any heat loss into the ceiling cavity is negligible. For the system to operate effectively you must have EXCESS HEAT capacity in the room in which your wood-fire is installed. This excess heat available for transfer must then EXCEED the HEAT LOSS of the target room, if the temperature is to rise. The following points are worthy of consideration if you believe the performance of your system is not adequate;

- You may need to run your wood-fire at higher output levels.
- Your wood/fuel may not be properly seasoned dramatically reducing heat output from your wood-fire.
- You may need to improve the insulation factor of your home.
- The use of a door vent can assist in circulating air throughout a room.

Background heating takes time; give the system time to create warm air circulation through the house which may take several hours to establish.

**ACCESSORY** - The following optional accessory is available for your Pioneer Heat Transfer Duct;

<b>Part No.</b>	<b>Description</b>
9065-1100	INSULATED DUCTING - 3 Metres x Ø150mm c/w connector sleeve & ducting tape.

## WARNING

- Switch off the electrical mains before making any electrical connections.
- The Pioneer Heat Transfer duct is not intended for use by young children or infirm persons without supervision.
- If a Pioneer Heat Transfer duct is being considered for installation into a room where gas appliances are used as the heat source, the gas appliance supplier/installer must be consulted prior to installation. Section G4/2.2 (Mechanical Ventilation) of the New Zealand Building code refers to certain safety criteria which must be considered when installing a Pioneer Heat Transfer Duct in a room where a gas appliance is also installed. With solid fuel fires a negative pressure can cause smoke from the appliance to enter the room while the appliance is operating. As most solid fuel appliances use air from the room for combustion, ensure that sufficient venting is available to the room in which the appliance is installed to offset any pressure loss created by the Pioneer Heat Transfer Duct.
- All electrical wiring and connections required for the Pioneer Heat Transfer Duct must be done by a registered electrician.