

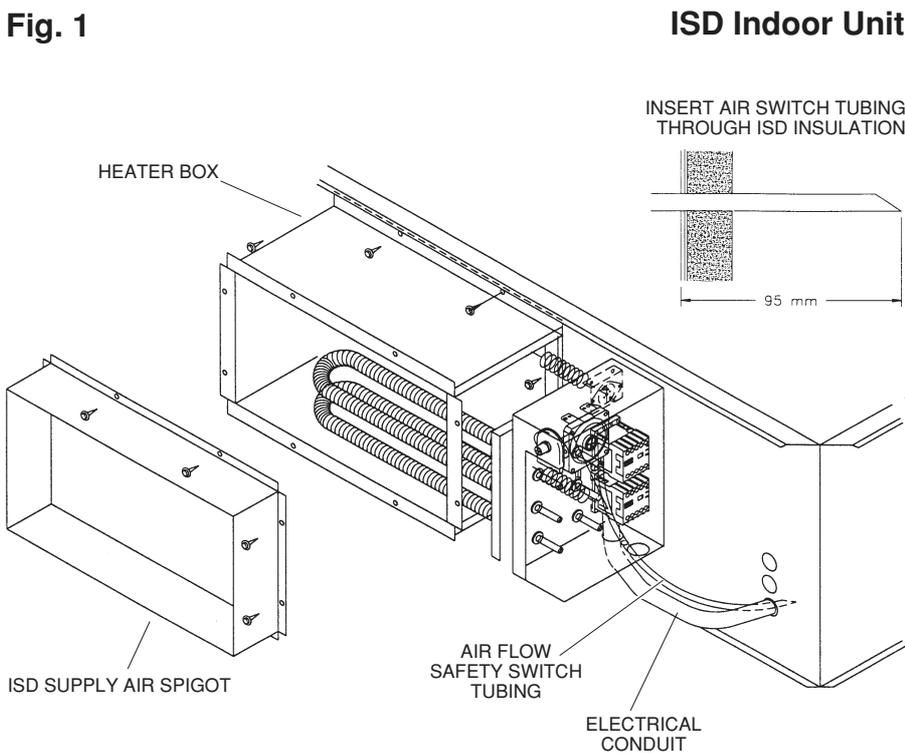
# ISD 146Q

# Electric Heat Kit

## Ducted Split Systems

## Installation Instructions

Fig. 1



### GENERAL

This electric booster heater box is designed specifically for the ISD Series of ducted split system air conditioning systems, and must be installed in accordance with all national and local safety codes. Installed correctly, this kit will permit the ISD unit to conform to AS/NZS 3350.2.40 1997.

**Note:** Reverse Cycle systems require an Outdoor Unit low limit t/stat, in addition to the Indoor Unit electric heater box.

### ISD INDOOR UNIT ELECTRIC HEATER BOX

#### Components:

1. Electric heater box assembly:  
2 x 1.5 kW elements, contactors, wiring loom, air flow safety switch (including attached tube), auto and manual high temp. safety thermostats (overloads).
2. Screws

Check that all items of the kitset are supplied and no damage has occurred to the items.

#### Installation

1. Remove the ISD unit's electrical access panel, electrical box cover and the supply air spigot.
2. Remove the heater box's electrical access panel.
3. Secure the heater box, using screws supplied, to the unit in the same position vacated by the supply air spigot.  
**Note:** The elements and electrical box must be partially withdrawn to attach the two far end screws through to the unit.
4. Attach the supply air spigot to the heater box.
5. Use the supplied wiring loom to complete the wiring connections as shown in the appropriate wiring diagram (refer overleaf).
6. Locate the small hole in the ISD cabinet below the three electrical conduit holes (see Fig.1). Puncture the ISD unit's insulation at the point of entry for the safety switch tubing.
7. Push the tubing approximately 95 mm into the unit.
8. Ensure the plastic tubing airway is not in anyway restricted.
9. Ensure the high temperature t/stats (overloads) are not touching the elements.
10. Complete the wiring using the appropriate diagram overleaf.
11. Replace the electrical box covers and the unit's electrical access panel.

Fig. 2

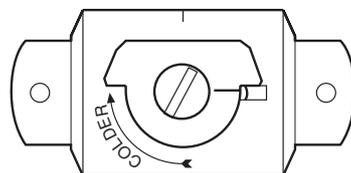
### Outdoor Unit - Low Ambient Thermostat

**Note:** All temperatures are  $\pm 1.5^{\circ}\text{C}$ .

Use switch terminals 1 & 2 which are marked on underside of t/stat.

#### COLDEST SETTING

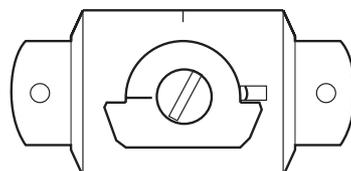
Cut in :  $0.6^{\circ}\text{C}$   
Cut out :  $6.2^{\circ}\text{C}$



Set to coldest setting as shown above.

#### WARMEST SETTING

Cut in :  $6.1^{\circ}\text{C}$   
Cut out :  $11.7^{\circ}\text{C}$



If heating is required at a warmer ambient temperature, then adjust the dial anti-clockwise towards the warmest setting, as shown above.

## OSA OUTDOOR UNIT THERMOSTAT (Reverse Cycle Systems Only)

### Components:

1. Low ambient thermostat A22
2. 400 mm small bore PVC tube.
3. Two No.8 x 12 long PK screws.
4. Two cable ties.
5. Wiring loom.

Check that all items of the kitset are supplied and no damage has occurred to the items.

### Thermostat Installation

1. Remove access panel from Outdoor Unit.
2. Remove the electrical box cover.
3. Adjust the low ambient thermostat to the setting shown in figure 2.
4. Slide the PVC tube supplied over the capillary until it meets the thermostat.
5. *OSA 146RB* (refer figure 3)
  - a. Thread the capillary tube assembly through the hole near the top of the electrical box, over the top of the bulkhead and down into the space between the coil and the outer grille.
  - b. Fit the thermostat to the top of the electrical box using the two PK screws supplied.
  - c. Tie the capillary to the coil protection grille with the cable ties supplied.
6. Complete wiring as per appropriate diagram below.
7. Replace the electrical box cover and access panel.

### TESTING

#### High Temperature Overload

Test that the auto high temperature overload (preset to 90°C) will operate by operating the electric heater without the fan and compressor running. This can be achieved by supplying power to the high temperature (HST) overload and heater relay.

#### Air Safety Switch

Test the air safety switch by running the fan on its lowest speed and checking for electrical heating. Remove power to the fans and the electric elements should cut-out.

### OPERATION

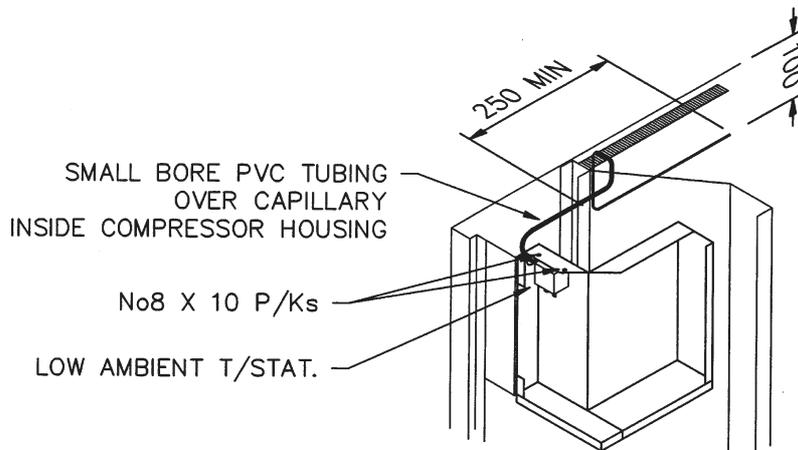
This electric heat kit includes both auto (90°C) and manual (120°C) high temp. safety thermostats. If the manual high temp. safety t/stat requires resetting and the auto high temp. safety t/stat does not reset, then the latter needs to be replaced.

### Note

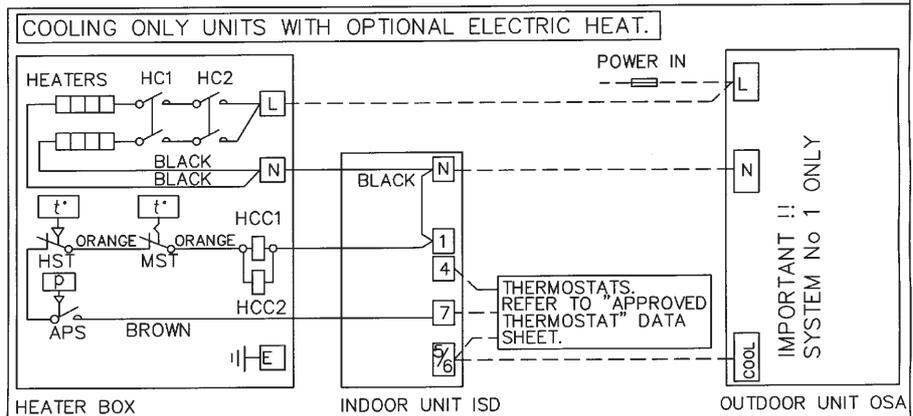
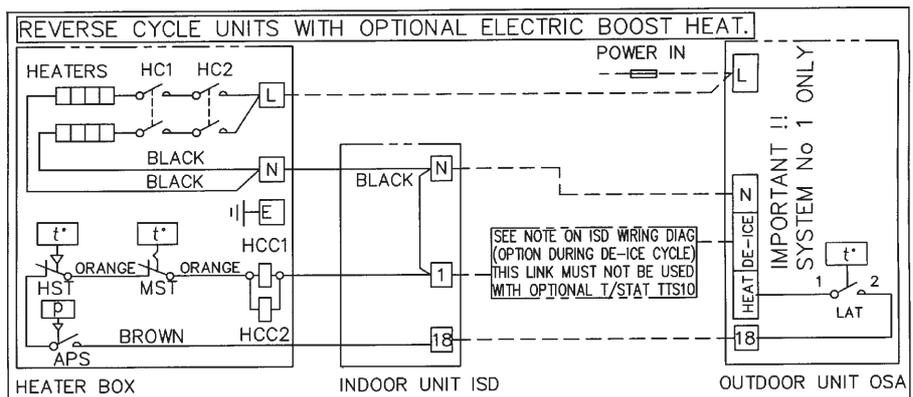
The manufacturer reserves the right to change specifications at any time without notice or obligation. Certified dimension available on request.

**Fig. 3 T/stat Location**

## OSA 146 B Outdoor Units (Reverse Cycle Systems Only)



### Wiring Diagrams



APS	AIR PRESSURE SWITCH
HC	HEATER CONTACTOR
HCC	HEATER CONTACTOR COIL
HST	HIGH TEMP. SAFETY
LAT	LOW AMBIENT T/STAT
E	EARTH TERMINAL



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ISD 146  
COOLING & REVERSE CYCLE  
TWO ELEMENT UNITS  
WIRING SCHEMATIC

NOTE: CHECK WIRING BEFORE SWITCHING ON, INCORRECT CONNECTION WILL DAMAGE MOTORS.

CLIENT WIRING  
Interconnections between units by client. Double insulated multi-core cable.

Drawn D.W.H. Date 09-02-01  
Aprvd  
Drawing No. 325-294-005  
Revision A

This pamphlet replaces the previous issue no. 2013 dated 06/01.  
Wiring revision A - control wire colour.