

ISDL 29Q - 100Q

Ducted Split Systems

Electric Heat Kit

Installation Instructions

GENERAL

This electric booster heat kit is designed specifically for the ISDL 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 heat kit.

ISDL INDOOR UNIT ELECTRIC HEAT KIT

Components:

1. Electric element:-
ISDL 29Q: 1 kW element, 4.4 A
ISDL 45Q: 1.5 kW element, 6.6 A
ISDL 71Q, 84Q: 2 kW element, 8.8 A
ISDL 100Q: 3 kW element, 13.2 A
2. Two contactors
3. Auto high temperature thermostat (overload) with attached capillary
4. Manual high temperature thermostat (overload) with attached capillary
5. Air pressure safety switch
6. Plastic tube - 650 mm long
7. Air hose fitting
8. Wiring loom
9. Thermostat bracket
10. Thermostat bracket cover

11. Heat shield (ISDL 100 have 2 pieces).
12. Four rubber grommets; 15 mm long (ISDL 71/84/100 use only).
13. Ten No.6 x 10 long PK screws.
14. Eight No.8 x 13 long PK screws.
15. Four No.8 x 19 long PK screws.

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

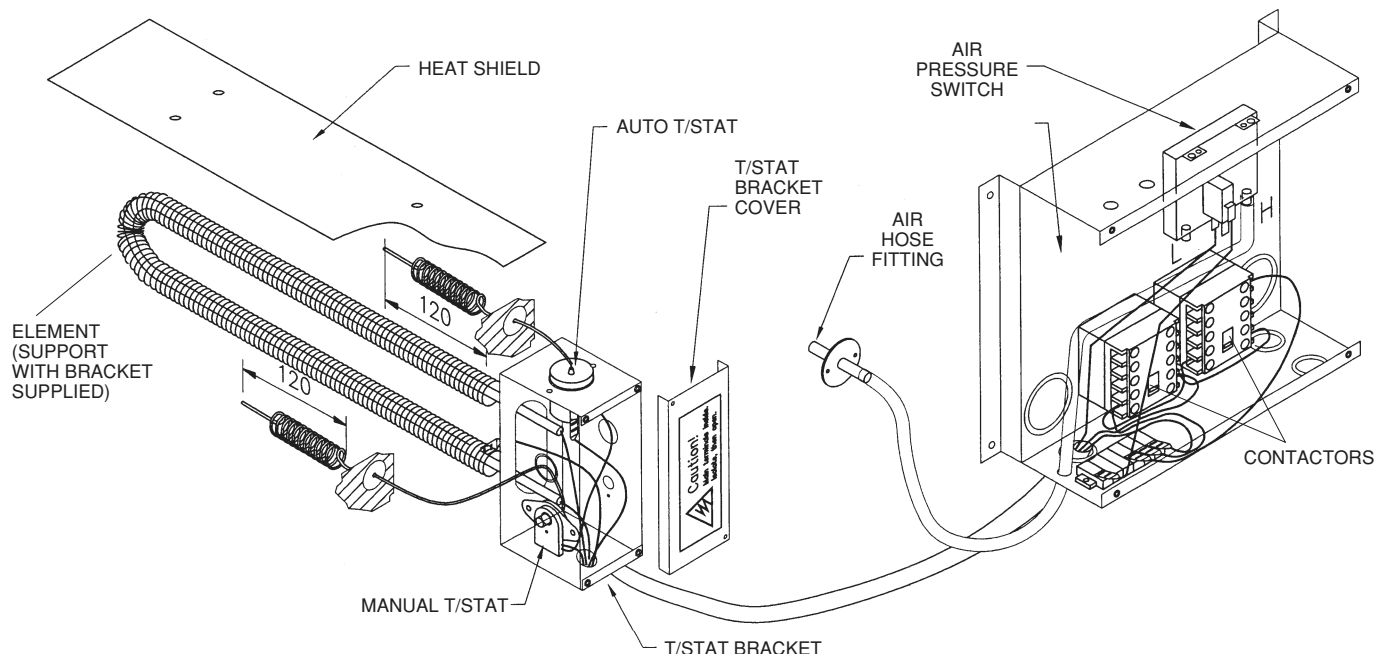
Installation

1. Remove the ISDL unit's supply air spigot from the front of the unit and retain the screws.
2. Remove the unit's electrical box cover.
3. Secure the heat shield to the pre-drilled upper panel using the longest PK screws supplied. ISDL 71/84/100 Q models also have element support brackets supplied which must be suspended, now, using some of these same PK screws.
4. Secure the thermostat bracket to the side of the unit using the holes and screws provided.
5. From inside the unit, insert the electric element ends through the two holes in the unit and into the thermostat bracket (see figure 1 or 4). Support the elements on the unit's built-in support brackets.
Note: The ISDL 29/45 Q unit's element is supported at one end only by using the bracket mounted on the opposite end of the electrical box.

6. Prepare the sensor capillaries:
ISDL 29/45 Q only:
Shape each high temperature thermostat's sensor capillary into an extended coil by winding it around a suitable pipe (approx. 12 mm dia.).
ISDL 71/84/100 Q only:
Maintain both sensors capillaries straight. Slide two rubber grommets supplied on to each capillary.
7. Using screws/nut supplied, secure the auto and manual thermostats to the thermostat bracket and poke each capillary through the hole in the unit's side panel (see figure 1).
Note: The capillary must not be positioned in such a way that it is in danger of touching the element.
ISDL 71/84/100 Q only:
 - a) Locate the supporting brackets that are punched out in the heat shield. Snap the tag and pull bracket down to a 90° angle.
 - b) Align the rubber grommets on the capillary with the supporting brackets and snap into place.
8. Attach the plastic tube supplied to the high (H) side of the air pressure safety switch supplied.
9. Secure the air pressure safety switch inside the top right hand side of the electrical box and trail the attached plastic tube out through the base (see Fig.1 or 4).

Fig. 1 ISDL 29/45 Q Indoor Unit

Assembly



10. Locate the small hole in the ISDL cabinet beside the electrical box. Puncture the ISDL unit's insulation at the point of entry for the air hose fitting supplied, then secure the air hose fitting using the screws supplied.
11. Ensure the plastic tube and fittings airways are not in any way restricted.
12. Attach the plastic tube to the air hose fitting.
13. Use the supplied wiring loom to complete the wiring connections as shown in the appropriate wiring diagram (refer overleaf).
14. Replace the electrical box cover and secure the thermostat bracket cover.
15. Replace the supply air spigots.

**OSA OUTDOOR UNIT THERMOSTAT
(Supplied separately; required for
Reverse Cycle Systems Only)**

Components:

1. Low ambient thermostat A22
2. 400 mm small bore 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 top panel.
3. Remove the electrical box cover.
4. Adjust the low ambient thermostat to the setting shown in figure 2.
5. Slide the PVC tube supplied over the capillary until it meets the thermostat.
6. Thread the capillary tube assembly through the rubber grommet 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. (see Fig. 2)

continued...

Fig. 2

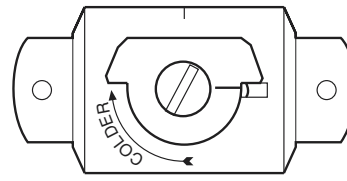
Outdoor Unit - Low Ambient Thermostat

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

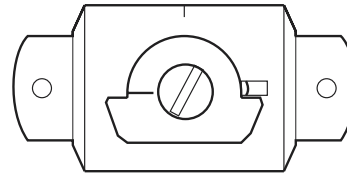
Cut in : 0.6°C
Cut out : 6.2°C



Set to coldest setting as shown above.

WARMEST SETTING

Cut in : 6.1°C
Cut out : 11.7°C



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

Fig. 3

**OSA 29 - 101 Outdoor Unit
(Reverse Cycle Systems Only)**

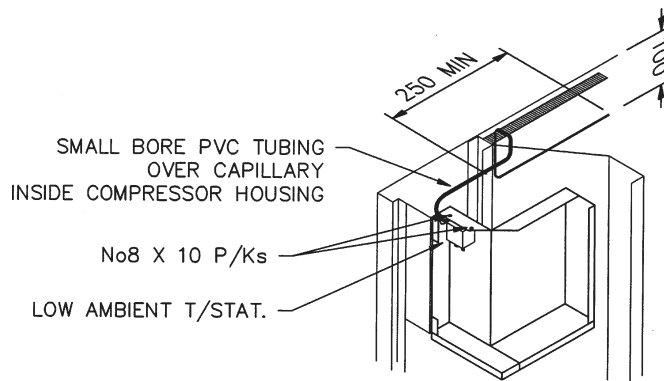
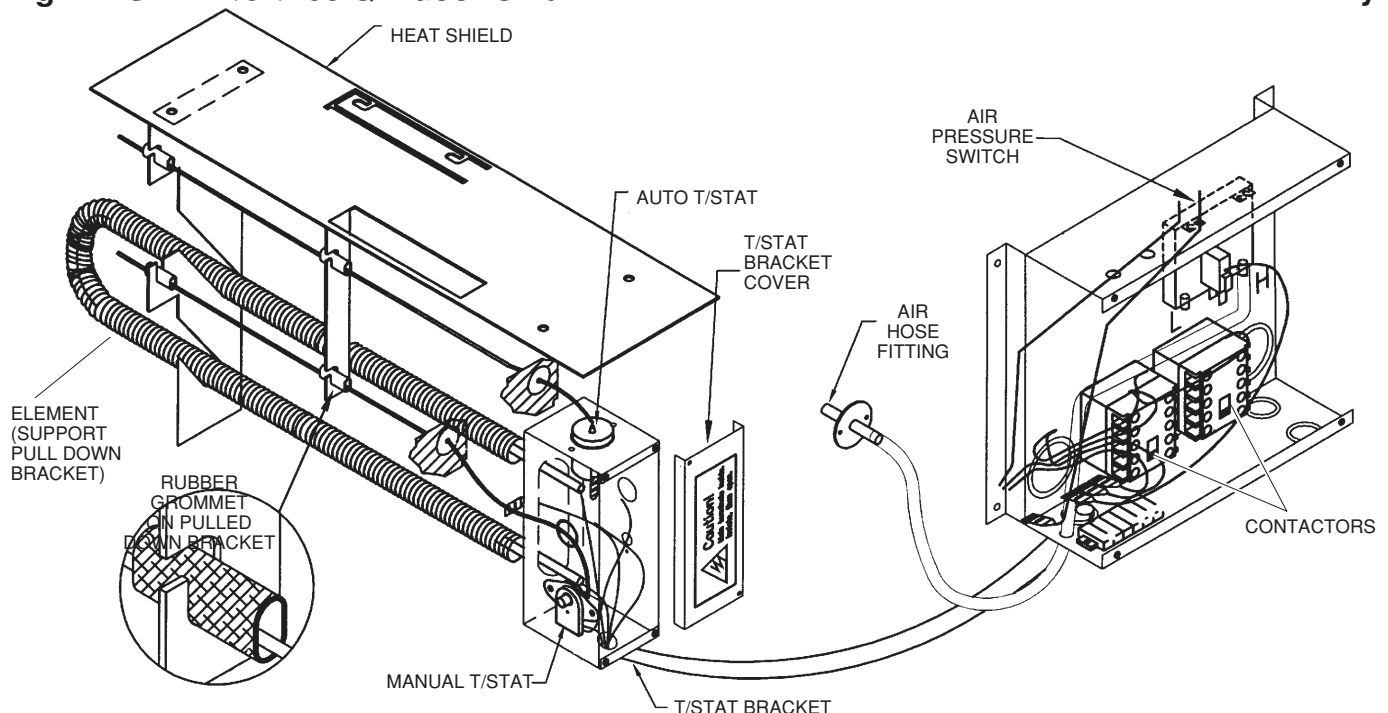


Fig. 4 ISDL 71/84/100 Q Indoor Unit

Assembly



7. Fit the thermostat to the top of the electrical box using the two PK screws supplied.
8. Tie the capillary to the coil protection grille with the cable ties supplied.
9. Complete wiring as per appropriate diagram included in this document.
10. Replace the systems external fuse with the size recommended in the table below and mark the change on the Outdoor Unit's wiring diagram.

Outdoor Unit	Replacement Fuse Size
OSA 29	20 A
OSA 45	25 A
OSA 73, 85	32 A
OSA 90 B	25 A (x2)
OSA 100	40 A
OSA 101	25 A
11. Replace the electrical box cover, top panel and access panel.

TESTING

Air Pressure Safety Switch

Test the air pressure 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.

This pamphlet replaces the previous issue no. 1754 dated 09/99. AS/NZ std, contactor, APS, heat shield, wiring.

Wiring Loom

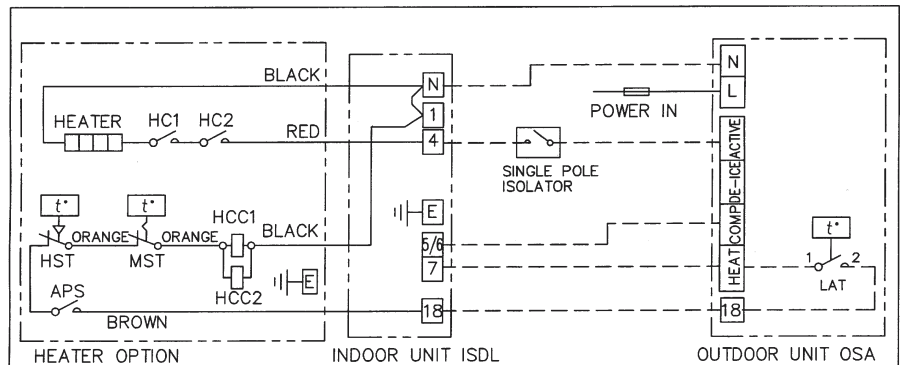
ELECTRIC HEAT KIT

Item	Length (mm)	Colour	From	To
1	830	Green	element Earth	E
2	750	Orange	MST	HHC1 term. A1
3	600	Brown	HST	APS term. N/O
4	280	Red	4	HC2 term.1/ L1
5	55	Red	HC2 term.2/T1	HC1 term.1/L1
6	160	Black	1	HCC 1 term. A2
7	200	Black	HCC1 term. A2	HCC 2 term. A2
8	195	Brown	18 *	APC term. C
9	195	Orange	MST	HST
10	200	Orange	HCC1 term. A1	HCC2 term. A1

* From '7' on cooling only systems

Note: Items 1–3 are enclosed in a PVC sleeve.

Wiring



APS	AIR PRESSURE SWITCH
E	EARTH STUD
HC1 & 2	HEATER CONTACTOR
HCC1 & 2	HEATER CONTACTOR COIL
HST	AUTO HIGH TEMP. T/STAT
LAT	LOW AMBIENT T/STAT
MST	MANUAL HIGH TEMP. T/STAT.

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

NOTE:
SWITCHING ON, INCORRECT CONNECTION WILL DAMAGE MOTORS.

Programmed by 	Title ISDL 29 – 100 OPTIONAL ELECTRIC HEAT 								
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