

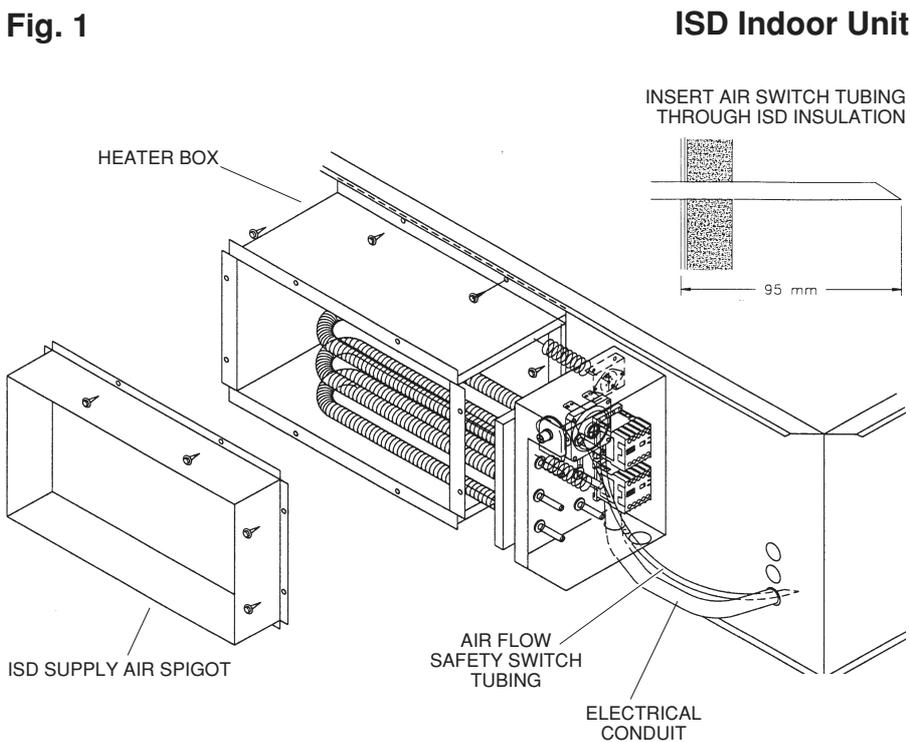
ISD 75Q – 220Q, 265Q

Electric Heat Kit

Ducted Split Systems

Installation Instructions

Fig. 1



ISD Indoor Unit

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 - element/s, contactors, wiring loom, air flow safety switch (including attached tube), auto and manual high temp. safety switches.
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 **Note:** The elements and electrical box must be partially withdrawn to attach the two far end screws through to the unit.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

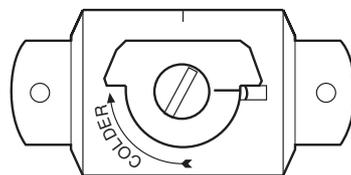
Outdoor Unit - Low Ambient Thermostat

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

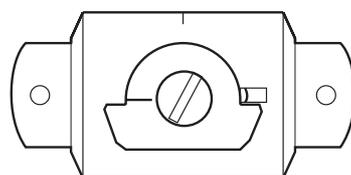
Cut in : 0.6°C
Cut out : 6.2°C



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.

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 top panel (Note: This is not necessary for OSA 181).
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. **OSA 73R - 180R** (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.
Note: The capillary must not touch the coil fins.

OSA 181R, 220R, 264R (see fig.4, 5 & 6)

- a. Push the free end of the capillary through the hole in the side/bottom of the electrical box, through the insulation (OSA 220/264 R only), and out through the hole in the external panel. Note: The PVC covered end of the capillary is to remain inside the electrical box.
 - b. Fit the thermostat inside the electrical box using the two PK screws supplied.
 - c. Outside the unit, coil 250 mm minimum of the protruding capillary to a diameter of approx. 50 mm.
 - d. Tie the loops together and close to the panel using the long cable tie supplied and two small panel holes (OSA 220/264 R only).
7. Complete wiring as per appropriate diagram included in this document.
Note: For OSA 126/ ISD 127 and OSA 165/ISD 150 combinations it is recommended the elements be powered by a separate 25 A fused supply line sourced via a two pole isolator on the Outdoor Unit. Wiring supplied in heater box must be altered to suit single phase power supply.
 8. Replace the systems external fuse with the size recommended in the Quick Reference Table (back page) and mark the change on the Outdoor Unit's wiring diagram.
 9. Replace the electrical box cover, top panel (if applicable) and access panel.

TESTING

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.

This pamphlet replaces the previous issue no. 2012 dated 06/01. ISD 265Q added. Wiring rev. - control wire colour.

Fig. 3 T/stat Location

OSA 73 – 180 Outdoor Units (Reverse Cycle Systems Only)

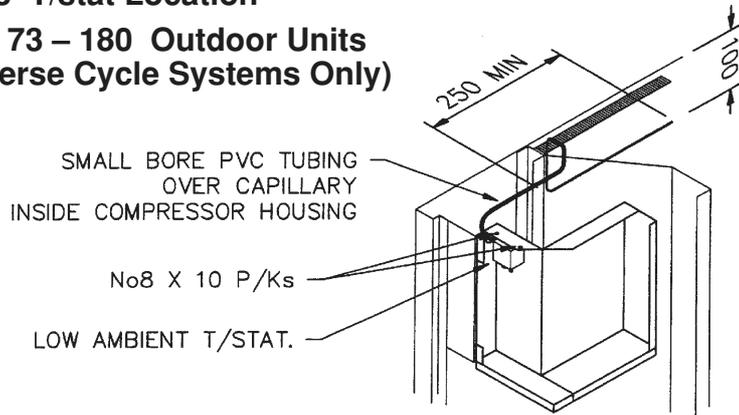


Fig. 4 T/stat Location

OSA 181 Outdoor Unit (Reverse Cycle Systems Only)

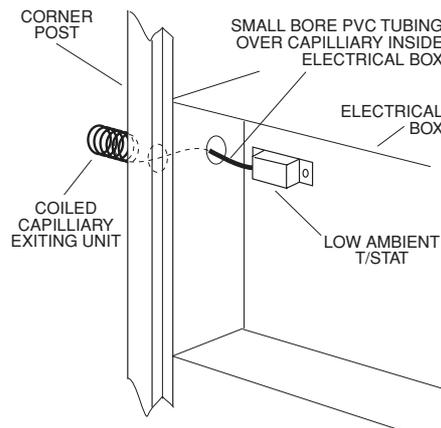


Fig. 5 T/stat Location

OSA 220 Outdoor Unit (Reverse Cycle Systems Only)

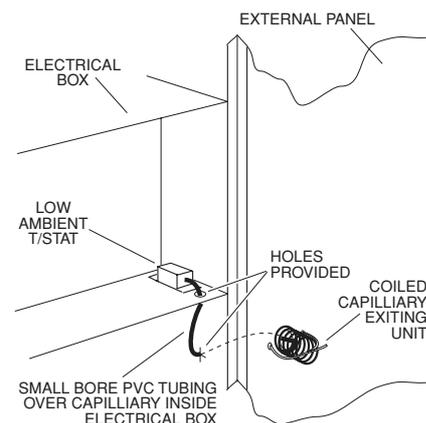


Fig. 6 T/stat Location

OSA 264 Outdoor Unit (Reverse Cycle Systems Only)

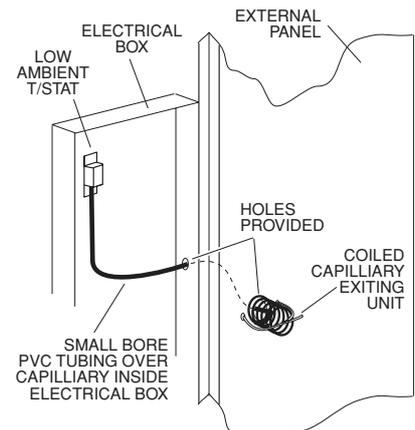


Fig. 7 1 Element, 1 Phase, Reverse Cycle Systems with Optional Electric Heat

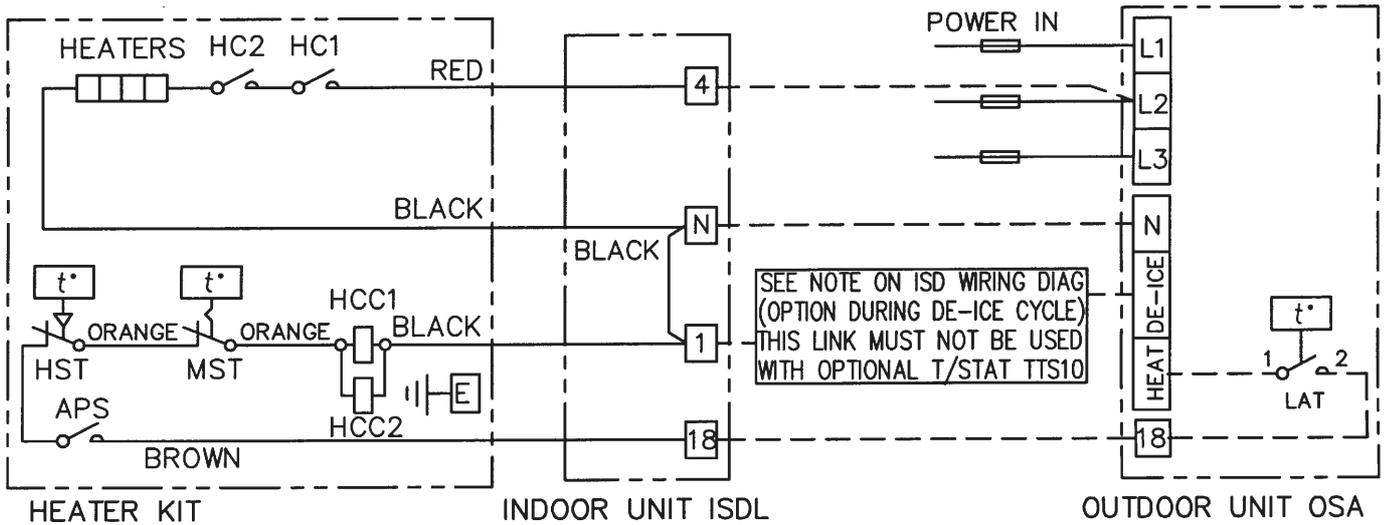


Fig. 8 1 Element, 1 Phase, Cooling Only Systems with Optional Electric Heat

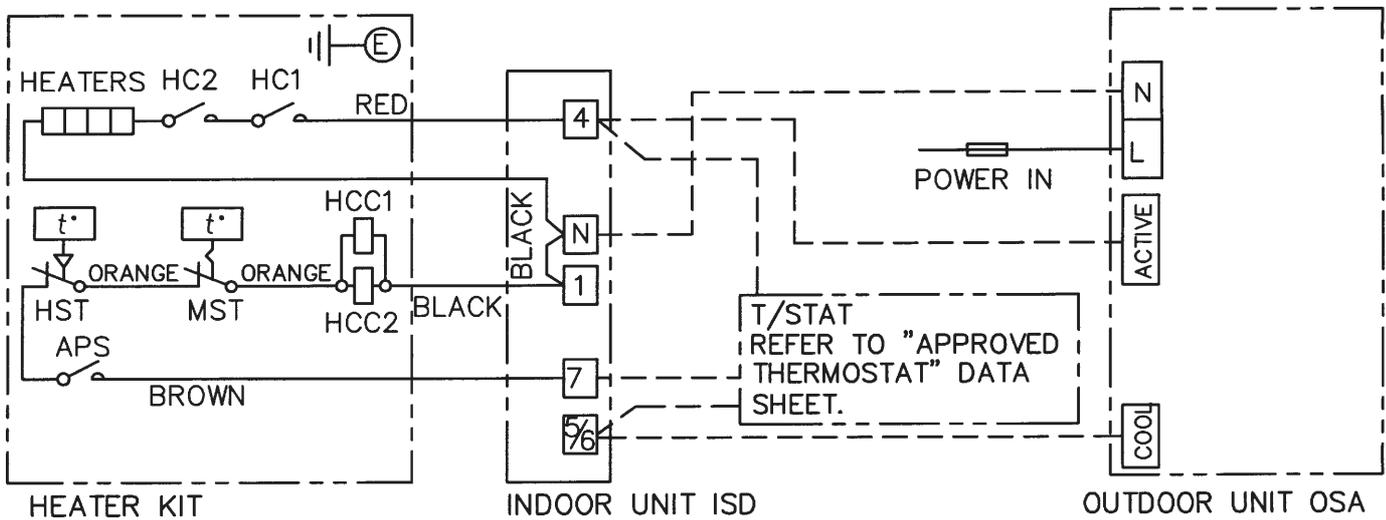


Fig. 9 3 Element, 1 Phase, Reverse Cycle Systems with Optional Electric Heat

OSA 100/ISD 101 SINGLE PHASE REVERSE CYCLE UNIT WITH OPTIONAL ELECTRIC BOOST HEAT. BOX COMES WIRED FOR 3 PHASE OPTION, DETAILS BELOW ARE FOR SINGLE PHASE UNIT. NEUTRAL WIRE TO BE CONNECTED BETWEEN STAR TERMINAL AND NEUTRAL TERMINAL THIS WIRE MUST BE 2.5mm AND IS SUPPLIED LOOSE WITH HEATER KIT.

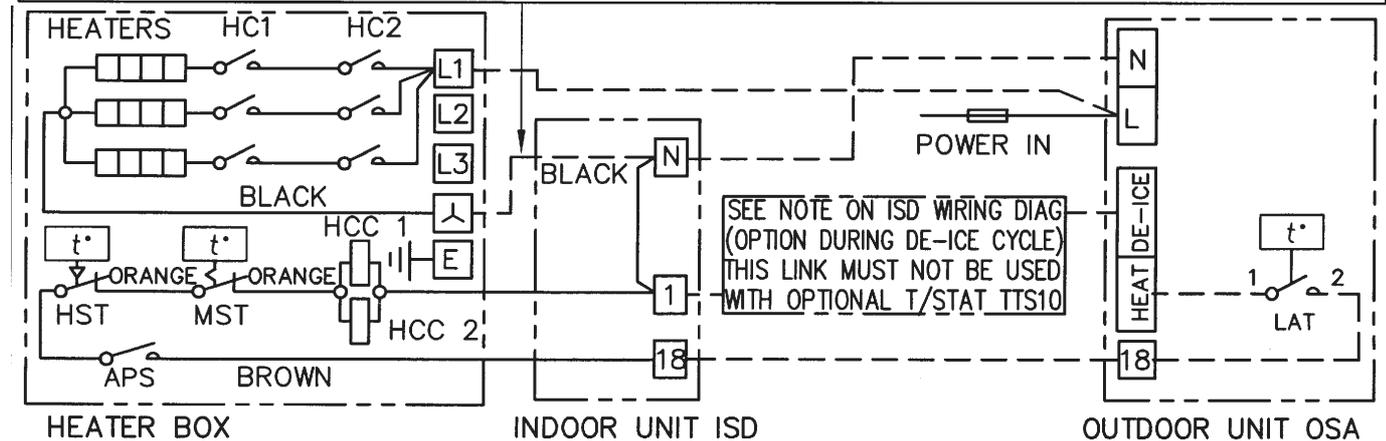


Fig. 10 3 Element, 3 Phase, Reverse Cycle Systems with Optional Electric Heat

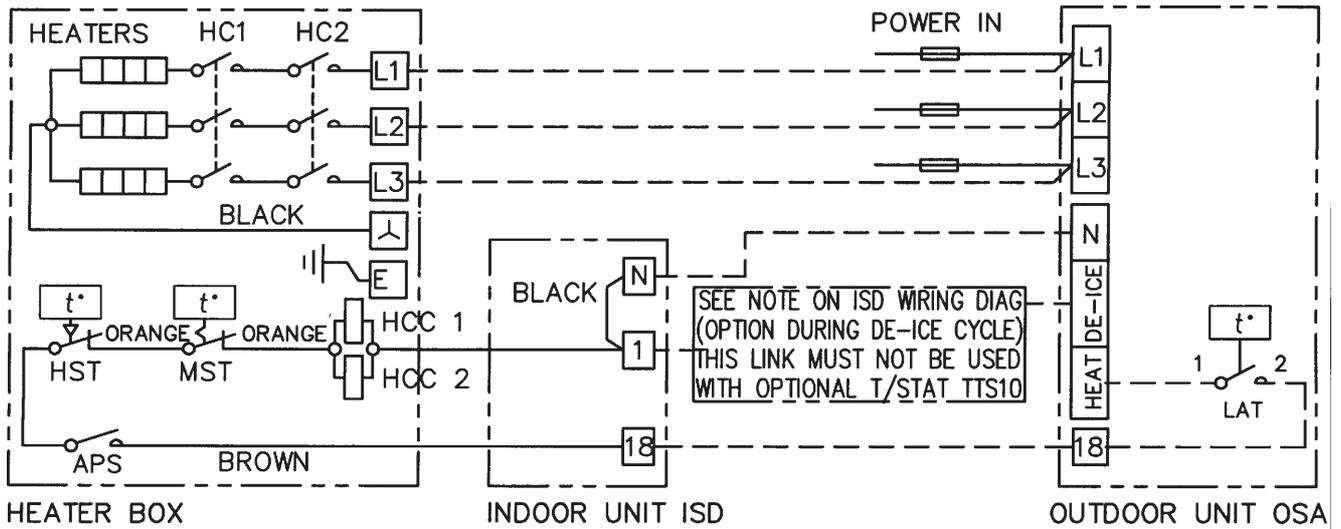
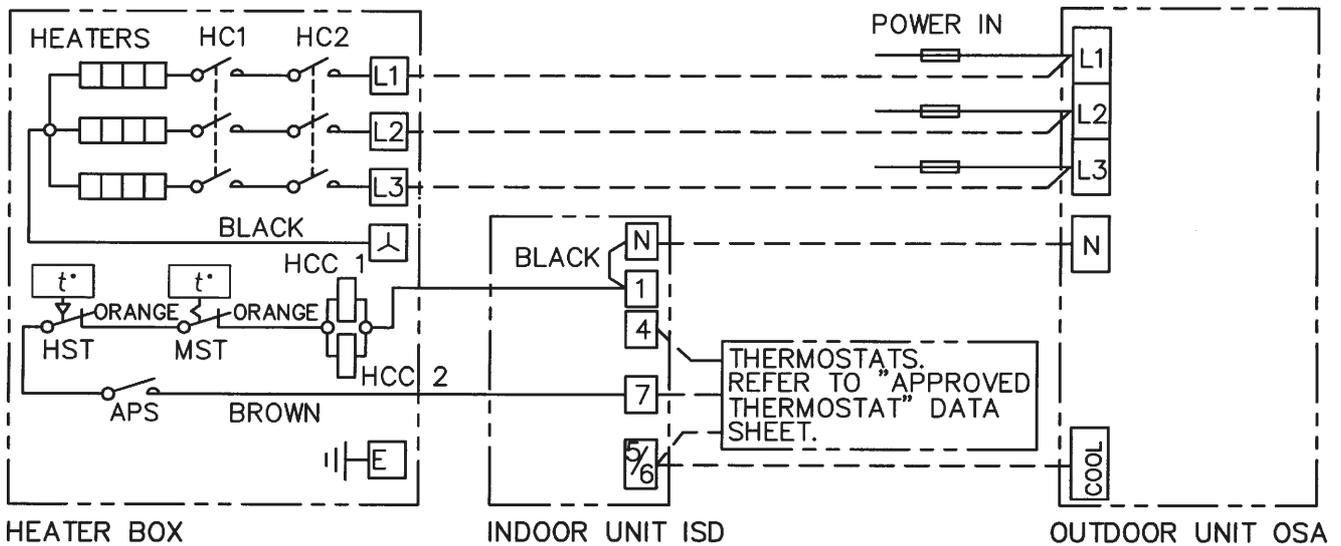


Fig. 11 3 Element, 3 Phase, Cooling Only Systems with Optional Electric Heat



APS	AIR PRESSURE SWITCH
HC	HEATER CONTACTOR
HCC	HEATER CONTACTOR COIL
HST	HIGH TEMP. SAFETY AUTO

LAT	LOW AMBIENT T/STAT
MST	HIGH TEMP. SAFETY MANUAL
E	EARTH TERMINAL

Quick Reference Table

System		Power Supply	Elements	Running Amps	Wiring Diagram	Recommended Replacement External Fuse Size	Comment
Indoor Unit	Outdoor Unit						
ISD 75Q	OSA 73	1Ø	1 x 2 kW	8.8 A	Fig. 7 or 8	32 A	
ISD 85Q	OSA 85	1Ø	1 x 2 kW	8.8 A	Fig. 7 or 8	32 A	
ISD 101Q	OSA 100	1Ø	3 x 1 kW	13.2 A	Fig. 9	40 A	Change to 1Ø *
ISD 101Q	OSA 101	3Ø	3 x 1 kW	13.2 A	Fig. 10 & 11	no change	
ISD 127Q	OSA 126	1Ø	3 x 1 kW	13.2 A	Fig. 9	separate 25 A fuse	Change to 1Ø *
ISD 127Q	OSA 127	3Ø	3 x 1 kW	13.2 A	Fig. 10 or 11	no change	
ISD 150Q	OSA 150	3Ø	3 x 1.5 kW	19.8 A	Fig. 10 or 11	32 A	
ISD 150Q	OSA 165	1Ø	3 x 1.5 kW	19.8 A	Fig. 9	separate 25 A fuse	Change to 1Ø *
ISD 181Q	OSA 180/181	3Ø	3 x 1.5 kW	19.8 A	Fig. 10 or 11	32 A	
ISD 220Q	OSA 220	3Ø	3 x 1.5 kW	19.8 A	Fig. 10 or 11	32 A	
ISD 265Q	OSA 264/265	3Ø	3 x 1.5 kW	19.8 A	Fig. 10 or 11	32 A	

* Three element heater boxes are supplied wired for 3 phase power supply.