

## ISK Series

# Cassette Split System Indoor Units

# Installation & Maintenance

### GENERAL

The ISK Cassette Indoor Units can be coupled with various Outdoor Units :

- ISK 73 / OSA 73C - Cooling Only System
- ISK 73 / OSA 73R - Reverse Cycle System
- ISK 101 / OSA 100R - Reverse Cycle Sys.
- ISK 101 / OSA 101C - Cooling Only Sys.
- ISK 101 / OSA 101R - Reverse Cycle Sys.
- ISK 125 / OSA 126C - Cooling Only Sys.
- ISK 125 / OSA 126R - Reverse Cycle Sys.
- ISK 125 / OSA 127C - Cooling Only Sys.
- ISK 125 / OSA 127R - Reverse Cycle Sys.

Two ISK 73 can be coupled to one OSA 146CB or OSA 146RB.

ISK/OSA reverse cycle systems require the fitting of an ISK/OSA Reverse Cycle Kit; refer to separate installation instructions.

### CASSETTE UNIT

#### Components

The ISK Indoor Unit, ISK Ceiling Fascia and Remote Control are supplied separately.

The ISK Cassette carton includes:

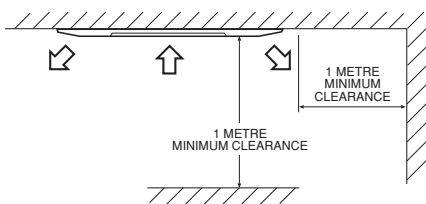
1. One ISK Cassette unit
2. One component bag containing:
  - a. Four leveling plates and screws.
  - b. Plastic condensate drain adaptor (25/32 mm ID)
  - c. Two jubilee hose clamps.
  - d. Four cable ties.
3. Cardboard pattern (hole cutting template).
4. Installation & Maintenance pamphlet
4. Operating Instructions manual.

Check that the contents of the ISK Cassette's component bag is complete.

#### Positioning & Mounting

The ISK Cassette is designed to be installed within a ceiling space.

Locate the ISK centrally within the area to be air conditioned to take full advantage of the four way supply air pattern. At least 1 m clearance will be required to each side of and beneath the ceiling fascia once the unit is installed.

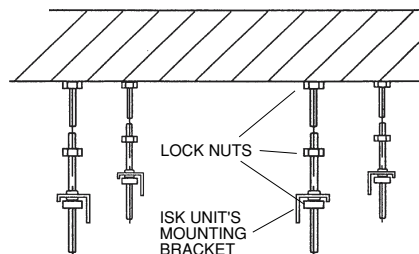


The ISK can be installed in either a level suspended tile ceiling (by cutting away one longitudinal rail) or solid ceiling (by cutting a hole in the ceiling to the required size). Adequate access will be needed, via removable tiles or ceiling access panel, to install, commission and service the unit.

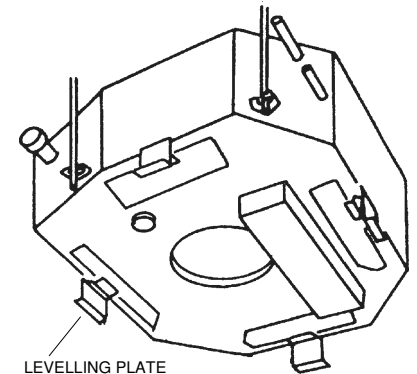
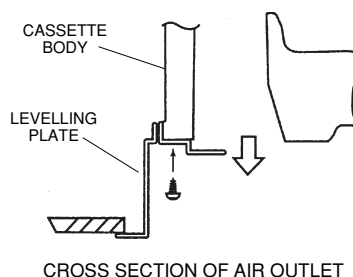
**Note:** If the ceiling is already constructed, lay the piping and wiring into position for connection to the ISK before placing the unit inside the ceiling.

#### Installation

1. Use the supplied pattern to cut the required ceiling aperture and locate the hanging rod centres.
2. Install four M8 threaded hanging rods (not supplied) so that they hang down close to the ceiling. Fit the ceiling locknuts (not supplied) as shown below. Pre-position the upper bracket locknuts to dimension 'E' shown in figure 1.



3. Lift the Cassette to the hole. If you have a fixed ceiling, this may be a good time to connect refrigeration piping, condensate piping and wiring; refer to 'Indoor-Outdoor Unit Connections'.
4. Position the Cassette on its four mounting rods about 50 mm below its estimated final resting position.
5. Install the four leveling metal plates supplied to the unit's underside as shown here. There is a pre-drilled hole for each securing screws - centred beside each air outlet and beneath the insulation.



6. Raise the Cassette until the leveling plates are touching the roomside of the ceiling.
7. Secure the unit on its mounting rods with washers and locknuts.

### INDOOR-OUTDOOR UNIT CONNECTIONS

Refer to the relevant OSA Outdoor Unit 'Installation & Maintenance' pamphlet for piping instructions. For wiring connections, refer to the Outdoor Unit wiring diagram in conjunction with the ISK wiring diagram on this pamphlet.

### REFRIGERATION PIPING

The ISK Cassette is shipped from the factory with a holding charge of dry air. Refer to the Outdoor Unit 'Installation & Maintenance' pamphlet for evacuation procedure.

ISK 73Q and ISK 101Q refrigerant line connections are:

- Liquid: 3/8" (9.5 mm OD) flare nut
- Gas: 5/8" (16 mm OD) flare nut

ISK 125Q refrigerant line connections are:

- Liquid: 3/8" (9.5 mm OD) flare nut
- Gas: 3/4" (19 mm OD) copper capped, swaged, brazed pipe

### Separation Limits

- Maximum Pipe Length: 30 m total
- Indoor Unit above Outdoor Unit : 12 m
- Outdoor Unit above Indoor Unit : 18 m

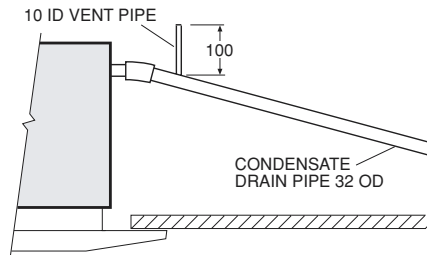
For line lengths in excess of the above, contact the manufacturer's nearest sales office for additional piping requirements.

## CONDENSATE DRAIN

Connect a 32 mm OD drain pipe (not supplied) to the Cassette's drain connection using the plastic condensate drain adaptor supplied and the two hose clamps.

Maintain a downwards slope of at least 1 in 50 (20 mm/m) along the drain line. The condensate pump allows a unit to be positioned up to 8.5 m (ISK 73) or 11 m (ISK 101) from the drain exit.

No 'U' trap is necessary. Vent the drain pipe at its highest point to prevent air locks.



If multiple units are involved, check that the drain slope is sufficient to prevent pumping from one unit to another.

## CONDENSATE PUMP

The condensate pump/motor operates when the water level is 'high'.

Note: If the pump works continuously for longer than 3 mins and the water level remains 'high' the unit will stop functioning. The three LEDs on the unit's fascia panel will blink to indicate there may be a blocked drain.

If the air conditioning system shuts down it is advisable to first check that flooding is not the problem.

The safety float switch automatically resets once the water level is lowered. To lower the water level remove the pump sump's rubber drain plug. Use a suitable silicone sealant when replacing the drain plug.

**Note:** The cause of any flooding must be identified and resolved. Possible causes: pump/motor burnout, faulty connection, blockage in pump or drain line.

## ELECTRICAL WIRING

The electrical supply required (via the Outdoor Unit) is specified on the Outdoor Unit's wiring diagram.

Electrical work must be carried out by a qualified electrician in accordance with local supply authority regulations and the wiring diagram.

To wire the Cassette, thread field wiring (five core cable) through the cable entry hole through to the electrical box. Complete the wiring as per the wiring diagram.

Note: Some connections can not be made until the fascia panel is installed.

## CEILING FASCIA

### Components

The Ceiling Fascia carton contains:

1. One fascia assembly comprising :
  - a. Fascia frame
  - b. Return air grille c/w filter panel

### Positioning & Mounting

1. Remove the hinged return air grille/filter panel and put safely aside until required.
2. Place the fascia frame face down, on a protective surface.
3. Remove the four M8 bolts and washers from the suspended Cassette unit.
4. Lift the frame to the Cassette and orientate to match the shape of the unit's air outlets. The three LEDs on the fascia panel will be nearest the cable entry to the unit's electrical box - the same corner as the refrigeration pipe connections.
5. Secure the fascia frame to the Cassette using the four M8 bolts and washers (removed at step 4), passed through the four fixing holes in the frame.  
Caution: Overtightening the screws will distort the fascia panel.
6. The fascia frame should fit snugly to the ceiling. If the ceiling is not level or is uneven, slacken or tighten the M8 fascia securing screws fractionally to facilitate a snug fit to the ceiling. Ensure, however, that there is still an airseal between the Cassette and the fascia.
7. Locate the hinge panel cut-out switch connection wire and the thermostat/control cable. Complete their connection to the electrical box as per the wiring diagram.
8. Replace the hinged return air grille/filter panel.

### INDOOR FAN SPEED

The fan speed can be set to LOW, MED, or HIGH for single speed operation using the remote control - refer to *Operating Instructions* manual.

### THERMOSTAT & REMOTE CONTROL

The ISK unit includes a built in thermostat. Refer to the *Operating Instructions* manual for how to use the remote control.

### COOLING ONLY SYSTEMS

**An Outdoor Unit fan speed controller is recommended where indoor cooling is required at ambient conditions below 20°C.**

### FRESH AIR INTRODUCTION - Option

To introduce fresh air into the unit, remove the fresh air entry panel (behind insulation knockout; refer Fig.1) and attach a suitable spigot (not supplied). Connect a 100 mm dia. flexible duct. Feed the unit filtered fresh air via the flexible duct using an in-line tube fan (available from **temperzone**). The fresh air is channelled, within the Cassette, to mix in with the return air.

### REMOTE DIFFUSER - Option

If a remote diffuser is needed (e.g. around the corner of an 'L' shaped room) up to 3 m of ducting can be installed.

Remove one of the two supply air exit panels (behind insulation knockouts; refer Fig.1) and attach a suitable spigot (not supplied). Make a plate to block the supply air slot closest to the knockout position, to re-direct air through the new spigot. Connect 200 mm dia. flexible ducting and a supply air diffuser with a square to round adaptor and damper if required (all available from **temperzone**).

## COMMISSIONING

### Indoor Unit

1. Check that the remote control is set at the desired temperature.
2. Check that the air filter is clean.
3. Check that the fan runs freely without vibration.
4. Check condensate drains for free drainage.
5. Run the unit in cooling (and heating if applicable) mode.

## MAINTENANCE

### Weekly For First Four Weeks

1. Check air filter; vacuum clean as necessary.
2. Check condensate drains for free drainage.

### Monthly

Check air filter; vacuum clean as necessary.

### Six Monthly

1. Check condensate drain for free drainage.
2. Check the tightness of the fan.
3. Check that fan motor is free running.
4. Check tightness of electrical connections.

## NOTE

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

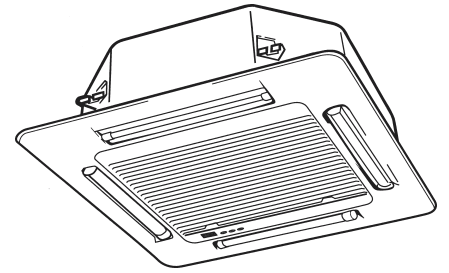
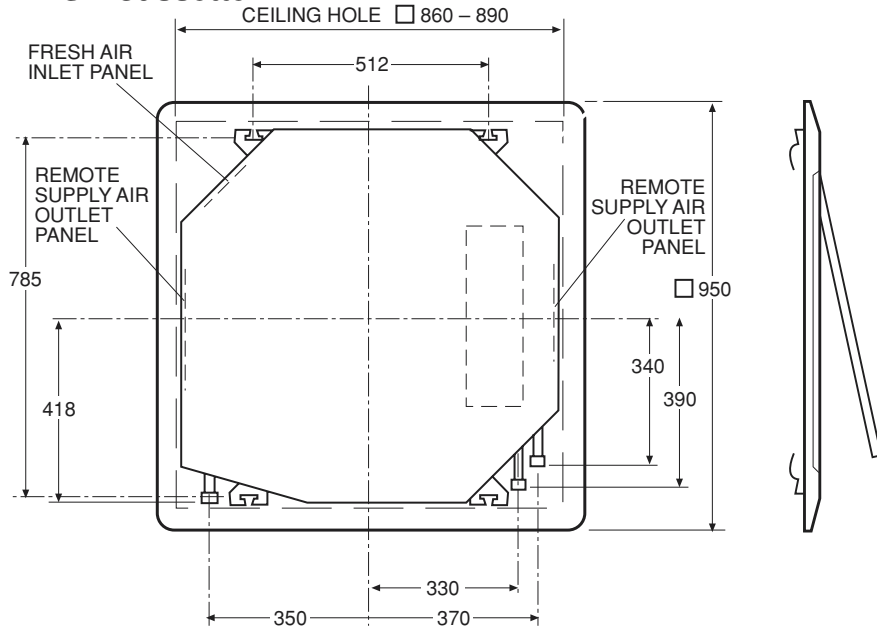
This pamphlet replaces the previous issue no. 2112 dated 04/02. ISK 150 removed.

# DIMENSIONS (mm)

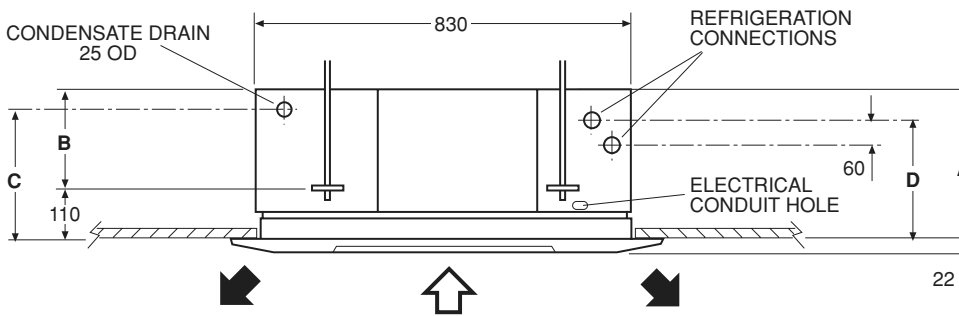
Not to Scale

## Fig. 1 ISK Cassette

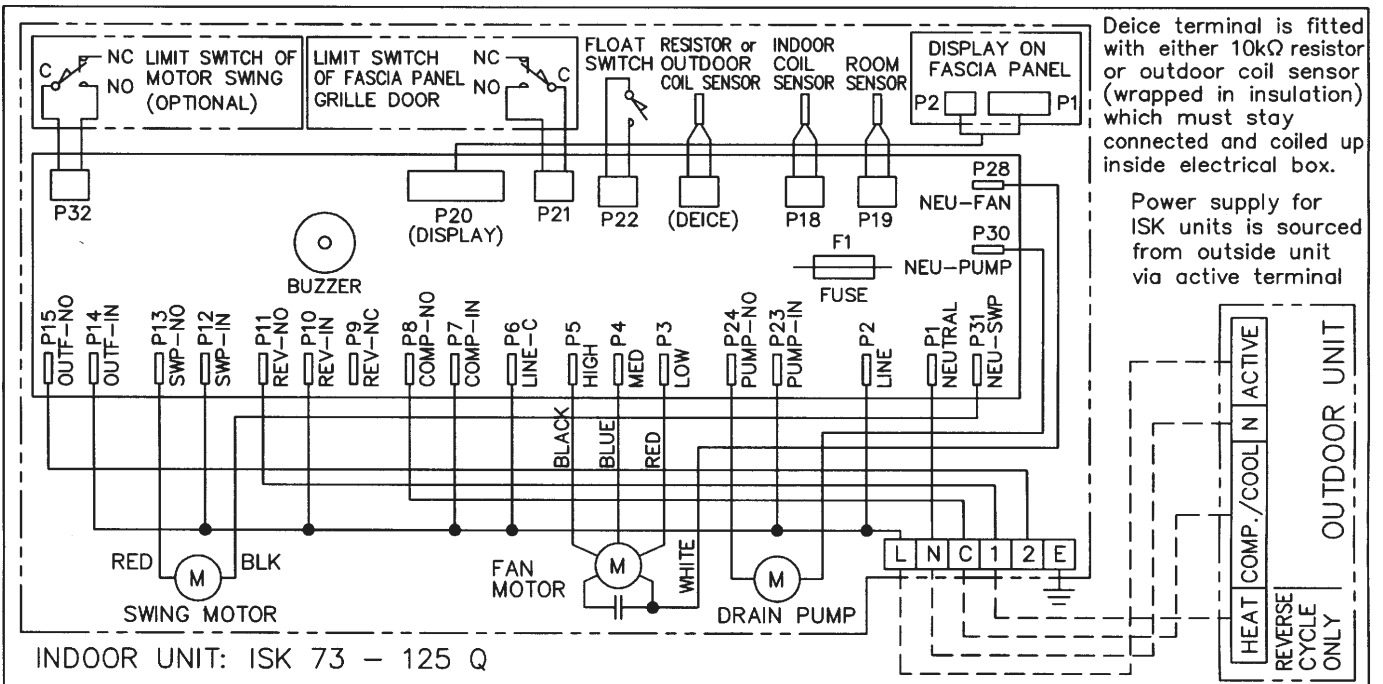
## Indoor Unit



MODEL	A	B	C	D
ISK 73Q	290	180	230	165
ISK 101Q	340	230	280	215
ISK 125Q	340	230	280	215



**Net Weight** (incl. fascia)  
 ISK 73Q 37 kg  
 ISK 101Q 43 kg  
 ISK 125Q 45 kg



Model	ISK 73 Q	ISK 101 Q	ISK 125 Q	ISK 73 - 125 Q WIRING SCHEMATIC	
Capacitor MFD	5	4	6		
Indoor unit running Amps	HIGH	0.4	0.5		
	MED	0.3	0.4		
	LOW	0.2	0.3		
NOTE: Check wiring before switching on, incorrect connection will damage motors.				CLIENT WIRING Interconnections between units by client. Double insulated multi-core cable.	
				©temperzone ltd 2002	
				Drawn	Date 7-8-98
				P.W-M	03
				Drawing No.	Revision
				011874001	B



