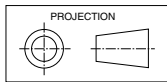


# ISD 299KB, 331K, 406K

## Ducted Split System Indoor Units

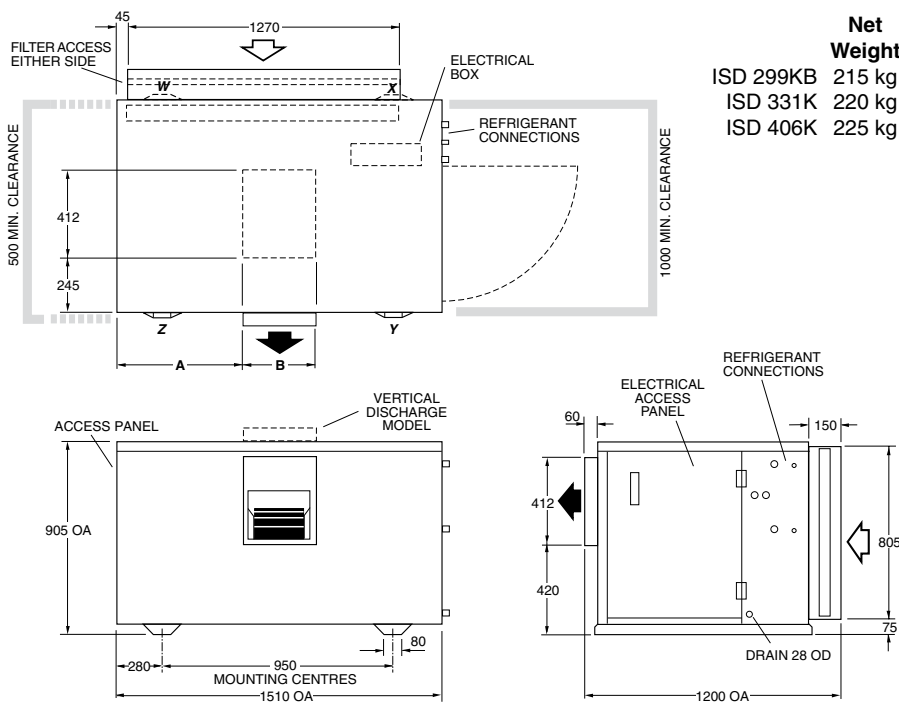
## Installation & Maintenance

**Fig.1 Dimensions (mm)**



Not to Scale

MODEL	DIMENSION		CORNER LOADS (kg)			
	A	B	W	X	Y	Z
ISD 299KB	590	336	69	48	38	60
ISD 331K	590	336	71	49	39	61
ISD 406K	445	477	67	60	45	53



### GENERAL

These ISD indoor units are designed to be coupled with their respective OSA outdoor units. Units must be installed in accordance with all national and local safety codes.

### Combinations

One ISD 299KB with one OSA 298RKT  
 One ISD 331K with one OSA 330RKT  
 One ISD 406K with one OSA 405RKT

### Option

Filters

### INSTALLATION

#### Unpacking

The unit's supply air spigot has been secured inside the unit for ease of shipping. Remove the spigot and secure it in place using the existing screws.

#### Positioning & Mounting

Provide sufficient clearance to the access panels.

Mount on a suitable level platform using vibration isolators. Access to fixing centres beneath the return air spigot can be made via the removeable bungs in the spigot's base.

#### Condensate Drain

The unit has an internal sloping condensate drain tray. The trap should have a vertical height of at least 100 mm. The drain should have a slope of at least 1 in 50 and must not be piped to a level above the unit drain tray (refer Fig.2).

For long condensate pipe runs, fit a vent pipe near the drain trap. The top of the vent pipe must be at least 100 mm above the ISD unit's drain tray.

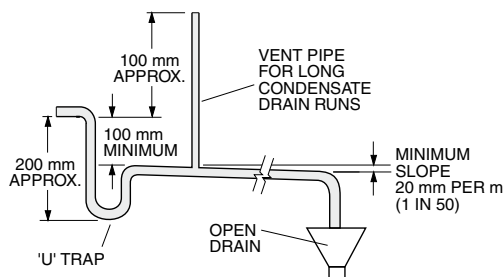
It is essential that the drainage system for the evaporator is checked by pouring water in the drain tray and seeing that it discharges at the end of the drain and does not overflow the drain tray.

### NOTE

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

**Fig. 2**

### Condensate Drain



### 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.

### REFRIGERATION PIPING

#### Pipe Connection Sizes & Type

ISD 299KB

Liquid (x2): 13 mm OD (1/2") sweat

Suction (x2): 19 mm OD (3/4") sweat

**ISD 331K**

Liquid (x1): 16 mm OD (5/8") sweat  
 Suction (x1): 22 mm OD (7/8") sweat

**ISD 406K**

Liquid (x1): 16 mm OD (5/8") sweat  
 Suction (x1): 35 mm OD (1 3/8") sweat

The ISD is shipped from the factory with a pressurised holding charge of nitrogen. Immediately before removing any brazed pipe connection's seal, reduce holding charge to atmospheric pressure.

**Warning:** failure to do so may cause injury.

Refer to the Outdoor Unit 'Installation & Maintenance' pamphlet for evacuation procedure and piping requirements.

**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.

In a free blow or low resistance application, beware of exceeding the fan motor's full load amp limit (refer Outdoor Unit's wiring diagram).

To make the indoor fan switch off during de-ice cycle, refer to the Outdoor Unit wiring diagram for the appropriate changes.

**INDOOR FAN SPEED**

The fan motor is fitted with a factory set adjustable pitch pulley. One revolution of adjustment is equal to 7% change in air volume flow rate.

To change the fan speed loosen the motor mounting plate hold down screws, loosen the pulley grub screws and turn the pulley flange the desired amount. The pulley adjustment is locked by tightening the grub screws in the keyways.

When setting air flows ensure that the pulleys are in alignment. Tension the belt by adjusting the motor mounting plate.

**COMMISSIONING**

Indoor Unit

1. Check that the thermostat is correctly wired and set at the desired temperature.
2. Check that any air filter (if fitted) is clean.
3. Check that the fan runs freely without vibration.
4. Check the airflow at each air outlet (diffuser) and adjust if necessary.
5. Check condensate drain for free drainage.
6. Run the unit in cooling mode and heating mode.

**MAINTENANCE**

**Weekly For First Four Weeks**

1. Check air filter (if fitted); vacuum clean as necessary.
2. Check condensate drain for free drainage.

**Monthly**

Check air filter (if fitted); vacuum clean as necessary.

**Six Monthly**

1. Check condensate drain for free drainage.
2. Check heat exchanger coil; vacuum or brush clean as necessary.

3. Check the tightness of the fan, motor mountings, pulley and belt tension.
4. Check that fan motor is free running.
5. Check tightness of electrical connections.
6. Check air supply at diffuser outlets.

**WARNING**

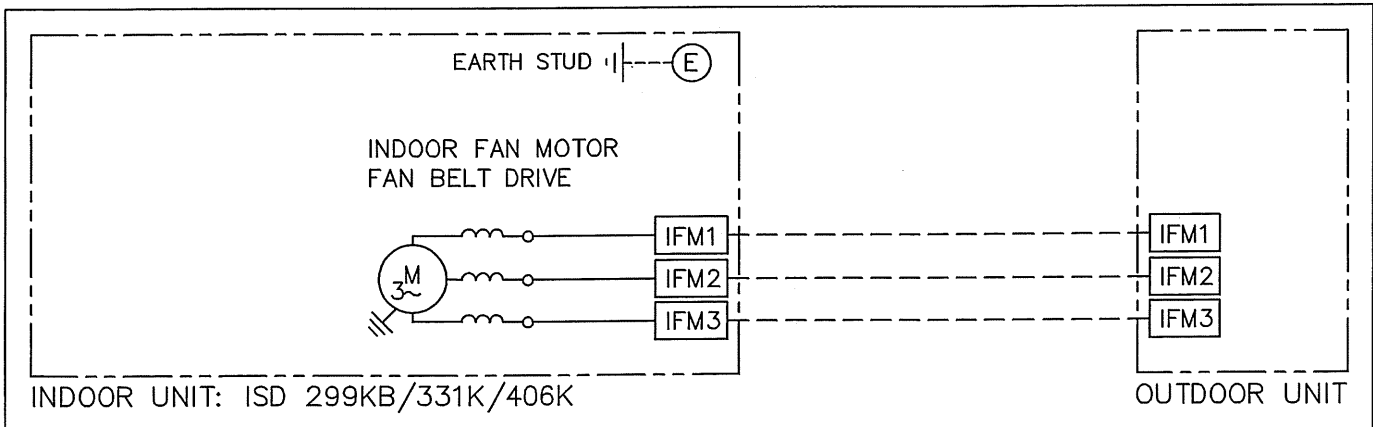
This unit is designed for use ONLY with the refrigerant HFC-410A (R410A). The use of other refrigerants is NOT authorised or approved by the manufacturer and may cause operational problems such as poor performance and efficiency, loss of capacity, degradation of materials and refrigerant leaks.

**The use of flammable or explosive materials as a refrigerant creates the additional risks of fire and explosion which may result in property damage, personal injury or death.**

**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. 3152 dated 08/09. Mounting rail dimension.



MODEL -	ISD	299KB	331K	406K
INDOOR FAN MOTOR FULL LOAD AMPS/PH		2.6A	3.3A	4.1A

CLIENT WIRING Interconnections between units by client. Double insulated multi-core cable.	PLOTTED 31-07-09
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NOTE: CHECK WIRING BEFORE SWITCHING ON, INCORRECT CONNECTION WILL DAMAGE MOTORS.

A	ADD ISD299KB TO DWG	N2237	31-07-09	KTT
ISSUE	MODIFICATION	ECN	DATE	APRVD

Title ISD 299KB/331K/406K WIRING SCHEMATIC



Drawn KTT	Date 10-03-09	Drawing No. 525-474-202	Revision A
Scale	As Shown		