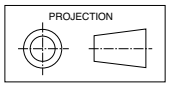
ISDL 29Q – 100Q (Slave)

Ducted Split System Indoor Units

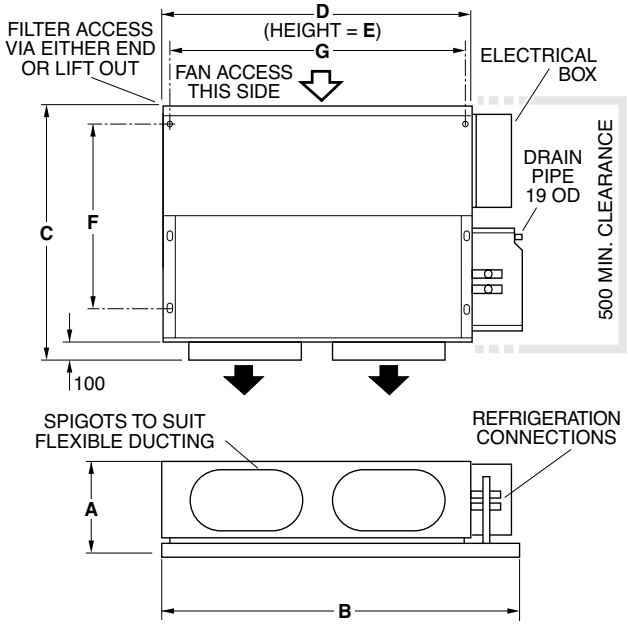
Installation & Maintenance

Fig. 1 Dimensions (mm)

Allow adequate clearance for the filter to be removed.
Note: ISDL 100Q has two half length filters



Not to Scale



MODEL	A	B	C	D	E	F	G	Net Weight	Supply Air Spigots
ISDL 29Q	250	680	715	550	245	470	525	21 kg	200 dia. (x2)
ISDL 45Q	250	930	715	795	245	470	775	28 kg	250 dia. (x2)
ISDL 71Q	260	1195	755	1050	255	510	1025	35 kg	250 dia. (x3)
ISDL 84Q	260	1195	755	1050	255	510	1025	35 kg	250 dia. (x3)
ISDL 100Q	260	1595	755	1445	255	510	1425	50 kg	250 dia. (x4)

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

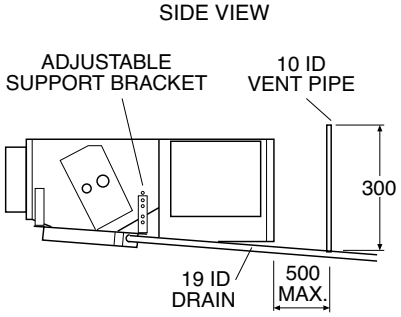
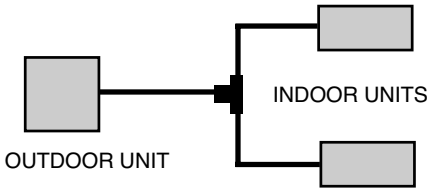


Fig. 3 ISDL Tandem Piping



Maximum line length specified for the outdoor unit must include both tandem legs.

Tandem legs must be as close as possible to equal, after leaving the common leg.

GENERAL

The ISDL indoor units are designed to be coupled with the OSA outdoor units. Units must be installed in accordance with all national and local safety codes.

Combinations

One ISDL 29Q with one OSA 29
One ISDL 45Q with one OSA 45
One ISDL 71Q with one OSA 73
One ISDL 84Q with one OSA 85
One ISDL 100Q with one OSA 100/101

Tandem combinations:
Two ISDL 29Q with one OSA 45
Two ISDL 45Q with one OSA 73
Two ISDL 45Q with one OSA 85
Two ISDL 71Q with one OSA 126/127
Two ISDL 84Q with one OSA 147/148/150
Two ISDL 100Q with one OSA 180/181

Note: A Tandem Kit (supplied separately). is available for connecting one ISDL unit c/w HAN-L6 Controller (Master) and one ISDL unit without thermostat (Slave). Some piping restrictions apply – refer Fig.3.

ISDL *c/w* ELECTIC HEAT OPTION (Factory Fitted)

Units supplied with electric boost heat are designed to conform to AS/NZS 3350.2.40 1997.

ISDL 29Q: 1 kW element, 4.4 A
ISDL 45Q: 1.5 kW element, 6.6 A
ISDL 71Q: 2 kW element, 8.8 A
ISDL 84Q: 2 kW element, 8.8 A
ISDL 100Q: 3 kW element, 13.2 A

Note: Reverse Cycle systems fitted with electric heat require an Outdoor Unit low limit t/stat (supplied separately).

INSTALLATION

Positioning & Mounting

Provide 500 mm minimum clearance to the electrical box end of the unit. Allow adequate clearance for the filter to be withdrawn to its full length from either end of the unit. Alternatively the filter may be lifted out of its track.

If the Electric Heat Kit option is to be used, allow adequate clearance for servicing.

Install the unit suspended on threaded rods or bolts and locking nuts (not supplied). Alternatively mount each unit on vibration isolators on a suitable platform.

The unit must be installed level with the drain tray tilted about 10 mm along its length so that the drain connection is at the lowest point. Use the adjustable support bracket (see figure 2) to lower the drain pipe corner of the drain tray.

Condensate Drain
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. Fit a vent pipe within 500 mm of the unit (see Fig.2). Check the drain by pouring water into the drain tray and ensuring that it clears.

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 ISDL wiring diagram on this pamphlet.

REFRIGERATION PIPING
Pipe Connection Sizes (mm OD)

Model	Liquid	Suction
ISDL 29Q	6 ($^1/_4$")	13 ($^1/_2$")
ISDL 45Q	6 ($^1/_4$")	13 ($^1/_2$")
ISDL 71Q	10 ($^3/_8$")	16 ($^5/_8$")
ISDL 84Q	10 ($^3/_8$")	16 ($^5/_8$")
ISDL 100Q	10 ($^3/_8$")	16 ($^5/_8$")

ISDL units are supplied with flare nut connections and a pressurised holding charge of dry nitrogen.

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).

Reverse Cycle Systems
It is recommended electricians run two spare wires between Outdoor Unit and Indoor Unit in case one or both of the following options becomes a requirement. Note: Leave the wires unconnected until required.

Option 1. Indoor Fan Off During De-Ice
Connect one of the spare wires mentioned above and remove the loop wire from terminal 'N' to terminal '1'.
Note: This option must not be implimented when using optional thermostat TTS-10.

Option 2. Electric Boost Heat.
Connect one of the spare wires mentioned above from Indoor Unit terminal '18' to Outdoor Unit terminal '18'.

ISDL/OSA Systems with Electric Heat
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	32 A
OSA 85	32 A
OSA 100	40 A
OSA 101	25 A

Note: Tandem indoor units with electric heat may require greater fuse sizes on the power supply.

INDOOR FAN SPEED
The fan speed can be set to LOW, MED, or HIGH - whichever best suits the application.

THERMOSTATS
For options, refer to the **temperzone** pamphlet 'ISDL 29-101 - Approved Thermostats' Data Sheet. A dedicated neutral line is required where electronic or anticipator thermostats are used when you choose to have indoor fan off in de-ice.

COOLING OPERATION
An outdoor unit HP Fan Speed Controller, (available from **temperzone**) is recommended where indoor cooling is required at ambient conditions below 20°C.

COMMISSIONING
Indoor Unit
1. Check that the thermostat is correctly wired and 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 drain for free drainage.
5. Run the unit in cooling and heating modes.

Indoor Unit with Electric Heat
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. temperature (HST) overload and heater relay.

OPERATION
Units installed with electric heat kits 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.

MAINTENANCE
Weekly For First Four Weeks
1. Check air filter; vacuum clean as necessary.
2. Check condensate drain for free drainage.

Monthly
Check air filter; 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.
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 HCFC-22. 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.

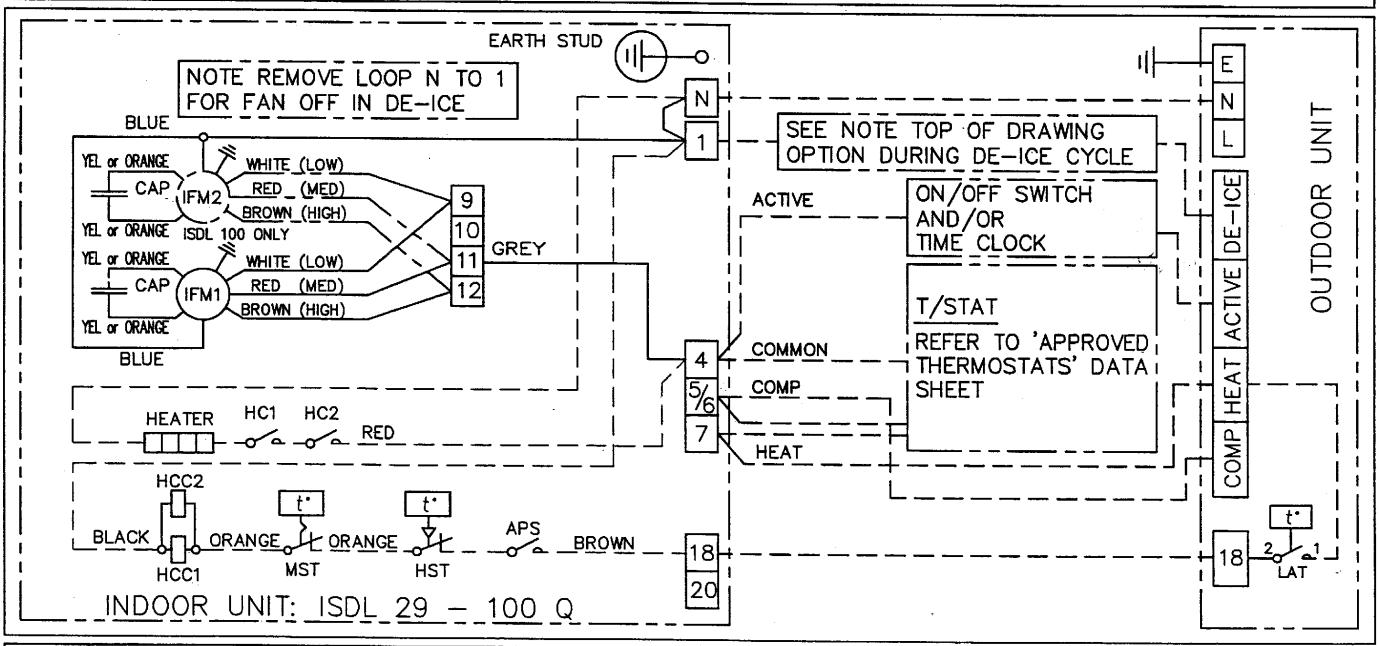
Note
The manufacturer reserves the right to change specifications at any time without notice or obligation. Certified dimension available on request.

This pamphlet replaces the previous issue no. 2377 dated 06/04.
HAN-L6 replaces TTS-10/11.

Wiring

NOTE: FOR REVERSE CYCLE UNITS IT IS RECOMMENDED THE ELECTRICIAN RUN TWO SPARE WIRES BETWEEN OUTDOOR AND INDOOR UNITS. WARNING ! DO NOT ***CONNECT THESE IF OPTIONS BELOW ARE NOT REQUIRED. ONE WIRE IS USED FOR INDOOR FAN OFF IN DE–ICE CYCLE AND RUNS BETWEEN INDOOOR TERMINAL No 1 AND OUTDOOR TERMINAL (DE–ICE).*** WARNING ! ***LINK BETWEEN TERMINALS (N AND No 1) IN THE INDOOR UNIT MUST BE REMOVED. SECOND WIRE IS FOR OPTIONAL LOW AMBIENT BOOST HEAT AND RUNS FROM INDOOR TERMINAL (No 18) TO OUTDOOR TERMINAL (No 18).***

A DEDICATED NEUTRAL LINE IS REQUIRED WHERE ELECTRONIC OR ANTICIPATOR T/STATS ARE USED WHEN YOU CHOOSE TO HAVE INDOOR FAN OFF IN DE–ICE.



CAP	CAPACITOR
APS	AIR PRESSURE SWITCH
HC	HEATER CONTACTOR
HCC	HEATER CONTACTOR COIL
HST	AUTO HIGH TEMP. T/STAT
IFM1	INDOOR FAN MOTOR
IFM2	INDOOR FAN MOTOR (ISDL100 ONLY)
LAT	LOW AMBIENT T/STAT
MST	MANUAL HIGH TEMP. T/STAT

MODEL		ISDL 29	ISDL 45	ISDL 71	ISDL 84	ISDL 100
INDOOR FAN MOTOR	HIGH	0.40	0.70	1.15	1.20	1.70
	MED	0.35	0.48	0.95	1.05	1.45
	LOW	0.30	0.40	0.85	0.90	1.30

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

CLIENT WIRING – – – – – –
Interconnections between units by OPTIONAL – – – – – –
Electric Heat Wiring

temperzone

ISDL 29 – 100Q (Slave) WIRING SCHEMATIC

Drawn	Date 10-11-00	Drawing No.	Revision
L.H.Z	Aprvd	325-034-002	B