

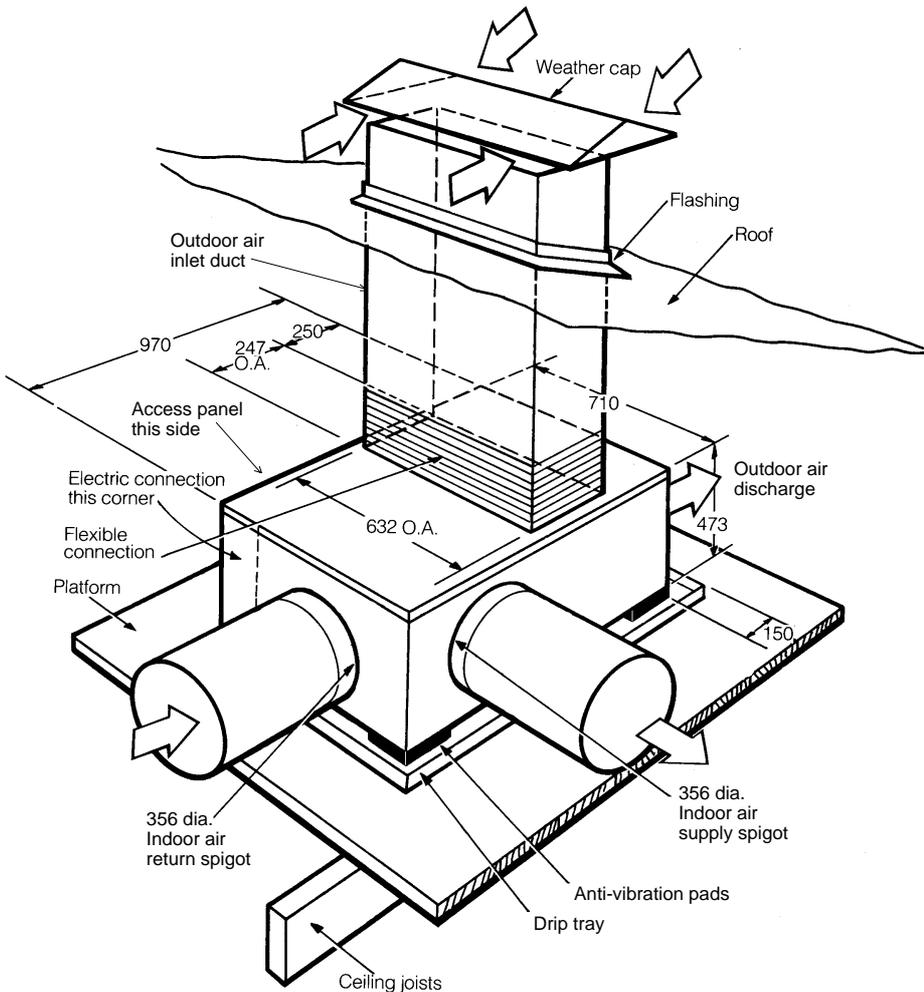
# RR 225

## Ducted Reverse Cycle Packaged Air Conditioner

## Installation & Maintenance

Fig. 1 Dimensions (mm)

RR 225



RR 225 Net Weight 99 kg  
Shipping Weight 115 kg

### GENERAL

The RR 225 'Attic' unit has been specifically designed for the air conditioning requirements of the average home or office. By utilisation of the heat pump system the Attic unit is able to provide economical heating as well as cooling. Due to the Attic unit's compact proportions, it can be installed within the attic space, on a platform constructed on the roof, through an end wall, above the ceiling level and also in the basement.

### COMPONENTS

Each air conditioner consists of the following components :

1. Compressor
2. Outdoor air coil
3. Indoor air coil
4. Fan motor - multi-speed
5. Propeller outdoor air fan - direct drive
6. Centrifugal indoor air fan - direct drive
7. Enclosed compressor compartment
8. Compressor crankcase heater
9. Reversing valve
10. Time/temperature de-ice control
11. Control fuse and compressor contactor
12. Anti-rapid cycle timer
13. High pressure safety control
14. Cabinet - galvanised steel
15. Drain tray - built-in, with stub
16. Spigots - supply and return

### Available Factory Options

1. Electric heat kit; includes:
  - 2 kW electric element
  - Safety thermostat cut-out
  - Heater relay
  - Low ambient thermostat.
2. Remote room thermostat.

### INSTALLATION

#### Preliminary Inspection

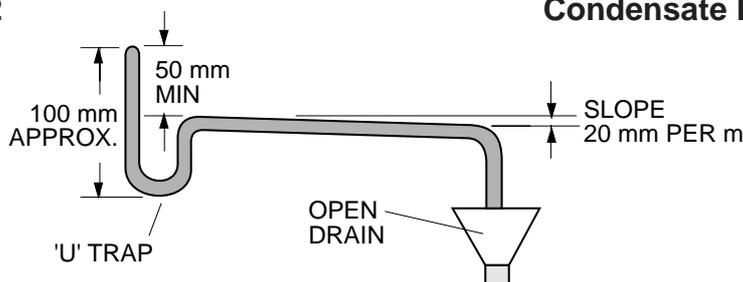
Cut the packing straps, lift the carton from the air conditioner and remove the unit from the pallet. Remove the access panel and check that the pipes of the refrigeration system are not rubbing at any area in the unit. Replace the access panel.

#### Location

- The RR 225 air conditioner may be located:
- within the attic space of the house
  - on a platform construction on the roof (if shielded from rain)
  - through the end wall of the house above ceiling level, or
  - in the basement

Fig. 2

### Condensate Drain



## RR 225

### Positioning & Mounting

When determining the position of the air conditioner allow space around the unit so maintenance can be carried out without difficulty. Position the unit over the amenities block and as close as possible to the return air grille. The unit should be placed so that the ducting is kept to the minimum length.

### Support

If the unit is to be installed in an attic space, consideration must be given to the load on the ceiling from the unit's weight (99 kg) plus the weight of service personnel. If necessary a deck should be built to support the unit and allow a large enough working area around the unit.

### Condensate Drain

A 19 mm O.D. pipe stub is provided in the side of the air conditioner. The drain line should be maintained at 19 mm I.D. .

**A 'U' trap must be fitted in the drain line and a constant fall away from the unit is important (see figure 2). Failure to adhere to these instructions could cause flooding in the air conditioner.**

A drip tray under the unit is recommended and a 19 mm I.D. drain is required also from this tray.

### Vibration Isolation

To reduce transmitted vibration to a minimum, it is recommended that the unit be mounted on four commercially available rubber vibration damping pads. These pads must be thick enough to provide adequate ventilation to the space between the unit base and the drip tray to prevent corrosion.

### Outdoor Air Inlet

#### Attic Application

A duct must be constructed to fit the top spigot on the unit. A flexible ducting connection is required. The duct penetration through the roof must be flashed and made good. A weather cap is required at the top of the duct, complete with bird mesh guard. Be sure the weather cap is big enough to stop driving rain entering the duct, but does not restrict the air intake. The static pressure drop through the air intake system must not exceed 20 Pa (0.1" WG) at medium speed.

#### Basement Application

Adequate outdoor air must be available to the top spigot from ventilation openings in the basement walls. The outdoor air discharge vent must be positioned to avoid recirculation of the exhausted air back through the outdoor air inlet.

### Outdoor Air Discharge

#### Attic Application

The outdoor air discharge may be exhausted into the attic space as long as the attic is adequately ventilated. It is recommended that the ceiling be completely insulated. Alternatively, a short duct to the soffit of the house can be fitted to duct the exhausted air to the outside.

#### Basement Application

The outdoor discharge air must be ducted out of the basement ensuring there is no recirculation of the exhausted air back through the basement ventilation openings. The static pressure drop through the discharge duct and intake air openings to the basement must not exceed 20 Pa (0.1" WG) at medium speed.

### Indoor Air Circulation

Fit the spigots, supplied loose, to the unit with the self tapping screws provided into the existing holes in the panel. The indoor supply and return air ducting must be insulated and sealed to prevent loss of performance. If rigid supply and return air ducting is used, a flexible duct connection must be used at the unit. Preferably, insulated flexible duct should be used. It is recommended that the duct size match the size of the spigot. The ceiling diffusers must be selected to produce the required air flow with acceptable noise level. An air filter must be fitted firmly behind the return air grille. The filter must be easily removable for cleaning.

The total static resistance measured across the unit, between the supply and return air spigots, must not exceed 100 Pa on Low; 200 Pa on Medium or 300 Pa on High speed.

The motor speed selection is factory set at medium speed. An alternative speed may be selected dependant on the requirements of static resistance and noise level.

### Electrical

The electrical supply required (including voltage fluctuation limits) is: single phase 200-252 V a.c. 50 Hz with an adequate earth. The supply to have an accessible switch to allow isolation of the unit. Wire thermostats to the terminals provided in the control box as per the wiring diagram supplied with the unit. All wiring to the air conditioner must comply with the wiring regulations of the local electrical authority.

## MAINTENANCE

### Lint accumulation

Inspect heat exchanger coil and drain connection every three months for lint/dust build up.

1. Vacuum clean or
2. Brush and remove residue (failure to do this may affect efficiency).

### Air Filters

Check air filters and vacuum clean if necessary every month. Replace air filter every six months, or as necessary to maintain adequate air flow.

### Motor

Ball bearing type; sealed for life.

### Care of Machine

Check periodically for any deterioration in materials and if required touch up with water resistant paint.

### Manufacturer's 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. 1263 dated 10/95.  
Wiring revision B.

Fig. 3 Attic Application

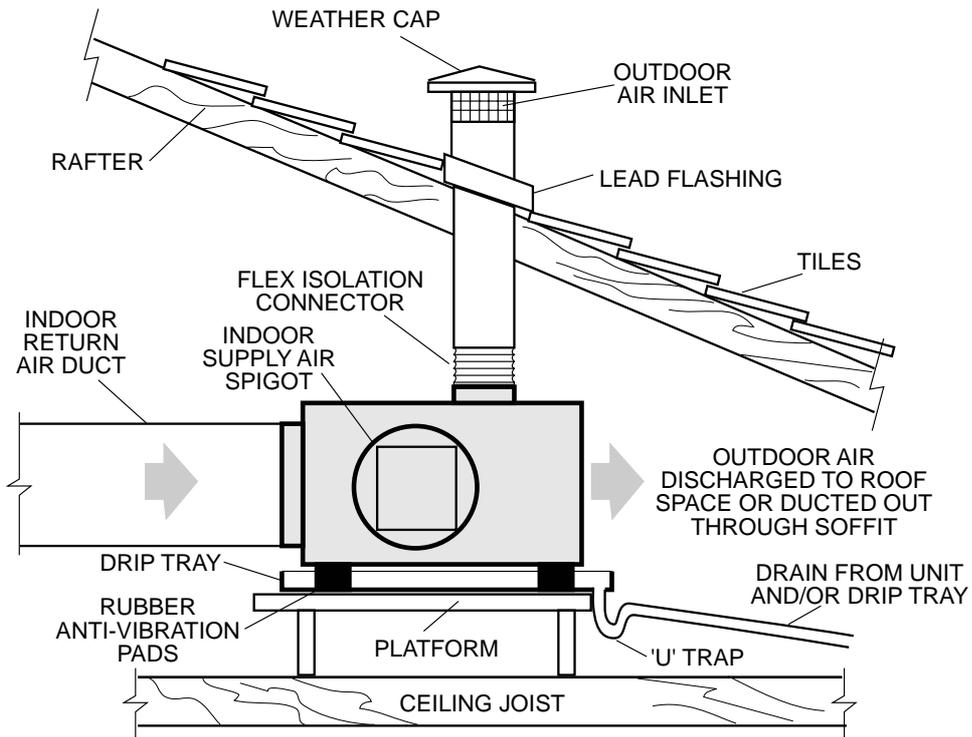
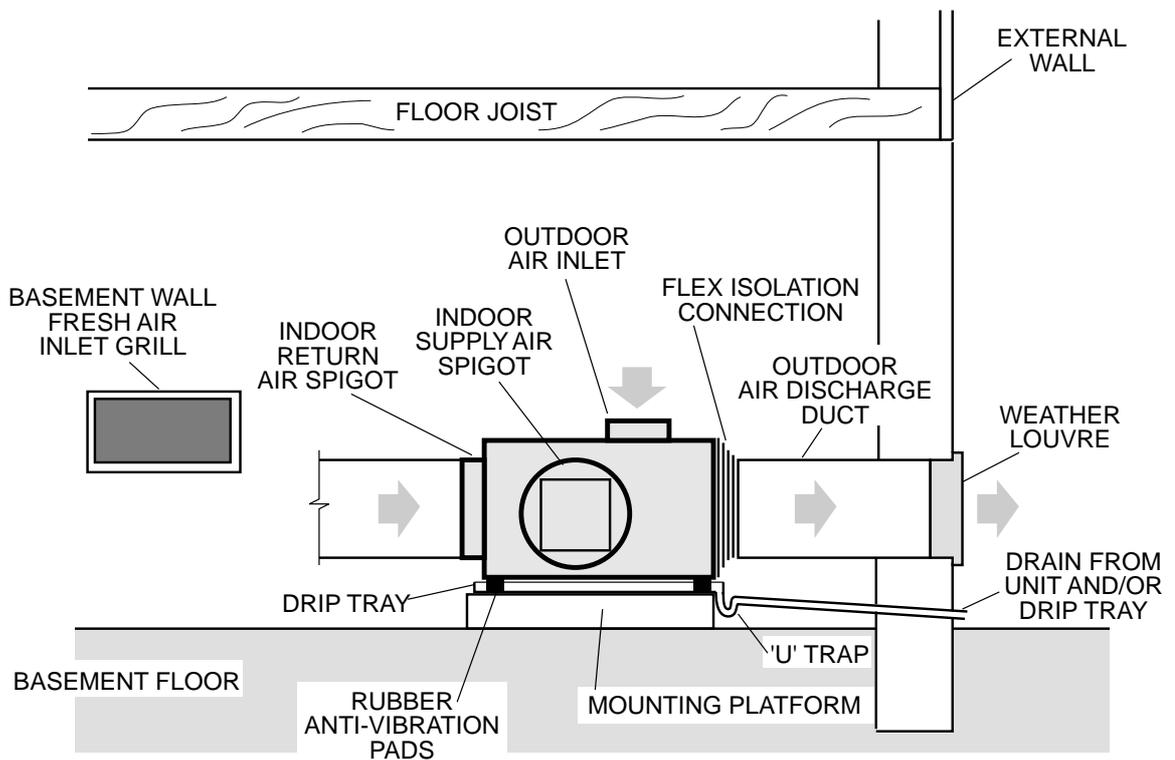


Fig. 4 Basement Application



CAPACITIES - NOMINAL / AS1861.1(A)	
PACKAGED UNIT	RR225
COOLING -	6.4 kW
HEATING -	6.5 kW
HEATING - ELECTRIC ELEMENT OPTION	2.0 kW
ELECTRICAL INPUT @ 230V ~ 50Hz	
COOLING - kW/TOTAL RUNNING Amps	2.8/12.6
HEATING - kW/TOTAL RUNNING Amps	2.7/12.0
HEATING - ELECTRIC ELEMENT OPTION	2.0 kW
E.E.R./C.O.P. (COOLING)	8.0/2.35
ELECTRICAL	
SUPPLY REQUIRED 1Ph 200-252V ~ 50Hz INCLUDING VOLTAGE FLUCTUATIONS	
COMPRESSOR RUN Amps RATED CONDITIONS	9 A
COMPRESSOR MOTOR STARTING Amps	32 A
FAN MOTOR FLA	5.7 A
FAN MOTOR CAPACITOR	10 MFD
ELECTRIC ELEMENT (OPTION) FLA	8.7 A
RECOMMENDED EXTERNAL FUSE SIZE STD/HEATER	25/30 A
REFRIGERANT - HCFC22 (R22)	1.60 Kg
WEIGHT - NETT	99 Kg

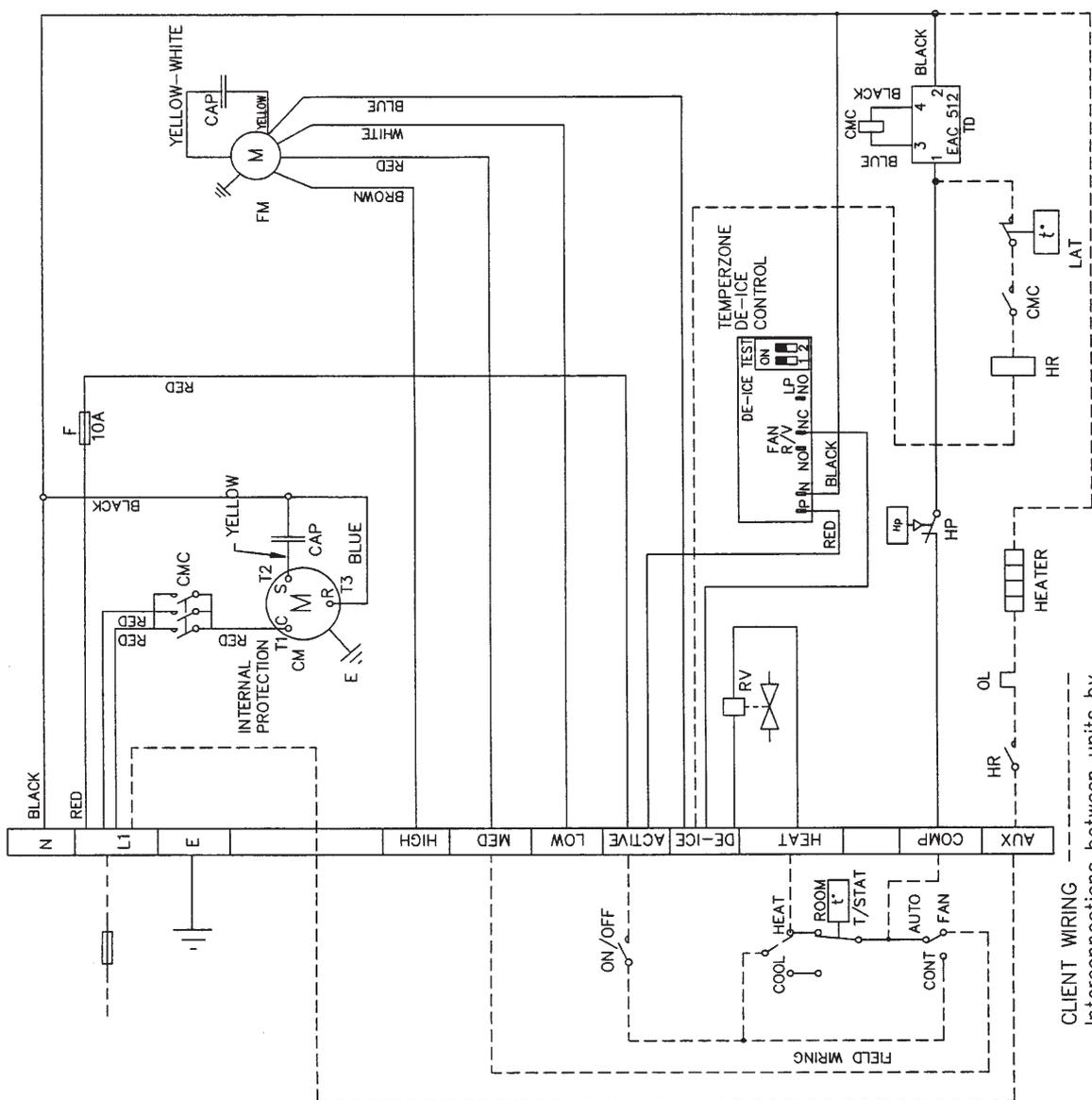
ABB	DESCRIPTION
CAP	CAPACITOR
CM	COMPRESSOR MOTOR
CMC	COMPRESSOR CONTACTER
HR	HEATER RELAY
FM	FAN MOTOR
LAT	LOW AMBIENT T/STAT
OL	OVERLOAD PROTECTION
RV	REVERSING VALVE
TD	TIME DELAY 6 MINS

**NOTE: TESTING OF DE-ICE SWITCH DIP SWITCH 1 OFF TO ALLOW REPEATED DE-ICE CYCLES WITHOUT A 38 MINUTE DELAY. SWITCH DIP SWITCH 2 OFF TO FORCE A DE-ICE CYCLE. ALWAYS RETURN BOTH SWITCHES TO 'ON' POSITION FOR NORMAL OPERATION.**

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

Title		RR225 ATTIC UNIT WITH OPTIONAL ELECTRIC HEAT	
Drawn	GM	Date	1.9.95
Scale		Aprvd	
Revision No.		Drawing No.	
B		011-656-001	

temperzone  
 11-02-98  
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ISSUE	MODIFICATION	EC/N	DATE	APPRD	DRG SIZE	No.	DESCRIPTION	Mat'l	FINISH	ASSY No.
B	DE-ICE WITH DIP SWITCH ADDED		10-02-98	D.J.H.						
A	REFRIGERANT CHARGE NOW 1.6 WAS 1.4 Kg		15-12-95	GM						