



Eaton-Williams Ltd

QUALITAIR

**TECHNICAL MANUAL &
INSTALLATION PROCEDURES
FOR
QPM CHASSIS UNIT**

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PM CHASSIS UNIT MANUAL

1. SAFETY PROCEDURES

Installation

The units making up the Air Conditioning System must be installed only by a qualified engineer, following the mandatory and local codes of practice.

Handling

Care must be taken when the units are moved or lifted to ensure that everyone and everything is safe. When lifting equipment is used, it must be suitable and approved.

Application

Ensure that the unit is only used for suitable purpose / applications.

Electrical Connection

Electrical work and connections must only be made by authorised electricians in accordance with mandatory regulations and local codes of practice.

Warranty

Failure to comply with the manufacturer's installation instructions could affect the performance of the unit and invalidate the warranty. Warranty is also subject to the implementation of a planned service / maintenance agreement as documented in the warranty booklet supplied with the unit.

General

- a) All works must be carried out in accordance with manufacturer's installation and operating procedures.
- b) Good working practices must be followed at all times so that Mechanical and Electrical Hazards are kept to a minimum.
- c) The equipment has been fitted with doors and covers to prevent access during operation. These must be kept in place and additional guards fitted, if necessary.

- d) The equipment must be connected to an external electrical isolator is one is not supplied fitted to the unit.
- e) Servicing and maintenance must only be carried out by fully qualified and competent staff. Before any work is started, electrically isolate the units to make sure they cannot be switched on accidentally and allow sufficient time for isolated parts to come to rest before removing panels. Electrical isolation switches MUST be labelled to show that they are off during servicing and maintenance operation.

NOTE
SOME UNITS ARE DORMANT IN
STANDBY MODE AND CAN
RESTART WITHOUT WARNING
IF THEY ARE NOT ELECTRICALLY
ISOLATED.

- f) Care must be taken not to touch components or pipework which may be extremely hot or cold, for a period after the unit is electrically isolated.
- g) After completing any tasks ensure all guards, covers and doors are correctly refitted before restoring the power supply to the unit.
- h) Air conditioning equipment may generate unacceptable noise levels. If noise levels are unacceptable sound and vibration attenuators may be required. For noise levels guidance refer to technical literature, or contact Qualitair, or their distributors for advice.

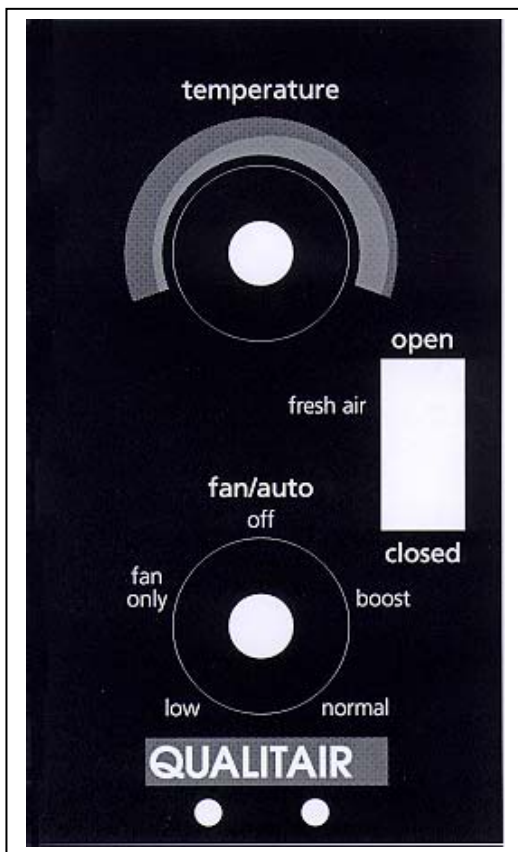
PM CHASSIS UNIT MANUAL

OPERATING PROCEDURE

General

The controls on your conditioner operate a switch and thermostat. Correct use of these controls will ensure efficient operation of your air conditioner.

Operation



To Recirculate Room Air

Set the lower control to 'FAN ONLY'.

For Normal Operation

Set the lower control to 'NORMAL' and the upper control to the desired setting. An automatic heating / cooling changeover thermostat is fitted as standard. This will control your unit to maintain the temperature setting. Always allow the room conditions to stabilise before resetting the controls.

For Maximum Cooling / Heating

Set the lower control to 'BOOST' and the upper control fully clockwise (cooling) or anti-clockwise (heating), as desired.

For Quite Operation

Set the lower control to 'LOW' and the upper control to the desired setting.

For Fresh Air Operation

The fresh air damper can be opened or closed using the selector switch as desired.

INTERNAL PROTECTION DETAILS

Low Refrigerant Pressure Switch

Prevents compressor operation on low refrigerant pressure.

Start Delay Timer

Prevents repetitive starting of compressor (factory set delay 2 minutes).

Low Ambient Thermostat

Prevents compressor operating during low outside ambient conditions and will also shut fresh air damper if in 'OPEN' position (factory set at 5°C).

De-Frost Thermostat

Prevents freezing of evaporator and LPHW coils by preventing compressor operating and by shutting fresh air damper if in 'OPEN' position and switching on LPHW heater (factory set at 2°C).

Fuses

Main supply fuse 10A protects main compressor circuit.

Secondary fuse 3.15A protects control circuit wiring and auxiliary power supply circuit. (See electrical chassis component layout and wiring diagrams).

MAINTENANCE

IMPORTANT

Before commencing any maintenance work, isolate the unit at mains supply.

PM CHASSIS UNIT MANUAL

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Fresh Air Filter

The fresh air filter is situated behind fresh air damper and can be removed by lifting the damper and removing the filter from its velcro strips.

Cleaning can be carried out by gently vacuuming both faces.

Refit the clean filter in reverse order.

Coils

Periodically check both evaporator and condenser coil fins for any blockages that would prevent units correct operation, by removing the unit's top and front access panels.

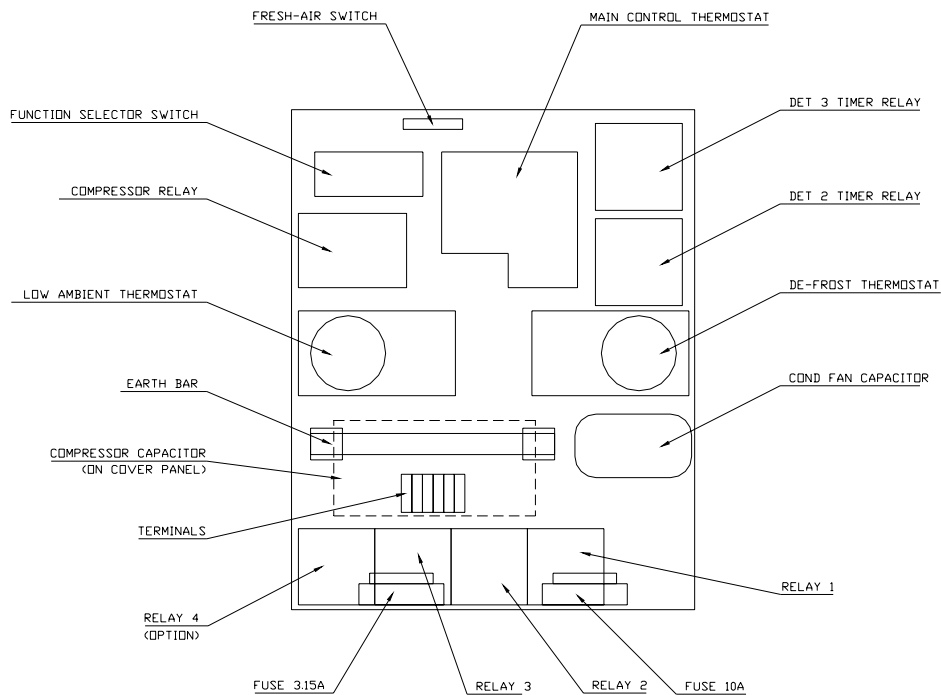
Care should be taken when removing the front panel to gently lower the evaporator fan assembly onto a rigid surface to allow inspection of the air on face of the coil.

Cleaning can be carried out by gently vacuuming both faces.

Condensate Drain

Check condensate drain from evaporator fan assembly is clean and unblocked.

Electrical Chassis Component Layout



ELECTRICAL CHASSIS LAYOUT

ELECTRICAL DETAILS

IMPORTANT
Before commencing any maintenance, inspection or removal of unit, isolate the unit at mains supply.

NB When selector switch on front panel is set at 'OFF' there is a 240v 1Ph 50Hz supply **STILL** present at the heater connection to hold valve in closed position.

Mode	Running Current
Fan Only	0.5A
Cooling (Boost)	6.5A
Heating (Boost)	1.0A
Maximum Starting Current	32A

NOTE
If unit is fitted with auxiliary supply, NO cooling functions are available during operation on this supply.

PM CHASSIS UNIT MANUAL

PERFORMANCE DATA

Total Cooling Capacity	3.1kW
Sensible Cooling Capacity	2.1kW

Based on:
 Internal Conditions of 21°Cdb – 15°Cwb
 External Conditions of 27°Cdb – 19°Cwb

PHYSICAL DATA

Height	360
Width	875
Depth	475
Weight	52kg

ADDITIONAL DATA

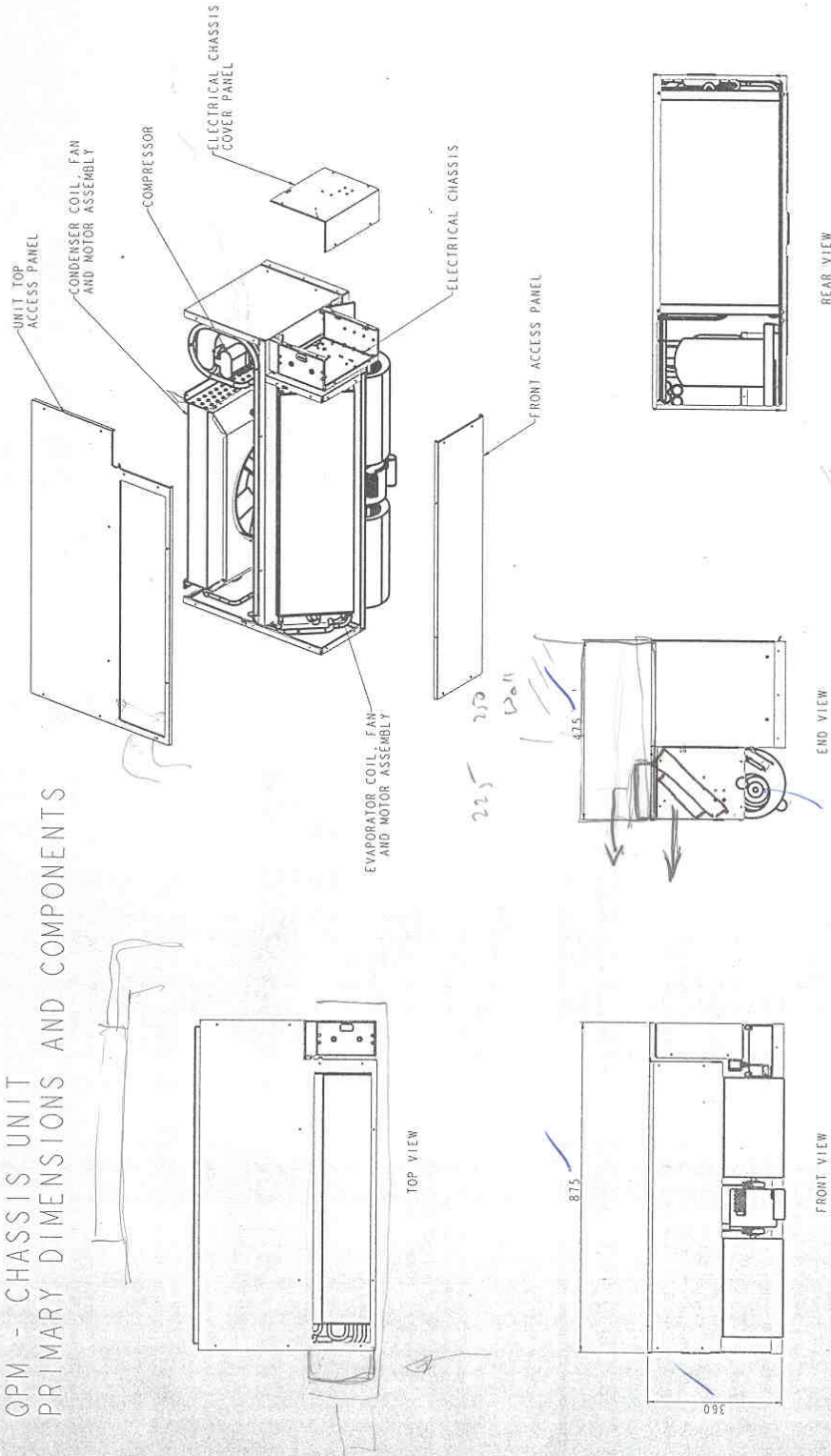
Refrigerant	R22
Charge Weight	1.56kg
Shipping Weight (2 units on pallet)	124kg

MAIN COMPONENT PART N^{OS}

Description	Part N°
10A Fuse	LG3298L/13
3.15 Fuse	1080379
Compressor Start Relay	1170171
Delay Start Timer	J211300023
Pressure Switch (L/P)	2100162
L/P Switch Timer	1230050
Compressor	2050104
Condensate Hose	2560028
Selector Switch (Rotary)	J9990397
Condenser fan motor capacitor	J9991420
Fan	J9991486
Low Ambient/De-Frost Thermostat	LG2995/02
Evaporator fan Deck Assembly	LG3298L/01
Condenser Fan Impellor	LG3298L/02
3-pole C/O Relay	LG3298L/08
2-Pole C/P Relay	LG3298L/09
Rocker Switch	LG3298L/11
Filter Pad (Fresh Air)	LG3298L/12
Control Thermostat	LG3298L/07

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QPM - CHASSIS UNIT PRIMARY DIMENSIONS AND COMPONENTS



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