

GME Series c/w HAN-L6 Controller

Underceiling/Console Split System Indoor Units

Installation & Maintenance

GENERAL

The GME Underceiling Indoor Unit are designed to be coupled with the OSA outdoor units and controlled by the HAN-L6 room temperature controller. Units must be installed in accordance with all national and local safety codes.

Combinations

One GME 152 with one OSA 45
 One GME 222 with one OSA 73
 One GME 302 with one OSA 100/101
 One GME 402 with one OSA 126/127
 One GME 502 with one OSA 147/148/150
 One GME 702 with one OSA 180/181

One GME unit c/w HAN-L6 Controller and one GME unit without controller (slave) can be connected in tandem to one single circuit Outdoor Unit. Tandem combinations available are:

Two GME 152 with one OSA 73
 Two GME 152 with one OSA 85
 Two GME 222 with one OSA 126/127
 Two GME 302 with one OSA 180/181
 Two GME 402 with one OSA 220/221
 One GME 222 and GME 152 (slave) with one OSA100/101

UNPACKING UNITS

The OSA outdoor unit and GME indoor unit are cartoned separately. Unpack each item carefully. Examine for transit damage.

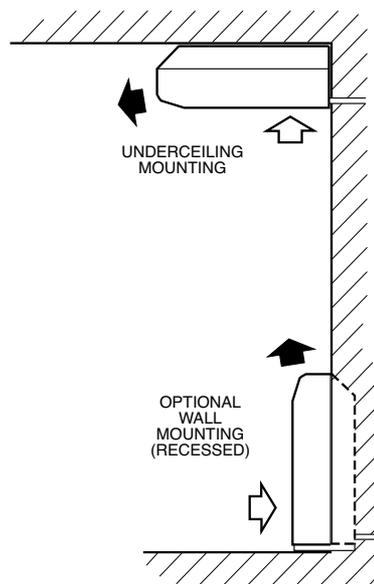
GME UNIT

Components

The GME carton includes:

1. GME indoor unit.
2. HAN-L6 Wall Control (shipped inside unit behind filter panel)
3. Insulated condensate drain extension kit.
4. Right-angled suction pipe extension c/w lock nut and teflon seal.

Fig. 1 Mounting Options



INSTALLATION

Positioning & Mounting

The GME is designed to be installed :

- a. suspended horizontally beneath a level or sloping ceiling, or
- b. floor or wall mounted (i.e. vertically).

Note: For an extra low profile the unit can be recessed into the ceiling (or wall).

Preparation

Prior to mounting the GME the mounting brackets must be detached from each end of the unit.

1. Open the end filter panel and locate the screw securing the unit endcaps (refer figure 2).
2. Remove the endcap securing screw and retain.
3. Remove the endcap by first sliding it forward approx. 20 mm, then pull outwards away from end of the unit.
4. Release each mounting bracket from behind the two bolts securing them to the unit.
5. Remove the floor mounting base from the back of the GME if when ceiling mounted it is required to fit flush to the wall.

Underceiling Mounting

Locate the GME near a wall to take full advantage of the long supply air throw and to hide the condensate drain pipe (and other connections) exiting at the rear of the unit.

Refrigeration and wiring connections are via the top or the rear access holes. A right-angled suction pipe extension is supplied to facilitate top exit.

Fig. 2 Mounting Bracket Detachment

VIEWED FROM BELOW

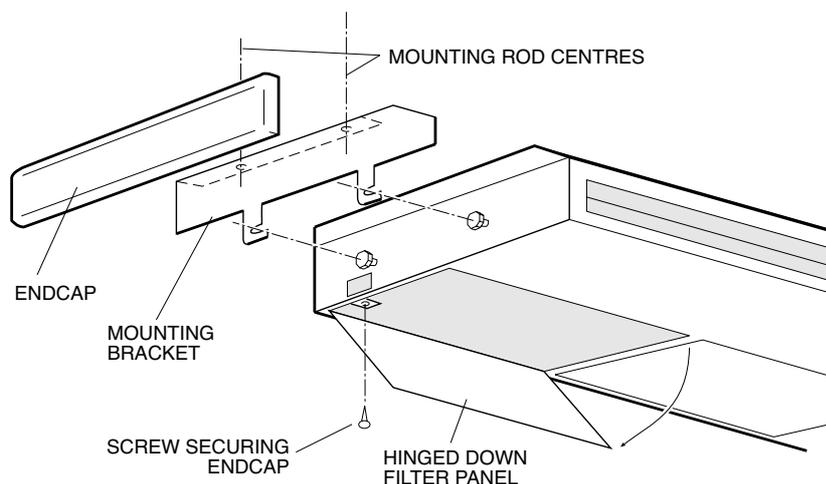
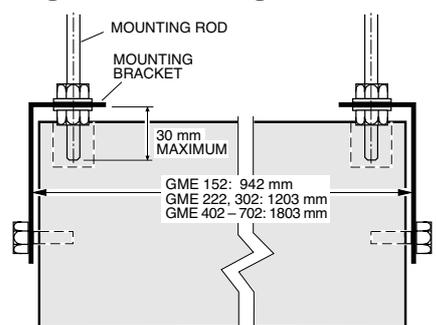


Fig. 3 Mounting Detail



Underceiling Installation

1. If an extra low profile installation is preferred, first cut the required ceiling aperture.

2. Install four M8 threaded hanging rods (not supplied) to protrude no more than 30 mm below the level of the mounting bracket flange (refer figure 3).
3. Thread on and tighten the lower washer and locknut sets (not supplied) to secure the left and right mounting brackets.
Note: Mounting bracket flanges face inwards.
4. Adjust distance between mounting brackets to match dimensions in figure 3.
5. Lift the unit to the mounting brackets locating the two protruding bolts, at each end of the unit, securely into the two slots provided in each mounting bracket, then tighten bolts to secure the GME unit.
6. Check that the secured GME is installed level to facilitate condensate drainage.
7. Complete all refrigeration piping connections (refer 'Indoor-Outdoor Unit Connections').
8. Fit the insulated condensate drain extension, orientated so that the drain vent tube is at the highest point in the condensate line.
9. After completing all piping connections replace the GME unit's left and right endcaps as follows:
 - a. Place each endcap slightly forward of the appropriate end of the unit,
 - b. Compress the endcap at its centre and slide back hooking the endcaps hook under the 'U' shaped bracket on the unit and into position .
 - c. Secure each with the screws removed earlier from behind the filter panels.

Wall / Floor Installation

Vertically mounted, the refrigeration and wiring connections can be made through the back or base of the unit.

1. Measure and cut wall recess, if required.
2. Secure the mounting brackets to the wall using fastenings suitable for the wall construction and weight of the GME unit. (Note: Mounting bracket flanges to face inwards.)
3. Refer to 'Underceiling Installation' instructions, steps 4 to 9 above, to complete vertically mounted installation.

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 GME wiring diagram on this pamphlet.

REFRIGERATION PIPING

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

GME 152 refrigerant line connections are:
Liquid: 6 mm OD (1/4") flare nut
Gas: 13 mm OD (1/2") flare nut

GME 222 refrigerant line connections are:
Liquid: 10 mm OD (3/8") flare nut
Gas: 16 mm OD (5/8") flare nut

GME 302 refrigerant line connections are:
Liquid: 10 mm OD (3/8") flare nut
Gas: 19 mm OD (3/4") sweat

GME 402 refrigerant line connections are:
Liquid: 13 mm OD (1/2") flare nut
Gas: 19 mm OD (3/4") sweat

GME 502, 702 refig. line connections are:
Liquid: 13 mm OD (1/2") flare nut
Gas: 22 mm OD (7/8") sweat

Separation Limits

Maximum Pipe Length: Up to 30 m total *1
Indoor Unit above Outdoor Unit : 12 m *2
Outdoor Unit above Indoor Unit : 18 m *2

*1 25 m total for GME 152 when connected to OSA 45.

*2 10 m for GME 152 when connected to OSA 45.

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

CONDENSATE DRAIN

Connect a 19 mm ID drain pipe (not supplied) to the GME's drain connection. Maintain a downwards slope of at least 1 in 50 (20 mm/m) along the drain line. No 'U' trap is necessary.

Insulation of the GME 502 and 702 drain pipes is recommended especially in high humidity environments.

Note: The unit has a right angled drain tray to allow for wall or ceiling installation.

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.

Note: The TTS-11 Wall Thermostat automatically switches the indoor fan off during de-ice, therefore no additional wiring is required to achieve this result.

Note: The HAN-L6 Controller automatically switches the indoor fan off during de-ice, therefore no additional wiring is required to achieve this result.

COOLING OPERATION

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

HAN-L6 CONTROLLER

The following components are supplied in a box beside the GME electrical box:

1. HAN-L6 Wall Control plaque, including wall mounting plate and screws.
2. 10 m interface lead (plaque-to-electrical box).
3. *User's Operating Instructions* booklet.
4. HAN-L6 Installation Instructions.

Optional

1. Remote return air temperature sensor on lead; 5 m or 10 m.
2. Remote wall mounted air temp. sensor on lead; 5 m or 10 m.
3. 20 m extended interface lead (plaque-to-electrical box).

4. GME electrical box-to-OSA outdoor unit interconnecting lead; 12.5 m or 25 m; 7 core.
5. Additional HAN-L6 Wall Control plaques (Note: maximum of 4 plaques in total).

Installation

The HAN-L6 Controller board is supplied pre-installed inside the GME unit's electrical box.

1. Isolate the GME unit from power supply, then remove electrical box cover.
2. Connect one end of the interconnecting cable (supplied separately) to the unit's terminals and the other end to your OSA outdoor unit as per wiring diagram, page 4.
4. Remove the Wall Control's interface lead from its box and connect one end of the interface lead to the colour coded terminal block on the HAN-L6 Controller board. Trace the remaining length of the lead to the wall plaque's intended location.
5. Ensure all interface and sensor wires are run separately and away from main power supply wires, including the interconnecting cable.
6. Replace the electrical box cover.

HAN-L6 Wall Control

Refer to the separate Installation Instructions supplied with the HAN-L6 Wall Control.

Remote Air Temperature Sensor/s (option)

The air temperature sensor is by default located in the Wall plaque. Optional remote air temperature sensors are available so that the measurement of the room temperature can be taken away from the wall plaque, eg. elsewhere in the room or in the return air duct.

If plugging the remote sensor into the Wall Control (TH1R) a jumper (JP1) must be repositioned to switch the active sensor to the remote location (refer separate HAN-L6 Installation Instructions).

Remote sensors can be plugged directly into the Controller board (PCB). This board accepts up to four sensors which are designated as 'zones' two to five. The first zone will always be the Wall Control itself. The Controller will always use the average of the zones selected. Refer to the separate installation instructions supplied with the PCB for further details.

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. Refer to Outdoor Unit *Installation & Maintenance* instructions and Wall Thermostat *User's Operating Instructions* to complete the start-up and commissioning procedure for the complete air conditioning system.
6. Run the motorised louvre to check up/down air distribution. Use the switch to set up/down louvre in **fixed** position,

if required. Do not try to set up/down louvre manually.

7. With the motorised louvre switched off, manually adjust the left/right louvre to throw the air in the required direction.
8. Demonstrate the Wall Thermostat to the owner/user, after having first thoroughly familiarised yourself with the *User's Operating Instructions*.

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.
5. Check air supply at louvre.

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

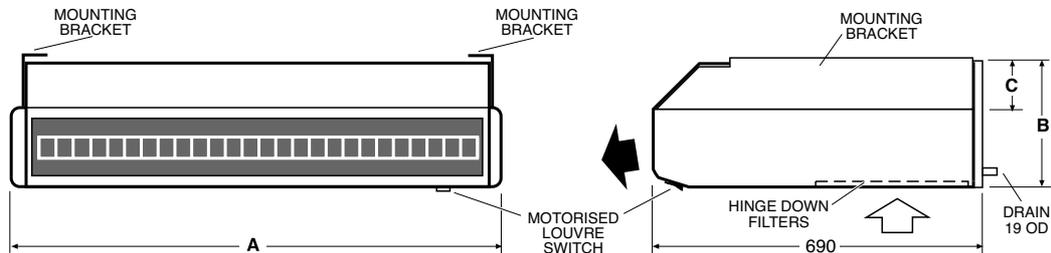
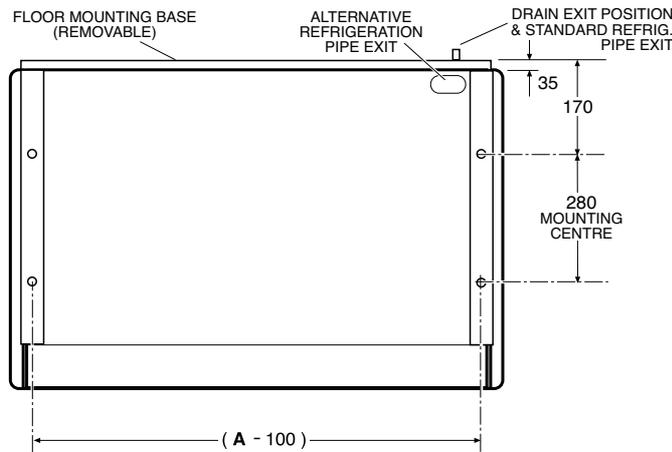
The manufacturer reserves the right to change specifications at any time without notice or obligation. Certified dimensions available on request.

This pamphlet replaces the previous issue no.s 2562 dated 12/05. Wiring revision C.

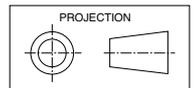
DIMENSIONS (mm)

Fig. 5 GME 152, 222, 302, 402, 502, 702

Not to Scale



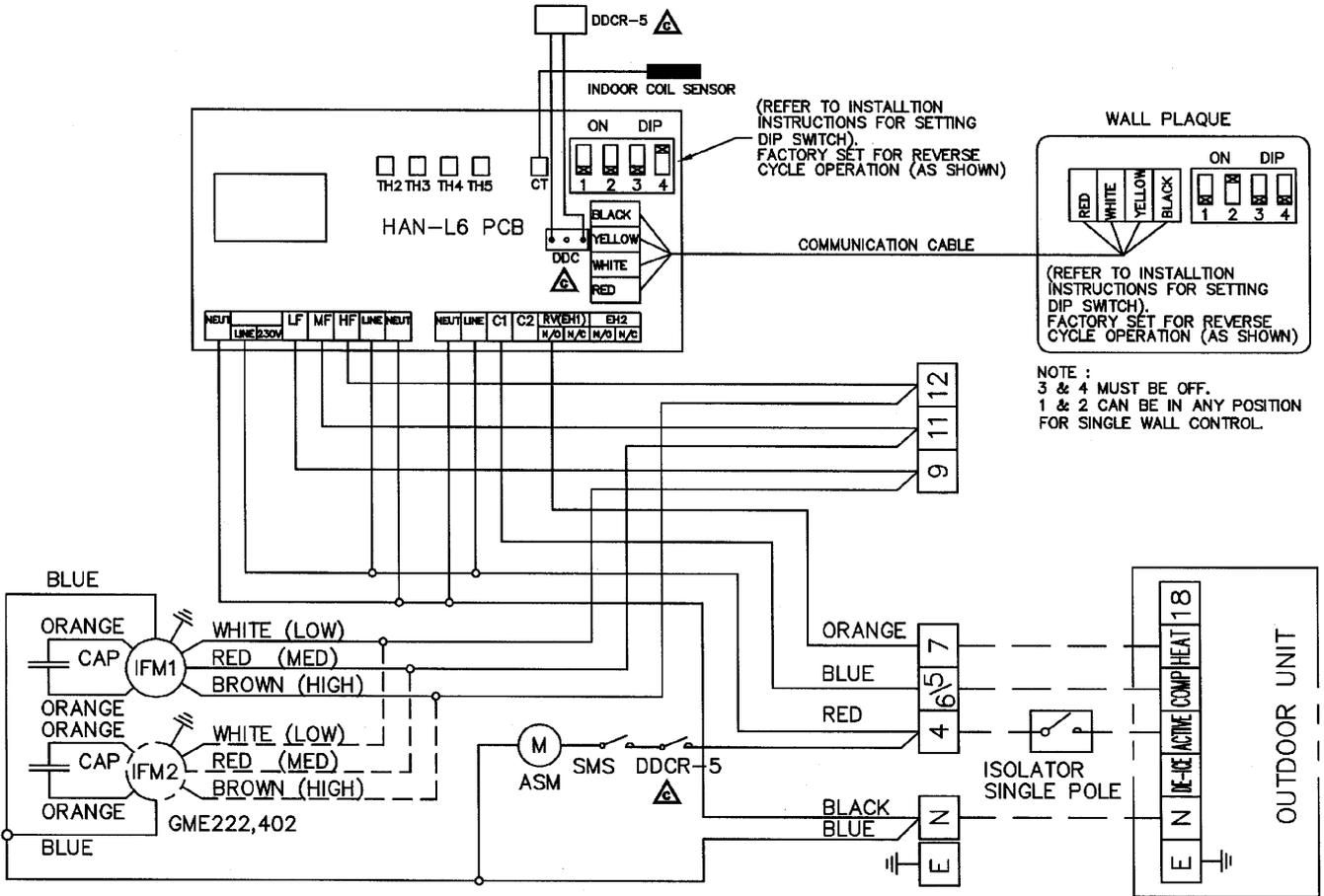
Indoor Units



MODEL	A	B	C
GME 152	1000	190	35
GME 222	1260	190	35
GME 302	1260	255	100
GME 402	1860	255	100
GME 502	1860	255	100
GME 702	1860	255	100

Net Weight:

- GME 152 27 kg
- GME 222 38 kg
- GME 302 48 kg
- GME 402 68 kg
- GME 502 74 kg
- GME 702 74 kg



NOTE :
 3 & 4 MUST BE OFF.
 1 & 2 CAN BE IN ANY POSITION
 FOR SINGLE WALL CONTROL.

MODEL	GME 152	GME 222	GME 302	GME 402	GME 502	GME 702
INDOOR FAN MOTOR RUNNING AMPS	HIGH	0.45	0.45 x2	0.70	0.60 x2	0.70 x2
	MED	0.22	0.23 x2	0.54	0.45 x2	0.54 x2
	LOW	0.17	0.18 x2	0.45	0.36 x2	0.45 x2
CAPACITOR MFD	2.75	2.75 x2	3.5	3.5 x2	3.5 x2	5 x2

ASM	AIR SWING MOTOR
CAP	CAPACITOR
E	EARTH STUD
IFM	INDOOR FAN MOTOR
SMS	SWING MOTOR SWITCH
DDCR-5	ACCESS CONTROL RELAY

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

C	ADD DDC RELAY/DDCR-5 SWITCH	N1381	27-04-06	ROD					
B	CHANGE TO TH2/TH3/TH4/TH5	180	21-06-05	ROD					
ISSUE	MODIFICATION	ECN	DATE	APRVD	DRG No.	DESCRIPTION	Mat.l	FINISH	ASSY No.

Programmed by	Title GME 152 TO 702 WIRING SCHEMATIC (T/STAT HAN-L6)		
PLOTTED 27-04-06 ©temperzone ltd 2005			
	Drawn L.H.Z.	Date 16-12-04	Drawing No. 208-124-004
	Scale	AKA 2005	Revision C