



**filterfit**  
engineered filtration solutions

# MEDI-VENT™

## CLEAN AIR UNIT



Building works

Isolation Rooms

Clean Air Zones

# MEDI-VENT™

## CLEAN AIR UNIT

### OPERATION AND MAINTENANCE MANUAL

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## I. INTRODUCTION

The Filterfit Medi-Vent™ Clean Air Unit has the unique ability to deliver ultra clean air through a three-stage filtration system with whisper quiet operation, the key to the successful operation of the Medi-Vent™

The Medi-Vent™ is designed and manufactured in Australia with all stages of manufacture carefully monitored to ensure the highest possible standards are maintained. Extensive research, development and testing ensure the Medi-Vent™ provides patient or product security, trouble free operation and ease of use.

The filter integrity and efficiency of the Medi-Vent™ is guaranteed due to the HEPA filters being individually tested and certified in a registered laboratory before installation.



## 2. DESCRIPTION

The Medi-Vent™ Clean Air Unit is designed to provide a negative pressure to a room, transfer air or area to assist in the containment of contamination to adjacent work zones.

The Medi-Vent™ is also suitable for a range of other applications where clean air is required. Applications would include isolation rooms, asbestos removal, equipment rooms and construction work zones. For areas where HEPA filtration is not required simply remove the HEPA filter and operate with a dual filtration system.

The Medi-Vent™ unit incorporates the following features:

- ☑ High air flow rates up to 480 L/S with attenuator fitted (higher without)
- ☑ Ultra low noise levels ranging from 44 – 55 dBA
- ☑ Three stage high efficiency filtration system with removable HEPA for dirty work
- ☑ Variable speed control
- ☑ Audible filter replacement alarm
- ☑ Dual magnehelic filter pressure drop gauges
- ☑ Ducted or free standing
- ☑ Interchangeable end panels with spigot option
- ☑ Modular construction
- ☑ Heavy gauge metal
- ☑ Painted finish of your choice
- ☑ Hospital grade castors with brakes fitted
- ☑ Recessed control panel incorporating three pin power socket
- ☑ Portability

### 3.APPLICATIONS

The Filterfit Medi-Vent™ Clean Air Unit is designed to provide negative air pressure to areas where dust and noise emission are undesirable. Areas such as the health care facility environment where patient welfare is paramount make the Medi-Vent™ the ideal choice.

The Medi-Vent™ incorporates a three-stage filtration system to ensure that the required filtration levels can be practically maintained. The **first stage** traps and removes the larger particles and gives extended life to the second and third stage filters.

The **second stage** filter is a deep bed filter with the **final stage** being a HEPA filter providing 99.99% efficiency to 0.3 micron.

All Medi-Vent™ units are modular and can be easily used without the attenuation section if so required.

All end panels are interchangeable to provide the flexibility of either a grille or spigot end.

These modules will assist in all areas where containment of airborne dust is critical.



## 4. LIMITATIONS

The Medi-Vent™ is not suitable for use with flammable or explosive materials as the fan motor is situated in the air-stream.

## 5. HANDLING

Care should be taken to avoid damaging the unit and the HEPA filter inside. Should the HEPA filter be damaged do not use the unit where air quality is critical. Handles are factory fitted to the unit for ease of handling and lifting.

## 6. SITE SETUP

The Medi-Vent™ is supplied with a recessed control panel on the side of the unit.

The panel incorporates an on/off switch, variable speed control, three-pin power socket, magnehelic gauges, and audible alarm facilities. Before switching the unit on, the following steps should be taken

- Check filters
- Ensure brake locks are secured in place
- Single phase power supply connected
- Ducting secured to unit
- Portability

## 7. FAN SPEED CONTROL

The fan speed control is located on the side of the unit in the recessed control panel which enables the user to select the appropriate air flow to suit site requirements.

## 8. HEPA FILTERS

The HEPA filters fitted to the Medi-Vent™ are 99.99% efficient to 0.3 micron. These filters have a fragile medium, which is easily damaged by physical contact. The HEPA filter cannot be cleaned and must be replaced. This will be governed by the pressure drop over the filter. An audible alarm will sound to indicate when filter requires replacement.

Replacement filters should be individually tested and certified to 99.99% efficiency to 0.3 micron.

The HEPA filters are replaced from the air on side of the unit and care must be taken whilst fitting these not to damage the filter medium.

## 9. FAN

The fan fitted to the Medi-Vent™ is a forward curve blower type. A direct drive motor fan assembly eliminate all external drive parts resulting in a more compact unit with lower component numbers.

NOTE: Due to the danger of electric shock and entanglement in the fan only qualified personnel should attempt to service the unit. It is recommended that the unit be returned to Filterfit for service.

The fan is accessible by removing the filters giving ample room to work on the fan if required. Care should be taken not to damage the internal insulation whilst working on the fan.



## 10. FILTER REPLACEMENT

A differential air pressure gauge is fitted to second and third stage filters to allow the filter to be continuously monitored. Replacement filters should be kept in stock in a clean and secure environment if possible to avoid downtime.

**The unit must be switched off and unplugged prior to removing the filters and only genuine Filterfit replacement parts should be used.**

- Pre filter replacement:**
- Remove grille
  - Lift hinged section of R.M. panel filter
  - Remove & replace filter pad

- Secondary filter replacement:**
- Open spring fastening clips
  - Remove gate-type R.M. filter
  - Remove & replace bag filter

- HEPA filter replacement:**
- Remove grille
  - Open spring fastening clips
  - Remove gate-type R.M. filter
  - Remove bag filter
  - Remove pre & secondary filter holding frame
  - Undo & remove four securing lugs securing HEPA filter
  - Tilt HEPA filter forward at top, turn & withdraw
  - from unit
  - Re-install HEPA filter in reverse sequence



Grille



Gate type RM panel filter



Secondary filter bag



Pre & secondary filter holding frames



Pre & secondary filter holding frame



HEPA securing lug



HEPA filter

## II. MAINTENANCE & REPLACEMENT PARTS

Under normal conditions daily monitoring of filters should provide adequate needs. Should, however, the unit be used without the HEPA filter, a full decontamination of unit should be carried out. This will ensure cleanliness before it is used in other areas.

**Due to the danger of electric shock and entanglement in the fan, only qualified personnel should attempt to service the unit. It is recommended that the unit be returned to Filterfit for service.**



For quality replacement parts and service contact Filterfit

<b>Part No.</b>	<b>Medivent parts list</b>
6-9000	Medi-Vent unit complete with attenuator
6-9001	Medi-Vent spigot 500mm diameter
6-9005	Medi-Vent reducer 500mm
6-9006	Minipleat HEPA 610 x 610 x 70mm with guard
6-9008	Gate R.M. panel BR10 media 595 x 595 x 25mm
6-9009	Replacement F5 pre filter pad 620x620mm
6-9010	F6 six pocket bag 595 x 595 x 380mm with header

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## 12. PLANT SAFETY CERTIFICATION



### DECLARATION OF CONFORMITY

**Manufacturers Name:** Filterfit Pty Ltd

**Manufacturers Address:** 24-26 Japaddy Street, Mordialloc. Victoria. 3189

**Declares that:**

**Product Name:** Medi-Vent™

**Product Type:** Clean Air Unit

**Product Options:** All

**Conforms to the following:**

Victorian Occupational Health & Safety Act

Victorian Occupational Health & Safety (Plant) Regulations

**Chris Hall**  
**Manager**

**Michael Raftis**  
**Manager OHS**

## 13. SPECIFICATIONS

### Airflow

With attenuator fitted

Max            461 litres/second (l/s)

Without attenuator fitted

Max            532 l/s

With HEPA filter removed

Max            889 l/s

Variable control direct drive fan

### Noise

44 dBa @ 280 l/s

48 dBa @ 400 l/s

55 dBa @ 460 l/s

### Electrical

Max 10A - 10A plug fitted

240v

50 Hz

Single phase

### Filtration

1<sup>st</sup> Filter F5 panel

2<sup>nd</sup> Filter F6 deep bed

3<sup>rd</sup> Filter HEPA 99.99% to 0.3 micron

Magnehelic pressure gauges with alarm

Note: Due to the nature of operation the HEPA seal cannot be guaranteed

### Duct Connections

Optional ~ 500 spigots connect to both ends of unit

With and without attenuator fitted

### Dimensions

665 x 665 x 2050 unit complete

665 x 655 x 1050 unit without attenuator