

Mobile Manual Bag-Change Filtration Units (HEPA)

Wozair manufactures a range of Mobile Filtration Units to compliment their radial and axial manual bag-change HEPA filter housings.



Mobile Manual Bag-Change Filtration Units (HEPA)

Wozair Limited manufacture a range of mini-mobile, mobile and modular HEPA filter housings using various configurations to suit customer requirements. These are primarily designed for filtering and processing exhaust air during the decommissioning of radioactive or other contaminated facilities.

All mini-mobile, mobile and modular HEPA filter units incorporate a filter housing or housings fitted with a circular plug-in filter insert which is changed using the bag in, bag out method, fan and control panel. Units are designed to be either portable or fixed with manifolds (if required) and self-contained, requiring connection of inlet and outlet ducting and an electrical supply once in position on site.

Individual filter housings are available in two sizes and are designed to pass through standard doorway openings wherever possible.

Mini Mobile units are used mainly for temporary ventilation applications whereas Standard Mobile units are used in larger temporary ventilation systems

Technical Information

Available Design Duty

Standard: 950 l/sec and 470 l/sec.

Non-standard: 280 l/sec, 160 l/sec and 75 l/sec

Testing

Full NDT of all containment welds

Materials of Construction

Casing and Flanges:

Materials

Stainless Steel 304L/316L (1.4307/1.4404)

White epoxy painted Carbon Steel

Flanges:

Filter housing casing is provided with 6 mm flat face flanges for bolting into high integrity ductwork. Alternate flange arrangements and flange thicknesses can be considered on request.

Mechanical Options

The following options can be incorporated if required.

- Emcel Filters
- Pressure monitoring instrumentation
- In-line HEPA Filters to protect pressure instruments
- FerroxyI testing
- Electric heater to reduce relative humidity of incoming air
- Spark arrestor stage
- Pre-filter stage
- Primary and secondary stages of HEPA filtration
- Acoustic silencers
- Duct connection flexible couplings with backing flange
- Manifolds
- Supports
- Inlet and outlet Isolation Dampers
- Depression Relief Systems
- PVC Filter change bags
- Mobile bag welder
- Scissor lift table

Ordering

Type: MFU	Capacity: 950 l/s
Material: 316L	
Type: Mobile Filter Unit = MFU Mobile Extract Unit = MEU	
Case Material: Stainless Steel Low Carbon 1.4307 = 304L Low Carbon 1.4404 = 316L Carbon Steel White Epoxy Painted = PCS	
Capacity: 75 l/s (non-standard) 160 l/s (non-standard) 280 l/s (non-standard) 470 l/s 950 l/s	
Order Code Example MFU/316L/950 l/s	

Features & Benefits

- Plug-in radial filter housing complete with HEPA filter insert and change bag
- Two-stage contra-rotating axial flow fans (mobile units and systems with high pressure loss) or single stage axial flow fan/ centrifugal fan (mini-mobile)
- Control panel with 5 pin 415/3/50Hz electrical connector socket, variable speed drive for fan motor control with keypad controller, start and stop push buttons, emergency stop and high filter differential pressure status/alarm
- Manually operated inlet and outlet dampers providing isolation from the ventilation system to conduct the filter change
- In-bleed depression relief system to reduce the internal pressure to near room conditions to allow the access cover to be removed and to conduct the filter change
- Differential pressure tapping points to monitor filter condition connected to a pressure gauge and transmitter
- Support frame with 4 off lockable castor wheels and jacking screws

Performance

Manual bag-change filter housings radial

1. Straight through 180 degrees (typically top entry, bottom exit)
- 450 Pa clean and 800 Pa dirty;
90 degrees (typically rear entry, side exit)- 450 Pa clean and 800 Pa dirty

2. Radial housing Maximum operating pressure: 3 kPa

3. Safe change Radial; Volume flow rates offered

- a. 75 l/s (150 cfm) (non-standard)
- b. 160 l/s (340 cfm) (non-standard)
- c. 280 l/s (600 cfm) (non-standard)
- d. 470 l/s (1000 cfm)
- e. 950 l/s (2000 cfm)

4. Manual bag-change housing; the units are designed for the circular plug-in filters to achieve a minimum 99.25% efficiency to ES_0_1737_2

Maintenance

Refer to Wozair maintenance manual

Filter change out frequency will be subject to site conditions



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