

## Fume Extraction



Made in Britain

### Inspection

Remove the Fume Extractor from the shipping carton and inspect for damage.

#### Items included with model **35440**:

- 1 – MENDA Solo Extractor with one inlet, 120VAC
- 1 – **35456** 30" 50mm ESD Stay Put Extraction Arm with Nozzle
- 1 – **35457** 5' 50mm Flex Hose
- 1 – **35454** Flip Top Flush Seal Mounting Plate includes a grounding wire with ring terminal
- 1 – **35453** Table Bracket Installation Kit
- 2 – **35458** Jubilee Clips
- 1 – Sleeve
- 1 – 6' Power Cord, 120VAC, North American Plug
- 1 – **35451** Combined Filter (HEPA)
- 1 – **35450** Pre-Filter, Pack of 5

**35452** Gas Filter is available as an option

#### Items included with model **35445**:

- 1 – MENDA Duo Extractor with two inlets, 120VAC
- 2 – **35456** 30" 50mm ESD Stay Put Extraction Arms with Nozzle
- 2 – **35457** 5' 50mm Flex Hoses
- 2 – **35454** Flip Top Flush Seal Mounting Plate includes a grounding wire with ring terminal
- 2 – **35453** Table Bracket Installation Kits
- 4 – **35458** Jubilee Clips
- 2 – Sleeves
- 1 – Black Inlet Cover
- 1 – 6' Power Cord, 120VAC, North American Plug
- 1 – **35451** Combined Filter (HEPA)
- 1 – **35450** Pre-Filter, Pack of 5

**35452** Gas Filter is available as an option

#### Items included with model **35460**:

- 1 - MENDA Quad Extractor with two inlets, 120VAC
- 1 - **35461** Filter

All accessories are sold separately.

2 - Item **35459** (75mm Funnel Arm) are recommended.



35440



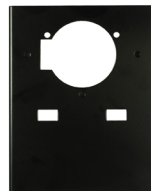
35445



35460



35459 - 40" 75mm Mounted Arm Funnel



35453 - Table Bracket Installation Kit



35457 - 5' 50mm Flex Hose



35454 - Flip Top



Power Cord



35458 - Jubilee Clips



Sleeve



35456 - 30" 50mm Extraction Arm with Nozzle

## Installation

### **Extractor Installation Procedure**

Move the unit to the location where it is going to be installed and remove the unit from its packaging.

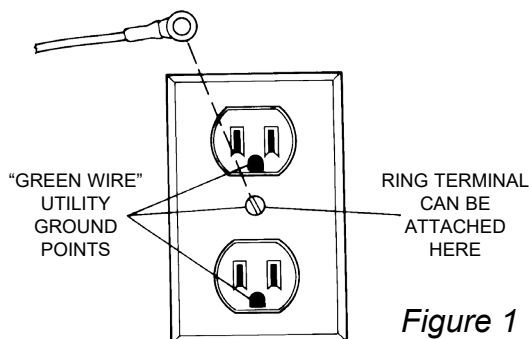
### **Caution**

- The unit should be installed in a well ventilated room.
- Ensure that a 18" space is available around any louvered areas of the unit to ensure adequate air flow.
- Do not block or cover any louvers or cooling holes on the unit as this severely restricts air flow and may cause damage to the unit.
- The filtered air exhaust is at the base of the 35440, 35445 and 35460 units.
- Under no circumstances should the exhaust outlet(s) be covered as this will restrict the airflow and cause overheating.
- Check filters are located in their correct position and carefully replace lid.

Connect the extraction ducting between the extractor inlet(s) and the extraction arms using hose adaptors and jubilee clips as required. Ducting runs should be kept as short as possible.

The 35440 and 35445 are supplied with an installation kit. This kit gives the option of fixing the extraction arms through the workbench using the flip top flush sealing mounting plates (Figure 2) or the clamp on bench mount brackets as preferred (Figure 3). The top of the work bench must be suitably drilled using a 2.5" hole cutter if the flip top flush sealing mounting plates are used. When using the flip top use the grounding wire with ring terminal to ground the ESD Stay Put Extraction Arm with Nozzle (Figure 1) to equipment ground (preferably 3-wire AC outlet ground).

For the 35460 the required installation fittings would have been selected at the time of ordering.



*Figure 1*

## Operation

### **On/Off switch**

These extractor units are turned on and off by using the switch on the front or rear of the unit. See the note below for units supplied with a remote flow control box.

### **Single LED Filter condition indication**

On 35440 and 35445 units only, an LED on the front panel of the machine will illuminate when the filters need attention.

See the Maintenance section for information on changing filters.

## Maintenance

### **General**

User maintenance is limited to cleaning the unit and replacing the filters with new. Only MENDA is authorized to carry out component testing and replacement. Unauthorized work or the use of unauthorized replacement filters may result in a potentially dangerous situation and/or damage to the extractor unit, and will invalidate the manufacturer's warranty.

### **Cleaning Unit**

The powder coated finish can be cleaned with a damp cloth and non-aggressive detergent. Do not use an abrasive cleaning product as this will damage the finish.

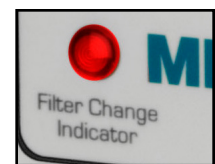
The cooling inlets and outlets should be cleaned once a year to prevent build up of dust and overheating of unit

### **Caution**

To prevent overheating, units should not be run with a blocked filter condition, or with dust obstruction of inlets or outlets.

### **Replacing Filters**

The filter package needs attention when the filter change signal is alarmed and red LED's on the unit are illuminated.



A log of filter changes should be maintained by the user.

All filters are tested to BS3928. A certificate on conformity for each filter is available on request.

It is recommended that a spare set of filters are kept on site to avoid prolonged unit unavailability. Refer to the consumable spares table.

**Filter replacement indication**

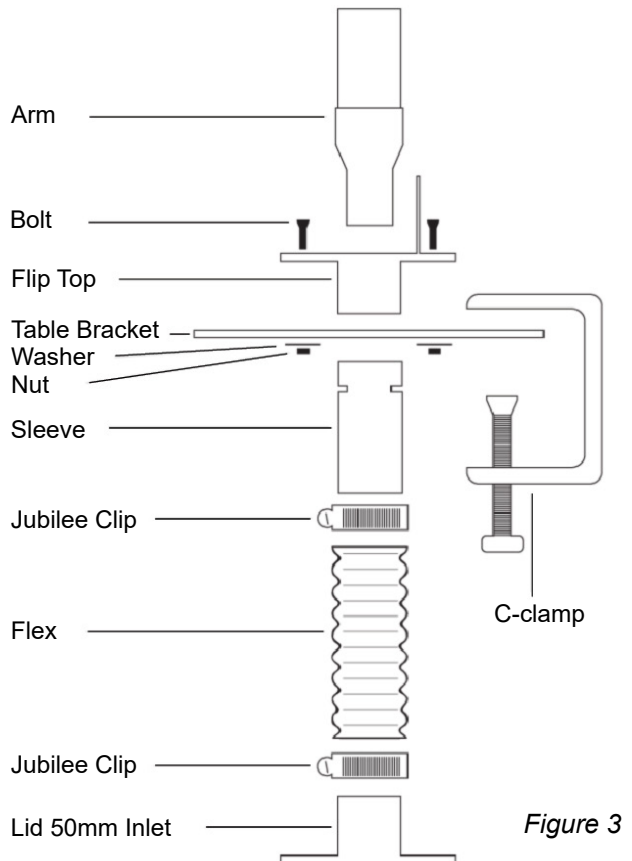
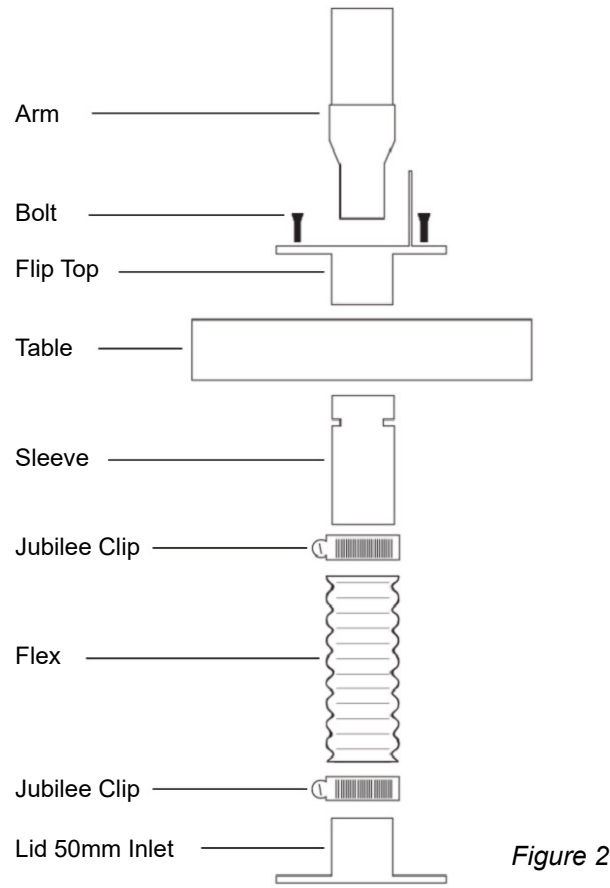
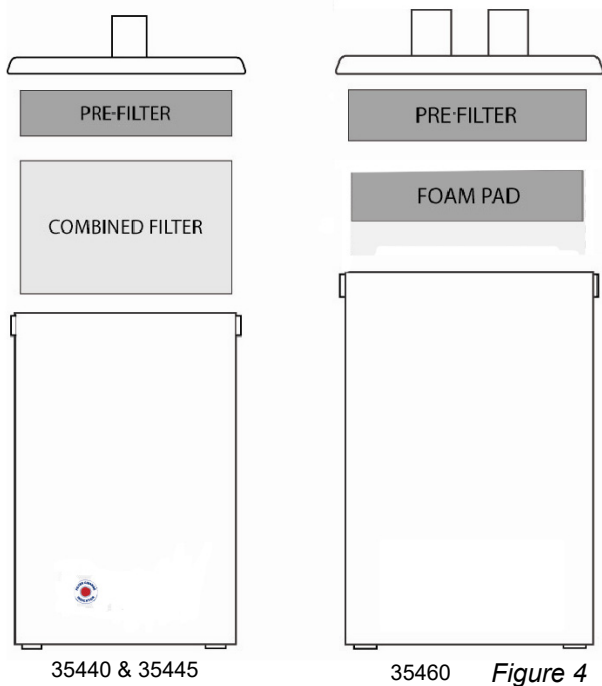
The first few filter changes should only apply to the pre-filter. The indication that the Combined or Gas / HEPA filter needs replacing is when the filter alarm signal and LED's (if fitted) do not go off after the pre-filter has been changed.

Please note that the carbon media within the combined filter or Gas filter is hygroscopic and will absorb moisture from the atmosphere. This is why these filters should be changed every twelve months regardless.

The filter change procedure depends on the specific model of extractor. (See layout diagrams to the right)

**Filter replacement 35440, 35445, 35460**

1. Isolate the electrical supply to the extractor.
2. Undo the protex clips on either side of the unit and lift the lid or motor section clear of the filter package and place on a safe surface.
3. Remove the filter package from the base of the unit.
4. Vacuum out any dust in the base. (We recommend using a Menda Omega Field or Service Vac).
5. Remove the pre-filter, which may be recessed into the combined filter. (See Figure 4)
6. Replace the exhausted pre-filter, or combined filter, or Foam filter as necessary.
7. Place the filter package back into position. Replace the motor section, fasten the protex clips and start up the unit.



## 35440 System Specifications

<b>Capacity:</b>	53 CFM		
<b>Size:</b>	height 15" x depth 10" x width 10"		
<b>Weight:</b>	15 lbs.		
<b>Exhauster:</b>	Centrifugal fan		
<b>Rated Output:</b>	60w (65w)		
<b>Electrical supply:</b>	120V 1ph 60Hz		
<b>Full Load Current:</b>	0.3A (0.65A)		
<b>Noise level:</b>	54dB (A)		
<b>Filters:</b>	Pre-filter	Surface area	0.06 m <sup>2</sup>
		Efficiency F7	85% @ 0.8μ
	Combined filter	Surface area	2.0 m <sup>2</sup>
		Efficiency H13	99.997% @ 0.3μ
		Impregnated Carbon	
<b>Duct Size:</b>	50mm		
<b>Duct Run:</b>	9.5 feet		

## 35445 System Specifications

<b>Capacity:</b>	125 CFM		
<b>Size:</b>	height 15" x depth 10" x width 10"		
<b>Weight:</b>	22 lbs.		
<b>Exhauster:</b>	Centrifugal fan		
<b>Rated Output:</b>	140w (95w)		
<b>Electrical supply:</b>	120V 1ph 60Hz		
<b>Full Load Current:</b>	1.1A (1.4A)		
<b>Noise level:</b>	55dB (A)		
<b>Filters:</b>	Pre-filter	Surface area	0.06 m <sup>2</sup>
		Efficiency F7	85% @ 0.8μ
	Combined filter	Surface area	2.0 m <sup>2</sup>
		Efficiency H13	99.997% @ 0.3μ
		Impregnated Carbon	
<b>Duct Size:</b>	2 x 50mm		
<b>Duct Run:</b>	16 feet		

## 35460 System Specifications

<b>Capacity:</b>	320 CFM		
<b>Size:</b>	height 17.5" x depth 14.5" x width 14.5"		
<b>Weight:</b>	50 lbs.		
<b>Exhauster:</b>	Centrifugal fan		
<b>Rated Output:</b>	240W (255W)		
<b>Electrical supply:</b>	120V 1ph 60Hz		
<b>Full Load Current:</b>	1.8A (3.5A)		
<b>Noise level:</b>	60dB (A)		
<b>Filters:</b>	Pre-filter	Efficiency F8	85% @ 0.8μ
	Gas activated carbon foam		
<b>Duct Size:</b>	4 x 50mm or 2 x 75mm		
<b>Duct Run:</b>	19.5 feet		

The 35460 will run a maximum of six 50mm arms or four 75mm arms and with a maximum duct run of 19.5 feet.

### Limited Warranty

Menda expressly warrants that for a period of one (1) year from the date of purchase, Menda Fume Extraction Units will be free of defects in material (parts) and workmanship (labor). Within the warranty period, the product will be tested, repaired, or replaced at Menda's option, free of charge. Call our Customer Service Department at 909-627-2453 for a Return Material Authorization (RMA) and proper shipping instructions and address. Include a copy of your original packing slip, invoice, or other proof of purchase date. Any unit under warranty should be shipped prepaid to the Menda factory. Warranty repairs will take approximately two weeks.

If your unit is out of warranty, call Customer Service at 909-627-2453 for a Return Material Authorization (RMA) and proper shipping instructions and address. Menda will quote repair charges necessary to bring your unit up to factory standards.

### Warranty Exclusions

THE FOREGOING EXPRESS WARRANTY IS MADE IN LIEU OF ALL OTHER PRODUCT WARRANTIES, EXPRESSED AND IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH ARE SPECIFICALLY DISCLAIMED. The express warranty will not apply to defects or damage due to accidents, neglect, misuse, alterations, operator error, or failure to properly maintain, clean or repair products.

### Limit of Liability

In no event will Menda or any seller be responsible or liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, users shall determine the suitability of the product for their intended use, and users assume all risk and liability whatsoever in connection therewith.

## HEPA FILTER (35451) MATERIAL SAFETY DATA SHEET

### SECTION 1 — COMPOSITION / INFORMATION ON COMPONENTS

QAS NO	Constituents Chemical Name	Content %	PEL & TLV
65997-17-3	Fibre Glass	75-95%	5mg/m3 OSHA breathable dust 10mg/m3 OSHA Total dust 1 fibre/cc (TWA) ACGIH
25038-59-9	Polyester	0-20%	5mg/m3 OSHA breathable dust
9004-34-6	Regenerate cellulose	0-3%	5mg/m3 OSHA breathable dust
NA	Acrylic latex	3-10%	NA

### SECTION 2 — HAZARDS IDENTIFICATION

The ingredients in this product are not listed as carcinogens by ACGIH, IARC, NTP, or OSHA.

Glass wool fibres; dust of breathable sizes has been classified by NTP as reasonable anticipated to be a carcinogen IARC has classified glass wool fibres as Group 2B, possibly carcinogenic to humans.

OSHA has not classified glass wool.

Glass wool fibres; dust of breathable sizes has been classified as Group III possibly carcinogenic to human according to the European Directive 97/69/C.E.

Pre-existing upper respiratory and lung diseases may be aggravated by dust or loose fibres.

Overexposure to loose fibres or dust may cause irritation or soreness in the throat and nose, skin irritation, rash, eye irritation or inflammation, may cause irritation to the gastro-intestinal tract.

### SECTION 3 — FIRST AID MEASURES

<b>Eyes:</b>	Do not rub eyes. Flush immediately with large amounts of water for at least 15min. Eyelids should be held away from the eyeball to ensure thorough rinsing. If irritation persists or foreign body in the eye, get immediate medical attention.
<b>Skin:</b>	Wash area of contact gently with soap and water. Launder contaminated clothing before reuse. Get medical attention if irritation persists.
<b>Ingestion:</b>	Do not induce vomiting. Get medical attention for substantial ingestions or if symptoms develop.
<b>Inhalation:</b>	If symptoms develop, remove person from source of exposure to fresh air. Drink water to clear throat. Blow nose to evacuate fibres. Get medical attention if irritation persists.

### SECTION 4 — FIRE FIGHTING MEASURES

#### Flammable Properties:

#### Hazardous Combustion

#### Products:

As regards toxicity, the gas coming out of the paper due to its small organic binder content does not represent any risk.

#### General Hazards:

The organic binder may burn-off at high temperatures, however this material will not support combustion. The packaging as well as the materials around might be flammable.

#### Extinguishing Media:

Water spray, Carbon dioxide, Foam, Dry chemical

#### Fire Fighting Equipment

Wear self-contained breathing apparatus when entering in oxygen deficient area. Avoid breathing combustion products from initial burn-off organic binder.

### SECTION 5 — ACCIDENTAL RELEASE MEASURES

Pick up large pieces. Use vacuum to clean up any dust. Wet dust with water where sweeping is necessary.

Personal safety and exposure recommendations described elsewhere in this data sheet apply to exposure during clean up of spilled material.



## GAS FILTER (35452) MATERIAL SAFETY DATA SHEET

### SECTION 1 — COMPOSITION / INFORMATION ON INGREDIENTS

**Chemical Characterisation:** Steam Activated Carbon, black, granular impregnated with approx 5-10% wt. Phosphoric acid and Carbamide.

Components:	CAS number	UN number
Carbon	7440-44-0	1362
Phosphoric Acid	7664-38-2	1805
Carbamide	57-13-6	

### SECTION 2 — HAZARDS IDENTIFICATION

This product is an odourless black granule or extruded pellet. Never enter a confined space containing carbon as it will absorb oxygen and asphyxiation may result.

Prolonged or repeated exposure to dust may cause eye and respiratory tract irritation.

### SECTION 3 — FIRST AID MEASURES

**Eyes:** Promptly flush with running water for 15 minutes including water under eyelids. Obtain medical attention.

**Skin:** Wash affected area well with water. Remove clothing, clean and dry thoroughly before re-use. Get medical help if irritation develops.

**Ingestion:** Give 1/2 pint of warm water to drink. Seek medical help urgently. Do not induce vomiting.

**Inhalation:** Remove to fresh air. Get medical help if irritation develops.

### SECTION 4 — FIRE FIGHTING MEASURES

**Flammable Properties:**

**Hazardous Combustion**

**Products:** Material will burn in a fire, releasing combustion products of carbon monoxide, carbon dioxide and phosphorus oxide.

**General Hazards:** Other material adsorbed on to the carbon may also be released.

**Extinguishing Media:** Water fog, foam, dry chemical.

**Fire Fighting Equipment** Self-contained breathing apparatus and full body protective clothing.

### SECTION 5 — ACCIDENTAL RELEASE MEASURES

Notify safety personnel for large spills. Avoid generation of dust. Collect solid for recovery or disposal. Personnel involved in clean up need protection against skin and eye contact and inhalation of dust or mist.

### SECTION 6 — HANDLING AND STORAGE

**Handling:** Follow good handling and housekeeping procedures, avoid spills, accumulation of dust and generation of airborne dust. Avoid prolonged contact with skin and eyes. Avoid inhalation of dust. Wear protective gloves and safety glasses or goggles. Use in a well ventilated area.

**Storage:** Store in a sealed container in a clean, dry, well ventilated area away from strong oxidisers, strong acids, ignition sources, combustible materials and heat.

### SECTION 7 — EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Eye Protection:** Wear safety glasses with side shields, safety goggles or a face shield, especially in dusty conditions. Provide eye wash station nearby.

**Skin Protection:** Gloves and overalls should be worn when handling this product.

**Respiratory Protection:** A dust mask meeting CEN or NIOSH regulations should be worn when handling this product. Maximum permissible exposure limit for inert dust: 6mg/m<sup>3</sup>. When exceeded, an irritation of respiratory tract is possible.

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#### SECTION 8 — PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

**Form** Solid  
**Colour** Black  
**Danger of Explosion** Under normal conditions no danger of explosion. In unfavourable conditions may form an explosive dust/air mixture.  
**Bulk Density:** Approx 630g/l<sup>-1</sup>  
**Solubility** Insoluble (the acid impregnation is water soluble)  
**pH Value** Strong acid/suspension with water forms potassium hydroxide solution  
**Ignition Temperature** >350°C  
**Auto-Ignition** None

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#### SECTION 9 — STABILITY AND REACTIVITY

**Chemical Stability:** Stable  
**Conditions to Avoid:** Heat and ignition sources, strong oxidisers and combustible materials.  
**Hazardous Decomposition Products:** CO, CO<sub>2</sub>, phosphorous oxide, ammonia  
**Hazardous Polymerisation:** None.

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#### SECTION 10 — TOXICOLOGICAL INFORMATION

No toxicological properties

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#### SECTION 11 — ECOLOGICAL INFORMATION

Slightly hazardous

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#### SECTION 12 — DISPOSAL CONSIDERATIONS

In accordance with local regulations.

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#### SECTION 13 — TRANSPORT INFORMATION

**Land Transport ADR/RID** Class: 8, corrosive substances UN - Number 3244  
**Maritime Transport IMDG** Class: 8, corrosive substances UN - Number 3244  
**Air Transport IATA** Class: 8, corrosive substances UN - Number 3244

Corrosive solid, activated carbon containing phosphoric acid

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#### SECTION 14 — REGULATORY INFORMATION

**Hazardous Component** Corrosive = C  
**R-Phrases** R 36/38 irritates the eyes and skin  
**S-Phrases** S 20 when using so not eat or drink  
S 26 In case of contact with eyes flush careful with water and consult a physician  
S 45 In case of accident or indisposition consult a physician immediately