



Volume Fume
Extraction
VFX-1000-H/VFX-1000-G



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Safety Instructions

Symbols used

- Danger** refers to an immediately impending danger. If the danger is not avoided, it could result in death or severe (crippling) injury.
- Warning** refers to a possibly dangerous situation. If it is not avoided, it could result in death or severe injury
- Caution** refers to a possibly harmful situation. If it is not avoided, damage could be caused to the product or to something in its environment.
- Important** refers to handling tips and other particularly useful information. This does not signify a dangerous or harmful situation.

Electrical safety

The VFX-1000 Volume Fume Extraction Unit is designed to meet the safety requirements of the Low Voltage Directive 2006/95/EC (previously numbered 73/23/EEC)

- Warning** During works with the pump/motor housing open, live, 230/110volt components are accessible. Make sure that rules and regulations for work on live components are always observed.
- Important** To reduce the risk of fire, electric shock or injury:
1. Always isolate the system from the mains power supply before removing the pump/motor panel
 2. Use only as described in the manual
 3. Connect to a properly grounded outlet

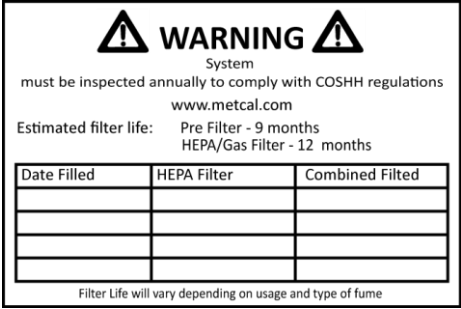






Dangers to eyes, breathing and skin

Once used, the filters in the VFX-1000 Volume Fume Extraction Unit contain a mixture of particulates, some of which may be sub micron size. When the used filters are moved, it may agitate some of this particulate which could get into the breathing zone and eyes of the operative.

Caution: When changing used filters always wear mask, safety glasses and gloves.

Please note the media in the gas filter fitted in this unit can adsorb a wide range of organic compounds. However, it is the responsibility of the user to ensure it is suitable for the application it is being used on.

Warning and Information Labels

Label/Symbol	Position															
 <p>WARNING System must be inspected annually to comply with COSHH regulations www.metcal.com Estimated filter life: Pre Filter - 9 months HEPA/Gas Filter - 12 months</p> <table border="1"> <thead> <tr> <th>Date Filled</th> <th>HEPA Filter</th> <th>Combined Filtered</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table> <p><small>Filter Life will vary depending on usage and type of fume</small></p>	Date Filled	HEPA Filter	Combined Filtered													Rear of base below serial no label
Date Filled	HEPA Filter	Combined Filtered														
 <p>WARNING. ISOLATE MAINS BEFORE REMOVING COVER AVERTISSEMENT. CONDUITE PRINCIPALE SOLITAIRE AVANT LA COUVERTURE DEMENAGEANTE VORSICHT. LOESEN SIE DIE VERBINDUNGEN BEVOR SIE ABDECKUNG ENTFERNEN</p>	Side beside Protex clip															
 <p>WARNING GOGGLES, GLOVES & MASK MUST BE WORN WHEN CHANGING FILTERS</p>	Rear of base below filter change label															
 <p>Danger Disconnect the mains supply before removing this cover</p>	Pump/motor access panel															
 <p>DO NOT COVER</p>	Pump/motor access panel															
 <p>MODEL : VFX-1000-H Serial No. <input type="text"/> 115-230V, 1.9A 50/60 Hz WARNING THIS EQUIPMENT MUST BE EARTHED YEAR OF MANUFACTURE 06/2017</p> <p>WEEE COMPLIANT REACH COMPLIANT RoHS COMPLIANT</p> <p>CE  www.Metcal.com METCAL</p>	Rear of unit below power connection															

Installation

Introduction

Soldering activities take many forms, but in most operations, a good mechanical joint between the components being joined requires a flux, which cleans the component surfaces and helps the molten solder flow, to ensure a good connection. The temperature required to melt the solder causes the flux to vaporise and this is the solder fume.

There are two interlinked reasons for capturing the fume:

- Operator health protection – The fume is one of the major causes of industrial asthma.
- Legal requirement – The Health and Safety Executive have set an occupational exposure limit of 0.05mg/m³ (EH40/2000) for rosin based solder flux fume. It is a legal requirement for employers to ensure none of their employees are exposed to this level and additionally they are required to reduce the exposure to as low a level as is reasonably possible

The VFX-1000 Volume Fume Extraction Unit is suitable for extracting the fume from soldering applications, capturing it in the multistage filter system and returning the associated clean air back into the workplace.

Please note the media in the gas filter fitted in this unit can adsorb a wide range of organic compounds. However, it is the responsibility of the user to ensure it is suitable for the application it is being used on.

Extractor Overview

The VFX-1000 Volume Fume Extraction Unit provides extraction and filtration of the fume generated by soldering operations. The unit is of robust design and features ease of use with minimal maintenance. The main components are shown in fig. 1.

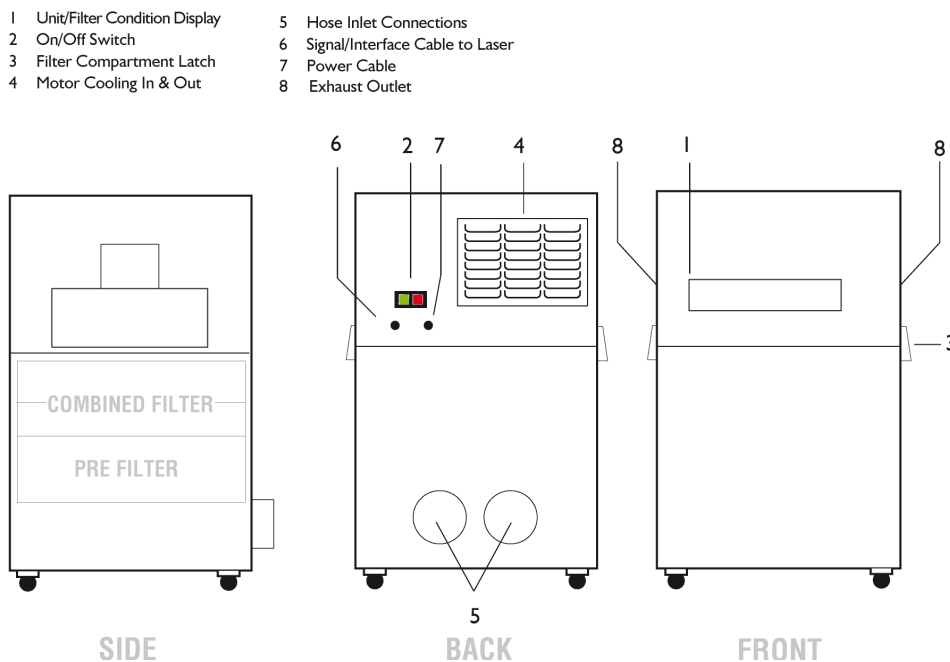


Fig 1.

Extractor Installation Procedure

Move the unit to the location where it is going to be installed and remove the unit from its packaging. This should be in a well-ventilated room.

Ensure that a 0.5m space is available around the louvered areas of the unit to ensure good air flow. Lock the two braked castors.

Check the integrity of the electrical power cable.

Caution Test the mains input at the isolated supply is the same as the voltage on the Serial No label.

Connect the power cable to an isolated electrical supply.

General Safety Requirements

The mains socket outlet should be installed near the equipment and be easily accessible

Caution

Do not block or cover louvers on the unit as this severely restricts air flow and may cause damage to the unit

Caution

This unit is over 18Kgs (40 lbs) in weight and should only be lifted with suitable lifting equipment

Caution

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired

Read all instructions in this manual before using this extractor.

Warning **Mains voltage. Dangerous voltages exist in this equipment.
Ensure all covers are fitted before operating this equipment.**





Operation

Manual operation

The VFX-1000 Volume Fume Extraction Unit is turned on and off by the illuminated, red, rocker switch on the rear of the unit. Local power and airflow control is via the power switch located on the wired remote control.

Filter condition and system failure indicators

The three LED's on the front panel (see table below) indicate the following conditions

LED's	Showing	Indicates
	Green only	Unit is running - Filters are usable
	Green & Amber	Pre or Combined filter 75% blocked
	Green, Amber & Red	Pre or Combined filter blocked and in need of replacing
	Green, Amber & Red flashing	Fault with the extractor This condition may occur for a few seconds on start up

Maintenance

Maintenance consists of replacing filters only. Replace the filters annually or when the filter change indicator is activated

Pre-filter replacement

The filter needs changing when the filter change signal is alarmed and/or the green amber and red LED's on the unit are illuminated. Isolate the electrical supply to the extractor

Caution: When changing used filters always wear mask, safety glasses and gloves.

Isolate the electrical supply to the unit. Undo the protex clips on either side of the unit and lift the motor section off. Remove the filters from the base. Vacuum out any dust in the base. Remove the pre-filter from inside the combined filter and replace with a new pre-filter. Locate the combined filter onto the base. Replace the motor section and fasten the protex clips. Reconnect the power supply. (See fig 2).

Combined filter replacement

The filter needs changing annually, or when the filter alarm signal and LED's do not go off after changing the pre-filter. Isolate the electrical supply to the extractor.

The carbon media within this filter is hygroscopic and will absorb moisture from the atmosphere. Filters should be changed every twelve months regardless.

Caution: When changing used filters always wear mask, safety glasses and gloves.

Isolate the electrical supply to the unit. Undo the protex clips on either side of the unit and lift the motor section off.



Remove the filters from the base. Vacuum out any dust in the base.

Remove the pre-filter from inside the combined filter and if still serviceable fit into a new combined filter. Locate the new filters onto the base.

Replace the motor section and fasten the protex clips. Reconnect the power supply.

Fig 2.

Consumable Spares

Unit	Part Number	Description
VFX-1000-H	AC-VFX-1000-PRE	Pre-filter for VFX-1000
VFX-1000-G	AC-VFX-FIL-HEPA	Combined HEPA filter
	AC-VFX-FIL-GAS	Deep Bed Gas Filter

Accessories

Part Number	Description
AC-VFX-ARM-PF	50mmØ Arm, 650mm long w/ plenum/funnel, blk
AC-VFX-ARM-RF	50mmØ Arm, 650mm long w/rnd funnel, blk
AC-VFX-ARM-RF	50mmØ Arm, 650mm long w/ long funnel, LED, blk
AC-VFX-HK75	75mm hose kit for VFX-1000

Filter Disposal

Pre and combined filters are manufactured from non-toxic materials. Filters are not re-usable, cleaning used filters is not recommended. Disposal of the used filters depends on the material deposited on them. See the following table:

Deposit	EWC listing*	Comment
Non-Hazardous	15 02 03	Can be disposed of as non-hazardous waste.
Hazardous	15 02 02 M	The type of Hazard needs to be identified and the associated risks defined. The thresholds for these risks can then be compared with the amount of material in the filters to see if they fall into the hazardous category. If so, the filters will need to be disposed of inline with the local/national regulations.

* European Waste Catalogue

Fuses

The following table gives details of the internal fuse in the VFX-1000 Volume Fume Extraction Unit:

Item Protected	Fuse Rating A	FLC A	Fuse Type	Voltage
12v Power Pack	1	<.1		230 or 115v
Exhaust Fan	2	<.2		230 or 115v

Cleaning

Mild Steel, powder coated paint finished units can be cleaned with a damp cloth and non-aggressive detergent.

Trouble Shooting

In the unlikely event of a problem with your VFX-1000 Volume Fume Extraction Unit please contact your local representative.

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Appendix

Ambient Operating Temperature	10 to 40°C
Maximum Enclosure Temperature	55°C
Input Line Voltage	100 – 240 VAC, grounded circuit
Output Frequency	50/60 Hz
Power	12.5 amps / 1.1 kw
Noise	<54dBA
Airflow/Pressure	350 m ³ /hr/ 96 mbar (206 cfm / 96 mbar)
Certification / Marking	TUV, CE
Dimensions w x d x h	590 x 375 x 415 mm (23.2 x 14.8 x 16.3")
Weight	35 Kgs (77 lbs)
Configuration	
Maximum number of 32mm Arms	7
Maximum number of 50mm Arms, Cowls or Down Draft Trays	5
Maximum number of 75mm Arms, Cowls or Down Draft Trays	2
Deep Pleat Pre-Filter Specification	
Surface Media Area	6m ² approx.
Filter Media	Glass Fibre
Filter Media Construction	Folded
Filter Efficiency	F8 (95% @ 0.9 microns)
Combined Filter Specifications	
HEPA Filter Media	Glass Fibre
HEPA Media Construction	Maxi Pleat Construction with Webbing Spacers
Gas Filter	Treated Activated Carbon
Filter Housing	Zintec Mild Steel
Filter Efficiency	99.997% @ 0.3 microns