VFX-1000
Data Sheet and Configuration Guide

METCAL™

Why Fume Extraction?

Solder smoke is more than just an irritant. It can reduce worker productivity through a loss of concentration and fatigue. These and other health concerns, occupational asthma as an example, may be a result of exposure to solder fumes during the production process. As an employer, you are responsible for properly managing the health risks associated with solder fumes, and take appropriate precautionary measures. Solder fume extraction is a simple way to manage the risks to employees and your organization

Risks to Employees
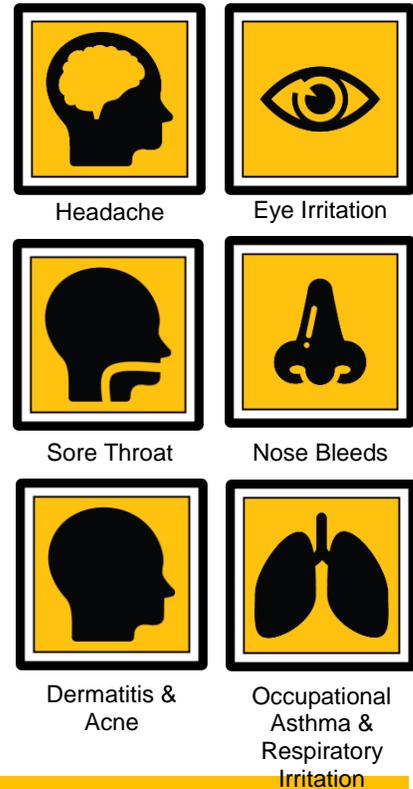
Headache

Eye Irritation

Sore Throat

Nose Bleeds

Dermatitis & Acne

Occupational Asthma & Respiratory Irritation

Solder Fume Composition

Particulates, 95%

Gases, 5%:
Acetone
Methyl Alcohol
Formaldehyde

Carbon Dioxide
Diterpene Acid
Carbon Monoxide
Isopropyl Alcohol

Systems

VFX-1000-H

VFX-1000 with HEPA Filter

VFX-1000-G

VFX-1000 with Deep Bed Gas Filter

Technical Specifications

Volume Fume Extraction System	
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 m³/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)**

The selection of the fume capture device should be guided by your application and work habits.

System performance is a function of the following factors and will decrease if

- Hose Diameters decrease
- Length of ducting increases
- Number of 90^0 bend increases
- Number of arms increases

All exhaust arms are made of ESD material and are supplied with appropriate mounting accessories. The design allows for mounting the arms to a variety of surfaces.

Nozzle Selection

Round/Funnel	Point and small area extraction for • Soldering • Gluing/Bonding • Laser marking Fumes		
Oval	Point extraction for • Soldering under a microscope • Laser marking Fumes		
Rectangular	Area extraction for • Soldering • Gluing/Bonding	• Solder Pots • Solvent Vapors	
Large Rectangular/ Large Hood	Large area extraction for • Soldering of large boards • Large Solder Pots	• Gluing/Bonding • Solvent Vapors	
Plenum/Funnel	Area extraction for • Soldering • Gluing/Bonding	• Solder Pots • Solvent Vapors	
Cabinet	Area extraction for • Volatile gases • Toxic gases • Odours		

Configure your System

| 1	Determine # of Users and Application Requirement	
2	Select System	VFX-1000-H, Fume Extraction with HEPA Filter
		VFX-1000-G, Fume Extraction with Deep Bed Gas Filter
3	Select Arm(s) or Cabinet	
4	Add 1 x AC-VFX-HK75 per arm for 32mm and 50mm arms	
	Add 1 x AC-VFX-HK7563 per 63mm arm and 1 x AC-VFX-YAD63 per 2 x 63mm arms	
	Add 2 x AC-VFX-HS7525 per AC-VFX-CAB-75	
5	Select optional accessories, as needed	

Fume Extraction Cabinet

CABINET

Fume extraction cabinets are recommended for the capture of volatile gases and strong odors.

AC-VFX-CAB-75	Fume Extraction Cabinet with LED lighting & 2 x 75 mm Dia, 1.5 m length hoses and 2x hose clamps

ADAPTER

AC-VFX-75X75	Hose Connector 75 mm Dia.

ACCESSORIES

AC-VFX-HS7525	Hose 75 mm Dia. 2.5 m length

Technical Data

Dimensions (HxWXD)	350 x 540 x 360 mm (13.4" x 21.3" x 14.7")
Opening Dimensions	315 x 540 mm (12.4" x 12.3")

Configuration

2 ports per unit	1 x AC-VFX-HS7525 per port

32MM Arms

ARMS

AC-VFX-ARM-32F	32 mm Dia. Arm, 650 mm long w/rnd funnel, blk
AC-VFX-ARM-32N	32 mm Dia. Arm, 650 mm long w/oval nozzle, blk

ADAPTER/HOSE KITS

AC-VFX-HK75	Hose Kit with 75 mm Dia. to 50 mm Dia. adapter

| Configuration	Adapter/Hose Kit	
Up to 7 arms per system Up to 4 arms per port	1 x AC-VFX-HK75 per arm	Omniflex arm AC-VFX-ARM-XXX
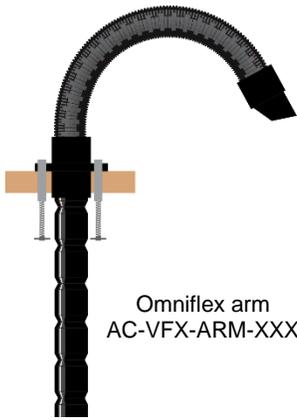
50MM Arms

ARMS	
AC-VFX-ARM-RF	50 mm Dia. Arm, 650 mm long w/rnd funnel, blk
AC-VFX-ARM-PF	50 mm Dia. Arm, 650 mm long w/ plenum/funnel, blk
AC-VFX-ARM-LF	50 mm Dia. Arm, 650 mm long w/rnd funnel, LED, blk
ADAPTER/HOSE KITS	
AC-VFX-HK75	Hose Kit with 75 mm Dia. to 50 mm Dia. adapter
ACCESSORIES	
AC-VFX-HS7525	Hose 75 mm Dia. 2.5 m length

Configuration	Adapter/Hose Kit	
Up to 5 arms per system Up to 4 arms per port	 1 x AC-VFX-HK75 per arm	 Omniflex arm AC-VFX-ARM-XXX

Cover
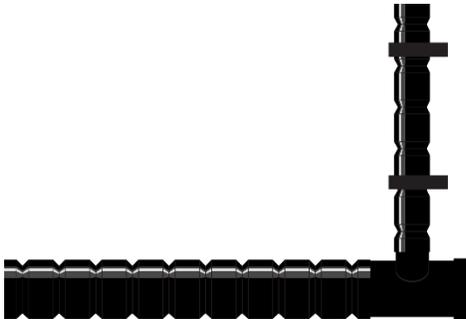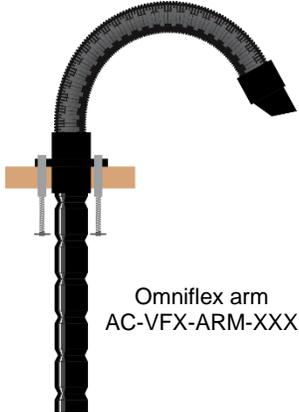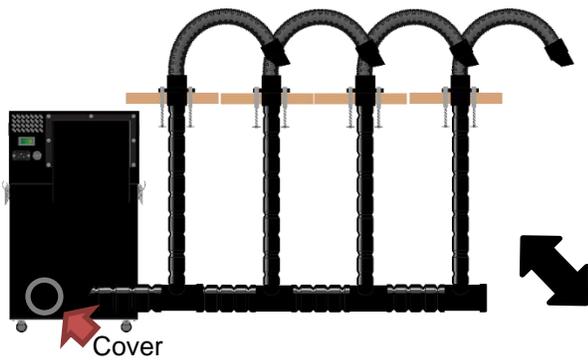
Example Configuration:
- VFX-1000-H
- 4 AC-VFX-ARM-RF
- 4 AC-VFX-HK75

63MM Arms

ARMS

AC-VFX-ARM-ORN	Omniflex Arm with Rectangular Nozzle, 63 mm Dia. hose (1m), bracket, C-clamps & hose clamp
AC-VFX-ARM-OTN	Omniflex Arm with Oval Nozzle 63 mm Dia. hose (1m), bracket, C-clamps & hose clamp
AC-VFX-ARM-OLH	Omniflex Arm with Large Hood, 63 mm Dia. hose (1m), bracket, C-clamps & hose clamp

ADAPTER/HOSE KITS

AC-VFX-HK7563	Hose Kit with 2m hose and 75 mm Dia. to 63 mm Dia. adapter

ACCESSORIES

AC-VFX-YAD63	Y Adapter, 63 mm Dia. with Hose (305 mm) and 3x hose clamps		
Q-AD426530	Replacement nozzle – Rectangular - 150 x 88 mm		
Q-AD426550	Replacement nozzle – Tapered		
Q-AD426560	Replacement nozzle – Large Hood - 350 x 212 mm		
AC1101	Damper for Omniflex Arm	AC1102	Omniflex Arm Extension 30 cm
CH0251	Connection Hose 2.5m x 63 mm Dia. with hose clamps	CH0252	Connection Hose 3.5 m x 63 mm Dia. with hose clamps
CH0253	Connection Hose 7.5m x 63 mm Dia. with hose clamps	AC2025	63 mm dia. Y Adapter

Configuration	Adapter/Hose Kit	
Up to 4 arms per system Up to 2 arms per VFX port	 1 x AC-VFX-HK7563 per port	 Omniflex arm AC-VFX-ARM-XXX
	 1 x AC-VFX-YAD63 per 2 arms	
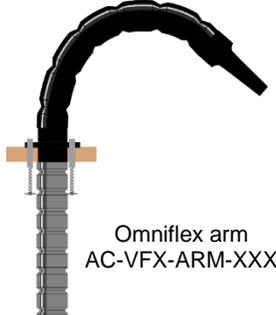
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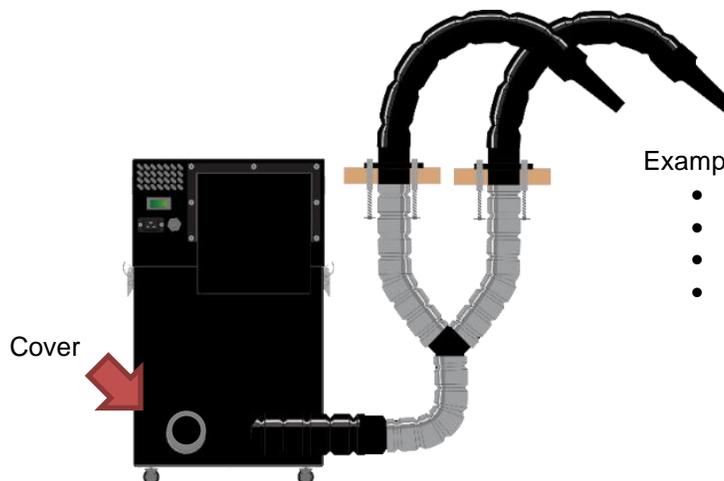
Example Configuration:
- VFX-1000-G
- 2 AC-VFX-ARM-OTN
- 1 AC-VFX-HK7563
- 1 AC-VFX-YAD63
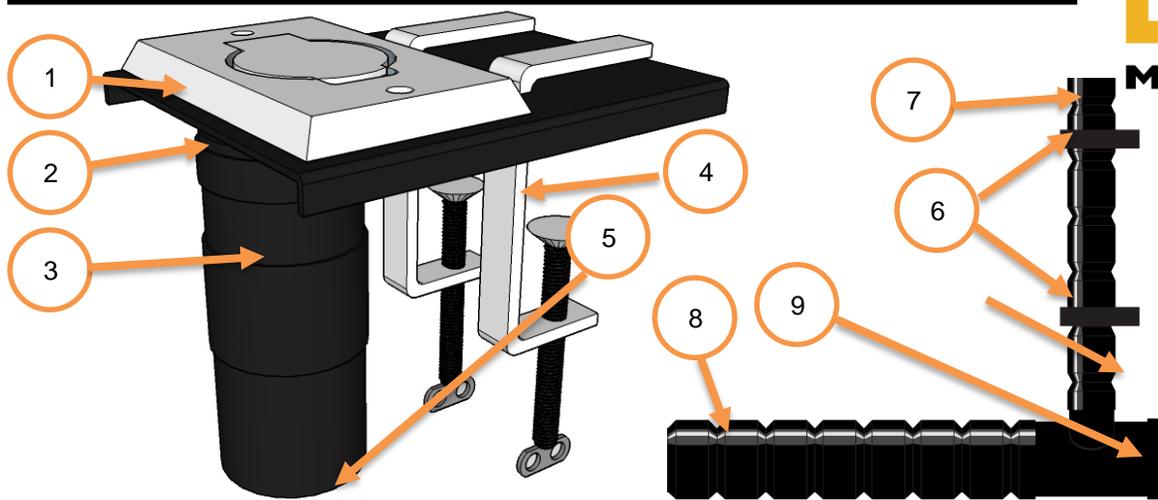
	AC-VFX-HK75		
	Description	**QTY**	
1	AC-VFX-HK75CONN Arm Connection Receptacle with Seal and Hardware	1	
2	AC-VFX-HK75BRK Bracket with 2 clamps	1	
3	AC-VFX-HK75RED 50-40 Reducer	1	
4	AC-VFX-HK75HC Hose Clamp	1	
5	AC-VFX-HK75CL 50 mm Hose Clip	4	
6	AC-VFX-HK75H50 50 mm Flexible Hose, 1m	1	
7	AC-VFX-HK75H75 75 mm Flexible Hose, 2.5m	1	
8	AC-VFX-HK75TCONN 75x50x75 mm T Connector and Cover	1	
9	AC-VFX-HK75CAP 75mm Cap	1	
10	AC-VFX-HK75CUFF75 75mm Connection Cuff	2	**Not Shown**
11	AC-VFX-HK75CUFF50 50mm Connection Cuff	1	**Not Shown**

Replacement Filters

AC-VFX-FIL-PRE

Deep Pleat Pre-Filter Specification	
Surface Media Area	6m^2 approx.
Fiilter Media	Glass Fibre
Filter Media Construction	Folded
Filter Efficiency	F8 (95% @ 0.9 microns)

AC-VFX-FIL-HEPA

Combined HEPA Filter Specification	
HEPA Filter Media	Glass Fibre
HEPA Media Construction	Maxi Pleat Construcution with Webbing Spacers
Gas Filter	Treated Activated Carbon
Filter Housing	Zintec Mild Steel
Filter Efficiency	99.997% @ 0.3 microns

AC-VFX-FIL-GAS

Deep Bed Gas Filter Specification	
Gas Filter	Activated Carbon
Filter Housing	Zintec Mild Steel
Filter Efficiency	99.997% @ 0.3 microns