



OPERATING INSTRUCTIONS & PARTS LIST FUME EXHAUSTERS

MODELS 500S, 1000S, 1500S, 2000S,
F-6-B, F-6-C & F-8-C

**Read instructions carefully before attempting to assemble, install, operate, move, inspect or service your fume exhauster!
Retain instructions for future reference.**

Description

This fume exhauster is designed for continuous operation to exhaust fumes and smoke from welding, soldering or brazing operations. The mounting frame can be used for portable or stationary mounting.

Units are equipped with a cast aluminum radial blade or steel multivane blower wheel, continuous duty motor, discharge elbow, inlet hose and inlet nozzle.

For further information, consult Specifications and Performance.



Figure 1 - Models 500S-2000S
Fume Exhauster



Figure 2 - Models F-6-B, F-6-C and
F-8-C Fume Exhauster

General Safety Information

⚠ WARNING *Do not use this fume exhauster in a flammable or explosive atmosphere. Do not use to collect aluminum or magnesium dust, nor any other chemically reactive dusts. Consult National Fire Protection Association (NFPA) standards.*

Read instructions carefully before attempting to assemble, install, operate, inspect, move or service your fume exhauster! Retain this manual for future reference.

⚠ DANGER *High voltage electrical power can cause severe injury or death. Always disconnect or lock out motor from power source before servicing. Disconnect or lock out motor from power source and let motor come to a complete stop before inspecting, moving or servicing.*

⚠ WARNING *High speed rotating equipment can cause severe personal injury. Guards must always be in place. Disconnect or lock out motor from power source and let motor come to a complete stop before inspecting, moving or servicing.*

1. Follow all local electrical and safety codes, as well as National Electrical Codes (NEC), National Fire Protection Association (NFPA) standards and Occupational Safety and Health Act (OSHA). All electrical connections and wiring should be performed only by qualified personnel.
2. Make sure the power source conforms to the requirements of your fume exhauster motor.
3. Exercise caution when the unit is in operation. There is a high speed blower wheel inside the blower housing and another on the top of the motor. Both can amputate fingers or grab loose clothing or neck ties. Always wear safety glasses when operating the fume exhauster.
4. Do not locate the fume exhauster in a corrosive atmosphere, nor where the ambient temperature exceeds 104° F (40° C). Do not exhaust fumes which exceed 180° F (82° C).

Specifications

Model No.	Motor		Max. CFM (1)	Max. S.P. (2)	Air Velocity (F.P.M.)	dBA @5 Ft.	Material Type		Hose Size	Outlet Elbow Dia.	Nozzle Size	Full Load APMs (3)		Approx. Ship Wt.
	HP	RPM					Housing	Wheel				115 Volt 1 Phase	230 Volt 3 Phase	
500S	1/2	3450	370	7.0"	4242	80	14 Gauge Steel	Cast Alum. Radial	4" x 120"	4 1/16"	4" x 8"	6.8	1.9	60
1000S	1	3450	485	4.7"	3555	87			5" x 120"	6 1/16"	5" x 10"	11.2	3.2	74
1500S	1 1/2	3450	630	7.4"	4615	83			5" x 120"	6 1/16"	5" x 10"	16.0	4.4	89
2000S	2	3450	800	9.5"	5865	88			5" x 120"	6 1/16"	5" x 10"	20.0	5.6	95
F-6-B	1/4	1750	409	1.0"	2082	73			Cast Alum.	Steel Multi-Vane	6" x 120"	6 1/16"	8" x 8"	5.4
F-6-C	1 1/2	3450	826	3.8"	4205	85	6" x 120"	6 1/16"			8" x 8"	16.0	4.4	85
F-8-C	3/4	1750	1296	1.9"	3712	81	8" x 120"	8 1/16"			8" x 8"	11.0	3.0	85

(1) Maximum CFM with 10 feet of inlet hose, inlet nozzle and discharge elbow. Removing inlet hose and/or discharge elbow will overload motor. Airflow will be reduced by 10 CFM for each additional foot of hose or 5 CFM for each additional foot of smooth wall metal duct.

Airflow loss for each 90° elbow in the hose is equal to the loss through 10 feet of straight, smooth wall, metal duct.

(2) Maximum additional static pressure at which point there will be no airflow. SP (static pressure) is measured in inches of water gauge (SPWG).

(3) Starting amps are approximately 6-7 times full load amps. Full load amps shown are subject to change with motor types and/or vendors.

Unpacking

When unpacking the exhauster, carefully inspect for any damage that may have occurred during transit. Check for loose parts, missing parts or damaged parts.

Assembly

Use Figure 3, Page 4 as reference.

- Place a hose clamp (#8) over one end of each 5 foot hose section (#19). Insert the hose sleeve (#7) halfway into each hose end and then tighten the hose clamps to form a 10 foot section of hose.
- Place another hose clamp (#8) over one end of the 10 foot hose section. Slip the hose end over the inlet collar (#3E) and tighten the hose clamp to secure the hose.
- Place another hose clamp (#8) over the open end of the hose section. Slip the intake nozzle (#20) inside the hose and tighten the clamp to secure the nozzle.

For Model 500S only:

There is a plastic blower discharge guard that is not shown in Figure 3, page 4. This guard replaces the internal discharge guard (#3C) shown in Figure 3. The plastic guard is riveted to the blower housing discharge and must remain in place at all times.

- Remove the 2 screws in the plastic guard. Do not remove the rivets in the guard. Do not discard the 2 screws. Slip the long end of the discharge elbow (#4) over the end of the guard so the 2 holes in the elbow line up with the 2 holes in the guard. Reinstall the 2 screws through the 2 holes in the elbow and into the 2 holes in the guard.

For all other models:

Slip the end of the discharge elbow (#4) with the draw lug over the end of the blower discharge. Tighten the draw lug screw to secure the elbow to the blower discharge.

- Your Fume-Master is now ready for installation.

Installation

CAUTION Do not use exhauster where ambient temperatures exceed 104°F. (40°C) or in corrosive or explosive atmospheres. Do not exhaust fumes that are over 180°F (82°C).

The fumes collected by the exhauster should always be piped to the outside. Locate the exhauster as close as possible to both the operation and outside exhaust opening. Air flow will be reduced approximately 2 CFM for every additional foot of hose or duct installed. Each 90° change in direction will reduce air flow about 15 CFM.

The exhauster can be installed with the motor in any position, including vertical.

Check motor rotation on 3 phase power connections; the cooling fan on the motor should turn clockwise as observed from above. An electrician can correct rotation by interchanging any two (3 phase) power lead wires.

Operation

For welding operations, intake nozzle should be placed in accordance with American Welding Society Recommendations.

SUGGESTED WELDING NOZZLE LOCATIONS

WELDING ZONE	MINIMUM CFM	
	Plain Duct	Flanged Nozzle or Cone Nozzle
Up to 6" from arc or torch	335	250
6" to 9" from arc or torch	755	560
9" to 12" from arc or torch	1335	1000

⚠ DANGER Do not use to exhaust air from a confined space; this can cause death by asphyxiation. Do not place or operate any fume exhauster inside a tank or confined area that contains or did contain volatile fumes or liquid.

The exhauster can be used to blow fresh air into a confined space. However, it is the sole responsibility of the user to ensure sufficient ventilation is provided in compliance with all applicable safety and building codes. It is important to ensure (1) the air flow is sufficient and (2) the inlet hose is properly positioned.

Guards must always be in place during operation to prevent injury to hands and fingers.

Maintenance

⚠ DANGER

High voltage electrical power can cause severe injury or death.

Always disconnect or lock out motor from power source and let motor come to a complete stop before inspecting, moving or servicing.

⚠ WARNING

High speed rotating equipment can cause severe personal injury. Guards

must always be in place. Disconnect or lock out motor from power source and let motor come to a complete stop before inspecting, moving or servicing.

Motor

The bearings on the electrical motor are lubricated and sealed for life, so they need no lubrication during use. Keep the motor clean as excessive dirt may prevent proper cooling. Use no more than 50 psi air to blow off excessive dirt.

⚠ CAUTION

Wear eye protection while using an air hose for cleaning.

Blower wheel and steel components

The cast aluminum and steel components are maintenance free and should not require any maintenance during the life of the unit.

If a vibration should develop, it may indicate excessive wear or damage to the blower wheel. In this case, with the motor turned OFF and LOCKED OUT, inspect the blower wheel. If any damage or excessively worn areas are noted, replace the blower wheel.

⚠ WARNING

Do not operate the fume exhauster with a damaged or severely worn blower wheel. The wheel may disintegrate at operating speed and high speed fragments may cause death or severe personal injury and property damage.

Troubleshooting Chart

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Exhauster will not start.	<ol style="list-style-type: none"> 1. Blown fuse or circuit breaker of incorrect size. 2. Low line voltage. 3. Material wedged between wheel and housing. 4. Defective switch. 5. Defective motor. 	<ol style="list-style-type: none"> 1. If blown, replace with proper size. 2. If voltage is under recommended minimum, check size of wiring from main switch on property. If wire size is sufficient, discuss problem with power company. 3. Disconnect or lock out motor. Remove material that may be wedged between wheel and housing. 4. Replace switch. 5. Replace motor.
Low Flow.	<ol style="list-style-type: none"> 1. Excessive lengths of hose. 2. Wrong rotation. 	<ol style="list-style-type: none"> 1. Test air flow with less hose; relocate exhauster as needed. 2. Rewire for proper rotation. (For 3-phase, interchange two of the power leads.)
Blowing fuses or circuit breaker.	<ol style="list-style-type: none"> 1. Defective plug, cord or switch. 2. Faulty internal wiring. 	<ol style="list-style-type: none"> 1. Replace defective part. 2. Repair or replace motor.

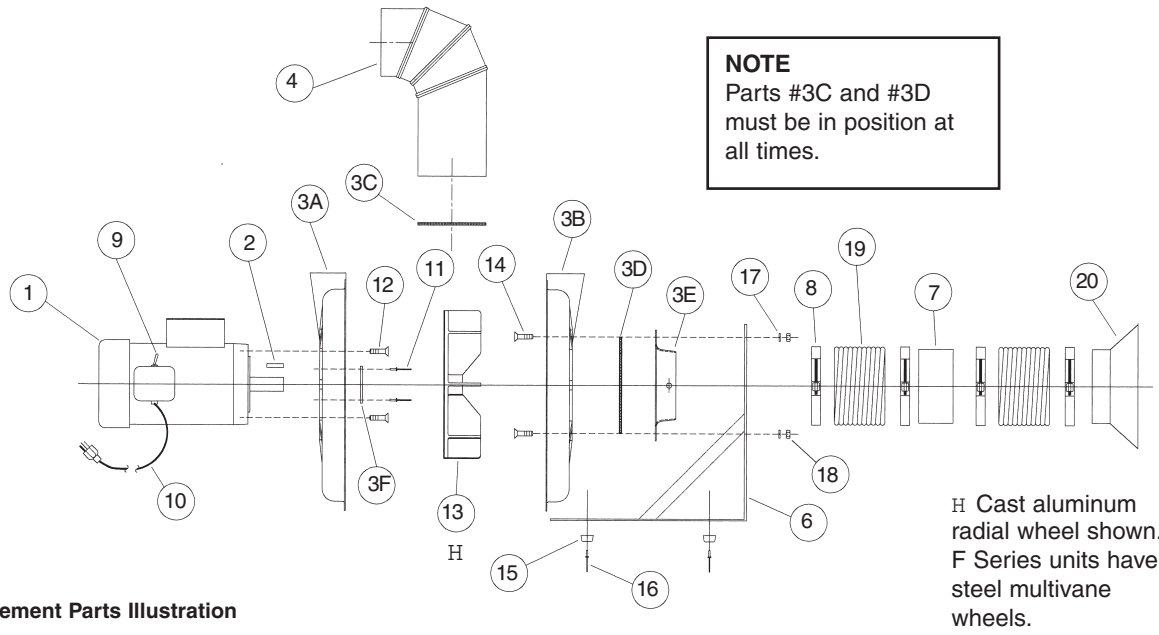


Figure 3 - Replacement Parts Illustration

Replacement Parts List

Ref. No.	Qty.	Description	Part Number for Model						
			500S	1000S	1500S	2000S	F-6-B	F-6-C	F-8-C
1	1	Motor, 1 Phase, TEFC 115/208-230 Volt, 60 Hz.	37754 (1)	37755 (1)	37301	373719	37097 (1)	37301	372046 (1)
		Motor, 3 Phase, TEFC 230/460 Volt, 60 Hz.	37154	37254	37304	37353	370541	37304	37204
		Motor, 1 Phase, EXP 115/230 Volt, 60 Hz.	37152	37252	37302	—	37054	37302	37202
		Motor, 3 Phase, EXP 230/460 Volt, 60 Hz.	371679	3725462	37305	37354	370534	37305	372170
2	1	Key, 3/16" square	▲	▲	▲	▲	▲	▲	
3A-3F	1	Housing / Guard Assy. (See note 2 below)	34026FE	34030FE	34030FE	34030FE	33074FE	33074FE	33080FE
3E	1	Collar, Inlet (only)	26139	26141	26141	26141	●	●	●
3D	1	Guard, Inlet (only)	29124	29125	29125	29125	29078	29078	29079
3C	1	Guard, Discharge (only)	29330	29240	29240	29240	29078	29078	29079
4	1	Elbow, Discharge	51269	51111	51111	51111	51111	51111	51035
6	1	Base, Steel Angle	031461	031471	031471	031471	031461	031461	031441
7	1	Connector, Hose	51086	51087	51087	51087	51088	51088	51089
8	4	Clamp, Hose	31379	31016	31016	31016	31244	31244	31019
9	1	Switch, 115V. only	■	■	—	—	■	—	■
10	1	Cord & Plug, 115V. only	■	■	—	—	■	—	■
11	3	Pop Rivet	▲	▲	▲	▲	▲	▲	▲
12	4	Bolt, 3/8-16 x 1/2"	▲	▲	▲	▲	▲	▲	▲
13	1	Wheel, Blower ★	5530602	5500202	5500702	5501002	55528	55528	55533
14	4	Bolt, 1/4-20 x 1"	▲	▲	▲	▲	▲	▲	▲
15	4	Rubber Feet	31043	34043	31043	31043	31043	31043	31043
16	4	Pop Rivet	▲	▲	▲	▲	▲	▲	▲
17	4	Lock Washer, 1/4"	▲	▲	▲	▲	▲	▲	▲
18	4	Nut, 1/4-20	▲	▲	▲	▲	▲	▲	▲
19	2	Hose, Inlet, 5 Ft. long	31623	31625	31625	31625	31626	31626	31627
20	1	Nozzle, Inlet	51012	51013	51013	51013	51030	51030	51031

(1) Includes 8 foot cord and switch (parts #9 and #10) and 3 prong (grounded) plug for use on 115 Volt, 1 Phase, 60 Hertz ONLY.

(2) Price includes complete housing, inlet guard and discharge guard. On "S" series, it also includes the inlet collar and the aluminum disc (#3F) around the motor shaft hole of the motor side housing. Be sure to state the model number and the serial number on your order, so all the required holes will be drilled for a Fume-Master series unit.

▲ Standard hardware store items available locally.

■ Order from motor manufacturer, motor distributor or your nearest motor repair shop for that brand motor.

● Parts 3B and 3E are casted as one piece on this model Fume-Master.

Limited Warranty

Cincinnati Fan and Ventilator Co. warrants products of its own manufacture against defects of material and workmanship under normal use and service for a period of eighteen (18) months from date of shipment or twelve (12) months from date of installation, whichever ever occurs first. This warranty does not apply to any of Seller's products or any part thereof which has been subject to ordinary wear and tear, accident, abuse, misuse, overloading, negligence or alteration. This warranty does not cover systems or materials not of Seller's manufacture. Expenses incurred by Buyer(s) in repairing or replacing any defective product will not be allowed except where authorized in writing and signed by an officer of the Seller.

The obligation of the Seller under this warranty shall be limited to repairing or replacing F.O.B. Seller's plant, or allowing credit at Seller's options. **THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE AND OF ALL OTHER OBLIGATIONS AND LIABILITIES OF THE SELLER. THE BUYER ACKNOWLEDGES THAT NO OTHER REPRESENTATIONS WERE MADE TO HIM OR RELIED UPON HIM WITH RESPECT TO THE QUALITY OR FUNCTION OF THE PRODUCT HEREIN SOLD.**

The Seller shall not be liable for any special, direct, indirect or consequential damages to Buyer(s) or anyone else by reason of any loss or any damage to any property or material processed by Buyer(s) with the products or on account of the character or quality of any property or material processed by Buyer(s) with the product. On products furnished by Seller, but manufactured by others, such as motors, Seller extends the same warranty as Seller received from the manufacturer thereof.

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⚠ WARNING

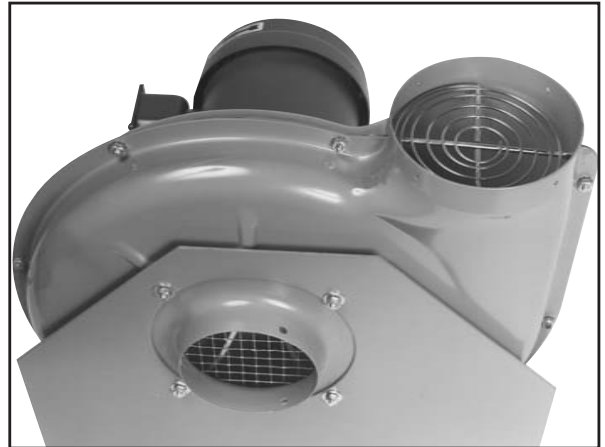
High speed rotating equipment can cause severe personal injury. Guards must always be in place. Disconnect or lock out motor from power source and let motor come to a complete stop before inspecting, moving or servicing.

⚠ WARNING

Do not use this exhauster in a flammable or explosive atmosphere.

Safety Guards

All Cincinnati Fume-Masters have safety guards in the inlet and discharge of the blower housing. These guards are for your safety. **Removal of guards for any reason voids warranty and liability. DO NOT OPERATE WITHOUT ALL GUARDS IN PLACE.**



MODELS 1000S, 1500S & 2000S INLET & OUTLET.
MODEL 500S INLET ONLY.



MODEL 500S, OUTLET ONLY



MODELS F-6-B, F-6-C & F-8-C



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