

**Model  
PFE-230  
PORTABLE FUME EXTRACTOR**

Manual No. PFE03  
(Rev 2 Sept 2008)



# Operating Manual



## **AIRSYSTEMSINTERNATIONAL, INC.**

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## GENERAL SAFETY INFORMATION

Read and understand all warnings and operating instructions before using this equipment. Failure to follow all instructions may result in electric shock, fire, and/or serious personal injury or property damage.

### WARNING

*Use this product carefully to effectively avoid any possible danger. Observe the following safety regulations to avoid bodily injury due to electrocution during use.*

1. Read this manual carefully before operating the product and preserve the Operation Manual properly.
2. Do not use the product in a wet or rain environment
3. Do not use product in a flammable gas or liquid environment to avoid danger.
  - Do not let children get close to the product. All wires used by the product shall be in a safe location to prevent children from touching them.
4. If the machine breaks down, contact Air Systems for repair, 1-800-866-8100.
5. Before replacing parts, shut off power to the machine.
  - Check that the switch is in the “on” or “off” position. Do not attempt the replacement when the machine is running. To replace parts or filters, make certain that the switch is “off”.
6. Use extension cords that are of sufficient size rating to prevent voltage drops. This will cause damage to the electric motors.

## **ADDITIONAL WELDING FUME EXTRACTOR SAFETY RULES**

The Welding Fume Extractor can be dangerous if it is operated incorrectly. Therefore, the product must be used cautiously to avoid causing a hazard or damage. Unnecessary injuries may occur by failing to follow the instructions of the Safety Rules Manual. Be sure to wear protective welding safety equipment that can protect your body, such as a helmet and eye protection to avoid injuries from occurring.

1. Read this manual carefully before operating the product.
2. Be sure to follow local electrical and safety regulations and observe the electrical safety standards practiced in the relevant area.
3. Do not operate the product near flammable materials, as sparks may ignite these materials and cause an explosion. Please confirm there aren't any flammables near the working site to avoid hazard.
4. This product is suitable for collecting smoke and welding oil gas. Do not use it in collecting iron chips and dust at the same time to avoid producing sparks.
5. Before replacement of parts or filter materials, be certain that the switch is disconnected.
6. Do not kink the power cord and keep it away from oil, chemicals or flammables.
7. When the fan blades are operated at high speed, do not reach hand near these blades to prevent finger from breaking or clothes/necktie from getting caught.

## **ELECTRICAL INSTALLATION**

### **POWER CONNECTION**

1. Confirm that the power is properly connected under normal power supply conditions. Use 115 VAC with minimum 15amp service.

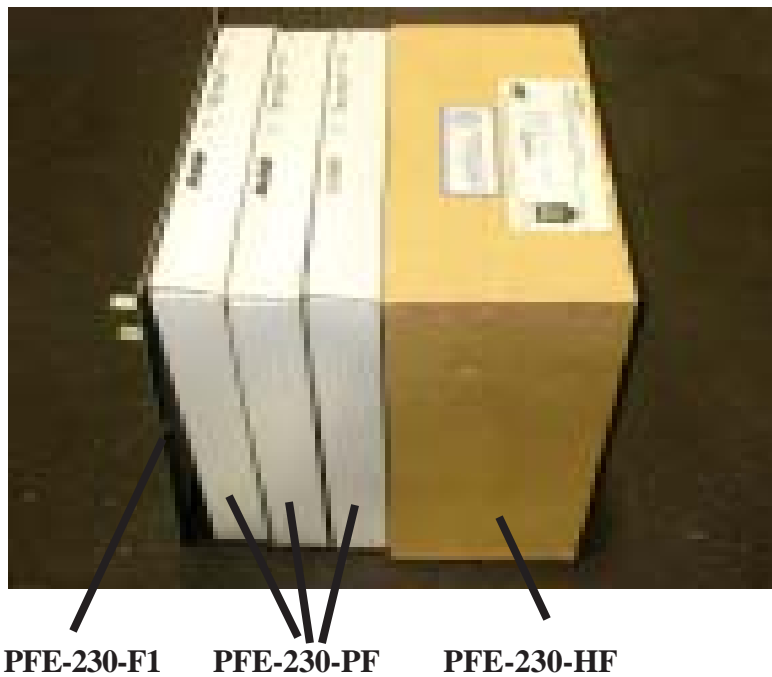
## UNPACKING

The machine should be unpacked carefully. Check if the machine and components are consistent with those indicated in the Parts List. If any doubt arises or when the components are incomplete, contact Air Systems, 1-800-866-8100.

**PFE-230-F1** STAINLESS FILTER captures up to 95% of the sparks and steel chips down to 1-2 micron.

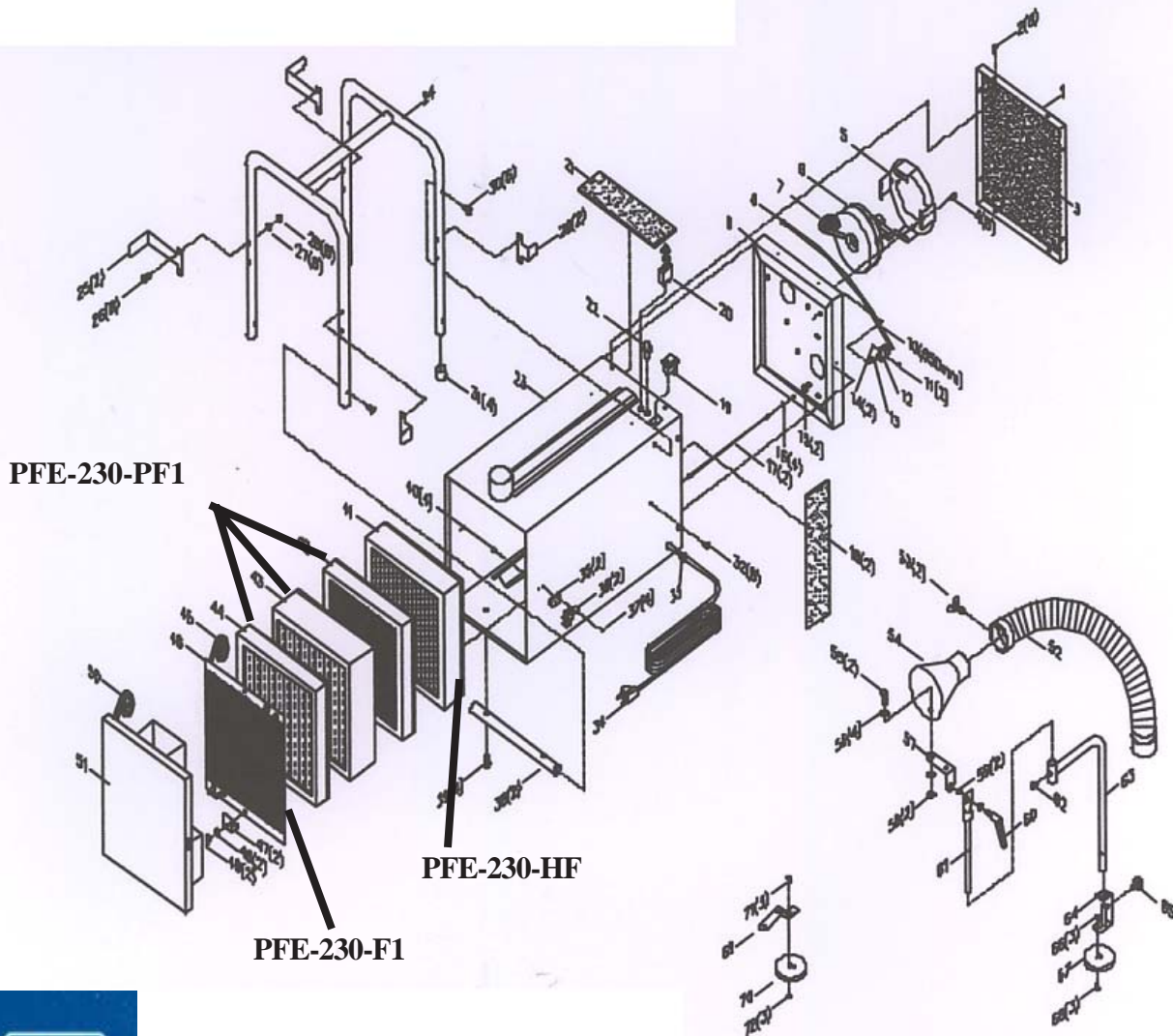
**PFE-230-PF1** PLEATED FILTER 12" x 12" x 2" MERV 7 rated, 50-70% efficient

**PFE-230-HF** PLEATED HEPA FILTER 12" x 12" x 5 7/8" captures 99.97% of the 0.3 micron particles and provides better working environment, DOP certified.



## SETUP AND DAILY USAGE

1. Check that all filters are clean and secured in place with the stainless steel wire screen.
2. Replace pre-filter(s) as they become clogged from welding fumes. Start with the first pre-filter and check the second and third filter for any heavy buildup of welding smoke and fumes that may reduce suction
3. Do not replace the HEPA filter until no suction improvement results from changing the pre-filters.



PFE-230-PF1

PFE-230-HF

PFE-230-F1

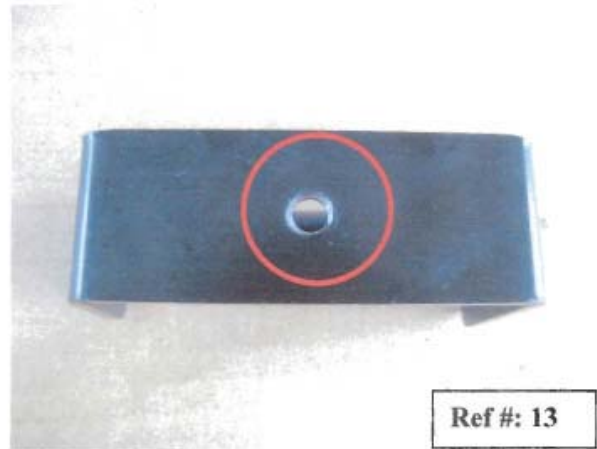


2 SPEED CONTROL FOR HIGH OR LOW CFM

FOR TECHNICAL QUESTIONS OR SERVICE, PLEASE CONTACT OUR REPAIR SERVICES DEPARTMENT AT 1-800-866-8100 OR E-MAIL REPAIRS@AIRSYSTEMS.COM

Reference number	Description	Part Number	Quantity
1	Back Cover	FE-2010-DB-BA-002	1
2	Phillips Head Screw (1/4"*3/4")	SV-APA-03-AA-C003	8
3	Noise Reducer	SV-SAB-10-A0001	1
4	Phillips Head Screw ( 1/4"*2")	SV-APA-03-AD-C002	8
5	Motor Fixing Base	FE-2010-MB-BA-002	2
6	Motor	SV-MT-A-11560-800W	2
7	Foam Tape	SV-RBD-AA-001	2
8	Ventilation Fixing Cover	A016-SB-10	1
9	Motor Base	FE-2010-MB-AA-002	1
10	Hose(dia. 5)	SV-HAS-0-A-A0-650MM	1
11	Inner Hex Screw (M2*20mm)	SV-APA-02-AC-D002	2
12	Pressure Gauge	SV-PG-A-001	1
13	Pressure Gauge Ring	A016-GM0705	1
14	Hex Nut (M2)	SV-APB-01-AC-A016	2
15	Flat Washer (1/4"*OD19*2t)	AV-APC-01-AA-C001	2
16	Hex Nut (1/4")	AV-APB-01-AA-C001	4
17	Filter Fixing Shaft	SV-APA-07-AA-C001	2
18	Noise Reducer	SV-SAB-10-A0002	2
19	Switch	A007-TR-26-2-A	1
20	Overload Protector	A007-A-15A-60	1
21	Noise Reducer	SV-SAB-10-A0003	1
22	Indicator (Red)	A004-809-14-110	1
23	Machine Body	FE-2010-BD-AA-002	1
24	Handle (Frame)	FE-2010H-LG-AA-015	1
25	PVC Hose Rolling Rack	FE-2010H-HS-BA-015	2
26	Countersunk Phillips Head Screw (1/4"*1-1/2")	SV-APA-04-AC-C004	8
27	Flat Washer (1/4"*OD19*2t)	SV-APC-01-AA-C001	8
28	Hex Nut (1/4")	SV-APB-01-AA-C001	8
29	Cable Rolling Rack	FE-2010H-HS-AA-015	2
30	Countersunk Phillips Head Screw (1/4"*1-1/2")	SV-APA-04-AC-C004	6
31	Cushion	SV-RBF-AA-001	4
32	Phillips Head Screw	SV-APA-05-AA-E001	6
33	Cord Buckle	A016-SR-6R1	1
34	Cord	SV-L-A2-143C-3.3-A5	1
35	Door Buckle Base	FE-2010-BT-AA-B001	2
36	Dual Spring Buckle	A003-37-1	2
37	Hex Nut	SV-APB-01-AA-B001	4
38	Frame Connecting Shaft	FE-2010H-LG-BA-015	2
39	Countersunk Phillips Head Screw (1/4"*1-1/2")	SV-APA-04-AC-C004	4
40	Countersunk Phillips Head Screw (M3*15mm)	SV-APA-04-BA-B001	4
41	HEPA	PFE-230-HF	1
42	Prefilter	PFE-230-PF1	1
43	Prefilter	PFE-230-PF1	1
44	Prefilter	PFE-230-PF1	1
45	Foam Tape	SV-RBD-AA-001	1
46	Stainless Filter	PFE-230-F1	1
47	Filter Fixing Base	FE-2010-HF-AA-Z06	2
48	Flat Washer (1/4"*OD19*2t)	SV-APC-01-AA-C001	2
49	Wing Nut (1/4")	SV-APB-05-AA-C001	2
50	Foam Tape	SV-RBD-AA-001	1
51	Front Cover	FE-2010-DB-FA-002	1
52	PVC Hose	SV-HSG-B-A-25-3M	1
53	PVC Hose Fixing Screw	SV-APA-12-BA-E001	2
54	Suction Hood	SV-ITA-02-A-A0-002	1
55	Hex Screw (5/16"*3/4)	SV-APA-01-AA-D001	2
56	Flat Washer (5/16"/OD18*2t)	SV-APC-01-AA-D002	4
57	Hood Fixing Hinge	FE-2010-CP-A2-003	1
58	Hex Nut(5/16")	SV-APB-01-AA-D001	2
59	Spring Washer (5/16")	SV-APC-02-AA-D001	2
60	Handle	SV-APA-10-AA-S001	1
61	Hood Fixing Tube	FE-2010-CP-A2-003	1
62	Special Screw (5/16"*5/8")	SV-APA-25-AA-D001	1
63	L-Shaped Tube	FE-2010-CP-A1-003	1
64	Fixing Base	FE-2010-BS-AA-003	1
65	Fixing Hinge	SV-APA-11-AA-D003	1
66	Hex Nut(3/16")	SV-APB-01-AA-P046	3
67	Magnetic Base	A004-L-219	1
68	Round Phillips Head Screw	SV-APA-08-AA-B001	3
69	Hood Holder	FE-2010H-MG-AA-015	1
70	Magnetic Base	A004-L-219	1
71	Round Phillips Head Screw	SV-APA-08-AA-B001	3
72	Hex Nut ( 3/16")	SV-APB-01-AA-P046	3

## Accessory Assembly Procedures

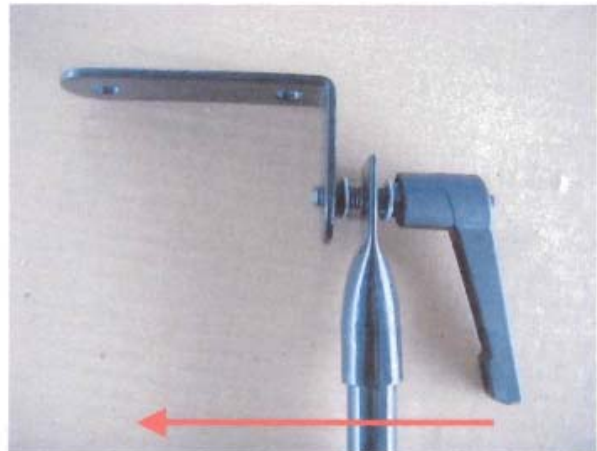


The Accessory parts from the Manual

Ref #6: Hood Fixing Plate

Ref #13: Fixing Support

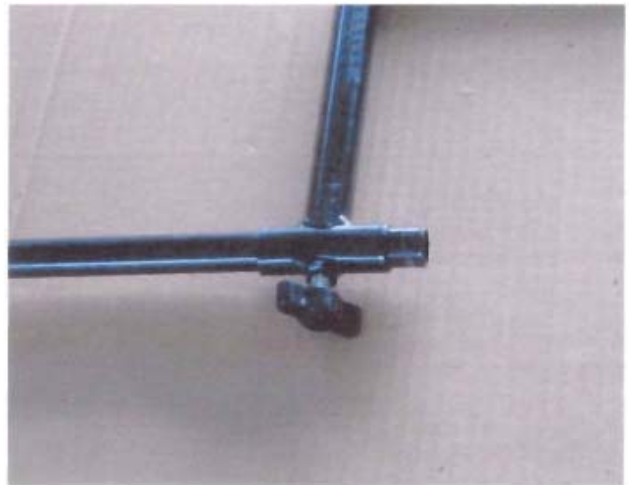
The above accessories were threaded; however the parts threaded were covered by the Electro Deposition Coating (ED coating). In the future we will re-thread after ED coating prior to shipment.



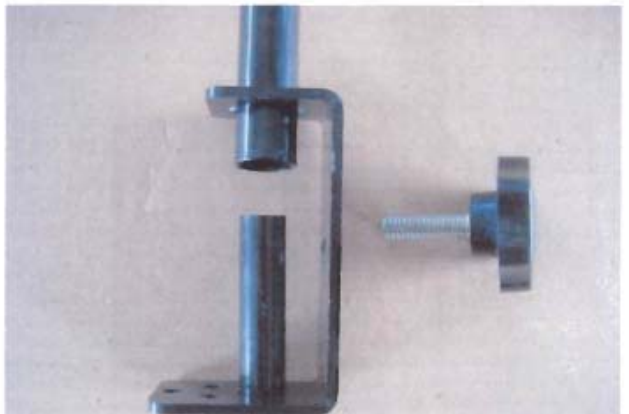
- [ 1 ] Put 5/16"\*1" Handle through (1) pc of 5/16" Spring Washer and Suction Hood Fixing Pipe. Then fasten (1) pc of 5/16" Spring Washer to the Hood Fixing Support.



[ 2 ] Use (2) pcs of 5/16"×3/4" Hex Screw and (4) pcs of 5/16"×OD18\*2t Flat Washers to fix the Hood to the Hood Fixing Support. Use (2) pcs of 5/16" Hex Nut to fasten.

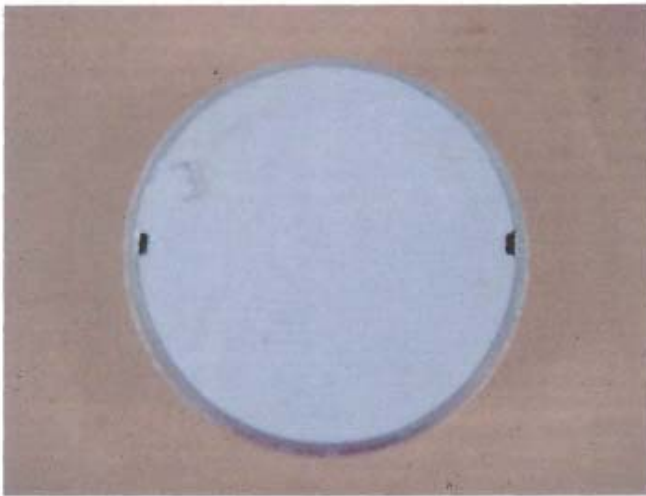


[ 3 ] Fit the already assembled Hood Fixing Pipe to the L-shaped Pipe. Use (1) pc of 5/16"×5/8" Wing Screw to fasten.





[ 4 ] Fit the L-shaped Pipe onto the Fixing Support. Use (1) pc of 5/16"\*1" Fixing Knob for fastening.



[ 5 ] Open the Base Board on the back of the Magnetic Base.

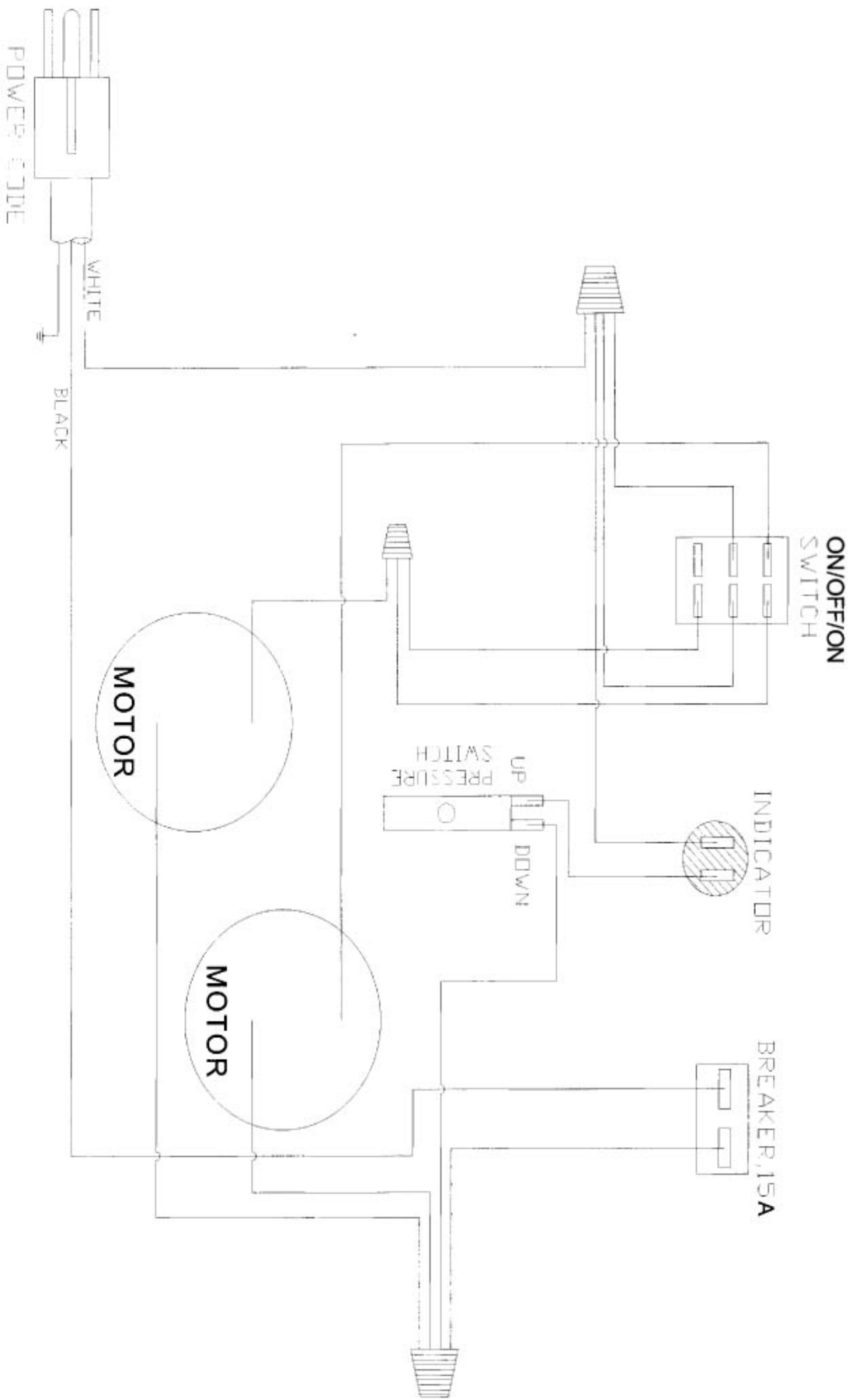


[ 6 ] Put (3) pcs of 3/16"\*3/8" Philips Head Screw through the Magnetic Base onto the (3) holes on the Fixing Support. Use (3) pcs of 3/16" Hex Nut to fasten.



[ 7 ] Assembly completed.

# Wiring Diagram 800W x 2 / 120V / 60HZ / 1PH



### *Warranty Disclaimer*

Air Systems' manufactured equipment is warranted to the original user against defects in workmanship or materials under normal use for one year after date of purchase. Any part which is determined by Air Systems to be defective in material or workmanship will be, as the exclusive remedy, repaired or replaced at Air Systems' option. This warranty does not apply to electrical systems or electronic components. Electrical parts are warranted, to the original user, for 90 days from the date of sale. During the warranty period, electrical components will be repaired or replaced at Air Systems' option.

**NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER MATTER IS GIVEN BY AIR SYSTEMS IN CONNECTION HEREWITH. UNDER NO CIRCUMSTANCES SHALL THE SELLER BE LIABLE FOR LOSS OF PROFITS, ANY OTHER DIRECT OR INDIRECT COSTS, EXPENSES, LOSSES OR DAMAGES ARISING OUT OF DEFECTS IN, OR FAILURE OF THE PRODUCT OR ANY PART THEREOF.**

The purchaser shall be solely responsible for compliance with all applicable Federal, State and Local OSHA and/or MSHA requirements. Although Air Systems International believes that its products, if operated and maintained as shipped from the factory and in accordance with our "operations manual", conform to OSHA and/or MSHA requirements, there are no implied or expressed warranties of such compliance extending beyond the limited warranty described herein. Product designs and specifications are subject to change without notice. **Rev 2 12/98**

*Air leaks are not covered under warranty except when they result from a defective system component, i.e. an on/off valve or regulator or upon initial delivery due to poor workmanship. Air leaks due to poor delivery or damage will be covered under delivery claims. Minor air leaks are part of routine service and maintenance and are the responsibility of the customer just as are filters and oil changes.*