

MICRO AIR **AIR CLEANERS**



MODEL IE2700 **OWNER'S MANUAL**

CAUTION

READ COMPLETE INSTRUCTIONS BEFORE OPERATING.
PLEASE FILE FOR FUTURE REFERENCE.

MODEL IE2700 SPECIFICATIONS

Length:	42"
Width:	38.5"
Height:	21"
Shipping Weight:	325 lbs.
Actual Weight:	290 lbs.
Input Volts:	120V, 60 HZ, or 208/230/460V, 60 HZ.
Power:	1000 Watts @ 13.8 Amps Single Phase
Motor:	1 HP, TEFC

PRE-OPERATING INSTRUCTIONS

1. Cut banding material that holds skid to cardboard carton.
2. Remove unit from cardboard carton.
3. Inspect power cord and the on/off switch for damage.
4. Open cell access door and inspect cell and ionizer for damage.

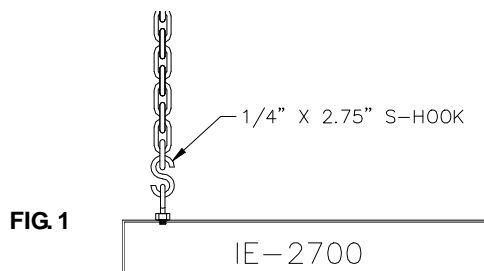
HANGING INSTRUCTIONS

The following items are needed for hanging:

- 4/o chain minimum rated at 400 lbs. working load.
- 5/16" Wrench.
- Bolt Cutter.

CAUTION: No less than four chains may be used to suspend unit from ceiling. Chains should not angle more than 15 Degrees. Hang from structural supports.

1. Remove the eyebolts from the unit.
2. Remove the four plastic plugs from the corners located on the top or bottom of the unit.
3. Put an eyebolt into each hole and screw the two nuts provided onto the eyebolts. Tighten the nuts together to prevent loosening by vibration. The unit is now ready to be hung in an appropriate location.
4. Firmly secure four chains of equal length to a firm, structural support. Wire of equal or greater strength may be used in lieu of chains.
5. Raise unit up to chains and bond eyebolts to chains. (See FIG. 1.)



CAUTION: Firm structure must be capable of supporting a minimum weight of 1400 lbs.

ELECTRICAL CONNECTIONS

A. CORD CONNECTION

1. For cord connected application, simply plug the cord into an appropriate A.C. outlet. (IE2700 Single Phase only.)

B. PERMANENT WIRING – SINGLE PHASE

1. Conduit electrical connections should be made by a qualified electrician and must comply with local electrical codes

CAUTION: Be sure that designated circuit breaker is off until all wiring has been completed.

2. Remove power box cover held by four (4) screws.

CAUTION: Be sure that ON/OFF switch is in the OFF position.

3. Locate desired area for conduit connection and drill hole for conduit.
4. Route wire through conduit and into electrical compartment. Disconnect power cord ground wire and replace with green wire from conduit.
5. Cut power cord six inches from interlock switch, strip insulation back 1/2" and, using wire nuts, connect black and white wire from conduit to interlock. (See FIG. 2.)

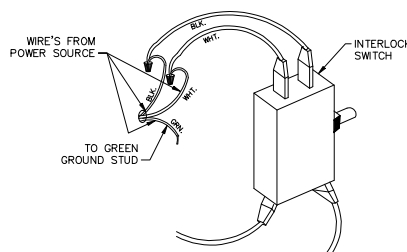


FIG. 2

6. Remove and discard remaining 9 1/2 Feet of power cord.
7. Replace blower access door and turn unit on.

C. PERMANENT WIRING – 3-PHASE

1. Conduit electrical connections should be made by a qualified electrician and must comply with local electrical codes.

CAUTION: Be sure that designated circuit breaker is off until all wiring has been completed.

2. Remove blower access door held by four (4) screws that contains power box.

CAUTION: Be sure that ON/OFF switch is in the OFF position.

3. Locate desired area for conduit connection and drill hole for conduit.
4. Route wire through conduit and into electrical compartment.
5. Connect red, black and white wires to terminal block as shown in 3-phase wiring diagram.
6. Connect green wire to green painted ground stud in electrical box.
7. Replace electrical access door and blower access door. Installation is complete.

OPERATING INSTRUCTIONS

1. Turn the switch on. The power lamp should glow.

NOTE: The cell access door activates an interlock switch when it is closed.

2. Some initial arcing (popping noise) may occur when the unit is turned on. This will stop in a few minutes after loose lint and dust are collected.
3. During normal operation, the power lamp may blink intermittently. If the lamp stops glowing completely, the cells should be inspected for excessive moisture or large particles. (See Maintenance.)
4. The IE2700 is equipped with a 4-way adjustable exhaust grille. This can be positioned for the optimum air flow pattern. Adjust grille up or down, and left or right to achieve desired pattern.

MAINTENANCE

1. Always be sure power switch is turned off before performing any service to the air cleaner.
2. When checking cell and ionizer assemblies, turn unit off and wait approximately three minutes before attempting to remove assemblies.

CAUTION: Cell assemblies weigh 27 lbs. each.

3. Open cell access door and note the orientation of the cell, ionizer, and prefilter. Remove for cleaning.
4. Wash the prefilter, cell, and ionizer in a container of hot water, and ElectriClean or a good industrial detergent that is aluminum safe.

CAUTION: Do not use any caustic or acidic solutions strong enough to damage aluminum.

Soak 15 minutes or more, swishing the parts occasionally. Rinse thoroughly in clean water, drain, then allow to completely dry before installing back into cabinet.

5. Check the drive belt for tightness and wear.
6. Check the blower bearings for wear. Check blower wheel for debris and dirt, and clean when necessary.
7. Check all wiring for loose connections or cracked insulation.

TROUBLESHOOTING & REPAIRS

WARNING: RISK OF ELECTRICAL SHOCK – THESE SERVICE INSTRUCTIONS ARE FOR USE BY QUALIFIED PERSONNEL ONLY. TO REDUCE RISK OF ELECTRICAL SHOCK, DO NOT PERFORM ANY SERVICE OTHER THAN CONTAINED IN OPERATING INSTRUCTIONS UNLESS QUALIFIED TO DO SO.

Whenever the air cleaner is not functioning, the neon light on the cabinet will not be lit. When the unit is operating this light will usually flicker to some extent. This is normal and does not indicate trouble.

A. If unit is not working – (Fan is not running and indicator light is not on):

1. Check that fuse or circuit breaker is closed.
2. Make sure switch is "on".

NOTE: If door is not in place when checking, door switch must be held in manually.

B. If lighted switch is off:

1. Check fuse. If burnt, replace with 1 1/2 AMP time delay fuse.
2. Remove cell and ionizer from cabinet. If light comes on upon activating door switch, the fault is in the

ionizer and / or collector cell. To determine which, first place ionizer in unit. If lamp goes out ionizer is at fault. Repeat procedure with collector cell.

3. If light is still not operating:

- a. Remove the blower access door.
- b. Put a neon test light or voltmeter across the two input leads to check line voltage on primary of high voltage transformer.
- c. If correct voltage (120 V. or 230 V. **E** 10 volts, see nameplate) is not measured, check backward, using wiring diagram, until problem can be found.
- d. Check voltage to light terminals (yellow and green / yellow wires. See Wiring Diagram) on the neon lamp. If voltage (120V **E** 10V) is found and light is out, replace lighted switch.
- e. If there is no voltage, replace power pack. This can be removed by removing two nuts and lock washers and sliding out the power pack. Replace new power pack in same manner.

C. If light is on, but cells are not collecting:

1. Check ionizer for broken ionizer wires and replace if necessary.

NOTE: If replacement wires are not immediately available, unit will operate satisfactorily with some of the wires missing until proper wire can be obtained. Make certain to remove all remnants of the broken wires.

2. Use an insulated handle screwdriver to cause a short at two places on the cell between two adjacent collecting plates (first) and (second) between any ionizing wire and the air flow plate. The spark at both locations indicates the cell and ionizer are working. The correct voltage readings are approximately 4500VDC for the plates, 10000VDC for the wires. A voltmeter capable of reading 10000VDC should be used to check for correct voltage.
3. If no spark is visible, remove the cell and make sure that the cell contacts are making contact with the contact on unit.
4. To check the cell, connect one side of an ohmmeter to outside plate of cell and the other side of meter to copper contact on end of cell. Resistance should read infinity (open circuit). If resistance is not infinity, see Step 5.
5. Examine cells and ionizers for:
 - a. Broken ionizer wires.
 - b. Damaged or bent plates. Straighten bent plate with needle nose pliers.
 - c. Excessive dirt accumulation.

D. If the fan motor does not run:

1. Check across the black and white leads on both sides of power switch with test lead or voltmeter to assure power is on to unit. If power is not on, check main panel fuse or circuit breakers. If power is on, proceed to Step 2.
2. If power is on and no voltage is measured on motor side of power switch, then switch is defective and must be replaced.

IE2700 SIDE EXHAUST OPTION

The IE2700 comes from the factory with the exhaust end opposite the air inlet. This unit can exhaust air from the front side by exchanging the exhaust grille assembly with the power box assembly.

1. Be sure that the power switch is off. Disconnect power to unit at circuit breaker.
2. Open cell access door and remove all cells, ionizers, and prefilters. Do not close door.
3. Remove four screws holding power box cover and remove cover.
4. Disconnect wires from motor and source voltage bonded to terminal block and ground stud.
5. Remove power box assembly which is held by eight (8) #8 x 1/2" screws.
6. Remove grille assembly plate which is also held by eight (8) #8 x 1/2" screws.
7. At this time the blower / motor should be easily accessible. Remove four (4) hex bolts holding blower to cabinet. (See FIG.3.)



FIG. 3

8. Rotate blower / motor assembly 90° so that blower / motor exhaust is now where power box was previously located. (See FIG. 4.)

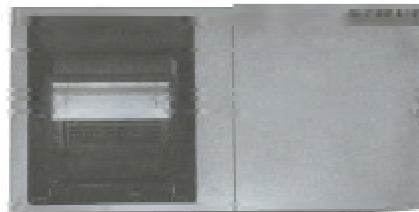


FIG. 4

11. Upon completion of wiring, replace power box cover.
12. Replace exhaust grille assembly to new location. (See FIG. 6.)

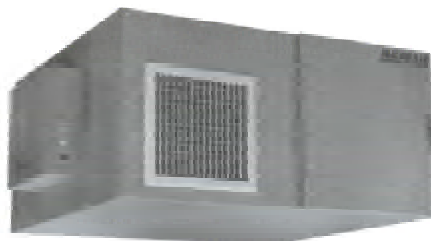


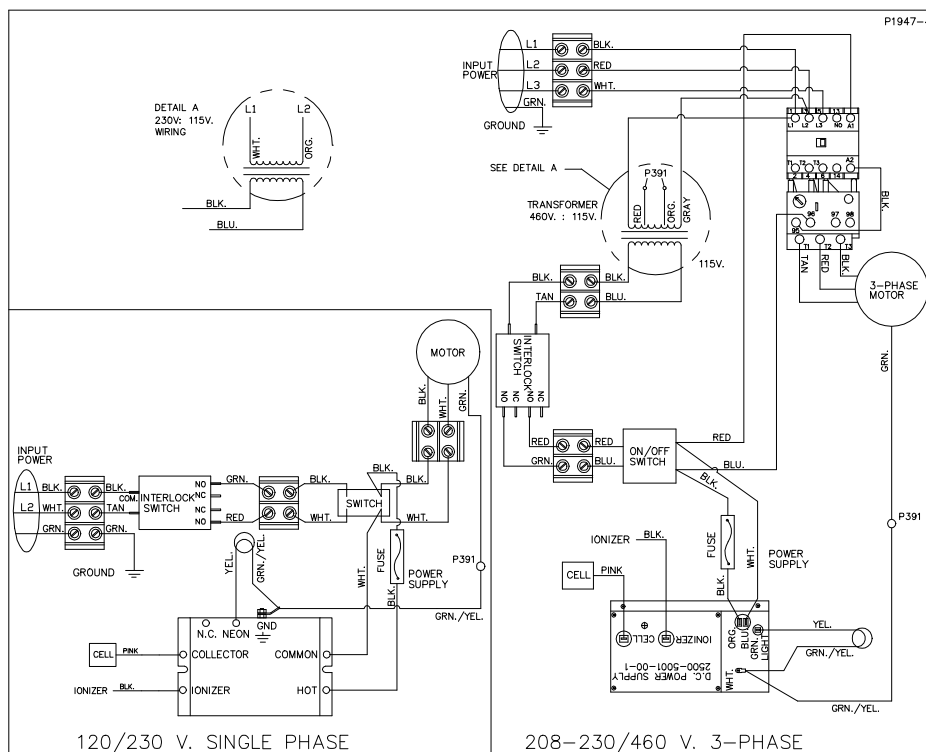
FIG. 6

13. Replace items removed in Step 2. Close door and turn unit on. Adjust exhaust grille to desired air flow pattern.

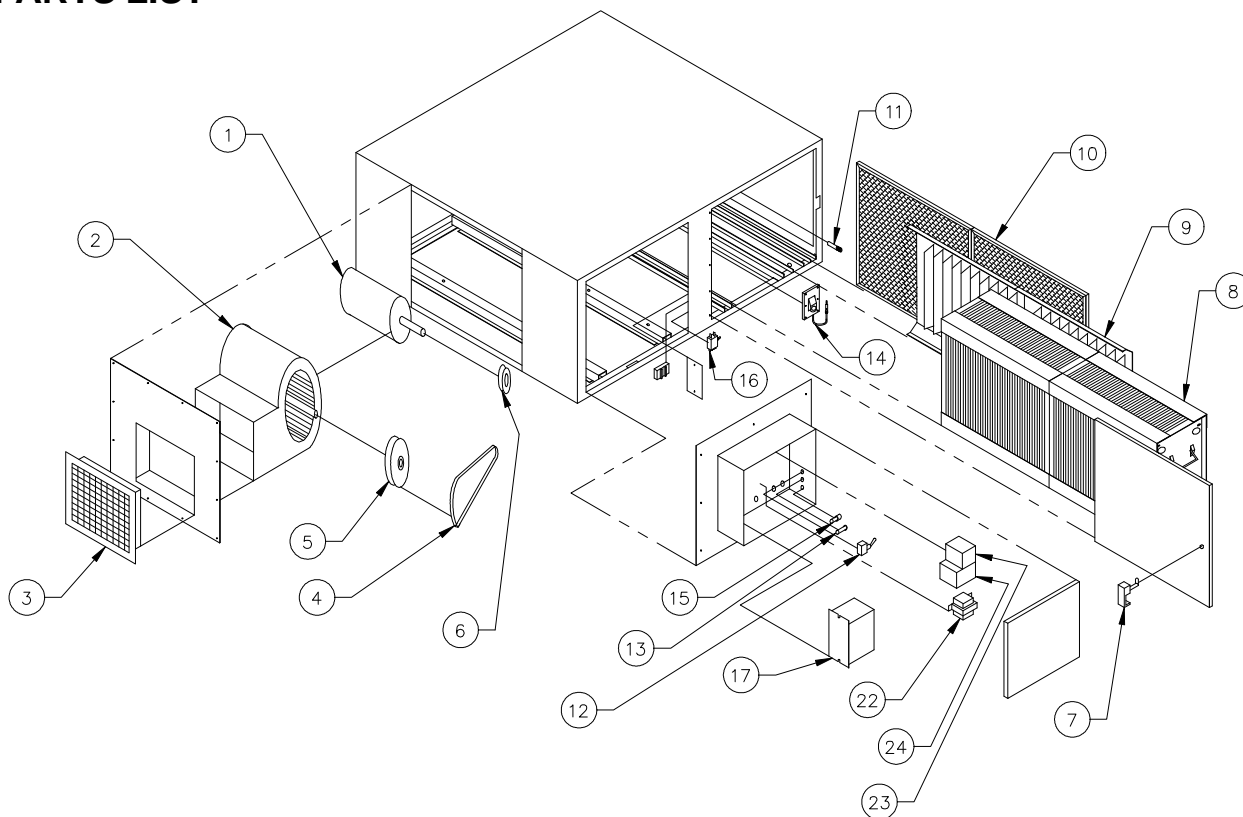
WARRANTY

Metal-Fab offers a limited 2 year warranty (from date of installation) on all replacement parts due to faulty workmanship and materials. All patents rights reserved.

FIG. 5
WIRING
DIAGRAM



IE2700 PARTS LIST



Qty. 1, unless otherwise noted.

1a.	Motor, 110/230V., 1 HP. 115/208-230V. Single Phase	P1756	12.	On / Off Switch, 120 V.	P1356
1b.	Motor, 208-230/460V. 1HP. 3 Phase	P1762	13.	Neon Lamp	P1718
2.	Blower	P1735	14.	Cell Contact	30349-03
3.	Grille	P1420	15.	Fuse Holder	P1720
4a.	Belt 120 V.	P1712	16.	Inter lock Switch	P1816
4b.	Belt 208-230/460V.	P1777	17.	Power Supply	P3500
5.	Blower Pulley, 5.95" O.D.	P1974	18.	Cord Set (not shown) 120V.	P1363
6a.	Motor Pulley, 120V.	P1781	19.	Ionizer Wire (not shown)	33911-01
6b.	Motor Pulley, 208-230/460V.	P1745	20.	Charcoal Filter (not shown)**	P1749
7.	Latch	P1372	21.	Media Afterfilter (not shown)**	P1752
8.	Collector Cell (2ea.)	33917-01	22.	Transformer, 230/460V., 3-phase*	P1754
9.	Ionizer Assembly	33925-01	23.	Starter	P3908
10.	Prefilter (2 ea.)	P2155	24.	Overload Relay	P3914
11.	Ionizer Contact Kit	39030-01			

***NOTE:** Transformers only used with 230, 460, 3-phase motors. Not required with 120 Volt.

** Optional

NOTES

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AIR CLEANERS

Products of Metal-Fab, Inc.
P.O. Box 1138 • Wichita, KS. 67201
(316) 943 2351 • FAX (316)943-2717