



**Unimodule M2**  
Unidirectional Flow  
Clean Bench/Workstation  
**OPERATION MANUAL**

Model MGPI424 #10670  
Model MGPI430 #10671  
Model MGPI436 #10672  
Model MGPI524 #10673  
Model MGPI530 #10674  
Model MGPI536 #10675

## Table of Contents

Uncrating Instructions.....	3
1. Introduction.....	3
2. Assembly Instructions.....	3
2.1 Locating the Unimodule Components.....	3
2.2 Suspending the M2 Air Supply Module.....	3
2.3 Installation of Vinyl Curtain Enclosure.....	3
2.4 Assembly of the “G” Support Stand.....	4
2.5 Installation of M2 Air Supply Stand.....	4
2.6 Installation of Plexiglas Eyelid.....	4
2.7 Installation of the Lamp Tubes and Light Diffuser.....	4
2.8 Installation of M2 Air Supply Modules Side-by-Side on a Common “G” Stand.....	4
2.9 Installation of Isolated Work Table.....	4
2.10 Plexiglas Side Panels.....	5
2.11 M2 Air Supply Module Initial Check-Out Procedure.....	5
3. Operating Procedures.....	5
3.1 Equipment and Materials Procedure.....	5
3.2 Operator Procedures.....	5
4. Maintenance and Servicing.....	6
4.1 Air Velocity Adjustment.....	6
4.2 Prefilter Replacement.....	6
4.3 HEPA Filter Replacement.....	6
4.4 Leak-Testing HEPA Filter.....	7
4.5 Filter Repairs.....	7
4.6 Lubrication of Belt Drive Blower Motors.....	7
4.7 Work Station Maintenance.....	7
4.8 Light Maintenance.....	7
4.9 Velocity Gauge Calibration (Option).....	8
5. Troubleshooting.....	8
6. Wiring Diagrams.....	9
6.1 Motor Switching.....	9
6.2 Light Switching.....	9
7. Module to Stand Attachment.....	10
8. Replacement Parts List.....	11
8.1 M424-2, Model 10577.....	11
8.2 M430-2, Model 10571.....	11
8.3 M436-2, Model 10581.....	11
8.4 M524-2, Model 10578.....	11
8.5 M530-2, Model 10572.....	12
8.6 M536-2, Model 10582.....	12
8.7 M624-2, Model 10579.....	12
8.8 M630-2, Model 10573.....	12
8.9 M636-2, Model 10583.....	13
8.10 M824-2, Model 10580.....	13
8.11 M830-2, Model 10574.....	13
8.12 M836-2, Model 10584.....	13

Please read through instructions before beginning installation.

### Installation & Service Manual

#### UNCRATING INSTRUCTIONS

The ENVIRCO equipment should be uncrated and inspected for shipping damage immediately upon arrival. If any damage exists, a damage claim report must be filled out and promptly sent to responsible carrier.

#### 1. INTRODUCTION

The M2 Unimodule Line features the modular concept, which provides almost unlimited laminar airflow combinations. It is composed of an M2 Air Supply Module, which can be combined with numerous other modular units. The basic M2 Air Supply Module is a completely self-contained unit designed to provide vertical laminar airflow to various independent workstations. It may be used separately as a ceiling-suspended unit or mounted on various support structures. M2 Air Supply Modules may be easily mounted back-to-back and/or side-to-side.

Air enters the M2 Air Supply Module through a prefilter, which removes most of the larger particles from the air. The air is then evenly distributed across High Efficiency Particulate Air (HEPA) filters by blower(s). The HEPA filters remove particles 0.3 microns and larger and impart a unidirectional or laminar flow pattern to the air. This air moves through the work area at a velocity of 90 feet per minute, +/- 20%, carrying away all airborne contamination generated by activities within the work area. All samples, or equipment, within the work area are continually bathed in laminar downflow ultraclean air.

While the M2 Air Supply Module provides an essentially particle-free atmosphere within the work area, extreme care must be taken to avoid introducing contamination via either the operator or items brought into the work area.

#### 2. ASSEMBLY INSTRUCTIONS

##### 2.1 Locating the Unimodule Components

- 2.1.1 Care should be taken in selecting the location and placement of the M2 Air Supply Module. Heavily contaminated areas where dust-producing activities take place should be avoided. Even though the modular unit performs equally well in this type of area, there is greater danger of introducing particles into the work area, and filter life will be reduced.
- 2.1.2 High velocity ambient air directed toward the work area can disturb the air pattern within the work area.
- 2.1.3 Operations near the workstation, such as grinding, can produce high velocity particles, which may penetrate the clean area.
- 2.1.4 If heavy fallout of particles is present in the vicinity of the modular unit area, a canopy should be placed over the entire unit to catch such contamination.
- 2.1.5 The top of the M2 Air Supply Module should be a minimum of 4" below the ceiling to allow air to enter the prefilter on the top and to provide access of prefilter maintenance. Where this space is not available, the prefilter assembly should be mounted on the front of the unit. The prefilter panel and the front access panel of the M2 Air Supply Module are directly interchangeable and may be accomplished without the use of tools.

##### 2.2 Suspending the M2 Air Supply Module

Using the eyebolts furnished with the M2 Air Supply Module, attach chains, cables, or lifting rods to the eyebolts for hoisting module into place.

**CAUTION: The M2 Air Supply Module should not be lifted from underneath, since this could result in damage to the HEPA filter(s) or lights.**

##### 2.3 Installation of Vinyl Curtain Enclosure

Vinyl curtain enclosures are generally used only when M2 Air Supply Modules are ceiling suspended. When a vinyl curtain enclosure is used, attach the vinyl curtain by pressing the hook and pile zipper attached to the top of the curtain against the mating portion attached to the bottom perimeter of the module.

### Installation & Service Manual

#### 2.4 Assembly of the “G” Support Stand

2.4.1 Install the two horizontal members to the center and bottom sections of the two (2) “G” shaped end members using nuts and bolts furnished.

NOTE: If an Isolated Work Table is to be installed, proceed to section 2.9 before continuing.

2.4.2 Install gasketing strips on the top inner edges of the “G” stand. This is easily accomplished by peeling off the paper backing and pressing the exposed sticky side of the gasket against the top metal surfaces of the stand.

NOTE: Assure that the mounting holes are not obstructed, as this will make installing the module mounting hardware difficult to install.

#### 2.5 Installation of M2 Air Supply on Stand

2.5.1 Position stand supports in desired location.

2.5.2 Adjust leveling feet at the bottom four (4) corners of the stand for level conditions in all planes.

NOTE: If eyelid is to be installed on the M2 Air Supply Module, proper leveling of the “G” stand is necessary to prevent it from binding on the side enclosures.

2.5.3 Hoist the M2 Air Supply Module and position it above the “G” stand.

2.5.4 Slowly lower the module into place, making certain that the holes in the module and the stand are matching.

2.5.5 Attach module to the top of the stand with the hardware furnished. (See Section 7.0.)

#### 2.6 Installation of Plexiglas Eyelid

Attach eyelid to the front bottom edge of the M2 Air Supply Module with sheet metal screws furnished with the eyelid.

#### 2.7 Installation of the Lamp Tubes and Light Diffuser

**CAUTION: Use extreme caution to prevent damage to HEPA(s).**

2.7.1 Install fluorescent light tubes into sockets located on either end of the module directly below the HEPA filter(s).

2.7.2 Insert the egg-crate acrylic light diffusers below the lamp tubes and allow to rest on the lower flange of the module. It may be necessary to slightly bend the diffuser in performing this operation.

2.7.3 Install the aluminum perforated “hat” channel strip between the diffuser sections so that the joints between the sections are supported.

#### 2.8 Installation of M2 Air Supply Modules Side-by-Side on a Common “G” Stand

Instructions are the same as those given in Section 2.4, except that one “G” shaped end member will act as a common support for both M2 Air Supply Modules.

#### 2.9 Installation of Isolated Work Table

2.9.1 Position the Isolated Work Table within the “G” stand directly beneath the M2 Air Supply Module.

NOTE: If the depth dimensions of the table and “G” stand are identical, the lower horizontal member of the stand is installed after the table has been properly positioned. Assure that the table is not touching the “G” stand at any point, as this will affect its isolation characteristics.

2.9.2 Adjust the leveling feet at the bottom of each leg for desired leveling requirements.

### Installation & Service Manual

#### 2.10 Plexiglas Side Panels

Generally, Plexiglas side panels are attached to the end members of the “G” stand whether designed for use with or without an Isolated Table. If panels are shipped separately from the end members of the stand, they should be installed using the holes pre-drilled in the stand end members and the screws furnished with the stand for this purpose.

#### 2.11 M2 Air Supply Module Initial Check-Out Procedure

- 2.11.1 Connect the M2 Air Supply Module to a 120 VAC, single phase, 60 Hz, grounded power source. Assure that the circuit is sized to provide sufficient amperage as noted on the module data plate.
- 2.11.2 Convenience outlets, if installed in the work area, are factory wired with a separate power cord to handle 15 amps, maximum, at 120 VAC.
- 2.11.3 Switches for module operation are located at the lower right-hand side of the M2 Air Supply Module. The switches are maintain contact type and activate or de-activate power to the lights or blower(s). The top, green, push-button switch turns the desired portion (lights or blower) of the module ON and OFF. The lower, clear push-button is an indicator light.
- 2.11.4 Turn the M2 Air Supply Module blower and lights on. The module will provide a clean air environment within the work area within five to 10 seconds.
- 2.11.5 Air velocity being furnished by the module may be checked using a thermo-anemometer or similar airflow measuring device. If average velocity is not 90 fpm +/- 20%, see Maintenance and Servicing, Section 4.0, for instructions on adjusting speed of blower.
- 2.11.6 All HEPA filters are tested prior to shipment. However, since subsequent handling may cause leaks to develop, the integrity of the HEPA filter may be checked by introducing a challenge aerosol into the module intake (prefilter) with the blower(s) running. The air immediately below the HEPA filter is then sampled with an Aerosol Particle Counter/Photometer.

### 3. OPERATING PROCEDURES

#### 3.1 Equipment and Materials Procedure

- 3.1.1 Never poke any object through the light diffuser, as even a minute hole in the HEPA filter located immediately above the diffuser will violate the work area cleanliness level.
- 3.1.2 Surfaces of the work area should be kept clean of dust particles. This area should be wiped out before any work is begun, and at least once per work shift. Use a dust-free cloth dampened with alcohol or water for wipe-down procedure.
- 3.1.3 When the M2 Air Supply Module has been off or when activities change, the work surfaces should be wiped clean per section 3.1.2 and the air supply allowed to operate at least five minutes before activities commence within the work area.
- 3.1.4 All material (tools, containers, fixtures, etc.) should be cleaned before being placed inside the work area.
- 3.1.5 Work surfaces should be kept free of items not being used.
- 3.1.6 Avoid unnecessary obstruction directly between the HEPA filters and the critical activities.
- 3.1.7 Lead pencils, paper products, or other linting or particle-producing items are not recommended for use in the clean work area.
- 3.1.8 Do not store anything on the top of the M2 Air Supply Module, since the possibility of blocking the intake air at the prefilters occurs. This in turn will affect the clean air supplied to the work area.

#### 3.2 Operator Procedures

- 3.2.1 Hands, forearms, and sleeves of the operator should be free of loose dirt and lint before placing them inside the work component.
- 3.2.2 Recognizing that the amount of contamination that the operator can transfer directly to the critical work from their hands or poor techniques is many times greater than that resulting from airborne contamination; care must be exercised at all times to prevent direct contact with the work.
- 3.2.3 Care must be taken that the hair or eyelashes are not rubbed when the working procedure is taking place at the work surface. Always turn away when coughing or sneezing.

### Installation & Service Manual

- 3.2.4 If close work requires that the operator place his or her hand within the work compartment, a head covering should be worn.
- 3.2.5 Work should be performed at least six inches behind the front edge of the work deck.
- 3.2.6 Whenever possible, work on the critical part should be performed with the operator's hands downstream from the part itself.
- 3.2.7 Clean parts transported in protective containers should be removed from the containers inside the work compartment. Containers should be kept inside the work compartment until the part is returned to the container, and the container is closed.
- 3.2.8 It should be recognized that when objects, tools, or operator's hands are brought into the work area, that a slight vacuum is created behind these objects which carries contaminated air into the work area. Care must be taken that critical parts or processes are not exposed to this contamination.

## 4. MAINTENANCE AND SERVICING

### 4.1 Air Velocity Adjustment

- 4.1.1 Air velocity within the work compartment should normally be 90 feet per minute +/- 20%. This is determined by taking a series of readings with an airflow measuring device, i.e. a thermo-anemometer, 6-12 inches below the bottom of the module. These readings should be taken on an imaginary 6" x 6" grid in a plane defined by the module bottom.
- 4.1.2 When the air velocity falls below the prescribed value, the prefilter should be checked and replaced, if dirty.
- 4.1.3 If after replacing the prefilter, the velocity is still low, the supply blower speed must be increased. This is accomplished by advancing, clockwise, the motor speed control. The motor speed control is located inside the blower compartment and is easily accessible by lifting the front access panel from a race at the bottom, bringing the panel slightly outward and lowering the access panel to remove it from its top race before taking it away from the front of the module.

Depending on the cleanliness, or lack of it, in the ambient conditions surrounding the module, HEPA filters will last a number of years before becoming "loaded" to the point where they require replacement. When the motor speed control has been turned all the way clockwise, and air velocities prescribed cannot be reached, the HEPA filter(s) require replacement.

### 4.2 Prefilter Replacement

- 4.2.1 Prefilter life is directly dependent on the condition of the ambient air and should be routinely inspected and replaced when necessary. These should be replaced with 30% ASHRAE filter rather than furnace type prefilters to prolong HEPA filter life.
- 4.2.2 Standard prefilters are located on the top of the M2 Supply Module and may be replaced by removing the prefilter panel from the top of the module, sliding the prefilters out of the perforated portion of the panel and inserting new prefilters in reverse order of removal.

### 4.3 HEPA Filter Replacement

- 4.3.1 Normally HEPA filters require replacement after 2-4 years of operation. This, however, is dependent upon proper prefilter servicing and conditions of ambient air.
- 4.3.2 HEPA filters are accessible from the front of the module by removing the front access panel as specified in section 4.1.3.

There are barrel bolt locks on either end of the HEPA housing and supply plenum, which rests on the top of the HEPA. The pin on the locks must be retracted before removal of the HEPA.

After the locks have been retracted, using the handles on the front of the plenum, raise the plenum front until the lock pins can be released and allowed to rest on their strike brackets. The filter may now be slid forward until it clears the cabinet and can be removed. The new filter is installed in reverse order.

### Installation & Service Manual

After the new filter has been installed, retract the lock pins and lower the plenum onto the top of the filter. Slide the lock pins into the retaining holes of the retainer brackets.

- 4.3.3 Conduct air velocity check as specified in section 4.1.1 and set motor speed control at a proper position to provide 90 feet per minute +/- velocity.

#### 4.4 Leak-Testing HEPA Filter

When HEPA filters are replaced, it is advisable to check for filter and filter seal leaks if test equipment is available.

The M2 Air Supply Module is designed with a negative plenum concept, and leaks between the HEPA and its mating frame should not cause induction of contamination into the work area. Leaks that may occur between frame and filter occur in a negative area, in respect to the work area, and are drawn back to the blower for return to the HEPA filter. It is still recommended, however, the following leak tests be performed.

- 4.4.1 An aerosol generator is placed adjacent to the prefilters of the module to introduce particles.
- 4.4.2 A particle counter/photometer is used to reveal leaks. Any leaks passing more than 0.01% of the upstream concentration should be sealed.
- 4.4.3 Carefully check for the presence of particles around the edges of the filter and across the entire filter face.
- 4.4.4 If a leak is detected, determine by close inspection if the leak is coming through or around the gasket, indicating a poor seal, or if the leak is in the filter media itself, indicating a ruptured filter. Patch caulk the HEPA filter as necessary.

#### 4.5 Filter Repairs

To seal a media leak, remove the filter from the M2 Air Supply Module. (See Section 4.3.) Set the filter on its side and place a bright light source behind the media and visually inspect for a leak. If the hole appears to be more than 1/2" into the media from the filter surface, it will be necessary to pour glue into the media.

- 4.5.1 If gasket is not properly glued to the cell sides, air can flow between the surfaces. Use contact cement to bond.
- 4.5.2 Due to shipping movement, the glue which holds the media to the sides of the filter may crack or the media may develop cracks at the glue bond line. Leaks between the filter sides and media are patched with either silicone sealant or glue. Filter should be raised on edge opposite leaking edge if glue is used.
- 4.5.3 If a "surface" media leak is discovered, silicone sealant is forced down into the media at least 3/8" using the fingers. DO NOT FORCE THE TIP OF THE CAULKING GUN INTO THE MEDIA. Run a bead of caulking along the media 3/4" each direction from the leaking surface as well as adjacent pleats.
- 4.5.4 If media leak is in the "interior" of the filter, it is repairable only by pouring glue into area of the leak. Filter glue recommended is Rulabond #2227, manufactured by Rubber Latex Company of America, New Jersey. To seal the leak, pour glue from one face of the filter and let set for 30 minutes; turn the filter over and pour from the other side; and let sit for 30 minutes before handling.

#### 4.6 Lubrication of Belt Drive Blower Motors

- 4.6.1 Motors are permanently lubricated for the life of the motor and require no lubrication.

#### 4.7 Work Station Maintenance

- 4.7.1 Plastic surfaces, painted surfaces, and anodized aluminum may be cleaned with a non-filming cleaner and water or a good quality non-corrosive solvent designed for compatibility with the material to be cleaned.
- 4.7.2 Non-abrasive, special purpose, plastic cleaners are used on Plexiglas surfaces. NEVER USE ABRASIVE CLEANERS ON PLEXIGLAS.

#### 4.8 Light Maintenance

- 4.8.1 Fluorescent tubes are accessible from within the work compartment. Removal of the diffuser is required to gain access to the light tubes.

### Installation & Service Manual

4.8.2 The remote ballast is located in the supply module blower compartment and is accessible by removing either the prefilter panel or the front access panel.

#### 4.9 Velocity Gauge Calibration

A velocity gauge and front mounted speed control potentiometer are available as options, and the following section applied only if this option is purchased with the module.

4.9.1 Adjust the front speed control knob to obtain the 90 FPM +/- 20% average velocity in the work area. Measure the airflow values as noted in section 4.1.1.

4.9.2 Adjust the set screw at the bottom of the air gauge until the black ball in the gauge centers on the middle black line of the gauge.

#### 5. TROUBLESHOOTING

Symptom	Causes	Action
1. Air supply inoperative	<ul style="list-style-type: none"> <li>a. Power failure</li> <li>b. Switch or internal wiring failure</li> <li>c. Motor failure</li> <li>d. Speed control set wrong</li> </ul>	<ul style="list-style-type: none"> <li>a. Check building power at plug.</li> <li>b. Check switch, relay, and wiring per enclosed schematic. Replace faulty component.</li> <li>c. Replace motor.</li> <li>d. Adjust motor speed control per 4.1.1.</li> </ul>
2. Exhaust air unbalanced (exhaust units only)	<ul style="list-style-type: none"> <li>a. Power failure</li> <li>b. Exhaust outlet discharging into cramped area or high static pressure duct</li> </ul>	<ul style="list-style-type: none"> <li>a. Check building power at plug.</li> <li>b. Modify discharge area. Total static pressure drop in duct system should not exceed 0.2" water gauge.</li> </ul>
3. Low air velocity	<ul style="list-style-type: none"> <li>a. Dirty prefilter</li> <li>b. Velocity gauge out of calibration (option)</li> <li>c. Dirty HEPA filter</li> <li>d. Bad speed control</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace prefilter.</li> <li>b. Recalibrate gauge. See section 4.9.1.</li> <li>c. Replace HEPA filter.</li> <li>d. Replace speed control.</li> </ul>
4. High air velocity	<ul style="list-style-type: none"> <li>a. Blower speed control turned all the way up</li> <li>b. Velocity gauge out of calibration (option)</li> <li>c. Bad speed control</li> </ul>	<ul style="list-style-type: none"> <li>a. Adjust airflow per section 4.1.</li> <li>b. Recalibrate gauge per section 4.9.1.</li> <li>c. Replace speed control.</li> </ul>
5. Non-laminar airflow	<ul style="list-style-type: none"> <li>a. Obstruction of airflow</li> <li>b. Blower failure</li> <li>c. HEPA filter is damaged</li> <li>d. External drafts</li> <li>e. Low air velocity</li> </ul>	<ul style="list-style-type: none"> <li>a. Remove large objects from work compartment.</li> <li>b. Make certain all blowers are operative.</li> <li>c. Repair or replace HEPA filter.</li> <li>d. Relocate modular unit or restrict external drafts.</li> <li>e. See section 3 above.</li> </ul>
6. Excessive contamination	<ul style="list-style-type: none"> <li>a. HEPA filter damage</li> <li>b. Aspiration of dirty air into clean area caused by obstruction in work area or crack in construction joints</li> </ul>	<ul style="list-style-type: none"> <li>a. Repair or replace HEPA filter.</li> <li>b. Remove obstruction. Seal any cracks in joints with caulking compound.</li> </ul>
7. Inoperative or low illumination	<ul style="list-style-type: none"> <li>a. Tube failure</li> <li>b. Wiring or switch failure</li> <li>c. Ballast failure</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace tube.</li> <li>b. Check Air Supply Module wiring and switches by enclosed electrical schematic. Replace defective components.</li> <li>c. Replace ballast.</li> </ul>

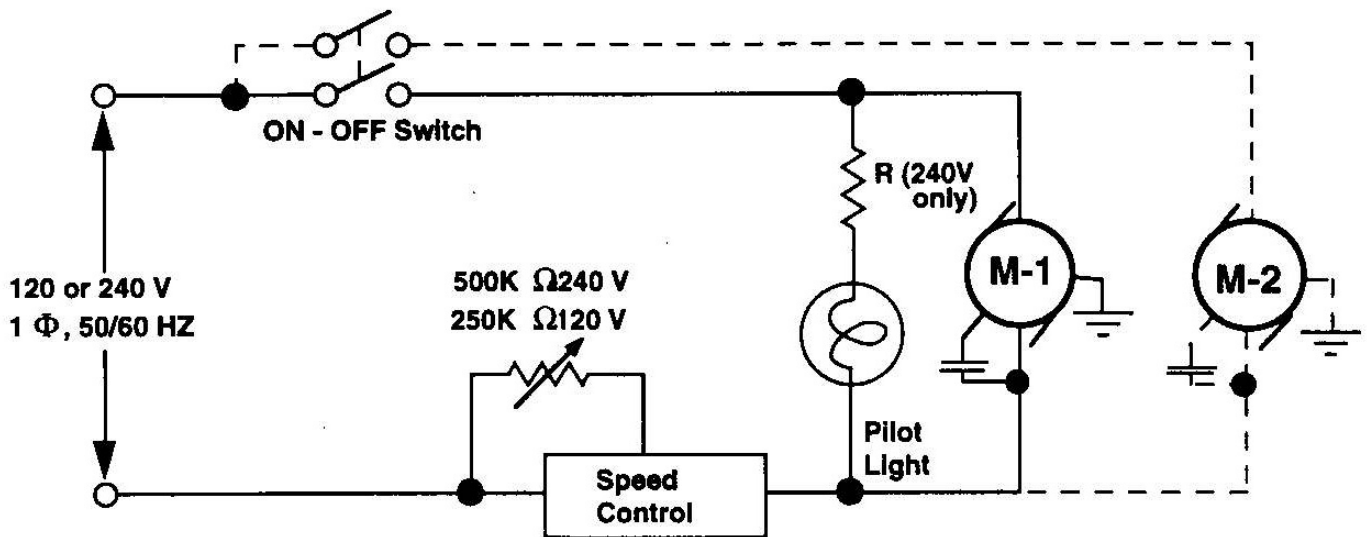


Installation & Service Manual

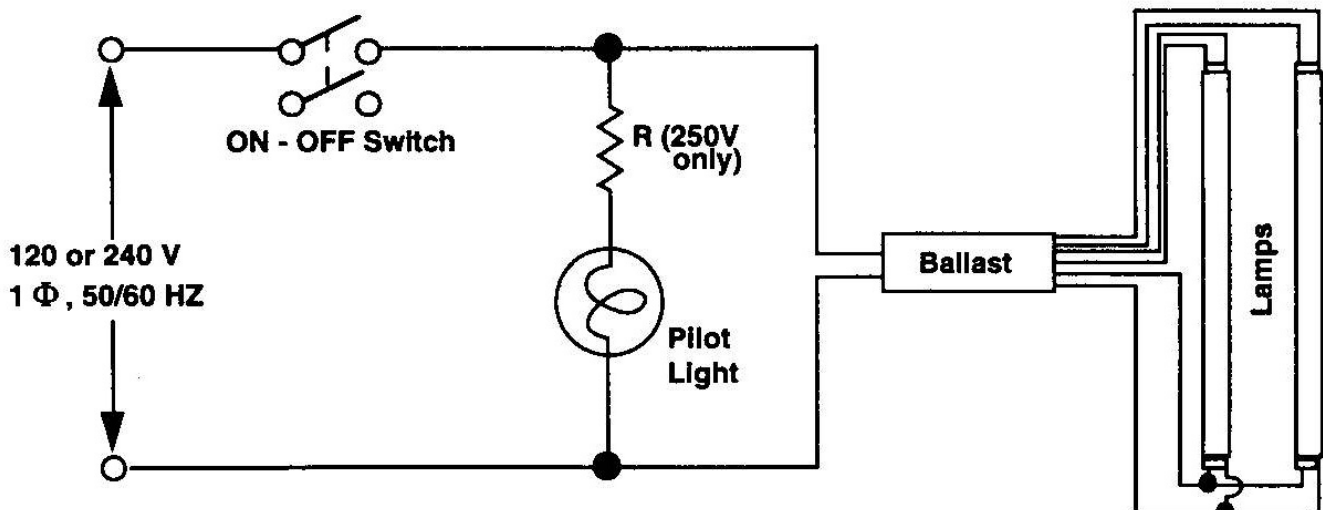
8. Inoperative speed control		
8.1 No control - high speed wide open	a. Minimum adjust pot set at maximum b. Shorted speed control	a. Turn minimum speed pot inside speed control heat sink to an approximate 9 o'clock position. b. Replace speed control.
8.2 No control - low speed or off completely	a. Damaged speed control b. Low voltage supply	a. Replace speed control. b. Obtain proper voltage to module.

6. WIRING DIAGRAMS

6.1 Motor Switching

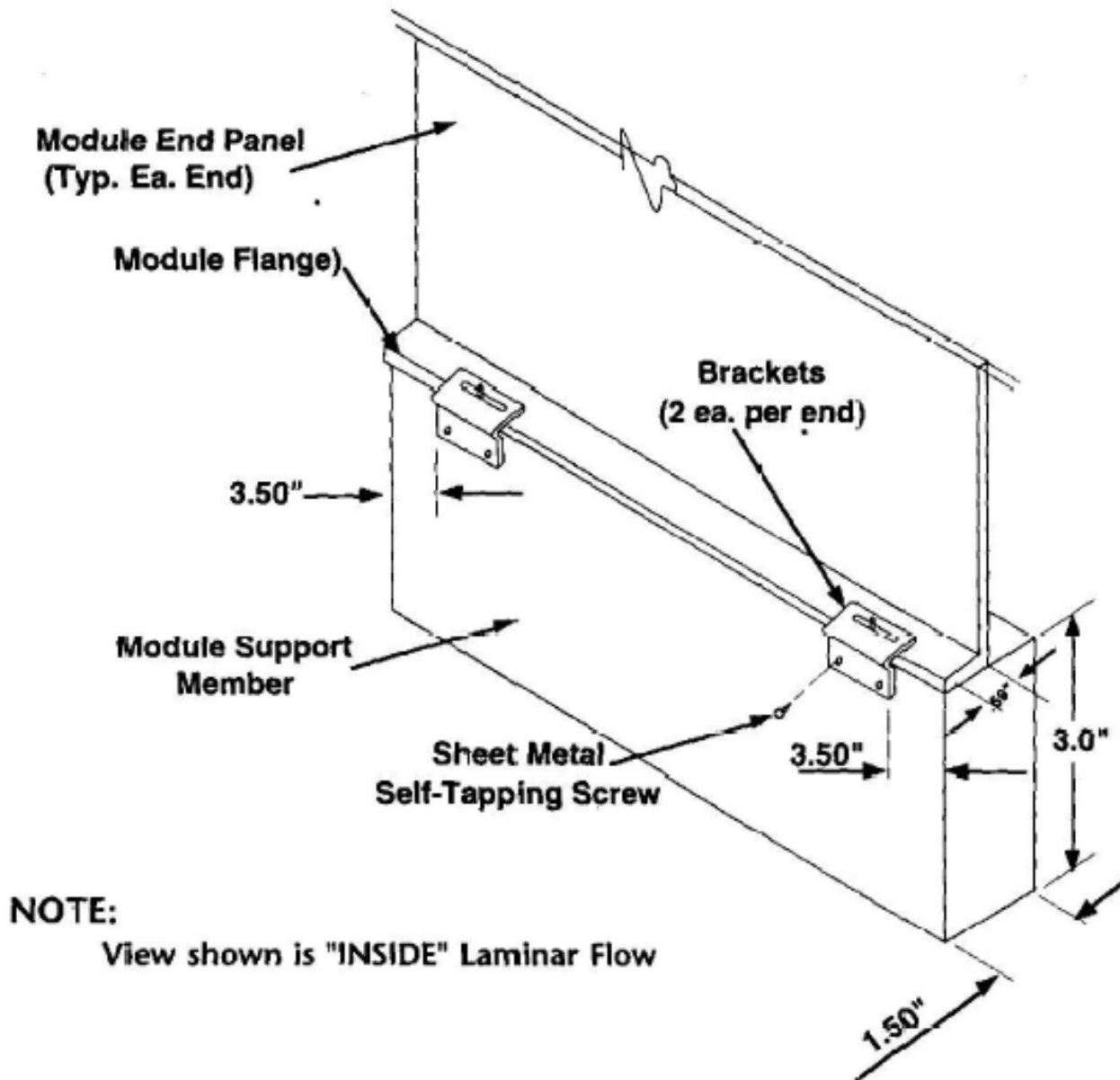


6.2 Light Switching



### Installation & Service Manual

#### 7. MODULE TO STAND ATTACHMENT DRAWING



#### Assembly:

1. Place Laminar Flow Module on top of support members.
2. Place attaching anchor brackets on top of module flange and secure with (2) self-tapping sheet metal screws. Two brackets are required at each end of module.

### Installation & Service Manual

#### 8. REPLACEMENT PARTS LIST

##### 8.1 M424-2, Model No. 10577

Description	Part No.	Qty.
Blower/Motor Assembly	32836	1 each
Motor Only	62260	1 each
Ballast Assembly	20290	1 each
Lamp F48 T12 CW HO	60062	2 each
Speed Control Assembly	22452	1 each
HEPA Filter 24" x 48"	69260	1 each
Prefilter 16" x 12" x 1"	60360	4 each
Capacitor	60077	1 each
Pilot Light	62740	2 each
Switch	62739	2 each
Lamp Socket, Fixed	60081	2 each
Lamp Socket, Plunger	60082	2 each
Light Lens	30229	2 each
Lens Support Channel	30217	1 each

##### 8.2 M430-2, Model No. 10571

Description	Part No.	Qty.
Blower/Motor Assembly	32836	1 each
Motor Only	62260	1 each
Ballast Assembly	20290	1 each
Lamp F48 T12 CW HO	60062	2 each
Speed Control Assembly	22452	1 each
HEPA Filter 30" x 48"	69302	1 each
Prefilter 16" x 12" x 1"	60360	4 each
Capacitor	60077	2 each
Pilot Light	62740	2 each
Switch	62739	2 each
Lamp Socket, Fixed	60081	2 each
Lamp Socket, Plunger	60082	2 each
Light Lens	30230	2 each
Lens Support Channel	30218	1 each

##### 8.3 M436-2, Model No. 10581

Description	Part No.	Qty.
Blower/Motor Assembly	32954	1 each
Motor Only	61806	1 each
Ballast Assembly	20290	1 each
Lamp F48 T12 CW HO	60062	2 each
Speed Control Assembly	22452	1 each
HEPA Filter 36" x 48"	69286	1 each
Prefilter 16" x 12" x 1"	60360	4 each
Capacitor	61807	1 each
Pilot Light	62740	2 each
Switch	62739	2 each
Lamp Socket, Fixed	60081	2 each
Lamp Socket, Plunger	60082	2 each
Light Lens	30231	2 each
Lens Support Channel	30219	1 each

##### 8.4 M524-2, Model No. 10578

Description	Part No.	Qty.
Blower/Motor Assembly	32836	2 each
Motor Only	62260	2 each
Ballast Assembly	20290	1 each
Lamp F60 T12 CW HO	60063	2 each
Speed Control Assembly	22452	1 each
HEPA Filter 24" x 60"	69301	1 each
Prefilter 16" x 12" x 1"	60036	3 each
Capacitor	60077	2 each
Pilot Light	62740	2 each
Switch	62739	2 each
Lamp Socket, Fixed	60081	2 each
Lamp Socket, Plunger	60082	2 each
Light Lens	30232	3 each
Lens Support Channel	30220	2 each

### Installation & Service Manual

#### 8.5 M530-2, Model No. 10572

Description	Part No.	Qty.
Blower/Motor Assembly	32836	2 each
Motor Only	62260	2 each
Ballast Assembly	20290	1 each
Lamp F60 T12 CW HO	60063	2 each
Speed Control Assembly	22452	1 each
HEPA Filter 30" x 60"	69279	1 each
Prefilter 16" x 12" x 1"	60036	3 each
Capacitor	60077	1 each
Pilot Light	62740	2 each
Switch	62739	2 each
Lamp Socket, Fixed	60081	2 each
Lamp Socket, Plunger	60082	2 each
Light Lens	30233	3 each
Lens Support Channel	30221	2 each

#### 8.6 M536-2, Model No. 10582

Description	Part No.	Qty.
Blower/Motor Assembly	32836	2 each
Motor Only	62260	2 each
Ballast Assembly	20290	1 each
Lamp F60 T12 CW HO	60063	2 each
Speed Control Assembly	22452	1 each
HEPA Filter 36" x 60"	69300	1 each
Prefilter 16" x 12" x 1"	60036	3 each
Capacitor	60077	2 each
Pilot Light	62740	2 each
Switch	62739	2 each
Lamp Socket, Fixed	60081	2 each
Lamp Socket, Plunger	60082	2 each
Light Lens	30234	3 each
Lens Support Channel	30222	2 each

#### 8.7 M624-2, Model No. 10579

Description	Part No.	Qty.
Blower/Motor Assembly	32836	2 each
Motor Only	62260	2 each
Ballast Assembly	20290	1 each
Lamp F72 T12 CW HO	60064	2 each
Speed Control Assembly	22452	1 each
HEPA Filter 24" x 72"	69212	1 each
Prefilter 16" x 12" x 1"	60360	1 each
Prefilter 16" x 20" x 1"	60036	3 each
Capacitor	60077	2 each
Pilot Light	62740	2 each
Switch	62739	2 each
Lamp Socket, Fixed	60081	2 each
Lamp Socket, Plunger	60082	2 each
Light Lens	30229	2 each
Lens Support Channel	30223	2 each

#### 8.8 M630-2, Model No. 10573

Description	Part No.	Qty.
Blower/Motor Assembly	32836	2 each
Motor Only	62260	2 each
Ballast Assembly	20290	1 each
Lamp F72 T12 CW HO	60064	2 each
Speed Control Assembly	22452	1 each
HEPA Filter 30" x 72"	69261	1 each
Prefilter 16" x 12" x 1"	60036	3 each
Prefilter 16" x 20" x 1"	60360	1 each
Capacitor	60077	2 each
Pilot Light	62740	2 each
Switch	62739	2 each
Lamp Socket, Fixed	60081	2 each
Lamp Socket, Plunger	60082	2 each
Light Lens	30230	3 each
Lens Support Channel	30224	2 each

### Installation & Service Manual

#### 8.9 M636-2, Model No. 10583

Description	Part No.	Qty.
Blower/Motor Assembly	32836	2 each
Motor Only	62260	2 each
Ballast Assembly	20290	1 each
Lamp F72 T12 CW HO	60064	2 each
Speed Control Assembly	22452	1 each
HEPA Filter 36" x 72"	69303	1 each
Prefilter 16" x 12" x 1"	60360	1 each
Prefilter 16" x 20" x 1"	60036	3 each
Capacitor	60077	2 each
Pilot Light	62740	2 each
Switch	62739	2 each
Lamp Socket, Fixed	60081	2 each
Lamp Socket, Plunger	60082	2 each
Light Lens	30231	2 each
Lens Support Channel	30225	2 each

#### 8.11 M830-2, Model No. 10574

Description	Part No.	Qty.
Blower/Motor Assembly	32836	2 each
Motor Only	62260	2 each
Ballast Assembly	20679	1 each
Lamp F96 T12 CW HO	60156	2 each
Speed Control Assembly	22452	1 each
HEPA Filter 30" x 48"	69302	2 each
Prefilter 16" x 12" x 1"	60360	3 each
Prefilter 16" x 20" x 1"	60036	3 each
Capacitor	60077	2 each
Pilot Light	62740	2 each
Switch	62739	2 each
Lamp Socket, Fixed	60081	2 each
Lamp Socket, Plunger	60082	2 each
Light Lens	30230	4 each
Lens Support Channel	30227	3 each

#### 8.10 M824-2, Model No. 10580

Description	Part No.	Qty.
Blower/Motor Assembly	32836	2 each
Motor Only	62260	2 each
Ballast Assembly	20679	1 each
Lamp F96 T12 CW HO	60156	2 each
Speed Control Assembly	22452	1 each
HEPA Filter 24" x 48"	69260	1 each
Prefilter 16" x 12" x 1"	60036	3 each
Prefilter 16" x 20" x 1"	60360	3 each
Capacitor	60077	2 each
Pilot Light	62740	2 each
Switch	62739	2 each
Lamp Socket, Fixed	60081	2 each
Lamp Socket, Plunger	60082	2 each
Light Lens	30229	4 each
Lens Support Channel	30226	3 each

#### 8.12 M836-2, Model No. 10584

Description	Part No.	Qty.
Blower/Motor Assembly	32954	2 each
Motor Only	61806	2 each
Ballast Assembly	20679	1 each
Lamp F96 T12 CW HO	60156	2 each
Speed Control Assembly	23132	1 each
HEPA Filter 36" x 48"	69286	2 each
Prefilter 16" x 12" x 1"	60036	3 each
Prefilter 16" x 20" x 1"	60360	3 each
Capacitor	61807	2 each
Pilot Light	62740	2 each
Switch	62739	2 each
Lamp Socket, Fixed	60081	2 each
Lamp Socket, Plunger	60082	2 each
Light Lens	30231	4 each
Lens Support Channel	32125	3 each

# Clean air solutions built for you.

MORE INFORMATION AVAILABLE AT [WWW.ENVIRCO.COM](http://WWW.ENVIRCO.COM)

## Industrial

### Cleanroom Products

- » MAC 10<sup>®</sup> Original
- » MAC 10<sup>®</sup> IQ™
- » MAC 10<sup>®</sup> IQ™ LAF
- » MAC 10<sup>®</sup> LEAC™
- » MAC 10<sup>®</sup> LEAC2™
- » MAC 10<sup>®</sup> LEDC™
- » Ducted Ceiling Module:  
DCM & RSR
- » AC or DC Control Systems
- » MAC-T Ceiling Grid System

## Hospital & Healthcare

### Hospital & Healthcare

- » IsoClean<sup>®</sup> and IsoClean  
with Ultraviolet Light
- » AirCeil<sup>®</sup>
- » Hospi-Gard<sup>®</sup> Room  
Pressure Monitor

### Enviramedic Products

- » HOR Horizontal Flow  
Enclosure
- » HCF Horizontal Flow  
Surgery Room
- » VOR Vertical Flow Surgery  
Isolator

## Pharmaceutical

### Pharmaceutical & Medical Device

- » Unimodule M2 Vertical  
Laminar Flow Workstation
- » METD 100% Exhausted  
Vertical Flow Workstation
- » Laminar Downflow Module

## Laboratory & Research

### Laboratory & Research

- » 100-Plus Horizontal or  
Vertical Flow Clean Bench
- » Unidirectional Flow  
Horizontal Flow Bench (LF)
- » TT Table Top Horizontal  
Flow Clean Bench
- » EnviraLab Sterility Module:  
ESM

ENVIRCO MAC 10 is a registered trademark of ENVIRCO, USA. Specifications subject to modifications or changes without notice. US patents 4,560,395 and 5,470,363. Other patents issued and pending in foreign countries.



**ENVIRCO<sup>®</sup>**

101 McNeill Road | Sanford, NC 27330, USA

tel: 919.775.2201 | toll free: 800.884.0002 | fax: 800.458.2379

[www.envirco.com](http://www.envirco.com) | email: [info@envirco.com](mailto:info@envirco.com)