



BIOCLIMATIC

MICRO/CLIMATIC MODEL MC PLENUM CB SERIES

INSTALLATION, OPERATION

&

MAINTENANCE

MANUAL

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TABLE OF CONTENTS

1	INTRODUCTION	1
	1.1 <i>Disclaimer</i>	1
	1.2 <i>Receiving</i>	1
	1.3 <i>Handling</i>	2
	1.4 <i>Storage</i>	2
	1.5 <i>Warranty</i>	2
2	INSTALLATION.....	4
	2.1 <i>Initial Setup</i>	4
	2.2 <i>Electrical Connections</i>	4
	2.3 <i>Filter Installation</i>	4
	2.4 <i>Belts, Drives and Bearings</i>	6
	2.5 <i>Airflow and Static Pressure Adjustment</i>	6
3	PHYSICAL DESCRIPTION	7
	3.1 <i>Principle of Operation</i>	7
	3.2 <i>Prefilter/Media Postfilter</i>	7
	3.3 <i>Primary Filter</i>	7
	3.4 <i>Bi-Polar Ionization</i>	8
	3.5 <i>Gas Phase Filtration</i>	8
	3.6 <i>Filter Change Light</i>	8
4	SYSTEM START-UP	9
	4.1 <i>General</i>	9
	4.2 <i>Inspection Check List</i>	9
	4.3 <i>Electrical Connection and Power Up</i>	9
5	OPERATION & MAINTENANCE OF UNIT	9
	5.1 <i>General</i>	9
	5.2 <i>Filter Change Light Adjustment</i>	10
	5.3 <i>Filter Maintenance</i>	10
	5.4 <i>Motor Pulley Belt Replacement</i>	13
	5.5 <i>Fuse Replacement</i>	14
	5.6 <i>Gasket Replacement</i>	14

1 INTRODUCTION

1.1 Disclaimer

These instructions are submitted with the implicit understanding that:

- 1.1.1 This manual is to guide the user of Bioclimatic equipment in the proper installation, operation and maintenance procedures to insure maximum equipment life with efficient operation.
- 1.1.2 The customer has assigned competent maintenance and operating personnel to the system described herein and will assume operational and maintenance responsibility upon start-up of the system.
- 1.1.3 The customer will read and thoroughly examine the foregoing instructions and will notify the seller of any points not fully understood, points of conflict or error.
- 1.1.4 The customer, in lieu of any notification to the contrary, has read and fully understands the operation of the System and is aware of the hazards of corrosion, abrasion and fire or explosion and shall take the necessary steps in the operation of equipment to control such hazards to the maximum extent possible.
- 1.1.5 Start-up assistance or field engineering service provided by Bioclimatic, or its authorized representative, shall in no way relieve the customer of responsibility for the proper operation of the System.

IMPORTANT: Any modifications to the unit by unauthorized personnel will void ETL listing and factory warranty. The unit must be installed in accordance with the manufacturer instructions to preserve warranty and ETL label.

1.2 Receiving

Products leaving the Bioclimatic factory are inspected and in satisfactory operating condition. All equipment should be thoroughly inspected when received. Although all units are firmly secured and palletized, rough handling in transit can cause breakage. Any shortage or damage should be reported at once to the transportation company. Note the damage on the bill of lading before signing for the shipment. **No equipment may be returned to Bioclimatic without written authorization. Returned equipment sent without authorization will be refused and returned to sender.**

All products are shipped F.O.B. (EX Works) Bioclimatic warehouse. Responsibility for all equipment passes to the Buyer at the time equipment is loaded onto the carrier's truck.

1.3 Handling

All equipment must be handled with extreme care. The unit is shipped on wooden pallets to facilitate equipment movement by lift truck without damage. Wooden pallets must be removed once the equipment is in its final location.

Handle equipment with care when removing pallets or moving equipment to prevent damage to special paints and surface coating. A small chip in the paint or coating will break the continuity of the surface treatment and destroy its protective value. Always touch-up scratched surfaces prior to installation and start-up.

1.4 Storage

When storing equipment, care must be taken to protect bearings, shafts, electrical connections, leads and finished surfaces from moisture, and contamination. Do not store unit outdoors. Do not store any other material on top of equipment. Periodic inspections of the equipment should be made until it is ready to be put into service. Remove all filters from equipment when storing.

NOTE: If equipment is not installed upon delivery, it must be stored in a weather-protected area.

1.5 Warranty

THE SELLER WARRANTS THE EQUIPMENT AGAINST DEFECTIVE WORKMANSHIP AND MATERIAL FOR ONE (1) YEAR FROM DATE OF FACTORY SHIPMENT OR 15 MONTHS FROM COMMISSIONING, WHICHEVER OCCURS FIRST. IN THE FULFILLMENT OF ITS WARRANTY, THE SOLE OBLIGATION OF SELLER SHALL BE TO REPAIR OR REPLACE, AT ITS OPTION, F.O.B. ITS FACTORY, ANY PART OR PARTS WHICH ARE RETURNED F.O.B. ITS FACTORY, SHIPPING CHARGES PREPAID, AND WHICH AFTER INSPECTION BY SELLER ARE FOUND TO BE DEFECTIVE. BUYER SHALL NOTIFY SELLER OF DEFECT IN WRITING, PROMPTLY UPON DISCOVERY AND WITHIN THE WARRANTY PERIOD. THIS WARRANTY DOES NOT COVER DEFECTS CAUSED BY CORROSION OR NORMAL DETERIORATION; IT DOES NOT EXTEND TO CONSEQUENTIAL DAMAGE, LOSS OR DELAY ASSOCIATED WITH A WARRANTY DEFECT; AND IT DOES NOT COVER ANY COST OF LABOR, TRAVEL, OR OTHER EXPENSE ASSOCIATED WITH THE REPAIR OR REPLACEMENT OF DEFECTIVE PARTS. SELLER ASSUMES NO LIABILITY FOR PRODUCT LOSS OR OTHER CLAIMS WHATSOEVER ARISING OUT OF THE USE OR APPLICATION OF THE EQUIPMENT IN ANY OPERATIONS, WHETHER THE MACHINE IS USED ALONE OR IN JOINT USE WITH OTHER EQUIPMENT OR PROCESSES. NOTWITHSTANDING THE FOREGOING, SELLER'S WARRANTY OBLIGATIONS WITH RESPECT TO ANY ITEMS NOT MANUFACTURED BY SELLER SHALL NOT EXCEED THE OBLIGATIONS UNDERTAKEN BY THE MANUFACTURER THEREOF UNDER EXPRESS WARRANTY TO THE SELLER. THIS EXPRESS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OF FITNESS OF THE MACHINE FOR ANY PARTICULAR PURPOSE.

THERE ARE NO OTHER REPRESENTATIONS, WARRANTY OF CONDITION IN ANY RESPECTS EITHER EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE IN CONTRACT OR TORT, OTHER THAN WHAT IS STATED ABOVE.

THE SELLER SHALL NOT BE HELD LIABLE IN ANY WAY FOR CONSEQUENTIAL DAMAGES, HOWEVER CAUSED.

THIS WARRANTY WILL NOT APPLY IF THE SELLER'S EQUIPMENT HAS BEEN DAMAGED DUE TO IMPROPER INSTALLATION, ALTERATION, ABUSE OR MISUSE, ACCIDENT, FIRE, FLOOD OR ACT OF GOD. FURTHER, THIS WARRANTY WILL NOT APPLY IF REPAIRS, REPLACEMENTS, OR ALTERATIONS ARE MADE BY OTHERS WITHOUT THE SELLER'S PRIOR WRITTEN AUTHORIZATION.

IN THE EVENT THE STATE IN WHICH THE EQUIPMENT IS INSTALLED DOES NOT PERMIT THE LIMITATION OR EXCLUSION OF IMPLIED WARRANTIES OR CONDITIONS UNDER GIVEN CIRCUMSTANCES, THE PROVISIONS OF THIS WRITTEN WARRANTY ARE IN ADDITION TO AND NOT A MODIFICATION OF THE STATUTORY WARRANTIES AND OTHER RIGHTS AND REMEDIES PROVIDED BY SUCH LAWS.

NOTE:

“ANY MODIFICATION TO ORIGINAL EQUIPMENT BY ANY COMPANY OR PERSON OTHER THAN THE MANUFACTURER WILL SERVE TO CANCEL AND VOID ALL OF THE SELLER'S LIABILITY UNDER THE MANUFACTURER'S WARRANTY. ENCLOSURES CONTAINING ELECTRONIC COMPONENTS ARE NORMALLY SEALED BY THE MANUFACTURER TO PREVENT UNAUTHORIZED TAMPERING OR ADJUSTMENTS. ONLY AUTHORIZED SERVICE PROVIDES MAY BREAK SEALS TO COMPLETE CALIBRATION OR TO TROUBLE SHOOT THE UNIT. UNAUTHORIZED TAMPERING OR BREAKING SEALS WILL RELEASE THE SELLER FROM ANY FUTURE LIABILITY UNDER THE WARRANTY”

2 INSTALLATION

2.1 Initial Setup

After receiving the MC-CB system, remove the packaging and place the unit in a horizontal position. Open the quick access panels and remove the ionization tubes, filters and media holding modules (if applicable). Remove the wooden skid bolted to the base of the unit and inspect all parts for damage. If any parts are damaged contact shipping company to file claim for damaged equipment. Check the packing list for verification that all numerated items were received.

Select a location for the unit where adequate service clearance is provided for removing the filters from the unit. The access panels must have 36 inch working space clear from the unit, or be able to swing open 90 degrees for service. Ample clearance (about two (2) feet) should also be provided to access the motor starter/disconnect.

Hang or mount the MC-CB unit from structural supports which are capable of supporting a minimum load equal to two (2) times the weight of the completely loaded unit. Ceiling suspensions of horizontal units have factory provisions for thru bolt hanger rods from the top or bottom of the housing. The unit is symmetrical so it may be supported by either the top or bottom mounting points. A minimum of four (4) supports should be used. More supports will be required in areas prone to earthquake, consult your local building code for more detail. Vertical units can be mounted directly to the floor or on a base rail. If the unit was designed to be connected to ductwork, it will be fitted with duct collars. The ductwork can be bolted directly to the duct collars on the unit. Install ductwork in conformance with local building codes and the National Electric Code.

2.2 Electrical Connections

An electrical wiring diagram is included with these instructions.

NOTE: Prior to installing any wiring, check the unit name plate for main power voltage, control voltage, transformer sizing and any fuse sizing. All field wiring must comply with National Electric Code and local code requirements.

Tighten all wiring lugs and terminals prior to connecting power to the unit, as they may loosen during transportation. Refer to the wiring diagram for proper wiring connections. Mount and wire any field installed items as indicated on the factory supplied wiring diagram. When mounting field installed components, do not jumper out or rewire any factory wiring without written authorization from Bioclimatic. (Violation will void warranty.) Check for proper motor rotation before operating the unit. Pay particular attention to proper grounding of the unit.

2.3 Filter Installation

When installing filters, refer to the filter label located on the inside of the access panels. This label itemizes all filters in the unit and their arrangement.

NOTE: Make sure that airflow arrow on the filter or module points in the direction of airflow through the unit.

The filters should be installed in the reverse order as they appear on the filter label, that is, the final stage filter should be installed first and so on. Check the filter gaskets and seals to make sure that there is no air bypass.

2.3.1 Media Holding Modules (if applicable)

Fill the media holding modules as follows:

NOTE: Gloves and a dust mask should be worn when handling media. See MSDS sheet for proper handling requirements.

- 2.3.1.1 Remove the access panel from the module.
- 2.3.1.2 Fill the module approximately 1/3 full.
- 2.3.1.3 Gently vibrate the module in order to make the media settle.
- 2.3.1.4 Fill the module approximately 2/3 full and vibrate again.
- 2.3.1.5 Completely fill the module, making sure there are no voids in the media.
- 2.3.1.6 Replace the access panel.

After 48 to 72 hours of operation, it may be necessary to "top off" the modules because of possible media settlement.

Install the media holding modules and 2 in. pleated post filter carefully so there is no air bypass.

NOTE: Unit should not be operated without filters in place because the lack of adequate static pressure will cause the motor to draw too much current and consequently burn out.

2.3.2 Ionization Tube Installation (if applicable)

Install ionization tubes as follows:

- 2.3.2.1 Screw tubes into socket by holding the leaf spring clear of tube surface.
- 2.3.2.2 Turn tube into socket by the plastic base.

- 2.3.2.3 After tube contacts base, tighten an additional 1/8 to 1/4 turn. Do not use hand tools to tighten tubes, as they will damage the glass tubes.
- 2.3.2.4 Ensure leaf spring is in contact with outer mesh.
- 2.3.2.5 Close access door.

NOTE: The ionization tubes are fragile - Handle With Care.

2.4 Belts, Drives and Bearings

Prior to starting the unit, tighten all set screws on the fan(s), sheaves and bearings where applicable. Set screws may loosen during shipment. Sheaves must be in line. Use a straight edge to verify.

2.4.1 General belt tension rules for V-Belt drives

NOTE: Ideal tension is the lowest tension at which the belt will not slip under peak load conditions.

- 2.4.1.1 Check tension frequently during the first 24 – 48 hours of operation. Over tensioning shortens belt and bearing life.
- 2.4.1.2 Keep belts free from foreign material that may cause slip.
- 2.4.1.3 Make V-Belt inspection on a periodic basis. Tension when slipping.

NOTE: Never apply belt dressing, as this will damage the belt and cause early failure.

2.5 Airflow and Static Pressure Adjustment

An adjustable motor pulley is provided so that the air flow and external static pressure may be changed.

2.5.1 Adjustment Procedure

- 2.5.1.1 Remove drive belt.
- 2.5.1.2 Change blower speed by loosening the pulley set screw and rotating the front half of the pulley. Clockwise rotation will increase pulley diameter and increase blower speed. Counterclockwise rotation will decrease pulley diameter and decrease blower speed.
- 2.5.1.3 Tighten set screw and install drive belt.
- 2.5.1.4 Apply tension to drive belt by sliding the motor away from blower.
- 2.5.1.5 Check the tension in the drive belt by placing a straightedge across the top of the belt. Pull the belt down, noting the deflection from the straightedge. This deflection should be approximately 3/8 in. or

10 mm. The force applied to cause such a deflection should be approximately 1 pound or 0.5 kg.

NOTE: It is extremely important to have the proper tension on the belt.

Be certain that the pulleys are aligned as to avoid uneven and accelerated wear on the drive belt and non-uniform power delivery to the blower pulley.

2.5.1.6 Place a straightedge across the outside of both pulleys such that it contacts each pulley in two (2) places. If the straightedge does not contact each pulley in two (2) places, the pulleys are not properly aligned.

2.5.1.7 Adjust the pulleys until the straightedge contacts each pulley in two (2) places.

2.5.1.8 Tighten motor bolts.

NOTE: It is extremely important that the pulleys are properly aligned.

2.5.1.9 Check the actual motor current after pulley adjustment and with all filters in place to ensure full load amperage is not exceeded.

NOTE: Do not operate the unit in excess of the motor's full load amperage rating.

3 PHYSICAL DESCRIPTION

3.1 Principle of Operation

The MC-CB System is designed for filtration of environmental air so as to control particulate and gaseous contaminants for new or retrofit HVAC applications. Please refer to the filter arrangement drawings for proper filter orientation. The filter stage designation refers to the installation sequence in the direction of airflow.

3.2 Prefilter/Media Postfilter

Prefilters are 2 in. or 4 in. deep, disposable type, using preformed pleated design with reinforced fabric media. Filters have a rated average efficiency of not less than 30% by ASHRAE Standard 52.2 test method, using atmospheric dust. Filters are listed Class 2 by Underwriters' Laboratories.

3.3 Primary Filter

There are different types of primary particulate filters available in different efficiency ratings. The available space in the filter section will determine the filter type.

<u>Filter Type</u>	<u>Efficiency</u>
Ultrafine Glass with Aluminum Separators	60%, 80%, 90%
Ultrafine Glass in Minipleat Configuration	60%, 80%, 90%
HEPA, HEPA Type	99.97%, 95% DOP

3.4 Bi-Polar Ionization

3.4.1 System Description

The Bi-polar ionization unit consists of a power generator, ionization tubes and power regulator.

The power generator produces line synchronized bipolar ionization of an air stream whose flow is perpendicular to the axis of the tubes. Thus, depending upon the volume of air, its velocity, chemical and biological content, ionization is adjusted by means of local control to affect particle discharge density sufficient to produce the desired volumetric air purification. Each generator is equipped with an independent voltage regulator to control ionization voltage to the tubes. Externally, the power generator includes ionization tube sockets, spring contacts, and fuse, fuseholder and indicator lamps. The ionization tube consists of two electrodes, a glass tube and a plastic base with a male threaded connector. The external electrode is crimped around the glass tube by the manufacturer, and under no circumstances should it be removed from the tube. The glass tubing material is fragile and should be handled with care. Cracked or damaged glass will cause a system malfunction and require tube replacement.

The power regulator provides control of the output of the ionization tubes. This unit can be operated in either high or low mode.

NOTE: Ozone is a by-product of any ionization process. When installed and operated in accordance with manufacturer instructions, the Bioclimatic System will not generate ozone in excess of the safety standards specified by OSHA and FDA. In most cases, there will not be chemically detectable levels of ozone generated.

3.5 Gas Phase Filtration (Optional)

Refer to the included Material Safety Data Sheets for more information on the media that was supplied with your unit.

3.6 Filter Change Light

The system consists of a differential pressure switch, which monitors the pressure drop across the filter bank. As the filter removes particulate contaminants from the air, it clogs up, restricting the airflow across the filter. When the maximum static pressure is reached the filter change light will illuminate indicating that the filters must be replaced.

4 SYSTEM START-UP

4.1 General

Before starting the System, a complete inspection should be made to ensure that all the equipment is installed for safe and proper operation. It is particularly important that the system is free of all foreign objects. Be sure all access panels are securely closed.

4.2 Inspection Check List

FILTERS

PANELS

Complete filter installation	_____	Insulation intact	_____
Surface continuity between adjacent filters and seal surfaces.	_____	Fasteners secure	_____
Wipe entire section clean	_____	Gaskets intact	_____

BI-POLAR IONIZATION

Check system fuse holder for the presence of the properly rated fuse.	_____
Inspect tubes for damage	_____
All tubes properly installed	_____

4.3 Electrical Connection and Power Up

Provide electrical connection to the system. All external wiring must be in accordance with National Electric Code and local code requirements. Pay particular attention to proper grounding of the system. After checking that all filters are in place, input electrical power is correct, and all electrical connections are in accordance with the National Electric Code and local code requirements, energize the unit. The current being supplied to the unit should be checked after powering up the unit. It should not exceed the full load amperage.

5 OPERATION & MAINTENANCE OF UNIT

5.1 General

The initial set of particulate filters is included and shipped with the unit. The gas phase filtration media (optional) is shipped in 1 cu.ft. (28.3 liter) sealed containers.

Once all the ductwork is installed, and just before starting up the system, the unit should be filled with the gas phase filtration media using the procedure in section 2.3.1. The gas phase filtration media is supplied by Bioclimatic and installed by others.

5.2 Filter Change Light Adjustment

CAUTION: Disconnect all power before opening doors for service or maintenance. Observe routine safety precautions when servicing unit.

The gas phase and fibrous filters require periodic maintenance in order to ensure satisfactory system performance over an extended period. The filter change light indicates the need to replace fibrous filters. The differential pressure switch which activates the filter change light is preset at the factory to light when static pressures increase of approximately 1 in. WC (249 Pa) occurs.

It is possible to calibrate the static pressure differential, which illuminates the filter change light as follows:

5.2.1 Calibration Procedure for Air Differential Switch

- 5.2.1.1 Remove the access panel closest to the air supply side for access to the adjustment screw.
- 5.2.1.2 Turn the unit on with clean filters installed.
- 5.2.1.3 Cover approximately 67% of the return grille with cardboard. This corresponds to the initial factory setting of 1 in. WC (249 Pa). The light should come on.

NOTE: For more time between filter changes (less air flow), cover more of the opening and for less time between changes (more air flow), cover less of the opening.

- 5.2.1.4 Turn the adjustment screw clockwise using a standard screwdriver until the light goes off; or, turn the adjustment screw counterclockwise until the light comes on.

5.3 Filter Maintenance

5.3.1 Fibrous Filters

When the filter change light illuminates, it is time to replace the fibrous filters. It is important to use high quality filters with the same specifications as those provided with the unit. The filter label affixed on the inside of the access panel lists the part number of the filters supplied with the unit. Refer to the specifications for optional features for the specifications of the proper replacement filters for your unit.

5.3.2 Ionization Tubes

The ionization tubes must be washed on a periodic basis to ensure operating efficiency. At minimum, they should be washed any time that the primary filter is serviced, but in no case longer than one year. The tubes can be washed using the following procedure:

IMPORTANT: Make sure all power to the unit is disconnected before performing this or any maintenance procedure.

5.3.2.1 Remove the tubes from the unit by lifting the leaf spring from the surface of the tube and unscrew each tube. Hold tube by its plastic base while removing.

5.3.2.2 Clean tubes with a solution of warm water and non-abrasive detergent. A soft nylon brush may be used to remove embedded material within the external electrode.

NOTE: Do not attempt to remove the tube's outer electrode.

5.3.2.3 Rinse with clean water after washing.

5.3.2.4 Replace ionization tubes only after they are completely dry. Pay special attention to removing moisture from the polycarbonate base.

5.3.2.5 Screw tube into socket by holding the leaf spring clear of tube surface. Turn tube into socket by the plastic base. After tube contacts base, tighten an additional 1/8 to 1/4 turn.

NOTE: Do not use hand tools to tighten tubes, as they will damage the glass tubes.

5.3.2.6 Make sure that the leaf spring is in contact with tube surface.

REMEMBER: The tubes are fragile - Handle With Care.

5.3.3 Gas Filtration Media

The life of the media will vary depending on the contaminants present and their concentration. A predetermined schedule for media change-outs is NOT recommended since it may result in establishing an incorrect maintenance schedule. In order to obtain the maximum operating time from the gas filtration media, Bioclimatic offers a Laboratory Service to inform the customer of the remaining media life and the correct time to change the media.

5.3.3.1 Special Precautions for Handling Gas Filtration Media

5.3.3.1.1 Inhalation

A well ventilated work area is suggested for changing the media, since dusting from fresh pellets results due to handling abrasion. In closed unventilated spaces, dust masks, such as the 3M No. 8500 are strongly recommended. Avoid direct inhalation of media dust. Refer to Material Safety Data Sheets.

5.3.3.1.2 Water

DO NOT expose the Gas Filtration Media pellets to water or moisture since this will cause leaching of permanganate or other impregnate. Exposure of permanganate solution to the skin will stain but will not burn or blister. The staining condition is temporary. This staining may be neutralized by washing in a solution of sodium bisulfide.

5.3.3.1.3 Eye Contact

If the event that eye or other sensitive areas are exposed to media dust, flush thoroughly with water and seek treatment from a physician, for exposure to abrasive dusts. Refer to Material Safety Data Sheets.

5.3.3.2 Laboratory Service (Media Life Analysis)

Laboratory Service is a support system offered to our customers, free of charge. This service will ensure timely media change out for cost effective and efficient system operation.

Media Sampling Procedure

- 5.3.3.2.1 Remove module from filter bank. (Tag module as "Test" module). Empty contents of module into a box.
- 5.3.3.2.2 Take four separate one cup samples from different areas of box.
- 5.3.3.2.3 Place samples of media into a clean container.
- 5.3.3.2.4 Mix contents thoroughly.
- 5.3.3.2.5 Fill a plastic lined sample bag from the prepared media sample. Label bag. Refill and reinstall module. Sample bags can be obtained from Bioclimatic.
- 5.3.3.2.6 Enter the date on the media sampling label located on the inside of the housing door.

5.3.3.2.7 Label the sample bag and ship to:
Bioclimatic Air Systems
600 Delran Parkway
Delran, NJ 08075
Attn: Laboratory Supervisor

5.3.3.3 Filling the modules

NOTE: Please read the included MSDS sheets before filling the media modules. Gloves and a dust mask should be worn when handling media. See MSDS sheet for proper handling requirements.

Fill with the gas phase filtration media using the procedure outlined in section 2.3.1.

Prior to installation, blow out modules to remove excessive dust. Check modules for voids.

NOTE: If the module is not blown out, excessive dust will be released into the air when the system is started. This will require that the postfilter be replaced after only a few minutes of operation due to excessive pressure loss.

After 48 to 72 hours of operation, it may be necessary to "top off" the modules because of possible media settlement. Media settlement results in air bypass and loss of efficiency.

5.4 Motor Pulley Belt Replacement

5.4.1 Place belt around pulleys.

5.4.2 Apply tension to drive belt by sliding the motor away from blower.

5.4.3 Check the tension in the drive belt by placing a straightedge across the top of the belt. Pull the belt down, noting the deflection from the straightedge. This deflection should be approximately 3/8 in. or 10 mm. The force applied to cause such a deflection should be approximately 1 pound or 0.5 kg.

NOTE: It is extremely important to have the proper tension on the belt.

Be certain that the pulleys are aligned as to avoid uneven and accelerated wear on the drive belt and non-uniform power delivery to the blower pulley.

5.4.4 Place a straightedge across the outside of both pulleys such that it contacts each pulley in two (2) places. If the straightedge does not contact each pulley in two (2) places, the pulleys are not properly aligned.

5.4.5 Adjust the pulleys until the straightedge contacts each pulley in two (2) places.

5.4.6 Tighten motor bolts.

NOTE: It is extremely important that the pulleys are properly aligned.

5.4.7 Check the actual motor current after pulley adjustment and with all filters in place to ensure full load amperage is not exceeded.

5.5 Fuse Replacement

If the fuse blows on the front of the MC-CB system, it is indicative of a defective tube or generator problem. The problem can be accurately identified as follows.

5.5.1 Remove all tubes, replace fuse and test. If the fuse blows, the generator is probably defective. If the fuse does not blow, inspect tubes for signs of cracked glass or arcing.

NOTE: Do not use damaged tubes.

5.5.2 Insert one (1) tube at a time and test. Continue independently testing each tube until the defective tube is identified. A Tube Test Unit (TTU) may also be used to quickly and efficiently identify defective ionization tubes. TTU's are available from Bioclimatic Air Systems.

5.5.3 If the generator is found to be defective, remove and return it to Bioclimatic for repairs. Please Note: **Equipment may not be returned to Bioclimatic without written authorization.** Disconnect electrical connections by turning the lock nut on the quick connect fitting counterclockwise and gently pull connector free from generator. Remove the four machine screws that hold the generator in place. When making the electrical connections, align the key on the cable connector with the slot in the mating half on the generator. Gently push into place then turn the lock nut clockwise approximately 1/2 turn until both halves on the connector are locked. The pin connections on the electrical connector will only permit installation in one way.

5.6 Gasket Replacement

After a period of operation, the gasketing on the unit may need to be replaced. It is important to replace it only with **closed cell neoprene gasketing**. Do not use rubber gasketing, as it is not suitable for use in this application.