RoboVent®

Clarion Series (CFX-)

Oil Mist Collectors

Owner's Manual

Installation, Operation & Maintenance

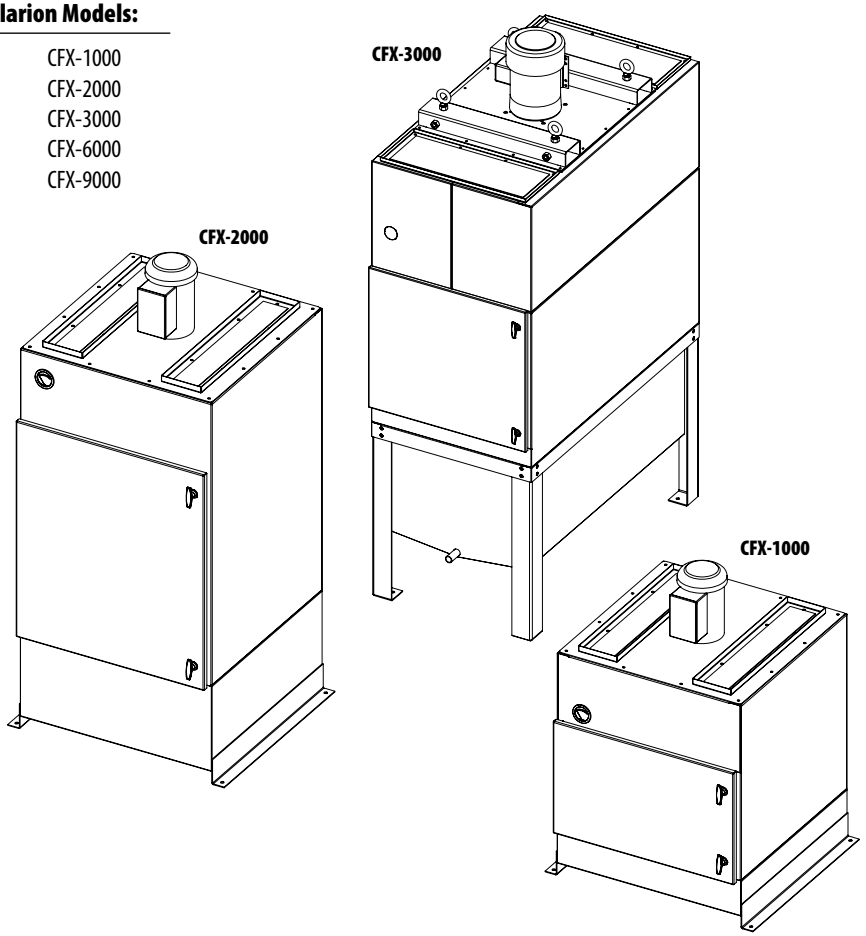
Revised 11-25-20

Owner's Manual

Installation, Operation & Maintenance

Clarion Models:

CFX-1000
CFX-2000
CFX-3000
CFX-6000
CFX-9000



Manufactured by:
RoboVent
37900 Mound Road Sterling Heights, MI 48310 USA
(888) 762-6836 www.robovent.com

Congratulations!

Dear Customer,

Thank you for purchasing a RoboVent Clarion Oil Mist Collector. This manual will help you use the many features available to customize the unit to your specific needs.

When your RoboVent Clarion Series unit needs scheduled maintenance, keep in mind that RoboVent has specially trained staff in servicing our mist and particle collectors. We would be pleased to set up a preventative maintenance program or answer your questions and concerns.

At RoboVent we are committed to making your facility a safe and healthy environment for your workers. Please take time to read this manual thoroughly before installing and operating the unit.

Table of Contents

SECTION 100

Important Safety Instructions

Failure to follow all instructions may result in electric shock, bodily injury and/or destruction of the unit.

Use of controls, adjustments, or performance of procedures other than those specified herein, may result in electrical shock.

IMPORTANT SAFETY INSTRUCTIONS

1. Read all instructions thoroughly.

2. Heed all warnings.

3. Do not block intake or exhaust vents. Keep the exhaust vent free from debris and materials that could restrict airflow. Prolonged restriction could damage the motor and electrical components. Any blockage of the air flow will decrease efficiency of this unit.

4. Refer all service matters to qualified service personnel. Servicing is required when the unit is damaged in any way including the control panel, supply wiring or in the case of excessive filter loading.

5. **Risk of serious personal injury or death!**
   Use extreme care to make sure you are never in a position where your body (or any item you are in contact with, such as a screwdriver or test instrument) can accidentally touch the blower wheel.

6. **Disconnect power before working on the motor or blower wheel. The motor or blower wheel should be disassembled only by a factory authorized technician.**

SECTION 200

Features of the Clarion Series Collectors

FIGURE 1

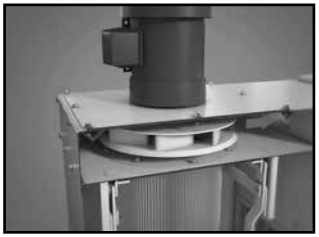


FIGURE 2

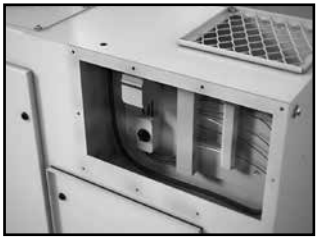


FIGURE 3

1. Filtration System

The RoboVent Clarion Series oil mist collectors utilize a proprietary design with a superior ability to process oil-laden air in way that causes miniscule droplets to coalesce and precipitate for far more effective capture. Traditional oil mist collectors rely on dated principles with limited success, such as centrifugal pocket filters, individual cartridge or panel filters, electrostatic precipitators and others.

Unlike other manufacturers, the RoboVent Clarion uses packed-bed filter technology (see Figure 1)that only require a single filter in our collectors, reducing your replacement and maintenance costs. Furthermore, our application-specific filter media means that we can apply the right media to your application, ensuring long life and clean air. All of this, backed by our 9 month filter life guarantee.

2. High Performance Blower Design

Each RoboVent Clarion Series Collector comes with a high output blower and direct drive motor. This highly efficient blower design and direct drive system maximizes the airflow (CFM) delivered by the motor power requirements. (see Figure 2).

3. Control Panel

The built-in Control Panel of the RoboVent Clarion Series contains all the electrical control devices, including the motor starter with thermal overload relay, on/off selector switch and service disconnect switch. (see Figure 3).

4. Sturdy 12 GA Reinforced Collector Housing Construction

This heavy-duty construction secures a lifetime of industrial use. Seams are robotic welded and sealed to assure there are no leaks or cracks that could contaminate the facility air system. Each unit is pre-tested for air leaks during construction and again before installation.

Features of the Clarion Series Collectors

5. **Acoustic Silencing Plenum** (option)
   High-density sound materials and Bass Trap Acoustics have been implemented as part of the outlet plenum. The acoustically designed plenum greatly reduces motor and blower noise levels and decreases ambient noise into the facility.

6. **Front Door Filter Access**
   Screen filters are easily accessible through an oversized front access door. Filter replacement is made easy and requires less time and effort than traditional loading systems.

8. **Integral Mounting Rails**
   Mounting rails on base for machine top mounting or suspending from building structure.

SECTION 300

Receiving & Inspection

Receiving

RoboVent Equipment is typically shipped on skids or in crates. The number of skids/crates will vary, depending on the type, size and accessories ordered. These skids/crates are too heavy to lift by hand, and will need to be unloaded by an industrial fork-truck or similar equipment.

Inspection

A visual inspection of your equipment should be performed before it is removed from the truck. Dents, scratches, and other damages should be noted on the shipping documents, and also photographed. The structural integrity of the housing can be adversely affected by large dents. RoboVent should be immediately notified of any structural damage to your equipment. It is the purchaser's responsibility to file shortage reports and damage claims with the carrier and with your RoboVent Representative. The carrier is responsible for any damage to the equipment while it is in transit unless specific arrangements are made otherwise.

Compare the number of items received against the carrier's bill of lading. Inspect all items for apparent damage. Immediately report any shortages or obvious damage to the carrier and to your local RoboVent Representative, call the factory at 1-(888)-762-6836, or email: customer.service@robovent.com.

When all skids are completely unpacked and uncrated, check all items received against the packing lists. Further inspect the unit and components for hidden damage. Again, report any shortage or damage to the carrier and to your local RoboVent Representative.

The filter cartridges are typically shipped installed in your collector. Be sure to check them for alignment, as they may have shifted during transit. If they have shifted, it is possible that damage may have been done. Remove all filter cartridges and inspect thoroughly.

Note: Do not return any damaged components without first contacting your RoboVent Representative to obtain a Returned Goods Authorization (RGA).

Small Parts

Carefully inspect all packing material before it is discarded, to be sure that no small parts have been missed.

Installation

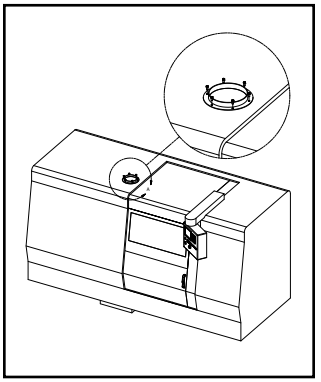


FIGURE 4

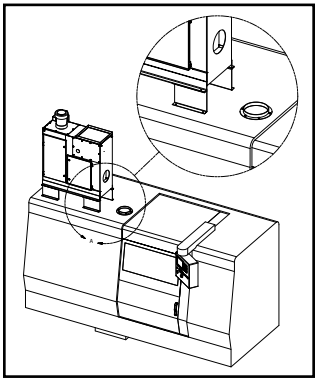


FIGURE 5

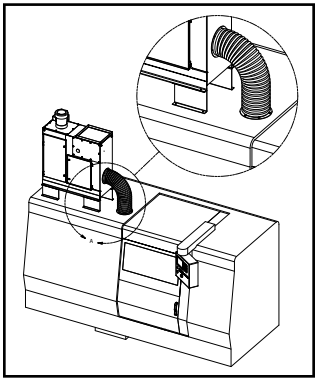


FIGURE 6

The Clarion Oil Mist Series

The RoboVent Clarion Oil Mist Series Collectors are universally designed to cover a large spectrum of oil and coolant mist applications. The application will determine the type of mounting system needed. The most common is the machine mounted Collector. In most cases this will work because of the small footprint of the Collector. The CFX Series units also have the ability to be ducted to one or several machines saving money and floor space.

Machine Mounting Installation:

This is the typical installation type and the simplest set-up when space permits;

First locate a suitable mounting location on the top of the machine where the Clarion unit can be mounted.

Many CNC machines have a cover plate along the top or side that is designated for attaching a filtration flex hose. Locate this if applicable. The cut-out under the cover plate should be about 6"-8" diameter but will depend on the size of the machine.

The Clarion unit has a side inlet opening where the mist laden air enters into the Collector. Locate a level place along the top of the CNC or machine that will allow a short flexible duct or rigid metal duct connection from the Collector to machine. This distance should be as short as possible. **Do not locate the suction intake on machining applications in direct line of the cutting spray.**

Remove the cover plate from the machine (if present, alternatively cut a circular opening through the machine skin to suit the flange size), and install an angle flange (see Figure 4).

Secure the Clarion Unit to the top of the machine that will allow a minimum of 12" clearance under the Collector (see Figure 5). This will be for the drain hoses (Detailed in the following section).

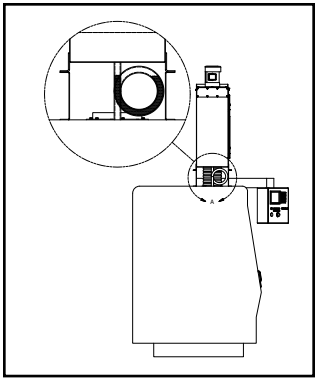


FIGURE 7

After securing the Collector, fit an angle flange to the Clarion unit's intake, then connect a short length of flexible duct or a section of rigid metal duct from the Collector inlet to the angle flange that was installed on the top of the CNC (see Figure 6).

Connecting Drain Hoses:
The Clarion Series Collectors has 2 or 3 drain outlets located on the underside of the Collector. Connect the provided clear plastic tubing to each drain. The tubing can be installed in two ways. It can be loop connected (see Figure 7) or submerged into the reservoir tank. Either installation will work to create a fluid air trap so your Collector will drain properly. This is essential otherwise air or coolant can be drawn backwards through these tubes into the Collector, because of the negative vacuum pressure inside the Collector. Failure to properly install the drain hoses will greatly reduce efficiency of the Collector as it will prevent coolant from draining down the tubes, and the unit will not function properly.

Each tube must have a loop (as shown) that will create the fluid air trap to isolate the internal reservoir. Secure the loop with a zip-tie and place the open end over an area that will allow the coolant to drain back into the machine or the coolant sump. Do not submerge the open end into the coolant as this will form a double trap.

The other option is to set up a submerged system that does not require a loop set-up. If this installation is preferred make sure the open end of each tube is totally submerged into the machine's coolant sump or reservoir. If the reservoir runs low or below the tubing you will lose the fluid air trap. The tubing must be submerged at least 12" into the reservoir.

Electrical Hook-up:
The Oil Mist Series requires a 3 phase, 460 volt electrical feed (230 Volt and 110 Volt available as options on certain models. Verify your particular model by looking at the rating tag on the Collector or on the relevant Specification Sheet). Amperage requirements for the motor can be found on the Specification Sheet for the particular Clarion collector. Electrical connections should only be done by a licensed electrician and accordance with NEC and all applicable local codes. (See Appendix for electrical schematic.)

The exact electrical connection will be determined by what model unit is ordered.

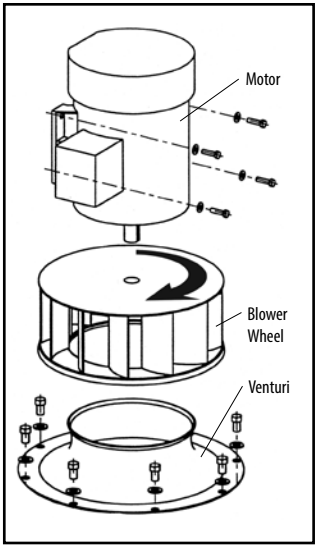


FIGURE 15

Clarion Oil Mist Collector Start-Up

Once the Collector is properly mounted, the proper flex duct installed, the drain hoses and sump primed and electrical power is connected you are ready for Start Up.

1. **Check Blower Rotation:** Check blower rotation of the unit by jogging the motor. Proper blower rotation can be observed by either removing the blower access panel or by looking down through the vents in the top of the motor. Blower rotation should be **CLOCKWISE** when viewed from above the motor. The blower will still draw air if run backward but it will only be a fraction of what it should be (see Figure 15).

2. **Check filters.** Make sure all the filters are sealed around the edges and that there is no air-flow between the track and the filter.

3. **Check the drainage system.** Make sure each looped drain line is full with fluid. If coolant is sucked back up into the Collector you may need to increase the size of the loop in the line. Periodically check that there is coolant in the drain loops at all times (when using the loop installation method). This is extremely important in the functioning of the Clarion unit.

4. **Record differential pressure.** Over the first several weeks it will be important to monitor the differential pressure from the dirty air to clean air side. If static pressure increases rapidly there may be an issue with the application which may require a different filter combination. In this case call RoboVent Technical Support at 1-(888)-762-6836, or email: customer.service@robovent.com

SECTION 600

Motor Greasing Guide

RoboVent®

Motor Greasing Guide

Your RoboVent unit will have one of four motor manufacturers installed: **TECO, Marathon, Weg,** or **Baldor**.

These motors are created with anti-friction, grease-lubricated bearings. Grease is essential to your motor bearings because it creates an oil film that counteracts the abrasive metal-to-metal contact that can occur between rotating elements. Follow RoboVent's Motor Greasing Guidelines to properly lubricate your electric motor.

Manual Grease Gun

Heavy Duty Lever Grease Gun w/ 18"
Hose Ext & Coupler
Fastenal Part No. (SKU) 0425881

DELIVERY RATE = 1 OZ PER 28 PUMPS

Grease Conversion Chart for use with this grease gun

OUNCES (OZ)	GRAMS (G)	GREASE GUN PUMPS
0.1 oz	2.835 g	2.8 pumps
1 oz	28.35 g	28 pumps
2 oz	56.70 g	56 pumps
3 oz	85.05 g	84 pumps
4 oz	113.40 g	112 pumps
5 oz	141.75 g	140 pumps

NOTE: 1 Pump = 1 gram of grease

Teco Motor Greasing Guidelines

Lubrication Procedure

It is advisable to re-grease when the motor is running to allow the new grease to be evenly distributed inside the bearing. Before re-greasing, the inlet fitting should be thoroughly cleaned to prevent any accumulated dirt from being carried into the bearing with the new grease. The outlet of grease drainage should be opened to allow the proper venting of old grease. Use a grease gun to pump grease through grease nipple into the bearings. After re-greasing, operate the motor for 10-30 minutes to allow any excess grease to vent out.

Approved Greases

- All motors with ZZ bearings will have SHELL Alvania R3 (lithium base grease).
- All motors with open bearings will have Polyrex EM (polyurea base grease).
- Certain T-frame models will utilize special grease and will be noted on the lubrication nameplate.

Relubrication Time Interval & Amounts

*Fill new grease until it overflows and the old grease is entirely replaced.

Relubrication Time Interval

BEARING SIZE	MOTOR HP	GREASE AMOUNT IN GRAMS	1800 RPM – HOUR CHANGE INTERVAL	3600 RPM – HOUR CHANGE INTERVAL
All motors listed are ODP				
DE & NDE: 6306ZZ	5	30 grams	3000 hours	2000 hours
DE & NDE: 6306ZZ	7.5	30 grams	3000 hours	2000 hours
DE: 6308ZZ	10	30 grams	3000 hours	2000 hours
DE: 6310ZZ	20	40 grams	3000 hours	2000 hours
DE: 6311ZZ & DE: 6212C3	30	40 grams	3000 hours	2000 hours
DE & NDE: 6213 & DE: 6212C3	40	50 grams	3000 hours	2000 hours
DE & NDE: 6213 & DE & NDE: 6213C3	50	50 grams	3000 hours	1000 hours
DE: 6314, NDE: 6213, DE: 6313C3 & NDE: 6213C3	75	80 grams	3000 hours	1000 hours
DE & NDE: 6317, DE: 6313C3 & NDE: 6213C3	100	120 grams	2000 hours	1000 hours
DE & NDE: 6317 & DE & NDE: 6313C3	125	120 grams	2000 hours	1000 hours

Marathon Motor Greasing Guidelines

Lubrication Procedure

1. Stop motor. Disconnect and lock out of service.
2. Remove contaminates from grease inlet area.
3. Remove filler and drain plugs.
4. Check filler and drain holes for blockage and clean as necessary.
5. Add proper type of amount of grease. See the relubrication amounts table for volume of grease required.
6. Wipe off excess grease and replace filler and drain plugs.
7. Motor is ready for operation.

Approved Greases

- Chevron SRI #2
- Rykon Premium #2
- Exxon Polyrex EM
- Texaco Polystar RB

Service Types

- **Seasonal Service:** The motor remains idle for a period of 6 months or more.
- **Standard Service:** Up to 16 hours of operation per day, indoors, 100° F max ambient temp.
- **Severe Service:** Greater than 16 hours of operation per day. Continuous operation under high ambient temp (100 to 150° F), dirty moist locations, high vibration, heavy shock loading or where shaft extension end is hot.

Motor Greasing Guide

Relubrication Time Interval

	NEMA FRAME SIZE (IN RPMs)					
	140-180		210-360		400-510	
SERVICE CONDITIONS	1800 RPM OR LESS	OVER 1800 RPM	1800 RPM OR LESS	OVER 1800 RPM	1800 RPM OR LESS	OVER 1800 RPM
Standard	3 yrs	6 months	2 yrs	6 months	1 year	3 months
Severe	1 yr	3 months	1 yr	3 months	6 months	1 month
Seasonal	The motor remains idle for a period of 6 months or more					

Relubrication Amounts

NEMA FRAME SIZE	MOTOR HP	VOLUME OF GREASE
140	5 HP	4 grams
180	7.5 HP	8 grams
210	10 HP	12 grams
250	20 HP	16 grams
280	30 HP	19.5 grams
320	40 HP-50 HP	23.5 grams
360	60 HP-75 HP	27.5 grams
400	100 HP	34 grams
440	125 HP	42.5 grams

Weg Motor Greasing Guidelines

Lubrication Procedure

Machines without Grease Nipples

Motors up to frame size 215T are normally fitted without grease fittings. In these cases the regreasing shall be done during preventive maintenance service paying attention to the following aspects:

1. Take motor apart carefully.
2. Take all the grease out.
3. Wash the bearing with kerosene or diesel.
4. Dry the bearings
5. Regrease the bearing immediately.

Motors Fitted with Grease Fitting

It is strongly recommended to grease the machine while running. This allows the grease renewal in the bearing housing. When this is not possible due to rotating parts by the grease device (pulleys, bushing, etc.) that offer some risk to physical integrity of the operator, proceed as follows:

1. Clean the area near the grease nipple.
2. Put approximately half of the total grease and run the motor for 1 minute at full speed.
3. Then turn off the motor and pump in the rest of the grease.

Note: The injection of all the grease with the motor in standstill can make the grease penetrate into the motor, through the bearing housing inner seal.

Approved Grease

- Mobile Polyrex EM Grease

Special Note

The table below is specifically intended for relubrication with MOBIL Polyrex EM grease and bearing absolute operating temperature of:

- 70°C (158°F) for 254/6T to 324/6T frame size motors
- 85°C (185°F) for 364/5T to 586/7T frame size motors
- For every 15°C (59°F) above these limits, relubrication intervals must be reduced by half.
- Shielded bearing (ZZ) are lubricated for bearing life as long are they operate under conditions and temperature of 70°C (158°F).

*****When motors are used on the vertical position, their relubrication interval is reduced by half if compared to horizontal position motors.*****

On applications with high or low temperatures, speed variation etc., the type of grease and relubrication intervals is given on an additional nameplate attached to the motor.

Motor Greasing Guide

Relubrication Time Interval & Amount of Grease

FRAM SIZE	MOTOR HP	GREASE AMOUNT IN GRAMS	3600 RPM	1800 RPM
254 / 6T	20 HP	13 grams	15700 hours	20000 hours
284 / 6T	30 HP	18 grams	11500 hours	20000 hours
324 / 6T	40 HP	21 grams	9800 hours	20000 hours
364 / 5T	60 HP	27 grams	3600 hours	9700 hours
404 / 5T	100 HP	27 grams	3600 hours	9700 hours
444 / 5TS	125 HP	27 grams	3600 hours	9700 hours
RELUBRICATION INTERVALS IN HOURS				
324 / 5T	40 HP	21 grams	9800 hours	20000 hours
364 / 5T	60 HP	27 grams	4800 hours	9700 hours
404 / 5T	100 HP	34 grams	3000 hours	6000 hours
444 / 5T	125 HP	45 grams	2300 hours	4700 hours

Baldor Motor Greasing Guidelines

Lubrication Procedure

*****Lock off and tag out power at the disconnect before servicing*****
***** Motor should be warm prior to greasing*****

1. Locate the grease inlet, clean the area, replace the pipe plug with a grease fitting.
2. Remove grease drain plug.
3. Add recommended amount of grease. Stop when new grease appears at shaft hole in the endplate or grease outlet plug.
4. Replace grease inlet plug and run the motor for 15 minutes.
5. Replace the grease drain plug.

Correct Grease Gun Procedures

1. Use hand-operated grease gun, not a pneumatic grease gun. Pump grease slowly, taking 10 to 12 seconds to complete each stroke.
2. Apply quantity of grease called for. Over-lubrication can be as damaging as under-lubrication.
3. Do not over-lubricate motors. Over-lubrication of a motor can seriously damage it by forcing grease into motor windings. Over-lubrication of the extract motor can force grease into the centrifugal switch causing it to malfunction.

Approved Grease

- Shell Dolium R (factory installed)
- Chevron SRI (standard service conditions)
- Darmex 707 (high temp conditions)
- Arrowshell 7 (low temp conditions)

Motor Greasing Guide

Service Types

SEVERITY OF SERVICE	HOURS OF OPERATION PER DAY	MAX AMBIENT TEMP	ATMOSPHERIC CONTAMINATION	INTERVAL MULTIPLIER
Standard	8	104 F (40 C)	Clean, little corrosion	1
Severe	16 +	122 F (50 C)	Moderate dirt, corrosion	0.5
Extreme	16 +	>122F (>50 C) (NOTE 1)	Severe dirt, abrasive dust, corrosion	0.1
Low Temp		-22 F (-30 C) (NOTE 2)		1

Note 1: Use high temp grease

Note 2: Use low temp grease

Relubrication Time Interval

NEMA (IEC) FRAME SIZE	MOTOR HP	3600 RPM	1800 RPM	1200 RPM	900 RPM
Up to 125 (132)	5 HP	5500 hours	12000 hours	18000 hours	22000 hours
254 to 286 (160-180)	25 HP-30 HP	3600 hours	9500 hours	15000 hours	18000 hours
324 to 365 (200-225)	40 HP-50 HP	2200 hours	7400 hours	12000 hours	15000 hours
404 to 5000 (280-315)	100 HP-125 HP	2200 hours	3500 hours	7400 hours	10500 hours

Note: For vertically mounted motors and roller bearings, divide the relubrication interval by 2.

Relubrication Amounts

NEMA (IEC) FRAME SIZE	MOTOR HP	LARGEST BEARING IN SIZE CATEGORY	OD D MM	WIDTH B MM	VOLUME OF GREASE
Up to 215 (132)	5 HP-15 HP	6307	80	21	4.5 grams
254 to 286 (160 - 180)	25 HP-30 HP	6311	120	29	9 grams
324 to 365 (200 - 225)	40 HP	6313	140	33	12 grams
404 to 5000 (280 - 315)	100 HP-125 HP	NU322	240	50	31.5 grams

SECTION 700
Maintenance

The mist collector can operate for long periods without maintenance. The maintenance period will depend on the type of oil and solids or chips in the air stream. Some soluble oil and synthetic concentrates will congeal, reducing the airflow, requiring the filter media to be manually cleaned / washed.

Inspect the unit after 3 months, 6 months and 1 year of operation to establish the maintenance interval. If there is no fouling, the mist separator can run with minimal maintenance.

Filter Cleaning and Change-out

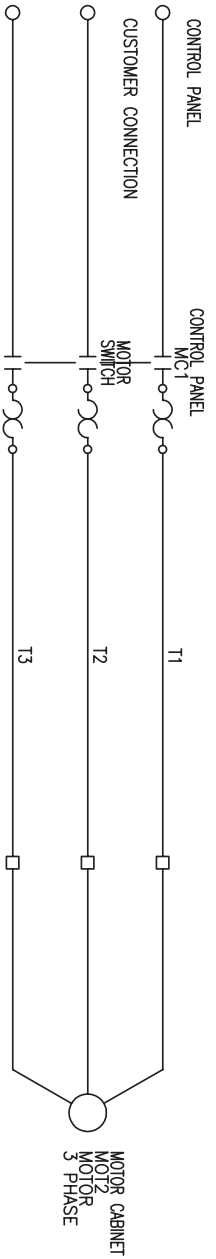
1. While the unit is operating, record the Static Pressure as displayed on the Minihelic gauge, record this information.
2. Turn off the system (Blower motor only!).
3. Turn off the main power disconnect.
4. Open large filter access door. This gives you access to the Packbed filter.
5. Remove the Packbed Filter from the Collector using RoboVent's SnapLock filter load system. Simply release the SnapLock mechanism by pulling the handles forward from the locked position, lowering the Filter Packbed, and slide the filter out.
6. Place the new Packbed Filter into the Collector. Simply slide the new filter onto the SnapLock rails and move the lift mechanism back into the locked position. Based on the size of the Packbed Filter, two people may be required to lift the new filter into position and, in some cases, a forktruck may be used. Ensure the filter is positioned square and true when it is in the up and locked position, to give proper compression and seal on the filter gasket.
7. Close and secure the filter access door.
8. Verify there is fluid present fluid air trap loop in the drain hoses. (for further detail refer to Section 400 – Installation)
9. Turn on the main power disconnect.
10. Record the Static Pressure (with the unit operating) as displayed by the Minihelic gauge, with the filters now replaced, new and clean. Calculate and record the difference from the reading taken in step 1.

APPENDIX A

General Wiring Diagrams

APPENDIX A

General Wiring Diagram



APPENDIX B

HEPA Filters
Installation & Maintenance

APPENDIX B

HEPA Filters

Features:

The RoboVent Magna Series HEPA grade air filters are designed for high-efficiency commercial and industrial applications. Magna Series efficiency ranges include: 1000 Series - 99.97% and 1100 Series - 99.99%, all based on a .30 micron particle. RoboVent Magna filters are produced in a wide range of sizes, frame types and header combinations and are ideal for converting or upgrading existing systems. As an option, RoboVent High-Capacity Magna filter models are also available for higher velocity applications and incorporate more media area for lower resistance.

Quality Assurance - the Magna 1000 Series - 99.97% and 1100 Series - 99.99% filters incorporate glass microfiber media rolls that are randomly tested and certified to meet minimum-efficiency requirements by the media manufacturer. In addition, Glasfloss randomly selects and tests filters for leaks under a rigorous quality control Program.

Media produced from glass microfibers are moisture-resistant and will not support microbial growth.

Magna 99.99% filters are tested for leaks based on near-monodispersed .30 micron size particle.

Frame is available in either 3/4" particleboard or 18 gauge galvanized metal for the 1000 Series - 99.97% and 1100 Series - 99.99%. A 26-gauge galvanized metal frame is used for the Magna 950 Series - 95%.

Aluminum separators incorporate rolled edges that help prevent media chaffing and damage in handling. The filter cartridge is bonded within the frame using a two-part sealant that isolates the filter from external shock and prevents air bypass.

Neoprene closed cell gasket is standard on each filter.

Magna 950 Series - 95%, 1000 Series - 99.97% and 1100 Series - 99.99% are available in standard and special size face dimensions.

Optional Features:

Upon request, the Magna 1000 Series - 99.97% shall be individually tested for leaks based on near-monodispersed .30 micron size particle.

An expanded metal wire lath face guard can be placed on air-entry and/or the air-exit side of the filter.

An aluminum header is available on the particleboard frame.

High-capacity and turbine style filters are available.

APPENDIX B

HEPA Filters

Construction:

The RoboVent Magna Series shall be manufactured with high-efficiency glass microfiber media that is gently pleated to form the media pack. Rolled-edge aluminum separators are inserted between each pleat to provide an extensive area for open air flow and to stabilize the media pack. A heavy-duty galvanized metal frame shall encapsulate the media pack. A self-extinguishing adhesive shall completely bond the media pack inside the filter frame to prevent air bypass. An external neoprene gasket is standard on the filter. Each Magna filter is packaged into a heavy-duty carton to help protect the filter from damage.

Applications:

The RoboVent Magna Series is designed for use where a high degree of cleanliness is required and contaminants must be removed to protect health, products or building interiors. The filters are ideal in a variety of applications including hospitals, manufacturing plants, microelectronics component assembly, negative-air machines, biological hoods and food processing.

Specifications:

The frame shall be made of 18-gauge galvanized metal. A 26-gauge galvanized steel header is available on the metal frame and an aluminum header. The media shall be constructed of a water-resistant, inorganic glass microfiber. For quality assurance, the glass microfiber media rolls are randomly tested and certified to meet minimum efficiency requirements by the media manufacturer. The media pack shall consist of a continuous sheet of the pleated glass microfiber. The pleated media pack is separated with multiple rolled-edge corrugated aluminum separators. The media cartridge shall be sealed with a fire retarding, rubber base, two-part sealant that bonds the media and separators to the interior of the frame. A 1/4" thick closed cell neoprene gasket shall be applied on the filter.

The filter shall be rated to withstand temperatures at a continuous 180o Fahrenheit. The 99.97% and 99.99% Magna filters shall be rated Class 2 under U. L. Std. 900. The filter element shall be factory-constructed by pleating a continuous sheet of glass microfiber media into uniform spaced pleats which are separated by rolled-edge corrugated aluminum. The efficiency shall be 99.97% or 99.99% based on a nearmonodispersed .30 micron size particle. This filter pack shall be encased in 18-gauge galvanized steel for the 1000 Series - 99.97% and 1100 Series - 99.99% efficiencies. The frame shall not exceed 5-7/8" or 11-1/2" in depth, and standard tolerances shall be +/- 1/16" on height and width. A closed-cell neoprene gasket shall be applied to the filter. Each filter shall be packaged into a heavy-duty carton. Filters shall be listed U.L. Class 2 under Std. 900.

APPENDIX B

HEPA Filters

BASE MODEL NUMBER	SIZE H x W x D NOMINAL	SIZE H x W x D EXACT	RATED VELOCITY FPM Std.	RATED VELOCITY FPM H.C.	INITIAL RESIST. IN. W.G. Std.	INITIAL RESIST. IN. W.G. H.C.
0808A5	8 x 8 x 6	8 x 8 x 5-7/8	175		1.0"	
1212A5	12 x 12 x 6	12 x 12 x 5-7/8	175		1.0"	
1224A5	12 x 24 x 6	12 x 24 x 5-7/8	175		1.0"	
1818A5	18 x 18 x 6	18 x 18 x 5-7/8	175		1.0"	
1824A5	18 x 24 x 6	18 x 24 x 5-7/8	175		1.0"	
2424A5	24 x 24 x 6	24 x 24 x 5-7/8	175		1.0"	
2430A5	24 x 30 x 6	24 x 30 x 5-7/8	175		1.0"	
2436A5	24 x 30 x 6	24 x 36 x 5-7/8	175		1.0"	
2448A5	24 x 48 x 6	24 x 48 x 5-7/8	175		1.0"	
2460A5	24 x 60 x 6	24 x 72 x 5-7/8	175		1.0"	
2472A5	24 x 72 x 6	24 x 72 x 5-7/8	175		1.0"	
1212B5	12 x 12 x 12	12 x 12 x 11-1/2	275	500	1.0"	1.45"
23F11FB5	24 x 12 x 12	23-3/8 x 11-3/8 x 11-1/2	275	500	1.0"	1.45"
2412B5	24 x 12 x 12	24 x 12 x 11-1/2	275	500	1.0"	1.45"
2418B5	24 x 18 x 12	24 x 18 x 11-1/2	275	500	1.0"	1.45"
23F23FB5	24 x 24 x 12	23-3/8 x 23-3/8 x 11-1/2	275	500	1.0"	1.45"
2424B5	24 x 24 x 12	24 x 24 x 11-1/2	275	500	1.0"	1.45"
2430B5	24 x 30 x 12	24 x 30 x 11-1/2	275	500	1.0"	1.45"

APPENDIX B

HEPA Filters

MEDIA SQUARE FEET Std.	MEDIA SQUARE FEET H.C.	SIZE H x W x D EXACT	RATED VELOCITY M/H Std.	RATED VELOCITY M/H H.C.	INITIAL RESIST.PASCALS Std.	INITIAL RESIST.PASCALS H.C.
7.87		203 x 203 x 149	3202.5		248.8	
20.93		305 x 305 x 149	3202.5		248.8	
44.84		305 x 610 x 149	3202.5		248.8	
51.68		457 x 457 x 149	3202.5		248.8	
70.47		457 x 610 x 149	3202.5		248.8	
96.09		610 x 610 x 149	3202.5		248.8	
123.32		610 x 762 x 149	3202.5		248.8	
148.95		610 x 914 x 149	3202.5		248.8	
200.20		610 x 1219 x 19	3202.5		248.8	
253.05		610 x 1524 x 149	3202.5		248.8	
304.30		610 x 1829 x 149	3202.5		248.8	
42.88	50.53	305 x 305 x 292	5032.5	9150	248.8	360.6
84.97	100.81	594 x 289 x 292	5032.5	9150	248.8	360.6
91.88	110.25	610 x 305 x 292	5032.5	9150	248.8	360.6
144.38	173.25	610 x 457 x 292	5032.5	9150	248.8	360.6
188.22	223.31	594 x 594 x 292	5032.5	9150	248.8	360.6
196.88	236.25	610 x 610 x 292	5032.5	9150	248.8	360.6
252.66	298.59	610 x 762 x 292	5032.5	9150	248.8	360.6

APPENDIX C

Parts List

APPENDIX C

Parts List

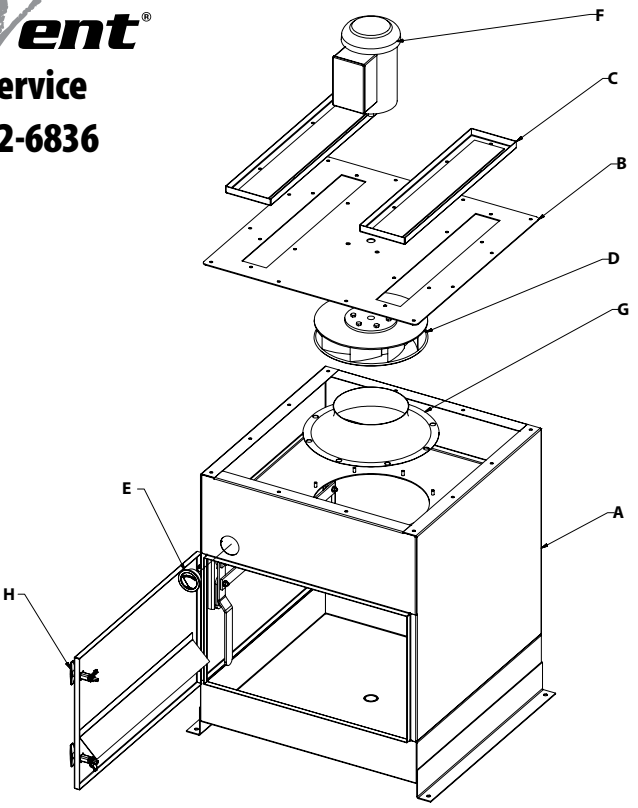
CFX-1000 MODEL

Item	Part Number	Description
A	CFX-1000-CAB	Small OilMist Complete Cabinet
B	CFX-1000-005	Motor Mount Plate
C	CFX-1000-011	Expanded Metal Covers
D	M1338	Blower Wheel 13" @ 38%
E	MHG-2	Minihelic Filter Gauge
F	MTR-1	1/2HP Motor, 1.5HP; 3600 RPM
G	MV13	Venturi, 13"
H	TH-SL	Tee Handle Door Latch

RoboVent®

Parts & Service

1 (888) 762-6836



APPENDIX C

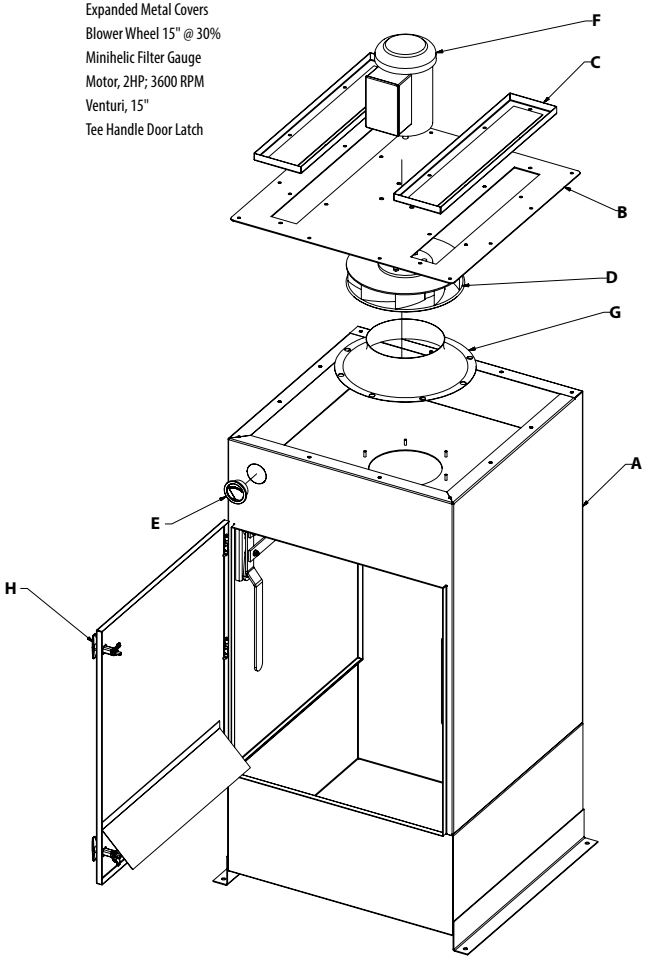
Parts List

CFX-2000-P/W-1.5-1338

Item	Part Number	Description
A	CFX-2000-CAB	OilMist Complete Cabinet
B	CFX-2000-005	Motor Mount Plate
C	CFX-2000-010	Expanded Metal Covers
D	M1338	Blower Wheel 13" @ 38%
E	MHG-2	Minihelic Filter Gauge
F	MTR-1	1/2HP Motor, 1.5HP; 3600 RPM
G	MV13	Venturi, 13"
H	TH-SL	Tee Handle Door Latch6

CFX-2000-P/W-2-1530

Item	Part Number	Description
A	CFX-2000-CAB	OilMist Complete Cabinet
B	CFX-2000-005	Motor Mount Plate
C	CFX-2000-010	Expanded Metal Covers
D	M1530	Blower Wheel 15" @ 30%
E	MHG-2	Minihelic Filter Gauge
F	MTR-2HP	Motor, 2HP; 3600 RPM
G	MV15	Venturi, 15"
H	TH-SL	Tee Handle Door Latch



APPENDIX C

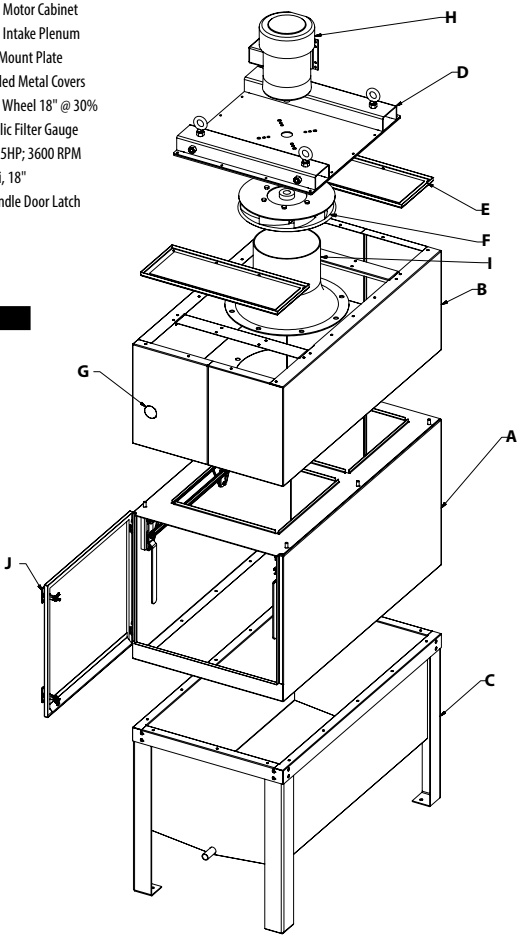
Parts List

CFX-3000-P/W-2-1530

Item	Part Number	Description
A	CFX-FC-3000	OilMist Filter Cabinet
B	CFX-MC-3000	OilMist Motor Cabinet
C	CFX-IB-3000	OilMist Intake Plenum
D	CFX-MC-3000-008	Motor Mount Plate
E	CFX-MC-3000-009	Expanded Metal Covers
F	M1530 Blower Wheel	15" @ 30%
G	MHG-2	Minihelic Filter Gauge
H	MTR-2HP	Motor, 2HP; 3600 RPM
I	MV15	Venturi, 15"
J	TH-SL	Tee Handle Door Latch

CFX-3000-P/W-5-1830

Item	Part Number	Description
A	CFX-FC-3000	OilMist Filter Cabinet
B	CFX-MC-3000	OilMist Motor Cabinet
C	CFX-IB-3000	OilMist Intake Plenum
D	CFX-MC-3000-008	Motor Mount Plate
E	CFX-MC-3000-009	Expanded Metal Covers
F	M1830	Blower Wheel 18" @ 30%
G	MHG-2	Minihelic Filter Gauge
H	MTR-5HP	Motor, 5HP; 3600 RPM
I	VV18	Venturi, 18"
J	TH-SL	Tee Handle Door Latch



CFX-6000 & CFX-9000

Contact the RoboVent Factory at (888) 762-6836 for Parts List information on the CFX-6000 & CFX-9000.

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