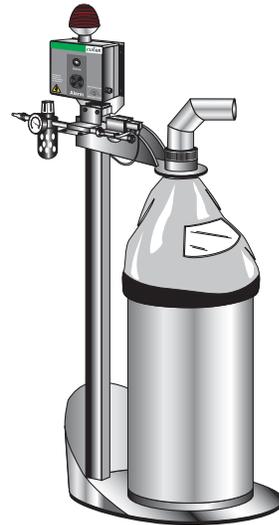


USER GUIDE
UGC004-1014

CAML-EVG Models and CAML-EVB Models

Compressed Air Material Evacuators



Please record your equipment's model and serial number(s) and the date you received it in the spaces provided.

It's a good idea to record the model and serial number(s) of your equipment and the date you received it in the User Guide. Our service department uses this information, along with the manual number, to provide help for the specific equipment you installed.

Please keep this User Guide and all manuals, engineering prints and parts lists together for documentation of your equipment.

Date:
Manual Number: UGC004-1014
Serial number(s):
Model number(s):

DISCLAIMER: Conair shall not be liable for errors contained in this User Guide or for incidental, consequential damages in connection with the furnishing, performance or use of this information. Conair makes no warranty of any kind with regard to this information, including, but not limited to the implied warranties of merchantability and fitness for a particular purpose.

TABLE OF CONTENTS

INTRODUCTION	1-1
Purpose of the user guide	1-2
How the guide is organized	1-2
Your responsibilities as a user	1-2
ATTENTION: Read this so no one gets hurt	1-3
DESCRIPTION	2-1
What is the CAML-EV?	2-2
Typical applications	2-2
How it works.....	2-3
Specifications	2-4
INSTALLATION.....	3-1
Unpacking the boxes.....	3-2
Preparing for installation	3-3
Assembling the CAML-EV	3-4
Connecting conveying lines.....	3-5
Connecting compressed air.....	3-6
Adjusting fill sensor height.....	3-7
Installing the demand sensor (optional)	3-7
Connecting the main power.....	3-8
OPERATION.....	4-1
Preparing for operation.....	4-2
Adjusting sensors.....	4-2
Moving gaylords into place	4-3
To start conveying.....	4-4
Adjusting material flow	4-4
Setting conveying time (optional)	4-5
To stop conveying	4-5
Basic cycle timer adjustment.....	4-6
MAINTENANCE.....	5-1
Maintenance checklist	5-2
Replacing the fill shroud.....	5-3
Draining the filter bowl	5-4
Checking O-rings.....	5-5
TROUBLESHOOTING.....	6-1
Before beginning.....	6-2
A few words of caution	6-2
<u>DIAGNOSTICS</u>	
Loader will not cycle	6-3
Gaylord is overfilling.....	6-3
No material flow	6-4
Poor conveying rate	6-5

TABLE OF CONTENTS

APPENDIX

Service/Warranty information.....	A-1
CAML-EVG Retractable Cover Installation.....	B-1

PARTS/DIAGRAMS

This section has been provided for you to store spare parts lists and diagrams.

INTRODUCTION

- *Purpose of the User Guide1-2*
- *How the guide is organized1-2*
- *Your responsibilities as a user .1-2*
- *ATTENTION: Read this so
no one gets hurt1-3*

PURPOSE OF THE USER GUIDE

This User Guide describes the Conair CAML-EV Compressed Air Material Evacuator and explains step-by-step how to install, operate, maintain and repair this equipment.

Before installing this product, please take a few moments to read the User Guide and review the diagrams and safety information in the instruction packet. You also should review manuals covering associated equipment in your system. This review won't take long, and it could save you valuable installation and operating time later.

HOW THE GUIDE IS ORGANIZED

Symbols have been used to help organize the User Guide and call your attention to important information regarding safe installation and operation.

Symbols within triangles warn of conditions that could be hazardous to users or could damage equipment. Read and take precautions before proceeding.

- 1** Numbers within shaded squares indicate tasks or steps to be performed by the user.
- ◆ A diamond indicates the equipment's response to an action performed by the user.
- An open box marks items in a checklist.
- A shaded circle marks items in a list.

YOUR RESPONSIBILITY AS A USER

You must be familiar with all safety procedures concerning installation, operation and maintenance of this equipment. Responsible safety procedures include:

- Thorough review of this User Guide, paying particular attention to hazard warnings, appendices and related diagrams.
- Thorough review of the equipment itself, with careful attention to voltage requirements, intended uses and warning labels.
- Thorough review of instruction manuals for associated equipment.
- Step-by-step adherence to instructions outlined in this User Guide.

We design equipment with the user's safety in mind. You can avoid the potential hazards identified on this machine by following the procedures outlined below and elsewhere in the User Guide.

ATTENTION: READ THIS SO NO ONE GETS HURT



WARNING: Improper installation, operation or servicing may result in equipment damage or personal injury.

This equipment should be installed, adjusted, and serviced by qualified technical personnel who are familiar with the construction, operation and potential hazards of this type of equipment.

All wiring, disconnects and fuses should be installed by qualified electrical technicians in accordance with electrical codes in your region.

Always maintain a safe ground. Improper grounding can result in personal injury and erratic machine operation.

Do not operate the equipment at power levels other than what is specified on the the equipment serial tag and data plate.



WARNING: Electrical shock hazard

This equipment is powered by electrical voltage, as specified on the machine serial tag and data plate.

Always disconnect and lock out the incoming main power source before opening the electrical enclosure or performing non-standard operating procedures, such as troubleshooting or maintenance. Only qualified personnel should perform procedures that require access to the electrical enclosure while power is on.



CAUTION: Air under high pressure

This equipment uses compressed air delivered at 30 to 120 PSI to convey plastic materials.

To prevent possible injury, wear eye protection when operating this equipment. Always disconnect the compressed air supply before performing maintenance or troubleshooting.

DESCRIPTION

- *What is the CAML-EV*2-2
- *Typical applications*2-2
- *How it works*2-3
- *Specifications*2-4

WHAT IS THE CAML-EV?

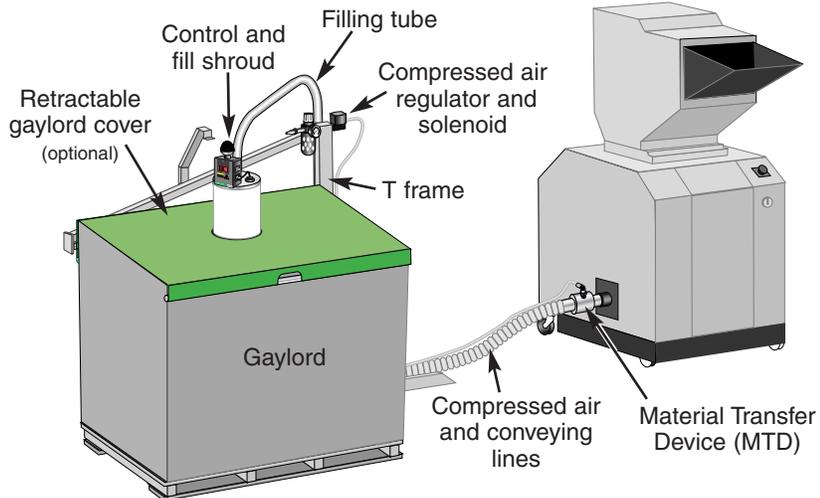
The CAML-EVG uses compressed air to fill gaylords with regrind or pelletized plastic conveyed from a granulator or other bin located up to 20 feet away. The CAML-EVB fills barrels rather than gaylords, but operation is the same.

The standard CAML-EV includes a high-level alarm sensor in the filling tube that alerts the operator to a full gaylord or barrel. An optional demand sensor for the granulator bin can provide a start signal for automatic or timed conveying.

The CAML-EVG's T-shaped frame provides locations for two gaylords, allowing for uninterrupted operation. When one gaylord is full, you simply rotate the loader's filling tube to the other gaylord. An optional, retractable cover for either or both gaylord positions can be used to minimize material contamination and dust from the conveying process.

TYPICAL APPLICATIONS

CAML-EV



The CAML-EV can be used successfully in applications that require:

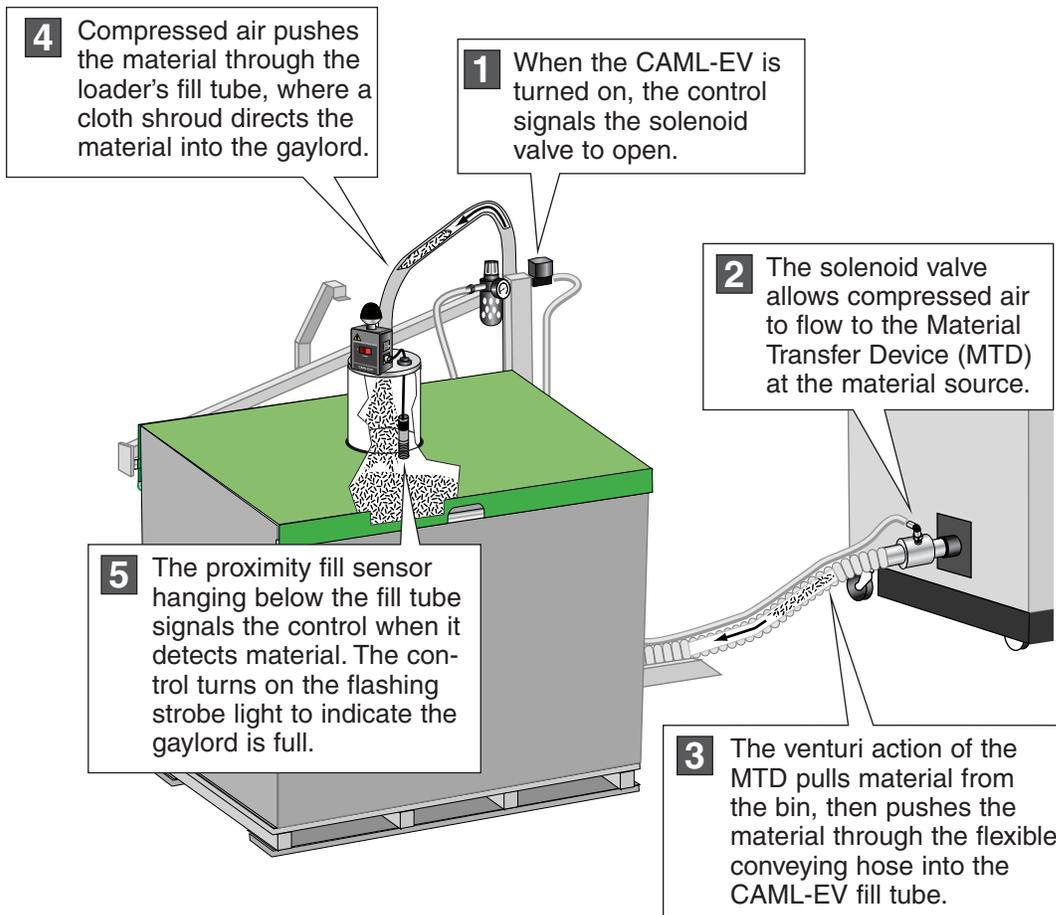
- Evacuating plastic regrind from granulator bins to gaylords for storage and reuse.
- Transferring pelletized materials from storage vessels to gaylords.
- High-capacity loading, with a maximum throughput rate of 500 to 700 lb/hr {227 to 318 kg/hr}.
- Conveying distances up to 20 feet {6 meters}.

The CAML-EV should not be used for conveying powdered materials. Although the loader can convey up to 700 lb/hr, we recommend a maximum throughput rate of 250 lb/hr to achieve the best performance with minimum filter maintenance.

How It Works

The standard CAML-EV starts conveying when the power at the control is switched on and stops when power is switched off.

If the CAML-EV is equipped with an optional timer and demand sensor, the loader will start conveying when the sensor detects material in the bin that needs to be evacuated. Conveying continues until the bin is empty or the load time set at the control expires. Conveying restarts automatically when the sensor detects more material in the bin.



SPECIFICATIONS

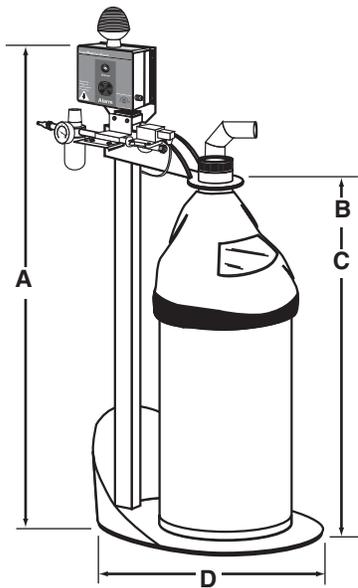
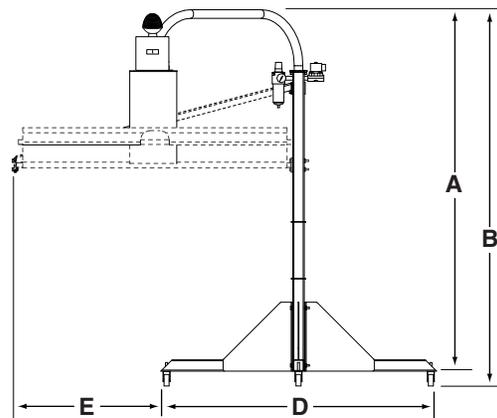
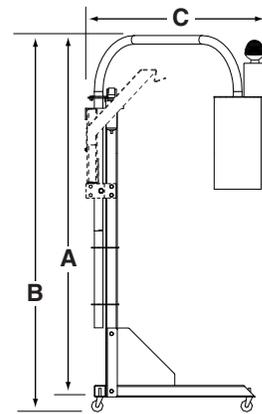
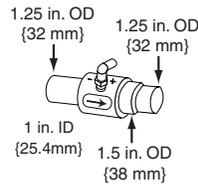
MODELS	CAML-EVG
Performance characteristics	
Maximum throughput lb/hr {kg/hr}	700 {318}
Optimum throughput * lb/hr {kg/hr}	500 {227}
Maximum conveying distance ft {m}	20 {6}
Material line size in. {mm}	1.5 {38}
Dimensions inches {mm}	
A - Overall height	65.5 {1664}
B - Height, with optional casters	68.0 {1727}
C - Depth	45.0 {1143}
D - Width	48.0 {1219}
E - Width, add for each retractable cover	27.0 {686}
Weight lb {kg}	
Shipping	185 {84}
Installed	160 {73}
Retractable cover weight, each	35 {16}
Voltages Total amps	
120V/1 phase/60 hz	1.5
Compressed air requirements	
Regulator set pressure psi {bars}	20-120 {1.4-8.3}
Consumption @ 60 psi ft ³ /min {liters/min}	8.25 {233.6}
Air inlet, NPT fitting	3/8 in.

SPECIFICATION NOTES

* Throughput is highly dependent upon material size, shape and flow rate. Performance claims are based on typical regrind. Large, small or poor flowing materials should be tested for suitability.

Specifications can change without notice. Contact your Conair representative for the most current information.

Material transfer device



MODELS	CAML-EVB
Performance characteristics	
Maximum throughput lb/hr {kg/hr}	700 {318}
Nominal throughput * lb/hr {kg/hr}	500 {227}
Maximum conveying distance ft {m}	20 {6}
Material line size in. {mm}	1.5 {38}
Dimensions inches {mm}	
A - Overall height with alarm option	57 {1448}
B - Maximum height, adjustable arm	46 {1168}
C - Minimum height, adjustable arm	30 {762}
D - Drum stand base diameter	25 {635}
Weight lbs {kg}	
Shipping	130 {59}
Installed	90 {41}
Voltages Total amps	
120V/1 phase/60 hz	1.0
Compressed air requirements	
Typical operating pressure psi {bars}	30 {2.1}
Consumption @ 60 psi ft ³ /min {liters/min}	8.25 {233.6}
NPT fitting	3/8 in.

SPECIFICATION NOTES

*Recommended throughput rates are provided to insure optimum performance and life of the product.

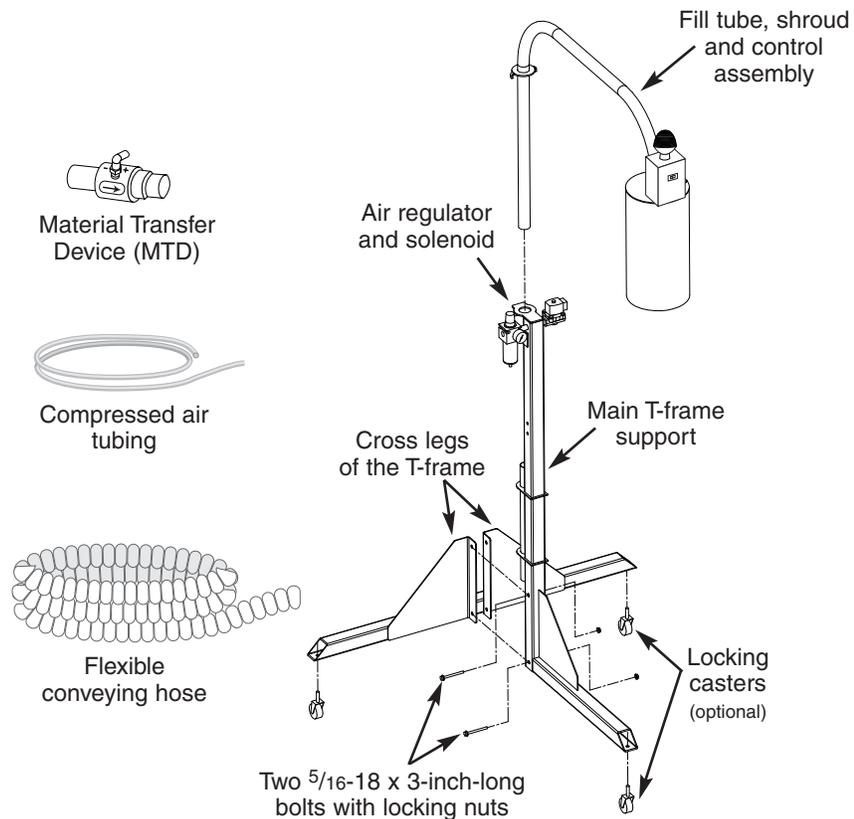
Specifications can change without notice. Contact your Conair representative for the most current information.

INSTALLATION

- *Unpacking the boxes3-2*
- *Preparing for installation3-3*
- *Assembling the CAML-EV3-4*
- *Connecting conveying lines . . .3-5*
- *Connecting compressed air3-6*
- *Adjusting fill sensor height3-7*
- *Installing the demand sensor . .3-7*
- *Connecting main power3-8*

UNPACKING THE BOXES

The CAML-EV is shipped partially assembled. Depending on the model and options you ordered, the boxes should include:



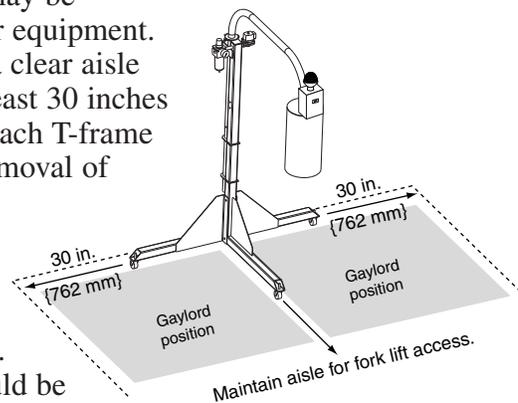
- 1 Carefully remove the loader** from its shipping container, and set upright.
- 2 Remove all packing material**, protective paper, tape and plastic.
- 3 Carefully inspect all components** to make sure no damage occurred during shipping, and that you have all the necessary hardware. If you find any damage, report it to the freight company immediately.
- 4 Take a moment to record serial numbers** and electrical power specifications in the blanks provided on the back of the the User Guide's title page. The information will be helpful if you ever need service or parts.
- 5 You are now ready to begin installation.** Follow the preparation steps on the next page.

The CAML-EV is easy to install, if you plan the location and prepare the mounting area properly.

PREPARING FOR INSTALLATION

1 Make sure the installation area provides:

- ❑ **A source of compressed air.** The compressor must be able to supply dry, non-lubricated air at a minimum of 60 PSI. Average air consumption is 8.25 cfm at 60PSI. Normal operation requires 30 to 40 psi.
- ❑ **A source of 120 volt alternating current.** You will need a standard, grounded three-hole outlet installed to within 10 feet of the planned control unit location.
- ❑ **Clearance for safe operation and maintenance.**
The back of the CAML-EV may be placed close to a wall or other equipment. We recommend maintaining a clear aisle in front of the loader and at least 30 inches {762 mm} clearance beyond each T-frame leg for easy placement and removal of gaylords.
- ❑ **The shortest, straightest conveying distance.**
The maximum conveying distance is 20 feet {6 meters}. All hose and tubing runs should be as straight as possible, eliminating excessive bends that can reduce conveying performance.



2 Assemble the CAML-EV.

Follow the procedures in this section for assembling the T-frame, loader, and any optional items that were ordered. All assembly hardware has been provided.

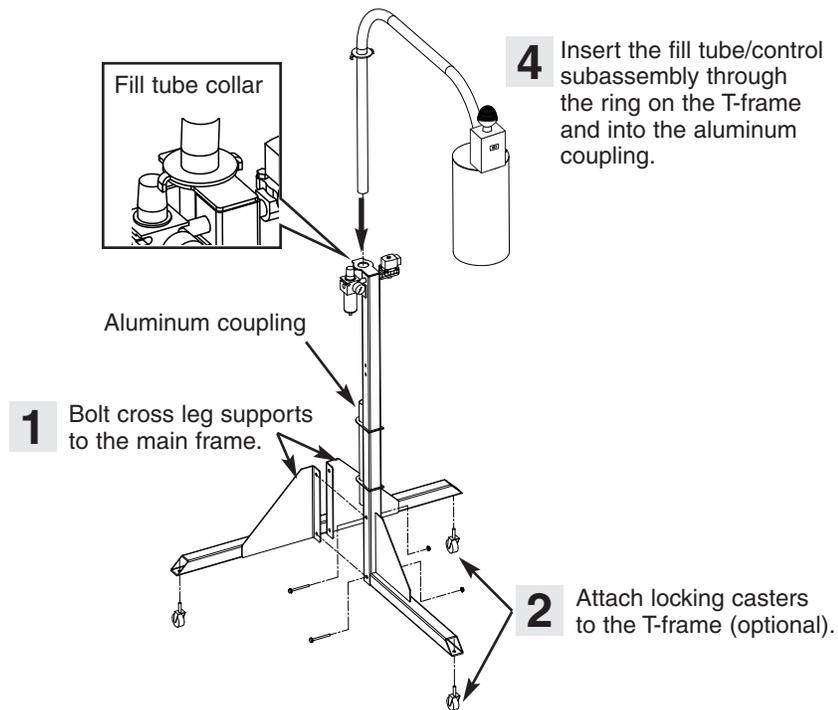
NOTE: If you did not purchase the optional locking casters, we recommend bolting the CAML-EV to the floor. You will need three 3/8-inch diameter bolts, which are not supplied with the loader.

3 Prepare the granulator bin or other material vessel for the demand sensor (optional).

The optional demand sensor must be mounted through the wall of the granulator bin. A hole may already have been provided in the granulator bin for installation of a sensor. If not, you need to drill a 3/4-inch hole in the granulator bin to accommodate the 18mm-diameter sensor. The hole should be located above the material outlet, but low enough to prevent material backup in the cutting chamber.

ASSEMBLING THE CAML-EV

Assemble the T-frame and attach the fill tube/control sub-assembly before moving the loader to the installation area.



1 Bolt the cross leg supports to the main frame.

Align the bolt holes in the support with the holes in the main frame. Insert two $\frac{5}{16}$ -inch hex bolts through both supports and the frame. Secure with the nuts provided.

2 Attach the locking casters (optional).

Insert the threaded shafts of the casters through the holes in the legs. Secure with the locking nuts provided.

3 Stand the T-frame upright.

Immediately lock the optional casters, if they are installed, to prevent movement during assembly.

4 Insert the fill tube in the T-frame.

Carefully insert the fill tube through the ring on the frame and into the aluminum coupling. Do not force the tube into the coupling. You could damage the O-rings inside the coupling. When correctly installed, the teeth on the fill tube collar ride between the stops in the main frame ring, allowing free rotation of the fill tube in either direction.

5 Move the loader into position and secure.

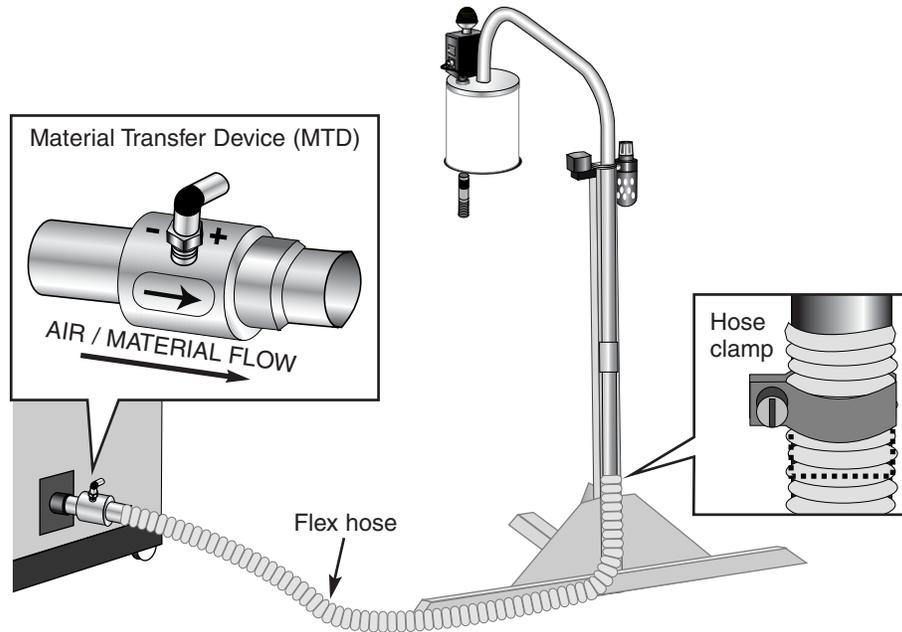
Lock the optional casters, or bolt the T-frame to the floor to prevent accidental movement during operation.

NOTE: If you purchased the optional gaylord cover, see **INSTALLING THE RETRACTABLE GAYLORD COVER** in the Appendix before proceeding.

Proceed to **CONNECTING CONVEYING LINES**, unless you have purchased the optional retractable gaylord cover.

CONNECTING CONVEYING LINES

You will use the flex hose, hose clamps and the venturi-style Material Transfer Device (MTD) that are supplied with the standard CAML-EV. If ordered, you may also have received optional line size adapters, couplings or material pickup devices, depending on your application requirements.

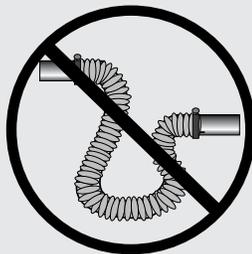


1 Connect the MTD to the material bin.

Attach the MTD to the material outlet tube of the granulator bin or other pickup device installed in the vessel that will be evacuated. For efficient conveying, install the end of the MTD marked (-) as close to the material as possible. Use optional line size adapters or couplings to make the connection, if necessary.

2 Connect the MTD to the fill tube with flex hose.

Clamp one end of the hose to the MTD and the other to the bottom of the fill tube on the T-frame. The hose should be as straight as possible. Cut the hose to length, if necessary. The hose clamp should be secured at least $\frac{1}{4}$ inch from the end of the inlet or outlet tube.

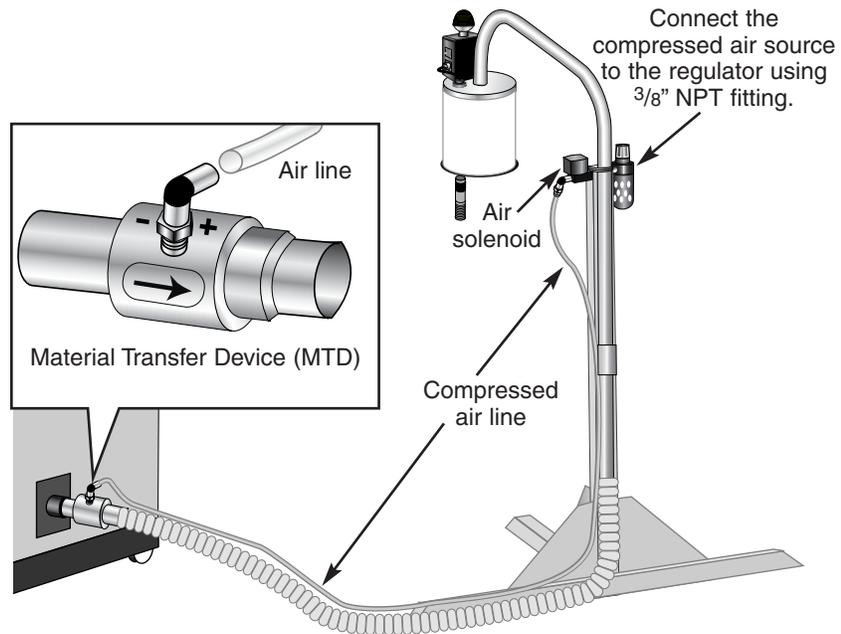


IMPORTANT: Do not allow the flexible hose to kink or crimp. The flex hose should be cut to length to minimize S curves. The hose may be cut using a hack saw or sharp knife.

CONNECTING COMPRESSED AIR

The CAML-EV requires dry, non-lubricated compressed air supplied at a minimum of 60 PSI. Average air consumption is 8.25 cfm at 60PSI. Normal operation requires 30 to 40 psi.

You can cut the supplied compressed air tubing to the length required to stretch from the air solenoid to the MTD. Make sure the cuts on each end are square.

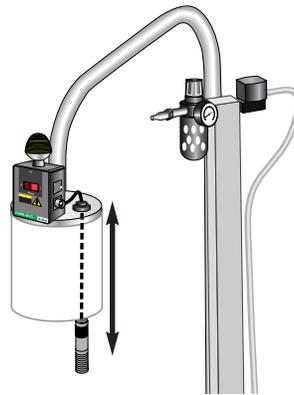


- 1 Connect the air line to the air solenoid.**
Push one end of the supplied compressed air tubing firmly into the brass fitting on the air solenoid. Tug on the tubing to make sure it is properly connected.
- 2 Connect the air line to the MTD.**
Push the other end of the compressed air tubing firmly into the brass fitting on the MTD. Tug on the tubing to make sure it is properly connected.
- 3 Connect the air supply to the regulator/filter.**
Connect the compressed air supply to the 3/8-inch NPT female fitting in the side of the regulator. We recommend installing a shut-off valve between the regulator and the compressed air supply.

TIP: If the CAML-EV is equipped with casters for mobility, we recommend using a quick disconnect fitting at the air regulator. Make sure the fitting does not restrict air flow when connected.

The standard CAML-EV is equipped with a proximity sensor that indicates when the gaylord is full by turning on the alarm beacon.

This sensor is mounted in the control/shroud assembly so that it hangs below the fill tube outlet. You can adjust the height of the sensor according to the material level you want to achieve in the gaylord.



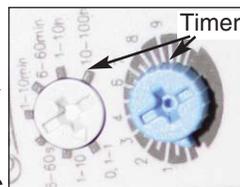
ADJUSTING FILL SENSOR HEIGHT

To adjust the sensor height:

- 1 Loosen the locking nut that grips the sensor cord.**
- 2 Slide the cord up or down to adjust the height.**
Typically, the sensor face would be level with the bottom of the shroud. The sensor should be low enough to prevent the gaylord from overflowing.
- 3 Tighten the locking nut.**

An optional demand sensor can be mounted in the granulator bin or other material source, then connected to an auxiliary timer on the CAML-EV control.

This proximity sensor signals the CAML-EV to start conveying when it sees material in the bin. Conveying continues until the material level falls below the sensor or until the time set at the control expires. The range for off-delay time is 0.6 seconds to 100 hours. The timer is located inside the control enclosure.

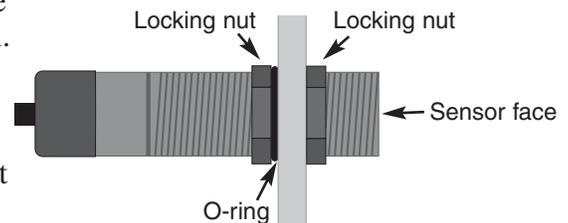


INSTALLING THE DEMAND SENSOR (OPTIONAL)



To install the optional demand sensor:

- 1 Drill a hole in the wall of the material bin.**
If the material bin does not already provide a hole for the sensor, drill a 3/4-inch hole in the bin wall.
- 2 Insert the sensor through the hole and secure.**
Position the face of the sensor so that it extends at least 1/2-inch inside the bin. Tighten the locking nuts to secure.
- 3 Connect the sensor cable to the timer cable on the the CAML-EV control.**



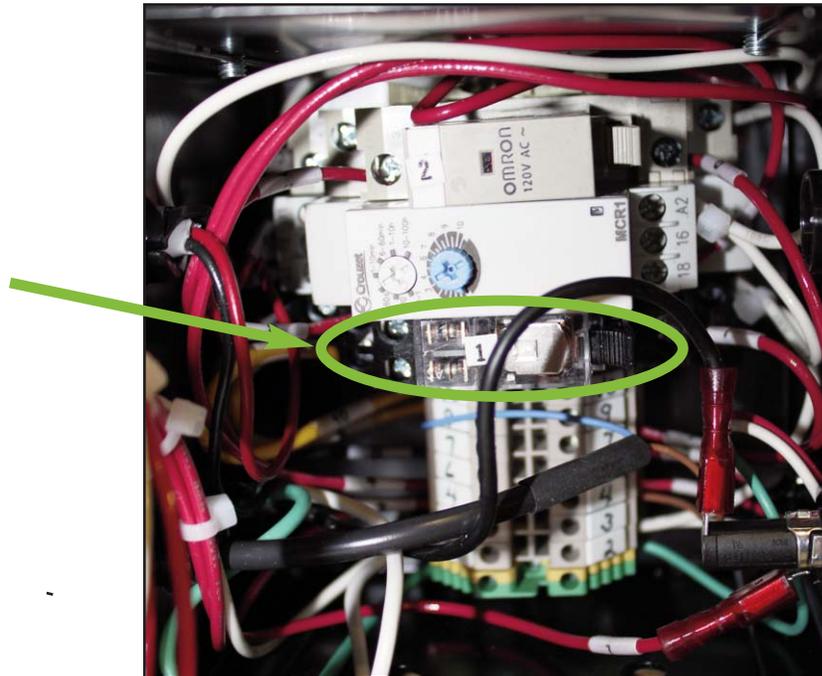
CONNECTING MAIN POWER

The CAML-EV requires a grounded source of 120 VAC electrical power, and is equipped with a fused control box and power cord.

To connect the CAML-EV to power, simply plug the loader's power cord into a standard three-prong electrical outlet.

CONNECTING TO ALARM CONNECTION

For your convenience, the CAML-EV comes equipped with dry contacts for you to connect to an alarming system. The dry contacts are located inside the control enclosure, underneath the timer (if equipped). There is a plugged hole in the side of the control enclosure that can be used for your wire to enter the box.



OPERATION

- *Preparing for operation4-2*
- *Adjusting sensors4-2*
- *Moving gaylords into place4-3*
- *To start conveying4-4*
- *Adjusting material flow4-4*
- *Setting conveying time4-5*
- *To stop conveying4-5*
- *Adjusting the basic
cycle timer4-6*

PREPARING FOR OPERATION

Before beginning normal operation, you should:

- Lock the casters, if casters are installed.
- Adjust the sensitivity of the proximity sensors.

See **ADJUSTING SENSORS**.

- Move at least one empty gaylord into place.

The CAML-EV provides positions for two gaylords, one on either side of the front T-frame support leg.

See **MOVING GAYLORDS INTO PLACE**.

ADJUSTING SENSORS

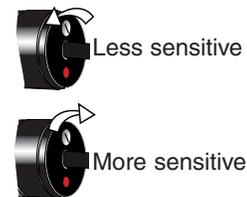
TIP: You should adjust the sensor sensitivity several times after initial use to ensure the sensor indicates the presence of material, yet ignores material dust.

The standard CAML-EV is equipped with a proximity “overflow” sensor that hangs below the fill tube inside the shroud. This sensor indicates the gaylord is full when it detects a mass of material in front of its sensing face.

The CAML-EV also may have a demand sensor option, which provides a proximity “demand” sensor installed at the material source. This sensor signals the CAML-EV control to begin conveying when it detects a mass of material in front of its sensing face in the bin you want to evacuate.

The sensitivity of these sensors should be adjusted before normal operation to ensure that the sensor detects material. The sensitivity adjustment also can prevent nuisance alarms by allowing the sensor to ignore the dust that can build up on the sensor face during operation.

You adjust the sensitivity by turning the screw on the end of the sensor. The LED light on the sensor should turn ON when material is present.



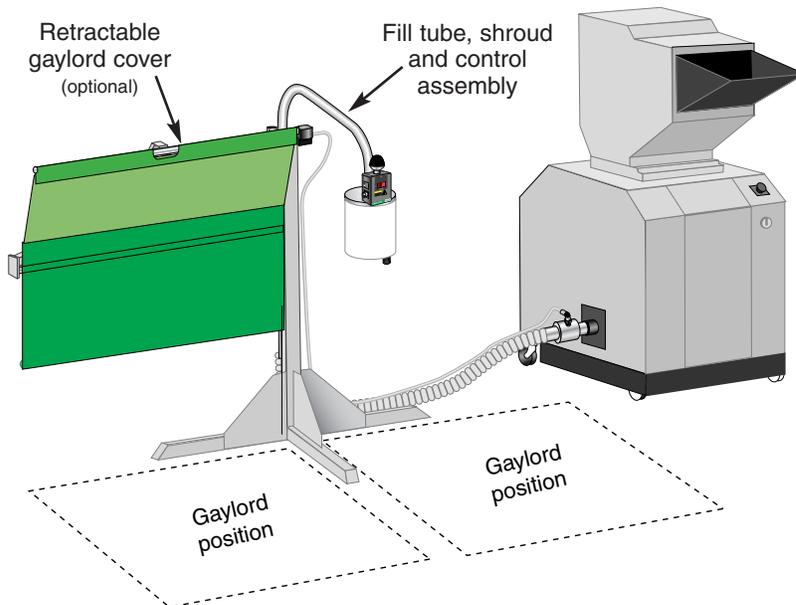
NOTE: Sensor adjustment should be done with power to the control turned ON; compressed air turned OFF; and no material in the gaylord or at the source.

To adjust the sensor:

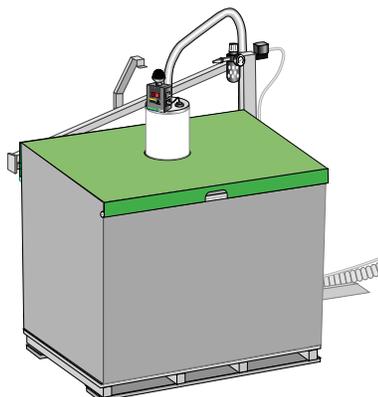
- 1** Hold a clear plastic bag of material in front of the sensor face, and turn the adjustment screw clockwise until the LED light turns on. 
- 2** Move the bag of material away from the sensor face. If the LED light turns off, stop. If the LED light stays on, continue to step 3.
- 3** Turn the screw counterclockwise until the light goes off. Continue a quarter turn. 

Gaylords may be placed on either side of the CAML-EVG's front support leg. The gaylords should be placed carefully to avoid crashing into the T-frame and damaging the unit.

MOVING GAYLORDS INTO PLACE



- 1 Swing the fill tube out of the way.**
Center the fill tube and control over the front support leg, or move it to the opposite side of the gaylord position you want to use.
- 2 Retract the gaylord cover (if installed).**
Lift the cover by the handle and allow the cover to roll back. Place the cover handle on handle rest attached to the support arm.
- 3 Move the gaylord into position.**
- 4 Pull the cover over the gaylord (if cover installed).**
Lift the cover by the handle and pull forward until the fill hole in the cover is centered over the gaylord.
- 5 Swing the fill tube into place.**
The shroud should hang down into the center of the empty gaylord. If the optional cover is installed, align the shroud with the fill hole in the center of the cover. Insert the shroud into the hole. Position the cloth for a smooth fit between shroud and cover to minimize the escape of dust during conveying.



To START CONVEYING



CAUTION: Air under high pressure

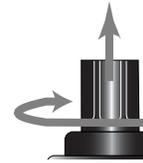
This equipment uses compressed air delivered at 30 to 120 PSI to convey plastic materials.

To prevent possible injury, wear eye protection when operating this equipment. Always disconnect the compressed air supply before performing maintenance or troubleshooting.

Before beginning, make sure all hoses and air lines are connected securely. Adjust the fill sensor height, if necessary.

1 Turn on the compressed air and adjust the pressure.

Lift the air regulator knob and turn to set the pressure. We recommend 30 to 40 PSI for normal operation. Push the knob down to lock.



2 Switch the control power to ON.

- ◆ The ON/OFF switch lights up.
- ◆ The compressed air solenoid opens and air flows to the Material Transfer Device. If the optional demand sensor is installed, the solenoid opens when the sensor sees material in the bin to be evacuated.
- ◆ Material flows through the fill tube into the gaylord.
- ◆ When the gaylord is full, the strobe light on the control will begin to flash.

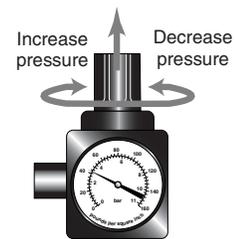


IMPORTANT: The CAML-EV will not stop loading automatically when the gaylord is full. You must press the OFF switch to stop conveying. As soon as a gaylord fills, replace it with an empty one.

ADJUSTING MATERIAL FLOW

1 Readjust air pressure.

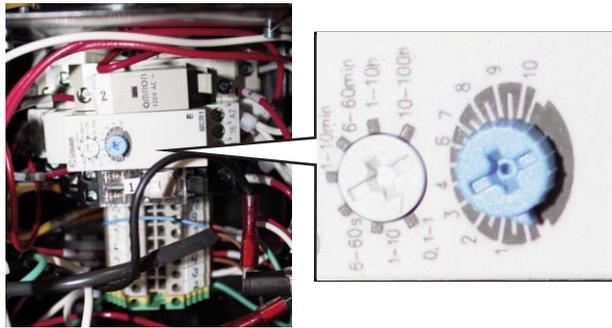
- To increase material flow, increase air pressure.
- To decrease material flow, decrease air pressure. You may be able to conserve air and minimize dust around the gaylord by decreasing pressure to as low as 20 PSI.



If your CAML-EV is equipped with the optional demand sensor and conveying timer, you can set a conveying time up to 100 hours. This allows for automatic operation.

When the demand sensor detects material in the bin to be evacuated, the control opens the solenoid valve to direct compressed air to the MTD. When the conveying time expires or the bin is emptied, the control closes the solenoid valve.

SETTING THE CONVEYING TIME (OPTIONAL)



To set the conveying time:

- 1 Turn the screw on the auxiliary timer.**
Turn clockwise to increase the conveying time; turn counterclockwise to decrease the time. The time setting is approximate within a range of 0.6 seconds (-) to 100 hours (+). The left adjustment determines the increments of the right adjustment.

-
- 1 Press the OFF switch.**



Be sure to disconnect the compressed air and main power before servicing or cleaning the CAML-EV.

To STOP CONVEYING

ADJUSTING THE BASIC CYCLE TIMER



CAUTION: Air under high pressure

This equipment uses compressed air delivered at 30 to 120 PSI to convey plastic materials.

To prevent possible injury, wear eye protection when operating this equipment. Always disconnect the compressed air supply before performing maintenance or troubleshooting.

The basic cycle timer is used to adjust the cycle time of the CAML-EV. The timer is located at the air solenoid.

1 Turn the OFF screw to adjust the UNLOADING time.

The screw is a 10-turn potentiometer. Adjustments may be necessary as you determine the proper time for your application. The timer range is from 10-2000 seconds.



2 Turn the ON screw to adjust the LOADING time.

The screw is a 10-turn potentiometer. Adjustments may be necessary as you determine the proper time for your application. The timer range is from 10-2000 seconds.



MAINTENANCE

- *Maintenance schedule*5-2
- *Replacing the fill shroud*5-4
- *Draining the filter bowl*5-4
- *Checking O-rings*5-5

MAINTENANCE SCHEDULE



WARNING: Disconnect power and compressed air before servicing.

Always disconnect and lock out power and compressed air supplies to this equipment before performing maintenance or repair. Failure to do so could result in personal injury caused by the unexpected energization of this equipment.

Only qualified personnel should perform procedures that require access to the electrical enclosure while power is on.



WARNING: Air under high pressure

Always wear proper eye protection and observe all OSHA and other safety regulations pertaining to the use of compressed air to clean industrial equipment.

We recommend using vacuum air or wiping cloths to clean components whenever possible.

Routine maintenance will ensure optimum operation and performance of the CAML-EV. We recommend the following maintenance schedule and tasks.

● **Whenever you change materials**

Clean all material contact points.

Drain the conveying line. Clean the fill shroud, fill tube, fill sensor and optional gaylord cover, if installed. Remove dust and material to avoid contaminating material on the next job. Use vacuum air to clean the fill shroud and gaylord cover. The fill tube and flex hose may be blown clean with compressed air, as long as you follow all safety procedures.

Adjust proximity fill sensor height.

When replacing gaylords, you may need to adjust the height of the fill sensor. See **ADJUSTING HEIGHT OF THE FILL SENSOR** in the *INSTALLATION* section.

Adjust sensitivity of proximity sensor(s).

When changing materials, you may need to readjust the sensitivity of the fill and optional demand sensors. See **ADJUSTING SENSORS** in the *OPERATION* section.

Continued on next page.

MAINTENANCE SCHEDULE

● Weekly, or as often as needed

Clean the fill shroud.

The buildup of dust and fines on the shroud may decrease conveying efficiency or allow dust to escape elsewhere. Use vacuum air to clean the shroud.

Replace the shroud if it is torn or worn. See

REPLACING THE FILL SHROUD.

Drain the compressed air filter bowl.

Remove any condensation that has accumulated in the filter bowl. If See *DRAINING THE FILTER BOWL.*

● Monthly, or as often as needed

Inspect material and air hoses for damage or wear.

If you are conveying abrasive materials, you may need to do this more frequently. Compressed air leaks will decrease conveying performance. Check all material and air hoses for wear, kinks or tears. Replace any hoses that show signs of damage or wear. Make sure hose clamps, couplings and fittings are secure.

Inspect O-rings for damage or wear.

Compressed air or vacuum leaks will decrease conveying performance. Replace any O-rings that are worn, cracked or torn. See *CHECKING O-RINGS.*

● Every six months

Check control system components.

Inspect all control system lights, sensors, timers, and alarms for proper working condition. Repair or replace any cut or frayed cords. Verify that the control panel door closes and secures correctly.

REPLACING THE FILTER SHROUD

WARNING: Disconnect power and compressed air before servicing.

Always disconnect and lock out power and compressed air supplies to this equipment before performing maintenance or repair. Failure to do so could result in personal injury caused by the unexpected energization of this equipment.

The filter shroud is attached to the fill tube/control assembly with a band clamp. You should replace the filter shroud if it becomes torn, excessively worn, or caked with dust and fines.

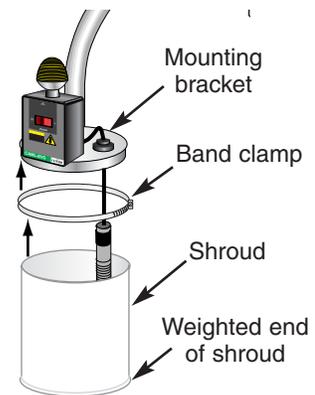
1 Disconnect the power and compressed air.

2 Remove the old shroud.

Loosen the screw on the band clamp and remove the clamp. Pull the old shroud off of the fill tube mounting bracket.

3 Install the new shroud.

Fit the unweighted end of the new shroud over the fill tube mounting bracket. Make sure the fill sensor hangs inside the shroud. Secure the shroud to the bracket with the band clamp.



DRAINING THE FILTER BOWL

Depending on your compressed air supply, you may see oil or moisture accumulate in the compressed air filter bowl on the regulator. The filter bowl should be drained regularly to remove this moisture.

If you do see oil in the filter bowl, we recommend that you install a coalescing type filter instead of the standard filter for removing moisture.

To remove moisture or oil:

1 Open the filter bowl drain.

Turn the knob on the bottom of the filter bowl counterclockwise. Leave the drain open until all moisture has been removed.

2 Close the filter bowl drain.

Turn the knob clockwise to close the drain.



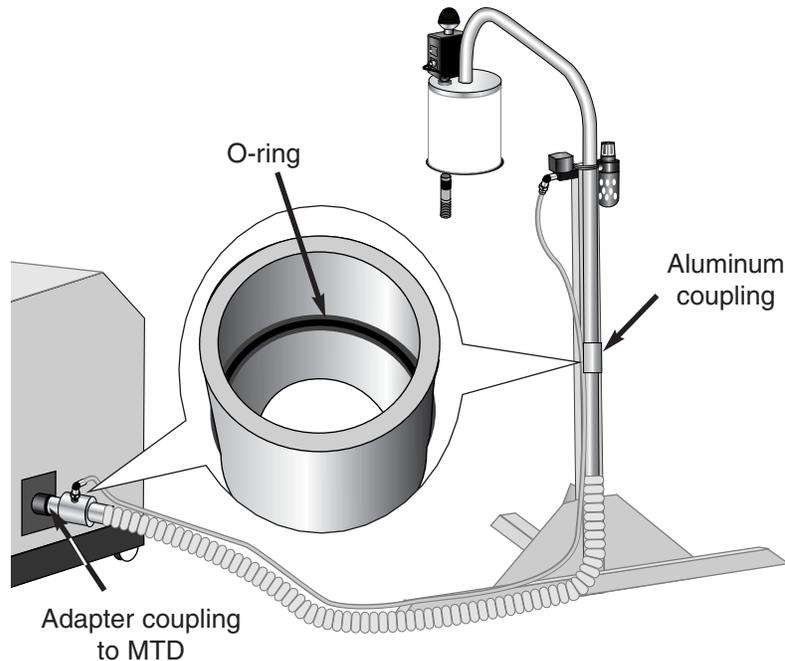
CHECKING O-RINGS

WARNING: Disconnect power and compressed air before servicing.

Always disconnect and lock out power and compressed air supplies to this equipment before performing maintenance or repair. Failure to do so could result in personal injury caused by the unexpected energization of this equipment.

The Material Transfer Device (MTD) and the aluminum coupling on the T-frame both use O-rings to maintain a tight seal in the conveying system.

You should check the condition of these O-rings monthly, or more frequently under adverse conveying conditions. Any O-ring that is cracked, worn or damaged should be replaced.



To replace an O-ring:

- 1** Pry the O-ring from the groove in the coupling.
- 2** Insert the new O-ring into the groove.
- 3** Apply petroleum jelly on the inside of the coupling around the O-Ring.

NOTE: If you have the optional demand sensor, also check the O-ring that provides the seal between the sensor nut and the bin wall.

TROUBLESHOOTING

● *Before beginning*6-2

● *A few words of caution*6-2

DIAGNOSTICS

● *Loader will not cycle*6-3

● *Gaylord is overfilling*6-3

● *No material flow*6-4

● *Poor conveying rate*6-5

BEFORE BEGINNING

You can avoid most problems by following the recommended installation and maintenance procedures outlined in this User Guide. If you do have a problem, this section will help you determine what caused it and how to fix it.

Before you begin troubleshooting:

- ❑ **Find the wiring diagrams that were shipped with your equipment.** These diagrams are the best reference for correcting a problem. The diagrams also will note any custom features, such as special wiring or control options, not covered in this User Guide.
- ❑ **Verify that you have manuals for other equipment in the process line.** Solving problems may require troubleshooting malfunctions or incorrect operating procedures on other pieces of equipment.

A FEW WORDS OF CAUTION

WARNING: This machines should be adjusted and serviced only by qualified technical personnel who are familiar with construction and operation of this type of equipment.



WARNING: Voltage hazard.

Troubleshooting the electrical system of this equipment requires use of precision electronic measuring equipment, and may require access to the electrical enclosure while power is on. Exposure to potentially harmful voltage levels may be unavoidable. These troubleshooting procedures should be performed only by qualified electrical technicians who know how to use this precision electronic equipment and who understand the hazards involved.



WARNING: Disconnect power and compressed air before servicing.

Always disconnect and lock out power and compressed air supplies to this equipment before performing maintenance or repair. Failure to do so could result in personal injury caused by the unexpected energization of this equipment.

CONVEYING PROBLEMS

When the CAML-EV is turned ON:

- ◆ The ON/OFF switch lights up.
- ◆ The compressed air solenoid opens. (With an optional demand sensor, the solenoid opens when the sensor sees material in the bin to be evacuated.)
- ◆ Material flows through the fill tube into the gaylord.
- ◆ The strobe light flashes when the gaylord is full.

Problem	Possible cause	Solution
The loader will not cycle.	Is the loader receiving power?	<ul style="list-style-type: none"> <input type="checkbox"/> Verify that the loader is plugged into a power source. <input type="checkbox"/> Check the control fuse. Replace if it is blown.
	Is the demand sensor adjusted correctly? (only for units with demand sensor option)	<p>Conveying should start when the demand sensor detects material in the bin that is to be evacuated. If it does not:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Verify that the sensor is connected correctly to the timer on the control. <input type="checkbox"/> Check sensor performance and readjust sensitivity as needed. See ADJUSTING SENSORS in the <i>OPERATION</i> section.
The gaylord is overfilling.	Is the strobe light flashing?	<p>If the light is flashing, the CAML-EV is working correctly. The CAML-EV does not turn off automatically when the gaylord is full. You must switch the control to OFF to stop conveying, and replace the full gaylord.</p>
	Is the fill sensor adjusted correctly? (strobe not flashing)	<ul style="list-style-type: none"> <input type="checkbox"/> Lower the sensor level in the gaylord. See ADJUSTING THE FILL SENSOR HEIGHT in the <i>INSTALLATION</i> section. <input type="checkbox"/> Verify that the sensor is connected correctly to the timer on the control. <input type="checkbox"/> Check sensor performance and readjust sensitivity as needed. See ADJUSTING SENSORS in the <i>OPERATION</i> section.

CONVEYING PROBLEMS

When the CAML-EV is turned ON:

- ◆ The ON/OFF switch lights up.
- ◆ The compressed air solenoid opens. (With an optional demand sensor, the solenoid opens when the sensor sees material in the bin to be evacuated.)
- ◆ Material flows through the fill tube into the gaylord.
- ◆ The strobe light flashes when the gaylord is full.

Problem	Possible cause	Solution
No material flow.	Do you have material at the source?	Verify that the bin you want to evacuate contains material.
	Is material flow blocked at the MTD or material outlet tube?	Check for obstructions at the material outlet of the bin or at the inlet of the MTD. Make sure material surrounds the bin outlet. If material obstructs or bridges this outlet, clear the obstruction.
	Are all air and conveying hose connections correct?	<ul style="list-style-type: none"> <input type="checkbox"/> Verify that the air regulator is connected to a source of compressed air. <input type="checkbox"/> Verify that the compressed air tube is securely connected to the correct devices. <input type="checkbox"/> Verify that that flexible conveying hose is securely clamped to the fill tube and to the MTD. <input type="checkbox"/> Verify that the MTD is connected to compressed air and correctly installed in the conveying line. See CONNECTING CONVEYING LINES in the <i>INSTALLATION</i> section.
	Is the air pressure on, or is it set too low?	<ul style="list-style-type: none"> <input type="checkbox"/> Check the air pressure setting at the regulator. Adjust as needed. See TO ADJUST MATERIAL FLOW in the <i>OPERATION</i> section. <input type="checkbox"/> Verify that the air solenoid is working properly. Replace if necessary.

CONVEYING PROBLEMS

When the CAML-EV is turned ON:

- ◆ The ON/OFF switch lights up.
- ◆ The compressed air solenoid opens. (With an optional demand sensor, the solenoid opens when the sensor sees material in the bin to be evacuated.)
- ◆ Material flows through the fill tube into the gaylord.
- ◆ The strobe light flashes when the gaylord is full.

Problem	Possible cause	Solution
No material flow. (continued)	Is the CAML-EV receiving power?	<input type="checkbox"/> Verify that the unit is plugged into a power source. <input type="checkbox"/> Check the control fuse. Replace if it is blown.
	Is the demand sensor adjusted correctly? (only for units with demand sensor option)	Conveying should start when the demand sensor detects material in the bin that is to be evacuated. If it does not: <ul style="list-style-type: none"> <input type="checkbox"/> Verify that the sensor is connected correctly to the timer on the control. <input type="checkbox"/> Check sensor performance and readjust sensitivity as needed. See ADJUSTING SENSORS in the <i>OPERATION</i> section.
Poor conveying rate	Is the air pressure to low?	Check the air pressure setting. The normal operating range is 30 to 40 PSI. Adjust as needed. See TO ADJUST MATERIAL FLOW in <i>OPERATION</i> section.
	Is there an air leak in the conveying system?	Check the condition of all material and air hoses in the system. Make sure connections are secure. Straighten kinked hoses. Replace damaged hoses.
	Is the fill shroud clogged with dust?	Vacuum the filter shroud to remove excess dust.
	Is the MTD dirty?	Check the MTD and clean if necessary.

We're Here to Help

Conair has made the largest investment in customer support in the plastics industry. Our service experts are available to help with any problem you might have installing and operating your equipment. Your Conair sales representative also can help analyze the nature of your problem, assuring that it did not result from misapplication or improper use.

Additional manuals and prints for your Conair equipment may be ordered through the Customer Service or Parts Department for a nominal fee. Most manuals can be downloaded free of charge from the product section of the Conair website.
www.conairgroup.com

How to Contact Customer Service

To contact Customer Service personnel, call:



 **NOTE:** Normal operating hours are 8:00 am - 5:00 pm EST. After hours emergency service is available at the same phone number.

From outside the United States, call: 814-437-6861

You can commission Conair service personnel to provide on-site service by contacting the Customer Service Department. Standard rates include an on-site hourly rate, with a one-day minimum plus expenses.

Before You Call...

If you do have a problem, please complete the following checklist before calling Conair:

- Make sure you have all model, control type from the serial tag, and parts list numbers for your particular equipment. Service personnel will need this information to assist you.
- Make sure power is supplied to the equipment.
- Make sure that all connectors and wires within and between control systems and related components have been installed correctly.
- Check the troubleshooting guide of this manual for a solution.
- Thoroughly examine the instruction manual(s) for associated equipment, especially controls. Each manual may have its own troubleshooting guide to help you.
- Check that the equipment has been operated as described in this manual.
- Check accompanying schematic drawings for information on special considerations.

Equipment Guarantee

Conair guarantees the machinery and equipment on this order, for a period as defined in the quotation from date of shipment, against defects in material and workmanship under the normal use and service for which it was recommended (except for parts that are typically replaced after normal usage, such as filters, liner plates, etc.). Conair's guarantee is limited to replacing, at our option, the part or parts determined by us to be defective after examination. The customer assumes the cost of transportation of the part or parts to and from the factory.

Performance Warranty

Conair warrants that this equipment will perform at or above the ratings stated in specific quotations covering the equipment or as detailed in engineering specifications, provided the equipment is applied, installed, operated and maintained in the recommended manner as outlined in our quotation or specifications.

Should performance not meet warranted levels, Conair at its discretion will exercise one of the following options:

- Inspect the equipment and perform alterations or adjustments to satisfy performance claims. (Charges for such inspections and corrections will be waived unless failure to meet warranty is due to misapplication, improper installation, poor maintenance practices or improper operation.)
- Replace the original equipment with other Conair equipment that will meet original performance claims at no extra cost to the customer.
- Refund the invoiced cost to the customer. Credit is subject to prior notice by the customer at which time a Return Goods Authorization Number (RGA) will be issued by Conair's Service Department. Returned equipment must be well crated and in proper operating condition, including all parts. Returns must be prepaid.

Purchaser must notify Conair in writing of any claim and provide a customer receipt and other evidence that a claim is being made.

Warranty Limitations

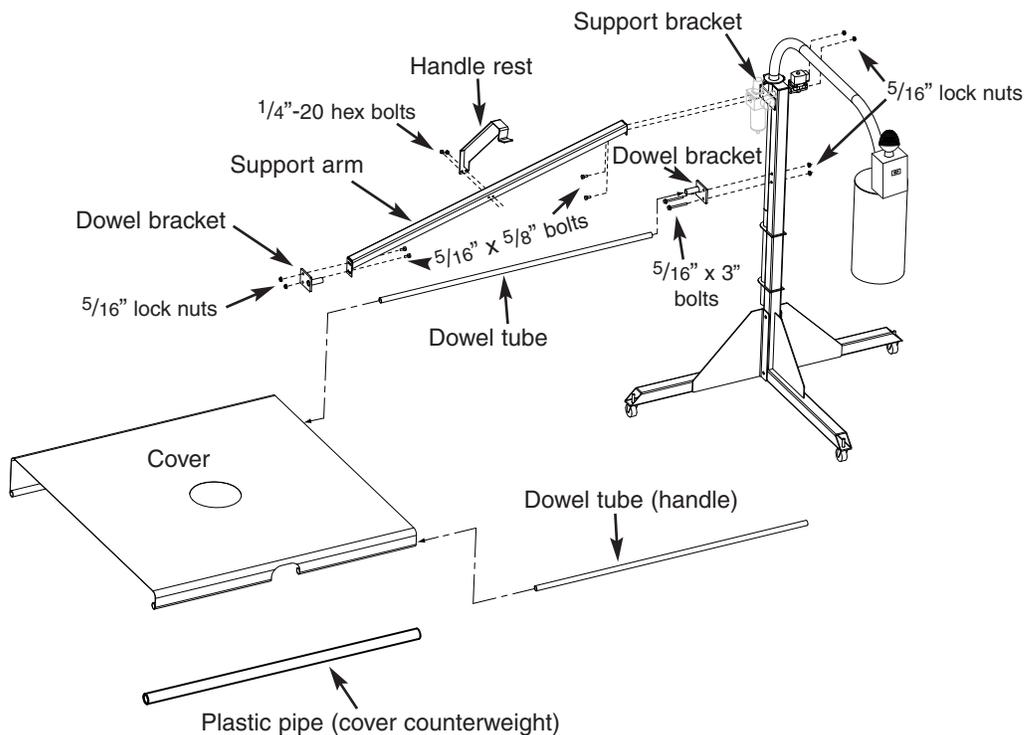
Except for the Equipment Guarantee and Performance Warranty stated above, Conair disclaims all other warranties with respect to the equipment, express or implied, arising by operation of law, course of dealing, usage of trade or otherwise, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

The CAML-EV can be equipped with a retractable cover for either or both gaylord positions to minimize material contamination and dust from the conveying process.

THE CAML-EV RETRACTABLE GAYLORD COVER

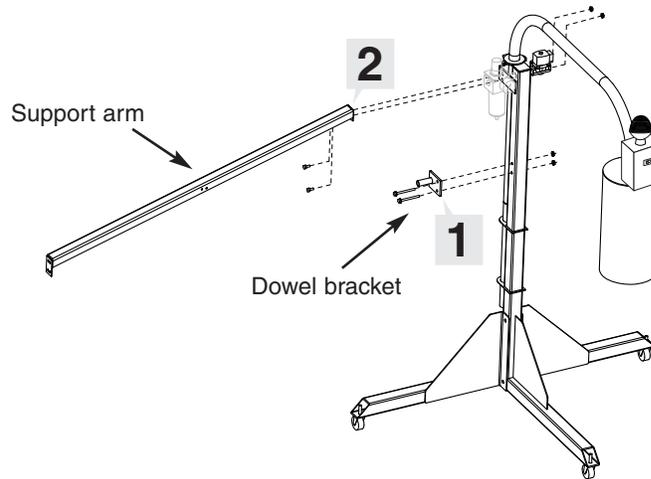


The retractable gaylord cover is shipped disassembled in its own container. You should separate, identify and lay out the parts for easier assembly and installation on the CAML-EV frame.

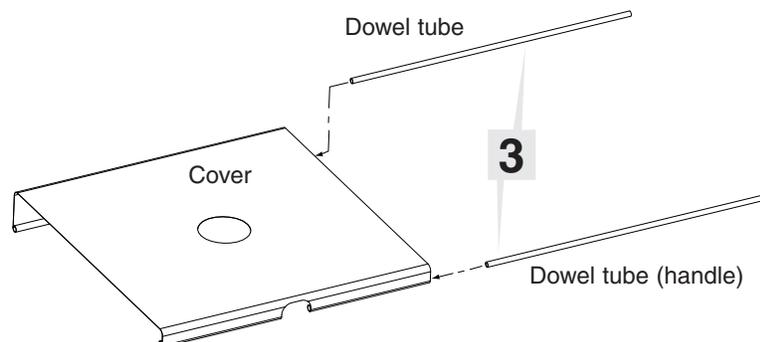


INSTALLING THE RETRACTABLE GAYLORD COVER

The cover may be installed on either the left or right side or on both sides of the CAML-EV. If covers are installed on both sides, you will use the same bolts and nuts to secure the dowel brackets to the T-frame in Step 1.

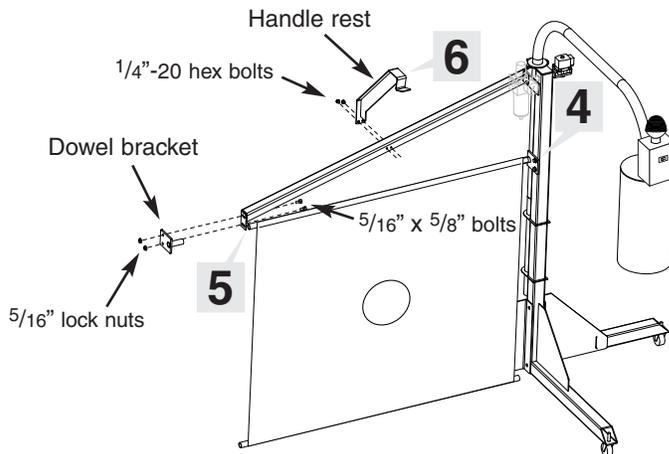


- 1 Attach one dowel bracket to the T-frame.**
Position the bracket so that the dowel pin is at the back of the frame. Attach using two 3-inch-long, $\frac{5}{16}$ -inch bolts and lock nuts.
- 2 Attach the support arm to the T-frame.**
Using two $\frac{5}{8}$ -inch-long, $\frac{5}{16}$ -inch hex bolts and lock nuts, attach the arm to the support bracket on the frame.
- 3 Insert the dowel tubes in the gaylord cover.**
Place a tube in each of the pockets sewn into the cover. If the openings appear to be too tight, lubricate the tubes with baby powder or a light oil. Clean off excess lubricant.



Continued on next page.

INSTALLING THE RETRACTABLE GAYLORD COVER



4 Attach one end of the cover to the frame.

Fit one end of the non-handle dowel tube over the dowel pin of the bracket you installed on the T-frame in Step 1. Allow the rest of the cover to drape to the floor.

5 Attach the cover to the support arm.

Insert the other end of the non-handle dowel tube into the remaining dowel bracket, then bolt the bracket to the end of the support arm. Use two $\frac{5}{8}$ -inch-long, $\frac{5}{16}$ -inch hex bolts and lock nuts. Make sure the dowel pin is in front of the support arm and pointing toward the T-frame.

6 Bolt the handle rest to the support arm.

Use the two $\frac{1}{4}$ -20 hex bolts to attach the handle rest to the back of the support arm.

7 Insert the counterweight into the cover fold.

Place the cover handle in the handle rest, allowing the cover to drape between the dowel tube and support arm.

Insert the plastic pipe into the fold to act as a counterweight.

