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Form 610469

INSTALLATION & MAINTENANCE INSTRUCTIONS
POWERMASTER® VENT MACHINE

I. INTRODUCTION

The PowerMaster II® is a drum/cable drive vent machine designed for long life and extended service. Simple controls and easy adjustments enable the machine to operate curtains, vents, doors or any moving component up to 12 feet high.

The PowerMaster II® is an electrical instrument and should be handled with care.

An alarm system should be installed to warn of mechanical or electrical failures.

The PowerMaster II® is 115 VAC or 230 VAC operated. Do not connect higher than specified voltages directly to the machine. All wiring should comply with the National Electric Code (NEC) and local codes.

MODEL	VOLTAGE
CM6115 CM6115T	115 VAC ONLY 60 Hz
CM6240 CM6240T	230 VAC ONLY 50/60 Hz

WARNING! Unit is shipped with a 600 lb. shear pin. If more pull strength is needed see page 8 Shear Pin/Drum Detail.

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II. SPECIFICATIONS

- Minimum Vent Switch: Optional
- Fan Switch: Optional
- Cycle Timer: CM6115T and CM6240T (60Hz) - 5 minute cycle time
  CM6240T (50 Hz) - 6 minute cycle time
- Limit Switches: Primary limit switches for adjusting full cable “in” and cable “out” position. Secondary limit switches shut down the machine if the primary limit switches are overrun.
- Input Voltage:

115 VAC 60hz-CM6115
230 VAC50/60hz -CM6240

III. MOTOR:

- ½ HP Permanent Split Capacitor
- TENV
- Instant reversing
- Auto internal thermal overload
- Intermittent duty cycle
- Pull capacity minimum with one shear pin installed: 600 Lb. Min
- Thermostat input: Switched 115/220 VAC two stage: (Optional)

IV. STANDARD EQUIPMENT

- PowerMaster II®
- Two 16’ 5/32” diameter 7x19 cables

V. OPTIONAL EQUIPMENT

- Minimum Vent Switch assembly
- PB1092S 2-stage thermostat
- 5 minute cycle timer (Model CM6115T)
- Installation Kit (Installs in center of side wall to operate both directions).

VI. INSTALLATION

Tools Needed

- Impact wrench or ratchet
- 7/16” drill, 2”x10” lumber

A. End Wall Installation
Controls both sides of building

The PowerMaster II® may be located with half of the grooved cable drum extending beyond the side wall so that the cable can operate down the side wall and across the gable to the other side of the building.

Install a 2”x10” brace on the inside wall between studs to support the machine.

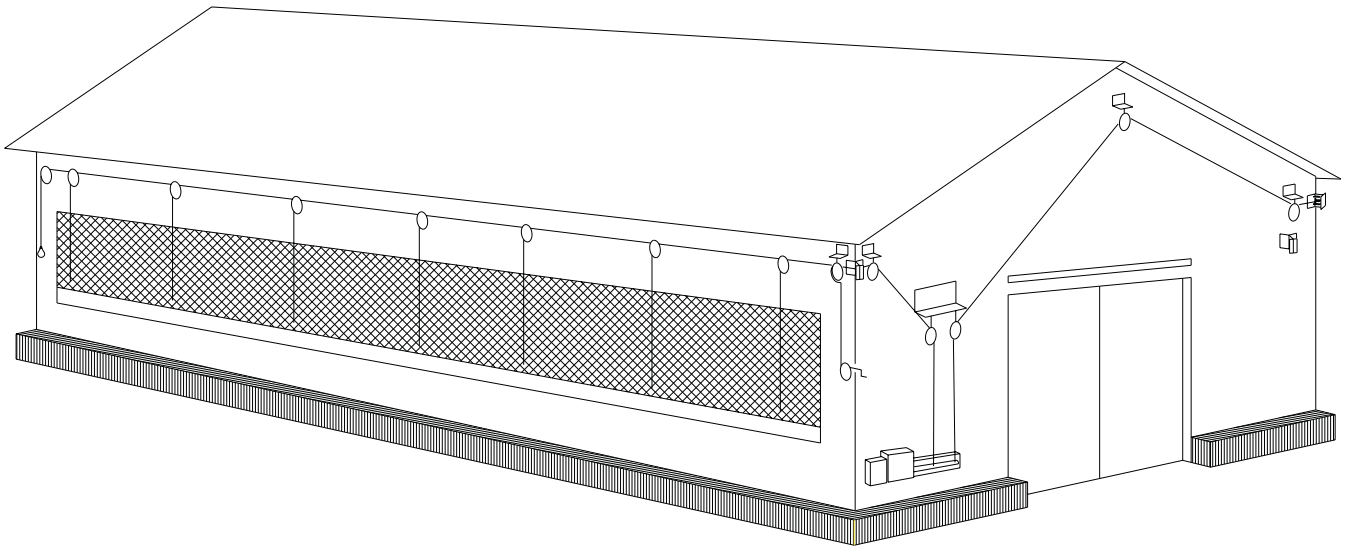


Figure 1

End Wall Installation

Drill holes through the wall and pass electrical wires to the inside of the building. Insulate to comply with the local codes.

Insert the two cable ends into the countersunk holes in the grooved cable drum and secure with concrete nails provided. Install the double pulley bracket above the PowerMaster II® so that the center of the pulley bracket is directly above the center of the cable drum and so that the cable winds properly onto the drum and does not overlap itself. The cables should be vertical and all cable necessary to close the vent should be wound onto the drum. Pulleys may be moved to other mounting holes in the bracket to achieve vertical cable alignment.

Attach the gable bracket through studs and the corner bracket through the opposite corner post so that the cable will move freely above the end doors and will remain clear of obstructions. Connect the PowerMaster II® cables to the vent cables on each side of the building using three (3) cable clamps for each splice. Make sure the cable clamps do not interfere with the movement of the cable through the pulleys.

B. Side Wall Installation

Locate the PowerMaster II® in the center of the side wall at the vent break. Install a 2”x10” brace on the inside wall between studs to support the machine. An additional 4”x4” or 2”x8” vertical support should also be installed extending from 1” below ground level against the foundation to just above the framing top plate above the screen wire.

Select three (3) pre-drilled mounting holes on the back bar above the cable drum and three (3) between the motor bracket and the electronics enclosure. Mark the hole locations on the side wall, then drill 3/8” holes through the side wall and the 2”x10” brace. Bolt the machine to the 2”x10” brace. DO NOT USE LAG SCREWS!

Drill holes through the wall and pass electrical wires to the inside of the building. Insulate to comply with local codes.

Insert the two cable ends into the counter sunk holes in the grooved cable drum and secure with concrete nails provided.

Install the double pulley bracket above the PowerMaster II® so that the center of the pulley bracket is directly above the center of the cable drum and does not overlap itself. The cables should be vertical with all cable necessary to close the curtain wound onto the drum. Pulleys may be moved to other mounting holes in the bracket to achieve vertical cable alignment.

Connect the PowerMaster II® cables to the vent cables on each side of the machine using three (3) cable clamps for each splice. Make sure the cable clamps do not interfere with the movement of the cable through the pulleys.

C. Typical Cable Configurations

The cable is normally connected with a double back or 2:1 configuration. At the expense of only allowing ½ the distance as would be allowed by the power unit, the machine can pull up to twice the machine rating and allow for the installation of a power drop hand winch. This setup is shown in figure 3a. Figure 3b shows a 1:1 configuration. Here the curtain movement is equal to the capability of the machine while the pull strength is also equal to the rating on the machine.

D. Thermostat Location

Locate the thermostat inside the building where a representative average temperature will be taken (just above and out of reach of livestock or birds).

DO NOT place the thermostat on an outer wall or where it is exposed to excessive drafts or direct heat from sunlight, radiant heat from borders, or located directly in front of fans, etc. It may be necessary to install a wood shield between the thermostat and any varying temperature source.

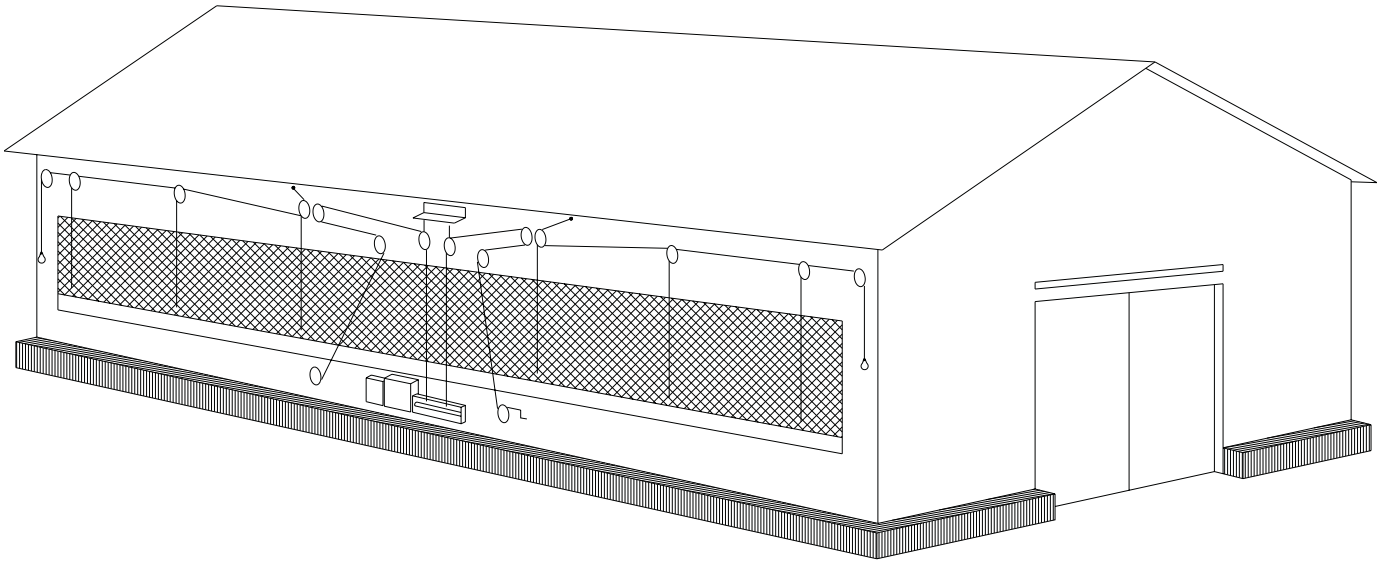


Figure 2

Side Wall Installation

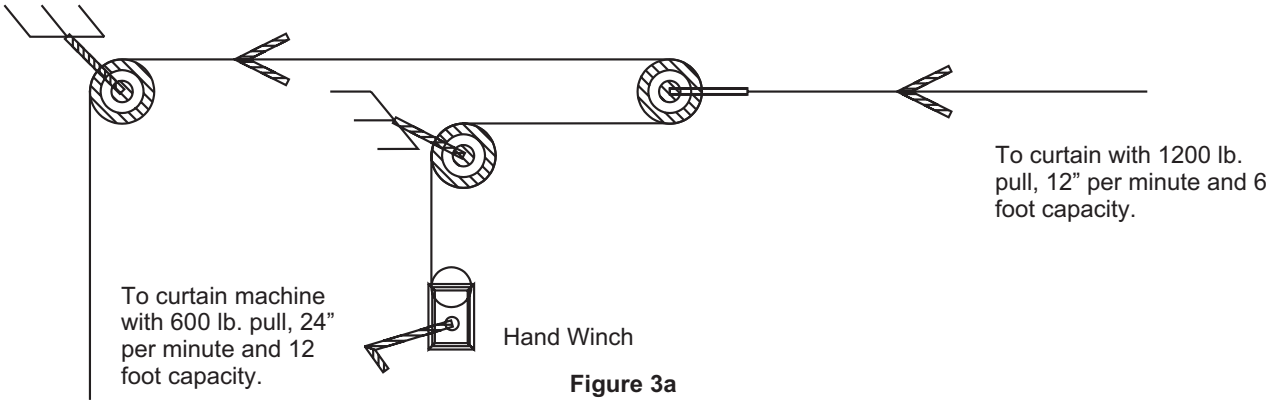


Figure 3a

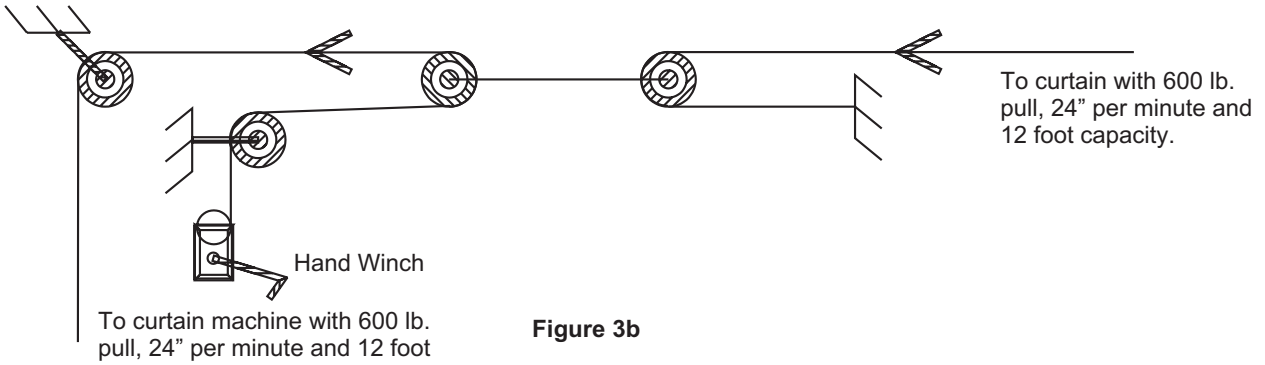


Figure 3b

E. Motor

The motor is equipped with four (4) multi-directional condensation drain screws on the front and rear bell housings. Depending on the location/direction of the vent machine installation, remove one rear and one front drain screw from the bottom of the motor (closest to the floor/ground) before operating the machine.

F. Gear Case

The gear box is equipped with a vent screw. Remove the vent screw before operating the machine.

G. Alternate Installations

The PowerMaster II® may be installed in locations other than the traditional wall mounting. Contact your local Acme distributor for assistance with alternate installations.

VII. OPERATION

A. Power

The PowerMaster II® is powered by a 115V 60Hz or 230V 50/60 Hz ½ HP motor. Plug the power cable into a standard grounded outlet.

B. Primary Limit Switches

BEFORE OPENING THE CONTROL ENCLOSURE, DISCONNECT POWER FROM THE UNIT.

The PowerMaster II ® features four (4) limit switches located inside the control box (See Figure 4 on Page 7), which are used to stop the vent at the top and bottom of the opening, as desired. One primary and one secondary limit switch are on each side. To set the closed (cable “in”) vent position, loosen the finger screws on the left switch. Slide the switch through the slot until it is out of the way of the actuator. Manually activate the machine until the curtain is in the correct cable “in” position. Slide the switch assembly until the lever clicks at the desired position and tighten the screws. Make sure this position does not allow the vent to pull too tight when closed. Once the desired position is reached, slide the safety screw over against the switch and tighten. To set the maximum open vent position (cable “out”), loosen the finger screws on the right switch. Slide the switch through the slot until it is out of the way of the actuator. Manually activate the lever until it clicks at the desired position and tighten the screws.

The limit switch mounting bracket has two safety screws. These are mounted to the outside of each Limit Switch Assembly. **Once the Limit Switch Assemblies have been adjusted, slide the safety screw over against the switch and tighten.** These screws helps keep the Limit Switch Assemblies from moving which could cause excessive stress on the curtain assembly. In addition, the screws act as safety stops for times when the Limit Switch Assemblies have to be temporarily changed.

The Secondary Limit Switches do not need adjustment. They are designed to activate only if the Primary Limit Switch doesn’t stop the machine. Once the Secondary Limit Switches are activated the problem causing the activation should be corrected. To reset the machine, loosen the limit set screw and slide it away from the actuator. With the manual up down switch, move the actuator into the normal area. Re-calibrate the affected Limit Switch Assembly as above.

C. Timer

CM6115T/CM6240T ONLY

A five minute, two circuit timer is located inside the control box on the right. For the 60 Hz operation the minimum on time is 13 seconds and can be adjusted in 2 second increments. For the 240V 50 Hz operation the minimum on time is 16 seconds 240V 50 Hz operation. The top cam controls the left (cable “in”) limit switch while the bottom cam controls the right (cable “out”) limit switch. To change a circuit, separate the tabs on the cam as desired.

VIII. INSTALLATION OF OPTIONAL INTERIM SWITCH ASSEMBLY

The Interim Switch Assembly is installed into the bottom of the control box. In order to mount the switch rail, the control box must be loosened from the Frame Assembly. It is not necessary to disconnect either the motor or the thermostat wires. The control box should be pulled out far enough to install the two pop rivets holding the left side of the rail to the control box. See Control Box Detail XIII on page 8.

1. Insert switch rail in the bottom of the control box with the bend placed toward the back of the box.
2. Pop rivet the right side with two of the pop rivets.
3. Loosen the control box from the frame.
4. Pop rivet the left side with the remaining two pop rivets.
5. Remount the control box onto the frame.
6. Install the Interim Switch Plate on the side where the fans are to be enabled (curtain closed).
7. Route the wires clear of the actuator and up to terminals 1 and 2.
8. A knock out is provided on the left side of the control box for access to the switch wires.
9. Wire the Normally Open switch into the fan circuit such that when the actuator goes past the switch lever, the switch will open and disable the fan circuit.

This switch is only rated for very small loads and should be used in conjunction with a power relay to control the fan circuits.

IX. TROUBLE SHOOTING GUIDE

1. PowerMaster II® motor will not run on manual or automatic if:
   a) There is no electric power to PowerMaster II® - see Power Detail.
   b) Secondary limit switch has been activated - see Secondary Limit Switch Detail.
   c) The limit switch is bad - see Primary Limit Switch Detail.
   d) One of the reversing relays is bad - see Reversing Relay Detail.
   e) The door interlock switch is bad - see Door Interlock Switch Detail.
   f) Motor auto thermal overload tripped - let cool.

If the limit switch actuator is against either upper or lower limit switch, move the switch away from the actuator. Push the manual switch the opposite direction. If the PowerMaster II® still will not operate, there is either (1) no power or (2) a bad door interlock switch.

2. PowerMaster II motor runs manually in only one direction if:
   a) There is a bad primary limit switch - see Primary Limit Switch Detail.
   b) There is a bad reversing relay - See Reversing Relay Detail.
3. PowerMaster II motor runs in both directions, but drum does not turn to wind or unwind cable if:
   a) There is a loose pulley on belt - see Shear Pin/Drum Detail.
   b) There is a sheared pin - See Shear Pin/Drum Detail.
   c) The gear case is bad - see Gear Case Detail.
   d) The shaft is broken - see Shaft Detail.
4. **PowerMaster II® runs up and down on manual, but does not run either direction on automatic setting if:**
   a) The timer or timer motor is bad - see Timer and Motor Detail.
   b) The thermostat is bad - see Thermostat Detail.
   c) The door interlock switch is bad - see Door Interlock Switch Detail.
5. **PowerMaster II® runs up and down continuously on automatic without stopping if:**
   a) The timer is bad - see Timer Detail.
   b) Timer pins are set backwards.
6. **PowerMaster II® runs both directions on manual setting, but only one direction on automatic if:**
   a) The timer is bad - see Timer Detail.
   b) The thermostat is bad - see Thermostat Detail.
7. **PowerMaster II® motor buzzes but does not run if:**
   a) The motor is bad - see Motor Detail.
   b) The reversing relay is bad - see Reversing Relay Detail.
   c) Motor auto thermal overload tripped - let cool.
8. **Building temperature is too hot or too cold before curtains activated when:**
   a) The thermostat is too near source of heat or cooling.
   b) Thermostat is exposed to sunlight.
9. **Actuator over run:**
   a) The reversing relay is sticking - see Reversing Relay Detail.

X. POWER DETAIL

To check for power, place test light leads on terminal block poles number 6 and number 7. If there is no power:

1. Check power to outlet.
2. Check all fuses or circuit breakers.
3. Check power cord.

A. PRIMARY LIMIT SWITCH DETAIL

The primary limit switches break the power going to the magnetic coils of the reversing relays. When activated, the curtain machine will stop at its furthest point of travel. When pushed in, the lever should make a slight clicking sound.

Replacement

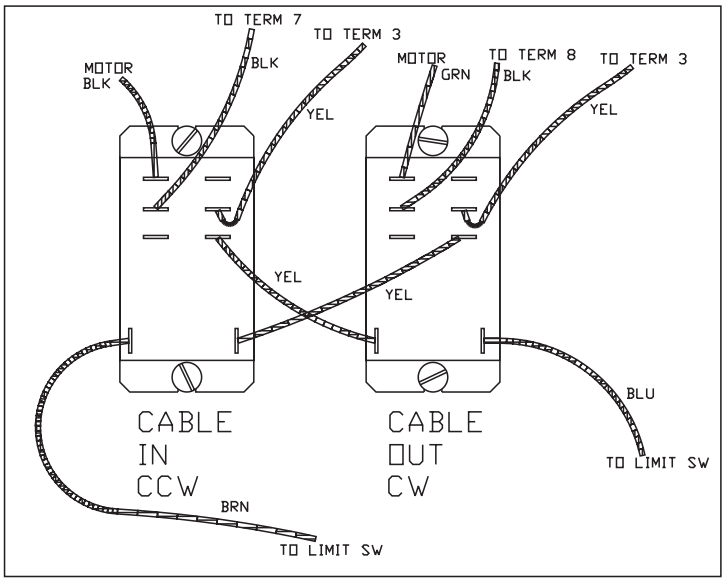
Disconnect power to machine. Remove the two finger screws securing the limit switch slide plate. Remove the plate and the limit switches. Replace the defective switch. Replace the slide plate making sure all wires are clear of the actuator paddle.

B. SECONDARY LIMIT SWITCH DETAIL

The secondary limit switches break the neutral leg of all power to the motor and the reversing relays. When activated, the curtain machine will stop and only operate once the actuator is moved away form the secondary limit switch. When pushed in, the lever should make a slight clicking sound.

Replacement
Disconnect power to machine. Remove the two

Reversing Relay



CAUTION: Incorrect wiring connections will result in limit switch malfunction.

screws securing the limit switch slide plate. Remove the plate and the limit switches. Replace the defective switch. Replace the slide plate making sure all wires are clear of the actuator paddle. Note: The secondary limit switch should be rated for a ½ HP motor load.

C. REVERSING RELAY DETAIL

The reversing relays condition the electric motor to run either direction, as determined by the thermostat and timer. Applying 115 volts of electricity across the coil(s) should cause the power transfer point to close. Place the hot wire on either the BLU or the BRN terminal and the neutral wire on the WHT/RED terminal. Refer to wiring diagram above.

Replacement
Disconnect power to the machine. Disconnect and remove the reversing relay. Install the replacement and connect the wiring.

D. DOOR INTERLOCK SWITCH DETAIL

The single pole, double throw door interlock micro switch allows electricity to travel to the thermostat and back to the timer to determine the direction the doors or curtains should travel. The switch is in the automatic mode whenever the cover is on the machine and the switch slide is in the down position. For manual operation without removing the cover, move the switch slide up.

Replacement
Remove the two nuts holding the micro switch to the side of the box, disconnect switch connector and remove the switch. Insert the new switch and replace the nuts and the quick connect contacts.

E. MOTOR DETAIL

The PowerMaster II® is powered by a totally enclosed, ball bearing ½ HP 48 frame motor capable of operation in both directions (clockwise and counterclockwise) from external reversing relays.

Replacement
The green and black wires determine the direction of operation, the white wire is neutral. To change the direction of the motor rotation, reverse the position of the green and black wires. If a replacement motor is necessary, ensure these wires on the new motor are connected to the unit exactly as the wires on the old motor.

F. TIMER AND TIMER MOTOR DETAIL (Model CM6115T)

A five minute, two circuit timer is located inside the control box on the right side. When operating normally, the two timer cams will turn very slowly, controlling the intermittent operation of the thermostat.

Replacement
To replace a defective timer motor, remove the three screws securing the timer assembly, disconnect the electrical leads and remove the timer assembly. Install the new timer motor assembly, connect the electrical leads and tighten the three screws. If there is a malfunction in the timer switch gear, replace the complete timer unit.

XI. THERMOSTAT DETAIL

The optional thermostat is a two stage heating and cooling unit in a totally enclosed NEMA 4X type enclosure with at least a two degree allowance between stages. Use only a similar thermostat to ensure proper PowerMaster II® performance. The red wire is the common wire, the white wire directs the cable to reel in and the black wire directs the cable to reel out. The green wire is the ground wire. Interrupted manual operation of the control during the timed cycle may result in delayed response of up to five minutes.

Thermostat temperature inaccuracies can be caused by exposure to varying temperature sources such as direct sunlight, drafts and dust. Dust buildup on the sensing coil insulates the coil resulting in false temperature measurements. Regular cleaning is necessary in dusty environments. Test the thermostat periodically by

holding the coil in your hand for at least a minute to simulate an increase in room temperature.

XII. DIRECTIONAL SWITCH DETAIL

This switch provides manual operation of the vents. Open the door panel and test the switch by shorting from the center to the outside poles.

Replacement
Remove the nut around the toggle switch, disconnect the three quick connect contacts on the back of the switch and remove the switch. Insert the new switch through the hole in the panel, replace the nut and the quick connect contacts.

XIII. CONTROL BOX DETAIL

Replacement
Move the actuator to the center. The entire control box may be removed by disconnecting the motor wire, thermostat wire, and removing the four bolts holding the box to the frame. The box may now be removed by pulling straight out from the rest of the machine. Replace the box by placing the box over the shaft and actuator. The limit switches should be moved aside, and the actuator should engage the actuator bar. Bolt the box to the main frame and reconnect the wires.

XIV. DRIVE PACKAGE DETAIL

A. PULLEYS AND BELTS DETAIL

Pulleys: The set screws on the motor pulley or gear case occasionally become loose during operation, allowing the pulley to slip on the shaft. If this occurs, realign the belt and tighten the set screw as tight as possible.

Belts: The size 4L or A size V-belt should run loose with a ½ to ¾ inch slack. Running the belt too tight can cause bearing damage to the motor and gear case. Worn or cracked belts should be replaced.

B. SHEAR PIN/DRUM DETAIL

The main shear pin is located in the coupling from the gear box to the shaft. This pin is a spring pin 5/32 X 0.75 Standard Duty AISI 1070-1095. This pin will shear at loads greater than 600 lbs. causing the vents to lower. The coupling on the gear case will continue to turn, but the drum will not rotate. This is usually caused by an obstruction prohibiting free movement of the vents. Remove the obstruction and replace the roll pin. DO NOT operate the machine without a shear pin. **Adding a second shear pin would double the pulling capability. If greater than 1200 lb. pull is required, the shear pins may be replaced with the solid steel pin. The pull limit is now left to the ¼ " x 2" spring pin located in the drum. Warning:** With two shear pins, an obstruction could cause the machine to exert sufficient force to damage the building structure.

A second ¼” x 2” spring roll pin connects the drum to the drive shaft in the end of the aluminum drum. This pin will shear at approximately 4000 pounds of pressure, causing the vents to lower.

Replacement
An extra shear pin and an extra roll pin are located inside the control box. Remove the broken pin, align the hole and install the new pin.

C. GEAR CASE DETAIL

The gear case contains a double worm gear with a 220 to 1 ratio gear case. If the drive shaft continues to turn, but the hub of the gear case is not rotating, the gear or worm may be stripped due to excessive pressure or lack of lubrication. When a problem with the gear case occurs, the entire case must be replaced. Field repairs to the gear case or worm are not recommended.

Replacement
Loosen the coupling set screw and the two mounting bolts. Slide the defective gear case from the frame. Install the new gear case and tighten the two mounting bolts and the coupling set screw.

D. SHAFT DETAIL

Replacement
To replace the actuator shaft, relieve the cable tension and remove the gear case, the coupling, the set screw from the limit switch actuator, the bearing and the shear pin. Install the new shaft and replace the shear pin, the bearing, the set screw, the coupling and the gear case. Restore the cable tension.

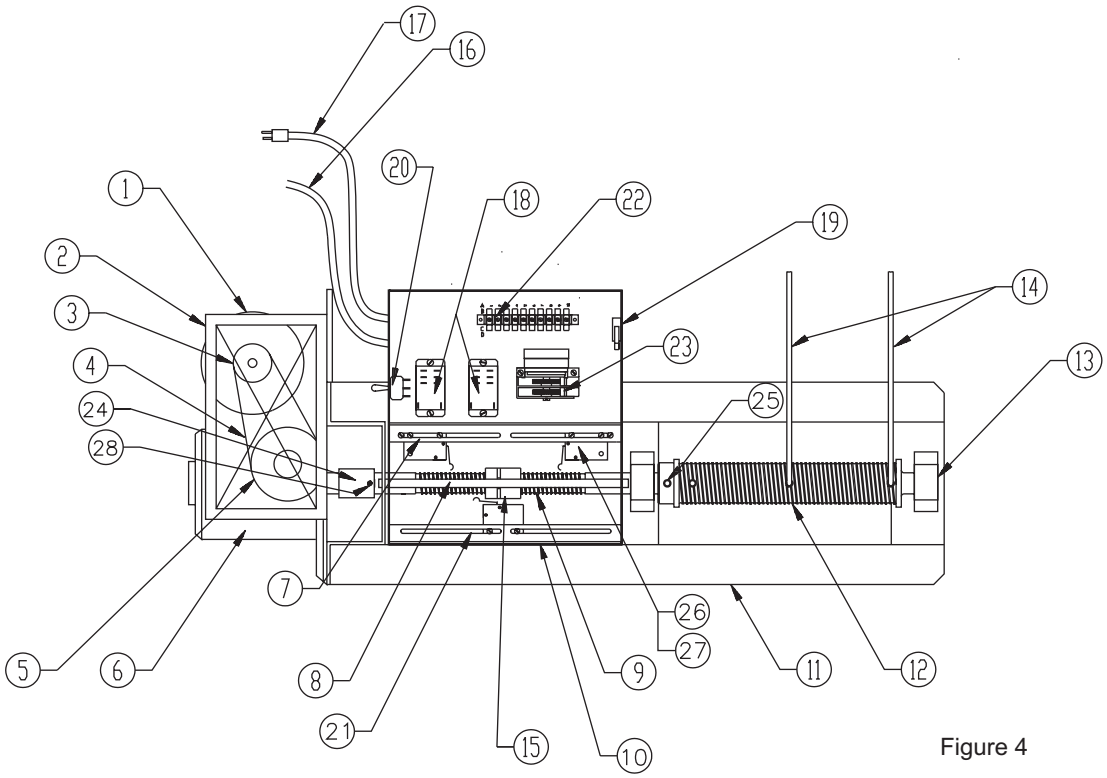
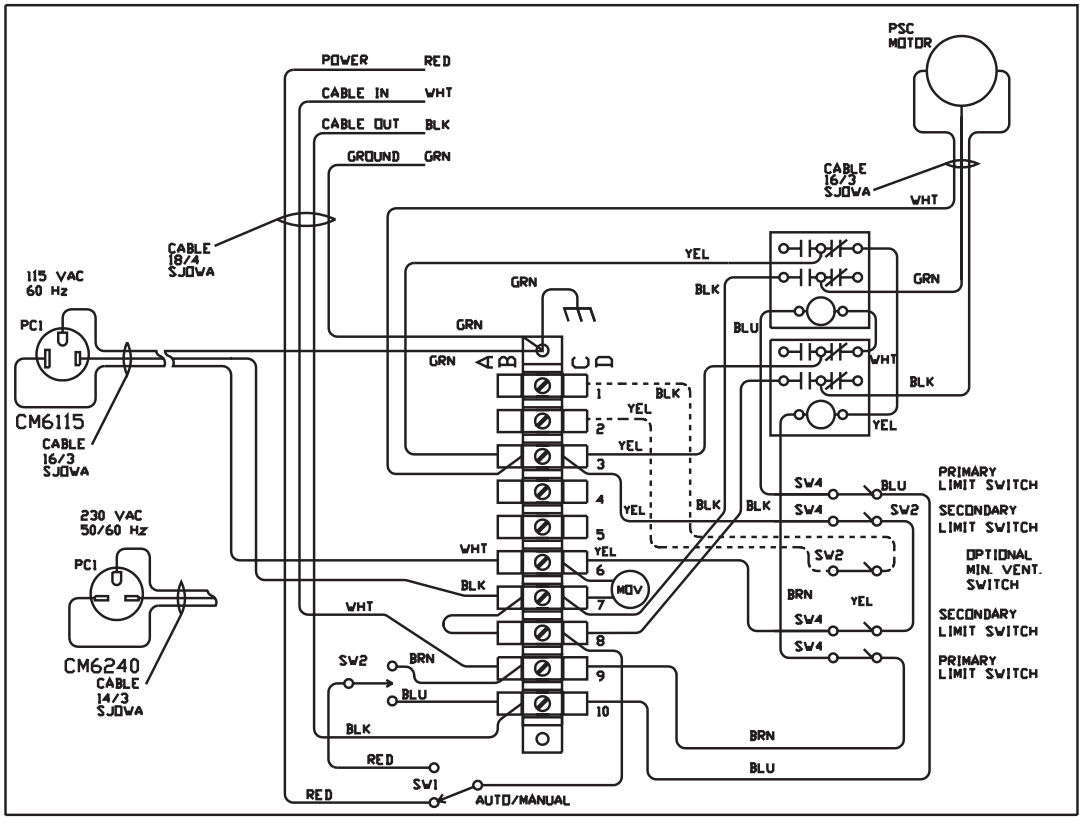


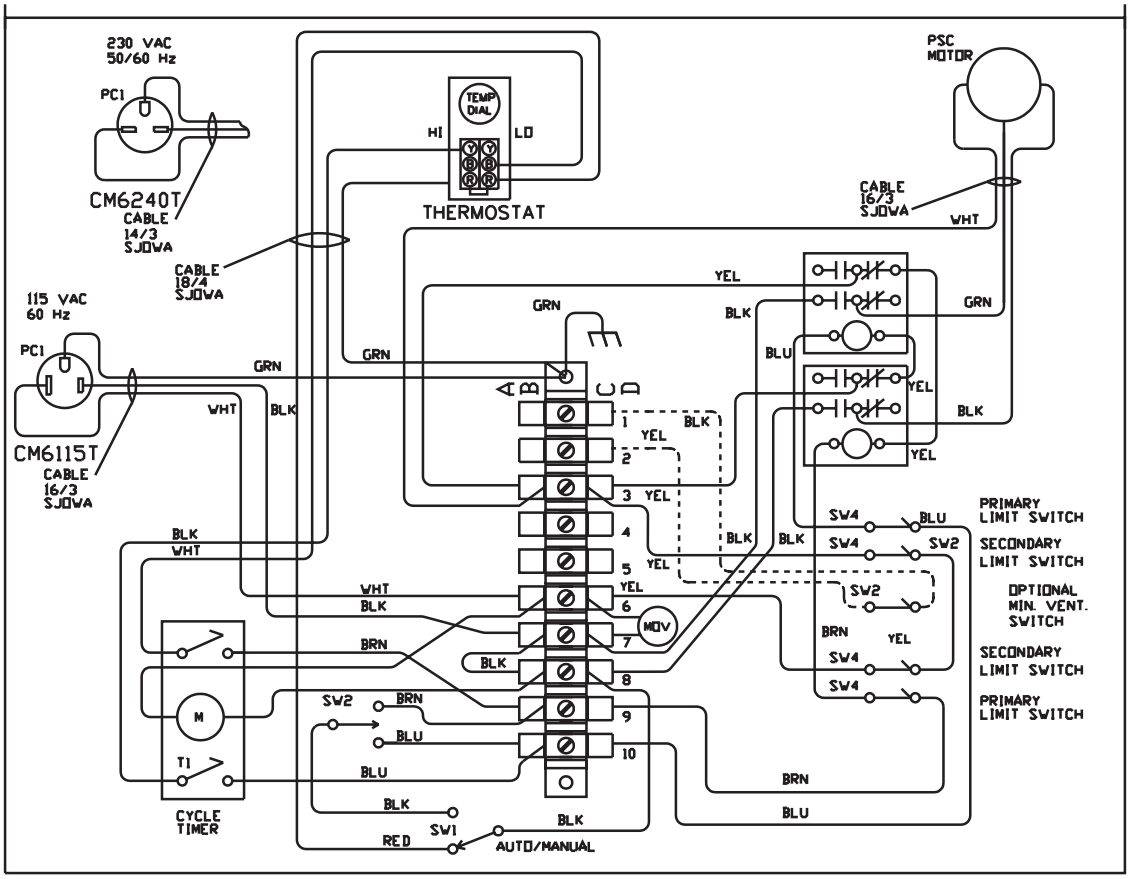
Figure 4

PARTS LEGEND					
NO.	**DESCRIPTION**	**PART NO.**	**NO.**	**DESCRIPTION**	**PART NO.**
1	MOTOR (115V*)	922811	21	INTERIM SWITCH ASSEMBLY	275039
2	BELT GUARD	275034	22	TERMINAL STRIP	928848
3	MOTOR PULLEY	931006	23	CYCLE TIMER (115V)	992203
4	BELT	935184	24	COUPLING	271004
5	GEARCASE PULLEY	931055	25	DRUM SPRING PIN	992209
6	GEAR CASE	992208	26	LIMIT SWITCH	928853
7	SWITCH RAIL	271044	27	LEVER SWITCH	928852
8	ACTUATOR BAR	271045	28	SAFETY SHEAR PIN LOCATION	N/A
9	ACTUATOR SHAFT	271006			
10	CONTROL BOX	270134	**PARTS NOT SHOWN IN DRAWING**		
11	FRAME ASSEMBLY	N/A	**DESCRIPTION**		**PART NO.**
12	ALUMINUM DRUM	271007	EXTRA SHEAR PIN SET		935184
13	BEARING	991007	600 LB SHEAR PIN		992382
14	16' CABLES	271019	DOWEL PIN		992494
15	ACTUATOR	275036	SQ KEY FOR GEAR BOX OUT		991282
16	THERMOSTAT CORD	992254	SQ KEY FOR GEAR BOX IN		991283
17	POWER CORD (115V)	928724	BOX CLOSING THUMB SCREW		941531
18	REVERSING RELAYS (115V)	928851	RAIL ATTACHMENT POP RIVET		941493
19	AUTO/MANUAL SW	928853	AUTO/MAN PLATE SCREW		941531
20	UP/DOWN SWITCH	992206	AUTO/MAN PLATE NUT		941097

*FOR 230V CONTACT FACTORY.



CM6115 and CM6240



CM6115T and CM6240T

NOTES

TERMS AND CONDITIONS

DESIGN CHANGES Acme reserves the right to make changes in design, improvements and additions in and to its products any time without imposing any liability or obligations to itself to apply or install the same in any product manufactured by it.

TITLE The title and right of possession of the equipment sold herein shall remain with the Company and such equipment shall remain personal property until all payments herein (including deferred payments whether evidenced by notes or otherwise) shall have been made in full in cash and the Purchaser agrees to do all acts necessary to perfect and maintain such right and title in the Company.

SAFETY ACCESSORIES The Company manufactures equipment designed to serve multiple applications and offers a wide range of safety equipment, including guards and other devices, as may be required to meet customer specifications. Without exception, the Company recommends that all orders include applicable safety devices. Equipment ordered without applicable safety devices is clearly the responsibility of the Purchaser. Further, the Purchaser warrants that he has determined and acquired any and all safety devices required for equipment sold by the Company. Weather covers and guards for motor and V-belt drives, couplings, shafts and bearings, along with inlet and outlet screens, are optional accessories noted in the price list.

These instructions cover the usual installation, operation and maintenance methods for which the product(s) was designed. They do not purport to cover all details or variations in the product(s) nor to provide for every possible contingency that might be met in connection with the installation, operation and maintenance. For any departures from these instructions, or should particular problems arise which are not covered sufficiently for the purchaser's purpose, the matter should be referred to the Company.

WARNING Acme products are designed and manufactured to provide reliable performance but they are not guaranteed to be 100% free of defects. Even reliable products will experience occasional failures and this possibility should be recognized by the User. If these products are used in a life support ventilation system where failure could result in loss or injury, the User should provide adequate back-up ventilation, supplementary natural ventilation or failure alarm system, or acknowledge willingness to accept the risk of such loss or injury.

WARNING DO NOT use in HAZARDOUS ENVIRONMENTS where fan's electrical system could provide ignition to combustible or flammable materials unless unit is specifically built for hazardous environments.

CAUTION Guards must be installed when fan is within reach of personnel or within seven (7) feet (2.134 m) of working level or when deemed advisable for safety.

DISCLAIMER The Company has made a diligent effort to illustrate and describe the products in this literature accurately; however, such illustrations and descriptions are for the sole purpose of identification, and do not express or imply a warranty that the products are merchantable, or fit for a particular purpose, or that the products will necessarily conform to the illustrations or descriptions or dimensions.

LIMITED WARRANTY

WARRANTY AND DISCLAIMER: Acme Engineering and Manufacturing Corporation extends this limited warranty to the original buyer and warrants that products manufactured by the Company shall be free from original defects in workmanship and materials for two years from date of shipment, provided same have been properly stored, installed, serviced, maintained and operated. This warranty shall not apply to products which have been altered or repaired without the Company's express authorization, or altered or repaired in any way so as, in the Company's judgment, to affect its performance or reliability, nor which have been improperly installed or subjected to misuse, negligence, or accident, or incorrectly used in combination with other substances. The Buyer assumes all risks and liability for results of use of the products. Warranties on purchased parts, such as but not limited to bearings, sheaves, belts, couplings, electric motors, pumps, controls and heaters are limited to the terms of warranty extended by our supplier.

Polyethylene tubing and cooling pads are warranted to be free of defects in material and workmanship for a period of 90 days from date of shipment and a like warranty applies to the cross fluted cellular type cooling cells for a period of two years from date of shipment provided same have been properly handled, stored, installed, serviced, maintained and operated. And further, not subjected to excessive heat, corrosive agents or chemicals, or mechanical abuse that may cause tearing, crushing or undue deterioration nor used on a system or in a manner other than that for which it was designed as explained in the product literature.

LIMITATION OF REMEDY AND DAMAGES: All claims under this warranty must be made in writing and delivered to P. O. Box 978, Muskogee, Oklahoma, 74402, within 15 days after discovery of the defect and prior to the expiration of two years from the date of shipment by the Company of the product claimed defective, and Buyer shall be barred from any remedy if Buyer fails to make such claim within such period.

Within 30 days after receipt of a timely claim, the Company shall have the option either to inspect the product while in Buyer's possession or to request Buyer to return the product to the Company at Buyer's expense for inspection by the Company. The Company shall replace, or at its option repair, free of charge, any product it determines to be defective, and it shall ship the repaired or replacement product to Buyer F.O.B. point of shipment; provided, however, if circumstances are such as in the Company's judgment to prohibit repair or replacement to remedy the warranted defects, the Buyer's sole and exclusive remedy shall be a refund to the Buyer of any part of the invoice price, paid to the Company, for the defective product or part.

The Company is not responsible for the cost of removal of the defective product or part, damages due to removal, or any expenses incurred in shipping the product or part to or from the Company's plant, or the installation of the repaired or replaced product or part.

Implied warranties, when applicable, shall commence upon the same date as the express warranty provided above, and shall, except for warranties of title, extend only for the duration of the express warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. The only remedy provided to you under an applicable implied warranty and the express warranty shall be the remedy provided under the express warranty, subject to the terms and conditions contained therein. The Company shall not be liable for incidental and consequential losses and damages under the express warranty, any applicable implied warranty, or claims for negligence, except to the extent that this limitation is found to be unenforceable under applicable state law. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

No employee, agent, dealer, or other person is authorized to give any warranties on behalf of the Company or to assume for the Company any other liability in connection with any of its products except in writing and signed by an officer of the Company.

REPLACEMENT PARTS If replacement parts are ordered, buyer warrants that the original components in which these replacement parts will be placed are in satisfactory working condition, and when said replacement parts are installed, the resultant installation will operate in a safe manner, at speeds and temperatures for which the original equipment was purchased.

TECHNICAL ADVICE AND RECOMMENDATIONS, DISCLAIMER: Notwithstanding any past practice or dealings or any custom of the trade, sales shall not include the furnishing of technical advice or assistance or system design. Any such assistance shall be at the Company's sole option and may be subject to additional charge.

The Company assumes no obligation or liability on account of any recommendations, opinions or advice as to the choice, installation or use of products. Any such recommendations, opinions or advice are given and shall be accepted at your own risk and shall not constitute any warranty or guarantee of such products or their performance.

GENERAL In no event shall any claim for consequential damages be made by either party. The Company will comply with all applicable Federal, State, and local laws.

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