



# Curtain & Vent Machine

Tel: (800) 348-6663 [www.diversifiedimports.com](http://www.diversifiedimports.com)

## Installation Guide



1. Using the cardboard template, drill holes in a 2" plank and mount the Curtain/Vent Machine as shown above. Bolt the unit mounting plate to a 2x12 plank (or two 2x6's) that is (are) secured to the house studs or rafters. The machine may be mounted on the plank before the plank is bolted to the wall or ceiling. If the plank is bolted to the wall or ceiling first, there are slots in the base that will slip over the head of a 3/8" lag bolt to hold the machine while it is being secured.
2. Connect the electrical wires and test for rotation as shown on the following page. If the belts are wound clockwise on the pulley, then OPEN will be CW rotation, and CLOSE will be CCW rotation. (Note: The limit switches are preset for limited travel. If the motor does not move in one direction, the limit switch may be activated. If so, try activating in the opposing direction.



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3. **Air Vent Unit** should be cabled at 1:1 or ideally 2:1 (2" Unit move – 1" Cable move) This is the Ideal speed for most Installations (see Illustration) Cabling 1:2 is not Recommended Because the Double Speed of the Curtain or Vent May Cause Over-Controlling (Yo-Yoing). Cabling 1:2 Also Doubles the Load on the Machine. Overloading Combined with Constant Yo-Yoing May Damage the Machine.
4. **Tunnel Unit** should be cabled 1:1. This is ideal for most situations and controllers. (See Illustration).
5. Electrical Wiring and Rotation Testing Must Be Done Before Attaching Cables.
6. Attach vent or curtain cables. At 1:1 the cables travel approximately 18 inches per/min.
7. Set and Test the limit switches as shown on the following page.
8. Complete the final adjustment on both sides of the winch cable with the manual winches. This will allow for equal weight distribution to the unit and proper air entry into the building. Configure alignment of the belts, so they will not ride upon sides of drum. Do Not Over-Tighten The Closure With The Manual Winches. This Could Create Excessive Load On The Machine.

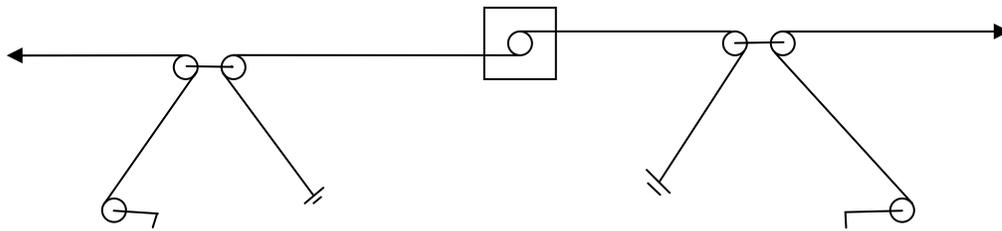


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## CABLING

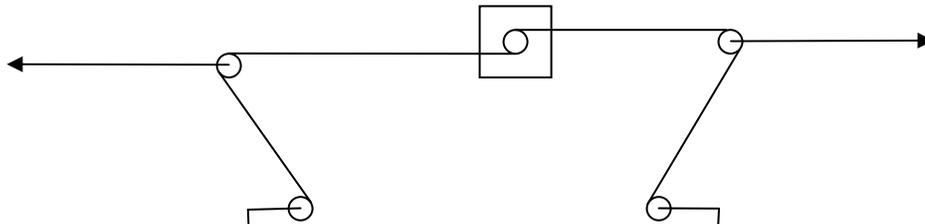
### Cabling 1:1 with adjusting cranks (Vents and Tunnel)

This is the recommended configuration for most situations. The outer cables travel the same speed as the inner cables and the loads on the cables are the same.



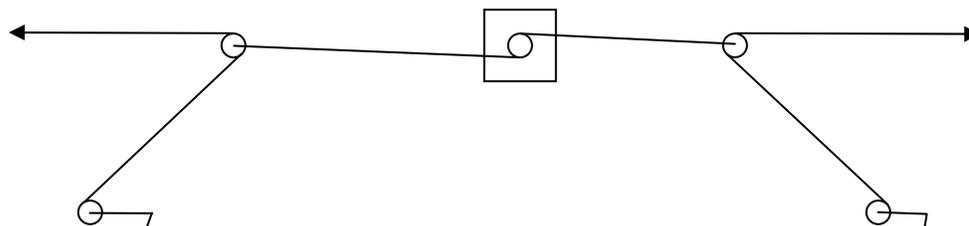
### Cabling 2:1 with adjusting cranks

This configuration is best for extra heavy loads. It allows the machine to carry twice the normal load, reduces speed of travel of the Vents and helps to prevent Yo-Yoing.



### Cabling 1:2 with adjusting cranks

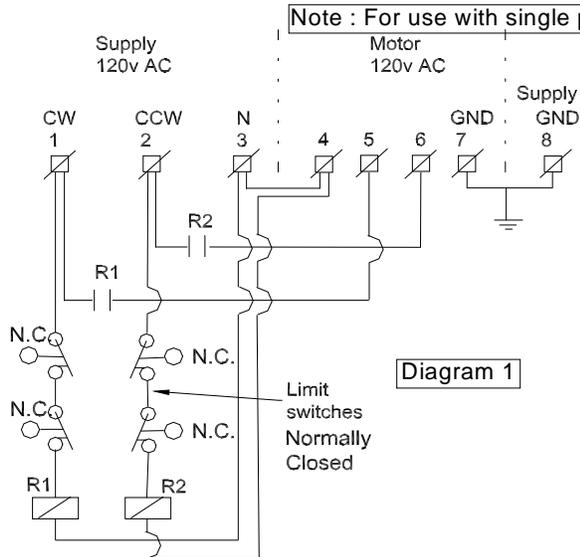
This configuration is **not recommended** for most situations. The outer cables travel twice the speed as the inner cables which may cause over-controlling (to hunt or yo-yo). It also doubles the load on the machine.





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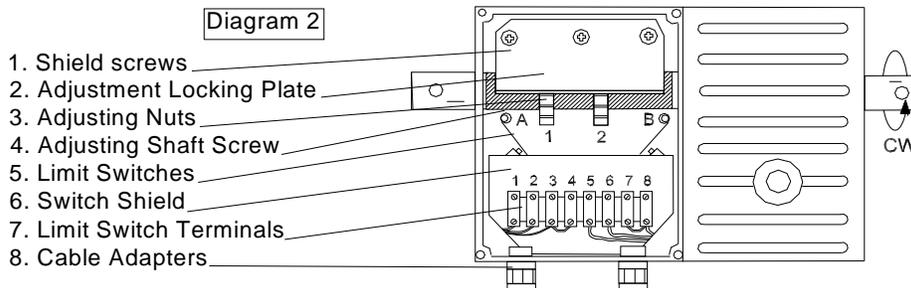
Wiring and Limit Switch Adjustment Instructions for "Diversified" Vent and Curtain Machine.



1. Connecting the power supply from the electric panel / controller to the terminals - Diagram 1
  - (a) CW to terminal no. 1
  - (b) CCW to terminal no.2
  - (c) N to terminal no.3
  - (d) Ground to terminal no.7

2. Verification - Diagram 2 Warning - live wires and terminals inside
  - (a) Momentarily jog unit to verify cw rotation. (Travel of adjusting nut 2 (when held) towards limit switch B )
  - (b) Check the following:
    - (i) In cw rotation and limit switch B is pressed, the motor stops.
    - (ii) When the command to open or close is given (from a manual switch or controller) and the unit opens or closes as required.
  - (c) If both (i) and (ii) occur you are ready to adjust the limit switches. If not - please see Troubleshooting below

3. Adjusting the limit switches - Diagram 2 Warning live wires and terminals inside
  - (a) Remove adjustment locking plate.
  - (b) While gear shaft is running in cw rotation turn adjusting nut 2 to the desired vent or curtain location and motor comes to a stop.
  - (c) In ccw rotation repeat step (b) using adjusting nut 1 and limit switch A, while holding adjusting nut 2.
  - (d) Replace adjustment locking plate (2) , ensuring that the shield edge retains the adjusting nuts in place.
  - (e) Replace the cover to prevent dirt and humidity entering the limit switch compartment.



Troubleshooting :- Warning : Main power supply switch must be off while reversing wiring.

Problem A: The limit switch is depressed and the motor stops, but the unit operates in the wrong direction.  
Solution A: Reverse the wiring in terminals 1 and 2

Problem B: When the command to open or close is given and the unit opens or closes as required, but the depressed limit switch does not stop the motor.  
Solution B : Step 1-Reverse the wiring in terminals 1 and 2. Step 2 -Reverse the wiring in terminals 5 and 6.

Problem C: The unit operates in the wrong direction and the motor does not stop when the limit switch is depressed.  
Solution C: Reverse the wiring in terminals 5 and 6