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## DuraDrive 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 described in Wiring Diagram and the Limit Switch Setting Procedure. If the belts are wound clockwise on the pulley, then OPEN will be CW rotation, and CLOSE will be CCW rotation.



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3. **Inlet 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 24 inches per min.
7. Set and Test the limit switches as shown on the following pages.
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.

**\*\* Note\*\***

Mounting the DuraDrive in the middle of the cable run is recommend.

Running the belt only one direction requires more accurate belt alignment.

If the installation requires a long run in one direction the cable drum option is recommended.



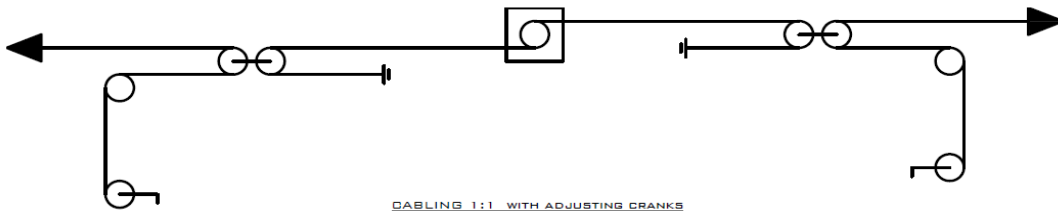
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## CABLING

Note: DuraDrive belts travel 4 times the speed of the standard screw-jack machine cables, and therefore must be cabled differently!

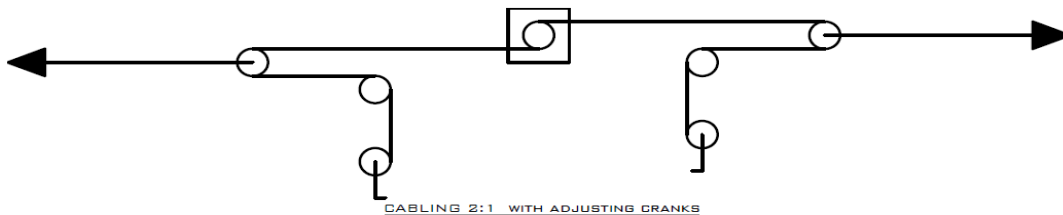
### Cabling 1:1 with adjusting cranks (Tunnel Doors and Curtains)

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.



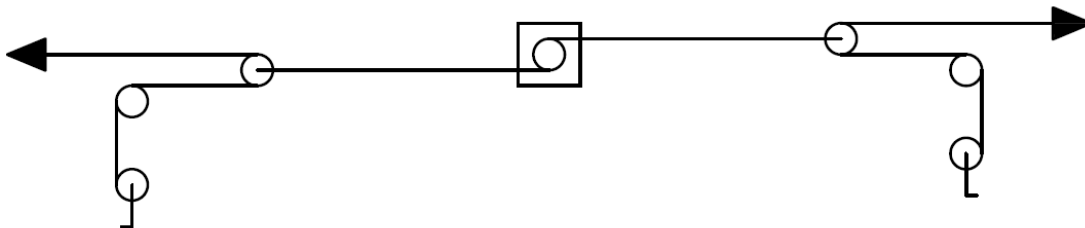
### Cabling 2:1 with adjusting cranks (Vents)

This configuration gives the best speed for vents, or power for extra heavy loads. It reduces speed of travel of the Vents and helps to prevent Yo-Yoing. It also provides twice the power for heavy loads.



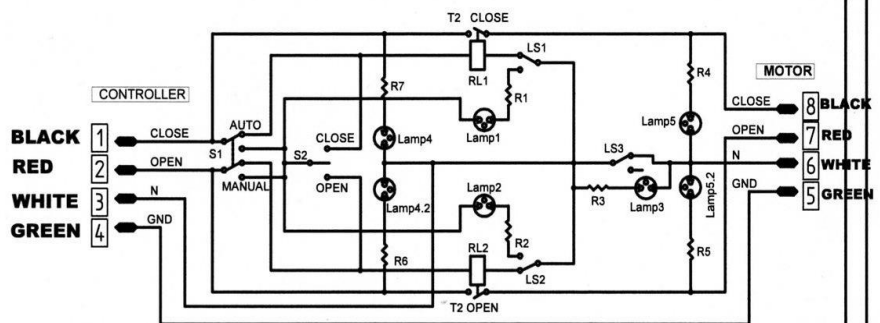
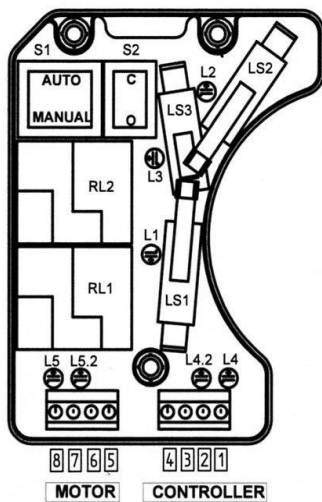
### Cabling 1:2 with adjusting cranks

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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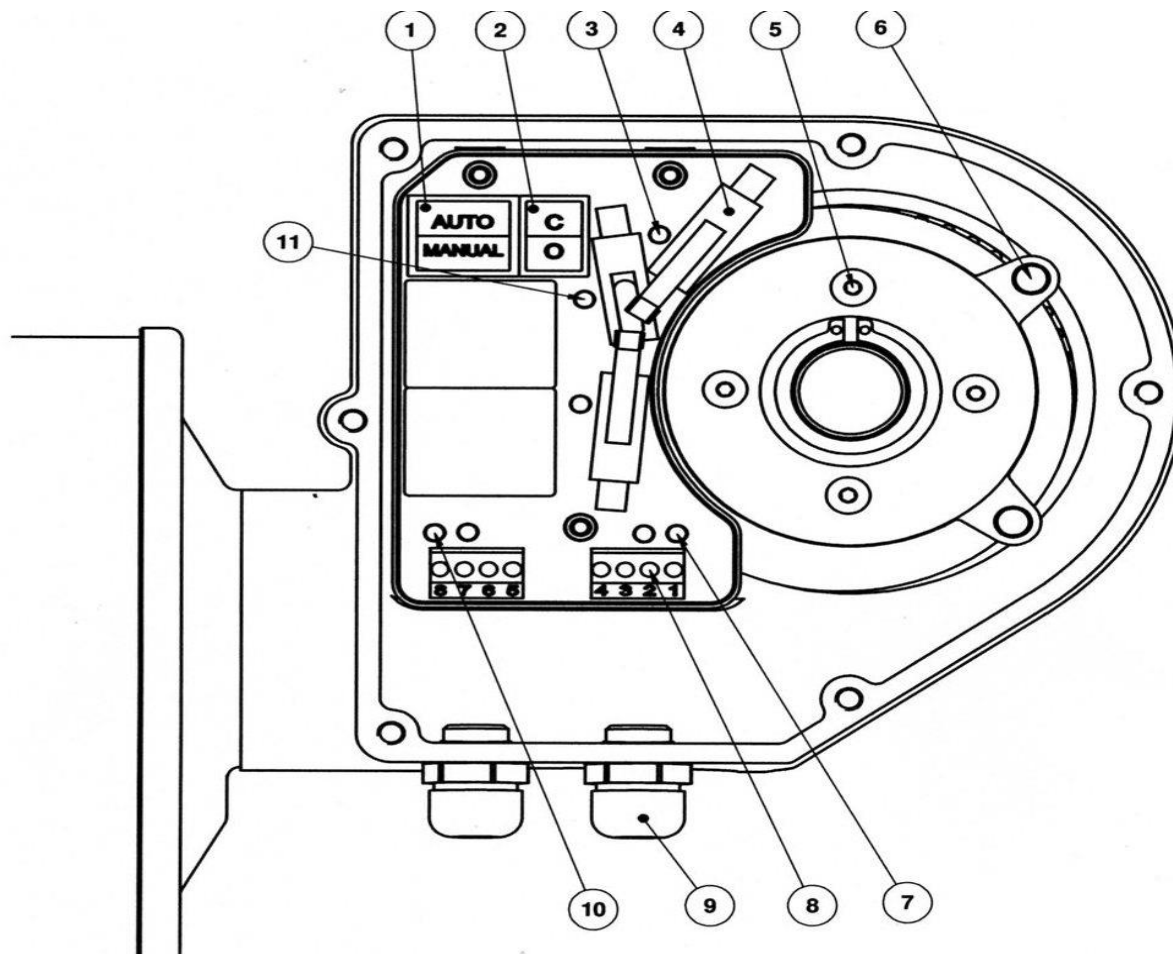


**WHEN THE DRUM IS ATTACHED TO THE GEAR THE BELT SHOULD BE WOUND CLOCKWISE**

**THE BOLT TO ATTACH THE GEAR TO PLATE IS 10MM  
 THE BOLT TO ATTACH THE GEAR TO MOTOR IS 3/8"**



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ITEM	DESCRIPTION	QTY.
1	SWITCH- AUTO / MANUAL	1
2	SWITCH- OPEN / CLOSE	1
3	LAMP- LIMIT SWITCH	2
4	LIMIT SWITCH	2
5	SCREW- LIMIT SWITCH	4
6	PIN- LIMIT SWITCH	2
7	LAMP- INPUT	2
8	TERMINAL BLOCK	2
9	CONNECTOR- PANEL	2
10	LAMP- MOTOR	2
11	LAMP- OVERRIDE	1

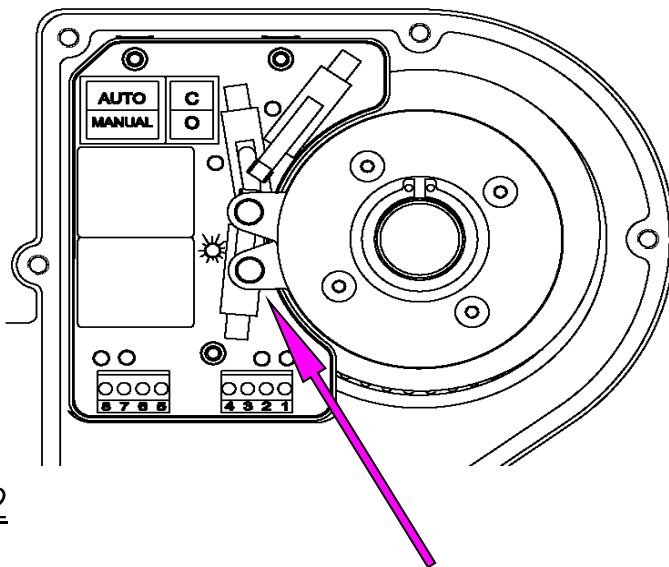




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## Limit Switch Setting Procedure

1. Move Switch (1) to "MANUAL" and Switch (2) to "OFF," which is the center position.
2. Connect the wires from the controller to Terminal Blocks (8) as shown in wiring diagram.
3. Apply power to the unit from the controller on either the open or close circuit.
4. Loosen the limit switch plate Screws (5) so that the two Limit Switch Plates (6) can be moved by hand with slight friction resistance.
5. ***Check to ensure that motor rotation is in sync with limit switches.*** With the Open/Close switch run the motor each direction and depress the Limit Switch (4) being approached by the pin (6). If motor rotation is not in sync with the switches, reverse leads to motor 7 and 8 and test again. If motor leads are reversed the power leads 1 and 2 may also need to be reversed.
6. Starting with the less accurate position requirement side (usually the Open direction), rotate the motor to the desired limit position using the "Open"/"Close" Switch (2). (Watch that limit switch Pins (6) will not touch either Limit Switch (4) during this procedure)
7. Hold the 2 Pins (6) together and rotate them CW or CCW (according to the need) until the Lamp near the activated Limit Switch will be alight. See Pic. 2



Pic. 2



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8. After Setting the first Limit position, rotate the motor to the other limit position (usually the close position), using the "Open"/"Close" Switch (2).
9. While holding the first adjusted Pin (6), rotate the other Pin (6) until the Lamp near the second activated Limit Switch alights (See Pic. 3).
10. Tighten the 4 Limit Switch Screws (5).
11. Verify proper adjustment by using the "Open"/"Close" Switch (2) and Limit Switch Lamps (3).
12. Switch the "Auto"/"Manual" Switch to the "AUTO" position.

