



PRODUCT OVERVIEW

The ZoneMaster™ 120V Motorized Damper is designed to customize airflow for improved air quality and comfort while delivering energy savings.

TYPICAL APPLICATIONS:

- Commercial balancing
- High-Rise or office ventilation
- Backdraft prevention
- Zone control
- Industrial process airflow (cleanrooms)

KEY FEATURES:

- Motorized damper with spring return
- Does not require a transformer
- Patented adjustable coupler for customized airflow
- Simple installation

IMPORTANT SAFETY WARNINGS

⚠ WARNING – Electrical Shock Hazard

Disconnect power to the ventilation system before installing or servicing this product.

⚠ WARNING – Fire Hazard

Maintain a minimum clearance of 4 inches from combustible materials.

⚠ WARNING – Installation Requirements

Installation should be performed by a qualified HVAC technician or licensed electrician in accordance with all local building and electrical codes.

⚠ NOTICE

Improper installation may result in poor ventilation performance or equipment damage.

WHAT YOU'LL NEED

The following will be required to complete the installation:

- Code compliant electrical wire routed to the damper to provide power.
- If you are mounting the damper between floor joists in flexible duct, you will need two standard duct supports.
- Aluminum foil tape to seal connection points.

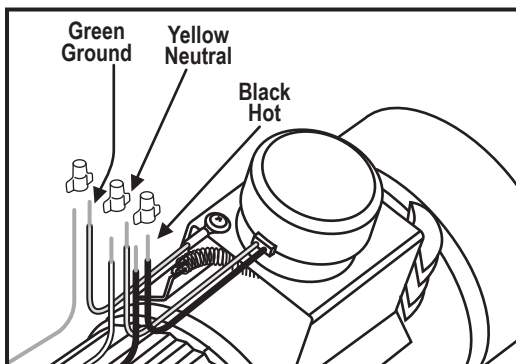
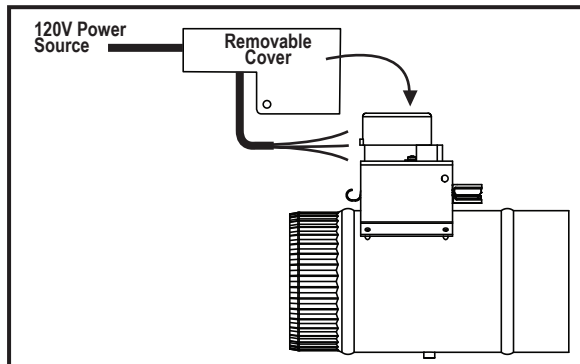
BEFORE YOU BEGIN

Carefully review this installation guide before cutting or modifying existing ductwork.
Proceed to – Installation portion of the instructions.

INSTALLATION

1. Consult the wiring instructions before planning your installation.
2. Determine the location of the damper, then determine the route you will be running the electrical wire to the damper.
3. Secure damper into the rigid ductwork or with supports if using flex duct. See “DAMPER UNIT INSTALLATION DETAILS”
4. Make electrical connections with 3-conductor, code compliant wire to connect the damper to a power supply. Check local codes for wire requirements in your area.

WIRING INSTRUCTIONS



1. Run 3-conductor, code compliant wire through the access hole on the protective electrical cover and to the electrical connections on the Damper.
2. Securely make connections with code compliant electrical connectors to the damper.
3. Once electrical connections are complete, securely attach the protective electrical cover back on the damper confirming that all connections are contained within the cover.

DAMPER UNIT INSTALLATION DETAILS

The damper is designed for in-line installation within ductwork. It can be installed directly onto a take-off, or into an existing duct.

For rigid duct:

1. Cut (6" (15 cm) section) with one end crimped to accommodate the damper.
2. Position the uncrimped end of the damper over the crimped end of the take-off or cut and crimped rigid metal duct. Then insert the damper's crimped end into the uncrimped section of duct.
3. Secure both connections with sheet metal screws and seal the connections with aluminum tape. When mounting, ensure the motor remains accessible for servicing.

For flexible duct:

1. Cut the flex duct and slide the ends over each end of the damper.
2. Support the damper with standard duct supports.
3. Secure the damper to the flexible duct with aluminum foil tape or heavy duty nylon cable ties.

Note: Take care to be sure that the outer jacket and insulation of the flex duct does not interfere with the damper mechanism.

Be sure to not deform the body of the damper pipe. If the damper pipe is severely "out of round", the spring return mechanism may not function properly and the damper plate will not function as designed.

IMPORTANT WIRING WARNING:

Locate and shut off the breaker on the power panel that controls the 120 Volt AC supply to the wire that will connect to the damper. Use a voltage detector, voltmeter or other suitable instrument to make sure that all power is OFF. Any wiring connections outside of the damper connections should be made in a junction box. The wire needs to be a 3-conductor wire : hot, neutral and ground.

USING A 120V SWITCH OR TIMER

Suncourt® dampers can be operated by a 120V wall switch or timer.

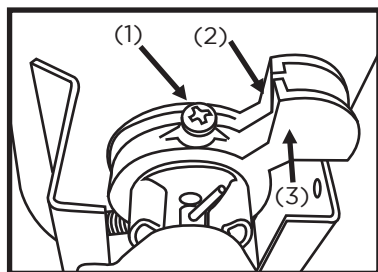
MAINTENANCE

Suncourt® recommends that the damper is cleaned at regular intervals to keep it free from lint, dust and debris. The damper must never be exposed to temperatures over 140°F (60°C)

ADJUSTABLE DAMPER PLATE POSITION

The amount of airflow through your motorized damper in either the powered or unpowered position can be adjusted by changing the final or initial position (angle) of the damper plate.

The position of the damper plate is controlled by the coupler mechanism. When the unit is powered, the motor will rotate the coupler mechanism counter-clockwise until the final “powered” plate position is reached. Once power is removed, a spring will pull the coupler mechanism clockwise until the plate is returned to the initial “unpowered” position.

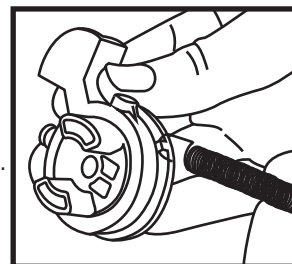


The coupler mechanism consists of 3 parts:

- (1) Set Screw
- (2) Inner Ring with Inner Arm
- (3) Outer Ring with Outer Arm

- The set screw (1) locks the Outer ring in place.
- The Inner Ring with Inner Arm (2) is attached to the damper shaft.
- The Outer Ring with Outer Arm (3) can be rotated to change the plate angle at the beginning or end of the power cycle.
- The sides of each Outer and Inner Arm will contact the motor bracket to limit the motion of the damper plate.

Unpowered position is shown in this image.

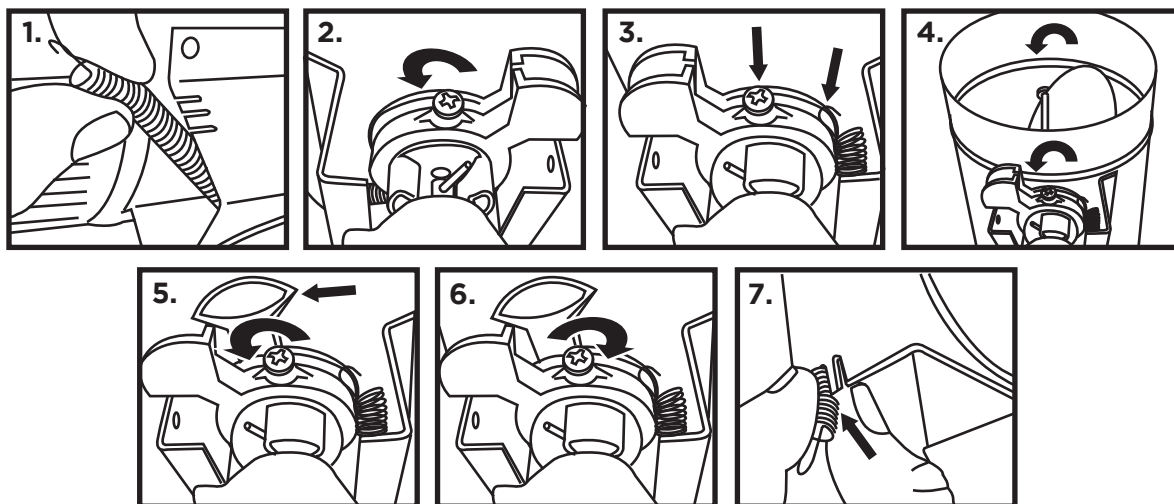


Proper spring location on coupler.

- The unit is normally closed configured at the factory for 100% closed plate position.
- Determine if you wish to change the plate position when powered or unpowered.
- Repositioning the Outer Ring counter-clockwise will alter the plate position when powered and leave the unpowered plate position unaffected.
- Repositioning the Outer Ring clockwise will alter the plate position when unpowered and leave the powered plate position unaffected.
- The extent of outer ring rotation will directly correlate to the change in plate position angle when powered or unpowered.
 - More **Counter-Clockwise** Outer Ring rotation will be less open when powered and fully closed when unpowered.
 - More **Clockwise** Outer Ring rotation will be less closed when unpowered and fully open when powered.

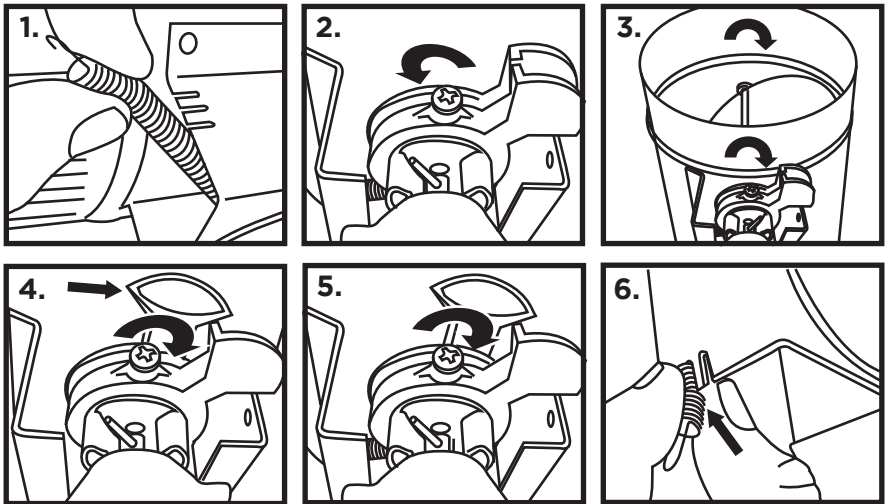
To adjust for the powered open position (Normally closed damper):

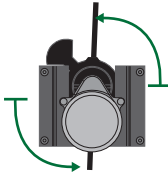
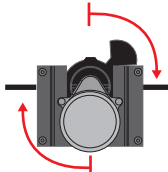
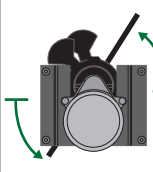
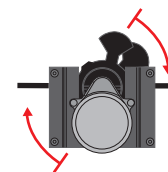
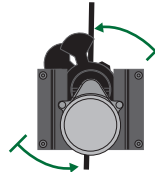
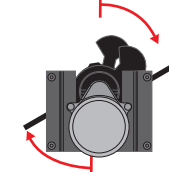
1. Detach the spring from the motor bracket. **Make note of the excess spring length below the bracket. This is important in setting the proper spring return force.**
2. Loosen the set screw in the Outer Ring and remove.
3. Move the screw to the boss on the right side of the Outer Arm, but do not tighten fully.
4. Rotate the plate to the intended open position using the Inner Arm.
5. While maintaining the intended plate position, rotate the Outer Arm counter-clockwise until it contacts the motor bracket.
6. Make sure that the Outer Ring is fully seated on the Inner Ring and tighten the set screw until it is 'seated'. **!Do not overtighten the set screw. Never use a powered drill driver!**
7. Reattach the spring to the motor bracket. Ensure that the spring has the correct excess length as noted above.



ADJUSTABLE DAMPER PLATE POSITION (CONT)

- Unpowered spring-return position adjustment:
- 1. Detach the spring from the motor bracket. **Make note of the excess spring length below the bracket. This is important in setting the proper spring return force.**
 - 2. Loosen the set screw in the Outer Ring until the Outer Ring can freely rotate independent of the Inner Ring.
 - 3. Rotate the plate to the intended closed position using the Inner Arm.
 - 4. While maintaining the intended plate position, rotate the Outer Arm clockwise until it contacts the motor bracket.
 - 5. Make sure that the Outer Ring is fully seated on the Inner Ring and tighten the set screw until it is 'seated'. **!Do not overtighten the set screw. Never use a powered drill driver!**
 - 6. Reattach the spring to the motor bracket. Ensure that the spring has the correct excess length as noted above.



	Powered	Unpowered (Spring Return)		Powered	Unpowered (Spring Return)		Powered	Unpowered (Spring Return)
FACTORY SETTING			OUTER RING CCW			OUTER RING CW		
	Full Open	Full Close		Partial Open	Full Close		Full Open	Partial Close
	Rotating the outer ring counter clockwise will reduce the open position to less than full open when powered. It will not affect the un-powered close position.							
	Rotating the outer ring clockwise will reduce the closed position to less than full closed on un-powered (spring-return). It will not affect the open position on powered.							

THREE YEAR LIMITED WARRANTY

Subject to the following limitations, Suncourt® (manufacturer) warrants that the ZoneMaster™ Motorized Adjustable Damper will, for 3 (three) years from date of original retail purchase, remain free from appearance of defects in workmanship or materials. This warranty is subject to the following limitations: (a) manufacturer's liability is limited to the replacement or repair of the unit, as decided by the manufacturer; (b) a defective unit must be returned, prepaid, with proof of purchase, well packaged to avoid damage in transit; and (c) this warranty does not apply to defects resulting from the alteration, abuse, accidental damage, unauthorized repair, or misuse of the unit. This warranty is given in lieu of all other warranties, guarantees, and conditions on manufacturer's part, and the manufacturer shall have no tortious or other liability in respect to this ZoneMaster™ Motorized Adjustable Damper. Ship unit to Suncourt® only after obtaining a Return Goods Authorization (RGA) number. Returns without this RGA number will not be accepted. Actual product appearance may differ from illustrations. Suncourt® reserves the right to modify any or all of its products' features, designs, components and specifications without notice.