



Natural Ventilation Chimney

Installation Manual

PNEG-967

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1. SAFETY

1.1 General Safety Statements

Thank you for choosing a Natural Ventilation Chimney. It is designed to give excellent performance and service for many years. AP's principle concern is your safety and the safety of others associated with swine equipment. We want to keep you as a customer. This manual is to help you understand safe operating procedures and some problems which may be encountered by the operator and other personnel.

As owner and/or operator, it is your responsibility to know what requirements, hazards, and precautions exist and inform all personnel associated with the equipment or in the area. Safety precautions may be required from the personnel. Avoid any alterations to the equipment. Such alterations may produce a very dangerous situation, where serious injury may occur.

1.2 Users Manual

This manual contains information and instructions essential to the safe installation and use of the Natural Ventilation Chimney. The manual should be read thoroughly **before** attempting any installation or use of the Chimney. This manual should be kept with the Natural Chimney or in a location where it can be readily accessed. Failure to read this manual and its safety instructions is a misuse of the equipment.

1.3 Correct Use of Your Natural Ventilation Chimney

In the installation, maintenance and use of the Natural Chimney, only genuine AP parts are to be used. Use of other non-genuine parts is a misuse of the system and may lead to dangerous situations risking the safety and health of you and others.

1.4 Safety in Handling the Natural Ventilation Chimney

Some components of the Natural Ventilation Chimney require manual handling during installation. To prevent injury, seek assistance where necessary.

Some items may have sharp, rough or abrasive edges. To prevent injury, use suitable hand protection when manually handling the components of this system.

1.5 Safety in Maintenance

While the Natural Ventilatin Chimney is designed to keep maintenance to a minimum, some repairs will be necessary in the course of the life of the machine. Do not attempt any repairs on the machine unless you are competent to do so. Never attempt any work on the Chimney without first isolating it from the linear actuator.

1.6 Installation Notes

To ensure your safety during installation, make all electrical connections to the linear actuator as the final step of installation. This should be done only when the chimney has been fully installed. Electrical connection should be carried out only by a qualified electrical installer and should be to the relevant rules and directives in force in your region

For Guidance Or Assistance On Any Issues Relating To The Safe Use Of Your Natural Ventilation Chimney,

Contact

The GSI Group at (1) 217 226 4449, Or
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2. ASSEMBLY

2.1 Assemble Chamber w/Damper

1. While lining up the pivot knobs on the damper with the holes in the main side assemblies, slide laminated foam sheets into the slots on the main side assemblies.
2. Drill 1/4 inch hole through foam using the top, middle and bottom hole in each of the four aluminum angles.
3. Bolt chamber together. In the top holes use (4) 1/4 x 1-1/2 inch carriage bolts, (4) nylon washers and (4) 1/4 inch lock nuts (washers and nuts go on the inside). In the middle holes use (4) 1/4 x 1-1/2 inch carriage bolts, (4) nylon washers, (4) aluminum stops and (4) 1/4 inch lock nuts. The aluminum stops stop the damper in its closed position. The direction they are installed is not important as they can be rotated later.

Note: Bolts in the bottom of the chamber will be put in later with other components.

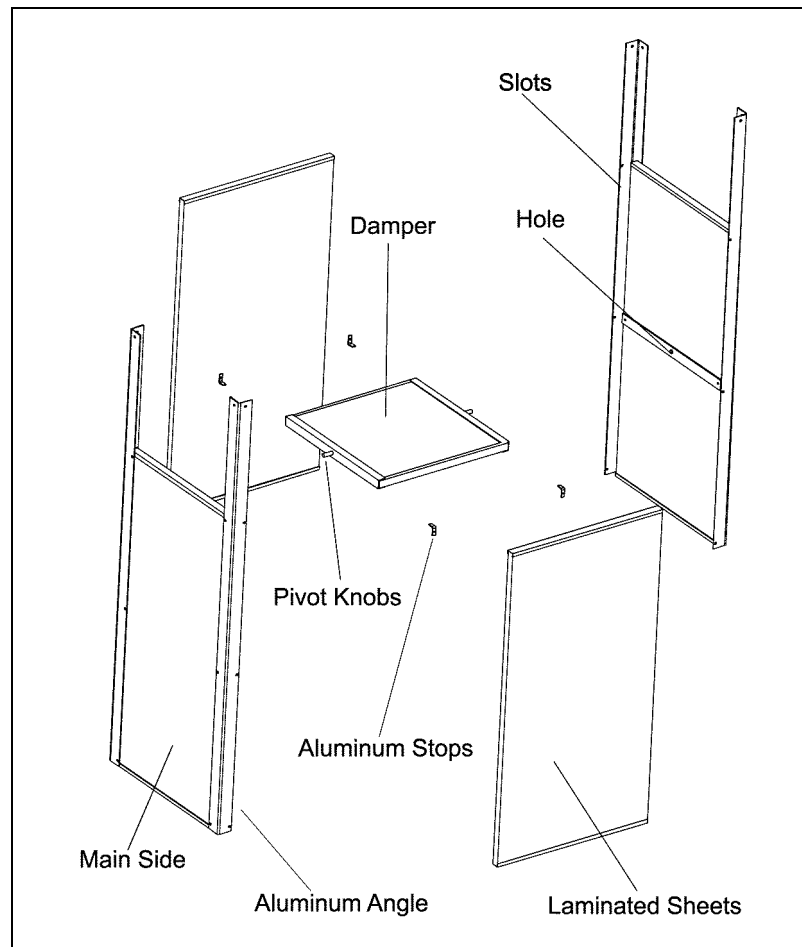


Figure 2A

2.2 Attach Pulley Bracket Assembly

1. Bolt pulley bracket assembly to the bottom of the chamber on one of the two sides that does not have the pivot of the damper in it. Use (2) 1/4 x 1-3/4 inch carriage bolts and 1/4 inch lock nuts.

Note: *If an extension is going to be added to the main chamber, two extension adapters need to be connected to the main outside angles using the same bolts used to bolt on the pulley bracket assembly.*

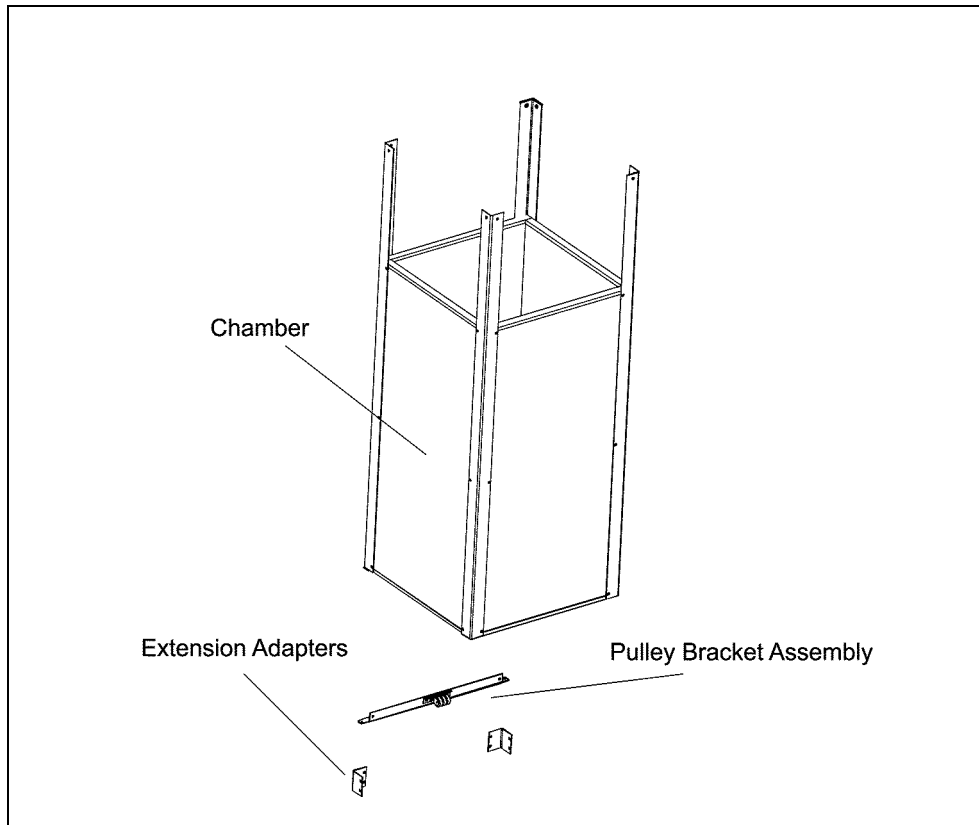


Figure 2B

Assembly

2.3 Attach Cables to the Damper

1. Connect the two cable assemblies to the damper by putting each eyebolt through one of the holes in the damper with a nylon washer on each side of the damper and securing with a locknut on the other side. It doesn't matter which assembly goes in which hole.
2. Slip each of the loose ends of the cable assemblies through one of the outside pulleys on the pulley bracket assembly.

Note: *The holes in the damper are offset to align better with the outside pulleys. Make sure each cable assembly uses the pulley on its side.*

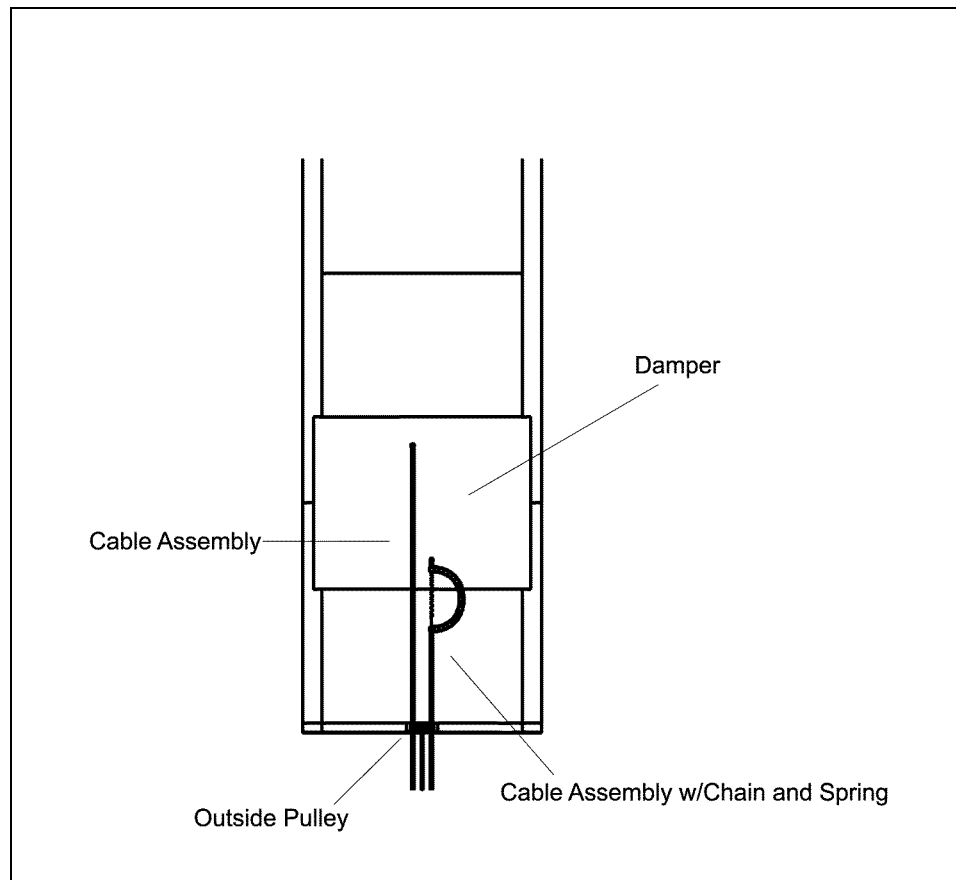


Figure 2C

2.4 Attach Bird Screen

1. With an aluminum plate on each side of both legs of the bird screen, bolt the assembly (using 1/4 x 1-3/4 inch carriage bolts and 1/4 inch lock nuts) to the same two sides as the pivots for the damper.

Note: *If an extension is going to be added to the main chamber, two extension adapters need to be connected to the main outside angles using the same bolts used to bolt on the bird screen.*

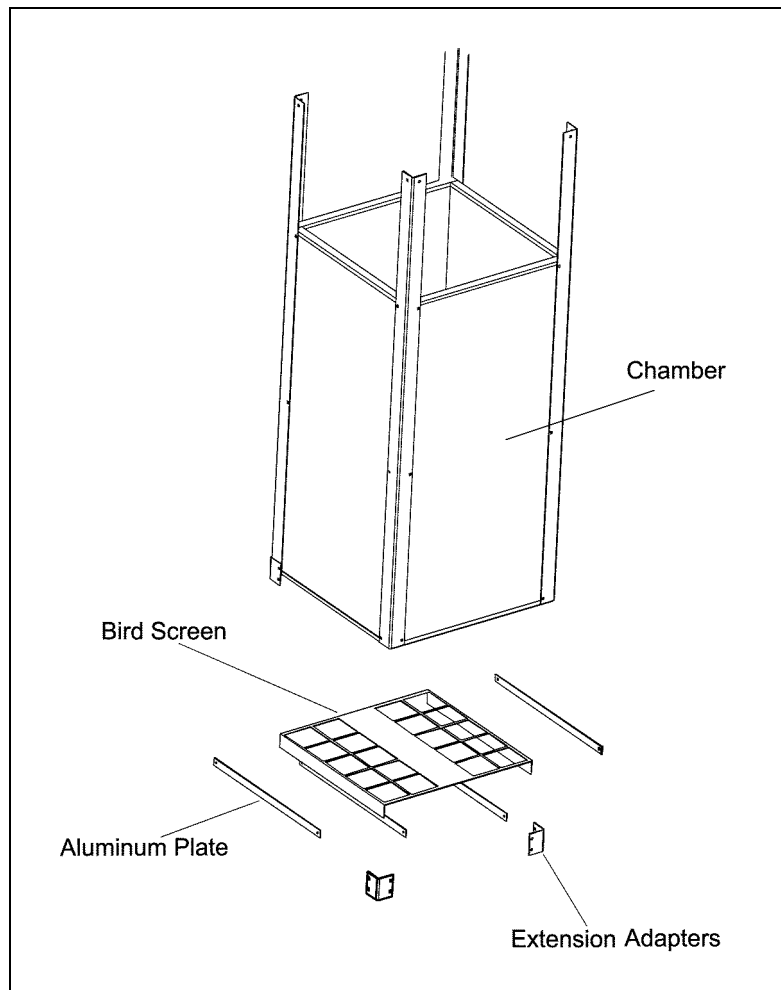


Figure 2D

Assembly

2.5 Assemble Extension (If Used)

1. Slide laminated foam sheets into the slots on the main side assemblies.
2. Drill 1/4 inch hole through foam using the top, middle and bottom hole in each of the four aluminum angles.
3. Bolt extension together using (4) 1/4 x 1-1/2 inch carriage bolts, (4) nylon washers and (4) 1/4 inch lock nuts in the bottom and middle holes.

Note: *Don't put the top bolts in until the extension is attached to the extension adapters on the main chamber.*

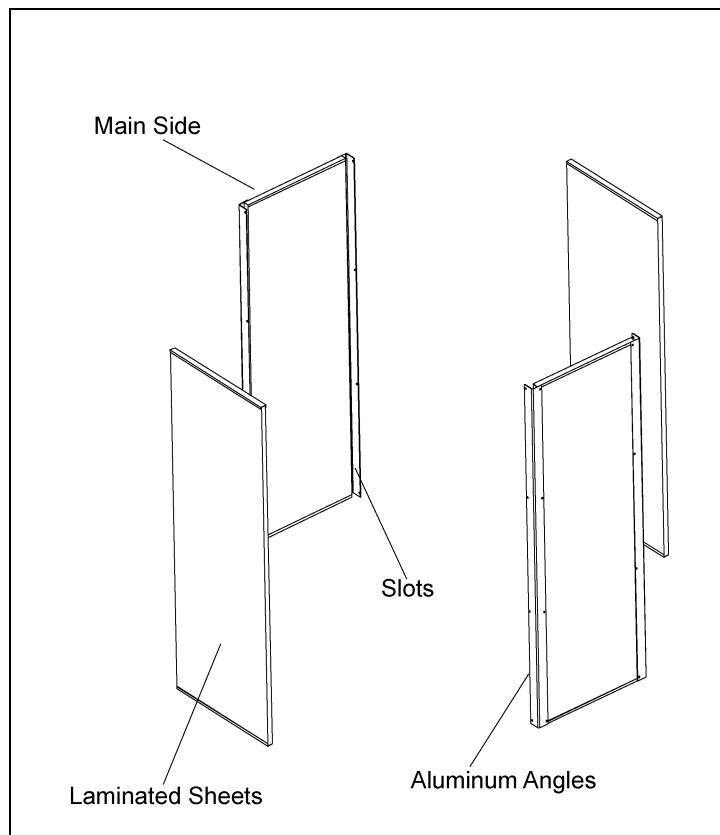


Figure 2E

2.6 Attach Extension to Main Chamber

1. Bolt extension to the extension adapters on the main chamber using (8) 1/4 x 1-1/2 inch carriage bolts, (8) nylon washers and (8) 1/4 inch lock nuts.

Note: *Four of the bolts, washers and lock nuts are on the main sides of the extension and need to be taken off first.*

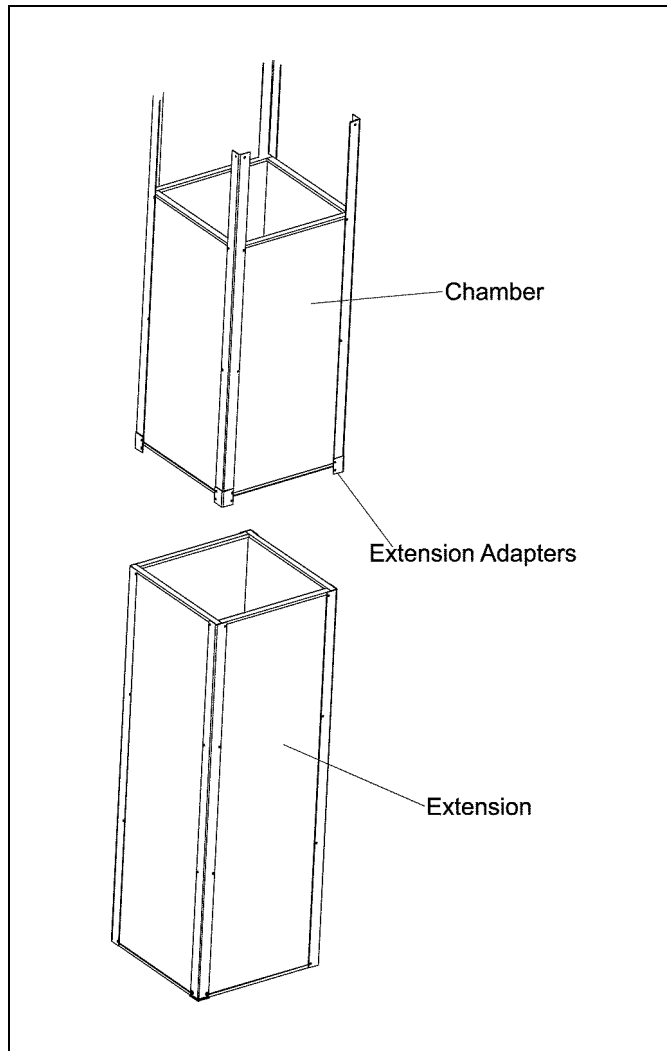


Figure 2F

Assembly

2.7 Attach Flat Ceiling Pulley Bracket (If Used)

1. Bolt the flat ceiling pulley bracket assembly to the bottom of the extension on the same side as the pulley bracket assembly on the main chamber. Use the 1/4 x 1-1/2 inch carriage bolts and 1/4 inch lock nuts already in the extension.

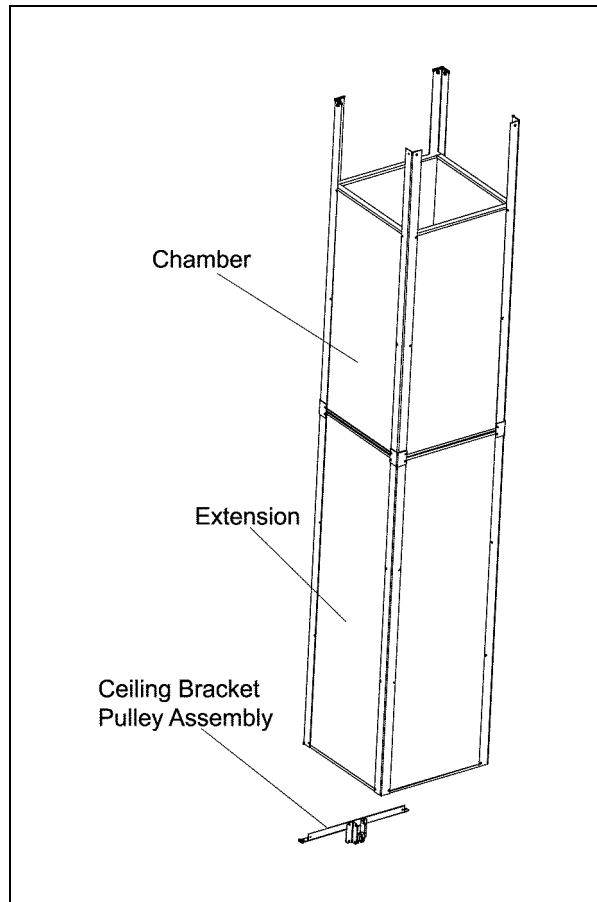


Figure 2G

2.8 Attach Closure Door (If Used)

1. Bolt the closure door to the bottom of the chamber or extension on the opposite side as the pulley bracket assembly using (2) 1/4 x 1-1/2 inch carriage bolts and 1/4 inch lock nuts.
2. Thread the cord through the middle pulley on the pulley bracket assembly.
3. The long cords can be tied off to hold the door in either the closed or open position.

Note: *This pivoting closure door can't be used in a flat ceiling application.*

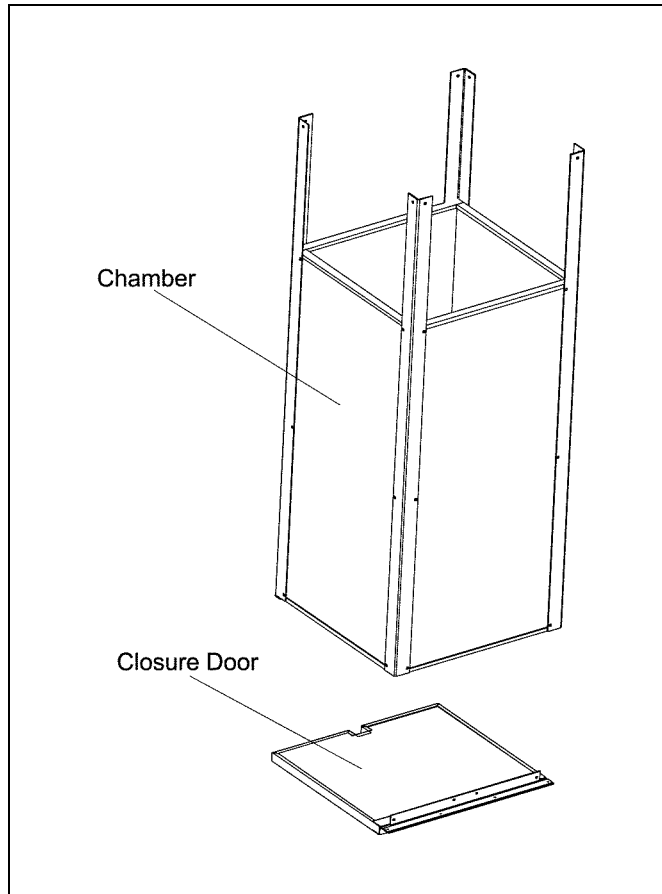


Figure 2H

Assembly

2.9 Install Chimney in Roof

1. Construct a framed opening through the roof that is 25.75 inches by 25.75 inches.
2. Hoist the chamber up through the opening until the top of the chamber extends above the roof 18 inches.
3. Connect the chamber to the framed opening using lag bolts that go through the aluminum angles at the corners of the chamber. Of course, holes through the angle and foam must be drilled first for the lag bolts.

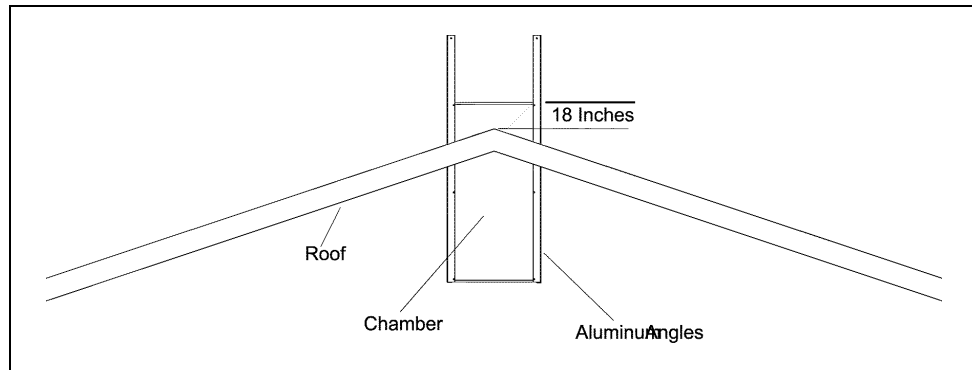


Figure 2I

2.10 Attach Cap to Chamber

1. If necessary, drill 3/8" holes in cap in eight locations where aluminum angle will be attached. Cap is dimpled in the locations where drilling is necessary.
2. Bolt the cap to the top of the outside aluminum angles on the chamber using (8) 5/16 x 1 inch bolts, (8) 5/16 whiz nuts and (8) fender washers. The washers and the heads of the bolts go on the outside of the cap.

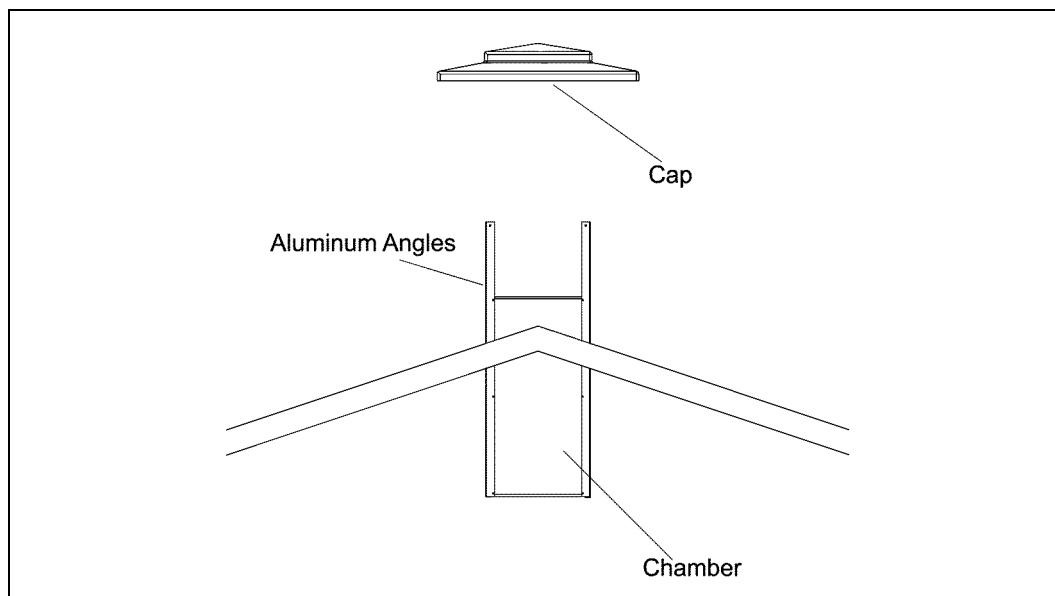


Figure 2J

2.11 Attach Damper Cables to Master Cable

1. After installing the linear actuator and master cable, put the linear actuator in the closed position.
2. If building doesn't have a ceiling, attach 1-7/8 inch pulleys to a horizontal truss member **directly below** the pulley assembly in the chamber using eyescrews provided. If the truss has a vertical member directly in the center, the horizontal truss member can be connected to the bottom of the truss with a hole in the bottom cord of the truss for the master cable/rod.
3. If the building has a ceiling, connect the ceiling bracket pulley assembly to the bottom of the chamber.
4. Pull on the cable assembly with the chain and spring until the damper hits the stops in the closed position. The stops may need to be rotated to be in the proper position for this to happen.
5. Connect the cable assembly with the chain and spring to the master cable in the direction of the linear actuator using a cable clamp after running the cable through one of the pulleys or through one of the pulleys in the ceiling bracket pulley assembly.
6. Connect the other cable assembly to the master cable in the opposite direction in the same way.

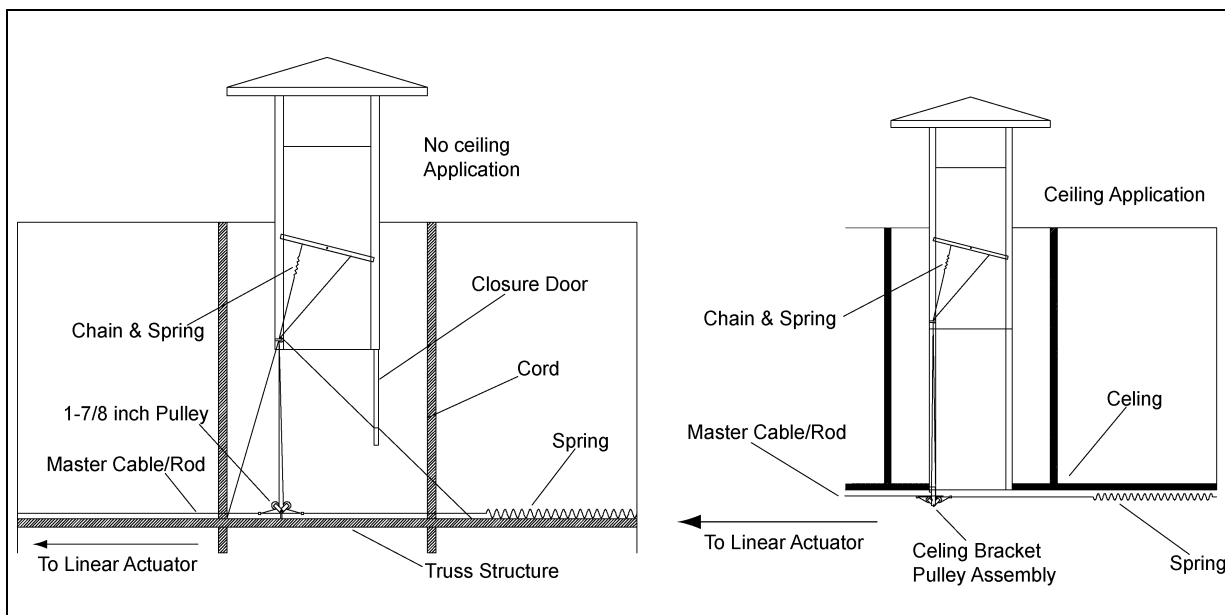
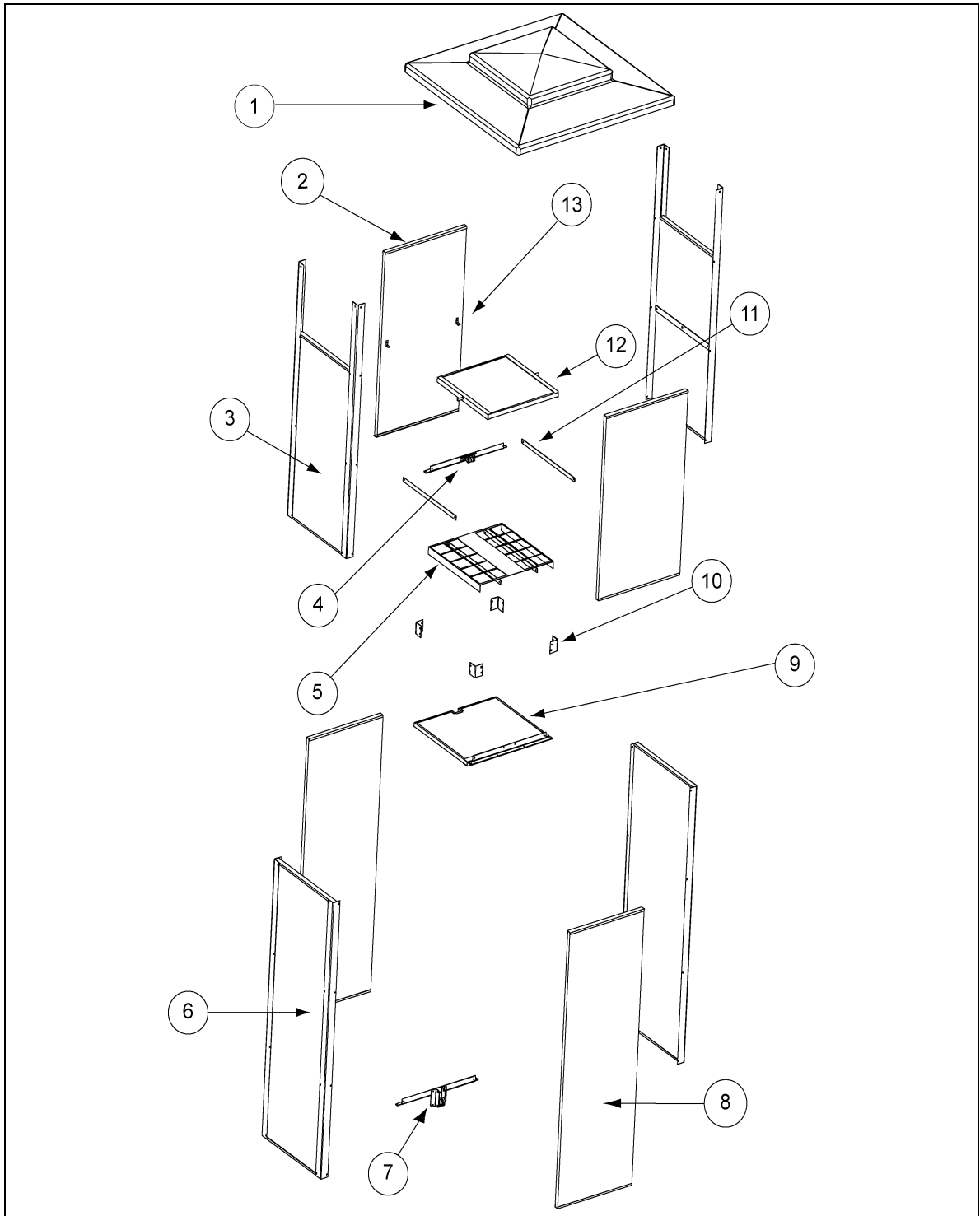


Figure 2K

3. PART LIST



Ref #	Part	Description
1	AP-2903	Cap with Holes
2	AP-2900	Small Side w/Channel and Holes
3		Main Side Assembly
4	AP-2904	Pulley Bracket Assembly
5	AP-2879	Bird Screen
6		Main Side 4' Extension
		Main Side 6' Extension
7	AP-2943	Ceiling Mount Pulley Assembly
8	AP-2900	Small Side 4' Extension
8	AP-2922	Small Side 6' Extension
9	AP-2876	Closure Door
10	AP-2889	Extension Adapter
11	AP-2837	Inside Bar
12	AP-2906	Damper Assembly
13	AP-2871	Stop for Damper

NOTES

4. WARRANTY

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This equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installations are made.



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