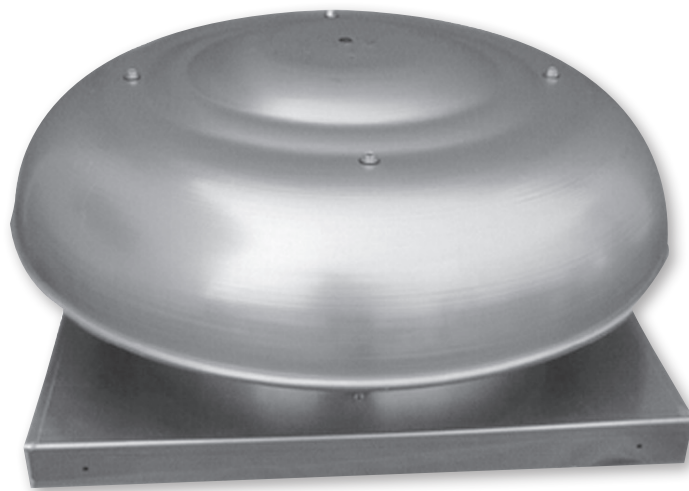




**SV
Weather Caps**

OPERATION & MAINTENANCE

Revised: 08/24/15



IMPORTANT! READ BEFORE PROCEEDING!

The information contained herein is, to the best of our knowledge, accurate and applicable for proper operation and installation of the specified equipment at the time this document entered service. Before proceeding, it is recommended that you check for a more current version of this Installation Operation Manual (IOM) on our website at www.johnsoncontrols.com.

Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

INTRODUCTION & INSTALLATION

Weather Caps are simple gravity vents used to either exhaust (relieve) air from an area or to allow fresh air to enter (intake or supply) an area. Except for the option of dampers, there are no moving parts. Two styles of Weather Caps are provided:

1. SVF (Weather Cap Flat) has an extra wide, flat base for installation under shingles. These models do not require curbs.
2. SVC (Weather Cap Curb) has a lipped curb cap (base) found on virtually all roof top ventilators. These models require a curb.



Units intended for intake applications have a recommended maximum capacity to minimize the possibility of water entry. (See chart provided on page 5.) This is common to all gravity intake type vents. The specific site installation can affect whether water entry will occur above or below the recommended air flows. If installed in

a windy area, there is a greater risk; if installed in a protected area, there is less risk. It is suggested that the area below the Weather Cap be reviewed to evaluate the impact of possible water entry.

RECEIVING AND HANDLING

YORK® by Johnson Controls fans are carefully inspected before leaving the factory. When the unit is received, inspect the carton for any signs of tampering. Inspect the unit for any damage that may have occurred during transit and check for loose, missing or damaged parts. Mishandled units can void the warranty provisions. If units are damaged in transit, it is the responsibility of the receiver to make all claims against the carrier. YORK® by Johnson Controls is not responsible for damages incurred during shipment.

Avoid severe jarring and/or dropping. Handle units with care to prevent damage to components or finishes. If the unit is scratched due to mishandling, the protective coating may be damaged. Incorrect lifting may damage the fan and void the warranty.

STORAGE

Long-term storage requires special attention. Store units on a level, solid surface, preferably indoors. If outside storage is necessary, protect the units against moisture and dirt by encasing the cartons in plastic or in some similar weatherproof material.

UNPACKING

Place the carton in an upright position and remove the staples or use a sharp (knife edge) tool to carefully cut or scribe the sealing tape on both sides at the top of the carton. Open carton flaps. Remove any cardboard and wooden filler pieces, as well as loose components or accessories shipped with the unit.

Carefully remove the unit from the carton. Inspect the unit for any damage that may have occurred during transit and check for loose, missing or damaged parts.

INSTALLATION

When the unit is installed on a sloped roof, suitable footing and/or other safety devices must be provided around the Weather Cap for normal maintenance. Depending upon the site conditions, the hinging of the Weather Cap off the curb during maintenance should be either parallel to the roof ridge or toward the roof ridge, but NOT away from the ridge.

SVF Models

Dampers are not recommended for SVF models. SVF roof openings normally match throat diameters. Assembly to a shingled roof (Note the illustrations on page 2):

1. From the underside of the roof select the Weather Cap location to avoid rafters or other obstructions. Drill a pilot hole through the roof at the exact center of the selected location.
2. From the topside of the roof, center the Weather Cap over the drilled pilot hole. Place the fan base slightly up or down slope to achieve a partial overlap of shingles onto fan base. Trace the outline of the Weather Cap base onto the shingle surface with crayon or chalk, and in the exact center of this outline, draw in the roof opening to be cut. Using an appropriate tool, cut the Weather Cap opening outline through the roof. Remove debris and any roofing nails that will interfere with positioning the Weather Cap.
3. Slide the Weather Cap under the shingles, centering the Weather Cap over the opening in the roof so the shingles overlap the Weather Cap base flange on the upslope. The Weather Cap base should overlap the shingles on the downslope.
4. Apply roofing cement between shingles and flange of the Weather Cap base if required. Drive galvanized or aluminum roofing nails through the shingles and the Weather Cap base flange into the roofing deck to secure the unit. Apply roofing cement to the exposed joint.

INSTALLATION (CONTINUED), MAINTENANCE & GENERAL SAFETY INFORMATION

Assembly to a flat roof:

1. From the underside of the roof select the Weather Cap location to avoid rafters or other obstructions. Drill a pilot hole through the roof at the center of the selected location.
2. Using an appropriate tool with the pilot hole as the center point cut the Weather Cap roof opening through the roof.
3. Clear all debris and gravel from the vicinity of the hole and apply a .125" wide bed of roofing mastic on the roofing surface around the Weather Cap opening.
4. Place the Weather Cap on the roof centered directly over the opening and fasten securely to the roof with fasteners compatible with the roofing system, i.e., nails, sheet metal screws, etc.
5. Reapply roofing mastic, strip flashing and a finish coat of roofing cement around the base of the Weather Cap. Replace gravel.

SVC Models

When required, install dampers prior to mounting the unit on the curb or frame. Dampers are sized to fit within the roof opening. The recommended clearances for the roof openings for installing the dampers is 1/4" (sizes 06-20) or 2" (sizes 24-48). Installation of motorized dampers requires 12" high curbs.

Secure using standard hardware. If the damper is installed on the inside of the curb, a piece of wood may be required as a "spacer". Do not twist or distort the damper frame. The damper frame must be reasonably level on all sides. Check for free operation. If dampers are the motor operated type, ascertain that the proper voltage is impressed on the motor terminals.

Anchoring and Installing to Curb

Whenever possible, anchor the cap fastening through the vertical portion of the mounting flange. The type, size and number of fasteners depends upon the unit size and curb construction. If code or specification prescribes fastening through the top (horizontal portion) of the mounting flange, use neoprene or lead washers under head of each fastener.

Guy down large units installed in areas subject to high winds or unusual field conditions. If the installer removes any Weather Cap parts to facilitate the installation or electrical connection, reassemble all parts by replacing all spacers, washers, nuts, bolts, fasteners and components exactly as they were found prior to removal. Draw all fasteners tight and secure.

MAINTENANCE

It is suggested that Weather Caps be inspected annually or after severe weather to confirm that the installation remains undamaged. Dampers, if installed, should be inspected to confirm the blades remain free. If damper actuators are installed, electrical connections should be inspected to confirm they remain free of corrosion, etc.

GENERAL SAFETY INFORMATION

While the only electrical item which may be installed with a Weather Cap is a damper actuator motor, the following guidelines still apply.

1. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).
2. Motor must be securely and adequately grounded. This can be accomplished by wiring with a grounded, metal-clad raceway system, by using a separate ground wire connected to the bare metal of the motor frame or other suitable means.
3. Always disconnect power source before working on or near a motor or its connected load. If the power disconnect point is out-of-sight, lock out power source and tag to prevent unexpected turn on while servicing.
4. Be careful when touching the exterior of an operating motor - it may be hot enough to be painful or cause injury.
5. Protect the power cable from coming in contact with sharp objects.
6. Do not kink power cable and never allow the cable to come in contact with oil, grease, hot surfaces or chemicals.
7. Make certain that the power source conforms to the requirements of your equipment.
8. Wiping or cleaning rags and other flammable waste materials must be placed in a tightly closed metal container and disposed of later in the proper fashion.
9. When cleaning electrical or electronic equipment, always use an approved cleaning agent such as dry cleaning solvent.

ILLUSTRATIONS

SVC INSTALLATION

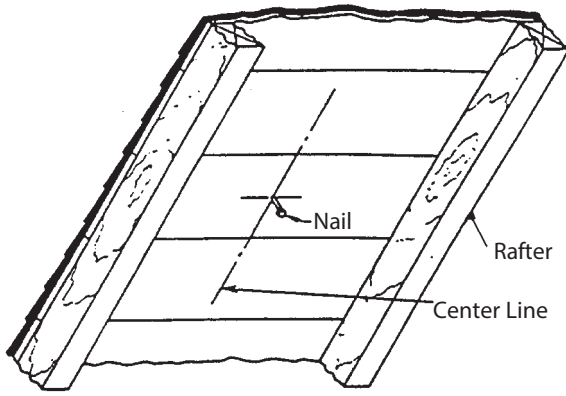


FIGURE 1:
Drive a long nail or drill a pilot hole thru the underside of the roof to center the ventilator between the rafters.

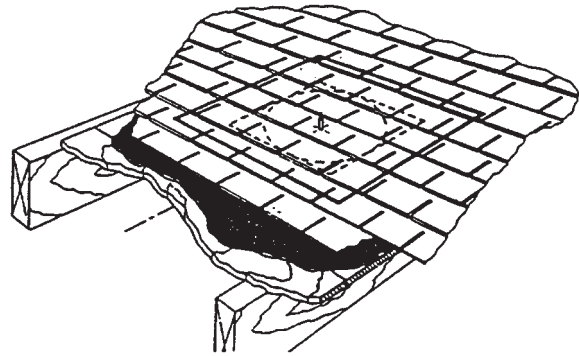


FIGURE 2:
The nail is the center point; trace the outside of the fan base on to the roof shingles with chalk.

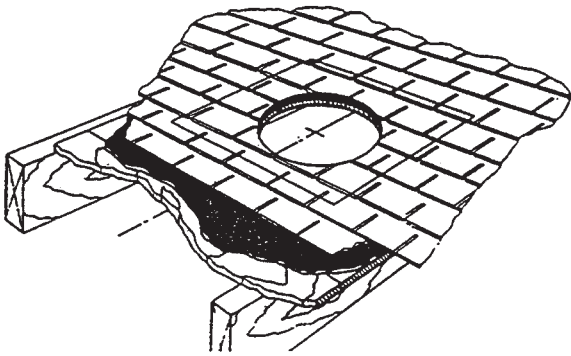


FIGURE 3:
Cut the fan inlet hole thru the roof utilizing the nail or the pilot hole as the center point - use an appropriate cutting tool.

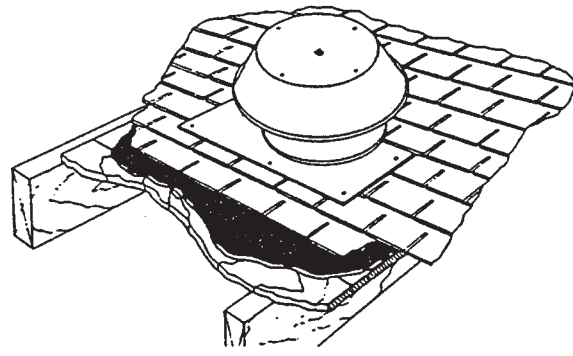


FIGURE 4:
Slide ventilator under the shingles centering the fan over the hole; shingles should overlap the ventilator base flange on the upslope and the ventilator base should overlap the shingles on the downslope.

ILLUSTRATIONS

TABLE 1: FRESH AIR INTAKE

Model	Throat Area Sq Feet	Intake Area Sq Feet	Max Intake CFM* at 500 FPM
SVF/SVC06	0.3	0.5	250
SVF/SVC08	0.4	1.4	700
SVF/SVC10	0.7	1.7	850
SVF/SVC12	0.9	2.5	1,250
SVF/SVC14	1.2	3.0	1,500
SVF/SVC16	1.6	3.3	1,650
SVF/SVC18	2.0	3.6	1,800
SVF/SVC20	2.4	5.1	2,550
SVC24	3.4	7.6	3,800
SVC30	5.2	9.5	4,750
SVC36	7.5	15.6	7,800
SVC42	10.1	14.4	7,200
SVC48	13.1	15.2	7,600

Note: * Based on hood entrance velocity.

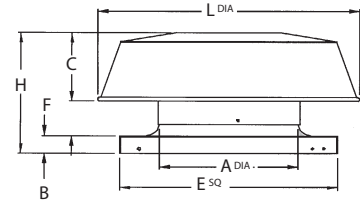


FIGURE 5: SVC

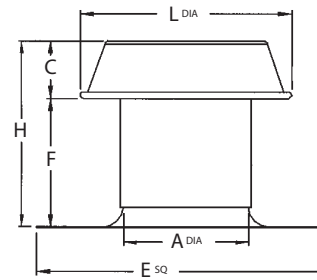


FIGURE 6: SVF

Note: Drawings are for illustrative purposes only.

TABLE 2: DIMENSIONS

Model	A (Throat Dia.)	B	C	E ^{SQ}	F	H	L - Dia.	* Damper ^{SQ}
SVF06	7	N/A	3 1/2	16 7/8	8	11 1/2	12	NA
SVF08	9	N/A	5 1/2	21 1/4	8	13 1/2	18 1/2	NA
SVF10	11	N/A	5 1/2	21 1/4	10	15 1/2	21	NA
SVF12	13	N/A	7	24	10	17	25	NA
SVF14	15	N/A	7	28	10	17	28	NA
SVF16	17	N/A	10	28	12	22	30	NA
SVF18	19	N/A	10	32	12	22	32	NA
SVF20	21	N/A	10 1/2	32	12	22 1/2	37	NA
SVC06	7	1	3 1/2	15	4	8 1/2	12	8 3/4
SVC08	9	1 1/2	5 1/2	18 1/2	4	11	18 1/2	11 1/4
SVC10	11	1 1/2	5 1/2	18 1/2	4	11	21	11 1/4
SVC12	13	2	7	20 1/2	4	13	25	15 3/4
SVC14	15	2	7	24 3/4	4	13	28	15 3/4
SVC16	17	2	10	24 3/4	4 1/2	16 1/2	30	15 3/4
SVC18	19	2	10	28 1/2	4 1/2	16 1/2	32	19 3/4
SVC20	21	2	10 1/2	28 1/2	5 1/2	18	37	19 3/4
SVC24	25	2	11	33 1/2	5 1/2	18 1/2	45	24 3/4
SVC30	31	2	11	36 1/2	7	20	52	27 3/4
SVC36	37	2	15	44 1/2	7	24	65	35 1/2
SVC42	43	2	16	52 1/2	7	25	67	43 1/2
SVC48	49	2	16	59	7	25	72	49 1/2

Note: Dimensions are in inches.



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