Louver Installation For Classroom Self-Contained Unit Ventilators
Models AZQ, AZR, AZU and AEQ
Safety Information

Recognize safety information. When you see a safety symbol on the unit or in these instructions, be alert to the potential for personal injury. Understand the meanings of the words DANGER, WARNING, and CAUTION.

**DANGER** identifies the most serious hazards that will result in death or severe personal injury.

<table>
<thead>
<tr>
<th>DANGER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disconnect all electrical power before servicing unit to avoid injury or death due to electrical shock.</td>
</tr>
</tbody>
</table>

**WARNING** means the hazards can result in death or severe personal injury.

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous Voltage! Disconnect all electric power including remote disconnects before servicing. Failure to disconnect power before servicing can cause severe personal injury or death.</td>
</tr>
</tbody>
</table>

**CAUTION** identifies unsafe practices that can result in personal injury or product and property damage.

<table>
<thead>
<tr>
<th>CAUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharp edges are a potential injury hazard. Avoid contact with them.</td>
</tr>
</tbody>
</table>

Improper installation, adjustment, service, maintenance, or use can cause conditions which can result in personal injury or property damage. This product must be installed only by personnel with the training, experience, skills, and applicable licensing that makes him/her "a qualified professional HVACR installer."

Follow all applicable safety codes. Wear safety glasses and work gloves. Consult applicable local building codes and National Electrical Codes (NEC) for special requirements.

<table>
<thead>
<tr>
<th>Table of Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Information ............................................. 2</td>
</tr>
<tr>
<td>Receiving, Handling, and Storage .......................... 3</td>
</tr>
<tr>
<td>Transportation Damage ..................................... 3</td>
</tr>
<tr>
<td>Storage .......................................................... 3</td>
</tr>
<tr>
<td>Lifting, Moving, and Stacking .............................. 3</td>
</tr>
<tr>
<td>Step 1 – Wall Opening Procedure .......................... 4</td>
</tr>
<tr>
<td>Step 1– Wall Opening Procedure ......................... 4</td>
</tr>
<tr>
<td>Cutting Exterior Wall Opening ........................... 5</td>
</tr>
<tr>
<td>Cutting Interior Wall Opening ............................ 5</td>
</tr>
<tr>
<td>Step 2 – Installing Louver ................................ 7</td>
</tr>
<tr>
<td>Louver Details .................................................. 7</td>
</tr>
<tr>
<td>Louver Installation Considerations ...................... 8</td>
</tr>
<tr>
<td>Typical Installation Methods .............................. 8</td>
</tr>
<tr>
<td>Top Plan Views – No Recess (Full Projection) .......... 10</td>
</tr>
<tr>
<td>Top Plan Views – Partial or Full Recess ............... 11</td>
</tr>
<tr>
<td>Louvers Without Flanges .................................... 12</td>
</tr>
<tr>
<td>Louvers With Flange .......................................... 14</td>
</tr>
</tbody>
</table>
Transportation Damage

Items supplied by Daikin may include louvers, wall sleeve, Model AZ/AE unit and accessories. Each item has been carefully inspected and securely packed in a Daikin-approved carton at the factory. The carrier checked the items when the shipment was loaded and assumed responsibility for damage or loss upon acceptance of the shipment.

The purchaser is responsible for filing the necessary claims with the carrier. Check each carton upon arrival for external damage or shortages. Note any damage or shortage and any damage on all copies of the freight bill. If damage or shortages are found, the consignee should:

1) Note any visible damage to the shipment or container on all copies of the delivery receipt and have it signed by the carrier’s agent. Failure to adequately describe such external evidence of a loss or damage may result in the carrier refusing to honor a claim.

2) Notify carrier promptly with a written request for an inspection.

3) In case of concealed loss or damage, or damage and/or loss that does not become apparent until the product has been unpacked, notify the carrier as soon as possible, preferably within five (5) days and no later than 15 days.

4) File the claim within the six (6) month statute of limitations of the carrier with the following supporting documents:
   a. Original Bill of Lading, certified copy, or indemnity bond.
   b. Original paid freight bill or indemnity in lieu thereof.
   c. Original invoice, or a certified copy thereof, showing trade and other discounts or reductions.
   d. Copy of the inspection report issued by carrier’s representative at the time damage is reported to the carrier.

The carrier is responsible for making prompt inspection of damage and for providing a thorough investigation of each claim. Daikin will not accept claims for transportation damage.

To help avoid concealed damage:

1) Lay the louvers on their side for shipping, handling and storage. Do not stack louver more than 10 high (Figure 1).

**Figure 1: Stack louvers maximum 10 high as shown**

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**NOTICE**

Daikin louvers are carefully packed and thoroughly inspected before leaving the factory. The carrier assumed responsibility for damage or loss upon acceptance of the shipment. Claims for loss or damage sustained in transit must be made upon the carrier as follows:

**VISIBLE LOSS OR DAMAGE**

Any external evidence of loss or damage must be noted on the freight bill or carrier’s receipt and signed by the carrier’s agent. Failure to adequately describe such external evidence of loss or damage may result in the carrier’s refusing to honor a damage claim. The form required to file a claim will be supplied by the carrier.

**CONCEALED LOSS OR DAMAGE**

For concealed loss or damage (damage and/or loss that does not become apparent until the product has been unpacked), make a written request for inspection by the carrier’s agent within fifteen (15) days of the delivery date. File a claim with the carrier since such damage is the carrier’s responsibility.

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**Storage**

If equipment is stored for any length of time before installation, it should remain in its shipping packaging in a clean, dry, climate controlled area.

**Lifting, Moving, and Stacking**

A forklift with 72" tines, or other lifting device is needed to move these products (Figure 2).

Move the louvers to the location where they are to be installed before uncrating. Check tagging on carton to confirm that the item is correct for the location.

Forklift-type vehicles may be used to unload and move the cartons. When using a forklift, it is important that the products remain banded to its skid and be lifted only from the end designated on the carton. Move only one pallet at a time. Do not drop.

**CAUTION**

Use 72" length forklift tines. Short tines will damage the unit bottom. Improper handling can damage internal components.

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**Figure 2: Forklift lifting requirements**

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Step 1– Wall Opening Procedure

An opening in the outside wall is required to accommodate the louver. The wall opening must be of sufficient size to allow proper fit of the louver and will depend on the type of wall. National and local codes for building construction must be followed and may supersede the suggested methods in this manual.

**NOTICE**

Wall and floor must be at 90º to one another. If not, the floor must be leveled (90º) to wall.

Locating Wall Opening (Existing Building)

The first step in the installation is to carefully locate the area of interior and exterior wall to be removed. Determine the appropriate location on the interior wall where the unit ventilator is to be installed. Using the rear edge of the wall sleeve as a guide, mark the interior wall surface for the rough-in wall sleeve opening 1/4" larger at each end than the wall sleeve recess dimension, and 1/4" higher (see Table 2 on page 6). In all cases, the bottom of the outdoor louver opening must be at the same height as the floor line.

For non-recessed installations, (full projection), mark the position of the wall sleeve on the interior wall surface with the wall mount flanges removed to help determine the location of the outdoor wall surface rough opening.

Transfer the interior wall opening dimensions to the exterior wall surface, being certain the opening is 1/4" larger at each end than the wall sleeve recess dimension, and 1/4" higher.

Figure 3: No recess (full projection), thin wall construction

Figure 4: Full recess, thick wall construction

Figure 5: Partial recess, frame and brick construction

**CAUTION**

Unit ventilators use fresh air to condition the interior space. Obstructions near the louver wall opening must be removed to allow free flow of entering and discharge air. Building and vehicle exhaust, etc., near the louver intake must be identified and eliminated.
Cutting Exterior Wall Opening
The wall opening must be of sufficient size to allow proper, yet snug, fit of the louver and will depend on the type of wall. If the louver is to be installed in a masonry wall, install a lintel to support the wall above the wall sleeve and louver. Install a sleeve to prevent moisture from seeping into the wall interior. Refer to approved submittal prints for recommended rough wall opening size.

**CAUTION**

Read louver installation considerations section beginning on page 8 before proceeding. Improper installation can result in property damage.

The following is a typical procedure for installing in existing masonry walls. Follow local codes and safety procedures.

If the Model AZ/AE unit is to be installed in an existing classroom, an opening must be cut in the outside wall to accommodate the wall sleeve and louver. This is accomplished as follows: First, the outside of the masonry wall is cut with a carborundum or other suitable blade as shown in Figure 6. This opening should be 1/2" larger overall than the size of the louver supplied with the unit (see Figure 7 & Table 1).

**Figure 6:** Cutting the outside wall rough opening slightly larger than the size of the louver

**Figure 7:** Rough-in dimensions of exterior wall for louver

<table>
<thead>
<tr>
<th>Unit Size</th>
<th>Width</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IN</td>
<td>MM</td>
</tr>
<tr>
<td>024</td>
<td>84½</td>
<td>2140</td>
</tr>
<tr>
<td>036</td>
<td>96½</td>
<td>2444</td>
</tr>
<tr>
<td>044</td>
<td>108½</td>
<td>2747</td>
</tr>
<tr>
<td>054</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 1: Recommended rough-in dimensions for louver with or without flanges (exterior wall)**

*Note: See louver installation section. Dimensions are approximate and are dictated by job site conditions.*

**Cutting Interior Wall Opening**
Next, the interior wall is cut as shown in Figure 8. If any portion of the wall sleeve is to be recessed into the wall, the opening must be large enough to accommodate the wall sleeve (see Table 1). In all cases, the bottom of the wall opening must be at the same height as the floor line. Seal the floor of the wall opening to permit water to drain under the louver and away from the building interior. If the building is a panel wall, the sleeve will be non-recessed (full projection) and all of the unit will remain in the room.

**Figure 8:** The interior wall opening is cut
Table 2: Recommended rough-in wall opening for wall sleeve

<table>
<thead>
<tr>
<th>Unit Size</th>
<th>Wall Sleeve w/Flange Length</th>
<th>Sleeve (Recessed) Length</th>
<th>Recommended Rough-in Wall Opening Length</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>024</td>
<td>86” (2184mm)</td>
<td>84” (2145mm)</td>
<td>84½” (2146mm)</td>
<td>28½” (724mm)</td>
</tr>
<tr>
<td>036</td>
<td>98” (2489mm)</td>
<td>96” (2489mm)</td>
<td>96½” (2451mm)</td>
<td>28½” (724mm)</td>
</tr>
<tr>
<td>044, 054</td>
<td>110” (2794mm)</td>
<td>108” (2755mm)</td>
<td>108½” (2756mm)</td>
<td>28½” (724mm)</td>
</tr>
</tbody>
</table>

The interior wall is then knocked out in the area cut for the wall sleeve as shown in Figure 9.

Figure 9: The interior wall is knocked out in the area cut for the wall sleeve

If the wall consists of concrete block with brick (or other) veneer and the louver opening is smaller than the opening of the wall sleeve (which is to be recessed), be careful to knock out only the veneer that is necessary.

After the opening is finished (Figure 10), a lintel must be installed above the opening in masonry walls to support the remaining block and brick (Figure 11). The wall must contain a solid surface or an internal column at each end for bracing and anchoring the wall sleeve and louver (by others).

Figure 10: A Lintel must be installed above the opening to support the remaining block and brick

Figure 11: Lintels installed

Internal column at each end for bracing and anchoring (by others)
Lintels installed above the opening to support block and brick
Exterior Wall
Top, bottom and sides of wall envelope made smooth and waterproof

CAUTION

Shut-off valves for hot water and steam must be flush with the floor to allow unit installation and removal.

New Buildings

In new construction, if any portion of the wall sleeve is to be recessed into the wall, the opening must be large enough to accommodate the wall sleeve (see Table 1). For smaller wall thickness, the wall sleeve will be non-recessed (full projection) and all of the unit will project into the room. In all cases, the bottom of the wall opening must be at the same height as the floor line. A lintel must be installed above the opening in masonry walls to support the block and brick. The wall must contain a solid surface or an internal column at each end for bracing and anchoring the wall sleeve and louver (by others).
Louver Details

Note: Please refer to "Transportation Damage" on page 3 for information on receiving, inspection, and filing claims for damage or loss with the carrier, and handling items supplied by Daikin.

Figure 12: Typical wall louver and grille

- Factory Mounted Bird Screen
- Bird Screen Fasteners
- Frame
- Mechanical Fasteners (Number Required Varies With Size of Louver)
- Optional Flanges
- Splitter Lines Up With Wall Sleeve Splitter
- Bottom Flange
- Optional Factory Mounted Exterior Grille
- Information Labels
- Louver Blade
- Drain Notch At Bottom
- Detail of Notches (Drain Holes)

Figure 13: Vertical blade louver, without flange

Outside View

- Condenser Discharge Air
- Condenser Inlet Air

Note: See CAUTION at right for louver blade orientation and drainage

Figure 14: Vertical louver with flange

- Flange - Do not caulk behind bottom edge of flange which will prevent water from draining.
- Louver drain lip

Figure 15: AZ/AE louver face dimensions

A

B

C

Table 3: Wall louver dimensions

<table>
<thead>
<tr>
<th>Unit Size</th>
<th>Overall Louver Size (Height x W)</th>
<th>Discharge Air Opening</th>
<th>Inlet Air Opening</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>024</td>
<td>28&quot; × 84&quot; (711 × 2134)</td>
<td>9&quot; (229mm)</td>
<td></td>
<td>5&quot; (127mm)</td>
</tr>
<tr>
<td>036</td>
<td>28&quot; × 96&quot; (711 × 2438)</td>
<td>9&quot; (229mm)</td>
<td>11.91&quot; (303mm)</td>
<td>7&quot; (178mm)</td>
</tr>
<tr>
<td>044, 054</td>
<td>28&quot; × 108&quot; (711 × 2743)</td>
<td>7&quot; (178mm)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: All dimensions are approximate and subject to change without notice. Refer to approved submittal prints for rough-in details and construction purposes, and for recommended wall opening size.

Figure 16: Vertical blade louver, without flange

Inside View

- Condenser Discharge Air
- Condenser Inlet Air
- Bird Screen On Side Toward Unit
- Louver with weep holes
- Bottom

⚠️ CAUTION

 Locate drain lip at bottom of vertical louver to allow proper drainage. Bird screen should always be on side toward unit.
Louver Installation Considerations

The standard louver is an aluminum, vertical, divided blade design complete with bird screen. This louver is also available with flanges and/or with a heavy-duty exterior lattice grille.

**CAUTION**

Louver by Daikin provide proper airflow. Proper unit performance has not been verified with louver by others.

1. **Figure 19 & Figure 20 on page 9** show detail of a typical louver. Before installation, carefully examine the louver and note the location of the bird screen and the notches (drain holes). The louver must be installed with the small opening at the top, notches at the bottom and the bird screen toward the room. If the louver is to be installed in a masonry wall, there must also be a lintel to support the existing wall above the louver.

2. Measure the opening to be sure there is adequate clearance for the louver around the sides. Observe the opening in relation to the wall sleeve and unit. For proper unit operation, the louver must be centered left to right and top to bottom to the wall sleeve. If the louver is of such a dimension that it extends above, below, or beyond the wall sleeve, these areas must be blocked off airtight (Figure 17).

**Figure 17: Oversize wall opening**

Exaggerated oversize louver or wall opening.

3. If the wall sleeve does not extend into the wall far enough to meet the louver, field fabricated splitter(s) must be provided. The splitter(s) need to extend far enough to engage the louver in order to form a proper seal (refer to Figure 22 through Figure 24 for splitter details).

**Figure 18: Typical field fabricated splitters**

Caulk top and two sides of the frame that come in contact with the wall of the opening. Field fabricated splitters engage the louver to form a proper seal, and seal at ends where they come in contact with the wall opening.

**Note:** See IM 1065 for details of attaching splitters to wall sleeve.

4. Check to see if the horizontal divider on the louver is the same height as the top horizontal splitter rail of the wall sleeve. The louver frame must be permanently mounted in the wall.

5. Before installing the louver in the opening, place a heavy bead of caulk along the top and two sides of the frame that come in contact with the walls of the opening. Use a flexible, waterproof caulk such as silicone.

6. Once the louver has been placed in the opening, further mechanical fastening may be desired or required. Fasten in a manner appropriate to the installation (see "Typical Installation Methods" on page 8). Care must be taken if fasteners are to be placed in the frame. If this is necessary, remove the louver by removing the screws that hold it in place. Drill holes in the desired locations and fasten with flat head screws. Be sure these screws do not interfere with the reinstallation. Shims must be placed between the louver and the wall so it won't be distorted. After the louver has been properly positioned, secure with fasteners.

In masonry wall applications, the louver may be permanently mounted by placing mortar around the top and sides in order to prevent it from being removed. Mortar keys may be attached to the louver, if necessary.

**Typical Installation Methods**

If the outside opening has not yet been made, see Figure 21 on page 10 through Figure 24 for the recommended locations and the job-specific plans for the exact location. Follow national and local codes.

**Wall Opening**

Cut the wall opening so that it is slightly larger than the louver being installed. For dimensions see Table 1 on page 5.

For dimensions, see Table 1 on page 5. If the opening is already there, measure to be sure there is a minimum of 3/8" (9mm) clearance around all sides. For masonry installations, follow national and local codes and install a lintel above all louvers.

**Outside Air Plenum**

In thick wall applications, the portion of the wall between the louver and the unit is the outside air plenum. Line this plenum area with 3/8" (9mm) sealed cement mortar or other suitable material. In some applications, the job specifications require a metal sleeve connection between the louver and the unit. If using such a sleeve, properly caulk it for a weather tight seal to help prevent moisture from seeping into the wall.

**CAUTION**

Sealing is critical in preventing freeze-ups, cold drafts, air infiltration, and to prevent moisture from entering the wall or room. Be sure the wall is smooth, square, and provides a suitable mating surface.
Sloping, Sealed Cement Mortar Base

Before setting the louver, construct a sloping, sealed cement mortar base to drain unwanted moisture to the outside, (Figure 19). Be sure the mortar base tapers toward the louver and away from the wall sleeve. The mortar at the wall sleeve also acts as a drain for excess moisture from the outside to drain back outside, thus it must extend so it meets the “D” seal flange of the wall sleeve. Temporarily slide the wall sleeve into place to mark this meeting point on the floor (refer to IM 1065 for wall sleeve installation details). The mortar should be the same height as the “D” seal flange. Be sure the sealed cement mortar base is smooth and flush along the wall sleeve “D” seal flange. This is critical in preventing water leaks and air leaks under the unit.

**CAUTION**

A space must exist between the bottom back edge of the wall sleeve and the sloping sealed cement mortar base to allow moisture to drain away from the condenser section. Do not fill this space with mortar (Figure 19).

**Figure 19: Typical louver installation with sloping sealed cement mortar base (splitters not shown)**

Sloped Flashing

If it is not possible to construct a sloping mortar base, then field-supplied flashing is required that is pitched for water drainage (Figure 20). The flashing should terminate flush with the exterior of the building. The flashing should extend so it is under the wall sleeve and meets the “D” seal flange of the wall sleeve. Place a bead of caulk under the flashing to prevent moisture from wicking back to the unit. Do not caulk the joint between the louver and the flashing. This joint is designed to let unwanted moisture escape.

**CAUTION**

Personal injury hazard. Avoid contact with sharp edges.

Before setting the louver, be sure the drain lip (vertical louver) is at the bottom, and the bird screen is toward the unit (refer to Figure 16 on page 7). Place a heavy bead of caulk along the top and the two vertical sides of the louver, leaving the bottom un-caulked so that if moisture gets into the area between the louver and the unit, it can drain to the outside, unrestricted (Figure 19 and Figure 20).

**Louvers With Flanges**

Place an additional bead of caulk on the inside of the top and side flanges that come in contact with the building facade. Do not caulk the bottom flange. Place the louver in the opening and push it tight against the building. Fasten it to the exterior of the building using fasteners (by others) appropriate to the installation. Seal the top and sides with a waterproof caulk to make it weather-tight. Do not caulk the bottom of the louver; doing so will trap unwanted moisture behind the flange.

**Louvers Without Flanges**

Place the louver in the opening so that it is recessed a minimum 1/16” (2mm) beyond the building facade or as directed in the architectural plans (Figure 20). If specified in the plans, secure the louver in the wall using mechanical fasteners (supplied by others) appropriate to the installation. With the louver solidly in place, run a bead of caulk around the perimeter of the louver to seal it weather-tight. Do not plug the bottom weep holes or the drip line of the louver. This will restrict the flow of unwanted moisture to the outside.

If flashing was used instead of the sloping mortar base, caulk the flashing where it contacts the “D” seal of the wall sleeve, the sides of the wall, etc. (Figure 20). This helps prevent moisture and outside air from getting under the flashing and into the room.
Top Plan Views – No Recess (Full Projection)

**Figure 21: Panel wall application with flush louver**

![Diagram of Panel wall application with flush louver](No Unit Recess)

**Figure 22: Masonry wall application with flush louver**

![Diagram of Masonry wall application with flush louver](No Unit Recess)

**Table 4: Unit & louver dimensions**

<table>
<thead>
<tr>
<th>Unit Size</th>
<th>Unit “A”</th>
<th>Louver “L”</th>
</tr>
</thead>
<tbody>
<tr>
<td>024</td>
<td>86</td>
<td>2184</td>
</tr>
<tr>
<td>036</td>
<td>98</td>
<td>2489</td>
</tr>
<tr>
<td>044, 054</td>
<td>110</td>
<td>2794</td>
</tr>
</tbody>
</table>

Note: "A" is unit length without end panels.

**CAUTION**

The bottom of the louver must be installed flush with the bottom of the unit for proper air inlet/outlet orientation and to permit water to drain under the louver from the building exterior. Louver dimensions are ±1/16” (1.6 mm) except as noted.

Intake and discharge must not be restricted. Trees, shrubs, etc., must be a minimum of 30” (762 mm) away from intake. Louver must be blanked off airtight (by others) if it extends beyond the confines of the wall sleeve. Horizontal splitters (by others) must be installed whenever there is any space between the wall sleeve and the louver. Seal the ends of the wall opening. Locate splitters between condenser discharge and condenser inlet, and between condenser air inlet and outdoor air inlet. Pitch the splitters toward the louver for water drainage. Louvers by Daikin provide proper air flow. Proper unit performance has not been verified with louvers by others. Grille must be flush with louver to provide proper air flow.
Top Plan Views – Partial or Full Recess

Figure 23: Masonry wall application with flush louver

![Diagram of Masonry wall application with flush louver](image)

Table 5: Room projection/end panel depth

<table>
<thead>
<tr>
<th>Application</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Recess</td>
<td>16½&quot; (422 mm)</td>
<td>11¾ (291 mm)</td>
</tr>
<tr>
<td>Recess</td>
<td>19½&quot; (498 mm)</td>
<td>8½ (213 mm)</td>
</tr>
<tr>
<td>No Recess</td>
<td>21¼&quot; (536 mm)</td>
<td>6¼ (163 mm)</td>
</tr>
</tbody>
</table>

CAUTION
Max. of 2" (51 mm) Louver Recess from Face of Brick

Figure 24: Masonry wall application with recessed louver

![Diagram of Masonry wall application with recessed louver](image)
Louver Installation Methods

Figure 25 through Figure 33 show various methods of installation. Select the appropriate method.

The following is a brief description of several popular methods of installation. Many variations are possible, depending on wall thickness, opening size, method of fastening, etc.

Louvers Without Flanges

Friction Fit Installation

Figure 25. This is a friction fit of the louver where the wall opening is made just large enough for the louver to be held in place by the friction between the wall and the louver. This will require each wall opening be “custom cut” to the intake size, which can be done only after the intake is on site for actual measurements. Recommended wall openings provided in this manual do not apply for this method of installation.

**CAUTION**

Appropriate fasteners must be used to prevent removal by unauthorized personnel.

Friction Fit Using Shims Installation

Figure 26. In cases where the opening is too large and the louver fits too loosely, friction fit may be obtained by the use of shims to help hold the louver in place.

Fastens To Wall Sleeve Installation

Figure 27. It may be desired to mount the louver to the wall sleeve so as to allow demounting the louver from the building exterior.

The louver may be fastened to the wall sleeve using appropriate fasteners on each corner of the wall sleeve where it butts up against the louver. The louver must be at least as long as the wall sleeve to be secured to the sleeve in this fashion. No holes are provided in the louver or in the wall sleeve for this type of mounting; the holes must be drilled in the field. Mounting hardware must also be provided by the installer. The wall sleeve must be properly secured to the wall structure.

**CAUTION**

INSTALL SO THAT THE EMBOSSEMENTS ARE AT THE BOTTOM OF THE LOUVER AND THE BIRD SCREEN IS ON THE UNIT (ROOM) SIDE.

If the wall intake louver extends above, below, or beyond the ends of the wall sleeve, it must be blanked off airtight in these areas only (Figure 19).

THE WALL OPENING SHOULD BE OF SUFFICIENT SIZE TO ALLOW PROPER, YET SNUG, FIT OF THE LOUVER, AND WILL DEPEND ON THE TYPE OF INSTALLATION REFER TO APPROVED SUBMITTAL PRINTS FOR RECOMMENDED WALL OPENING SIZE.

If the louver is to be installed in a masonry wall, there should also be a lintel to support the wall above the louver to prevent moisture from seeping into the wall. If it is to be installed in a panel wall, the louver should be placed so that it is as flush as possible with the inside wall.
Angle Bracket Mounting to Exterior Surface

Figure 28. This shows a typical application where an angle bracket is affixed to the edges of the louver and then the entire assembly is mounted from the outside by fastening to the exterior surface using suitable hardware. This figure shows an application where the wall sleeve is fully recessed into the wall and butts up against the louver. However, the same method of installation may be used where only partial or no recess is required and a horizontal air splitter between louver and wall sleeve must be installed.

Do not use mounting angles or strips at the bottom of the intake louver that run across the louver's entire length and plug the weep hole locations. Property damage and poor indoor air quality will result if water cannot drain to the outside from the weep holes. Appropriate fasteners must be used to prevent removal by unauthorized personnel.

Angle Bracket Mounting to Interior Surface

Figure 29. This is a variation of the installation shown in Figure 32 where the angle brackets are mounted on the inside of the louver and fastened to the wall from the interior of the building. This also shows usage of a horizontal air splitter with a partially recessed wall sleeve. Once the louver has been installed, run a bead of caulk around the outside perimeter of the frame to seal it watertight.

Do not plug the weep holes in the bottom of the louver. Property damage and poor indoor air quality will result if water cannot drain to the outside from the weep holes. Appropriate fasteners must be used to prevent removal by unauthorized personnel.

Panel Wall - Angle Bracket Mounting on Exterior Surface

Figure 30. This shows a typical panel wall installation where the panel wall thickness is greater than that of the louver. In this case, it is possible to mount the louver without flange using angle brackets. The louver could be removable from the exterior of the building.

On many panel wall applications, the panel wall manufacturer may accomplish louver mounting by using various aluminum extrusions to “build-in” the louver as a permanent part of the panel wall. All panel wall applications will most likely utilize a full finish collar, meaning no wall sleeve recess into the wall itself. See CAUTIONS above.

CAUTION

Do not use mounting angles or strips at the bottom of the intake louver that run across the louver's entire length and plug the weep hole locations. Property damage and poor indoor air quality will result if water cannot drain to the outside from the weep holes. Appropriate fasteners must be used to prevent removal by unauthorized personnel.

CAUTION

Do not plug the weep holes in the bottom of the louver. Property damage and poor indoor air quality will result if water cannot drain to the outside from the weep holes. Appropriate fasteners must be used to prevent removal by unauthorized personnel.
Panel Wall Using Moisture Resistant Material/Sheet Metal Framing

**Figure 31.** If desired, the louver may be "framed" in moisture resistant material or a moisture resistant material/sheet metal combination and then inserted into the panel wall for final mounting. This installation is desirable when the wall opening is considerably larger than that required by the louver. Provide an air and watertight seal and avoid blocking drainage at the bottom of the louver. After installation, be sure that there are no obstructions (mortar, nails, etc.) on the inside of the Louver where it meets the wall sleeve.

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**CAUTION**

Do not use mounting angles or strips at the bottom of the intake louver that run across the louver's entire length. This will plug the weep hole locations and property damage and poor indoor air quality will result if water cannot drain to the outside from the weep holes. Appropriate fasteners must be used to prevent removal by unauthorized personnel.

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**Louvers With Flange**

**Masonry Installation**

**Figure 32.** If the louver is supplied with a flange, follow these steps.

1. A bead of caulk is applied to the inside of the top and side flange that come in contact with the building facade.
2. The louver with flange is placed into the opening and pushed tight against the building.
3. Fasten it to the exterior of the building using appropriate fasteners for the installation.
4. Seal the top and two sides from the inside with waterproof caulk to make it weather-tight. Do not seal the bottom flange. To do so may trap water behind the flange. See CAUTION above.

**Panel Wall Installation**

**Figure 33.** This installation is typical when the thickness of the panel wall very closely approximates the thickness of the louver itself. Here only mounting straps may be required, running the entire top length and vertical width of the louver. This installation is perhaps the easiest. The louver could be removable from the exterior of the building. See CAUTION above.
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