Installation Guide

Sheets with Trim   Corner

Base

Wall End Caps

Column Covers

Safety Instructions

WHEN CUTTING OR DRILLING, ALWAYS WEAR PROTECTIVE GLASSES OR GOGGLES, A FACE MASK WHICH COVERS THE FACE AND MOUTH, AND GLOVES. The risk of electric shock while handling stainless steel increases with the level and duration of the current passing through the metal, the current path through the body, and the frequency of the current. Effective protection can reduce the health risks. Serious injury may also occur due to sharp edges. Appropriate care and gloves should be used.

Tools Needed
- Air Plasma Cutting System or Angle Grinder with stainless cut off wheels
- Noga DB1000 Sheet Metal Deburring Tool
- Trowel 3/16 x 1/4 x 5/16"
- Laminate Roller
- File

Materials Needed
- Standard stainless steel sheets
- SAS trim package
- Clear 100% silicone (or silver)
- Gloves
- Mineral spirits (solvent-based adhesive)
- Adhesive Appropriate for substrate
- Saw horses
- Rags
    - Tape Measure
- Utility Knife
- Suitable work table sized to sheets

Disclaimers (Please read)
PLEASE READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION
These guidelines are provided for your safety to prevent injuries and installation problems due to common errors. The manufacturer and/or distributor of the product are not responsible for actions taken or not taken when handling stainless steel. There are many nuances of installation that are assumed to be general construction knowledge to an experienced installer and these implications are not included in this guide. This guide contains recommendations and is not intended to serve as a step-by-step, foolproof installation checklist. Selection of an experienced stainless steel installer is the sole responsibility of the project owner and architect. Stainless Architectural Supply does not accept any responsibility for job failure resulting from or associated with improper environmental conditions at the job site.

Storage
Stainless steel panels and trims must be stored in a clean, dry, interior area. Make sure sheets are well supported. Lay panels horizontally, ensuring that they are flat with proper support, do not stand panels on edge. Please note: Stainless steel edges are sharp. Keep surrounding area clear or other materials.

- Store in a clean, dry, interior area.
- Lay panels flat with proper support
- Stainless steel edges are sharp. Keep area clear of other materials.

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Before installation/ pre-conditioning

Before installation, the installer must determine that the environment of the jobsite meets or exceeds all requirements specified in the installation guide. Installation typically begins when the majority of the job site has been completed. Installing should not start until the building is enclosed (windows and doors installed), permanent heating and cooling equipment is in operation, and residual moisture from plaster, concrete, or terrazzo work has dissipated.

• Do not begin installation until environment meets or exceeds requirements for installation

Wall Preparation

Walls must be free from dirt, grease, and loose paint. Remove any surface coatings designed to improve clean-up as they may affect adhesion and cause delamination. Sanding or priming of glassy surfaces may be needed to help promote adhesion.

New drywall or plaster- walls must be smooth and wiped clean to remove dust. Seal or prime walls with paint or primer. Allow appropriate time to dry in accordance with the manufacturers application instructions.

Painted drywall or plaster- test painted walls for adhesion by applying an aggressive sticky tape, such as duct tape. Press tape down firmly on painted surface while keeping one end up. Rip tape up quickly. If paint comes up with tape, the paint is not well bonded and wall needs to be stripped and resealed with a recommended paint/primer. Be sure to test several areas of the wall to insure the entire surface is suitable for installation.

• Test the wall to make sure paint is compatible with adhesive
• Strip the paint off wall if paint comes up with tape.

Concrete and concrete masonry units- Fill surface of concrete walls with an appropriate filler to make it smooth. Seal or prime walls with paint or primer. Allow paint/primer to dry in accordance with the manufacturers application instructions.

Uneven surfaces- Adhesion will be not be successful if installing over uneven surfaces because of the formation of air pockets behind the panel. Stainless panels will telegraph any substrate imperfections. This will reflect in the finished product. High and low spots should be leveled to provide an even wall surface.

Pre-Installation Inspection

Every attempt is made to inspect panels for cosmetic and physical abnormalities prior to shipment, however all panels should be inspected for any defects prior to installation. It is the installer's responsibility to perform a full inspection of product before installation. If materials are not acceptable, please contact SAS customer service immediately. Do not install panels of unacceptable or questionable quality. Stainless Architectural Supply will not be responsible for installation or removal costs of unacceptable panels.

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The following *wall conditions* require additional preparation or installation techniques:

Plywood- plywood walls must be flat and even, and warped plywood should be removed and replaced. Solvent-free adhesive cannot be used on any installation over pressure treated or fire-rated plywood

• Plywood should be flat and even. Replace any that is warped
• Solvent-free adhesive cannot be used over fire-rated plywood.

Concrete Block and Brick- Concrete block and brick surfaces are naturally uneven, and stainless steel panels installed directly to these surfaces will likely develop loose spots, bulges, and buckles. If a smooth buckle-free wall surface is required, the wall should be furred out, leveled, and plumbed with wood or metal studs or channels and covered with drywall, plywood, factory laminated panels, or other appropriate substrate according to the standard installation instructions.

• Materials installed over concrete block and brick will likely loosen or develop bulges.
• For a buckle-free surface, wall should be furred out with wood or metal studs and covered with drywall, plywood, or factory laminated panels.

Non-Porous Surfaces- (ceramic tile, glazed block, moisture resistance substrates, and metal panels) do not provide a good surface for adhesive bonding. General-purpose latex-based, polymer or solvent-based adhesives will not dry properly on a non-porous surface. Contact an adhesive manufacturer for recommendations in these environments.

• Non-porous surfaces do not provide a good surface for adhesive bonding.
• General-purpose latex-based, polymer or solvent-based adhesives will not suffice.

Direct Sunlight- Prolonged Direct Sunlight on panels may cause rapid expansion depending upon amount of heat buildup. Use caution in these areas.

The following *special conditions* require additional preparation or installation techniques:

High Humidity Rooms or Low Temperature Conditions- Carefully follow the guidelines for expansion/contraction for spacing and sealing. Failure to seal moisture entry points with silicone sealant can cause swelling of the substrate that may result in warping, curling, delamination or bond line separation. Use an adhesive that is recommended for the appropriate conditions. A vapor barrier may be required. Follow the architect or owner's specifications or check your local building codes for specific requirements.

• For high humidity, seal moisture entry points with silicone sealant. Failure to do so may cause swelling of substrate
• Use an adhesive that is recommended for the appropriate conditions

Expansion of Stainless Steel		
Coefficient of Thermal Expansion µ in./in ˚C	Expected Expansion of a 120 inch sheet (in)	Expected Expansion of a 3 meter sheet (mm)
16.5	0.08	2.03

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Pre-Installation Planning

• Pre-fit scribe each panel before fastening and/or adhering in place.
• All cutting and drilling should be done prior to the application of adhesive.
• Preplan for surface applied cove and base molding and trim. Sheets should be installed so that the base molding will not restrict normal panel movement during expansion and contraction. Cut panels a minimum of 1/4" above floor where the applied base molding will attach. Poured acrylic floor with built-in base cove should be in place before installation.

Basic Installation Steps

1. Trim panel to fit. Oversize pilot holes if drop-in ceiling wall angle is attached to and through panel (please allow for proper expansion and contraction).
2. Cut out any fixture openings
3. Apply adhesive to panel using a trowel recommended by the adhesive manufacturer.
4. Place panel on wall, leaving appropriate room at panel joints and corners for expansion and contraction
5. Using a laminate roller, remove air pockets by rolling from the center out toward the panel edge
6. Fit appropriate moldings between panels and ends leaving a minimum of 1/8" for expansion between panels and molding stem.
7. Install next panel.

Cutting Instructions

When selecting a stainless steel cutting blade for your tool, read the packaging to ensure that it is suggested for use on steel to prevent damage to the tool or injuries from a broken blade. Before cutting, ensure the material to be cut is safely secured in order to avoid any movement or vibration during operation.

Circular saw-Only allow skilled and trained personnel who are familiar with using these tools to handle this equipment. Only mount the wheel on a machine designed for the operation. Never use force when mounting the wheel. Always start cutting in a straight line, at ninety degrees to the work piece, applying only light pressure, keeping the cut positioning constant. Applying too much pressure may reduce the speed of rotation which affects the quality of cut and damages the wheel and the material. Ultra thin wheels of 1.0 mm, 1.6 mm. or 1.9 mm can be applied on massive material. By swinging the machine slightly forward and backward, the cut will be made easiest and quickest. Never give the wheel side pressure as this will cause wheel breakage and is dangerous.

• Only experienced users should handle such equipment.
• Only mount the cutting wheel on the machine designed for the operation.
• Do not use force. Do not give the wheel side pressure.
• Cut in a straight line, ninety degrees to the work piece.

Plasma cutter-Only allow skilled and trained personnel who are familiar with using these tool to handle this equipment. Select the appropriate plasma cutter for the thickness of the metal. Before starting, check for the following items: a clean compressed air supply, without water or oil (consumables that wear quickly, or black burn marks on the plate, may indicate that the air is

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contaminated) correct air pressure, and a nozzle and electrode are correctly in place. When setting the current, put it on the maximum output of the machine, then turn it down as needed. Approach the metal at an angle, 60˚ from horizontal, 30˚ from vertical, and then rotate the torch to the vertical position. Apply the appropriate speed according to thickness so that sparks go through metal and out bottom of cut. At the end of a cut, angle the torch slightly towards the final edge or pause briefly before releasing the trigger to completely sever the metal.

• Only experienced users should handle such equipment.
• Select the appropriate cutter for the metal's thickness and ensure a clean air supply, correct air pressure, and nozzle and electrode are in place.
• Start with maximum current and adjust as needed.
• Approach the metal at an angel, 60˚ from horizontal, 30˚ from vertical, and then rotate the torch to the vertical position.
• Apply appropriate speed according to thickness.

Attaching to Wall

Generally, stainless steel panels can be installed using adhesive alone or fasteners alone. The method used should be determined by the room and wall conditions. Check your local building codes for any restrictions or guidelines regarding approved installation methods.

Adhesive Application

When adhesive is used, be sure that it is a stainless steel formulated product. Follow the adhesive manufacturer's recommendations for trowel style (e.g., appropriate height of adhesive bead left by trowel). It is important to apply adhesive carefully and follow all directions to prevent problems that may result from using too little or too much adhesive. 100% adhesive coverage applied to the entire back of the panel is recommended. Adhesive should extend to all edges of the panel and should be applied directly to the back of each individual panel.

Figure 1

• Use adhesive appropriate for stainless steel
• Apply adhesive to entire back of panel.
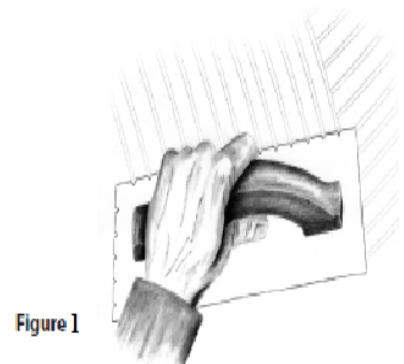• Cover 100% of the panel.

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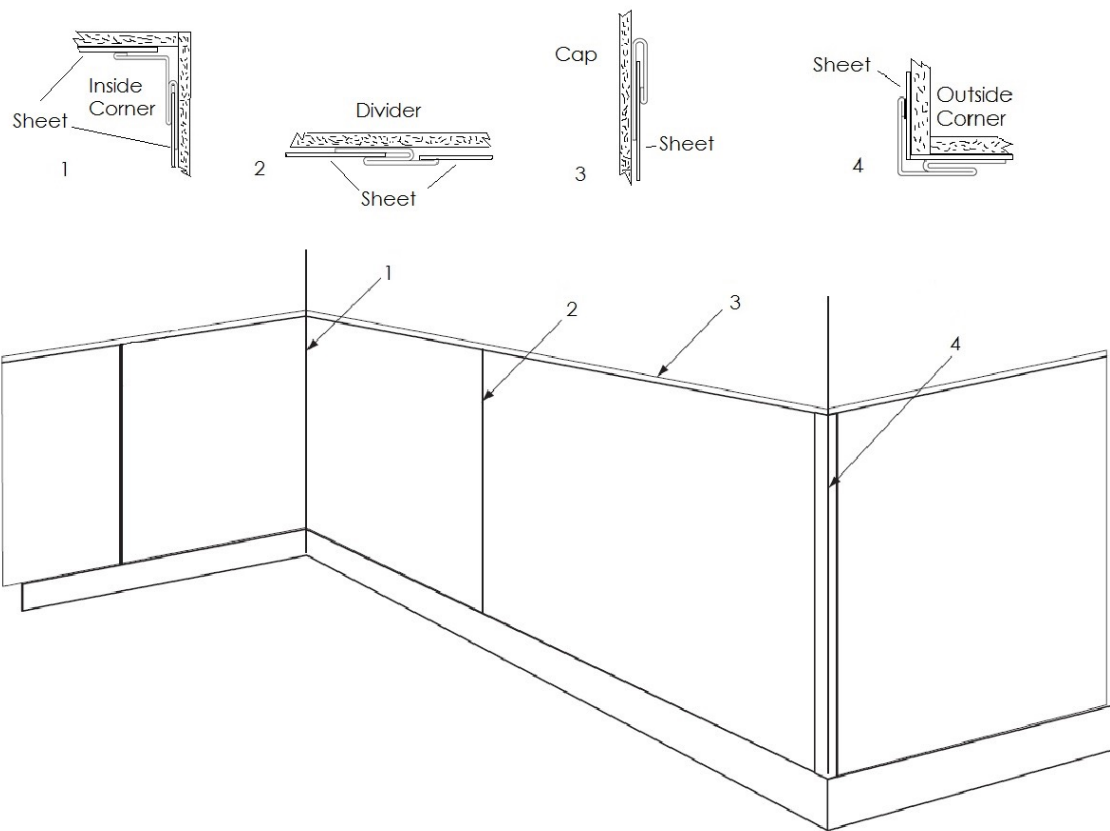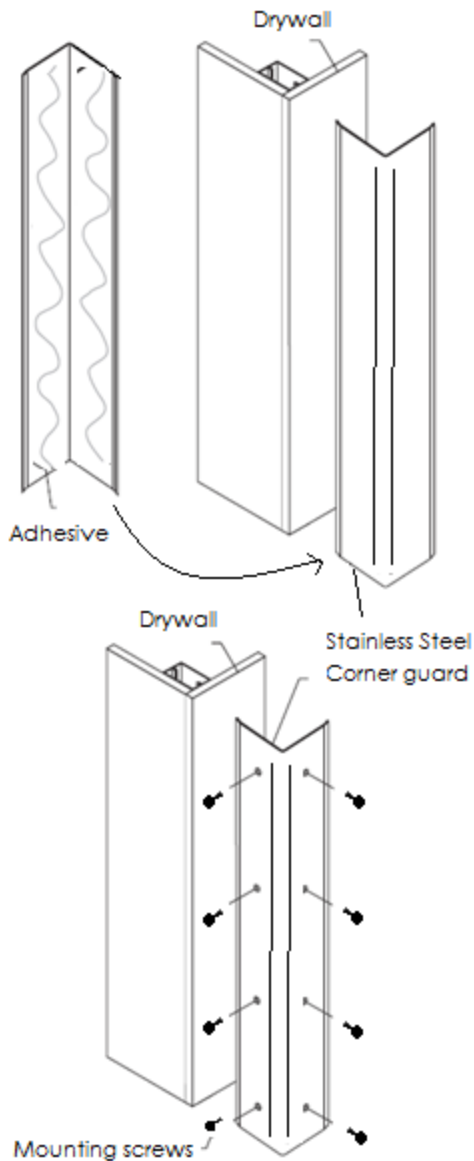
Trim Pieces

Figure 2

If using trim pieces with SAS sheet installation, install the first sheet on the wall. Cut trim pieces with appropriate tool if needed. Slide vertical divider bars or inside corners on the next sheet to be installed. Overlap the edge of the sheet on the wall with the divider bar or inside corner. Install the top cap by sliding it on the top edge of the sheet after the sheet is in place. Roll all trim pieces and the entire sheet with an extension roller.

- Cut trim pieces with appropriate tool.
- Ensure adhesive is applied behind all time pieces.
- Overlap trim pieces over the first sheet installed.
- Slide top cap on edge of sheet after sheet is on wall.
- Roll all trim pieces and entire sheet with extension roller.

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Corner Guards

Drywall

Adhesive

Drywall

Stainless Steel
Corner guard

Mounting screws

The wall surface that the corner guards are to be applied must be dry and free of dirt, dust, oil, loose paint, wax, and grease. Locate and install SAS corner guards in accordance with architectural drawings and specifications.

Check fit of corner guard before mounting. If wall corner is under 90 degrees and stainless steel guard edges do not touch wall, lay piece on ground and use a rubber mallet to tap edges until proper fit is achieved.
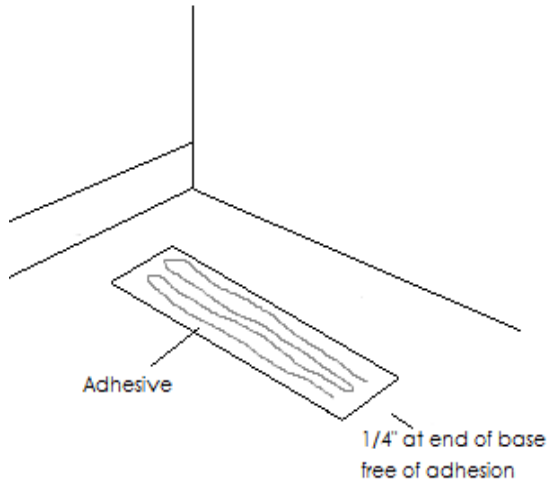
Cement-On Installation
• Apply construction adhesive in a zigzag pattern over the back surface of each wing of the corner guard. Do not glue near ends
• Place bottom against wall and bring the top up by matching the corner of the guard with the corner of the wall.

Screw-on Installation
• Install the corner guard by aligning the bottom of the corner guard with the top of the cove base or finish floor and moving the guard into position along the apex of the wall surface.
• Complete installation by securing the corner guard into position using the appropriate fasteners.

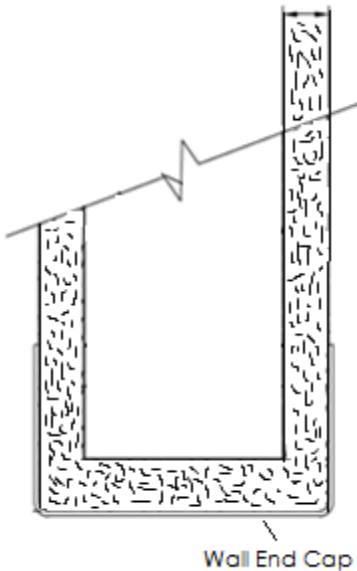**S**tainless **A**rchitectural **S**upply

Wall Base

Surfaces must be clean, structurally sound, and free of loose particles. For smooth surfaces, adhesion can be improved by lightly sanding bond areas prior to applying adhesive.

Adhesive

1/4" at end of base free of adhesion

• Install outside and inside corners first. Apply urethane adhesive to the back and position the corner in place. Roll base with a hand roller to ensure a secure bond.
• Apply adhesive in zig zag pattern on the wall base from cartridge or with a large notched trowel so 85% of the back surface is covered. Leave a 1/4" at the top of the base free of adhesive to prevent oozing.
• Immediately apply base to the wall between corners and press lightly or use a small hand roller to ensure good adhesion. Irregular or curved walls may require bracing until the adhesive sets.
• Use mechanical fasteners or bracing to hold surfaces together until the adhesive has set. Product will normally set within 8 to 12 hours.

Wall End Caps

Surfaces must be clean, structurally sound and free of loose particles. For smooth surfaces, adhesion can be improved by lightly sanding bond areas prior to applying adhesive.
Locate the end wall protector as indicated on the approved detail drawing for the appropriate substrate. Install end wall protectors, level and plumb at the height indicated on the drawings.

Cement on
• Apply adhesive to the back of the end wall protector in a zigzag pattern.
• Position the end wall protectors on the wall and press firmly in place
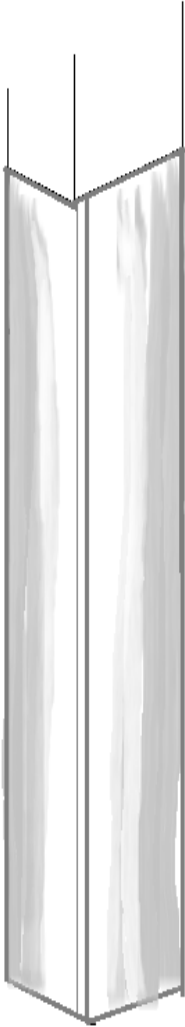
Screw on
• Position the end wall protector on the wall.
• Press firmly in place and attach with the provided fasteners.

Wall End Cap

Column Cover

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Our square column covers are made to order out of 20 gauge stainless steel. Column covers arrive per specified measurements and affix to existing columns. Utalizing a basic installation method, these column covers and simple to install.
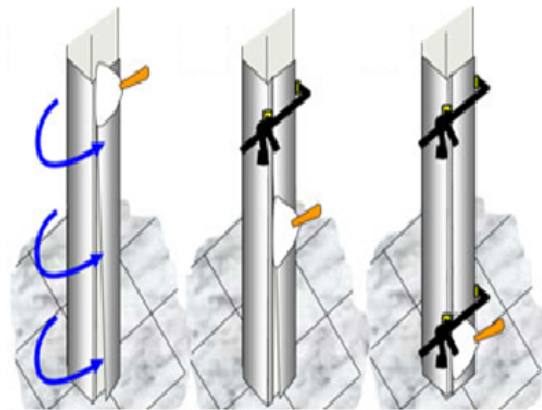
Column Detail

Materials needed: Rags, mineral spirits, Squeeze Clamps, Stainless Steel Rivets, Drill, Stainless Steel Drill Bit, Rivet Gun.
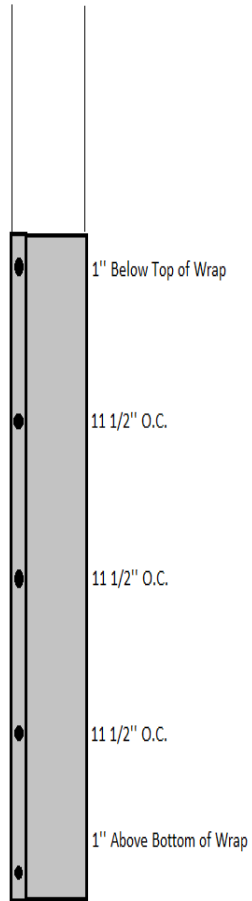
- Clean and scrape column from all debris
- Using the open end of the stainless steel column wrap, expand it to wrap around the column in a downward fashion.
- Once the stainless steel wrap has surrounded the column, use the squeeze clams to form the stainless steel wrap to the column.
- Mark the overlap for the holes to be drilled per the diagram below.
- Drill thru the stainless steel wrap and steel column. Remove the plastic film from the stainless steel before installing rivets.
- Install stainless steel pop rivets in holes and remove squeeze clams.
- Remove remaining plastic film from stainless steel and clean appropriately.

Square

Wrap column cover all the way around and interlock joint.

Column Cover Installation Diagram

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1" Below Top of Wrap

11 1/2" O.C.

11 1/2" O.C.

11 1/2" O.C.

1" Above Bottom of Wrap

Maintenance

Cleaning

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Fingerprints and smudges can be removed using a non-chlorinated spray cleaner/degreaser and a microfiber cloth. Do not use harsh abrasives, acids, or chlorine-based cleaners or cleaning tools containing carbon steel, such as steel wool or wire brushes. Heavier soiling or superficial discoloration can be removed using a paste of baking soda on a damp sponge. Rub the surface gently and evenly and then rinse with fresh water. Dry with a soft cloth. Stainless steel's bright appearance can be maintained by occasional polishing with a soft cloth dipped in common household white vinegar. Commercial products specifically formulated for stainless steel may also be used.

After installation
Maintain environmentally controlled conditions after the installation. Large temperature changes can cause de-lamination.

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