

DELTA[®]-VENT S

Water-Resistive Barrier (WRB). Installation Instructions With Window Pre-installed.

Health and Safety:

- Required safety equipment: hard hat, safety boots, gloves, safety glasses, fall arrest equipment.
- Always follow all safety precautions as directed by the Occupational Safety and Health Administration (OSHA-USA) or the Construction Safety Association (Canada).
- Please refer to Material Safety Data Sheets for all components and observe all recommended safety precautions therein.
- The general codes of practice for protection at work and instructions of the manufacturers for tools and components are to be observed at all times.

Recommended Materials:

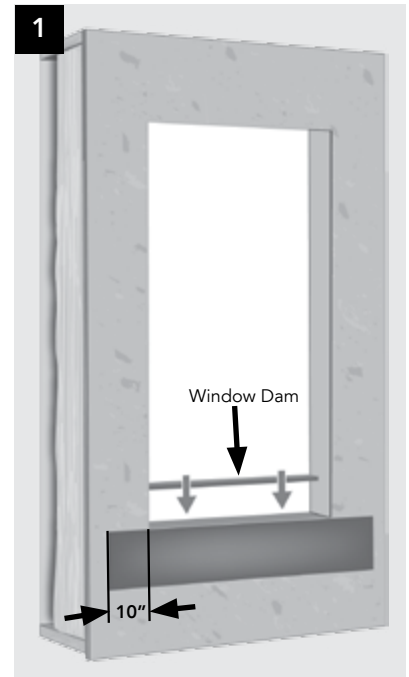
- DELTA[®]-VENT S
- Acceptable fasteners
- DELTA[®]-FLEXX FLASHING
- DELTA[®]-FLASHING (4" and 9")
- DELTA[®]-MULTI BAND tape
- DELTA[®]-THAN sealant

Recommended Tools:

- Utility knife or scissors
- Measuring tape
- Chalk line
- Caulking gun
- Hammer or pneumatic nail/staple gun
- Hammer drill (for masonry applications)
- Cordless drill with bits (for steel stud applications)

Notes and Limitations

- These installation instructions for DELTA[®]-VENT S are intended only as a guide and are for the convenience of the contractors, specifiers, and other interested parties. The final application and details are the sole responsibility of the design authority on record for the project.
- Building codes, such as International Residential Code (IRC), International Building Code (IBC) and National Building Code (NBC), require the use of a water-resistive barrier in all exterior walls that is at least equivalent to Grade D building paper. Always confirm the local building requirements prior to installation.
- Applications using cementitious coatings directly applied to surface of the water-resistive barrier, such as adhered manufactured stone veneer or conventional stucco, may require two layers of DELTA[®]-VENT S. Always confirm the local building requirements prior to installation.
- Do not install DELTA[®]-VENT S in adverse weather conditions.
- High winds may hamper application.
- The substrate should be dry prior to application.
- Ensure protrusions that may penetrate the membrane are removed from substrate.
- Prior to beginning the installation of the DELTA[®]-VENT S, step flashings and kick-out flashings should be installed.
- DELTA[®]-VENT S may be installed over structural sheathing board, insulation board, exterior gypsum board, concrete masonry units (CMU), or directly to framing members.
- When attaching wall ties for anchoring masonry claddings, install a patch of DELTA[®]-FLASHING at the penetration site before installing the wall tie. The patch should be of an adequate size to seal only the penetration point.



- The substrate on the building will determine what type of fastener will be used.
- Acceptable fasteners are:
 - #4 nails with 1" (25 mm) plastic cap (wood frame construction).
 - 1" (25 mm) plastic cap staples with minimum 7/8" (22 mm) leg (wood frame construction).
 - 1-1/4" (32 mm) or 2" (50 mm) self-tapping screws with gasketed metal washers (steel stud construction).
 - Tapcon® fasteners with 2" (50 mm) plastic caps (masonry construction).
- Maximum exposure time:
 - DELTA®-VENT S shall not be exposed to ultraviolet light (sunlight) for more than 3 months.

Installation

Step 1

Windows:

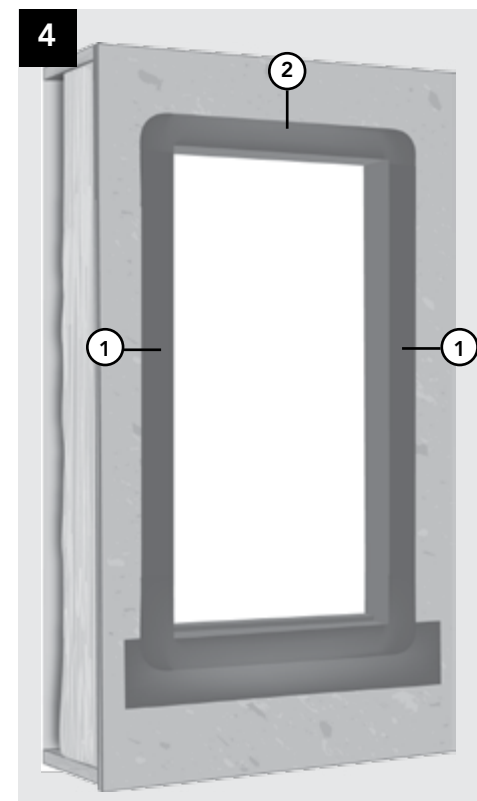
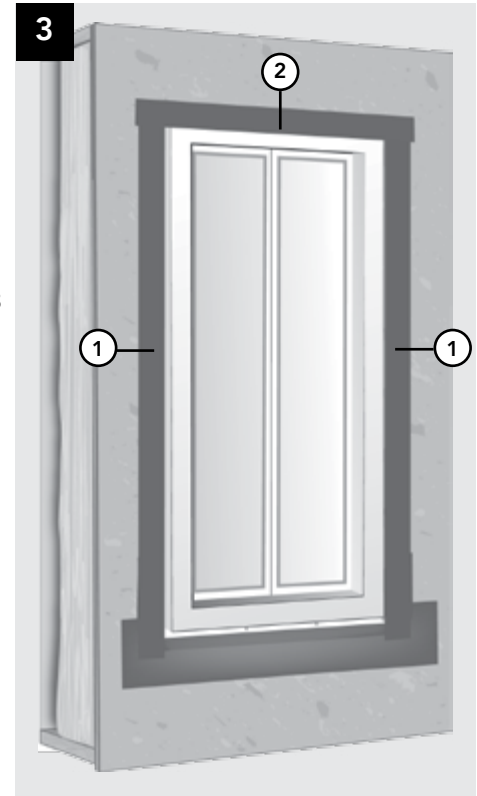
- These installation details for windows are a "best practices" approach that are consistent with installation options in ASTM E 2112-07 and/or AAMA 2400-02. All installation details should be confirmed prior to beginning the project with the design authority on record. It is important to integrate all construction materials to prevent potential water intrusion.
- Always install the materials and components so that the product above overlaps the product below.
- Prior to the installation of window:
 - Attach apron made of DELTA®-VENT S under sill. Extend the apron at least 10" (250 mm) beyond sides of rough opening jambs and far enough below the rough opening to overlap the sill plate at bottom of wall, or the DELTA®-VENT S that will be installed below, by a minimum of 6" (150 mm). Secure the top of the apron to the wall with fasteners. Leave the bottom of the apron free to overlap the DELTA®-VENT S later. If window dam is being used on the bottom sill, fasten in place. (see Detail 1)
 - Cut a length of DELTA®-FLEXX FLASHING minimum 12" (300 mm) longer than the width of the window opening.
 - Place DELTA®-FLEXX FLASHING on sill so that the back (interior) edge is even with the back (interior) edge of the sill and covers the window dam. Ensure the DELTA®-FLEXX FLASHING goes up each jamb a minimum of 6" (150 mm), stretching to ensure a firm and tight fit into the corners. (see Detail 2)

For Flanged Windows:

- Follow window manufacturer's installation instructions to avoid any potential issues relating to the window warranty. Note that window manufacturers may require a bead of sealant behind the window flange. If sealant is being used at the bottom flange, the sealant must be discontinuous to allow drainage. The final fenestration and flashing details are the sole responsibility of the design authority on record for the project.
- Flash the installed window in the following sequence:
 1. Install DELTA®-FLASHING on the side flanges of the window, sealing to the exterior sheathing. Ensure flashing extends 1" (25 mm) above window flange and below sill flashing.
 2. Install DELTA®-FLASHING across the header flange of the window, sealing to the exterior sheathing. Ensure the head flashing extends beyond the outer edges of jamb flashing. (see Detail 3)

For Non-Flanged Windows:

- Follow window manufacturer's installation instructions to avoid any potential issues relating to the window warranty.
- Flash the rough window opening in the following sequence:
 1. Install DELTA®-FLASHING on the side frames of the rough window opening, sealing to the exterior sheathing.



2. Install DELTA®-FLEXX FLASHING across the header frame of the rough window opening, stretching to ensure a firm and tight fit into the corners, sealing to the exterior sheathing. (see Detail 4)

- The final fenestration and flashing details are the sole responsibility of the design authority on record for the project.

Step 2

- Starting at a corner of the building, unroll DELTA®-VENT S keeping the roll plumb. Extend approximately 12" (300 mm) past either the inside or outside corner of the wall.
- At end (vertical) laps, overlap DELTA®-VENT S by a minimum of 6" (150 mm).
- At side (horizontal) laps, overlap DELTA®-VENT S by a minimum of 6" (150 mm).
- Always begin the installation of DELTA®-VENT S at the bottom of the building to ensure proper downward shingling of the horizontal laps.

Step 3

- DELTA®-VENT S should overlap through-wall flashing by a minimum of 6" (150 mm).
- For maximum air leakage reduction:
 - Seal DELTA®-VENT S at the bottom and top of the wall with DELTA®-THAN or DELTA®-FLASHING.
- If no through-wall flashing is installed, the bottom edge of DELTA®-VENT S should extend beyond the sill plate by at least 2" (50 mm) and be sealed with DELTA®-THAN.

Step 4

- Secure DELTA®-VENT S by fastening into the studs (wherever possible) no closer than 6" (300 mm) and no wider than 16" (406 mm) on centre horizontally and vertically.
- Ensure that the DELTA®-VENT S is pressed tightly into all inside corners before fastening to prevent damage during the installation of the exterior cladding.

Step 5

- Unroll DELTA®-VENT S directly over window and door openings.
- Do not install fasteners within 6" (150 mm) of the sill and jambs of the openings and within 9" (225 mm) of the head of the openings.

Step 6

- For maximum air leakage reduction, tape all horizontal and vertical laps and all fasteners with DELTA®-MULTI BAND. Horizontal and vertical laps also may be sealed using DELTA®-THAN. (see Detail 5)

Step 7

Treat all penetrations:

- Cut DELTA®-VENT S around penetrations as tightly as possible. Install a bead of DELTA®-THAN on the substrate, approximately 1" (25 mm) back from the edge of the cut. Press the DELTA®-VENT S into the DELTA®-THAN.
- Install DELTA®-FLASHING on the exterior of the DELTA®-VENT S to join the material to the penetration. (see Detail 5)

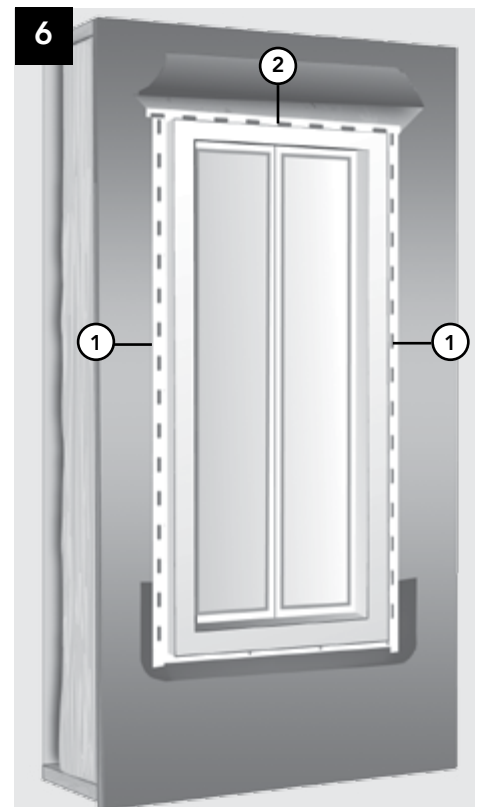
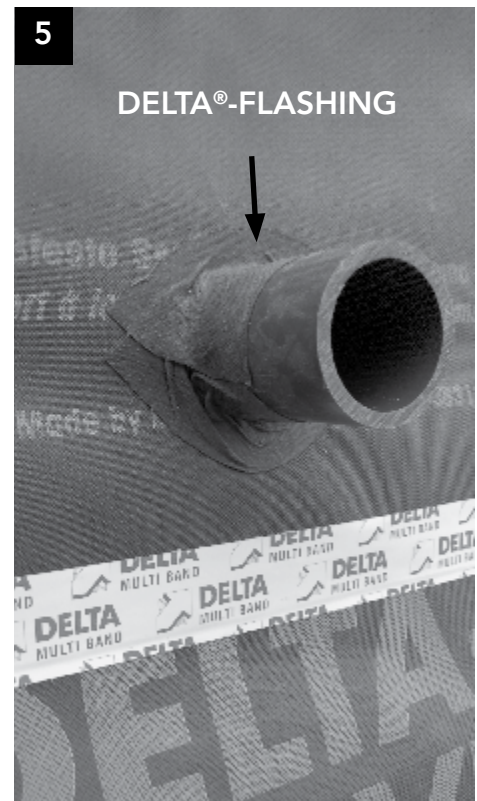
Step 8

For Flanged Windows:

- Cut the DELTA®-VENT S so that a minimum of 50% of the flange is covered.
- Seal the DELTA®-VENT S to the window flange with DELTA®-MULTI BAND in the following sequence: (see Detail 6)
 1. Jambs of window.
 2. Across header of window.

For Non-Flanged Windows:

- Cut the DELTA®-VENT S as closely as possible to the window frame. (see Detail 7)
- Seal the DELTA®-VENT S to the window frame with DELTA®-MULTI BAND in the following sequence: (see Detail 6)
 1. Jambs of window.
 2. Across header of window.



Step 9

Terminations:

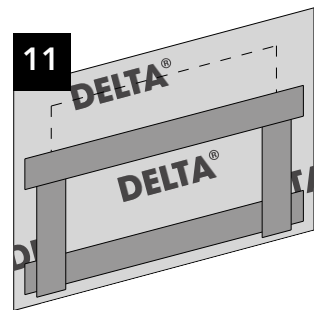
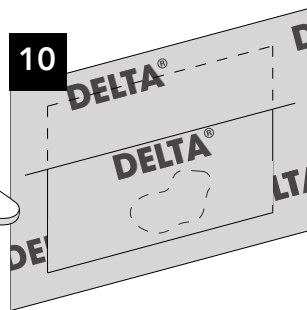
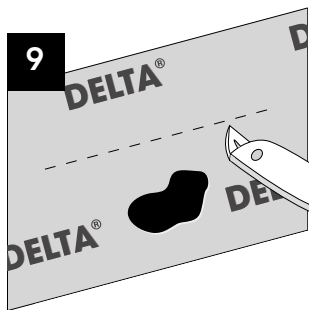
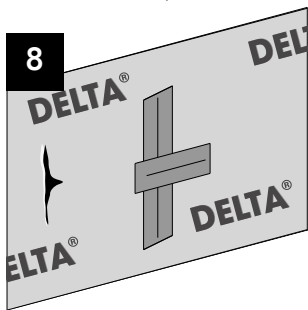
- Install a bead of DELTA®-THAN on the substrate approximately 1" (25 mm) back from the edge of the DELTA®-VENT S. Press the DELTA®-VENT S into the DELTA®-THAN.
- Alternatively, seal the DELTA®-VENT S to the substrate with DELTA®-MULTI BAND. To provide additional support in high wind locations, install temporary furring strips where the material is terminated. After removal of temporary furring strips, ensure fastener penetrations are sealed with DELTA®-MULTI BAND.

Step 10

Inspection:

- Inspect the DELTA®-VENT S for rips, tears, or other deficiencies in the continuity. Tape rips, tears or holes smaller than 2" (50 mm) with DELTA®-MULTI BAND. (see Detail 8)
- For holes greater than 2", a patch is required:
 - Cut a slit approximately 3" (8 cm) above the hole and approximately 3" (8 cm) wider than the hole. (see Detail 9)
 - Cut a patch minimum 6" (15 cm) larger than the hole.
 - Slide the top edge up into the cut slit so that the patch covers the hole. (see Detail 10)
 - Tape the patch in the following order: (see Detail 11)
 1. Bottom
 2. Sides
 3. Top
- To ensure continuity and air-tightness, check that all horizontal and vertical laps are sealed with DELTA®-MULTI BAND, DELTA®-FLASHING or DELTA®-THAN.

For technical support, call our technical support team at 1-888-4DELTA4 (1-888-433-5824) extension 326. or visit www.cosella-dorken.com.



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Canadian Home Builders' Association

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