



Installation Guide DELTA®-VENT SA



Flashing Systems for
FLANGE WINDOWS

Cosella-Dörken – Leading Through Technical Competence

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Prepared by:



Making Buildings Better

Graham Finch, MASC, P.Eng
James Bourget, ABET, RRO
Robin Urquhart, MBSc, MA NRES
Dave Ricketts, MSc, P.Eng



Marcus Jablonka, Dipl. Ing., Dipl. Wirt. Ing.
Peter Barrett, B.A. (Hons), M.B.A.
Krzysztof Apiasz, C.Tech.

Introduction

DELTA®-VENT SA water-resistive barrier and air barrier

This Installation Guide covers the preparation of rough window openings with DELTA®-VENT SA Water-resistive Barrier and Air Barrier and its components.

The following diagrams present a step-by-step sequence for all installations. There are several options for these installation sequences. The window manufacturer's specifications, and architectural considerations, such as flashing and trim will vary. All installations, regardless of variations, will follow the same fundamental approach.

The membrane's primary purpose is to function as a vapor permeable water-resistive barrier and continuous air barrier. Special attention is paid to interface areas to ensure that water or air cannot penetrate the assembly. Following the steps outlined in this Installation Guide will help ensure best practice installations.

These diagrams for DELTA®-VENT SA are intended only as a guide and are for the convenience of architects, specifiers, contractors and other interested parties. The final application and details are the sole responsibility of the design authority on record for the project.



On pages with the print2life logo you can simply point and scan with your tablet or smartphone, and view installation videos which appear directly on top of the page you are looking at. You can download the print2life app by scanning the QR code below:



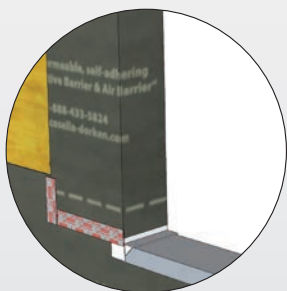
Method Selection Guide

Strip-in methods for flange windows

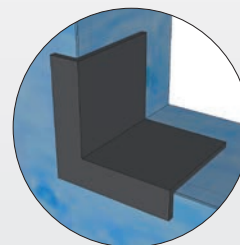
Flange Windows



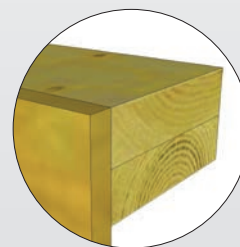
Strip-in method



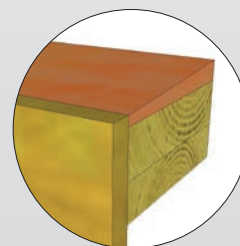
1. DELTA®-FAS CORNER (page 6)



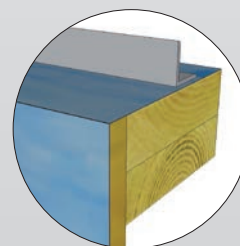
2. Flat sill (page 14)



3. Sloped sill (page 22)



4. Backdam (page 30)

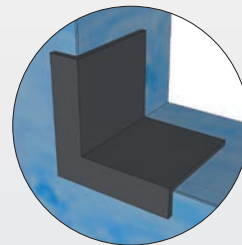


Cut-out methods for flange windows

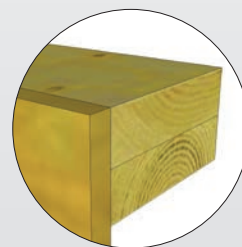
Cut-out method



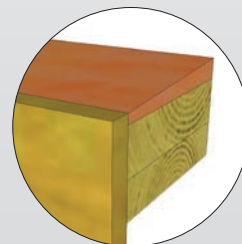
1. DELTA®-FAS CORNER (page 38)



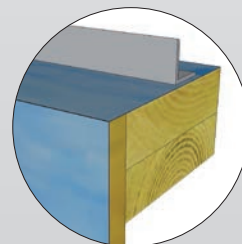
2. Flat sill (page 44)



3. Sloped sill (page 50)

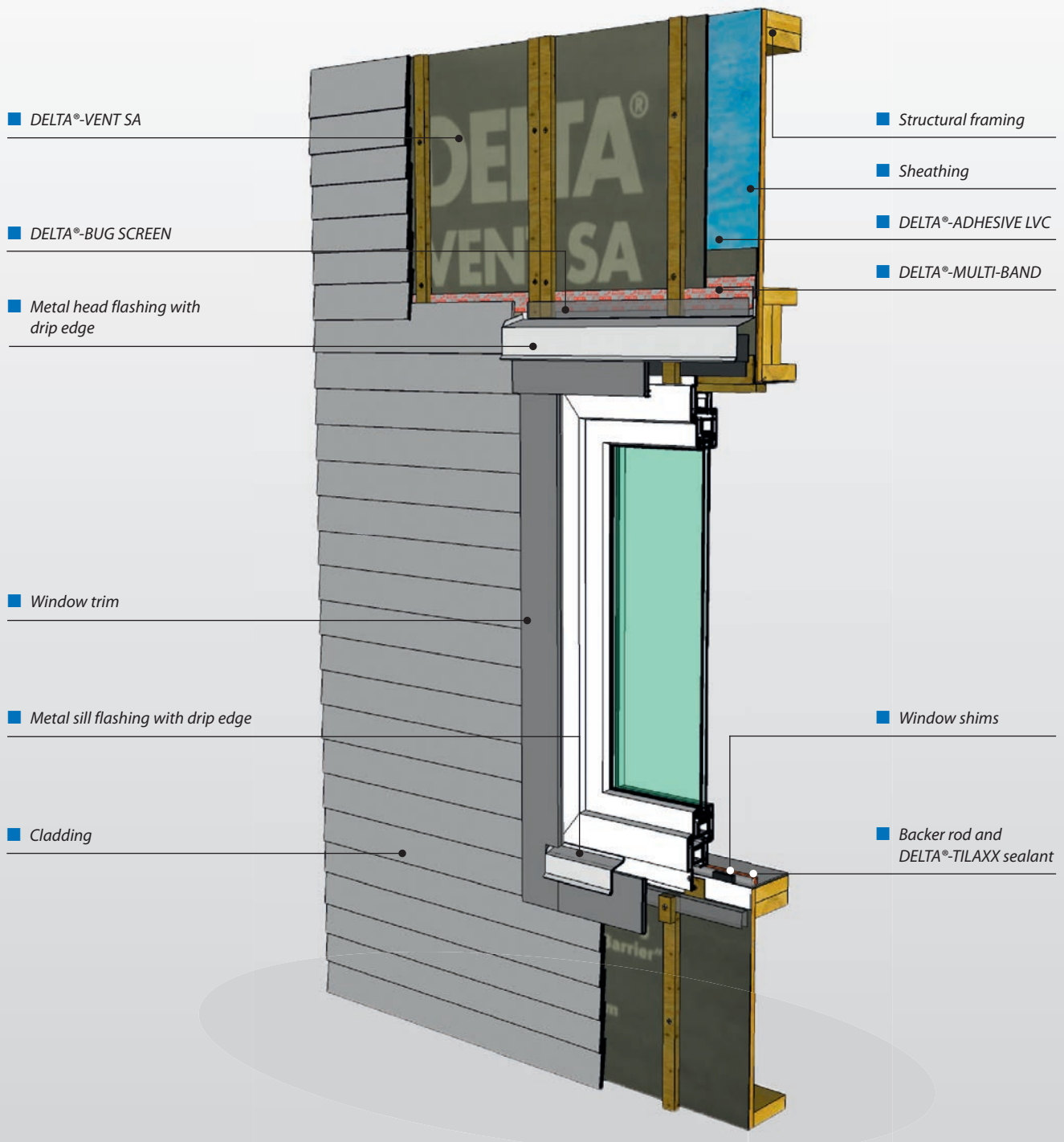


4. Backdam (page 56)



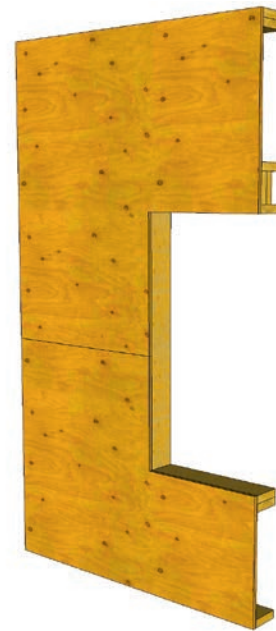
Strip-in method

1. With DELTA®-FAS CORNER



Step 1

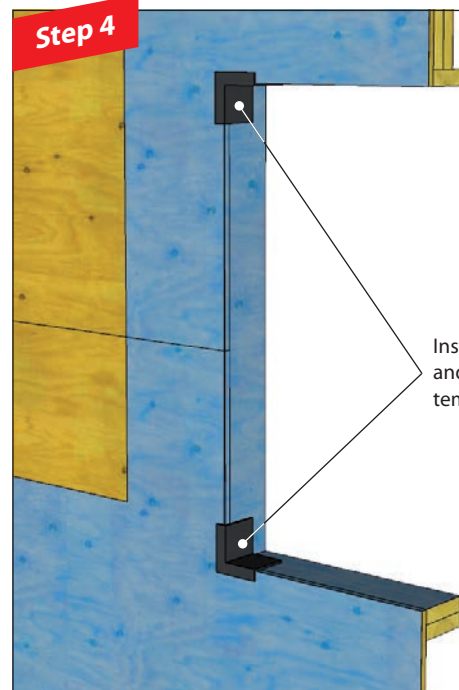
Framing

Step 2

Sheathing

Step 3

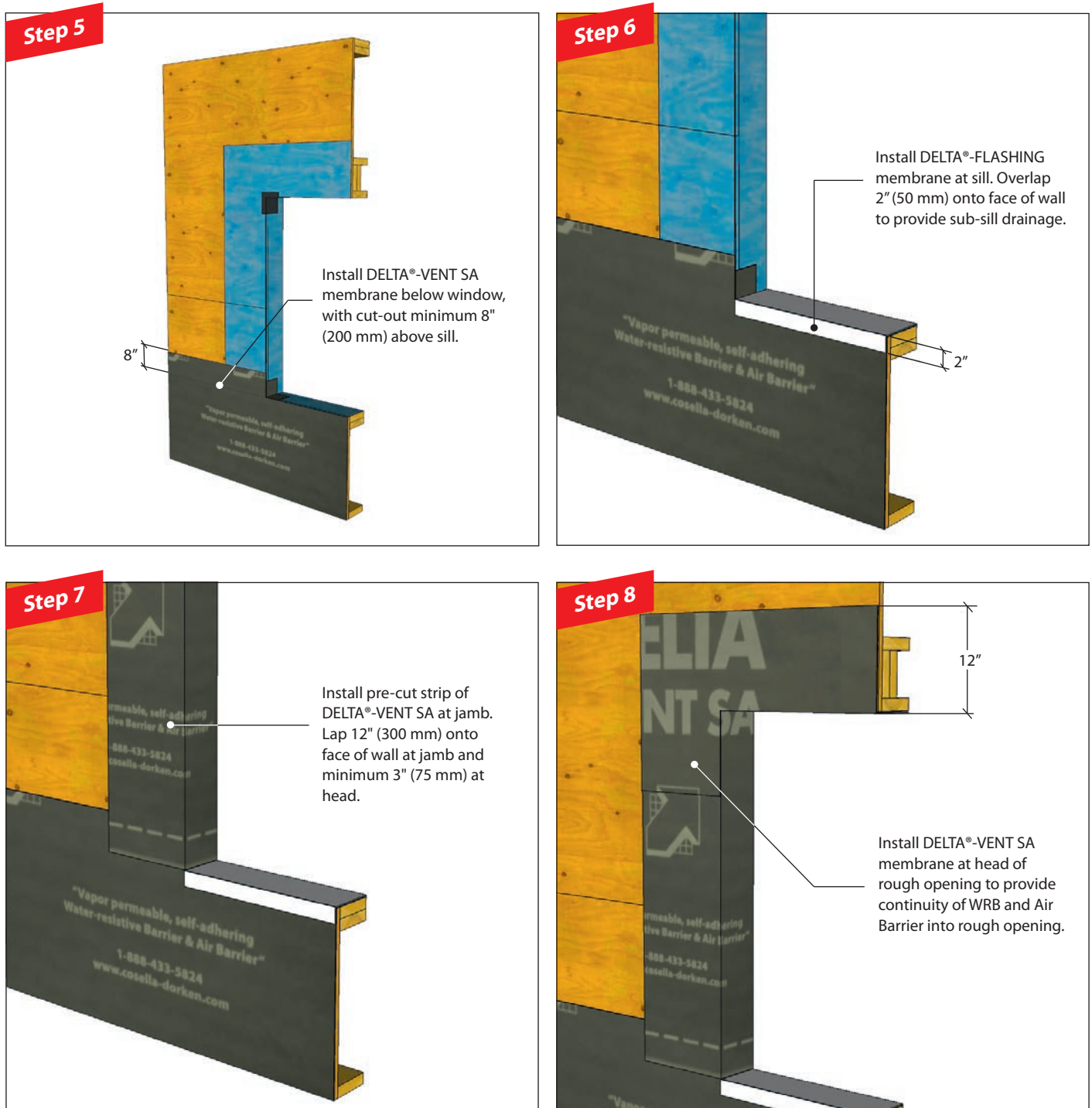
Prime substrate with
DELTA®-ADHESIVE LVC
before applying
DELTA®-VENT SA.

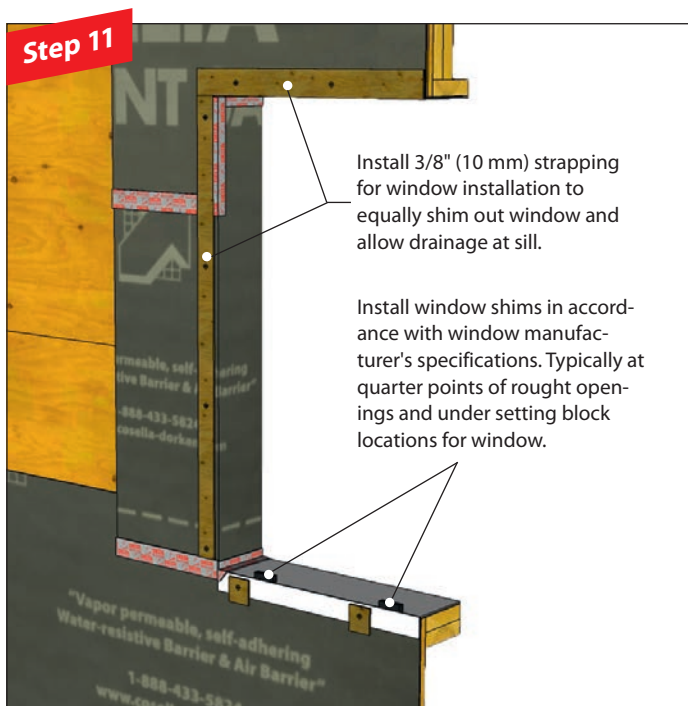
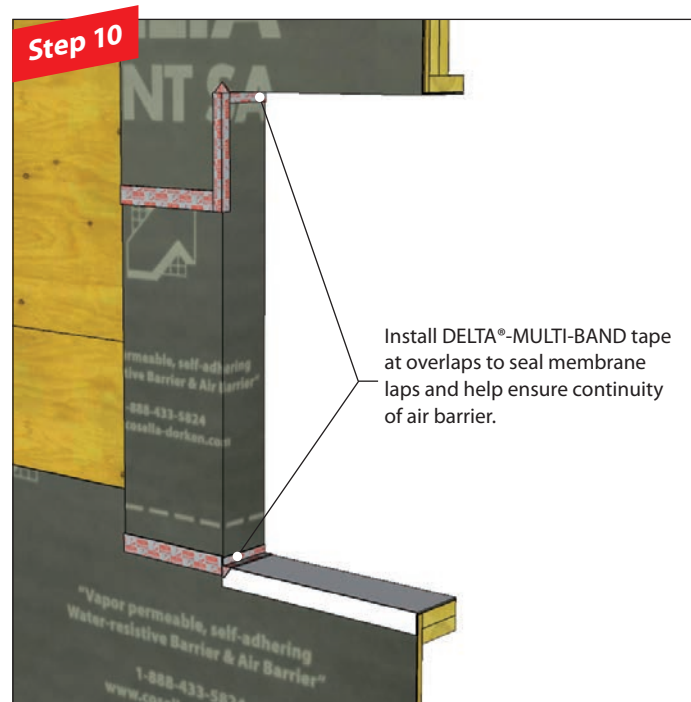
Step 4

Install DELTA®-FAS CORNERS
and staple on vertical leg to
temporarily hold in place.

Strip-in method

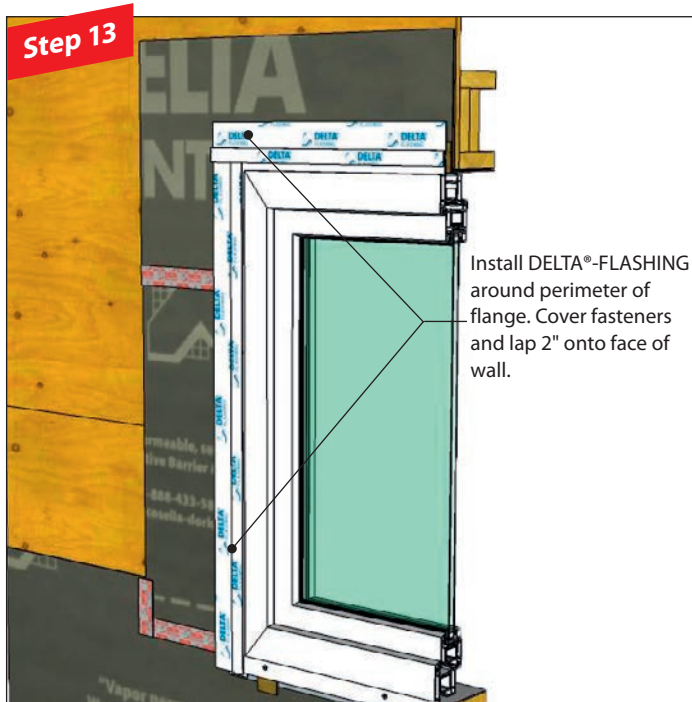
1. With DELTA®-FAS CORNER

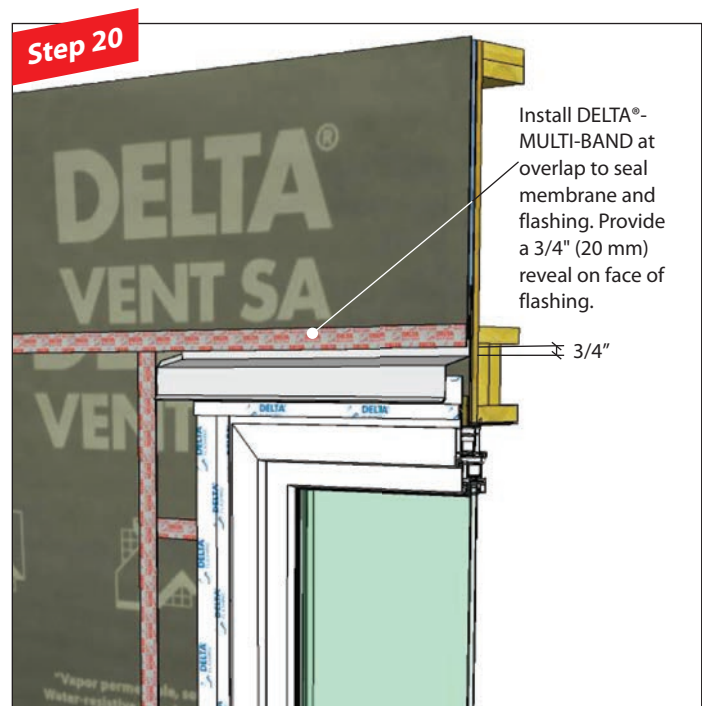
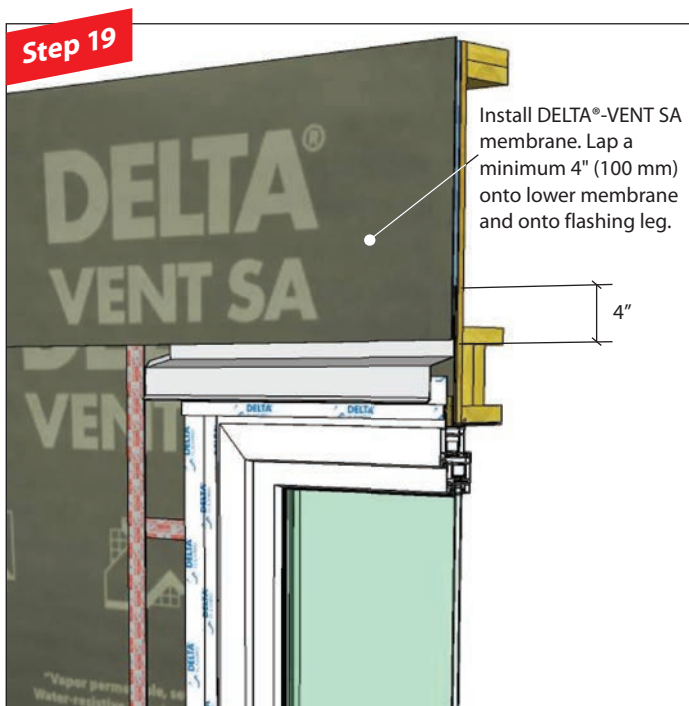
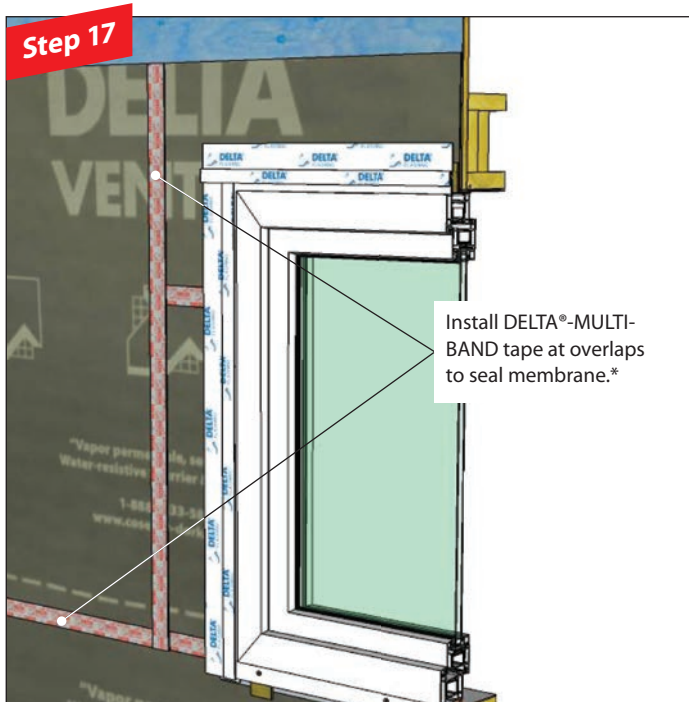




Strip-in method

1. With DELTA®-FAS CORNER

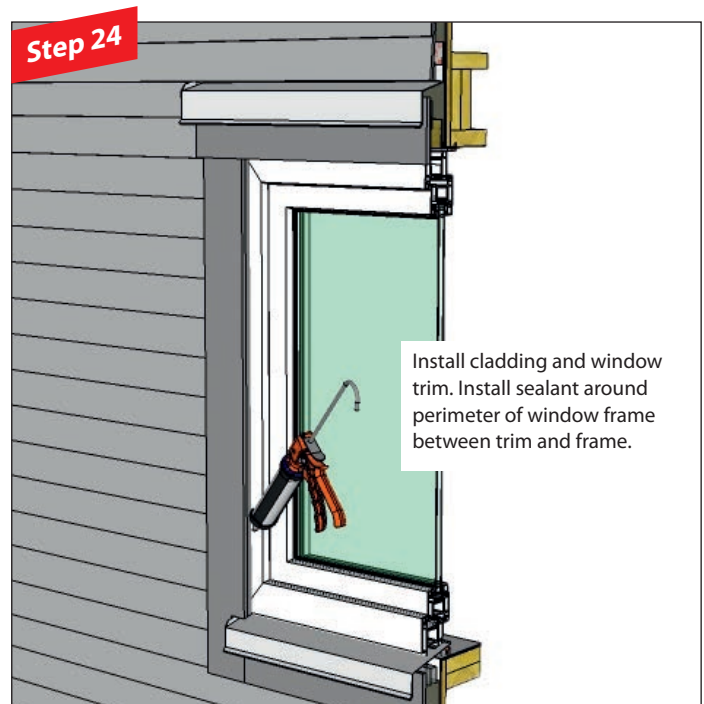




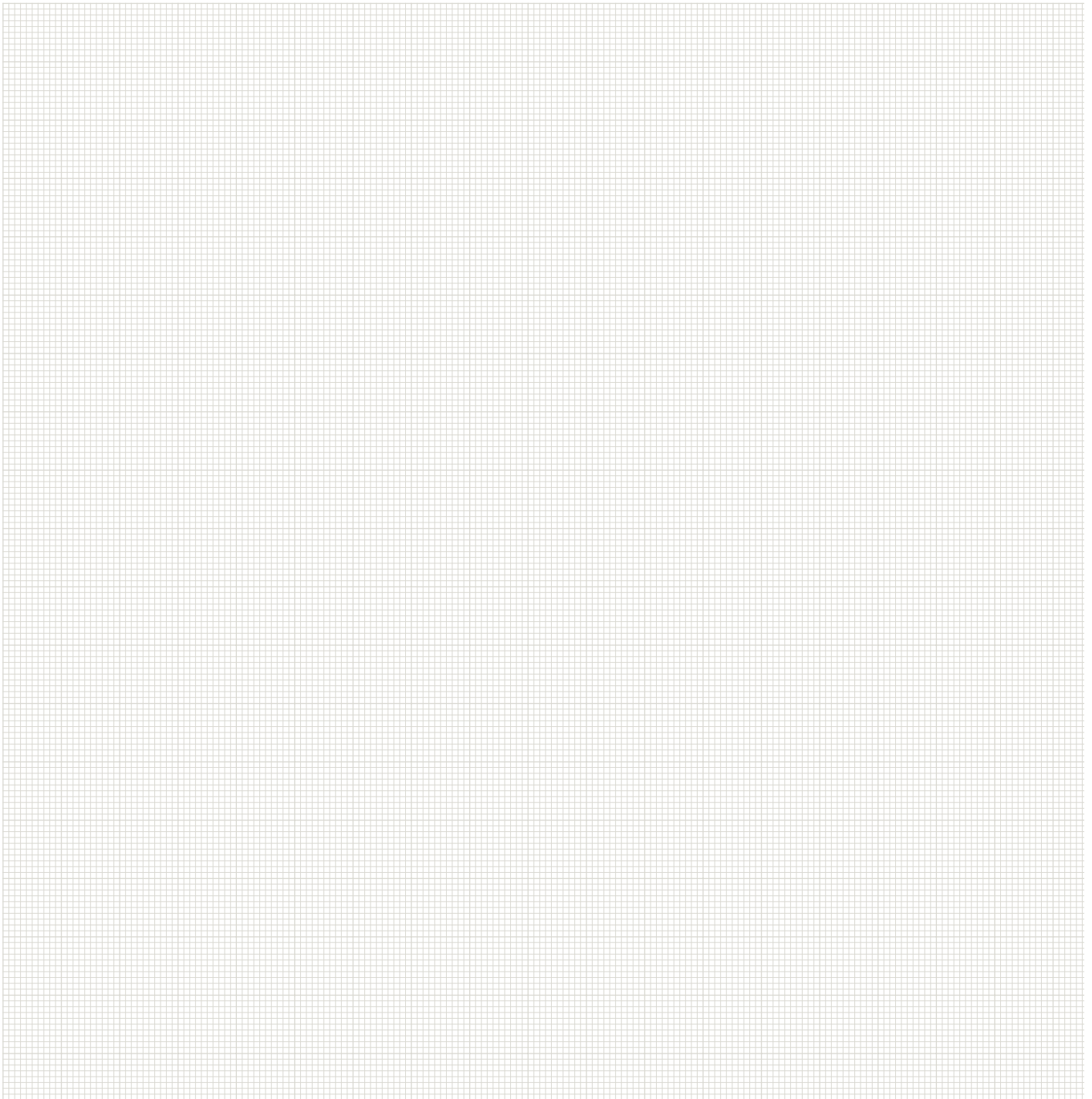
* Not required where there is a self-adhered edge.

Strip-in method

1. With DELTA®-FAS CORNER

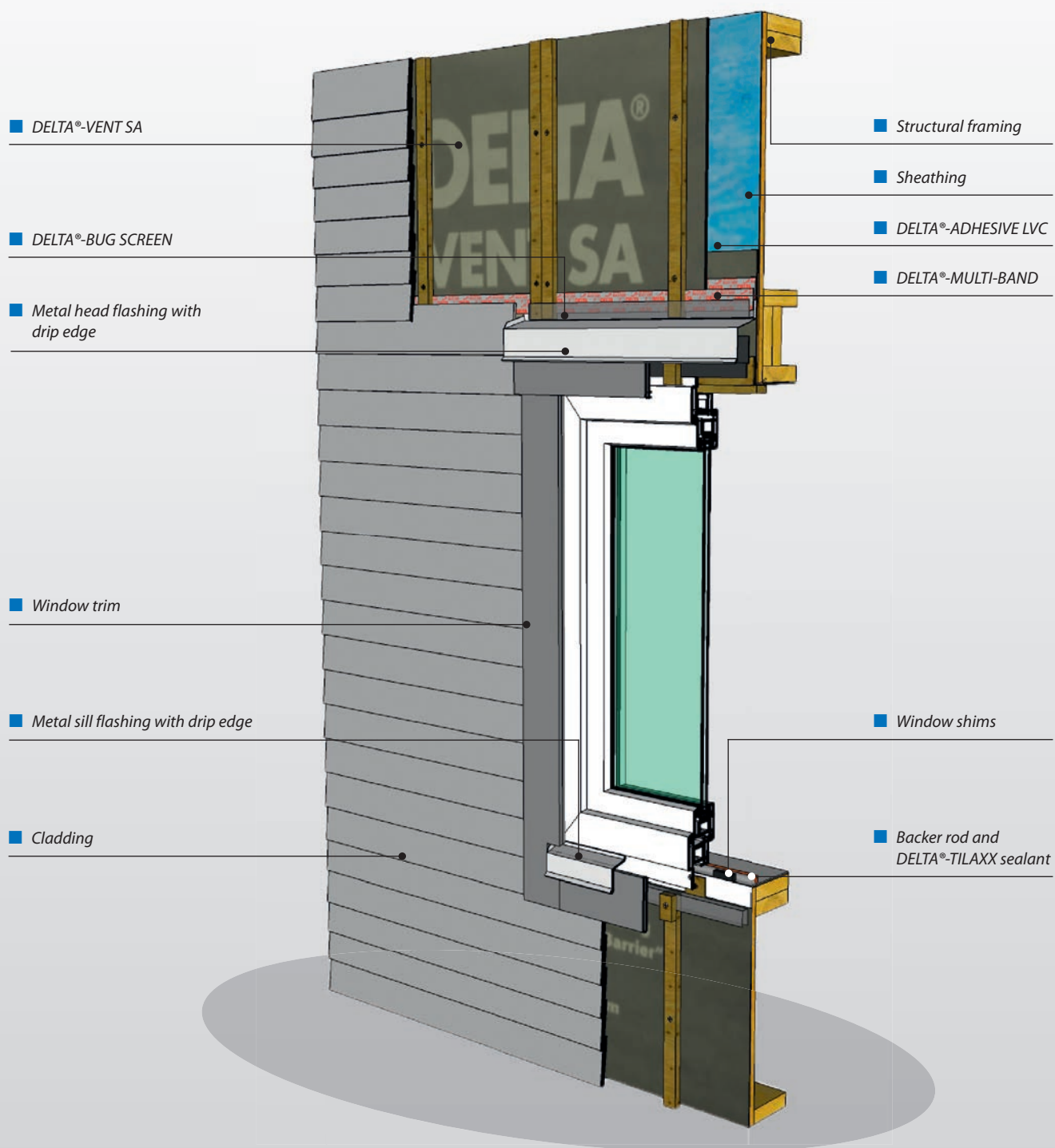


Notes

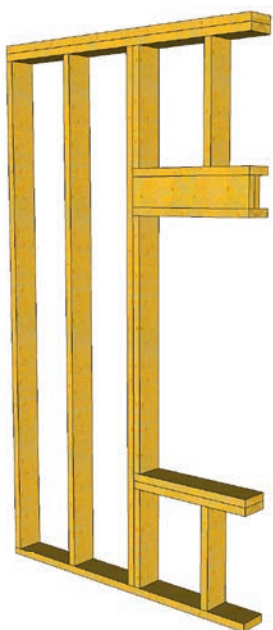


Strip-in method

2. With flat sill

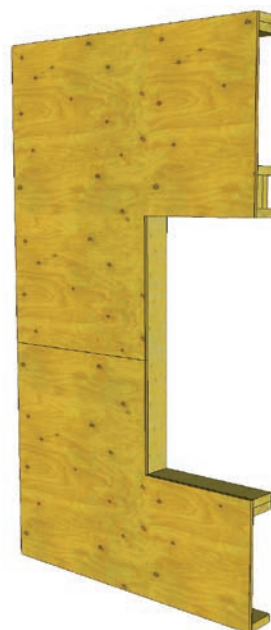


Step 1



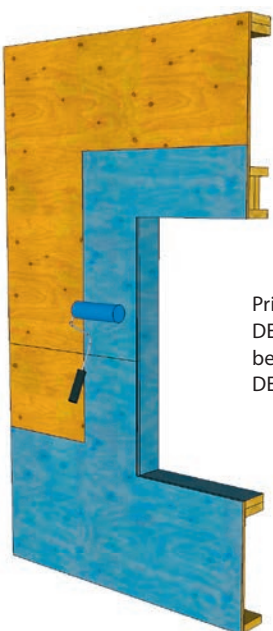
Framing

Step 2



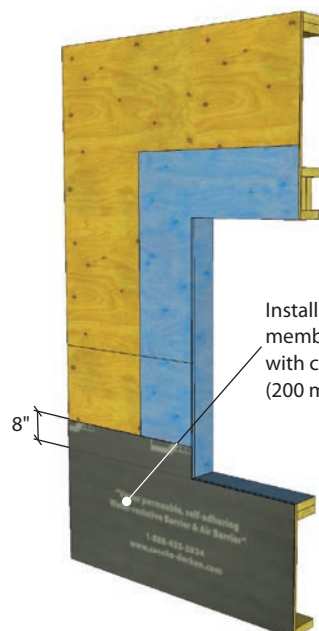
Sheathing

Step 3



Prime substrate with DELTA®-ADHESIVE LVC before applying DELTA®-VENT SA.

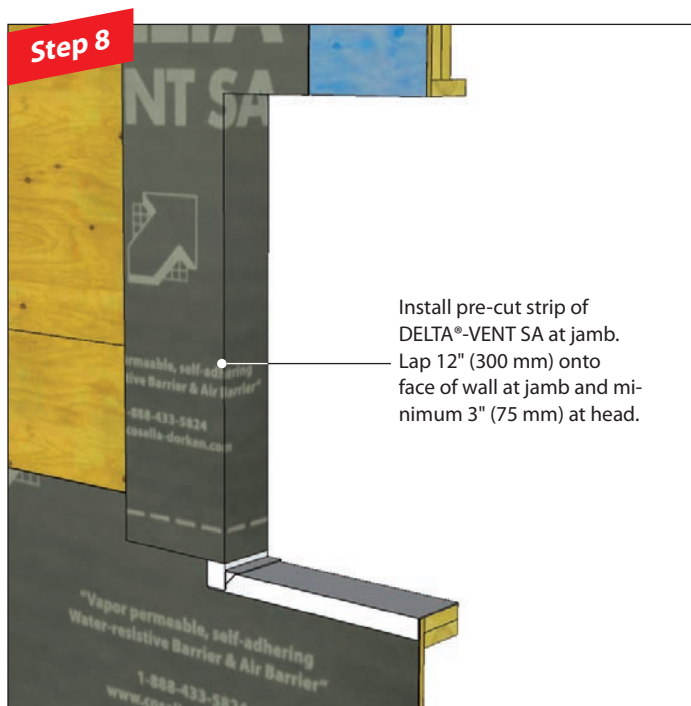
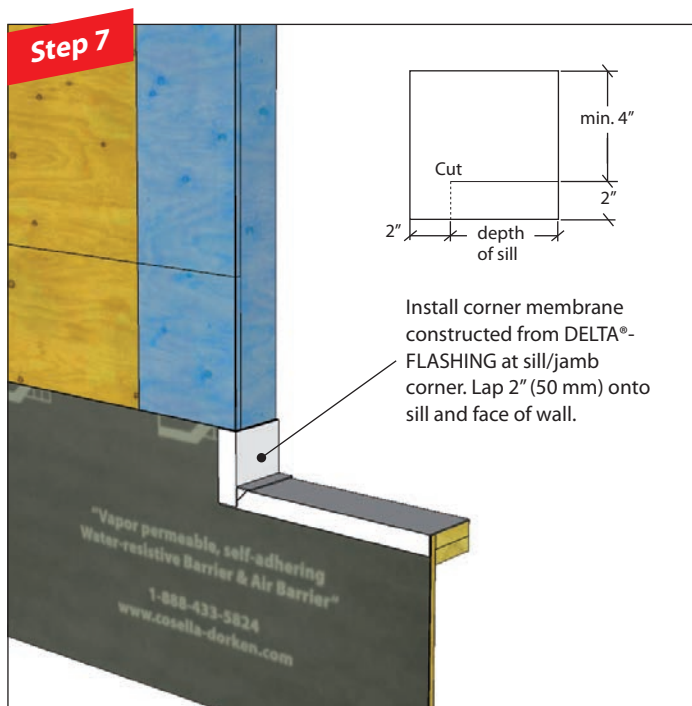
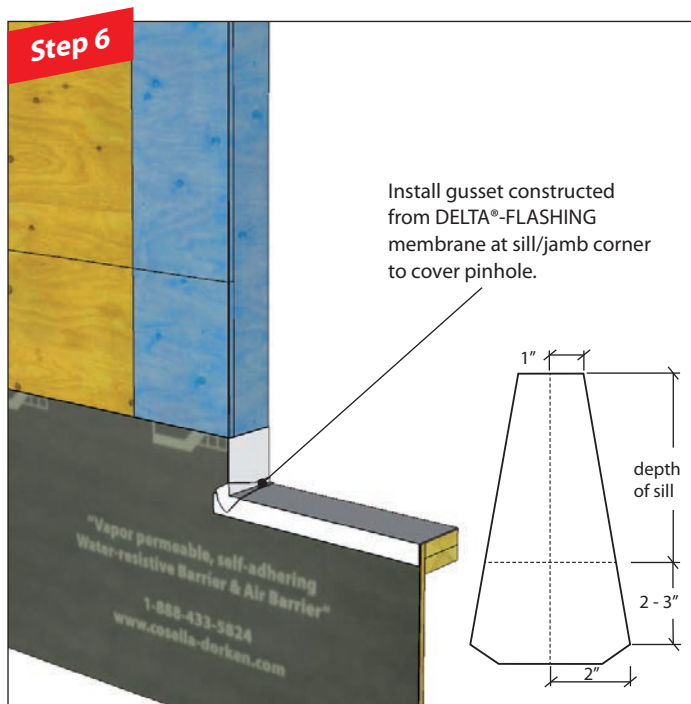
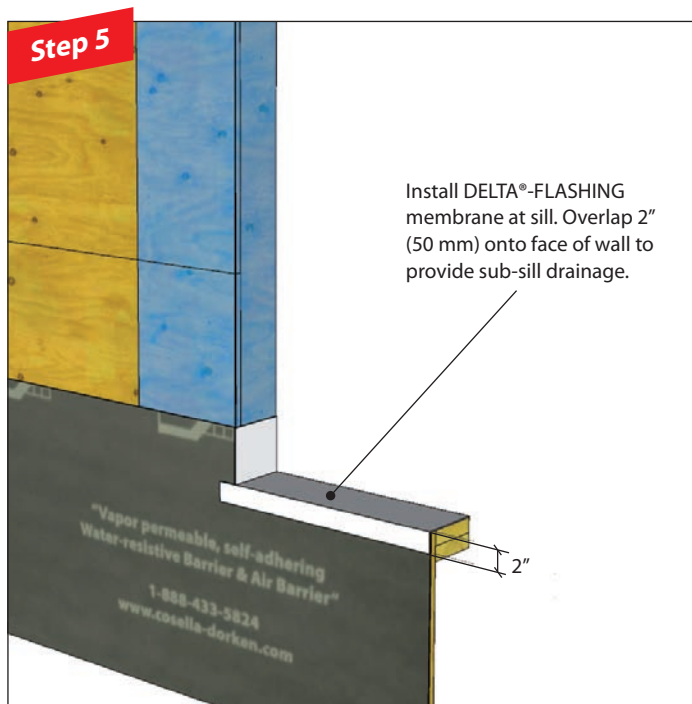
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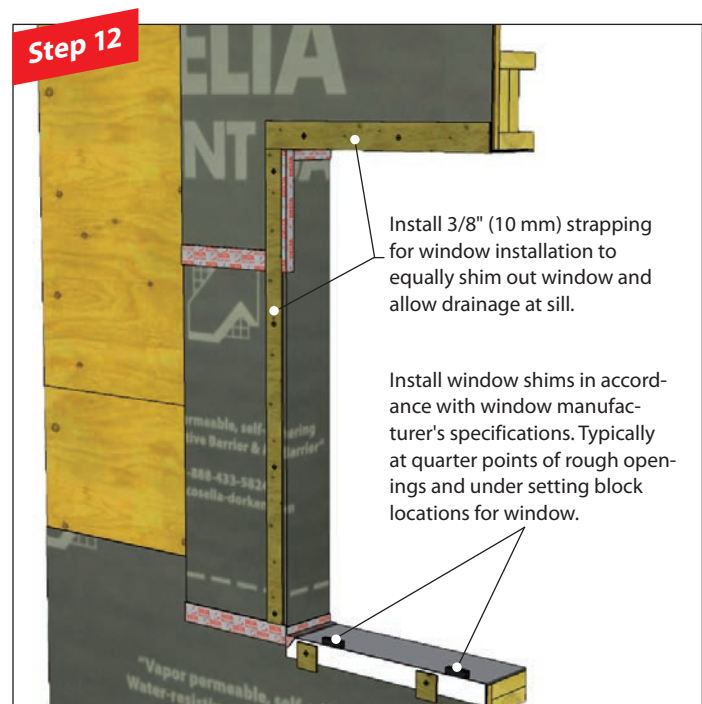
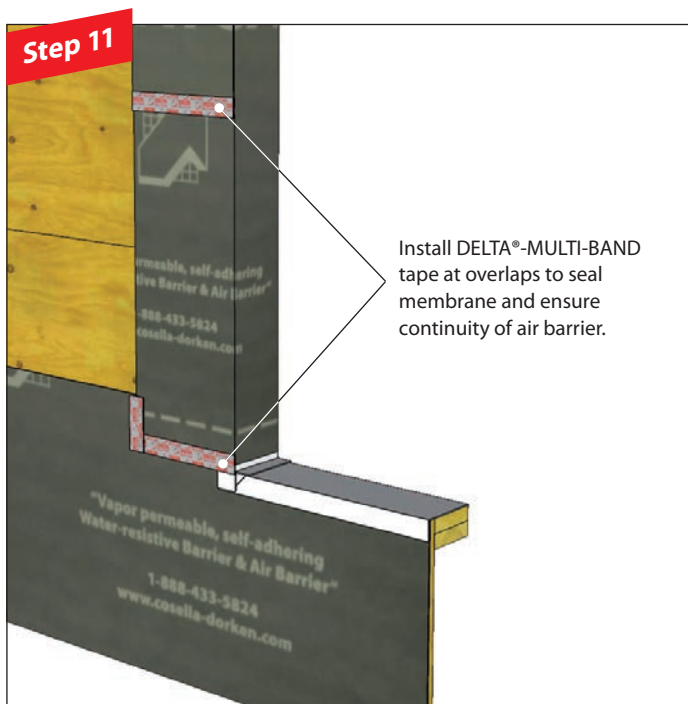


Install DELTA®-VENT SA membrane below window with cut-out minimum 8" (200 mm) above sill.

Strip-in method

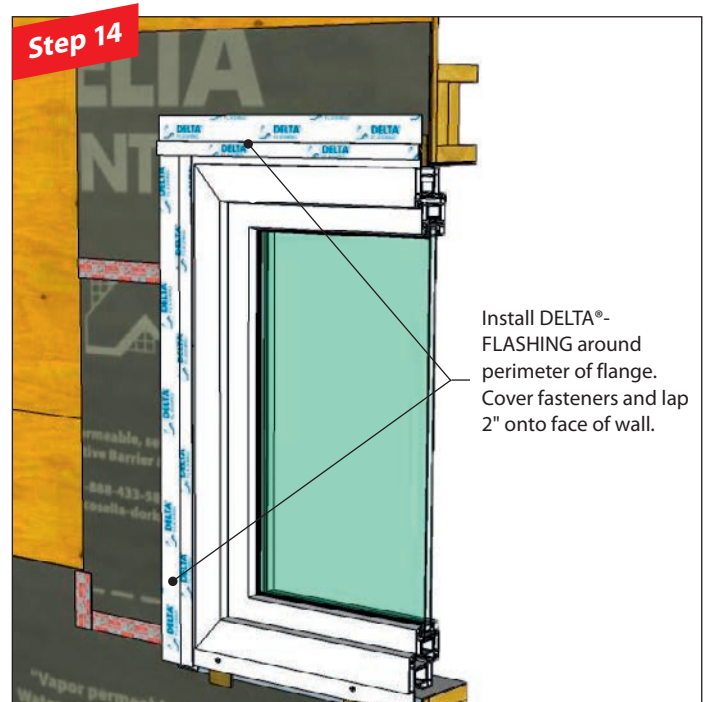
2. With flat sill

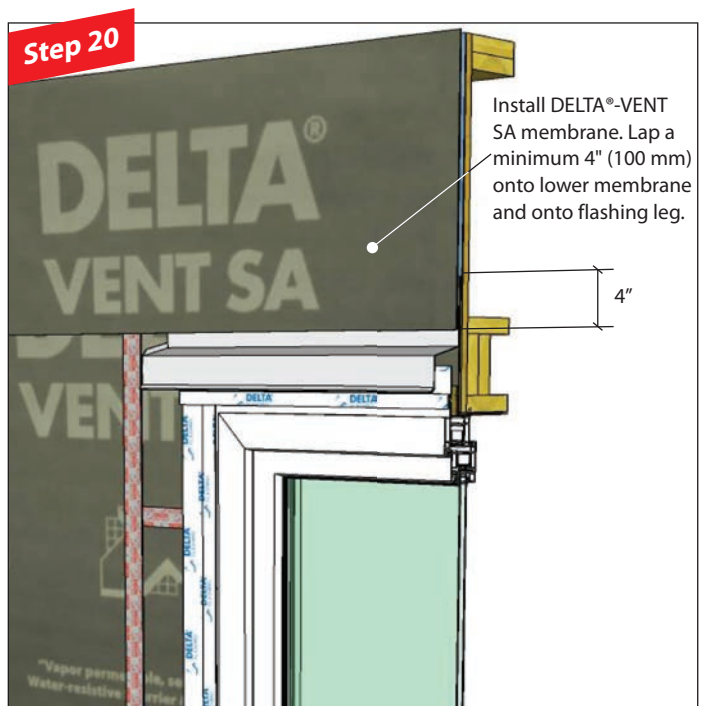
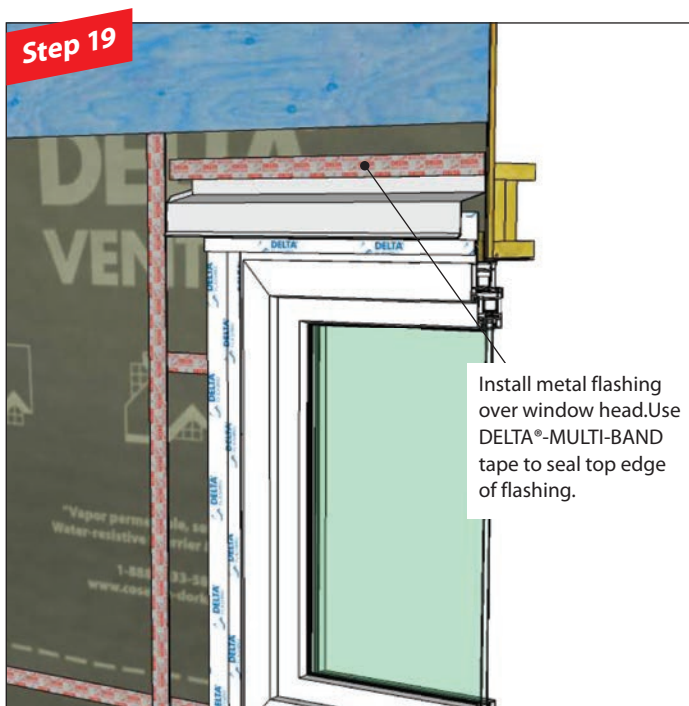
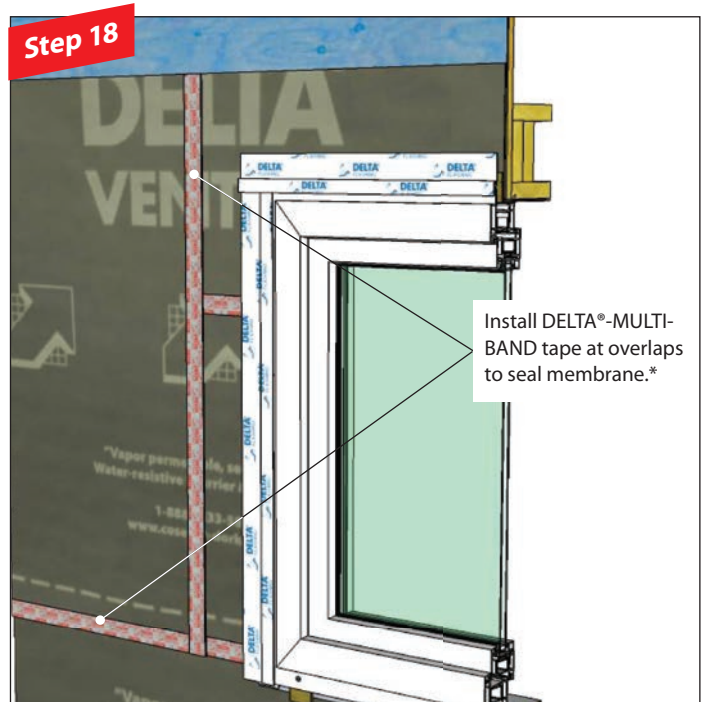
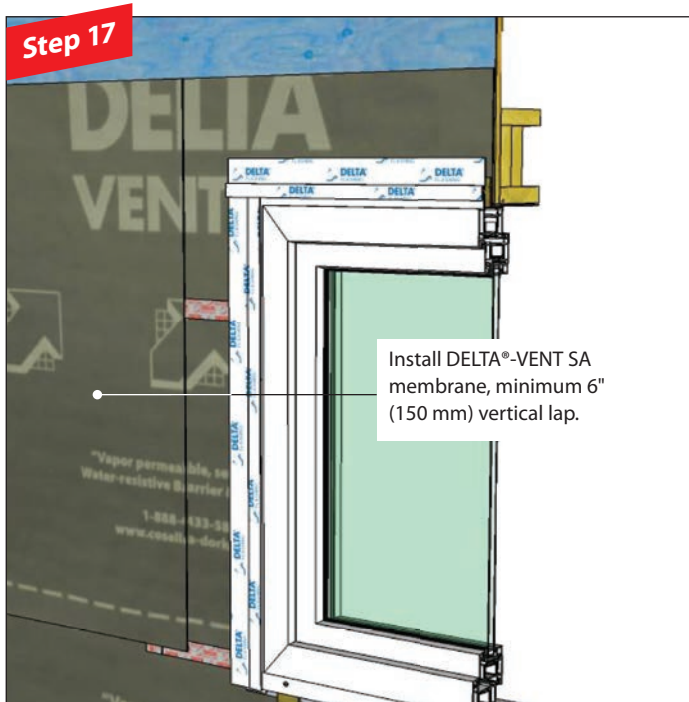




Strip-in method

2. With flat sill

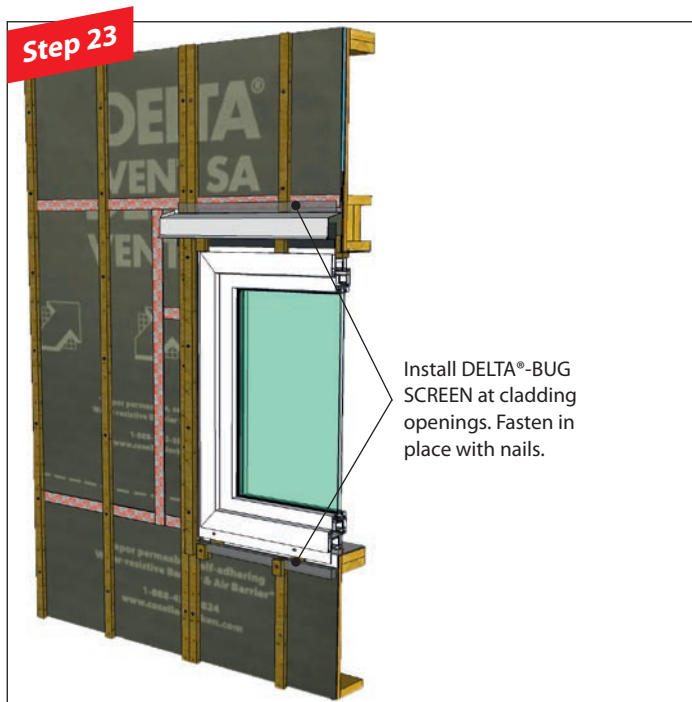
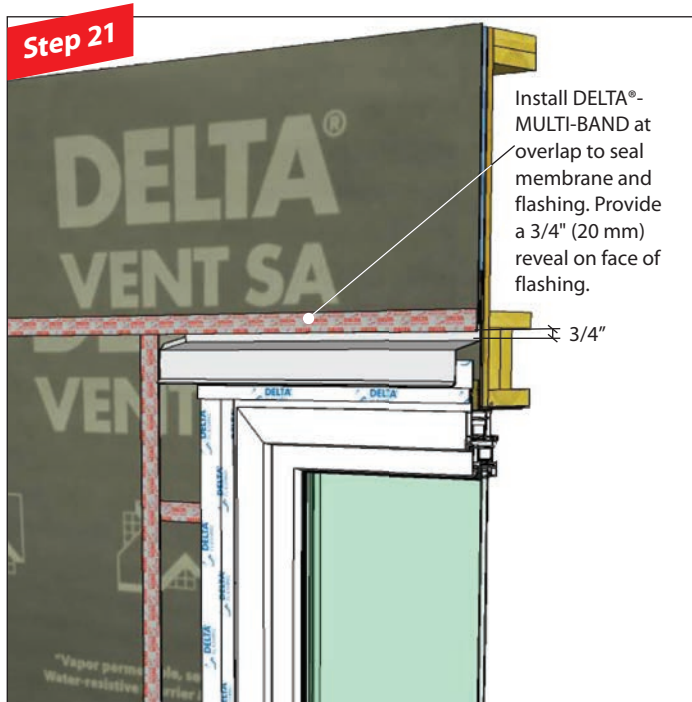




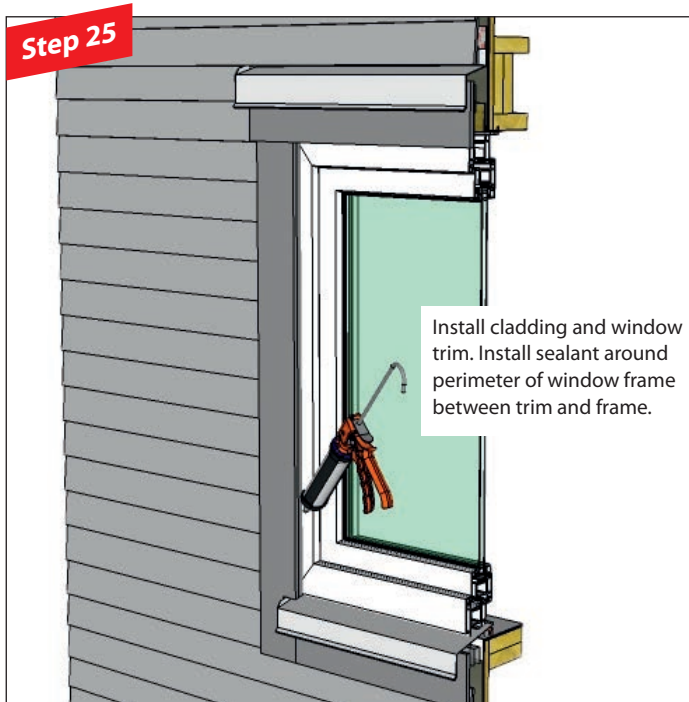
* Not required where there is a self-adhered edge.

Strip-in method

2. With flat sill

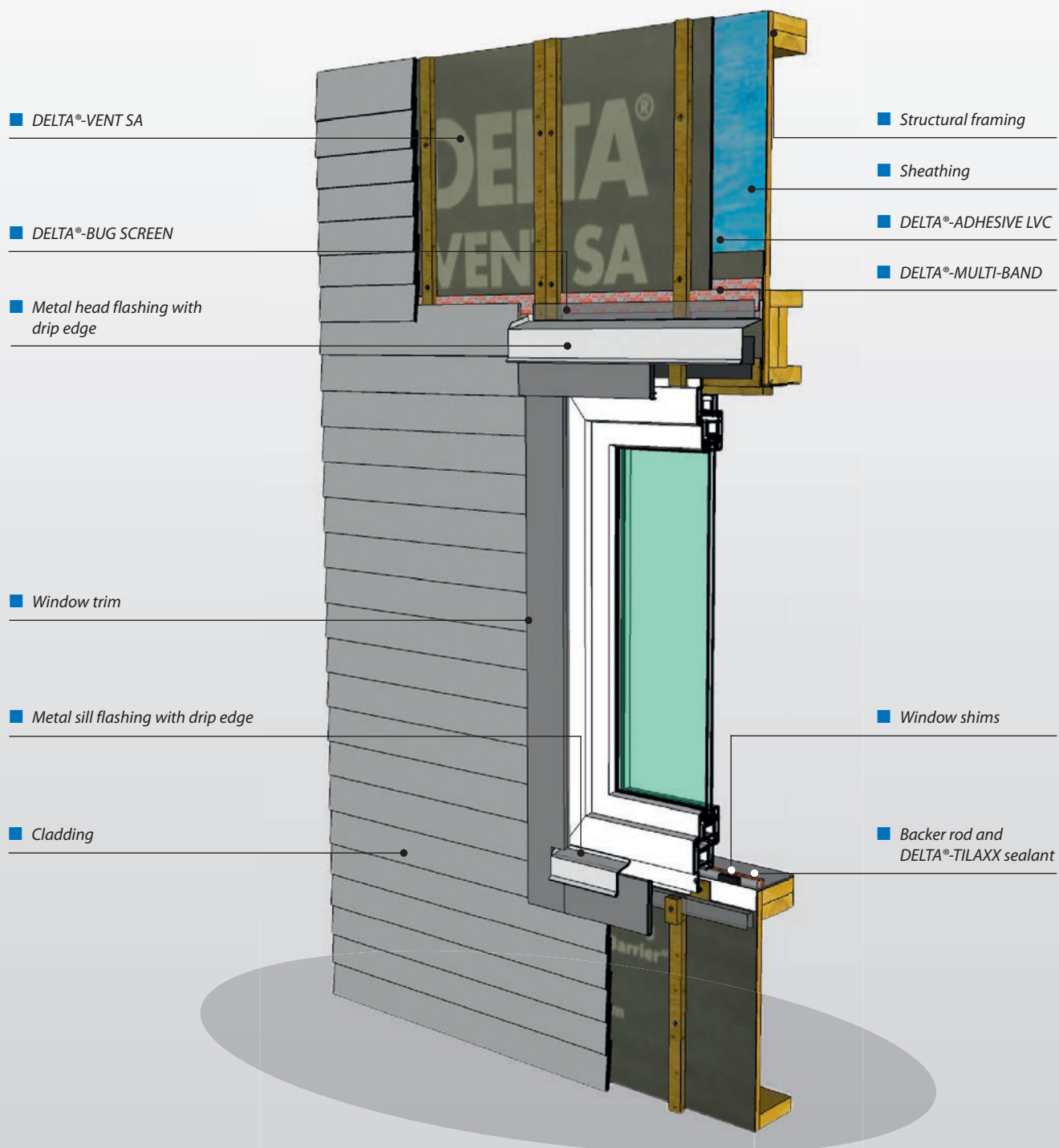


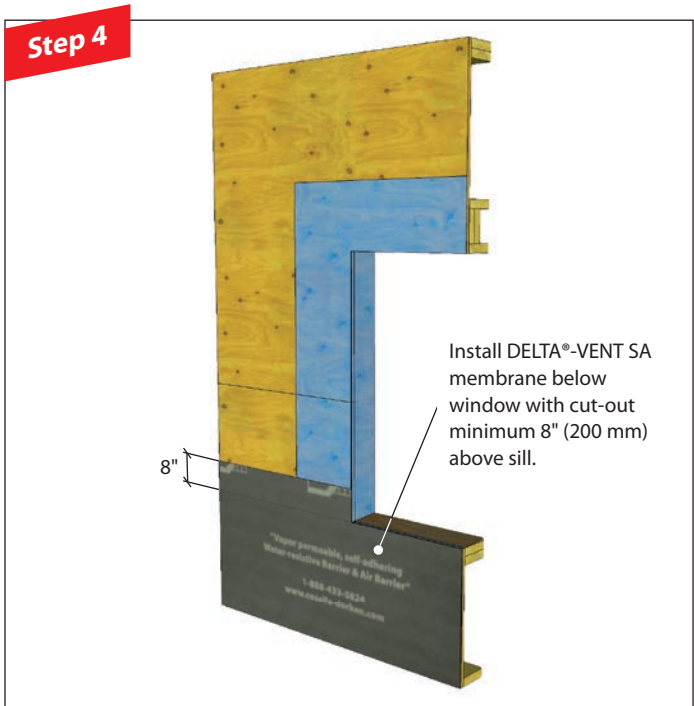
Notes



Strip-in method

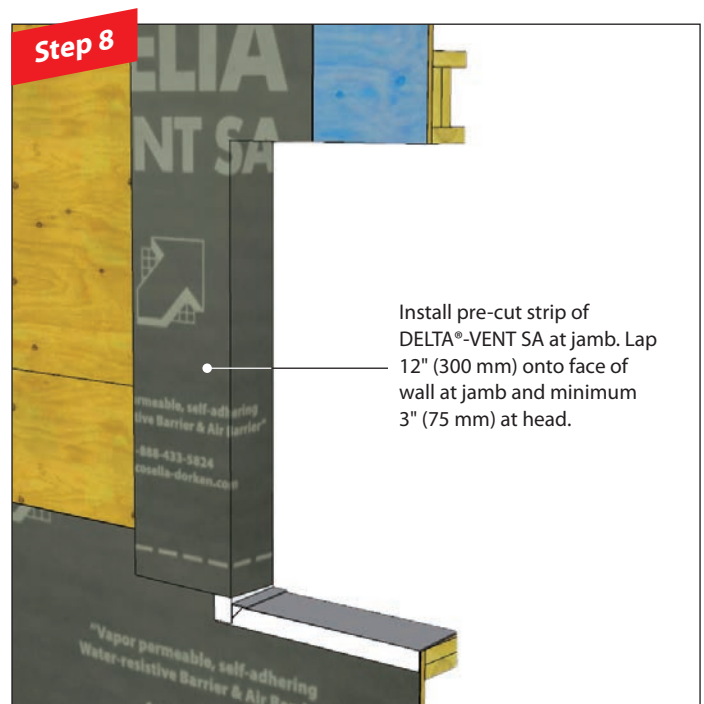
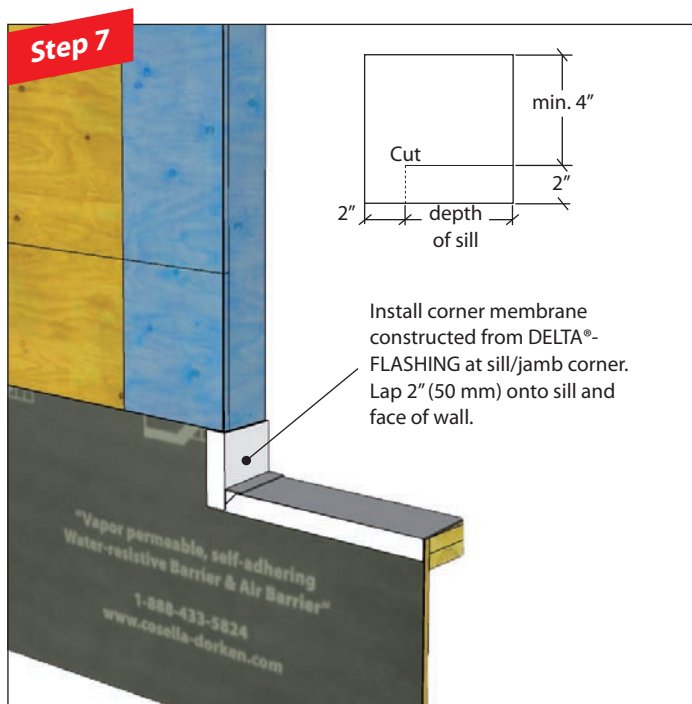
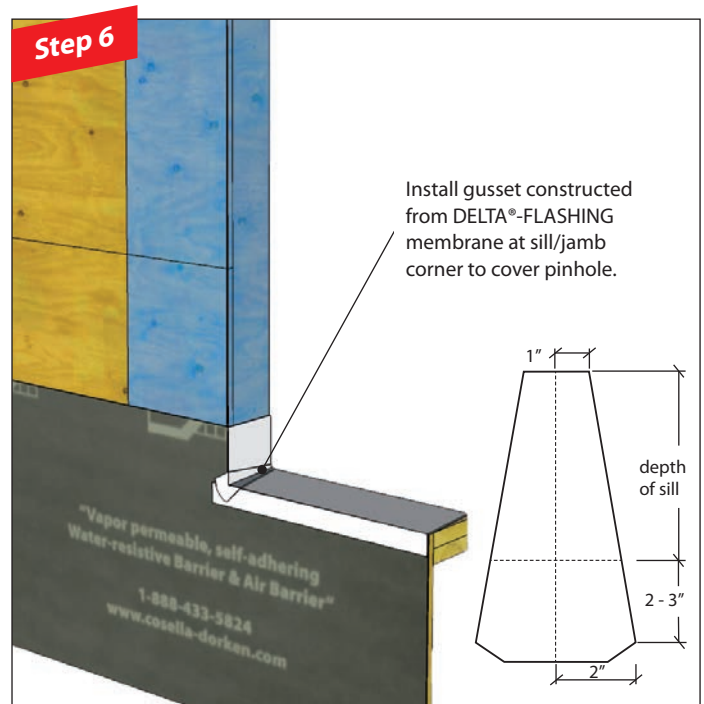
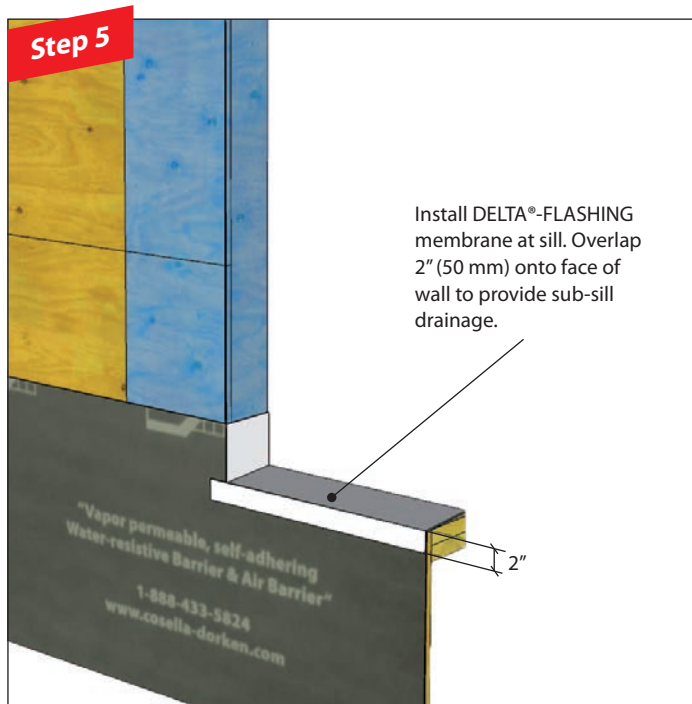
3. With sloped sill

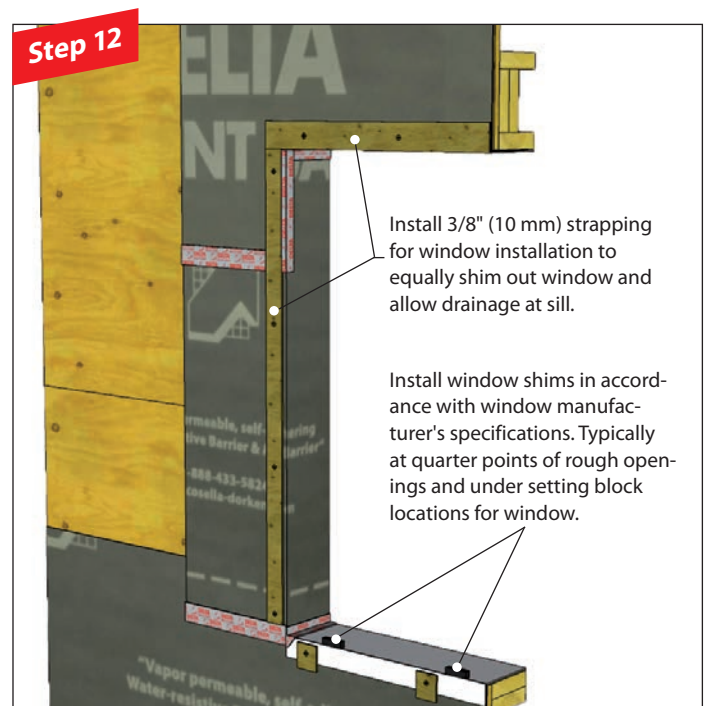
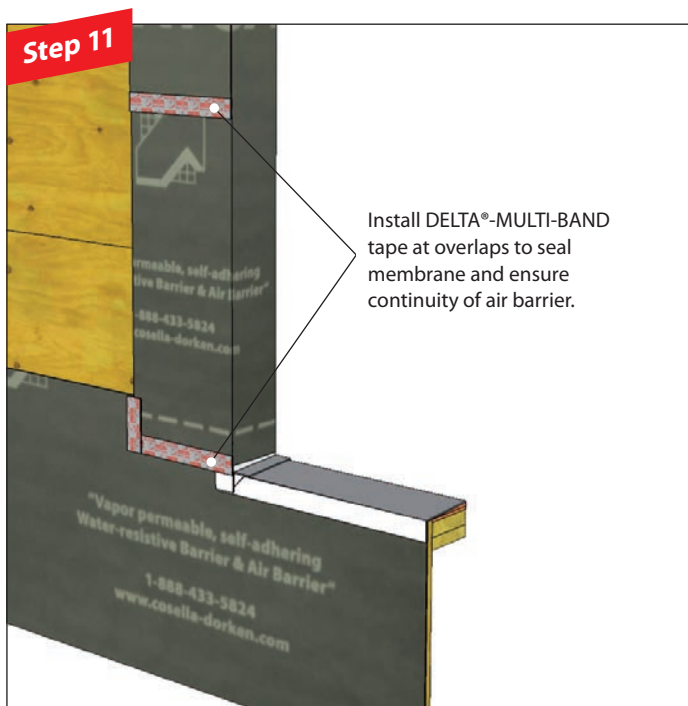
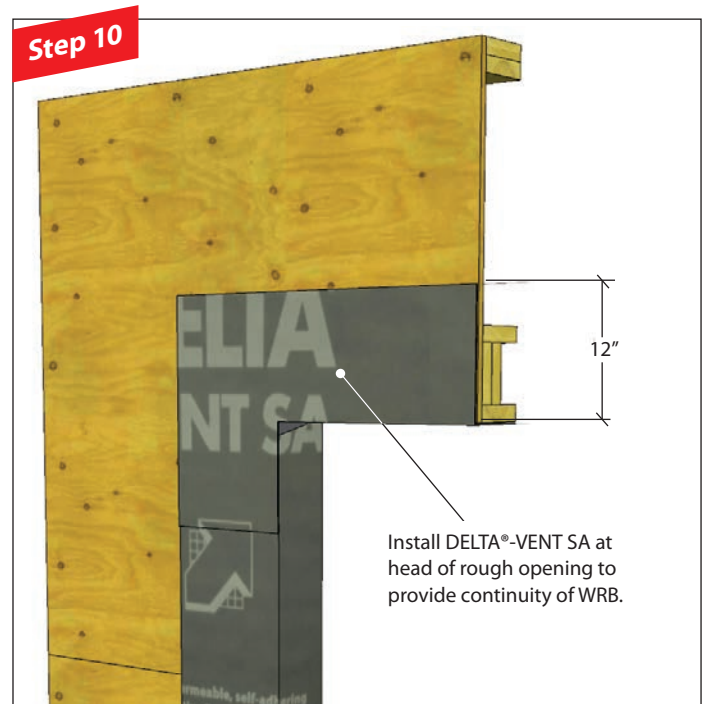




Strip-in method

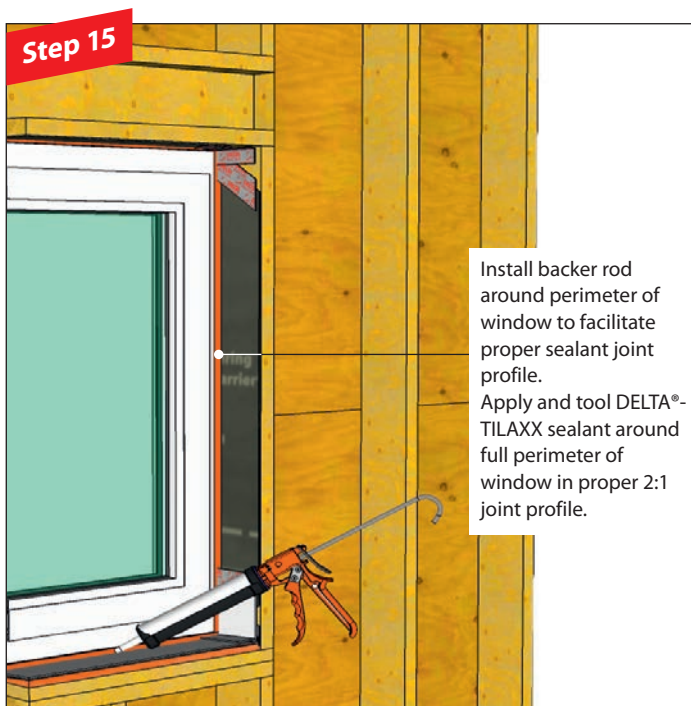
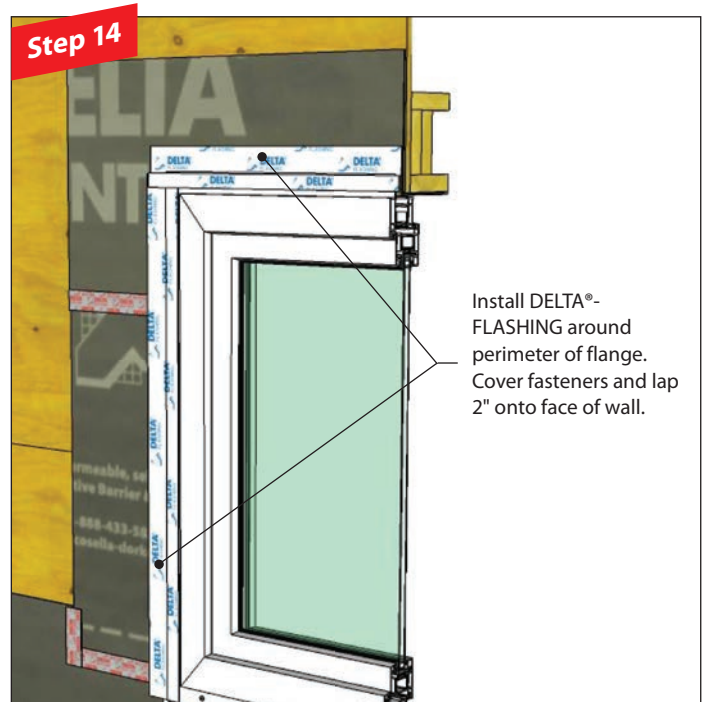
3. With sloped sill

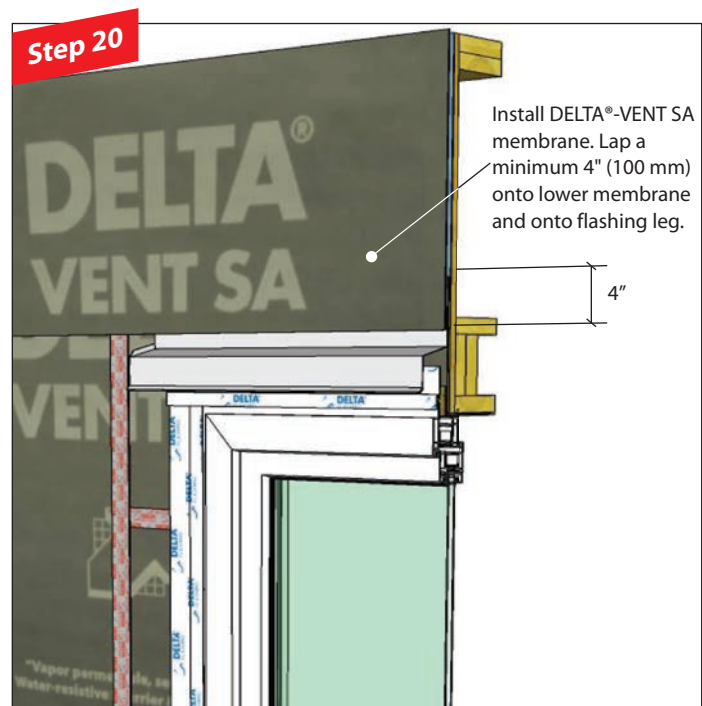
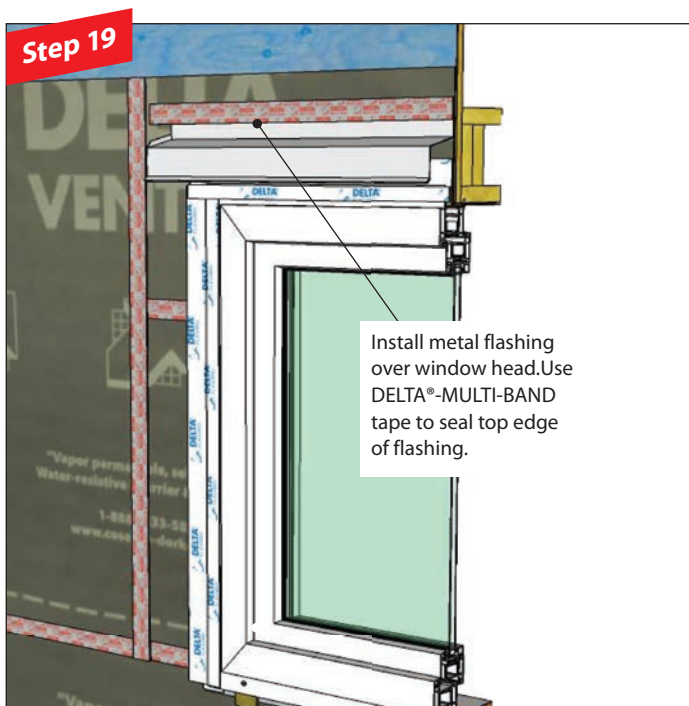
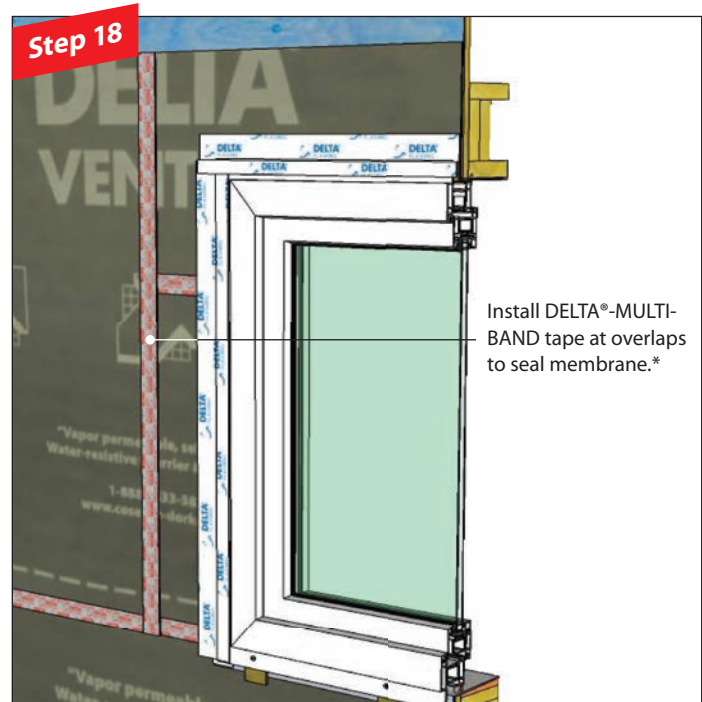
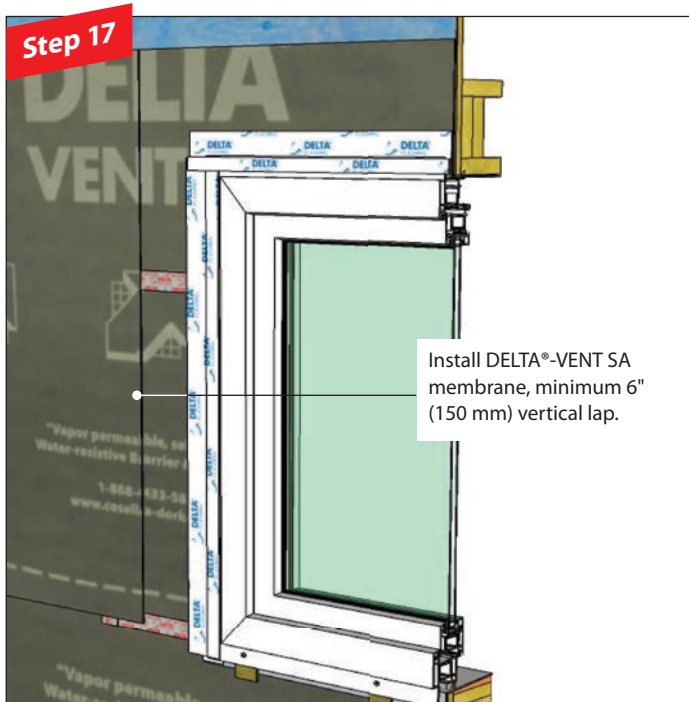




Strip-in method

3. With sloped sill

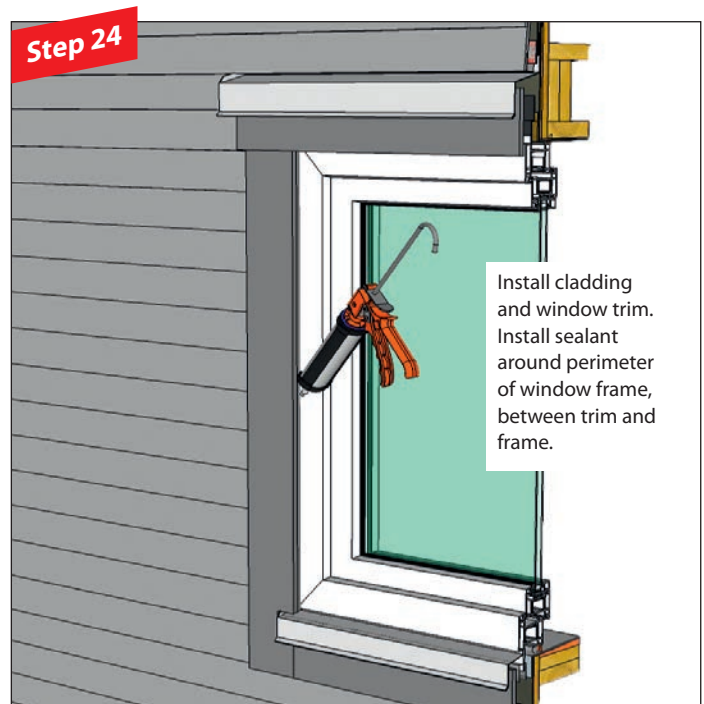
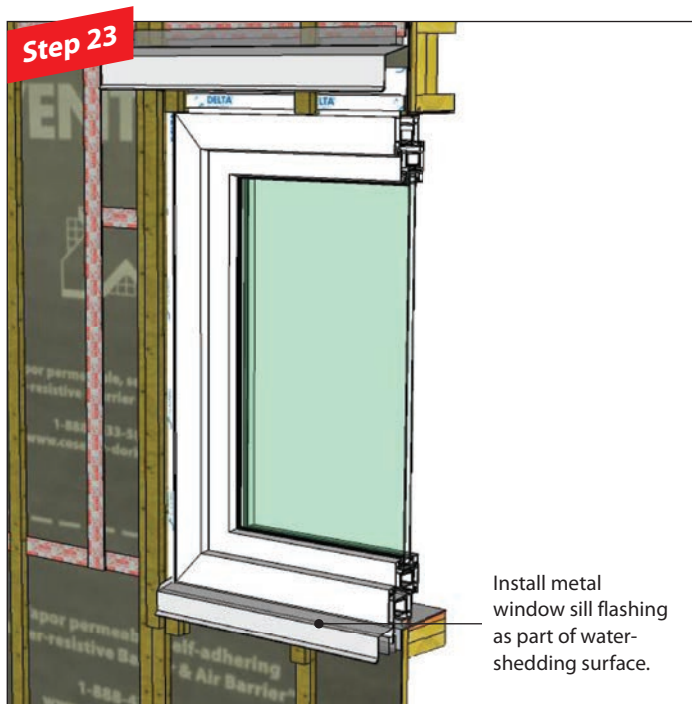
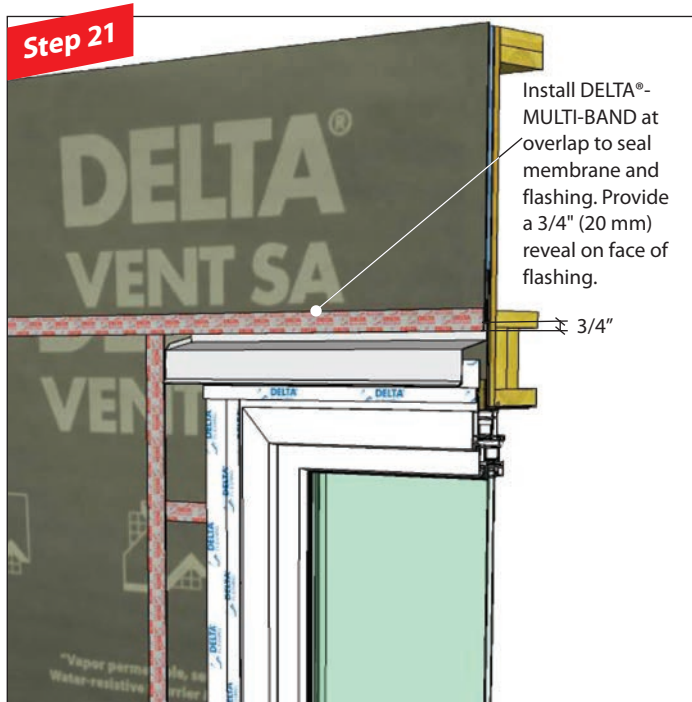




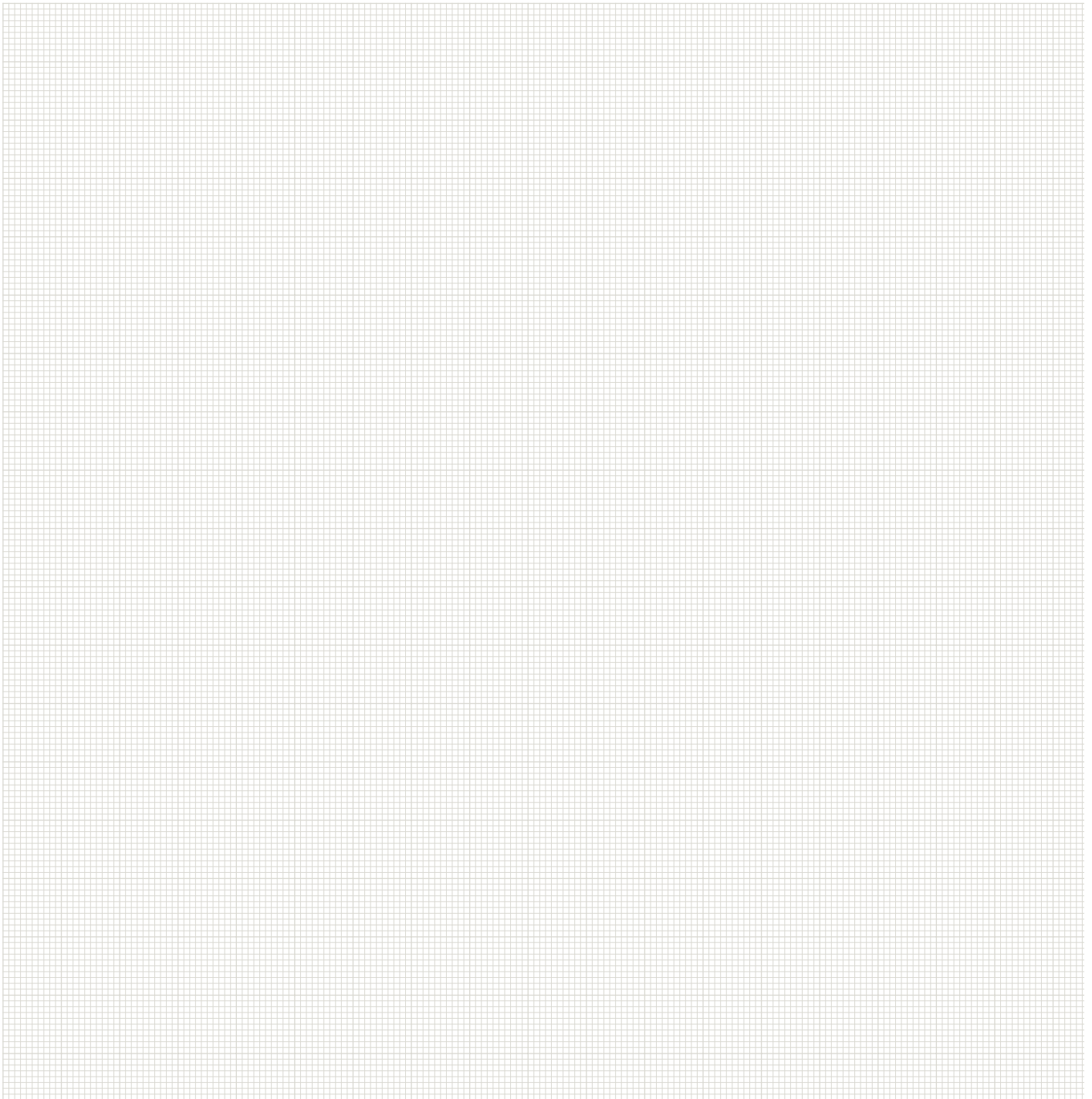
* Not required where there is a self-adhered edge.

Strip-in method

3. With sloped sill

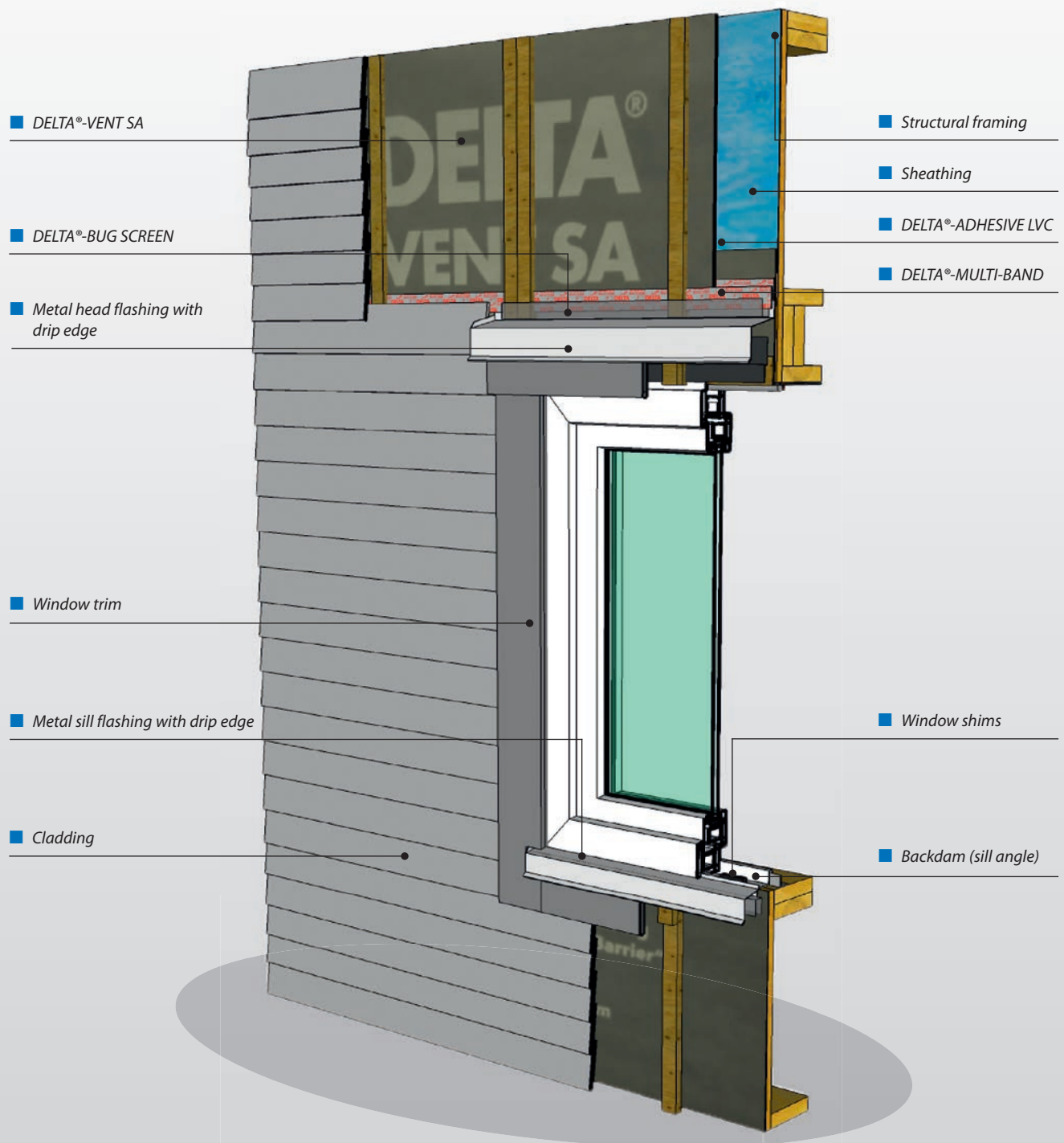


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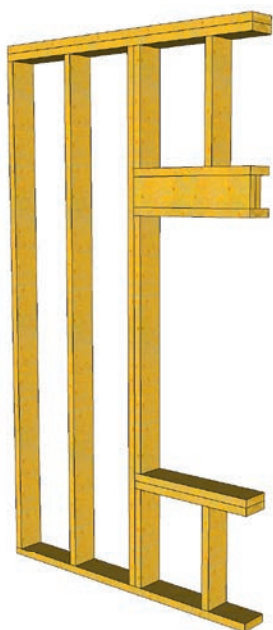


Strip-in method

4. With backdam

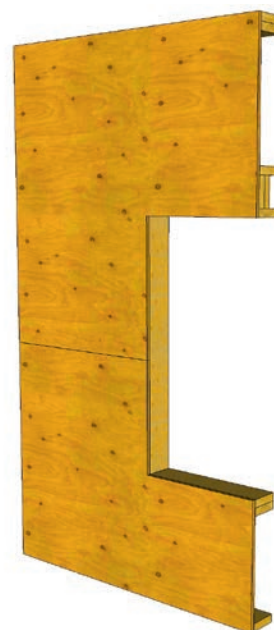


Step 1



Framing

Step 2



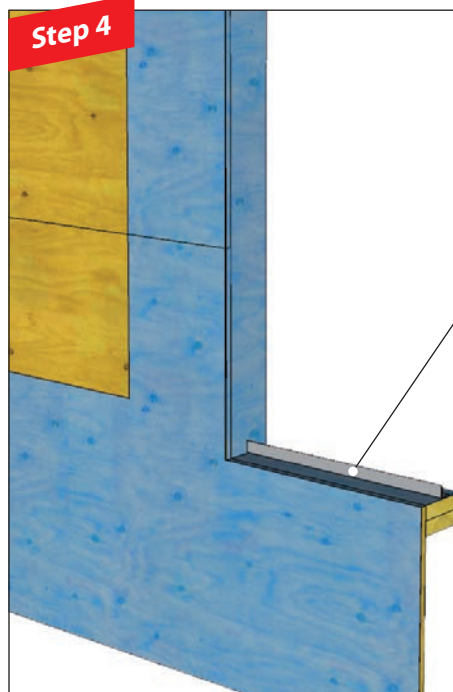
Sheathing

Step 3



Prime substrate with
DELTA®-ADHESIVE LVC
before applying
DELTA®-VENT SA.

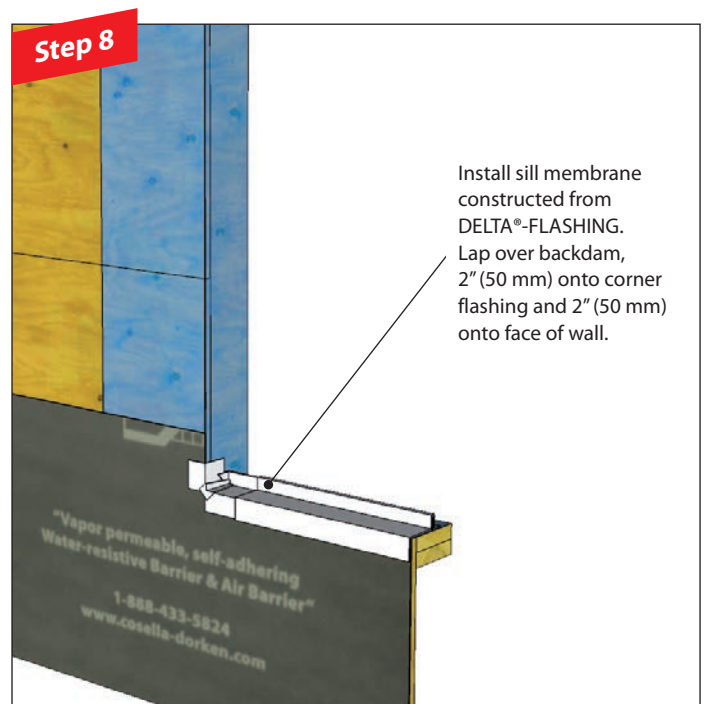
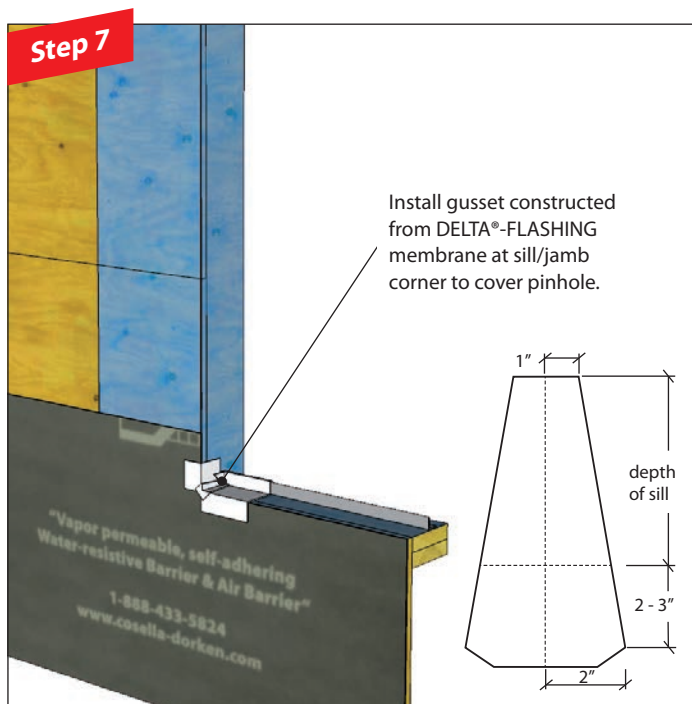
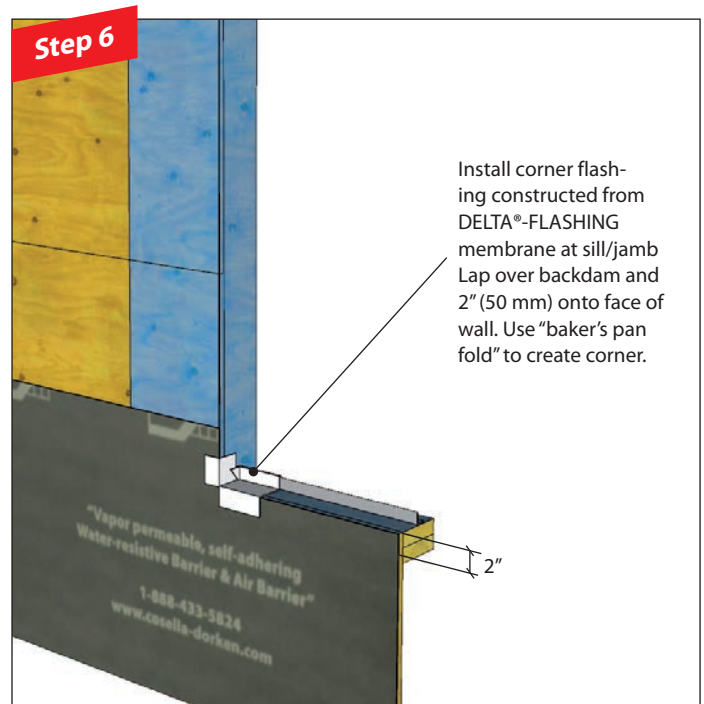
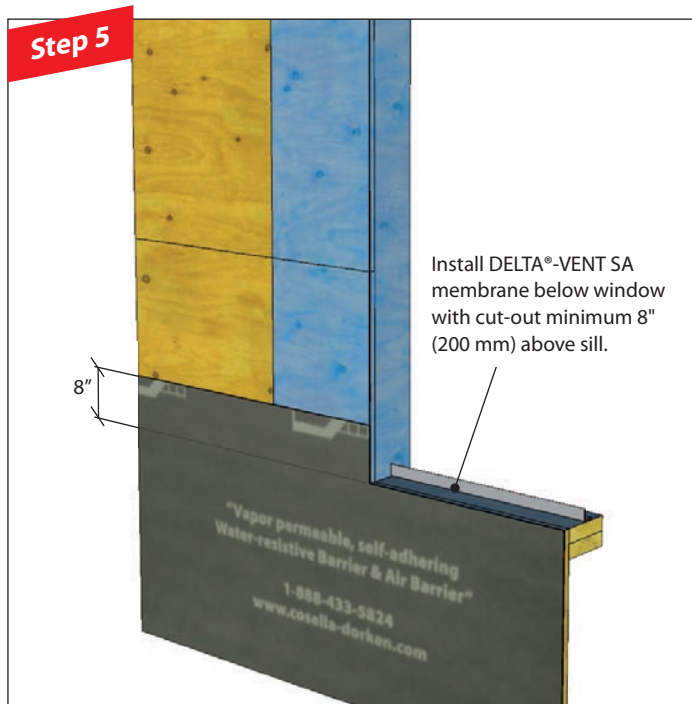
Step 4

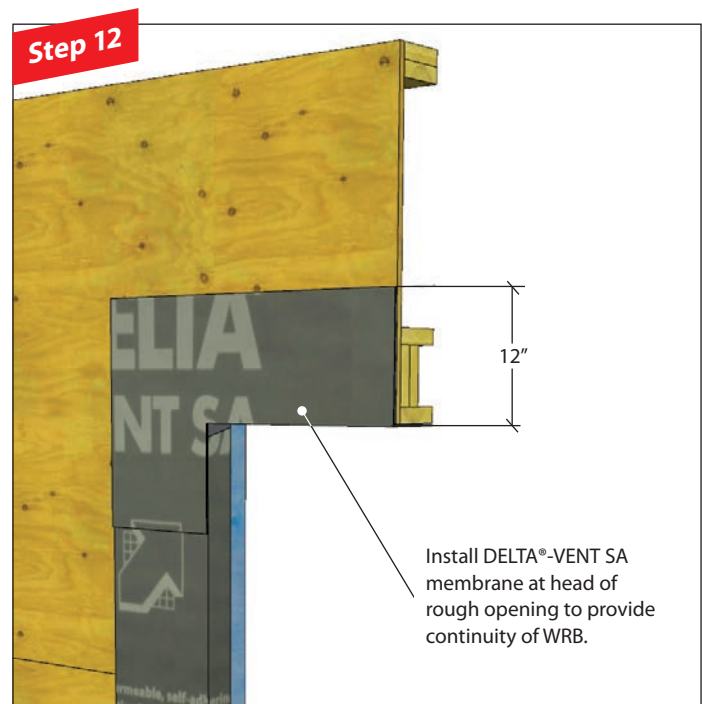
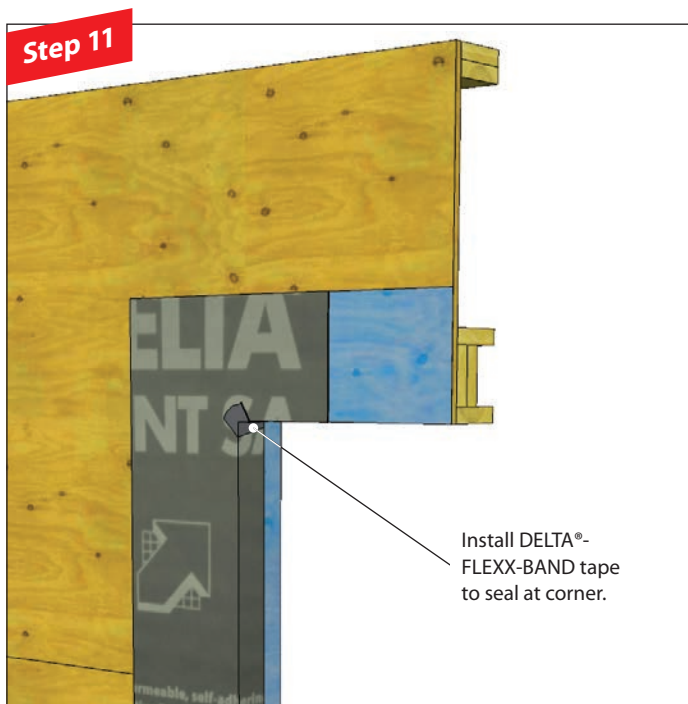
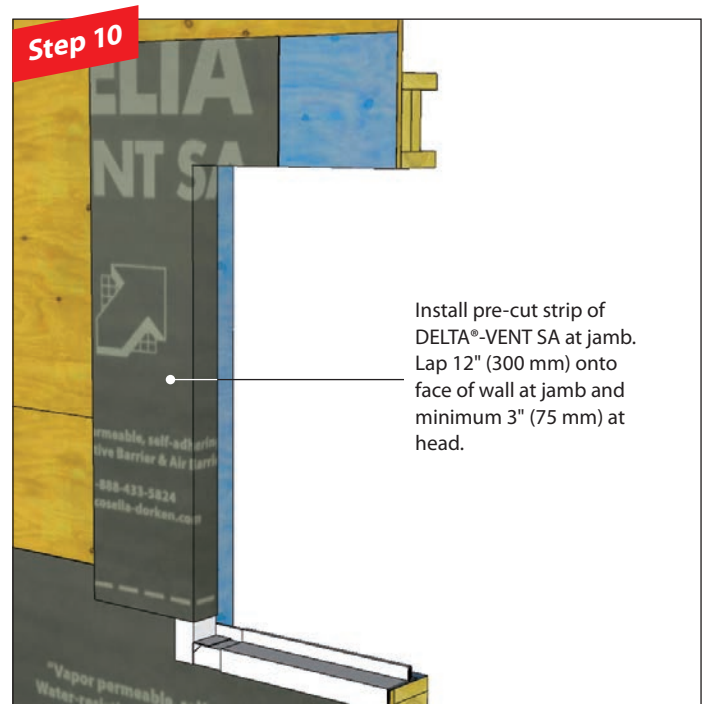
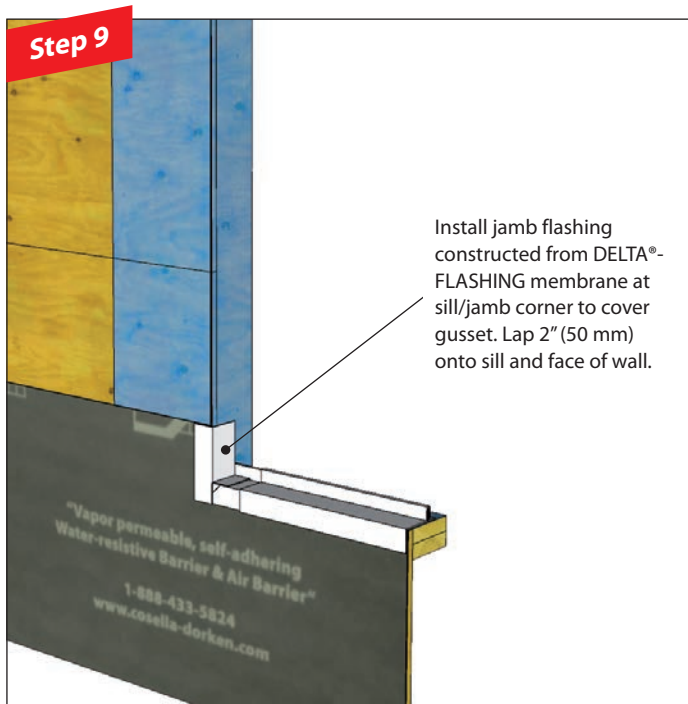


Install backdam
at expected
depth of window.

Strip-in method

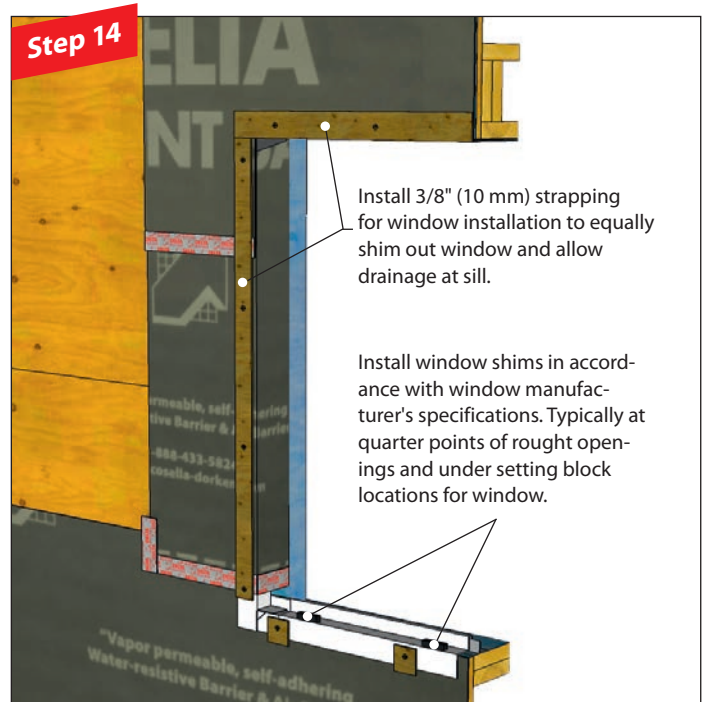
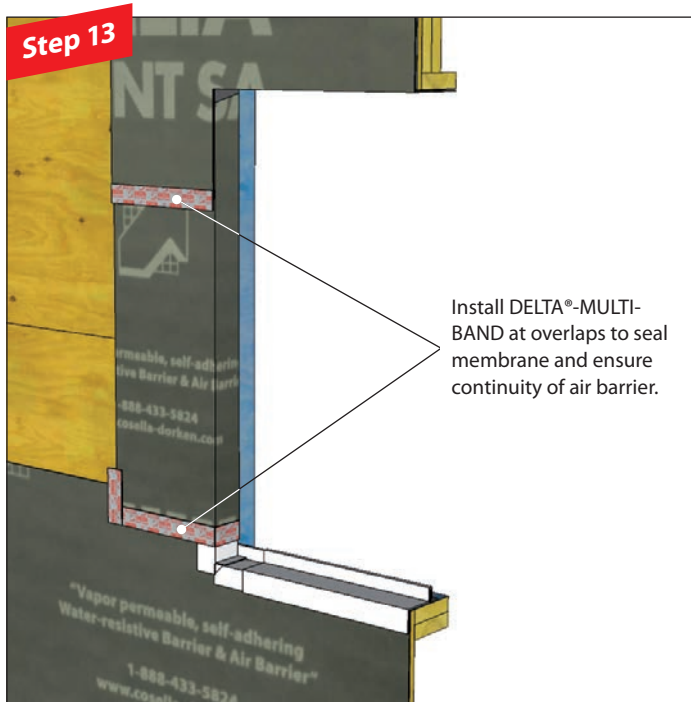
4. With backdam

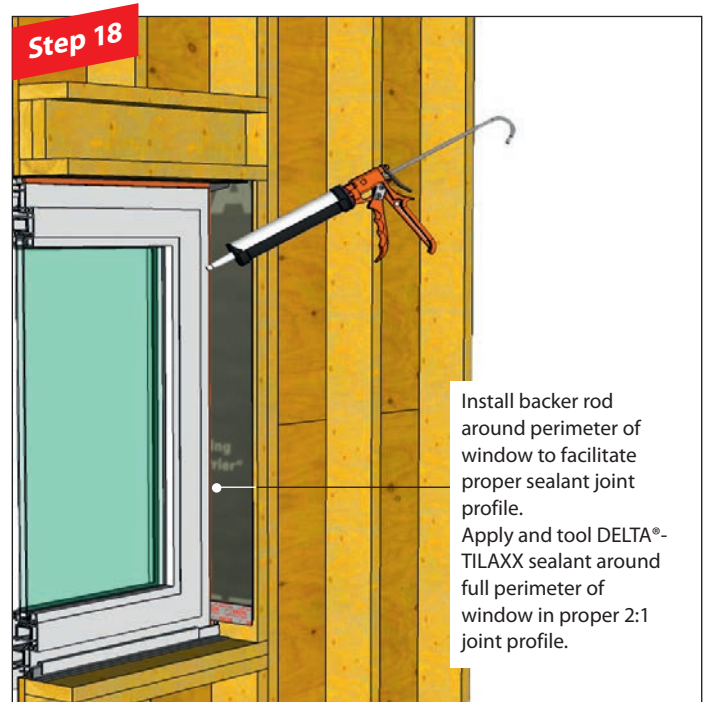




Strip-in method

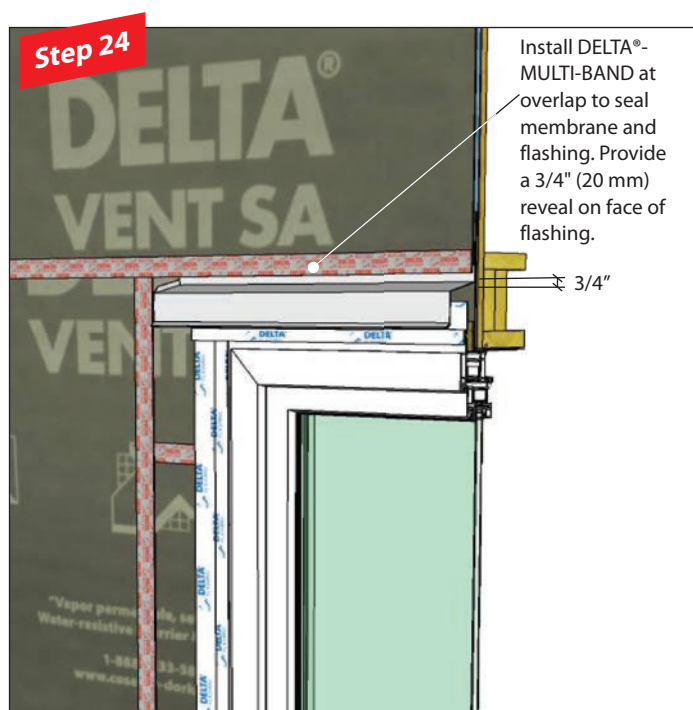
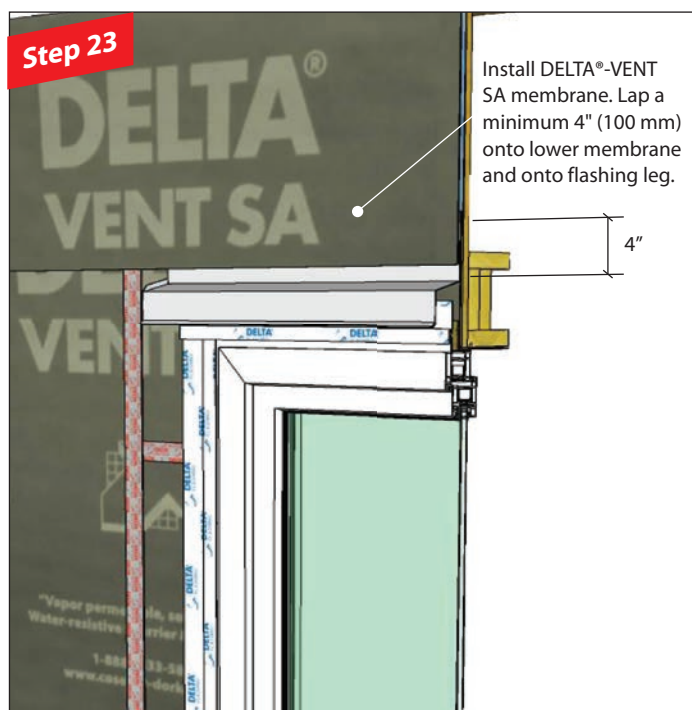
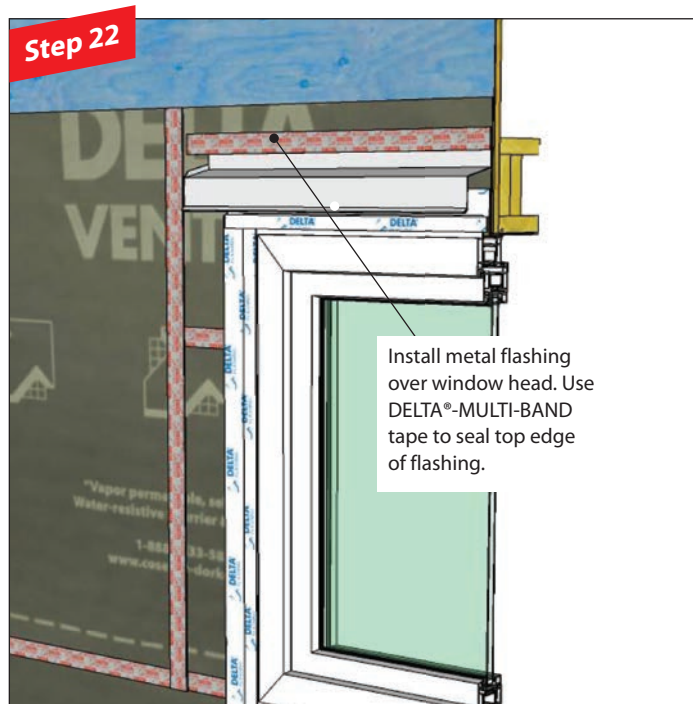
4. With backdam





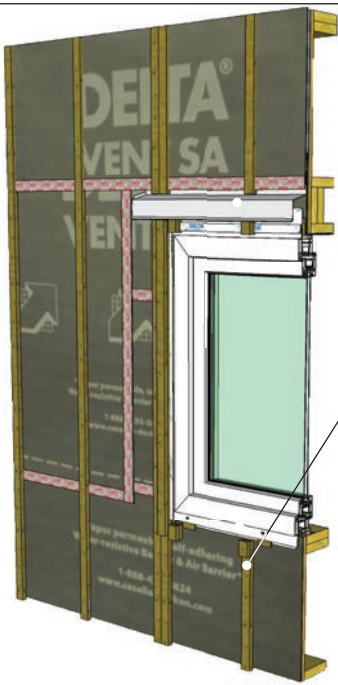
Strip-in method

4. With backdam



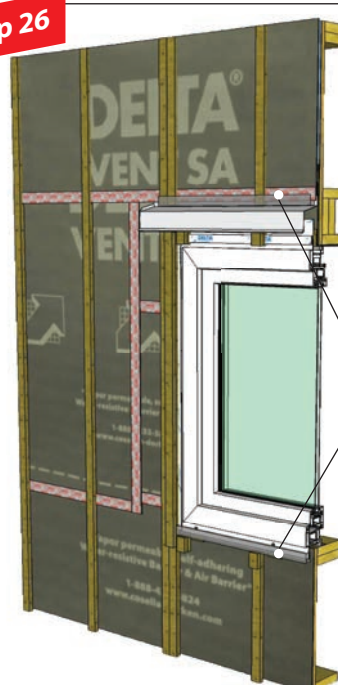
* Not required where there is a self-adhered edge.

Step 25



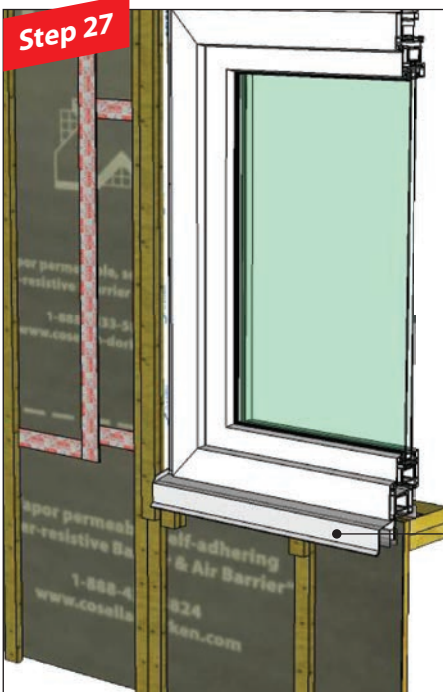
Install vertical strapping for cladding attachment and to provide cavity for drainage and venting.

Step 26



Install DELTA®-BUG SCREEN at cladding openings. Fasten in place with nails.

Step 27



Install metal window sill flashing as part of water-shedding surface.

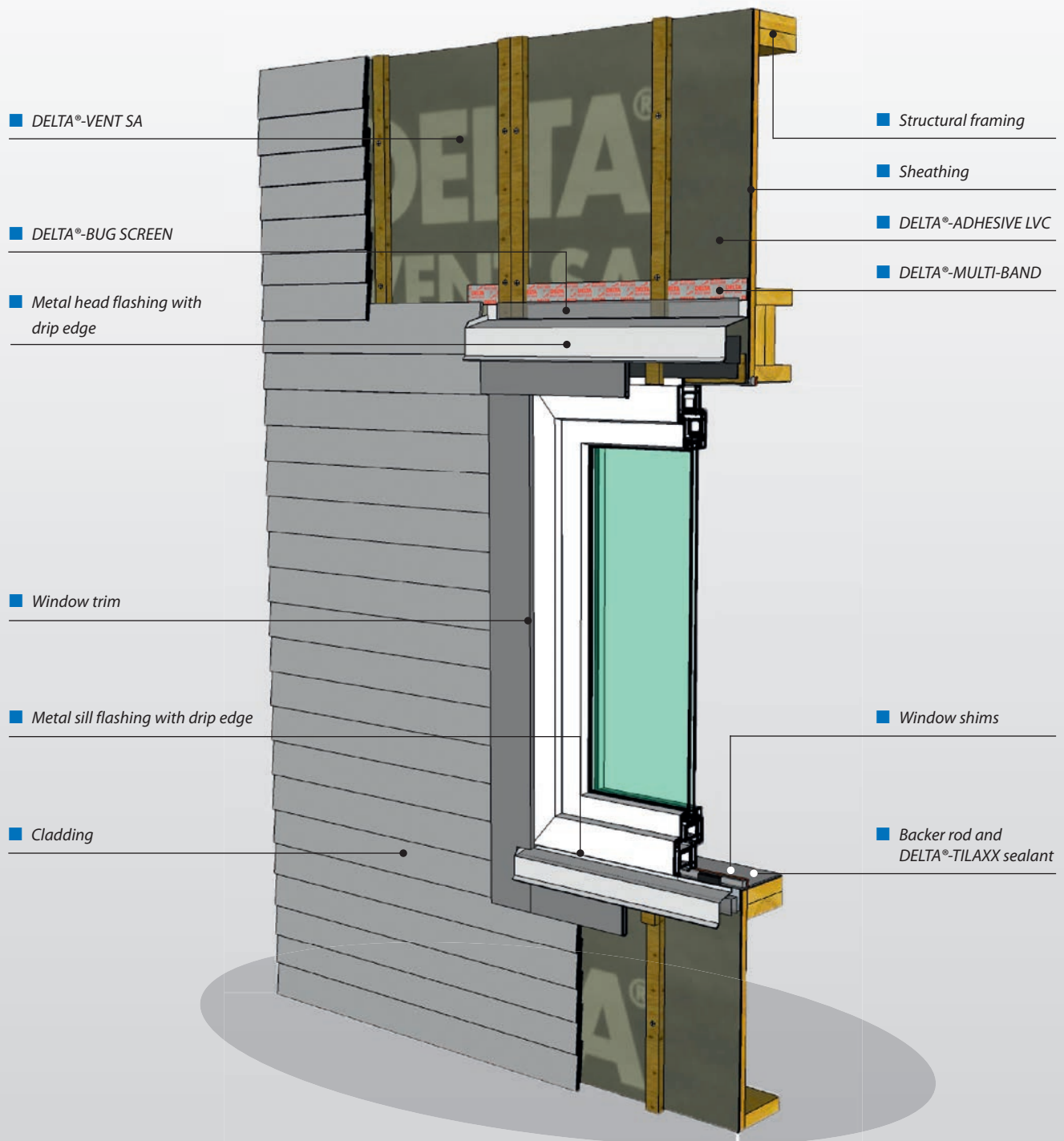
Step 28



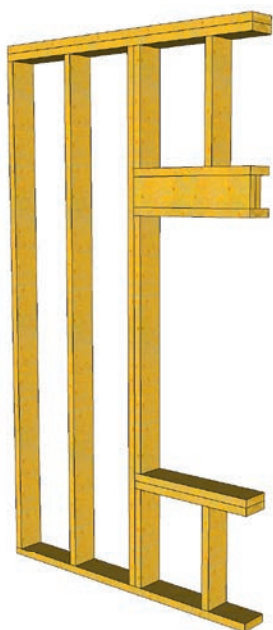
Install cladding and window trim. Install sealant around perimeter of window frame, between trim and frame.

Cut-out method

5. With DELTA®-FAS CORNER

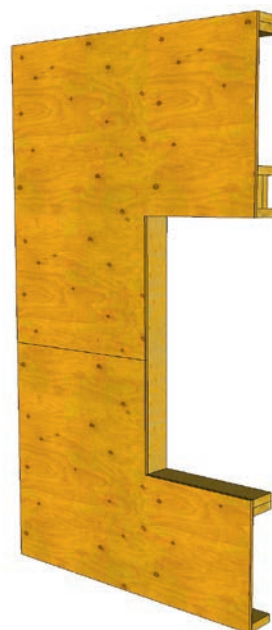


Step 1



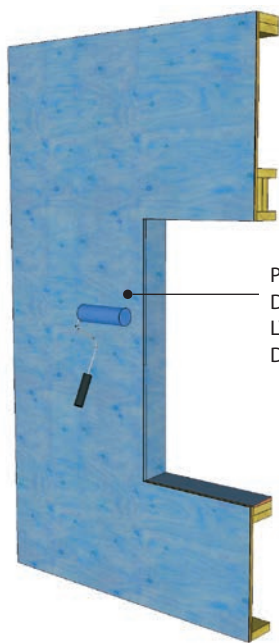
Framing

Step 2



Sheathing

Step 3



Prime substrate with
DELTA®-ADHESIVE
LVC before applying
DELTA®-VENT SA.

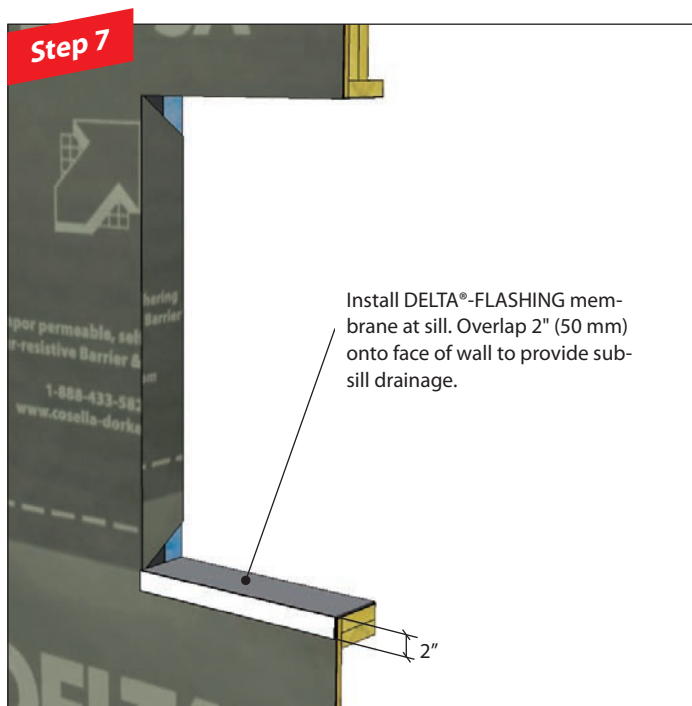
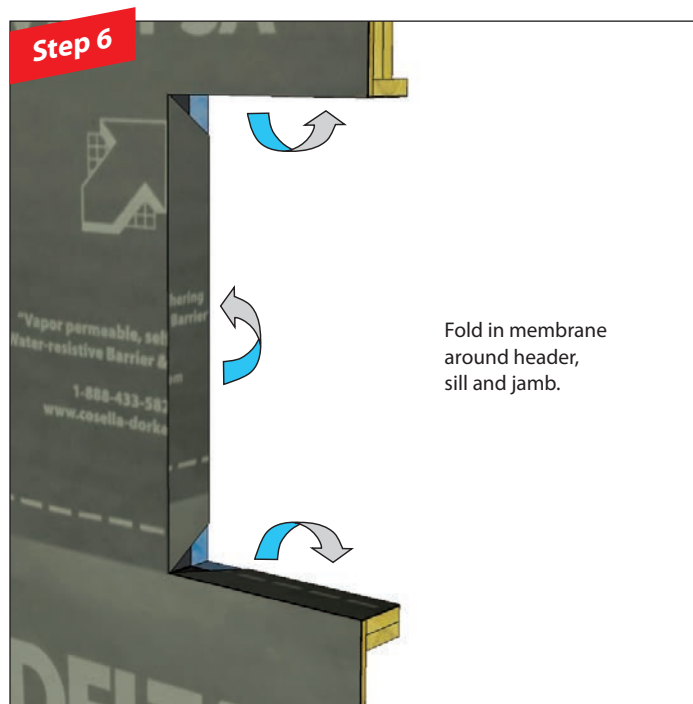
Step 4

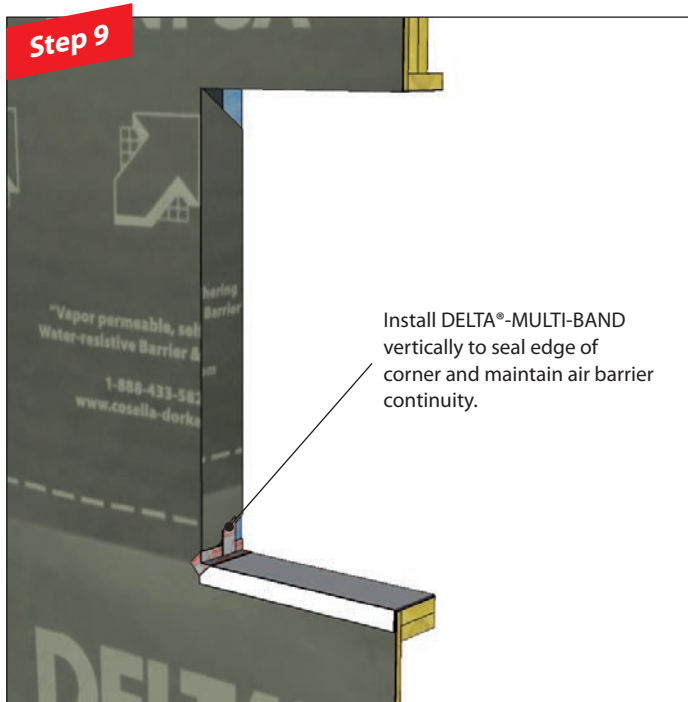


Install DELTA®-FAS CORNERS.
Staple on vertical leg to
temporarily hold in place.

Cut-out method

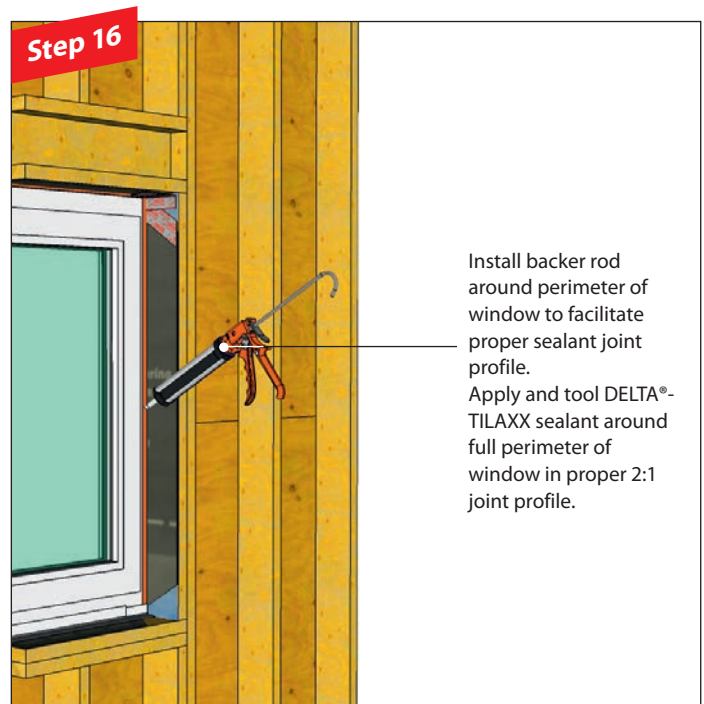
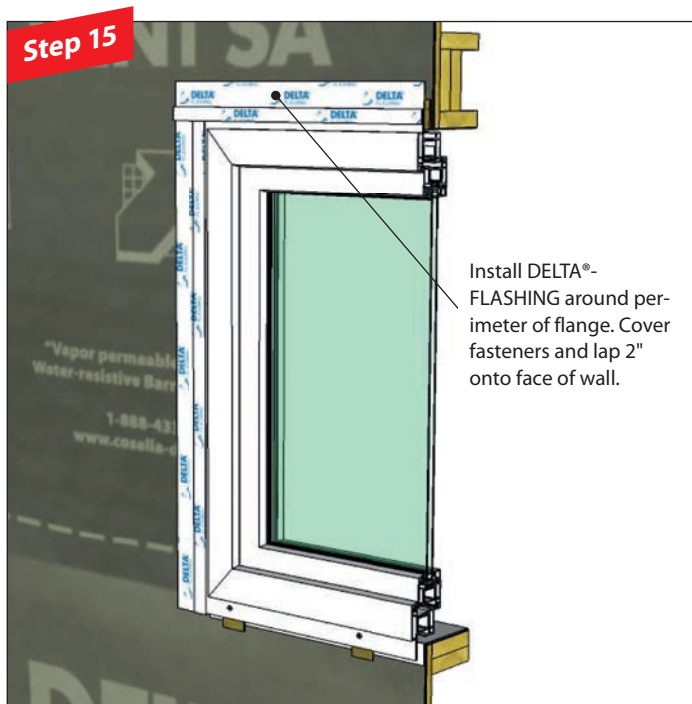
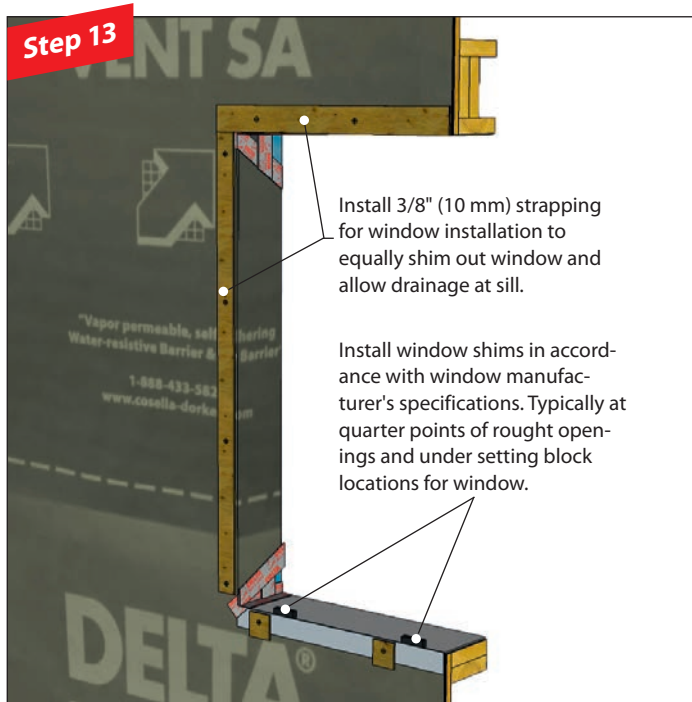
5. With DELTA®-FAS CORNER

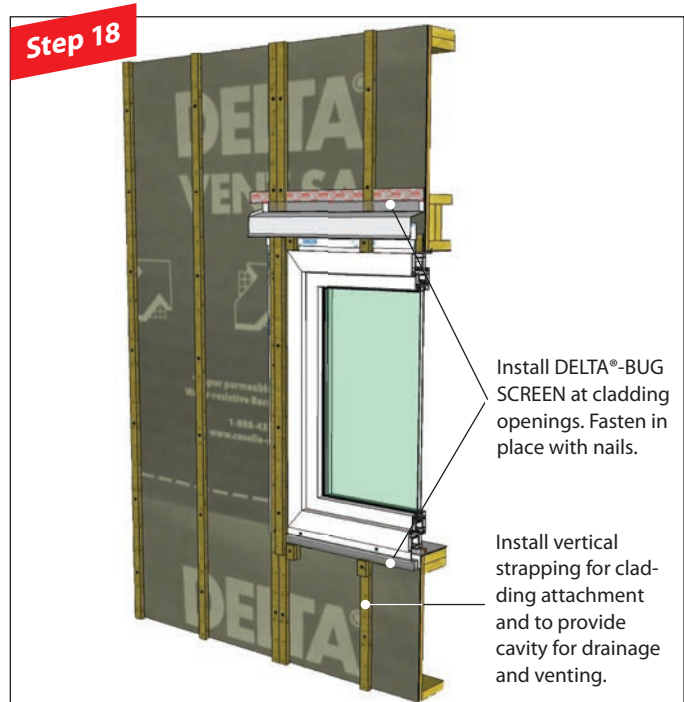
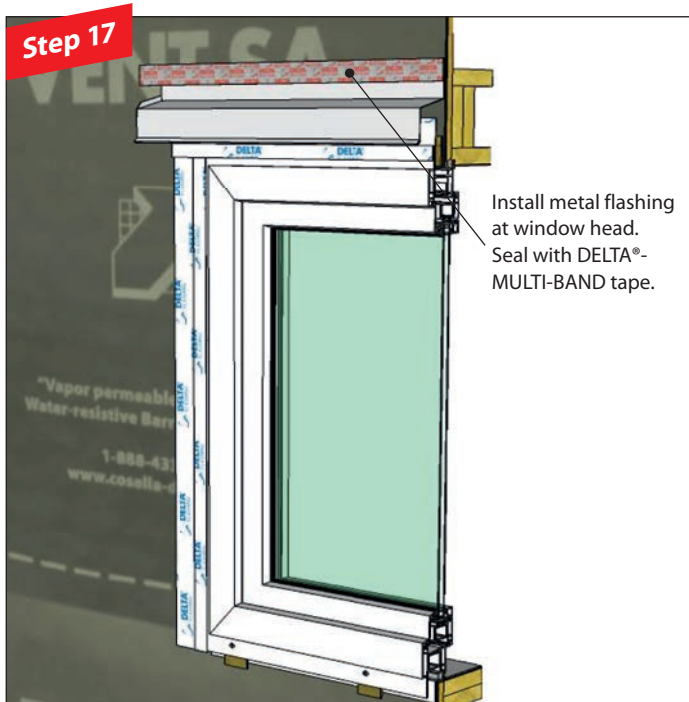




Cut-out method

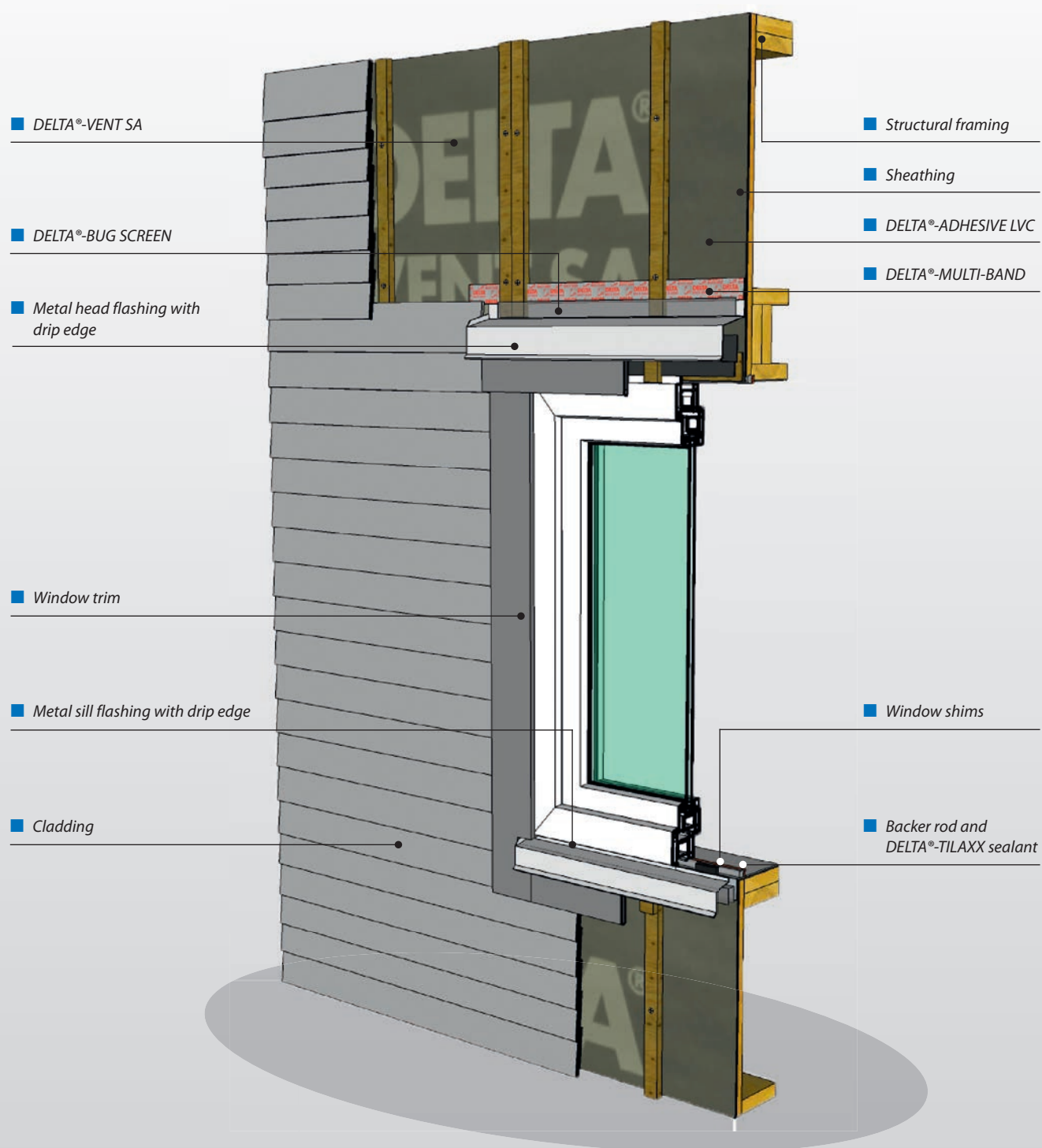
5. With DELTA®-FAS CORNER



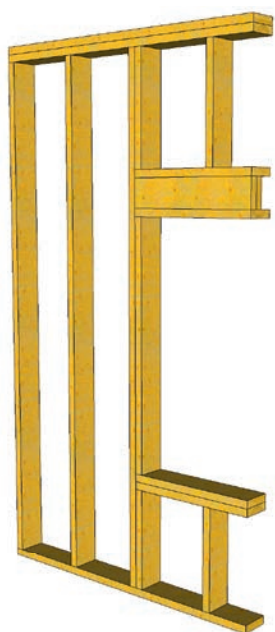


Cut-out method

6. With flat sill

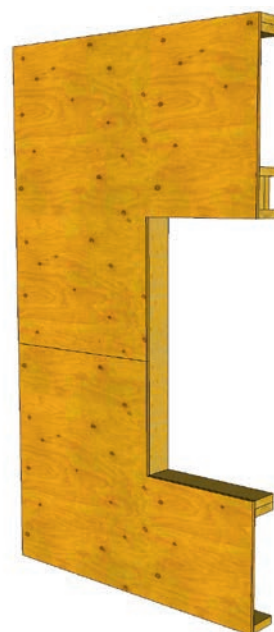


Step 1



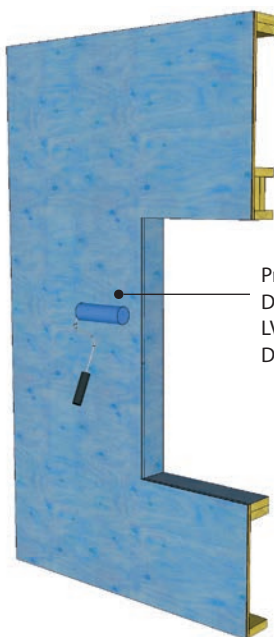
Framing

Step 2



Sheathing

Step 3



Prime substrate with DELTA®-ADHESIVE LVC before applying DELTA®-VENT SA.

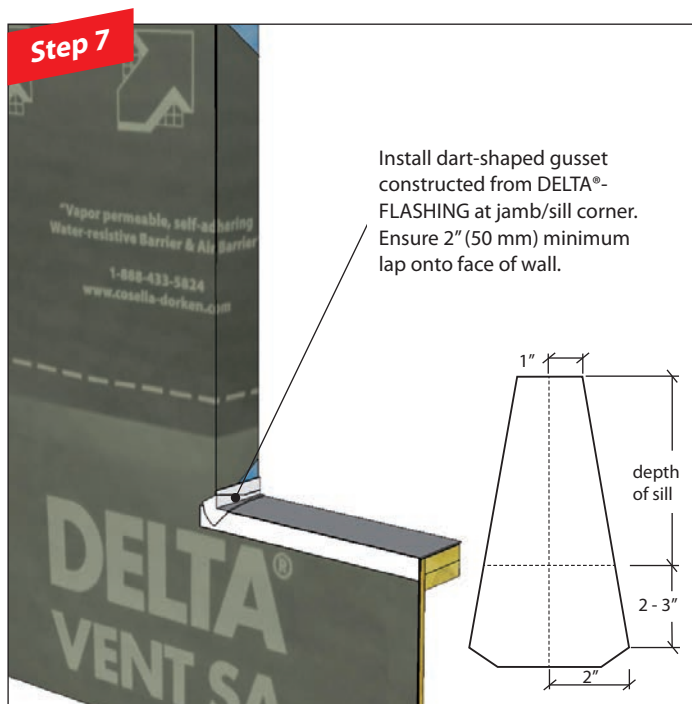
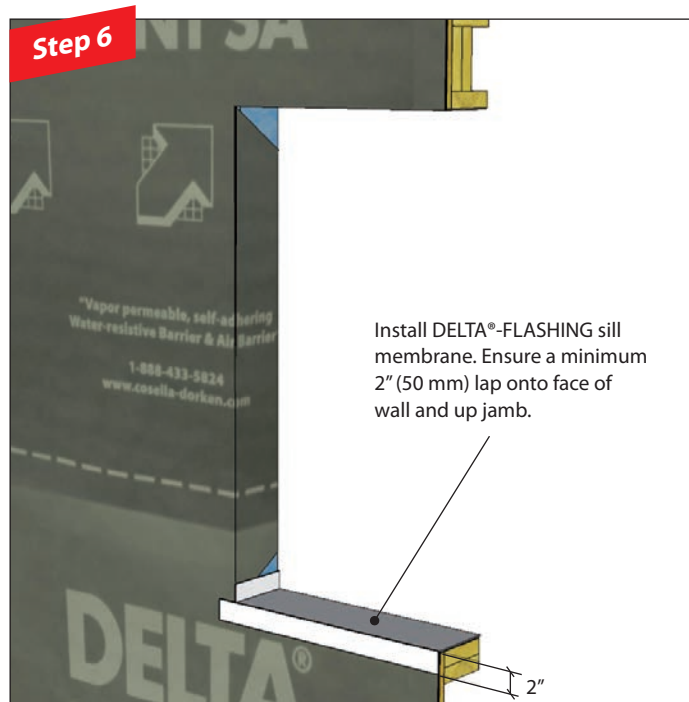
Step 4

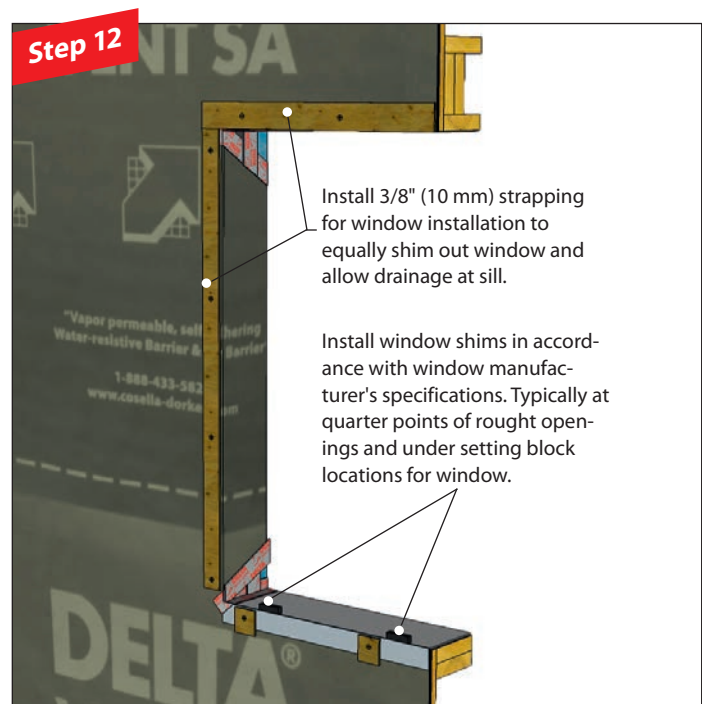
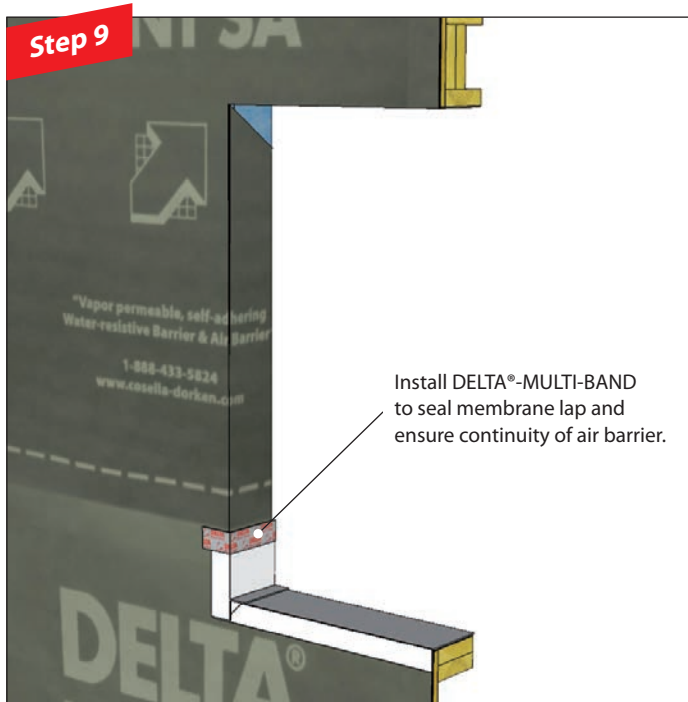


Install DELTA®-VENT SA membrane over entire wall surface. X-cut the membrane.

Cut-out method

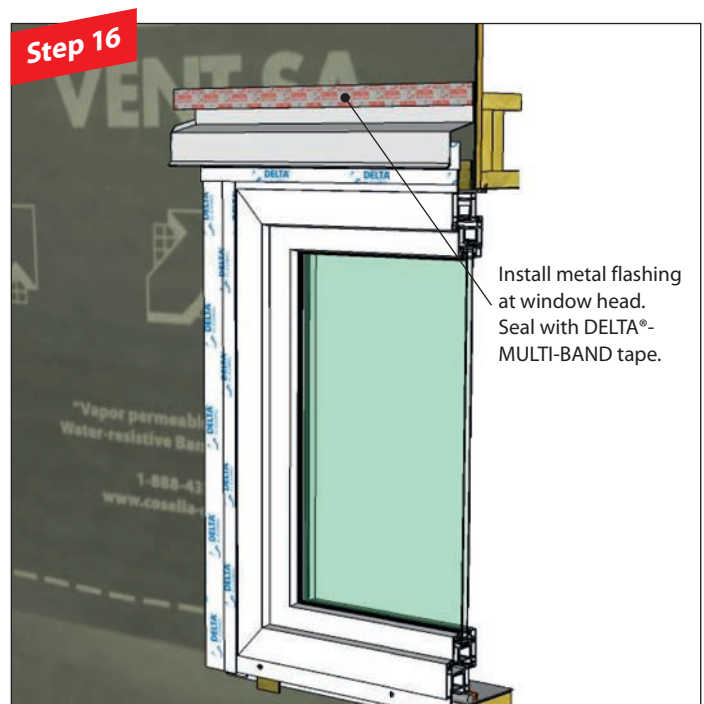
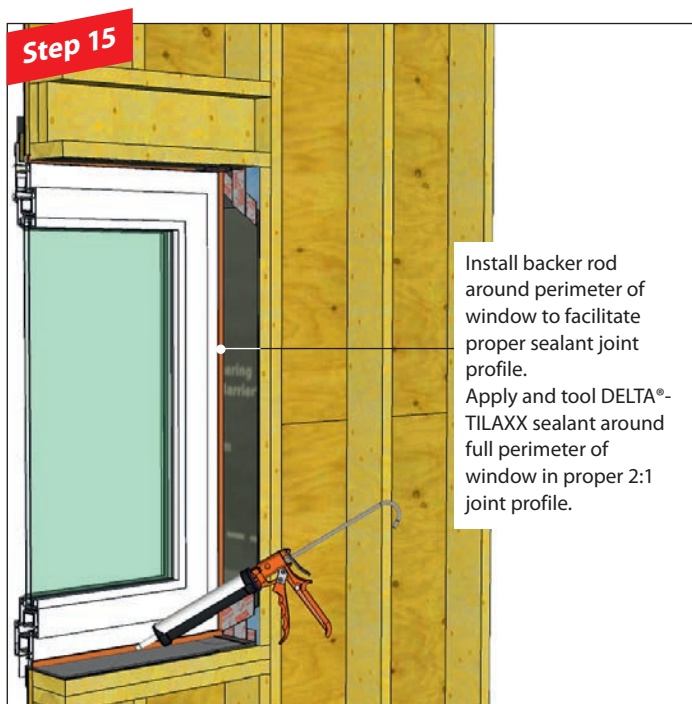
6. With flat sill

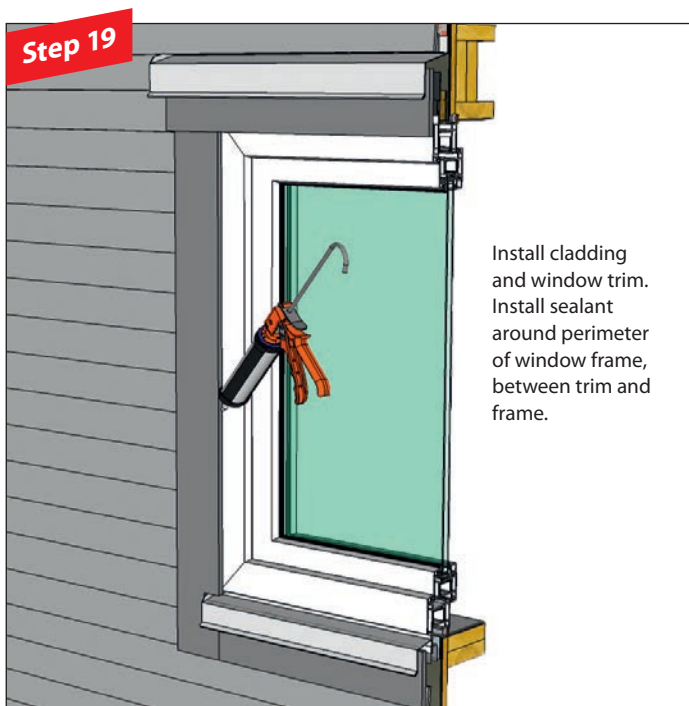
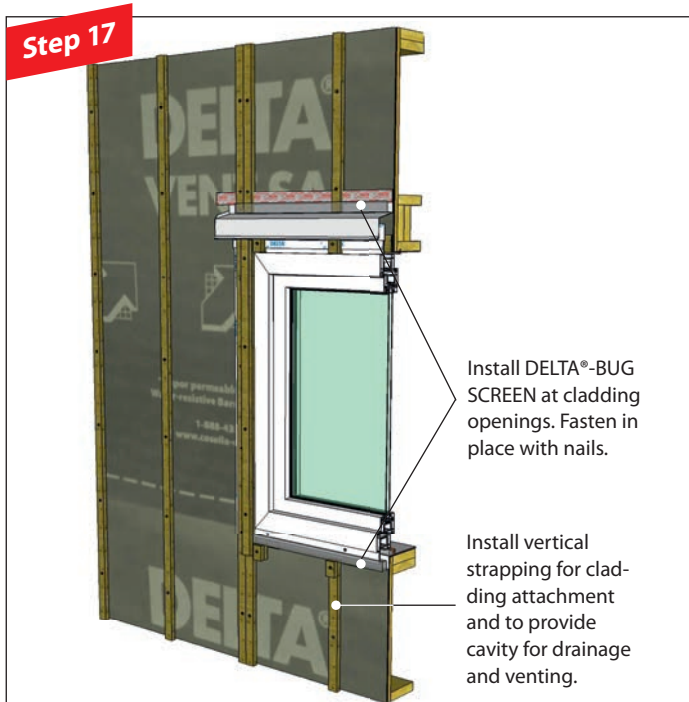




Cut-out method

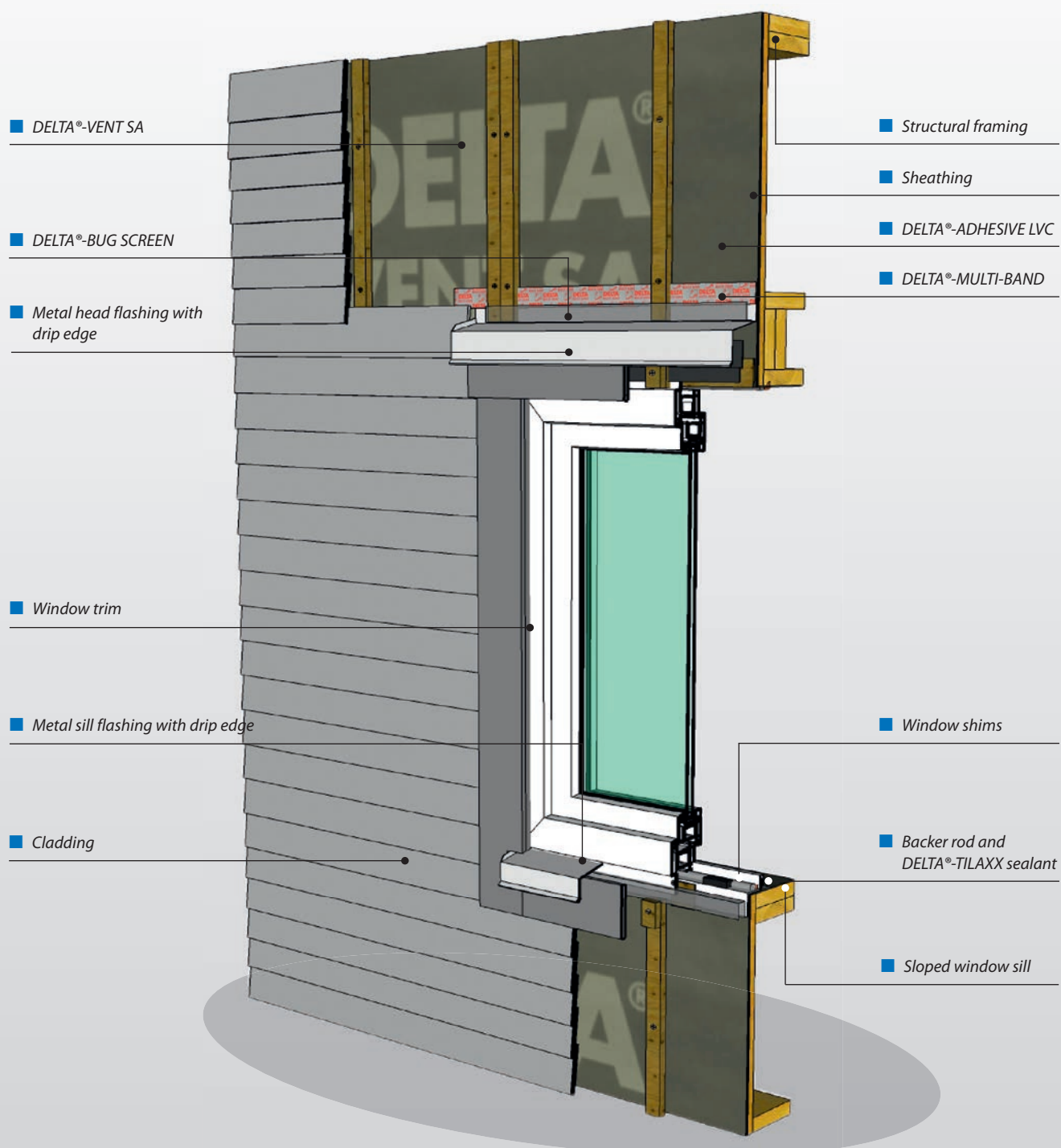
6. With flat sill



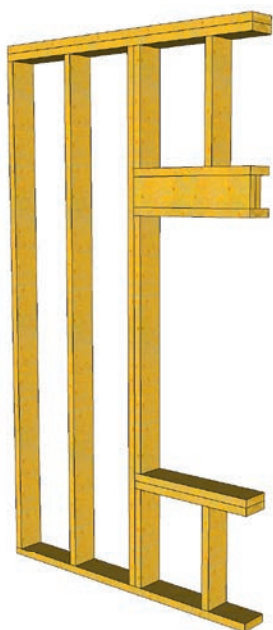


Cut-out method

7. With sloped sill

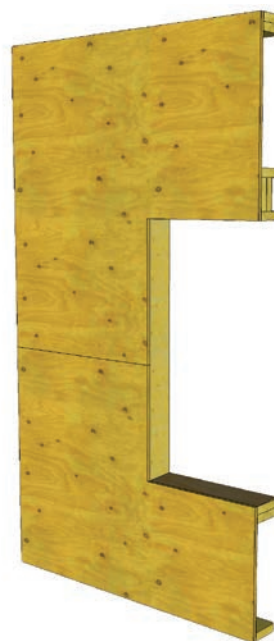


Step 1

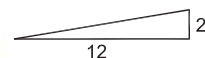


Framing

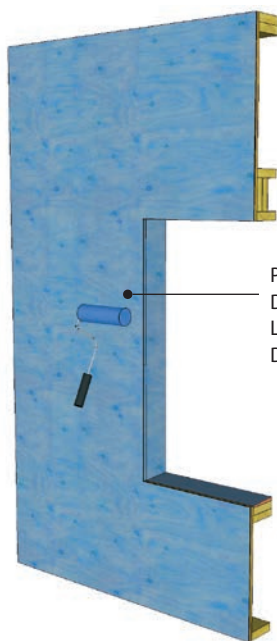
Step 2



Sheathing

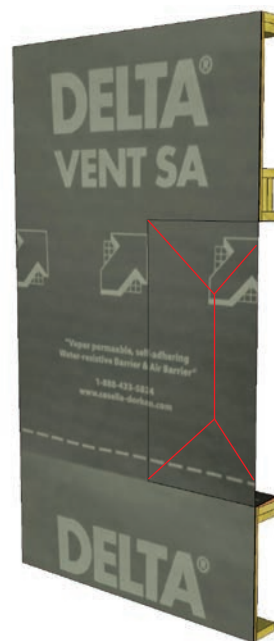


Step 3



Prime substrate with DELTA®-ADHESIVE LVC before applying DELTA®-VENT SA.

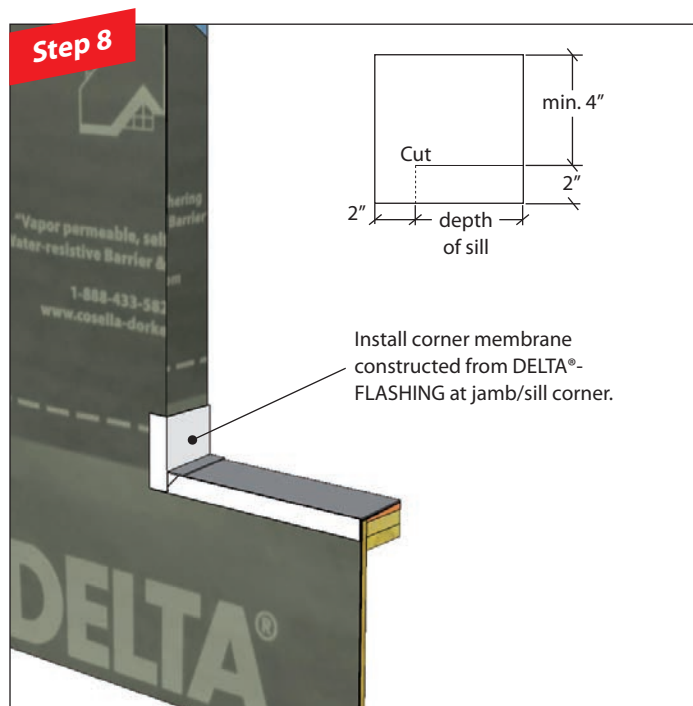
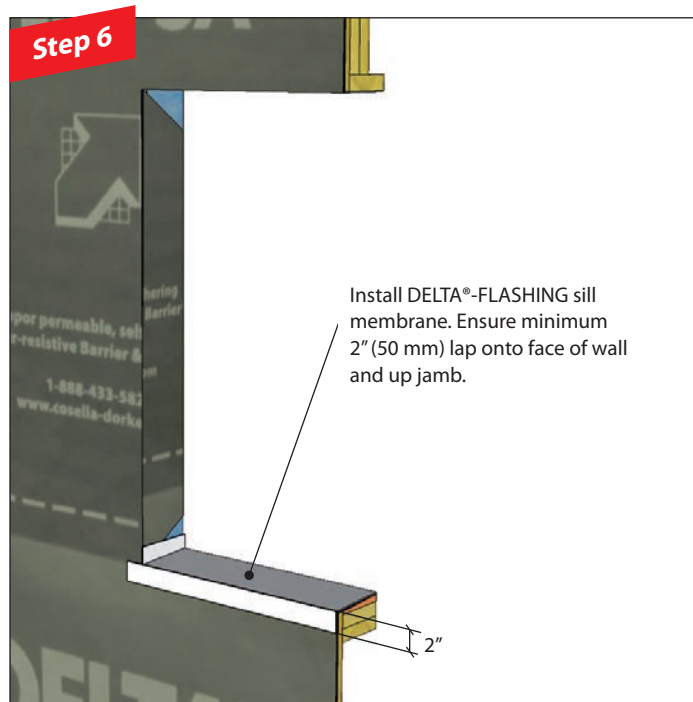
Step 4

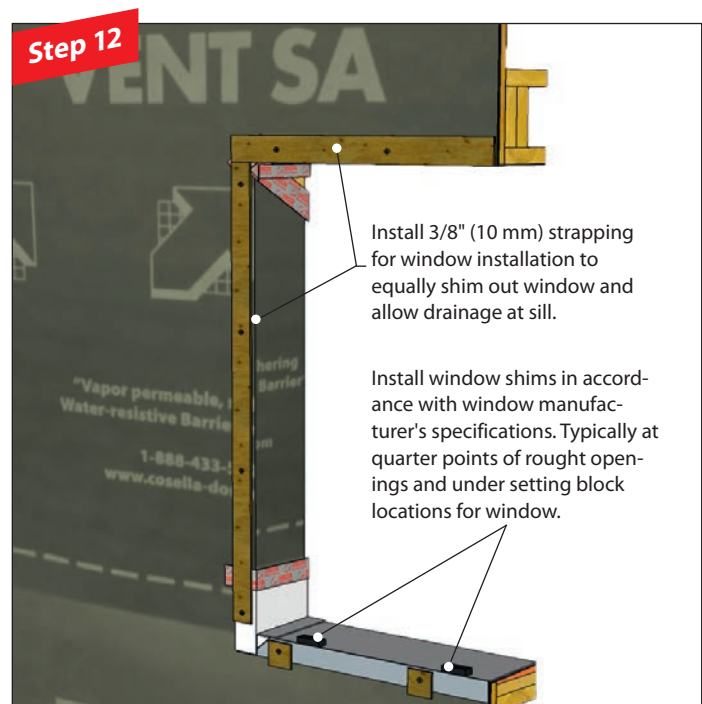


Install DELTA®-VENT SA membrane over entire wall surface. X-cut the membrane.

Cut-out method

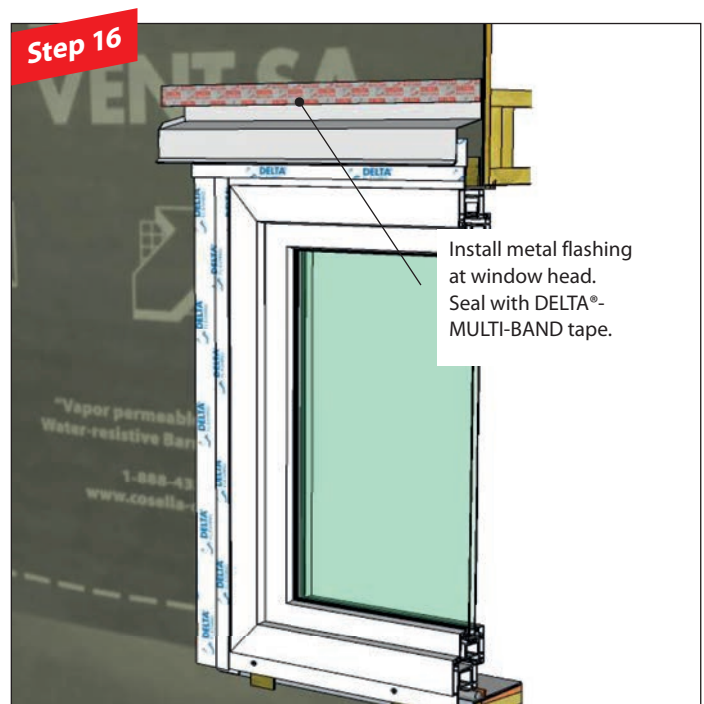
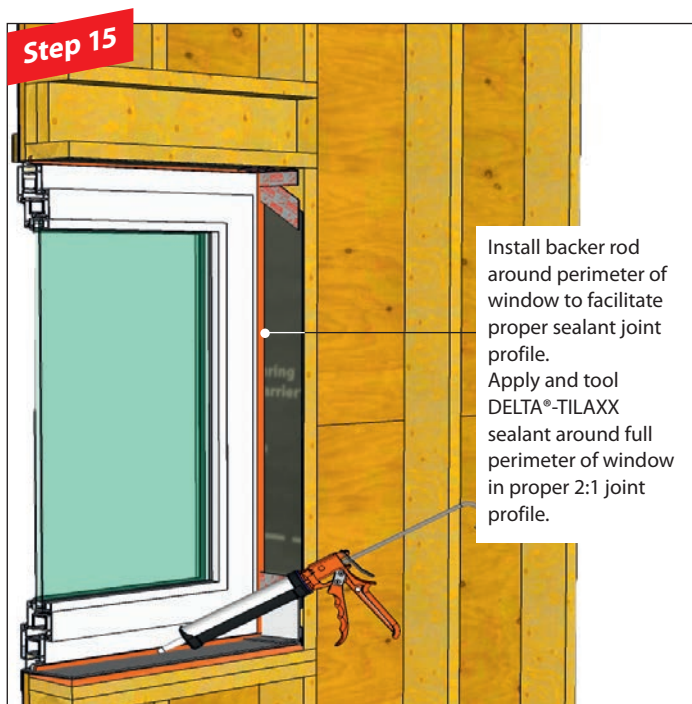
7. With sloped sill

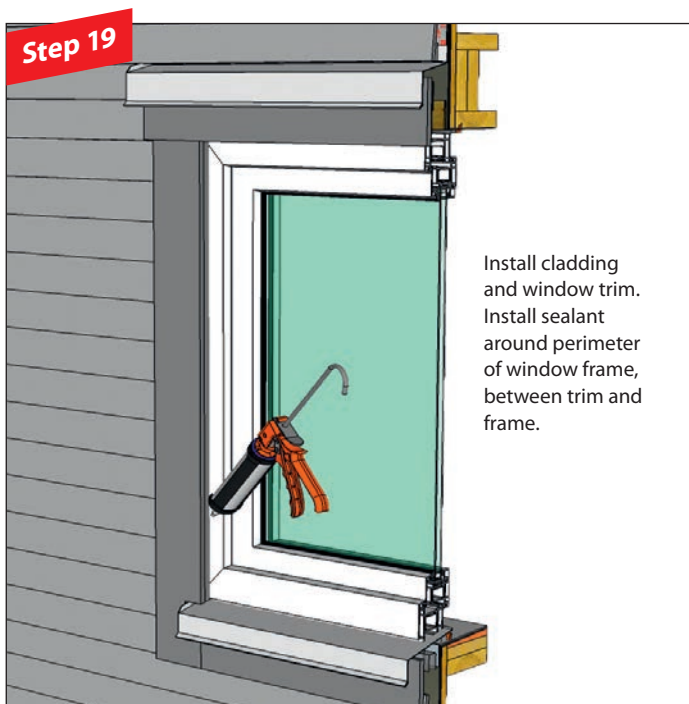
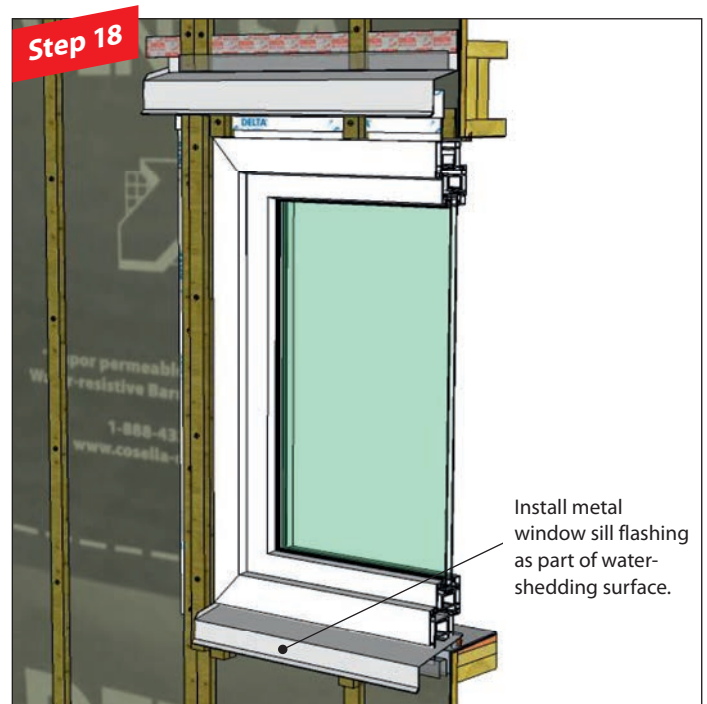




Cut-out method

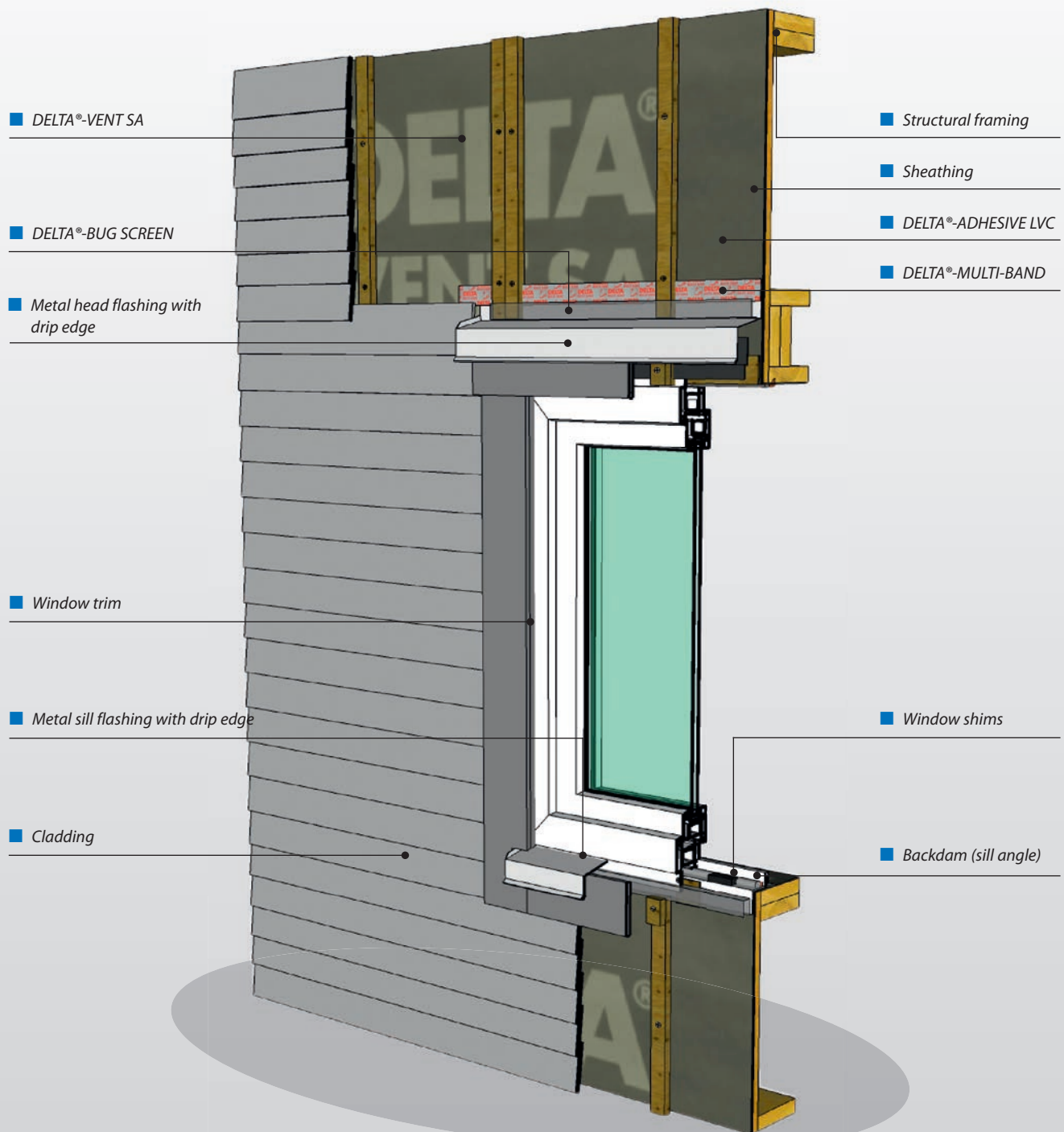
7. With sloped sill



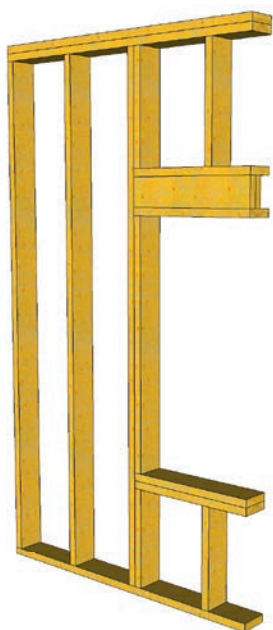


Cut-out method

8. With backdam

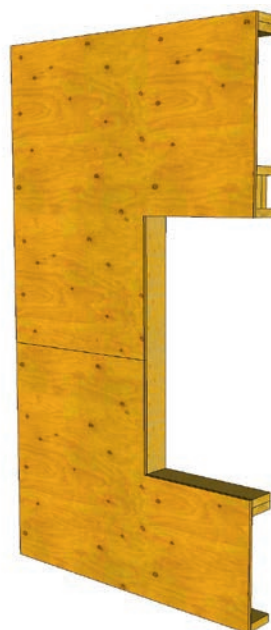


Step 1



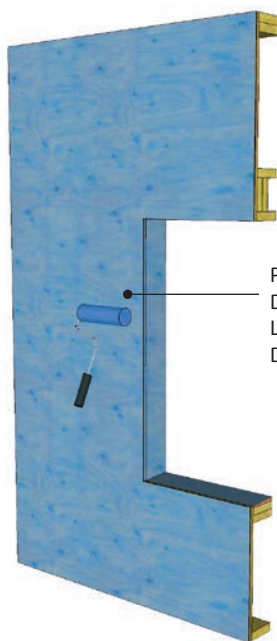
Framing

Step 2



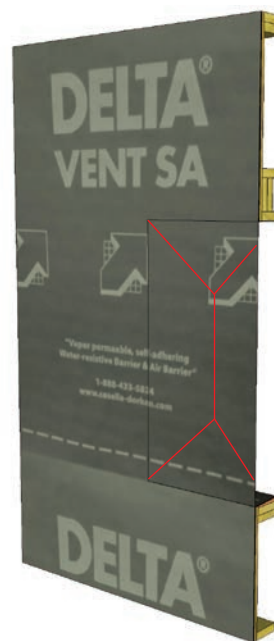
Sheathing

Step 3



Prime substrate with DELTA®-ADHESIVE LVC before applying DELTA®-VENT SA.

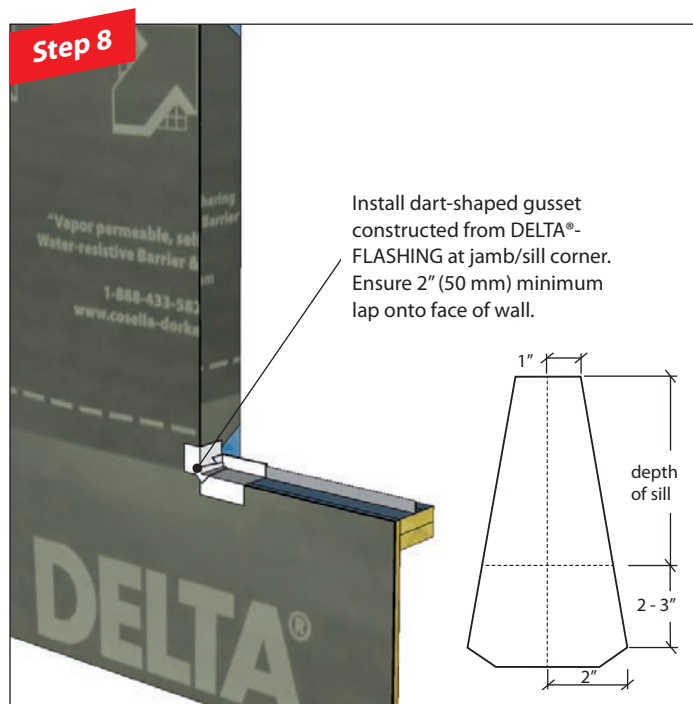
Step 4

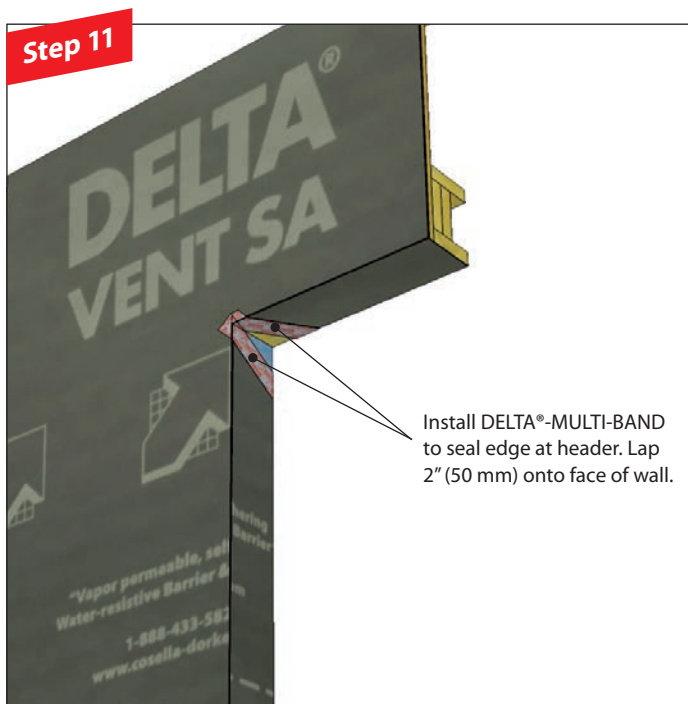
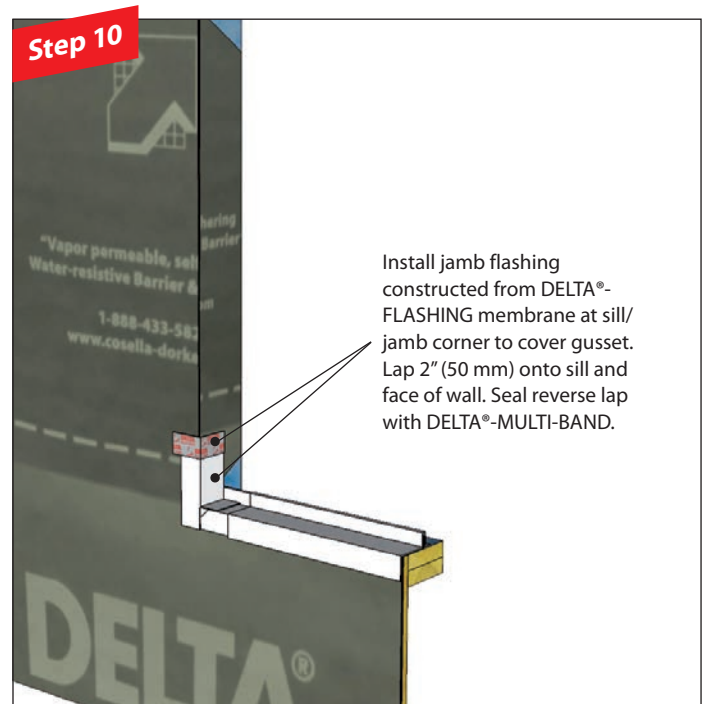


Install DELTA®-VENT SA membrane over entire wall surface. X-cut the membrane.

Cut-out method

8. With backdam

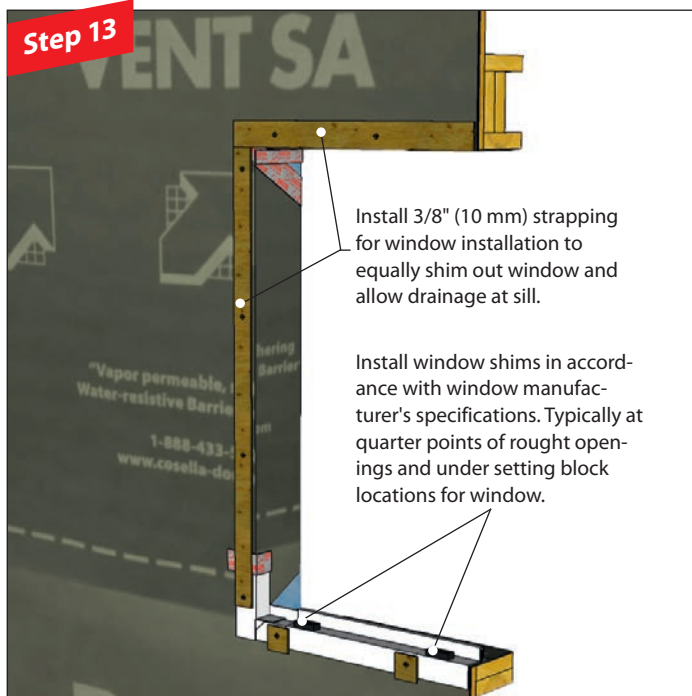




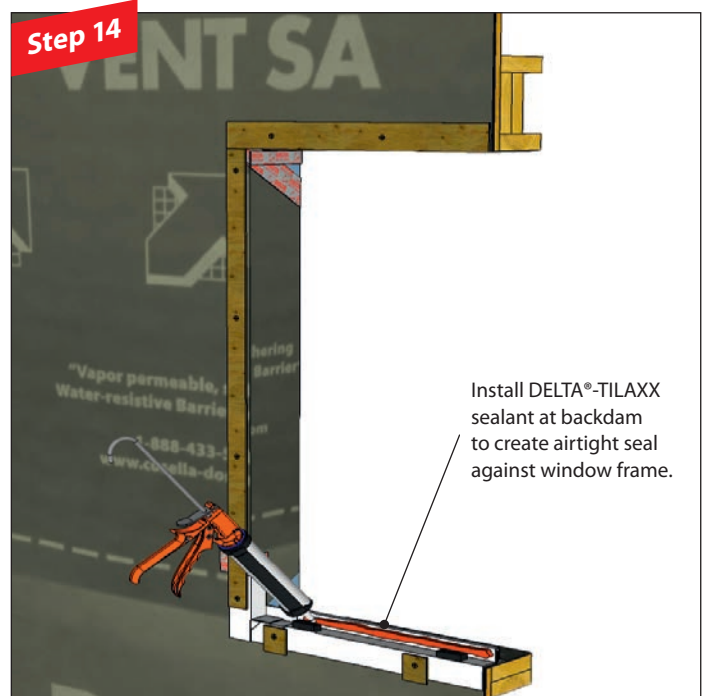
Cut-out method

8. With backdam

Step 13



Step 14

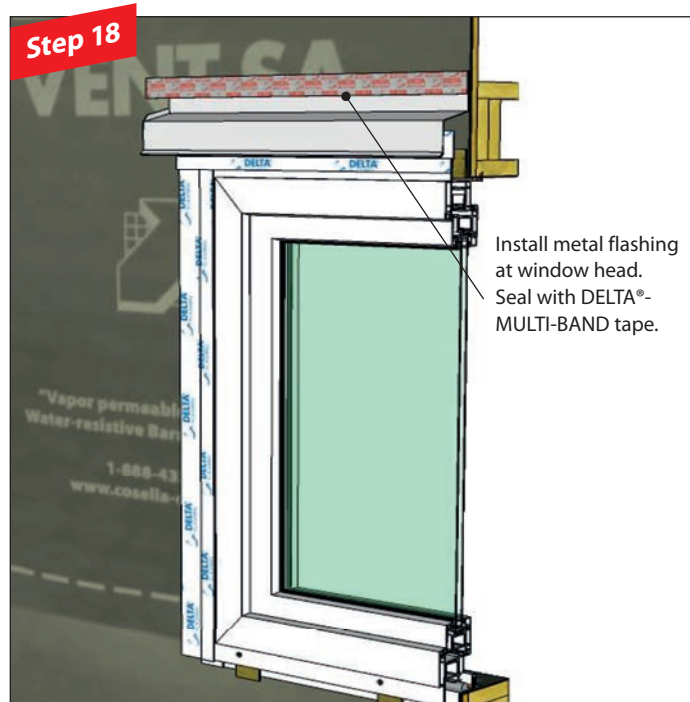
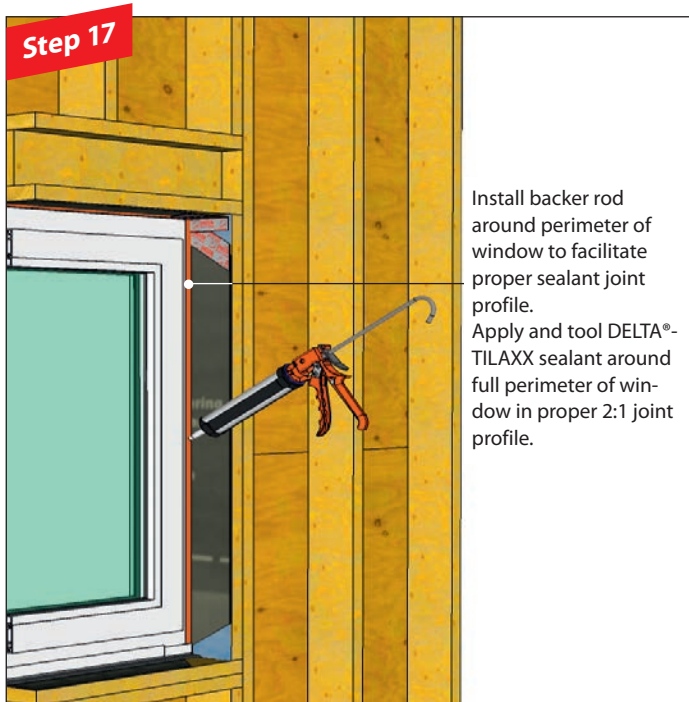


Step 15



Step 16





DELTA® Accessories

DELTA® Air Barrier System Components

Assuring an air-tight building enclosure

Using DELTA®-VENT SA to create an energy-efficient and air-tight building is a great choice. Choosing premium DELTA® Air Barrier System Components will help complete the job to meet the highest standards.

The secret to ensuring the overall effectiveness of an air barrier system is in the details, such as sealing windows, doors and penetrations. Proper attention to details is critically important to achieve an air-tight assembly. All components must be interconnected to successfully resist air and water infiltration, and turn individual materials, components and assemblies into a complete Air Barrier System.

DELTA®-Accessories are exhaustively tested for compatibility. Together they assure superior performance in air-tight building enclosures.

DELTA®-FLASHING is a best-in-class self-adhering membrane used to flash around window and door openings. Cut in practical and convenient widths, it provides superior long-term protection against air and water leaks.

DELTA®-MULTI-BAND is a very tough and durable seam tape with an aggressive pure acrylic adhesive. It is suitable for use at end and side laps or other detail areas. It sticks tenaciously to DELTA®-VENT SA as well as all other common construction substrates like OSB, plywood, metal, glass, etc.

DELTA®-FLEXX-BAND is a two-ply stretchable tape with a premium butyl rubber adhesive for use at penetrations such as service pipes, arched windows, window flanges, corners and joints. It is formed easily by hand into irregularly-shaped areas, forming a tight bond to wood, vinyl, metal and other common building materials.

DELTA®-FAS CORNER is a unique preformed corner for sealing windows and doors in air- and water-tight construction. Both durable and UV resistant, it provides top performance in detailing energy-efficient enclosures. DELTA®-FAS CORNER is easy to use and saves both time and labor during installation.

DELTA®-THAN is a permanently elastic adhesive and sealant made with a special rubber compound. It is ideal for sealing around penetrations, terminations, etc.

DELTA®-TILAXX is a high quality permanent-ly elastic adhesive and sealant for durable air-tight bonding to all common construction surfaces where moderate movement of components is expected.

DELTA®-LIQUIXX is a revolutionary fluid-applied flashing membrane with low vapor permeability. It is ideal for completing the air barrier continuity around difficult configurations and complex details. It may also be used to seal window openings.

DELTA®-ADHESIVE LVC is a low solvent surface conditioner. It consolidates surface dust on dirty construction site substrates, assuring reliable long-term air-tight adhesion for DELTA®-VENT SA.

The comprehensive line of DELTA®-Accessories by Cosella-Dörken delivers complete solutions for energy-efficient and durable building enclosures.

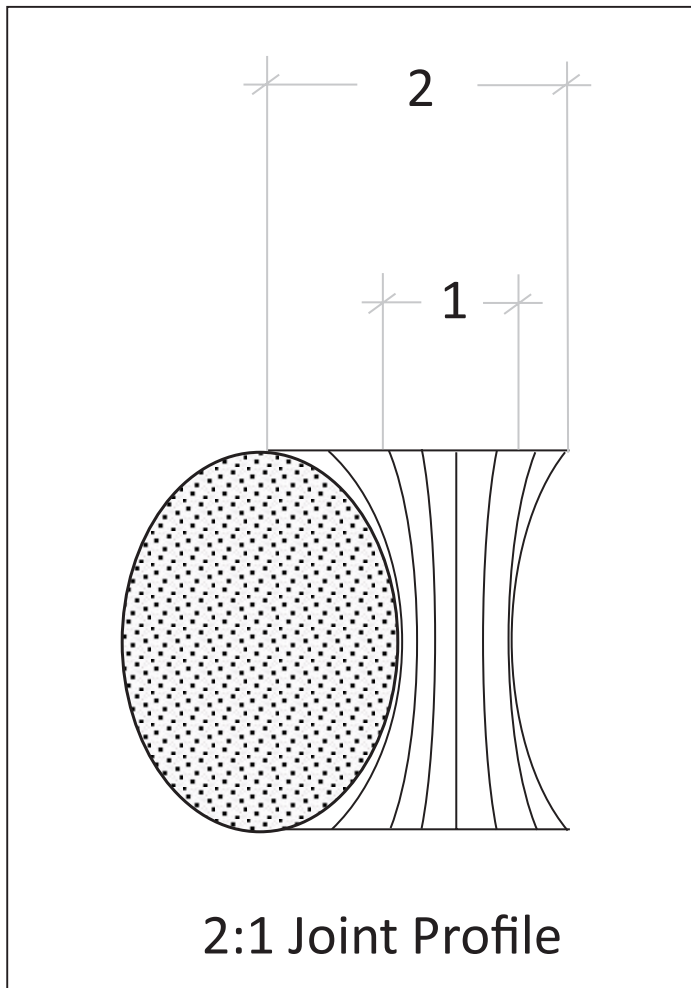


DELTA® Air Barrier System Components

			
DELTA®-FLASHING	DELTA®-MULTI-BAND	DELTA®-FLEXX-BAND	DELTA®-FAS CORNER
<p>Premium self-adhesive flashing membrane with aggressive tack.</p>	<p>Universal adhesive tape that sticks tenaciously and is highly resistant to aging.</p>	<p>Stretchable butyl-rubber compound tape with special carrier membrane.</p>	<p>Flexible pre-fabricated window corner. Permanently UV resistant.</p>
<p>Recommended Use</p> <ul style="list-style-type: none"> ■ For flashing of window and door openings. 	<p>Recommended Use</p> <ul style="list-style-type: none"> ■ For all DELTA® membranes to seal laps and penetrations. 	<p>Recommended Use</p> <ul style="list-style-type: none"> ■ Stretchable flashing for details and penetrations. ■ Pre-stretch where required. 	<p>Recommended Use</p> <ul style="list-style-type: none"> ■ Provides reliable air- and water-tight window details.
<p>Surface temperature min. +41 °F (+5 °C) Recommended storage: room temperature</p>	<p>Surface temperature min. +41 °F (+5 °C) Recommended storage: room temperature</p>	<p>Surface temperature min. +41 °F (+5 °C) Recommended storage: room temperature</p>	<p>–</p>
<p>Temperature Range -40 °F to +176 °F (-40 °C to +80 °C)</p>	<p>Temperature Range -40 °F to +176 °F (-40 °C to +80 °C)</p>	<p>Temperature Range -40 °F to +176 °F (-40 °C to +80 °C)</p>	<p>Temperature Range -40 °F to +176 °F (-40 °C to +80 °C)</p>
<p>Size Width: 6" (15.25 cm), 9" (23 cm) Length: 75' (22.85 m)</p>	<p>Size Width: 2 3/8" (6 cm), 4" (10 cm) Length: 82' (25 m)</p>	<p>Size Width: 4" (10 cm) Length: 33' (10 m)</p>	<p>Measurements 7" x 7" x 4" (18 cm x 18 cm x 10 cm)</p>

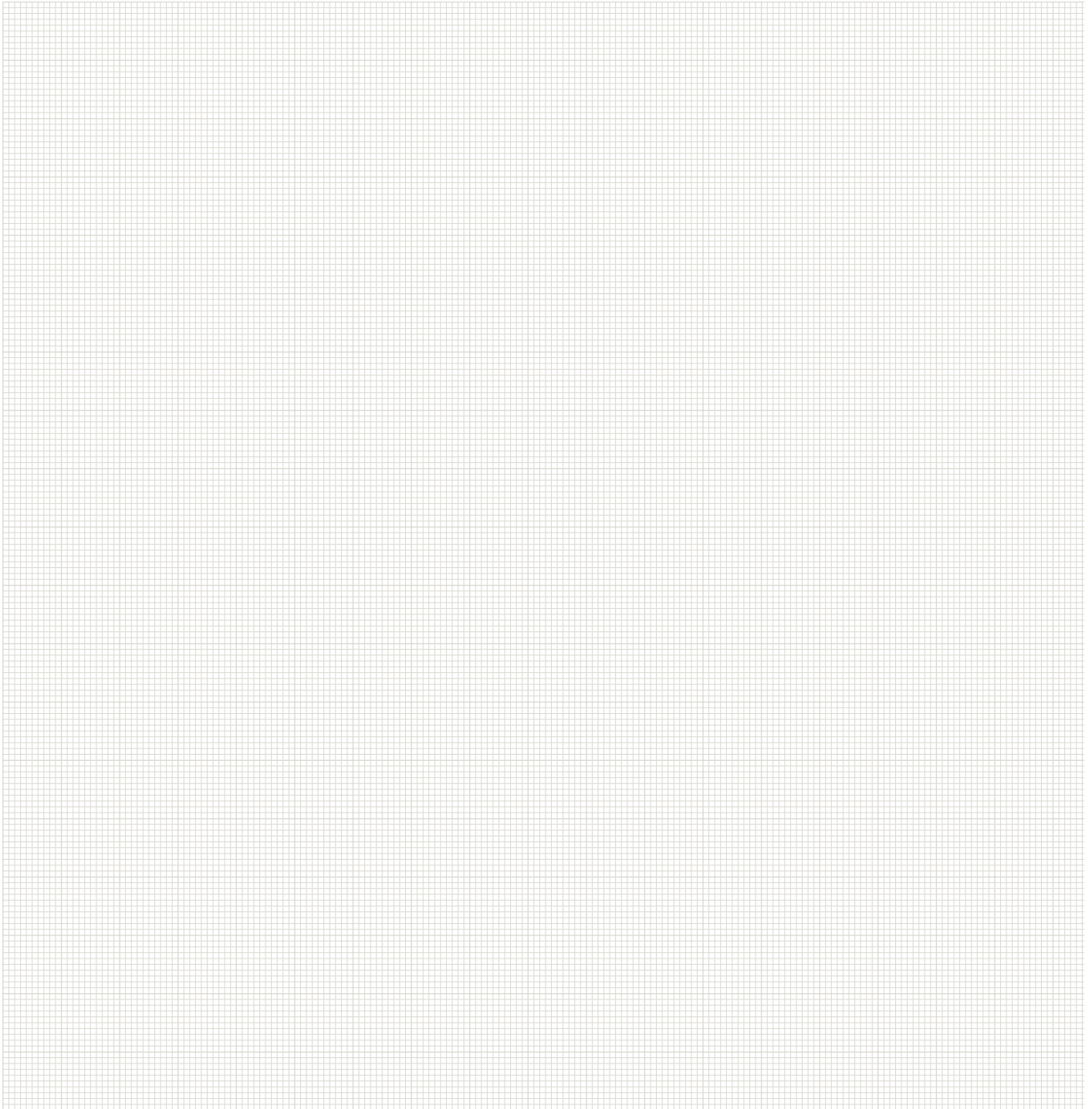
			
DELTA®-THAN	DELTA®-TILAXX	DELTA®-LIQUIXX	DELTA®-ADHESIVE LVC
<p>Permanently elastic special rubber compound sealant and adhesive.</p>	<p>High quality permanently elastic adhesive and sealant that retains flexibility.</p>	<p>Viscous, pure acrylic dispersion with enclosed fabric reinforcement.</p>	<p>Low solvent surface conditioner.</p>
<p>Recommended Use</p> <ul style="list-style-type: none"> ■ For sealing and adhering of DELTA® membranes. ■ Provides greater security in detail areas. ■ Suitable for areas with minimal movement of components. 	<p>Recommended Use</p> <ul style="list-style-type: none"> ■ For durable air-tight bonding to all common construction surfaces where moderate movement of components is expected. ■ Suitable for sealing of openings around windows (installed with backer rod). 	<p>Recommended Use</p> <ul style="list-style-type: none"> ■ For air-tight connection of complex details and air barrier continuity. ■ Suitable for all common construction surfaces. 	<p>Recommended Use</p> <ul style="list-style-type: none"> ■ Consolidates surface dust on dirty construction site substrates assuring reliable long-term air-tight adhesion. ■ Compliant with OTC rules for industrial adhesives and sealants and California South Coast Rule 1168.
<p>Application Conditions Open time: 30 minutes at min. +41 °F (+5 °C)</p>	<p>Application Conditions Open time: 30 minutes at min. +41 °F (+5 °C)</p>	<p>Application Conditions Open time: 3 - 4 hours at +70 °F (+21 °C) and 45 % RH</p>	<p>Surface temperature Application conditions: min. +25 °F (-4 °F) Recommended storage: min. 32 °F (0 °C)</p>
<p>Application Rate Approx. 23' (7 linear m) per cartridge</p>	<p>Application Rate Approx. 23' (7 linear m) per cartridge</p>	<p>Application Rate Approx. 2.8 fl.oz/sqft (0.9 l/sqm)</p>	<p>Application Rate Up to 250 sqft/gal (6.13 sqm/l) depending on porosity and texture of surface</p>
<p>Temperature Range -22 °F to +176 °F (-30 °C to +80 °C)</p>	<p>Temperature Range -22 °F to +176 °F (-30 °C to +80 °C)</p>	<p>Temperature Range -22 °F to +176 °F (-30 °C to +80 °C)</p>	<p>Temperature Range -40 °F to +176 °F (-40 °C to +80 °C)</p>
<p>Size 10.5 fl.oz (310 ml)</p>	<p>Size 10.5 fl.oz (310 ml)</p>	<p>Size 0.66 gal/pail (2.5 l/pail)</p>	<p>Size 4.5 gal (17 l)</p>

Appendix



Recommended 2:1 Window Joint Profile

Notes



About Cosella-Dörken

Cosella-Dörken delivers innovative, premium quality products to the construction market. A North American manufacturer based out of Beamsville, Ontario, Cosella-Dörken Products, Inc. is a subsidiary of the Dörken Group, a leading European developer and manufacturer of waterproofing and drainage products sold worldwide. Other top-performing WRBs from Cosella-Dörken include DELTA®-MAXX, DELTA®-FOXX and DELTA®-VENT S.

For more information,
call 1-888-4DELTA4 (433-5824) or
visit www.cosella-dorken.com

DELTA®

COSELLA DÖRKEN

Cosella-Dörken Products, Inc.
4655 Delta Way
Beamsville,
ON L0R 1B4, Canada
Tel.: +1 (905) 563 3255
Fax: +1 (905) 563 5582
info@cosella-dorken.com
www.cosella-dorken.com

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