



Installation Guide DELTA®-VENT SA



Flashing Systems for
REBATE WINDOWS

Cosella-Dörken – Leading Through Technical Competence

Cosella-Dörken Products, Inc. (ISO 9001-2008) is a subsidiary of the Dörken Group that has over 100 years of experience in the construction industry. Developed from innovative ideas and manufactured on state-of-the-art production lines, the premium quality products for moisture management in building enclosures set standards for reliability, durability, and energy savings. Located in Beamsville, Ontario, Canada, Cosella-Dörken provides customized solutions and products of outstanding quality. Cosella-Dörken Products, Inc. is and always will be a trustworthy and highly respected partner for designers, architects, distributors and installers.

Contents

■ Introduction	3
■ Method Selection Guide	4
Strip-in method for rebate windows	6
■ 1. With DELTA®-FAS CORNER	6
■ 2. With flat sill	14
■ 3. With sloped sill	22
■ 4. With backdam	30
Cut-out method for rebate windows	38
■ 5. With DELTA®-FAS CORNER	38
■ 6. With flat sill	44
■ 7. With sloped sill	50
■ 8. With backdam	56
DELTA® Accessories	62
■ Appendix	66



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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. For example, window placement within the rough opening will depend on the rebate frame depth, the window manufacturer's specifications, and architectural considerations such as flashing and trim. 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.



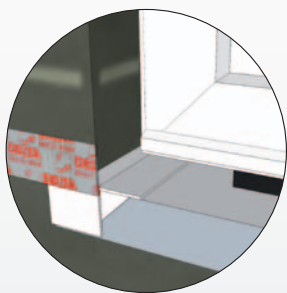
On pages with the print2life logo you can simply point and scan with your tablet or smartphone, and view installation videos which appear directly on top of the page you are looking at. You can download the print2life app by scanning the QR code below:



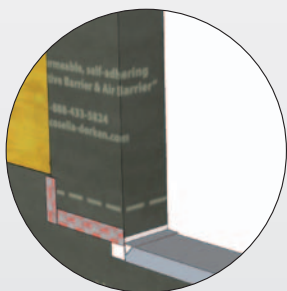
Method Selection Guide

Strip-in methods for rebate windows

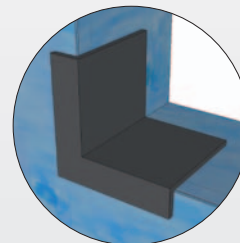
Rebate Windows



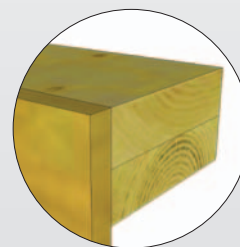
Strip-in method



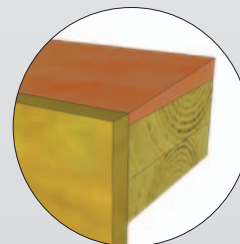
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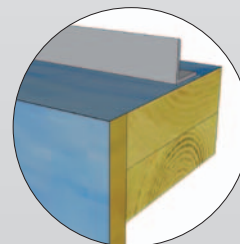
2. Flat sill (page 14)



3. Sloped sill (page 22)



4. Backdam (page 30)

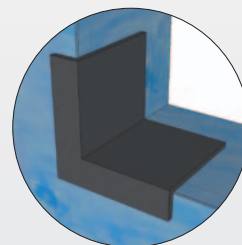


Cut-out methods for rebate windows

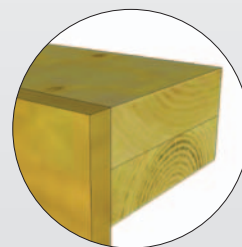
Cut-out method



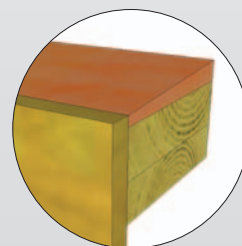
1. DELTA®-FAS CORNER (page 38)



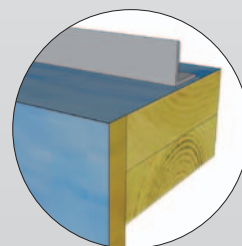
2. Flat sill (page 44)



3. Sloped sill (page 50)

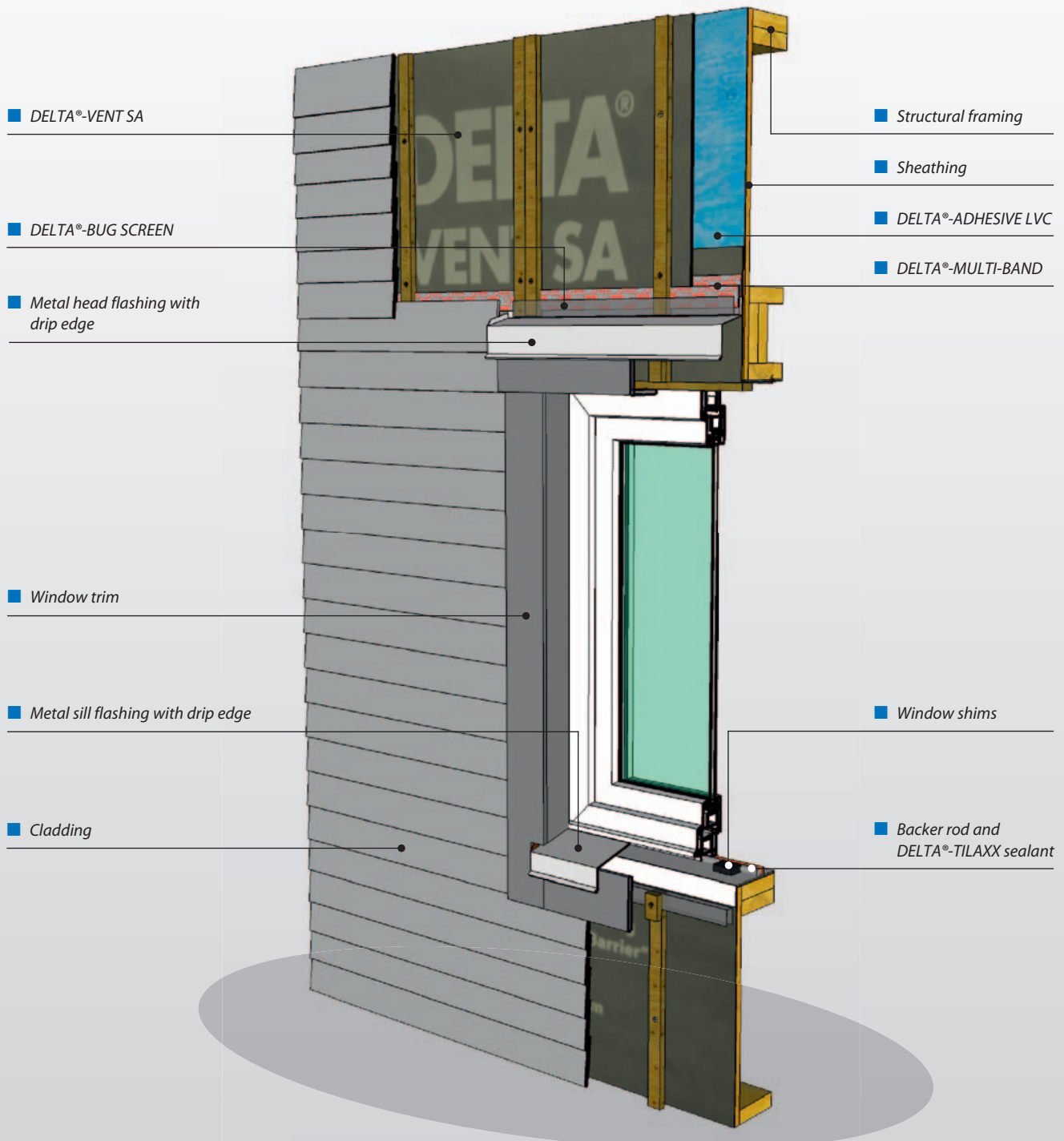


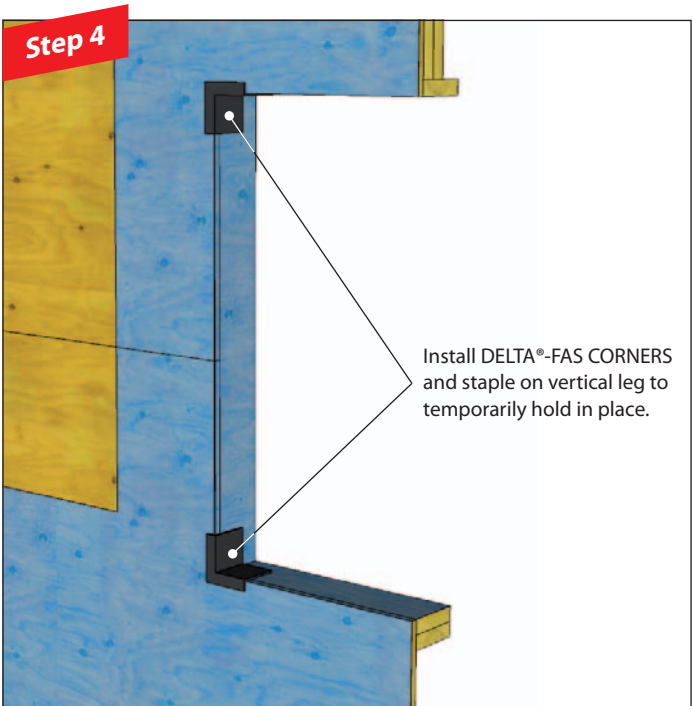
4. Backdam (page 56)



Strip-in method

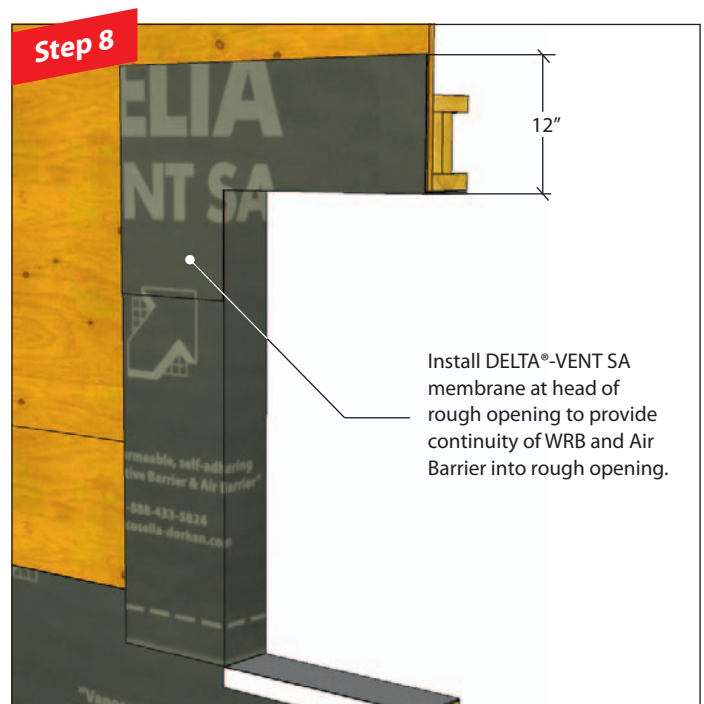
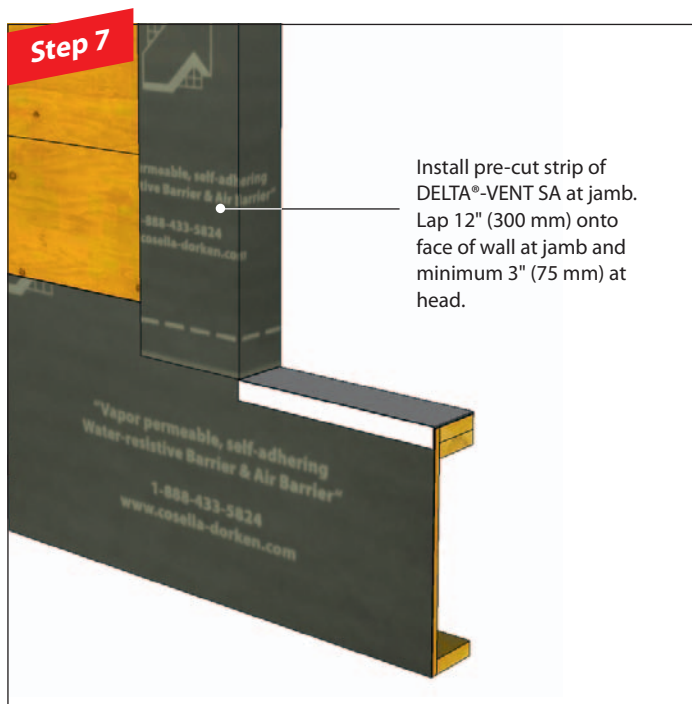
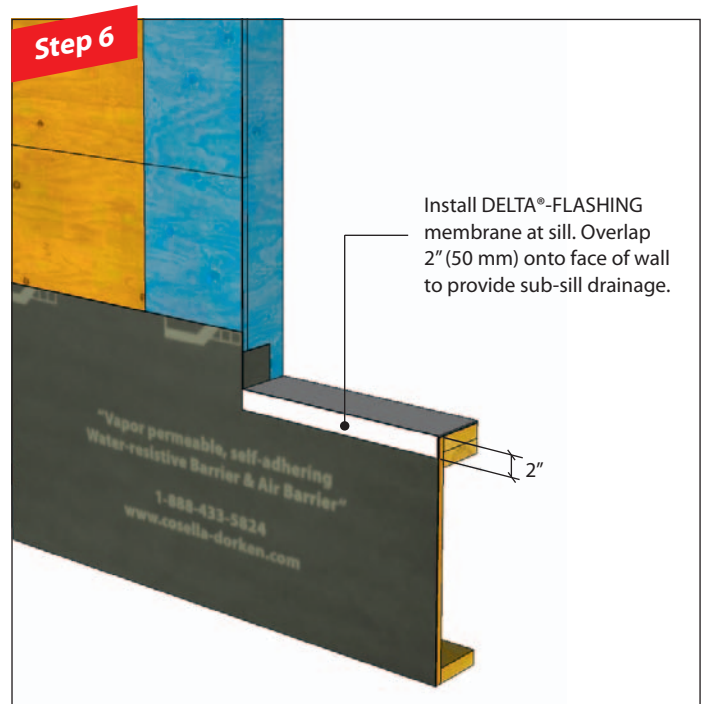
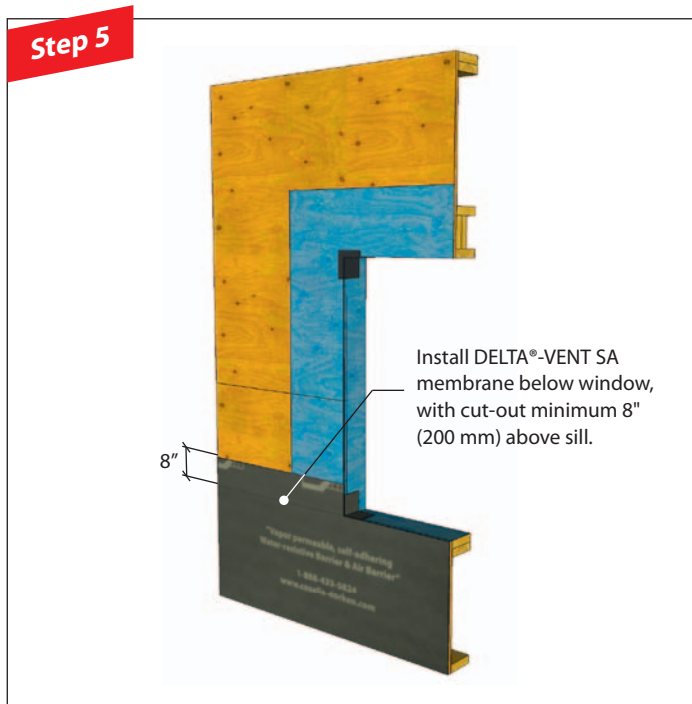
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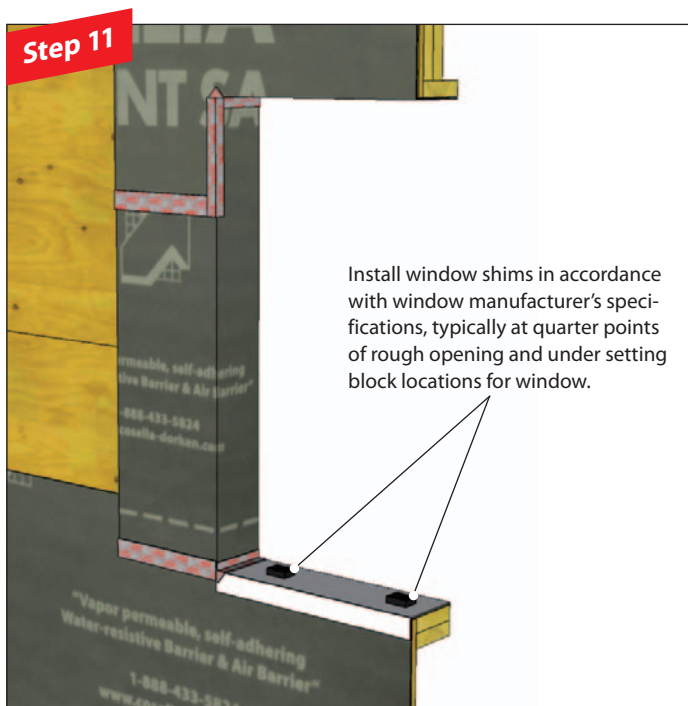




Strip-in method

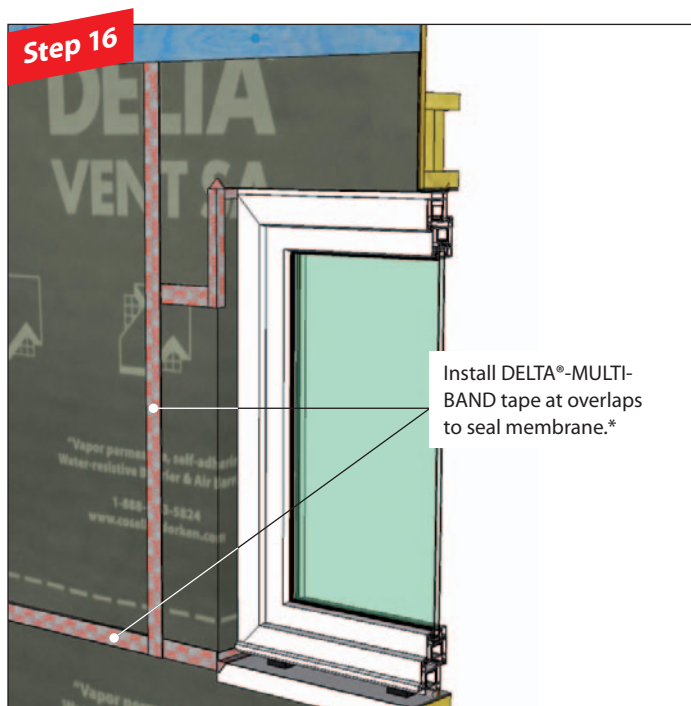
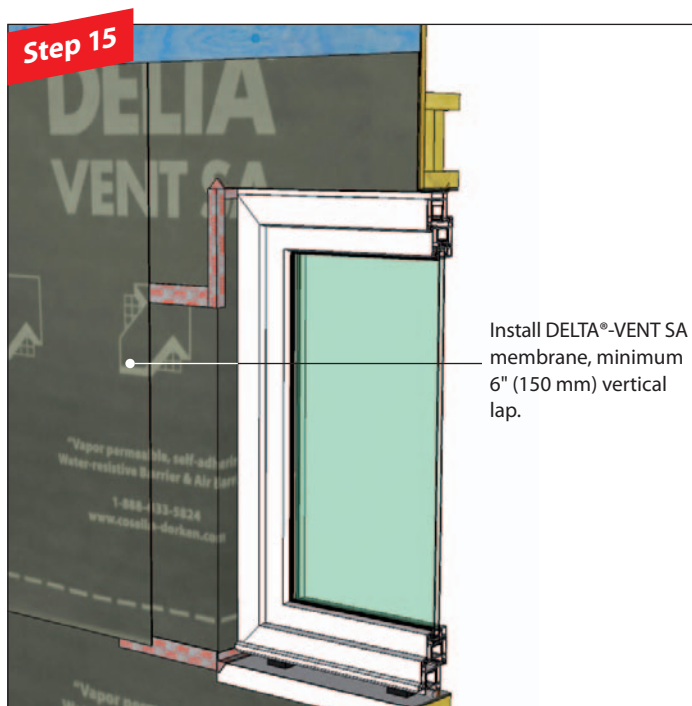
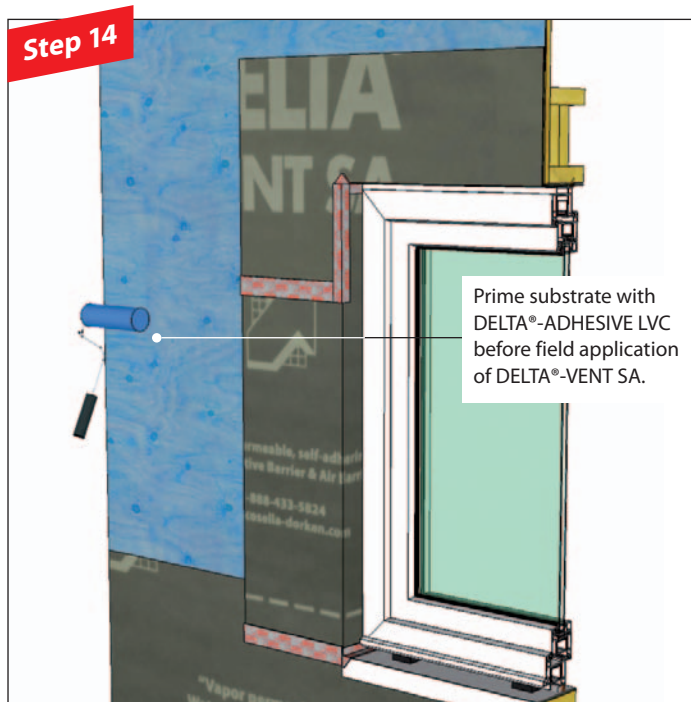
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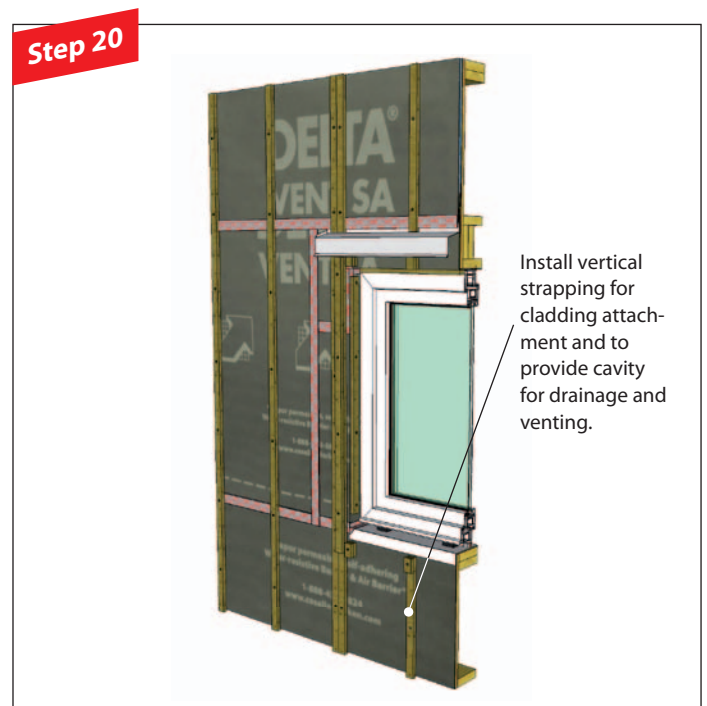
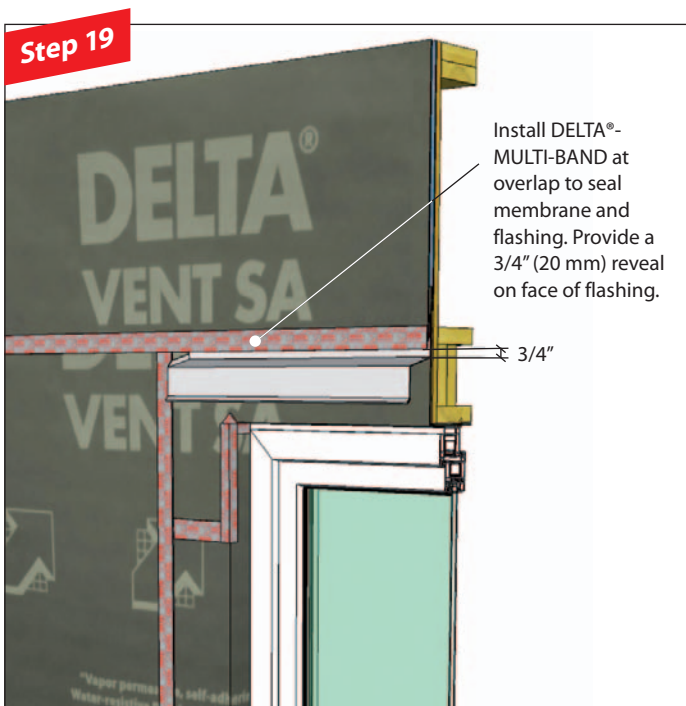
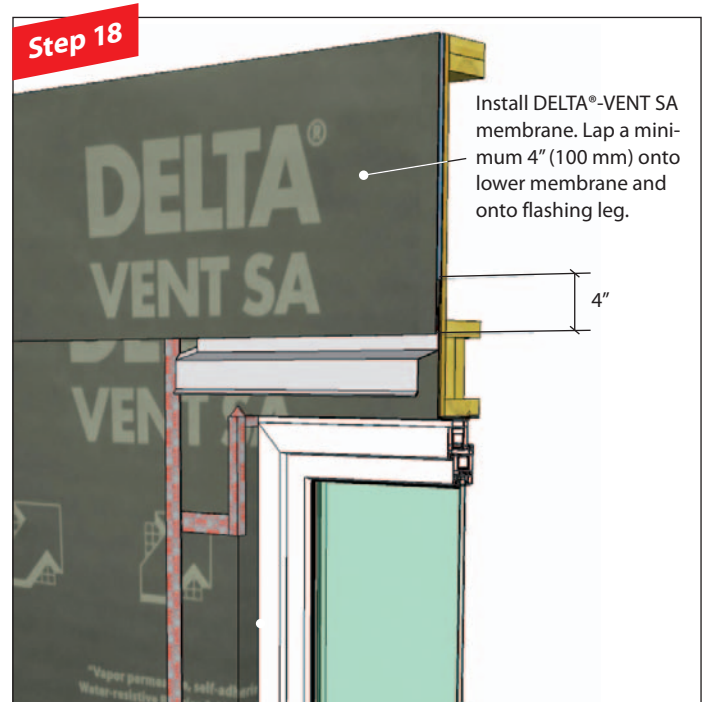
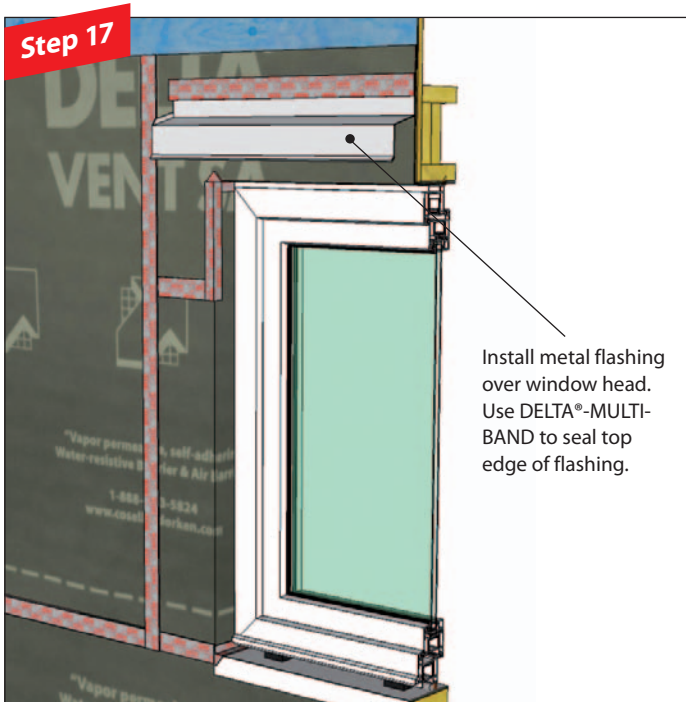


Strip-in method

1. With DELTA®-FAS CORNER



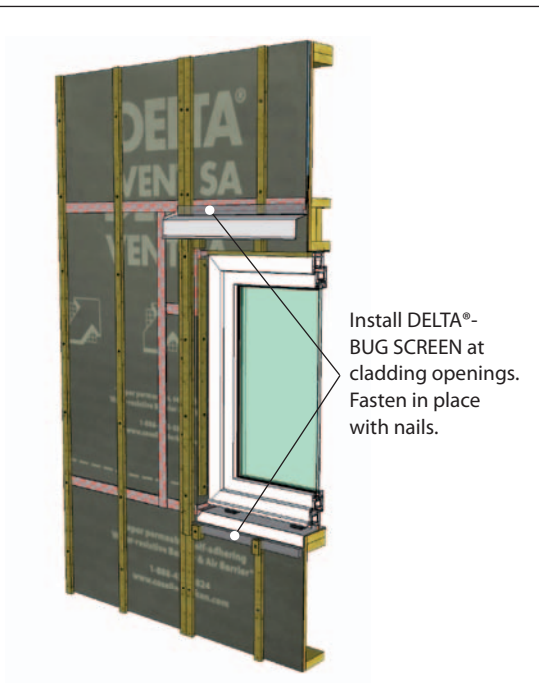
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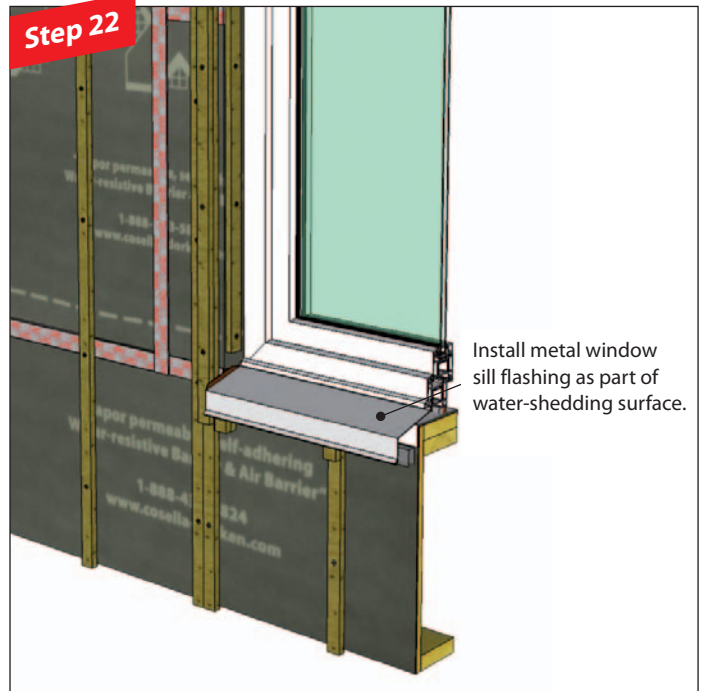
Strip-in method

1. With DELTA®-FAS CORNER

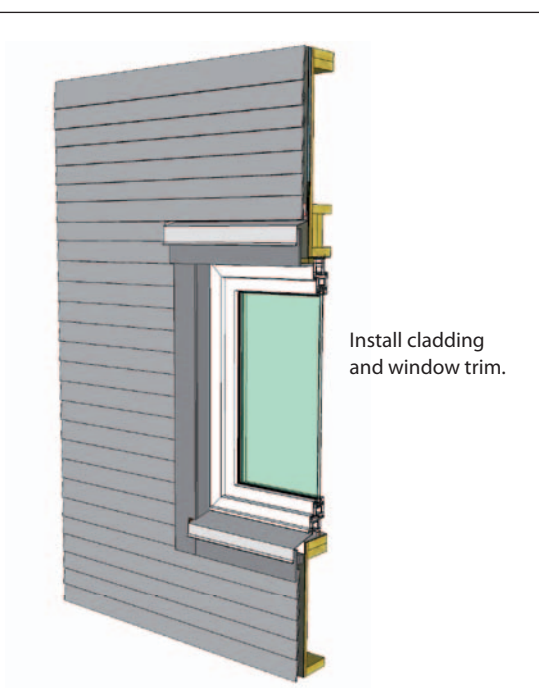
Step 21



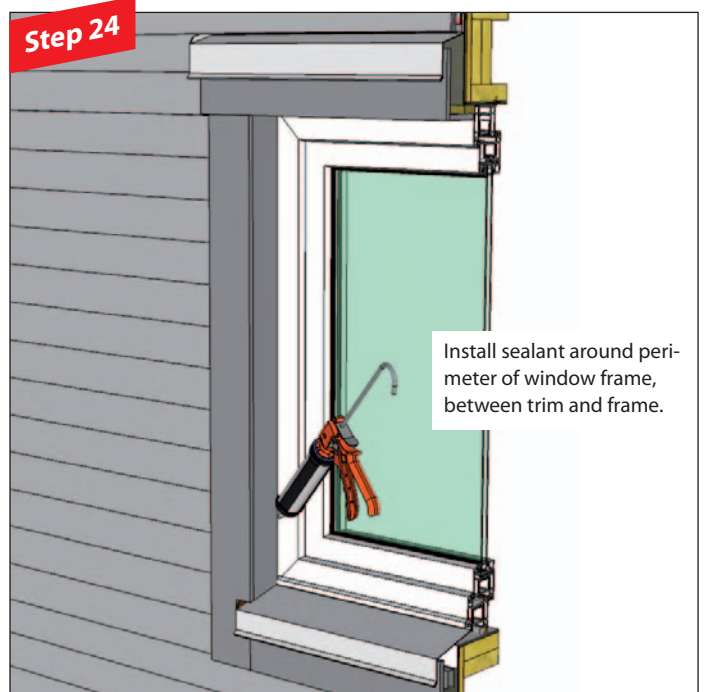
Step 22



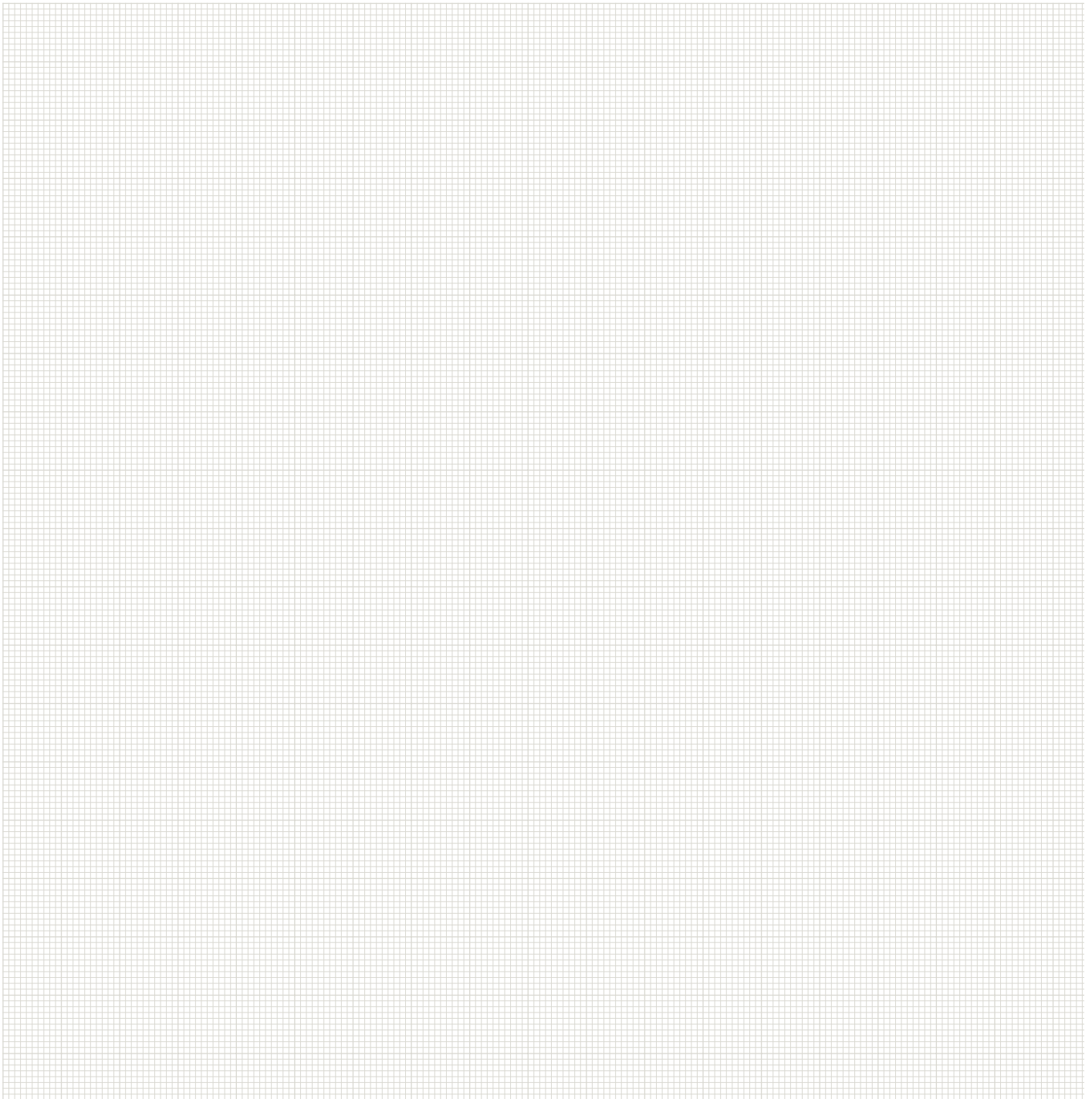
Step 23



Step 24

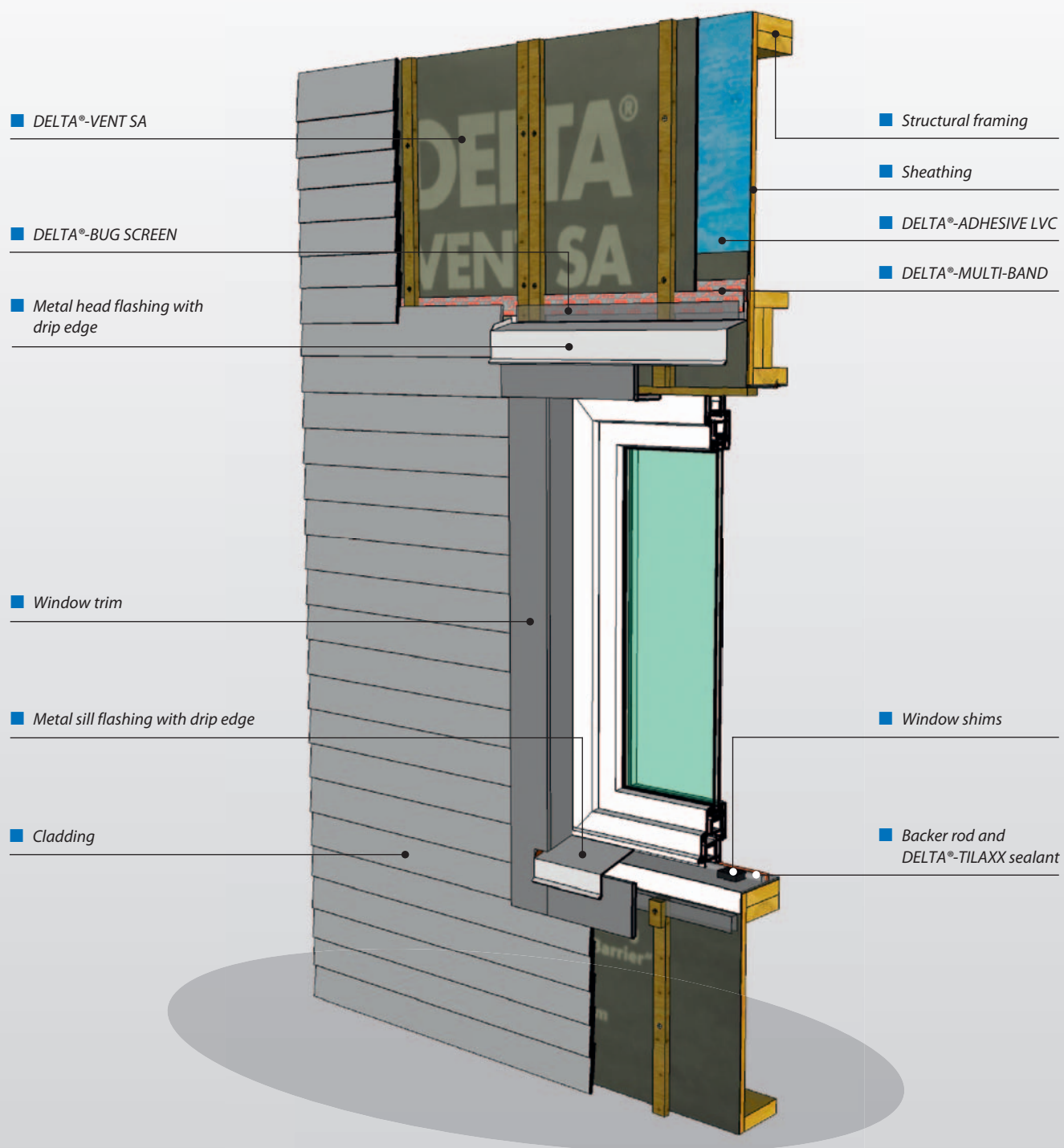


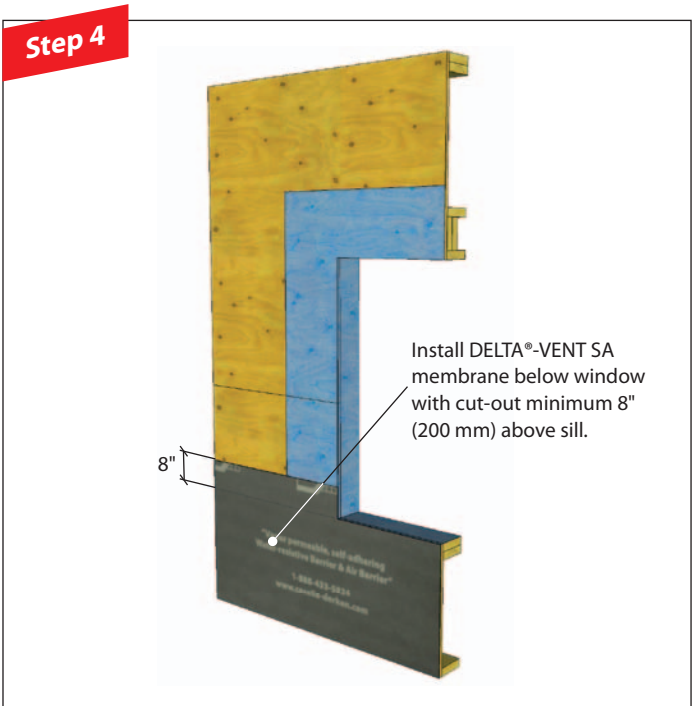
Notes



Strip-in method

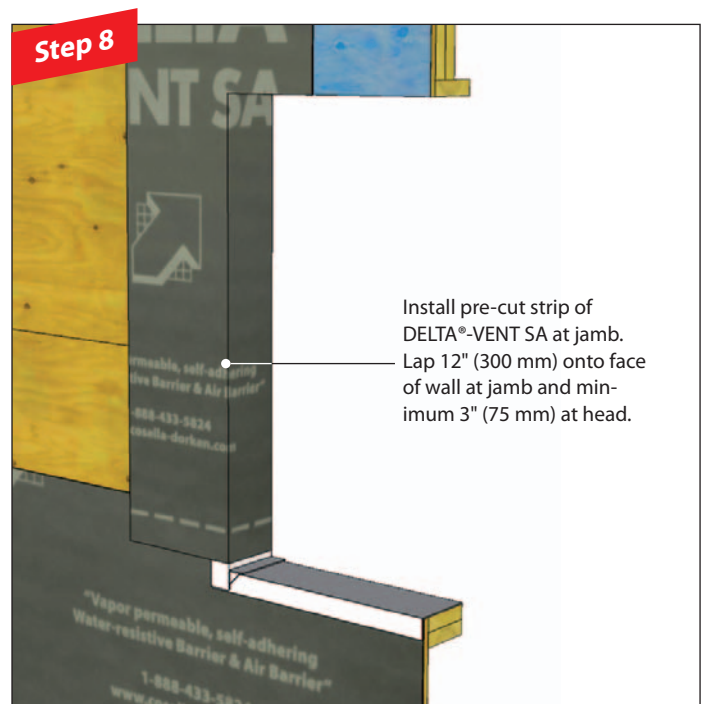
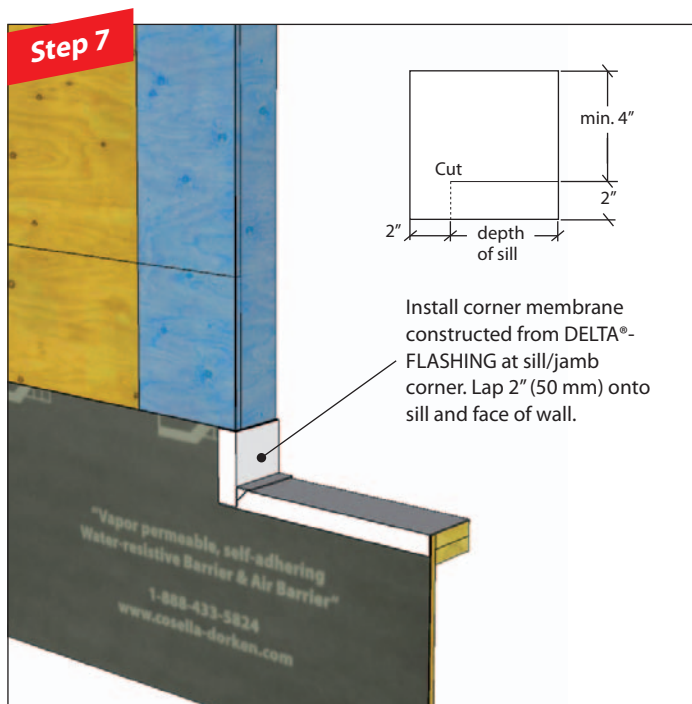
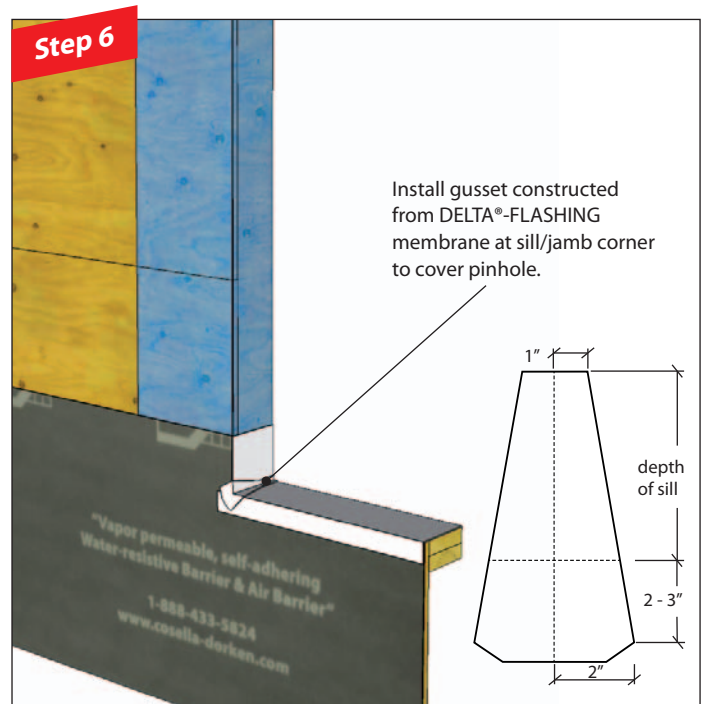
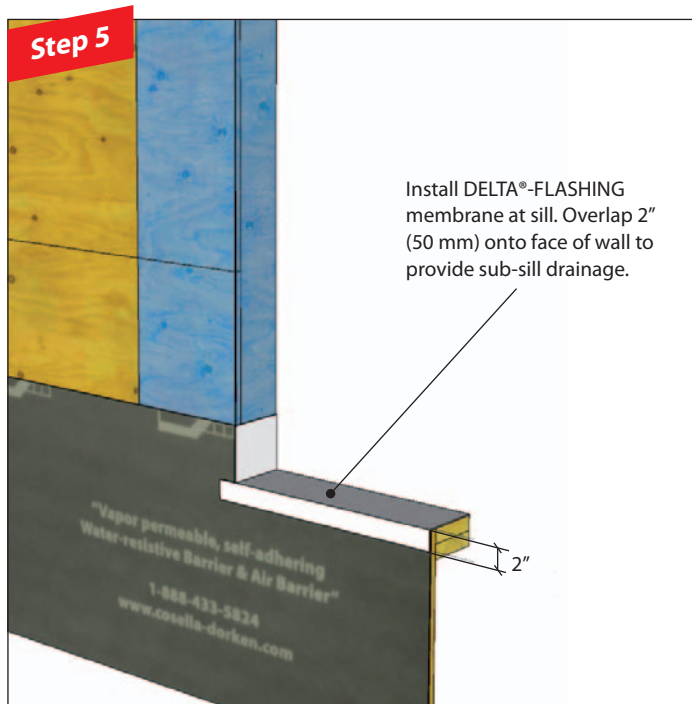
2. With flat sill

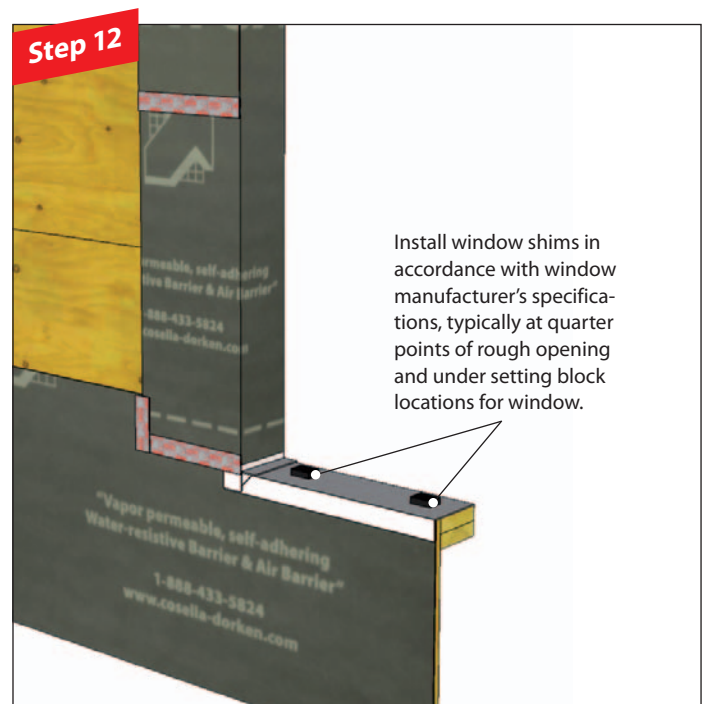
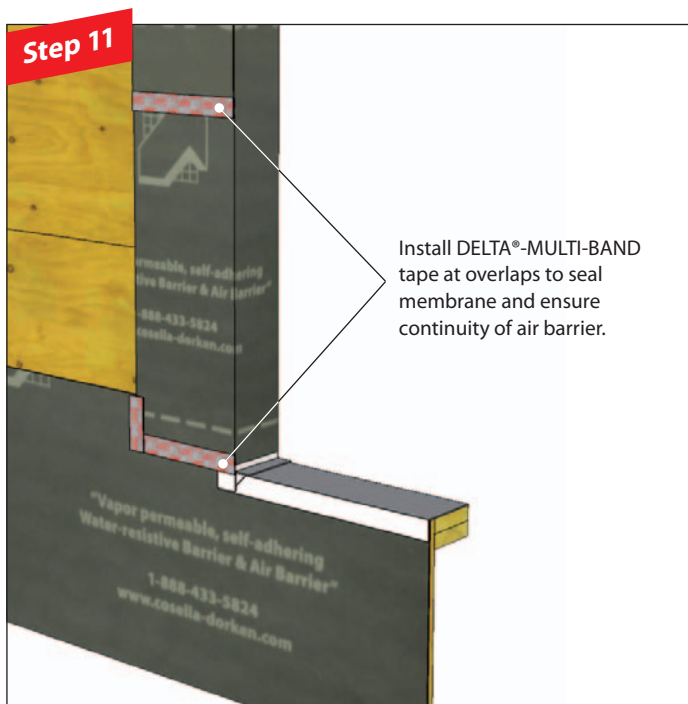
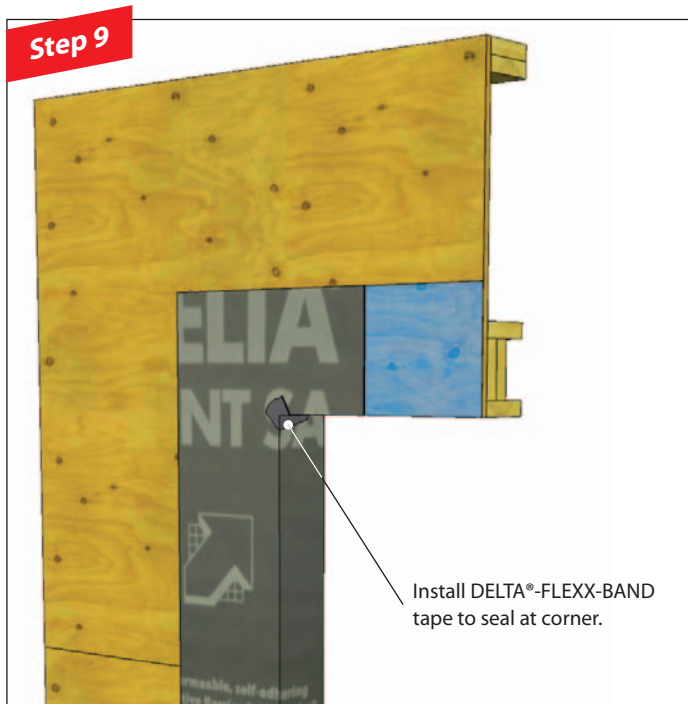




Strip-in method

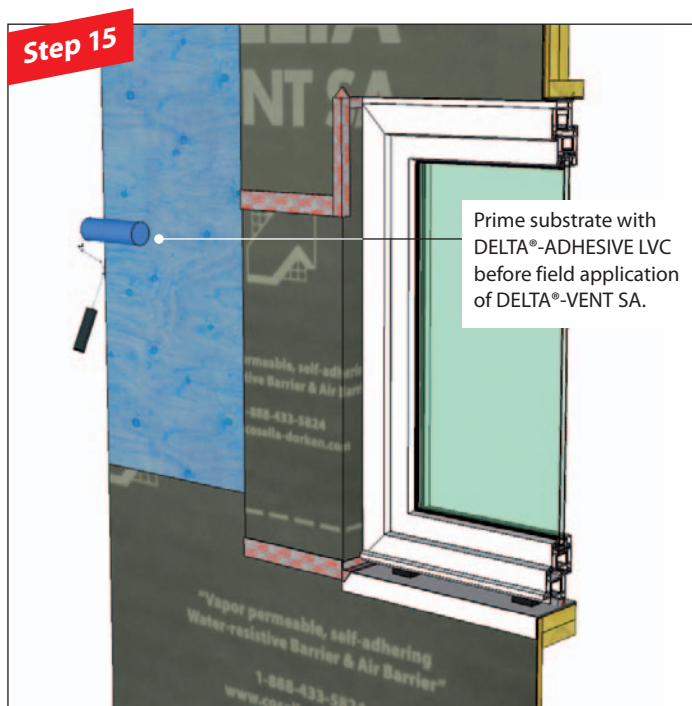
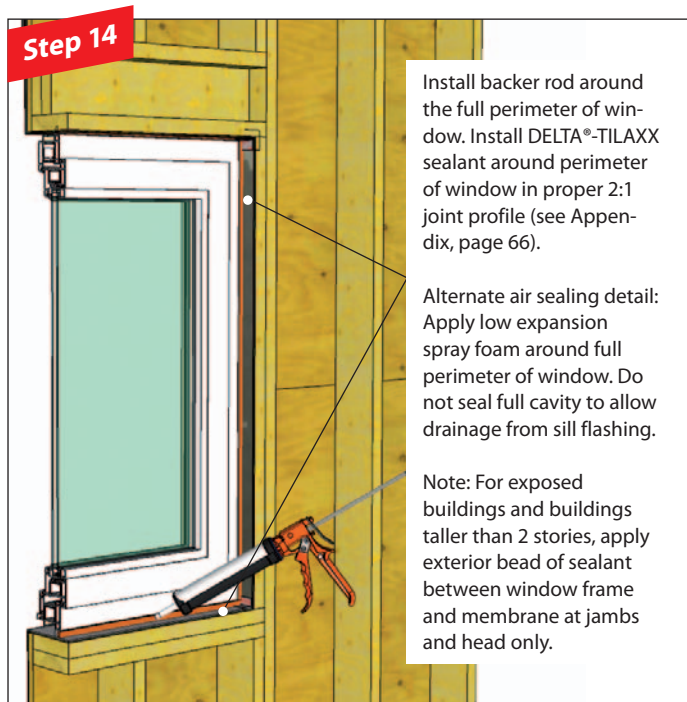
2. With flat sill

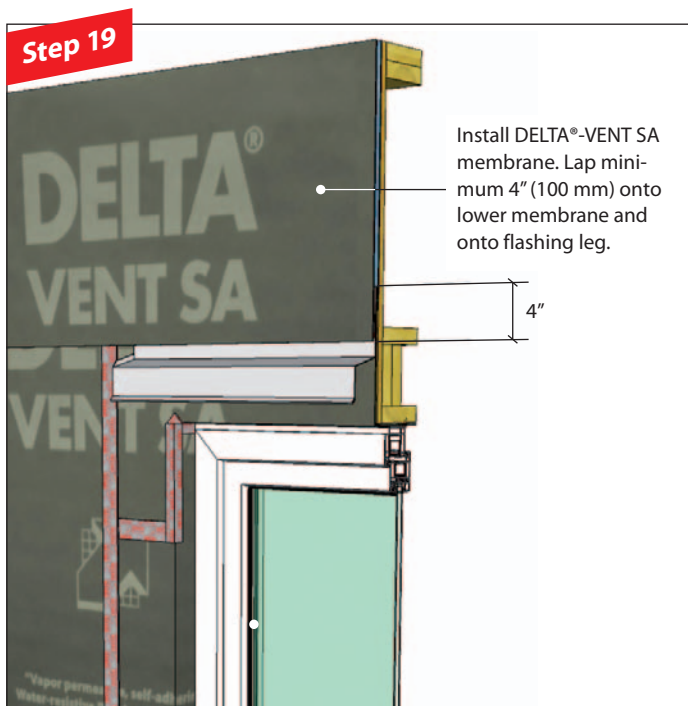
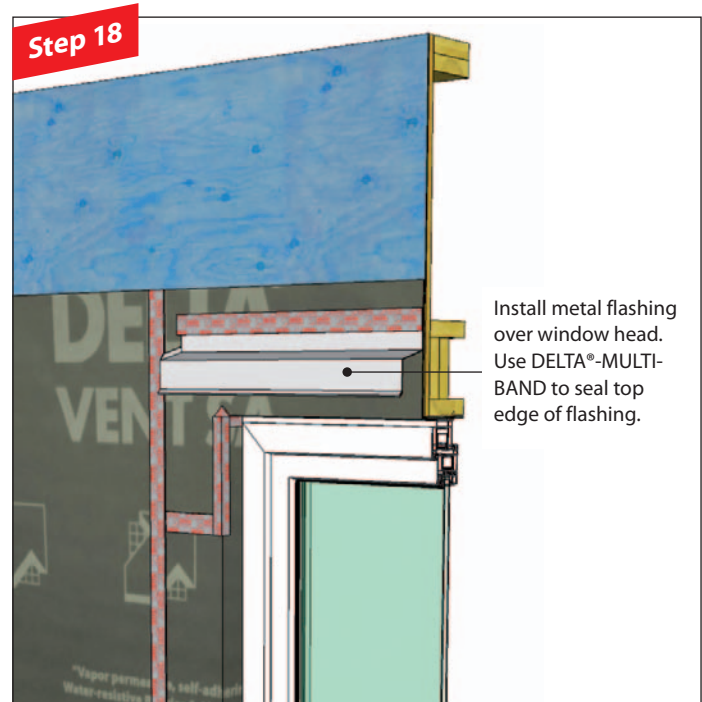
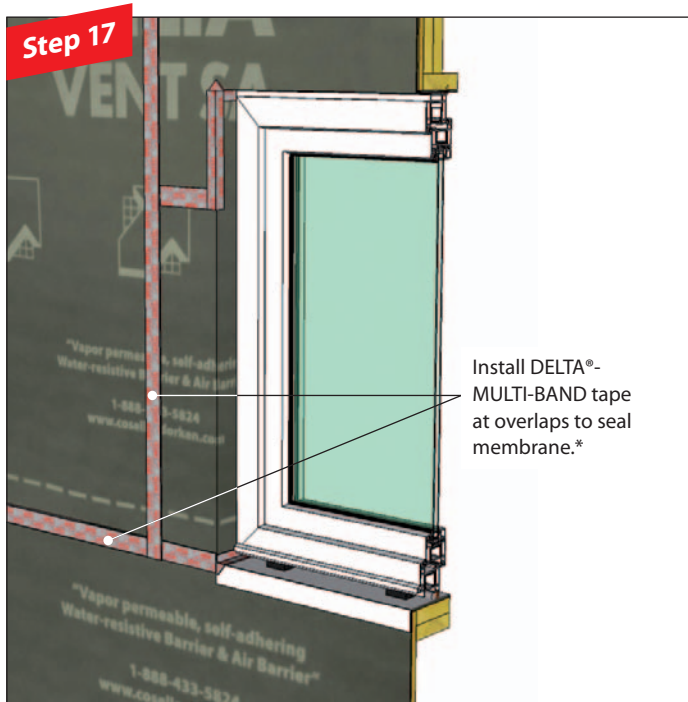




Strip-in method

2. With flat sill



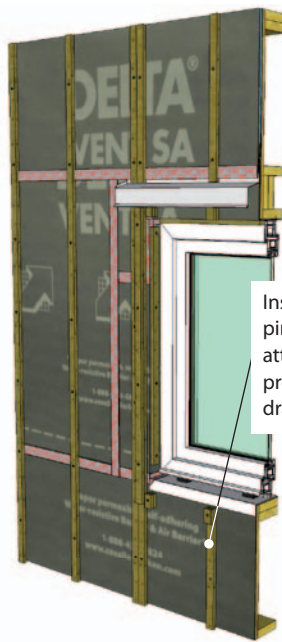


* Not required where there is a self-adhered edge.

Strip-in method

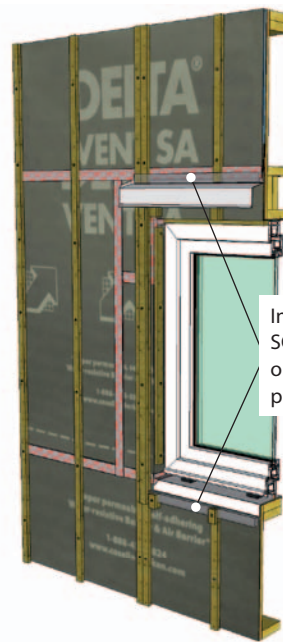
2. With flat sill

Step 21



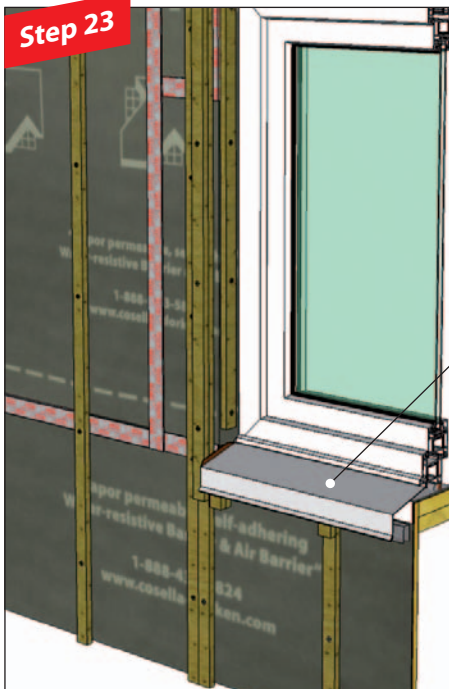
Install vertical strap-
ping for cladding
attachment and to
provide cavity for
drainage and venting.

Step 22



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

Step 23



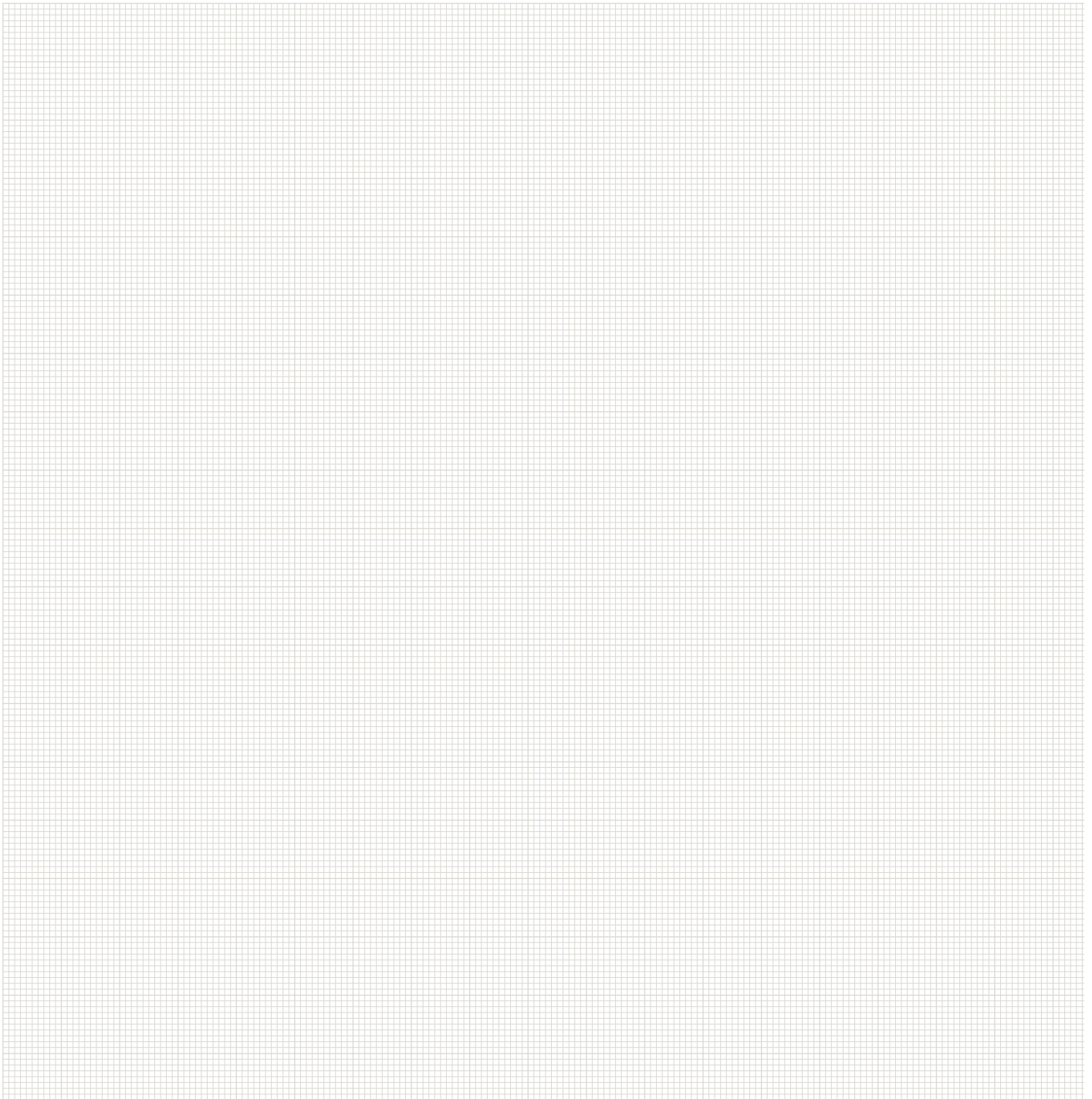
Install metal win-
dow sill flashing as
part of water-shed-
ding surface.

Step 24



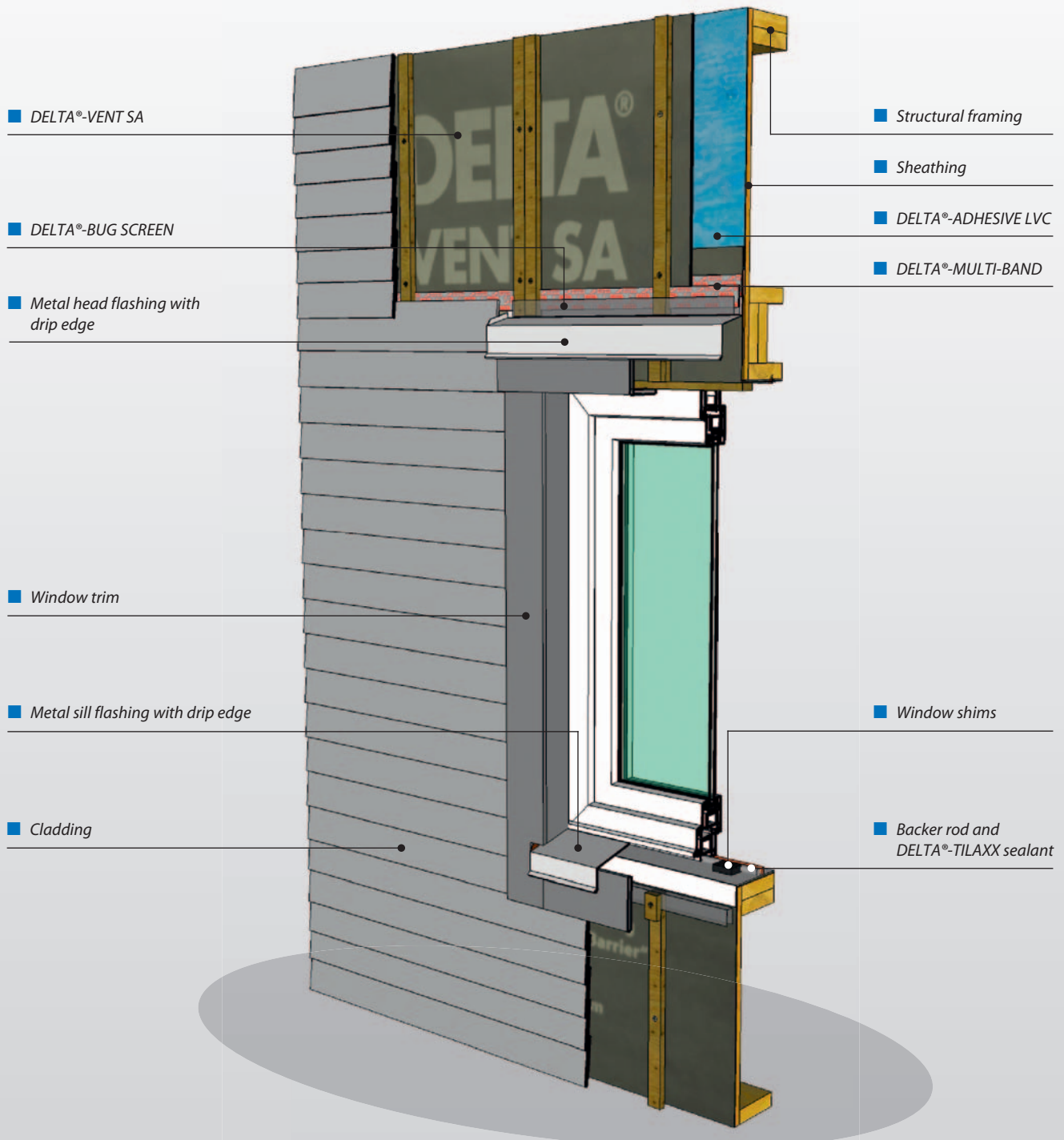
Install cladding
and window trim.
Install sealant
around perimeter
of window frame,
between trim and
frame.

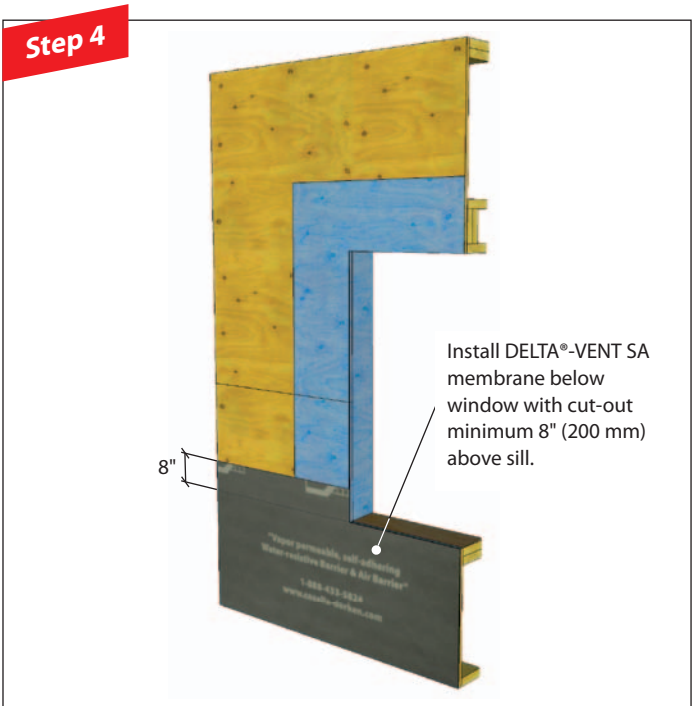
Notes



Strip-in method

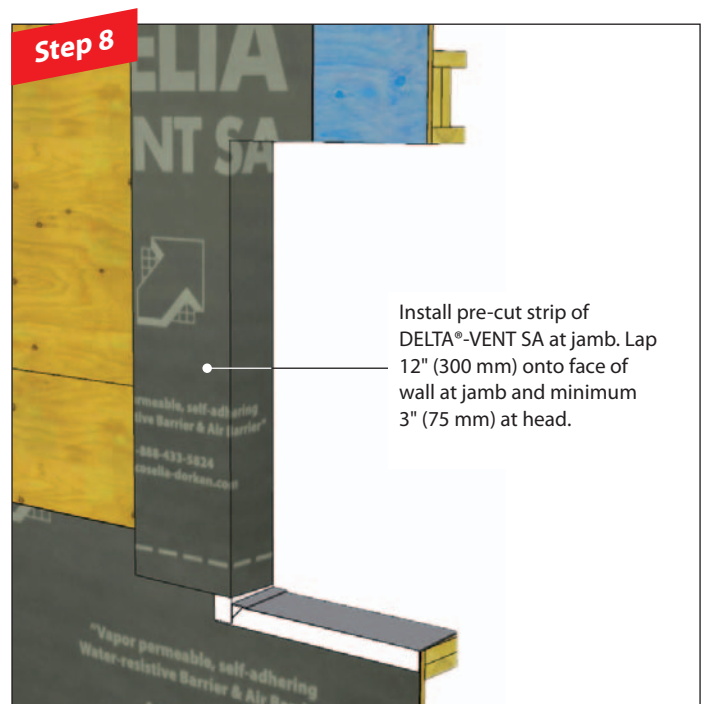
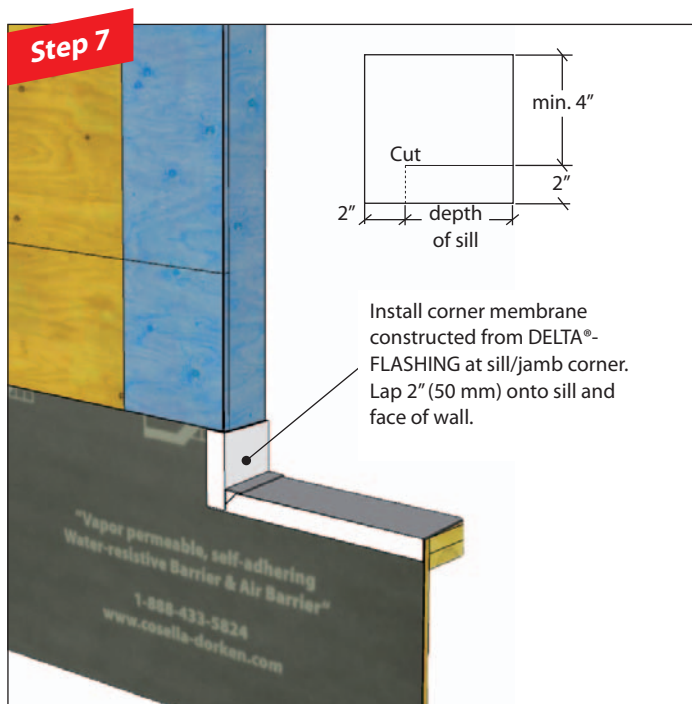
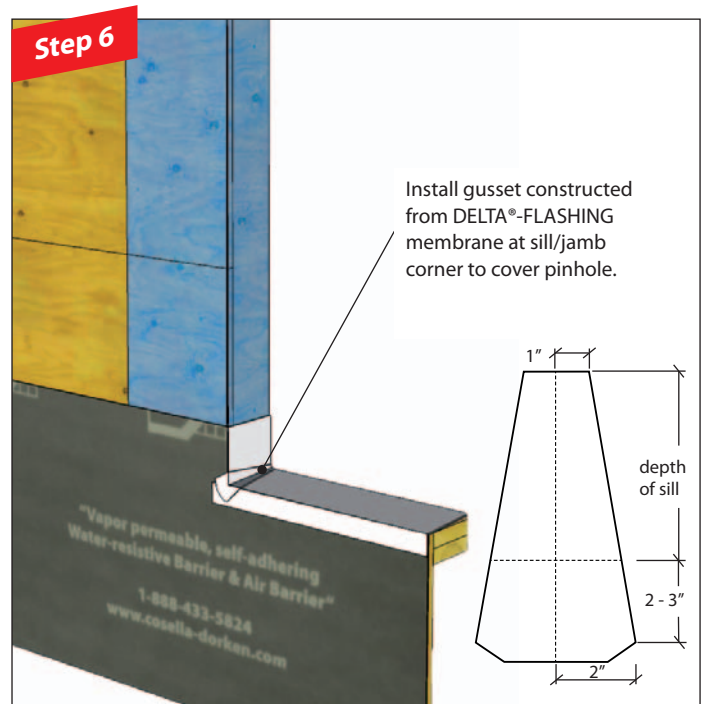
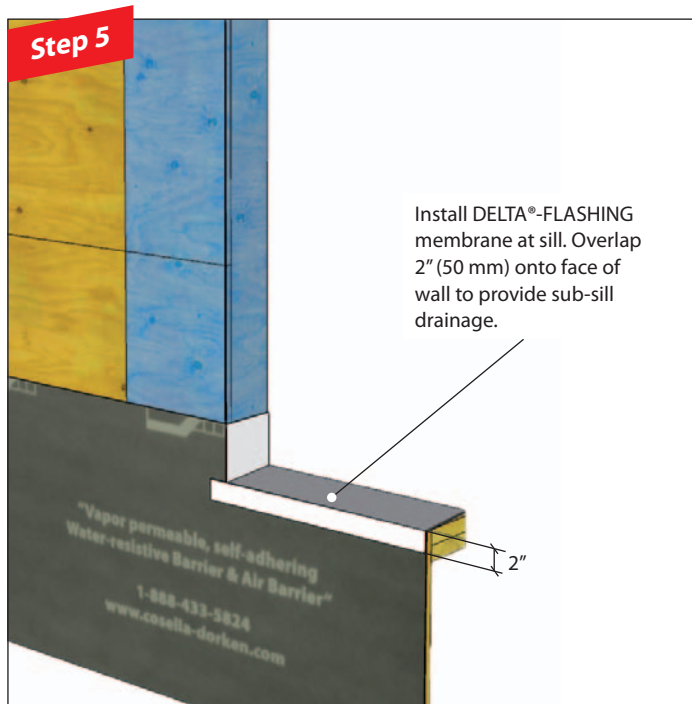
3. With sloped sill

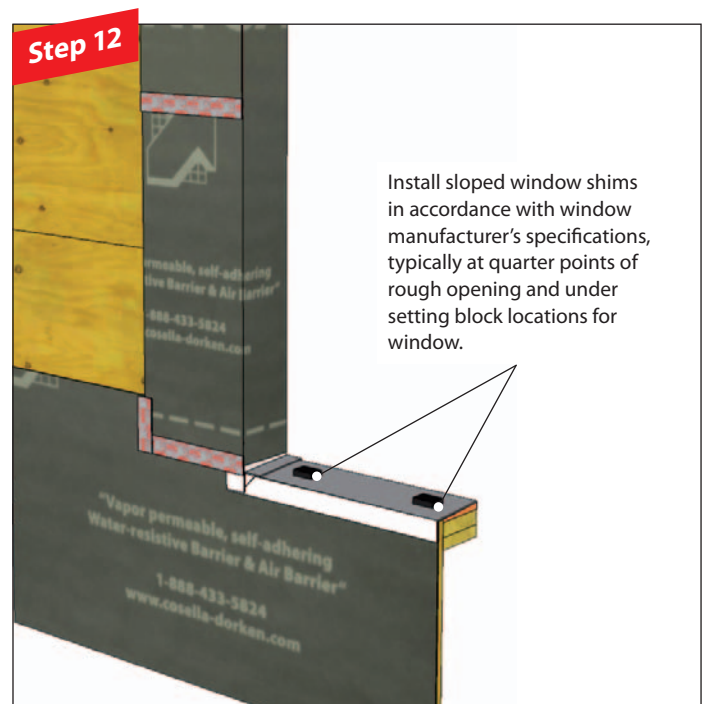
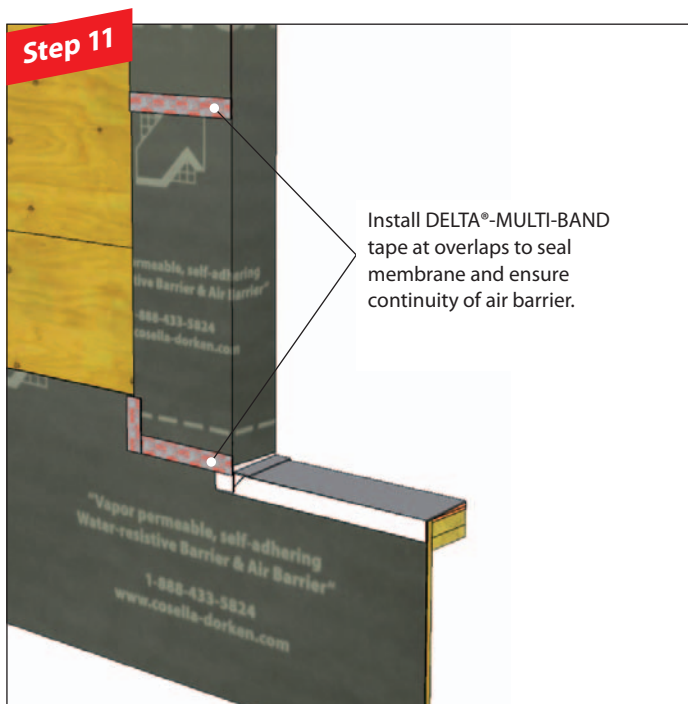
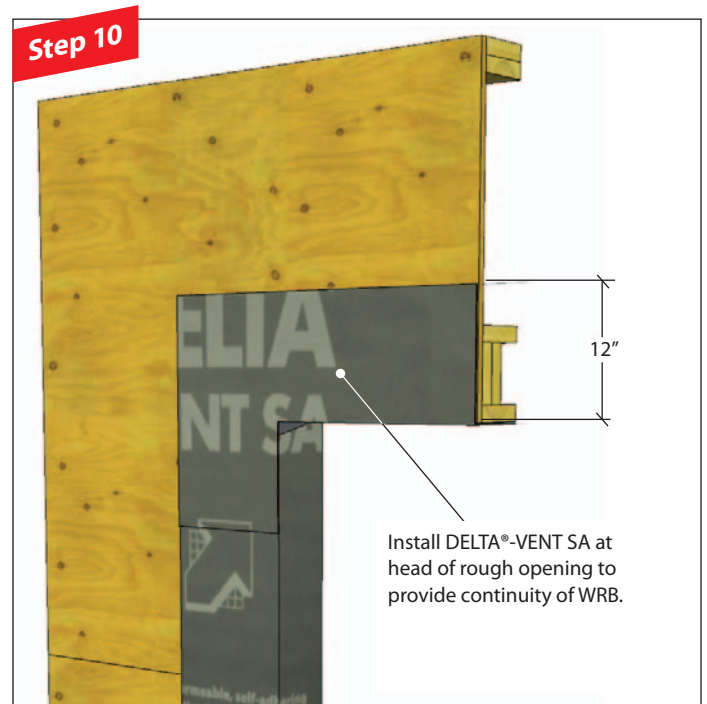




Strip-in method

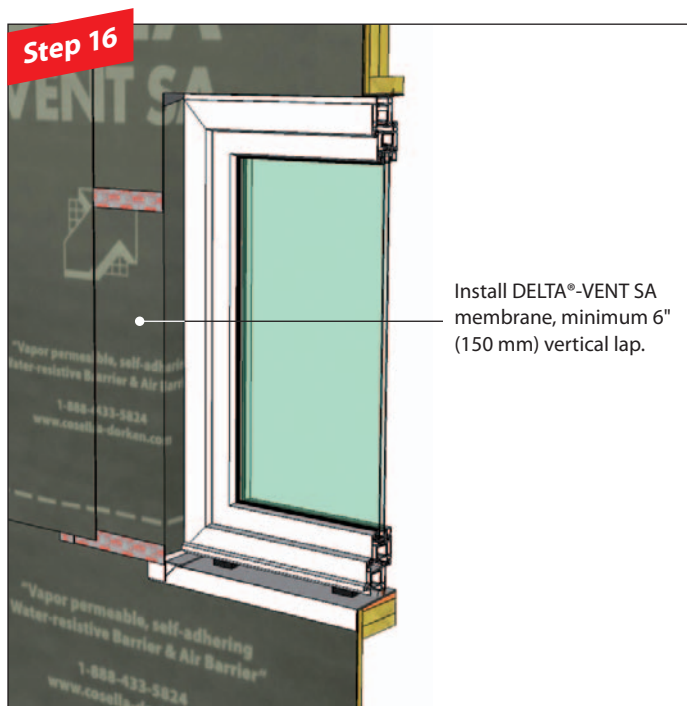
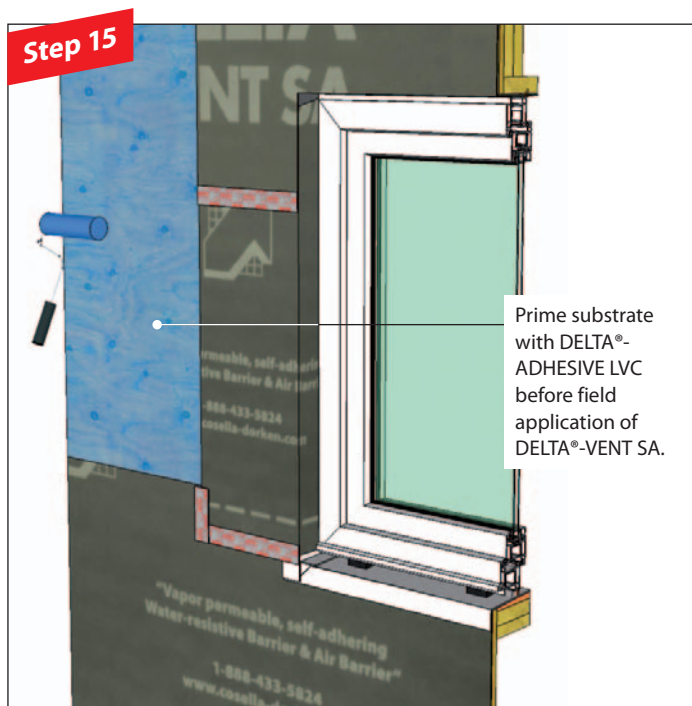
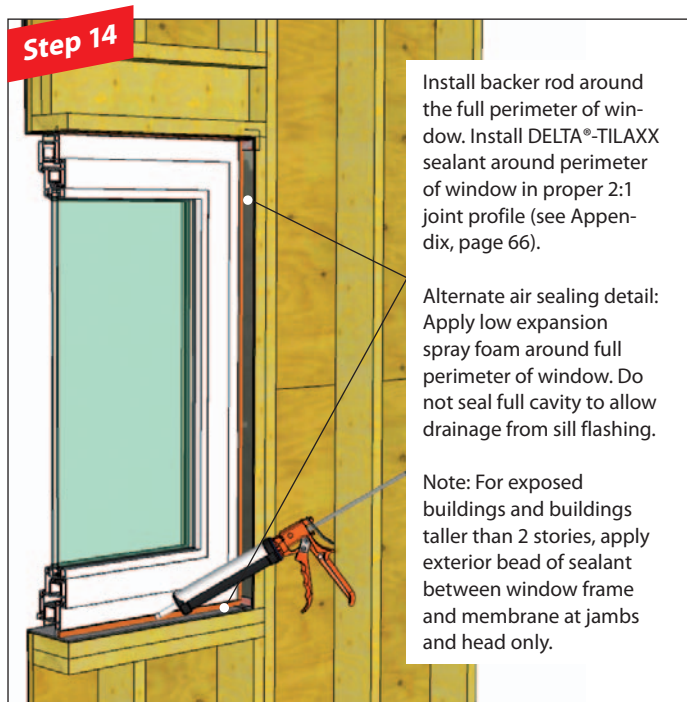
3. With sloped sill

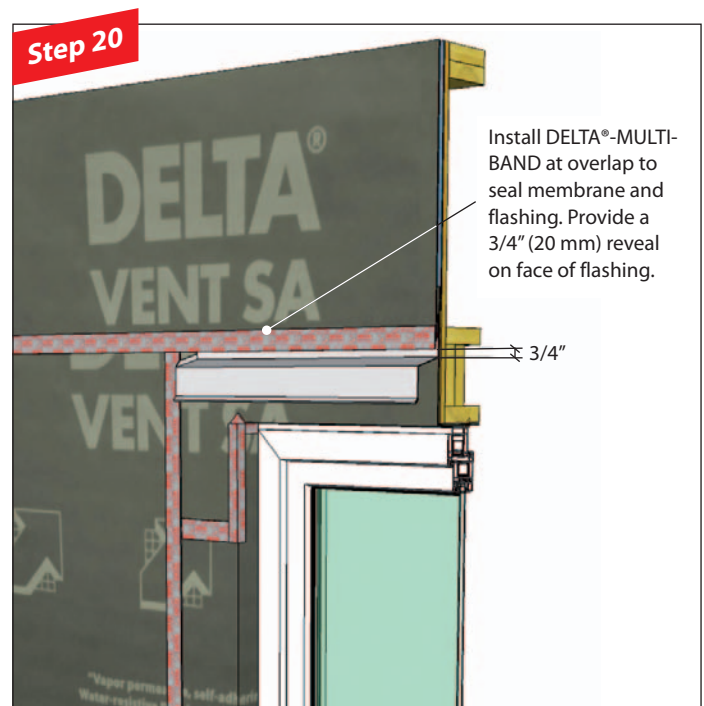
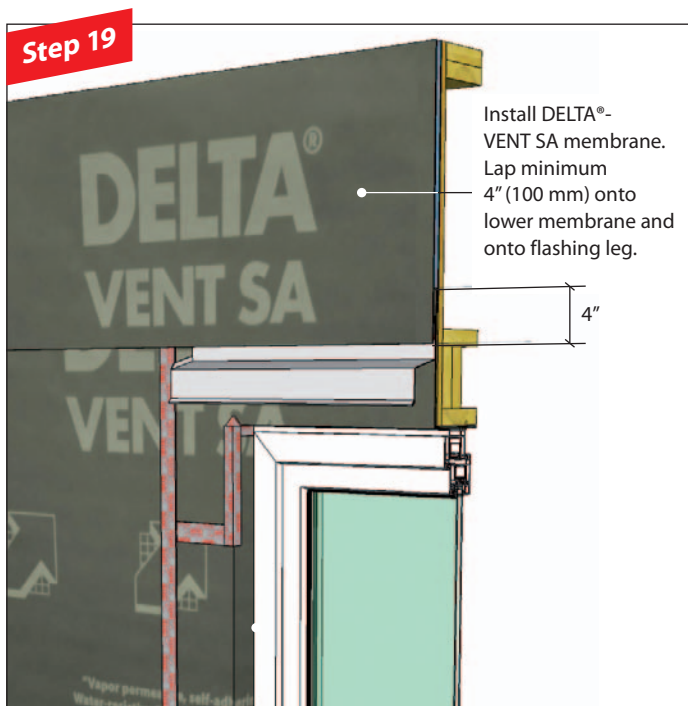
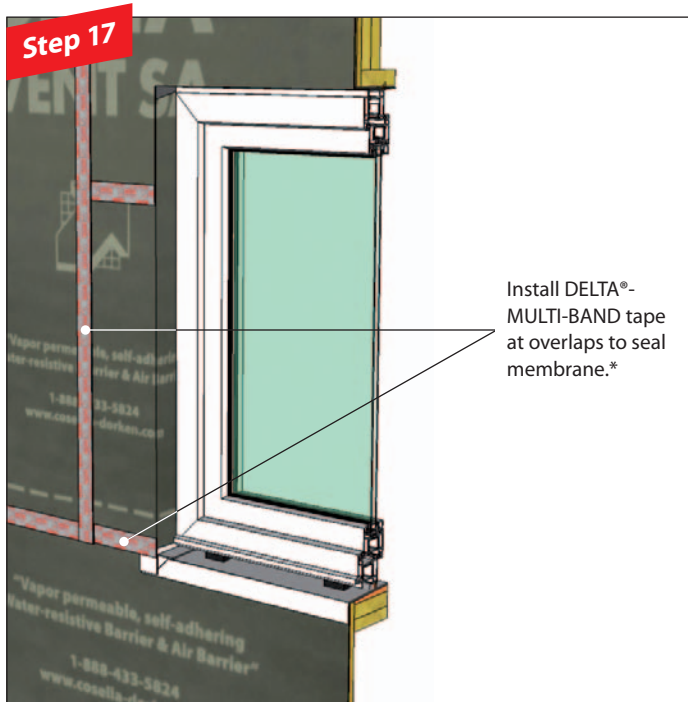




Strip-in method

3. With sloped sill



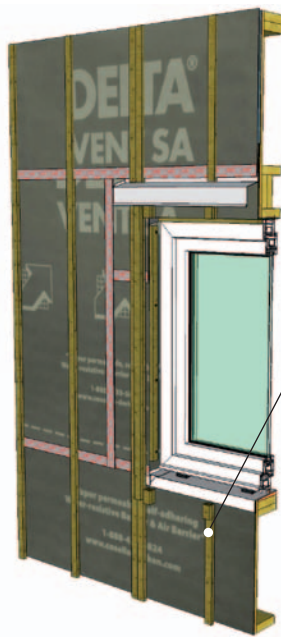


* Not required where there is a self-adhered edge.

Strip-in method

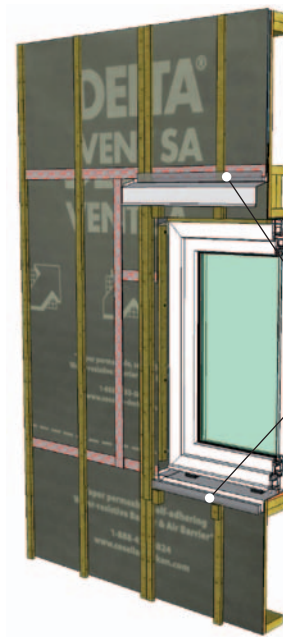
3. With sloped sill

Step 21



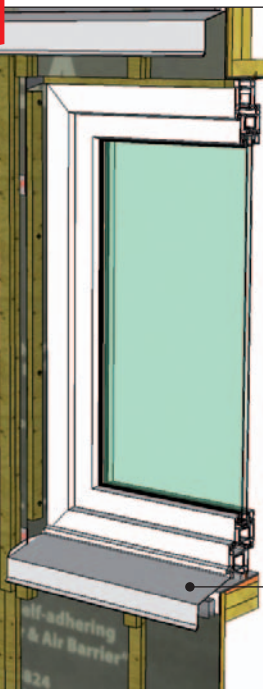
Install vertical strap-
ping for cladding
attachment and to
provide cavity for
drainage and venting.

Step 22



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

Step 23



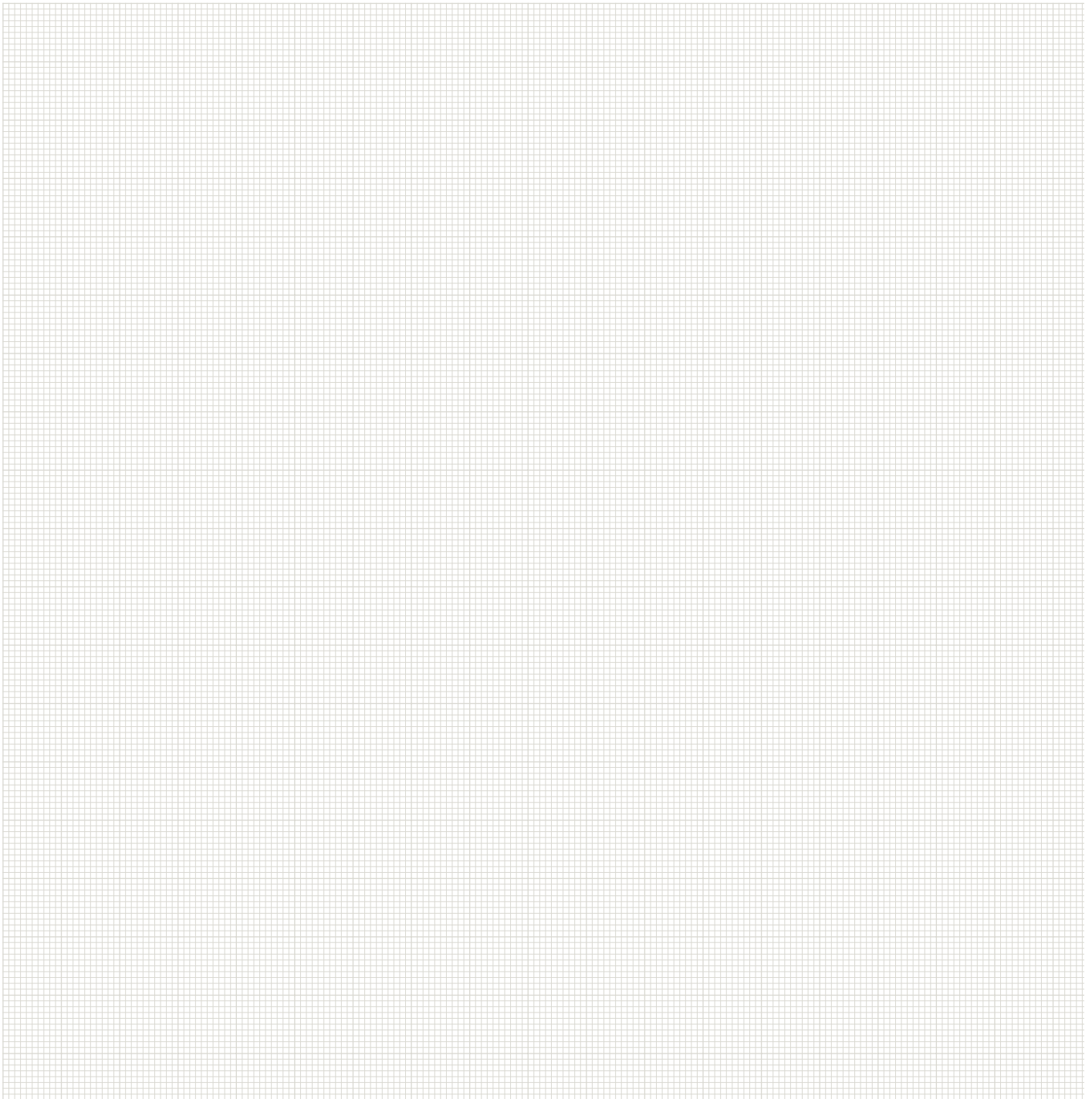
Install metal
window sill flashing
as part of water-
shedding surface.

Step 24



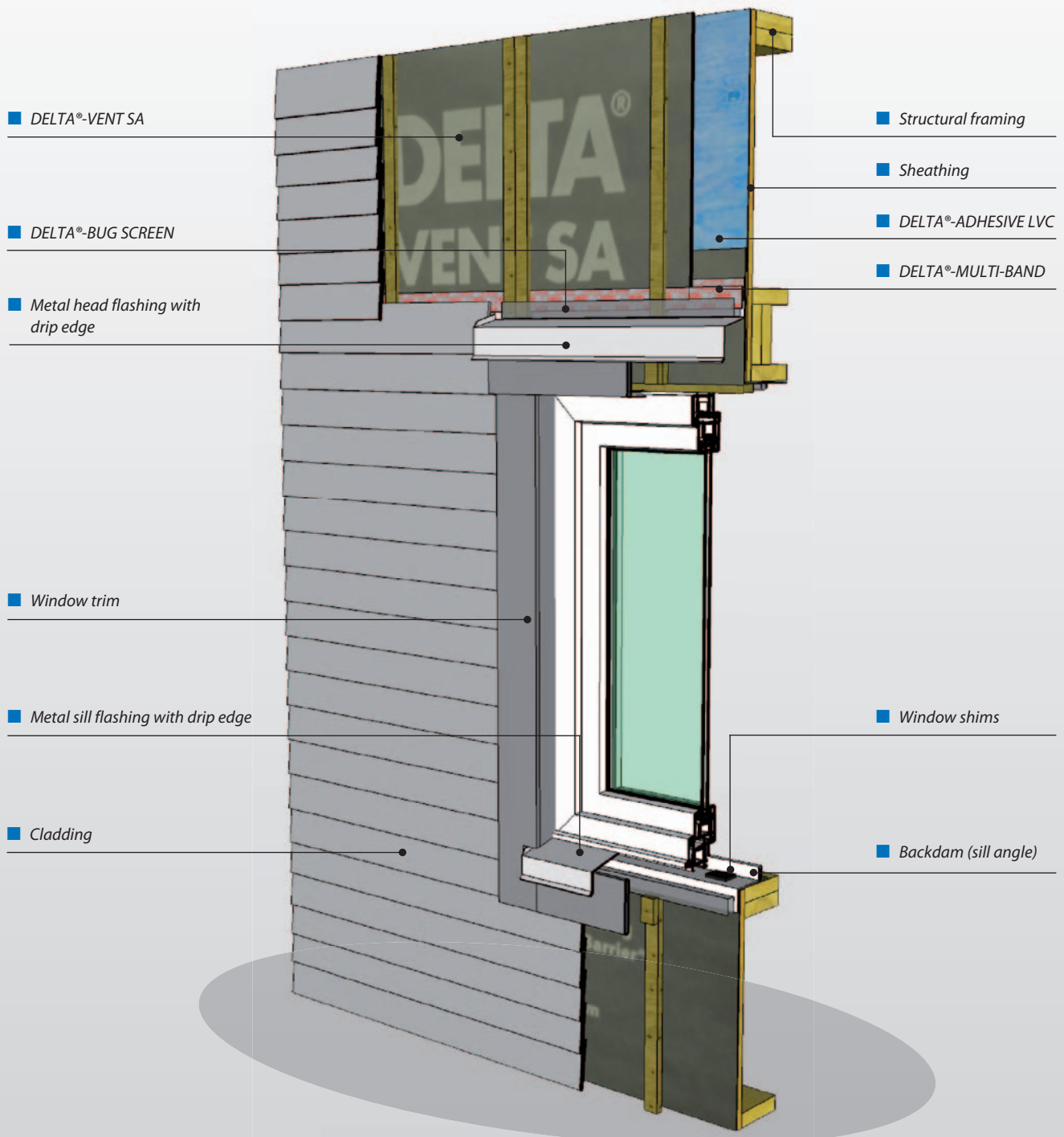
Install cladding
and window trim.
Install sealant
around perimeter
of window frame,
between trim and
frame.

Notes

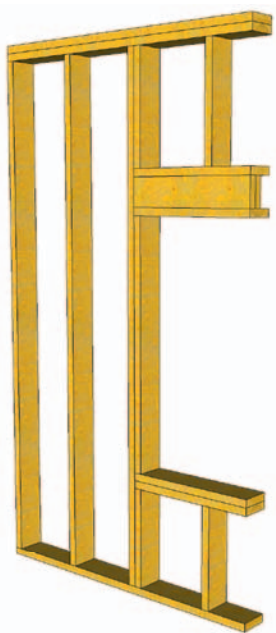


Strip-in method

4. With backdam



Step 1



Framing

Step 2



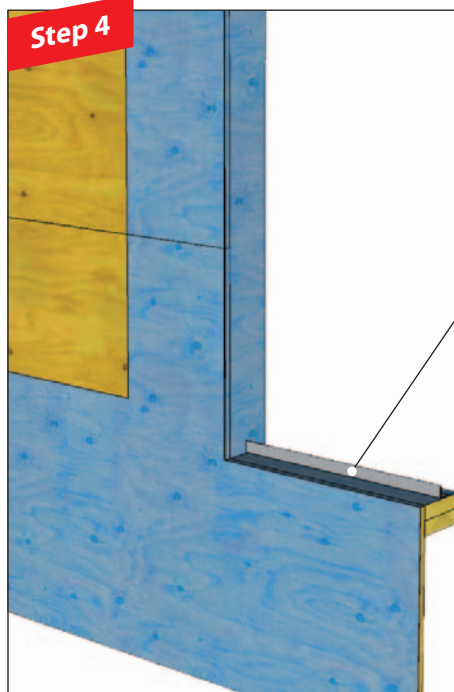
Sheathing

Step 3



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

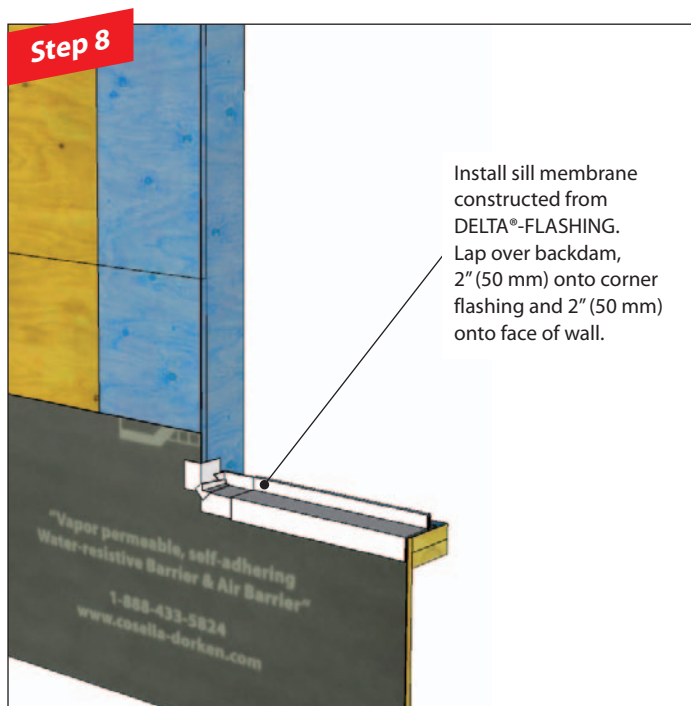
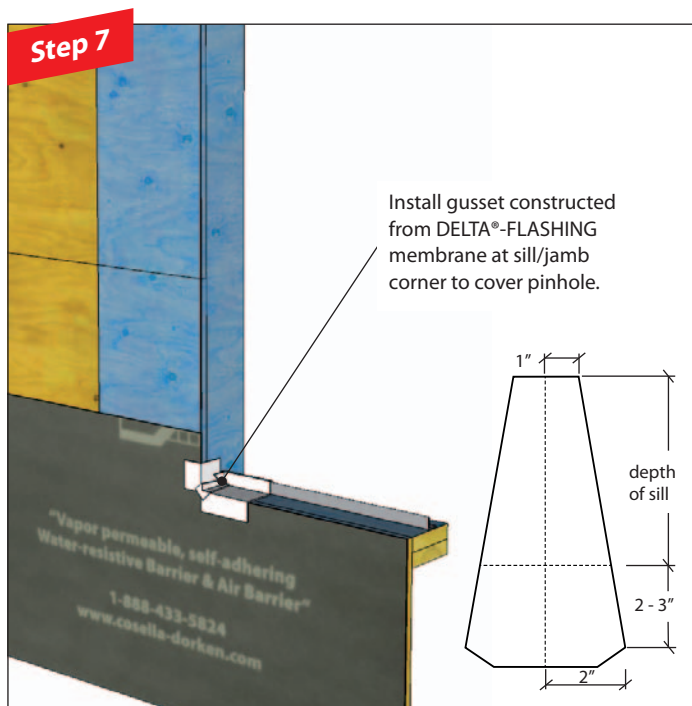
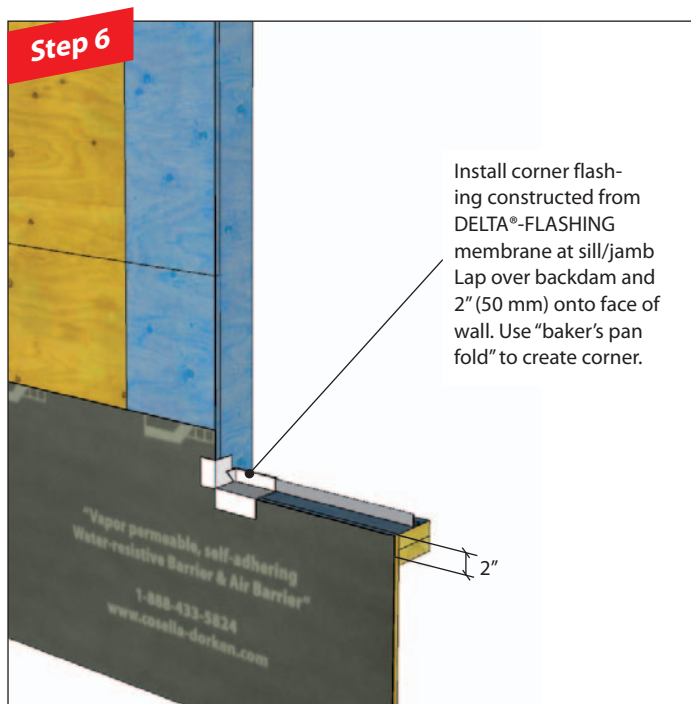
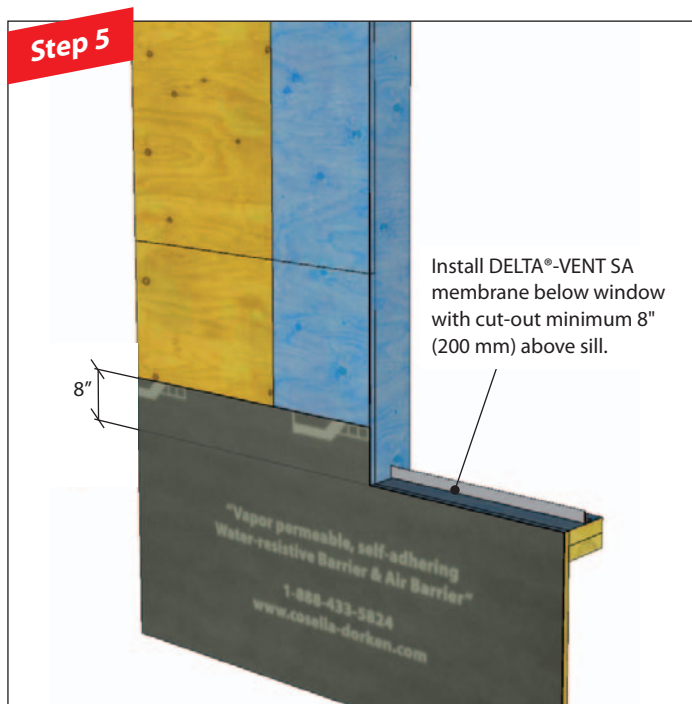
Step 4

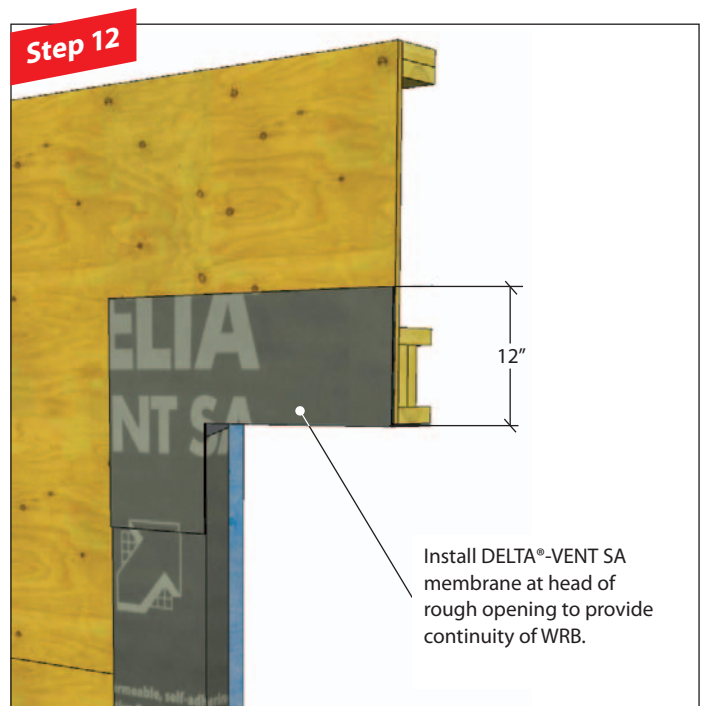
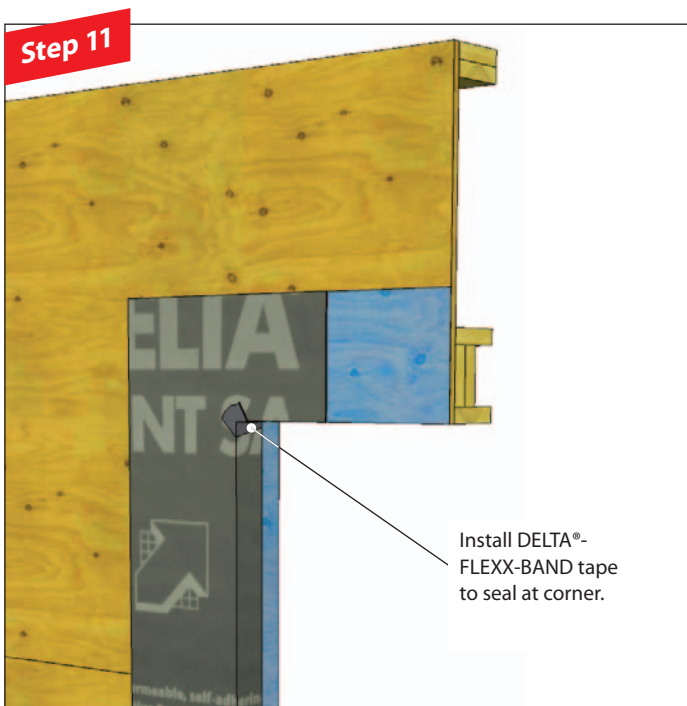
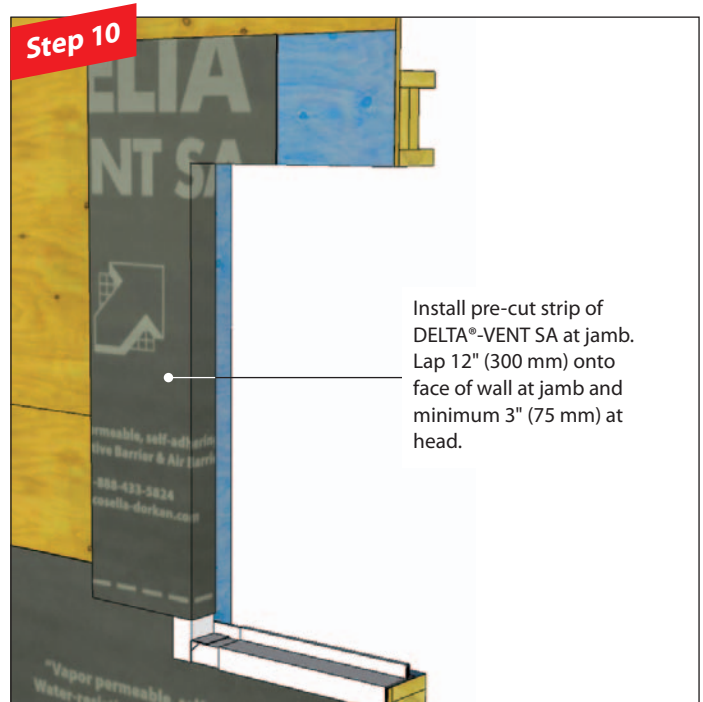
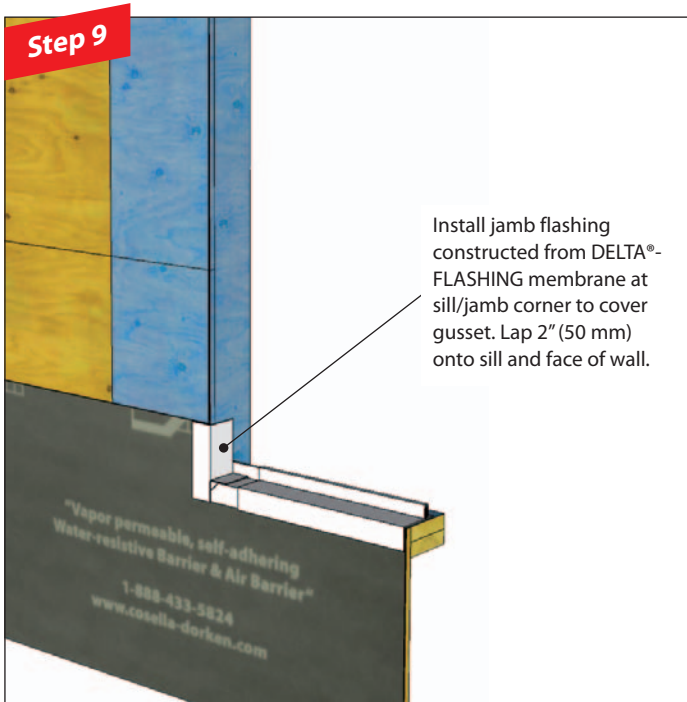


Install backdam
at expected
depth of window.

Strip-in method

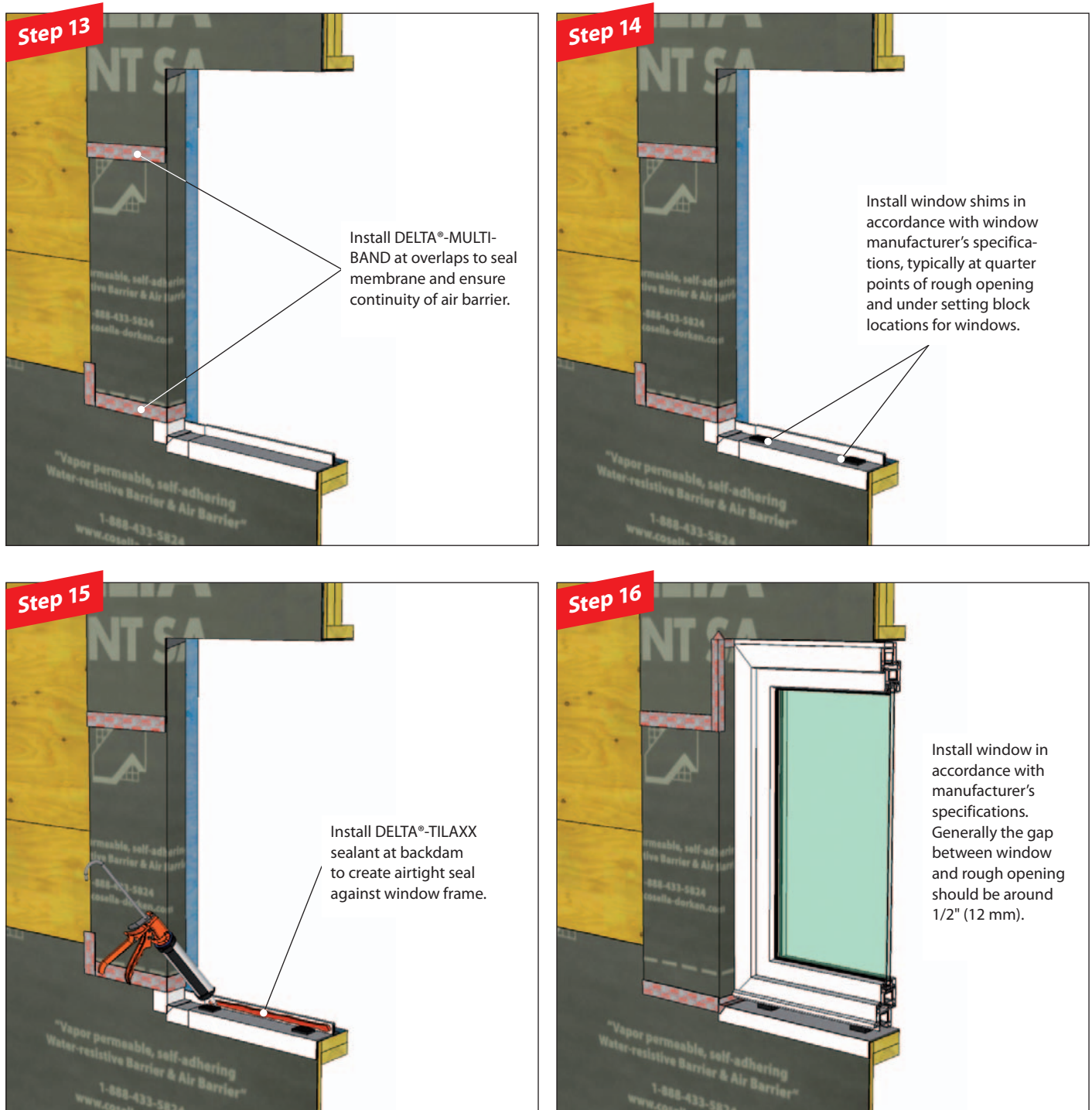
4. With backdam

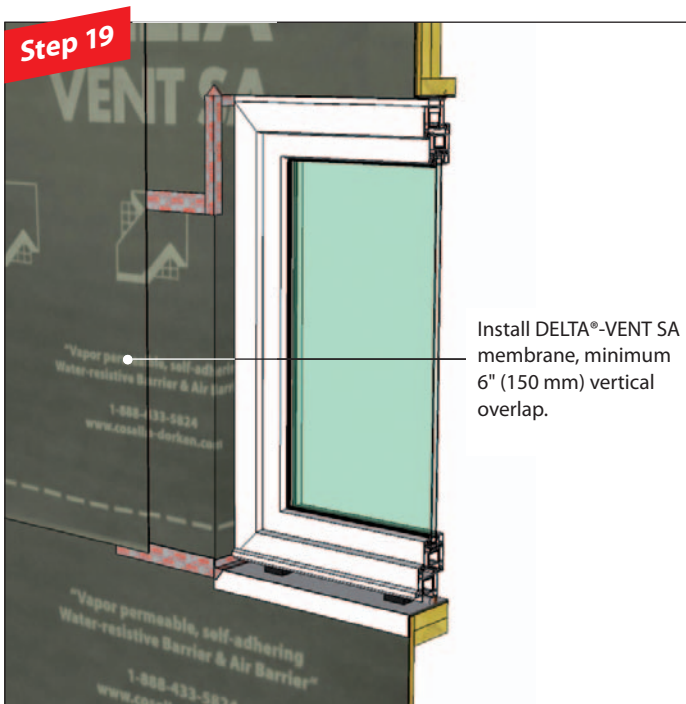
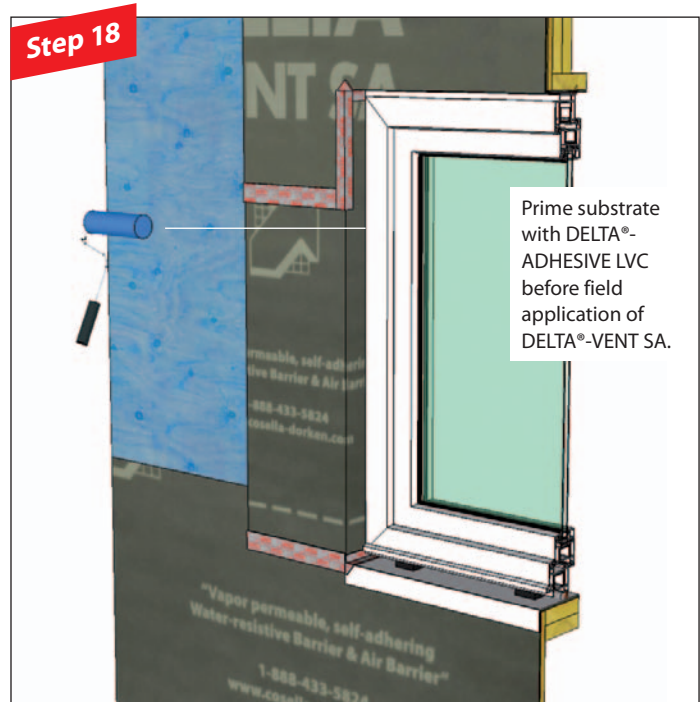




Strip-in method

4. With backdam

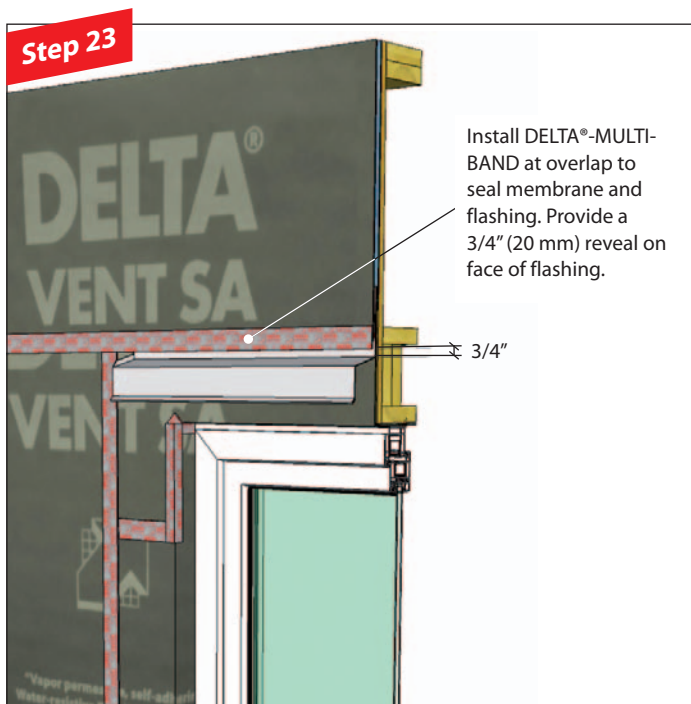
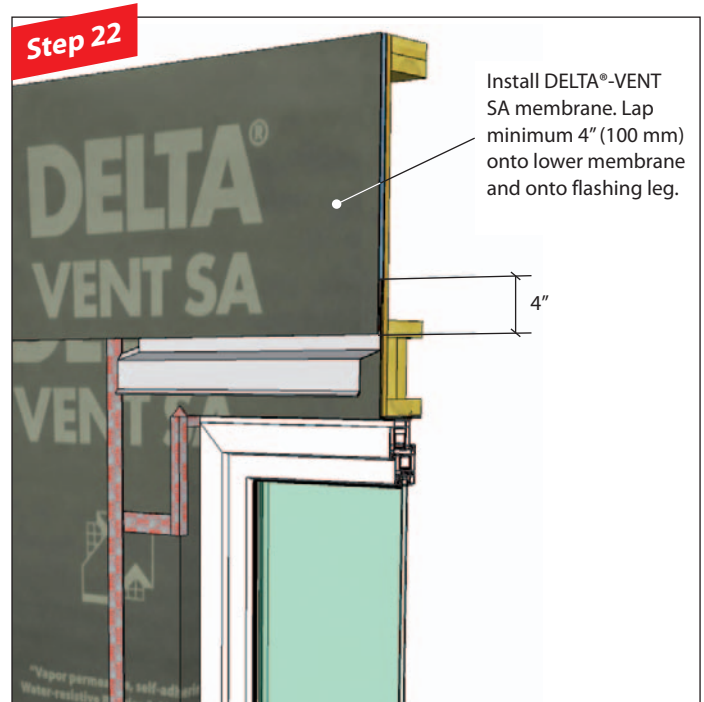




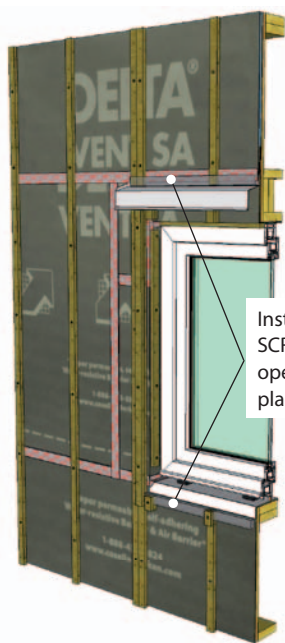
* Not required where there is a self-adhered edge.

Strip-in method

4. With backdam

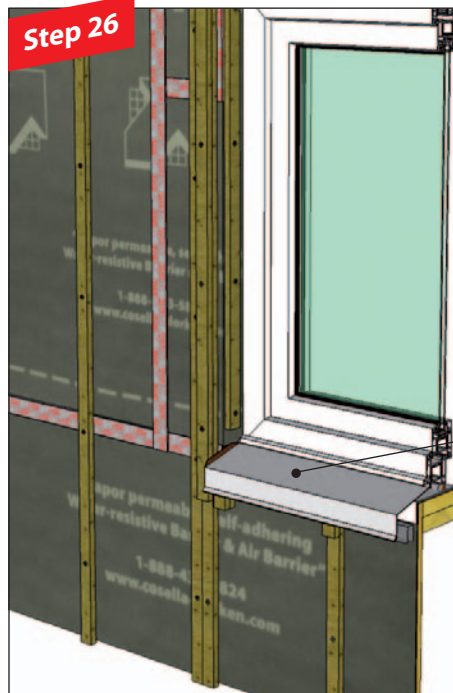


Step 25



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

Step 26



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

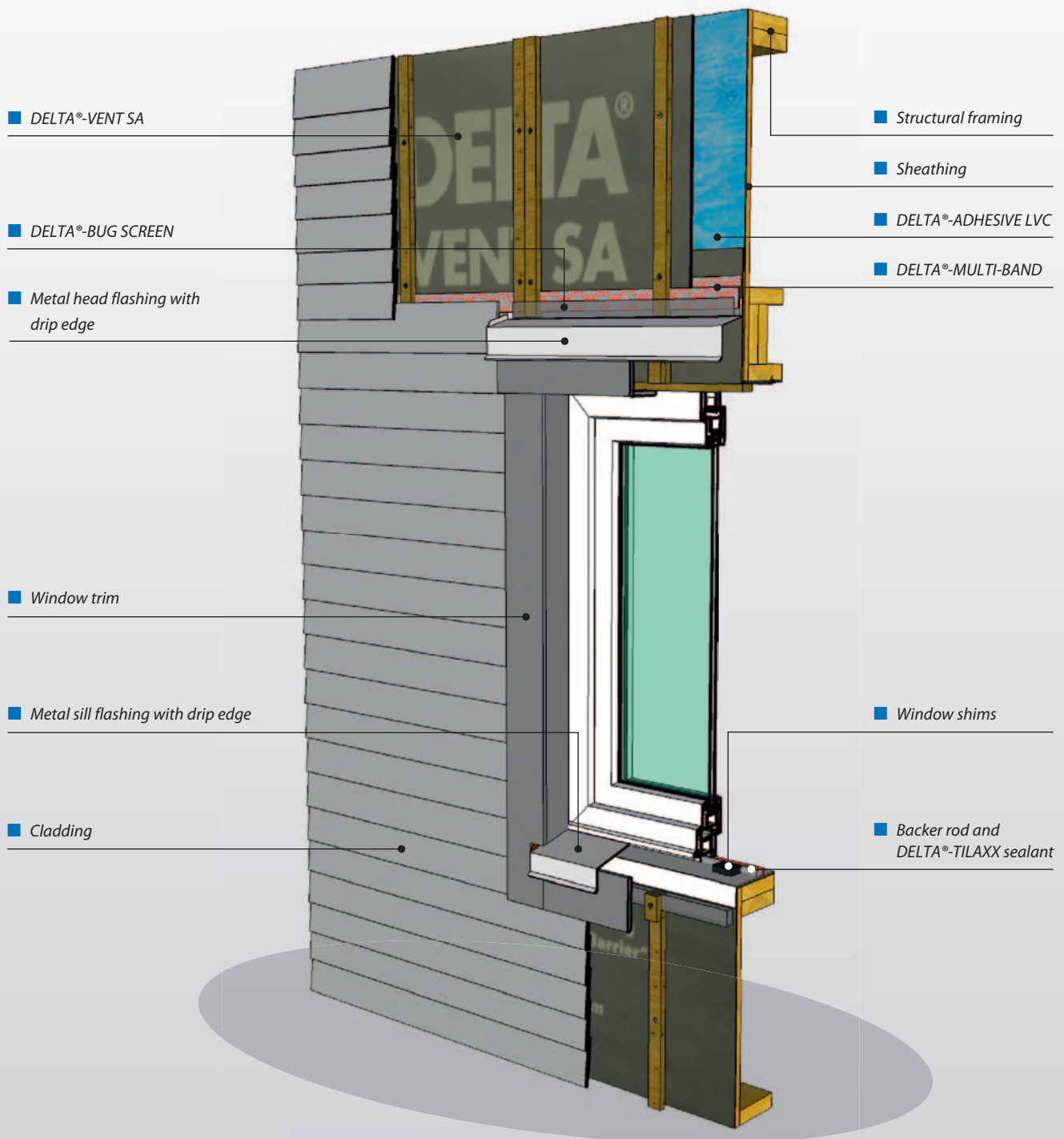
Step 27



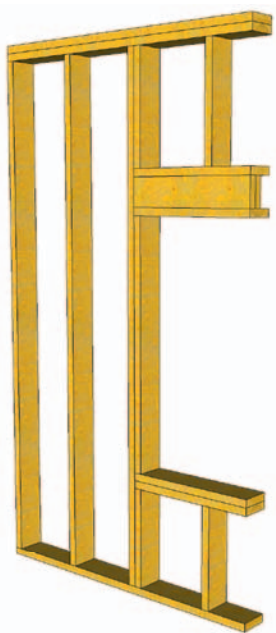
Install cladding and window trim. Install sealant around perimeter of window frame, between trim and frame.

Cut-out method

5. With DELTA®-FAS CORNER



Step 1



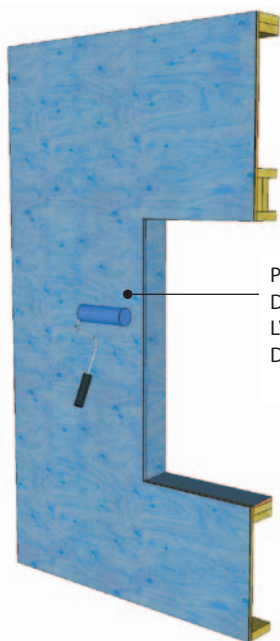
Framing

Step 2



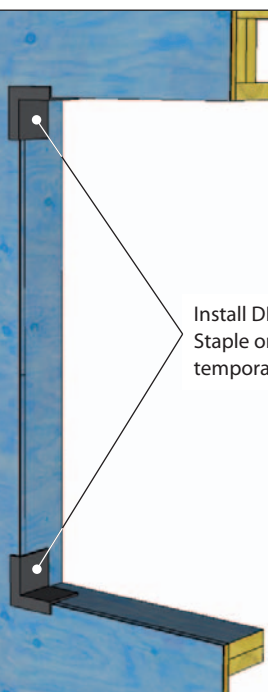
Sheathing

Step 3



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

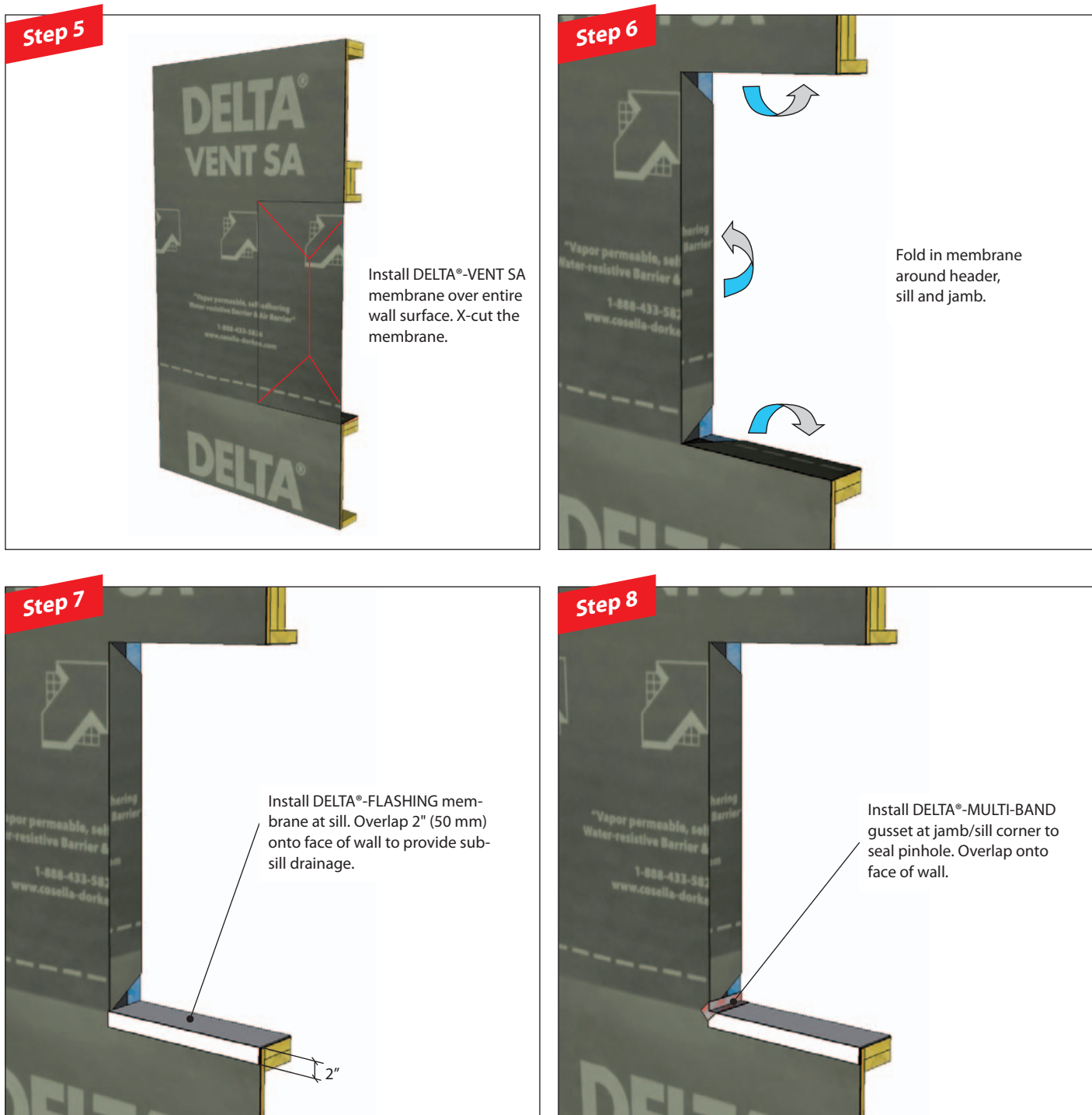
Step 4



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

Cut-out method

5. With DELTA®-FAS CORNER



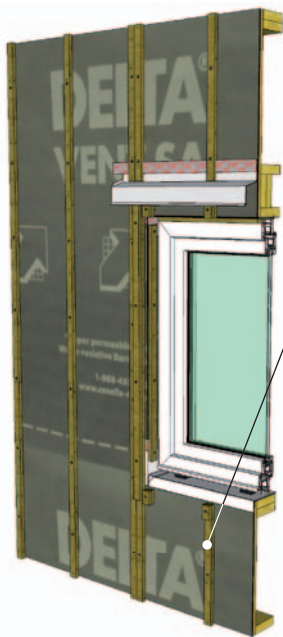


Cut-out method

5. With DELTA®-FAS CORNER

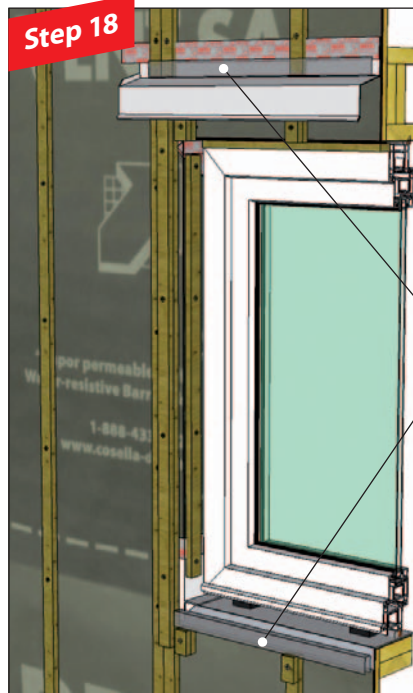


Step 17



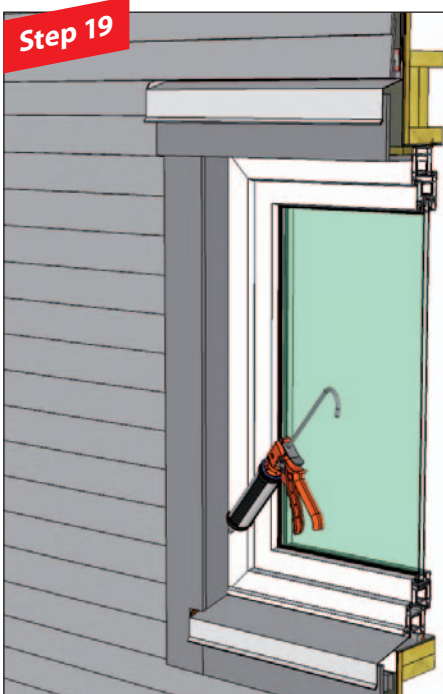
Install vertical strapping for cladding attachment and to provide cavity for drainage and venting.

Step 18



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

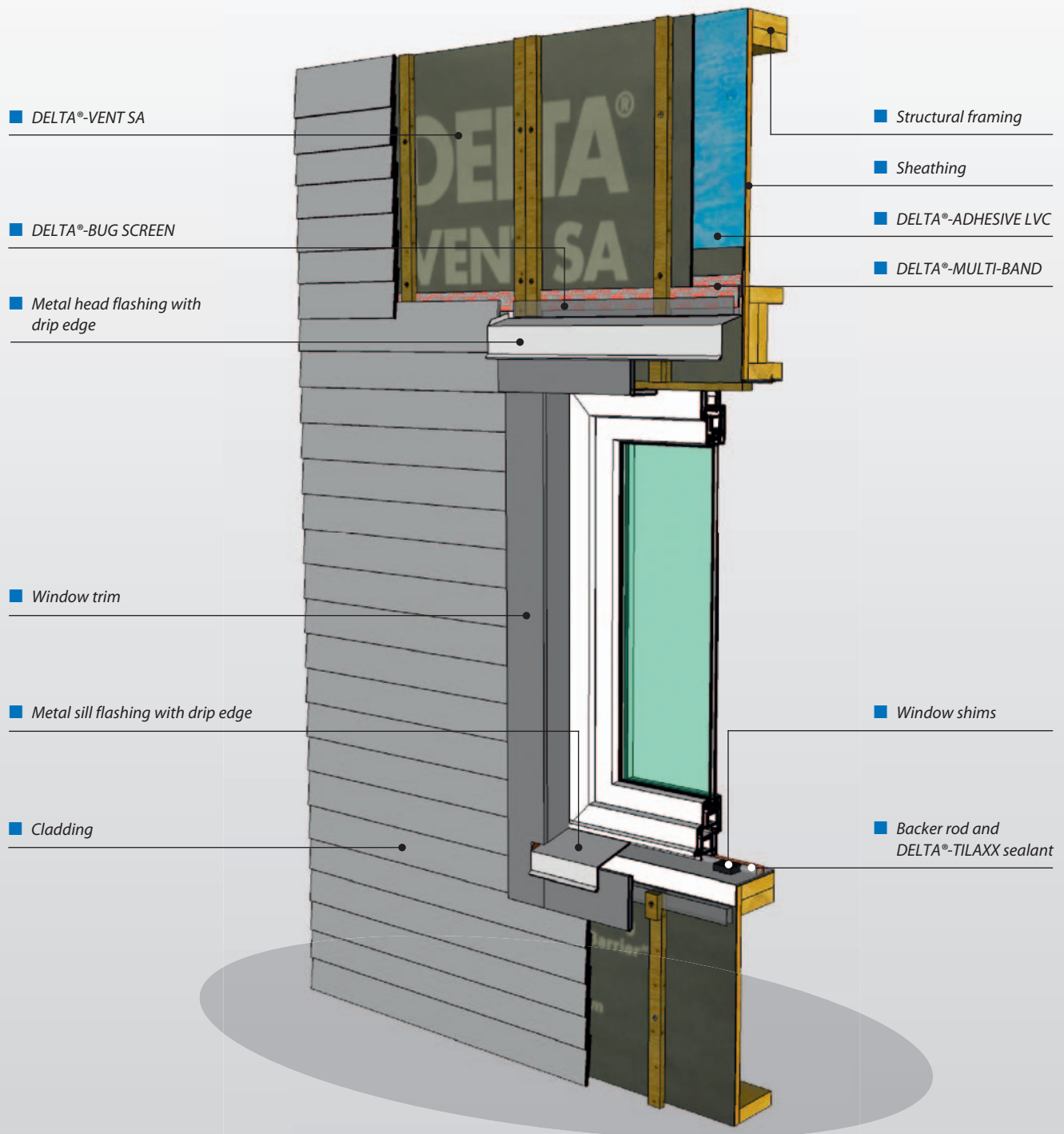
Step 19



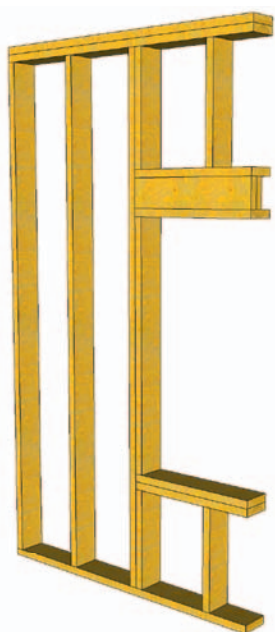
Install cladding and window trim. Install sealant around perimeter of window frame, between trim and frame.

Cut-out method

6. With flat sill

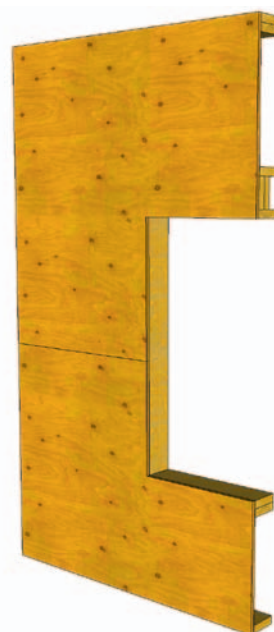


Step 1



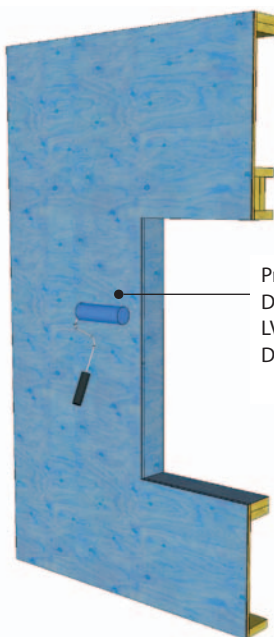
Framing

Step 2



Sheathing

Step 3



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

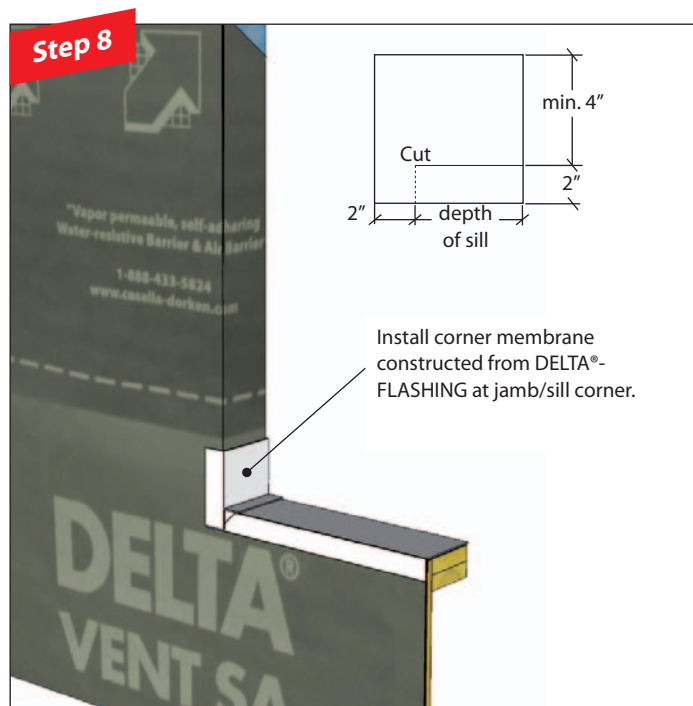
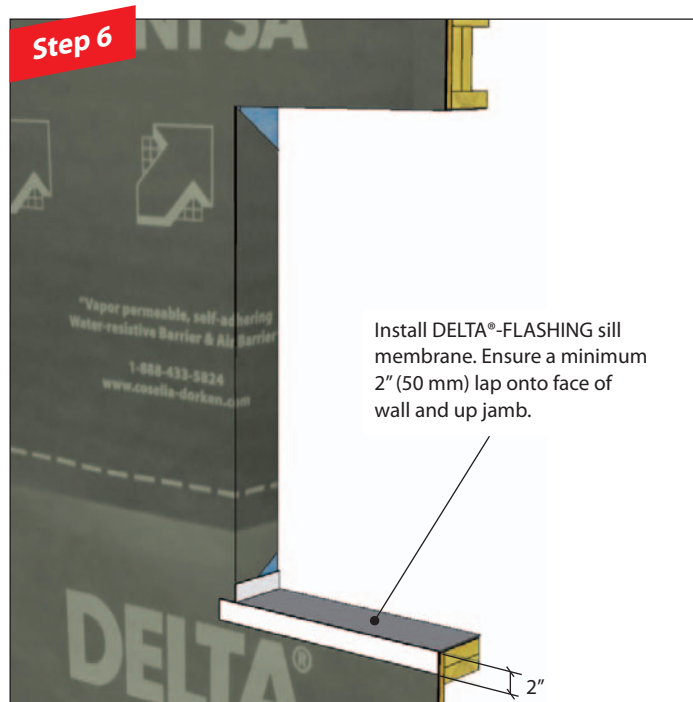
Step 4

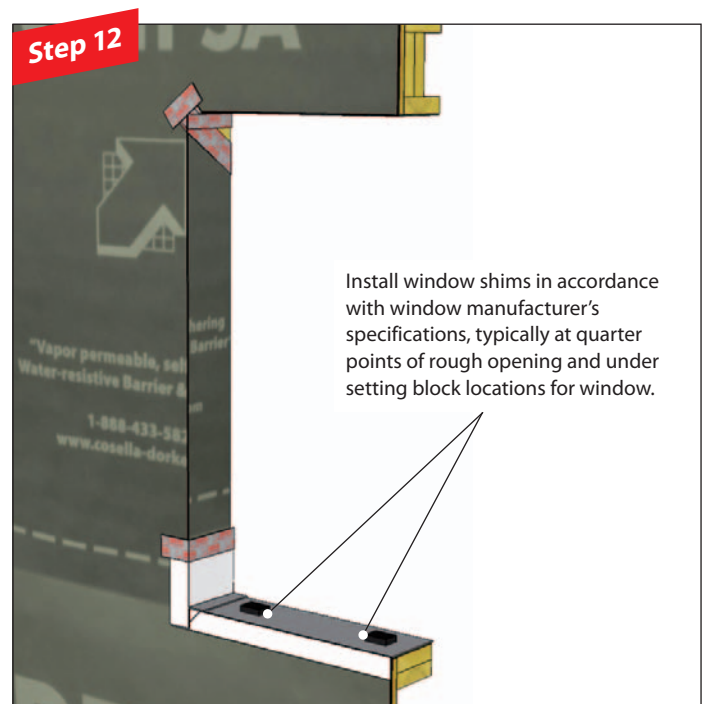
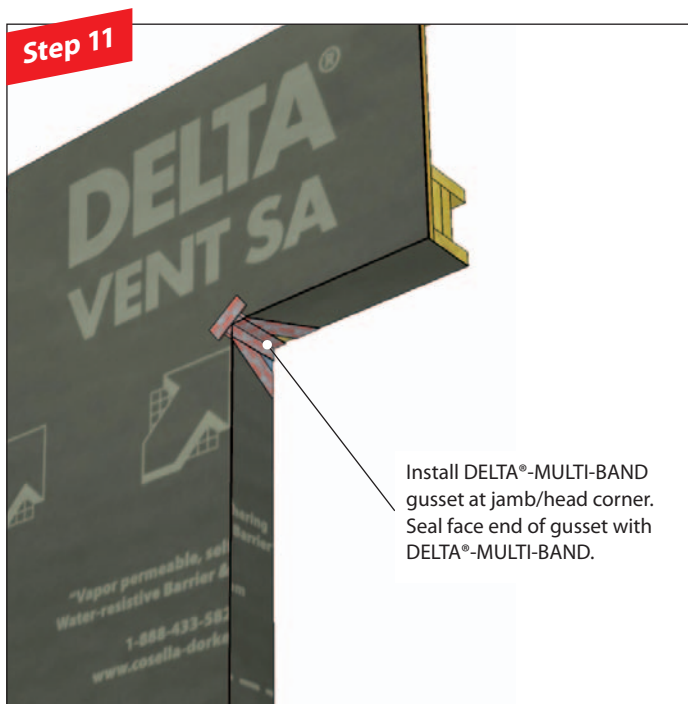
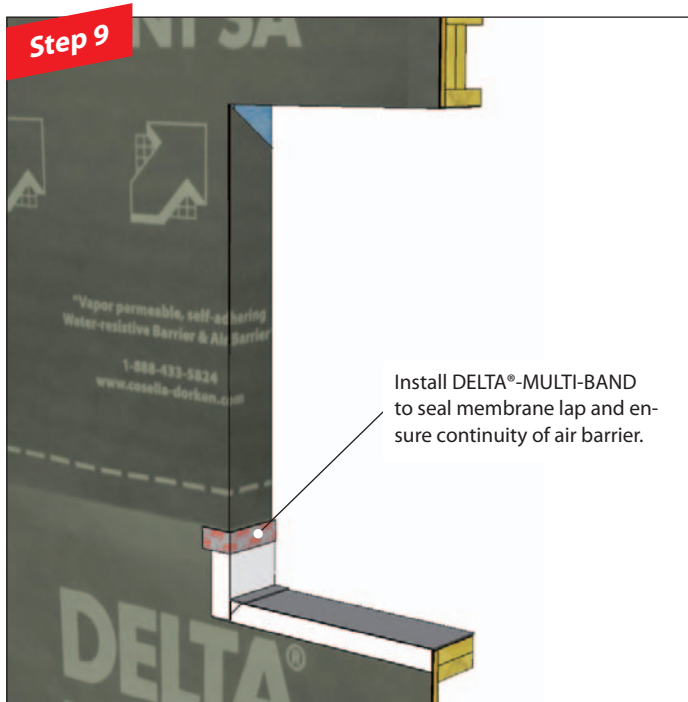


Install DELTA®-VENT SA membrane over entire wall surface. X-cut the membrane.

Cut-out method

6. With flat sill





Cut-out method

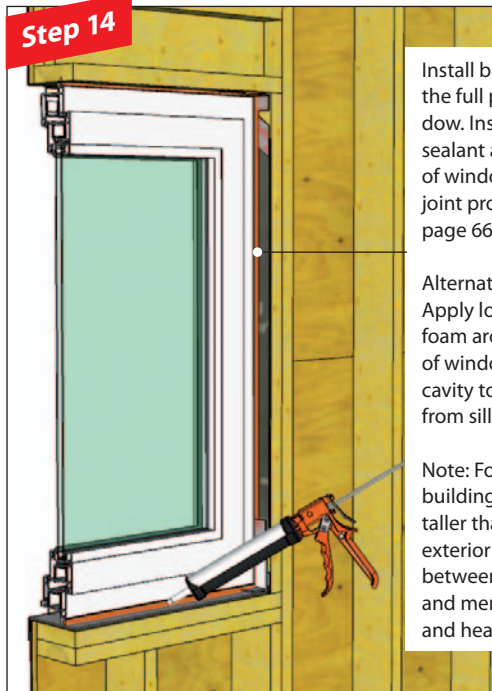
6. With flat sill

Step 13



Install window in accordance with manufacturer's specifications. Generally the gap between window and rough opening should be around 1/2" (12 mm).

Step 14



Install backer rod around the full perimeter of window. Install DELTA®-TILAXX sealant around perimeter of window in proper 2:1 joint profile (see Appendix, page 66).

Alternate air sealing detail: Apply low expansion spray foam around full perimeter of window. Do not seal full cavity to allow drainage from sill flashing.

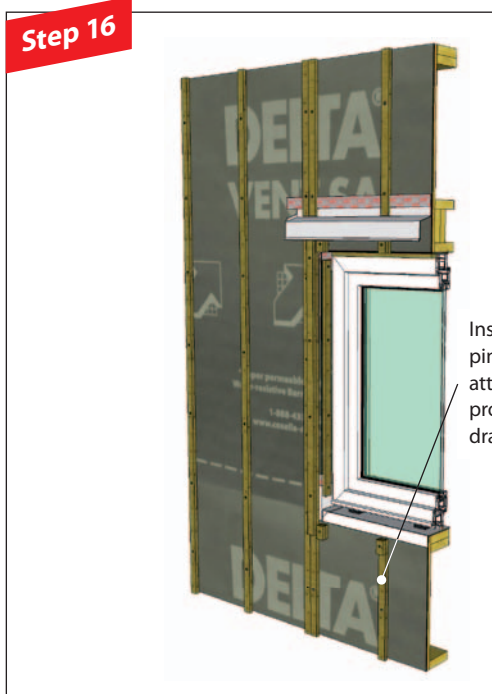
Note: For exposed buildings and buildings taller than 2 stories, apply exterior bead of sealant between window frame and membrane at jambs and head only.

Step 15

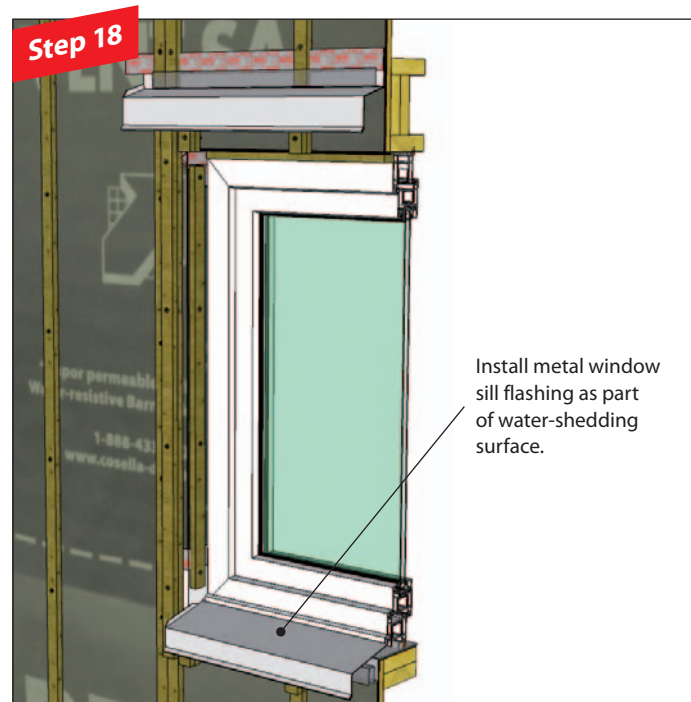


Install metal flashing at window head. Seal with DELTA®-MULTI-BAND tape.

Step 16

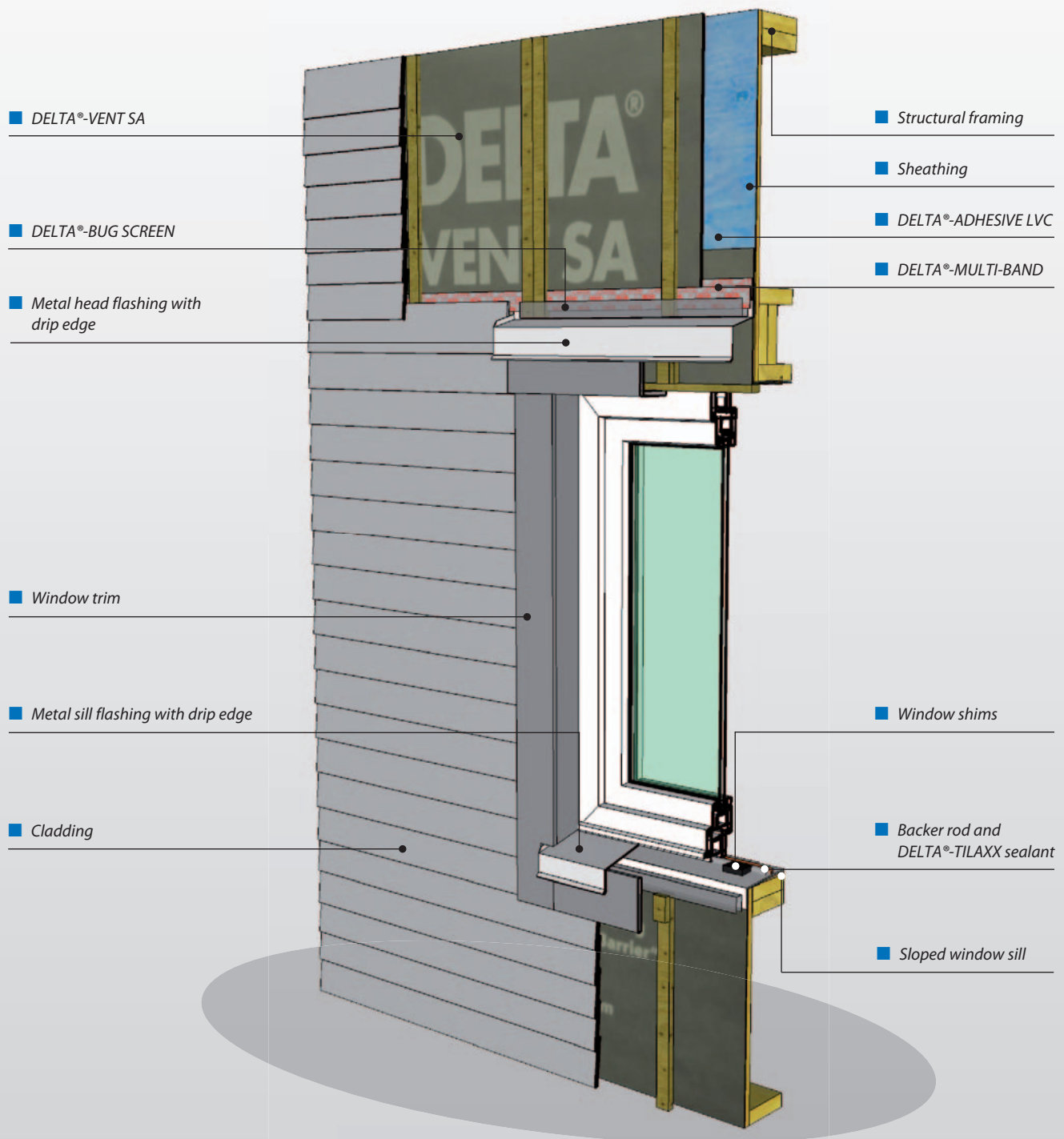


Install vertical strapping for cladding attachment and to provide cavity for drainage and venting.

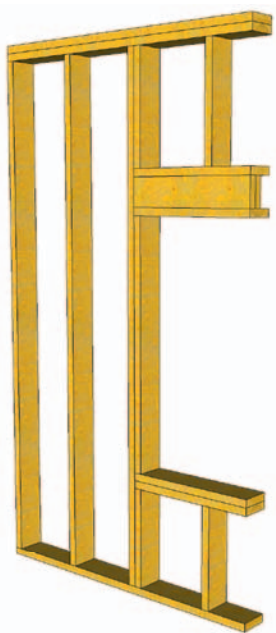


Cut-out method

7. With sloped sill

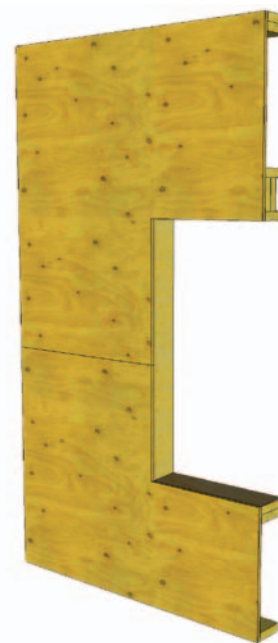


Step 1



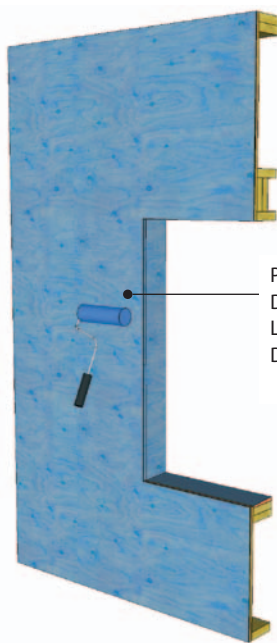
Framing

Step 2



Sheathing

Step 3



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

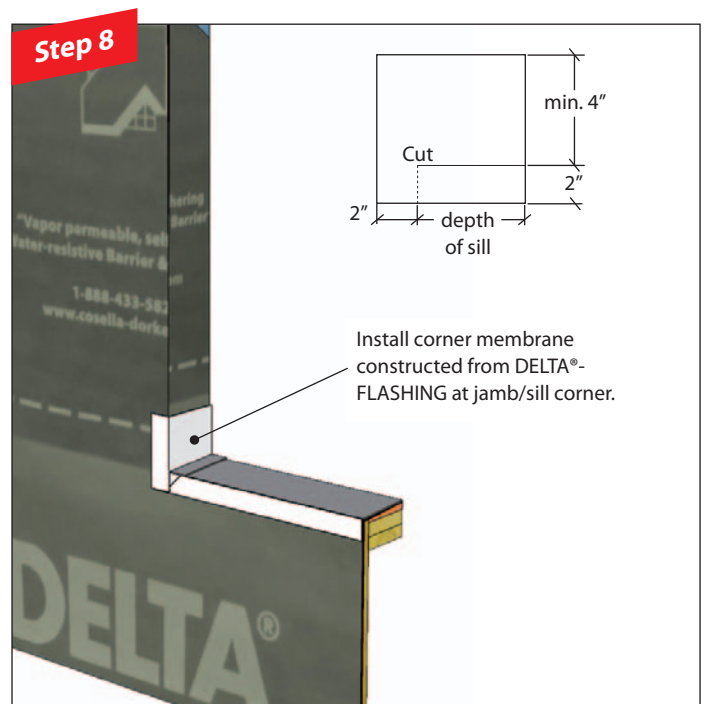
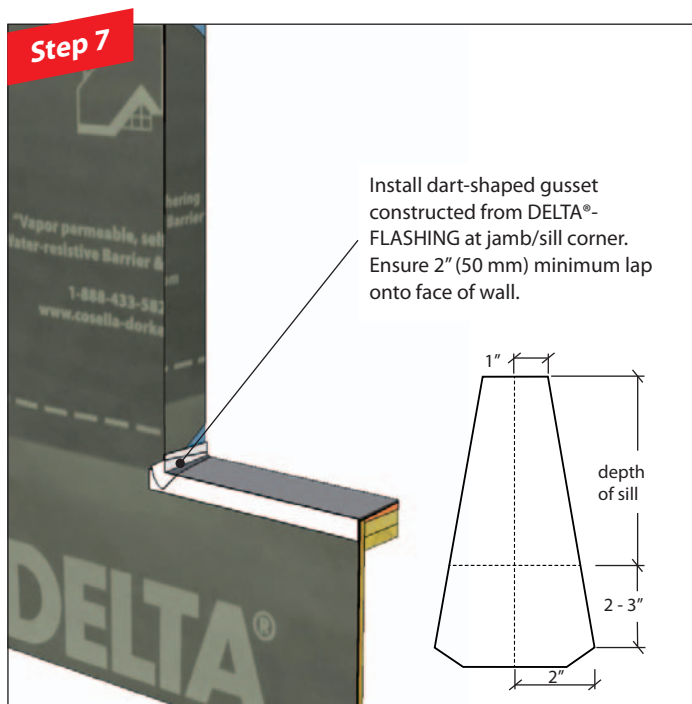
Step 4



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

Cut-out method

7. With sloped sill





Cut-out method

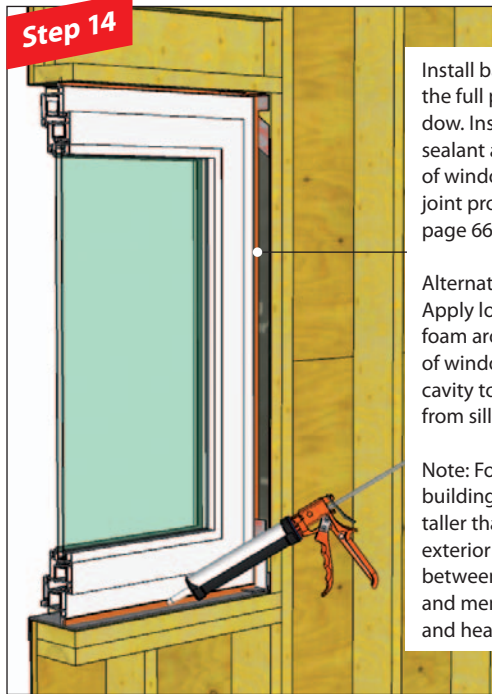
7. With sloped sill

Step 13



Install window in accordance with manufacturer's specifications. Generally the gap between window and rough opening should be around 1/2" (12 mm).

Step 14

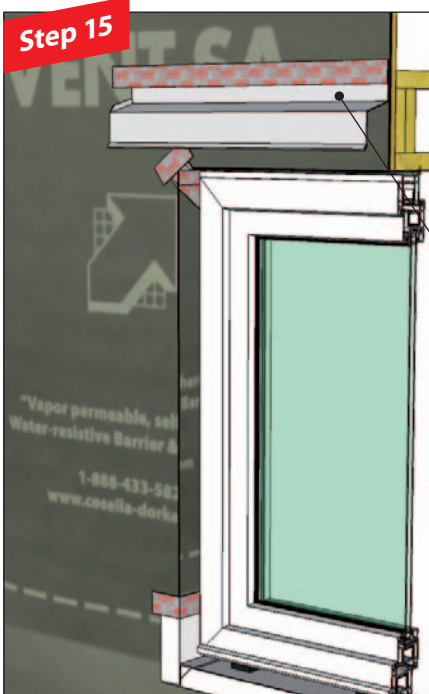


Install backer rod around the full perimeter of window. Install DELTA®-TILAXX sealant around perimeter of window in proper 2:1 joint profile (see Appendix, page 66).

Alternate air sealing detail: Apply low expansion spray foam around full perimeter of window. Do not seal full cavity to allow drainage from sill flashing.

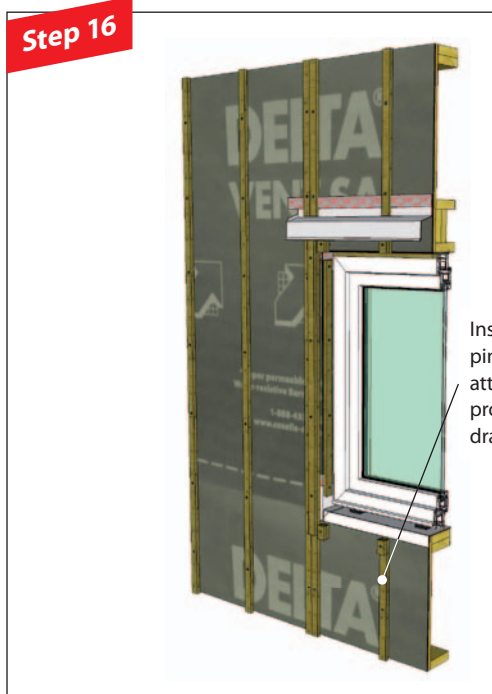
Note: For exposed buildings and buildings taller than 2 stories, apply exterior bead of sealant between window frame and membrane at jambs and head only.

Step 15

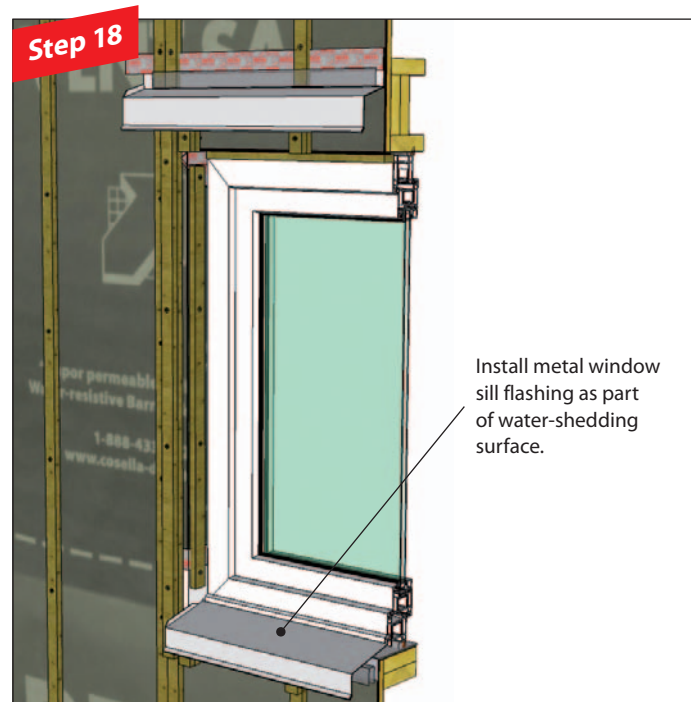
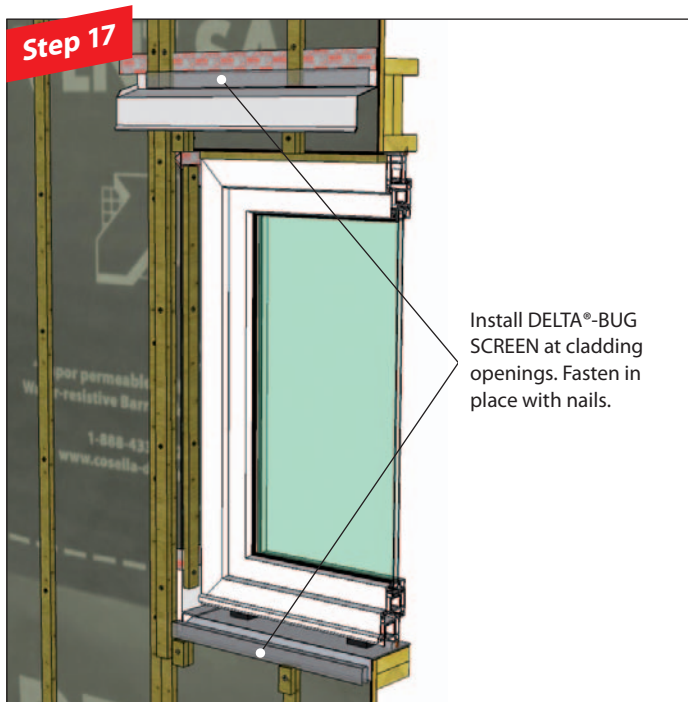


Install metal flashing at window head. Seal with DELTA®-MULTI-BAND tape.

Step 16

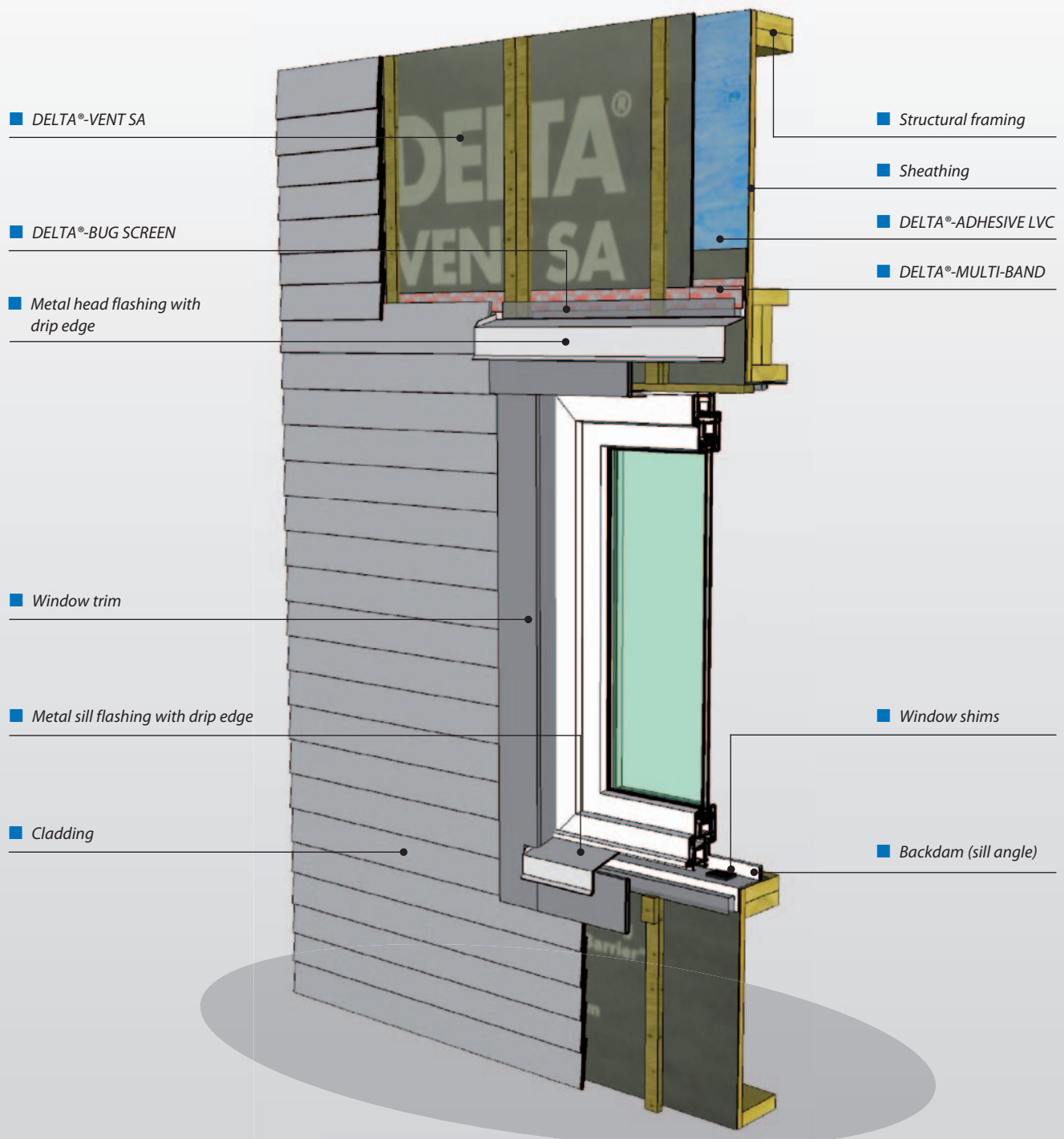


Install vertical strapping for cladding attachment and to provide cavity for drainage and venting.

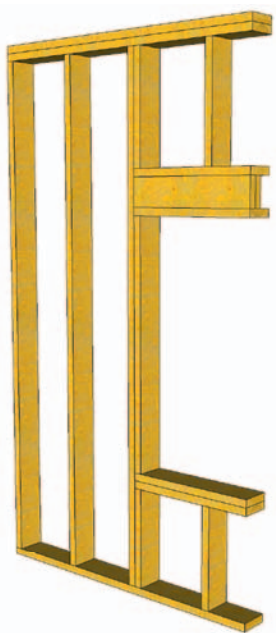


Cut-out method

8. With backdam



Step 1



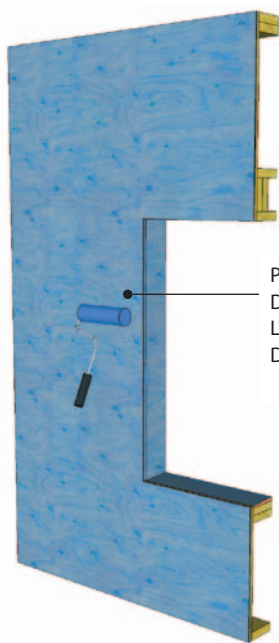
Framing

Step 2



Sheathing

Step 3



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

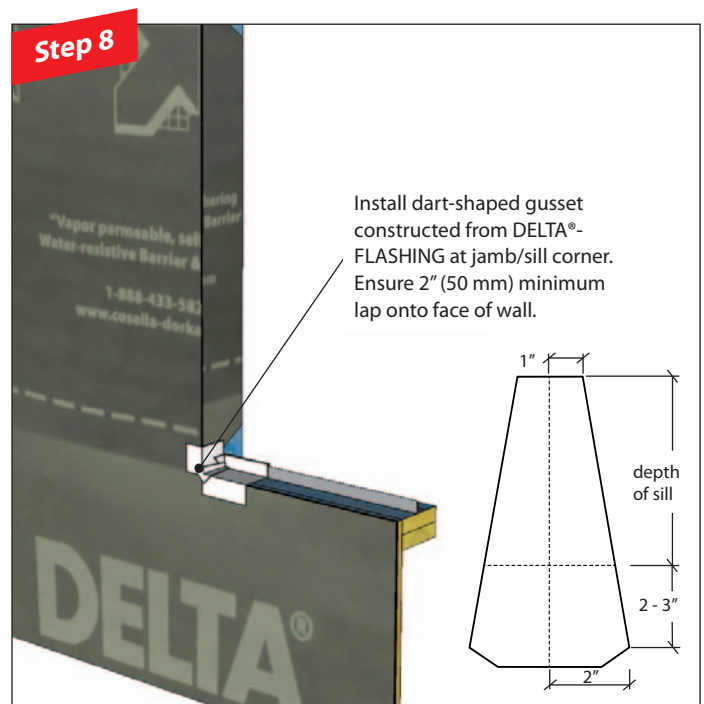
Step 4

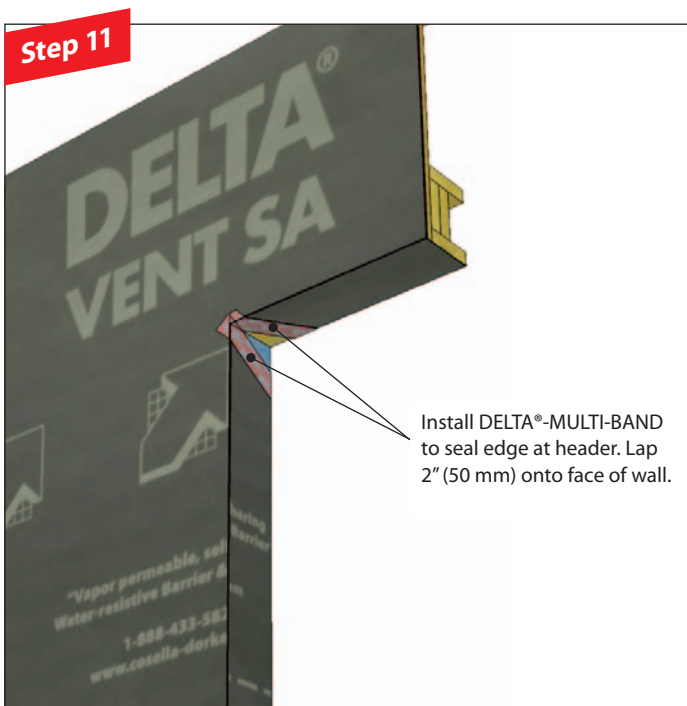
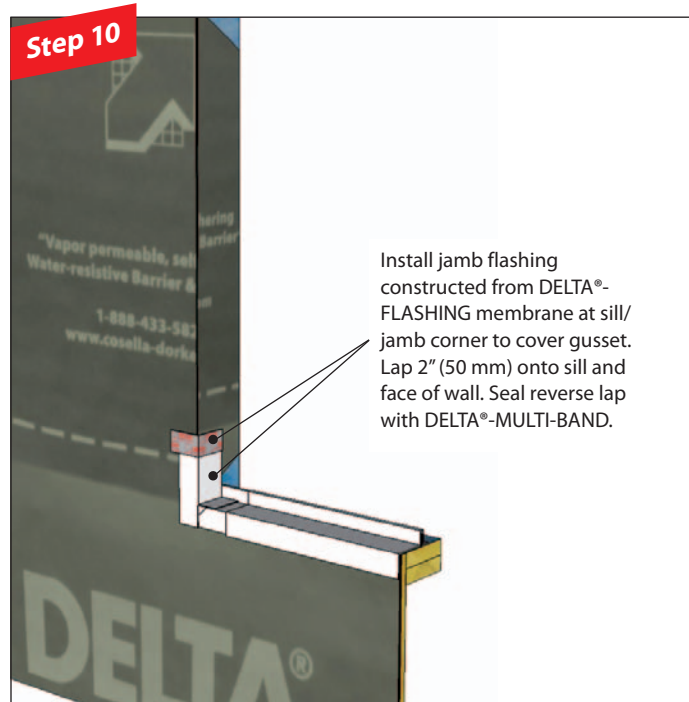


Install DELTA®-VENT SA membrane over entire wall surface. X-cut the membrane.

Cut-out method

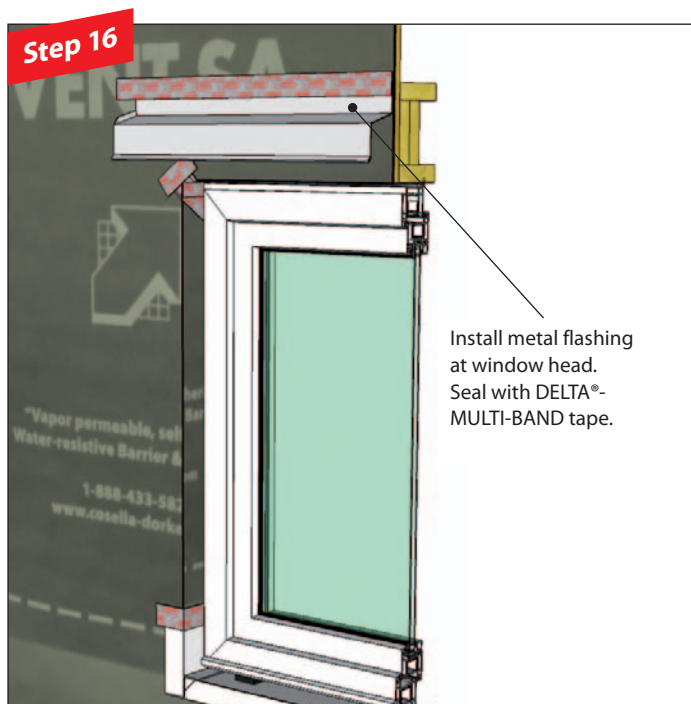
8. With backdam

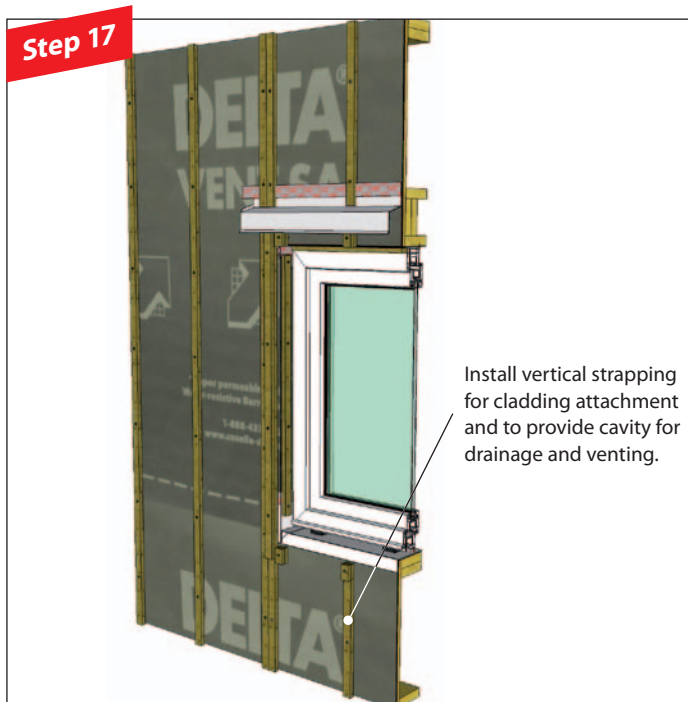




Cut-out method

8. With backdam





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 permanently 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.

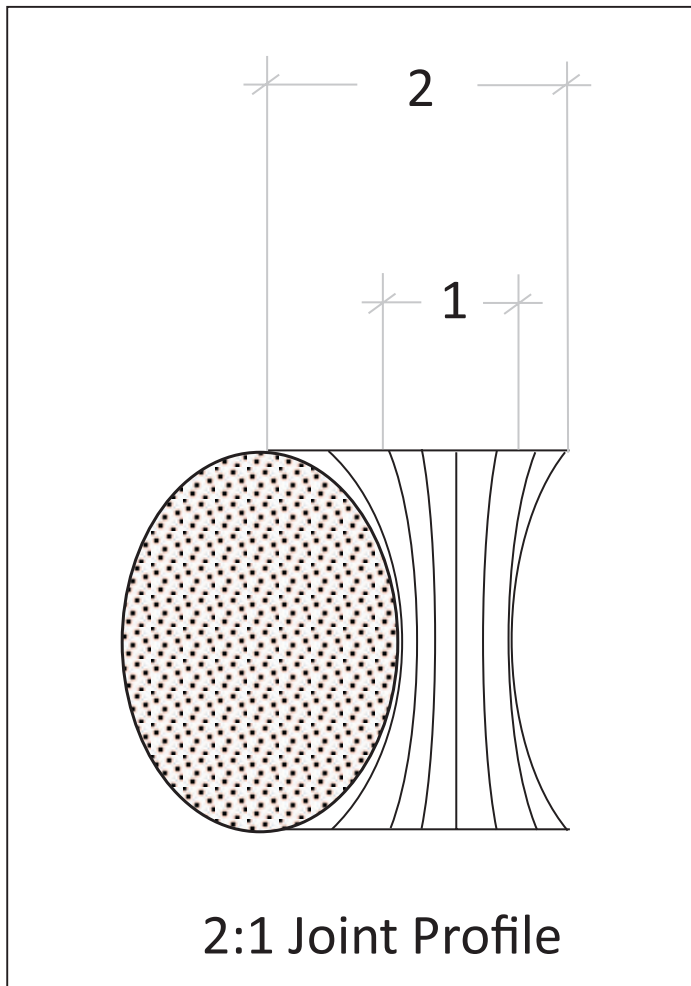


DELTA® Air Barrier System Components

			
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>

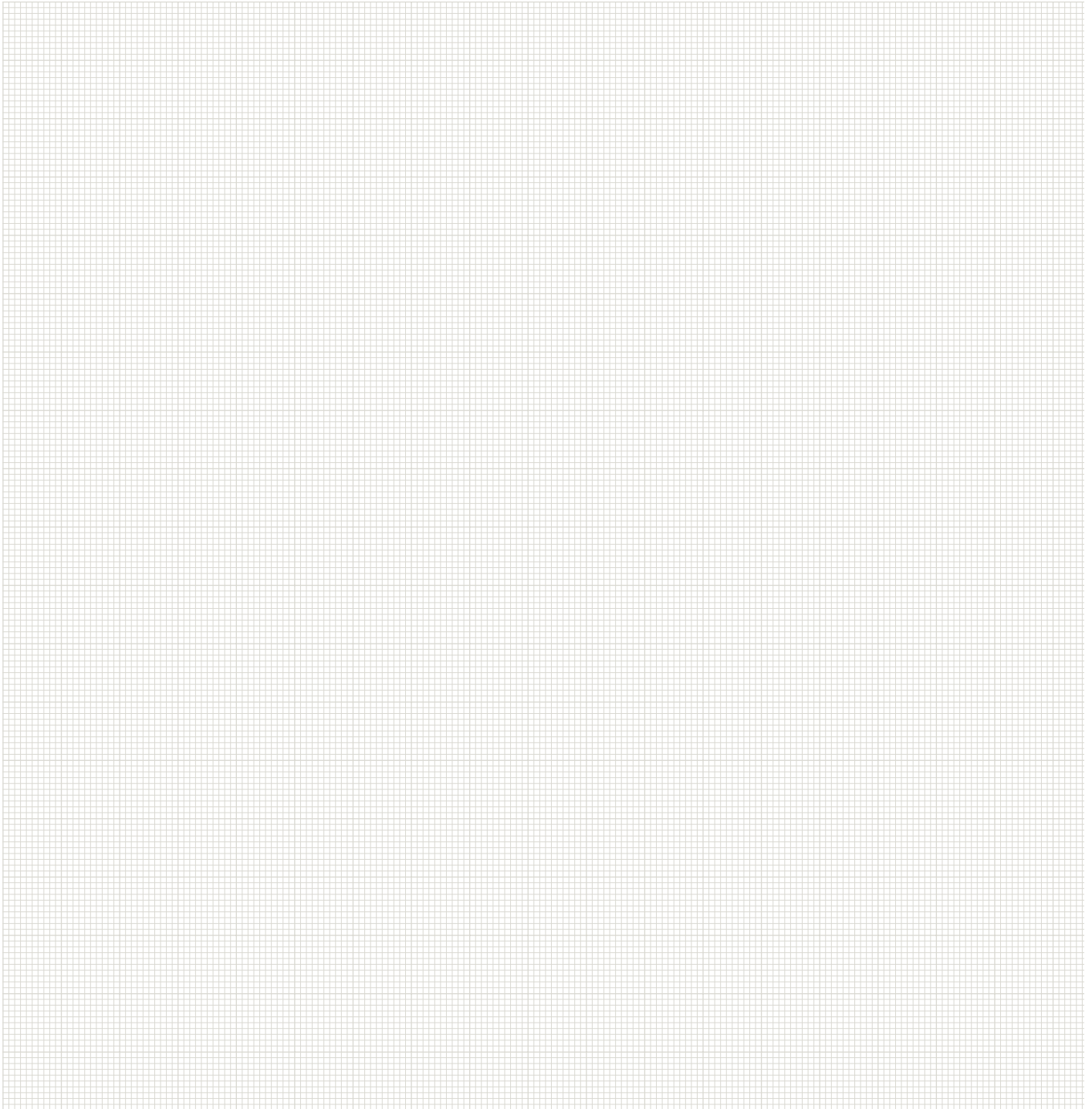
			
DELTA®-THAN	DELTA®-TILAXX	DELTA®-LIQUIXX	DELTA®-ADHESIVE LVC
<p>Permanently elastic special rubber compound sealant and adhesive.</p>	<p>High quality permanently elastic adhesive and sealant that retains flexibility.</p>	<p>Viscous, pure acrylic dispersion with enclosed fabric reinforcement.</p>	<p>Low 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®

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A company of the Dörken Group

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