

# Installation Guide DELTA®-VENT SA



## Flashing Systems for FLANGE WINDOWS

# Dörken – Leading Through Technical Competence

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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. 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.



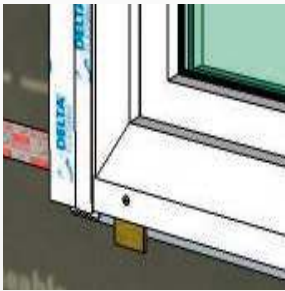
On pages with the print2life logo you can simply point and scan with your tablet or smartphone, and view installation videos which appear directly on top of the page you are looking at. You can download the print2life app by scanning the QR code below:



# Method Selection Guide

## Strip-in methods for flange windows

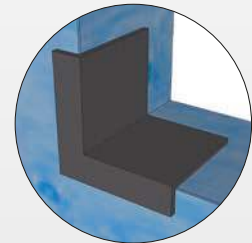
### Flange Windows



### Strip-in method



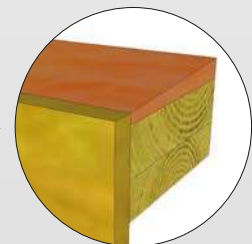
1. DELTA®-FAS CORNER (page 6)



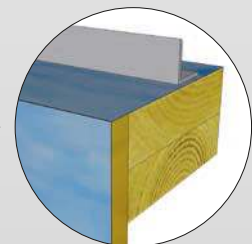
2. Flat sill (page 14)



3. Sloped sill (page 22)



4. Backdam (page 30)

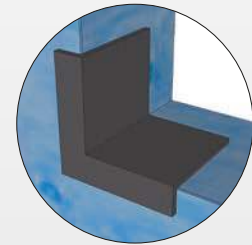


## Cut-out methods for flange windows

### Cut-out method



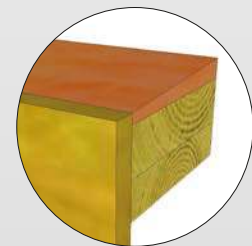
1. DELTA®-FAS CORNER (page 38)



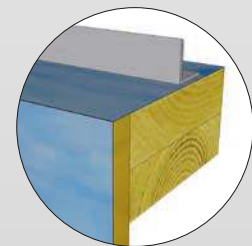
2. Flat sill (page 44)



3. Sloped sill (page 50)

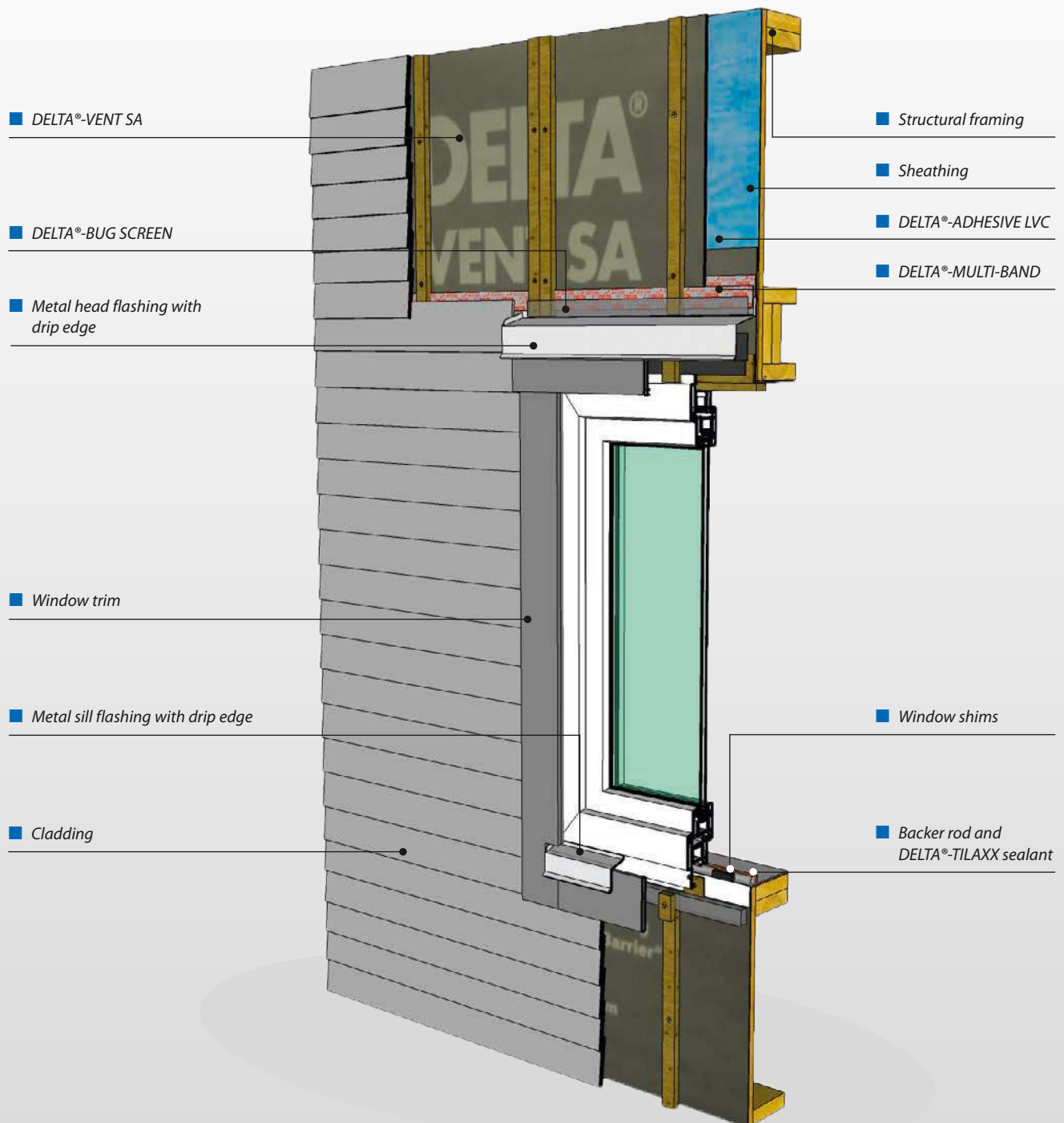


4. Backdam (page 56)



# Strip-in method

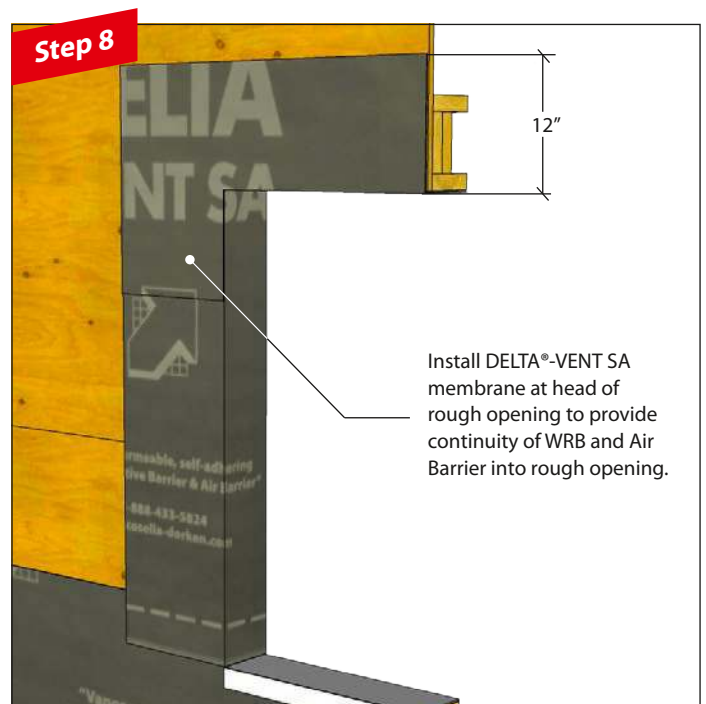
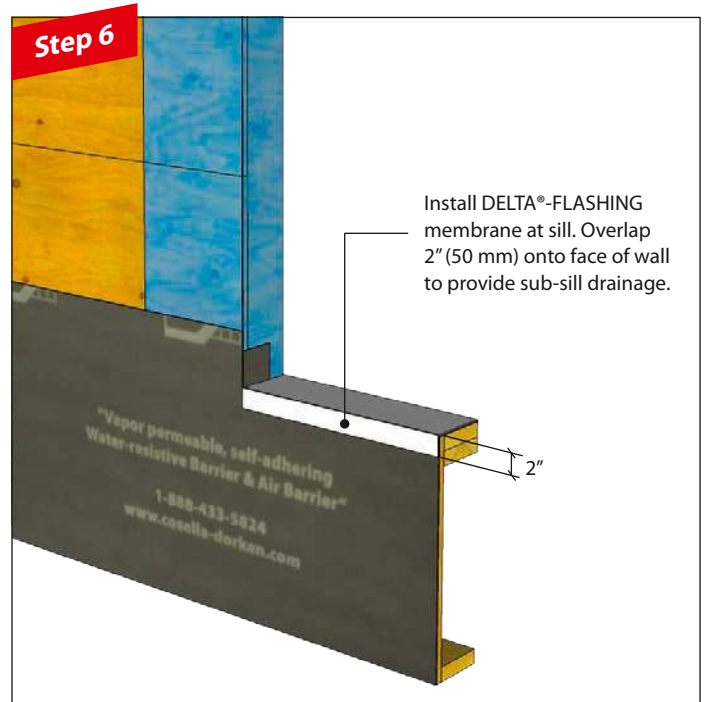
## 1. With DELTA®-FAS CORNER



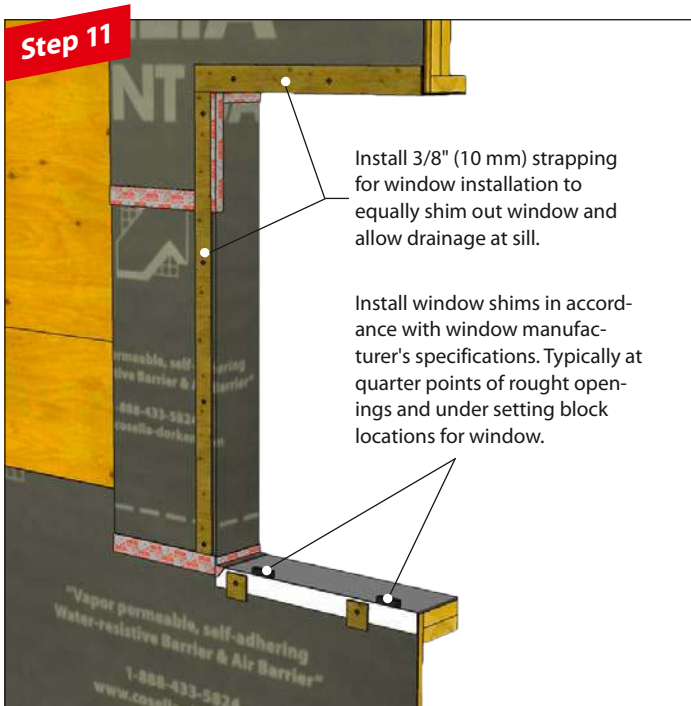


# Strip-in method

## 1. With DELTA®-FAS CORNER

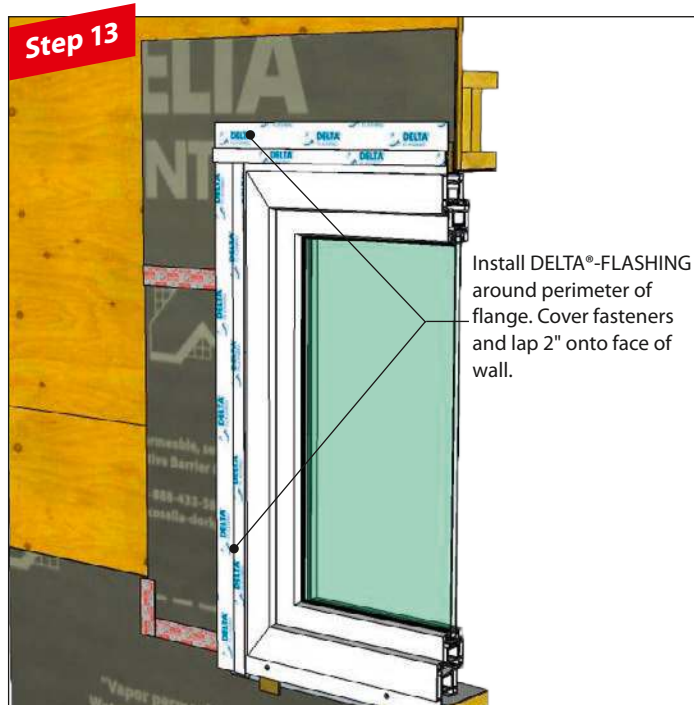


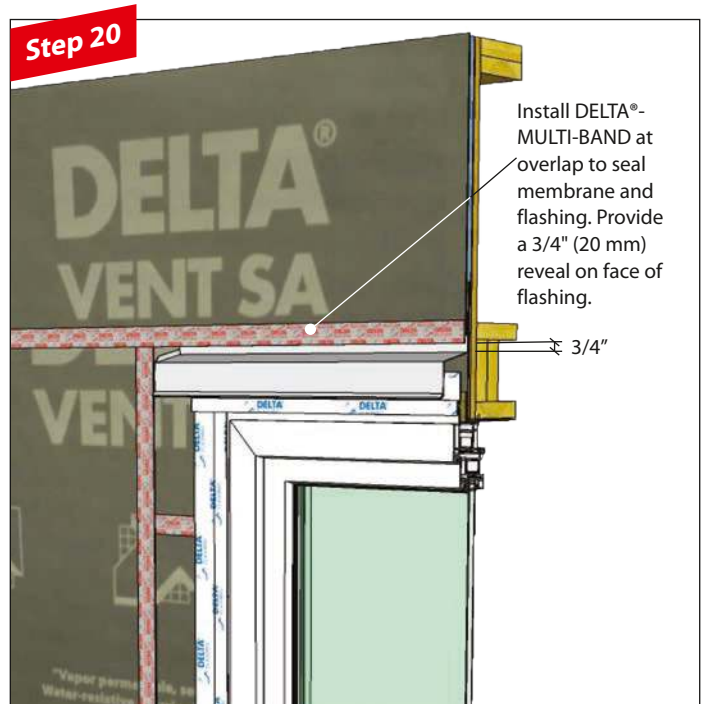
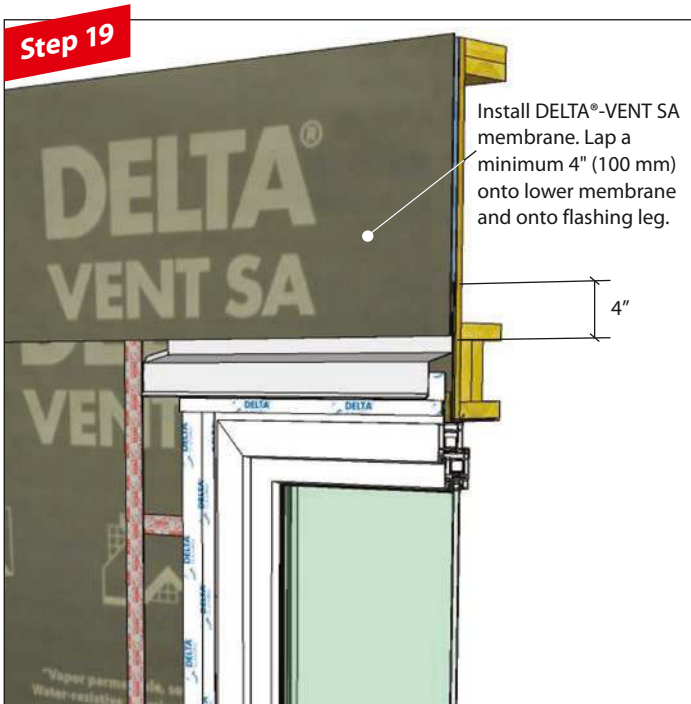
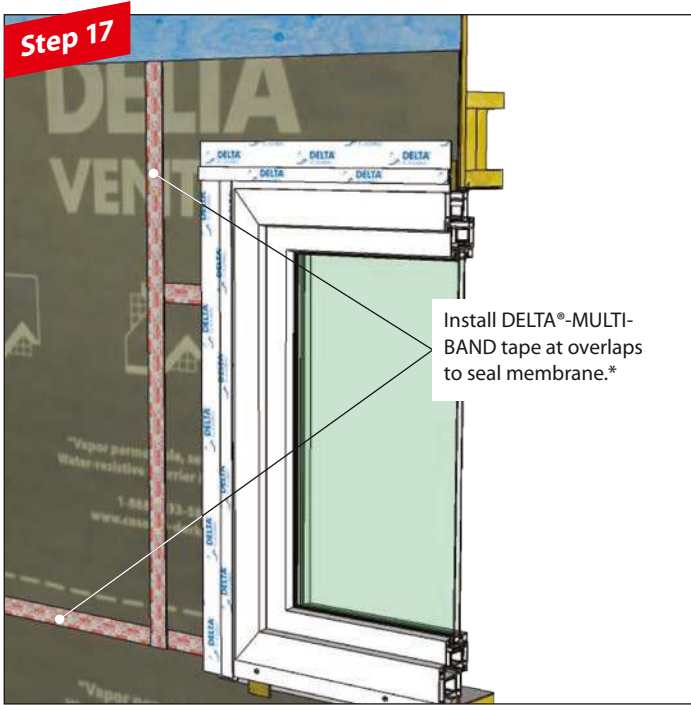




# Strip-in method

## 1. With DELTA®-FAS CORNER

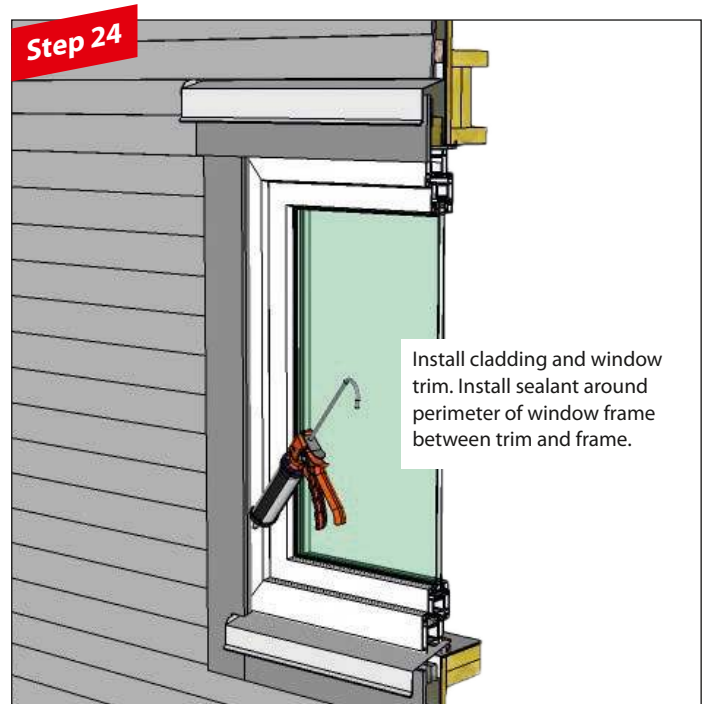




\* Not required where there is a self-adhered edge.

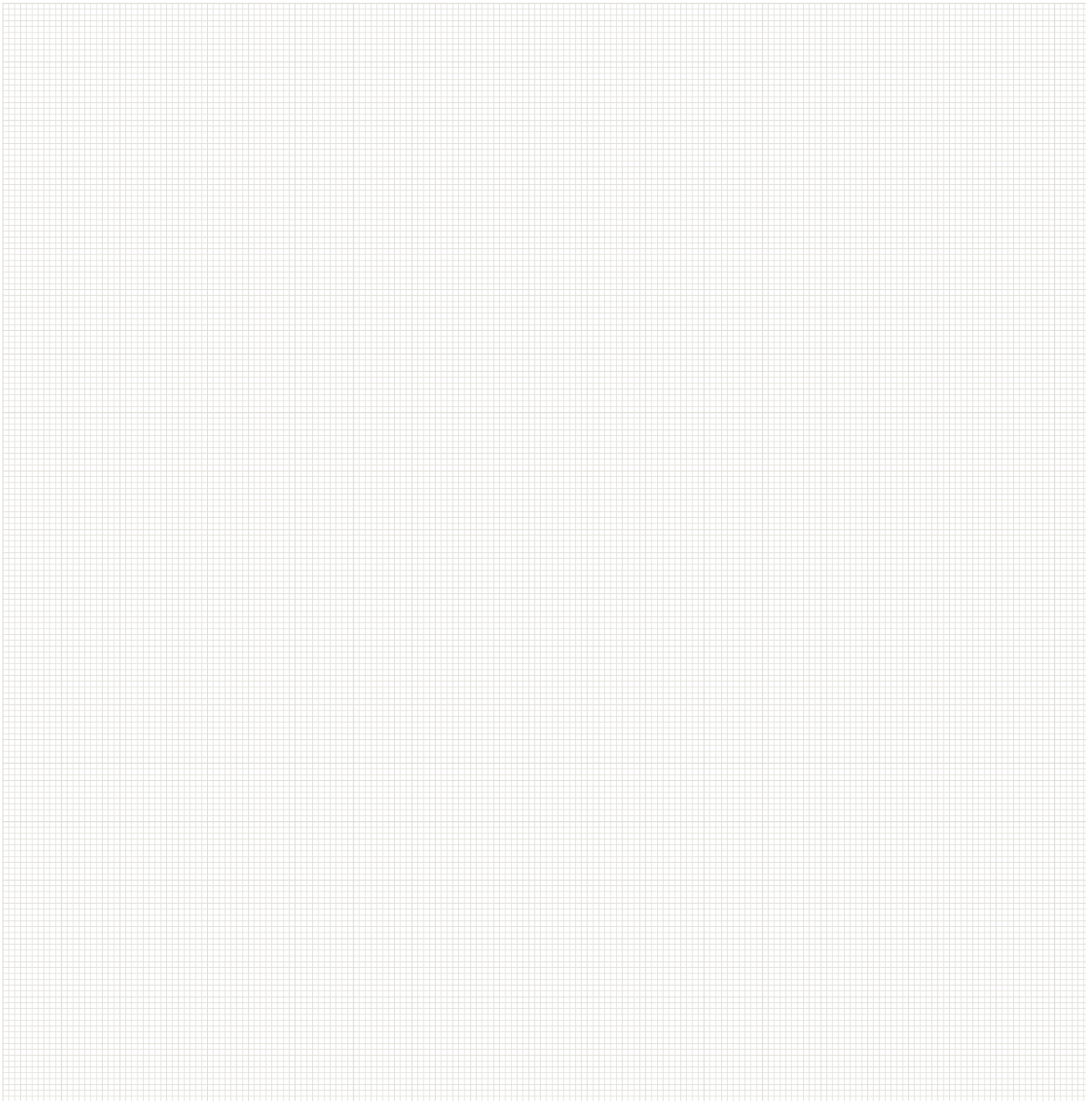
# Strip-in method

## 1. With DELTA®-FAS CORNER



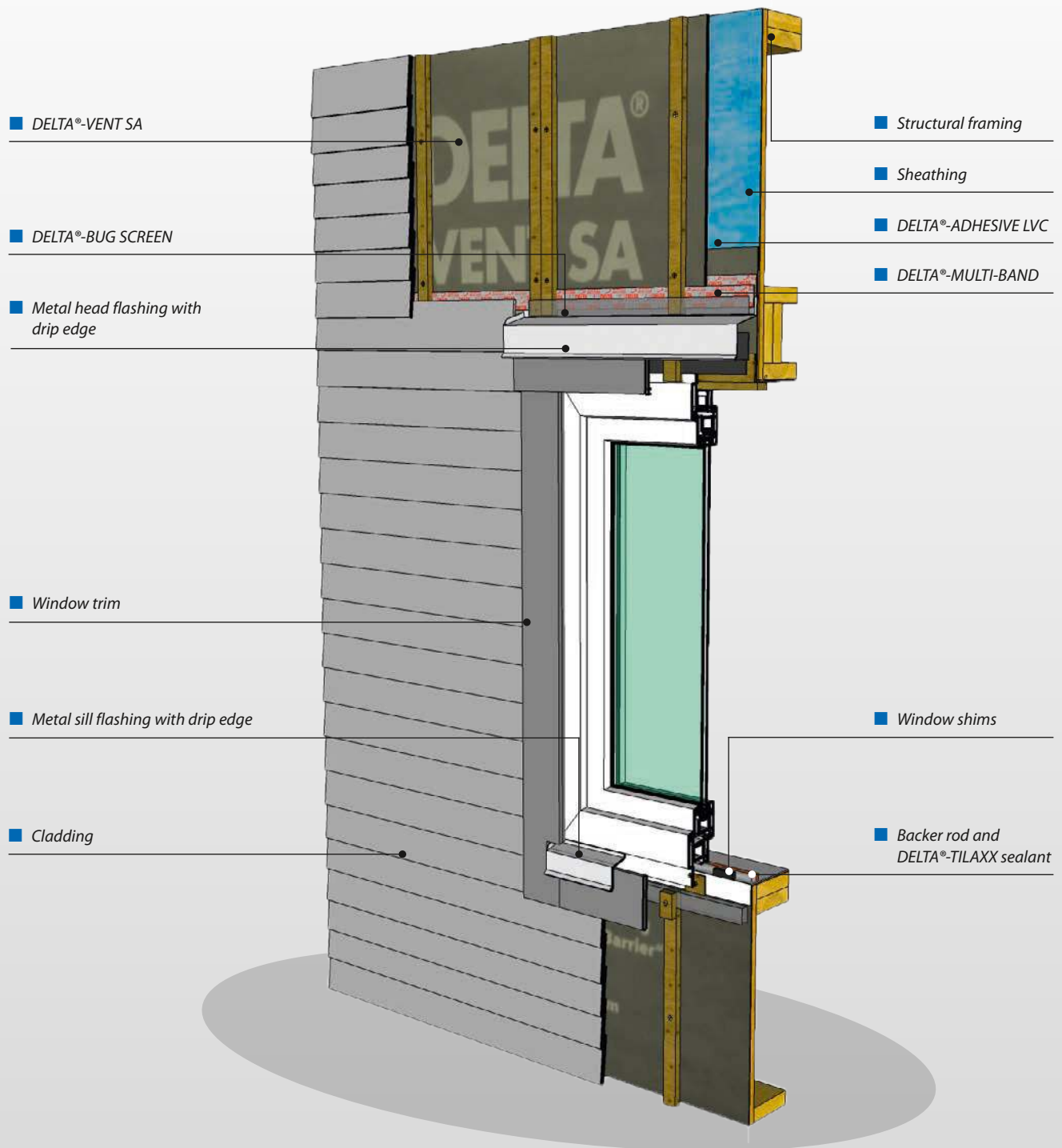
# Notes

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# Strip-in method

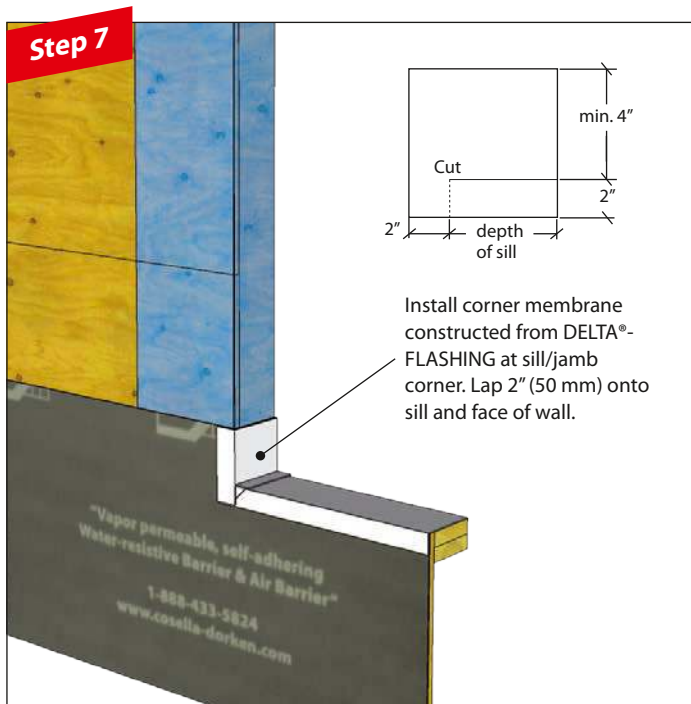
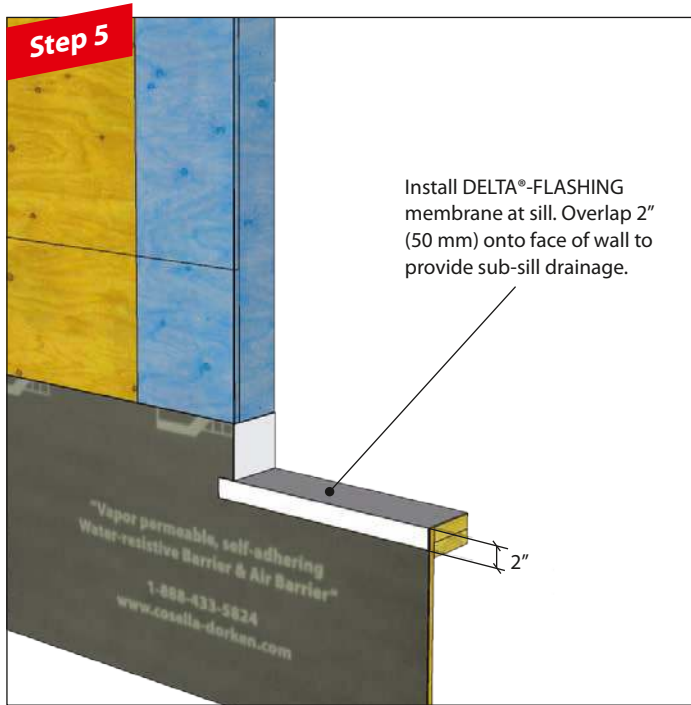
## 2. With flat sill



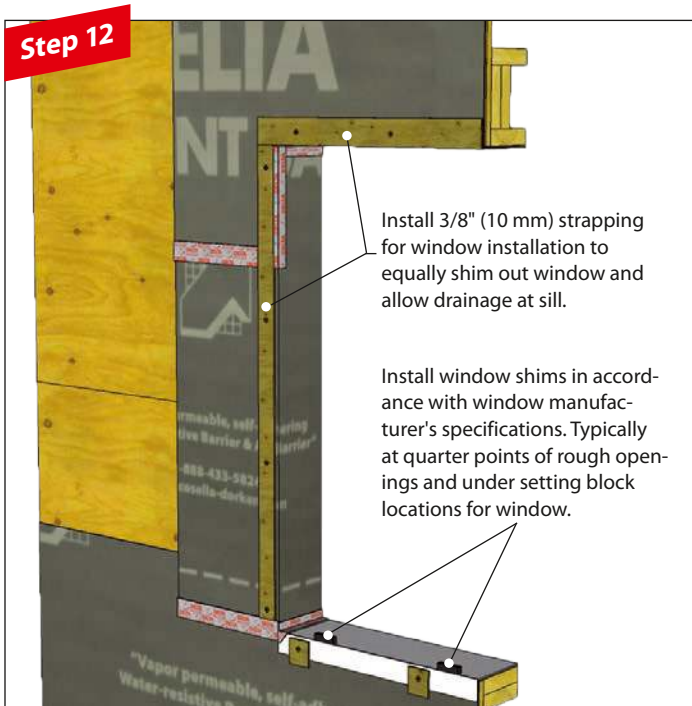
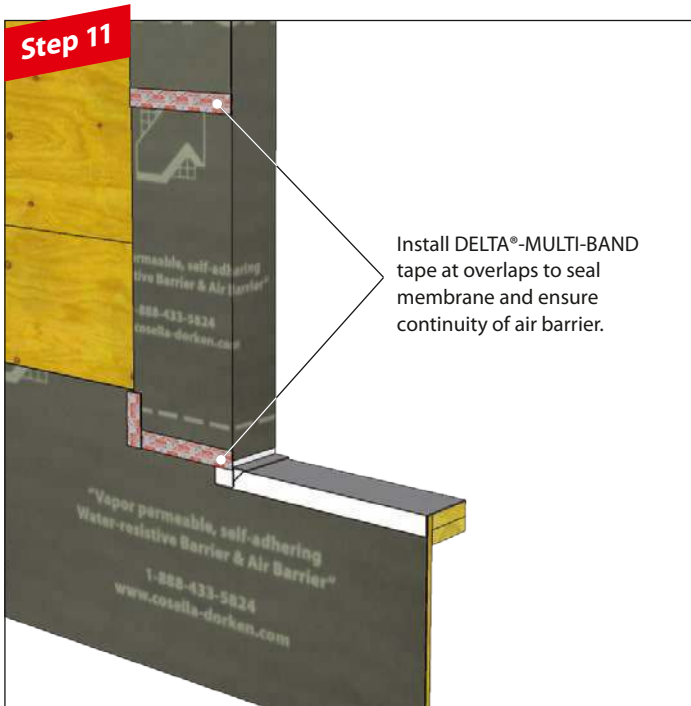


# Strip-in method

## 2. With flat sill

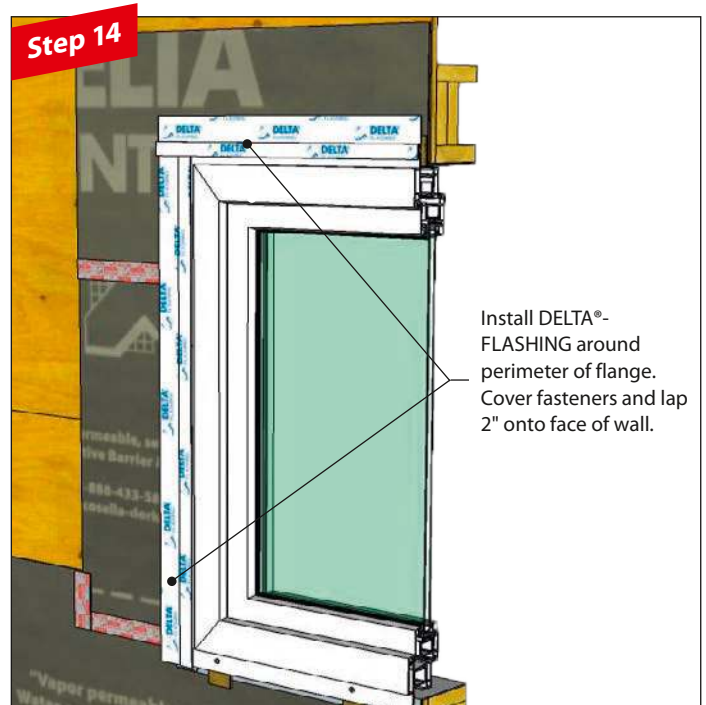


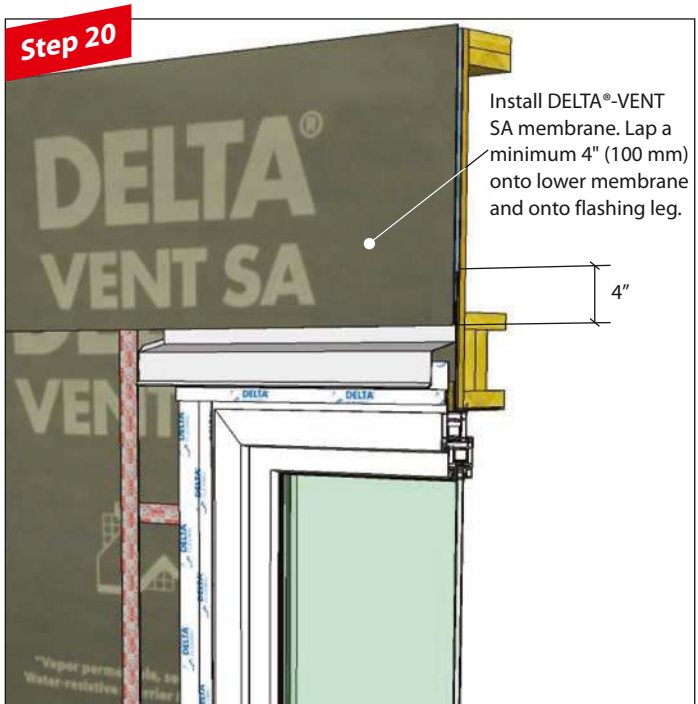
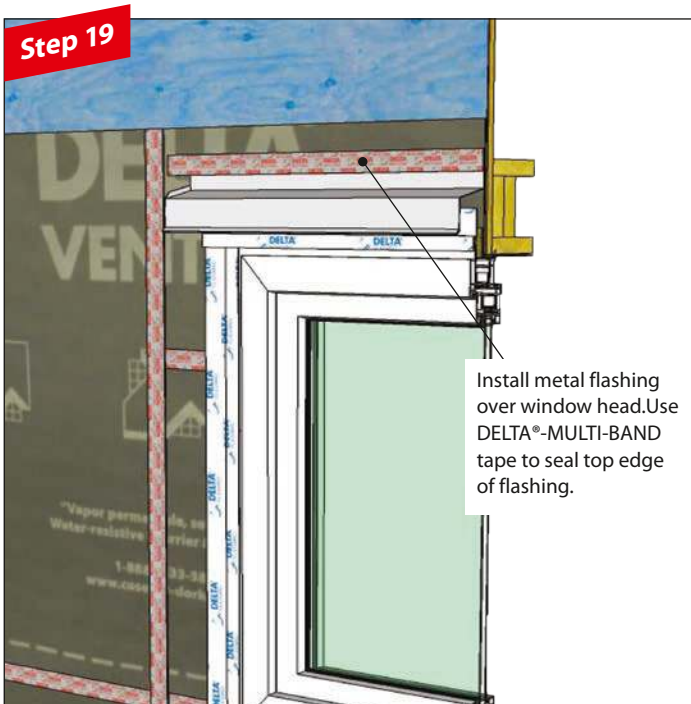
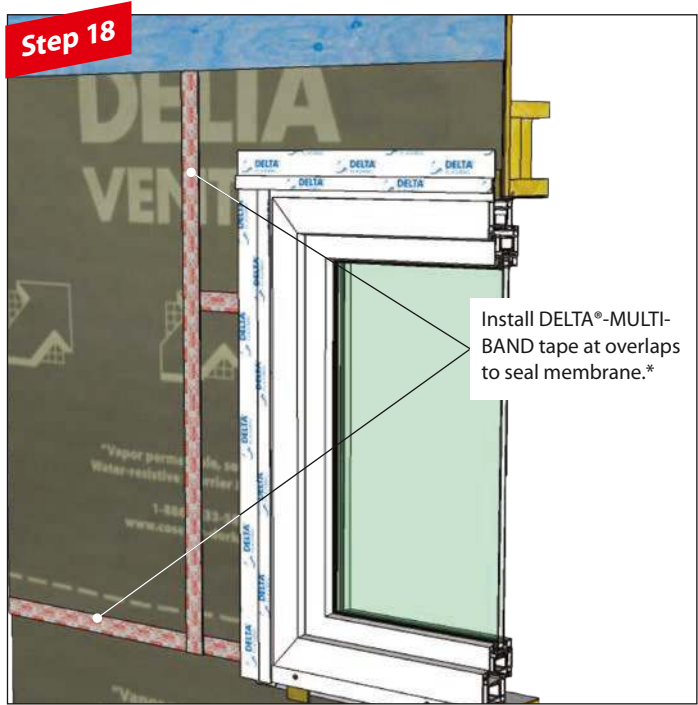
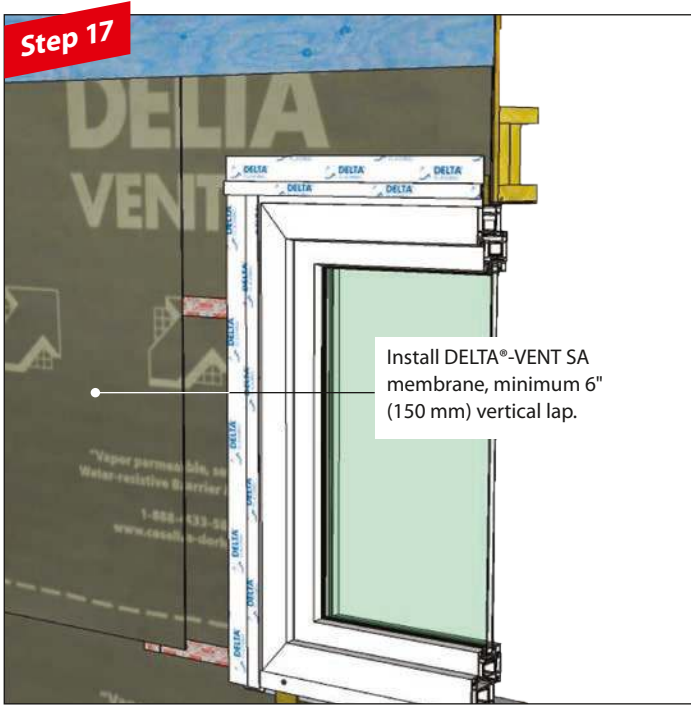




# Strip-in method

## 2. With flat sill





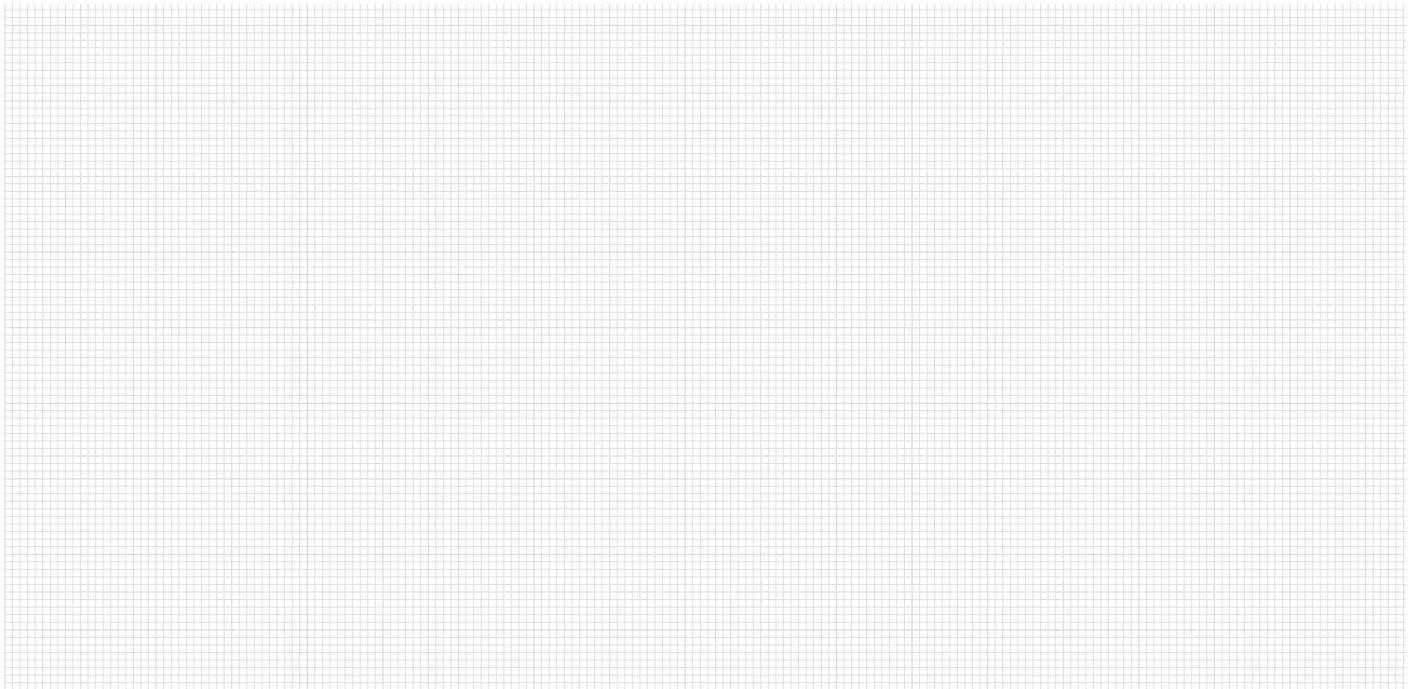
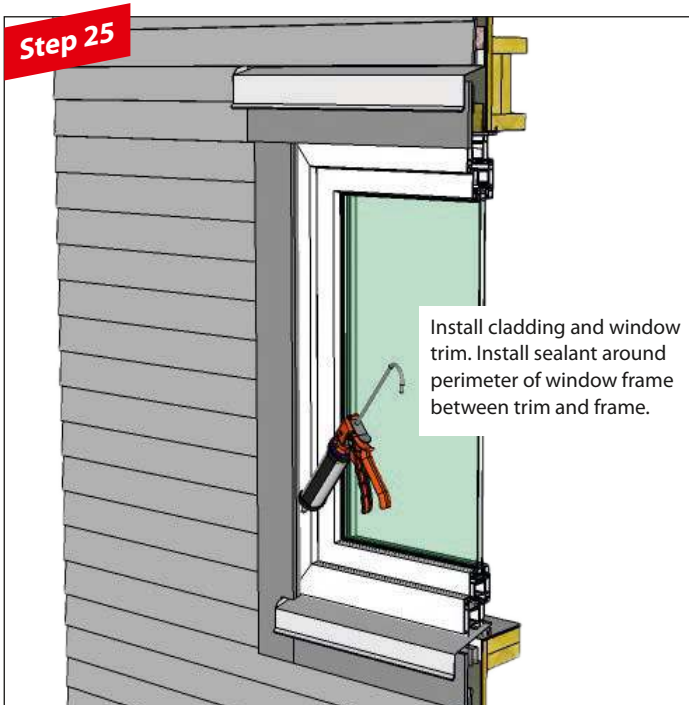
\* Not required where there is a self-adhered edge.

# Strip-in method

## 2. With flat sill

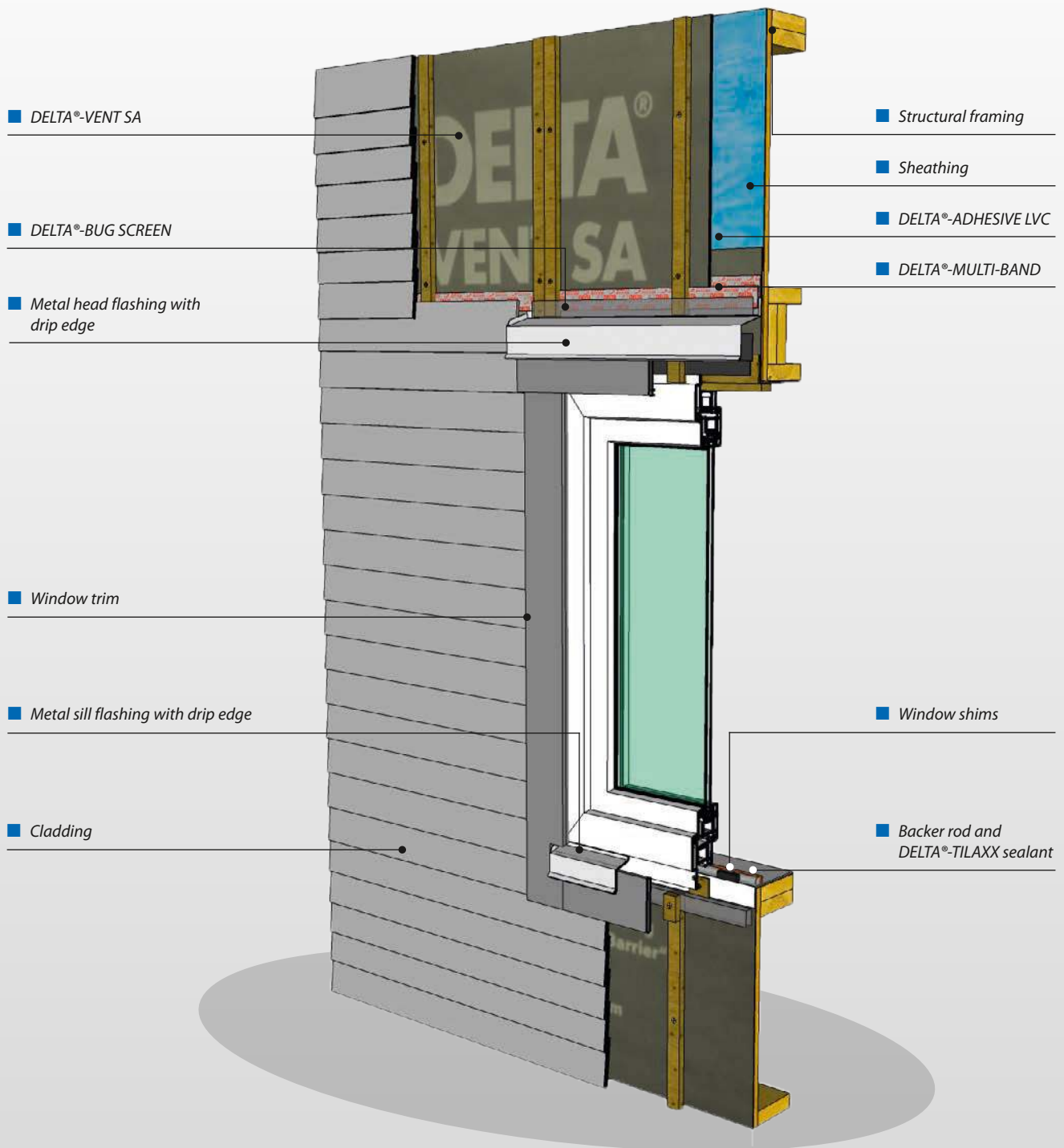


# Notes



# Strip-in method

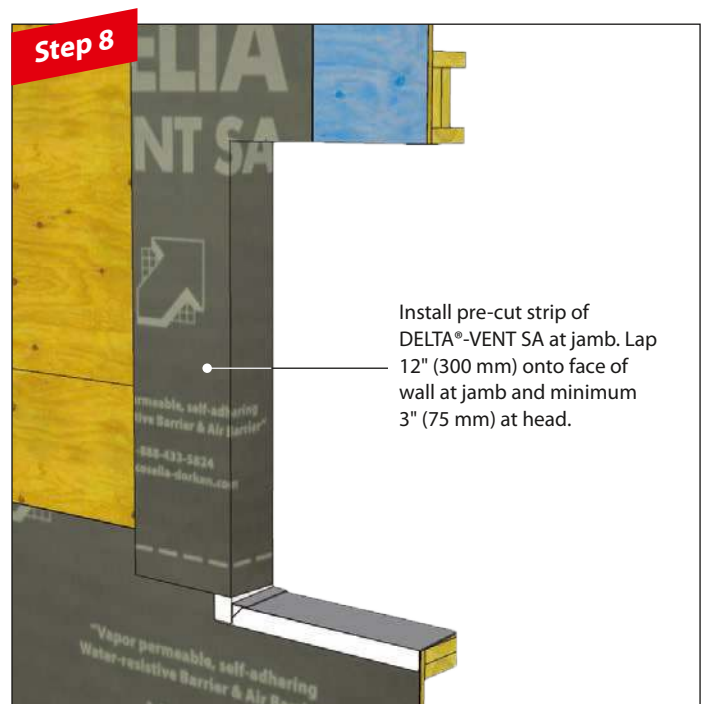
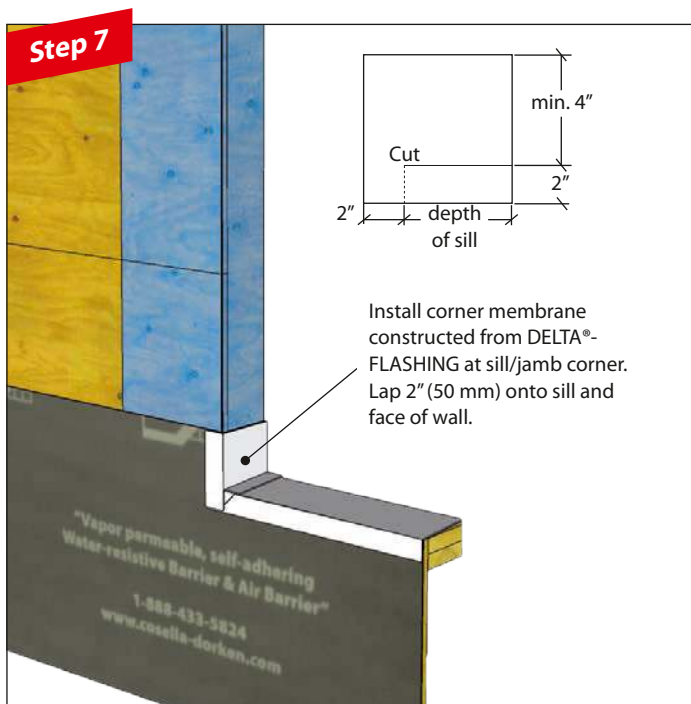
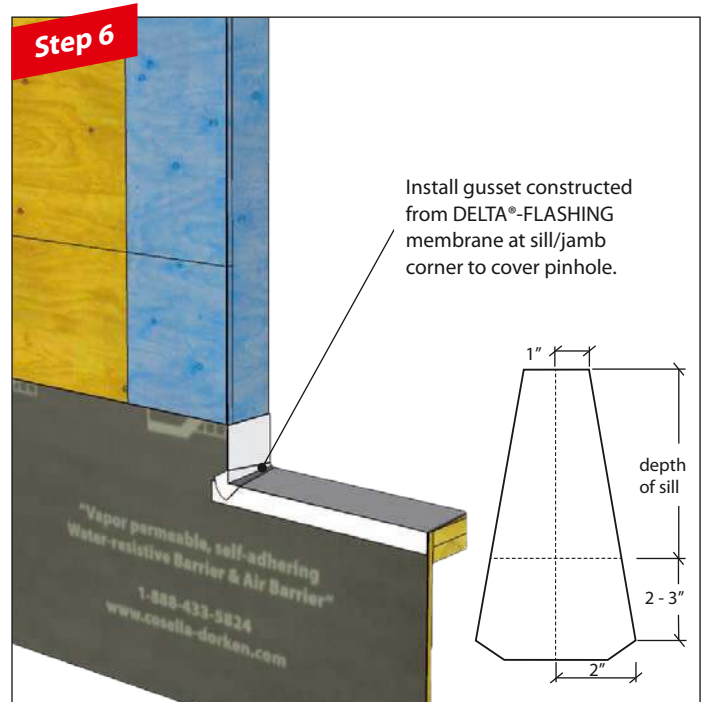
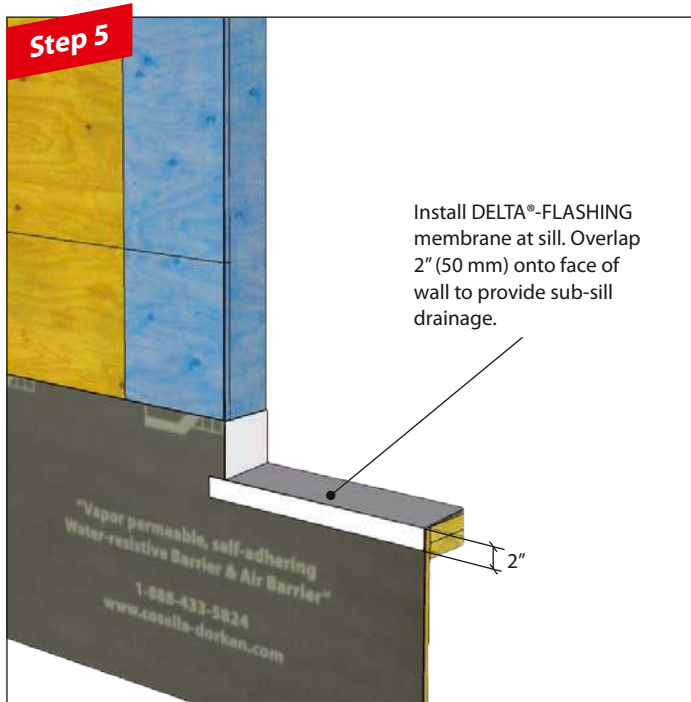
## 3. With sloped sill



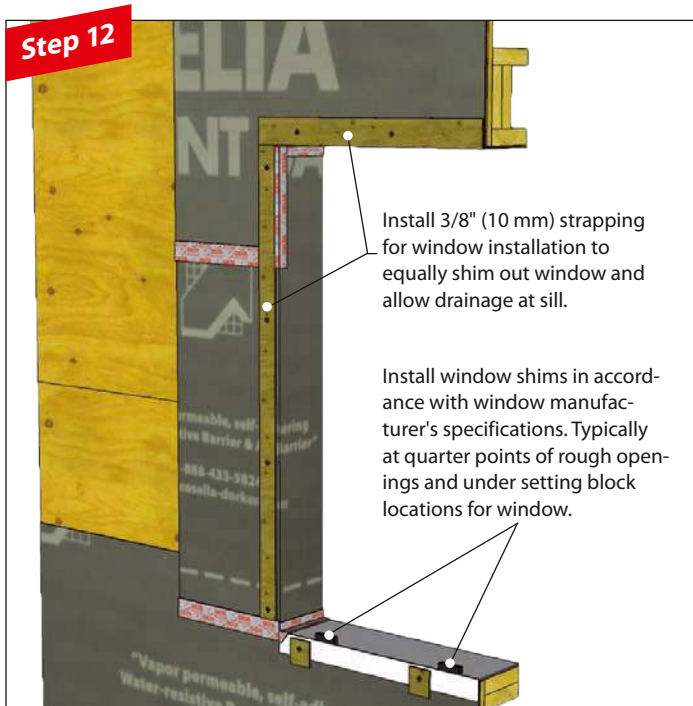
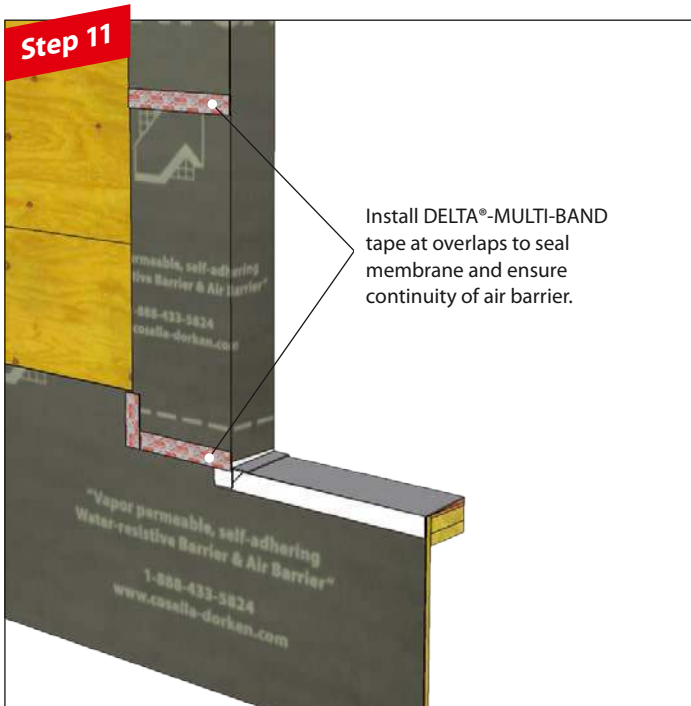
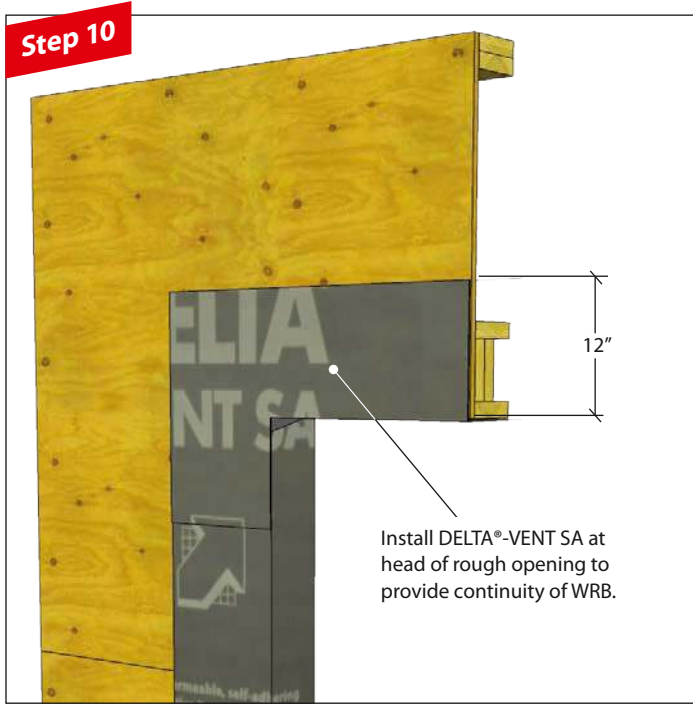


# Strip-in method

## 3. With sloped sill

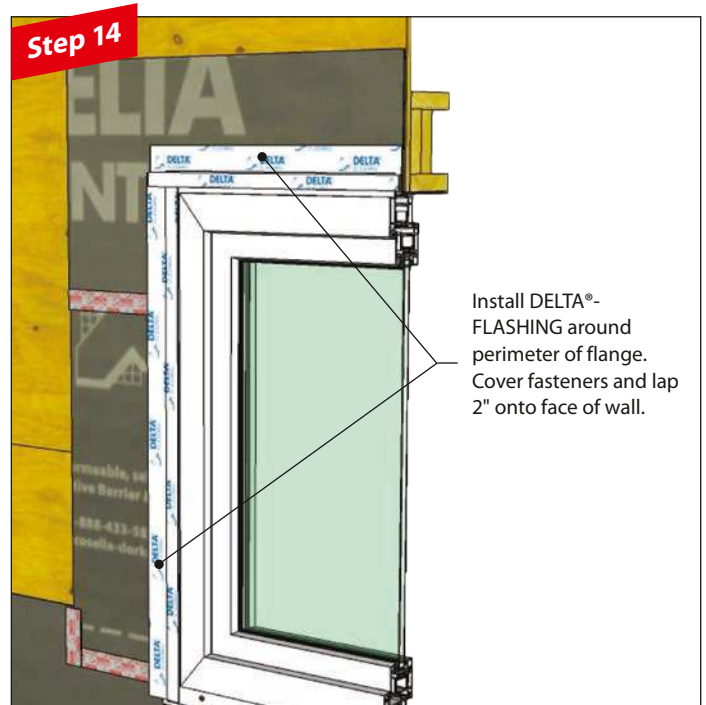


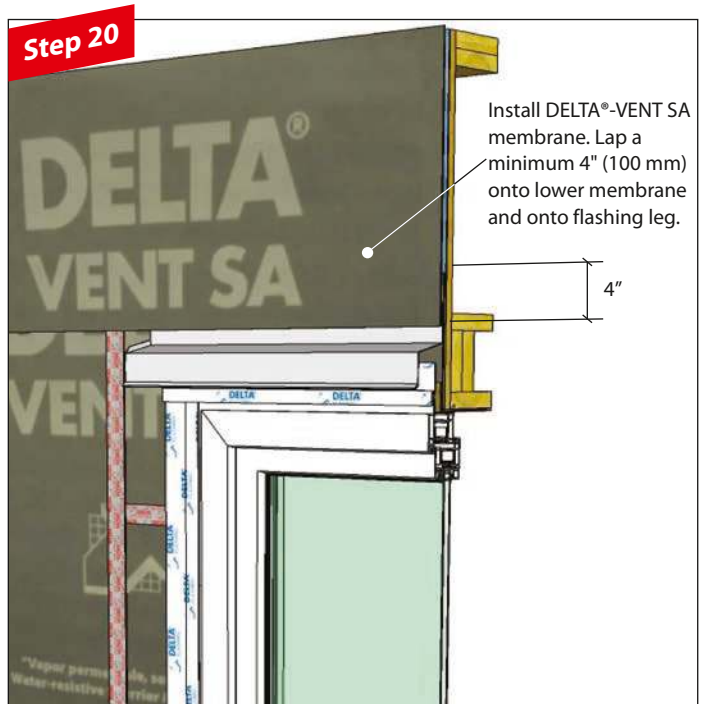
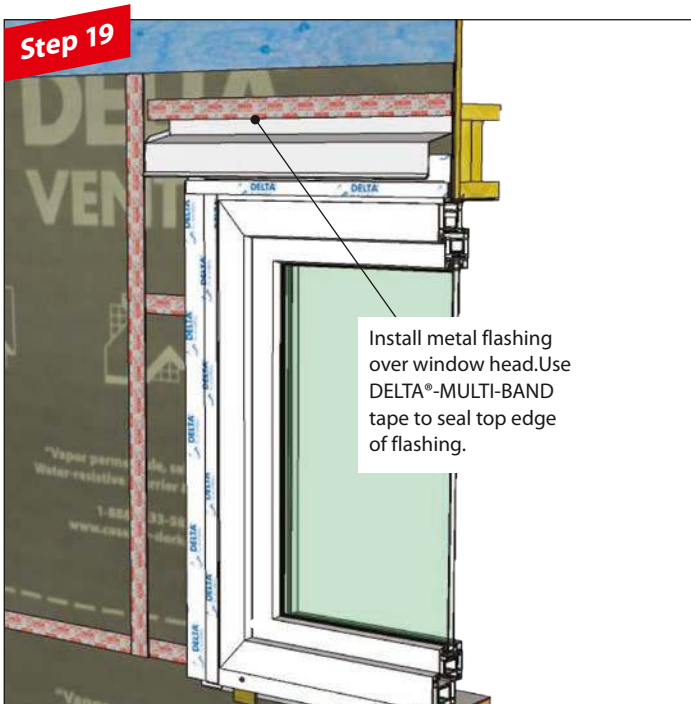
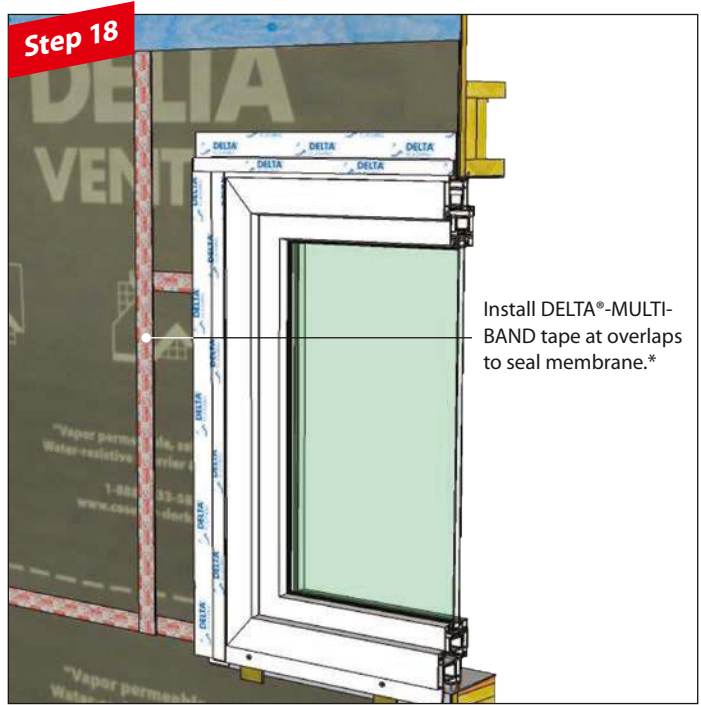
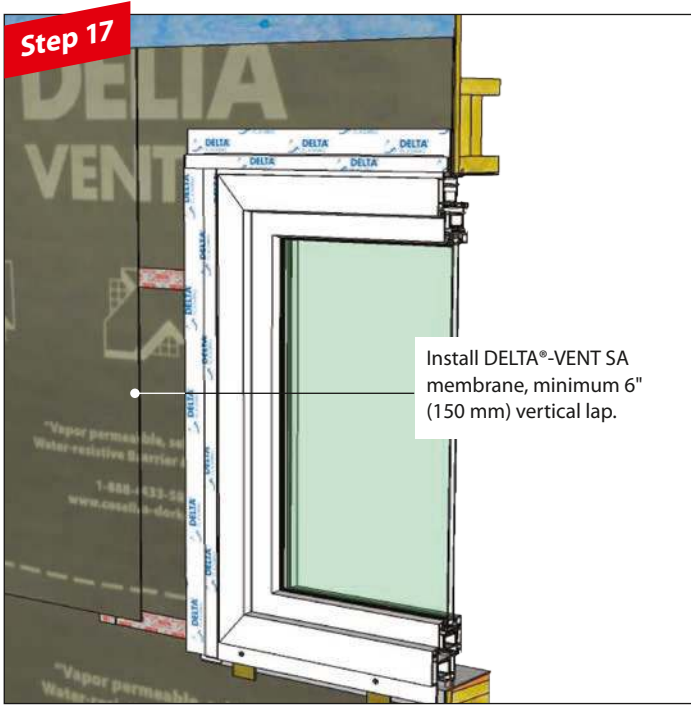




# Strip-in method

## 3. With sloped sill

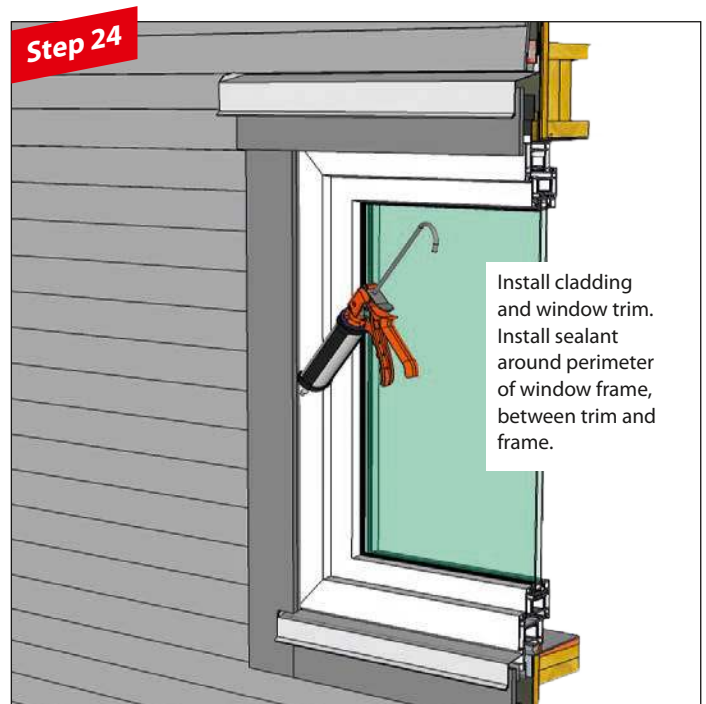
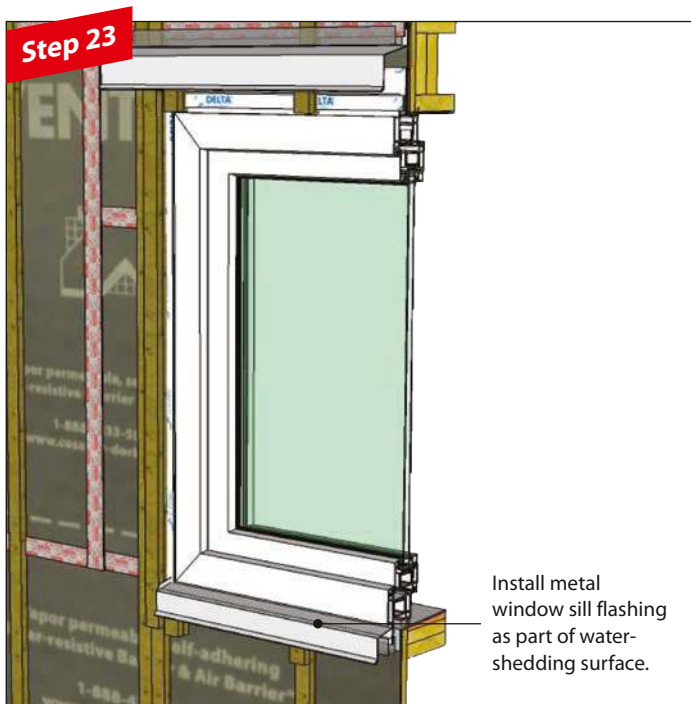




\* Not required where there is a self-adhered edge.

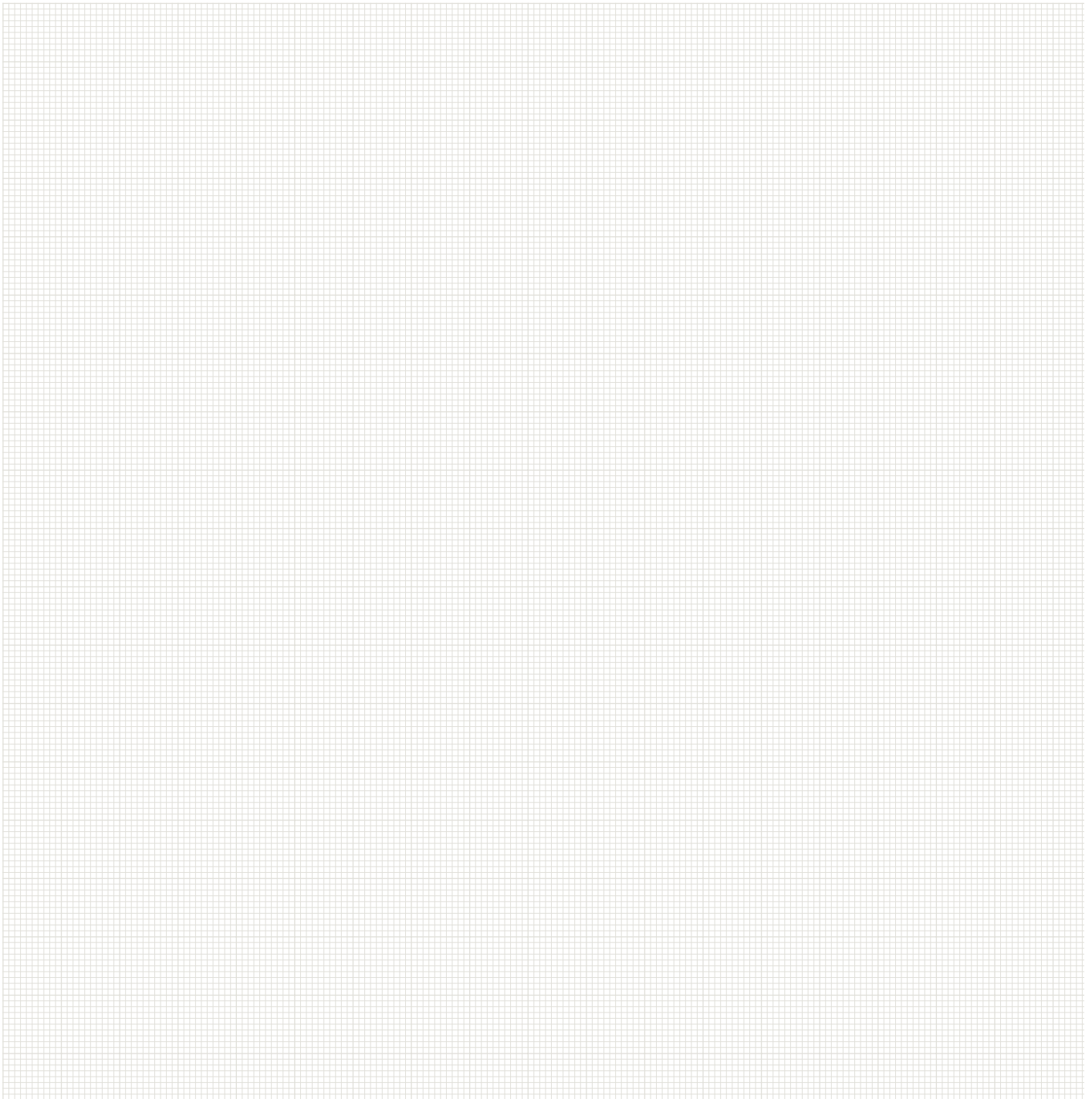
# Strip-in method

## 3. With sloped sill



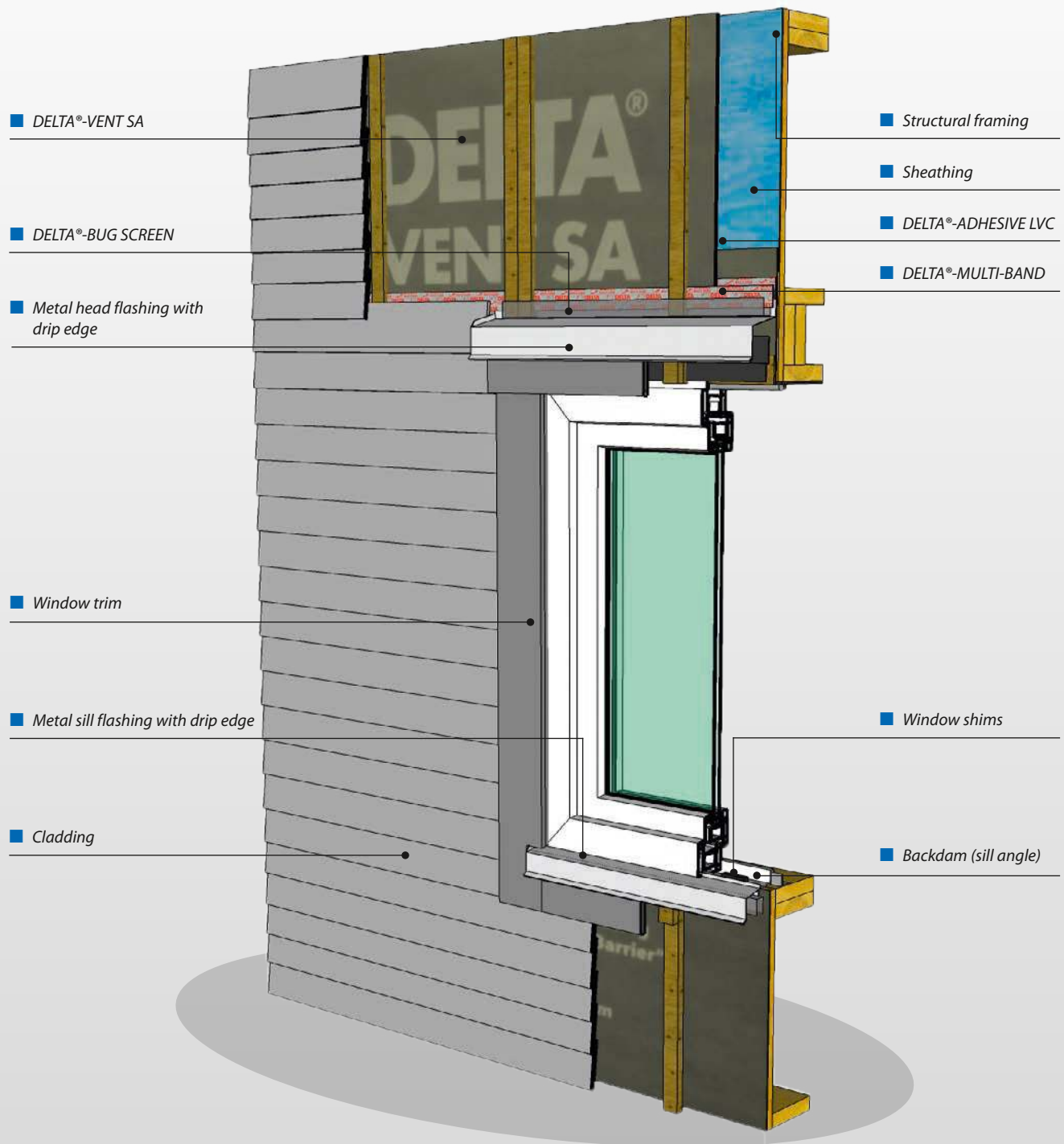
# Notes

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# Strip-in method

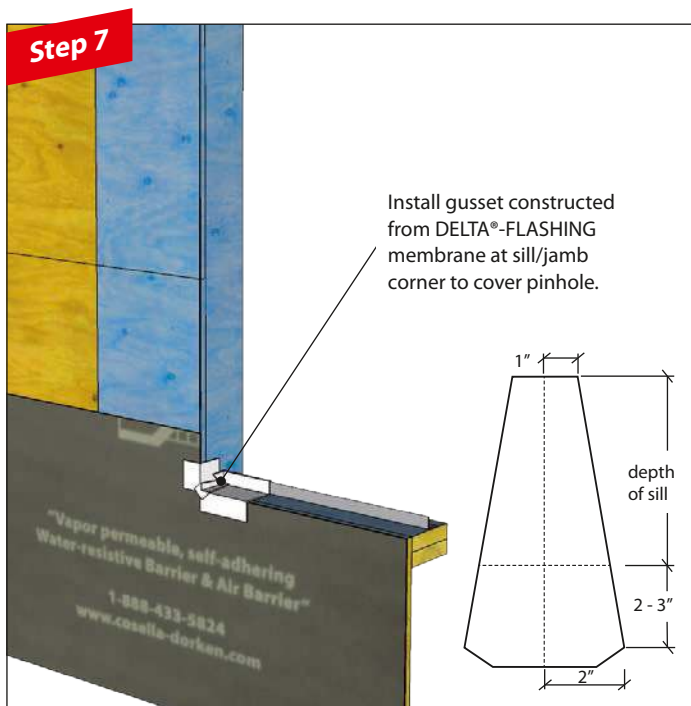
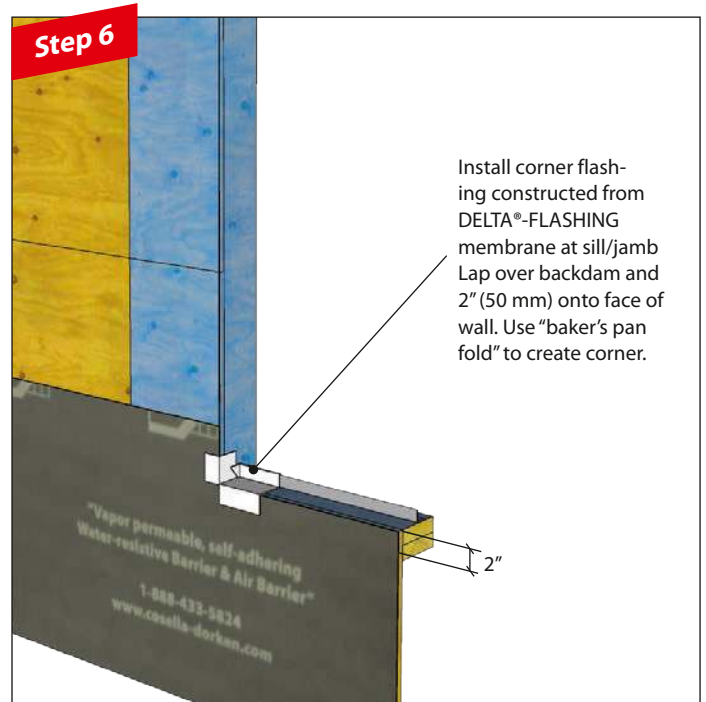
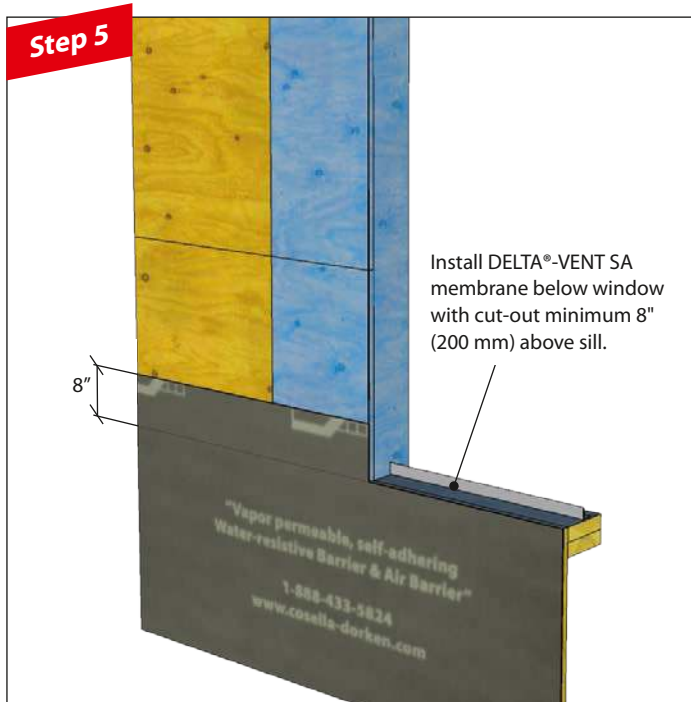
## 4. With backdam



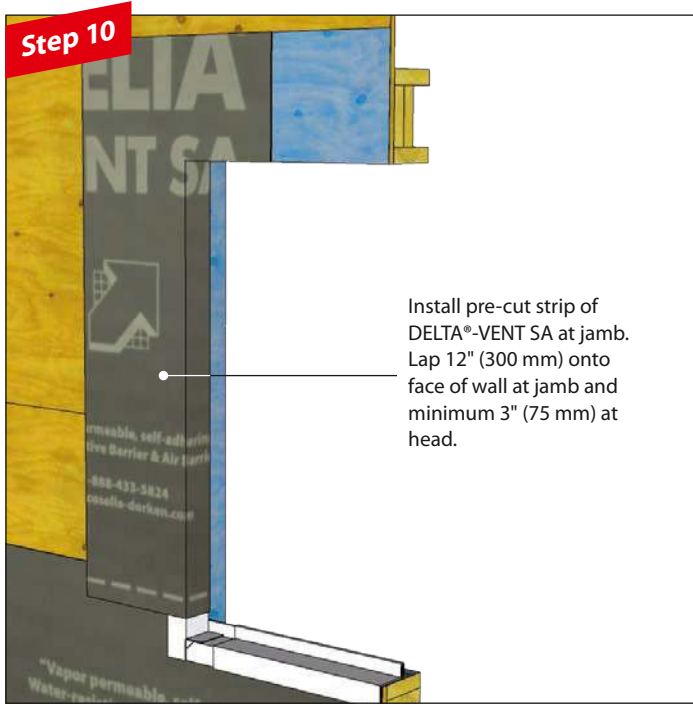
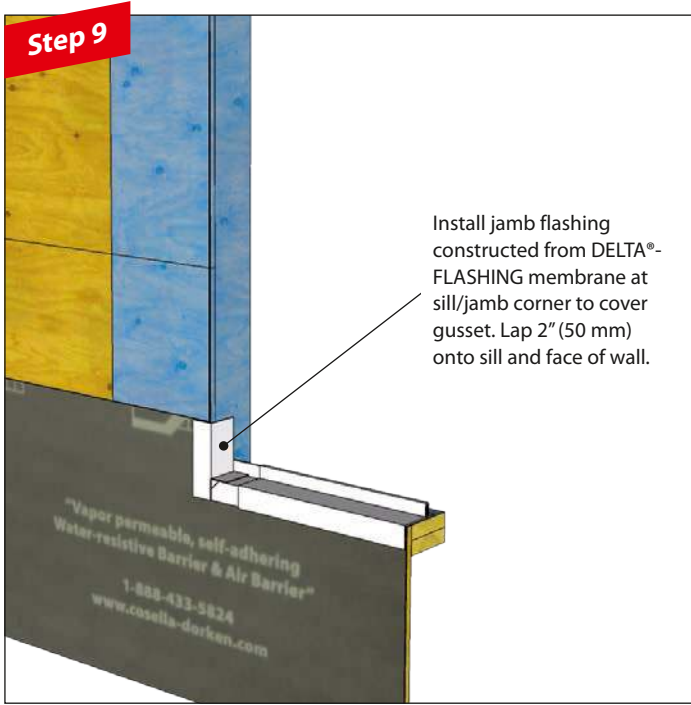


# Strip-in method

## 4. With backdam

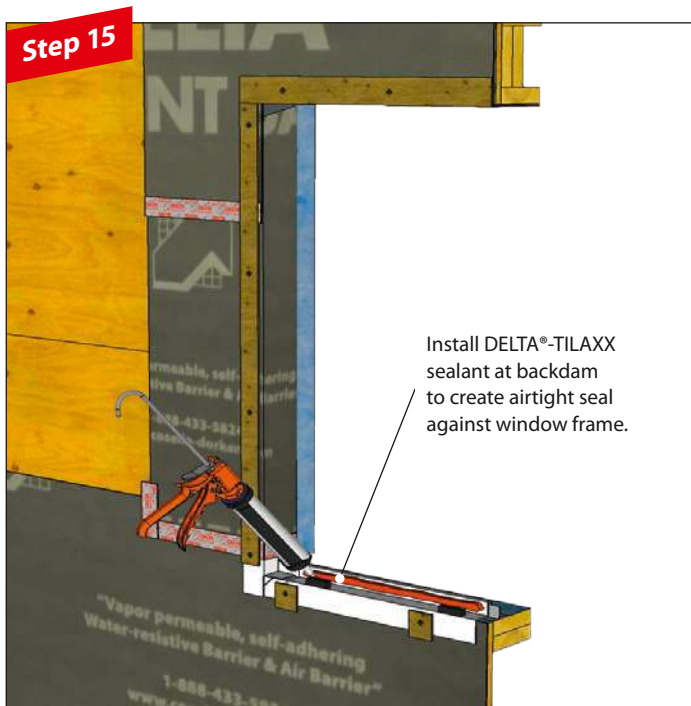
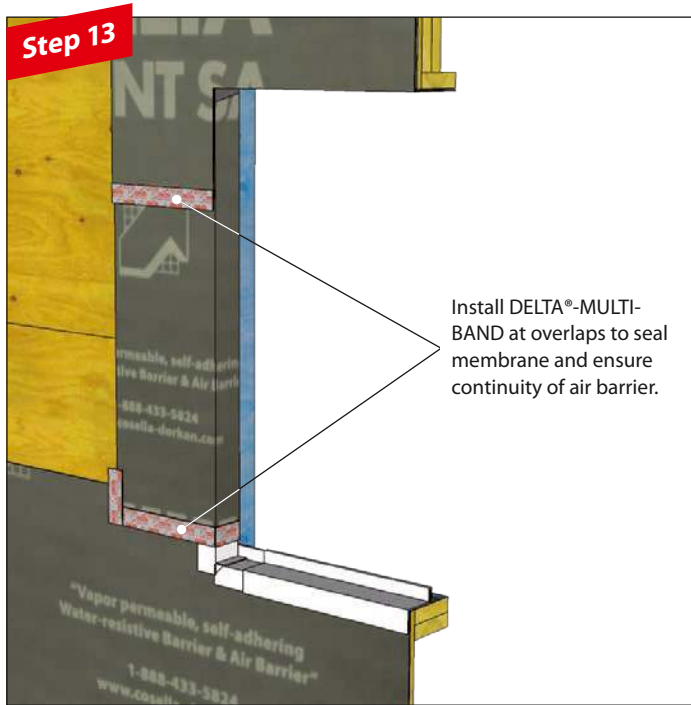


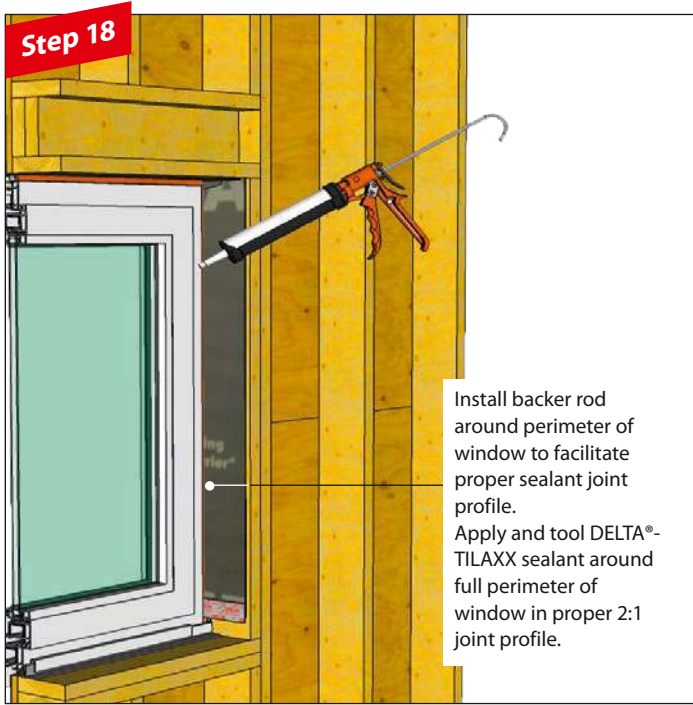




# Strip-in method

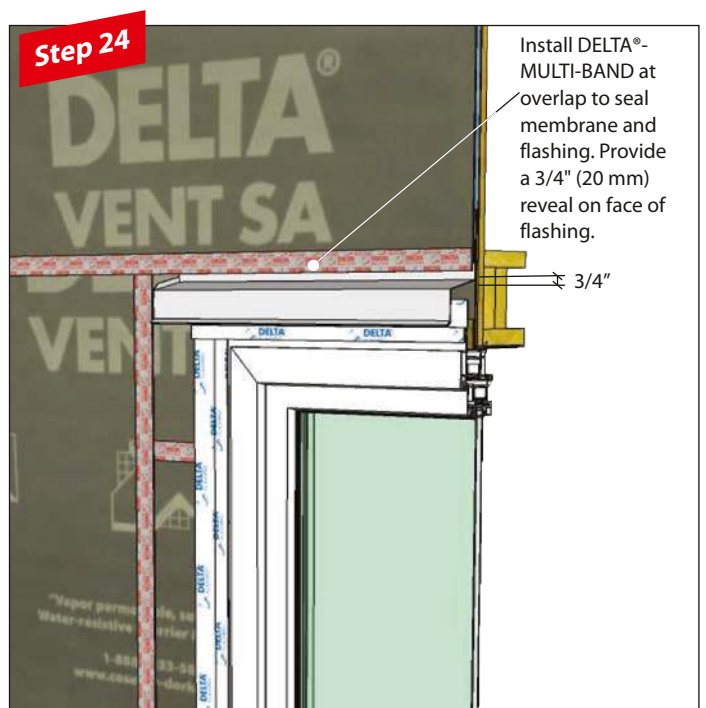
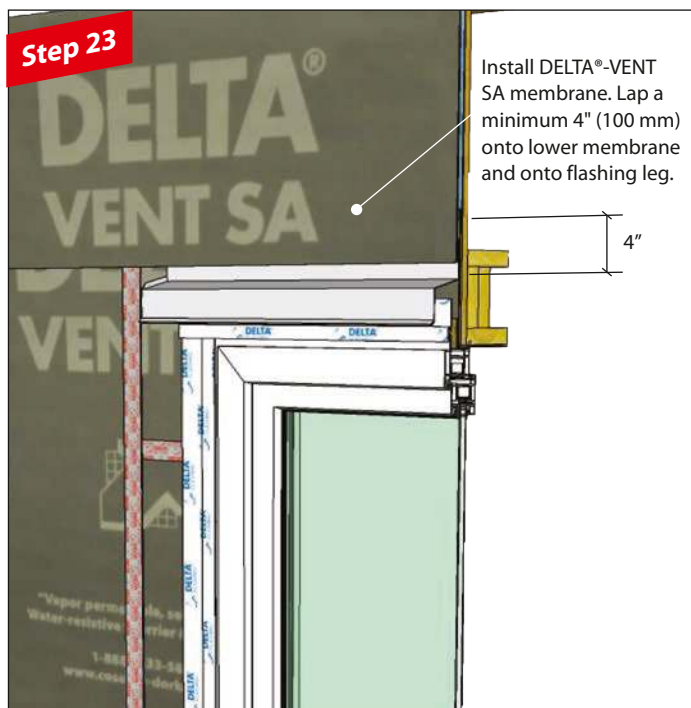
## 4. With backdam





# 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.

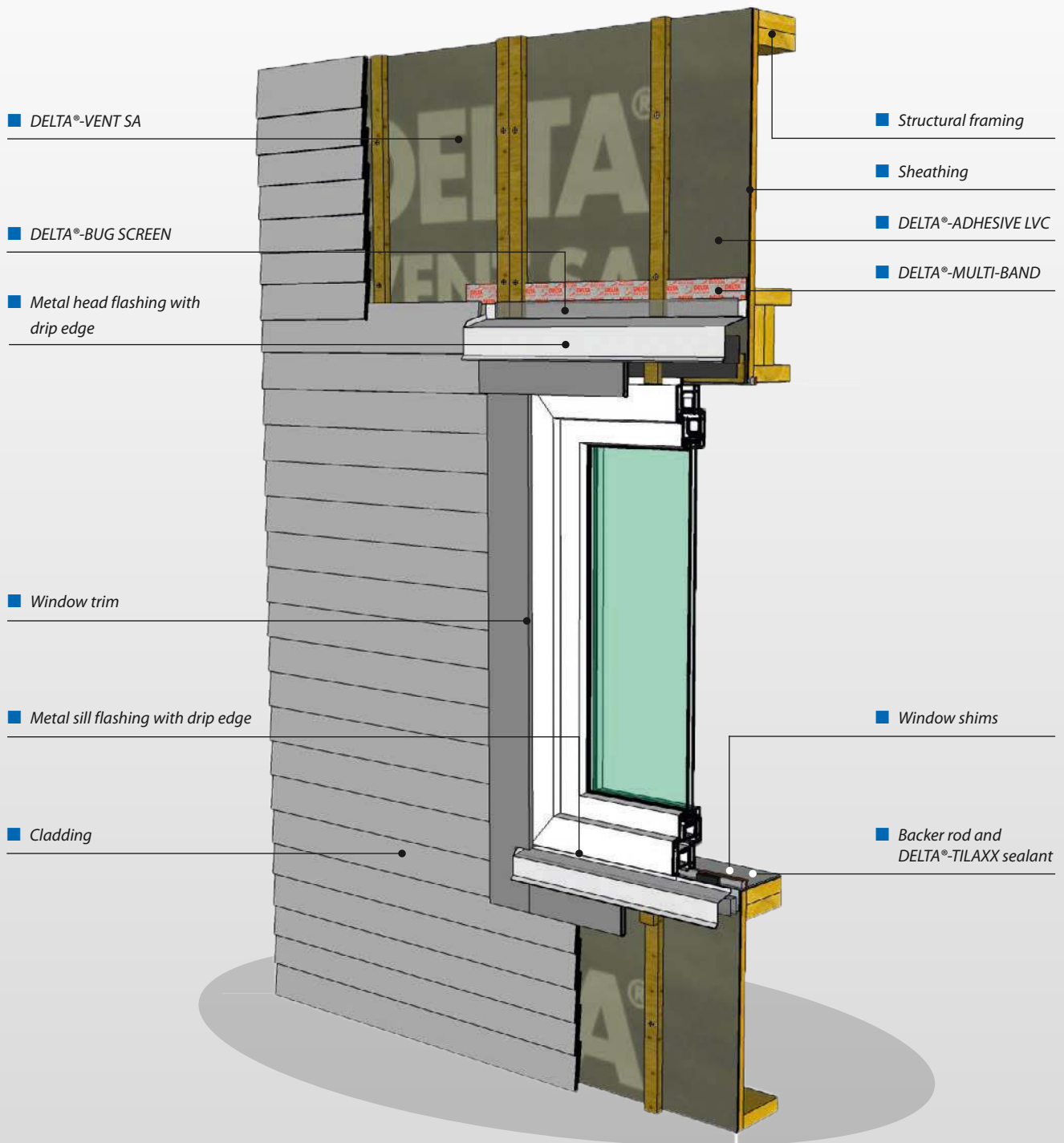
**Step 28**



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

# Cut-out method

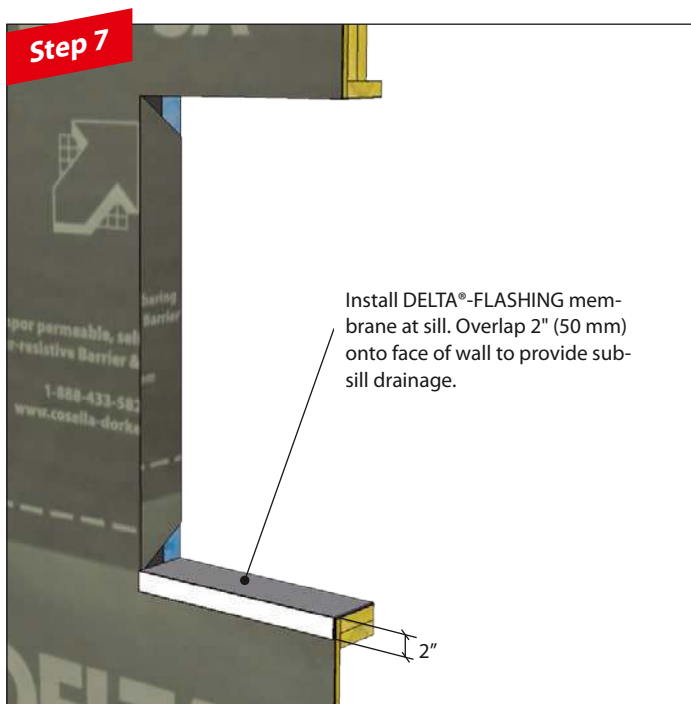
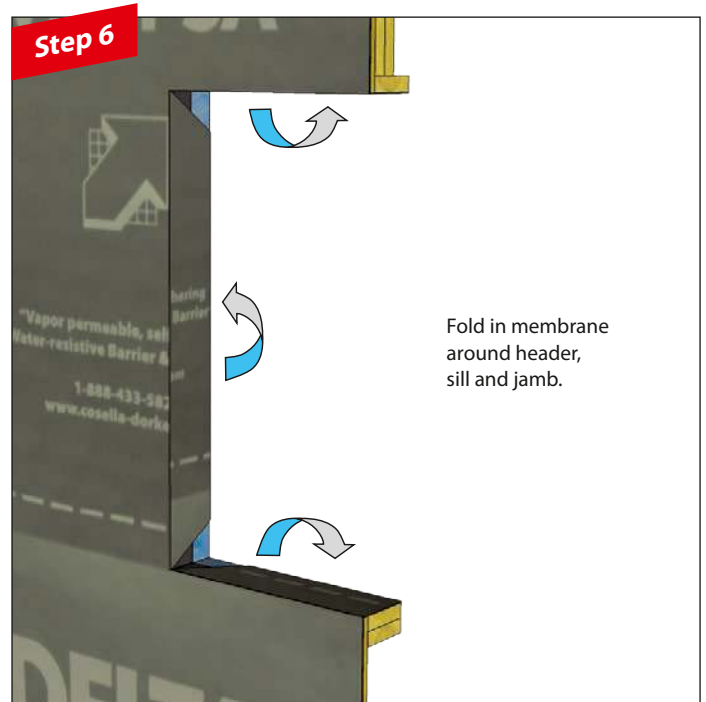
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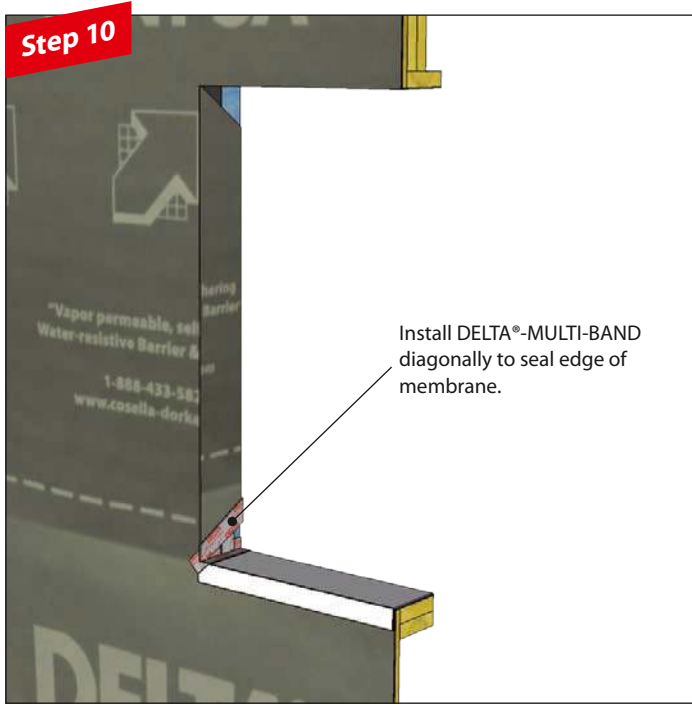


# Cut-out method

## 5. With DELTA®-FAS CORNER

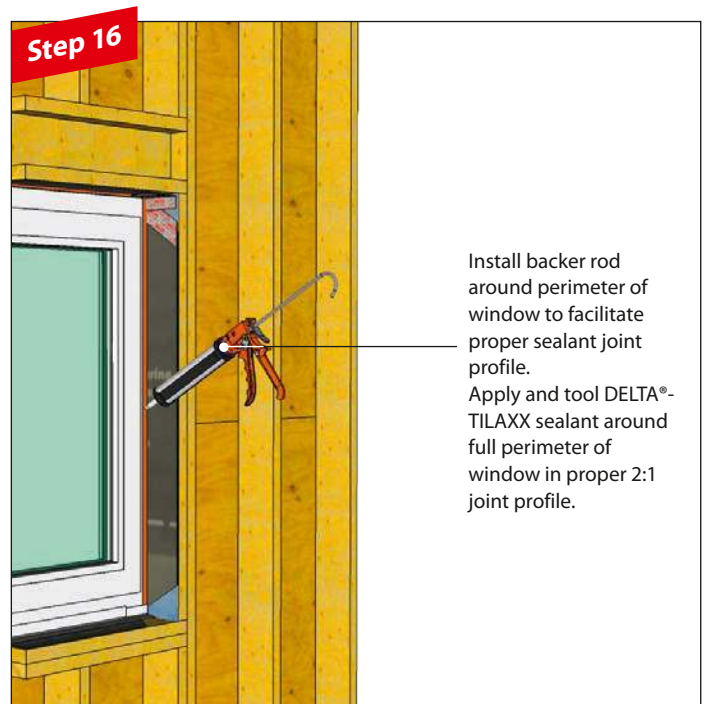


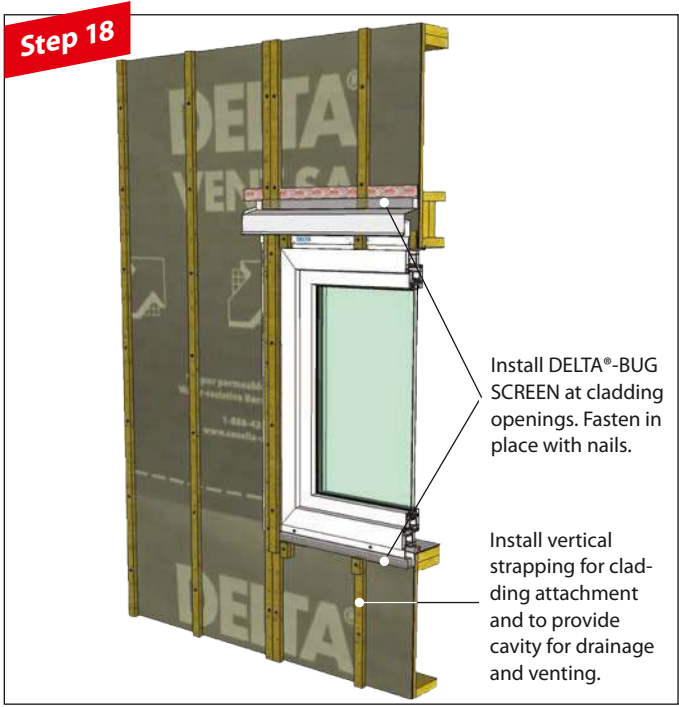




# Cut-out method

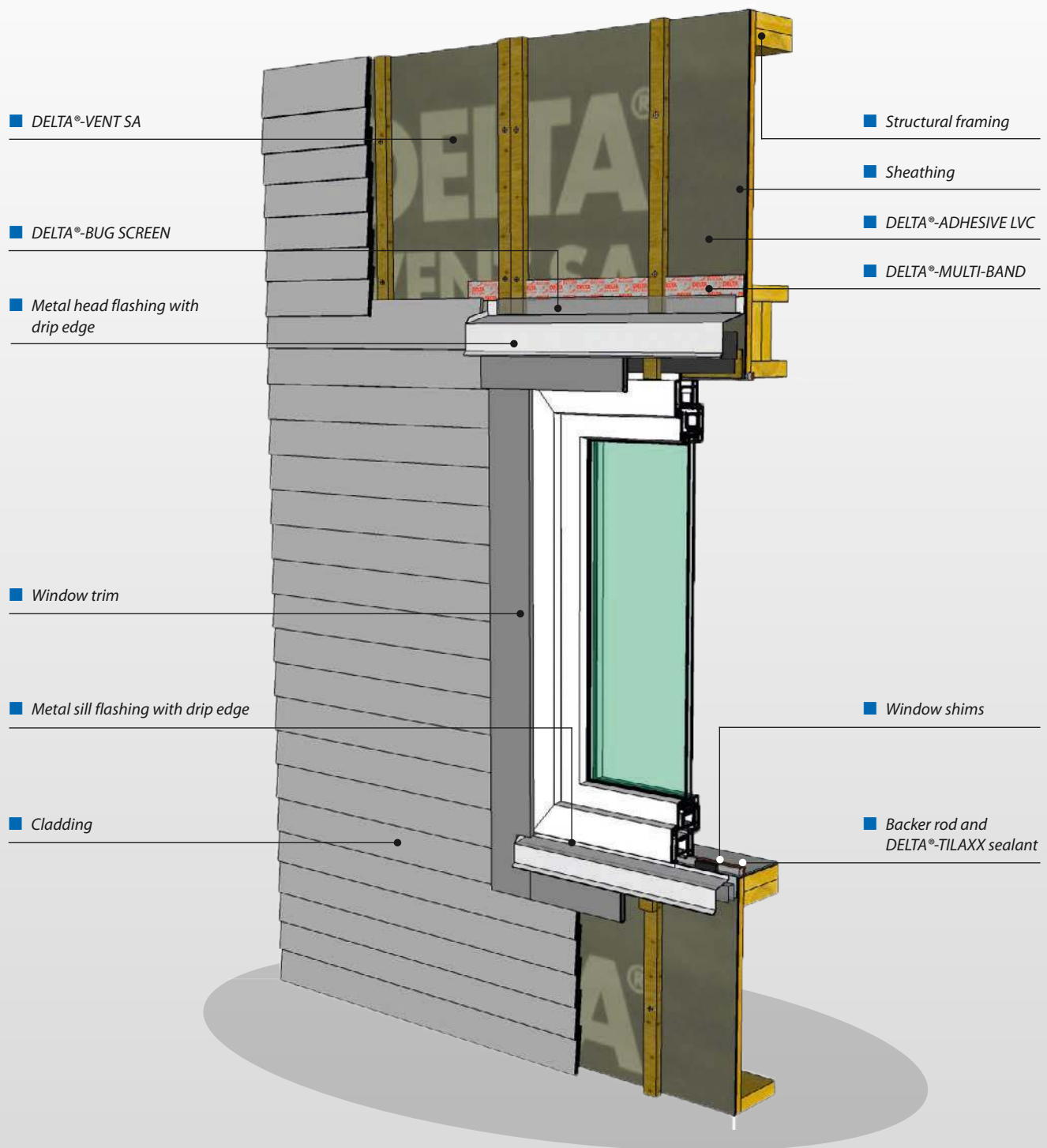
## 5. With DELTA®-FAS CORNER





# Cut-out method

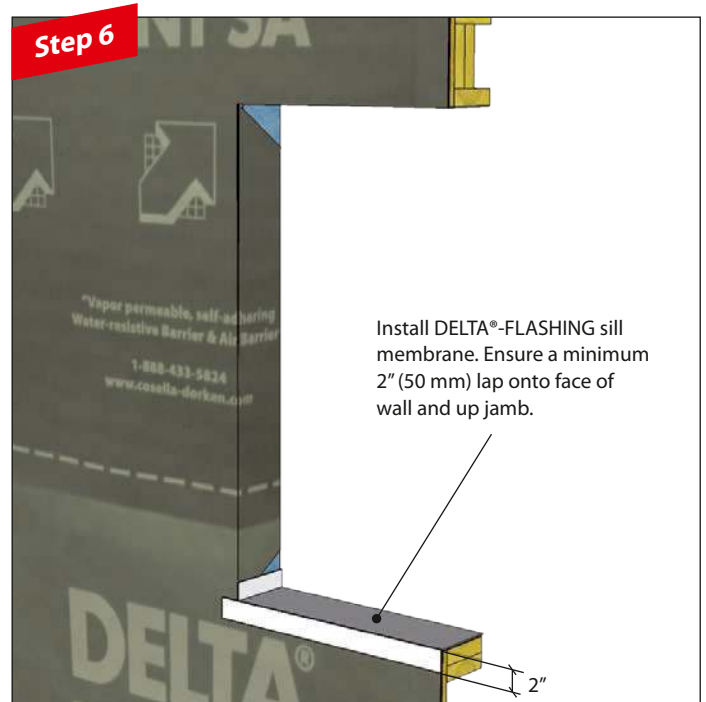
## 6. With flat sill





# Cut-out method

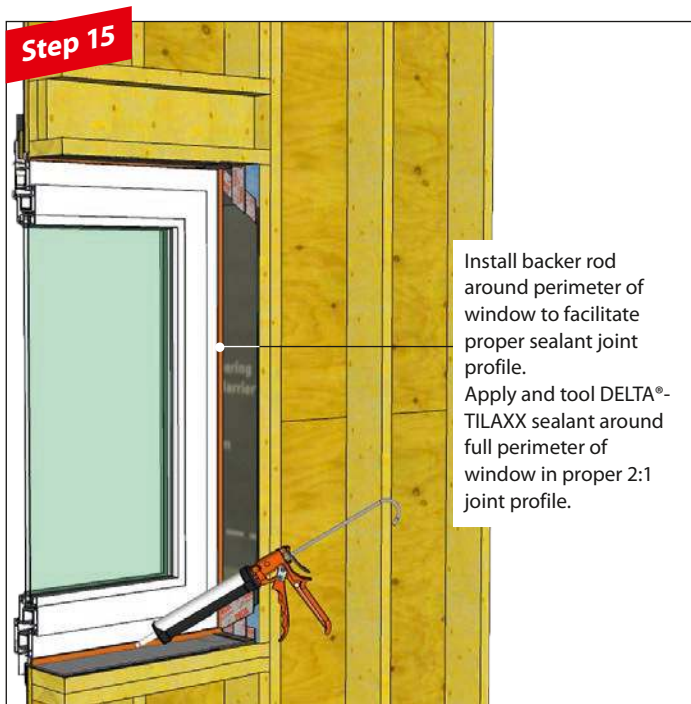
## 6. With flat sill



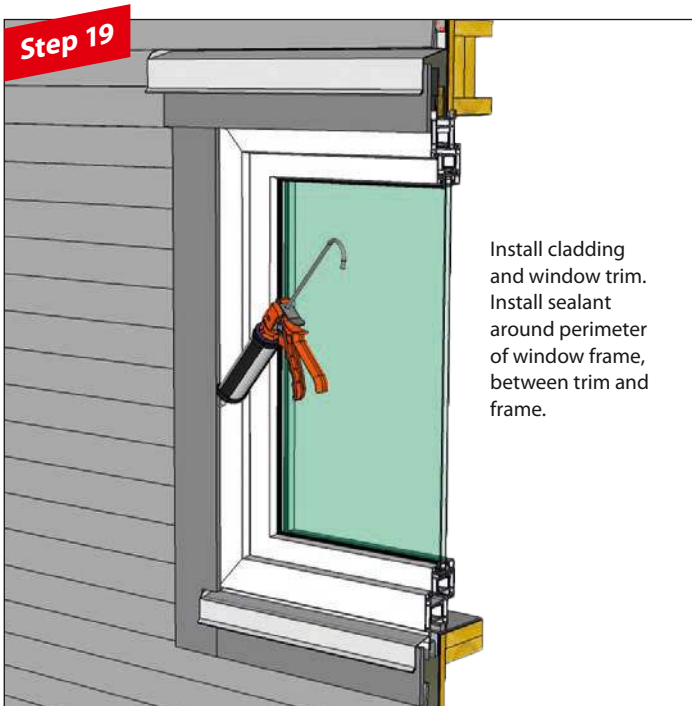
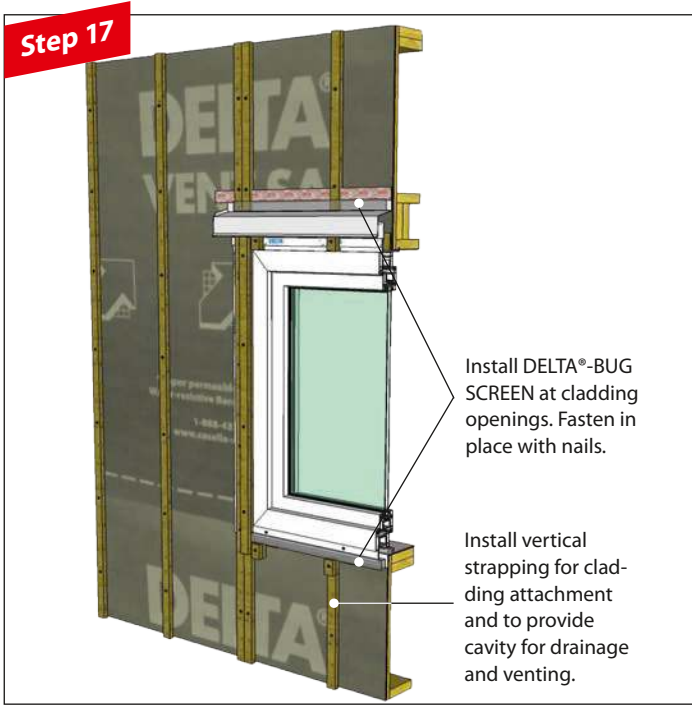


# Cut-out method

## 6. With flat sill

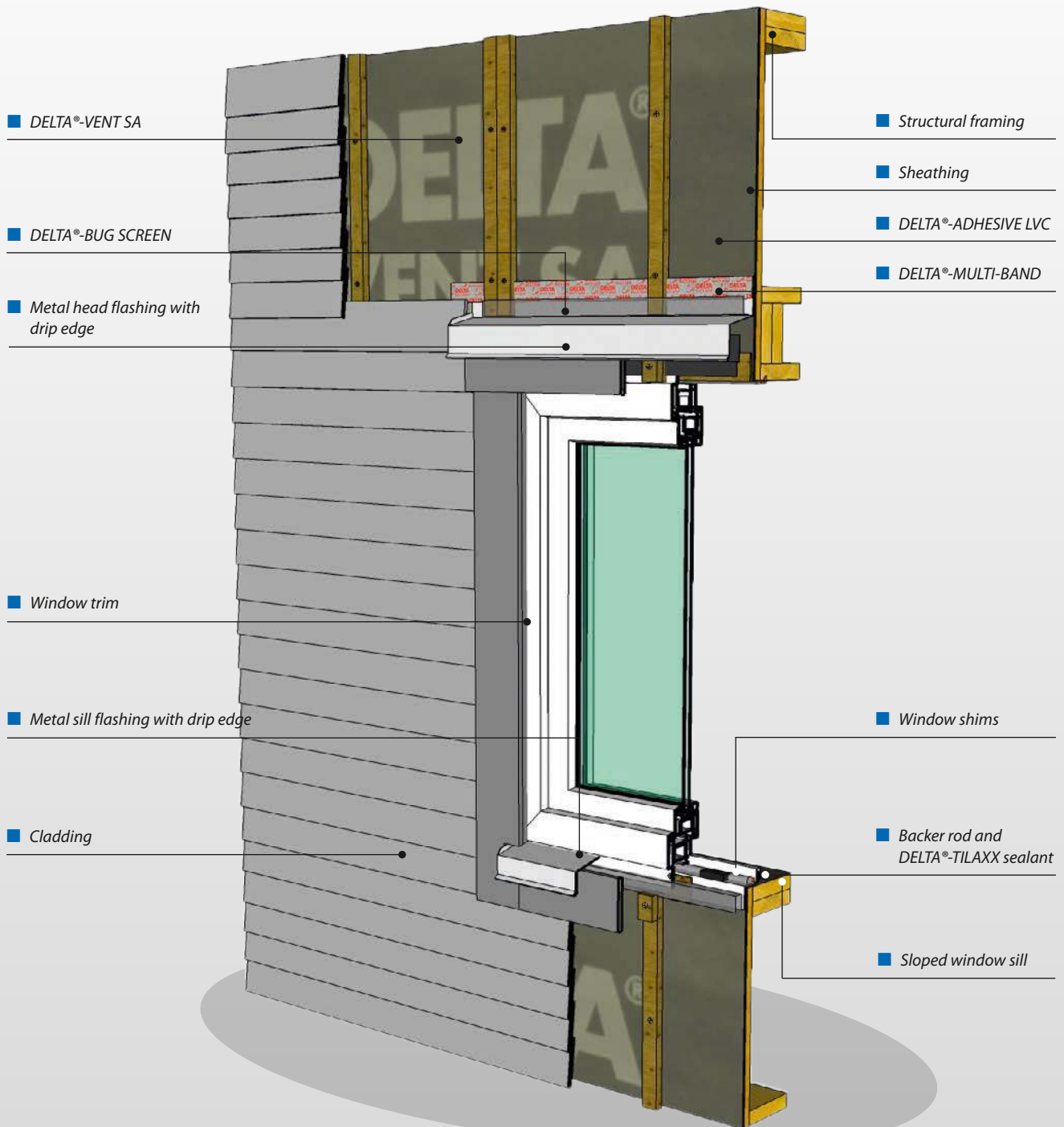






# Cut-out method

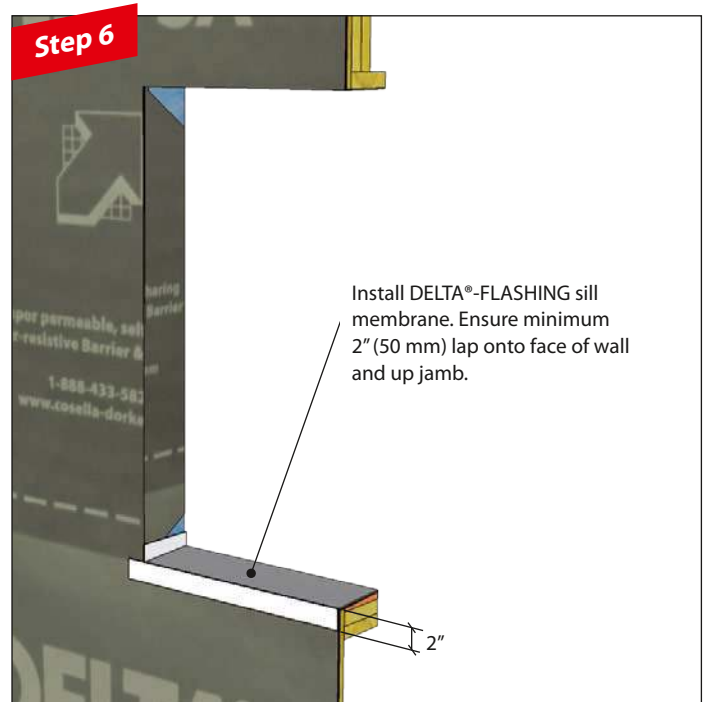
## 7. With sloped sill

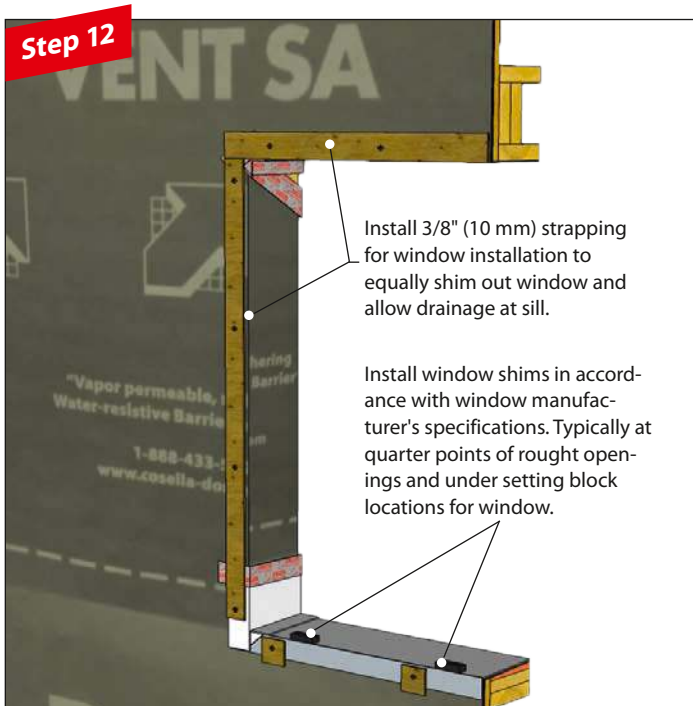




# Cut-out method

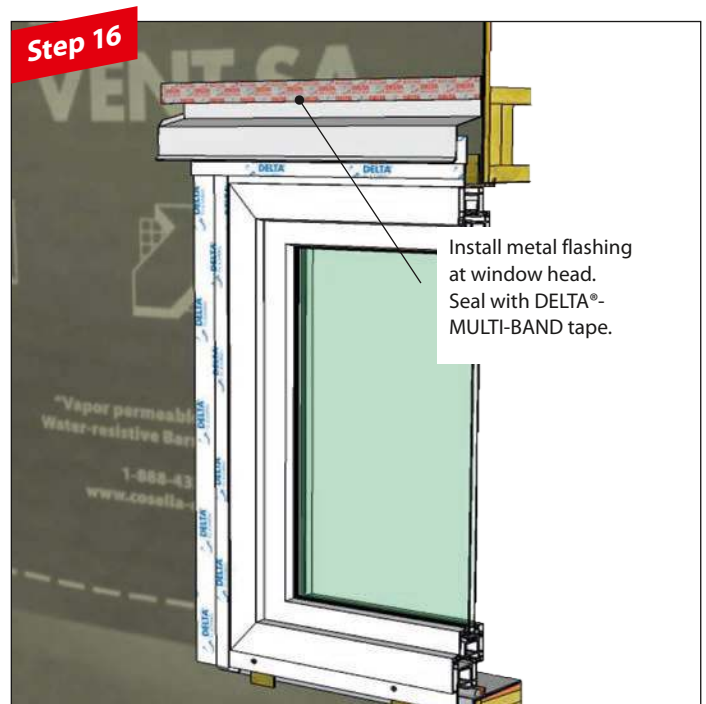
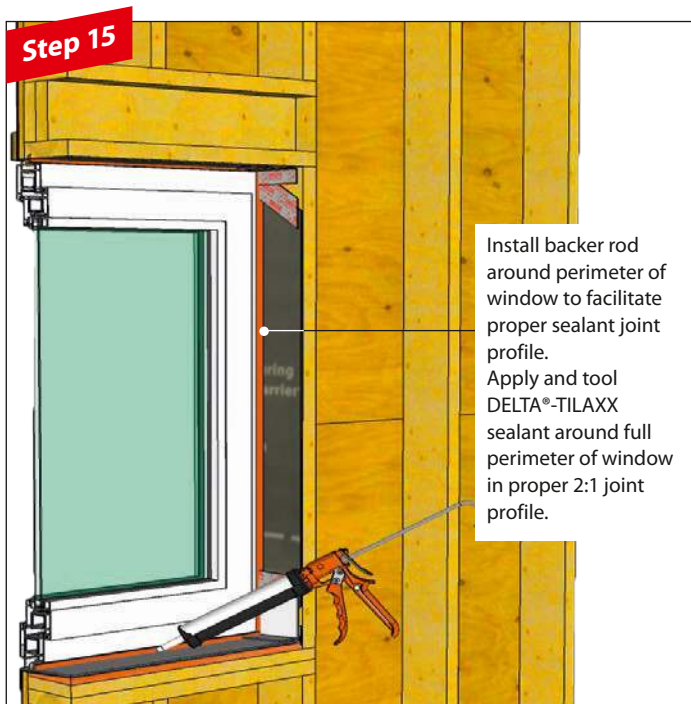
## 7. With sloped sill

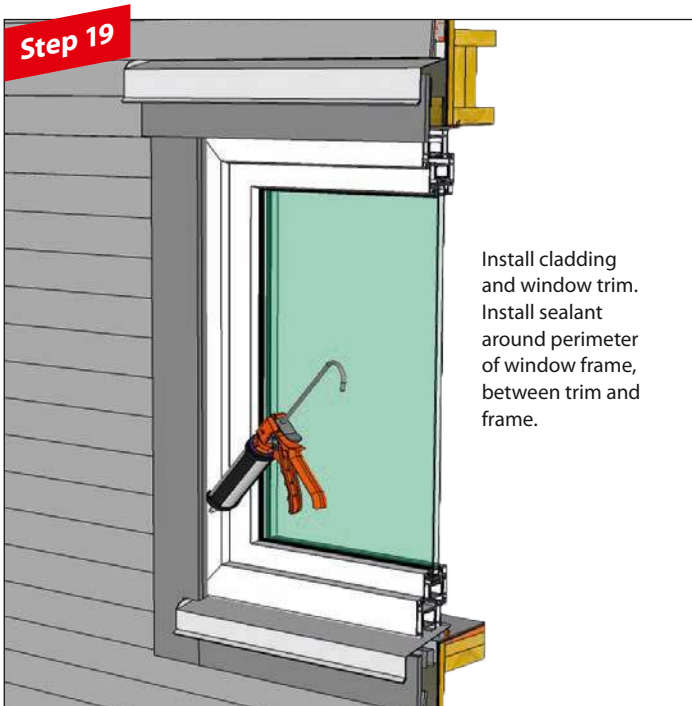




# Cut-out method

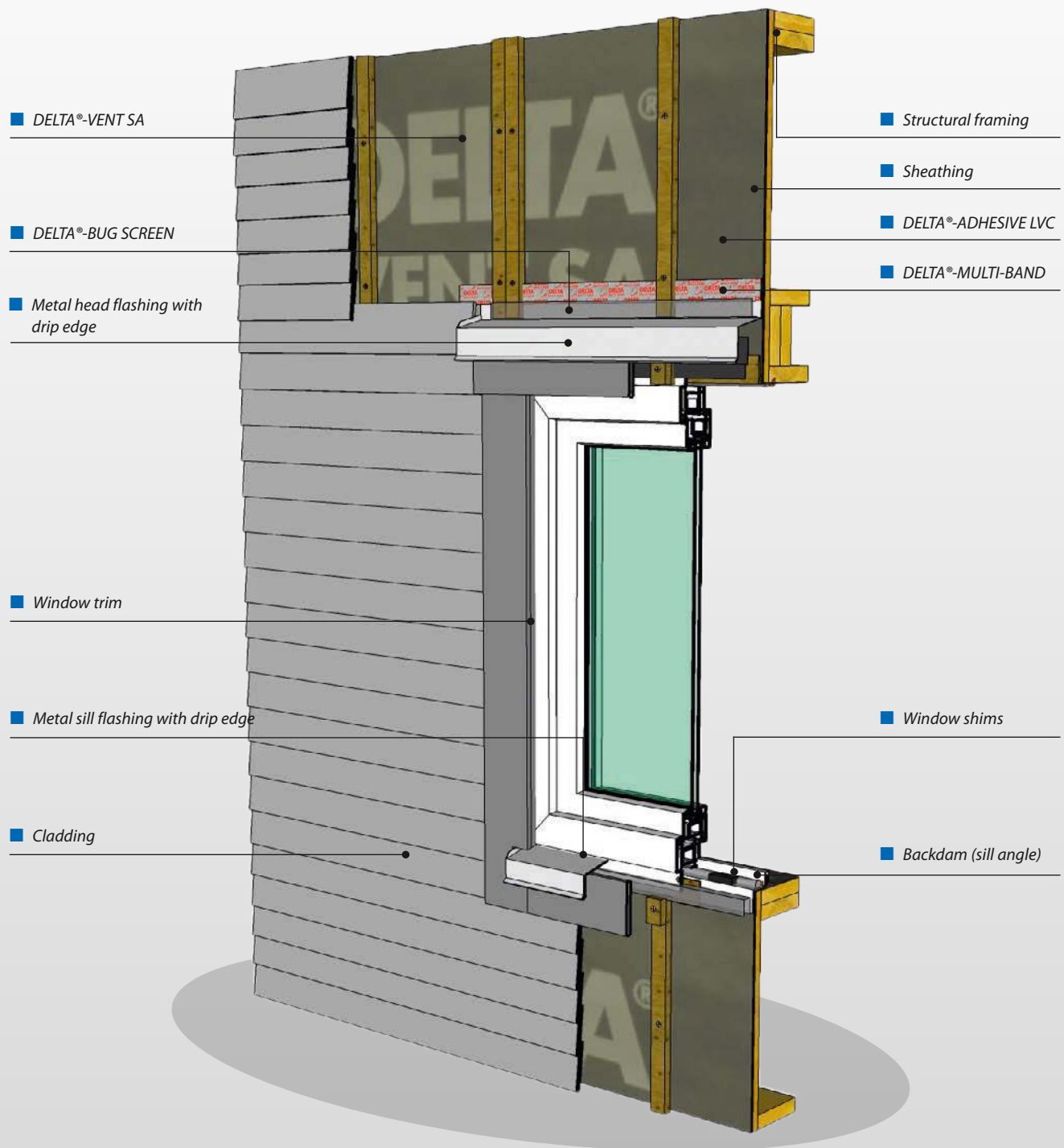
## 7. With sloped sill





# Cut-out method

## 8. With backdam



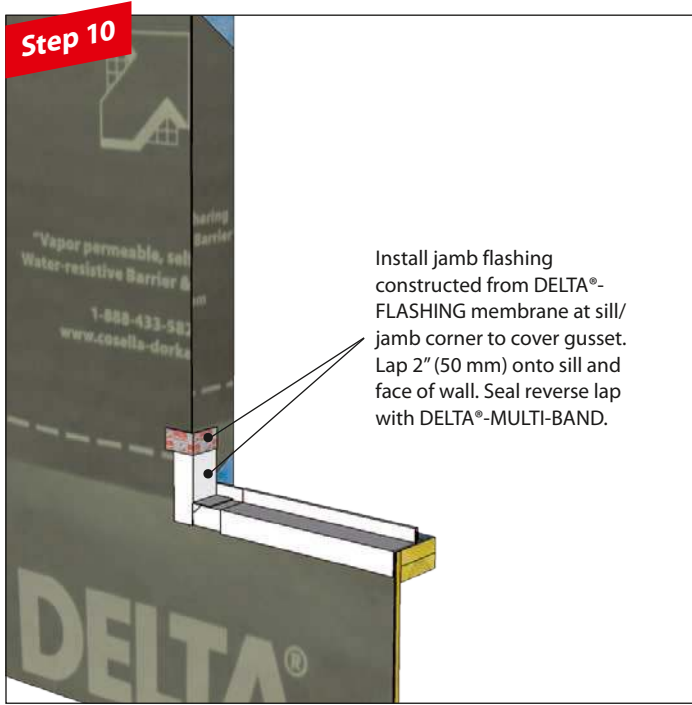




# Cut-out method

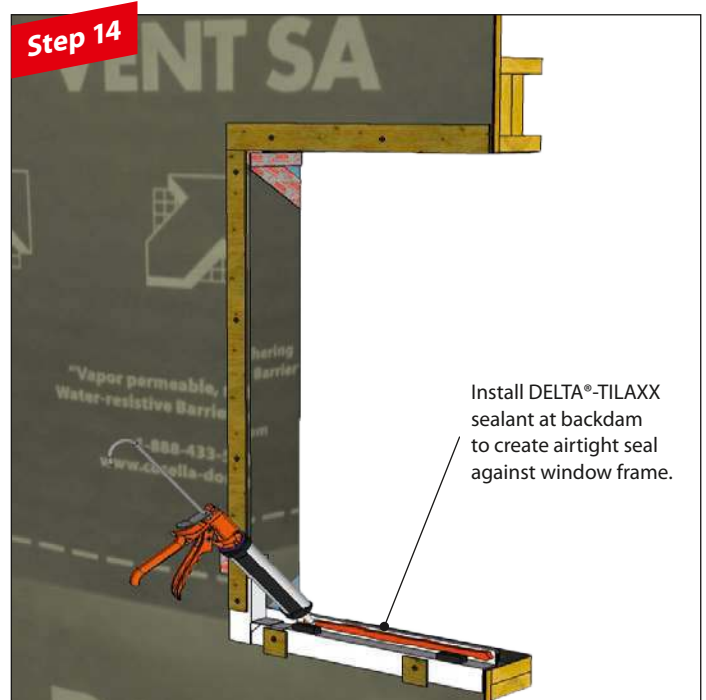
## 8. With backdam





# Cut-out method

## 8. With backdam





Install backer rod around perimeter of window to facilitate proper sealant joint profile. Apply and tool DELTA®-TILAXX sealant around full perimeter of window in proper 2:1 joint profile.



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



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

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



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

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

# 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 Dörken delivers complete solutions for energy-efficient and durable building enclosures.



# DELTA® Air Barrier System Components

			
<p><b>DELTA®-FLASHING</b></p>	<p><b>DELTA®-MULTI-BAND</b></p>	<p><b>DELTA®-FLEXX-BAND</b></p>	<p><b>DELTA®-FAS CORNER</b></p>
<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><b>Recommended Use</b></p> <ul style="list-style-type: none"> <li>■ For flashing of window and door openings.</li> </ul>	<p><b>Recommended Use</b></p> <ul style="list-style-type: none"> <li>■ For all DELTA® membranes to seal laps and penetrations.</li> </ul>	<p><b>Recommended Use</b></p> <ul style="list-style-type: none"> <li>■ Stretchable flashing for details and penetrations.</li> <li>■ Pre-stretch where required.</li> </ul>	<p><b>Recommended Use</b></p> <ul style="list-style-type: none"> <li>■ Provides reliable air- and water-tight window details.</li> </ul>
<p><b>Surface temperature</b> min. +41 °F (+5 °C) Recommended storage: room temperature</p>	<p><b>Surface temperature</b> min. +41 °F (+5 °C) Recommended storage: room temperature</p>	<p><b>Surface temperature</b> min. +41 °F (+5 °C) Recommended storage: room temperature</p>	<p>–</p>
<p><b>Temperature Range</b> -40 °F to +176 °F (-40 °C to +80 °C)</p>	<p><b>Temperature Range</b> -40 °F to +176 °F (-40 °C to +80 °C)</p>	<p><b>Temperature Range</b> -40 °F to +176 °F (-40 °C to +80 °C)</p>	<p><b>Temperature Range</b> -40 °F to +176 °F (-40 °C to +80 °C)</p>
<p><b>Size</b> Width: 6" (15.25 cm), 9" (23 cm) Length: 75' (22.85 m)</p>	<p><b>Size</b> Width: 2 3/8" (6 cm), 4" (10 cm) Length: 82' (25 m)</p>	<p><b>Size</b> Width: 4" (10 cm) Length: 33' (10 m)</p>	<p><b>Measurements</b> 7" x 7" x 4" (18 cm x 18 cm x 10 cm)</p>





**DELTA-THAN**

Permanently elastic special rubber compound sealant and adhesive.

**Recommended Use**

- For sealing and adhering of DELTA® membranes.
- Provides greater security in detail areas.
- Suitable for areas with minimal movement of components.

**Application Conditions**

Open time: 30 minutes at min. +41 °F (+5 °C)

**Application Rate**

Approx. 23' (7 linear m) per cartridge

**Temperature Range**

-22 °F to +176 °F (-30 °C to +80 °C)

**Size**

10.5 fl.oz (310 ml)



**DELTA-TILAXX**

High quality permanently elastic adhesive and sealant that retains flexibility.

**Recommended Use**

- 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).

**Application Conditions**

Open time: 30 minutes at min. +41 °F (+5 °C)

**Application Rate**

Approx. 23' (7 linear m) per cartridge

**Temperature Range**

-22 °F to +176 °F (-30 °C to +80 °C)

**Size**

10.5 fl.oz (310 ml)



**DELTA-LIQUIXX**

Viscous, pure acrylic dispersion with enclosed fabric reinforcement.

**Recommended Use**

- For air-tight connection of complex details and air barrier continuity.
- Suitable for all common construction surfaces.

**Application Conditions**

Open time: 3 - 4 hours at +70 °F (+21 °C) and 45 % RH

**Application Rate**

Approx. 2.8 fl.oz/sqft (0.9 l/sqm)

**Temperature Range**

-22 °F to +176 °F (-30 °C to +80 °C)

**Size**

0.66 gal/pail (2.5 l/pail)



**DELTA-ADHESIVE LVC**

Low solvent surface conditioner.

**Recommended Use**

- 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.

**Surface temperature**

Application conditions: min. +25 °F (-4 °F)  
Recommended storage: min. 32 °F (0 °C)

**Application Rate**

Up to 250 sqft/gal (6.13 sqm/l) depending on porosity and texture of surface

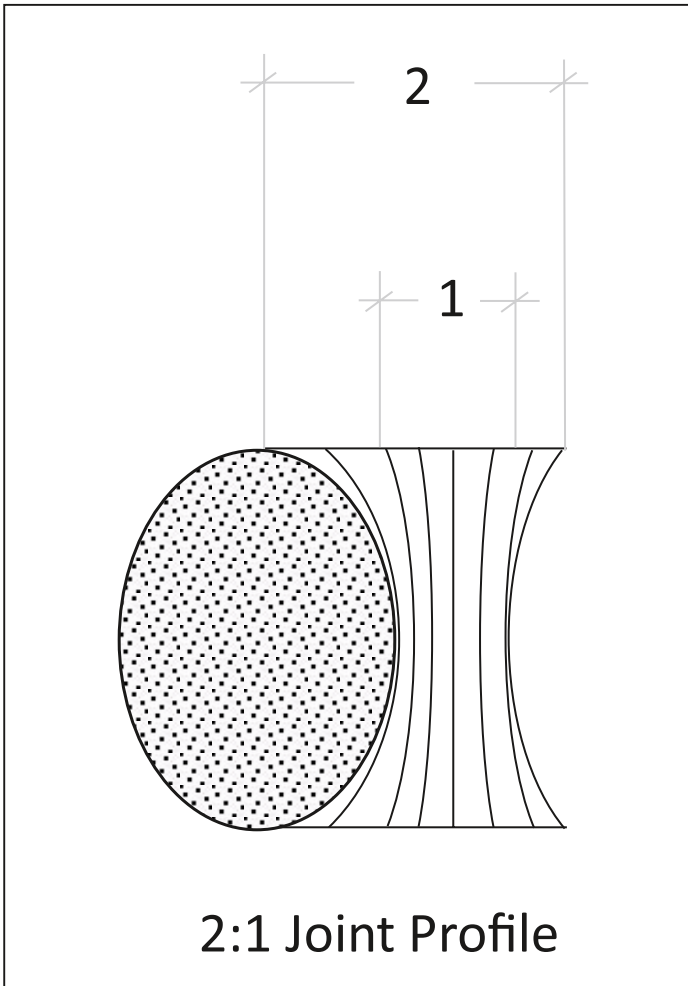
**Temperature Range**

-40 °F to +176 °F (-40 °C to +80 °C)

**Size**

4.5 gal (17 l) |

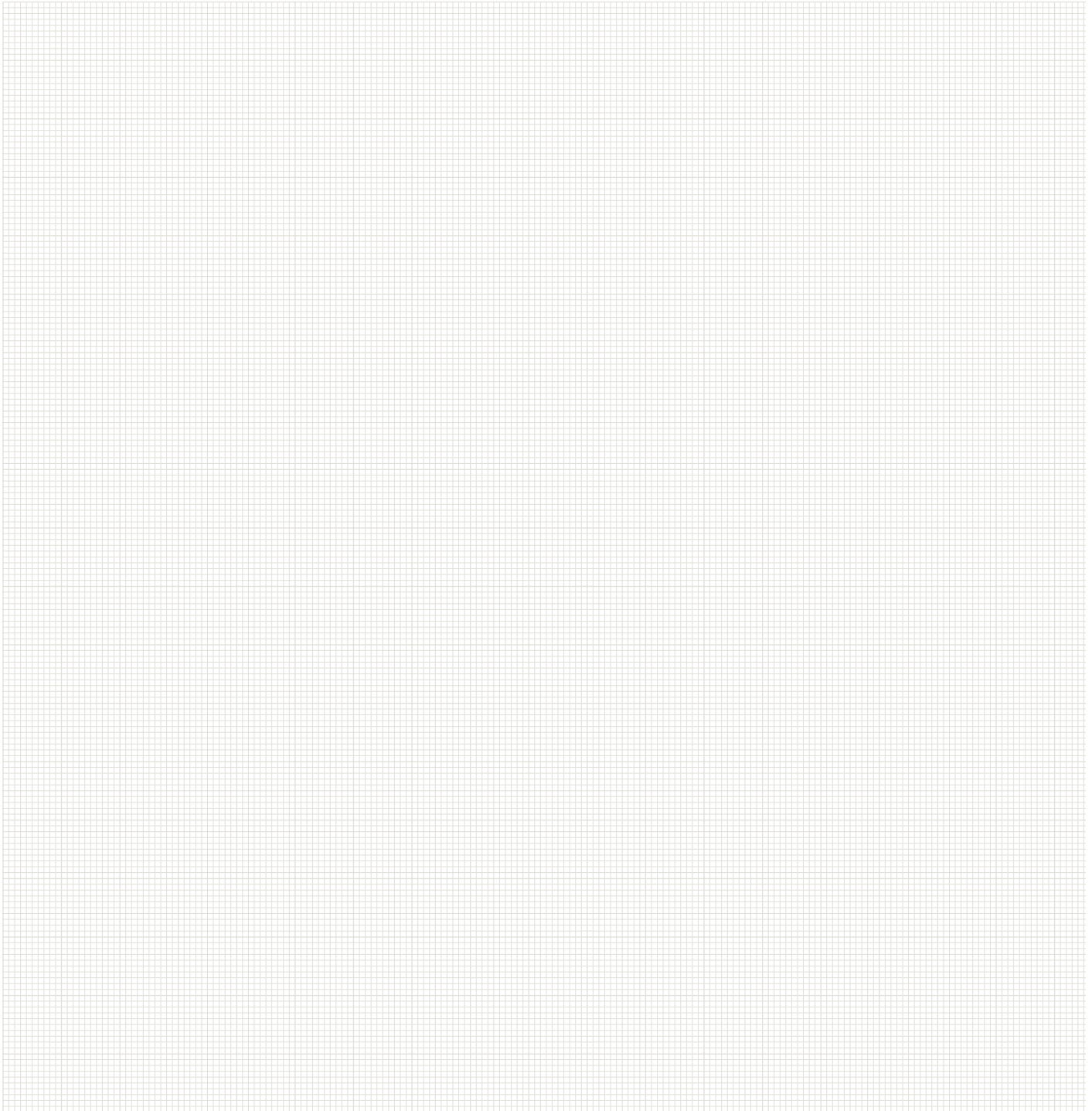
# Appendix



Recommended 2:1 Window Joint Profile

# Notes

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### About Dörken

Dörken delivers innovative, premium quality products to the construction market. A North American manufacturer based out of Beamsville, Ontario, Dörken Systems 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 Dörken include DELTA®-MAXX, DELTA®-FOXX and DELTA®-VENT S.

For more information, call 1-888-4DELTA4 (433-5824) or visit [www.dorken.com](http://www.dorken.com)

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