

TABLE OF CONTENTS

Products Covered.....	1
Required Installation Materials.....	1
Code Requirements.....	1
Safety and Storage.....	1
Slippage	
Precautions	
Storage	
Warranty	
DRYline Building Wrap Systems Water-Resistive and Air Barrier Installation Instructions	2
Continuity	3
Terminations	
Gable Ends	
Cantilevered Floors	
Penetrations	
Dryer Vent Installation	
Round Exhaust Duct Penetration Flashing Installation	
Repairing Tears and Holes	
Flanged Window Installation.....	5
Standard Windows	
Round-top Windows	
Non-Flanged Window Installation (Buildings less than 4 stories).....	8
Wall Sheathing.....	11
Additional Support	12

PRODUCTS COVERED

DRYline BUILDING WRAP SYSTEM WATER-RESISTIVE BARRIERS (WRB)

- DRYline HPX Commercial Building Wrap
- DRYline HP Building Wrap
- DRYline MP+ Drainage Building Wrap
- DRYline LP+ Drainage Building Wrap
- DRYline W Building Wrap

DRYline FLASHING PRODUCTS

- DRYline ATX Flashing
- DRYline ATX Flex Flashing
- DRYline Sheathing Tape

REQUIRED INSTALLATION MATERIALS

- DRYline Building Wrap Water-Resistive Barrier
- DRYline Flashing Tape
- Fasteners (sufficient in length to penetrate framing or fastening substrate, i.e. non-corrosive roofing nails or staples)
- Sealant (residential or commercial), see list of compatible sealants on page 12.

CODE REQUIREMENTS: DRYline Building Wrap Systems water-resistive barriers meet or exceed applicable building codes for weather-resistant barriers and are a critical component for a healthy, energy-efficient building.

SAFETY AND STORAGE

SLIPPAGE: DRYline building wrap systems may become slippery and pose a potential safety hazard under foot. Please discard of unused materials properly to avoid a slipping hazard.

PRECAUTIONS: DRYline building wrap materials are combustible and should not be exposed to open flame or other ignition source.

STORAGE: Protect from high heat or other ignition sources during shipment, storage and application. Take care to protect from exposure to sunlight during storage. Inside or under cover storage is recommended.

WARRANTY: To obtain a copy of the Secure-Start™ Limited Lifetime Warranty, please visit www.drylinewrap.com or call 800-552-7775. No other warranty, express or implied, is given, including any implied warranty of merchantability or of fitness for a particular purpose.

Note: When installed in conjunction with other building materials DRYline building wrap systems must be properly shingled with these materials in a manner that will divert water to the exterior of the wall system

DRYLINE BUILDING WRAP SYSTEMS WATER-RESISTIVE AND AIR BARRIER INSTALLATION GUIDELINES

Ensure that wall substrate is flat and free of damage and foreign debris before DRYline building wrap is applied. In the event of existing moisture related wall problems, corrective measures need to be taken prior to installing DRYline building wrap products. Contact a building envelope professional for detection and appropriate action.

For the most current installation guidelines for DRYline building wrap products, please contact National Shelter Products. Always verify the intended application is compliant with local building codes.

INSTALLATION INSTRUCTIONS

DRYline building wrap systems are best installed after framing is complete and roof sheathing, step flashing and kickout flashings have been installed and before windows and doors are installed. Install DRYline building wrap with the print facing outward. The building wrap must be applied beginning at the bottom of the structure overlapping vertical and horizontal seams utilizing a shingling method (the higher piece lapped over the outside of the piece below) to ensure proper water shed and prevent water from entering the wall system.

STEP 1

Begin at the corner of the structure leaving a 6" to 12" vertical overlap.

STEP 2

Confirm DRYline building wrap is plumb with bottom edge extended 2" to 4" over the sill plate. Secure DRYline

building wrap with plastic cap (preferred) nails or staples or non-corrosive roofing nails or staples spaced approximately 8" along the top and bottom plates and 24" apart in the field of the roll. Fasteners should be of sufficient length

to penetrate framing or fastening substrate. Ensure that fasteners are properly driven; over and/or under-driven fasteners may cause pulling around the fastener and damage to the building wrap material.

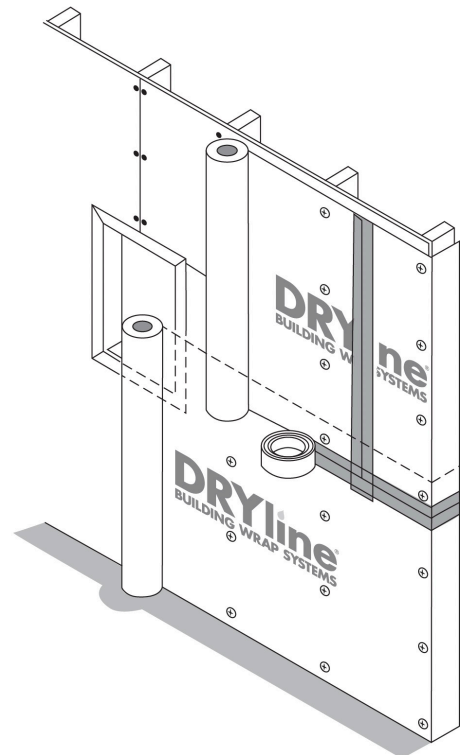
Note: When installing DRYline building wrap as an air barrier, seal the wrap at the bottom of the wall with an approved residential or commercial sealant, DRYline flashing or sheathing tape. For slab on grade foundations, extend to the bottom of the sill plate. Building wrap should be integrated with weep screed for stucco installations.

STEP 3

Unroll DRYline building wrap around the structure, applying directly over windows and door openings, plates, sills and corners. The top building wrap layers should overlap the bottom layers a minimum of 2". A minimum 6" overlap is required when starting a new roll at inside and outside corners.

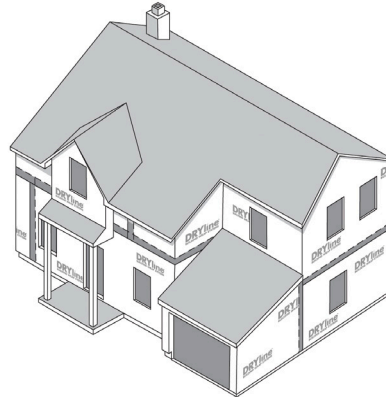
STEP 4

Apply DRYline Sheathing Tape at the joints of DRYline building wrap using constant and adequate pressure to maximize adhesion. DRYline building wraps must be covered with a code complying exterior wall covering within 180 days* of first application. * 300 days for DRYline W



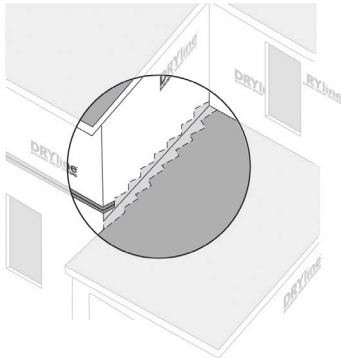
CONTINUITY

Proper shingling should be used to ensure continuity of the water-resistive barrier. Begin by installing DRYline building wrap at the bottom of the structure, overlapping the previous layer by a minimum of 2". Continue wrapping the entire structure in this manner including unconditioned spaces.



TERMINATIONS

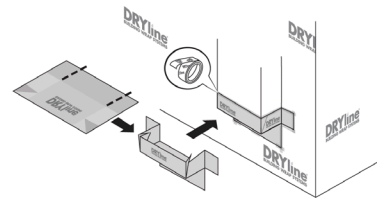
Lap DRYline building wrap over the entire top of any step flashed areas i.e., wall to roof intersections and thru-wall flashing. Be sure to integrate weep screed and expansion joints with flashings and water-resistive barrier.



CANTILEVER FLOORS

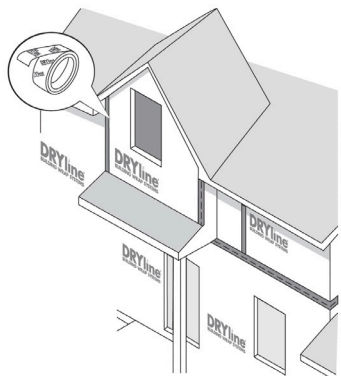
Begin at wall area below the cantilevered structure, wrapping under and up the cantilever floor, folding DRYline building wrap up on the front and sides of the cantilevered wall a minimum of 6". Inside corners should be as tight as possible utilizing a 1x4 or similar object. Tape all corners.

Subsequent layers of DRYline building wrap should overlap the bottom layer a minimum of 6".



GABLE ENDS

Cover entire gable end with DRYline building wrap extending a 6" to 12" overlap at each corner. Cut away excess building wrap and tape all seams.



PENETRATIONS

Whether from dryer vents, exterior lights, electrical outlets or exhaust ducts, all building construction will inevitably necessitate putting incidental penetrations in walls. While this is an accepted practice, care must be taken to insure that the integrity of the DRYline Building Wrap System is not compromised. DRYline ATX Flex Flashing and DRYline ATX Flashing are designed to create a tightly sealed

water-resistive drainage plane. While the details of installation can vary, all effective flashing methods have one thing in common – they must be installed in a “shingle fashion” or in such a way that water drains down and away from the wall. The following steps illustrate typical examples of penetrations and flashing procedures consistent with current editions of AAMA 711 and ASTM E 2112.

DRYER VENT INSTALLATION WITH DRYLINE ATX FLASHING

STEP 1

Cut two 45 degree angle diagonal slits in the building wrap; raise the flap and temporarily secure with tape.

STEP 2

Install the DRYline ATX Flashing to the underside of the vent/building wrap intersection, extending 2" past the vent opening.

STEP 3

Install the DRYline ATX Flashing to the sides of the vent/building wrap intersection, extending 2" past the vent opening.

STEP 4

Install the DRYline ATX Flashing to the top of the vent/sheathing intersection, extending 2" past the vent opening, and secure the building wrap flap to its original position with seam tape.

ROUND EXHAUST DUCT PENETRATION FLASHING INSTALLATION WITH DRYLINE ATX FLASHING

STEP 1

Make two 45 degree slits above the vent (in the building wrap) to create a flap. Lift the flap and temporarily secure with tape.

STEP 2

Cut a length of DRYline ATX Flex Flashing (approximately half the circumference of the vent).

STEP 3

Install the length of the DRYline ATX Flex Flashing by extending around the lower half of the vent surface and adhering to the vent flange and building wrap.

STEP 4

Cut a second length of DRYline ATX Flex Flashing (approximately 1" wider and 2" longer than the bottom length).

STEP 5

Install the remaining section of DRYline ATX Flex Flashing around the upper half of the vent/sheathing intersection, making sure the top flashing shingles cover the bottom flashing. Secure the building wrap to its original location with seam tape.

REPAIRING TEARS AND HOLES

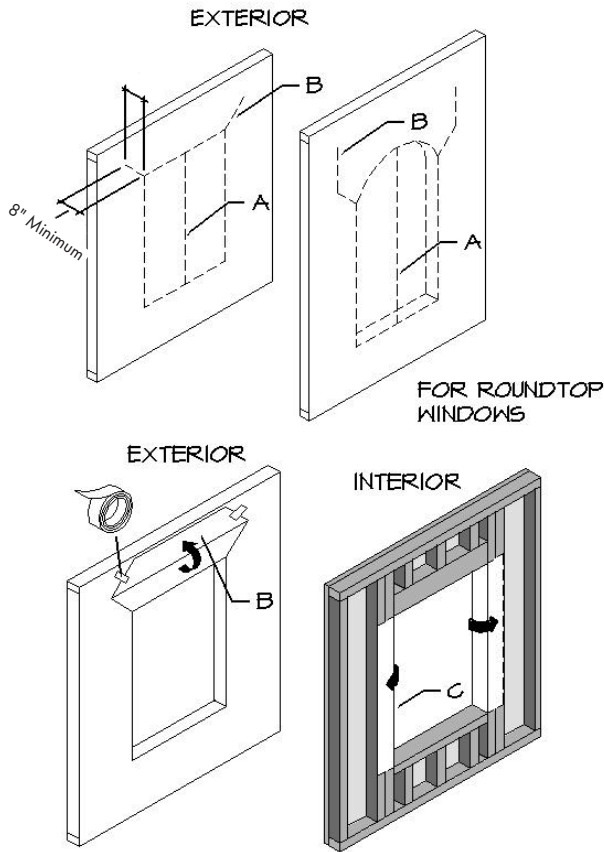
Rips, tears, breaks and holes, etc. may occur during normal construction and should be repaired to maintain the continuity of DRYline building wrap. Properly tape, flash and seal any holes, gaps, or cracks that are present around faucets, dryer vents, electrical outlets, etc. Tears smaller than 1" can be easily covered with DRYline Seam/Repair Tape. Tears or holes larger than 1" may require cutting a piece of DRYline building wrap to cover the hole with care taken to maintain a "shingle-lap" installation.

FLANGED WINDOW INSTALLATION

STEP 1

Prepare DRYline building wrap for window installation:

A: Make an "I-Cut" (standard I-Cut) in the building wrap (modified I-Cut for a round-top window is also acceptable). For an I-Cut, begin with a horizontal cut across the bottom and the top of the window frame (for roundup windows, the cut should begin above the mull joint). From the center, cut straight down to the sill.



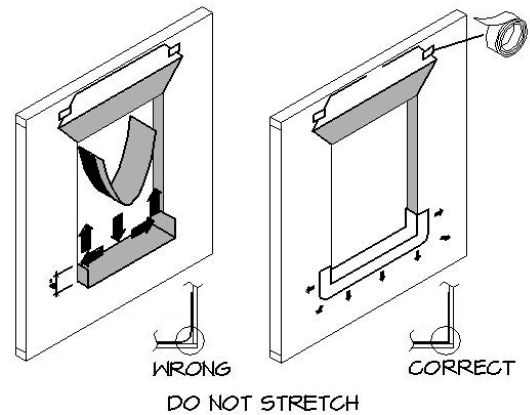
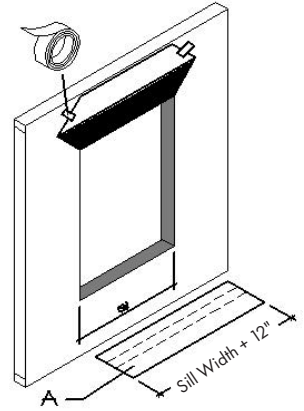
B: Cut two 45 degree slits a minimum of 8" extending from the corner of the window head, up and away from the window opening. This will create a flap above the rough opening to expose sheathing or framing members to allow head flashing installation (see Step 4). Flip head flap up and temporarily secure with tape. NOTE: Some windows and flashing widths may require longer slits.

C: Fold side flaps into rough opening and secure to inside wall. Cut off excess flaps if desired.

STEP 2

A: Cut DRYline ATX Flex Flashing at least 12" longer than width of rough opening sill (S).

B: Remove first piece of release paper, cover horizontal sill by aligning inside edge of sill, and adhere into rough opening along sill and up jambs (minimum 6" on each side).



C: Remove second release paper.

D: Fan out DRYline ATX Flex Flashing at bottom corners onto face of wall. Coverage of DRYline ATX Flex Flashing should be 2" to 3" onto the face of the wall.

STEP 3

Apply sealant (residential or commercial)** on three sides (jamb and head) as shown below. If sealant is applied to the sill, ensure that there are at least two (2) 2" gaps in the sealant bead for every 4' of window to allow for drainage.

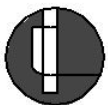
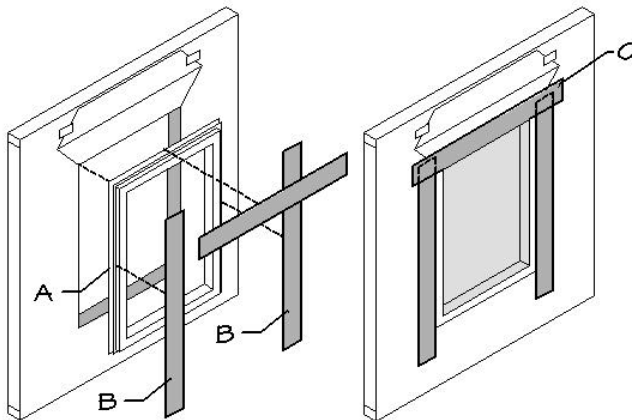
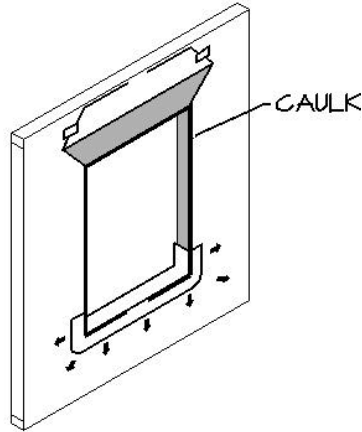
** Install sealant according to manufacturer's instructions.

STEP 4

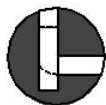
Standard Windows:

A: Install window according to manufacturer's instructions.

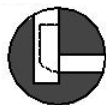
B: Cut two pieces of DRYline ATX Flashing for jamb flashing extending 1" above window head flange and below bottom edge of sill flashing. Remove release paper and press tightly along sides of window frame.



INCORRECT
FLEXIBLE
FLASHING
REVERSE
FLASHED



INCORRECT
STRAIGHT
FLASHING
FLUSH WITH
FLEXIBLE
FLASHING



CORRECT
STRAIGHT
FLASHING
OVERLAPS
FLEXIBLE
FLASHING

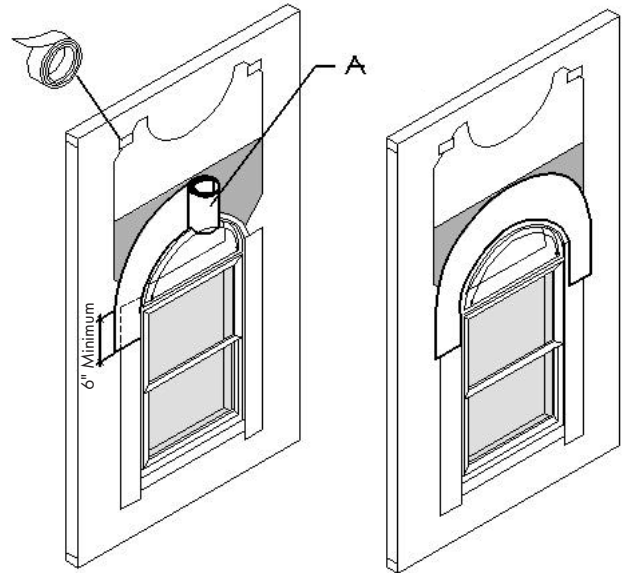
C: Cut a piece of DRYline ATX Flashing for head flashing, long enough to extend beyond outer edges of jamb flashings. Remove release paper and install completely covering flange and adhering to exposed sheathing or framing members.

NOTE: Ensure proper shingling, DRYline ATX Flashing at jambs must overlap the DRYline flex wrap at the sill and adhere to the DRYline building wrap or other WRB below the sill.

TO INSTALL HEAD FLASHING ON A ROUND-TOP WINDOW:

A: Cut DRYline flex wrap head flashing at least 12" longer than the arc length (H) of round-top window.

B: Remove release paper and install to conform around top of window, covering the entire mounting flange and adhering to exposed sheathing or framing members. Head flashing should overlap jamb flashings by at least 6".



Round-top Windows:

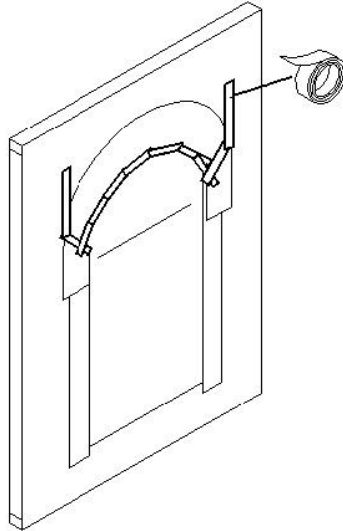
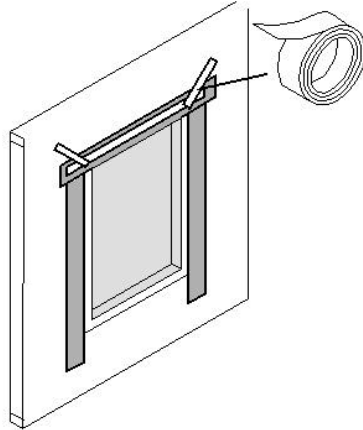
Follow standard window instructions steps 1 thru 4B for proper installation of sill and jamb flashing prior to head flashing installation.

STEP 5

A: Flip down upper flap of DRYline building wrap or other WRB so it lays flat across head flashing.

B: Tape Seams as shown. Do not tape at bottom of window. At the head, continuously tape seams as shown with DRYline building tape. Skip-taping at the head is acceptable if an air barrier is not required or if additional drainage is desired.

C: Tape down diagonal seams of DRYline building wrap or other WRB.

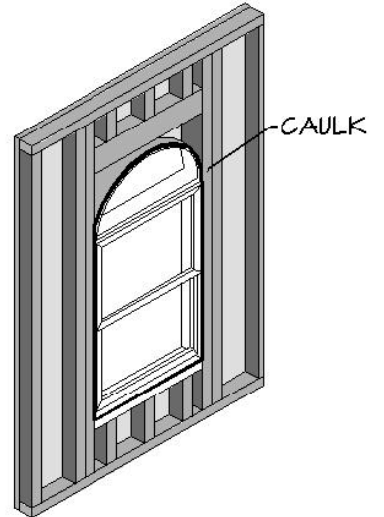
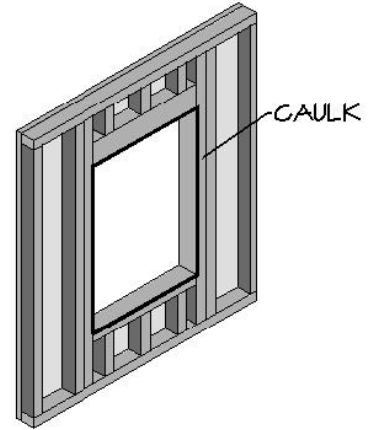


STEP 6

Final Step

Install sealant (residential or commercial)** and backer rod as necessary around the window opening at the interior (it is also acceptable to use window or door foam in lieu of backer rods). The seal created by the sealant (and backer rod as necessary) or foam will also serve as a back dam. Sealant should be tooled flat to allow the natural curing process to create a concave shape. Be sure that the sealant penetrates the grooves of the DRYline flexible flashing around sill.

NOTE: Installations that specify a window/door design rating of DP45 or greater may require extra precautions. Refer to AAMA guidelines for performance requirements exceeding this design rating.



NON-FLANGED WINDOW INSTALLATION (BUILDINGS LESS THAN 4 STORIES)

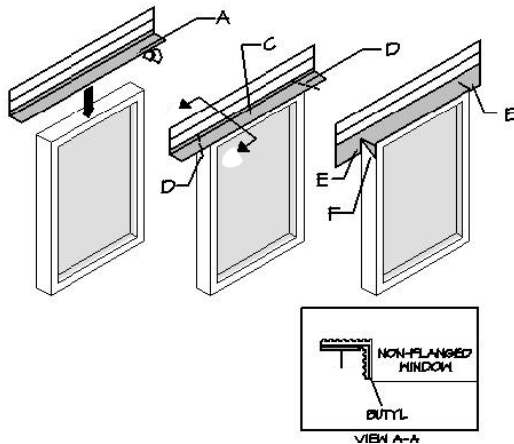
Follow Steps 1 and 2 for Flanged Window Installation.

STEP 3

A: Prepare head flashing by cutting a piece of DRYline ATX Flashing at least 12" longer than the head length.

B: Remove the release paper from one side of DRYline ATX Flashing.

C: Center the DRYline ATX Flashing along the length of the window and position so that it contacts the window frame.



D: At the exterior corners, where the window head frame meets the jamb frame, make 45 degree cuts in the DRYline ATX Flashing at each end away from the header.

E: Fold the DRYline ATX Flashing down flat in the vertical direction parallel to the window frame.

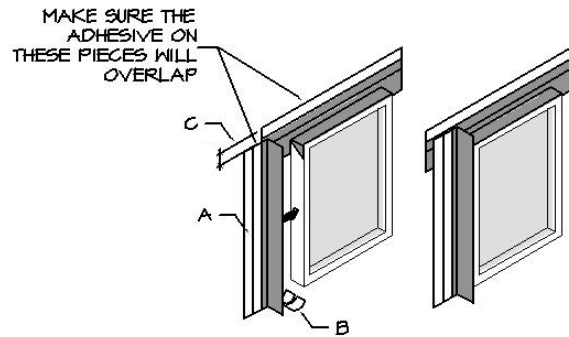
F: Fold newly created flaps down to the jamb and adhere to the frame.

STEP 4

A: Prepare jamb flashing by cutting a piece of DRYline ATX Flashing at least 6" longer than the jamb length.

B: Remove the release paper.

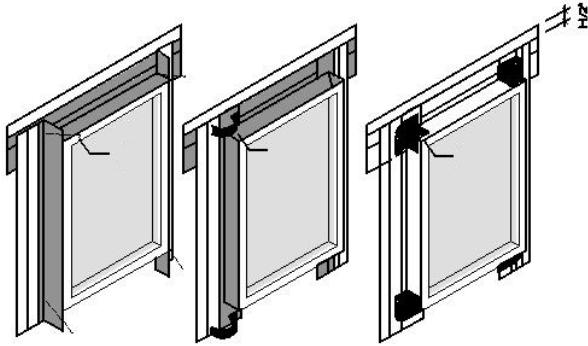
C: Position so that it contacts the window frame up to the exterior face of the window. Ensure that the jamb flashing is positioned 1/2" below top of head flashing. Jamb flashing adhesive must come in contact with head flashing adhesive and overlap by 1".



D: Repeat on opposite jamb.

STEP 5

A: At the exterior corner of the window, where the window head frame meets the jamb frame, make 45 degree cuts in the DRYline ATX Flashing at each end up and away from the head and down away at the sill.



B: Fold the jamb flashing pieces parallel to the window. Fold newly created flaps to the jamb frame.

C: Repeat on opposite jamb.

D: Cut four (4) 3" x 3" pieces of DRYline ATX Flex Flashing and add patches to corners of the window. Staple to wooden frame for non-flanged windows.

E: Complete installation starting at step 6.

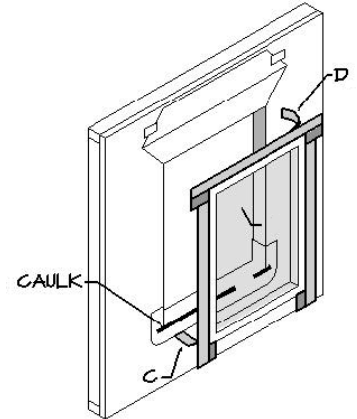
STEP 6

A: If sealant is applied to the sill, ensure that there are two (2) D 2" gaps in the sealant bead for every 4' of window to allow for drainage using sealant (residential or commercial) ** as shown below.

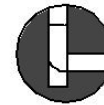
B: Install the window per manufacturer's instructions.

C: Remove the release paper from the DRYline ATX Flashing at jambs and press firmly to adhere it to the DRYline building wrap or other WRB.

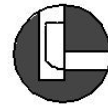
D: Remove the release paper at the head and adhere it to the wall surface.



FLEXIBLE
FLASHING
REVERSE
FLASHED



STRAIGHT
FLASHING
FLUSH WITH
FLEXIBLE
FLASHING

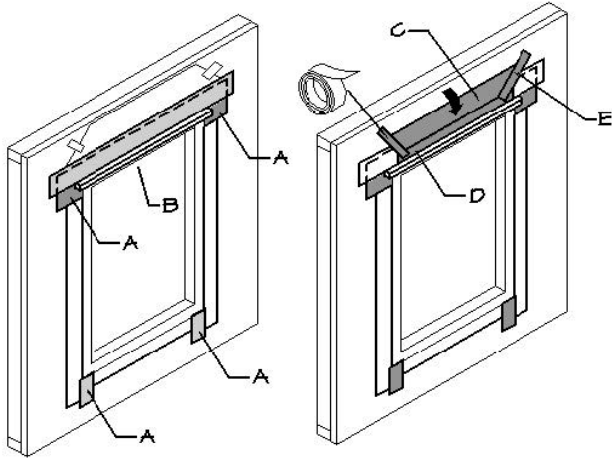


STRAIGHT
FLASHING
OVERLAPS
FLEXIBLE
FLASHING

NOTE: DO NOT REVERSE SHINGLE.
STRAIGHT FLASHING MUST OVERLAP
FLEXIBLE FLASHING AND ADHERE
TO THE SUBSTRATE.

STEP 7

A: Optional: Cover exposed sealant with DRYline ATX Flashing, flashing tape or building tape.



B: Optional: Cut a piece of metal or vinyl drip cap slightly longer than the width of the window and place a bead of sealant (residential or commercial) on the rear side. Install the drip cap tight against the window head and cover the top edge with DRYline straight flashing or flashing tape.

C: Flip down upper flap of the DRYline building wrap or other WRB so it lays flat across head flashing.

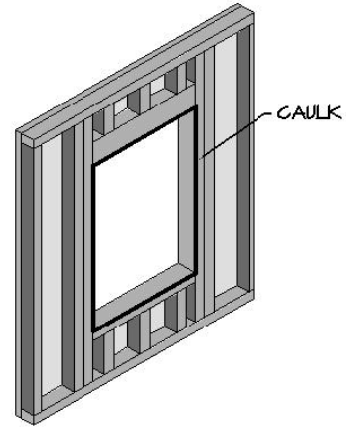
D: Tape seams as shown. Do not tape at bottom of the window. At the head, continuously tape seams as shown with building tape. Skip-taping at the head is acceptable if an air barrier is not required or if additional drainage is desired.

E: Tape down diagonal seams of DRYline building wrap or other WRB.

STEP 8

Final Step

Install sealant (residential or commercial)** and backer rod as necessary around the window opening at the interior (it is also acceptable to use window and door foam in lieu of backer rods). The seal created by the sealant (and backer rod as necessary) or foam will also serve as a back dam. Sealant should be tooled flat to allow the natural curing process to create a concave shape. Be sure that the sealant penetrates the grooves of the DRYline ATX Flex Flashing around sill.



NOTE: Installations that specify a window/door design rating of DP45 or greater may require extra precautions. Refer to AAMA guidelines for performance requirements exceeding this design rating.

WALL SHEATHING

DRYline ATX Flashing and DRYline ATX Flex Flashing are excellent choices for flashing windows and penetrations in exterior sheathing panels that serve as the Water-Resistive Barrier. Windows and wall penetrations may be flashed with a combination of DRYline ATX Flashing and DRYline ATX Flex Flashing.

STEP 1

Install the Sill Flashing

Insure that all surfaces are free of excess dust, moisture, grease and other contaminants. Cut a piece of DRYline ATX Flex Flashing that is 12" longer than the length of the rough opening window sill. Remove the release liner and position the DRYline ATX Flex Flashing, centering it in the rough opening and overlapping the exterior WRB sheathing panel by 2" to 3". Press firmly, starting at the center and working toward the corners. Gently stretch and press the DRYline ATX Flex Flashing to form-fit the corners and sides.

STEP 2

Install the window

Apply a continuous bead of approved construction sealant to the back side of the window nail fin or on the wall. If applying sealant to the bottom window nail fin or window bottom, leave a minimum of two (2) 2" gaps for each 4' of window, for drainage. Install the window in accordance with the manufacturer's installation instructions, insuring that the window is plumb and securely fastened to the framing. Install approved sealant or foam around the interior window opening and provide for an adequate back dam.

STEP 3

Install the Jamb Flashing

Remove the release liner and apply the flashing to both sides of the window. Position the DRYline ATX Flashing and apply pressure so that it is adhered to the entire window nail fin flange and the WRB sheathing.

STEP 4

Install the Head Flashing

Cut a section of DRYline ATX Flashing large enough to extend 1" past the jamb on both sides of the window. Remove the release liner and install the flashing, insuring that it covers the nail fin flange and the adjoining sheathing surface. For round top arch windows, cut a section of DRYline ATX Flex Flashing that is at least 12" greater than the arch length. Remove the release liner and install the flashing along the arched contour.

STEP 5

Terminate the edge of the Head Flashing

Cut a section of seam construction tape 2" longer than the installed Head flashing tape and install it by lapping it shingle fashion over the Head Flashing. The seam construction tape should extend 1" past each end of and overlap the Head Flashing by 1".

DRYline ATX Flashing and DRYline ATX Flex Flashing are excellent choices for flashing Gypsum Wall Sheathing. Use minimum 3" width DRYline ATX Flashing to flash wall joints and seams. Windows and wall penetrations may be flashed with a combination of DRYline ATX Flashing and DRYline ATX Flex Flashing.

Use of a J-Roller is recommended when applying the flashing to the Gypsum Sheathing.

SEALANTS COMPATIBLE WITH DRYLINE ATX & ATX FLEX FLASHING TAPES†

MANUFACTURER*	PRODUCT GRADE	TYPE	WEBSITE
Bostik	ChemCalk 915	Polyurethane	www.bostik-us.com
Henkl - OSI	HM270	Silicone	www.osipro.com
Sika	Sikaflex 1a	Polyurethane	www.sikaconstruction.com
Henry	HE925	Polyether	www.henry.com
Dow-Corning	758	Silicone	www.dowcorning.com
Dow-Corning	758	Silicone	www.dowcorning.com

†A limited product warranty applies to DRYline ATX & ATX Flex flashing products. Please contact National Shelter Products or visit www.drylinewrap.com for details. No warranty, express or implied, is given as to the merchantability, fitness for particular purpose, or otherwise for applications outside the scope of the published limited product warranty.

Technical information contained herein is furnished without charge or obligation, and is given and accepted at the recipient's sole risk. Because conditions of use may vary and are beyond our control, National Shelter Products makes no representation about, and is not responsible or liable for damages caused by the products referred to. Installers need to evaluate compatibility and fitness for use for the intended application and the various products in the assembly.

* For evaluation of other sealant grades, please contact National shelter Products

NEED ADDITIONAL SUPPORT

Please visit www.drylinewrap.com or call 800-552-7775 to request a **DRYline Specialist Installation Review** or to locate or become a **DRYline Certified Installer**. Our Certified Installers are trained to install DRYline building systems according to building codes in the most efficient and effective manner – contact us for more information!

800-552-7775
nationalshelter.com

