



PRODUCT & ENGINEERING MANUAL

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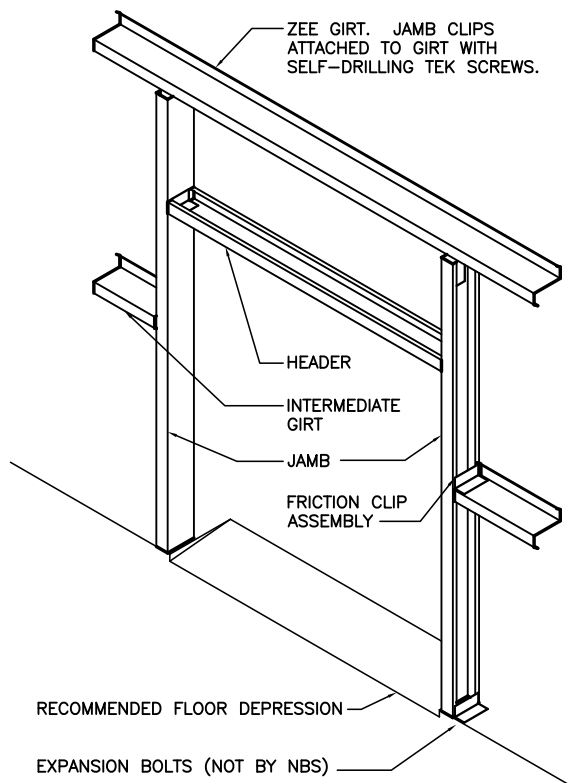


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FRAMED OPENING FEATURES

The following guidelines are Nucor Building Systems standards and may be adjusted on a per job basis.

- All exposed framing is prime painted.
- Certain loading conditions require the use of hot-rolled structural channel. In such cases, pre-drilling for panel fasteners is required.
- All overhead door framed openings are field located, unless located on plans at quote and order entry.
- Jambs are extended to the next standard girt elevation or eave strut for door track attachment.
- Standard jamb design allows for the support of roll-up doors up to a total door weight of 2000#.
- When vertical lift doors are specified, jamb extensions are provided up to twice the door height or eave strut.



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SUGGESTED MINIMUM FRAMED OPENING CLEARANCE DIMENSIONS		
<p><u>BYPASS</u></p>	<p><u>CORNER</u></p>	
<p><u>INSET</u></p>	<p><u>SIDEWALL AT EAVE</u></p>	<p><u>PORTAL COLUMN</u></p>
<p><u>ADJACENT OPENINGS</u></p>	<p><u>ENDWALL</u></p>	<p>** = 2X DOOR HGT ● VL DOORS</p> <p><u>PORTAL RAFTER</u></p>

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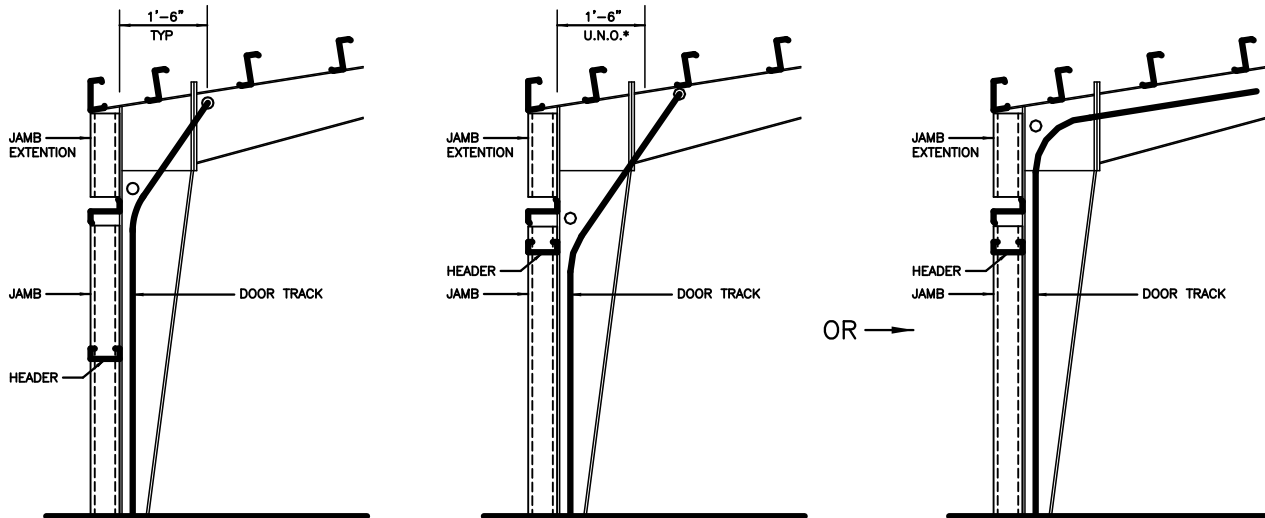
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VERTICAL LIFT-HIGH LIFT DOORS



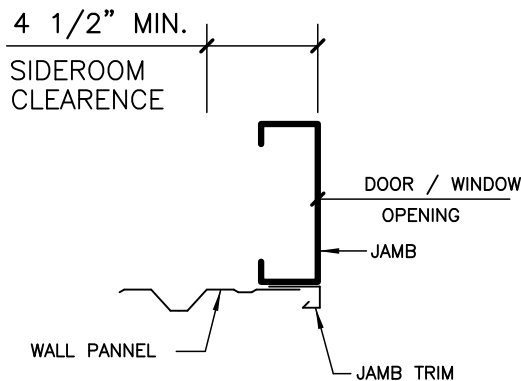
WHEN DOOR HEIGHT IS LESS THAN HALF THE EAVE HEIGHT, THE DOOR HUGS THE WALL. JAMB EXTENSIONS ARE AN ACCEPTABLE SOLUTION TO SUPPORT THE DOOR TRACK.

WHEN DOOR HEIGHT IS GREATER THAN HALF THE EAVE HEIGHT, THE TRACK WILL HUG THE WALL AS HIGH AS POSSIBLE AND THEN FOLLOW THE ROOF.

* AS A RULE OF THUMB, KEEP 1'-6" CLEARANCE UNO.

② VERTICAL LIFT (HIGH LIFT) DOORS

DOOR JAMBS MUST EXTEND 2 X DOOR HEIGHT + 12" TO EAVE - WHICH EVER IS LESS



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SIDEROOM IS VERY IMPORTANT. THIS IS THE ROOM NEEDED FOR THE HOISTS, TRACKS, AND/OR TORSION SPRING SUPPORT.

TROUBLE SHOOTING AREAS

- FULL FRAME ENDWALLS - HEAD AND SIDE CLEARANCE UNDER FRAME.
- PORTAL FRAMES - HEAD CLEARANCE
- CRANE BEAMS - HEAD CLEARANCE
- MEZZANINE - HEAD, SIDE AND BACK CLEARANCE
- LINER PANEL DETAILS
- FLANGE BRACES



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WALKDOOR INFORMATION

For additional information about Nucor Building Systems standard walk doors, see the Nucor Building Systems website at the below link.

[NBS Walk Doors](#)

PRE-ASSEMBLED WALK DOOR FEATURES

These features will vary per division.

- All doors are ADA compliant, with glass openings per ADA Standards.
- Foam insulated specifically designed for metal building use.
- Pre-assembled and self-framing for ease of installation. No framed opening required if Nucor standard girt spacing is utilized.
- Doors are finished paint or primed paint in white or brown.
- Doors are shipped in wood crates for protection.
- Hinges are ball bearing in powder coated or stainless steel.
- 14 Ga. Heavy Duty 8" Sub Jamb
- Doors leafs are made of 20-gage or 18 gage material.
- Aluminum threshold.
- Top, Bottom and Intermediate Clips
- Weather stripping and kerf weather seal is included.
- Premium sweep

PRE-ASSEMBLED WALK DOOR PRODUCT DESCRIPTION

1. Nucor has solid doors available in the following sizes: 3070, 4070, and 6070.
2. The following optional accessories are available:
 - Rim Panic Devise
 - Lever locks
 - Mortise locks with lever
 - Deadbolt Cylinders
 - Half Glass with tempered, laminated, or insulated glass
 - Narrow Lite with tempered, laminated, or insulated glass
 - Vision Lite with tempered, laminated, or insulated glass
 - Heavy Duty Closer



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- Security Latch guard
 - Crash chain
 - Jamb extension
 - Swing options (LHR, RHR, LHRA, RHRA)
3. Walk doors are typically keyed alike per project unless specified otherwise.
 4. Walk doors are shipped as self-framing if 7'-6" standard girt spacing is utilized.
 5. Wind Rated option is available.

Because of unknown variables, Nucor **does not** offer fire rated doors or doors to fit in masonry. However these options are available through our door supplier. Please contact your Nucor plant for more information.



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KNOCK DOWN (FIELD ASSEMBLED) WALKDOORS

Field Assembled walk doors are available from all divisions. Contact your District Sales Manager or the Estimating team for availability.

KNOCK DOWN WALK DOOR FEATURES

These features will vary per division.

- All doors are ADA compliant, with glass openings per ADA Standards.
- Foam insulated specifically designed for metal building use.
- The walk door is shipped knocked down for field assembly.
- Doors are finished paint or primed paint in white or brown.
- Doors leafs are made of 20-gage or 18 gage material.
- Weather stripping and kerf weather seal is included.
- The package is shipped in full cardboard carton.
- All doors have Grade 2 lever locks as standard.
- Hinges are ball bearing in powder coated or stainless steel
- 14 Ga. Heavy Duty 8" Sub Jambs
- Aluminum threshold.
- Premium sweep
- Screw package

KNOCK DOWN WALK DOOR PRODUCT DESCRIPTION

1. Nucor has solid doors available in the following sizes: 3070, 4070, and 6070.
2. The following optional accessories are available:
 - Rim Panic Devise
 - Lever locks
 - Mortise locks with lever
 - Deadbolt Cylinders
 - Half Glass with tempered, laminated, or insulated glass
 - Narrow Lite with tempered, laminated, or insulated glass
 - Vision Lite with tempered, laminated, or insulated glass
 - Heavy Duty Closer
 - Security Latch guard



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- Crash chain
- Jamb extension
- Swing options (LHR, RHR, LHRA, RHRA)
- Screw package

3. Doors are typically keyed alike per project unless specified otherwise.

4. Wind Rated option is available.

Because of unknown variables, Nucor **does not** offer fire rated doors or doors to fit in masonry. However these options are available through our door supplier. Please contact your Nucor plant for more information.



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STANDARD WINDOW INFORMATION

STANDARD WINDOW FEATURES

- The standard Nucor Building Systems window offering is an extruded aluminum frame unit designed specifically for metal building use.
- Each window comes completely assembled for ease of installation.
- Each window is self-flashing. The head and sill trim is factory attached to the window frame. Universal jamb pieces are “snapped” in place without the use of fasteners and work well with all Nucor standard wall panel profiles.
- Each window frame features a non-thermal break aluminum frame with 1/8” DSB non-insulated glass or 3/4” insulated glass.
- Each window finish is prime-painted and finished with choices of brown, white, or mill finished anodized.
- All windows are boxed per project and stood up on pallets for shipping.

STANDARD WINDOW PRODUCT DESCRIPTION

1. Nucor standard windows are available in the following sizes:

<u>Horizontal Slider</u>	<u>Fixed</u>	<u>Fixed / Project-In</u>
3030	2060	3040
4030	4040	
4040	5040	
5030		
6030		

2. Special window sizes and other types are available from Nucor on special order and for additional cost with a potential longer delivery.

NOTE: In locations requiring wind borne debris protection this product requires an impact-resistant covering meeting the requirements of Section 1609.1.2 of the IBC. The covering is not included by the Metal Building Manufacturer.



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DAYLIGHTING WITH PRISMATIC SKYLIGHTS

CURB MOUNTED PRISMATIC SKYLIGHTS

- Nucor Curb Mounted Prismatic Skylights are perfect for new construction or retrofit applications with any Nucor roof system.
- Nucor Curb Mounted Prismatic Skylights are an economical method to allow natural lighting into the building, thus reducing the need for electric light.
- Nucor Curb Mounted Prismatic Skylights are designed without the need for secondary framing between the purlin/joist members, but allows for expansion and contraction while resisting uplift. This secondary framing elimination results in significant savings not only in material but also engineering, detailing and construction labor.
- Nucor Curb Mounted Prismatic Skylights have a curb height of 7", have mitered and fully welded corners, a fully welded in place water cricket and a 1" splash lip on entire curb perimeter. Curbs are insulated as a standard and are built to be parallel with the roof slope.
- Nucor Curb Mounted Prismatic Skylights are available in (4) standard sizes: 4896, 6072, 24120 and 4848. Additional sizes available upon request.
- Nucor Curb Mounted Prismatic Skylights are provided with pre-punched holes around the perimeter of the curb to ensure proper fastener spacing and to have optimum weather tightness, with the curb side fasteners being internal which again improves weatherability and aesthetics.
- Nucor Curb Mounted Prismatic Skylights offer an integrated safety/security frame with each unit.
- For more in-depth information regarding the Nucor Curb Mounted Prismatic Skylights visit this location: www.nucorbuildingsystems.com/daylighting/



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TRANSLUCENT PANEL INFORMATION

AC0105PE – NUCOR CFR™ STANDING SEAM ROOF TRANSLUCENT PANEL FEATURES

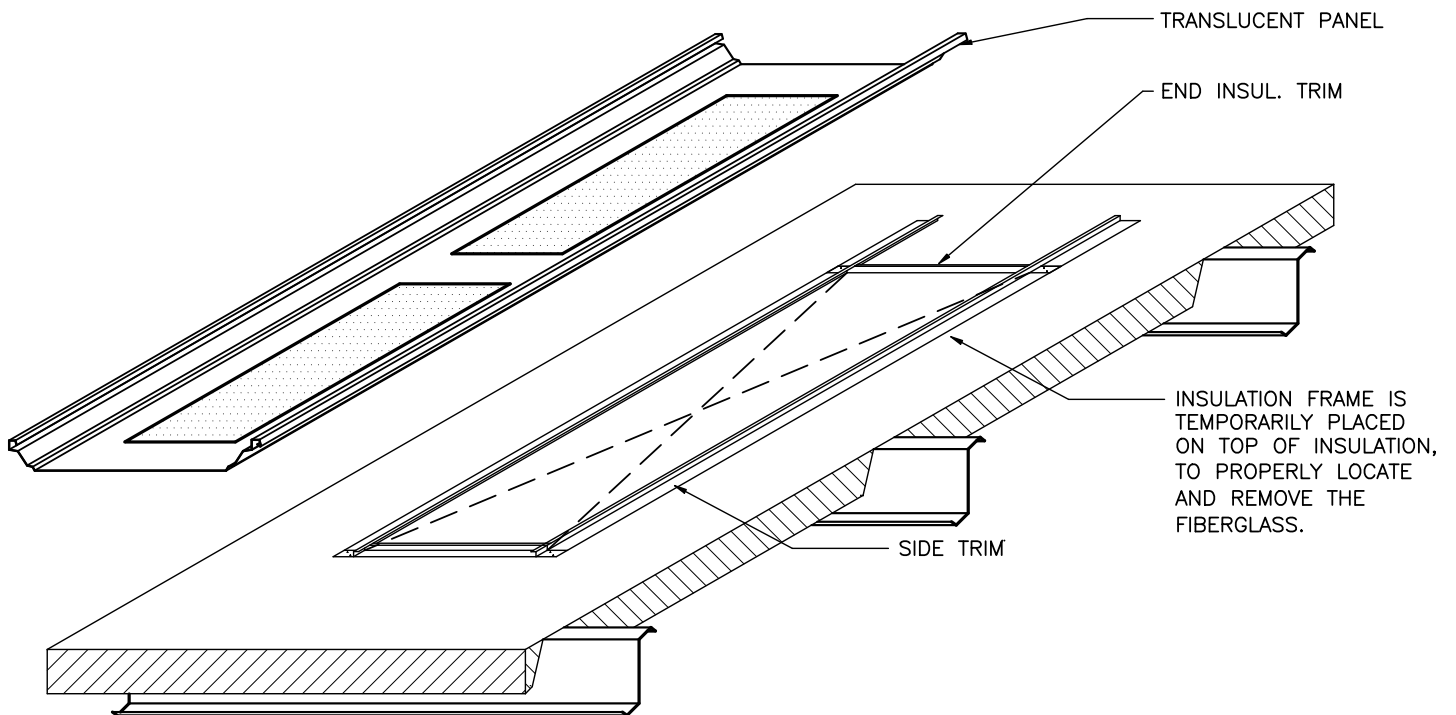
- The Nucor CFR™ translucent panel units are available in Polar White. These units are completely factory assembled and are available as either insulated or non-insulated.
- The Nucor CFR™ translucent panel units is an economical method to allow natural lighting into the building and is **available** for Underwriters Laboratory (UL) rated roof systems. Whenever possible, it is recommended that Nucor translucent wall panels be used in lieu of Nucor CFR™ translucent panel units.
- The Nucor CFR™ panel and translucent panel unit is designed so that the unit laps and seams directly into the roof, without the need for field cutting.
- The Nucor CFR™ translucent panel unit is designed for secondary spacing of 5'-0", 5'-6", and 6'-0".

NOTE: **UL rating is available for 5'-0" purlin spacing only.** The UL rating is achieved by simply hand-crimping the full length of the Nucor CFR™ translucent panel unit. No extra framing or materials are required.

- Nucor CFR™ translucent panel units **can** be placed end to end. However, Nucor CFR™ translucent panel units **cannot** run continuously from eave to eave or be placed at the eave of a building. Nucor CFR™ translucent panel units also **cannot** be placed directly beside each other and it is recommended that at least (4) CFR panels occur between Nucor CFR™ translucent panel unit locations and in from each end wall.
- This Nucor CFR™ translucent panel unit cannot be used as an erection platform.
- The Nucor CFR™ panels above, between and below the Nucor CFR™ translucent panel unit must bear on a minimum of (3) purlins, preferably (4). Always indicate Nucor CFR™ translucent panel unit locations on the order documents.
- Buildings with less than 60'-0 panel runs typically have (1) Nucor CFR™ translucent panel unit per run.
- The span capacities of Nucor CFR™ translucent panel units are identical to the spans of Nucor CFR™ panels without translucent panels. See **PE Section 5.0 CFR™ STANDING SEAM ROOF SYSTEM** for panel spans.



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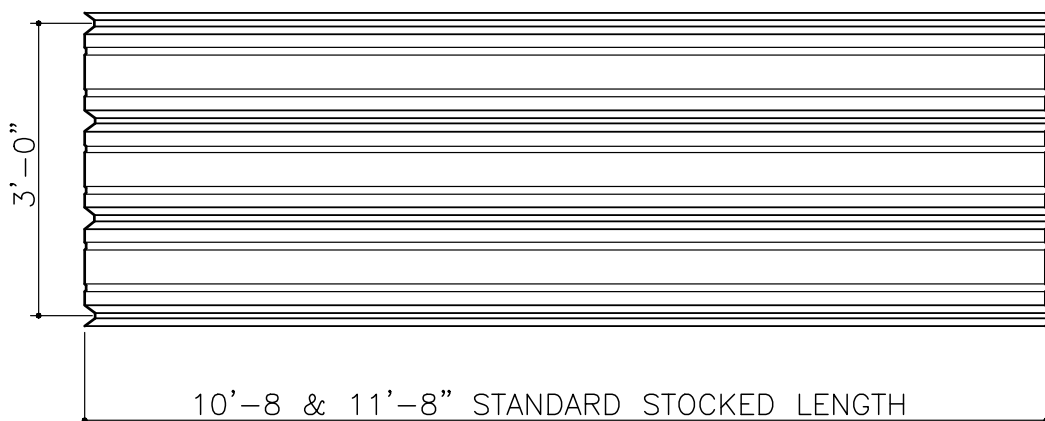


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AC0090PE – NUCOR CLASSIC ROOF™ TRANSLUCENT PANEL INFORMATION

- Whenever possible, it is recommended that Nucor translucent wall panels be used in lieu of Nucor Classic Roof™ translucent panels.
- Nucor Classic Roof™ translucent panels are an economical method to allow natural lighting into the building.
- Nucor Classic Roof™ translucent panels are field installed with self-drilling screws. Tape mastic is used at the panel perimeter.
- Nucor Classic Roof™ translucent panels are available in 10'-8" & 11'-8" standard nominal lengths.
- Nucor Classic Roof™ translucent panels shall not be placed side-to-side or end-to-end. A minimum of (4) full panel runs is recommended between Nucor Classic Roof™ translucent panel locations. Nucor Classic Roof™ panels above and below Nucor Classic Roof™ translucent panels shall attach to a minimum of (3) purlins, preferably (4). Always indicate Nucor Classic Roof™ translucent panel locations on the order documents.
- Nucor Classic Roof™ translucent panels shall not be placed at the eave of the building.
- Buildings with less than 60'-0 panel run can typically only have (1) Nucor Classic Roof™ translucent panel per run.
- Contact the engineering team for applicable Nucor Classic Roof™ translucent panel spans.

NEVER STEP, STAND,
OR APPLY WEIGHT TO
TRANSLUCENT PANELS.



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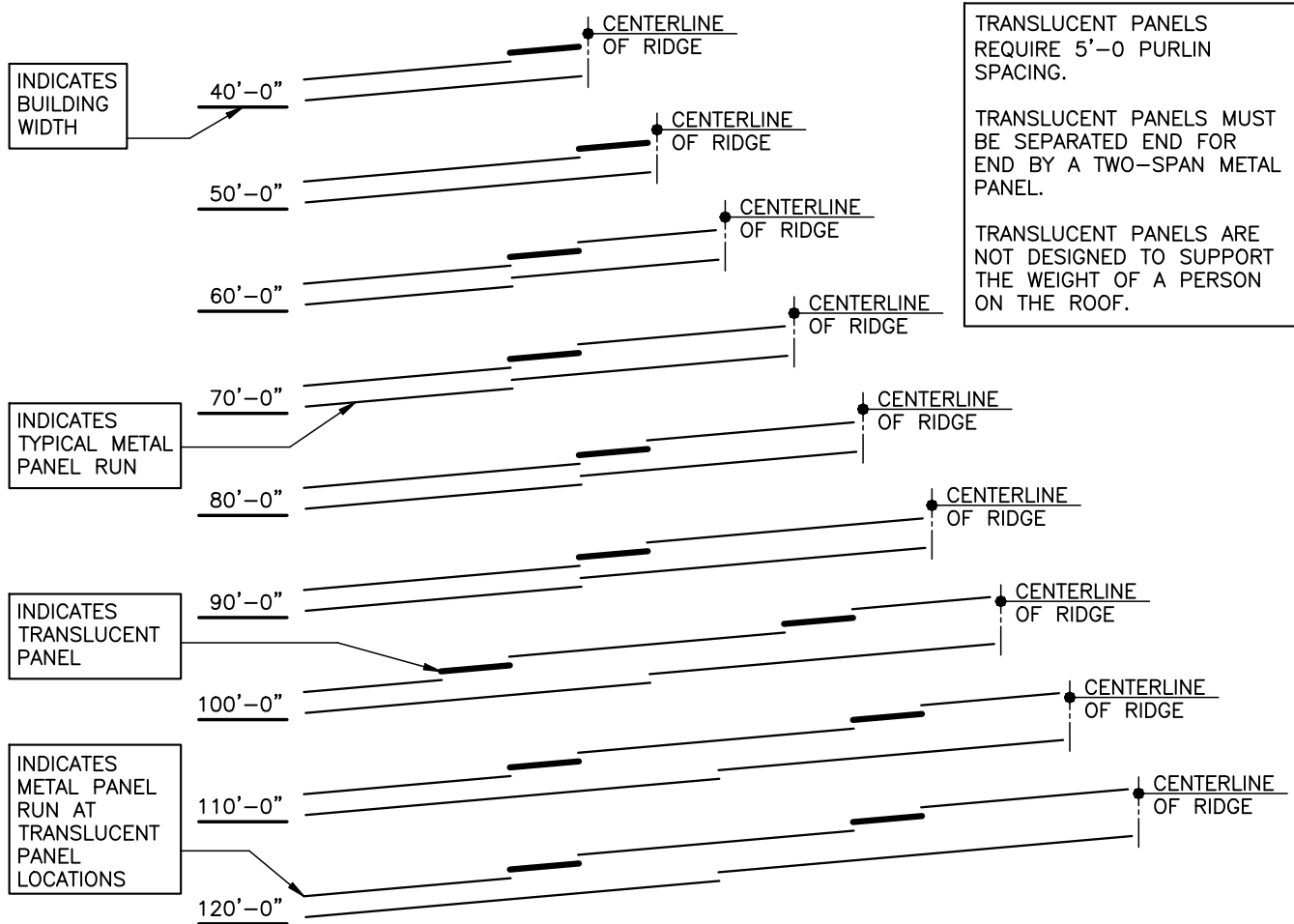
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AC0095PE – NUCOR CLASSIC ROOF™ STANDARD TRANSLUCENT PANEL LOCATIONS



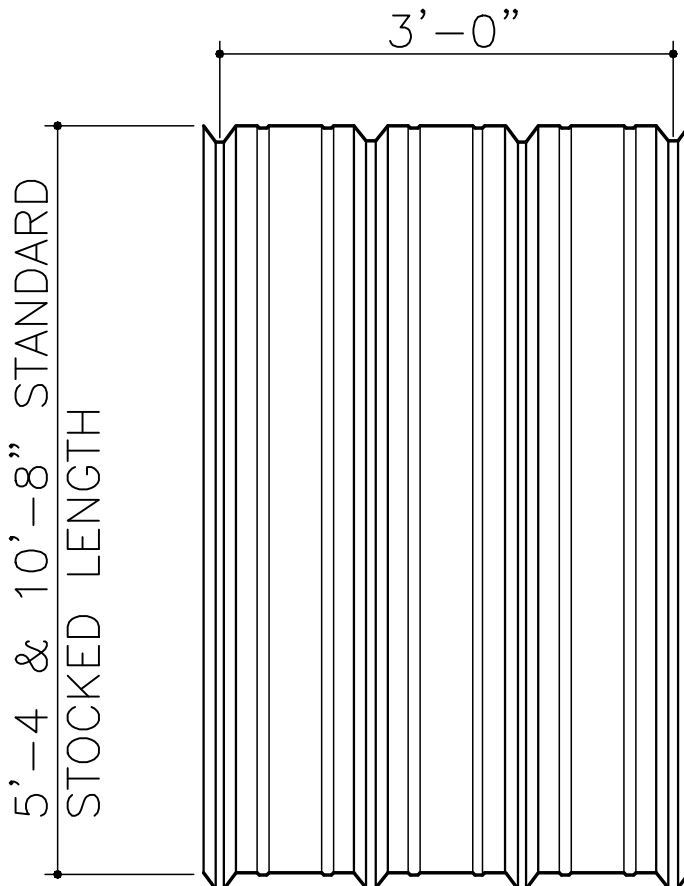
TRANSLUCENT PANEL LOCATIONS FOR CLASSIC ROOF



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AC0100PE – WALL TRANSLUCENT PANEL INFORMATION

- Nucor translucent wall panels are an economical method to allow natural lighting into the building and are available in Nucor Classic Wall™, Nucor Reverse Classic Wall™, and Nucor Accent Wall™ profiles.
- Nucor translucent wall panels are field installed with self-drilling screws and $\frac{3}{8}$ " grommet seal fasteners (field drilling required).
- Nucor translucent wall panels are available in 5'-0" & 10'-0" nominal lengths as a standard.
- Always indicate Nucor translucent wall panel locations on the order documents as well as noting any other special requirements.
- As a standard, the panel at the end of any wall with Nucor translucent wall panel will be a full height metal panel for corner trim attachment.
- Contact the engineering team for applicable Nucor translucent wall panel spans.



NOTE: CLASSIC PROFILE SHOWN. WALL LITES ARE ALSO AVAILABLE IN ACCENT PROFILE.

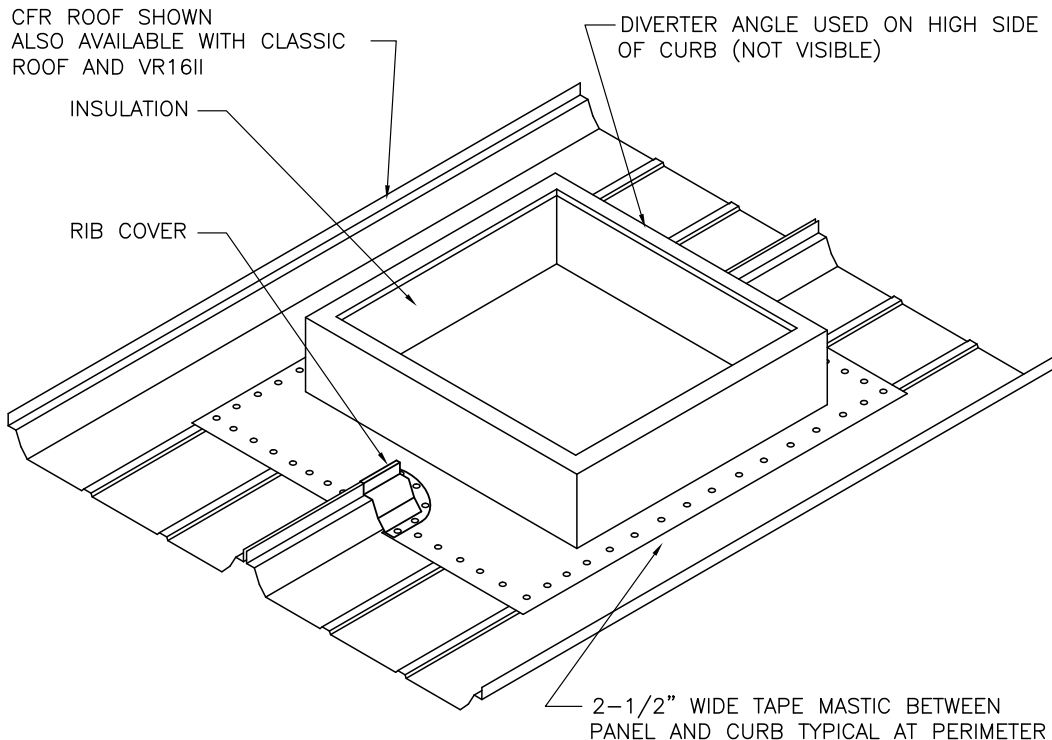


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ROOF CURB INFORMATION

AC0050PE – FLOATING CURB (NON-STRUCTURAL)

The below curb is for use with Nucor CFR™ roof, Nucor VR16 II™ roof, and Nucor Classic Roof™ systems.



NOTES:

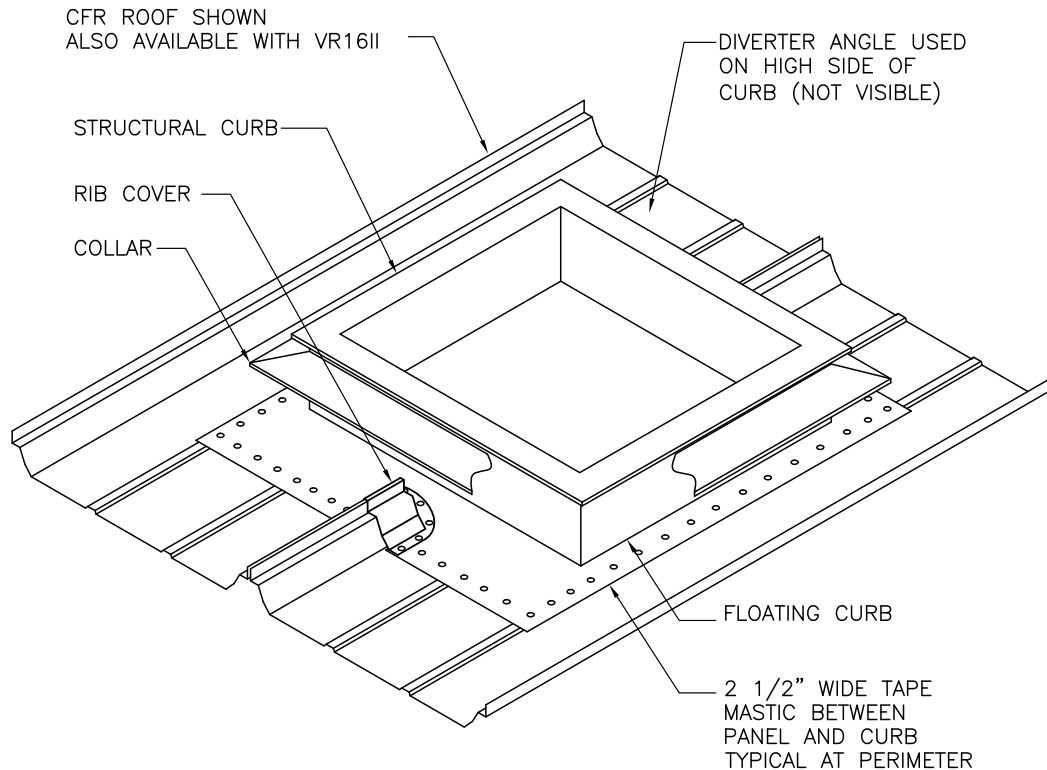
1. Use self-drilling screws at 4" o.c. at curb perimeter through center of 2 ½" tape mastic.
2. For sub-framing, see details in [Roof-Top Unit Sub Framing](#) section.
3. To be used for RTU's < 6000# with Nucor CFR™ roof systems with fixed clips and all floating clip roof systems < 750#
To be used for all RTU's < 6000# with Nucor Classic Roof™ system.
4. Available unpainted only. May be field painted to match roof color if desired.



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AC0060PE – FLOATING CURB (STRUCTURAL)

The below structural floating curb is for use with Nucor CFR™ and Nucor VR16 II™ roof systems.



NOTES:

1. Inner Structural curb is attached to sub-framing. Floating curb is attached to roof panels only.
2. Opening size varies. Include the roof top unit manufacturer & model number on order documents.
3. Structural supports required for curb (Not shown).
4. Ridge mounted curbs are not available.
5. The curb can be installed after the roof panel is completely installed.
6. Installation of curb is recommended during Nucor Composite CFR roof panel installation.
7. For sub-framing, see details in [Roof-Top Unit Sub Framing](#) section.
8. To be used on all roof systems, except Nucor Classic Roof™, for RTU's > 750# and < 6000#.
9. Available unpainted only. May be field painted to match roof color if desired.

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ROOF-TOP UNIT SUB-FRAMING INFORMATION

Sub-framing is always required for roof top units (RTU) when curbs are used. The type of sub-framing depends upon the weight of the roof top unit supported.

1. For Nucor roof systems with RTU weights >750# with floating (non-structural) curbs, the sub-framing detail shown [here](#) applies.
2. For Nucor CFR™ and Nucor VR16 II™ roof systems with RTU weights > 750# and <1200# with structural curbs, the sub-framing detail shown [here](#) applies.
3. For Nucor roof systems with RTU weights > 1200# and <6000# where purlins are allowed to run through the opening, the sub-framing detail shown [here](#) applies.
4. For Nucor roof systems with RTU weights > 1200# and <6000# where purlins are not allowed to run through the opening (i.e. purlins are “cut”), the sub-framing detail shown [here](#) applies.

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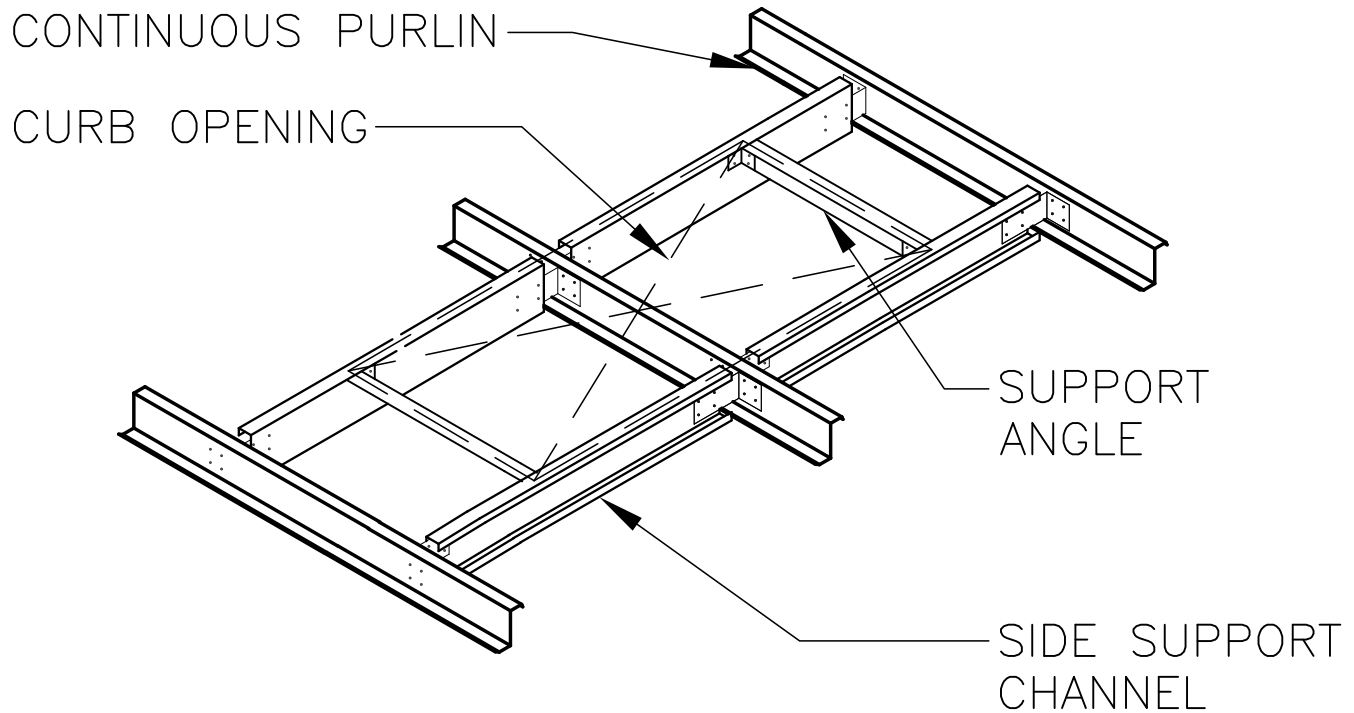
- The Nucor roof system is located above the roof secondary structural members depending on the size of the clips (short or tall). The roof curb sub-framing must be located at the same height as the secondary members to avoid potential leak problems. Refer to the details for proper dimensions. Short clips require ½” of differential elevation, while tall clips require 1 ½” of differential elevation.
- The Nucor CFR™ roof system is designed as a floating system. Curb framing and flashing must be designed accordingly to allow the curb system to float with the Nucor CFR™ roof system during thermal expansion and contraction. Curbs cannot span the ridge of the building.
- Typically, purlin runs are not interrupted by RTU openings. If purlins are required to stop at each side of the opening, indicate this on all quote request and order documents.
- When possible roof top units should not be placed closer than 15’-0 from any roof edge.



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ROOF TOP UNITS LESS THAN 750 POUNDS

AC0181PE – RTU STANDARD SUB-FRAMING FOR FLOATING CURB < 750#



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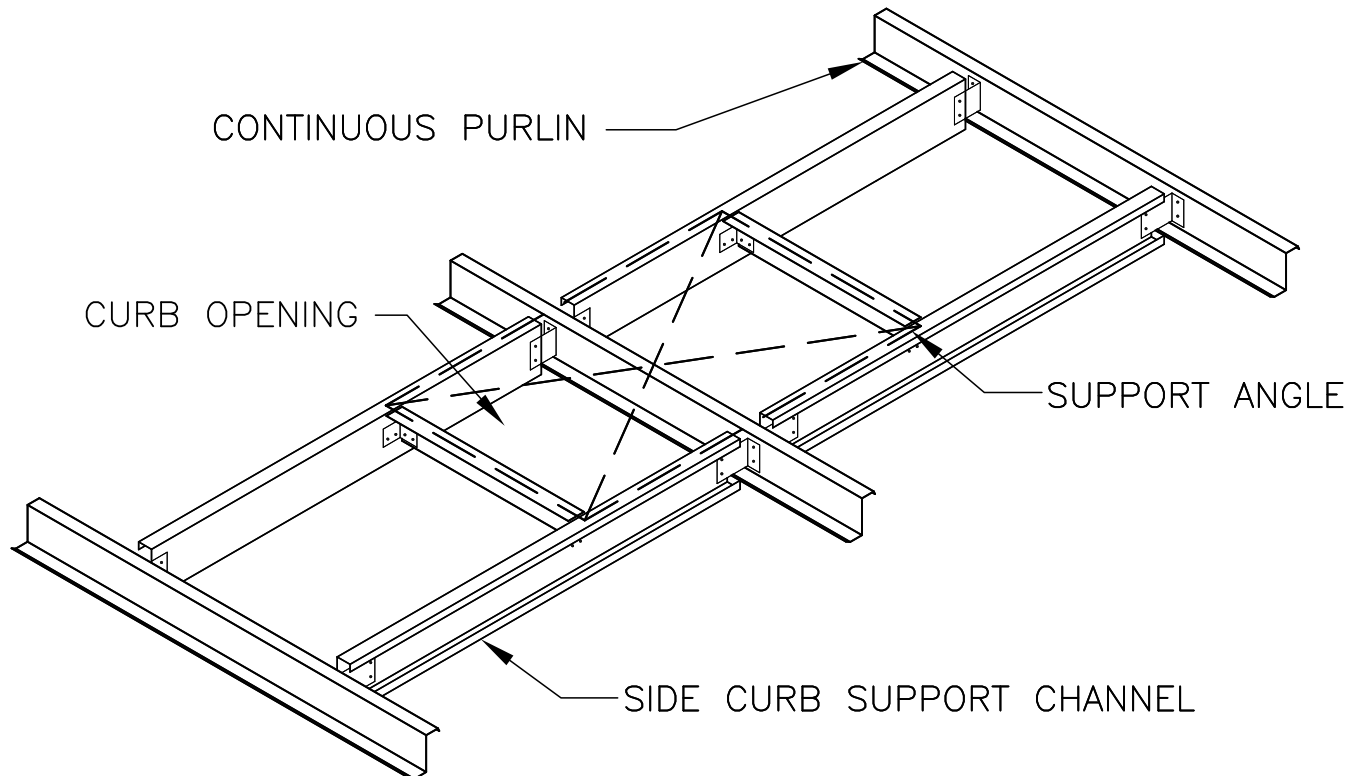
- TEK SCREW CONNECTION SHOWN.
- CURB ANGLE CHANGES TO CHANNEL WHEN WIDTH IS $> 5'-0"$.



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ROOF TOP UNITS OVER 750 POUNDS & LESS THAN 1200 POUNDS

AC0161PE – FLOATING/STRUCTURAL CURB >750# < 1200#



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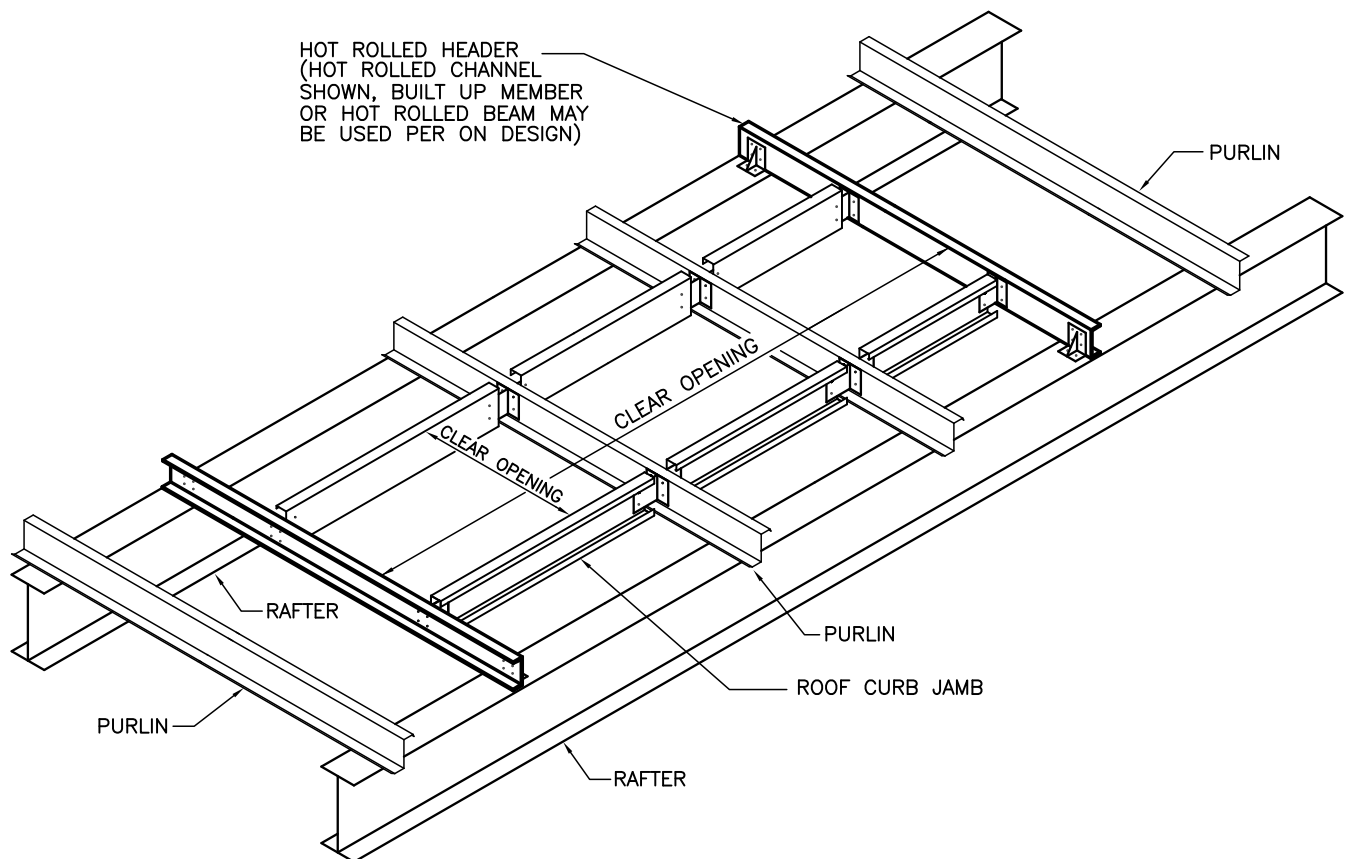
- BOLTED CONNECTION SHOWN.
- SIDE CURB SUPPORT CHANNEL MAY BE CONTINUOUS (PURLINS CUT).
- CURB ANGLE CHANGES TO CHANNEL WHEN WIDTH IS > 5'-0".



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ROOF TOP UNITS OVER 1200 POUNDS & LESS THAN 6000 POUNDS

BK0123PE – PURLINS RUN THROUGH OPENING



ERECTOR NOTE:

LOADS FROM THE RTU'S HAVE BEEN APPLIED TO THE FRAMES BASED ON THE RTU LOCATIONS SHOWN ON THESE ERECTION DRAWINGS. N.B.S. MUST BE CONSULTED PRIOR TO MOVING THE RTU'S FROM THESE GIVEN LOCATIONS. IF RTU'S ARE MOVED, NEW MATERIALS MAY NEED TO BE PURCHASED.

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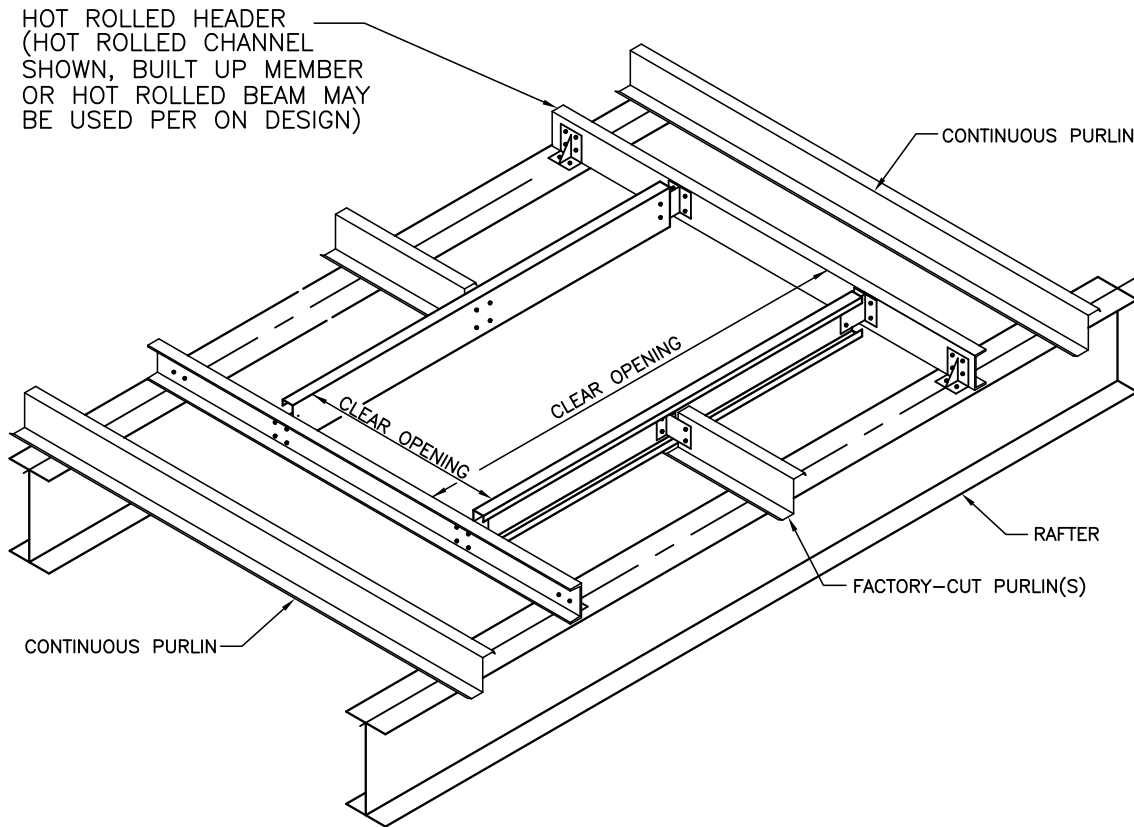
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BK0125PE – PURLINS CUT



ERECTOR NOTE:

LOADS FROM THE RTU'S HAVE BEEN APPLIED TO THE FRAMES BASED ON THE RTU LOCATIONS SHOWN ON THESE ERECTION DRAWINGS. N.B.S. MUST BE CONSULTED PRIOR TO MOVING THE RTU'S FROM THESE GIVEN LOCATIONS. IF RTU'S ARE MOVED, NEW MATERIALS MAY NEED TO BE PURCHASED.



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RIDGE VENT INFORMATION

RIDGE VENT STANDARD OPTIONS:

NUCOR CLASSIC ROOF™

1. 9" and 12" ridge vents are available as single units or continuous units.
2. Low Profile ridge vents are available as single units or continuous units.

NUCOR CFR™ ROOF

1. 9" and 12" ridge vents are available as single units or continuous units.
2. Low Profile ridge vents are available as single units or continuous units.

9" & 12" THROAT RIDGE VENT FEATURES

- Ridge vents come completely assembled for ease of installation.
- Standard available finishes may vary per plant. Contact the Estimating Department from which the project will ship for availability.
- The ridge vent can be used with both Nucor Classic Roof™ and Nucor CFR™ roof systems.
- Nominal ridge vent length is 10'-0".
- Ridge vents should not be placed closer than 5'-0 to the endwall steel line. For example: a 90'-0 long building with ridge vents required the entire length, should have no more than (8) units.
- Ridge vents can be ordered as continuous or single units.
- Ridge vents have flat skirts for both Nucor Classic Roof™ and Nucor CFR™ roof systems.



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RIDGE VENT PRODUCT DESCRIPTION

- Nucor ridge vents are available in the following sizes: 9" throat and 12" throat.
- The following are the standard ridge vent systems available:
 - Single unit w/ screen & damper
 - Single unit w/screen (no damper)
 - Continuous unit w/screen & damper
 - Continuous unit w/ screen (no damper)
- The following vent closer comes **STANDARD** for each single ridge vent system:
 - a. Lockerpull type operator with 10' of chain that hangs down from the middle of the unit.
- Below is a list of **OPTIONAL** closer accessories for the continuous ridge vent system.
 - a. Lever (6 units max. 40' of 3/16" bare galvanized cable)
 - b. Boat winch (8 units max. for units with 9" throat 60' of 3/16" bare galvanized cable)
 - c. Boat winch (6 units max. for units with 12" throat units max. 60' of 3/16" bare galvanized cable)
- A cable extension package is available to be used in conjunction with the lever or boat winch closer.



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9" & 12" THROAT RIDGE VENT DATA SPECIFICATIONS

Ridge vents supplied by Nucor are of a low profile design to provide gravity type ventilation. Bird screen is provided as a standard. Each unit contains flashing for either single or continuous run installation where specified on the sketch of the Order Document.

Vents are available in 9" or 12" throats in standard white or Galvalume® finish. Other colors are available at additional costs. Consult Nucor for price and delivery impacts of colored vents.

Ridge vents are available for both Nucor CFR™ roof and Nucor Classic Roof™ systems. Skirts are flat by design and are attached to the major ribs (or End Dam on the Nucor CFR™ roof system) by self-drilling screws. Because gravity ridge vents are designed to allow free airflow, some penetration of water during blowing rains is to be expected.

Exterior parts are 26 Gage Painted or Galvalume®. Interior parts are G90 galvanized steel. Substructure consists of 10 Gage saddle straps with interior baffles of 24 Gage steel. Lifter arms and damper slides are 18 Gage.

Manual operation is through activation of a pull bar, which is attached internally to bell cranked type lifter arms connected to the damper with Teflon coated pins through the damper slides. Dampers are spring loaded to remain in the open position until pull bar is operated and locked in the closed position and dampers operate in a vertical manner.



PRODUCT & ENGINEERING MANUAL

AIR MOVEMENT CAPACITIES FOR NUCOR RIDGE VENTS

Capacities Listed Below are Cubic Feet per Minute per 9" x 10'-0" Long Vent

Height	Temperature Difference								
	5°	10°	15°	20°	25°	30°	35°	40°	45°
10'	999	1,323	1,566	1,728	1,890	2,052	2,187	2,322	2,565
15'	1,134	1,620	1,917	2,160	2,322	2,484	2,673	2,835	2,943
20'	1,431	1,890	2,187	2,484	2,673	2,889	3,078	3,294	3,402
25'	1,566	2,079	2,403	2,700	2,916	3,186	3,375	3,591	3,753
30'	1,701	2,241	2,619	2,916	3,159	3,456	3,672	3,915	4,050
35'	1,782	2,349	2,754	3,078	3,348	3,645	3,888	4,077	4,266
40'	1,890	2,511	2,916	3,294	3,510	3,807	4,050	4,347	4,536
45'	1,998	2,592	3,024	3,456	3,726	3,996	4,293	4,536	4,725
50'	2,079	2,727	3,186	3,591	3,888	4,212	4,509	4,725	4,941
55'	2,160	2,862	3,321	3,753	4,050	4,428	4,644	4,941	5,184
60'	2,241	2,943	3,456	3,888	4,185	4,563	4,833	5,130	5,400
65'	2,295	3,024	3,564	3,996	4,347	4,698	4,995	5,319	5,562
70'	2,376	3,159	3,672	4,131	4,509	4,833	5,103	5,454	5,697
75'	2,430	3,213	3,753	4,239	4,563	4,941	5,292	5,562	5,859
80'	2,511	3,294	3,834	4,347	4,644	5,022	5,400	5,697	5,940

Numbers based upon air intake area 1 1/2 times ventilator throat area, assumes 5 mph wind speed.

Height = vertical rise from inlets near floor to ventilator.

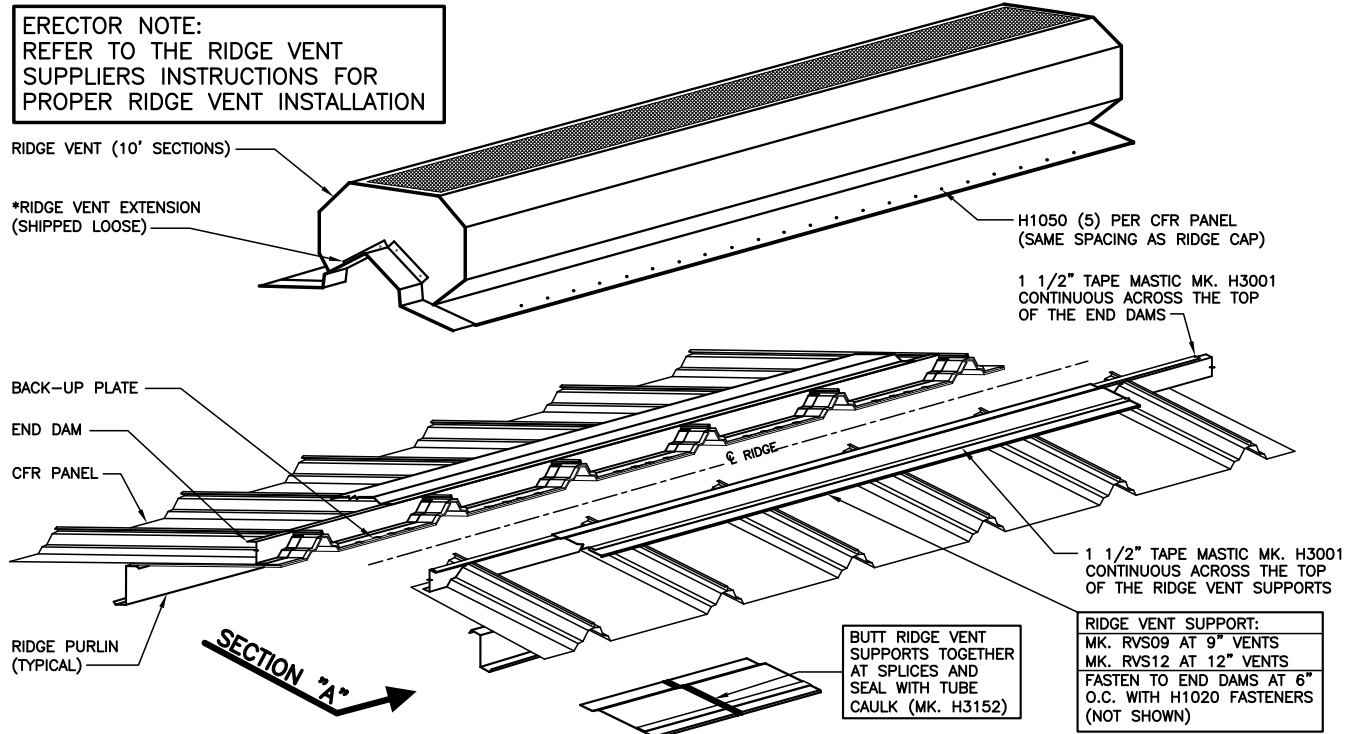
Temperature = estimated temperature difference between middle of air intake near floor & ventilator with dampers open.

To calculate data for 12" vents, multiply capacities listed above by 1.3334.



PRODUCT & ENGINEERING MANUAL

AC0115PE – RIDGE VENT DETAIL



LAST REVISION
DATE: 02/06/15
BY: AK CHK: EGB

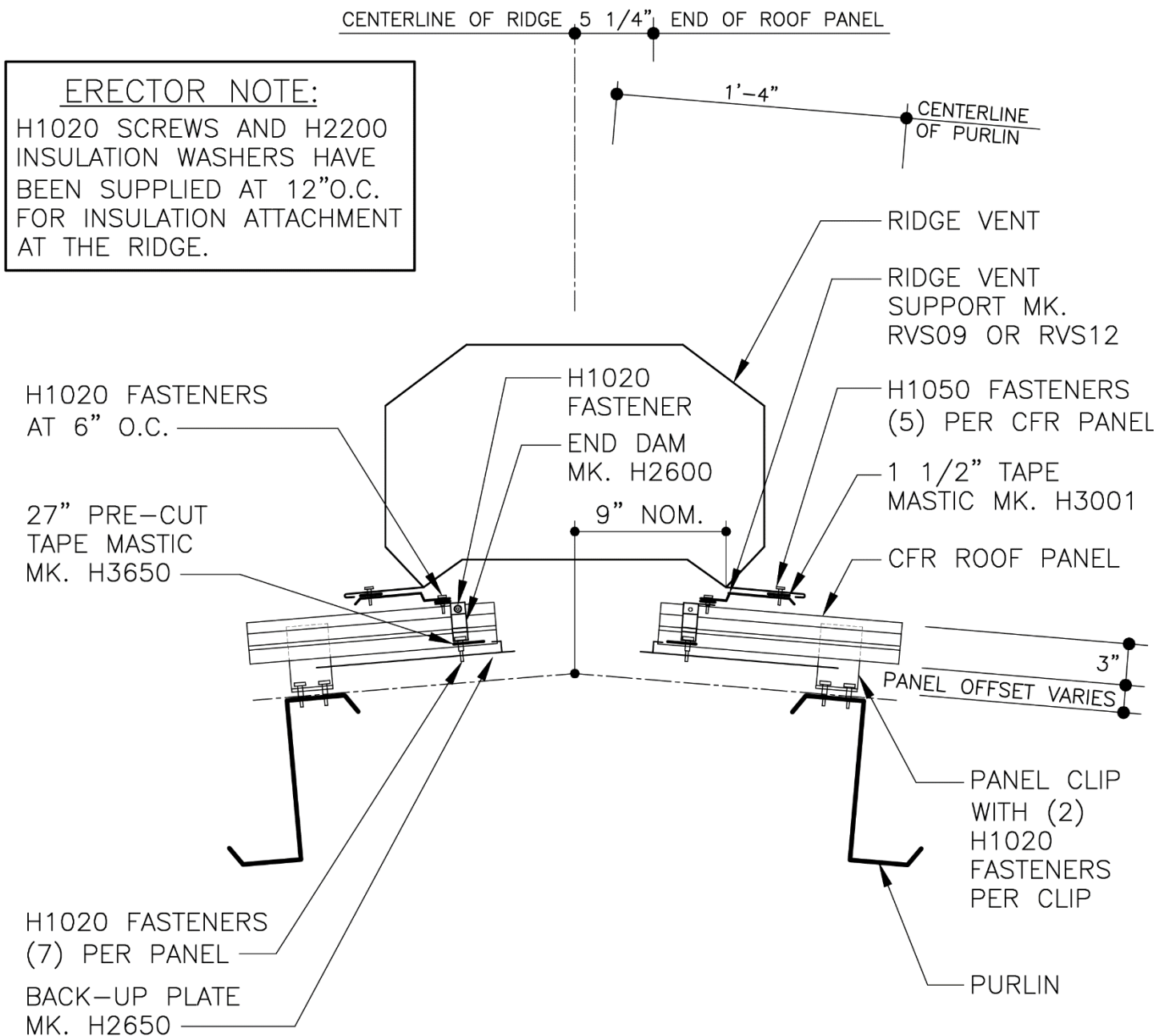
DETAIL NAME IF APPLICABLE
AC0115PE.DWG

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PRODUCT & ENGINEERING MANUAL

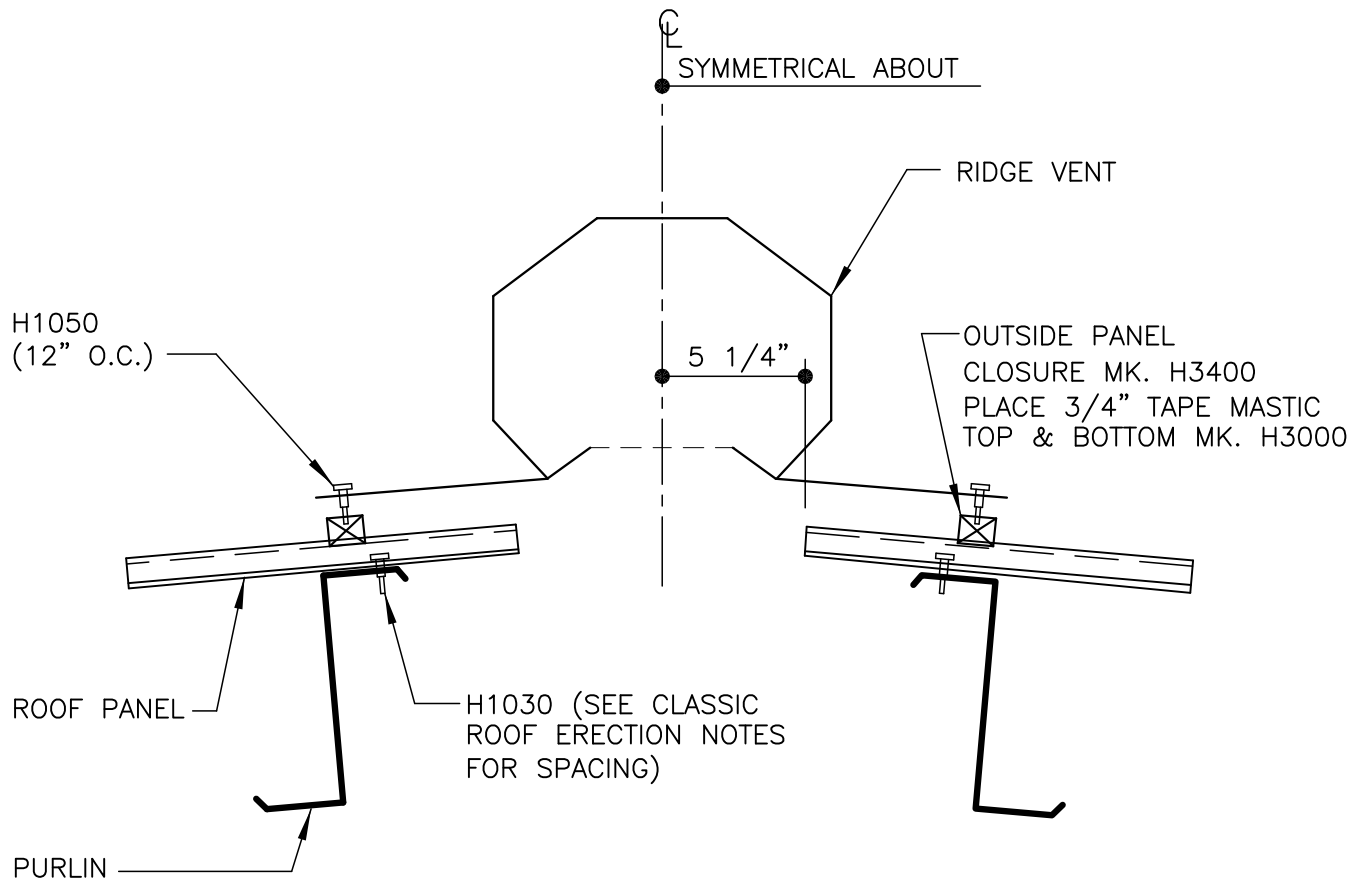
AC0120PE – 9" RIDGE VENT DETAIL (NUCOR CFR™ ROOF)





PRODUCT & ENGINEERING MANUAL

AC0140PE – RIDGE VENT DETAIL (NUCOR CLASSIC ROOF™)



LAST REVISION
DATE: 09/07/11
BY: RT CHK: EGB

DETAIL NAME IF APPLICABLE
AC0140PE.DWG

8.0.29



PRODUCT & ENGINEERING MANUAL

LOW PROFILE RIDGE VENT INFORMATION

LOW PROFILE RIDGE VENT FEATURES:

- Ridge vent system is low profiled, erector friendly and architecturally pleasing.
- Ridge vent system is not elevated above the roof as traditional vents are.
- Allows the use of Nucor's standard metal peak boxes installed in the same manner.
- Nominal ridge vent length is 10'-0.
- Ridge vents can be ordered as single units or continuous units.

Continuous Unit Definitions:

1. Vents, vent splice kits, ridge cap and (2) end caps per run are supplied by the ridge vent vendor.
2. Mastics and fasteners supplied by Nucor Building Systems.

Single Unit Definitions:

1. Vents, ridge cap and (2) end caps per unit are supplied by the ridge vent vendor
2. Mastics and fasteners supplied by Nucor Building Systems.

GENERAL INFORMATION

- Units may be installed in combination, meaning a portion of the vent system be continuous with a different portion of the vent system being single units. In these cases, the un-vented areas will be linked together with ridge cap supplied by the ridge vent vendor.
- Standard colors for the Low Profile Ridge Vents and Ridge cap are: PW & GM. Other finishes are available and may vary per plant. Contact the Estimating Department for cost and availability.
- Ridge cap for the low profile ridge vents are made in standard 20'-0" lengths. The 20'-0" lengths are available in PW & GM colors. Ridge Cap lengths may vary for colors other than PW & GM. Contact the Ridge vent supplier for length/color availability.

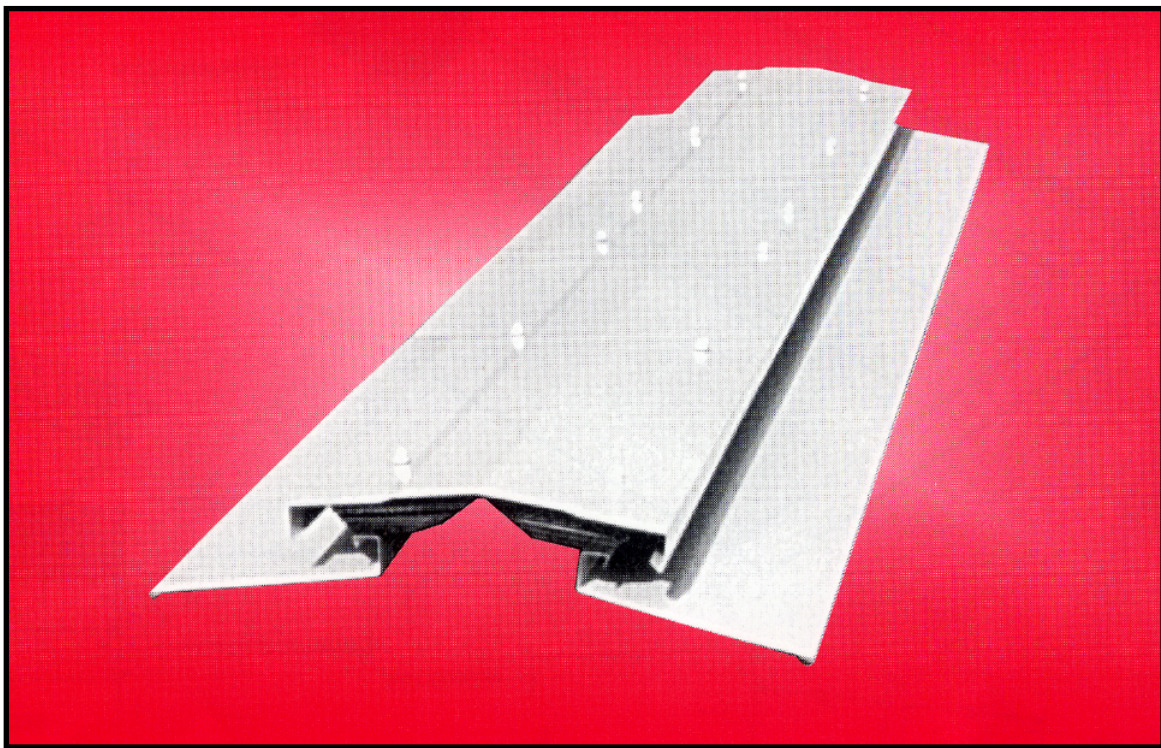


PRODUCT & ENGINEERING MANUAL

- Ridge vents should not be placed closer than 5'-0 to the end wall steel line. The transition from the vent to the rake trim will be made with ridge cap supplied from ridge vent vendor. (ridge cap profile to match ridge vent profile) Example: a 90'-0 long building with ridge vents required the entire length, should have no more than (8) units.
- As a standard, the low profile ridge vent system utilizes the standard panel set-back of: 5 1/4" up to 6:12 roof slope. *Above 6:12 roof slope, detailing will need to determine the correct panel set-back dimension.*

LOW PROFILE RIDGE VENT PRODUCT DESCRIPTION:

- The Low Profile Ridge Vent is a product currently produced from Metallic Products. This system features the Cor-A Vent® ventilation core. All other steel components are made with 24 gage metal. When required, this system will take the place of the standard NBS ridge cap detail. The unit(s) are fastened to the end dams utilizing standard self-drilling fasteners. The top hood is bent on a 4:12, with the bottom flanges bent to match the roof slope.



LOW PROFILE RIDGE VENT



PRODUCT & ENGINEERING MANUAL

AIR MOVEMENT CAPACITIES FOR LOW PROFILE RIDGE VENT

DIMENSIONS AND TECHNICAL DATA

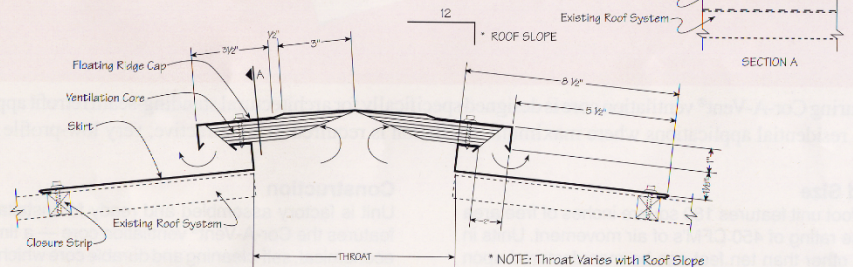
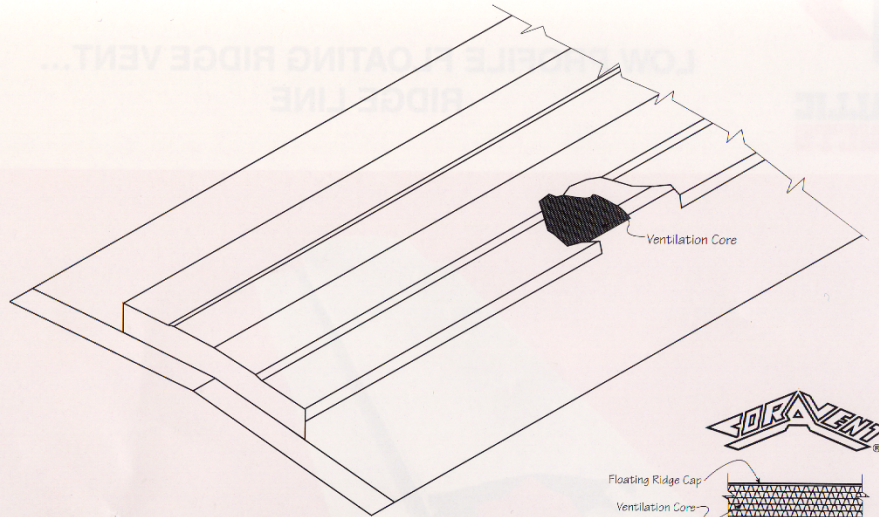


TABLE A Air Movement per Lineal Foot Factors						
HEIGHT IN FEET	Temperature Difference					
	5°	10°	15°	20°	25°	30°
10	16.65 _A	22.05 _A	26.10 _A	28.80 _A	31.50 _A	34.20 _A
15	18.90 _A	27.00 _A	31.95 _A	36.00 _A	38.70 _A	41.40 _B
20	23.85 _A	31.50 _A	36.45 _A	41.40 _A	44.50 _B	48.15 _B
25	26.10 _A	34.65 _A	40.05 _A	45.00 _B	48.60 _B	53.10 _C
30	28.35 _A	37.35 _A	43.65 _B	48.60 _B	52.65 _C	57.60 _C
35	29.70 _A	39.15 _B	45.90 _B	51.30 _B	55.80 _C	60.75 _C
40	31.50 _B	41.85 _B	48.60 _B	54.90 _C	58.50 _C	63.45 _C
45	33.30 _B	43.20 _B	50.40 _B	57.60 _C	62.10 _C	66.60 _C
50	34.65 _B	45.45 _B	53.10 _C	59.85 _C	64.80 _C	70.20 _D

Note: If material is furnished by customer, the following must be supplied for each 10' section:

Painted Screws

1 Sheet for Metal Roof, 2 for Shingle

15 Self-Tapping Screws 1/4" x 1 1/2"

Type A W/Washers

TABLE B Wind Velocity Factors				
WIND M.P.H.	Factors			
	A	B	C	D
3	1.14	1.09	1.05	1.02
5	1.25	1.18	1.13	1.09
7	1.41	1.29	1.22	1.16
9	1.62	1.43	1.33	1.25
11	1.82	1.57	1.43	1.32

TOTAL CFM = (Table A) X (Table B) X Length

TABLE C Throat Size (Determined by Roof Pitch)			
Pitch	Throat Size	Pitch	Throat Size
1:12	6 1/8"	7:12	4 1/8"
2:12	6 1/8"	8:12	3 1/2"
3:12	5 3/8"	9:12	3"
4:12	5 1/4"	10:12	2 1/2"
5:12	4 7/8"	11:12	2 1/8"
6:12	4 3/8"	12:12	1 3/4"



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PRODUCT & ENGINEERING MANUAL

VENTED RIDGE & HIP INFORMATION (NUCOR VR16 II™ ROOF)

VENTED RIDGE/HIP SYSTEM FEATURES

- Vent system is low profiled, erector friendly and architecturally pleasing.
- Ridge vent system is not elevated above the roof as traditional vents are.
- Can be placed on a ridge or hip roof.
- Ridge vent system can be placed the entire length of the ridge/hip or partial length (continuous recommended)
- Vented and non-vented sections of the system look the same on the surface.
- Standard parts accommodate up 12:12 roof slopes.
- Nucor standard metal peak boxes installed the same as with other roof systems.
- Ridge vent system is not recommended for slopes less than 2:12.
- Maximum panel run is 80'-0".

VENTED RIDGE/HIP SYSTEM DESCRIPTION

- This system is comprised of 1) a vented material called PreVent made by Metallic Products, 2) standard cover flash, 3) fasteners and, 4) ridge cap. The PreVent is 24 gage GM metal 'J' shape with ½" x 2" louvers.
- For installation, place the 10' PreVent sections on top of the zee closure and fasten in place with standard fasteners, repeating for both sides. Install the ridge cap as work progresses by placing the ridge cap over the PreVent and fastening into the PreVent. See photos of the product and the different stages of installation below.

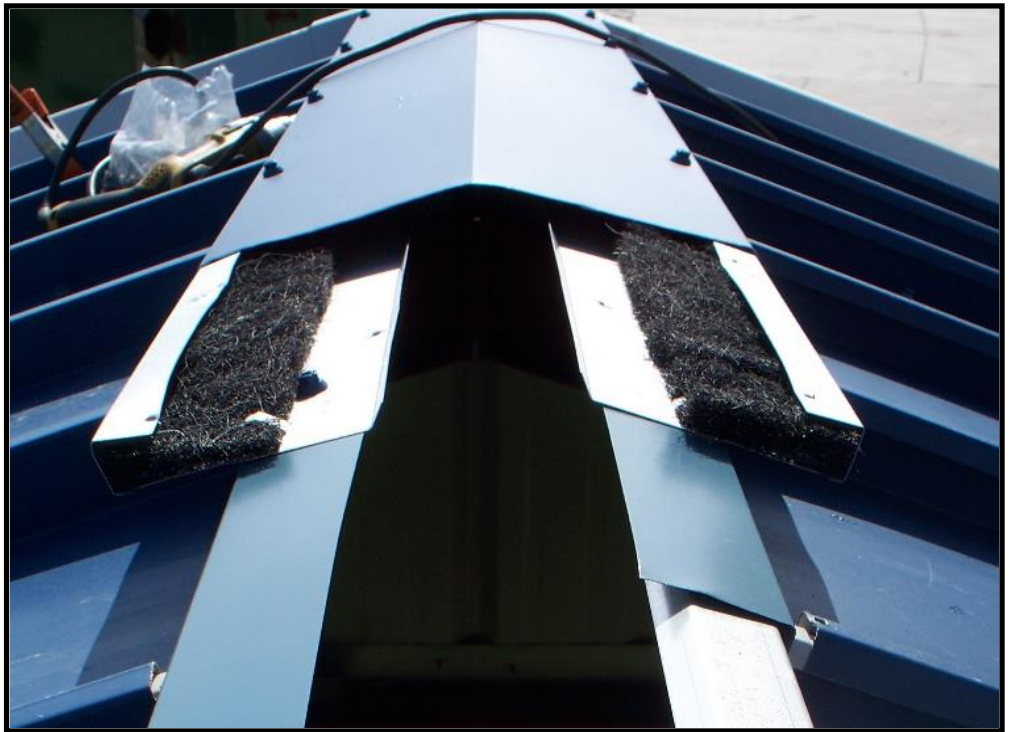


PRODUCT & ENGINEERING MANUAL

- The fiber media contained in the Prevent is comprised of a non-woven, fire retardant, natural fiber mixture bonded with latex and will withstand extreme heat and cold conditions. The filter media is bacteriostatic and will not support the growth of mold, mildew or bacteria, and is very effective in resisting the entrance of wind driven rain or snow.



PREVENT
PRODUCT



END PICTURE OF PROGRESSIONAL
ASSEMBLY



PRODUCT & ENGINEERING MANUAL

AIR MOVEMENT CAPACITIES FOR VENTED RIDGE/HIP SYSTEM (NUCOR VR16 II™ ROOF)

PREVENT

Nucor Building Systems

MODEL NU24-1-1
24 Ga. Galvalume
10'-0" Lengths
6 lbs Each
6.25 in² NFA per 10'-0"

Filter media is bacteriostatic: Will not support growth of mold, mildew or bacteria.

RIDGE VENT APPLICATION

VENTILATING SLOTS
Used on all models

CFM Chart (per 10'-0" run of ridge vent)

Stack Height	Temperature Differential							
	5°	10°	15°	20°	25°	30°	35°	40°
5	170	188	203	215	225	235	244	252
10	188	215	235	252	266	280	292	304
15	203	235	260	280	298	315	330	345
20	215	252	280	304	325	345	362	398
25	225	266	298	325	350	370	390	408
30	235	280	315	345	370	394	415	435
35	244	292	330	392	390	415	438	460
40	252	304	345	398	408	435	460	483

Assumes 5 mph wind speed

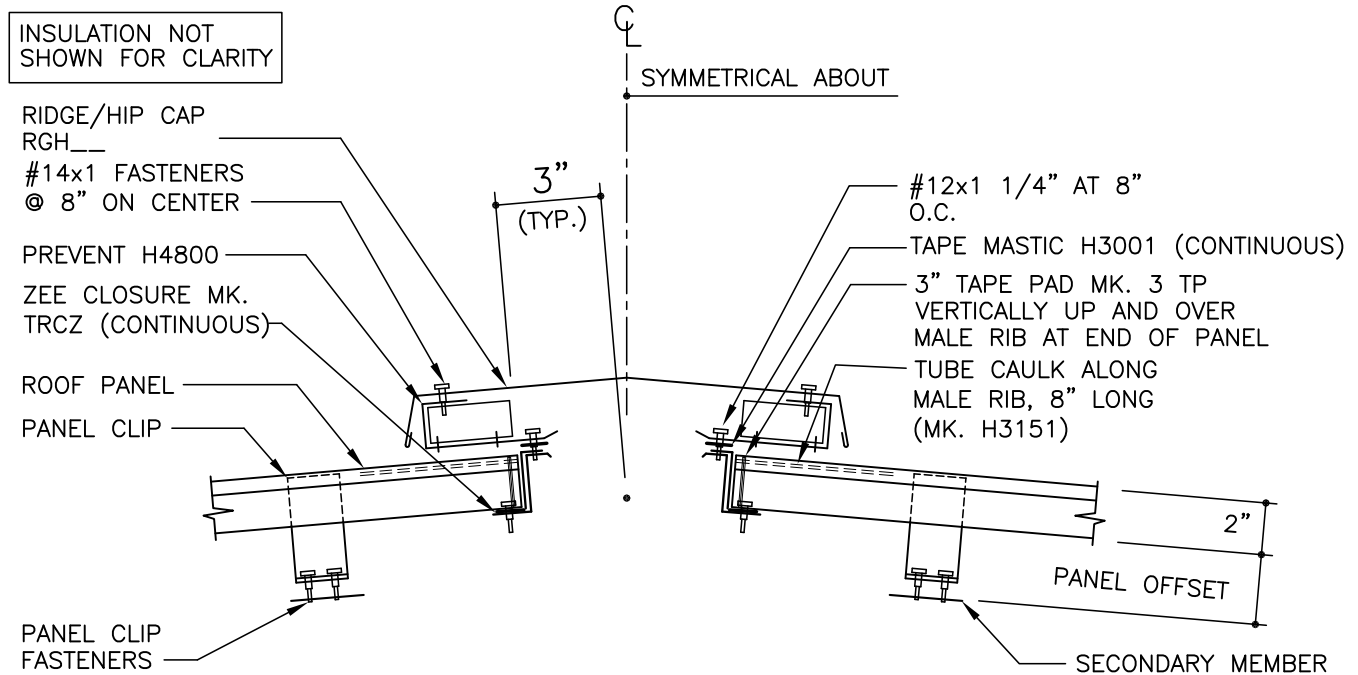
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PRODUCT & ENGINEERING MANUAL

AC0150PE –VENTED RIDGE / HIP DETAIL (NUCOR VR16 II™ ROOF)



VR16 II VENTED RIDGE/HIP DETAIL

LAST REVISION
DATE: 08/10/09
BY: EGB CHK: AES

DETAIL NAME IF APPLICABLE
AC0150PE.DWG

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