

# Henry® NFPA 285 Air Barrier Assemblies

The following Henry air barrier assemblies meet the performance requirements of NFPA 285 as required by the International Building Code® (2003, 2006, 2009, 2012, 2015, 2018 and 2021 editions).

Install NFPA 285 compliant wall assemblies as described in this tech-talk bulletin. Changes or modifications to the construction, and/or materials, may affect the tested assembly fire performance and void NFPA 285 compliance. Install Henry air barrier assemblies per Henry installation instructions. Refer to product specific technical data sheet (TDS), guide specification and standard details.

Henry Company regularly expands the NFPA 285 complaint wall assembly offerings. Refer to the Henry website at [www.henry.com](http://www.henry.com) for the most up to date version.

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## Disclaimer

Henry Company regularly expands the NFPA 285 complaint wall assembly offerings. It is the user's responsibility to obtain and to confirm the most recent version. Information contained in this Tech-Talk Bulletin may change without notice.

## Tech-talk: Henry NFPA 285 Assemblies

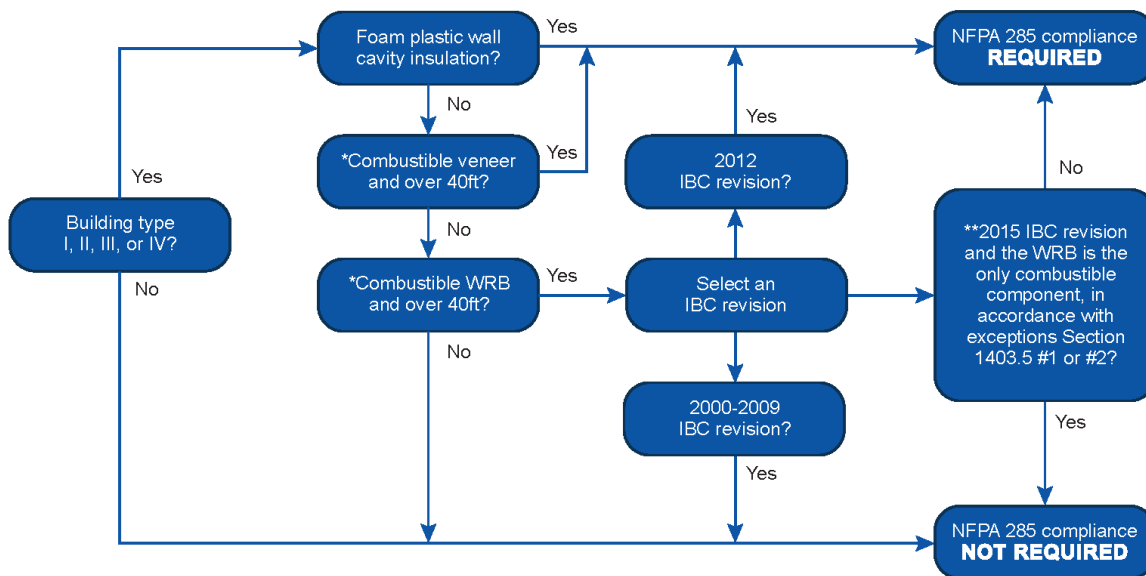
### NFPA 285 Performance Requirements and Code References

NFPA 285 is a standard test method for evaluating fire propagation characteristics of exterior noncombustible wall assemblies containing combustible components. NFPA 285 compliance is identified through assembly analysis by accredited testing facilities and Fire Protection Engineers as referenced in AC12 §6.6. This document is based on verified NFPA 285 compliant wall assembly reports, and is intended as a guide for architects, general contractors, building owners, and authorities having jurisdiction in the design and construction of walls requiring NFPA 285 compliance. Product manufacturers do not have the authority to approve and do not approve project specific NFPA 285 compliance. Contact the authority having jurisdiction for final approval.

#### International Building Code (IBC) sections that trigger NFPA 285

Common exterior wall materials that trigger NFPA 285 compliance		
Relevant section of the International Building Code	Section*	Year instated*
Foam Plastics	§2603.5.5	1988 edition
Combustible Veneers		
MCMs & ACMs	§1407.10	2000 edition
HPLs	§1409.10	2009 edition
EIFS	§1408.2	2009 edition
FRPs	§2612.5	2009 edition
Water-resistive barriers (WRB)	§1403.5	2012 edition

#### Quick reference NFPA 285 flow chart



\*Refer to International Building Code (IBC) sections that trigger NFPA 285. Section numbers may vary per IBC edition.

\*\*2021 International Building Code: Section 1402.5 Water-resistive barriers. Exterior walls on buildings of Type I, II, III or IV construction that are greater than 40 feet (12192 mm) in height above grade plane and contain a combustible water-resistive barrier shall be tested in accordance with and comply with the acceptance criteria of NFPA 285. Combustibility shall be determined in accordance with Section 703.3. For the purposes of this section, fenestration products, flashing of fenestration products, and water-resistive barrier flashing and accessories at locations, including through wall flashing, shall not be considered part of the water-resistive barrier (WRB). Exceptions:

1. Walls in which the water-resistive barrier is the only combustible component, and the exterior wall has a wall covering of brick, concrete, stone, terracotta, stucco or steel with minimum thickness in accordance with Table 1404.2.
2. Walls in which the water-resistive barrier is the only combustible component, and the water-resistive barrier complies with the following:
  - 2.1. A peak heat release rate of less than 150 kW/M<sup>2</sup>, a total heat release of less than 20MJ/m<sup>2</sup> and an effective heat of combustion of less than 18MJ/kg when tested on specimens at the thickness intended for use, in accordance with ASTM E 1354, in the horizontal orientation and at an incident radiant heat flux of 50 kW/m<sup>2</sup>.
  - 2.2. A flame spread index of 25 or less and a smoke-developed index of 450 or less as determined in accordance with ASTM E84 or UL723 with a test specimen preparation and mounting in accordance with ASTM E2404.

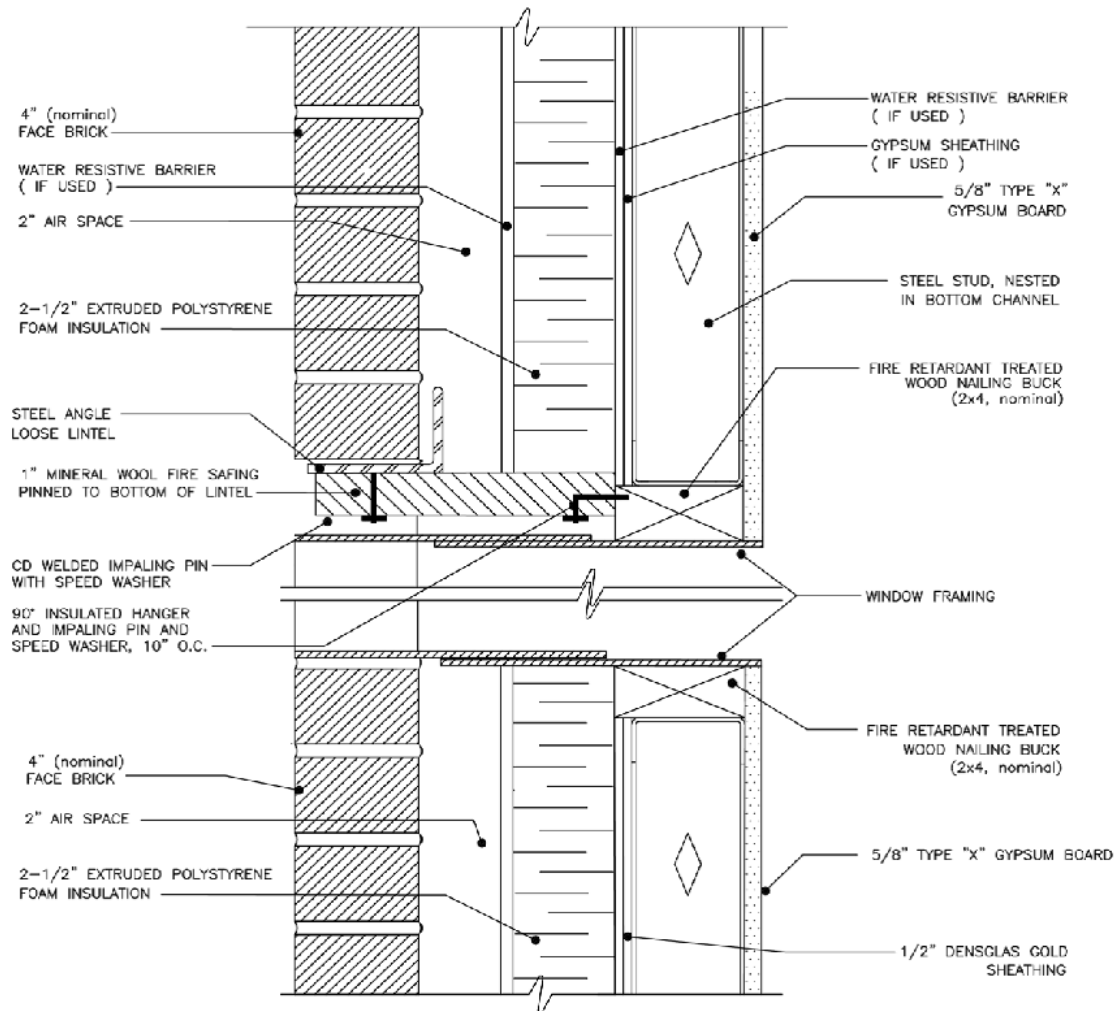
## Tech-talk: Henry NFPA 285 Assemblies

**Table 1. Walls containing Extruded Polystyrene (XPS) insulation**

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 20-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirements</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3, 4 or 5</i>  <i>Note: items 2-4 may incorporate a Class A vapor barrier film</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation per ASTM E136</li> <li>Mineral fiber (board type Class A, ASTM E84 faced or un-faced)</li> <li>Fiberglass (batt type Class A, ASTM E84 faced or un-faced)</li> <li>Henry Permax SPF - 6 inches (max.) (do not use spray polyurethane foam stud cavity insulation if incorporating an interior vapor barrier membrane - see optional interior vapor barrier row below)</li> </ol>
<b>Optional interior vapor barrier</b> <i>Use either 1 or 2</i>	<ol style="list-style-type: none"> <li>None</li> <li>Class A vapor barrier film (do not use spray polyurethane foam stud cavity insulation if incorporating an interior vapor barrier membrane - see note above)</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>1/2 inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>1/2 inch thick (min.) FRTW sheathing complying with IBC Section 2303.2 or LP FlameBlock (2 sided, 7/16" min.) installed in accordance with code allowances for Types I, II, III or IV construction</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc® 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad®</li> <li>Blueskin® SA or Blueskin SA LT</li> <li>Blueskin VP160</li> <li>FoilSkin®</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b>	Extruded Polystyrene Foam Insulation (XPS) - Type IV per ASTM C578 – 3 inches (max.). Where required, XPS may use Blueskin SA, Blueskin Butyl Flash flashing tape.
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5, 6 or 7</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – 3/4 inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> <li>Concrete Masonry Units (CMU) – 4 inch thick (min.) with a 2 inch (max) air gap between exterior insulation and CMU</li> <li>Concrete Panels – 2 inches thick (min.) with a 2 inch (max.) air gap between exterior insulation and concrete panel</li> </ol>
<b>Special conditions</b>	Install header as shown in figure 1, 2 or 3 for window and door openings in walls utilizing XPS insulation.
<b>Flashing of window, door and other exterior wall penetrations</b>	Flash window, door and exterior penetrations in accordance with applicable code using asphalt, acrylic or butyl based flashing (Blueskin Metal Clad, Blueskin SA, Blueskin Butyl Flash, Air-Bloc All Weather STPE or Air-Bloc LF®) – 12-inches wide (max.).

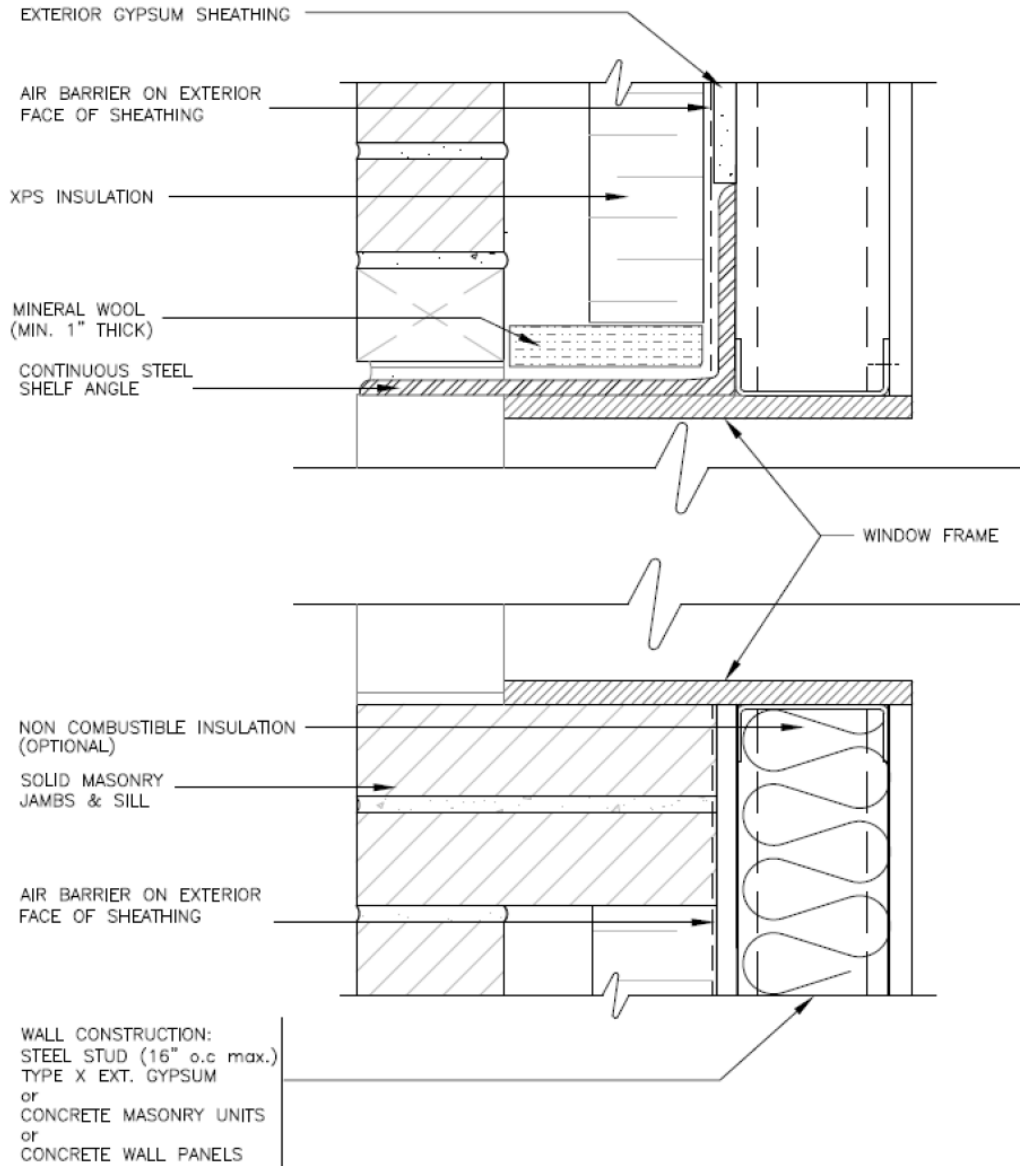
# Tech-talk: Henry NFPA 285 Assemblies

Figure 1 – Extruded Polystyrene (XPS) Window/door opening detail



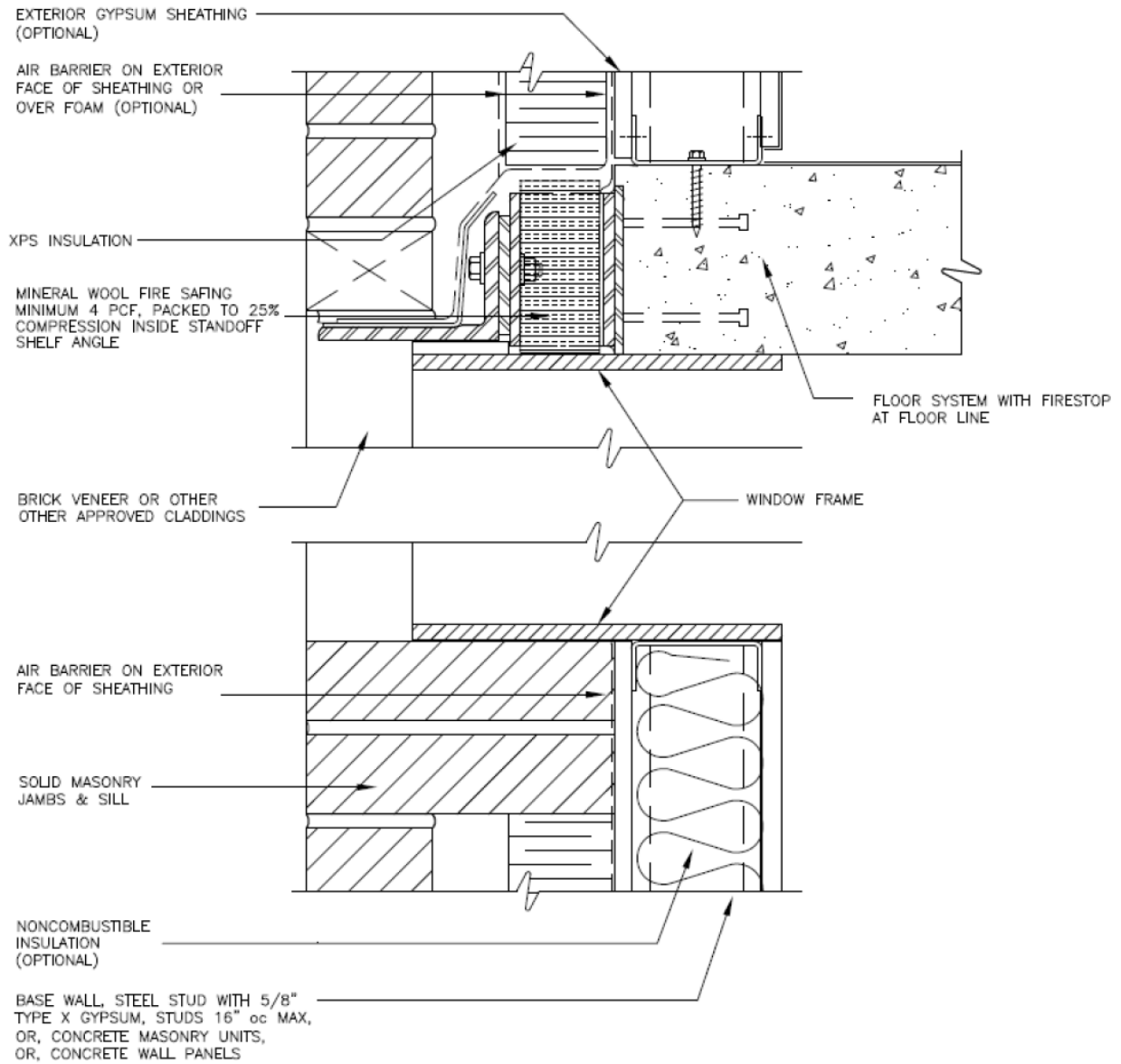
# Tech-talk: Henry NFPA 285 Assemblies

Figure 2 – Extruded Polystyrene (XPS) Window/door opening detail



# Tech-talk: Henry NFPA 285 Assemblies

Figure 3 – Extruded Polystyrene (XPS) Window/door opening detail



## Tech-talk: Henry NFPA 285 Assemblies

**Table 2. Walls containing Henry Permax 2.0X or Permax 2.0X Fast Closed-Cell SPF**

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2 or 3</i>	1. Concrete wall 2. Concrete masonry unit (CMU) wall 3. Steel Studs – 20-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code <ol style="list-style-type: none"> <li>a. 5/8 inch thick, Type X, gypsum wallboard on interior</li> <li>b. See special conditions</li> </ol>
<b>Floor line fire-stopping</b>	4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3 or 4</i>	1. None 2. Fiberglass (batt type Class A, ASTM E84 faced or un-faced) 3. Permax 2.0X SPF 4. Permax 2.0X Fast Closed-Cell SPF
<b>Exterior sheathing</b> <i>Use either 1, 2 or 3</i>	1. None (base wall systems 1 and 2 only) 2. 1/2 inch thick, exterior grade gypsum sheathing 3. 5/8 inch thick, Type X, exterior grade gypsum sheathing
<b>Henry exterior insulation installed onto exterior sheathing</b> <i>Select from list</i>	1. Permax 2.0X – 3 inches thick (max.) 2. Permax 2.0X Fast Closed-Cell – 3 inches thick (max.)
<b>Exterior veneer</b> <i>Use either 1, 2 or 3</i>	1. Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC 2. Stucco – 3/4 inch thick (min.), exterior cement plaster and lath 3. Limestone veneer – 2 inches thick (min.)
<b>Special conditions</b>	Refer to Permax 2.0X/2.0X Fast Closed Cell SPF ICC-EX report ESR - 3647

## Tech-talk: Henry NFPA 285 Assemblies

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### Table 3. Walls containing polyisocyanurate insulation and Henry air barrier membranes

Henry air barriers have been approved for use in NFPA 285 wall assemblies containing polyisocyanurate. Polyisocyanurate may have product specific fire propagation characteristics. Refer to the product specific table as indicated below for more information.

#### Polyisocyanurate insulation tables:

[Table 3.1](#) – Atlas® Energy Shield® Pro – 4 inches thick (max.)

Atlas Energy Shield Pro2 – 4 inches thick (max.)

Atlas CGF Pro (formally Rboard®) – 4 inches thick (max.)

[Table 3.2](#) – Dow® Thermax™ – 3 inches thick (max) for light claddings

[Table 3.3](#) – Dow Thermax – 4-1/4 inches thick (max) for heavy masonry claddings

[Table 3.4](#) – Johns Manville AP™ Foil Faced Sheathing – 4.5 inches thick (max.)

[Table 3.5](#) – Hunter® Xci CG – 3-1/2 inch thick (max.)

Hunter Xci Class A – 3-1/2 inch thick (max.)

Hunter Xci-286 – 3-1/2 inch thick (max.)

[Table 3.6](#) – Hunter Xci-Foil – 3-1/2 inch thick (max.)

[Table 3.7](#) – Hunter Xci-Foil (Class A) – 3.5 inches thick (max.)

[Table 3.8.A](#) – Hunter Xci-Ply – 3-1/2 inch thick (max.) – Henry air barrier installed onto exterior grade sheathing

[Table 3.8.B](#) – Hunter Xci-Ply – 3-1/2 inch thick (max.) – Henry air barrier installed onto Hunter Xci-Ply



## Tech-talk: Henry NFPA 285 Assemblies

**Table 3.1 Atlas Energy Shield Pro, Atlas Energy Shield Pro2 and Atlas CGF Pro – 4 inches thick (max)**

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 20-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>4 pcf. Mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirement</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3, 4 or 5</i>  <i>Note: items 2-4 may incorporate a Class A vapor barrier film</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation per ASTM E136</li> <li>Mineral fiber (Board type Class A, ASTM E84 faced or un-faced)</li> <li>Fiberglass (Batt type Class A, ASTM E84 faced or un-faced)</li> <li>Henry Permax SPF – 6 inches (max.) – See special conditions (do not use spray polyurethane foam stud cavity insulation if incorporating an interior vapor barrier membrane – see optional interior vapor barrier row below)</li> </ol>
<b>Optional interior vapor barrier</b> <i>Use either 1 or 2</i>	<ol style="list-style-type: none"> <li>None</li> <li>Class A vapor barrier film (do not use spray polyurethane foam stud cavity insulation if incorporating an interior vapor barrier membrane -see note above)</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>1/2 inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>1/2 inch thick (min.) FRTW sheathing complying with IBC Section 2303.2 or LP FlameBlock (2 sided, 7/16" min.) installed in accordance with code allowances for Types I, II, III or IV construction</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin SA or Blueskin SA LT</li> <li>Blueskin VP160</li> <li>FoilSkin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>Atlas Energy Shield Pro Rigid Insulation – 4 inches thick (max.)</li> <li>Atlas Energy Shield Pro2 Rigid Insulation – 4 inches thick (max.)</li> <li>Atlas CGF Pro (formally Rboard Pro) Rigid Insulation – 4 inches thick (max.)</li> </ol>
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 or 13</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – 3/4 inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.)</li> <li>Aluminum Composite Material (ACM) – systems that have successfully passed NFPA 285</li> <li>Uninsulated metal panels including steel, copper, or aluminum</li> <li>Uninsulated fiber cement siding</li> <li>Autoclaved-aerated concrete (AAC) panels – systems that have successfully passed NFPA 285</li> <li>Thin set brick</li> <li>Concrete Masonry Units (CMU) – 4 inch thick CMU (min.), with a 2 inch (max.) air gap between exterior insulation and CMU</li> <li>Concrete Panels – 2 inch thick (min.) panel, with a 2 inch (max.) air gap between exterior insulation and concrete panel</li> <li>Insulated Concrete Sandwich Panels – 2 inch thick (min.) outer and inner faces with 2 inch (max.) air gap between inner face and wall system</li> </ol>
<b>Special conditions</b>	Use 0.03 inch stainless flashing header treatment when polyisocyanurate exterior insulation is installed in conjunction with spray polyurethane foam cavity insulation.
<b>Flashing of window, door and other exterior wall penetrations</b>	Flash window, door and exterior penetrations in accordance with applicable code using asphalt, acrylic or butyl based flashing (Blueskin Metal Clad, Blueskin SA, Blueskin Butyl Flash, Air-Bloc All Weather STPE or Air-Bloc LF) – 12-inches wide (max.).

## Tech-talk: Henry NFPA 285 Assemblies

**Table 3.2 Walls containing Dow Thermax – 3 inches thick (max) for light claddings**

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 20-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirements</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None</li> <li>Fiberglass (batt type Class A, ASTM E84 faced or un-faced)</li> <li>Full stud depth (max.) Dow Styrofoam Spray Polyurethane Foam CM2030, 2045 or 2060 complying with ESR 2670. Apply to interior side of exterior sheathing</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>1/2 inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>1/2 inch thick (min.) FRTW sheathing complying with IBC Section 2303.2 and installed in accordance with code allowances for Types I, II, III or IV construction</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin SA or Blueskin SA LT</li> <li>Blueskin VP160</li> <li>Foilskin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b>	Dow Thermax Insulation – 3 inches thick (max.)
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5, 6, 7 or 8</i>	<ol style="list-style-type: none"> <li>Cast stone – 3/4 inch thick (min.) bonded using cementitious mortar to a 1/2 inch thick (min.) cement board or gypsum sheathing</li> <li>Metal Composite Material (MCM) – systems that have successfully passed NFPA 285</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> <li>Uninsulated metal panels including steel, copper, or aluminum</li> <li>Fiber cement board siding – 1-1/4 inch thick (min.)</li> <li>Concrete Panels – 1-1/2 inches thick (min.) with a 2 inch (max.) air gap between exterior insulation and concrete panels</li> <li>Ceramic tile – 3/8 inch thick (min.) bonded using noncombustible mortar adhesive to a 1/2 inch thick (min.) cement board or gypsum sheathing</li> <li>Thin set brick – 3/4 inch thick (min.), exterior cement plaster and lath</li> </ol>
<b>Special conditions</b>	Window headers must incorporate 25 ga. (min.) steel flashing.

## Tech-talk: Henry NFPA 285 Assemblies

**Table 3.3 Walls containing Dow Thermax – 4-1/4 inches thick (max) for heavy masonry claddings**

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 20-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth.</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirements.</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None</li> <li>Fiberglass (batt type Class A, ASTM E84 faced or un-faced)</li> <li>Full stud depth (max.) Dow Styrofoam Spray Polyurethane Foam CM2030, 2045 or 2060 complying with ESR 2670. Apply to interior side of exterior sheathing</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>1/2 inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>1/2 inch thick (min.) FRTW sheathing complying with IBC Section 2303.2 and installed in accordance with code allowances for Types I, II, III or IV construction</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin SA or Blueskin SA LT</li> <li>Blueskin VP160</li> <li>Foilskin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b>	Dow Thermax Insulation – 4-1/4 inches thick (max.)
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5 or 6</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – 3/4 inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> <li>Concrete Panels – 1-1/2 inches thick (min.) with a 2 inch (max.) air gap between exterior insulation and concrete panels</li> </ol>
<b>Special conditions</b>	Window headers must incorporate 25 ga. (min.) steel flashing.

## Tech-talk: Henry NFPA 285 Assemblies

**Table 3.4 Walls containing Johns Manville - AP Foil Faced Sheathing – 4-1/2 inches thick (max.)**

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 20-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirement</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3, 4 or 5</i>  <i>Note: items 2-4 may incorporate a Class A vapor barrier film</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation per ASTM E136</li> <li>Mineral fiber (Board type Class A, ASTM E84 faced or un-faced)</li> <li>Fiberglass (Batt type Class A, ASTM E84 faced or un-faced)</li> <li>Henry Permax SPF - 6 inches (max.) - See special conditions (do not use spray polyurethane foam stud cavity insulation if incorporating an interior vapor barrier membrane - see optional interior vapor barrier row below)</li> </ol>
<b>Optional interior vapor barrier</b> <i>Use either 1 or 2</i>	<ol style="list-style-type: none"> <li>None</li> <li>Class A vapor barrier film (do not use spray polyurethane foam stud cavity insulation if incorporating an interior vapor barrier membrane -see note above)</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>1/2 inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin SA or Blueskin SA LT</li> <li>Blueskin VP160</li> <li>FoilSkin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b>	Johns Manville AP Foil Faced Sheathing Polyiso – 4.5 inches thick (max.)
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4 or 5</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – 3/4 inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> </ol>
<b>Special conditions</b>	Use 0.03 inch stainless flashing header treatment when polyisocyanurate exterior insulation is installed in conjunction with spray polyurethane foam cavity insulation.
<b>Flashing of window, door and other exterior wall penetrations</b>	Flash window, door and exterior penetrations in accordance with applicable code using asphalt, acrylic or butyl based flashing (Blueskin Metal Clad, Blueskin SA, Blueskin Butyl Flash, Air-Bloc All Weather STPE or Air-Bloc LF) – 12-inches wide (max.).

## Tech-talk: Henry NFPA 285 Assemblies

Table T3.5 Hunter Xci CG, Hunter Xci Class A and Hunter Xci-286 – 3-1/2 inch thick (max.)

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 25-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth.</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirements.</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation (faced or un-faced) per ASTM E136</li> <li>Mineral fiber (board type Class A, faced or un-faced meeting ASTM E84)</li> <li>Fiberglass (batt type Class A, faced or un-faced meeting ASTM E84)</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2)</li> <li>1/2 inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>1/2 inch thick (min.) FRTW sheathing complying with IBC Section 2303.2 and installed in accordance with code allowances for Types I, II, III or IV construction</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin VP160</li> <li>Foilskin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>Hunter Xci CG – 3-1/2 inch thick (max.)</li> <li>Hunter Xci Class A – 3-1/2 inch thick (max.)</li> <li>Hunter Xci-286 – 3-1/2 inch thick (max.)</li> </ol>
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or 11</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – 3/4 inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> <li>Metal Composite Material (MCM) – systems that have successfully passed NFPA 285</li> <li>Uninsulated metal panels including steel, copper, or aluminum</li> <li>Uninsulated fiber cement siding</li> <li>Stone/Aluminum Honeycomb Composite Panels – systems that have successfully passed NFPA 285</li> <li>Autoclaved-aerated concrete (AAC) panels – systems that have successfully passed NFPA 285</li> <li>Terracotta cladding – Any 1/2 inch thick (min.) rain-screen terra cotta with ventilated shiplap</li> </ol>
<b>Special conditions</b>	Install 25 gauge (min.) steel flashing at window header.

## Tech-talk: Henry NFPA 285 Assemblies

Table 3.6 Hunter Xci-Foil – 3-1/2 inch thick (max.)

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 25-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth.</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirements.</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation (faced or un-faced) per ASTM E136</li> <li>Mineral fiber (board type Class A, faced or un-faced meeting ASTM E84)</li> <li>Fiberglass (batt type Class A, faced or un-faced meeting ASTM E84)</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2)</li> <li>1/2 inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>1/2 inch thick (min.) FRTW sheathing complying with IBC Section 2303.2 and installed in accordance with code allowances for Types I, II, III or IV construction</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin VP160</li> <li>Foilskin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b>	Hunter Xci-Foil – 3-1/2 inch thick (max.)
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4 or 5</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – 3/4 inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> </ol>
<b>Special conditions</b>	Install 25 gauge (min.) steel flashing at window header.

## Tech-talk: Henry NFPA 285 Assemblies

Table 3.7 Hunter Xci-Foil (Class A) – 3.5 inches thick (max.)

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 20-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirement</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3, 4 or 5</i>  <i>Note: items 2-4 may incorporate a Class A vapor barrier film</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation per ASTM E136</li> <li>Mineral fiber (Board type Class A, ASTM E84 faced or un-faced)</li> <li>Fiberglass (Batt type Class A, ASTM E84 faced or un-faced)</li> <li>Henry Permax SPF - 6 inches (max.) - See special conditions (do not use spray polyurethane foam stud cavity insulation if incorporating an interior vapor barrier membrane - see optional interior vapor barrier row below)</li> </ol>
<b>Optional interior vapor barrier</b> <i>Use either 1 or 2</i>	<ol style="list-style-type: none"> <li>None</li> <li>Class A vapor barrier film (do not use spray polyurethane foam stud cavity insulation if incorporating an interior vapor barrier membrane -see note above)</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>1/2 inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>1/2 inch thick (min.) FRTW sheathing complying with IBC Section 2303.2 or LP FlameBlock (2 sided, 7/16" min.) installed in accordance with code allowances for Types I, II, III or IV construction</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin SA or Blueskin SA LT</li> <li>Blueskin VP160</li> <li>FoilSkin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b>	Hunter Xci-Foil (Class A) – 3.5 inches thick (max.)
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – 3/4 inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> <li>Aluminum Composite Material (ACM) – systems that have successfully passed NFPA 285</li> <li>Uninsulated metal panels including steel, copper, or aluminum</li> <li>Uninsulated fiber cement siding</li> <li>Autoclaved-aerated concrete (AAC) panels – systems that have successfully passed NFPA 285</li> <li>Thin set brick</li> </ol>
<b>Special conditions</b>	Use 0.03 inch stainless flashing header treatment when polyisocyanurate exterior insulation is installed in conjunction with spray polyurethane foam cavity insulation.
<b>Flashing of window, door and other exterior wall penetrations</b>	Flash window, door and exterior penetrations in accordance with applicable code using asphalt, acrylic or butyl based flashing (Blueskin Metal Clad, Blueskin SA, Blueskin Butyl Flash, Air-Bloc All Weather STPE or Air-Bloc LF) – 12-inches wide (max.).

## Tech-talk: Henry NFPA 285 Assemblies

**Table 3.8.A Hunter Xci-Ply – 3-1/2 inch thick (max.) – Henry air barrier installed onto exterior grade sheathing**

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 25-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth.</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirements.</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation (faced or un-faced) per ASTM E136</li> <li>Mineral fiber (board type Class A, faced or un-faced meeting ASTM E84)</li> <li>Fiberglass (batt type Class A, faced or un-faced meeting ASTM E84)</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2)</li> <li>1/2 inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>1/2 inch thick (min.) FRTW sheathing complying with IBC Section 2303.2 and installed in accordance with code allowances for Types I, II, III or IV construction</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin SA or Blueskin SA LT</li> <li>Blueskin VP160</li> <li>Foilskin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b>	Hunter Xci-Ply – 3-1/2 inch thick (max.)
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – 3/4 inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> <li>Metal Composite Material (MCM) – systems that have successfully passed NFPA 285</li> <li>Uninsulated metal panels including steel, copper, or aluminum</li> <li>Uninsulated fiber cement siding</li> <li>Stone/Aluminum Honeycomb Composite Panels – systems that have successfully passed NFPA 285</li> <li>Autoclaved-aerated concrete (AAC) panels – systems that have successfully passed NFPA 285</li> <li>Thin set brick</li> <li>Terracotta cladding – Any 1/2 inch thick (min.) rain-screen terra cotta with ventilated shiplap</li> </ol>
<b>Special conditions</b>	Install 25 gauge (min.) steel flashing at window header.



## Tech-talk: Henry NFPA 285 Assemblies

**Table 3.8.B Hunter Xci-Ply – 3-1/2 inch thick (max.) – Henry air barrier installed onto Hunter Xci-Ply**

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 25-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth.</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirements.</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation (faced or un-faced) per ASTM E136</li> <li>Mineral fiber (board type Class A, faced or un-faced meeting ASTM E84)</li> <li>Fiberglass (batt type Class A, faced or un-faced meeting ASTM E84)</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2)</li> <li>1/2 inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>1/2 inch thick (min.) FRTW sheathing complying with IBC Section 2303.2 and installed in accordance with code allowances for Types I, II, III or IV construction</li> </ol>
<b>Exterior insulation</b>	Hunter Xci-Ply – 3-1/2 inch thick (max.)
<b>Henry air barrier installed onto exterior insulation</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin VP160</li> <li>Foilskin</li> </ol>
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – 3/4 inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> <li>Metal Composite Material (MCM) – systems that have successfully passed NFPA 285</li> <li>Uninsulated metal panels including steel, copper, or aluminum</li> <li>Uninsulated fiber cement siding</li> <li>Stone/Aluminum Honeycomb Composite Panels – systems that have successfully passed NFPA 285</li> <li>Autoclaved-aerated concrete (AAC) panels – systems that have successfully passed NFPA 285</li> <li>Thin set brick</li> <li>Terracotta cladding – Any 1/2 inch thick (min.) rain-screen terra cotta with ventilated shiplap</li> </ol>
<b>Special conditions</b>	Install 25 gauge (min.) steel flashing at window header.

## Tech-talk: Henry NFPA 285 Assemblies

**Table 4. Walls containing mineral wool insulation**

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 25-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>4 pcf. Mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth.</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirements.</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3, 4 or 5</i>  <i>Note: items 2-4 may incorporate a Class A vapor barrier film</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation per ASTM E136</li> <li>Mineral fiber (Board type Class A, ASTM E84 faced or un-faced)</li> <li>Fiberglass (Batt type Class A, faced or un-faced meeting ASTM E84)</li> <li>Henry Permax SPF – 6 inches (max.) (do not use spray polyurethane foam stud cavity insulation if incorporating an interior vapor barrier membrane – see optional interior vapor barrier row below)</li> </ol>
<b>Optional interior vapor barrier</b> <i>Use either 1 or 2</i>	<ol style="list-style-type: none"> <li>None</li> <li>Class A vapor barrier film (do not use spray polyurethane foam stud cavity insulation if incorporating an interior vapor barrier membrane – see note above)</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>½ inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>½ inch thick (min.) FRTW sheathing complying with IBC Section 2303.2 or LP FlameBlock (2 sided, 7/16" min.) installed in accordance with code allowances for Types I, II, III or IV construction</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin SA or Blueskin SA LT</li> <li>Blueskin VP160</li> <li>FoilSkin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b>	Mineral wool insulation as per ASTM C612 and meeting the following conditions: <ol style="list-style-type: none"> <li>1-1/2 inch thick minimum</li> <li>Noncombustible via ASTM E136 testing</li> <li>Density range from 4.0 to 9.0 lbs/ft<sup>3</sup></li> <li>R-value/inch range from 3.5 to 4.5</li> <li>Mechanically attach mineral wool</li> <li>Completely cover the air barrier membrane with mineral wool</li> </ol>
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 or 13</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – ¾ inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> <li>Aluminum Composite Material (ACM) – systems that have successfully passed NFPA 285</li> <li>Uninsulated metal panels including steel, copper, or aluminum</li> <li>Fiber cement siding</li> <li>Autoclaved-aerated concrete (AAC) panels – systems that have successfully passed NFPA 285</li> <li>Thin set brick</li> <li>Concrete Masonry Units (CMU) – 4 inches thick (min.) with a 2 inch (max) air gap between exterior insulation and CMU</li> <li>Concrete Panels – 2 inches thick (min.) with a 2 inch (max.) air gap between exterior insulation and concrete panels</li> <li>Stone/Aluminum Honeycomb Composite Panels – systems that have successfully passed NFPA 285</li> </ol>
<b>Flashing of window, door and other exterior wall penetrations</b>	Flash window, door and exterior penetrations in accordance with applicable code using asphalt, acrylic or butyl based flashing (Blueskin Metal Clad, Blueskin SA, Blueskin Butyl Flash, Air-Bloc All Weather STPE or Air-Bloc LF) – 12-inches wide (max.).

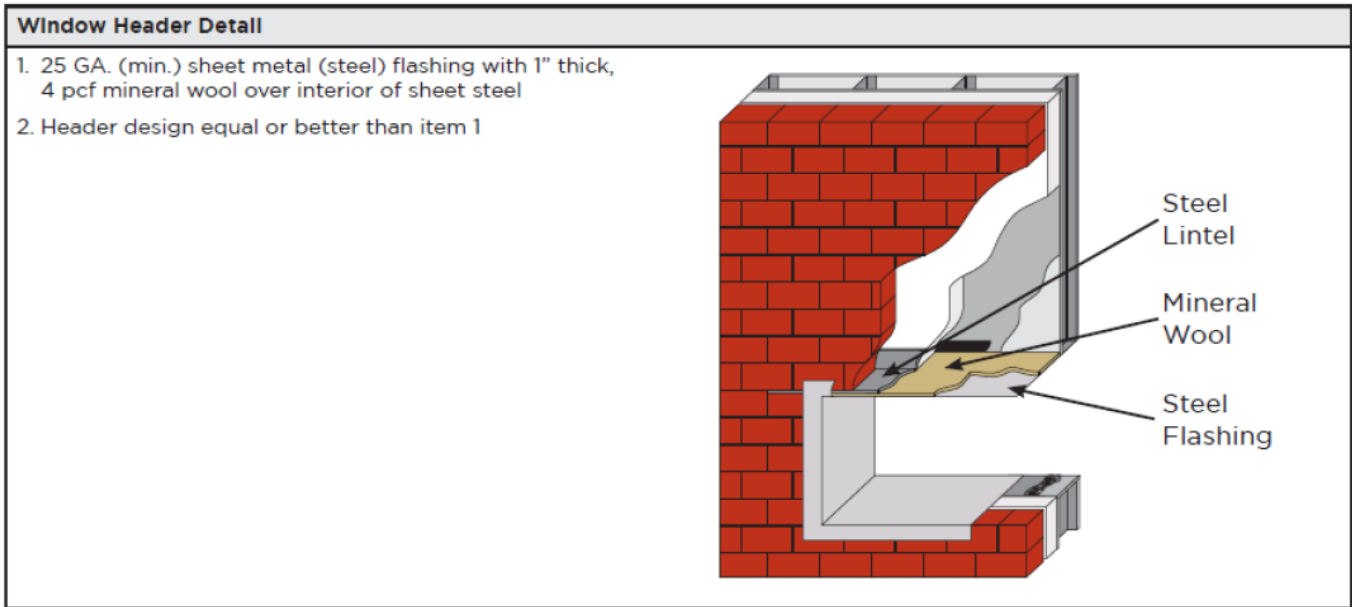
## Tech-talk: Henry NFPA 285 Assemblies

**Table 5. Walls containing Expanded Polystyrene (EPS) insulation**

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 20-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirements</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3, 4 or 5</i>  <i>Note: items 2-4 may incorporate a Class A vapor barrier film</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation per ASTM E136</li> <li>Mineral fiber (Board type Class A, ASTM E84 faced or un-faced)</li> <li>Fiberglass (Batt type Class A, ASTM E84 faced or un-faced)</li> <li>Henry Permax SPF – 6 inch (max.) (do not use spray polyurethane foam stud cavity insulation if incorporating an interior vapor barrier membrane - see optional interior vapor barrier row below)</li> </ol>
<b>Optional interior vapor barrier</b> <i>Use either 1 or 2</i>	<ol style="list-style-type: none"> <li>None</li> <li>Class A vapor barrier film (do not use spray polyurethane foam stud cavity insulation if incorporating an interior vapor barrier membrane - see note above)</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>1/2 inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>1/2 inch thick (min.) FRTW sheathing complying with IBC Section 2303.2 or LP FlameBlock (2 sided, 7/16" min.) installed in accordance with code allowances for Types I, II, III or IV construction</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin SA or Blueskin SA LT</li> <li>Blueskin VP160</li> <li>Foilskin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b> <i>Use either 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12</i>	<ol style="list-style-type: none"> <li>Atlas ThermalStar CVT™ 25 – 5.4-inch thick (max.)</li> <li>Atlas ThermalStar CVT 15 – 7.2-inch thick (max.)</li> <li>Atlas ThermalStar LCi™ 25 – 5.4-inch thick (max.)</li> <li>Atlas ThermalStar LCi 15 – 7.2-inch thick (max.)</li> <li>Atlas ThermalStar CHROME 25 – 5.4-inch thick (max.)</li> <li>Atlas ThermalStar CHROME 15 – 7.2-inch thick (max.)</li> <li>AFM Foam Control® EPS Type I – 10.75-inch (max.)</li> <li>AFM Foam Control EPS Type VIII – 8.25-inch (max.)</li> <li>AFM Foam Control EPS Type II – 7-inch (max.)</li> <li>AFM Foam Control EPS Type IX – 5.25-inch (max.)</li> <li>AFM Foam Control EPS Type XIV – 4-inch (max.)</li> <li>AFM Foam Control EPS Type XV – 3.25-inch (max.)</li> </ol>
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4 or 5</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – 3/4 inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> </ol>
<b>Special conditions</b>	Use header treatment shown in figure 4 for all window and door openings in walls utilizing EPS insulation.
<b>Flashing of window, door and other exterior wall penetrations</b>	Flash window, door and exterior penetrations in accordance with applicable code using asphalt, acrylic or butyl based flashing (Blueskin Metal Clad, Blueskin SA, Blueskin Butyl Flash, Air-Bloc All Weather STPE or Air-Bloc LF) – 12-inches wide (max.).

## Tech-talk: Henry NFPA 285 Assemblies

Figure 4 – Expanded Polystyrene (EPS) Window/door opening detail



Source: AFM Technologies

## Tech-talk: Henry NFPA 285 Assemblies

**Table 6. Walls with Henry air barriers and excluding exterior insulation**

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 25-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth.</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirements.</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation per ASTM E136</li> <li>Mineral fiber (Board type Class A, ASTM E84 faced or un-faced)</li> <li>Fiberglass (Batt type Class A, ASTM E84 faced or un-faced)</li> </ol>
<b>Optional interior vapor barrier</b> <i>Use either 1 or 2</i>	<ol style="list-style-type: none"> <li>None</li> <li>Class A vapor barrier film</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>1/2 inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>1/2 inch thick (min.) FRTW sheathing complying with IBC Section 2303.2 or LP FlameBlock (2 sided, 7/16" min.) installed in accordance with code allowances for Types I, II, III or IV construction</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin VP160</li> <li>FoilSkin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b>	None
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 or 11</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – 3/4 inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> <li>Uninsulated metal panels including steel, copper, or aluminum</li> <li>Uninsulated fiber cement siding</li> <li>Metal Composite Material (MCM) – systems that have successfully passed NFPA 285</li> <li>Concrete Masonry Units (CMU) – 4 inches thick (min.) with a 2 inch (max) air gap between exterior insulation and CMU</li> <li>Concrete Panels – 2 inch thick (min.) panel, with a 2 inch (max.) air gap between exterior insulation and concrete panel</li> <li>Insulated Concrete Sandwich Panels – 2 inch thick (min.) outer and inner faces. 2 inch (max.) air gap between inner face and wall system</li> </ol>
<b>Flashing of window, door and other exterior wall penetrations</b>	Flash window, door and exterior penetrations in accordance with applicable code using asphalt, acrylic or butyl based flashing (Blueskin Metal Clad, Blueskin SA, Blueskin Butyl Flash, Air-Bloc All Weather STPE or Air-Bloc LF) – 12-inches wide (max.).

## Tech-talk: Henry NFPA 285 Assemblies

### NFPA 285 Approved Assemblies by Third Party

Certification of NFPA 285 test results or extension by engineering analysis provided by listed manufacturer. Henry did not participate in their testing or certification processes and therefore assumes no responsibility for their results. Contact the product specific manufacturer for more information.

#### Laminators Inc. – Omega-Lite Dry Seal System

The assemblies below are the property of Laminators Inc. For additional information, clarification or installation questions please contact Laminators Inc. at 877-OMEGA77. You may also visit their website at [www.laminatorsinc.com](http://www.laminatorsinc.com).

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 25-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1 or 2</i>	<ol style="list-style-type: none"> <li>4 pcf. Mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth.</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirements for Type III construction.</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation per ASTM E136</li> <li>Mineral fiber (Board type Class A, ASTM E84 faced or un-faced)</li> <li>Fiberglass (Batt type Class A, ASTM E84 faced or un-faced)</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>½ inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>½ inch thick (min.) FRTW structural panels in Type III construction</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21S</li> <li>Blueskin VP160</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b> <i>Use either 1,2, 3, 4, 5, 6, or 7</i>	<ol style="list-style-type: none"> <li>None</li> <li>1.6" Omega CI Insulation Panel (1" Polyiso, 5/8" FT Plywood)</li> <li>2.1" Omega CI Insulation Panel (1-1/2" Polyiso, 5/8" FT Plywood)</li> <li>2.6" Omega CI Insulation Panel (2" Polyiso, 5/8" FT Plywood)</li> <li>3.1" Omega CI Insulation Panel (2-1/2" Polyiso, 5/8" FT Plywood)</li> <li>3.6" Omega CI Insulation Panel (3" Polyiso, 5/8" FT Plywood)</li> <li>4.1" Omega CI Insulation Panel (3-1/2" Polyiso, 5/8" FT Plywood)</li> </ol>
<b>Exterior veneer</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>6 mm (max.) Omega-Lite ACM with Dry Seal Installation System</li> <li>6 mm (max.) Omega-Lite ACM with Rout &amp; Return Installation System               <ol style="list-style-type: none"> <li>Contact Laminators for veneer specific requirements</li> </ol> </li> <li>6 mm (max.) Omega-Lite ACM with 1 Piece, Tight-Fit Molding (1P) Installation System</li> <li>6 mm (max.) Omega-Lite ACM with Clip &amp; Caulk (CC) Installation System. (Clip &amp; Caulk System must use Pecora 980 NST or equivalent silicone caulk)</li> </ol>

## Tech-talk: Henry NFPA 285 Assemblies

### Kingspan Kooltherm

The assemblies below are the property of Kingspan. For additional information, clarification or installation questions please contact Kingspan at (800) 241-4402. You may also visit their website at [www.kingspan.com](http://www.kingspan.com).

### Kingspan Kooktherm – Table A – 3 inch thick (max.)

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 20-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b>	4 pcf. Mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth.
<b>Stud cavity insulation</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation per ASTM E136</li> <li>Fiberglass (Batt type Class A, ASTM E84 faced or un-faced)</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>½ inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR (not verified for use with 3A Composites Alucobond Plus MCM Panels)</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin VP160</li> <li>FoilSkin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b>	Kingspan Kooltherm K15, K5, K8, K10, K12 or K20 insulation – Minimum 1 inch (25 mm) thick to a maximum of 3 inches (75 mm) thick. Standard silver aluminum, black coated aluminum, white coated aluminum, or glass tissue facers are all acceptable facing materials.
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – ¾ inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> <li>Uninsulated metal panels including steel, copper, or aluminum               <ol style="list-style-type: none"> <li>Aluminum cladding shall be minimum 0.080-inch thick.</li> <li>Steel cladding shall be minimum 0.0149-inch thick.</li> <li>Copper cladding shall be minimum 0.0216-inch thick.</li> </ol> </li> <li>Fiber cement siding (noncombustible)               <ol style="list-style-type: none"> <li>Minimum ¼-inch thick fiber-cement siding complying with ASTM C1186, Type A, minimum Grade II. Any standard installation technique with noncombustible furring can be used. A maximum 1½-inch air gap allowed behind the fiber-cement siding.</li> </ol> </li> <li>Metal Composite Material (MCM) – 4-mm thick (max.) systems that have successfully passed NFPA 285</li> <li>Concrete Masonry Units (CMU) – 4 inches thick (min.) with a 2 inch (max) air gap between exterior insulation and CMU</li> <li>Concrete Panels – 2 inch thick (min.) panel, with a 2 inch (max.) air gap between exterior insulation and concrete panel</li> <li>Swisspearl Panels – minimum 0.315-inch (8 mm) thick with closed or open joints (maximum ½ inch joints when open). Any standard installation technique using noncombustible furring can be used. A maximum 1½-inch air gap allowed behind the fiber-cement siding.</li> <li>Henkel Polybit Industries Limited Ceresit EIFS – EIFS system consisting of Ceresit-CT 85 adhesive mortar and basecoat, Ceresit-CT 16 primer, and Ceresit-CT 60 finish coat.</li> </ol>
<b>Flashing of window, door and other exterior wall penetrations</b>	Flash window, door and exterior penetrations in accordance with applicable code using asphalt, acrylic or Butyl based flashing (Blueskin Metal Clad, Blueskin SA, Blueskin Butyl Flash, Air-Bloc All Weather STPE or Air-Bloc LF) – 12-inches wide (max.).

## Tech-talk: Henry NFPA 285 Assemblies

**Kingspan Kooktherm - Table B – 4-3/4 inch thick (max.)**

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Studs – 20-gauge (min.) 3-5/8 inch (min.) steel studs spaced 24 inches OC (max.) with lateral bracing every 4 feet vertically or as required by building code               <ol style="list-style-type: none"> <li>5/8 inch thick, Type X, gypsum wallboard on interior</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b>	4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth.
<b>Stud cavity insulation</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation per ASTM E136</li> <li>Fiberglass (Batt type Class A, ASTM E84 faced or un-faced)</li> </ol>
<b>Optional interior vapor barrier</b> <i>Use either 1 or 2</i>	<ol style="list-style-type: none"> <li>None</li> <li>One layer of 6-mil thick (max.) polyethylene film</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>None (base wall systems 1 and 2 only)</li> <li>1/2 inch thick, exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR (not verified for use with 3A Composites Alucobond Plus MCM Panels)</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Air-Bloc All Weather STPE</li> <li>Blueskin Metal Clad</li> <li>Blueskin VP160</li> <li>FoilSkin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b>	Kingspan Kooltherm K15, K5, K8, K10, K12 or K20 insulation – Minimum 1-inch (25 mm) thick to a maximum of 4¾ inches (120 mm) thick. Standard silver aluminum, black coated aluminum, white coated aluminum, or glass tissue facers are all acceptable facing materials.
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5, 6 or 7</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – 3/4 inch thick (min.), exterior cement plaster and lath</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Concrete Masonry Units (CMU) – 4 inches thick (min.) with a 2 inch (max) air gap between exterior insulation and CMU</li> <li>Concrete Panels – 2 inch thick (min.) panel, with a 2 inch (max.) air gap between exterior insulation and concrete panel</li> <li>3A Composites Alucobond Plus MCM Panels – Panels system installed with maximum air gap of 2-7/8". (Air-Bloc 16MR not verified for use with this exterior veneer)</li> </ol>
<b>Flashing of window, door and other exterior wall penetrations</b>	Flash window, door and exterior penetrations in accordance with applicable code using asphalt, acrylic or butyl based flashing (Blueskin Metal Clad, Blueskin SA, Blueskin Butyl Flash, Air-Bloc All Weather STPE or Air-Bloc LF) – 12-inches wide (max.).



## Tech-talk: Henry NFPA 285 Assemblies

### Rmax

The assemblies below are the property of Rmax. For additional information, clarification or installation questions please contact Hunter Panels at 888-746-1114. You may also visit their website at [www.rmax.com](http://www.rmax.com).

### Rmax ECOBASEci, Rmax Durasheath, Rmax Thermasheath and ECOMAXci Ply

Henry assembly									
Wall component	Materials								
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Stud – 20-gauge (min.) 3-5/8" (min.) steel studs spaced 24" OC (max) with lateral bracing every 4 feet vertically or as required by building code.               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.).               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>								
<b>Floor line fire-stopping</b> <i>Use either 1 or 2</i> <i>Note- use 2 with FRTW framing</i>	<ol style="list-style-type: none"> <li>4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirements</li> </ol>								
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation (un-faced) per ASTM E136</li> <li>Mineral fiber (board type Class A, faced or un-faced meeting ASTM E84)</li> <li>Fiberglass (batt type Class A, faced or un-faced meeting ASTM E84)</li> </ol>								
<b>Exterior sheathing</b> <i>Use either 1, 2 or 3</i>	<ol style="list-style-type: none"> <li>1/2 inch thick (min.) exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>1/2 inch thick (min.) FRTW structural panels complying with IBC Section 2303.2 and installed in accordance with code allowances for Types I, II, III, or IV construction</li> </ol>								
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<table border="0"> <tr> <td>1. Air-Bloc 16MR</td> <td>5. Blueskin SA</td> </tr> <tr> <td>2. Air-Bloc 17MR</td> <td>6. Blueskin VP160</td> </tr> <tr> <td>3. Air-Bloc 21FR</td> <td>7. Foilskin</td> </tr> <tr> <td>4. Blueskin Metal Clad</td> <td></td> </tr> </table>	1. Air-Bloc 16MR	5. Blueskin SA	2. Air-Bloc 17MR	6. Blueskin VP160	3. Air-Bloc 21FR	7. Foilskin	4. Blueskin Metal Clad	
1. Air-Bloc 16MR	5. Blueskin SA								
2. Air-Bloc 17MR	6. Blueskin VP160								
3. Air-Bloc 21FR	7. Foilskin								
4. Blueskin Metal Clad									
<b>Exterior insulation installed onto Henry air barrier</b> <i>Use either 1, 2, 3 or 4</i>  <i>Installation may use FRT plywood on the exterior side (installed over exterior sheathing) or interior side (applied directly to studs). This option (ply on the interior) negates exterior sheathing since the FRT ply acts as the sheathing.</i>	<ol style="list-style-type: none"> <li>Rmax ECOBASEci – 4-1/2 inch (max.) foam with 5/8 inch (min.) FRT plywood. Installed in accordance with applicable code requirements. Must be applied perpendicular to studs with joints staggered. Fasteners used for securing panels must penetrate through the foam plastic into FRTW studs or steel framing. Design the system to handle the cladding and wind load per the applicable code.</li> <li>Rmax Durasheath – 4-1/2 inch (max.) single panel or multiple thinner panels</li> <li>Rmax – Thermasheath – 4-1/2 inch (max.) single panel or multiple thinner panels</li> <li>Rmax ECOMAXci Ply – 5/8 inch (min) to 4-1/2 inch (max.) FRT plywood thickness.</li> </ol> <p>Note: FRT plywood may be applied in the field or factory applied. Adhesive must not be full coverage</p>								
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – Minimum 3/4-inch thick, exterior cement plaster and lath. The secondary water-resistive barrier shall not be full coverage asphalt or self-adhered butyl membrane</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC511 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> <li>Metal Composite Material (MCM) – systems that have successfully passed NFPA 285</li> <li>Aluminum Composite Material (ACM) – systems that have successfully passed NFPA 285</li> <li>Uninsulated metal panels including steel, copper, or aluminum</li> <li>Uninsulated fiber cement siding</li> <li>Stone/Aluminum Honeycomb Composite Panels – systems that have successfully passed NFPA 285</li> <li>Autoclaved-aerated concrete (AAC) panels – systems that have successfully passed NFPA 285</li> <li>Thin set brick – Glen-Gery Thin Elite or Tabs II Panels System with 1/2 inch bricks using Tabs Wall Adhesive</li> <li>FunderMax M.Look – air gap between cladding or WRB must not exceed 1-1/2 inches</li> <li>Glen-Gary Tru-Brix (only with optional noncombustible mortar)</li> </ol>								
<b>Special conditions</b>	<p>Window headers must incorporate 20 GA (min.) steel flashing to cover air gaps between the exterior sheathing or exterior insulation and the exterior veneer. Flash window, door and exterior penetrations in accordance with applicable code using asphalt, acrylic or butyl based flashing (Blueskin Metal Clad, Blueskin SA, Blueskin Butyl Flash, Air-Bloc All Weather STPE or Air-Bloc LF) – 12-inches wide (max.).</p>								

## Tech-talk: Henry NFPA 285 Assemblies

### Rmax TSX-8500, Rmax TSX-8510, Rmax ECOMAXci, and ECOMAXci FR

Henry assembly	
Wall component	Materials
<b>Base wall system</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>Concrete wall</li> <li>Concrete masonry unit (CMU) wall</li> <li>Steel Stud – 20-gauge (min.) 3-5/8" (min.) steel studs spaced 24" OC (max) with lateral bracing every 4 feet vertically or as required by building code.               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> </ol> </li> <li>Where allowed in Types I, II, III, or IV construction, FRTW (fire retardant treated wood) studs complying with IBC Section 2303.2, min. nominal 2X4 dimension, spaced 24" OC (max.)               <ol style="list-style-type: none"> <li>5/8" (min.) type X Gypsum Wallboard Interior</li> <li>Bracing as required by code</li> </ol> </li> </ol>
<b>Floor line fire-stopping</b> <i>Use either 1 or 2</i> <i>Note- use 2 with FRTW framing</i>	<ol style="list-style-type: none"> <li>4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth</li> <li>FRTW fire blocking at floor line in accordance with applicable code requirements</li> </ol>
<b>Stud cavity insulation</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None</li> <li>Noncombustible insulation (un-faced) per ASTM E136</li> <li>Mineral fiber (board type Class A, faced or un-faced meeting ASTM E84)</li> <li>Fiberglass (batt type Class A, faced or un-faced meeting ASTM E84)</li> </ol>
<b>Exterior sheathing</b> <i>Use either 1, 2, 3 or 4</i>	<ol style="list-style-type: none"> <li>None (3 inch max. exterior insulation: all claddings, 4-1/2 inch max insulation: claddings 1-5)</li> <li>1/2 inch thick (min.) exterior grade gypsum sheathing</li> <li>5/8 inch thick, Type X, exterior grade gypsum sheathing</li> <li>1/2 inch thick (min.) FRTW structural panels complying with IBC Section 2303.2 and installed in accordance with code allowances for Types I, II, III, or IV construction</li> </ol>
<b>Henry air barrier installed onto exterior sheathing</b> <i>Select from list</i>	<ol style="list-style-type: none"> <li>Air-Bloc 16MR</li> <li>Air-Bloc 17MR</li> <li>Air-Bloc 21FR</li> <li>Blueskin Metal Clad</li> <li>Blueskin SA</li> <li>Blueskin VP160</li> <li>Foilskin</li> </ol>
<b>Exterior insulation installed onto Henry air barrier</b> <i>Use either 1, 2, 3 or 4</i>  <i>Installation may use FRT plywood on the exterior side (installed over exterior sheathing) or interior side (applied directly to studs). This option (ply on the interior) negates exterior sheathing since the FRT ply acts as the sheathing.</i>	<ol style="list-style-type: none"> <li>Rmax – TSX-8500 – 4-1/2 inch (max.) single panel or multiple thinner panels</li> <li>Rmax – TSX 8510 – 4-1/2 inch (max.) single panel or multiple thinner panels</li> <li>Rmax – ECOMAXci – 4-1/2 inch (max.) single panel or multiple thinner panels</li> <li>Rmax – ECOMAXci FR – 4-1/2 inch (max.) single panel or multiple thinner panels</li> </ol> <p>Note: See exterior sheathing options for thickness limitations when no exterior sheathing is used.            Note: FRT plywood may be applied in the field or factory applied. Adhesive must not be full coverage.</p>
<b>Exterior veneer</b> <i>Use either 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 or 14</i>	<ol style="list-style-type: none"> <li>Brick – Nominal 4 inch thick (min.), clay brick with a 2 inch (max.) air gap between insulation and brick, and standard veneer anchors installed 24 inches (max.) OC</li> <li>Stucco – Minimum 3/4-inch thick, exterior cement plaster and lath. The secondary water-resistive barrier shall not be full coverage asphalt or self-adhered butyl membrane</li> <li>Stone veneer – 2 inches thick (min.), using standard non-open joints</li> <li>Cast stone – 1-1/2 inches thick (min.) complying with ICC-ES AC51 using standard non-open joints</li> <li>Terracotta cladding – 1-1/4 inch thick (min.) (solid or equivalent by weight) using standard non-open joints</li> <li>Metal Composite Material (MCM) – systems that have successfully passed NFPA 285</li> <li>Aluminum Composite Material (ACM) – systems that have successfully passed NFPA 285</li> <li>Uninsulated metal panels including steel, copper, or aluminum</li> <li>Uninsulated fiber cement siding</li> <li>Stone/Aluminum Honeycomb Composite Panels – systems that have successfully passed NFPA 285</li> <li>Autoclaved-aerated concrete (AAC) panels – systems that have successfully passed NFPA 285</li> <li>Thin set brick – Glen-Gery Thin Elite or Tabs II Panels System with 1/2 inch bricks using Tabs Wall Adhesive</li> <li>FunderMax M.Look – air gap between cladding or WRB must not exceed 1-1/2 inches</li> <li>Glen-Gary Tru-Brix (only with optional noncombustible mortar)</li> </ol>
<b>Special conditions</b>	Window headers must incorporate 0.08 inch (min.) aluminum flashing to cover air gaps between the exterior sheathing or exterior insulation and the exterior veneer. Flash window, door and exterior penetrations in accordance with applicable code using asphalt, acrylic or butyl based flashing (Blueskin Metal Clad, Blueskin SA, Blueskin Butyl Flash, Air-Bloc All Weather STPE or Air-Bloc LF) – 12-inches wide (max.).

## Tech-talk: Henry NFPA 285 Assemblies

### TAKTL

The assemblies below are the property of TAKTL. For additional information, clarification or installation questions please contact TAKTL at 412-486-1600. You may also visit their website at [www.taktl-llc.com](http://www.taktl-llc.com).

Henry assembly	
Wall component	Materials
<b>Base wall system</b>	1. Steel Stud – 16-gauge (min.) 3-5/8" (min.) steel studs spaced 24" OC (max.) with lateral bracing every 4 feet vertically or as required by building code a. 5/8" (min.) type X Gypsum Wallboard Interior
<b>Floor line fire-stopping</b>	4 pcf. mineral wool in each stud cavity at floor lines – attached with Z-clips or equivalent. Safing thickness must match cavity depth
<b>Stud cavity insulation</b>	None
<b>Exterior sheathing</b>	5/8 inch thick, Type X, exterior grade gypsum sheathing
<b>Henry air barrier installed onto exterior sheathing</b>	Air-Bloc 16MR
<b>Exterior insulation installed onto Henry air barrier</b>	Roxul® Cavity Rock®, 2 inch (max.) mineral wool. Installed with 3 inch, solid based, insulation impaling pins 24 inches OC (max.) in accordance with applicable code requirements.
<b>Exterior veneer</b>	TAKTL THK Panel – 5/8 inch (max.) thick with Rainscreen Solutions Extruded Aluminum brackets and sub-girts and Taktl Extruded Aluminum Panel clips and rails. Install veneer in accordance with TAKTL NFPA 285 installation requirements.
<b>Special conditions</b>	Flash perimeter of window and door openings with 0.080 in. aluminum flashing.
<b>Flashing of window, door and other exterior wall penetrations</b>	Flash window, door and exterior penetrations in accordance with applicable code using asphalt, acrylic or butyl based flashing (Blueskin Metal Clad, Blueskin SA, Blueskin Butyl Flash, Air-Bloc All Weather STPE or Air-Bloc LF) – 12-inches wide (max.).



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