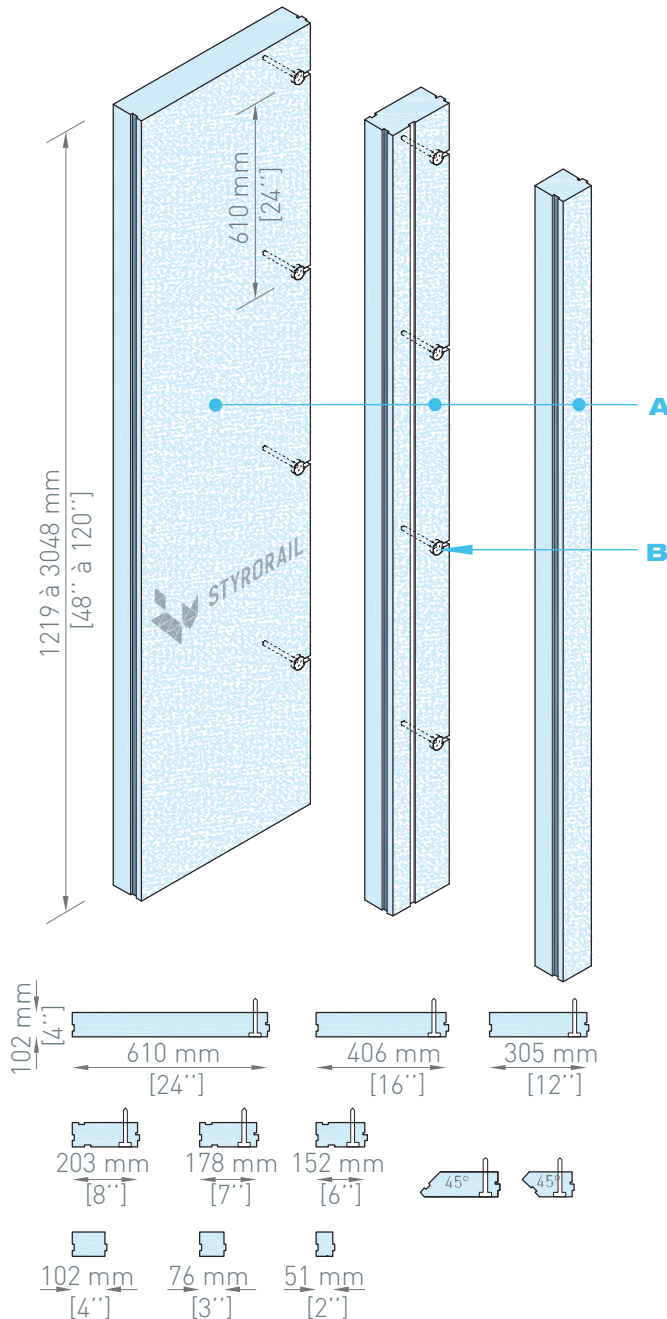




## Expanded Polystyrene Rigid Insulation for Concrete Forms

### INSTALLATION GUIDE



The **SR.F<sup>200</sup>** panels manufactured by Styro Rail™ are composed of type 2 expanded polystyrene [EPS] rigid insulation. They are inserted into traditional formwork before casting concrete and they are equipped with plastic ties fixed in the concrete wall used for finishing the wall.

#### ➤ RECOMMENDED USE

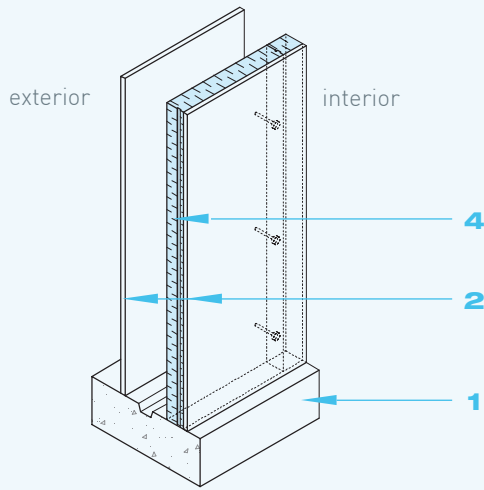
Install **SR.F<sup>200</sup>** panel are placed into traditional formwork before casting concrete, on the interior or exterior side of the walls, to obtain a continuous basement or above grade concrete wall insulation.

#### ➤ PANEL COMPOSITION

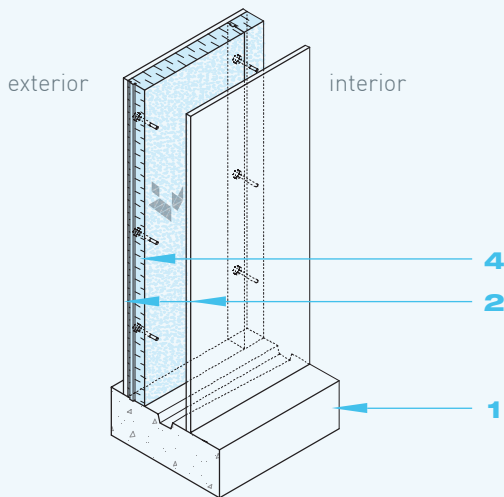
**A** Type 2 Expanded Polystyrene Rigid Panel Insulation [EPS] produced by Styro Rail™

**B** Patented plastic ties

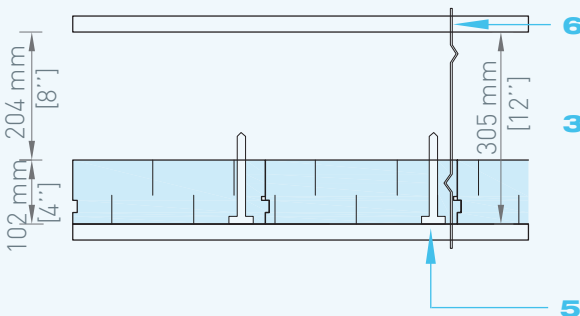
## PANEL INSTALLATION



INTERIOR INSTALLATION



EXTERIOR INSTALLATION



SR.F<sub>200</sub><sup>TM</sup>

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### GENERAL INSTALLATION

- 1 Pour footing according to plans and specifications.
- 2 Install the traditional wood forms on the footing.
- 3 Increase the space between the forms to accommodate a 4" panel.
- 4 Install the **SR.F<sup>TM</sup>200** panels vertically inside the wood forms before the pour of the concrete.
- 5 Position the panels so that the heads of the plastic ties are towards the surface of the wood forms and the perturbing section of the ties are directed towards the space between the forms.
- 6 Before the installation of the following form, place the metal ties. Use ties with a length of 305 mm [12"].
- 7 Install panels continuously and uniformly. Butt ends between panels.
- 8 Close the corners in accordance to the method described in this guide.
- 9 Pour the concrete between the wood forms and the insulating panels. Allow for the cement to cure according to plans and specifications. Deshutter.

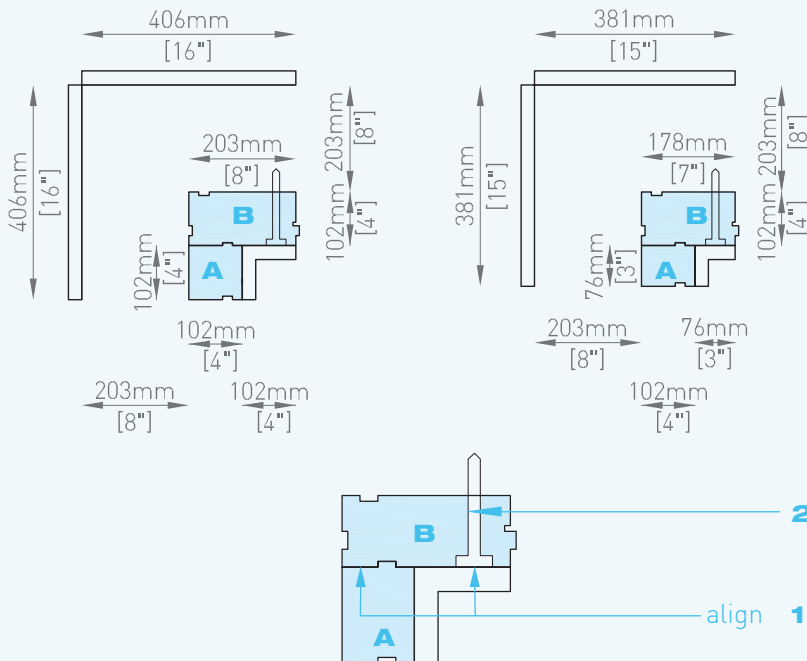
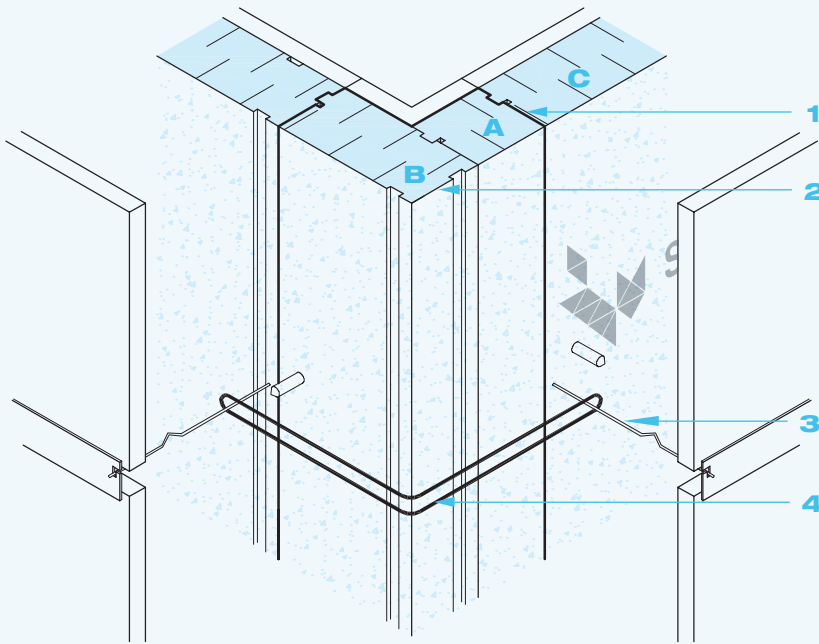
## PANEL INSTALLATION

SR.F<sub>002</sub><sup>TM</sup>

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### INSIDE CORNER

- 1** Install panel A against the surface of the wood form as illustrated. Align the panel A with the corner. Butt ends with panel C.
- 2** Insert the panel B in the panel A, the head of the plastic tie facing the wood form surface and the perturbing section of the tie directed towards the space between the forms.
- 3** Install the metal ties in every slot of the wood form. Pinch the insulating panel with the metal tie to rejoin the slot located behind the panel.
- 4** Install the elastics provided between the two metal ties so as to maintain the position of panels A and B.
- 5** Install formwork panels in the corner.



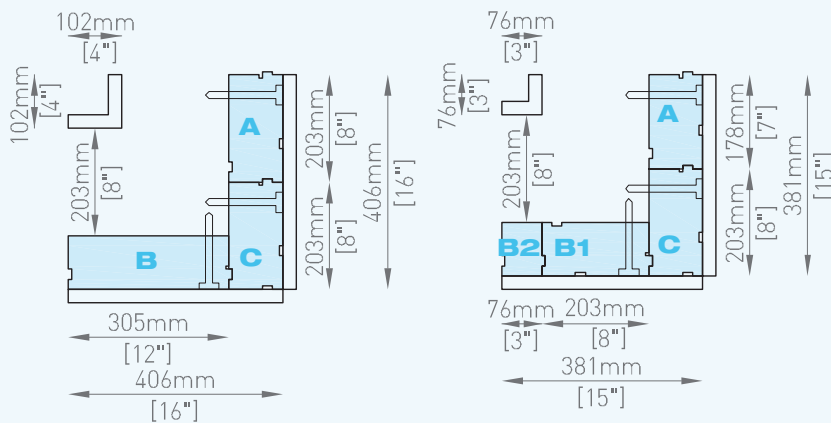
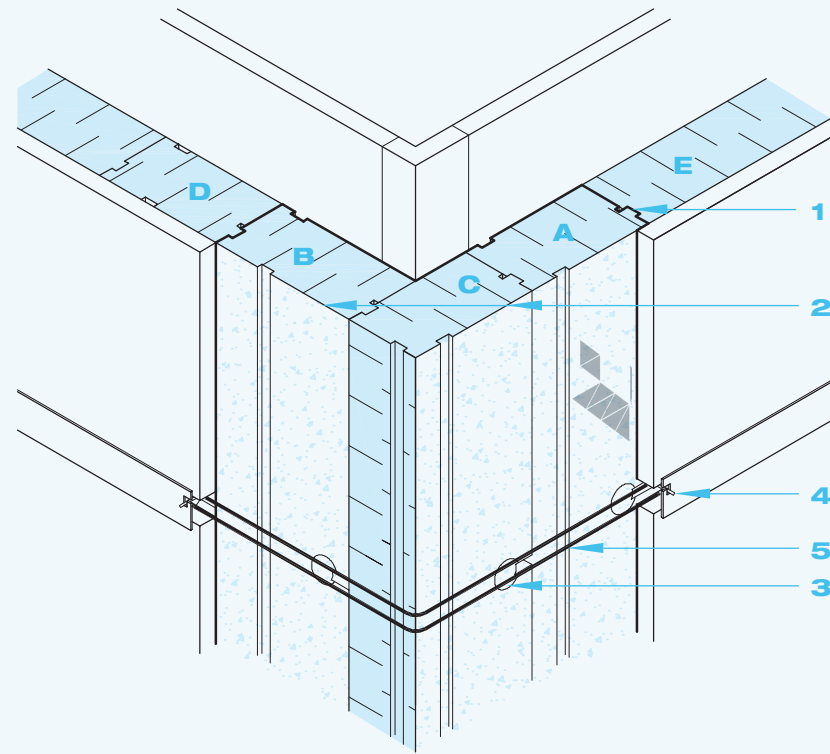
## PANEL INSTALLATION

SR.F<sub>002</sub><sup>TM</sup>

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### ➤ OUTSIDE CORNER

- 1** Install panel A against panel E. Butt ends.
- 2** Install panels B and C. Butt ends.
- 3** Insert the panels, the head of the plastic ties facing the wood form and the perturbing section of the tie facing the space between the forms.
- 4** Install the metal ties in every slot of the wood form. Pinch the insulating panel with the metal tie to rejoin the slot located behind the panel.
- 5** Install the elastics provided between the metal ties so as to maintain the position of panels A, B and C.



## PANEL INSTALLATION

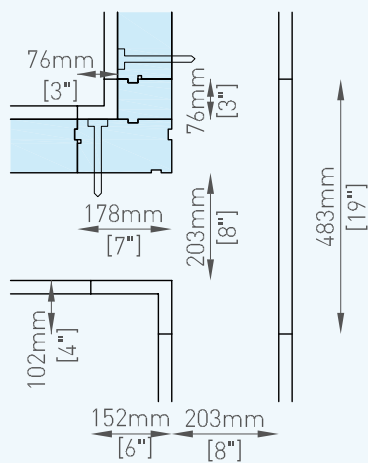
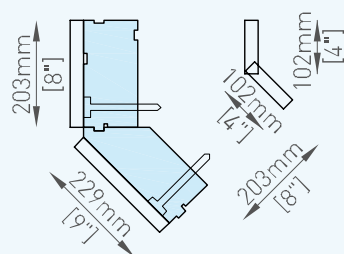
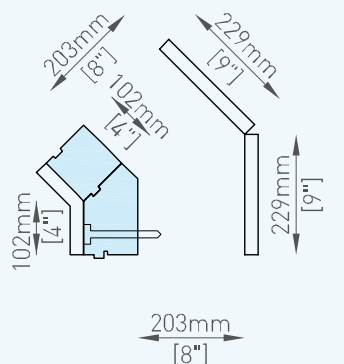
SR.F<sub>02</sub><sup>TM</sup>

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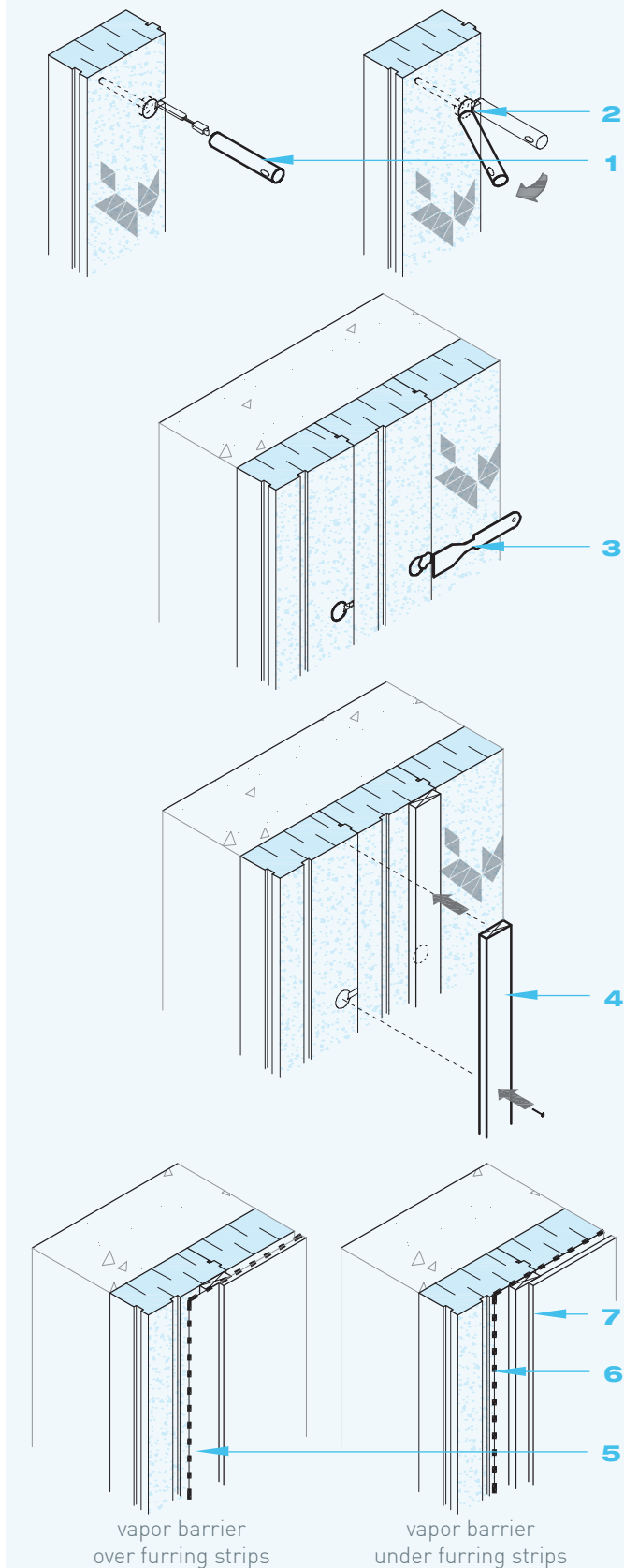


### ANGLE CORNER AND "T" JOINT

1 For angled corners or "T" joints; install the panels as illustrated.



## JUNCTION DETAILS



SR.Foam™

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## INTERIOR FINISH

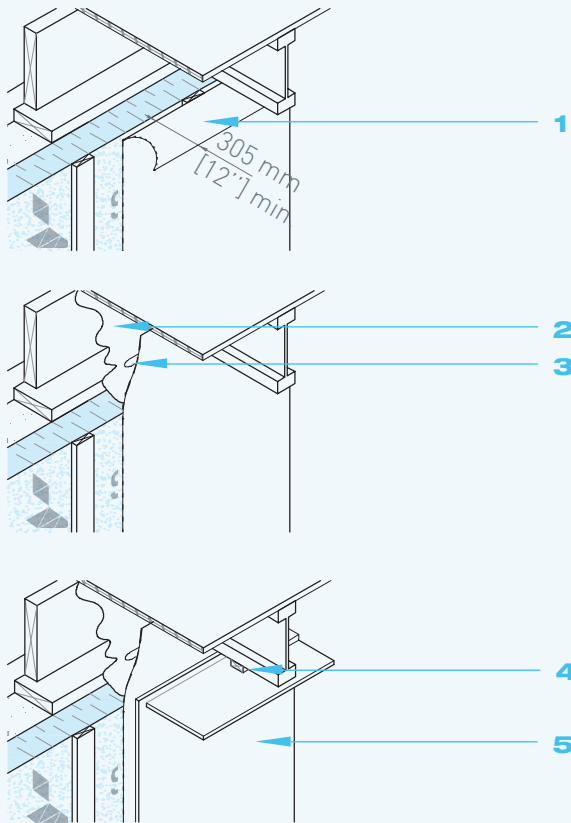
- 1 Insert a tubular tool in the perturbing section of the metal tie.
- 2 Rotate the tool so as to break the perturbing section of the metal tie.
- 3 Using a trowel; seal the openings where the plastic ties are located. Use a compatible adhesive for the insulation†.
- 4 Fix the 19 mm x 64 mm [1"x3"] furring strips on the insulating panels, through the plastic ties. Install the furring strips vertically. Use #8 wood screws of 38 mm [1-1/2"].
- 5 Install and seal a vapor barrier.
- 6 The vapor barrier can also be installed before the furring strips installation.
- 7 Install a protective barrier such as gypsum boards.

## JUNCTION DETAILS

SR.F<sub>80</sub><sup>TM</sup>

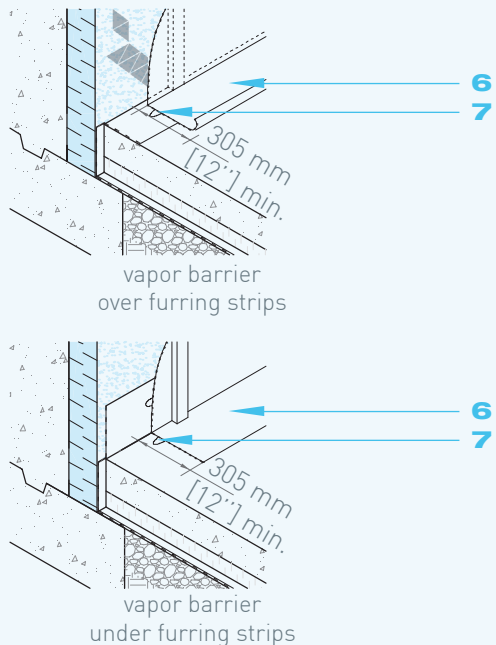
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### ➤ FLOOR JOIST



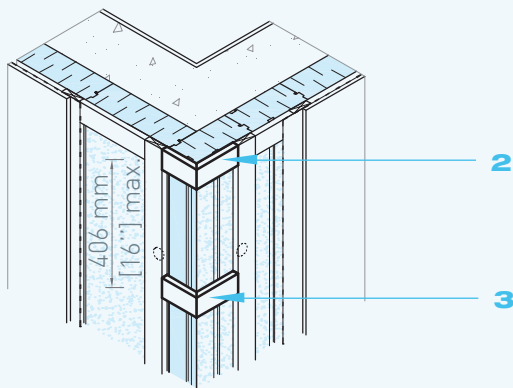
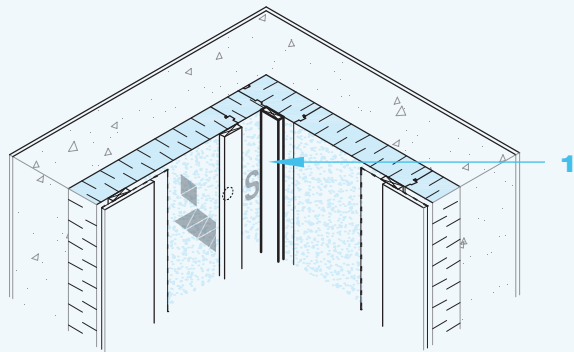
- 1** During the vapor barrier installation, leave a minimum 305 mm [12"] strip at the top of the wall.
- 2** Fill the cavity towards the joist header with a vapor barrier sprayed urethane.
- 3** Fold back the vapor barrier over the sprayed urethane. Fix the vapor barrier by applying an acoustic sealant bead<sup>††</sup>.
- 4** Install furring strips underneath the floor joists.
- 5** Install a protective barrier on wall and ceiling such as gypsum boards.

### ➤ CONCRETE SLAB



- 6** Leave a minimum 305 mm [12"] strip at the bottom of the wall to insure the continuity of the vapor barrier during the installation of the finished floor.
- 7** Apply an acoustic sealant<sup>††</sup> bead underneath the vapor barrier.

## JUNCTION DETAILS



SR.Foam™

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### ➤ INSIDE CORNER

**1** Fix a 19 mm x 64 mm [1"x3"] furring strip vertically at the interior corner, through the plastic ties.

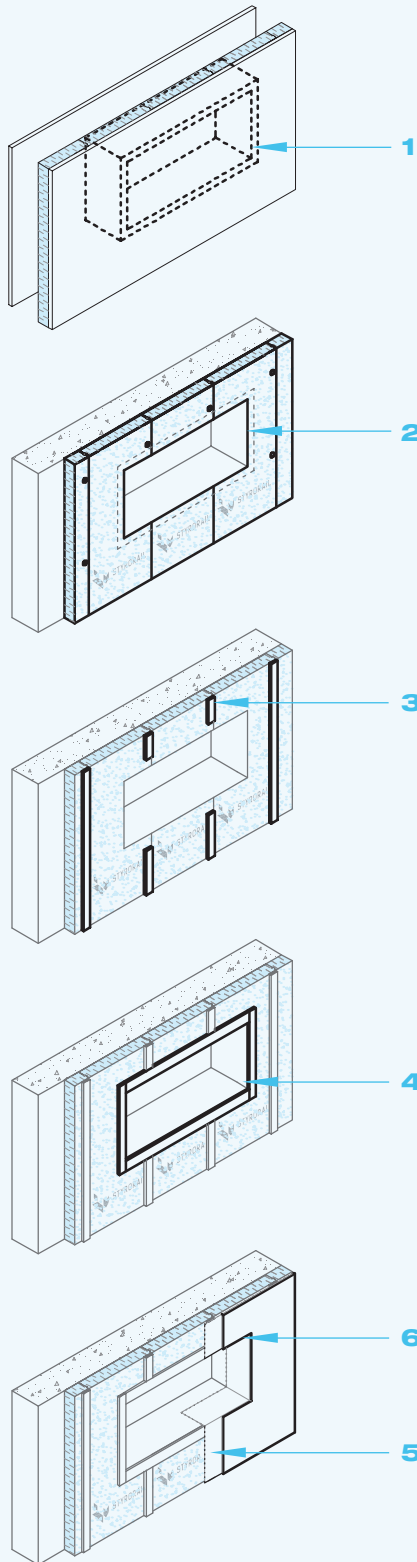
### ➤ OUTSIDE CORNER

**2** Install the 19 mm x 64 mm [1"x3"] furring strips horizontally between the vertical furring strips.

**3** Space at 406 mm [16"] max.



## JUNCTION DETAILS



SR.F<sub>82</sub><sup>TM</sup>

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### ➤ OPENING [DOOR AND WINDOW]

#### INTERIOR INSTALLATION

**1** Install a wood box inside the forms - between the form and the insulating panel - before the concrete pour, serving as backing for interior finish.

**2** Using a knife with a retractable blade or a drywall saw, cut panels to adjust them to doors and windows gross dimensions, before doors and windows installation. Cut panels flush to the gross opening.

**3** Fix the 19 mm x 64 mm [1"x3''] furring strips vertically on the insulating panels, through the plastic ties. Use #8 wood screws of 38 mm [1-1/2''].

**4** Fix the 19 mm x 64 mm [1"x3''] furring strips along the perimeter of the opening; into the backing and with #8 wood screws of 38 mm [1-1/2''].

**5** Install and seal a vapor barrier.

**6** Install a protective barrier such as gypsum boards.

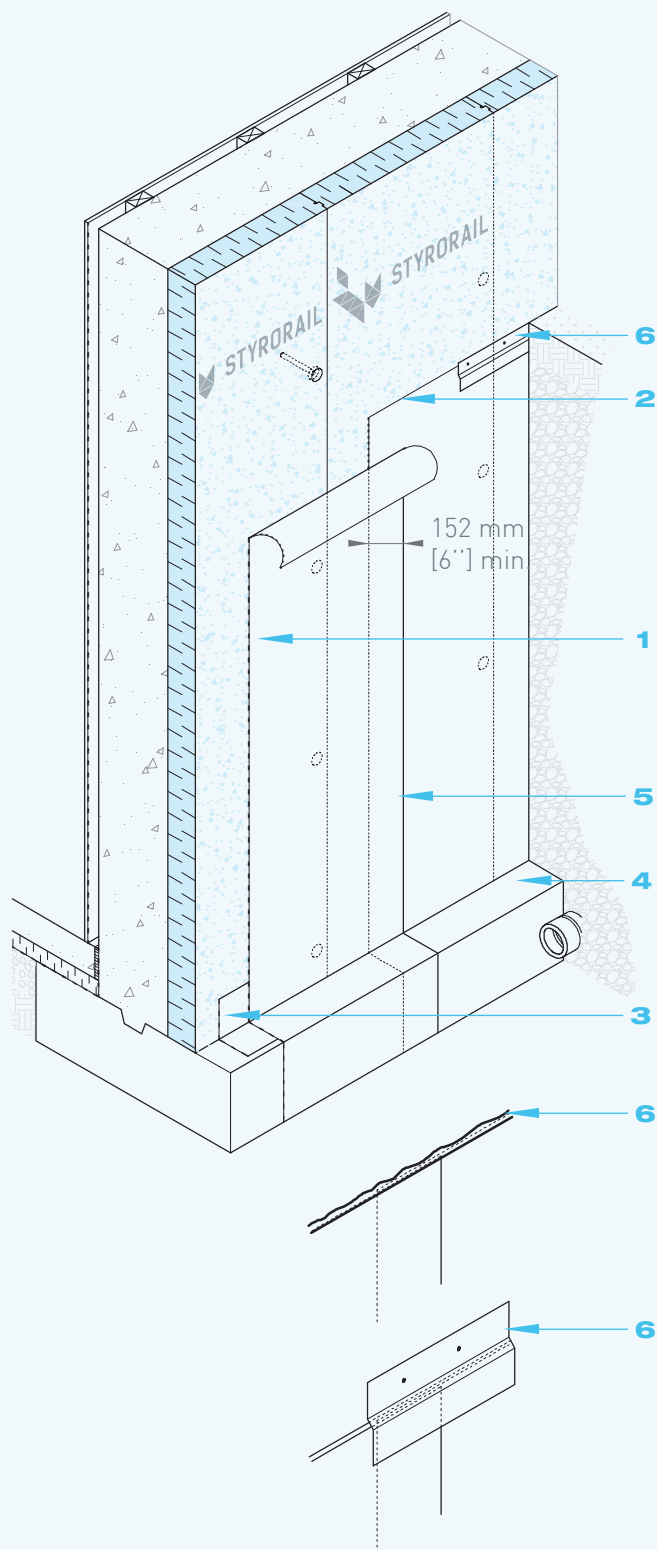
## JUNCTION DETAILS

SR.F<sup>200</sup>™

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### ➤ EXTERIOR FINISH

- 1** Install a compatible waterproofing membrane<sup>++</sup> on the **SR.F<sup>200</sup>™** panels. Install according to the manufacturer's instructions.
- 2** Install the waterproofing membrane until the finished ground level.
- 3** On the footing: install a membrane strip to reinforce the corner.
- 4** Install waterproofing membrane on the footing to repel water towards the french drain.
- 5** Overlap joints on a minimum of 152 mm [6"] min
- 6** Install a flashing as recommended by the membrane manufacturer or install an acoustic sealant bead<sup>+++</sup>.



## JUNCTION DETAILS

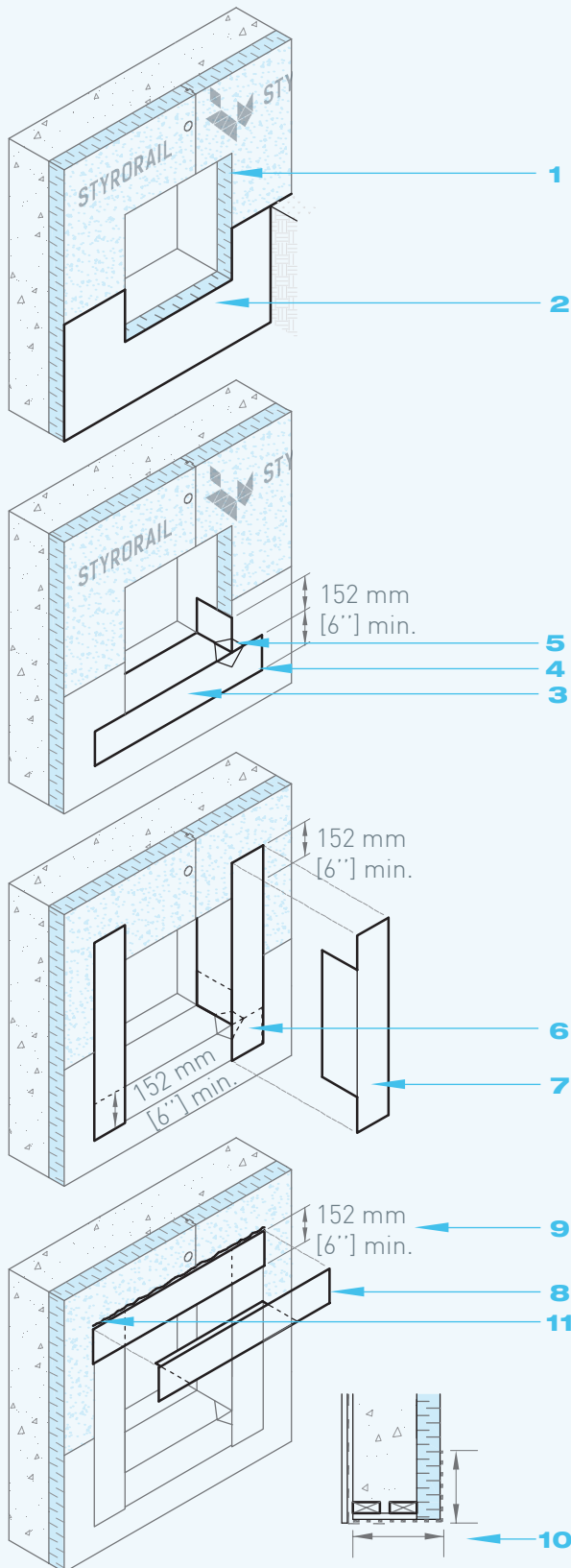
SR.F<sub>og</sub><sup>TM</sup>

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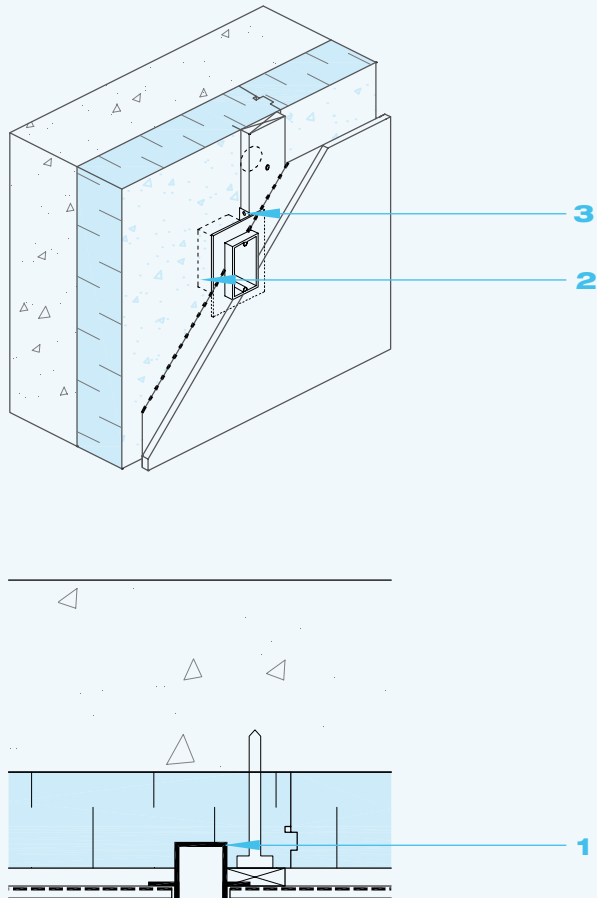
### ➤ OPENING [DOOR AND WINDOW]

#### EXTERIOR INSTALLATION

- 1** Using a knife with a retractable blade or a drywall saw, cut panels to adjust them to doors and windows gross dimensions, before doors and windows installation. Cut panels flush to the gross opening.
- 2** Install a compatible waterproofing membrane<sup>++</sup> on the exterior panels surface. Install membrane as per the installation method described in the Exterior Finish Section of this guide.
- 3** Install a compatible waterproofing membrane<sup>++</sup> over the entire width of the sill.
- 4** Fold back the membrane on the panel and along the jambs on 150 mm [6"] min.
- 5** Install a piece of flexible membrane to the bottom corners in order to limit corner air spaces and thus reducing unforeseen water infiltrations.
- 6** Install a compatible waterproofing membrane<sup>++</sup> along the opening jambs. Overlap every flexible membrane strips on 150 mm [6"] min.
- 7** Cut the flexible membrane as shown.
- 8** Install a compatible waterproofing membrane<sup>++</sup> on lintel.
- 9** Fold back the membrane on the vertical part of the lintel on 150 mm [6"] min.
- 10** Fold back the membrane under the lintel, over all lintel width.
- 11** Install a flashing as recommended by the membrane manufacturer or install an acoustic sealant bead<sup>+++</sup>.



## JUNCTION DETAILS



SR.F<sub>82</sub>™

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### ➤ PENETRATION [PIPE, DUCT, ELECTRICAL BOXE, ETC.]

#### INTERIOR INSTALLATION

- 1** Install electrical boxes in the space located between the insulation and the vapor barrier, towards the furring strips.
- 2** Install slim electrical boxes. Embed the electrical box into the insulation. Trace the outside of the box using a knife with retractable blade. Cut the perimeter and remove approx. 25 mm [1"] of insulation where the electrical box will be installed. Use airtight electric boxes.
- 3** Screw the electrical box on the furring strip.

## JUNCTION DETAILS

SR.F<sub>82</sub><sup>TM</sup>

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### ➤ PENETRATION [PIPE, DUCT, ETC.]

#### EXTERIOR INSTALLATION

**1** Drill a hole through the panel and the foundation wall with an appropriate diameter concrete bit.

**2** Insert the pipe.

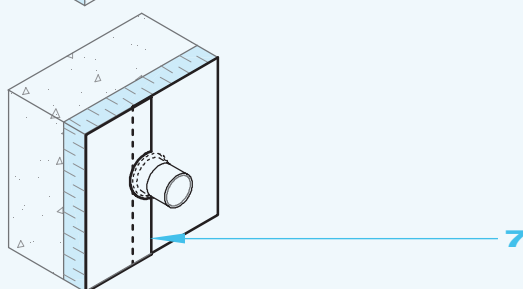
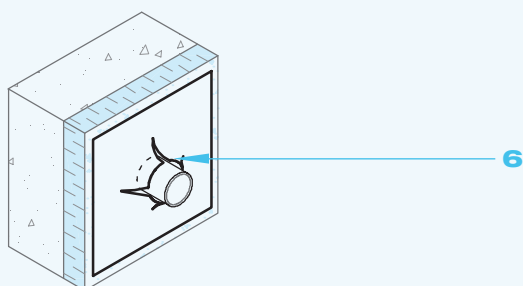
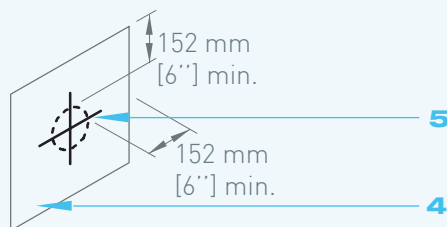
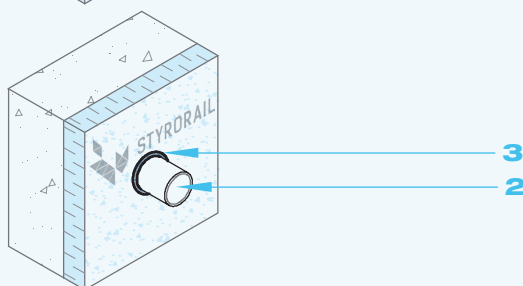
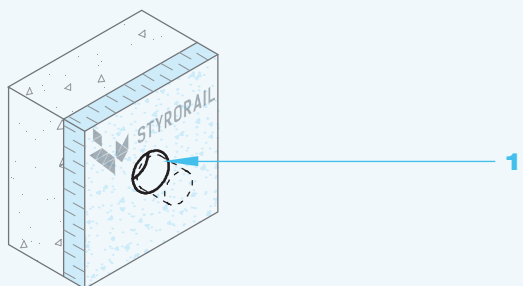
**3** Spray urethane around the pipe.

**4** Cut a compatible waterproofing membrane<sup>++</sup> in a square shape. Cut a sufficient size to cover a minimum of 152 mm [6''] on each side of the opening.

**5** Cut slots in a cross shape. The shape must be sufficiently large to allow penetration of the pipe in the center of the slots.

**6** Apply a square shape waterproofing membrane<sup>++</sup> through the pipe and fold back the flaps on the pipe.

**7** Install a waterproofing membrane<sup>++</sup> as per the installation method described in the Exterior Finish Section of this guide.



## GENERAL ADVICES

### ➤ RECOMMENDED PRODUCTS

<sup>†</sup> Adhesive must be compatible with expanded polystyrene. It must not be solvent based. Use *PL®300* adhesive from *Lepage* or equivalent.

<sup>††</sup> The waterproofing membrane must be compatible with expanded polystyrene. Use the *Blueskin® WP 200* from *Henry Bakor* and *Hi-tac* primer from *Henry Bakor* or equivalent.

<sup>†††</sup> The sealant must be compatible with expanded polystyrene and the chosen waterproofing membrane. Use the *HE925 BES* sealant from *Henry Bakor* if the *Blueskin® WP 200* membrane is used.

<sup>††††</sup> The acoustic sealant must be compatible with expanded polystyrene. Use *Tremco* acoustic sealant or equivalent.

<sup>†††††</sup> Sealants must be compatible with expanded polystyrene. Use *ADFoam* from *ADFast* polyurethane insulating foam or equivalent.

### ➤ STORAGE AND COVERING

Store panels in a dry location, protected from the outside elements, ultraviolet rays, open flames or other sources of ignition. Stack panels on pallets of minimum 100 mm [4"] above the ground. If provided packaging has been damaged during shipping, cover panels with a weather and ultraviolet tarp. Panels must be dry and in good condition before installation.

Cover the panels within 60 days after installation with an exterior cladding protecting from ultraviolet rays.

### ➤ EXEMPTION FROM LIABILITY

The information herein is based on the present state of our best scientific and practical knowledge. They are provided to facilitate Styro Rail™ product's installation and may not apply to all situations. The user is responsible for checking the suitability of products for their intended use. Styro Rail™ installation guides are updated on a regular basis; it is the user's responsibility to obtain and to confirm the most recent version. Information contained in this data sheet may change without notice. The drawings and details herein have not been scaled up.



### Un monde en expansion

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