

# CSP Homes, Inc. Insulated Cement Panels

## Installation Instructions

### 1 Installation

- 1.1 Installation shall comply with the approved construction documents, the manufacturer installation instructions, this report, and the applicable building code.
- 1.2 In the event of a conflict between the manufacturer installation instructions and this report, the more restrictive shall govern.

#### 1.3 Installation Procedure

- 1.3.1 Wall sections shall be connected in accordance with Section 2 of this TER and the manufacturer installation instructions.
- 1.3.2 Wall sections arrive pre-assembled. Panel-to-panel connections and panel-to-top and bottom rail members are completed onsite.

#### 1.4 Product Description

- 1.4.1 Insulated Cement Panels are load-bearing, insulated exterior/interior wall panels composed of a patented aerated concrete foam insulation, branded as Foam-Crete, enclosed within a steel frame and sheathed with fiber cement boards. The steel frame has an internal bracing system comprised of 24-gauge,  $19/32$ " by  $19/32$ " (0.7 mm thick, 15 mm by 15 mm) square tubes. Where walls exceed 8 feet tall (2,440 mm), 19-gauge, 1" by 1" (1 mm thick, 25 mm by 25 mm) angle steel members are used to support the butt-jointed fiber cement boards on both sides of the panel. Each wall panel measures approximately 2 feet (610 mm) in length with various heights.

##### 1.4.1.1 Steel Frame:

- 1.4.1.1.1 Steel is specified as Q235 hot-dip galvanized steel, 18-gauge (1 mm) thick.
- 1.4.1.1.2 A typical steel frame consists of: 1 male steel member, 1 female steel member, 2 arch steel members, 2 angle steel members, and 6 square tubes.
- 1.4.1.1.3 Steel member cross sections are displayed in Figure 1 through Figure 6.

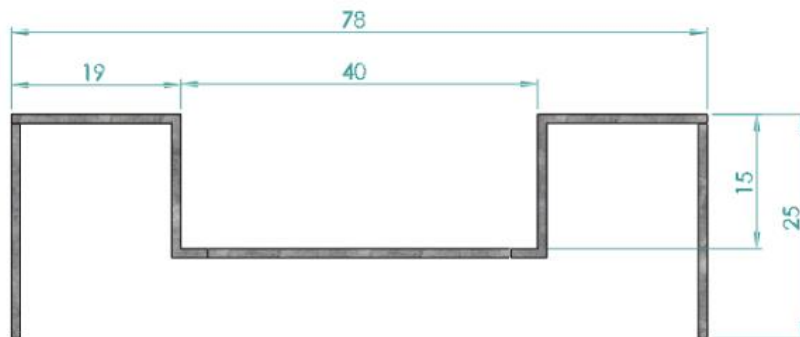


**Figure 1.** Female Steel Profile for  $3\frac{3}{4}$ " (96 mm) Thick Wall Panels

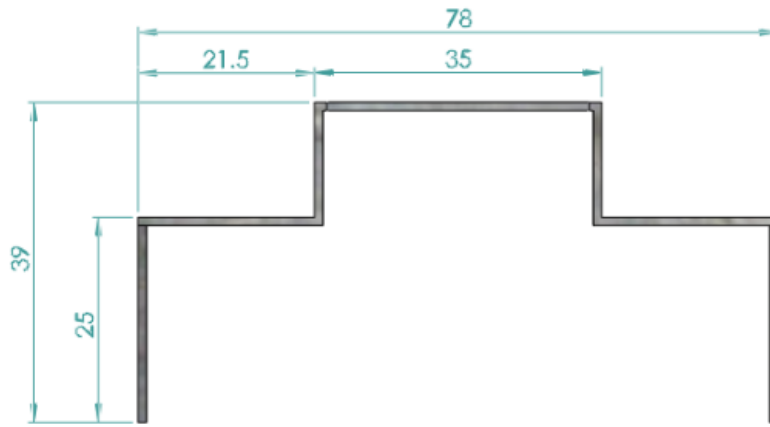


**Figure 2.** Male Steel Profile for 3<sup>3</sup>/<sub>4</sub>" (96 mm) Thick Wall Panels

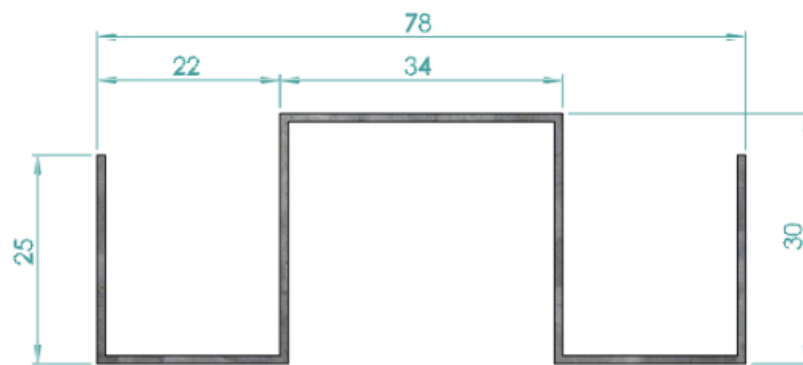


**Figure 3.** Arch Steel Profile for 3<sup>3</sup>/<sub>4</sub>" (96 mm) Thick Wall Panels

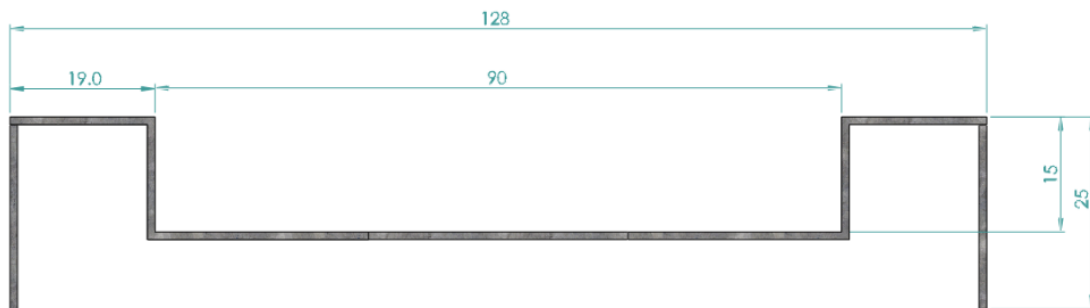


**Figure 4.** Female Steel Profile for 5<sup>3</sup>/<sub>4</sub>" (146 mm) Thick Wall Panels

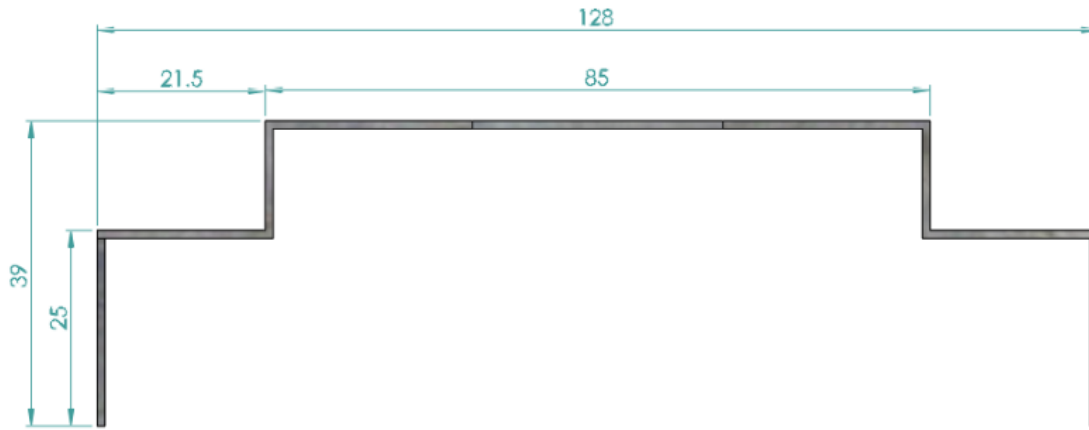


**Figure 5.** Male Steel Profile for 5<sup>3</sup>/<sub>4</sub>" (146 mm) Thick Wall Panels

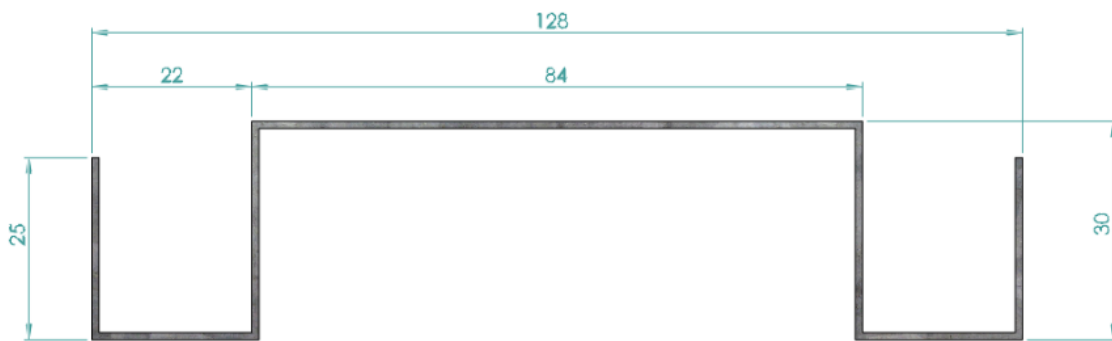


**Figure 6.** Arch Steel for 5<sup>3</sup>/<sub>4</sub>" (146 mm) Thick Wall Panels

#### 1.4.1.2 *Fiber Cement Board:*

1.4.1.2.1 Nominal thickness: <sup>3</sup>/<sub>8</sub>" (9 mm)

1.4.1.2.2 Boards are fastened to the steel frame with #6 x 1" (3.5 mm x 25 mm) self-tapping drywall screws spaced 24" (610 mm) o.c., along vertical panel edges and 6" (152mm) along horizontal panel edges. Fasteners are located <sup>3</sup>/<sub>8</sub>" (9.5 mm) from the panel edges.

#### 1.4.1.3 *Panel-to-Panel Connection:*

1.4.1.3.1 A 14-gauge, 1<sup>3</sup>/<sub>16</sub>" by 1<sup>3</sup>/<sub>16</sub>" (2mm thick, 30 mm by 30 mm) square tube is fitted into the groove of the top and bottom arch steel members of the panels being joined together.

1.4.1.3.2 The square tube is fastened to the top and bottom arch steel members with #12 x3" self-tapping screws spaced approximately 6" o.c. staggered front to back for each wall panel.

### 1.5 *Material Availability*

#### 1.5.1 *Standard Product Thickness:*

1.5.1.1 3<sup>3</sup>/<sub>4</sub>" (96 mm)

1.5.1.2 5<sup>3</sup>/<sub>4</sub>" (146 mm)

#### 1.5.2 *Standard Product Width:*

1.5.2.1 23<sup>5</sup>/<sub>8</sub>" (600 mm)

1.5.2.1.1 Width measurement applies only to the net face and excludes the tongue of the male end.

#### 1.5.3 *Standard Product Height:*

1.5.3.1 122" (3,100 mm) to 141<sup>3</sup>/<sub>4</sub>" (3,600 mm)