

# Contec Wall Panel

## Technical Sheet

### General Features

Lightweight, fire resistant\*, water penetration resistant\*\*, pest resistant, fast and easy to install, versatile and affordable. Contec Wall Panel is an AAC, steel reinforced element. Reinforcement is Grade 70 steel covered with an anti-corrosive coat.

\* Under ASTM E119-95 UL®

\*\* ASTM E514

### Uses

Contec Wall Panel can be used with steel or concrete structures as curtain walls in horizontal and/or vertical arrangement. Suitable for commercial and industrial buildings.

### Dimensions

**Length:** Up to 20 ft.  
**Width:** 24 in.  
**Nominal Thickness:** 4, 5, 6, 7, 8, 10 and 12 in.

### Properties

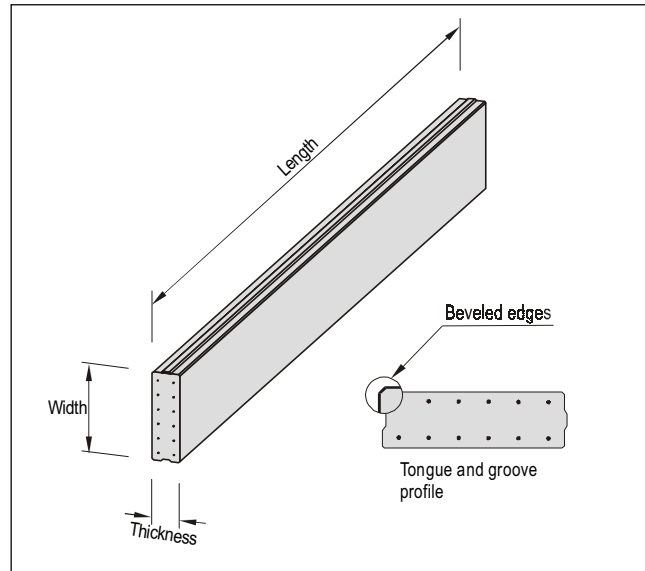


Fig. 1: Contec Wall Panel (AAC steel reinforced element).

Characteristic	Strength Class	
	GB3.3/0.6 (37 pcf) <sup>(1)</sup>	GB4.4/0.7 (44 pcf) <sup>(1)</sup>
Design Weight (pcf)	45	52
Minimum compressive strength, f <sub>c</sub> (psi)	497	710
Modulus of Elasticity (psi)	249,000	355,000
Drying shrinkage (in/ft)	0.003	0.003
Thermal Expansion Coefficient (1/°F)	4.4 × 10 <sup>-6</sup>	4.4 × 10 <sup>-6</sup>
Resistance to Freezing <sup>(2)</sup>	0.979	0.979

<sup>(1)</sup> Maximum dry density.  
<sup>(2)</sup> Ratio of final versus initial volume of sample subjected to freeze/thaw cycles.

Thickness * in	Design Weight			
	GB3.3/0.6		GB4.4/0.7	
	psf	lb/ft	psf	lb/ft
4 (3 7/8)	14.75	29.51	17.20	34.43
5 (4 7/8)	18.43	36.89	21.51	43.04
6 (5 7/8)	22.12	44.27	25.81	51.65
7 (6 7/8)	25.81	51.65	30.11	60.25
8 (7 7/8)	29.49	59.02	34.41	68.86
10 (9 13/16)	36.87	73.78	43.01	86.08
12 (11 13/16)	44.24	88.54	51.61	103.29

\* Nominal dimension (Exact dimension)

## Thermal properties

Thickness *	Thermal Resistance "R"	
	GB3.3/0.6	GB4.4/0.7
4 (3 7/8)	4.05	3.36
5 (4 7/8)	5.06	4.20
6 (5 7/8)	6.07	5.03
7 (6 7/8)	7.08	5.87
8 (7 7/8)	8.09	6.71
10 (9 13/16)	10.12	8.39
12 (11 13/16)	12.14	10.07

## Acoustic Performance

Assembly Type	STC	Report No.
Contec 8" wall GB3.3 Unfinished	46	AS-TL957AX
Contec 10" wall GB3.3 Unfinished	49	AS-TL977AX

Note: Testing performed at Acoustic Systems, Inc., Austin, TX in accordance with ASTM E90 "Standard Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions".

## Fire Performance

Material	Thickness in	Fire Rating Hrs.	UL Design Number (UL Fire Resistance Directory 1998)
Reinforced Wall Panels GB3.3/0.6 and GB4.4/0.7	6 and up	4	U920

Note: Testing performed at Underwriters Laboratories, Inc., under ASTM E119 (UL/ANSI 263) "Fire Tests of Building Construction and Materials".

## Design considerations

- Contec Wall Panels can be used as a partition or curtain wall and shall be designed in order to comply with safety and serviceability requirements as specified by ACI 318-95 and following guidelines of ACI 523.2/R-96.
- Main structure (steel or concrete) should be designed according to Local Building Codes.
- The design of Contec Wall Panel should consider wind loads according to Local Building Codes and the slenderness ratio must be revised as follows:
  - a) Contec Wall in horizontal arrangement:
    - Maximum quantity of panels installed without brackets: 20 pieces (maximum total height: 40 ft).
    - Panel slenderness ratio:
 

For $t \leq 7$ in.	$l/t \leq 40$
For $t \geq 8$ in.	$l/t \leq 38$
For fitting units ( $16 \text{ in} \leq b \leq 24 \text{ in}$ )	$l/t \leq 35$

Where t: Thickness of the panel, l = Length of the panel, b = Width of the panel.

- b) Contec Wall in vertical arrangement:
  - Maximum height of wall: 60 ft
  - Panel slenderness ratio:
 

For single unit walls or top course of a multi-course wall	$l/t \leq 40$
For multi-course walls, except the course on top	$l/t \leq 35$

Where t: Thickness of the panel, l = length of the panel

- Fitting panels should not be less than 16 in. on width. If more than one fitting panel is required on a wall, at least two normal (non-fitting) panels shall be installed between them.
- Maximum capacity for steel connectors can be checked in Table 1.

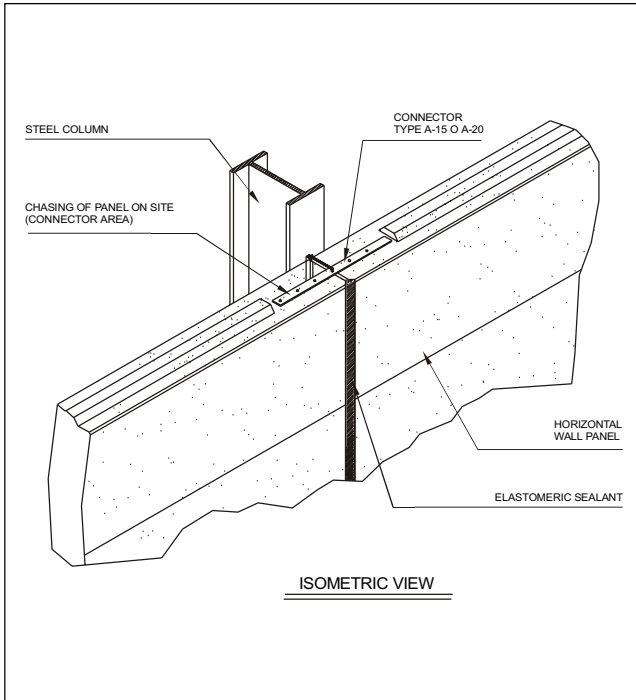


Fig. 2: Typical connection in Contec Horizontal Wall Panels using type "A" connector.

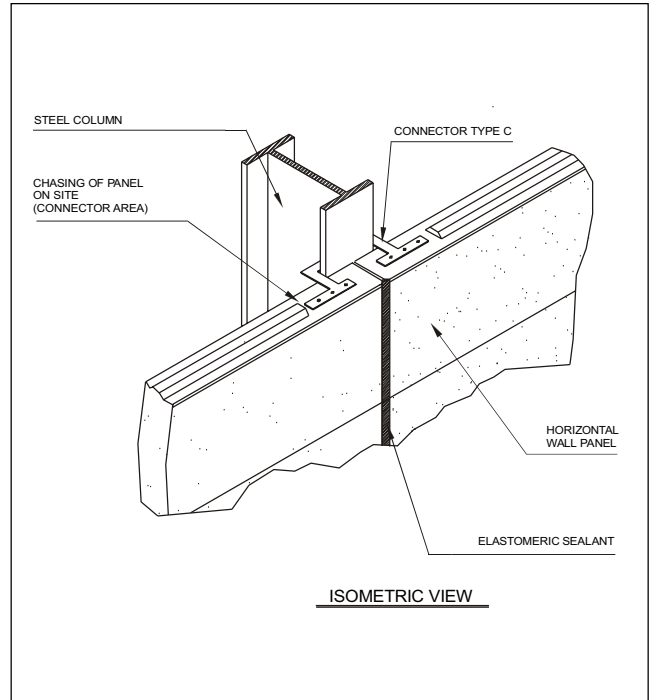


Fig. 3: Typical connection in Contec Horizontal Wall Panels using type "C" connector.

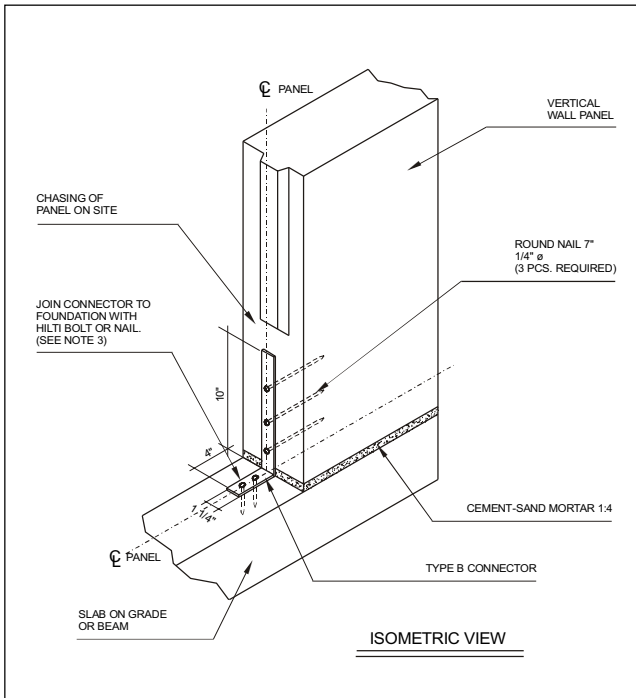


Fig. 4 : Typical bottom connection in Contec Vertical Wall Panels using type "B" connector.

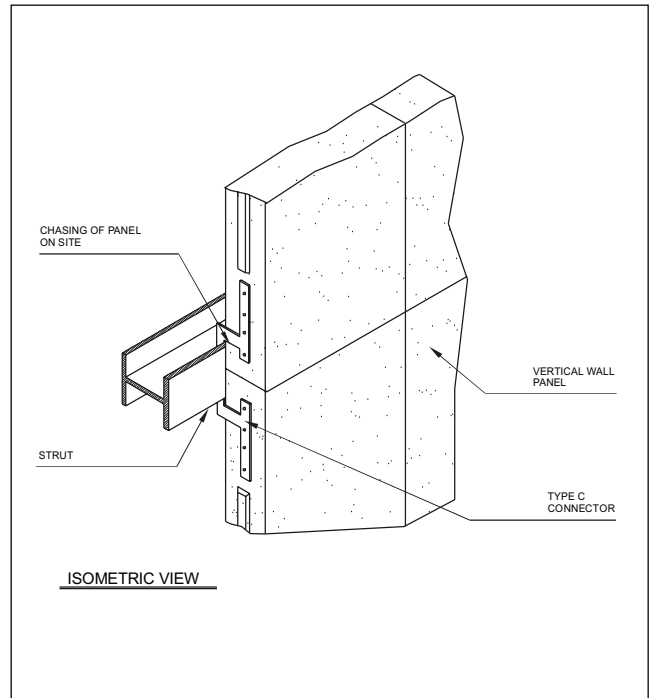


Fig. 5: Typical middle connection in Contec Vertical Wall Panels using type "C" connector.

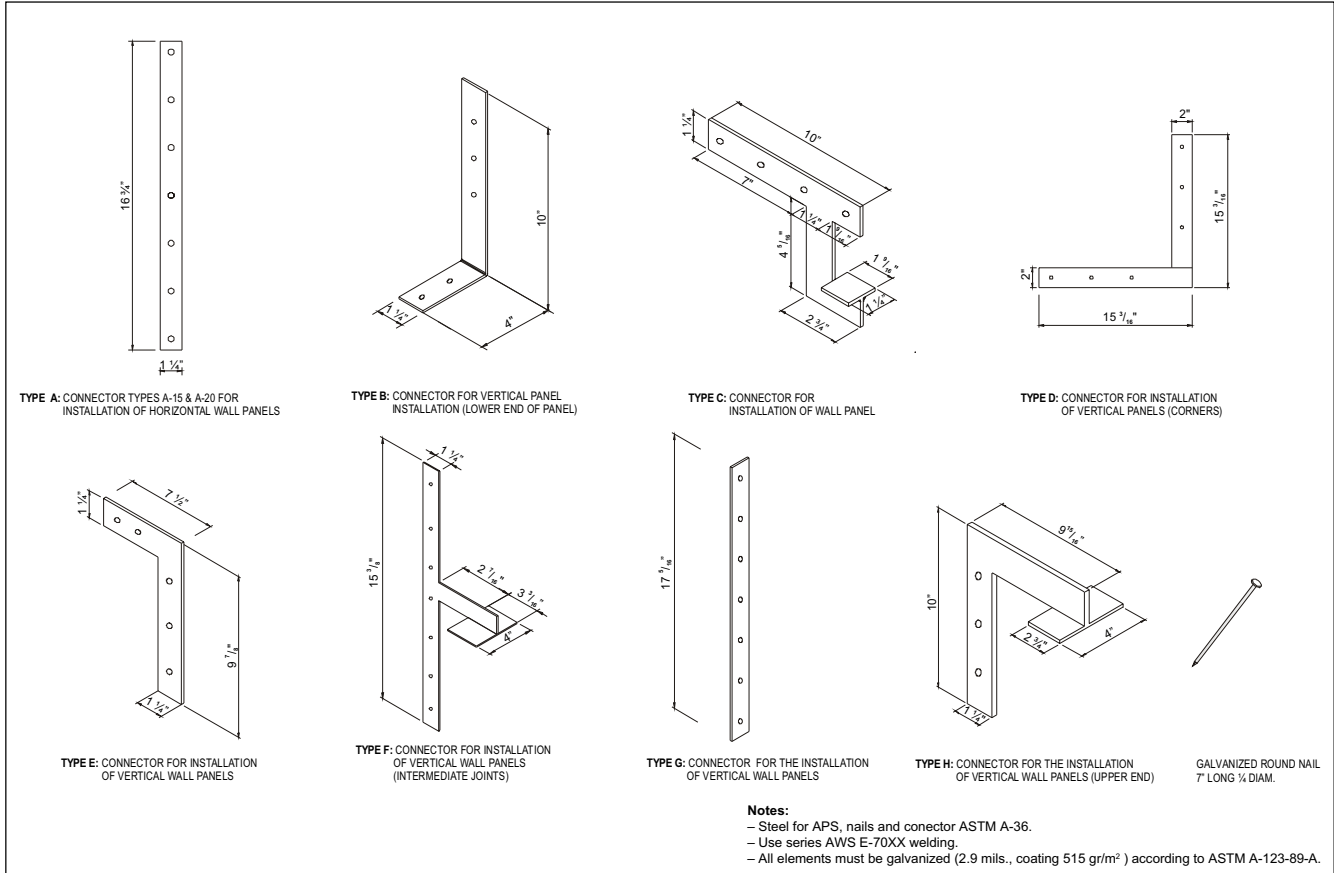


Fig. 6: Summary of connectors for Contec Wall Panel installation.

Connector Type	Wall Panel Orientation	Use (Connection)	Panel Thickness in	Allowable Shear Capacity (lb)	
				GB3.3/0.6	GB4.4/0.7
A-15, A-20	Horizontal	Panel - Frame	All	1190	1190
B	Vertical	Panel - Floor	All	826	1180
C	Horizontal, Vertical	Panel - Frame	6, 7, 8	1240	1770
D	Vertical	Panel-Panel (Corners)	6, 7, 8	Nil	Nil
E	Vertical	Panel - Frame	All	1240	1770
F	Vertical	Panel - Frame	6, 7, 8	1240	1770
G	Vertical	Panel - Panel	All	Nil	Nil
H	Vertical	Panel - Frame	6, 7, 8	1240	1770

Note: Refer to Technical Specifications of Contec Connectors.

Table 1: Maximum capacities for connectors in Contec Wall Panels installation.