

PRODUCT EVALUATION REPORT
Chief Buildings, Inc.

AP Panel Through Fastened Wall Panel over Open Framing

Florida Product Approval Number FL16578.1

Category: Structural Components

Sub-Category: Structural Wall

Compliance Method: 61G20-3.005 (1)(D)

NON-HVHZ

Product Manufacturer

Chief Buildings, Inc.
PO Box 2078
3942 W. Old Highway 30
Grand Island, Nebraska 68802

Manufacturing Location

Chief Buildings, Inc.
1225 E Maple St, Rensselaer, Indiana 47978

Engineer Evaluator

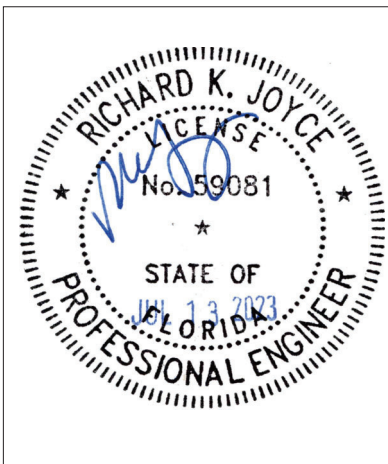
R. Keith Joyce, P.E., Florida 59081

Validator

Dennis L. Johnson, P.E., Florida 54340
Florida C.O.A. 30308

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Evaluation Report Pages 1-5 Dated 07-03-2023



Compliance Statement

The product described in this report has demonstrated compliance with the 2023 (8th Edition) Florida Building Code Sections 1404.5

Product Description

AP Panel Through Fastened structural panels applied over open framing:

1. AP, 26 Gauge (0.0181 Design Thickness) with a minimum $F_y = 80$ ksi and $F_u = 82$ ksi
2. AP, 26 Gauge (0.0181 Design Thickness) with a minimum $F_y = 50$ ksi and $F_u = 65$ ksi
3. AP, 24 Gauge (0.0230 Design Thickness) with a minimum $F_y = 50$ ksi and $F_u = 65$ ksi
4. AP, 22 Gauge (0.0293 Design Thickness) with a minimum $F_y = 50$ ksi and $F_u = 65$ ksi

Panel Material Standard

Formed steel in compliance with the 2023 (8th Edition) Florida Building Code Section 1405.2 with optional painted finish.

Panel Fastener

Corrosion Resistant #12 – 14 HWH SD as indicated in the **Load Tables** of this Evaluation Report

Substrate Description

Minimum 16 gauge open framing.

Framing must be designed in accordance with the 2023 (8th Edition) Florida Building Code

Quality Assurance Entity

The manufacturer has established compliance of products in accordance with the 2023 (8th Edition) Florida Building Code as relates to Rule 61G20-3.005(3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.

Insulation

Manufacturer's approved products (optional)

Fire Classification

Fire Classification is outside the scope of this evaluation

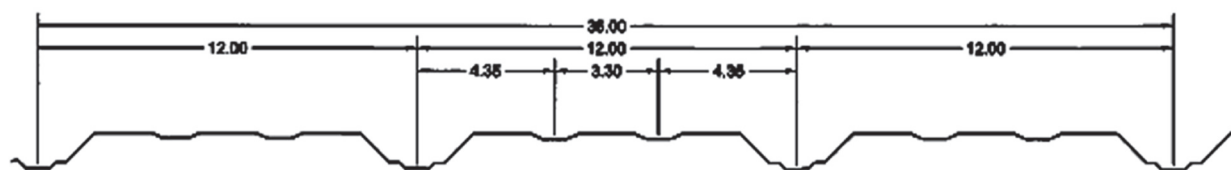
Shear Diaphragm

Shear Diaphragm is outside the scope of this evaluation

Design Procedure

Based on dimensions of the structure, appropriate wind loads are determined using chapter 16 of the 2023 (8th Edition) Florida Building Code for component loading of roof cladding. These component wind loads are compared to the allowable load listed in the **Load Tables** of this evaluation report. The design professional shall select appropriate fastener pattern and panel gauge to reference in the construction documents for proper installation. Design of support framing must be in compliance with the 2023 (8th Edition) Florida Building Code.

AP Panel Profile



AP Panel Section Properties									
Panel Gauge	F_y	F_u	Weight	Negative Bending			Positive Bending		
				I_{xe}	S_{xe}	M_{axo}	I_{xe}	S_{xe}	M_{axo}
	Ksi	Ksi		in ⁴	in ³	Kip-in	in ⁴	in ³	Kip-in
22	50	65	1.38	0.0600	0.0446	2.23	0.0400	0.0395	1.97
24			1.08	0.0477	0.0348	1.74	0.0300	0.0305	1.53
26			0.85	0.0367	0.0269	1.34	0.0227	0.0237	1.18
26	60*	61.5*	0.85	0.0360	0.0262	1.57	0.0216	0.0231	1.39

* = F_y is 80 ksi, F_u is 82 ksi reduced to F_y = 60 ksi, F_u = 61.5 ksi in accordance with the 2016 North American Specification for Cold-Formed Steel Structural Members with Supplement 2 (2020) Section A2.3.2

Notes:

1. All calculations for section properties of AP panels are calculated in accordance with the 2016 edition North American Specification for Cold-Formed Members with Supplement 2 (2020).
2. I_{xe} is for deflection calculations.
3. S_{xe} is for bending calculations.
4. M_{axo} is for allowable bending moment calculations.
5. All values are for one foot of panel width.

The engineering data contained herein is for the express use of the customers of Chief Buildings and qualified design professionals.

22 Ga. panel (0.0293") F_y = 50 ksi

AP (22 Gauge)		Allowable Wind Pressure Loads								
Span Type	Span (ft.)									
	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"
Single	329	210	146	107	82	65	53	43	37	31
2 - Span	353	230	161	119	92	73	59	49	41	35
3-Span	432	283	200	148	114	90	73	61	51	44

AP (22 Gauge)		Allowable Wind Suction Loads (Interior Fasteners 1'-0" O.C.)								
Span Type	Span (ft.)									
	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"
Single	298	238	165	121	93	73	59	49	41	35
2 - Span	119	95	79	68	60	53	48	43	36	31
3-Span	135	108	90	77	68	60	54	49	45	39

24 Ga. panel (0.023") F_y = 50 ksi

AP (24 Gauge)		Allowable Wind Pressure Loads								
Span Type	Span (ft.)									
	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"
Single	254	163	113	83	64	50	41	34	28	24
2 - Span	276	180	126	93	72	57	46	38	32	27
3-Span	337	221	156	116	89	71	57	47	40	34
AP (24 Gauge)		Allowable Wind Suction Loads (Interior Fasteners 1'-0" O.C.)								
Span Type	Span (ft.)									
	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"
Single	290	186	129	95	73	57	46	38	32	28
2 - Span	119	95	79	68	60	50	40	33	28	24
3-Span	135	108	90	77	68	60	50	42	35	30

26 Ga. panel (0.0181") $F_y = 50$ ksi

AP (26 Gauge-50) Allowable Wind Pressure Loads										
Span Type	Span (ft.)									
	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"
Single	197	126	88	54	49	39	32	26	22	19
2 - Span	211	138	97	72	55	44	35	29	25	21
3-Span	258	170	120	89	68	54	44	37	31	26

AP (26 Gauge-50) Allowable Wind Suction Loads (Interior Fasteners 1'-0" O.C.)										
Span Type	Span (ft.)									
	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"
Single	224	143	100	73	56	44	36	30	25	21
2 - Span	116	93	78	63	49	39	31	26	22	19
3-Span	132	106	88	76	61	48	39	35	27	23

26 Ga. panel (0.0181") $F_y = 80$ ksi

AP (26 Gauge-80) Allowable Wind Pressure Loads										
Span Type	Span (ft.)									
	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"
Single	231	148	103	75	58	46	37	31	26	21
2 - Span	246	161	113	84	64	51	41	34	29	25
3-Span	300	198	140	104	80	63	52	43	36	31

AP (26 Gauge-80) Allowable Wind Suction Loads (Interior Fasteners 1'-0" O.C.)										
Span Type	Span (ft.)									
	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"
Single	262	168	116	85	65	52	42	35	29	25
2 - Span	110	88	73	63	55	45	37	30	26	22
3-Span	125	100	83	72	63	56	46	38	32	27

Notes:

1. Allowable loads are based on uniform span lengths and uniformly distributed load.
2. Live Load is limited by bending, shear, combined bending & shear, and web crippling.
3. Negative Wind Load does not include a 33.33% increase and does consider pull-over and pull-out on a minimum 16 gauge supporting member. ($0.06'' - F_y = 55$ ksi and $F_u = 70$ ksi supporting members).
4. Above loads are computed for a maximum total deflection of $L/60$.
5. The weight of panels has already been deducted from the allowable loads shown above.
6. The material is subject to change without notice.
7. These data have been developed in accordance with the 2016 version of the North American Specification for Cold-Formed Steel Structural Members with Supplement 2 (2020).

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