

**EVALUATION REPORT OF
FALK PANEL
RRP-40 PANELS**

**FLORIDA BUILDING CODE 7TH EDITION (2020)
FLORIDA PRODUCT APPROVAL
FL 41819.1
STRUCTURAL COMPONENTS
STRUCTURAL ROOF**

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**This report consists of
Evaluation Report (3 Pages including cover)
Installation Details (1 Page)
Load Span Table (1 Page)**

**Report No. C2602-2
Date: 12.19.2022**



12.19.2022

Manufacturer: FALK Panel

Product Name: RRP-40 panels

Panel Description: RRP-40 panels are factory-assembled, metal faced, sandwich panels with a chemically bonded continuously foamed-in-place foam plastic core. Maximum 40" coverage. Panel thickness: 1.5", 2", 2.5", 3", 4", 5" & 6".

Panel Core: Polyisocyanurate (ISO) foam core designated as Dow 1201 with Normal and Isociclo Pentane blowing agent. Nominal core density is 2.4 pcf with flame spread index of 20 and smoke-developed index of 300 when tested in accordance with ASTM E84-18b.

Exterior skin: Min. 26 ga., 33 ksi galvanized coated steel (ASTM A653), galvalume AZ50 or AZ55 coated steel (ASTM A792) with embossed, smooth or coated finish. The exterior profile consisted of three 1-9/16" high ribs and 1-9/16" high standing rib. The ribs were spaced at 13.33" o.c. Corrosion resistant as per FBC 2020 Section 1507.4.3. Minimum base metal thickness is 0.017".

Interior skin: Min. 26 ga., 33 ksi galvanized coated steel (ASTM A653), galvalume AZ50 or AZ55 coated steel (ASTM A792) with 'Box' profile and embossed or smooth finish. Corrosion resistant as per FBC 2020 Section 1507.4.3. Minimum base metal thickness is 0.017".

Support Description: Min. 16 ga., 50 ksi steel section (Must be designed by others)

Slope: 1:12 or greater in accordance with FBC 2020 Section 1507.4.2 and with manufacturer recommendations. Butyl tape sealant (1/2" x 3/32") must be used in the panel sidelaps.

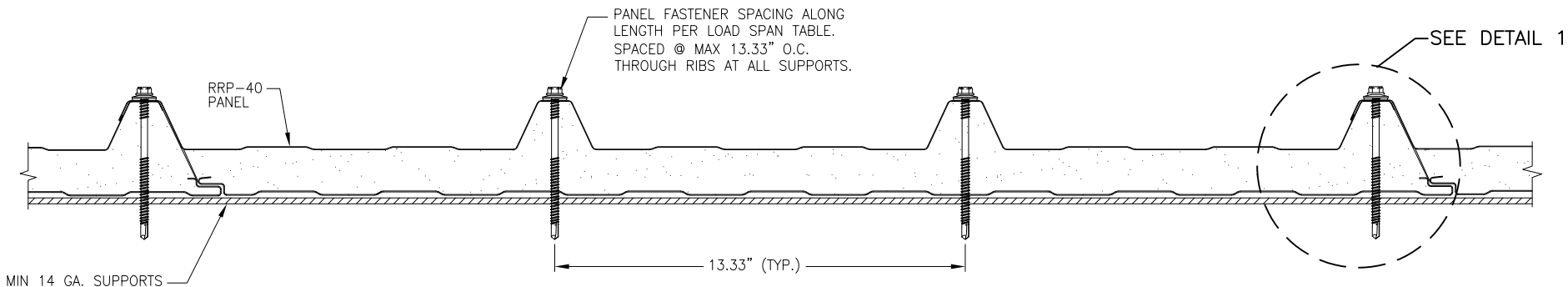
Design Pressure: Inward and uplift loads are shown in the load span table for both 26 and 24 ga. exterior profiles. The allowable loads for panel strength, connection and deflection limit of L/240 were developed from test data. Maximum panel span is 96".

Panel Attachment: Panels will be fastened to min. 14 ga. steel supports with #12-14 hex head self-drilling screws with 3/4" diameter bond seal washer through the ribs. Fastener shall be of sufficient length to penetrate through the support a minimum of 3/4".

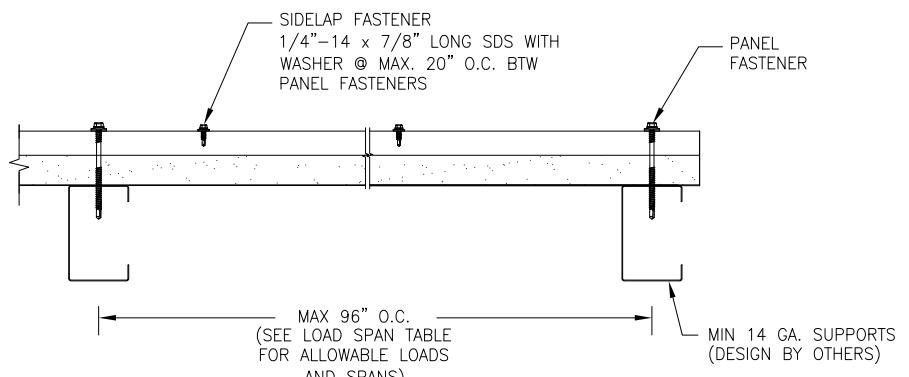
Sidelap Attachment: 1/4"-14 x 7/8" long hex head self-drilling lap screw with washer at max. 20" o.c. between panel fasteners.

- Test Standards: Roof assemblies were tested in accordance with ASTM E1592-05(2017) ‘Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure’ and FM 4470 (2016) Section 4.6 ‘Resistance to Foot Traffic’.
- Test Equivalency: The test procedures in ASTM E84-18b comply with test procedures prescribed in ASTM E84-16.
- The test procedures in ASTM E1592-05(2017) comply with test procedures prescribed in ASTM E1592-05(2012).
- Code Compliance: The product described herein has demonstrated compliance with FBC 2020 Section 1507.4 and 2603.3.
- Product Limitations: Design wind loads shall be determined for each project in accordance with FBC 2020 Section 1609 or ASCE 7-16 using allowable stress design. The maximum support spacing listed herein shall not be exceeded. The design pressure for reduced support spacing may be computed using rational analysis prepared by a Florida Professional Engineer or FALK load span table. This evaluation report is not applicable in High Velocity Hurricane Zone. Fire classification is not within scope of this Evaluation Report. Refer to FBC 2020 Section 1505 and current approved roofing materials directory or ASTM E108/UL790 report from an accredited laboratory for fire ratings of this product.
- Supporting Documents: ASTM E1592 Test Report
ENCON Technology Inc.
C2526-1, Reporting Date 4/14/2022
- FM 4470 Test Report
ENCON Technology Inc.
C2593-1, Reporting Date 12/14/2022
- ASTM E84 Test Report
QAI Laboratories Inc.
TJ8454-1, Reporting Date 3/1/2022

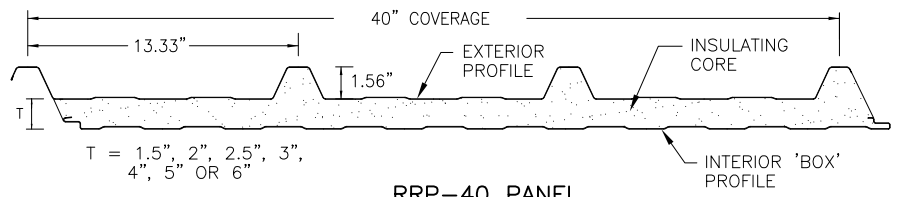
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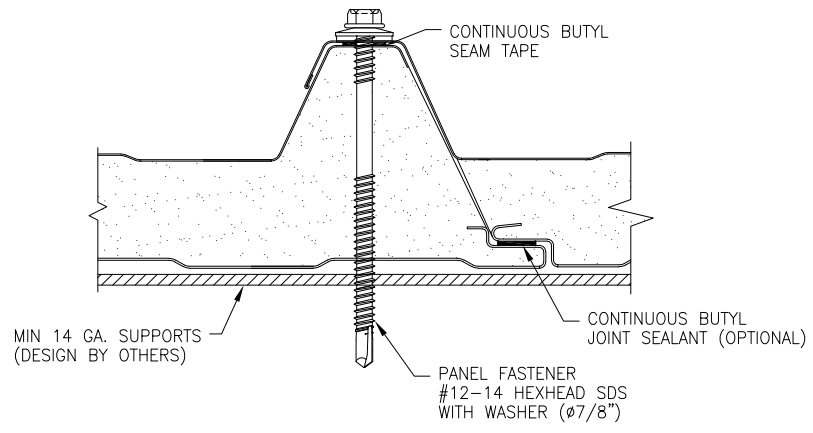
TYPICAL PANEL INSTALLATION X-SECTION



TYPICAL SIDE VIEW



RRP-40 PANEL
MIN 26 GA. EXT - INT PROFILES



DETAIL 1

GENERAL NOTES:

1. THIS STRUCTURAL ROOF PANEL SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH FLORIDA BUILDING CODE (FBC). THE DESIGN PRESSURES AS DETERMINED FROM SECTION 1609 AND ASCE 7-16 MUST BE MULTIPLIED BY 0.6.
2. PANELS ARE MAX 40" WIDE, CONSIST OF MIN. 26 GA. (t = 0.017" MIN.) EXTERIOR OR INTERIOR STEEL SKINS (Fy = MIN. 33 KSI) AND ARE SANDWICHED WITH FOAMED-IN-PLACE NON-CFC 2.4 LB/CU. FT. DENSITY POLYISOCYANURATE.
3. PANELS SHALL BE INSTALLED OVER ROOF SUPPORT AS SPECIFIED ON THIS DRAWING.
4. PANELS MUST BE INSTALLED OVER MIN. 2 SUPPORTS. ENDLAPS MAY BE PRESENT AT CENTERLINE OF SUPPORTS PROVIDING THE SEAMS ARE FLASHED & PROPERLY SEALED PER FALK SPECIFICATIONS AND EACH PANEL END IS SECURED PER THIS DRAWING.
5. REQUIRED DESIGN WIND LOADS SHALL BE DETERMINED FOR EACH PROJECT. THIS PANEL SYSTEM MAY NOT BE INSTALLED WHEN THE REQUIRED DESIGN WIND LOADS ARE GREATER THAN THE ALLOWABLE WIND LOADS SPECIFIED ON LOAD SPAN TABLE.
6. ALL SCREWS SHALL BE CORROSION RESISTANT.
7. THE SUPPORTING STRUCTURE, OVER WHICH THE PANELS ARE TO BE INSTALLED, MUST BE MINIMUM 14 GAGE (MIN. 0.071") STEEL WITH MIN. Fy = 50 KSI.
8. THESE ROOF PANELS SHALL NOT BE CONSIDERED TO OR BE USED FOR TRANSFER OF DIAPHRAGM ACTION OF ROOF TO SUPPORTING STRUCTURE.

DRAWING TITLE
RRP-40 PANEL

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FALK PANEL
RRP-40 Panel
Allowable Inward & Uplift Loads

Panel Description	Support Spacing (in)	Allowable Inward Load (psf) Min 26-26 Ga.	Allowable Uplift Load (psf)	
			26-26 Ga.	24-26 Ga.
RRP-40 Panel Min. 26 ga. Exterior & Interior Skins Panel Core Thickness: 1.5", 2", 2.5", 3" 4", 5" & 6"	36	108.4	87.5	120.0
	39	100.0	78.8	110.8
	42	92.9	73.1	102.9
	45	86.7	68.3	96.0
	48	81.3	64.0	90.0
	51	76.5	60.2	84.7
	54	72.2	56.9	80.0
	57	68.4	53.9	75.8
	60	65.0	51.2	72.0
	63	61.9	48.8	68.6
	66	59.1	46.5	65.5
	69	56.5	44.5	62.6
	72	54.2	42.7	60.0
	75	52.0	41.0	57.6
	78	50.0	39.4	55.4
	81	48.2	37.9	53.3
	84	46.4	36.6	51.4
	87	44.8	35.3	49.7
90	43.3	34.1	48.0	
93	42.0	33.0	46.5	
96		40.6	32.0	45.0

Notes:

1. Allowable load is the lowest value of panel strength, connection strength & deflection limit of L/240.
2. Allowable load is applicable to two or more span conditions.
3. The bold numbers indicate design loads obtained from test report.
4. Panels fastened at all ribs with #12-14 SDS with 3/4" bonded washer in minimum 14 ga. steel.
5. Fastener shall be of sufficient length to penetrate through the support a minimum of 3/4".
6. Panels must be installed as per Evaluation Report FL 41819.1 and FALK Panel's current installation procedure.
7. The structural capacity of support are not considered and must be examined independently by others.
8. Minimum bearing width of support is 2.25".

