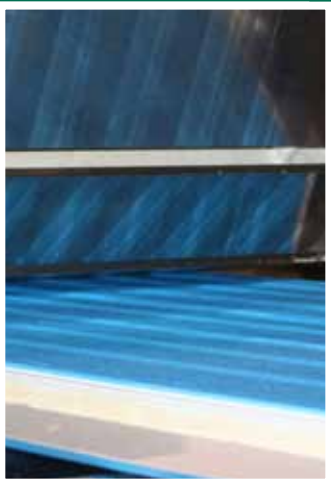




Technical Design **INFORMATION**

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Insulated Metal Panels, or IMPs, are structural wall and roof panels that also provide significant insulation properties. They are typically made of two metal skins on either side of a rigid foam insulation layer. The metal skins are chemically bonded to the foam and act in conjunction with it to provide a composite structural member capable of spanning distances to 10 feet or more while supporting transverse loads. The foam core acts alone to provide the thermal transmission resistance, or R-Value, as part of a building envelope system. Other aspects such as water and air transmission properties also play an important part in an energy-efficient design. IMPs can be used in either roof or wall applications and can be either concealed fastener/standing seam or through-fastened.

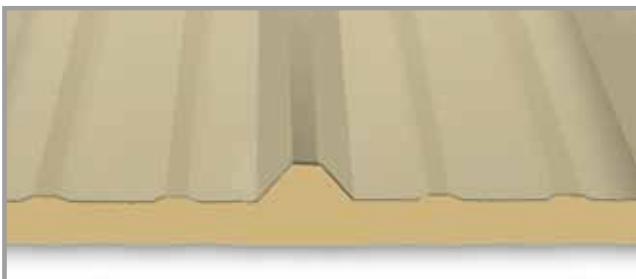
The metal skins come in a variety of profiles paired together as interior and exterior skins to form a panel profile. The exterior skin is called the fascia and the interior skin is called the liner. The encapsulated foam comes in a variety of thicknesses and, depending on the profile, the panels are available in widths of 24", 30", 36" and 42". A complete listing of our product offering is available online at www.insulated-panels.com.

MATERIAL SPECIFICATIONS

Coatings – The metal skins are painted prior to roll forming at a coil coating facility. Two classes of coatings are utilized with an option for a USDA certified silicone polyester on the liner. Signature 200 paints are siliconized polyester finishes and Signature 300 paints are fluoropolymers Kynar 500®/Hylar 5000®. Specifications for these coatings can be found on the color charts on the website.

Metal Skins – The standard metal skins are cold rolled from coil steel meeting the requirements of ASTM A792 AZ55 for bare Galvalume® and AZ50 painted Galvalume® and ASTM A653 for painted galvanized. The yield strength is 50 ksi and skins are available in 26, 24 and 22 gauge thicknesses.

Foam Insulation – The foam utilized for IMPs is Dow Chemical Company's Voracor® system. This is a polyisocyanurate two-part mix and is infused with a hydrofluorocarbon blowing agent as the mixture is combined. The two parts of the foam are called polyol and isocyanate. Other additives are introduced in the polyol to catalyze this reaction and increase its resistance to burning. When mixed together, these agents combine chemically to create a rigid plastic and the blowing agent turns to a gas to give the foam its cell structure. This structure greatly enhances the



plastic's resistance to heat transmission. The blowing agent used is non-CFC (non-chlorofluorocarbon) with a published Ozone Depletion Potential (ODP) of zero. Specifications for the foams are not typically given directly, but are controlled by specifying desired results to the tests discussed in the following section.

DESIGN USING IMPs

Because IMPs fulfill so many functions of the building envelope, many aspects should be considered in their design from a structural, fire safety, and thermal resistance standpoint.

Structural Design

The resistance to transverse loading provided by an IMP comes from its behavior as a composite member. The interior and exterior skins function as flanges in a beam, while the foam core provides resistance to shear stresses as a beam web does. Because of this, the in-place shear modulus and shear strength of the foam core are a very important parameters. However, these properties of the foam vary as a function of the thickness of the core and as such cannot be measured directly. **Only load testing of actual panels can provide useful values of shear strength and modulus of the core.** Likewise, the resistance to local buckling of the skins can only be measured by testing since the foam provides some support to compression elements in the skin. Compressive strength of the foam by itself is also accurately determined by panel testing. However, in order to provide increased resistance to foot traffic and aid in proper fastener installation, it is often specified separately. ASTM D1621 is used to determine the foam compressive strength in this case. Often, the tensile strength and shear strength of the foam core itself is specified by the designer. Although the tensile

strength of the foam is important to the behavior of the panel, a tensile strength value by itself means nothing. This is because in an actual loaded panel, the tensile stiffness of the foam is far below that of the metal skin and therefore stress redistribution relieves the foam. The shear strength of the foam is a significant parameter, however, the in-place testing done to determine overall strength of the panel tests this parameter directly and in a more real-world way. Furthermore, the compressive, tensile and shear strengths of the foam are directionally dependant. **So, specifying a single value without referencing the direction (longitudinal or X, transverse or Y, and through-thickness or Z) yields a meaningless specification.** The tensile strength of the foam is typically measured by ASTM D1623 and the shear strength is measured by ASTM C273.



For positive load, or load that pushes the panels against the framing, the ASTM E72 test method is deployed to obtain a load-deflection curve for the panel with a given support condition. A finite element computer model is calibrated to match the load versus deflection curve by varying the shear modulus. When the curve is matched to within a reasonable tolerance, the shear modulus is known. The ASTM E72 test progresses to failure and the apparent strength of the panel is reduced by a factor of safety determined by the failure mode. Using the derived shear modulus and strength limitations measured by the test, the computer models are rerun for support and span conditions different than what was tested. In this fashion, a maximum number of conditions can be modeled using a minimum amount of testing. Allowable loads tables derived using this procedure are presented later in this document.

IMPs must also resist negative load, or load that pulls the panel away from the framing. The behavior of the panel in this condition is drastically different than the behavior witnessed in the positive load testing. This is because the panel acts as a two-way slab rather than a beam. Furthermore, resistance against negative loading results in highly stressed connection elements. These elements are commonly the failure mode experienced in negative testing and cannot be modeled with a computer due to the distortion of the clip. The exception to this is fastener pull-out which is investigated separately using industry standard design procedures. Therefore, framing members used in the tests are thick enough to preclude fastener pull-out as a failure mode. The test method used to measure resistance to negative loading is ASTM E1592 or ASTM E72 depending on the anticipated failure mode.

Thermal/Energy Efficiency

The ability of the foam to resist thermal transmission is very important but only represents part of the ability of the foam to provide an effective envelope component. Resistance to air and water infiltration should also be specified as well as resistance to water absorption.

For thermal resistance, two tests are typically used. ASTM C518 is utilized to measure the heat transmission coefficient per unit thickness, or k-factor. In this test, a flat piece of insulation with no joints is placed between two heat conducting plates that are kept at a steady temperature. An electronic heat measuring device called a fluxometer is placed between one of the plates and the foam specimen. After equilibrium is achieved, the amount of heat being transferred through this device is then used to calculate the k-factor. The k-factor can then be mathematically converted into an R-Value for given thicknesses.

The other test commonly used to specify R-Values is ASTM C1363. This test is conducted in a sealed controlled apparatus call a guarded hot box. In this test the specimen is placed in between two chambers held at different temperatures. Heated or cooled air is pumped into each side such that the temperature remains the same. Once thermal equilibrium is achieved, the volume and temperature of the air is measured and the heat added or removed that is required to keep the temperature steady is calculated. By the principle of conservation of energy, the heat flow through the specimen is known, and an R-value is determined.

Regardless of the test method used, careful consideration must be used when specifying an R-value. Mean test temperature, test method, specimen orientation (i.e. heat flow up, down or



horizontal), presence of fasteners and joints in the specimen all affect the end result. Furthermore, many manufacturers publish R-Values inclusive of air film effects. **An R-value should never be specified without clear indication of all of these parameters.** An example might be:

Insulated metal panels must have an R-Value of 14 hr-ft-deg F/BTU when tested to ASTM C1363 at a mean temperature of 75 degrees Fahrenheit with horizontal heat flow. The tested specimen must be at least 64 square feet and incorporate at least two side joints. Air film effects shall not be included in the R-Value.

Only by providing these specific parameters can the designer be assured of adequate performance.

Also important for strength and heat transmission resistance is the foam density. Lower density foams tend to give more favorable k-factors, while higher density foams tend to give better shear modulus and strength values. Because of these effects, it is important to specify an acceptable range of foam density, rather than just a minimum or a maximum.

In order to function as an effective building envelope component, air infiltration must be held to a minimum, and



water infiltration should be prevented by the seams of the IMPs. Roof and wall panels utilize different tests to measure these properties due to the different orientations of the panels. For wall panels, air infiltration is measured with ASTM E283 and water infiltration is measured with ASTM E331. Roof air infiltration is tested to ASTM E1680 and roof water infiltration is measured with ASTM E1646. For air transmission testing, both infiltration and exfiltration must be tested. In all of these cases, there must be a static driving pressure specified as well. For air transmission, various energy efficiency standards require different static pressures. Common values are 1.52 psf (75 Pa), 6.24 psf (300 Pa), 12 psf, and 20 psf. Unfortunately, this makes it very difficult to recommend a specification that will work for all standards. Generally speaking, air infiltration decreases with the square root of the static pressure. But this should only be used as a guideline when comparing values between products tested under different static pressures.

Finally, since the dual metal skins function as vapor barriers, it is important that any water be kept out of the foam. This is

accomplished by using foams in which the individual cells are separated from each other by a thin layer of plastic.



Determining the percentage of cells that are isolated (called closed cell content) is accomplished by testing to ASTM D6226.

Fire Design

IMPs are not fire rated due to the fact that the foam insulation, while not flammable, has a melting point such that the insulation loses its ability to resist shear forces at the temperatures required for the test. This loss of strength impacts the ability of the panel to resist vertical load and prohibits the panel from being a fire rated assembly by itself. However, IMPs can be used as part of a fire-rated assembly due to their classification as non-flammable materials when used in conjunction with framing. The tests used to achieve this classification are FM Global Standard 4880 for room fire and ASTM E108 for external fire. It is also common to specify performance characteristics of the panels for smoke developed and flame spread index to meet the requirements of chapter 26 of the International Building Code (IBC). ASTM E84 is used for this purpose.

Chapter 23 of the IBC also requires that foam plastic insulation must incorporate a thermal barrier of two layers of sheet rock to retard the melting of the foam. (There are numerous exceptions to this requirement.) However, FM 4880 approval does allow this requirement to be waived.

Performance Ratings

Aside from the design requirements mentioned above, additional performance ratings are also commonly specified. These performance ratings combine performance in two or more categories at the same time and are commonly required for insurance purposes. The two most common ratings required for roofs are Underwriters Laboratories (UL) 580 and FM Global 4471. These tests combine strength and watertightness requirements and in the case of FM 4771, hail resistance. The most prevalent requirement is Class 90 for UL 580 and Class 1-60, 1-75, and 1-90 for FM 4471.

PRODUCT INFORMATION

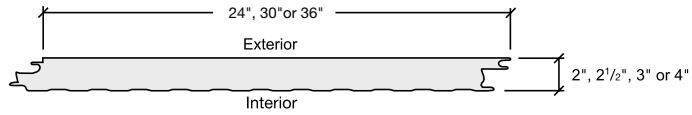
FWP

Wall Panel



Product Specifications

Panel Thicknesses:	2" 2 1/2" 3" 4"
Panel Lengths:	Recommended maximum is 32'
Insulation Material:	Non-CFC foamed-in-place polyisocyanurate foam 2.2 to 2.5 pcf density
Joint Configuration:	Concealed Fasteners
Metal facings:	22-ga. (fascia); 26-ga. (liner)
Coatings:	Silicone Polyester, Kynar 500®/Hylar 5000®
Accessories:	Fasteners, sealants, clips, standard and custom trim



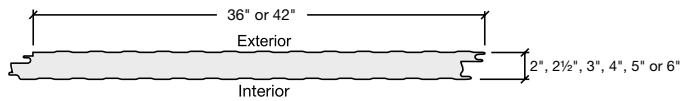
IPP II

Wall Panel



Product Specifications

Panel Thicknesses:	2" 2 1/2" 3" 4" 5" 6"
Panel Lengths:	Recommended maximum is 40'
Insulation Material:	Non-CFC foamed-in-place polyisocyanurate foam 2.2 to 2.5 pcf density
Joint Configuration:	Concealed Fasteners
Metal facings:	26-ga., 24-ga. and 22-ga. (fascia); 26-ga., 24-ga. and 22-ga. (liner)
Coatings:	Silicone Polyester, Kynar 500®/Hylar 5000®
Accessories:	Fasteners, sealants, clips, standard and custom trim



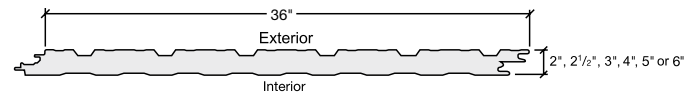
EWP II

Wall Panel



Product Specifications

Panel Thicknesses:	2" 2 1/2" 3" 4" 5" 6"
Panel Lengths:	Recommended maximum is 40'
Insulation Material:	Non-CFC foamed-in-place polyisocyanurate foam 2.2 to 2.5 pcf density
Joint Configuration:	Concealed Fasteners
Metal facings:	26-ga., 24-ga. and 22-ga. (fascia); 26-ga., 24-ga. and 22-ga. (liner)
Coatings:	Silicone Polyester, Kynar 500®/Hylar 5000®
Accessories:	Fasteners, sealants, clips, standard and custom trim



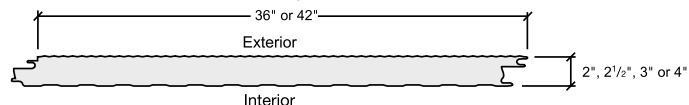
ESP II

Wall Panel



Product Specifications

Panel Thicknesses:	2" 2 1/2" 3" 4"
Panel Lengths:	Recommended maximum is 40'
Insulation Material:	Non-CFC foamed-in-place polyisocyanurate foam 2.2 to 2.5 pcf density
Joint Configuration:	Concealed Fasteners
Metal facings:	24-ga. and 22-ga. (fascia); 26-ga., 24-ga. and 22-ga. (liner)
Coatings:	Silicone Polyester, Kynar 500®/Hylar 5000®
Accessories:	Fasteners, sealants, clips, standard and custom trim

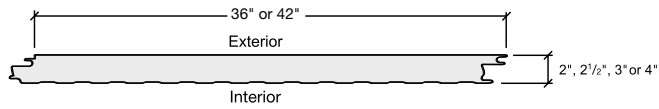


Sonora™ Wall Panel

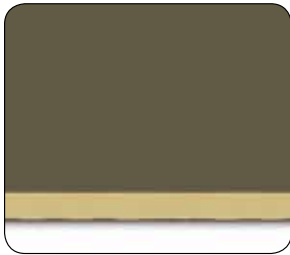


Product Specifications

Panel Thicknesses:	2" 2 1/2" 3" 4"
Panel Lengths:	Recommended maximum is 40'
Insulation Material:	Non-CFC foamed-in-place polyisocyanurate foam 2.2 to 2.5 pcf density
Joint Configuration:	Concealed Fasteners
Metal facings:	24-ga. and 22-ga. (fascia); 26-ga., 24-ga. and 22-ga. (liner)
Coatings:	Silicone Polyester, Kynar 500®/Hylar 5000®
Accessories:	Fasteners, sealants, clips, standard and custom trim

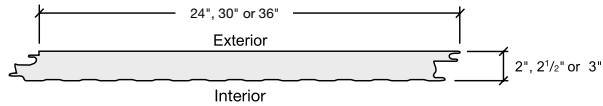


HWP Wall Panel



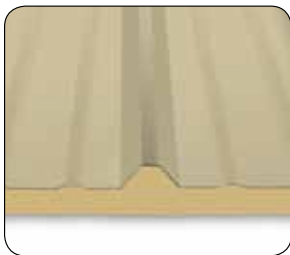
Product Specifications

Panel Thicknesses:	2" 2 1/2" 3"
Panel Lengths:	Recommended maximum is 24'
Insulation Material:	Non-CFC foamed-in-place polyisocyanurate foam 2.2 to 2.5 pcf density
Joint Configuration:	Concealed Fasteners
Metal facings:	22-ga. (fascia); 26-ga. (liner)
Coatings:	Silicone Polyester, Kynar 500®/Hylar 5000®
Accessories:	Fasteners, sealants, clips, standard and custom trim, reveals, aluminum extrusions



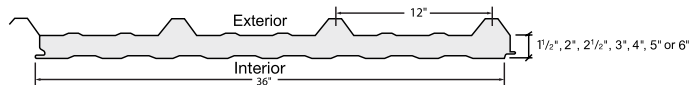
HWP is available with reveals of 1/8" (standard), 3/4" and 2". Corner panels and a comprehensive line of aluminum extrusions are also available to provide a complete wall system.

RWP II Roof or Wall Panel



Product Specifications

Panel Thicknesses:	1 1/2" 2" 2 1/2" 3" 4" 5" 6"
Panel Lengths:	Recommended maximum is 40'
Insulation Material:	Non-CFC foamed-in-place polyisocyanurate foam 2.2 to 2.5 pcf density
Joint Configuration:	Overlapping with exposed fasteners
Metal facings:	26-ga., 24-ga. and 22-ga. (fascia); 26-ga., 24-ga. and 22-ga. (liner)
Coatings:	Silicone Polyester, Kynar 500®/Hylar 5000®
Accessories:	Fasteners, sealants, clips, standard and custom trim

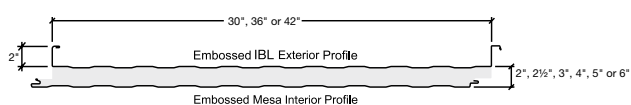


IBL Roof Panel



Product Specifications

Panel Thicknesses:	2" 2 1/2" 3" 4" 5" 6"
Panel Lengths:	Recommended maximum is 50'
Insulation Material:	Non-CFC foamed-in-place polyisocyanurate foam 2.2 to 2.5 pcf density
Joint Configuration:	Concealed Fasteners
Metal facings:	24-ga. and 22-ga. (fascia); 26-ga., 24-ga. and 22-ga. (liner)
Coatings:	Silicone Polyester, Kynar 500®/Hylar 5000®
Accessories:	Fasteners, sealants, clips, standard and custom trim



TECHNICAL DATA PERFORMANCE AND CERTIFICATIONS

The results of the test methods listed in the previous section are presented on the following table, with the exception of ASTM E72, E1592, ASTM C518, and ASTM C1363. ASTM E72 and E1592 are summarized in the Load Tables section of this document and results for ASTM C518 and C1363 (R-values, k-factors, U-factors) can be found on the IPS website or by calling (800)729-9324.

Category	Characteristic	Test Method	Purpose	Result
Environmental	Thermal Transmission	ASTM C518	Measure the heat transmission coefficient per unit thickness (k-factor)	0.138 BTU-in/hr-ft ² -°F (R-7.25/inch) at 75°F mean temperature 0.121 BTU-in/hr-ft ² -°F (R-8.25/inch) at 25°F mean temperature
	Thermal Transmission	ASTM C1363	Measures the resistance to heat flow (or R-value) of a construction assembly in a guarded hot box	Varies up to R-7.69/inch of panel thickness at 75°F mean temperature
	Air Leakage Through Wall Panel Joints	ASTM E283	Determines the air leakage characteristics of metal wall panels under specified air pressure differences at ambient conditions	0.01 cfm/ft ² at 20 psf static pressure
	Water Penetration Through Wall Panel Joints	ASTM E331	Determines the resistance to water penetration of metal wall panels under uniform static air pressure difference	No uncontrolled water penetration through the panel joints at a static pressure of 20 psf
	Air Leakage Through Roof Panel Joints	ASTM E1680	Determines the resistance of exterior metal roof panel systems to air infiltration resulting from either positive or negative air pressure differences	0.051 cfm at 6.24 psf static pressure 0.066 cfm at 12 psf static pressure
	Water Penetration Through Roof Panel Joints	ASTM E1646	Determines the resistance to water penetration of metal roof panels under uniform positive static air pressure differences	No uncontrolled water penetration through the panel joints at a static pressure of 20 psf
Foam Properties	Foam Density	ASTM D1662	Determines the apparent density of rigid cellular plastics	2.0 pcf
	Foam Compressive Strength	ASTM D1621	Determines the behavior of cellular materials under compressive load	15 psi through-thickness 30 psi other directions
	Foam Tensile Strength	ASTM D1623	Measures the tensile strength of the foam from a cored sample	30 psi through-thickness 25 psi lowest any other direction
	Foam Shear Strength	ASTM C273	Measures the shear strength of the foam from a cored sample	15 psi lowest in any direction
	Closed Cell Content	ASTM D6226	Determines the porosity of cellular plastics for situations where it has a direct effect on their properties such as thermal resistance and water absorption	97.8%
Fire Resistance	Surface Burning Characteristics	ASTM E84	Provides comparative measurements of surface flame spread and smoke density measurements relative to that of select grade red oak and fiber-cement board surfaces under specific fire exposure conditions	Flame Spread index of 15, Smoke Developed index of 75
	Room Fire Performance	FM Global Standard 4880	Evaluates insulated roof and wall panels, interior finishes or coatings, and exterior wall systems for their performance in regards to fire	Class 1 Rating of wall and roof panels for use in unlimited height structures
	Roof Covering Fire Performance	ASTM E108	Provides a basis for relative performance of roof coverings in regards to simulated fire exposure to the outside	Class A Rating
Structural	Uplift Resistance	ASTM E1592 ASTM E72	Provides a standard procedure to evaluate or confirm structural performance under uniform static air pressure difference	See Load Chart Section
	Positive Load Resistance	ASTM E72	Tests the behavior of segments of wall construction under conditions representative of those encountered in service	See Load Chart Section
Roof Listings	Roof Performance – FM Global®	FM Global Standard 4471	Sets performance requirements for panel roofs including uplift resistance Requires a Class 1 Rating by FM Global Standard 4880 as a prerequisite	Class 1-75 Rating for IBL supported at 7' O.C. Class 1-90 Rating for IBL supported at 5' O.C.
	Roof Performance – Underwriters Laboratories®	UL 580	Determines the uplift resistance of roof assemblies consisting of the roof deck and roof covering materials	Class 90 Rating – Construction numbers 499 and 500
Wall Listings	Wall Performance – FM Global®	FM Global Standard 4881	Sets performance standards for panel walls including wind load resistance and hail resistance Requires a Class 1 rating by FM Global Standard 4880 as a prerequisite	Class S (severe) hail resistance rating. Class +30/-42 Zone H to +70/-98 Zone H depending on configuration. See FM Global Approval Guide for Building Products for complete listings.

PANEL WEIGHTS IN POUNDS PER SQUARE FOOT FOR 36" WIDE PANELS

Panel	Thickness	Gauge (Fascia/Liner)								
		26/26	24/26	22/26	26/24	24/24	22/24	26/22	24/22	22/22
IPP II	2	2.11	2.32	2.61	2.33	2.54	2.83	2.60	2.81	3.10
	2 ½	2.22	2.43	2.72	2.44	2.65	2.94	2.71	2.91	3.21
	3	2.33	2.54	2.83	2.55	2.76	3.05	2.82	3.02	3.32
	4	2.55	2.76	3.05	2.77	2.98	3.27	3.04	3.24	3.54
	5	2.77	2.98	3.27	2.99	3.20	3.49	3.26	3.46	3.76
	6	2.99	3.20	3.49	3.21	3.42	3.71	3.48	3.68	3.98
ESP II Sonora™	2	n/a	2.32	2.61	n/a	2.54	2.83	n/a	2.81	3.10
	2 ½		2.43	2.72		2.65	2.94		2.92	3.21
	3		2.54	2.83		2.76	3.05		3.03	3.32
	4		2.76	3.05		2.98	3.27		3.25	3.54
FWP	2	n/a	n/a	2.61	n/a	n/a	2.83	n/a	n/a	3.10
	2 ½			2.72			2.94			3.21
	3			2.83			3.05			3.32
	4			3.05			3.27			3.54
HWP	2	n/a	n/a	2.61	n/a	n/a	2.83	n/a	n/a	3.10
	2 ½			2.72			2.94			3.21
	3			2.83			3.05			3.32
EWP II	2	2.16	2.38	2.67	2.38	2.60	2.89	2.65	2.87	3.16
	2 ½	2.27	2.49	2.78	2.49	2.71	3.00	2.76	2.98	3.27
	3	2.38	2.60	2.89	2.60	2.82	3.11	2.87	3.09	3.38
	4	2.60	2.82	3.11	2.82	3.02	3.33	3.09	3.21	3.60
	5	2.82	3.04	3.33	3.04	3.24	3.55	3.31	3.43	3.82
	6	3.04	3.26	3.55	3.26	3.46	3.77	3.53	3.65	4.04
RWP II	1 ½	2.00	2.21	2.50	2.22	2.43	2.72	2.49	2.70	2.99
	2	2.11	2.32	2.61	2.33	2.54	2.83	2.60	2.81	3.10
	2 ½	2.22	2.43	2.72	2.44	2.65	2.94	2.71	2.91	3.21
	3	2.33	2.54	2.83	2.55	2.76	3.05	2.82	3.02	3.32
	4	2.55	2.76	3.05	2.77	2.98	3.27	3.04	3.24	3.54
	5	2.77	2.98	3.27	2.99	3.20	3.49	3.26	3.46	3.76
	6	2.99	3.20	3.49	3.21	3.42	3.71	3.48	3.68	3.98
IBL	2	n/a	2.36	2.64	n/a	2.59	2.87	n/a	2.87	3.15
	2 ½		2.47	2.75		2.70	2.98		2.98	3.26
	3		2.58	2.86		2.81	3.09		3.09	3.37
	4		2.80	3.08		3.03	3.31		3.31	3.59
	5		3.02	3.30		3.25	3.53		3.53	3.81
	6		3.24	3.52		3.47	3.75		3.75	4.03

PANEL WEIGHTS IN POUNDS PER SQUARE FOOT FOR 42" WIDE PANELS

Panel	Thickness	Gauge (Fascia/Liner)								
		26/26	24/26	22/26	26/24	24/24	22/24	26/22	24/22	22/22
IPP II	2	2.08	2.29	2.57	2.48	2.51	2.79	2.57	2.78	3.06
	2 ½	2.19	2.40	2.68	2.59	2.62	2.90	2.68	2.89	3.17
	3	2.30	2.51	2.79	2.70	2.73	3.01	2.79	3.00	3.28
	4	2.52	2.73	3.01	2.92	2.95	3.23	3.01	3.22	3.50
	5	2.74	2.95	3.23	3.14	3.17	3.45	3.23	3.44	3.72
	6	2.96	3.17	3.45	3.36	3.39	3.67	3.45	3.66	3.94
ESP II	2	n/a	2.29	2.57	n/a	2.51	2.79	n/a	2.78	3.06
	2 ½		2.40	2.68		2.62	2.90		2.89	3.17
	3		2.51	2.79		2.73	3.01		3.00	3.28
	4		2.73	3.01		2.95	3.23		3.22	3.50
Sonora™	2	n/a	2.29	2.57	n/a	2.51	2.79	n/a	2.78	3.06
	2 ½		2.40	2.68		2.62	2.90		2.89	3.17
	3		2.51	2.79		2.73	3.01		3.00	3.28
	4		2.73	3.01		2.95	3.23		3.22	3.50
IBL	2	n/a	2.32	2.60	n/a	2.55	2.83	n/a	2.82	3.10
	2 ½		2.43	2.71		2.66	2.94		2.93	3.21
	3		2.54	2.82		2.77	3.05		3.04	3.32
	4		2.72	3.04		2.99	3.27		3.26	3.54
	5		2.94	3.26		3.21	3.49		3.48	3.76
	6		3.16	3.48		3.43	3.71		3.70	3.98

Notes:

1. For panel weights for 24" wide panels, please visit www.insulated-panels.com/informationlibrary

PANEL SECTION PROPERTIES PER FOOT OF WIDTH

Panel	Fascia Gauge	Liner Gauge	Panel Thickness (in)	Moment of Inertia (in ⁴ /ft)	Fascia Section Modulus (in ³ /ft)	Liner Section Modulus (in ³ /ft)	Core Area (in ² /ft)
ESP II	24	26	2	0.470	0.523	0.427	23.52
			2 ½	0.737	0.657	0.535	29.52
			3	1.065	0.791	0.644	35.52
			4	1.899	1.058	0.861	47.52
EWP II	26	26	2	0.394	0.384	0.280	22.19
			2 ½	0.632	0.498	0.379	28.19
			3	0.925	0.613	0.480	34.19
			4	1.681	0.844	0.687	46.19
FWP	22	26	2	0.520	0.666	0.426	23.44
			2 ½	0.816	0.838	0.535	29.44
			3	1.179	1.009	0.643	35.44
			4	2.104	1.352	0.861	47.44
HWP	22	26	2	0.520	0.666	0.426	23.44
			2 ½	0.816	0.838	0.535	29.44
			3	1.179	1.009	0.643	35.44
IPP II	26	26	2	0.427	0.427	0.427	23.57
			2 ½	0.669	0.535	0.535	29.57
			3	0.966	0.644	0.644	35.57
			4	1.722	0.861	0.861	47.57
			5	2.695	1.078	1.078	59.57
			6	3.886	1.295	1.295	71.57
RWP II	26	26	1 ½	0.394	0.217	0.422	20.56
			2	0.623	0.303	0.521	26.56
			2 ½	0.909	0.397	0.623	32.56
			3	1.253	0.496	0.728	38.56
			4	2.111	0.703	0.939	50.56
			5	3.198	0.920	1.153	62.56
			6	4.513	1.142	1.368	74.56
Sonora™	24	26	2	0.470	0.523	0.427	23.52
			2 ½	0.737	0.657	0.535	29.52
			3	1.065	0.791	0.644	35.52
			4	1.899	1.058	0.861	47.52
IBL	24	26	2	0.470	0.523	0.427	23.52
			2 ½	0.737	0.657	0.535	29.52
			3	1.065	0.791	0.644	35.52
			4	1.899	1.058	0.861	47.52
			5	2.973	1.326	1.078	59.52
			6	4.287	1.594	1.295	71.52

Notes:

1. The above values are included for informational purposes. The use of these values is only applicable for a composite section analysis that includes effects from shear deformation of the foam as well as non-composite fascia effects.

FWP WALL PANEL ALLOWABLE LOAD CHART (ALLOWABLE LOADS IN PSF)

Panel Depth	Support Condition	Load Type	Connection	Support Spacing										
				3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
2"	1-Span	Pressure	--	217.52	160.84	114.99	84.81	64.00	49.20	38.45	30.49	24.49	19.92	16.37
		Suction	no Fab-Lok® ⁵	90.55	67.91	54.33	45.27	38.81	33.96	30.18	27.16	24.49	19.92	16.37
		Suction	with Fab-Lok® ^{5,7}	135.82	101.87	81.49	67.91	58.21	49.20	38.45	30.49	24.49	19.92	16.37
	2-Span	Pressure	--	201.15	146.25	114.16	93.38	78.93	57.14	43.01	33.60	27.01	22.21	18.61
		Suction	no Fab-Lok® ⁵	69.81	50.76	39.62	32.41	27.39	23.72	20.91	18.71	16.92	15.45	14.22
		Suction	with Fab-Lok® ^{5,7}	104.72	76.14	59.44	48.62	41.09	35.58	31.37	28.06	25.39	23.18	21.33
	3-Span and greater	Pressure	--	196.07	143.56	113.09	93.30	78.70	61.75	47.72	38.04	31.06	25.86	21.87
		Suction	no Fab-Lok® ⁵	71.58	53.01	42.06	34.86	29.77	25.98	23.05	20.72	18.82	17.24	15.90
		Suction	with Fab-Lok® ^{5,7}	107.37	79.51	63.09	52.29	44.66	38.98	34.58	31.08	28.23	25.85	23.85
2 1/2"	1-Span	Pressure	--	245.98	184.49	146.31	110.31	84.98	66.58	52.91	42.58	34.65	28.50	23.66
		Suction	no Fab-Lok® ⁵	86.52	64.89	51.91	43.26	37.08	32.44	28.84	25.96	23.60	21.63	19.97
		Suction	with Fab-Lok® ^{5,7}	129.78	97.33	77.87	64.89	55.62	48.67	43.26	38.93	34.65	28.50	23.66
	2-Span	Pressure	--	230.64	168.03	131.14	107.14	90.42	71.53	53.20	41.17	32.85	26.85	22.38
		Suction	no Fab-Lok® ⁵	69.12	50.36	39.30	32.11	27.10	23.43	20.63	18.43	16.65	15.19	13.97
		Suction	with Fab-Lok® ^{5,7}	103.68	75.53	58.95	48.16	40.65	35.14	30.94	27.64	24.98	22.79	20.95
	3-Span and greater	Pressure	--	224.63	164.22	129.11	106.33	90.39	74.42	57.14	45.32	36.87	30.61	25.83
		Suction	no Fab-Lok® ⁵	70.37	52.08	41.28	34.18	29.17	25.44	22.56	20.27	18.40	16.85	15.54
		Suction	with Fab-Lok® ^{5,7}	105.56	78.11	61.92	51.27	43.75	38.16	33.84	30.41	27.61	25.28	23.32
3"	1-Span	Pressure	--	263.36	197.52	158.01	131.68	104.40	83.10	67.00	54.63	44.99	37.39	31.33
		Suction	no Fab-Lok® ⁵	82.61	61.96	49.56	41.30	35.40	30.98	27.54	24.78	22.53	20.65	19.06
		Suction	with Fab-Lok® ^{5,7}	123.97	92.98	74.38	61.99	53.13	46.49	41.32	37.19	33.81	30.99	28.61
	2-Span	Pressure	--	249.62	182.29	142.37	116.26	98.02	84.64	62.99	48.28	38.23	31.05	25.75
		Suction	no Fab-Lok® ⁵	68.19	49.81	38.89	31.76	26.78	23.12	20.33	18.14	16.38	14.93	13.72
		Suction	with Fab-Lok® ^{5,7}	102.28	74.69	58.34	47.64	40.16	34.68	30.50	27.21	24.57	22.39	20.58
	3-Span and greater	Pressure	--	243.23	177.74	139.53	114.73	97.41	84.64	65.39	51.60	41.81	34.59	29.12
		Suction	no Fab-Lok® ⁵	69.08	51.11	40.48	33.50	28.57	24.90	22.07	19.82	17.99	16.47	15.19
		Suction	with Fab-Lok® ^{5,7}	103.62	76.67	60.73	50.25	42.85	37.35	33.11	29.74	26.99	24.71	22.78
4"	1-Span	Pressure	--	264.82	198.61	158.89	132.41	113.49	99.31	79.07	64.04	52.93	44.47	37.90
		Suction	no Fab-Lok® ⁵	74.67	56.00	44.80	37.33	32.00	28.00	24.89	22.40	20.36	18.67	17.23
		Suction	with Fab-Lok® ^{5,7}	112.00	84.00	67.20	56.00	48.00	42.00	37.33	33.60	30.55	28.00	25.85
	2-Span	Pressure	--	254.99	187.16	146.57	119.87	100.93	87.02	76.40	60.88	47.42	38.01	31.16
		Suction	no Fab-Lok® ⁵	65.79	48.29	37.82	30.90	26.04	22.45	19.71	17.56	15.82	14.40	13.21
		Suction	with Fab-Lok® ^{5,7}	98.71	72.46	56.74	46.37	39.07	33.69	29.58	26.35	23.74	21.61	19.82
	3-Span and greater	Pressure	--	249.21	182.30	142.92	117.26	99.33	86.14	76.04	61.00	48.97	40.23	33.67
		Suction	no Fab-Lok® ⁵	66.25	49.05	38.83	32.09	27.33	23.80	21.08	18.92	17.16	15.70	14.47
		Suction	with Fab-Lok® ^{5,7}	99.41	73.59	58.26	48.15	41.01	35.72	31.63	28.39	25.75	23.56	21.71

Notes:

1. Allowable values are based on a 36" wide panel with a 22 ga. fascia and a 26 ga. liner with 2- 1/4"-14 SDS and 1-HW-2320 clip at each supporting structural member.
2. Allowable values have been derived from tests conducted in accordance with the ASTM E72 and ASTM E1592 test specifications.
3. Allowable face buckling, shear and panel disengagement loads have been calculated using a 1.875 safety factor derived from test data scatter.
4. Allowable values include a deflection check using a limit of Spacing/240 based on 10-year wind pressures.
5. Pullout of the self-drilling screws from the supporting structural member **must be checked separately**.
6. Allowable loads are given for equally-spaced supports.
7. Fab-Lok®, where required, are to be installed in the following pattern:
 - 36" wide panel: Install through support structure into ribs of liner in contact with support member at 6" from each panel side with one at mid panel width.
8. This information is subject to change without notice. Please contact IPS for most current information.

IPPII WALL PANEL ALLOWABLE LOAD CHART (ALLOWABLE LOADS IN PSF)

Panel Depth	Support Condition	Load Type	Connection	Support Spacing										
				3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
2"	1-Span	Pressure	--	196.07	134.66	96.07	70.70	53.25	40.88	31.90	25.26	2.27	16.47	13.53
		Suction	no Fab-Lok® ^{5,7}	56.08	42.06	33.65	28.04	24.03	21.03	18.69	16.82	15.29	14.02	12.94
		Suction	with Fab-Lok® ^{5,7}	84.11	63.09	50.47	42.06	36.05	31.54	28.04	25.23	20.27	16.47	13.53
	2-Span	Pressure	--	181.08	131.64	102.76	83.35	66.47	53.99	44.45	37.01	31.09	26.32	22.44
		Suction	no Fab-Lok® ^{5,7}	59.81	43.48	33.94	27.77	23.47	20.33	17.93	16.04	14.51	13.25	12.19
		Suction	with Fab-Lok® ^{5,7}	89.74	65.24	50.93	41.66	35.22	30.50	26.90	24.06	21.77	19.88	18.29
	3-Span and greater	Pressure	--	176.54	129.27	101.86	83.37	65.74	52.69	42.77	35.09	29.07	24.28	20.45
		Suction	no Fab-Lok® ^{5,7}	61.37	45.45	36.06	29.89	25.53	22.28	19.77	17.77	16.14	14.78	13.64
		Suction	with Fab-Lok® ^{5,7}	92.08	68.19	54.11	44.85	38.31	33.44	29.67	26.66	24.22	22.18	20.44
2 1/2"	1-Span	Pressure	--	228.12	165.53	120.92	91.10	70.13	54.91	43.61	35.07	28.53	23.45	19.46
		Suction	no Fab-Lok® ^{5,7}	54.86	41.14	32.91	27.43	23.51	20.57	18.29	16.46	14.96	13.71	12.66
		Suction	with Fab-Lok® ^{5,7}	82.29	61.71	49.37	41.14	35.27	30.86	27.43	24.69	22.44	20.57	18.99
	2-Span	Pressure	--	213.79	155.73	121.54	99.30	82.77	68.07	56.77	47.87	40.71	34.88	30.08
		Suction	no Fab-Lok® ^{5,7}	58.80	43.14	33.67	27.51	23.21	20.07	17.67	15.79	14.27	13.02	11.97
		Suction	with Fab-Lok® ^{5,7}	88.20	64.71	50.50	41.26	34.82	30.10	26.51	23.68	21.40	19.53	17.95
	3-Span and greater	Pressure	--	208.21	152.22	119.69	98.57	82.78	67.43	55.61	46.32	38.91	32.93	28.06
		Suction	no Fab-Lok® ^{5,7}	60.30	44.63	35.37	29.29	25.00	21.80	19.34	17.37	15.77	14.44	13.32
		Suction	with Fab-Lok® ^{5,7}	90.46	66.94	53.06	43.94	37.50	32.71	29.01	26.06	23.66	21.67	19.98
3"	1-Span	Pressure	--	251.65	188.73	141.43	108.52	85.06	67.74	54.64	44.58	36.72	30.53	25.59
		Suction	no Fab-Lok® ^{5,7}	53.64	40.23	32.18	26.82	22.99	20.11	17.88	16.09	14.63	13.41	12.38
		Suction	with Fab-Lok® ^{5,7}	80.46	60.34	48.27	40.23	34.48	30.17	26.82	24.14	21.94	20.11	18.57
	2-Span	Pressure	--	238.60	174.26	136.10	111.15	93.70	79.92	67.30	57.31	49.23	42.59	37.08
		Suction	no Fab-Lok® ^{5,7}	56.74	42.67	33.32	27.21	22.94	19.81	17.42	15.54	14.03	12.79	11.75
		Suction	with Fab-Lok® ^{5,7}	85.11	64.02	50.00	40.83	34.42	29.72	26.14	23.32	21.05	19.15	17.63
	3-Span and greater	Pressure	--	232.50	169.90	133.37	109.66	93.10	79.93	66.76	56.30	47.86	40.97	35.28
		Suction	no Fab-Lok® ^{5,7}	58.45	43.78	34.68	28.69	24.47	21.33	18.91	16.98	15.41	14.11	13.01
		Suction	with Fab-Lok® ^{5,7}	87.68	65.69	52.03	43.05	36.71	32.00	28.37	25.48	23.12	21.17	19.52
4"	1-Span	Pressure	--	279.05	209.29	167.43	132.06	106.40	87.07	72.10	60.28	50.81	43.14	36.86
		Suction	no Fab-Lok® ^{5,7}	51.20	38.40	30.72	25.60	21.94	19.20	17.07	15.36	13.96	12.80	11.82
		Suction	with Fab-Lok® ^{5,7}	76.80	57.60	46.08	38.40	32.91	28.80	25.60	23.04	20.95	19.20	17.72
	2-Span	Pressure	--	269.18	197.72	154.91	126.63	106.70	91.99	80.75	70.63	61.57	54.07	47.77
		Suction	no Fab-Lok® ^{5,7}	53.15	40.79	32.46	26.53	22.35	19.27	16.92	15.07	13.58	12.35	11.33
		Suction	with Fab-Lok® ^{5,7}	79.72	61.18	48.70	39.81	33.54	28.92	25.39	22.61	20.37	18.53	17.00
	3-Span and greater	Pressure	--	263.23	192.60	151.00	123.86	104.90	90.94	80.26	70.73	61.27	53.43	46.84
		Suction	no Fab-Lok® ^{5,7}	54.48	42.03	33.27	27.49	23.42	20.39	18.05	16.20	14.69	13.44	12.39
		Suction	with Fab-Lok® ^{5,7}	81.71	63.06	49.92	41.25	35.13	30.59	27.09	24.31	22.04	20.17	18w.59
5"	1-Span	Pressure	--	275.33	206.49	165.20	137.66	113.45	94.79	80.17	68.43	58.86	50.95	44.35
		Suction	no Fab-Lok® ^{5,7}	48.66	36.50	29.20	24.33	20.85	18.25	16.22	14.60	13.27	12.17	11.23
		Suction	with Fab-Lok® ^{5,7}	73.04	54.78	43.82	36.52	31.30	27.39	24.35	21.91	19.92	18.26	16.86
	2-Span	Pressure	--	268.82	198.55	156.24	128.06	108.05	93.18	81.74	72.72	65.43	58.67	52.42
		Suction	no Fab-Lok® ^{5,7}	49.87	38.02	30.97	25.75	21.73	18.74	16.44	14.62	13.16	11.95	10.95
		Suction	with Fab-Lok® ^{5,7}	74.85	57.06	46.49	38.63	32.59	28.10	24.66	21.93	19.74	17.93	16.42
	3-Span and greater	Pressure	--	264.17	193.98	152.21	124.76	105.48	91.28	80.41	71.84	64.93	58.92	52.41
		Suction	no Fab-Lok® ^{5,7}	50.81	39.01	31.86	26.32	22.40	19.48	17.24	15.45	14.00	12.80	11.79
		Suction	with Fab-Lok® ^{5,7}	76.26	58.56	47.79	39.48	33.60	29.23	25.86	23.18	21.01	19.20	17.69

IPPII WALL PANEL ALLOWABLE LOAD CHART (ALLOWABLE LOADS IN PSF)

Panel Depth	Support Condition	Load Type	Connection	Support Spacing										
				3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
6"	1-Span	Pressure	--	241.73	181.30	145.04	120.87	103.60	88.40	76.07	66.10	57.88	51.01	45.18
		Suction	no Fab-Lok ^{®5}	46.22	34.67	27.73	23.11	19.81	17.33	15.41	13.87	12.61	11.56	10.67
		Suction	with Fab-Lok ^{®5,7}	69.38	52.04	41.63	34.69	29.74	26.02	23.13	20.82	18.92	17.35	16.01
	2-Span	Pressure	--	238.16	176.79	139.77	115.01	97.32	84.08	73.84	65.70	59.10	53.65	49.09
		Suction	no Fab-Lok ^{®5}	46.93	35.57	28.82	24.35	21.02	18.16	15.95	14.19	12.77	11.59	10.60
		Suction	with Fab-Lok ^{®5,7}	70.44	53.40	43.26	36.55	31.53	27.24	23.92	21.29	19.15	17.38	15.91
	3-Span and greater	Pressure	--	235.25	173.62	136.64	112.12	94.78	81.93	72.07	64.29	58.01	52.84	48.51
		Suction	no Fab-Lok ^{®5}	47.53	36.27	29.55	25.07	21.38	18.59	16.44	14.72	13.33	12.18	11.21
		Suction	with Fab-Lok ^{®5,7}	71.35	54.45	44.36	37.63	32.08	27.89	24.65	22.08	20.00	18.27	16.81

Notes:

1. Allowable values are based on a 42" wide panel with a 26 ga. fascia and a 26 ga. liner with 2- ¼"-14 SDS and 1- HW-2320 clip at each supporting structural member.
2. Allowable values have been derived from tests conducted in accordance with the ASTM E72 and ASTM E1592 test specifications.
3. Allowable face buckling, shear and panel disengagement loads have been calculated using a 1.875 safety factor derived from test data scatter.
4. Allowable values include a deflection check using a limit of Spacing/240 based on 10-year wind pressures.
5. Pullout of the self-drilling screws from the supporting structural member **must be checked separately**.
6. Allowable loads are given for equally-spaced supports.
7. Fab-Lok[®], where required, are to be installed in the following pattern:
 - 36" wide panel: Install through support structure into ribs of liner in contact with support member at 6" from each panel side with one at mid panel width.
 - 42" wide panel: Install through support structure into ribs of liner in contact with support member at 9" from each panel side with one at mid-panel width.
8. This information is subject to change without notice. Please contact IPS for most current information.

EWPII WALL PANEL ALLOWABLE LOAD CHART (ALLOWABLE LOADS IN PSF)

Panel Depth	Support Condition	Load Type	Connection	Support Spacing										
				3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
2"	1-Span	Pressure	--	208.99	139.97	98.43	71.46	53.16	40.36	31.20	24.51	19.54	15.78	12.90
		Suction	no Fab-Lok ^{®5}	67.67	50.76	40.60	33.84	29.00	25.38	22.56	20.30	18.46	15.78	12.90
		Suction	with Fab-Lok ^{®5,7}	101.57	76.18	60.94	50.79	43.53	38.09	31.20	24.51	19.54	15.78	12.90
	2-Span	Pressure	--	192.91	140.17	109.48	86.73	68.64	55.32	45.20	37.34	31.14	26.19	22.18
		Suction	no Fab-Lok ^{®5}	69.35	50.39	39.36	32.23	27.27	23.64	20.86	18.68	16.91	15.45	14.22
		Suction	with Fab-Lok ^{®5,7}	104.02	75.58	59.04	48.34	40.91	35.46	31.30	28.01	25.36	23.17	21.33
	3-Span and greater	Pressure	--	188.33	138.08	108.93	86.28	67.36	53.47	43.01	34.99	28.76	23.86	19.96
		Suction	no Fab-Lok ^{®5}	71.49	52.98	42.07	34.89	29.81	26.03	23.10	20.76	18.86	17.28	15.94
		Suction	with Fab-Lok ^{®5,7}	107.24	79.47	63.10	52.33	44.71	39.04	34.65	31.15	28.29	23.85	19.96
2 1/2"	1-Span	Pressure	--	249.85	179.48	129.34	96.12	73.05	56.53	44.42	35.40	28.56	23.31	19.22
		Suction	no Fab-Lok ^{®5}	67.20	50.40	40.32	33.60	28.80	25.20	22.40	20.16	18.33	16.80	15.51
		Suction	with Fab-Lok ^{®5,7}	100.86	75.64	60.52	50.43	43.23	37.82	33.62	30.26	27.51	23.31	19.22
	2-Span	Pressure	--	232.16	168.90	131.82	107.77	89.05	72.71	60.20	50.38	42.54	36.19	31.00
		Suction	no Fab-Lok ^{®5}	68.72	49.99	39.02	31.90	26.95	23.32	20.55	18.38	16.62	15.17	13.96
		Suction	with Fab-Lok ^{®5,7}	103.08	74.99	58.53	47.85	40.42	34.98	30.83	27.56	24.93	22.75	20.93
	3-Span and greater	Pressure	--	226.20	165.52	130.30	107.43	88.51	71.42	58.36	48.18	40.14	33.71	28.52
		Suction	no Fab-Lok ^{®5}	70.28	52.03	41.27	34.19	29.19	25.48	22.60	20.31	18.44	16.89	15.58
		Suction	with Fab-Lok ^{®5,7}	105.42	78.04	61.90	51.29	43.79	38.21	33.90	30.46	27.66	25.34	23.37
3"	1-Span	Pressure	--	281.36	211.02	157.69	119.36	92.30	72.57	57.86	46.70	38.10	31.40	26.12
		Suction	no Fab-Lok ^{®5}	66.61	49.96	39.96	33.30	28.55	24.98	22.20	19.98	18.17	16.65	15.37
		Suction	with Fab-Lok ^{®5,7}	99.91	74.93	59.95	49.96	42.82	37.47	33.30	29.97	27.25	24.98	23.06
	2-Span	Pressure	--	264.47	192.76	150.46	122.90	103.70	88.84	74.28	62.78	53.54	45.99	39.75
		Suction	no Fab-Lok ^{®5}	67.85	49.45	38.60	31.53	26.60	22.99	20.24	18.07	16.33	14.89	13.69
		Suction	with Fab-Lok ^{®5,7}	101.77	74.17	57.90	47.29	39.90	34.49	30.36	27.11	24.49	22.34	20.54
	3-Span and greater	Pressure	--	257.57	188.28	147.97	121.81	103.53	88.23	73.00	60.99	51.39	43.62	37.26
		Suction	no Fab-Lok ^{®5}	68.99	51.05	40.46	33.50	28.58	24.93	22.10	19.86	18.03	16.51	15.22
		Suction	with Fab-Lok ^{®5,7}	103.49	76.58	60.69	50.24	42.87	37.39	33.15	29.78	27.04	24.76	22.83
4"	1-Span	Pressure	--	321.33	240.99	192.80	158.55	125.91	101.57	82.94	68.43	56.96	47.80	40.41
		Suction	no Fab-Lok ^{®5}	65.42	49.07	39.25	32.71	28.04	24.53	21.81	19.63	17.84	16.36	15.10
		Suction	with Fab-Lok ^{®5,7}	98.13	73.60	58.88	49.07	42.06	36.80	32.71	29.44	26.76	24.53	22.65
	2-Span	Pressure	--	307.23	224.93	175.89	143.66	121.05	104.43	91.76	81.79	72.80	63.44	55.62
		Suction	no Fab-Lok ^{®5}	65.61	48.04	37.56	30.68	25.85	22.30	19.60	17.47	15.76	14.35	13.17
		Suction	with Fab-Lok ^{®5,7}	98.42	72.06	56.34	46.02	38.78	33.45	29.39	26.20	23.63	21.52	19.76
	3-Span and greater	Pressure	--	299.75	219.09	171.84	141.13	119.67	103.88	91.78	82.22	71.62	61.84	53.70
		Suction	no Fab-Lok ^{®5}	66.24	49.02	38.81	32.09	27.35	23.83	21.11	18.95	17.20	15.74	14.51
		Suction	with Fab-Lok ^{®5,7}	99.36	73.52	58.21	48.13	41.02	35.74	31.67	28.43	25.79	23.61	21.77

Notes:

- Allowable values are based on a 36" wide panel with a 26 ga. fascia and a 26 ga. liner with 2- 1/4"-14 SDS and 1- HW-2320 clip at each supporting structural member.
- Allowable values have been derived from tests conducted in accordance with the ASTM E72 and ASTM E1592 test specifications.
- Allowable face buckling, shear and panel disengagement loads have been calculated using a 1.875 safety factor derived from test data scatter.
- Allowable values include a deflection check using a limit of Spacing/240 based on 10-year wind pressures.
- Pullout of the self-drilling screws from the supporting structural member **must be checked separately**.
- Allowable loads are given for equally-spaced supports.
- Fab-Lok[®], where required, are to be installed in the following pattern:
 - 36" wide panel: Install through support structure into ribs of liner in contact with support member at 6" from each panel side with one at mid panel width.
- This information is subject to change without notice. Please contact IPS for most current information.

ESPII WALL PANEL ALLOWABLE LOAD CHART (ALLOWABLE LOADS IN PSF)

Panel Depth	Support Condition	Load Type	Connection	Support Spacing										
				3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
2"	1-Span	Pressure	--	195.65	137.15	98.66	73.19	55.53	42.90	33.67	26.80	21.60	17.61	14.52
		Suction	no Fab-Lok ^{®5}	56.08	42.06	33.65	28.04	24.03	21.03	18.69	16.82	15.29	14.02	12.94
		Suction	with Fab-Lok ^{®5,7}	84.11	63.09	50.47	42.06	36.05	31.54	28.04	25.23	21.60	17.61	14.52
	2-Span	Pressure	--	181.59	132.09	103.09	84.29	67.98	55.46	45.87	38.35	32.35	27.50	23.53
		Suction	no Fab-Lok ^{®5}	60.02	43.65	34.07	27.86	23.54	20.37	17.96	16.06	14.52	13.26	12.20
		Suction	with Fab-Lok ^{®5,7}	90.05	65.50	51.12	41.80	35.31	30.56	26.94	24.09	21.79	19.89	18.30
	3-Span and greater	Pressure	--	176.94	129.49	101.95	84.07	67.52	54.41	44.41	36.62	30.48	25.57	21.61
		Suction	no Fab-Lok ^{®5}	61.41	45.47	36.07	29.89	25.52	22.27	19.76	17.75	16.12	14.77	13.62
		Suction	with Fab-Lok ^{®5,7}	92.15	68.22	54.11	44.84	38.29	33.41	29.64	26.64	24.19	22.16	20.44
2 1/2"	1-Span	Pressure	--	227.73	167.92	123.52	93.71	72.64	57.23	45.72	36.96	30.21	24.93	20.76
		Suction	no Fab-Lok ^{®5}	54.86	41.14	32.91	27.43	23.51	20.57	18.29	16.46	14.96	13.71	12.66
		Suction	with Fab-Lok ^{®5,7}	82.29	61.71	49.37	41.14	35.27	30.86	27.43	24.69	22.44	20.57	18.99
	2-Span	Pressure	--	214.37	156.30	122.01	99.65	84.07	69.62	58.28	49.32	42.11	36.22	31.34
		Suction	no Fab-Lok ^{®5}	58.50	43.30	33.80	27.61	23.29	20.12	17.71	15.82	14.29	13.03	11.98
		Suction	with Fab-Lok ^{®5,7}	87.75	64.95	50.70	41.41	34.93	30.19	26.57	23.72	21.43	19.55	17.97
	3-Span and greater	Pressure	--	208.79	152.61	119.91	98.70	83.86	69.23	57.37	48.01	40.51	34.43	29.45
		Suction	no Fab-Lok ^{®5}	60.33	44.65	35.38	29.29	24.99	21.79	19.32	17.36	15.76	14.43	13.31
		Suction	with Fab-Lok ^{®5,7}	90.49	66.98	53.08	43.94	37.49	32.69	28.99	26.04	23.64	21.64	19.96
3"	1-Span	Pressure	--	251.29	188.47	143.88	111.08	87.60	70.18	56.93	46.68	38.64	32.25	27.14
		Suction	no Fab-Lok ^{®5}	53.64	40.23	32.18	26.82	22.99	20.11	17.88	16.09	14.63	13.41	12.38
		Suction	with Fab-Lok ^{®5,7}	80.46	60.34	48.27	40.23	34.48	30.17	26.82	24.14	21.94	20.11	18.57
	2-Span	Pressure	--	239.19	174.88	136.66	111.60	94.06	81.18	68.82	58.79	50.67	43.99	38.42
		Suction	no Fab-Lok ^{®5}	56.49	42.81	33.45	27.32	23.02	19.87	17.47	15.58	14.06	12.81	11.76
		Suction	with Fab-Lok ^{®5,7}	84.74	64.23	50.19	40.99	34.55	29.81	26.21	23.37	21.09	19.22	17.65
	3-Span and greater	Pressure	--	233.20	170.41	133.72	109.88	93.24	80.98	68.52	58.03	49.54	42.57	36.80
		Suction	no Fab-Lok ^{®5}	58.15	43.81	34.69	28.70	24.47	21.32	18.90	16.97	15.40	14.09	13.00
		Suction	with Fab-Lok ^{®5,7}	87.23	65.74	52.06	43.06	36.71	31.99	28.35	25.46	23.10	21.15	19.50
4"	1-Span	Pressure	--	278.76	209.07	167.25	134.15	108.60	89.30	74.30	62.41	52.84	45.05	38.65
		Suction	no Fab-Lok ^{®5}	51.20	38.40	30.72	25.60	21.94	19.20	17.07	15.36	13.96	12.80	11.82
		Suction	with Fab-Lok ^{®5,7}	76.80	57.60	46.08	38.40	32.91	28.80	25.60	23.04	20.95	19.20	17.72
	2-Span	Pressure	--	269.67	198.32	155.51	127.17	107.17	92.40	81.09	71.98	62.90	55.37	49.05
		Suction	no Fab-Lok ^{®5}	52.98	40.60	32.56	26.63	22.44	19.34	16.98	15.11	13.61	12.38	11.35
		Suction	with Fab-Lok ^{®5,7}	79.48	60.90	48.85	39.95	33.67	29.03	25.47	22.68	20.43	18.58	17.03
	3-Span and greater	Pressure	--	263.96	193.26	151.51	124.25	105.17	91.14	80.41	71.94	62.81	54.95	48.33
		Suction	no Fab-Lok ^{®5}	54.24	41.82	33.29	27.51	23.42	20.39	18.05	16.19	14.68	13.43	12.38
		Suction	with Fab-Lok ^{®5,7}	81.36	62.73	49.95	41.27	35.14	30.59	27.08	24.30	22.03	20.16	18.57

Notes:

1. Allowable values are based on a 42" wide panel with a 24 ga. fascia and a 26 ga. liner with 2- 1/4"-14 SDS and 1- HW-2320 clip at each supporting structural member.
2. Allowable values have been derived from tests conducted in accordance with the ASTM E72 and ASTM E1592 test specifications.
3. Allowable face buckling, shear and panel disengagement loads have been calculated using a 1.875 safety factor derived from test data scatter.
4. Allowable values include a deflection check using a limit of Spacing/240 based on 10-year wind pressures.
5. Pullout of the self-drilling screws from the supporting structural member **must be checked separately**.
6. Allowable loads are given for equally-spaced supports.
7. Fab-Lok[®], where required, are to be installed in the following pattern:
 - 36" wide panel: Install through support structure into ribs of liner in contact with support member at 6" from each panel side with one at mid panel width.
 - 42" wide panel: Install through support structure into ribs of liner in contact with support member at 9" from each panel side with one at mid panel width.
8. This information is subject to change without notice. Please contact IPS for most current information.

SONORA™ WALL PANEL ALLOWABLE LOAD CHART (ALLOWABLE LOADS IN PSF)

Panel Depth	Support Condition	Load Type	Connection	Support Spacing										
				3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
2"	1-Span	Pressure	--	159.82	110.58	80.44	60.35	46.28	36.10	28.58	22.92	18.59	15.25	12.63
		Suction	no Fab-Lok® ⁵	56.08	42.06	33.65	28.04	24.03	21.03	18.69	16.82	15.29	14.02	12.63
		Suction	with Fab-Lok® ^{5,7}	84.11	63.09	50.47	42.06	36.05	31.54	28.04	22.92	18.59	15.25	12.63
	2-Span	Pressure	--	162.76	115.58	87.26	68.47	55.16	45.26	37.67	31.69	26.89	22.39	18.68
		Suction	no Fab-Lok® ⁵	60.29	43.97	34.32	28.04	23.67	20.47	18.03	16.11	14.57	13.29	12.22
		Suction	with Fab-Lok® ^{5,7}	90.43	65.96	51.48	42.06	35.51	30.71	27.05	24.17	21.85	19.94	18.33
	3-Span and greater	Pressure	--	164.00	116.85	88.19	68.90	55.06	44.72	36.78	30.55	25.60	21.61	18.37
		Suction	no Fab-Lok® ⁵	61.58	45.57	36.13	29.93	25.54	22.28	19.76	17.76	16.12	14.77	13.62
		Suction	with Fab-Lok® ^{5,7}	92.37	68.36	54.20	44.89	38.31	33.42	29.65	26.64	24.19	21.61	18.37
2 1/2"	1-Span	Pressure	--	198.68	139.71	103.46	79.04	61.68	48.91	39.30	31.95	26.23	21.74	18.18
		Suction	no Fab-Lok® ⁵	54.86	41.14	32.91	27.43	23.51	20.57	18.29	16.46	14.96	13.71	12.66
		Suction	with Fab-Lok® ^{5,7}	82.29	61.71	49.37	41.14	35.27	30.86	27.43	24.69	22.44	20.57	18.18
	2-Span	Pressure	--	201.06	143.99	109.62	86.75	70.50	58.40	49.06	41.68	35.72	29.20	24.24
		Suction	no Fab-Lok® ⁵	58.21	43.53	33.99	27.76	23.41	20.22	17.79	15.87	14.33	13.07	12.01
		Suction	with Fab-Lok® ^{5,7}	87.32	65.30	50.99	41.64	35.11	30.33	26.68	23.81	21.50	19.60	18.01
	3-Span and greater	Pressure	--	202.24	145.39	110.86	87.60	70.87	58.28	48.53	40.80	34.58	29.52	25.35
		Suction	no Fab-Lok® ⁵	60.00	44.76	35.46	29.34	25.03	21.82	19.34	17.37	15.77	14.44	13.32
		Suction	with Fab-Lok® ^{5,7}	89.99	67.14	53.18	44.01	37.54	32.73	29.02	26.06	23.66	21.66	19.97
3"	1-Span	Pressure	--	235.15	167.23	125.44	97.12	76.81	61.71	50.19	41.26	34.23	28.63	24.14
		Suction	no Fab-Lok® ⁵	53.64	40.23	32.18	26.82	22.99	20.11	17.88	16.09	14.63	13.41	12.38
		Suction	with Fab-Lok® ^{5,7}	80.46	60.34	48.27	40.23	34.48	30.17	26.82	24.14	21.94	20.11	18.57
	2-Span	Pressure	--	237.10	170.88	130.90	104.24	85.25	71.09	60.14	51.46	44.42	36.54	30.19
		Suction	no Fab-Lok® ⁵	56.38	42.95	33.57	27.41	23.10	19.94	17.52	15.62	14.10	12.84	11.79
		Suction	with Fab-Lok® ^{5,7}	84.57	64.42	50.35	41.12	34.65	29.90	26.28	23.43	21.14	19.26	17.69
	3-Span and greater	Pressure	--	231.67	169.30	132.33	105.40	86.01	71.38	59.98	50.90	43.54	37.49	32.47
		Suction	no Fab-Lok® ⁵	58.01	43.90	34.76	28.75	24.50	21.35	18.92	16.99	15.42	14.11	13.01
		Suction	with Fab-Lok® ^{5,7}	87.01	65.85	52.14	43.12	36.76	32.03	28.38	25.48	23.13	21.17	19.52
4"	1-Span	Pressure	--	287.51	215.42	164.43	129.75	104.65	85.72	68.86	55.78	46.10	38.73	33.00
		Suction	no Fab-Lok® ⁵	51.20	38.40	30.72	25.60	21.94	19.20	17.07	15.36	13.96	12.80	11.82
		Suction	with Fab-Lok® ^{5,7}	76.80	57.60	46.08	38.40	32.91	28.80	25.60	23.04	20.95	19.20	17.72
	2-Span	Pressure	--	277.51	203.89	159.78	130.62	110.06	94.07	80.36	69.44	60.56	53.12	43.45
		Suction	no Fab-Lok® ⁵	53.11	40.75	32.49	26.56	22.38	19.30	16.94	15.08	13.59	12.36	11.34
		Suction	with Fab-Lok® ^{5,7}	79.67	61.12	48.75	39.85	33.58	28.95	25.41	22.63	20.39	18.55	17.01
	3-Span and greater	Pressure	--	271.43	198.63	155.72	127.73	108.16	93.76	80.89	69.58	60.32	52.63	46.18
		Suction	no Fab-Lok® ⁵	54.42	41.99	33.28	27.51	23.43	20.40	18.06	16.20	14.70	13.45	12.39
		Suction	with Fab-Lok® ^{5,7}	81.63	62.99	49.94	41.27	35.15	30.60	27.10	24.31	22.05	20.17	18.59

Notes:

1. Allowable values are based on a 42" wide panel with a 24 ga. fascia and a 26 ga. liner with 2- 1/4" -14 SDS and 1- HW-2320 clip at each supporting structural member.
2. Allowable values have been derived from tests conducted in accordance with the ASTM E72 and ASTM E1592 test specifications.
3. Allowable face buckling, shear and panel disengagement loads have been calculated using a 1.875 safety factor derived from test data scatter.
4. Allowable values include a deflection check using a limit of Spacing/240 based on 10-year wind pressures.
5. Pullout of the self-drilling screws from the supporting structural member **must be checked separately**.
6. Allowable loads are given for equally-spaced supports.
7. Fab-Lok®, where required, are to be installed in the following pattern:
 - 36" wide panel: Install through support structure into ribs of liner in contact with support member at 6" from each panel side with one at mid panel width.
 - 42" wide panel: Install through support structure into ribs of liner in contact with support member at 9" from each panel side with one at mid panel width.
8. This information is subject to change without notice. Please contact IPS for most current information.

HWP WALL PANEL ALLOWABLE LOAD CHART (ALLOWABLE LOADS IN PSF)

Panel Depth	Support Condition	Load Type	Connection	Support Spacing										
				3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
2"	1-Span	Pressure	--	217.52	160.84	114.99	84.81	64.00	49.20	38.45	30.49	24.49	19.92	16.37
		Suction	no Fab-Lok ^{®5}	90.55	67.91	54.33	45.27	38.81	33.96	30.18	27.16	24.49	19.92	16.37
		Suction	with Fab-Lok ^{®5,7}	135.82	101.87	81.49	67.91	58.21	49.20	38.45	30.49	24.49	19.92	16.37
	2-Span	Pressure	--	201.15	146.25	114.16	93.38	78.93	57.14	43.01	33.60	27.01	22.21	18.61
		Suction	no Fab-Lok ^{®5}	69.81	50.76	39.62	32.41	27.39	23.72	20.91	18.71	16.92	15.45	14.22
		Suction	with Fab-Lok ^{®5,7}	104.72	76.14	59.44	48.62	41.09	35.58	31.37	28.06	25.39	23.18	21.33
	3-Span and greater	Pressure	--	196.07	143.56	113.09	93.30	78.70	61.75	47.72	38.04	31.06	25.86	21.87
		Suction	no Fab-Lok ^{®5}	71.58	53.01	42.06	34.86	29.77	25.98	23.05	20.72	18.82	17.24	15.90
		Suction	with Fab-Lok ^{®5,7}	107.37	79.51	63.09	52.29	44.66	38.98	34.58	31.08	28.23	25.85	23.85
2 1/2"	1-Span	Pressure	--	245.98	184.49	146.31	110.31	84.98	66.58	52.91	42.58	34.65	28.50	23.66
		Suction	no Fab-Lok ^{®5}	86.52	64.89	51.91	43.26	37.08	32.44	28.84	25.96	23.60	21.63	19.97
		Suction	with Fab-Lok ^{®5,7}	129.78	97.33	77.87	64.89	55.62	48.67	43.26	38.93	34.65	28.50	23.66
	2-Span	Pressure	--	230.64	168.03	131.14	107.14	90.42	71.53	53.20	41.17	32.85	26.85	22.38
		Suction	no Fab-Lok ^{®5}	69.12	50.36	39.30	32.11	27.10	23.43	20.63	18.43	16.65	15.19	13.97
		Suction	with Fab-Lok ^{®5,7}	103.68	75.53	58.95	48.16	40.65	35.14	30.94	27.64	24.98	22.79	20.95
	3-Span and greater	Pressure	--	224.63	164.22	129.11	106.33	90.39	74.42	57.14	45.32	36.87	30.61	25.83
		Suction	no Fab-Lok ^{®5}	70.37	52.08	41.28	34.18	29.17	25.44	22.56	20.27	18.40	16.85	15.54
		Suction	with Fab-Lok ^{®5,7}	105.56	78.11	61.92	51.27	43.75	38.16	33.84	30.41	27.61	25.28	23.32
3"	1-Span	Pressure	--	263.36	197.52	158.01	131.68	104.40	83.10	67.00	54.63	44.99	37.39	31.33
		Suction	no Fab-Lok ^{®5}	82.61	61.96	49.56	41.30	35.40	30.98	27.54	24.78	22.53	20.65	19.06
		Suction	with Fab-Lok ^{®5,7}	123.97	92.98	74.38	61.99	53.13	46.49	41.32	37.19	33.81	30.99	28.61
	2-Span	Pressure	--	249.62	182.29	142.37	116.26	98.02	84.64	62.99	48.28	38.23	31.05	25.75
		Suction	no Fab-Lok ^{®5}	68.19	49.81	38.89	31.76	26.78	23.12	20.33	18.14	16.38	14.93	13.72
		Suction	with Fab-Lok ^{®5,7}	102.28	74.69	58.34	47.64	40.16	34.68	30.50	27.21	24.57	22.39	20.58
	3-Span and greater	Pressure	--	243.23	177.74	139.53	114.73	97.41	84.64	65.39	51.60	41.81	34.59	29.12
		Suction	no Fab-Lok ^{®5}	69.08	51.11	40.48	33.50	28.57	24.90	22.07	19.82	17.99	16.47	15.19
		Suction	with Fab-Lok ^{®5,7}	103.62	76.67	60.73	50.25	42.85	37.35	33.11	29.74	26.99	24.71	22.78

Notes:

1. Allowable values are based on a 36" wide panel with a 22 ga. fascia and a 26 ga. liner with 2- 1/4"-14 SDS and 1-HW-2320 clip at each supporting structural member.
2. Allowable values have been derived from tests conducted in accordance with the ASTM E72 and ASTM E1592 test specifications.
3. Allowable face buckling, shear and panel disengagement loads have been calculated using a 1.875 safety factor derived from test data scatter.
4. Allowable values include a deflection check using a limit of Spacing/240 based on 10-year wind pressures.
5. Pullout of the self-drilling screws from the supporting structural member **must be checked separately**.
6. Allowable loads are given for equally-spaced supports.
7. Fab-Lok[®], where required, are to be installed in the following pattern:
 - 36" wide panel: Install through support structure into ribs of liner in contact with support member at 6" from each panel side with one at mid panel width.
8. This information is subject to change without notice. Please contact IPS for most current information.

RWPII ROOF & WALL PANEL ALLOWABLE LOAD CHART (ALLOWABLE LOADS IN PSF)

Panel Depth	Support Condition	Load Type	Connection	Support Spacing										
				3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
1 1/2"	1-Span	Live/Press ¹	--	179.28	117.49	80.87	57.56	42.09	31.49	24.04	18.69	14.77	11.84	9.62
		Suction	wall ^{3,5}	199.47	149.60	102.68	71.31	52.39	40.11	31.69	25.67	21.09	16.91	13.74
		Suction	roof ^{4,5}	238.34	160.44	102.68	71.31	52.39	40.11	31.69	25.67	21.09	16.91	13.74
	2-Span	Live/Press ¹	--	188.12	130.18	95.71	73.03	57.13	45.50	36.75	30.03	24.79	20.65	17.34
		Suction	wall ^{3,5}	108.76	79.02	61.80	50.68	42.95	37.28	32.93	28.84	23.38	19.35	16.30
		Suction	roof ^{4,5}	129.88	94.36	73.80	60.52	51.29	44.51	36.52	28.84	23.38	19.35	16.30
	3-Span and greater	Live/Press ¹	--	190.22	131.35	95.67	71.97	55.36	43.33	34.40	27.66	22.50	18.49	15.34
		Suction	wall ^{3,5}	112.94	83.77	66.58	55.26	47.24	41.26	36.63	32.93	27.60	23.05	19.54
		Suction	roof ^{4,5}	134.87	100.04	79.51	65.99	56.41	49.27	42.03	33.67	27.60	23.05	19.54
2"	1-Span	Live/Press ¹	--	229.75	154.23	108.72	79.11	58.97	44.85	34.72	27.31	21.79	17.62	14.41
		Suction	wall ^{3,5}	199.70	149.78	119.82	97.75	71.81	54.98	43.44	35.19	29.08	24.44	20.59
		Suction	roof ^{4,5}	238.58	178.93	140.76	97.75	71.81	54.98	43.44	35.19	29.08	24.44	20.59
	2-Span	Live/Press ¹	--	237.52	166.22	123.66	95.54	75.72	61.10	49.98	41.35	34.52	29.06	24.65
		Suction	wall ^{3,5}	111.45	80.98	63.25	51.78	43.81	37.97	33.51	29.99	27.15	24.80	22.77
		Suction	roof ^{4,5}	133.19	96.78	75.58	61.88	52.36	45.37	40.04	35.84	32.44	27.13	22.77
	3-Span and greater	Live/Press ¹	--	239.92	168.06	124.39	95.15	74.41	59.15	47.65	38.82	31.95	26.53	22.22
		Suction	wall ^{3,5}	114.81	85.06	67.54	56.01	47.85	41.78	37.08	33.33	30.27	27.74	25.58
		Suction	roof ^{4,5}	137.20	101.65	80.70	66.93	57.18	49.92	44.31	39.83	36.17	31.89	27.00
2 1/2"	1-Span	Live/Press ¹	--	275.47	188.43	135.43	100.40	76.12	58.77	46.10	36.67	29.55	24.08	19.84
		Suction	wall ^{3,5}	199.94	149.96	119.96	99.97	85.69	70.48	55.69	45.11	37.28	31.32	26.69
		Suction	roof ^{4,5}	238.93	179.20	143.36	119.47	92.05	70.48	55.69	45.11	37.28	31.32	26.69
	2-Span	Live/Press ¹	--	282.01	199.13	149.50	116.63	93.36	76.13	62.94	52.60	44.35	37.69	32.24
		Suction	wall ^{3,5}	114.02	82.93	64.73	52.93	44.72	38.71	34.12	30.51	27.59	25.19	23.18
		Suction	roof ^{4,5}	136.23	99.09	77.34	63.22	53.43	46.24	40.76	36.45	32.97	30.10	27.69
	3-Span and greater	Live/Press ¹	--	284.45	201.39	150.89	116.95	92.69	74.65	60.90	50.19	41.75	35.01	29.58
		Suction	wall ^{3,5}	116.71	86.41	68.54	56.80	48.50	42.32	37.55	33.75	30.64	28.07	25.89
		Suction	roof ^{4,5}	139.44	103.24	81.89	67.86	57.95	50.57	44.86	40.32	36.61	33.53	30.93
3"	1-Span	Live/Press ¹	--	315.66	219.15	160.03	120.51	92.74	72.58	57.63	46.33	37.68	30.97	25.69
		Suction	wall ^{3,5}	200.30	150.22	120.18	100.15	85.84	75.11	66.77	55.17	45.59	38.31	32.64
		Suction	roof ^{4,5}	239.17	179.38	143.50	119.59	102.50	86.20	68.11	55.17	45.59	38.31	32.64
	2-Span	Live/Press ¹	--	321.01	228.35	172.70	135.76	109.56	90.08	75.11	63.32	53.84	46.12	39.76
		Suction	wall ^{3,5}	116.43	84.81	66.19	54.08	45.64	39.46	34.75	31.04	28.06	25.60	23.54
		Suction	roof ^{4,5}	139.08	101.31	79.07	64.60	54.52	47.14	41.51	37.08	33.51	30.58	28.12
	3-Span and greater	Live/Press ¹	--	323.33	230.81	174.59	136.72	109.55	89.21	73.55	61.25	51.44	43.52	37.08
		Suction	wall ^{3,5}	118.58	87.75	69.56	57.60	49.16	42.88	38.03	34.17	31.02	28.41	26.20
		Suction	roof ^{4,5}	141.65	104.83	83.09	68.81	58.72	51.22	45.43	40.82	37.06	33.93	31.30
4"	1-Span	Live/Press ¹	--	378.39	268.43	200.78	154.99	122.21	97.89	79.40	65.10	53.88	44.97	37.84
		Suction	wall ^{3,5}	200.77	150.58	120.46	100.39	86.04	75.29	66.92	60.23	54.76	50.19	44.44
		Suction	roof ^{4,5}	239.76	179.82	143.86	119.88	102.76	89.91	79.92	71.93	62.06	52.15	44.44
	2-Span	Live/Press ¹	--	381.80	274.77	210.19	167.15	136.52	113.67	96.02	82.02	70.69	61.36	53.59
		Suction	wall ^{3,5}	120.81	88.33	69.02	56.36	47.51	41.00	36.04	32.15	29.01	26.43	24.28
		Suction	roof ^{4,5}	144.33	105.53	82.46	67.34	56.76	48.98	43.06	38.40	34.66	31.58	29.00
	3-Span and greater	Live/Press ¹	--	383.60	277.15	212.52	168.99	137.63	113.99	95.60	80.95	69.10	59.38	51.33
		Suction	wall ^{3,5}	122.19	90.41	71.59	59.22	50.48	44.00	38.99	35.01	31.77	29.09	26.82
		Suction	roof ^{4,5}	145.97	108.01	85.53	70.75	60.31	52.56	46.58	41.83	37.96	34.75	32.04

RWP11 ROOF & WALL PANEL ALLOWABLE LOAD CHART (ALLOWABLE LOADS IN PSF)

Panel Depth	Support Condition	Load Type	Connection	Support Spacing										
				3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
5"	1-Span	Live/Press ¹	--	415.78	299.37	227.78	179.11	143.93	117.47	97.03	80.92	68.05	57.64	49.15
		Suction	wall ^{3,5}	201.24	150.93	120.75	100.62	86.25	75.47	67.08	60.37	54.88	50.31	46.44
		Suction	roof ^{4,5}	240.36	180.27	144.21	120.18	103.01	90.13	80.12	72.11	65.55	60.09	55.47
	2-Span	Live/Press ¹	--	417.84	303.42	234.16	187.84	154.77	130.04	110.89	95.65	83.26	73.01	64.42
		Suction	wall ^{3,5}	124.82	91.62	71.76	58.64	49.41	42.60	37.40	33.32	30.02	27.32	25.07
		Suction	roof ^{4,5}	149.13	109.47	85.73	70.06	59.04	50.90	44.69	39.81	35.87	32.64	29.95
	3-Span and greater	Live/Press ¹	--	419.14	305.34	236.36	189.94	156.49	131.22	111.46	95.63	82.70	71.98	62.99
		Suction	wall ^{3,5}	125.68	93.05	73.66	60.88	51.85	45.15	39.99	35.89	32.55	29.78	27.45
		Suction	roof ^{4,5}	150.17	111.18	88.00	72.74	61.95	53.95	47.78	42.88	38.89	35.58	32.80
6"	1-Span	Live/Press ¹	--	323.42	242.57	194.05	161.71	138.61	121.28	107.81	91.85	78.39	67.34	58.19
		Suction	wall ^{3,5}	201.72	151.29	121.03	100.86	86.45	45.64	67.24	60.52	55.01	50.43	46.55
		Suction	roof ^{4,5}	240.95	180.71	144.57	120.47	103.26	90.36	80.32	72.28	65.71	60.24	55.60
	2-Span	Live/Press ¹	--	314.40	231.71	182.00	148.99	125.61	108.30	95.02	84.55	76.11	69.18	63.40
		Suction	wall ^{3,5}	128.63	94.80	74.47	60.96	51.39	44.31	38.87	34.59	31.14	28.31	25.94
		Suction	roof ^{4,5}	153.64	113.23	88.94	72.81	61.38	52.92	46.43	41.32	37.19	33.81	30.98
	3-Span and greater	Live/Press ¹	--	308.33	226.04	177.26	145.30	122.92	106.44	93.83	83.89	75.87	69.25	63.69
		Suction	wall ^{3,5}	129.16	95.74	75.80	62.63	53.31	46.39	41.05	36.82	33.37	30.52	28.12
		Suction	roof ^{4,5}	154.27	114.35	90.54	74.80	63.67	55.40	49.03	43.97	39.86	36.45	33.59

Notes:

1. Live/Press: Allowable loads applicable to downloads such as roof live, snow and positive wind pressure.
2. Allowable values are based on a 36" wide panel with a 26 ga. fascia and a 26 ga. liner with 3- ¼ "-14 SDS in a 3' wide panel at each supporting structural member.
3. Connection for **Walls**: Screws located at the middle of the low pan centered between the high ribs of the fascia panel. Attach fascia sidelaps with ¼" Lapteks at 24" o.c. max. spacing between main panel connections.
4. Connection for **Roof**: Screws located at the middle of the high ribs of the fascia panel with an HW-355 bonded washer under the screw head. Attach fascia sidelaps with ¼" Lapteks at 18" o.c. max. spacing between main panel connections.
5. Pullout of the self-drilling screws from the supporting structural member **must be checked separately**.
6. Allowable values have been derived from tests conducted in accordance with the ASTM E72 and ASTM E1592 test specifications.
7. Allowable face buckling, shear and panel pullover loads have been calculated using a 1.875 safety factor derived from test data scatter.
8. Allowable values include a deflection check using a limit of Spacing/240 for Live/Press loading, and Spacing/240 based on 10-year wind pressures for Wind Suction loading.
9. Allowable loads are given for equally-spaced supports.
10. This information is subject to change without notice. Please contact IPS for most current information.

IBL ROOF PANEL ALLOWABLE LOAD CHART (ALLOWABLE LOADS IN PSF)

Panel Depth	Support Condition	Load Type	Connection	Support Spacing										
				3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
2"	1-Span	Live/Press ¹	--	186.09	123.85	86.56	62.48	46.24	34.95	26.91	21.07	16.75	13.50	11.01
		Suction	no Fab-Lok ^{®6}	80.46	60.34	48.27	40.23	34.48	30.17	26.82	24.14	21.94	19.28	15.73
		Suction	with Fab-Lok ^{®6,8}	120.69	90.51	72.41	60.34	51.72	45.26	38.45	30.11	23.93	19.28	15.73
	2-Span	Live/Press ¹	--	180.79	131.35	99.84	76.80	60.58	48.66	39.62	32.63	27.13	22.75	19.22
		Suction	no Fab-Lok ^{®6}	55.06	40.00	31.25	25.60	21.68	18.79	16.59	14.86	13.45	12.29	11.32
		Suction	with Fab-Lok ^{®6,8}	82.58	60.00	46.88	38.40	32.51	28.19	24.89	22.29	20.18	18.44	16.98
	3-Span and greater	Live/Press ¹	--	176.63	129.57	100.23	76.21	59.24	46.83	37.52	30.42	24.92	20.62	17.21
		Suction	no Fab-Lok ^{®6}	56.88	42.16	33.49	27.78	23.74	20.73	18.40	16.54	15.02	13.76	12.70
		Suction	with Fab-Lok ^{®6,8}	85.32	63.24	50.23	41.67	35.61	31.09	27.60	24.81	22.53	20.64	19.05
2 1/2"	1-Span	Live/Press ¹	--	217.01	148.73	107.12	79.57	60.44	46.75	36.72	29.25	23.59	19.25	15.87
		Suction	no Fab-Lok ^{®6}	79.54	59.66	47.73	39.77	34.09	29.83	26.51	23.86	21.69	19.89	18.36
		Suction	with Fab-Lok ^{®6,8}	119.37	89.52	71.62	59.68	51.16	44.76	39.79	35.81	32.55	27.50	22.67
	2-Span	Live/Press ¹	--	219.33	156.87	117.88	92.06	73.77	60.22	49.84	41.70	35.20	29.94	25.64
		Suction	no Fab-Lok ^{®6}	62.56	45.51	35.20	29.04	24.53	21.23	18.71	16.73	15.13	13.81	12.71
		Suction	with Fab-Lok ^{®6,8}	93.84	68.27	53.28	43.56	36.80	31.85	28.07	25.10	22.70	20.72	19.06
	3-Span and greater	Live/Press ¹	--	213.70	156.38	119.02	92.37	73.31	59.13	48.30	39.86	33.20	27.87	23.57
		Suction	no Fab-Lok ^{®6}	64.00	47.38	37.58	31.14	26.59	23.20	20.58	18.50	16.80	15.38	14.19
		Suction	with Fab-Lok ^{®6,8}	95.99	71.06	56.37	46.71	39.88	34.80	30.87	27.74	25.19	23.07	21.28
3"	1-Span	Live/Press ¹	--	263.36	197.52	158.01	131.68	104.40	83.10	67.00	54.63	44.99	37.39	20.73
		Suction	no Fab-Lok ^{®6}	82.61	61.96	49.56	41.30	35.40	30.98	27.54	24.78	22.53	20.65	18.17
		Suction	with Fab-Lok ^{®6,8}	123.97	92.98	74.38	61.99	53.13	46.49	41.32	37.19	33.81	30.99	27.26
	2-Span	Live/Press ¹	--	238.12	170.18	129.29	102.11	82.81	68.44	57.37	48.62	41.56	35.79	31.02
		Suction	no Fab-Lok ^{®6}	70.11	51.14	39.92	32.60	27.50	23.76	20.91	18.67	16.86	15.37	14.13
		Suction	with Fab-Lok ^{®6,8}	105.17	76.70	59.88	48.91	41.25	35.64	31.36	28.00	25.29	23.06	21.20
	3-Span and greater	Live/Press ¹	--	239.62	171.90	130.76	103.05	83.11	68.15	56.57	47.42	40.08	34.12	29.23
		Suction	no Fab-Lok ^{®6}	71.20	52.60	41.74	34.55	29.47	25.70	22.79	20.47	18.58	17.01	15.69
		Suction	with Fab-Lok ^{®6,8}	106.80	79.02	62.61	51.82	44.21	38.55	34.18	30.70	27.87	25.52	23.53
4"	1-Span	Live/Press ¹	--	230.23	166.21	126.87	100.12	80.75	66.15	54.84	45.90	38.73	32.91	28.14
		Suction	no Fab-Lok ^{®6}	76.90	57.68	46.14	38.45	32.96	28.84	25.63	23.07	20.97	19.23	17.75
		Suction	with Fab-Lok ^{®6,8}	115.40	86.55	69.24	57.70	49.46	43.28	38.47	34.62	31.47	28.85	26.63
	2-Span	Live/Press ¹	--	231.22	168.20	130.4	104.49	86.24	72.59	62.01	53.58	46.73	41.06	36.30
		Suction	no Fab-Lok ^{®6}	79.77	61.20	49.12	40.15	33.83	29.17	25.61	22.80	2.54	18.69	17.14
		Suction	with Fab-Lok ^{®6,8}	119.71	91.84	73.68	60.23	50.75	43.76	38.41	34.20	30.81	28.03	25.71
	3-Span and greater	Live/Press ¹	--	231.87	169.18	131.19	105.63	87.22	73.30	62.42	53.69	46.54	40.62	35.64
		Suction	no Fab-Lok ^{®6}	81.74	63.07	50.32	41.58	35.41	30.83	27.30	24.50	22.22	20.33	18.73
		Suction	with Fab-Lok ^{®6,8}	122.67	94.65	75.48	62.37	53.12	46.25	40.95	36.74	33.32	30.49	28.10
5"	1-Span	Live/Press ¹	--	169.83	125.08	97.80	79.31	65.89	55.68	47.64	41.16	35.83	31.38	27.63
		Suction	no Fab-Lok ^{®6}	75.17	56.38	45.10	37.59	32.22	28.19	25.06	22.55	20.50	18.79	17.35
		Suction	with Fab-Lok ^{®6,8}	112.76	84.57	67.66	56.38	48.33	42.29	37.59	33.83	30.75	28.19	26.02
	2-Span	Live/Press ¹	--	170.00	125.45	98.46	80.31	67.28	57.46	49.82	43.71	38.71	34.56	31.05
		Suction	no Fab-Lok ^{®6}	76.54	58.13	47.19	39.94	34.79	30.93	27.92	25.49	23.49	21.80	20.36
		Suction	with Fab-Lok ^{®6,8}	114.82	87.20	70.78	59.91	52.18	46.39	41.88	38.24	35.24	32.71	30.54
	3-Span and greater	Live/Press ¹	--	170.14	125.71	98.84	80.80	67.82	58.03	50.37	44.21	39.14	34.89	31.29
		Suction	no Fab-Lok ^{®6}	77.69	59.41	48.49	41.17	35.89	31.88	28.70	26.11	23.96	22.14	20.57
		Suction	with Fab-Lok ^{®6,8}	116.53	89.12	72.73	61.76	53.84	47.81	43.05	39.17	35.94	33.21	30.86

IBL ROOF PANEL ALLOWABLE LOAD CHART (ALLOWABLE LOADS IN PSF)

Panel Depth	Support Condition	Load Type	Connection	Support Spacing										
				3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
6"	1-Span	Live/Press ¹	--	52.18	38.98	31.03	25.70	21.88	18.99	16.72	14.90	13.40	12.13	11.06
		Suction	no Fab-Lok ^{®6}	73.45	55.09	44.07	36.72	31.25	27.12	23.89	21.28	19.14	17.33	15.80
		Suction	with Fab-Lok ^{®6,8}	74.55	55.69	44.33	36.72	31.25	27.12	23.89	21.28	19.14	17.33	15.80
	2-Span	Live/Press ¹	--	52.18	38.99	31.04	25.72	21.90	19.03	16.78	14.97	13.49	12.25	11.19
		Suction	no Fab-Lok ^{®6}	73.74	55.47	44.35	36.75	31.29	27.18	23.97	21.39	19.27	17.49	15.99
		Suction	with Fab-Lok ^{®6,8}	74.50	55.70	44.35	36.75	31.29	27.18	23.97	21.39	19.27	17.49	15.99
	3-Span and greater	Live/Press ¹	--	52.19	39.00	31.05	25.74	21.93	19.06	16.82	15.02	13.54	12.31	11.26
		Suction	no Fab-Lok ^{®6}	74.02	55.70	44.36	36.76	31.32	27.22	24.02	21.45	19.34	17.57	16.08
		Suction	with Fab-Lok ^{®6,8}	74.55	55.70	44.36	36.76	31.32	27.22	24.02	21.45	19.34	17.57	16.08

Notes:

1. Live/Press: Allowable loads applicable to downloads such as roof live, snow and positive wind pressure.
2. Allowable values are based on a 42" wide panel with a 24 ga. fascia and a 26 ga. liner with 3- ¼ "-14 SDS and 1- HW-2324A clip at each supporting structural member.
3. Allowable values have been derived from tests conducted in accordance with the ASTM E72 and ASTM E1592 test specifications.
4. Allowable face buckling, shear, seam disengagement and panel disengagement loads have been calculated using a 1.875 safety factor derived from test data scatter.
5. Allowable values include a deflection check using a limit of Spacing/240 for Live/Press loading, and Spacing/240 based on 10-year wind pressures for Wind Suction loading.
6. Pullout of the self-drilling screws from the supporting structural member **must be checked separately**.
7. Allowable loads are given for equally-spaced supports.
8. Fab-Lok[®], where required, are to be installed in the following pattern:
 - 36" wide panel: Install through support structure into ribs of liner in contact with support member at 1" from edge without HW-2324 clip.
 - 42" wide panel: Install through support structure into ribs of liner in contact with support member at 1" from edge without HW-2324 clip.
9. This information is subject to change without notice. Please contact IPS for most current information.



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