ASC PROFILES LLC
2110 Enterprise Blvd.
West Sacramento, CA 95691
(800) 733-4955
www.ascprofiles.com

AEP SPAN AND ASC BUILDING PRODUCTS: SINGLE SKIN STEEL ROOF AND WALL PANELS WITH EXPOSED FASTENERS

CSI Sections:
07 61 00 Sheet Metal Roofing
07 64 00 Sheet Metal Wall Cladding

1.0 RECOGNITION

ASC Profiles LLC Single Skin Steel Roof and Wall Panels with Exposed Fasteners have been evaluated for use as exterior roof and wall covering panels. The structural and fire-resistance properties of the panels have been evaluated for compliance with the following codes:

- 2021, 2018, 2015, and 2012 International Building Code® (IBC)
- 2021, 2018, 2015, and 2012 International Residential Code® (IRC)
- 2022 and 2019 California Building Code® (CBC) – Attached supplement
- 2022 and 2019 California Residential Code® (CRC) – Attached supplement
- 2023 and 2020 City of Los Angeles Building Code (LABC) –Attached supplement
- 2023 and 2020 City of Los Angeles Residential Code (LARC) –Attached supplement

2.0 LIMITATIONS

Use of the ASC Profiles LLC Single Skin Steel Roof and Wall Panels and Fasteners recognized in this report is subject to the following limitations:

2.1 Metal panels used in roof applications shall be applied to a solid or closely fitted deck, except where the roof covering is specifically designed to be applied to spaced support members. The panel installation tables in this report provide applicable substrate limitations.

2.2 Calculations demonstrating compliance with this report shall be submitted to the building official for approval. The calculations shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

2.3 The manufacturer's recommended roof slopes are defined within the OVERVIEW portion of this report. The minimum roof panel slopes shall conform to IBC Section 1507.4.2 or IRC Section R905.10.2, or as stated in this report.

2.4 Roof panel flashing requirements, when applicable, shall comply with IBC Sections 1503.2 and 1503.3, or IRC Sections R903.2 and R903.3. Underlayment, including installation, shall comply with IBC Sections 1507.1 and 1507.4.5, or IRC Section R905.10.5, with consideration of applicable wind conditions.

2.5 Panels used on exterior walls shall be flashed in accordance with IBC Section 1405.4 or IRC Section R905.4.6 and be placed over a water-resistive barrier in accordance with IBC Sections 1402.2, 1403.2, and 1404.2, or IRC Section R703.1.

2.6 For modifications of panel installations, design of partial panels, panel penetrations, and other panel discontinuities shall consider effects on strength and stiffness and be the responsibility of the design professional in accordance with IBC Section 1604.4, using rational engineering mechanics or in accordance with the manufacturer's installation instructions as approved by the building official.

2.7 Where panels are used as vertical diaphragm shear resistance in walls (shear wall) of light-frame construction, the walls shall be classified as a "bearing wall system" or "building frame system" with "light-framed walls with shear panels of all other materials" subject to the conditions of this classification as defined in ASCE/SEI 7, Section 12.2.

2.8 Panel use as protection of glazed openings located in wind-borne debris regions is outside the scope of this report.

2.9 Product Performance:

2.9.1 Structural: The tables provided in this report specify the gross and effective section properties, inward (positive) uniform allowable loads, allowable reactions at supports, outward (negative) uniform allowable loads, and diaphragm shear capacities, *q* (plf) and flexibility factors, *F* (10-6 in/lbs) for each of the panels described in Section 4.1 of this report.

2.9.2 Roof Classification: Roof assemblies complying with the requirements of IBC Section 1505.2, Exception 2, or IRC Section R902.1, Exception 2, are considered Class A roof assemblies. For other conditions, roof assemblies shall be listed as Class A, B, or C in accordance with ASTM E108 or UL 790, by an approved listing agency or shall be considered non-classified roofing. ASC Profiles shall be contacted for information on the specific listed assemblies.

2.9.3 Wall Assembly Fire-Resistance: Wall panels are limited to installations where non-fire-resistance-rated construction is permitted by the IBC or IRC. Wall panels may be permitted in fire-resistance-rated wall assemblies based on successful testing in accordance with the requirements prescribed in IBC Section 703.

2.9.4 Air and Water Infiltration: Air and water infiltration resistance is outside the scope of this report. Weather protection shall comply with Sections 2.4 and 2.5 of this report.

2.9.5 Hail Resistance: Hail resistance is outside the scope of this report.

2.9.6 Wind-blown Debris Resistance: Wind-blown debris resistance is outside the scope of this report.

2.10 The Single Skin Steel Roof and Wall Panels recognized in this report are produced by ASC Profiles LLC in Sacramento, California, and Salem, Oregon.

3.0 PRODUCT USE

General Design and Installation shall be in accordance with the referenced codes in Section 1.0 of this report, the information provided in this report, and ASC Profile's product installation guides. Where conflicts occur, the more restrictive shall govern.

4.0 PRODUCT DESCRIPTION

4.1 Panels: The panels are available in various configurations as illustrated in the figures accompanying the tables in this report. Panels are either unpainted or are provided with a painted finish. Additional information on the panel configurations is provided in the OVERVIEW portion of this report.

The roof panels comply with requirements for metal roof panels in Chapter 15 of the IBC and Section R905 of the IRC. The wall panels comply with requirements for steel wall coverings in Chapter 14 of the IBC and Section R703 of the IRC.

4.2 Base Materials: All No. 18 and No. 20 gage panels are manufactured from sheet steel with G90 galvanized coatings conforming to ASTM A653 SS Grade 40.

All No. 22 and No. 24 gage panels are manufactured from AZ50 aluminum-zinc alloy coated steel sheet conforming to ASTM A792 SS Grade 50, or from G90 galvanized sheet per ASTM A653 SS Grade 50.

All No. 26 and No. 29 gage panels are manufactured from AZ50 aluminum-zinc alloy coated steel sheets conforming to ASTM A792 SS Grade 80. The panels are also available prepainted in accordance with ASTM A755.

4.3 Fasteners: The fasteners' size and type requirements are identified in the panel installation tables within this report. All fasteners shall be zinc-plated with an added corrosion-resistant coating, or of a 300 series stainless steel construction. Self-tapping metal-to-metal fasteners shall comply with ASTM C1513. Fasteners installed into treated wood shall be 300 series stainless steel or designed specifically for use with treated wood.

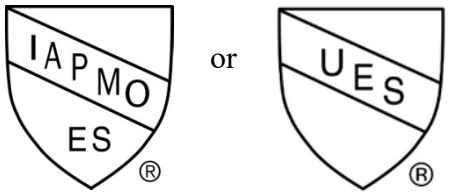
4.4 Substrates: ASC Profiles roof and wall panels may be fastened to numerous substrates including, but not limited to, the following:

- Cold-formed steel in accordance with AISI S100
- Hot rolled steel in accordance with AISC 360
- Concrete in accordance with ACI 318
- Plywood and OSB in accordance with DOC PS-1 and DOC PS-2
- Dimensional lumber in accordance with ANSI/AWC NDS®

The panel installation tables within this report provide applicable substrate and fastening requirements. For other support conditions, structural calculations complying with the applicable code shall be submitted to the building official for approval.

5.0 IDENTIFICATION

A permanent label or a die-stamp label bearing the name and address of the manufacturers, the model number, and this evaluation report number (Evaluation Report ER-550) identifies the products listed in this report. The identification labels may also include one of the following IAPMO Uniform Evaluation Service Marks of Conformity:



IAPMO UES ER-550

6.0 SUBSTANTIATING DATA

Data submitted in conformance with IAPMO UES Evaluation Criteria Single Skin Steel Roof and Wall Panels, EC-011, revised January 2022. All product testing is from laboratories in compliance with ISO/IEC 17025.

7.0 STATEMENT OF RECOGNITION

This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on ASC Profiles LLC Single Skin Steel Roof and Wall Panels with Exposed Fasteners to assess conformance to the codes and standards shown in Section 1.0 of this report and documents the product's certification. Products are manufactured at locations noted in Section 2.10 of this report under a quality control program with periodic inspections under the surveillance of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email at info@uniform-es.org

CONTENTS:

OVERVIEW:

The technical information contained within this evaluation report will assist the user in selecting the appropriate AEP Span or ASC Building Products' exposed fastener panels and associated panel attachments.

The report consists of the following product information:

- General report notes and considerations
- Panel views/fastener attachment locations
- Panel section properties
- Reaction at supports (web crippling) capacities
- Inward (positive/ gravity) load tables
- Outward (negative/ uplift) load tables
- Diaphragm shear capacities

Panels:

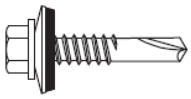
The following is a list of panels contained within this report along with application limitations:

Panel:	Application:	Coverage:	Gage No.:	Minimum Slope*:
2 ½" Corrugated	Roof, Wall	21-1/3" roof, 24" wall	29, 26	3:12
Box Rib	Wall	36"	26, 24, 22, 20, 18	n/a
Reversed Box Rib	Roof, Wall	36"	26, 24, 22, 20, 18	1:12
Delta Rib	Roof, Wall	24"	29, 26	3:12
Delta Rib III	Roof, Wall	36"	29, 26	3:12
HR-36®	Roof, Wall	36"	26, 24, 22, 20, 18	1:12
Reversed HR-36	Wall	36"	26, 24, 22, 20, 18	n/a
Mini-V-Beam	Roof, Wall	32"	26, 24, 22, 20, 18	1:12
Nor-Clad®	Roof, Wall	36"	29, 26	3:12
Nu-Wave® Corrugated	Roof, Wall	32" roof, 34-2/3" wall	26, 24, 22, 20	3:12
PBR	Roof, Wall	36"	26, 24, 22	1:12
Reversed PBR	Wall	36"	26, 24, 22	n/a
Strata Rib	Roof, Wall	36"	29, 26	3:12
U-Panel	Roof, Wall	36"	29, 26, 24, 22	3:12

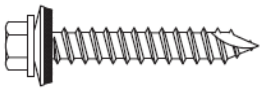
* - ASC recommended minimum slopes. Minimum installed panel slopes shall not be less than those stated in IBC Section 1507.4.2 or IRC Section R905.10.2.

Fasteners:

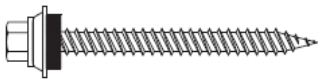
Below is a summary of the fastener size and types specified within this report. Fastener size and type shall be compatible with the material type, thickness, and grade of the supporting members. Section 4.3 of this report provides additional fastener requirements. Hex washer head (HWH) fasteners are shown below. However, alternative fastener heads are acceptable. Fasteners require sealing washers for weather-tight applications.



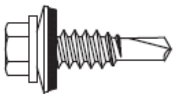
#12 metal-to-metal fastener (self-drilling point shown)



#14 metal-to-wood fastener (milled point shown)



#9 metal-to-wood fastener (dimensional lumber only; self-piercing point shown)



Side Lap Screw (#12 or #14 most common)

To assist in the evaluation of panel shear resistance, fastener connection shear strengths have been provided in Table B of this report for #12 fasteners into steel supports. These capacities are based on AISI S100, Section J4.3 for fastener shear strength and shear strengths limited by tilting and bearing. The capacities listed within Table B of this report are used to determine edge (perimeter) fastening requirements for shear resistance. The general notes and shear and flexibility tables of this report provide further information.

TABLE B

#12 Fastener Connection Shear Strengths *(lbs)*

Material / Grade	Substrate Thickness	Panel Gauge / Grade: 29ga (.0139") Gr80		26ga (.0173") Gr80		24ga (.0232") Gr50		22ga (.0294") Gr50		20ga (.0354") Gr40		18ga (.0459") Gr40	
		ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	16ga *(.0590")* min.	222	*332*	276	*414*	293	*440*	371	*557*	378	*568*	491	*736*
	18ga *(.0459")*	222	*332*	276	*414*	293	*440*	371	*557*	378	*568*	416	*624*
	20ga *(.0354")*	222	*332*	276	*414*	286	*429*	294	*441*	282	*423*	282	*423*
	22ga *(.0294")*	219	*329*	242	*364*	227	*341*	213	*320*	213	*320*	213	*320*
Steel (Gr 33 min.)	16ga *(.0590")* min.	222	*332*	276	*414*	293	*440*	371	*557*	378	*568*	433	*650*
	18ga *(.0459")*	222	*332*	276	*414*	291	*437*	319	*479*	306	*459*	288	*432*
	20ga *(.0354")*	222	*332*	251	*377*	229	*344*	211	*316*	195	*293*	195	*293*
	22ga *(.0294")*	203	*304*	199	*298*	167	*251*	148	*221*	148	*221*	148	*221*

GENERAL NOTES:

The following are general notes and considerations for the various report sections:

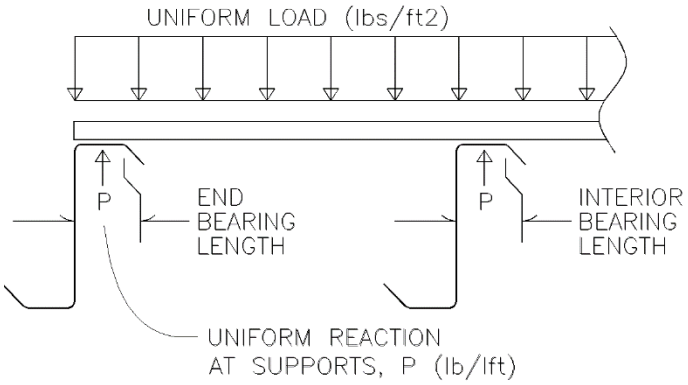
Panel views, with common fastener locations:

1. Included are drawings of the exposed fastener panels with basic dimensions and common fastener locations. These fastener locations correspond to the panel structural capacities contained within this report.

Panel section properties:

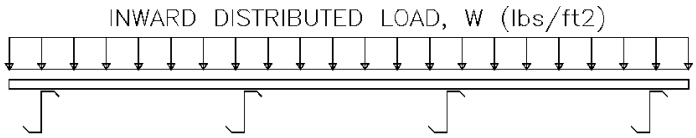
1. Section properties are calculated based on the panel geometry and the provisions of the American Iron and Steel Institute's *North American Specification for the Design of Cold-Formed Steel Structural Members* (AISI S100).
2. For calculating the deflection of a panel subject to uniform distributed loads, the hybrid moment of inertia is used and is equal to two times the effective moment of inertia plus the gross moment of inertia divided by three: $(2I_{e+} + I_g)/3$ for positive moment or (2Ie- + Ig)/3 for negative moment.

Reaction at supports (web crippling) capacity:



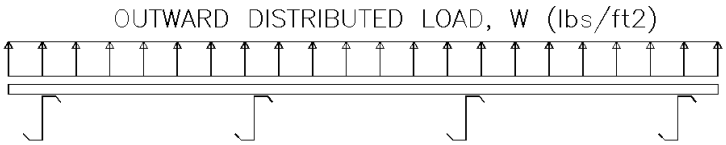
1. The panel reaction at supports capacity is calculated in accordance with AISI S100, Section G5 for multi-web steel panels supported by framing that supports a uniform distributed load. Where calculation in accordance with AISI S100 G5 is not possible, the performance is evaluated from web crippling testing complying with AISI S909. The panel end and interior reactions listed in the tables are for uniformly distributed out-of-plane loads applied to the panels.
2. The ASD allowable (P_n/Ω) and LRFD factored (ϕP_n) reactions presented in the tables are in pounds per linear foot (plf) running axially along the support for a given panel bearing length on the support. This is based on the web crippling capacity of an individual web multiplied by the number of webs per linear foot.
3. Reaction capacities listed in tables are acceptable for use with bearing lengths greater than those listed.

Positive (inward/ gravity) load capacity:



1. For uniform inward loading conditions, the appropriate support spacing is identified by referring to the inward load tables within this report. For conditions not defined by these tables, values are readily derived through standard engineering mechanics using the panel's section properties.
2. The ASD allowable (W/Ω) and LRFD factored (ϕW) panel strengths have been evaluated for bending, shear, and combined bending and shear.
3. The L/240, L/180, and L/120 values are based on allowable service load deflections.
4. Table values denoted by '- 'indicate that capacities are limited by allowable panel strength, not deflection. In those instances, the panel strength limits (W/Ω and ϕW) are reached prior to the deflection limits (L/180, etc.) being reached.

Negative (outward/ uplift) load capacity:



1. Common panel attachment combinations and associated outward load capacities are provided within this report. Panel system negative (outward) uniform load capacities are based on fastener pullout, pullover, fastener tension, panel outward bending strength, and IBC Section 1604.3.1 deflection limit of L/60 for formed metal sheet roofing and siding.
2. Using the project's defined outward wind loads, the appropriate *Panel System Negative (Outward) Uniform Load Capacity* table shall be reviewed to select a panel attachment that equals or exceeds the project wind load requirements. Not all possible fastener and substrate combinations are listed within the report. Alternative combinations are acceptable (i.e. attaching a panel assembly with fasteners into a concrete substrate), subject to the approval of the building official, provided an analysis is performed by a registered design professional based on the failure modes noted above.
3. Fastener capacities in steel are based on AISI S100. Fastener capacities in wood substrates are based on ANSI/AWC NDS with a combined adjustment factor of 1.6 (2.16 LRFD).
4. Although nominal fastener sizes are provided in the tables, the appropriate fastener thread and point type shall still be properly specified for the selected substrate.
5. The 1-inch minimum fastener penetration specified for the Douglas Fir-Larch values applies to the usable thread length and this minimum depth does not include the tapered portion of the fastener.

Shear and flexibility tables:

1. Shear capacity (lbs/lineal ft) and flexibility factors (10^{-6} in/lb) are presented in the tables. Product capacities are determined in accordance with the American Iron and Steel Institute's *North American Standard for the Design of Profiled Steel Diaphragm Panels* (AISI S310). Values are based on seismic governed loading conditions ($\Omega_d = 2.30$ and $\phi_d = 0.7$) and are therefore conservative for applications governed by wind loads ($\Omega_d = 2.00$ and $\phi_d = 0.8$).
2. Perimeter (edge) fastener spacing parallel to panel ribs has not been included in performance tables. Maximum spacing for edge fasteners parallel to panel flutes is defined as:

   Max. edge fastener spacing = the lesser of 1) shear capacity per fastener (lb) / shear demand (lb/ft); or 2) the interior side-seam fastener spacing

   The Fastener Connection Shear Strength performance table within this report assists with the needed fastener capacity in the above equation.
3. Tabulated shear capacities apply to both roof and wall diaphragms.
4. Tables apply to panels installed over steel supports. Evaluation of shear and flexibility over wood framing is outside the scope of this report.
5. Capacities are based on panel gauge, span, support fastener size and type, support attachment pattern, side lap connection fastener, and side lap fastener spacing. Capacities based on minimum #12 side lap and support screws.
6. Interpolation of diaphragm shear strength and flexibility factor between adjacent spans or side seam spacing is permitted provided the higher value does not exceed the lower value by more than 50 percent.
7. Flexibility Factors provided in charts are provided in an A +/- B(R) format.

   Where:

   A and B are constants provided in the shear tables.
   R = panel attachment spacing (panel span) ÷ panel length.

1.0: 2 1/2" Corrugated

FIGURE 1.1 - Basic Dimensions and Panel Attachment (2 1/2" Corrugated):

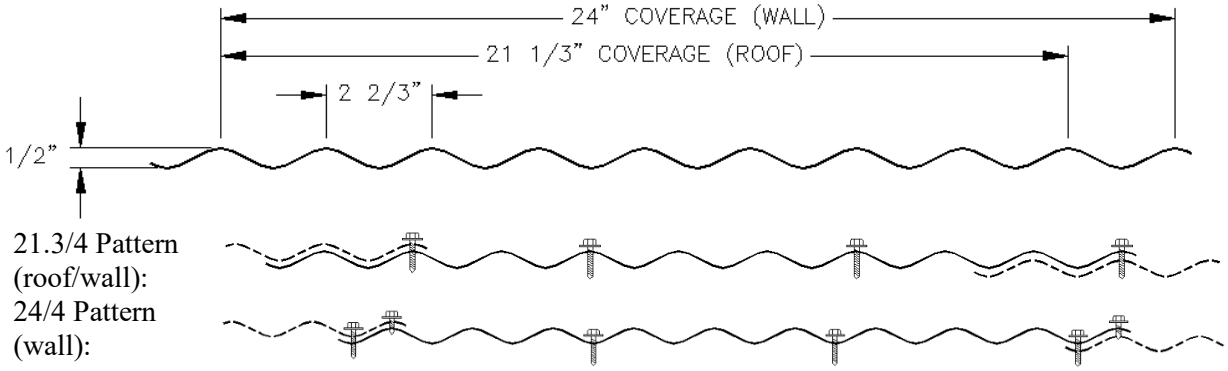


TABLE 1.1 - Section Properties (2 1/2" Corrugated):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
29	0.67	0.0139	80	82	0.1960	0.0055	0.26	0.0217	0.0217
26	0.83	0.0173	80	82	0.2439	0.0070	0.26	0.0269	0.0269

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative				
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	$I_d = (2I_e+I_g)/3$	
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
29	0.1021	0.0055	0.26	0.0209	0.0055	0.26	0.0209	0.0055	0.0055
26	0.1407	0.0070	0.26	0.0269	0.0070	0.26	0.0269	0.0070	0.0070

TABLE 1.2 - Inward (Positive) Uniform Allowable Loads (2 1/2" Corrugated):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	6' - 0"
29	Single Span	ASD, W/Ω	283	125	80	56	41	31	25	20	14
		LRFD, ϕW	449	199	127	88	65	50	39	32	22
		L/240	153	45	23	13	8	6	4	3	2
		L/180	204	60	31	18	11	8	5	4	2
		L/120	-	90	46	27	17	11	8	6	3
	Double Span	ASD, W/Ω	274	123	79	55	40	31	24	19	13
		LRFD, ϕW	412	186	119	82	60	46	36	29	20
		L/240	-	109	56	32	20	14	10	7	4
		L/180	-	-	74	43	27	18	13	9	5
		L/120	-	-	-	-	-	27	19	14	8
	Triple Span	ASD, W/Ω	338	153	98	68	51	39	31	24	17
		LRFD, ϕW	509	231	148	103	76	58	46	37	25
		L/240	289	85	44	25	16	11	7	5	3
		L/180	-	113	58	34	21	14	10	7	4
		L/120	-	-	87	50	32	21	15	11	6
26	Single Span	ASD, W/Ω	364	161	103	71	52	40	32	26	18
		LRFD, ϕW	577	255	163	113	83	64	50	41	28
		L/240	195	57	29	17	11	7	5	4	2
		L/180	260	76	39	23	14	10	7	5	3
		L/120	-	115	59	34	21	14	10	7	4
	Double Span	ASD, W/Ω	355	158	101	70	52	39	31	25	17
		LRFD, ϕW	534	238	153	106	78	59	47	38	26
		L/240	-	138	71	41	26	17	12	9	5
		L/180	-	-	94	55	34	23	16	12	7
		L/120	-	-	-	-	52	35	24	18	10
	Triple Span	ASD, W/Ω	440	198	127	88	65	50	39	31	22
		LRFD, ϕW	662	298	192	132	98	75	59	48	33
		L/240	368	108	55	32	20	14	10	7	4
		L/180	-	144	74	43	27	18	13	9	5
		L/120	-	-	111	64	40	27	19	14	8

TABLE 1.3 - Allowable Reactions at Supports (2 1/2" Corrugated):

Reactions at Supports based on Web Crippling			
Gauge	Condition	Bearing Length of Webs	
		ASD (P_n/Ω) (*lbs/ft width*)	**LRFD (ϕP_n)** (*lbs/ft width*)
		1.5"	1.5"
29	End	307	491
	Interior	435	696
26	End	605	966
	Interior	825	1322

TABLE 1.4 - Outward (Negative) Uniform Allowable Loads (No. 29 gage 2 1/2" Corrugated):

2 1/2" Corrugated, 29ga																					
Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft^2)																	
				Attachment Spacing, (ft-in)																	
				12"		16"		2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		4' - 6"		5' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga *(.1350")*	#12	24/4 21.3/4	570	*855*	427	*641*	209	*331*	133	*174*	93	*101*	63	*63*	43	*43*	30	*30*	22	*22*
	12ga *(.1050")*	#12	24/4 21.3/4	570	*855*	427	*641*	209	*331*	133	*174*	93	*101*	63	*63*	43	*43*	30	*30*	22	*22*
	14ga *(.0700")*	#12	24/4 21.3/4	557	*835*	418	*627*	209	*331*	133	*174*	93	*101*	63	*63*	43	*43*	30	*30*	22	*22*
	16ga *(.0590")*	#12	24/4 21.3/4	469	*704*	352	*528*	209	*331*	133	*174*	93	*101*	63	*63*	43	*43*	30	*30*	22	*22*
	18ga *(.0459")*	#12	24/4 21.3/4	365	*548*	274	*411*	183	*274*	133	*174*	93	*101*	63	*63*	43	*43*	30	*30*	22	*22*
	20ga *(.0354")*	#12	24/4 21.3/4	282	*422*	211	*317*	141	*211*	113	*169*	93	*101*	63	*63*	43	*43*	30	*30*	22	*22*
	22ga *(.0294")*	#12	24/4 21.3/4	234	*351*	175	*263*	117	*175*	94	*140*	78	*101*	63	*63*	43	*43*	30	*30*	22	*22*
Steel (Gr 33 min.)	≥10ga *(.1350")*	#12	24/4 21.3/4	570	*855*	427	*641*	209	*331*	133	*174*	93	*101*	63	*63*	43	*43*	30	*30*	22	*22*
	12ga *(.1050")*	#12	24/4 21.3/4	570	*855*	427	*641*	209	*331*	133	*174*	93	*101*	63	*63*	43	*43*	30	*30*	22	*22*
	14ga *(.0700")*	#12	24/4 21.3/4	386	*578*	289	*434*	193	*289*	133	*174*	93	*101*	63	*63*	43	*43*	30	*30*	22	*22*
	16ga *(.0590")*	#12	24/4 21.3/4	325	*487*	244	*366*	162	*244*	130	*174*	93	*101*	63	*63*	43	*43*	30	*30*	22	*22*
	18ga *(.0459")*	#12	24/4 21.3/4	253	*379*	190	*284*	126	*190*	101	*152*	84	*101*	63	*63*	43	*43*	30	*30*	22	*22*
	20ga *(.0354")*	#12	24/4 21.3/4	195	*292*	146	*219*	97	*146*	78	*117*	65	*97*	56	*63*	43	*43*	30	*30*	22	*22*
	22ga *(.0294")*	#12	24/4 21.3/4	162	*243*	121	*182*	81	*121*	65	*97*	54	*81*	46	*63*	40	*43*	30	*30*	22	*22*
Plywood & OSB	15/32"	#14	24/4 21.3/4	209	*283*	157	*212*	105	*141*	84	*113*	70	*94*	60	*63*	43	*43*	30	*30*	22	*22*
	19/32"	#14	24/4 21.3/4	265	*358*	199	*269*	133	*179*	106	*143*	88	*101*	63	*63*	43	*43*	30	*30*	22	*22*
	23/32"	#14	24/4 21.3/4	321	*434*	241	*325*	161	*217*	128	*173*	93	*101*	63	*63*	43	*43*	30	*30*	22	*22*
Lumber (DFL)	1" min	#9	24/4 21.3/4	388	*523*	291	*392*	194	*262*	133	*174*	93	*101*	63	*63*	43	*43*	30	*30*	22	*22*
		#14	24/4 21.3/4	530	*715*	397	*537*	209	*331*	133	*174*	93	*101*	63	*63*	43	*43*	30	*30*	22	*22*

TABLE 1.5 - Outward (Negative) Uniform Allowable Loads (No. 26 gage 2 1/2" Corrugated):

2 1/2" Corrugated, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				12"		16"		2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		4' - 6"		5' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga *(.1350")*	#12	24/4 21.3/4	709	*1064*	532	*798*	268	*425*	171	*222*	119	*128*	81	*81*	54	*54*	38	*38*	28	*28*
	12ga *(.1050")*	#12	24/4 21.3/4	709	*1064*	532	*798*	268	*425*	171	*222*	119	*128*	81	*81*	54	*54*	38	*38*	28	*28*
	14ga *(.0700")*	#12	24/4 21.3/4	557	*835*	418	*627*	268	*418*	171	*222*	119	*128*	81	*81*	54	*54*	38	*38*	28	*28*
	16ga *(.0590")*	#12	24/4 21.3/4	469	*704*	352	*528*	235	*352*	171	*222*	119	*128*	81	*81*	54	*54*	38	*38*	28	*28*
	18ga *(.0459")*	#12	24/4 21.3/4	365	*548*	274	*411*	183	*274*	146	*219*	119	*128*	81	*81*	54	*54*	38	*38*	28	*28*
	20ga *(.0354")*	#12	24/4 21.3/4	282	*422*	211	*317*	141	*211*	113	*169*	94	*128*	80	*81*	54	*54*	38	*38*	28	*28*
	22ga *(.0294")*	#12	24/4 21.3/4	234	*351*	175	*263*	117	*175*	94	*140*	78	*117*	67	*81*	54	*54*	38	*38*	28	*28*
Steel (Gr 33 min.)	≥10ga *(.1350")*	#12	24/4 21.3/4	709	*1064*	532	*798*	268	*425*	171	*222*	119	*128*	81	*81*	54	*54*	38	*38*	28	*28*
	12ga *(.1050")*	#12	24/4 21.3/4	578	*868*	434	*651*	268	*425*	171	*222*	119	*128*	81	*81*	54	*54*	38	*38*	28	*28*
	14ga *(.0700")*	#12	24/4 21.3/4	386	*578*	289	*434*	193	*289*	154	*222*	119	*128*	81	*81*	54	*54*	38	*38*	28	*28*
	16ga *(.0590")*	#12	24/4 21.3/4	325	*487*	244	*366*	162	*244*	130	*195*	108	*128*	81	*81*	54	*54*	38	*38*	28	*28*
	18ga *(.0459")*	#12	24/4 21.3/4	253	*379*	190	*284*	126	*190*	101	*152*	84	*126*	72	*81*	54	*54*	38	*38*	28	*28*
	20ga *(.0354")*	#12	24/4 21.3/4	195	*292*	146	*219*	97	*146*	78	*117*	65	*97*	56	*81*	49	*54*	38	*38*	28	*28*
	22ga *(.0294")*	#12	24/4 21.3/4	162	*243*	121	*182*	81	*121*	65	*97*	54	*81*	46	*69*	40	*54*	36	*38*	28	*28*
Plywood & OSB	15/32"	#14	24/4 21.3/4	209	*283*	157	*212*	105	*141*	84	*113*	70	*94*	60	*81*	52	*54*	38	*38*	28	*28*
	19/32"	#14	24/4 21.3/4	265	*358*	199	*269*	133	*179*	106	*143*	88	*119*	76	*81*	54	*54*	38	*38*	28	*28*
	23/32"	#14	24/4 21.3/4	321	*434*	241	*325*	161	*217*	128	*173*	107	*128*	81	*81*	54	*54*	38	*38*	28	*28*
Lumber (DFL)	1" min	#9	24/4 21.3/4	388	*523*	291	*392*	194	*262*	155	*209*	119	*128*	81	*81*	54	*54*	38	*38*	28	*28*
		#14	24/4 21.3/4	530	*715*	397	*537*	265	*358*	171	*222*	119	*128*	81	*81*	54	*54*	38	*38*	28	*28*

TABLE 1.6 - Shear and Flexibility (No. 29 gage 2 1/2" Corrugated):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)											
			Span →	12"	16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"		
24/4	29 ga	6"	q_a	434	409	351	329	312	239	183	144	117		
			q_f	698	658	565	529	503	382	292	231	187		
			F	29.8 -2.3R	30.8 -2.3R	32.1 -2.2R	32.8 -2R	33.3 -1.9R	33.6 -1.8R	33.9 -1.7R	34.2 -1.6R	34.4 -1.5R		
		12"	q_a	395	375	285	272	235	232	183	144	117		
			q_f	637	603	459	438	378	373	292	231	187		
			F	32.7 -3.9R	34.8 -4.3R	37.8 -4.7R	39.5 -4.7R	40.7 -4.6R	41.8 -4.5R	42.6 -4.4R	43.3 -4.2R	43.9 -4.1R		
		18"	q_a	395	333	285	239	205	206	183	144	117		
			q_f	637	535	459	385	329	331	292	231	187		
			F	34.2 -4.8R	37 -5.6R	41.3 -6.5R	43.8 -6.8R	45.9 -7R	47.6 -7R	49 -7R	50.3 -6.9R	51.3 -6.8R		
		24"	q_a	395	333	245	239	205	178	158	144	117		
			q_f	637	535	395	385	329	287	254	231	187		
			F	35.2 -5.4R	38.4 -6.5R	43.7 -7.8R	46.9 -8.5R	49.6 -8.9R	52 -9.2R	54 -9.3R	55.7 -9.4R	57.2 -9.4R		
		30"	q_a	395	333	245	203	205	178	158	141	117		
			q_f	637	535	395	327	329	287	254	228	187		
			F	35.8 -5.8R	39.4 -7.1R	45.5 -8.9R	49.3 -9.8R	52.5 -10.5R	55.4 -10.9R	57.8 -11.3R	60.1 -11.5R	62 -11.6R		
		36"	q_a	395	333	245	203	173	178	158	141	117		
			q_f	637	535	395	327	278	287	254	228	187		
			F	36.2 -6.1R	40.1 -7.5R	46.8 -9.7R	51 -10.9R	54.8 -11.8R	58.1 -12.5R	61 -13R	63.6 -13.4R	66 -13.6R		

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 1.7 - Shear and Flexibility (26ga 2 1/2" Corrugated):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)											
			Span →	12"	16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"		
24/4	26 ga	6"	q_a	540	521	453	427	407	337	258	204	165		
			q_f	869	839	729	687	656	539	413	326	264		
			F	24.7 -2.1R	25.6 -2.1R	26.8 -2R	27.4 -1.8R	27.8 -1.7R	28.1 -1.6R	28.4 -1.5R	28.6 -1.4R	28.8 -1.3R		
		12"	q_a	498	477	366	352	304	302	258	204	165		
			q_f	803	768	589	566	490	487	413	326	264		
			F	27.3 -3.5R	29.2 -3.9R	31.9 -4.2R	33.3 -4.2R	34.5 -4.1R	35.4 -4R	36.2 -3.9R	36.8 -3.8R	37.3 -3.7R		
		18"	q_a	498	421	366	307	264	267	238	204	165		
			q_f	803	677	589	495	424	430	383	326	264		
			F	28.7 -4.3R	31.2 -5R	35 -5.8R	37.3 -6.1R	39.1 -6.3R	40.6 -6.3R	41.9 -6.3R	43 -6.2R	44 -6.1R		
		24"	q_a	498	421	312	307	264	230	204	204	165		
			q_f	803	677	502	495	424	370	328	326	264		
			F	29.5 -4.9R	32.4 -5.8R	37.2 -7R	40.1 -7.6R	42.5 -8R	44.6 -8.2R	46.3 -8.3R	47.9 -8.4R	49.3 -8.4R		
		30"	q_a	498	421	312	258	264	230	204	183	165		
			q_f	803	677	502	416	424	370	328	294	264		
			F	30.1 -5.2R	33.3 -6.3R	38.8 -8R	42.1 -8.8R	45.1 -9.4R	47.6 -9.8R	49.8 -10.1R	51.8 -10.3R	53.6 -10.4R		
		36"	q_a	498	421	312	258	219	230	204	183	165		
			q_f	803	677	502	416	353	370	328	294	264		
			F	30.5 -5.5R	33.9 -6.8R	39.9 -8.7R	43.7 -9.7R	47.1 -10.5R	50 -11.2R	52.7 -11.6R	55 -12R	57.1 -12.2R		

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

2.0: Box Rib

FIGURE 2.1 - Basic Dimensions and Panel Attachment (Box Rib):

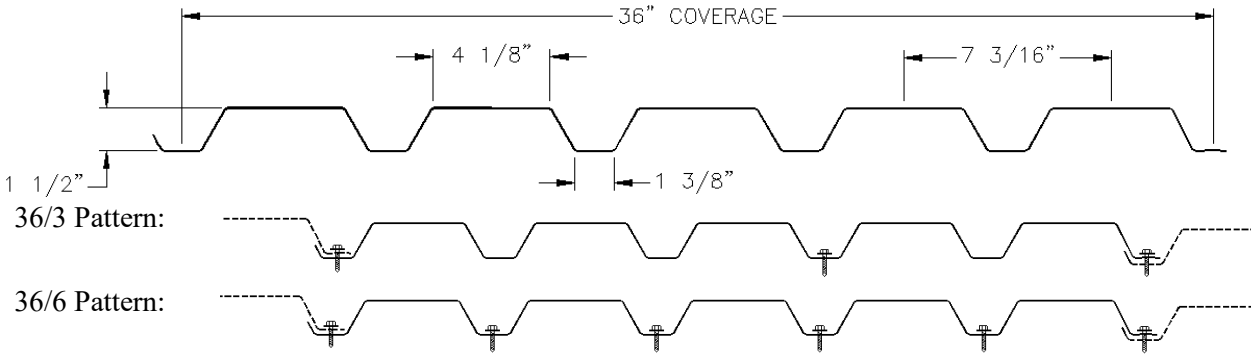


TABLE 2.1 - Section Properties (Box Rib):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
26	0.91	0.0173	80	82	0.2663	0.1007	0.96	0.1783	0.1049
24	1.21	0.0232	50	65	0.3570	0.1333	0.96	0.2378	0.1402
22	1.54	0.0294	50	65	0.4524	0.1700	0.97	0.2997	0.1771
20	1.85	0.0354	40	55	0.5446	0.2067	0.97	0.3590	0.2127
18	2.40	0.0459	40	55	0.7059	0.2667	0.97	0.4610	0.0274

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative			$I_d = (2I_e+I_g)/3$	
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus		
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
26	0.0871	0.0630	0.66	0.0653	0.0947	1.09	0.0674	0.0756	0.0967
24	0.1580	0.0963	0.70	0.1020	0.1333	1.01	0.1163	0.1087	0.1333
22	0.2382	0.1333	0.73	0.1438	0.1700	1.00	0.1593	0.1456	0.1700
20	0.3544	0.1833	0.80	0.1928	0.2067	0.97	0.2122	0.1911	0.2067
18	0.5247	0.2567	0.85	0.2573	0.2667	0.97	0.2740	0.2600	0.2667

TABLE 2.2 - Inward (Positive) Uniform Allowable Loads (Box Rib):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
26	Single Span	ASD, W/Ω	391	250	174	98	63	43	32	24	16
		LRFD, ϕW	621	397	276	155	99	69	51	39	25
		L/240	-	-	-	77	40	23	14	10	5
		L/180	-	-	-	-	53	31	19	13	7
		L/120	-	-	-	-	-	-	29	19	10
	Double Span	ASD, W/Ω	353	236	168	97	63	43	32	25	16
		LRFD, ϕW	532	355	253	146	95	66	49	37	24
		L/240	-	-	-	-	-	-	-	23	12
		L/180	-	-	-	-	-	-	-	-	16
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	421	285	205	119	77	54	40	31	20
		LRFD, ϕW	634	429	309	180	117	81	60	46	30
		L/240	-	-	-	-	75	43	27	18	9
		L/180	-	-	-	-	-	-	36	24	12
		L/120	-	-	-	-	-	-	-	-	19
24	Single Span	ASD, W/Ω	509	326	226	127	81	57	42	32	20
		LRFD, ϕW	808	517	359	202	129	90	66	50	32
		L/240	-	-	-	111	57	33	21	14	7
		L/180	-	-	-	-	76	44	28	19	9
		L/120	-	-	-	-	-	-	42	28	14
	Double Span	ASD, W/Ω	533	351	248	142	91	63	47	36	23
		LRFD, ϕW	803	528	373	213	138	95	71	54	34
		L/240	-	-	-	-	-	-	-	34	17
		L/180	-	-	-	-	-	-	-	-	23
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	646	429	305	175	114	79	58	44	28
		LRFD, ϕW	973	647	459	264	171	119	87	67	43
		L/240	-	-	-	-	108	62	39	26	13
		L/180	-	-	-	-	-	-	52	35	18
		L/120	-	-	-	-	-	-	-	-	27
22	Single Span	ASD, W/Ω	717	459	319	179	115	80	59	45	29
		LRFD, ϕW	1138	728	506	285	182	126	93	71	46
		L/240	-	-	-	149	76	44	28	19	10
		L/180	-	-	-	-	102	59	37	25	13
		L/120	-	-	-	-	-	-	56	37	19
	Double Span	ASD, W/Ω	741	485	342	195	126	87	64	49	31
		LRFD, ϕW	1116	731	514	293	189	131	97	74	47
		L/240	-	-	-	-	-	-	-	45	23
		L/180	-	-	-	-	-	-	-	-	31
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	902	596	422	242	156	109	80	61	39
		LRFD, ϕW	1358	897	635	364	235	164	121	92	59
		L/240	-	-	-	-	144	83	52	35	18
		L/180	-	-	-	-	-	-	70	47	24
		L/120	-	-	-	-	-	-	-	-	36

TABLE 2.2 (Cont'd) - Inward (Positive) Uniform Allowable Loads (Box Rib):

Gauge	Span	Limit Condition	Panel Span (Support Spacing) 2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
20	Single Span	ASD, W/Ω	770	493	342	192	123	86	63	48	31
		LRFD, ϕW	1221	781	543	305	195	136	100	76	49
		L/240	-	-	-	-	100	58	37	24	13
		L/180	-	-	-	-	-	77	49	33	17
		L/120	-	-	-	-	-	-	-	-	25
	Double Span	ASD, W/Ω	777	511	362	207	133	92	68	52	34
		LRFD, ϕW	1170	770	544	311	200	139	102	78	51
		L/240	-	-	-	-	-	-	-	-	30
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	939	625	445	256	165	115	85	66	41
		LRFD, ϕW	1414	941	669	385	249	174	128	99	62
		L/240	-	-	-	-	-	109	69	46	24
		L/180	-	-	-	-	-	-	-	62	32
		L/120	-	-	-	-	-	-	-	-	-
18	Single Span	ASD, W/Ω	1027	657	457	257	164	114	84	64	41
		LRFD, ϕW	1630	1043	724	407	261	181	133	102	65
		L/240	-	-	-	-	136	79	50	33	17
		L/180	-	-	-	-	-	105	66	44	23
		L/120	-	-	-	-	-	-	-	-	34
	Double Span	ASD, W/Ω	1003	661	466	267	172	120	88	68	43
		LRFD, ϕW	1510	995	702	402	259	181	133	102	65
		L/240	-	-	-	-	-	-	-	-	41
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	1213	808	573	330	214	149	110	85	54
		LRFD, ϕW	1828	1216	863	497	322	225	166	127	81
		L/240	-	-	-	-	-	-	94	63	32
		L/180	-	-	-	-	-	-	-	84	43
		L/120	-	-	-	-	-	-	-	-	-

TABLE 2.3 - Allowable Reactions at Supports (Box Rib):

Gauge	Condition	Bearing Length of Webs: ASD (P_n/Ω) *(lbs/ft width)* 1"	1.5"	2"	3"	LRFD (ϕP_n) *(lbs/ft width)* 1"	1.5"	2"	3"
26	End	240	275	305	355	367	421	467	543
	Interior	382	430	471	539	568	640	700	802
24	End	347	396	436	505	531	605	668	773
	Interior	557	624	679	773	829	927	1010	1149
22	End	540	612	673	774	826	936	1029	1185
	Interior	874	972	1054	1193	1300	1446	1569	1774
20	End	610	688	754	865	933	1053	1154	1323
	Interior	994	1100	1190	1340	1479	1637	1770	1993
18	End	987	1107	1207	1376	1510	1693	1847	2106
	Interior	1625	1786	1922	2151	2417	2657	2859	3199

TABLE 2.4 - Outward (Negative) Uniform Allowable Loads (No. 26 gauge Box Rib):

Box Rib, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	355	532	284	426	236	355	163	259	104	166	72	115	53	84	41	65	26	41
		#12	36/3	177	266	142	213	118	177	89	133	71	106	59	89	51	76	41	65	26	41
	12ga (.1050")	#12	36/6	355	532	284	426	236	355	163	259	104	166	72	115	53	84	41	65	26	41
		#12	36/3	177	266	142	213	118	177	89	133	71	106	59	89	51	76	41	65	26	41
	14ga (.0700")	#12	36/6	278	418	223	334	186	278	139	209	104	166	72	115	53	84	41	65	26	41
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	26	41
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	117	176	94	141	72	115	53	84	41	65	26	41
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	91	137	73	110	61	91	52	78	41	65	26	41
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	70	106	56	84	47	70	40	60	35	53	26	41
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	58	88	47	70	39	58	33	50	29	44	23	35
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	355	532	284	426	236	355	163	259	104	166	72	115	53	84	41	65	26	41
		#12	36/3	177	266	142	213	118	177	89	133	71	106	59	89	51	76	41	65	26	41
	12ga (.1050")	#12	36/6	289	434	231	347	193	289	145	217	104	166	72	115	53	84	41	65	26	41
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	26	41
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	96	145	77	116	64	96	53	83	41	65	26	41
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	81	122	65	97	54	81	46	70	41	61	26	41
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	63	95	51	76	42	63	36	54	32	47	25	38
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	40	61	32	49	27	40	23	35	20	30	16	24
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	52	71	42	57	35	47	30	40	26	35	21	28
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/6	133	179	106	143	88	119	66	90	53	72	44	60	38	51	33	45	26	36
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/6	161	217	128	173	107	145	80	108	64	87	54	72	46	62	40	54	26	41
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	97	131	78	105	65	87	53	75	41	65	26	41
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/6	265	358	212	286	177	238	132	179	104	143	72	115	53	84	41	65	26	41
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 2.5 - Outward (Negative) Uniform Allowable Loads (No. 24 gauge Box Rib):

Box Rib, 24ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	377	566	302	452	251	377	159	252	102	162	71	112	52	82	40	63	25	40
		#12	36/3	189	283	151	226	126	189	94	141	75	113	63	94	52	81	40	63	25	40
	12ga (.1050")	#12	36/6	377	566	302	452	251	377	159	252	102	162	71	112	52	82	40	63	25	40
		#12	36/3	189	283	151	226	126	189	94	141	75	113	63	94	52	81	40	63	25	40
	14ga (.0700")	#12	36/6	278	418	223	334	186	278	139	209	102	162	71	112	52	82	40	63	25	40
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	25	40
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	117	176	94	141	71	112	52	82	40	63	25	40
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	91	137	73	110	61	91	52	78	40	63	25	40
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	70	106	56	84	47	70	40	60	35	53	25	40
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	58	88	47	70	39	58	33	50	29	44	23	35
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	372	558	297	446	248	372	159	252	102	162	71	112	52	82	40	63	25	40
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	52	80	40	63	25	40
	12ga (.1050")	#12	36/6	289	434	231	347	193	289	145	217	102	162	71	112	52	82	40	63	25	40
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	25	40
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	96	145	77	116	64	96	52	82	40	63	25	40
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	81	122	65	97	54	81	46	70	40	61	25	40
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	63	95	51	76	42	63	36	54	32	47	25	38
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	40	61	32	49	27	40	23	35	20	30	16	24
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	52	71	42	57	35	47	30	40	26	35	21	28
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/6	133	179	106	143	88	119	66	90	53	72	44	60	38	51	33	45	25	36
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/6	161	217	128	173	107	145	80	108	64	87	54	72	46	62	40	54	25	40
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	97	131	78	105	65	87	52	75	40	63	25	40
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/6	265	358	212	286	177	238	132	179	102	143	71	112	52	82	40	63	25	40
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	25	36

TABLE 2.6 - Outward (Negative) Uniform Allowable Loads (No. 22 gauge Box Rib):

Box Rib, 22ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	478	717	382	573	319	478	224	356	143	228	100	158	73	116	56	89	36	57
		#12	36/3	239	358	191	287	159	239	119	179	96	143	80	119	68	102	56	89	36	57
	12ga (.1050")	#12	36/6	418	627	334	501	278	418	209	313	143	228	100	158	73	116	56	89	36	57
		#12	36/3	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	36	57
	14ga (.0700")	#12	36/6	278	418	223	334	186	278	139	209	111	167	93	139	73	116	56	89	36	57
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	117	176	94	141	78	117	67	101	56	88	36	57
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	91	137	73	110	61	91	52	78	46	68	36	55
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	70	106	56	84	47	70	40	60	35	53	28	42
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	58	88	47	70	39	58	33	50	29	44	23	35
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	372	558	297	446	248	372	186	279	143	223	100	158	73	116	56	89	36	57
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	46	70	36	56
	12ga (.1050")	#12	36/6	289	434	231	347	193	289	145	217	116	174	96	145	73	116	56	89	36	57
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	96	145	77	116	64	96	55	83	48	72	36	57
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	81	122	65	97	54	81	46	70	41	61	32	49
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	63	95	51	76	42	63	36	54	32	47	25	38
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	40	61	32	49	27	40	23	35	20	30	16	24
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	52	71	42	57	35	47	30	40	26	35	21	28
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/6	133	179	106	143	88	119	66	90	53	72	44	60	38	51	33	45	27	36
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/6	161	217	128	173	107	145	80	108	64	87	54	72	46	62	40	54	32	43
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	97	131	78	105	65	87	55	75	48	65	36	52
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/6	265	358	212	286	177	238	132	179	106	143	88	119	73	102	56	89	36	57
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 2.7 - Outward (Negative) Uniform Allowable Loads (No. 20 gauge Box Rib):

Box Rib, 20ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	487	730	389	584	325	487	241	365	154	244	107	170	79	125	60	95	38	61
		#12	36/3	243	365	195	292	162	243	122	183	97	146	81	122	70	104	60	91	38	61
	12ga (.1050")	#12	36/6	418	627	334	501	278	418	209	313	154	244	107	170	79	125	60	95	38	61
		#12	36/3	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	38	61
	14ga (.0700")	#12	36/6	278	418	223	334	186	278	139	209	111	167	93	139	79	119	60	95	38	61
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	117	176	94	141	78	117	67	101	59	88	38	61
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	91	137	73	110	61	91	52	78	46	68	37	55
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	70	106	56	84	47	70	40	60	35	53	28	42
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	58	88	47	70	39	58	33	50	29	44	23	35
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	372	558	297	446	248	372	186	279	149	223	107	170	79	125	60	95	38	61
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	46	70	37	56
	12ga (.1050")	#12	36/6	289	434	231	347	193	289	145	217	116	174	96	145	79	124	60	95	38	61
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	96	145	77	116	64	96	55	83	48	72	38	58
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	81	122	65	97	54	81	46	70	41	61	32	49
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	63	95	51	76	42	63	36	54	32	47	25	38
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	40	61	32	49	27	40	23	35	20	30	16	24
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	52	71	42	57	35	47	30	40	26	35	21	28
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/6	133	179	106	143	88	119	66	90	53	72	44	60	38	51	33	45	27	36
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/6	161	217	128	173	107	145	80	108	64	87	54	72	46	62	40	54	32	43
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	97	131	78	105	65	87	55	75	48	65	38	52
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/6	265	358	212	286	177	238	132	179	106	143	88	119	76	102	60	89	38	61
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 2.8 - Outward (Negative) Uniform Allowable Loads (No. 18 gauge Box Rib):

Box Rib, 18ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	537	806	430	644	358	537	269	403	205	322	143	226	105	166	80	127	51	81
		#12	36/3	269	403	215	322	179	269	134	201	107	161	90	134	77	115	67	101	51	81
	12ga (.1050")	#12	36/6	418	627	334	501	278	418	209	313	167	251	139	209	105	166	80	127	51	81
		#12	36/3	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	42	63
	14ga (.0700")	#12	36/6	278	418	223	334	186	278	139	209	111	167	93	139	80	119	70	104	51	81
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	117	176	94	141	78	117	67	101	59	88	47	70
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	91	137	73	110	61	91	52	78	46	68	37	55
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	70	106	56	84	47	70	40	60	35	53	28	42
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	58	88	47	70	39	58	33	50	29	44	23	35
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	372	558	297	446	248	372	186	279	149	223	124	186	105	159	80	127	51	81
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	46	70	37	56
	12ga (.1050")	#12	36/6	289	434	231	347	193	289	145	217	116	174	96	145	83	124	72	108	51	81
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	96	145	77	116	64	96	55	83	48	72	39	58
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	81	122	65	97	54	81	46	70	41	61	32	49
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	63	95	51	76	42	63	36	54	32	47	25	38
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	40	61	32	49	27	40	23	35	20	30	16	24
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	52	71	42	57	35	47	30	40	26	35	21	28
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/6	133	179	106	143	88	119	66	90	53	72	44	60	38	51	33	45	27	36
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/6	161	217	128	173	107	145	80	108	64	87	54	72	46	62	40	54	32	43
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	97	131	78	105	65	87	55	75	48	65	39	52
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/6	265	358	212	286	177	238	132	179	106	143	88	119	76	102	66	89	51	72
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 2.9 - Shear and Flexibility (No. 26 gauge Box Rib, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	26 ga	6"	q_a q_f	240 386	240 386	240 386	240 386	240 386	240 386	240 386	240 386	240 386
			F	9.2 -0.5R	9.3 -0.5R	9.4 -0.5R	9.6 -0.4R	9.7 -0.3R	9.7 -0.3R	9.8 -0.3R	9.8 -0.2R	9.9 -0.2R
		12"	q_a q_f	240 386	240 386	240 386	221 356	209 336	200 321	193 310	187 302	180 289
			F	10.8 -1.2R	11.3 -1.2R	11.6 -1.2R	12 -1.1R	12.3 -1R	12.5 -0.9R	12.7 -0.8R	12.8 -0.8R	13 -0.7R
		18"	q_a q_f	240 386	240 386	215 347	200 322	190 307	166 267	163 263	161 259	146 235
			F	12 -1.8R	12.6 -1.8R	13.1 -1.8R	13.9 -1.8R	14.5 -1.7R	14.9 -1.6R	15.2 -1.5R	15.5 -1.4R	15.8 -1.3R
		24"	q_a q_f	240 386	240 386	215 347	176 283	170 274	147 236	146 236	131 210	121 194
			F	12.7 -2.2R	13.6 -2.3R	14.3 -2.4R	15.4 -2.4R	16.2 -2.4R	16.8 -2.3R	17.3 -2.2R	17.7 -2.1R	18.3 -2R
		30"	q_a q_f	240 386	210 338	215 347	176 283	147 237	147 236	127 205	131 210	105 169
			F	13.3 -2.5R	14.3 -2.7R	15.2 -2.9R	16.6 -3R	17.7 -3R	18.5 -3R	19.2 -2.9R	19.7 -2.9R	20.6 -2.7R
		36"	q_a q_f	240 386	210 338	185 298	176 283	147 237	123 198	127 205	112 180	105 169
			F	13.7 -2.8R	14.9 -3.1R	15.9 -3.3R	17.6 -3.5R	18.9 -3.6R	19.9 -3.6R	20.8 -3.6R	21.5 -3.6R	22.6 -3.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 2.10 - Shear and Flexibility (No. 26 gauge Box Rib, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/6	26 ga	6"	q_a q_f	483 778	454 731	432 696	402 647	382 615	368 593	358 576	350 564	319 510
			F	8.8 -0.6R	8.9 -0.6R	9.1 -0.6R	9.3 -0.5R	9.4 -0.4R	9.5 -0.4R	9.6 -0.4R	9.7 -0.3R	9.7 -0.3R
		12"	q_a q_f	407 656	387 623	338 543	297 478	271 436	253 407	240 386	230 370	215 346
			F	9.9 -1.1R	10.3 -1.2R	10.7 -1.2R	11.2 -1.2R	11.6 -1.2R	11.9 -1.1R	12.1 -1R	12.3 -1R	12.6 -0.9R
		18"	q_a q_f	407 656	346 558	299 482	266 429	245 395	206 332	199 320	194 312	171 275
			F	10.6 -1.5R	11.2 -1.6R	11.7 -1.7R	12.5 -1.8R	13.2 -1.8R	13.7 -1.8R	14.1 -1.8R	14.4 -1.7R	14.9 -1.6R
		24"	q_a q_f	359 579	346 558	299 482	234 376	218 351	180 289	176 284	154 248	139 224
			F	11 -1.8R	11.7 -2R	12.4 -2.1R	13.5 -2.3R	14.4 -2.4R	15.1 -2.4R	15.6 -2.4R	16.1 -2.4R	16.9 -2.3R
		30"	q_a q_f	359 579	301 485	299 482	234 376	186 300	180 289	154 247	154 248	123 199
			F	11.3 -2R	12.1 -2.2R	12.9 -2.4R	14.2 -2.7R	15.3 -2.9R	16.2 -3R	16.9 -3R	17.6 -3R	18.6 -3R
		36"	q_a q_f	359 579	301 485	258 416	234 376	186 300	153 247	154 247	134 216	123 199
			F	11.5 -2.1R	12.4 -2.4R	13.3 -2.7R	14.8 -3R	16 -3.3R	17.1 -3.4R	18 -3.6R	18.8 -3.6R	20 -3.6R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 2.11 - Shear and Flexibility (No. 24 gauge Box Rib, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	24 ga	6"	q_a q_f	255 410	255 410	255 410	255 410	255 410	255 410	255 410	255 410	255 410
			F	7.2 -0.5R	7.3 -0.4R	7.4 -0.4R	7.5 -0.3R	7.6 -0.3R	7.7 -0.3R	7.7 -0.2R	7.7 -0.2R	7.8 -0.2R
		12"	q_a q_f	255 410	255 410	255 410	248 399	236 379	227 365	220 354	215 346	207 334
			F	8.6 -1R	9 -1R	9.2 -1R	9.6 -0.9R	9.9 -0.8R	10.1 -0.8R	10.2 -0.7R	10.3 -0.7R	10.5 -0.6R
		18"	q_a q_f	255 410	255 410	238 383	224 360	215 346	188 303	186 300	185 298	169 272
			F	9.6 -1.5R	10.1 -1.6R	10.6 -1.6R	11.3 -1.5R	11.7 -1.5R	12.1 -1.4R	12.4 -1.3R	12.6 -1.2R	12.9 -1.1R
		24"	q_a q_f	255 410	255 410	238 383	195 315	191 308	166 267	167 269	150 241	139 224
			F	10.2 -1.9R	11 -2R	11.6 -2.1R	12.5 -2.1R	13.2 -2.1R	13.8 -2R	14.2 -1.9R	14.6 -1.9R	15.1 -1.7R
		30"	q_a q_f	255 410	229 369	238 383	195 315	164 265	166 267	146 235	150 241	122 197
			F	10.7 -2.2R	11.6 -2.3R	12.4 -2.5R	13.6 -2.6R	14.5 -2.6R	15.2 -2.6R	15.8 -2.5R	16.3 -2.5R	17 -2.3R
		36"	q_a q_f	255 410	229 369	202 326	195 315	164 265	141 227	146 235	129 207	122 197
			F	11.1 -2.4R	12.1 -2.6R	13 -2.8R	14.5 -3R	15.6 -3.1R	16.5 -3.1R	17.2 -3.1R	17.8 -3.1R	18.8 -2.9R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 2.12 - Shear and Flexibility (No. 24 gauge Box Rib, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/6	24 ga	6"	q_a q_f	534 860	506 815	485 781	456 734	437 704	424 682	414 666	406 654	395 636
			F	6.8 -0.5R	7 -0.5R	7.1 -0.5R	7.3 -0.4R	7.4 -0.4R	7.5 -0.4R	7.5 -0.3R	7.6 -0.3R	7.7 -0.3R
		12"	q_a q_f	447 720	430 692	377 606	336 540	309 497	290 468	277 446	266 429	252 405
			F	7.8 -1R	8.2 -1R	8.5 -1R	8.9 -1R	9.3 -1R	9.5 -1R	9.7 -0.9R	9.9 -0.9R	10.1 -0.8R
		18"	q_a q_f	447 720	382 616	332 534	299 481	278 448	237 381	230 370	225 362	200 322
			F	8.4 -1.3R	8.9 -1.4R	9.4 -1.5R	10.1 -1.6R	10.6 -1.6R	11.1 -1.6R	11.4 -1.5R	11.7 -1.5R	12.1 -1.4R
		24"	q_a q_f	391 629	382 616	332 534	260 418	246 396	206 332	203 327	177 285	161 260
			F	8.7 -1.5R	9.4 -1.7R	10 -1.8R	10.9 -2R	11.7 -2.1R	12.3 -2.1R	12.8 -2.1R	13.2 -2.1R	13.8 -2R
		30"	q_a q_f	391 629	328 529	332 534	260 418	210 339	206 332	175 282	177 285	142 228
			F	9 -1.7R	9.7 -1.9R	10.4 -2.1R	11.5 -2.3R	12.5 -2.5R	13.2 -2.6R	13.9 -2.6R	14.4 -2.6R	15.3 -2.6R
		36"	q_a q_f	391 629	328 529	282 453	260 418	210 339	173 279	175 282	153 246	142 228
			F	9.2 -1.8R	10 -2.1R	10.8 -2.3R	12 -2.6R	13.1 -2.8R	14 -3R	14.8 -3.1R	15.5 -3.1R	16.6 -3.1R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 2.13 - Shear and Flexibility (No. 22 gauge Box Rib, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	22 ga	6"	q_a q_f	323 520	323 520	323 520	323 520	323 520	323 520	323 520	323 520	323 520
			F	5.9 -0.4R	6 -0.4R	6.1 -0.3R	6.2 -0.3R	6.3 -0.3R	6.3 -0.2R	6.4 -0.2R	6.4 -0.2R	6.4 -0.2R
		12"	q_a q_f	323 520	323 520	323 520	323 520	313 504	303 488	295 475	289 466	280 452
			F	7.2 -0.9R	7.5 -0.9R	7.7 -0.9R	8.1 -0.8R	8.3 -0.8R	8.5 -0.7R	8.6 -0.6R	8.7 -0.6R	8.9 -0.5R
		18"	q_a q_f	323 520	323 520	311 500	296 476	286 460	252 406	251 403	249 402	229 369
			F	8 -1.3R	8.5 -1.4R	8.9 -1.4R	9.5 -1.4R	10 -1.3R	10.3 -1.2R	10.5 -1.2R	10.7 -1.1R	11 -1R
		24"	q_a q_f	323 520	323 520	311 500	257 414	254 409	221 356	224 361	201 324	189 304
			F	8.6 -1.7R	9.3 -1.8R	9.8 -1.8R	10.7 -1.9R	11.3 -1.8R	11.8 -1.8R	12.2 -1.7R	12.5 -1.6R	12.9 -1.5R
		30"	q_a q_f	323 520	296 477	311 500	257 414	217 350	221 356	195 314	201 324	166 268
			F	9.1 -1.9R	9.9 -2.1R	10.5 -2.2R	11.6 -2.3R	12.4 -2.3R	13.1 -2.3R	13.6 -2.3R	14 -2.2R	14.7 -2.1R
		36"	q_a q_f	323 520	296 477	263 423	257 414	217 350	187 301	195 314	174 280	166 268
			F	9.4 -2.1R	10.3 -2.3R	11.1 -2.5R	12.4 -2.7R	13.4 -2.8R	14.2 -2.8R	14.8 -2.8R	15.4 -2.7R	16.2 -2.6R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 2.14 - Shear and Flexibility (No. 22 gauge Box Rib, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/6	22 ga	6"	q_a q_f	699 1125	666 1073	642 1034	609 980	587 945	571 920	560 901	551 887	538 866
			F	5.6 -0.5R	5.7 -0.4R	5.9 -0.4R	6 -0.4R	6.1 -0.3R	6.2 -0.3R	6.2 -0.3R	6.3 -0.3R	6.3 -0.2R
		12"	q_a q_f	583 939	565 910	497 801	447 720	415 668	392 631	375 605	363 584	344 555
			F	6.5 -0.9R	6.8 -0.9R	7.1 -0.9R	7.5 -0.9R	7.8 -0.9R	8 -0.8R	8.2 -0.8R	8.3 -0.8R	8.5 -0.7R
		18"	q_a q_f	583 939	500 806	435 700	397 639	372 600	318 511	311 500	305 491	274 440
			F	7 -1.2R	7.4 -1.3R	7.8 -1.3R	8.5 -1.4R	9 -1.4R	9.4 -1.4R	9.7 -1.3R	9.9 -1.3R	10.3 -1.2R
		24"	q_a q_f	505 813	500 806	435 700	342 550	327 527	278 447	276 445	240 387	220 354
			F	7.3 -1.4R	7.9 -1.5R	8.4 -1.6R	9.2 -1.8R	9.9 -1.8R	10.4 -1.9R	10.9 -1.9R	11.2 -1.8R	11.8 -1.8R
		30"	q_a q_f	505 813	425 684	435 700	342 550	280 450	278 447	237 381	240 387	192 309
			F	7.5 -1.5R	8.2 -1.7R	8.8 -1.9R	9.8 -2.1R	10.6 -2.2R	11.3 -2.3R	11.9 -2.3R	12.3 -2.3R	13.1 -2.3R
		36"	q_a q_f	505 813	425 684	365 588	342 550	280 450	232 373	237 381	206 331	192 309
			F	7.7 -1.6R	8.4 -1.8R	9.1 -2R	10.2 -2.3R	11.2 -2.5R	12 -2.6R	12.7 -2.7R	13.3 -2.8R	14.2 -2.8R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 2.15 - Shear and Flexibility (No. 20 gauge Box Rib, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	20 ga	6"	q_a q_f	329 530	329 530	329 530	329 530	329 530	329 530	329 530	329 530	329 530
			F	5.1 -0.4R	5.2 -0.3R	5.3 -0.3R	5.4 -0.3R	5.4 -0.2R	5.5 -0.2R	5.5 -0.2R	5.5 -0.2R	5.6 -0.1R
		12"	q_a q_f	329 530	329 530	329 530	329 530	329 530	321 517	314 505	308 496	300 483
			F	6.3 -0.8R	6.5 -0.8R	6.8 -0.8R	7.1 -0.7R	7.3 -0.7R	7.4 -0.6R	7.6 -0.6R	7.7 -0.5R	7.8 -0.5R
		18"	q_a q_f	329 530	329 530	325 523	311 501	303 487	268 432	267 430	267 430	247 397
			F	7 -1.2R	7.5 -1.3R	7.8 -1.3R	8.4 -1.2R	8.8 -1.2R	9.1 -1.1R	9.3 -1.1R	9.5 -1R	9.7 -0.9R
		24"	q_a q_f	329 530	329 530	325 523	270 435	269 433	235 378	239 385	215 347	203 327
			F	7.6 -1.5R	8.2 -1.6R	8.7 -1.7R	9.4 -1.7R	10 -1.7R	10.4 -1.6R	10.8 -1.6R	11.1 -1.5R	11.5 -1.4R
		30"	q_a q_f	329 530	307 495	325 523	270 435	229 369	235 378	208 335	215 347	179 287
			F	8 -1.8R	8.7 -1.9R	9.3 -2R	10.3 -2.1R	11 -2.1R	11.6 -2.1R	12.1 -2.1R	12.5 -2R	13.1 -1.9R
		36"	q_a q_f	329 530	307 495	273 439	270 435	229 369	198 318	208 335	186 299	179 287
			F	8.3 -1.9R	9.1 -2.1R	9.8 -2.3R	11 -2.5R	11.9 -2.5R	12.6 -2.5R	13.2 -2.5R	13.7 -2.5R	14.5 -2.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 2.16 - Shear and Flexibility (No. 20 gauge Box Rib, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/6	20 ga	6"	q_a q_f	730 1175	699 1126	677 1089	645 1039	624 1005	610 982	599 964	591 951	579 931
			F	4.8 -0.4R	4.9 -0.4R	5 -0.4R	5.2 -0.3R	5.3 -0.3R	5.3 -0.3R	5.4 -0.3R	5.4 -0.2R	5.5 -0.2R
		12"	q_a q_f	608 979	593 955	524 843	475 764	443 713	420 677	404 650	391 630	373 601
			F	5.6 -0.8R	5.9 -0.8R	6.1 -0.8R	6.5 -0.8R	6.8 -0.8R	7 -0.8R	7.1 -0.7R	7.3 -0.7R	7.5 -0.6R
		18"	q_a q_f	608 979	523 843	456 735	420 676	397 638	339 546	333 536	329 529	296 476
			F	6.1 -1.1R	6.5 -1.1R	6.9 -1.2R	7.4 -1.3R	7.9 -1.3R	8.2 -1.3R	8.5 -1.2R	8.7 -1.2R	9.1 -1.1R
		24"	q_a q_f	523 842	523 843	456 735	359 579	347 559	295 475	295 475	260 418	238 383
			F	6.3 -1.2R	6.9 -1.4R	7.3 -1.5R	8.1 -1.6R	8.7 -1.7R	9.2 -1.7R	9.6 -1.7R	9.9 -1.7R	10.5 -1.6R
		30"	q_a q_f	523 842	441 710	456 735	359 579	295 474	295 475	254 409	260 418	207 333
			F	6.6 -1.4R	7.2 -1.5R	7.7 -1.7R	8.6 -1.9R	9.4 -2R	10 -2.1R	10.5 -2.1R	10.9 -2.1R	11.7 -2.1R
		36"	q_a q_f	523 842	441 710	379 611	359 579	295 474	246 397	254 409	221 356	207 333
			F	6.7 -1.5R	7.4 -1.7R	8 -1.9R	9 -2.1R	9.9 -2.3R	10.6 -2.4R	11.2 -2.5R	11.8 -2.5R	12.7 -2.5R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 2.17 - Shear and Flexibility (No. 18 gauge Box Rib, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)								
		Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	18 ga	6"	q_a q_f	358 576	358 576	358 576	358 576	358 576	358 576	358 576	358 576	358 576
			F	4.1 -0.3R	4.2 -0.3R	4.3 -0.3R	4.4 -0.2R	4.4 -0.2R	4.5 -0.2R	4.5 -0.2R	4.5 -0.1R	4.6 -0.1R
		12"	q_a q_f	358 576	358 576	358 576	358 576	358 576	358 576	358 576	358 576	358 576
			F	5.2 -0.7R	5.4 -0.7R	5.6 -0.7R	5.9 -0.7R	6.1 -0.6R	6.2 -0.6R	6.3 -0.5R	6.4 -0.5R	6.5 -0.4R
		18"	q_a q_f	358 576	358 576	358 576	358 576	358 576	334 538	336 542	338 544	318 511
			F	5.8 -1.1R	6.2 -1.1R	6.6 -1.1R	7 -1.1R	7.4 -1R	7.6 -1R	7.8 -0.9R	8 -0.9R	8.2 -0.8R
		24"	q_a q_f	358 576	358 576	358 576	327 526	331 533	294 473	303 487	275 443	263 424
			F	6.3 -1.3R	6.8 -1.4R	7.3 -1.5R	8 -1.5R	8.5 -1.5R	8.8 -1.4R	9.1 -1.4R	9.4 -1.3R	9.8 -1.2R
		30"	q_a q_f	358 576	356 573	358 576	327 526	281 452	294 473	262 423	275 443	231 373
			F	6.7 -1.5R	7.3 -1.7R	7.8 -1.8R	8.7 -1.8R	9.3 -1.9R	9.9 -1.8R	10.3 -1.8R	10.6 -1.8R	11.1 -1.6R
		36"	q_a q_f	358 576	356 573	319 513	327 526	281 452	244 393	262 423	236 381	231 373
			F	6.9 -1.7R	7.7 -1.9R	8.3 -2R	9.3 -2.2R	10.1 -2.2R	10.7 -2.2R	11.3 -2.2R	11.7 -2.2R	12.4 -2.1R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 2.18 - Shear and Flexibility (No. 18 gauge Box Rib, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)								
		Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/6	18 ga	6"	q_a q_f	856 1377	832 1340	814 1311	790 1272	774 1246	763 1228	754 1214	748 1204	738 1189
			F	3.9 -0.4R	4 -0.4R	4.1 -0.3R	4.2 -0.3R	4.3 -0.3R	4.4 -0.2R	4.4 -0.2R	4.4 -0.2R	4.5 -0.2R
		12"	q_a q_f	715 1151	712 1146	637 1026	592 953	562 904	541 870	525 845	513 826	496 798
			F	4.6 -0.7R	4.8 -0.7R	5.1 -0.7R	5.4 -0.7R	5.6 -0.7R	5.8 -0.7R	5.9 -0.6R	6.1 -0.6R	6.2 -0.5R
		18"	q_a q_f	715 1151	624 1005	549 885	520 837	502 808	433 697	431 694	430 692	392 631
			F	5 -0.9R	5.4 -1R	5.7 -1.1R	6.2 -1.1R	6.6 -1.1R	6.9 -1.1R	7.1 -1.1R	7.3 -1R	7.7 -1R
		24"	q_a q_f	604 972	624 1005	549 885	438 705	435 700	372 599	379 610	337 542	315 507
			F	5.2 -1.1R	5.7 -1.2R	6.1 -1.3R	6.8 -1.4R	7.3 -1.5R	7.8 -1.5R	8.1 -1.5R	8.4 -1.5R	8.9 -1.4R
		30"	q_a q_f	604 972	513 826	549 885	438 705	361 582	372 599	324 521	337 542	273 440
			F	5.4 -1.2R	6 -1.4R	6.4 -1.5R	7.2 -1.7R	7.9 -1.8R	8.4 -1.8R	8.9 -1.9R	9.3 -1.9R	9.9 -1.8R
		36"	q_a q_f	604 972	513 826	443 714	438 705	361 582	307 493	324 521	286 461	273 440
			F	5.6 -1.3R	6.1 -1.5R	6.7 -1.6R	7.6 -1.9R	8.4 -2R	9 -2.1R	9.6 -2.2R	10 -2.2R	10.8 -2.2R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

3.0: Reversed Box Rib

FIGURE 3.1 - Basic Dimensions and Panel Attachment (Reversed Box Rib):

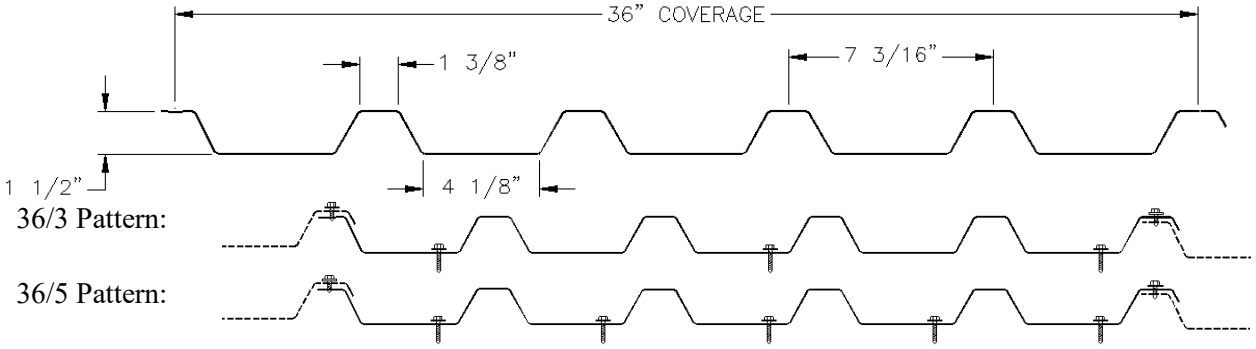


TABLE 3.1 - Section Properties (Reversed Box Rib):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
26	0.91	0.0173	80	82	0.2663	0.1007	0.96	0.1049	0.1783
24	1.22	0.0232	50	65	0.3572	0.1367	0.96	0.1404	0.2380
22	1.54	0.0294	50	65	0.4527	0.1700	0.97	0.1774	0.3000
20	1.85	0.0354	40	55	0.5446	0.2067	0.97	0.2127	0.3590
18	2.40	0.0459	40	55	0.7059	0.2667	0.97	0.2740	0.4610

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative			$I_d = (2I_e+I_g)/3$	
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus		
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
26	0.0871	0.0947	0.43	0.0674	0.0630	0.86	0.0653	0.0967	0.0756
24	0.1565	0.1333	0.51	0.1158	0.0963	0.83	0.1016	0.1344	0.1098
22	0.2360	0.1700	0.54	0.1587	0.1333	0.79	0.1431	0.1700	0.1456
20	0.3544	0.2067	0.58	0.2122	0.1833	0.75	0.1928	0.2067	0.1911
18	0.5247	0.2667	0.58	0.2740	0.2567	0.70	0.2573	0.2667	0.2600

TABLE 3.2 - Inward (Positive) Uniform Allowable Loads (Reversed Box Rib):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			2' - 0"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"	12' - 0"
26	Single Span	ASD, W/Ω	404	179	101	65	45	33	25	16	11
		LRFD, ϕW	641	285	160	102	71	52	40	26	18
		L/240	-	-	99	51	29	18	12	6	4
		L/180	-	-	-	-	39	25	17	8	5
		L/120	-	-	-	-	-	-	25	13	7
	Double Span	ASD, W/Ω	344	163	94	61	42	31	24	15	10
		LRFD, ϕW	518	246	141	92	64	47	36	22	16
		L/240	-	-	-	-	-	-	-	15	9
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	411	199	115	76	53	39	30	19	13
		LRFD, ϕW	620	300	174	114	79	59	45	29	20
		L/240	-	-	-	-	-	35	23	12	7
		L/180	-	-	-	-	-	-	-	16	9
		L/120	-	-	-	-	-	-	-	-	-
24	Single Span	ASD, W/Ω	578	257	145	92	64	47	36	23	16
		LRFD, ϕW	917	408	229	147	102	75	57	37	25
		L/240	-	-	138	71	41	26	17	9	5
		L/180	-	-	-	-	54	34	23	12	7
		L/120	-	-	-	-	-	-	34	18	10
	Double Span	ASD, W/Ω	475	218	124	80	55	41	31	20	14
		LRFD, ϕW	715	329	187	120	83	62	47	30	21
		L/240	-	-	-	-	-	-	-	-	12
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	578	269	154	99	70	51	39	24	17
		LRFD, ϕW	871	405	232	149	105	77	58	37	26
		L/240	-	-	-	-	-	48	32	17	10
		L/180	-	-	-	-	-	-	-	22	13
		L/120	-	-	-	-	-	-	-	-	-
22	Single Span	ASD, W/Ω	792	352	198	127	88	65	49	32	22
		LRFD, ϕW	1256	558	314	201	140	103	79	50	35
		L/240	-	-	174	89	52	32	22	11	6
		L/180	-	-	-	119	69	43	29	15	9
		L/120	-	-	-	-	-	-	44	22	13
	Double Span	ASD, W/Ω	676	309	176	113	79	57	43	28	19
		LRFD, ϕW	1017	465	264	170	118	87	66	43	29
		L/240	-	-	-	-	-	-	-	27	16
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	825	382	218	141	98	72	55	35	24
		LRFD, ϕW	1243	575	328	212	148	109	83	53	36
		L/240	-	-	-	-	97	61	41	21	12
		L/180	-	-	-	-	-	-	55	28	16
		L/120	-	-	-	-	-	-	-	-	24

TABLE 3.2 (Cont'd) - Inward (Positive) Uniform Allowable Loads (Reversed Box Rib):

Gauge	Span	Limit Condition	Panel Span (Support Spacing) 2' - 0"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"	12' - 0"
20	Single Span	ASD, W/Ω	847	376	212	136	94	69	53	34	24
		LRFD, ϕW	1344	597	336	215	149	110	84	54	37
		L/240	-	-	212	108	63	39	26	14	8
		L/180	-	-	-	-	84	53	35	18	10
		L/120	-	-	-	-	-	-	53	27	16
	Double Span	ASD, W/Ω	717	331	188	122	84	62	48	30	20
		LRFD, ϕW	1080	498	283	183	127	94	72	45	31
		L/240	-	-	-	-	-	-	-	-	19
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	872	408	234	151	106	77	59	37	26
		LRFD, ϕW	1313	614	352	227	159	116	89	57	39
		L/240	-	-	-	-	-	75	50	26	15
		L/180	-	-	-	-	-	-	-	34	20
		L/120	-	-	-	-	-	-	-	-	-
18	Single Span	ASD, W/Ω	1094	486	273	175	122	89	68	44	30
		LRFD, ϕW	1735	771	434	278	193	142	108	69	48
		L/240	-	-	273	140	81	51	34	17	10
		L/180	-	-	-	-	108	68	46	23	13
		L/120	-	-	-	-	-	-	68	35	20
	Double Span	ASD, W/Ω	953	441	251	162	113	83	64	40	28
		LRFD, ϕW	1435	663	378	244	170	125	96	61	43
		L/240	-	-	-	-	-	-	-	-	24
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	1157	543	312	202	140	103	79	50	35
		LRFD, ϕW	1743	818	469	303	211	156	119	76	53
		L/240	-	-	-	-	-	96	64	33	19
		L/180	-	-	-	-	-	-	-	44	25
		L/120	-	-	-	-	-	-	-	-	-

TABLE 3.3 - Allowable Reactions at Supports (Reversed Box Rib):

Gauge	Condition	Bearing Length of Webs: ASD (P_n/Ω) *(lbs/ft width)* 1"	1.5"	2"	3"	LRFD (ϕP_n) *(lbs/ft width)* 1"	1.5"	2"	3"
26	End	240	275	305	355	367	421	467	543
	Interior	382	430	471	539	568	640	700	802
24	End	347	396	436	505	531	605	668	773
	Interior	557	624	679	773	829	927	1010	1149
22	End	540	612	673	774	826	936	1029	1185
	Interior	874	972	1054	1193	1300	1446	1569	1774
20	End	610	688	754	865	933	1053	1154	1323
	Interior	994	1100	1190	1340	1479	1637	1770	1993
18	End	987	1107	1207	1376	1510	1693	1847	2106
	Interior	1625	1786	1922	2151	2417	2657	2859	3199

TABLE 3.4 - Outward (Negative) Uniform Allowable Loads (No. 26 gauge Reversed Box Rib):

Reversed Box Rib, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/5	296	443	236	355	197	296	148	222	108	171	75	119	55	87	42	67	27	37
		#12	36/3	177	266	142	213	118	177	89	133	71	106	59	89	51	76	42	66	27	37
	12ga (.1050")	#12	36/5	296	443	236	355	197	296	148	222	108	171	75	119	55	87	42	67	27	37
		#12	36/3	177	266	142	213	118	177	89	133	71	106	59	89	51	76	42	66	27	37
	14ga (.0700")	#12	36/5	232	348	186	278	155	232	116	174	93	139	75	116	55	87	42	67	27	37
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	27	37
	16ga (.0590")	#12	36/5	196	293	156	235	130	196	98	147	78	117	65	98	55	84	42	67	27	37
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/5	152	228	122	183	101	152	76	114	61	91	51	76	43	65	38	57	27	37
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/5	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/5	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/5	296	443	236	355	197	296	148	222	108	171	75	119	55	87	42	67	27	37
		#12	36/3	177	266	142	213	118	177	89	133	71	106	59	89	51	76	42	66	27	37
	12ga (.1050")	#12	36/5	241	361	193	289	161	241	120	181	96	145	75	119	55	87	42	67	27	37
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	27	37
	14ga (.0700")	#12	36/5	161	241	129	193	107	161	80	120	64	96	54	80	46	69	40	60	27	37
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/5	135	203	108	162	90	135	68	102	54	81	45	68	39	58	34	51	27	37
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/5	105	158	84	126	70	105	53	79	42	63	35	53	30	45	26	40	21	32
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/5	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/5	67	101	54	81	45	67	34	51	27	40	22	34	19	29	17	25	13	20
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/5	87	118	70	94	58	79	44	59	35	47	29	39	25	34	22	29	17	24
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/5	111	149	88	119	74	100	55	75	44	60	37	50	32	43	28	37	22	30
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/5	134	181	107	145	89	120	67	90	54	72	45	60	38	52	33	45	27	36
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/5	161	218	129	174	108	145	81	109	65	87	54	73	46	62	40	55	27	37
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/5	221	298	177	238	147	199	110	149	88	119	74	99	55	85	42	67	27	37
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 3.5 - Outward (Negative) Uniform Allowable Loads (No. 24 gauge Reversed Box Rib):

Reversed Box Rib, 24ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/5	314	471	251	377	209	314	157	236	116	183	80	127	59	94	45	72	29	46
		#12	36/3	189	283	151	226	126	189	94	141	75	113	63	94	54	81	45	71	29	46
	12ga (.1050")	#12	36/5	314	471	251	377	209	314	157	236	116	183	80	127	59	94	45	72	29	46
		#12	36/3	189	283	151	226	126	189	94	141	75	113	63	94	54	81	45	71	29	46
	14ga (.0700")	#12	36/5	232	348	186	278	155	232	116	174	93	139	77	116	59	94	45	72	29	46
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/5	196	293	156	235	130	196	98	147	78	117	65	98	56	84	45	72	29	46
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/5	152	228	122	183	101	152	76	114	61	91	51	76	43	65	38	57	29	46
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/5	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/5	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/5	310	465	248	372	207	310	155	232	116	183	80	127	59	94	45	72	29	46
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	45	70	29	46
	12ga (.1050")	#12	36/5	241	361	193	289	161	241	120	181	96	145	80	120	59	94	45	72	29	46
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/5	161	241	129	193	107	161	80	120	64	96	54	80	46	69	40	60	29	46
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/5	135	203	108	162	90	135	68	102	54	81	45	68	39	58	34	51	27	41
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/5	105	158	84	126	70	105	53	79	42	63	35	53	30	45	26	40	21	32
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/5	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/5	67	101	54	81	45	67	34	51	27	40	22	34	19	29	17	25	13	20
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/5	87	118	70	94	58	79	44	59	35	47	29	39	25	34	22	29	17	24
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/5	111	149	88	119	74	100	55	75	44	60	37	50	32	43	28	37	22	30
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/5	134	181	107	145	89	120	67	90	54	72	45	60	38	52	33	45	27	36
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/5	161	218	129	174	108	145	81	109	65	87	54	73	46	62	40	55	29	44
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/5	221	298	177	238	147	199	110	149	88	119	74	99	59	85	45	72	29	46
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 3.6 - Outward (Negative) Uniform Allowable Loads (No. 22 gauge Reversed Box Rib):

Reversed Box Rib, 22ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/5	398	597	319	478	265	398	199	299	158	239	110	174	81	128	62	98	40	63
		#12	36/3	239	358	191	287	159	239	119	179	96	143	80	119	68	102	60	90	40	63
	12ga (.1050")	#12	36/5	348	522	278	418	232	348	174	261	139	209	110	174	81	128	62	98	40	63
		#12	36/3	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	40	63
	14ga (.0700")	#12	36/5	232	348	186	278	155	232	116	174	93	139	77	116	66	99	58	87	40	63
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/5	196	293	156	235	130	196	98	147	78	117	65	98	56	84	49	73	39	59
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/5	152	228	122	183	101	152	76	114	61	91	51	76	43	65	38	57	30	46
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/5	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/5	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/5	310	465	248	372	207	310	155	232	124	186	103	155	81	128	62	98	40	63
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	46	70	37	56
	12ga (.1050")	#12	36/5	241	361	193	289	161	241	120	181	96	145	80	120	69	103	60	90	40	63
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/5	161	241	129	193	107	161	80	120	64	96	54	80	46	69	40	60	32	48
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/5	135	203	108	162	90	135	68	102	54	81	45	68	39	58	34	51	27	41
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/5	105	158	84	126	70	105	53	79	42	63	35	53	30	45	26	40	21	32
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/5	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/5	67	101	54	81	45	67	34	51	27	40	22	34	19	29	17	25	13	20
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/5	87	118	70	94	58	79	44	59	35	47	29	39	25	34	22	29	17	24
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/5	111	149	88	119	74	100	55	75	44	60	37	50	32	43	28	37	22	30
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/5	134	181	107	145	89	120	67	90	54	72	45	60	38	52	33	45	27	36
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/5	161	218	129	174	108	145	81	109	65	87	54	73	46	62	40	55	32	44
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/5	221	298	177	238	147	199	110	149	88	119	74	99	63	85	55	75	40	60
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 3.7 - Outward (Negative) Uniform Allowable Loads (No. 20 gauge Reversed Box Rib):

Reversed Box Rib, 20ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft^2)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/5	406	608	325	487	270	406	203	304	162	243	118	187	86	137	66	105	42	67
		#12	36/3	243	365	195	292	162	243	122	183	97	146	81	122	70	104	61	91	42	67
	12ga (.1050")	#12	36/5	348	522	278	418	232	348	174	261	139	209	116	174	86	137	66	105	42	67
		#12	36/3	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	42	63
	14ga (.0700")	#12	36/5	232	348	186	278	155	232	116	174	93	139	77	116	66	99	58	87	42	67
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/5	196	293	156	235	130	196	98	147	78	117	65	98	56	84	49	73	39	59
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/5	152	228	122	183	101	152	76	114	61	91	51	76	43	65	38	57	30	46
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/5	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/5	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/5	310	465	248	372	207	310	155	232	124	186	103	155	86	133	66	105	42	67
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	46	70	37	56
	12ga (.1050")	#12	36/5	241	361	193	289	161	241	120	181	96	145	80	120	69	103	60	90	42	67
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/5	161	241	129	193	107	161	80	120	64	96	54	80	46	69	40	60	32	48
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/5	135	203	108	162	90	135	68	102	54	81	45	68	39	58	34	51	27	41
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/5	105	158	84	126	70	105	53	79	42	63	35	53	30	45	26	40	21	32
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/5	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/5	67	101	54	81	45	67	34	51	27	40	22	34	19	29	17	25	13	20
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/5	87	118	70	94	58	79	44	59	35	47	29	39	25	34	22	29	17	24
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/5	111	149	88	119	74	100	55	75	44	60	37	50	32	43	28	37	22	30
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/5	134	181	107	145	89	120	67	90	54	72	45	60	38	52	33	45	27	36
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/5	161	218	129	174	108	145	81	109	65	87	54	73	46	62	40	55	32	44
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/5	221	298	177	238	147	199	110	149	88	119	74	99	63	85	55	75	42	60
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 3.8 - Outward (Negative) Uniform Allowable Loads (No. 18 gauge Reversed Box Rib):

Reversed Box Rib, 18ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft^2)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/5	448	671	358	537	298	448	224	336	179	269	149	224	112	177	85	136	55	87
		#12	36/3	269	403	215	322	179	269	134	201	107	161	90	134	77	115	67	101	54	81
	12ga (.1050")	#12	36/5	348	522	278	418	232	348	174	261	139	209	116	174	99	149	85	131	55	87
		#12	36/3	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	42	63
	14ga (.0700")	#12	36/5	232	348	186	278	155	232	116	174	93	139	77	116	66	99	58	87	46	70
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/5	196	293	156	235	130	196	98	147	78	117	65	98	56	84	49	73	39	59
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/5	152	228	122	183	101	152	76	114	61	91	51	76	43	65	38	57	30	46
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/5	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/5	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/5	310	465	248	372	207	310	155	232	124	186	103	155	89	133	77	116	55	87
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	46	70	37	56
	12ga (.1050")	#12	36/5	241	361	193	289	161	241	120	181	96	145	80	120	69	103	60	90	48	72
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/5	161	241	129	193	107	161	80	120	64	96	54	80	46	69	40	60	32	48
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/5	135	203	108	162	90	135	68	102	54	81	45	68	39	58	34	51	27	41
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/5	105	158	84	126	70	105	53	79	42	63	35	53	30	45	26	40	21	32
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/5	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/5	67	101	54	81	45	67	34	51	27	40	22	34	19	29	17	25	13	20
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/5	87	118	70	94	58	79	44	59	35	47	29	39	25	34	22	29	17	24
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/5	111	149	88	119	74	100	55	75	44	60	37	50	32	43	28	37	22	30
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/5	134	181	107	145	89	120	67	90	54	72	45	60	38	52	33	45	27	36
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/5	161	218	129	174	108	145	81	109	65	87	54	73	46	62	40	55	32	44
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/5	221	298	177	238	147	199	110	149	88	119	74	99	63	85	55	75	44	60
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 3.9 - Shear and Flexibility (No. 26 gauge Reversed Box Rib, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	26 ga	6"	q_a q_f	286 461	279 449	273 440	266 428	261 420	257 414	255 410	253 407	250 403
			F	21.6 -1.1R	21.9 -1R	22.1 -0.9R	22.4 -0.7R	22.5 -0.6R	22.7 -0.6R	22.7 -0.5R	22.8 -0.4R	22.9 -0.4R
		12"	q_a q_f	236 381	237 381	212 341	197 318	188 303	181 292	177 284	173 278	168 270
			F	26.2 -2.7R	27 -2.6R	27.7 -2.5R	28.6 -2.2R	29.2 -2R	29.6 -1.8R	29.9 -1.6R	30.2 -1.5R	30.5 -1.3R
		18"	q_a q_f	236 381	206 331	181 291	172 278	167 269	144 232	144 232	144 232	132 213
			F	29.4 -4.2R	30.9 -4.2R	32 -4.1R	33.6 -3.9R	34.8 -3.6R	35.6 -3.3R	36.2 -3.1R	36.7 -2.9R	37.5 -2.5R
		24"	q_a q_f	197 316	206 331	181 291	144 232	144 232	120 193	125 201	109 176	103 166
			F	31.8 -5.4R	33.8 -5.6R	35.4 -5.6R	37.8 -5.5R	39.5 -5.2R	40.8 -5R	41.8 -4.7R	42.6 -4.4R	43.8 -4R
		30"	q_a q_f	197 316	166 268	181 291	144 232	114 184	120 193	102 164	109 176	87 140
			F	33.6 -6.4R	36.1 -6.7R	38.2 -6.9R	41.3 -7R	43.6 -6.9R	45.4 -6.6R	46.8 -6.4R	47.9 -6.1R	49.6 -5.6R
		36"	q_a q_f	197 316	166 268	143 231	144 232	114 184	93 150	102 164	89 144	87 140
			F	35.1 -7.2R	38 -7.7R	40.4 -8.1R	44.3 -8.4R	47.2 -8.4R	49.4 -8.2R	51.2 -8R	52.7 -7.7R	55 -7.2R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 3.10 - Shear and Flexibility (No. 26 gauge Reversed Box Rib, 36/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/5	26 ga	6"	q_a q_f	389 627	371 598	358 577	341 549	330 531	322 518	316 509	312 502	306 493
			F	20.9 -1.3R	21.3 -1.2R	21.6 -1.1R	22 -1R	22.2 -0.8R	22.4 -0.7R	22.5 -0.7R	22.6 -0.6R	22.7 -0.5R
		12"	q_a q_f	304 490	300 483	260 418	235 379	220 354	209 337	202 325	196 315	187 302
			F	24.5 -2.8R	25.5 -2.8R	26.2 -2.7R	27.3 -2.6R	28.1 -2.4R	28.6 -2.2R	29 -2R	29.4 -1.9R	29.9 -1.7R
		18"	q_a q_f	304 490	256 412	219 353	203 328	193 311	159 256	159 255	159 255	143 230
			F	26.8 -4R	28.3 -4.1R	29.5 -4.2R	31.4 -4.2R	32.7 -4R	33.7 -3.9R	34.5 -3.7R	35.1 -3.5R	36.1 -3.1R
		24"	q_a q_f	249 402	256 412	219 353	165 266	162 260	133 214	136 219	119 192	111 179
			F	28.4 -4.8R	30.3 -5.2R	31.9 -5.4R	34.5 -5.6R	36.4 -5.6R	37.9 -5.5R	39.1 -5.3R	40.1 -5.1R	41.6 -4.8R
		30"	q_a q_f	249 402	206 332	219 353	165 266	130 209	133 214	113 182	119 192	95 153
			F	29.5 -5.5R	31.8 -6R	33.8 -6.4R	37 -6.8R	39.5 -7R	41.5 -7R	43.1 -6.9R	44.4 -6.8R	46.5 -6.4R
		36"	q_a q_f	249 402	206 332	171 276	165 266	130 209	106 171	113 182	99 160	95 153
			F	30.4 -6R	33 -6.7R	35.3 -7.2R	39 -7.9R	42 -8.2R	44.5 -8.4R	46.5 -8.4R	48.2 -8.3R	50.9 -8.1R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 3.11 - Shear and Flexibility (No.24 gauge Reversed Box Rib, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	24 ga	6"	q_a q_f	315 507	308 497	304 489	297 479	293 472	290 467	288 463	286 461	284 457
			F	16.9 -1R	17.2 -0.9R	17.3 -0.8R	17.6 -0.6R	17.7 -0.5R	17.8 -0.5R	17.9 -0.4R	18 -0.4R	18.1 -0.3R
		12"	q_a q_f	262 422	264 426	238 384	225 362	216 347	209 337	205 329	201 324	196 315
			F	20.9 -2.4R	21.6 -2.3R	22.2 -2.1R	23 -1.9R	23.5 -1.7R	23.8 -1.5R	24.1 -1.4R	24.3 -1.3R	24.6 -1.1R
		18"	q_a q_f	262 422	230 370	203 327	196 316	192 309	167 268	168 270	168 271	155 249
			F	23.7 -3.6R	24.9 -3.6R	25.9 -3.5R	27.3 -3.3R	28.3 -3.1R	29 -2.9R	29.6 -2.7R	30 -2.5R	30.6 -2.2R
		24"	q_a q_f	217 349	230 370	203 327	163 262	165 266	142 228	147 236	129 208	123 198
			F	25.7 -4.7R	27.5 -4.8R	28.9 -4.8R	30.9 -4.7R	32.4 -4.5R	33.5 -4.3R	34.4 -4.1R	35.1 -3.8R	36.1 -3.4R
		30"	q_a q_f	217 349	184 297	203 327	163 262	134 215	142 228	120 194	129 208	103 166
			F	27.3 -5.5R	29.5 -5.8R	31.2 -6R	34 -6R	36 -5.9R	37.5 -5.7R	38.7 -5.5R	39.7 -5.2R	41.1 -4.8R
		36"	q_a q_f	217 349	184 297	159 256	163 262	134 215	110 176	120 194	105 169	103 166
			F	28.6 -6.2R	31.1 -6.7R	33.2 -7R	36.5 -7.2R	39 -7.2R	41 -7.1R	42.5 -6.9R	43.8 -6.7R	45.8 -6.2R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 3.12 - Shear and Flexibility (No. 24 gauge Reversed Box Rib, 36/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/5	24 ga	6"	q_a q_f	436 702	419 674	407 655	390 628	380 611	372 600	367 591	363 584	357 575
			F	16.4 -1.1R	16.7 -1R	16.9 -1R	17.2 -0.8R	17.5 -0.7R	17.6 -0.6R	17.7 -0.6R	17.8 -0.5R	17.9 -0.4R
		12"	q_a q_f	340 548	339 545	295 475	270 435	255 410	244 393	236 380	230 371	222 357
			F	19.5 -2.4R	20.3 -2.4R	20.9 -2.4R	21.9 -2.2R	22.5 -2.1R	23 -1.9R	23.4 -1.8R	23.6 -1.6R	24.1 -1.4R
		18"	q_a q_f	340 548	287 463	247 398	233 375	224 360	189 304	188 303	188 303	170 274
			F	21.4 -3.4R	22.7 -3.6R	23.8 -3.6R	25.4 -3.6R	26.5 -3.5R	27.4 -3.3R	28.1 -3.2R	28.6 -3R	29.5 -2.7R
		24"	q_a q_f	275 443	287 463	247 398	191 307	189 305	156 251	160 258	140 225	131 211
			F	22.8 -4.2R	24.5 -4.5R	25.9 -4.7R	28.1 -4.8R	29.7 -4.8R	31 -4.7R	32.1 -4.6R	32.9 -4.4R	34.2 -4.1R
		30"	q_a q_f	275 443	228 367	247 398	191 307	150 242	156 251	132 213	140 225	112 180
			F	23.8 -4.7R	25.8 -5.2R	27.5 -5.5R	30.2 -5.9R	32.4 -6R	34.1 -6R	35.5 -6R	36.6 -5.8R	38.4 -5.5R
		36"	q_a q_f	275 443	228 367	193 310	191 307	150 242	124 199	132 213	115 186	112 180
			F	24.5 -5.2R	26.8 -5.8R	28.7 -6.2R	32 -6.8R	34.6 -7.1R	36.7 -7.2R	38.4 -7.2R	39.9 -7.2R	42.2 -7R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 3.13 - Shear and Flexibility (No. 22 gauge Reversed Box Rib, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	22 ga	6"	q_a q_f	404 650	403 648	398 640	391 629	386 622	383 617	381 613	379 610	376 606
			F	13.9 -0.9R	14.2 -0.8R	14.3 -0.7R	14.5 -0.6R	14.7 -0.5R	14.8 -0.4R	14.8 -0.4R	14.9 -0.3R	15 -0.3R
		12"	q_a q_f	344 553	348 561	316 509	300 484	290 467	283 455	277 446	273 440	267 430
			F	17.5 -2.1R	18.1 -2R	18.6 -1.9R	19.3 -1.7R	19.8 -1.5R	20.1 -1.4R	20.4 -1.3R	20.5 -1.1R	20.8 -1R
		18"	q_a q_f	344 553	304 489	270 435	263 424	259 417	226 364	228 367	230 370	213 342
			F	20 -3.2R	21.1 -3.2R	21.9 -3.2R	23.2 -3R	24.1 -2.8R	24.7 -2.6R	25.2 -2.4R	25.6 -2.2R	26.1 -1.9R
		24"	q_a q_f	283 455	304 489	270 435	218 351	223 358	192 309	199 321	178 287	169 273
			F	21.8 -4.1R	23.3 -4.3R	24.6 -4.3R	26.4 -4.2R	27.7 -4R	28.7 -3.8R	29.5 -3.6R	30.1 -3.4R	31 -3.1R
		30"	q_a q_f	283 455	242 389	270 435	218 351	181 291	192 309	167 269	178 287	143 231
			F	23.2 -4.9R	25.1 -5.2R	26.7 -5.3R	29.1 -5.4R	30.9 -5.3R	32.2 -5.1R	33.3 -4.9R	34.2 -4.7R	35.5 -4.3R
		36"	q_a q_f	283 455	242 389	209 337	218 351	181 291	151 243	167 269	145 233	143 231
			F	24.3 -5.5R	26.5 -5.9R	28.4 -6.2R	31.4 -6.4R	33.6 -6.4R	35.3 -6.3R	36.7 -6.1R	37.8 -5.9R	39.6 -5.5R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 3.14 - Shear and Flexibility (No. 22 gauge Reversed Box Rib, 36/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/5	22 ga	6"	q_a q_f	575 926	556 895	542 873	524 843	512 824	503 810	497 801	493 793	486 783
			F	13.5 -1R	13.7 -0.9R	14 -0.8R	14.2 -0.7R	14.4 -0.6R	14.6 -0.6R	14.7 -0.5R	14.7 -0.5R	14.8 -0.4R
		12"	q_a q_f	449 724	451 726	395 636	365 588	346 557	333 536	324 521	316 509	306 493
			F	16.2 -2.1R	16.9 -2.1R	17.5 -2.1R	18.4 -2R	18.9 -1.8R	19.4 -1.7R	19.7 -1.6R	19.9 -1.5R	20.3 -1.3R
		18"	q_a q_f	449 724	381 614	329 530	313 504	304 489	259 416	259 417	260 418	236 381
			F	18 -3R	19.1 -3.2R	20 -3.2R	21.5 -3.2R	22.5 -3.1R	23.3 -3R	23.9 -2.8R	24.4 -2.7R	25.1 -2.4R
		24"	q_a q_f	360 579	381 614	329 530	256 413	258 415	215 346	222 358	193 311	182 293
			F	19.2 -3.7R	20.6 -4R	21.9 -4.1R	23.9 -4.3R	25.3 -4.3R	26.5 -4.2R	27.4 -4.1R	28.2 -3.9R	29.3 -3.7R
		30"	q_a q_f	360 579	299 481	329 530	256 413	205 329	215 346	182 294	193 311	154 248
			F	20 -4.2R	21.8 -4.6R	23.3 -4.9R	25.8 -5.2R	27.7 -5.4R	29.2 -5.4R	30.4 -5.3R	31.5 -5.2R	33.1 -4.9R
		36"	q_a q_f	360 579	299 481	254 409	256 413	205 329	169 271	182 294	158 255	154 248
			F	20.7 -4.6R	22.7 -5.2R	24.5 -5.6R	27.4 -6.1R	29.6 -6.3R	31.5 -6.4R	33.1 -6.4R	34.4 -6.4R	36.4 -6.2R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 3.15 - Shear and Flexibility (No. 20 gauge Reversed Box Rib, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)								
		Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	20 ga	6"	q_a q_f 411 662	411 662	411 662	409 658	405 652	402 647	400 644	399 642	396 638
			F 12 -0.8R	12.2 -0.7R	12.4 -0.6R	12.6 -0.5R	12.7 -0.4R	12.8 -0.4R	12.8 -0.3R	12.9 -0.3R	13 -0.3R
		12"	q_a q_f 359 579	366 588	334 537	319 513	309 498	302 486	297 478	293 472	287 463
			F 15.2 -1.9R	15.8 -1.8R	16.3 -1.7R	16.9 -1.6R	17.3 -1.4R	17.6 -1.3R	17.9 -1.1R	18 -1R	18.3 -0.9R
		18"	q_a q_f 359 579	320 515	285 459	280 451	277 445	242 390	246 395	248 399	230 371
			F 17.5 -2.9R	18.5 -2.9R	19.3 -2.9R	20.5 -2.7R	21.2 -2.5R	21.8 -2.3R	22.3 -2.2R	22.6 -2R	23.1 -1.8R
		24"	q_a q_f 295 476	320 515	285 459	232 373	238 383	206 332	215 346	192 310	184 296
			F 19.2 -3.8R	20.6 -3.9R	21.7 -3.9R	23.4 -3.8R	24.6 -3.7R	25.5 -3.5R	26.2 -3.3R	26.7 -3.1R	27.6 -2.8R
		30"	q_a q_f 295 476	253 408	285 459	232 373	193 311	206 332	181 291	192 310	157 253
			F 20.5 -4.5R	22.2 -4.7R	23.6 -4.8R	25.8 -4.9R	27.4 -4.8R	28.7 -4.6R	29.6 -4.4R	30.4 -4.2R	31.6 -3.9R
		36"	q_a q_f 295 476	253 408	220 354	232 373	193 311	164 264	181 291	159 256	157 253
			F 21.5 -5R	23.5 -5.4R	25.2 -5.7R	27.9 -5.9R	29.9 -5.9R	31.5 -5.7R	32.8 -5.6R	33.8 -5.4R	35.4 -5R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 3.16 - Shear and Flexibility (No. 20 gauge Reversed Box Rib, 36/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)								
		Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/5	20 ga	6"	q_a q_f 604 972	586 944	574 924	557 896	546 878	538 866	532 857	528 850	522 840
			F 11.6 -0.9R	11.8 -0.8R	12 -0.8R	12.3 -0.7R	12.5 -0.6R	12.6 -0.5R	12.7 -0.5R	12.7 -0.4R	12.8 -0.4R
		12"	q_a q_f 473 762	478 770	421 677	391 630	373 600	360 579	350 564	343 553	333 536
			F 14.1 -2R	14.8 -1.9R	15.3 -1.9R	16 -1.8R	16.6 -1.7R	16.9 -1.5R	17.2 -1.4R	17.5 -1.3R	17.8 -1.2R
		18"	q_a q_f 473 762	403 650	349 562	335 540	327 526	279 449	281 452	282 454	258 415
			F 15.7 -2.8R	16.7 -2.9R	17.6 -2.9R	18.9 -2.9R	19.8 -2.8R	20.5 -2.7R	21.1 -2.6R	21.5 -2.4R	22.2 -2.2R
		24"	q_a q_f 376 606	403 650	349 562	273 439	277 445	234 376	243 391	211 340	199 321
			F 16.8 -3.4R	18.1 -3.6R	19.3 -3.8R	21.1 -3.9R	22.4 -3.9R	23.5 -3.8R	24.3 -3.7R	25 -3.6R	26 -3.3R
		30"	q_a q_f 376 606	313 504	349 562	273 439	221 355	234 376	199 320	211 340	168 271
			F 17.6 -3.8R	19.2 -4.2R	20.6 -4.5R	22.8 -4.8R	24.5 -4.9R	25.9 -4.9R	27 -4.8R	28 -4.7R	29.4 -4.5R
		36"	q_a q_f 376 606	313 504	267 430	273 439	221 355	182 293	199 320	173 278	168 271
			F 18.2 -4.2R	20 -4.7R	21.6 -5.1R	24.2 -5.5R	26.3 -5.8R	28 -5.9R	29.4 -5.9R	30.6 -5.8R	32.5 -5.6R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 3.17 - Shear and Flexibility (No. 18 gauge Reversed Box Rib, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	18 ga	6"	q_a q_f	447 720	447 720	447 720	447 720	447 720	447 720	447 720	447 720	447 720
			F	9.8 -0.7R	10 -0.6R	10.1 -0.6R	10.3 -0.5R	10.4 -0.4R	10.5 -0.3R	10.5 -0.3R	10.6 -0.3R	10.6 -0.2R
		12"	q_a q_f	424 682	433 698	404 650	392 631	385 619	379 611	375 604	372 599	368 592
			F	12.6 -1.7R	13.2 -1.6R	13.5 -1.5R	14.1 -1.4R	14.5 -1.2R	14.7 -1.1R	14.9 -1R	15.1 -0.9R	15.3 -0.8R
		18"	q_a q_f	424 682	385 620	349 563	349 562	349 562	312 502	318 511	322 518	303 488
			F	14.6 -2.6R	15.5 -2.6R	16.2 -2.5R	17.2 -2.4R	17.9 -2.2R	18.4 -2R	18.8 -1.9R	19.1 -1.8R	19.6 -1.5R
		24"	q_a q_f	350 563	385 620	349 563	290 468	303 489	266 429	280 451	253 408	245 395
			F	16.1 -3.3R	17.3 -3.4R	18.3 -3.4R	19.8 -3.4R	20.8 -3.2R	21.6 -3.1R	22.2 -2.9R	22.7 -2.7R	23.4 -2.4R
		30"	q_a q_f	350 563	304 489	349 563	290 468	246 395	266 429	236 380	253 408	211 340
			F	17.2 -3.9R	18.7 -4.1R	20 -4.2R	21.9 -4.3R	23.3 -4.2R	24.4 -4.1R	25.3 -3.9R	26 -3.7R	27 -3.4R
		36"	q_a q_f	350 563	304 489	267 429	290 468	246 395	212 341	236 380	211 340	211 340
			F	18.1 -4.4R	19.9 -4.8R	21.4 -5R	23.7 -5.1R	25.5 -5.1R	26.9 -5R	28 -4.9R	28.9 -4.7R	30.3 -4.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 3.18 - Shear and Flexibility (No. 18 gauge Reversed Box Rib, 36/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/5	18 ga	6"	q_a q_f	719 1157	706 1136	697 1122	684 1102	676 1089	671 1080	667 1073	664 1068	659 1061
			F	9.4 -0.8R	9.6 -0.7R	9.8 -0.7R	10 -0.6R	10.2 -0.5R	10.3 -0.5R	10.4 -0.4R	10.4 -0.4R	10.5 -0.3R
		12"	q_a q_f	574 925	589 949	527 849	501 806	484 779	472 760	464 746	457 736	448 721
			F	11.6 -1.7R	12.2 -1.7R	12.7 -1.7R	13.3 -1.6R	13.8 -1.5R	14.1 -1.4R	14.4 -1.3R	14.6 -1.2R	14.9 -1R
		18"	q_a q_f	574 925	498 802	436 702	429 691	425 685	367 591	373 601	378 608	349 562
			F	13 -2.4R	13.9 -2.5R	14.7 -2.6R	15.8 -2.6R	16.6 -2.5R	17.2 -2.4R	17.7 -2.2R	18.1 -2.1R	18.7 -1.9R
		24"	q_a q_f	450 724	498 802	436 702	346 557	359 578	307 494	322 519	286 461	274 441
			F	14 -3R	15.2 -3.2R	16.2 -3.3R	17.7 -3.4R	18.9 -3.4R	19.8 -3.4R	20.6 -3.3R	21.2 -3.2R	22.1 -2.9R
		30"	q_a q_f	450 724	377 608	436 702	346 557	284 458	307 494	267 430	286 461	231 372
			F	14.7 -3.4R	16.1 -3.7R	17.3 -3.9R	19.3 -4.2R	20.8 -4.3R	22 -4.3R	23 -4.2R	23.8 -4.2R	25.1 -3.9R
		36"	q_a q_f	450 724	377 608	323 521	346 557	284 458	240 386	267 430	234 377	231 372
			F	15.2 -3.7R	16.8 -4.1R	18.2 -4.4R	20.5 -4.9R	22.4 -5.1R	23.9 -5.1R	25.1 -5.2R	26.1 -5.1R	27.8 -4.9R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

4.0 Delta Rib

FIGURE 4.1 - Basic Dimensions and Panel Attachment (Delta Rib):

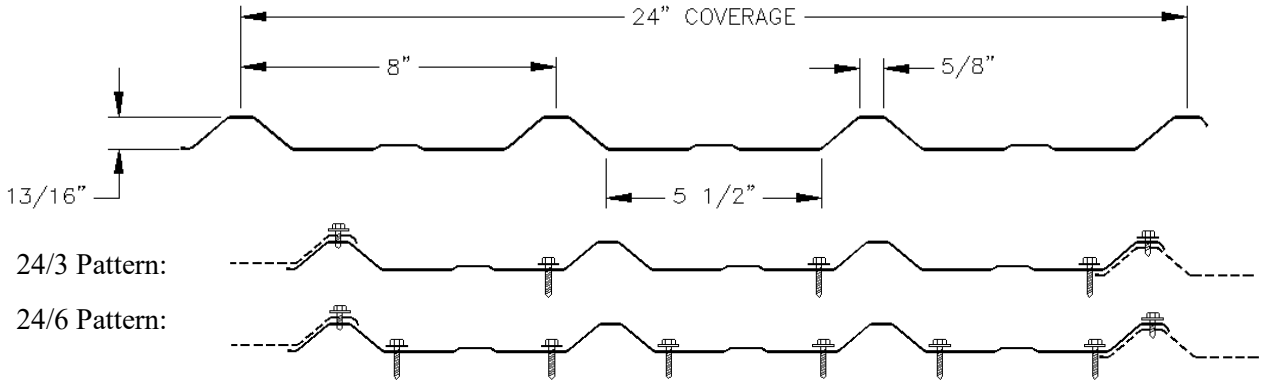


TABLE 4.1 - Section Properties (Delta Rib):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
29	0.67	0.0139	80	82	0.1967	0.0165	0.22	0.0277	0.0748
26	0.83	0.0173	80	82	0.2448	0.0210	0.23	0.0344	0.0924

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative				
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	$I_d = (2I_e+I_g)/3$	
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
29	0.0387	0.0165	0.19	0.0227	0.0130	0.35	0.0249	0.0165	0.0142
26	0.0539	0.0210	0.21	0.0320	0.0170	0.34	0.0314	0.0210	0.0183

TABLE 4.2 - Inward (Positive) Uniform Allowable Loads (Delta Rib):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	6' - 0"
29	Single Span	ASD, W/Ω	307	136	87	60	44	34	27	22	15
		LRFD, ϕW	488	216	138	96	70	54	43	35	24
		L/240	-	135	69	40	25	17	12	9	5
		L/180	-	-	-	53	34	23	16	12	7
		L/120	-	-	-	-	-	34	24	17	10
	Double Span	ASD, W/Ω	301	141	91	64	48	37	28	23	16
		LRFD, ϕW	453	213	138	97	72	55	43	35	24
		L/240	-	-	-	-	-	-	-	21	12
		L/180	-	-	-	-	-	-	-	-	16
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	360	173	113	80	59	46	36	29	20
		LRFD, ϕW	543	260	170	120	89	69	54	44	30
		L/240	-	-	-	76	48	32	22	16	9
		L/180	-	-	-	-	-	43	30	22	13
		L/120	-	-	-	-	-	-	-	-	19
26	Single Span	ASD, W/Ω	433	191	122	85	62	48	38	31	21
		LRFD, ϕW	686	304	194	135	99	76	60	49	34
		L/240	-	172	88	51	32	22	15	11	6
		L/180	-	-	117	68	43	29	20	15	8
		L/120	-	-	-	-	-	43	30	22	13
	Double Span	ASD, W/Ω	395	181	117	82	60	47	36	29	20
		LRFD, ϕW	594	273	176	123	90	70	55	44	31
		L/240	-	-	-	-	-	-	-	27	15
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	480	223	146	102	75	58	46	37	25
		LRFD, ϕW	723	336	219	153	113	87	69	56	38
		L/240	-	-	-	96	61	41	29	21	12
		L/180	-	-	-	-	-	54	38	28	16
		L/120	-	-	-	-	-	-	-	-	24

TABLE 4.3 - Allowable Reactions at Supports (Delta Rib):

Reactions at Supports based on Web Crippling			
Gauge	Condition	Bearing Length of Webs	
		ASD (P_n/Ω) (*lbs/ft width*)	**LRFD (ϕP_n)** (*lbs/ft width*)
		1.5"	1.5"
29	End	87	140
	Interior	56	90
26	End	164	263
	Interior	205	328

TABLE 4.4 - Outward (Negative) Uniform Allowable Loads (Delta Rib):

Delta Rib, 29ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)															
				Attachment Spacing, (ft-in)															
		Nom. Size	Attach. Pattern	16"		2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		4' - 6"		5' - 0"		6' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	24/6	510	809	227	359	145	230	101	160	74	117	57	90	45	71	36	56	25	32
		#12	24/3	321	481	214	321	145	230	101	160	74	117	57	90	45	71	36	56	25	32
	12ga (.1050")	#12	24/6	510	809	227	359	145	230	101	160	74	117	57	90	45	71	36	56	25	32
		#12	24/3	321	481	214	321	145	230	101	160	74	117	57	90	45	71	36	56	25	32
	14ga (.0700")	#12	24/6	510	809	227	359	145	230	101	160	74	117	57	90	45	71	36	56	25	32
		#12	24/3	313	470	209	313	145	230	101	160	74	117	57	90	45	71	36	56	25	32
	16ga (.0590")	#12	24/6	510	792	227	359	145	230	101	160	74	117	57	90	45	71	36	56	25	32
		#12	24/3	264	396	176	264	141	211	101	160	74	117	57	90	45	71	36	56	25	32
	18ga (.0459")	#12	24/6	411	616	227	359	145	230	101	160	74	117	57	90	45	71	36	56	25	32
		#12	24/3	205	308	137	205	110	164	91	137	74	117	57	90	45	71	36	56	25	32
	20ga (.0354")	#12	24/6	317	475	211	317	145	230	101	160	74	117	57	90	45	71	36	56	25	32
		#12	24/3	158	238	106	158	84	127	70	106	60	91	53	79	45	70	36	56	25	32
	22ga (.0294")	#12	24/6	263	395	175	263	140	211	101	160	74	117	57	90	45	71	36	56	25	32
		#12	24/3	132	197	88	132	70	105	58	88	50	75	44	66	39	58	35	53	25	32
Steel (Gr 33 min.)	≥10ga (.1350")	#12	24/6	510	809	227	359	145	230	101	160	74	117	57	90	45	71	36	56	25	32
		#12	24/3	321	481	214	321	145	230	101	160	74	117	57	90	45	71	36	56	25	32
	12ga (.1050")	#12	24/6	510	809	227	359	145	230	101	160	74	117	57	90	45	71	36	56	25	32
		#12	24/3	321	481	214	321	145	230	101	160	74	117	57	90	45	71	36	56	25	32
	14ga (.0700")	#12	24/6	434	651	227	359	145	230	101	160	74	117	57	90	45	71	36	56	25	32
		#12	24/3	217	325	145	217	116	174	96	145	74	117	57	90	45	71	36	56	25	32
	16ga (.0590")	#12	24/6	366	548	227	359	145	230	101	160	74	117	57	90	45	71	36	56	25	32
		#12	24/3	183	274	122	183	97	146	81	122	70	104	57	90	45	71	36	56	25	32
	18ga (.0459")	#12	24/6	284	427	190	284	145	228	101	160	74	117	57	90	45	71	36	56	25	32
		#12	24/3	142	213	95	142	76	114	63	95	54	81	47	71	42	63	36	56	25	32
	20ga (.0354")	#12	24/6	219	329	146	219	117	175	97	146	74	117	57	90	45	71	36	56	25	32
		#12	24/3	110	165	73	110	58	88	49	73	42	63	37	55	32	49	29	44	24	32
	22ga (.0294")	#12	24/6	182	273	121	182	97	146	81	121	69	104	57	90	45	71	36	56	25	32
		#12	24/3	91	137	61	91	49	73	40	61	35	52	30	46	27	40	24	36	20	30
Plywood & OSB	15/32"	#14	24/6	236	318	157	212	126	170	101	141	74	117	57	90	45	71	36	56	25	32
		#14	24/3	118	159	79	106	63	85	52	71	45	61	39	53	35	47	31	42	25	32
	19/32"	#14	24/6	299	403	199	269	145	215	101	160	74	117	57	90	45	71	36	56	25	32
		#14	24/3	149	202	100	134	80	107	66	90	57	77	50	67	44	60	36	54	25	32
	23/32"	#14	24/6	361	488	227	325	145	230	101	160	74	117	57	90	45	71	36	56	25	32
		#14	24/3	181	244	120	163	96	130	80	108	69	93	57	81	45	71	36	56	25	32
Lumber (DFL)	1" min	#9	24/6	436	589	227	359	145	230	101	160	74	117	57	90	45	71	36	56	25	32
		#9	24/3	218	294	145	196	116	157	97	131	74	112	57	90	45	71	36	56	25	32
		#14	24/6	510	805	227	359	145	230	101	160	74	117	57	90	45	71	36	56	25	32
		#14	24/3	298	402	199	268	145	215	101	160	74	117	57	90	45	71	36	56	25	32

TABLE 4.5 - Outward (Negative) Uniform Allowable Loads (Delta Rib):

Delta Rib, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	16"		2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		4' - 6"		5' - 0"		6' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	24/6	717	1138	319	506	204	324	142	225	104	165	80	126	63	100	51	73	35	42
		#12	24/3	399	598	266	399	204	319	142	225	104	165	80	126	63	100	51	73	35	42
	12ga (.1050")	#12	24/6	717	1138	319	506	204	324	142	225	104	165	80	126	63	100	51	73	35	42
		#12	24/3	399	598	266	399	204	319	142	225	104	165	80	126	63	100	51	73	35	42
	14ga (.0700")	#12	24/6	627	940	319	506	204	324	142	225	104	165	80	126	63	100	51	73	35	42
		#12	24/3	313	470	209	313	167	251	139	209	104	165	80	126	63	100	51	73	35	42
	16ga (.0590")	#12	24/6	528	792	319	506	204	324	142	225	104	165	80	126	63	100	51	73	35	42
		#12	24/3	264	396	176	264	141	211	117	176	101	151	80	126	63	100	51	73	35	42
	18ga (.0459")	#12	24/6	411	616	274	411	204	324	142	225	104	165	80	126	63	100	51	73	35	42
		#12	24/3	205	308	137	205	110	164	91	137	78	117	68	103	61	91	51	73	35	42
	20ga (.0354")	#12	24/6	317	475	211	317	169	253	141	211	104	165	80	126	63	100	51	73	35	42
		#12	24/3	158	238	106	158	84	127	70	106	60	91	53	79	47	70	42	63	35	42
	22ga (.0294")	#12	24/6	263	395	175	263	140	211	117	175	100	150	80	126	63	100	51	73	35	42
		#12	24/3	132	197	88	132	70	105	58	88	50	75	44	66	39	58	35	53	29	42
Steel (Gr 33 min.)	≥10ga (.1350")	#12	24/6	717	1138	319	506	204	324	142	225	104	165	80	126	63	100	51	73	35	42
		#12	24/3	399	598	266	399	204	319	142	225	104	165	80	126	63	100	51	73	35	42
	12ga (.1050")	#12	24/6	651	976	319	506	204	324	142	225	104	165	80	126	63	100	51	73	35	42
		#12	24/3	325	488	217	325	174	260	142	217	104	165	80	126	63	100	51	73	35	42
	14ga (.0700")	#12	24/6	434	651	289	434	204	324	142	225	104	165	80	126	63	100	51	73	35	42
		#12	24/3	217	325	145	217	116	174	96	145	83	124	72	108	63	96	51	73	35	42
	16ga (.0590")	#12	24/6	366	548	244	366	195	292	142	225	104	165	80	126	63	100	51	73	35	42
		#12	24/3	183	274	122	183	97	146	81	122	70	104	61	91	54	81	49	73	35	42
	18ga (.0459")	#12	24/6	284	427	190	284	152	228	126	190	104	163	80	126	63	100	51	73	35	42
		#12	24/3	142	213	95	142	76	114	63	95	54	81	47	71	42	63	38	57	32	42
	20ga (.0354")	#12	24/6	219	329	146	219	117	175	97	146	84	125	73	110	63	97	51	73	35	42
		#12	24/3	110	165	73	110	58	88	49	73	42	63	37	55	32	49	29	44	24	37
	22ga (.0294")	#12	24/6	182	273	121	182	97	146	81	121	69	104	61	91	54	81	49	73	35	42
		#12	24/3	91	137	61	91	49	73	40	61	35	52	30	46	27	40	24	36	20	30
Plywood & OSB	15/32"	#14	24/6	236	318	157	212	126	170	105	141	90	121	79	106	63	94	51	73	35	42
		#14	24/3	118	159	79	106	63	85	52	71	45	61	39	53	35	47	31	42	26	35
	19/32"	#14	24/6	299	403	199	269	159	215	133	179	104	154	80	126	63	100	51	73	35	42
		#14	24/3	149	202	100	134	80	107	66	90	57	77	50	67	44	60	40	54	33	42
	23/32"	#14	24/6	361	488	241	325	193	260	142	217	104	165	80	126	63	100	51	73	35	42
		#14	24/3	181	244	120	163	96	130	80	108	69	93	60	81	54	72	48	65	35	42
Lumber (DFL)	1" min	#9	24/6	436	589	291	392	204	314	142	225	104	165	80	126	63	100	51	73	35	42
		#9	24/3	218	294	145	196	116	157	97	131	83	112	73	98	63	87	51	73	35	42
		#14	24/6	596	805	319	506	204	324	142	225	104	165	80	126	63	100	51	73	35	42
		#14	24/3	298	402	199	268	159	215	132	179	104	153	80	126	63	100	51	73	35	42

TABLE 4.6 - Shear and Flexibility (No. 29 gauge Delta Rib):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	6' - 0"
24/3	29 ga	6"	q_a q_f	311 501	275 442	262 422	254 408	247 398	242 390	238 383	235 378	201 321
			F	26.2 -2.2R	27.4 -1.9R	27.9 -1.7R	28.2 -1.5R	28.5 -1.4R	28.7 -1.3R	28.9 -1.2R	29 -1.1R	29.2 -1R
		12"	q_a q_f	278 447	211 339	209 336	181 291	184 296	164 265	169 272	154 248	147 237
			F	32 -4.7R	34.9 -4.6R	36.3 -4.4R	37.4 -4.2R	38.3 -4R	39 -3.8R	39.6 -3.6R	40 -3.4R	40.8 -3.1R
		18"	q_a q_f	233 375	211 339	176 284	151 243	159 255	141 227	127 204	135 217	113 182
			F	35.6 -6.5R	40.1 -7R	42.5 -7R	44.5 -6.9R	46 -6.8R	47.3 -6.6R	48.3 -6.3R	49.2 -6.1R	50.6 -5.7R
		24"	q_a q_f	233 375	169 273	176 284	151 243	131 211	115 185	127 204	114 183	94 151
			F	38 -7.9R	43.9 -8.9R	47.3 -9.3R	50 -9.4R	52.2 -9.3R	54 -9.2R	55.6 -9.1R	57 -8.9R	59.2 -8.4R
		30"	q_a q_f	233 375	169 273	139 224	151 243	131 211	115 185	102 164	91 146	94 151
			F	39.8 -8.9R	46.8 -10.5R	51 -11.2R	54.4 -11.5R	57.2 -11.7R	59.7 -11.7R	61.8 -11.7R	63.6 -11.5R	66.6 -11.2R
		36"	q_a q_f	233 375	169 273	139 224	117 189	131 211	115 185	102 164	91 146	75 120
			F	41.1 -9.8R	49.1 -11.8R	54 -12.8R	58 -13.4R	61.5 -13.8R	64.5 -14R	67.1 -14.1R	69.4 -14R	73.2 -13.8R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 4.7 - Shear and Flexibility (No. 26 gauge Delta Rib):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	6' - 0"
24/3	26 ga	6"	q_a q_f	399 643	356 574	342 551	332 535	325 523	319 514	314 506	311 500	283 453
			F	22.1 -2R	23.1 -1.7R	23.5 -1.5R	23.9 -1.4R	24.1 -1.3R	24.3 -1.2R	24.4 -1.1R	24.6 -1R	24.8 -0.9R
		12"	q_a q_f	356 574	273 439	273 439	237 381	242 390	217 350	224 361	205 330	197 316
			F	27.2 -4.2R	29.8 -4.1R	31.1 -4R	32.1 -3.8R	32.9 -3.6R	33.5 -3.4R	34 -3.2R	34.4 -3.1R	35.1 -2.8R
		18"	q_a q_f	297 478	273 439	229 369	196 316	208 336	186 299	167 269	179 288	152 244
			F	30.4 -5.8R	34.5 -6.3R	36.7 -6.3R	38.4 -6.2R	39.8 -6.1R	40.9 -5.9R	41.8 -5.7R	42.6 -5.5R	43.9 -5.1R
		24"	q_a q_f	297 478	217 350	229 369	196 316	171 276	152 244	167 269	152 244	126 202
			F	32.6 -7.1R	37.9 -8R	40.9 -8.3R	43.3 -8.4R	45.3 -8.4R	47 -8.3R	48.4 -8.1R	49.6 -8R	51.6 -7.6R
		30"	q_a q_f	297 478	217 350	179 288	196 316	171 276	152 244	134 216	120 194	126 202
			F	34.2 -8R	40.5 -9.4R	44.2 -10R	47.3 -10.3R	49.9 -10.5R	52 -10.5R	53.9 -10.4R	55.6 -10.3R	58.3 -10R
		36"	q_a q_f	297 478	217 350	179 288	152 244	171 276	152 244	134 216	120 194	99 160
			F	35.4 -8.8R	42.6 -10.6R	46.9 -11.5R	50.5 -12R	53.6 -12.3R	56.3 -12.5R	58.7 -12.6R	60.7 -12.6R	64.1 -12.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

Note: Shear Tables 4.6 & 4.7 based on 24/3 attachment pattern. Values acceptable for use (conservative) for 24/6 attachment pattern.

5.0 Delta Rib III

FIGURE 5.1 - Basic Dimensions and Panel Attachment (Delta Rib III):

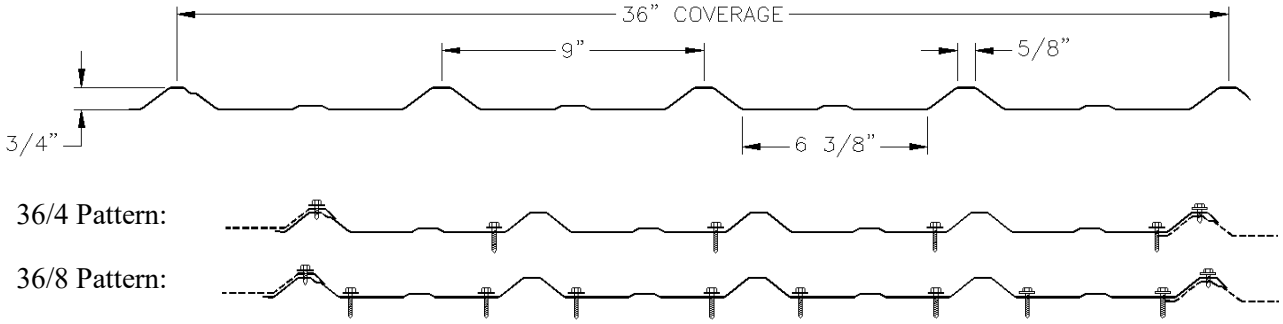


TABLE 5.1 - Section Properties (Delta Rib III):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
29	0.65	0.0139	80	82	0.1900	0.0127	0.19	0.0218	0.0681
26	0.80	0.0173	80	82	0.2365	0.0157	0.19	0.0270	0.0839

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative				
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	$I_d = (2I_e+I_g)/3$	
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
29	0.0273	0.0123	0.16	0.0179	0.0093	0.32	0.0191	0.0124	0.0104
26	0.0383	0.0157	0.17	0.0245	0.0123	0.31	0.0242	0.0157	0.0134

TABLE 5.2 - Inward (Positive) Uniform Allowable Load Table (Delta Rib III):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	6' - 0"
29	Single Span	ASD, W/Ω	242	107	68	48	35	27	21	17	12
		LRFD, ϕW	384	170	109	75	55	42	34	27	19
		L/240	-	102	52	30	19	13	9	7	4
		L/180	-	-	-	40	25	17	12	9	5
		L/120	-	-	-	-	-	25	18	13	8
	Double Span	ASD, W/Ω	238	110	71	49	36	28	22	17	12
		LRFD, ϕW	359	165	107	75	55	42	33	26	19
		L/240	-	-	-	-	-	-	22	16	9
		L/180	-	-	-	-	-	-	-	-	-
		L/180	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	289	135	88	62	45	35	27	23	15
		LRFD, ϕW	435	204	133	93	68	53	41	34	23
		L/240	-	-	-	57	36	24	17	12	7
		L/180	-	-	-	-	-	32	23	16	10
		L/120	-	-	-	-	-	-	-	-	14
26	Single Span	ASD, W/Ω	332	147	94	65	48	37	29	24	16
		LRFD, ϕW	527	233	149	104	76	58	46	37	26
		L/240	-	128	66	38	24	16	11	8	5
		L/180	-	-	88	51	32	21	15	11	6
		L/120	-	-	-	-	48	32	23	16	10
	Double Span	ASD, W/Ω	310	141	90	63	46	36	28	23	16
		LRFD, ϕW	466	212	136	95	70	54	42	34	24
		L/240	-	-	-	-	-	-	27	20	11
		L/180	-	-	-	-	-	-	-	-	15
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	379	174	112	78	58	45	35	28	20
		LRFD, ϕW	570	262	169	118	87	67	53	42	30
		L/240	-	-	-	72	45	30	21	16	9
		L/180	-	-	-	-	-	40	28	21	12
		L/120	-	-	-	-	-	-	-	-	18

TABLE 5.3 - Allowable Reactions at Supports (Delta Rib III):

Reactions at Supports based on Web Crippling			
Gauge	Condition	Bearing Length of Webs	
		ASD (P_n/Ω) *(lbs/ft width)*	**LRFD (ϕP_n)** *(lbs/ft width)*
		1.5"	1.5"
29	End	54	86
	Interior	44	71
26	End	86	137
	Interior	90	144

TABLE 5.4 - Outward (Negative) Uniform Allowable Loads (Delta Rib III):

Delta Rib III, 29ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				16"		2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		4' - 6"		5' - 0"		6' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/8	401	637	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#12	36/4	285	427	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
	12ga (.1050")	#12	36/8	401	637	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#12	36/4	285	427	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
	14ga (.0700")	#12	36/8	401	637	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#12	36/4	278	418	178	278	114	181	79	126	58	92	45	71	35	56	29	41	20	24
	16ga (.0590")	#12	36/8	401	637	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#12	36/4	235	352	156	235	114	181	79	126	58	92	45	71	35	56	29	41	20	24
	18ga (.0459")	#12	36/8	365	548	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#12	36/4	183	274	122	183	97	146	79	122	58	92	45	71	35	56	29	41	20	24
	20ga (.0354")	#12	36/8	282	422	178	282	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#12	36/4	141	211	94	141	75	113	63	94	54	80	45	70	35	56	29	41	20	24
	22ga (.0294")	#12	36/8	234	351	156	234	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#12	36/4	117	175	78	117	62	94	52	78	45	67	39	58	35	52	29	41	20	24
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/8	401	637	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#12	36/4	285	427	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
	12ga (.1050")	#12	36/8	401	637	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#12	36/4	285	427	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
	14ga (.0700")	#12	36/8	386	578	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#12	36/4	193	289	129	193	103	154	79	126	58	92	45	71	35	56	29	41	20	24
	16ga (.0590")	#12	36/8	325	487	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#12	36/4	162	244	108	162	87	130	72	108	58	92	45	71	35	56	29	41	20	24
	18ga (.0459")	#12	36/8	253	379	169	253	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#12	36/4	126	190	84	126	67	101	56	84	48	72	42	63	35	56	29	41	20	24
	20ga (.0354")	#12	36/8	195	292	130	195	104	156	79	126	58	92	45	71	35	56	29	41	20	24
		#12	36/4	97	146	65	97	52	78	43	65	37	56	32	49	29	43	26	39	20	24
	22ga (.0294")	#12	36/8	162	243	108	162	86	130	72	108	58	92	45	71	35	56	29	41	20	24
		#12	36/4	81	121	54	81	43	65	36	54	31	46	27	40	24	36	22	32	18	24
Plywood & OSB	15/32"	#14	36/8	209	283	140	189	112	151	79	126	58	92	45	71	35	56	29	41	20	24
		#14	36/4	105	141	70	94	56	75	47	63	40	54	35	47	31	42	28	38	20	24
	19/32"	#14	36/8	265	358	177	239	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#14	36/4	133	179	88	119	71	96	59	80	51	68	44	60	35	53	29	41	20	24
	23/32"	#14	36/8	321	434	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#14	36/4	161	217	107	145	86	116	71	96	58	83	45	71	35	56	29	41	20	24
Lumber (DFL)	1" min	#9	36/8	388	523	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#9	36/4	194	262	129	174	103	140	79	116	58	92	45	71	35	56	29	41	20	24
		#14	36/8	401	637	178	283	114	181	79	126	58	92	45	71	35	56	29	41	20	24
		#14	36/4	265	358	177	238	114	181	79	126	58	92	45	71	35	56	29	41	20	24

TABLE 5.5 - Outward (Negative) Uniform Allowable Loads (Delta Rib III):

Delta Rib III, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				16"		2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		4' - 6"		5' - 0"		6' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/8	551	874	245	388	157	249	109	173	80	127	61	97	48	73	39	53	27	31
		#12	36/4	355	532	236	355	157	249	109	173	80	127	61	97	48	73	39	53	27	31
	12ga (.1050")	#12	36/8	551	874	245	388	157	249	109	173	80	127	61	97	48	73	39	53	27	31
		#12	36/4	355	532	236	355	157	249	109	173	80	127	61	97	48	73	39	53	27	31
	14ga (.0700")	#12	36/8	551	835	245	388	157	249	109	173	80	127	61	97	48	73	39	53	27	31
		#12	36/4	278	418	186	278	149	223	109	173	80	127	61	97	48	73	39	53	27	31
	16ga (.0590")	#12	36/8	469	704	245	388	157	249	109	173	80	127	61	97	48	73	39	53	27	31
		#12	36/4	235	352	156	235	125	188	104	156	80	127	61	97	48	73	39	53	27	31
	18ga (.0459")	#12	36/8	365	548	243	365	157	249	109	173	80	127	61	97	48	73	39	53	27	31
		#12	36/4	183	274	122	183	97	146	81	122	70	104	61	91	48	73	39	53	27	31
	20ga (.0354")	#12	36/8	282	422	188	282	150	225	109	173	80	127	61	97	48	73	39	53	27	31
		#12	36/4	141	211	94	141	75	113	63	94	54	80	47	70	42	63	38	53	27	31
	22ga (.0294")	#12	36/8	234	351	156	234	125	187	104	156	80	127	61	97	48	73	39	53	27	31
		#12	36/4	117	175	78	117	62	94	52	78	45	67	39	58	35	52	31	47	26	31
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/8	551	874	245	388	157	249	109	173	80	127	61	97	48	73	39	53	27	31
		#12	36/4	355	532	236	355	157	249	109	173	80	127	61	97	48	73	39	53	27	31
	12ga (.1050")	#12	36/8	551	868	245	388	157	249	109	173	80	127	61	97	48	73	39	53	27	31
		#12	36/4	289	434	193	289	154	231	109	173	80	127	61	97	48	73	39	53	27	31
	14ga (.0700")	#12	36/8	386	578	245	386	157	249	109	173	80	127	61	97	48	73	39	53	27	31
		#12	36/4	193	289	129	193	103	154	86	129	73	110	61	96	48	73	39	53	27	31
	16ga (.0590")	#12	36/8	325	487	217	325	157	249	109	173	80	127	61	97	48	73	39	53	27	31
		#12	36/4	162	244	108	162	87	130	72	108	62	93	54	81	48	72	39	53	27	31
	18ga (.0459")	#12	36/8	253	379	169	253	135	202	109	169	80	127	61	97	48	73	39	53	27	31
		#12	36/4	126	190	84	126	67	101	56	84	48	72	42	63	37	56	34	51	27	31
	20ga (.0354")	#12	36/8	195	292	130	195	104	156	87	130	74	111	61	97	48	73	39	53	27	31
		#12	36/4	97	146	65	97	52	78	43	65	37	56	32	49	29	43	26	39	22	31
	22ga (.0294")	#12	36/8	162	243	108	162	86	130	72	108	62	93	54	81	48	72	39	53	27	31
		#12	36/4	81	121	54	81	43	65	36	54	31	46	27	40	24	36	22	32	18	27
Plywood & OSB	15/32"	#14	36/8	209	283	140	189	112	151	93	126	80	108	61	94	48	73	39	53	27	31
		#14	36/4	105	141	70	94	56	75	47	63	40	54	35	47	31	42	28	38	23	31
	19/32"	#14	36/8	265	358	177	239	142	191	109	159	80	127	61	97	48	73	39	53	27	31
		#14	36/4	133	179	88	119	71	96	59	80	51	68	44	60	39	53	35	48	27	31
	23/32"	#14	36/8	321	434	214	289	157	231	109	173	80	127	61	97	48	73	39	53	27	31
		#14	36/4	161	217	107	145	86	116	71	96	61	83	54	72	48	64	39	53	27	31
Lumber (DFL)	1" min	#9	36/8	388	523	245	349	157	249	109	173	80	127	61	97	48	73	39	53	27	31
		#9	36/4	194	262	129	174	103	140	86	116	74	100	61	87	48	73	39	53	27	31
		#14	36/8	530	715	245	388	157	249	109	173	80	127	61	97	48	73	39	53	27	31
		#14	36/4	265	358	177	238	141	191	109	159	80	127	61	97	48	73	39	53	27	31

TABLE 5.6 – Shear and Flexibility (No. 29 gauge Delta Rib III, 36/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	6' - 0"
36/4	29 ga	6"	q_a q_f	303 487	272 437	260 418	251 405	245 394	239 386	235 379	232 373	165 264
			F	22 -1.5R	22.8 -1.4R	23.2 -1.3R	23.5 -1.2R	23.7 -1.1R	23.9 -1R	24 -0.9R	24.1 -0.9R	24.3 -0.8R
		12"	q_a q_f	279 449	221 355	216 348	189 305	190 306	172 276	174 281	160 258	152 245
			F	25.1 -3R	27.1 -3.1R	28.2 -3.1R	29 -3R	29.6 -2.9R	30.1 -2.8R	30.6 -2.7R	30.9 -2.5R	31.5 -2.3R
		18"	q_a q_f	245 395	221 355	188 303	163 262	168 270	150 242	136 218	142 229	121 195
			F	27 -4R	30 -4.5R	31.6 -4.7R	33 -4.7R	34.1 -4.7R	35 -4.6R	35.7 -4.5R	36.4 -4.4R	37.5 -4.1R
		24"	q_a q_f	245 395	186 299	188 303	163 262	143 230	127 204	136 218	124 199	104 167
			F	28.2 -4.7R	31.9 -5.6R	34.1 -5.9R	36 -6.1R	37.5 -6.2R	38.8 -6.2R	39.9 -6.2R	40.9 -6.2R	42.5 -6R
		30"	q_a q_f	245 395	186 299	155 250	163 262	143 230	127 204	114 184	103 165	104 167
			F	29 -5.3R	33.4 -6.4R	36.1 -7R	38.3 -7.4R	40.2 -7.6R	41.9 -7.7R	43.4 -7.8R	44.6 -7.8R	46.8 -7.7R
		36"	q_a q_f	245 395	186 299	155 250	133 214	143 230	127 204	114 184	103 165	85 136
			F	29.7 -5.7R	34.6 -7.1R	37.6 -7.9R	40.2 -8.4R	42.5 -8.8R	44.5 -9R	46.2 -9.2R	47.8 -9.3R	50.5 -9.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 5.7 – Shear and Flexibility (No. 26 gauge Delta Rib III, 36/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	6' - 0"
36/4	26 ga	6"	q_a q_f	385 620	349 562	336 541	326 525	319 513	313 504	308 496	304 490	228 365
			F	18.2 -1.4R	19 -1.2R	19.3 -1.1R	19.6 -1R	19.8 -1R	20 -0.9R	20.1 -0.8R	20.2 -0.8R	20.3 -0.7R
		12"	q_a q_f	355 571	283 456	280 450	246 396	249 401	225 362	230 370	211 340	202 325
			F	21.1 -2.7R	22.9 -2.8R	23.8 -2.8R	24.5 -2.7R	25.1 -2.6R	25.6 -2.5R	26 -2.4R	26.3 -2.3R	26.8 -2.1R
		18"	q_a q_f	311 500	283 456	242 390	210 339	219 352	196 316	178 286	188 302	160 258
			F	22.7 -3.6R	25.4 -4R	26.9 -4.2R	28.1 -4.2R	29.1 -4.2R	29.9 -4.1R	30.6 -4R	31.2 -3.9R	32.2 -3.7R
		24"	q_a q_f	311 500	237 381	242 390	210 339	185 298	165 266	178 286	162 261	137 221
			F	23.8 -4.3R	27.2 -5R	29.2 -5.3R	30.8 -5.5R	32.2 -5.6R	33.3 -5.6R	34.3 -5.6R	35.2 -5.5R	36.7 -5.4R
		30"	q_a q_f	311 500	237 381	198 319	210 339	185 298	165 266	148 239	135 217	137 221
			F	24.6 -4.7R	28.5 -5.8R	30.9 -6.3R	32.9 -6.6R	34.6 -6.8R	36.1 -6.9R	37.4 -7R	38.6 -7R	40.5 -6.9R
		36"	q_a q_f	311 500	237 381	198 319	170 273	185 298	165 266	148 239	135 217	111 179
			F	25.2 -5.1R	29.5 -6.4R	32.3 -7R	34.6 -7.5R	36.6 -7.9R	38.4 -8.1R	40 -8.3R	41.4 -8.3R	43.8 -8.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

Note: Shear Tables 5.6 & 5.7 based on 36/4 attachment pattern. Values acceptable for use (conservative) for 36/8 attachment pattern.

6.0 HR-36®

Figure 6.1 - Basic Dimensions and Panel Attachment (HR-36):

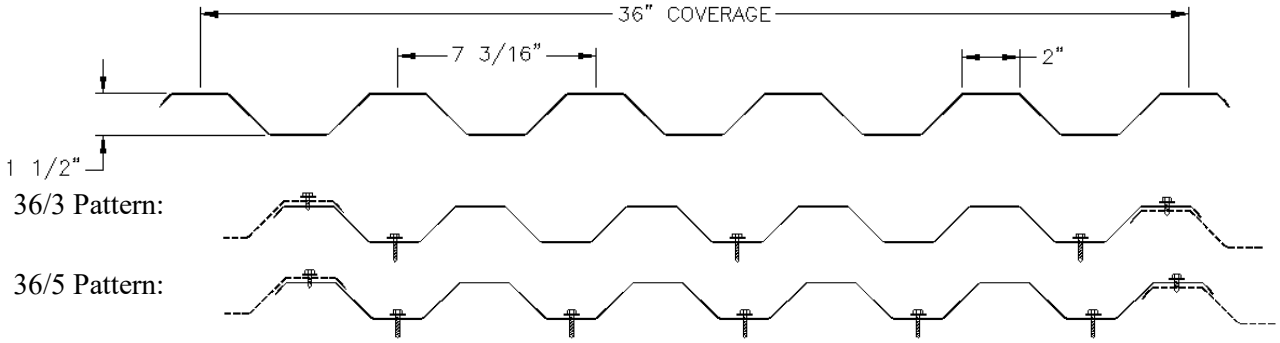


TABLE 6.1 - Section Properties (HR-36):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
26	0.89	0.0173	80	82	0.2618	0.0987	0.81	0.1382	0.1224
24	1.19	0.0232	50	65	0.3510	0.1333	0.81	0.1846	0.1636
22	1.51	0.0294	50	65	0.4448	0.1667	0.81	0.2329	0.2066
20	1.82	0.0354	40	55	0.5356	0.2000	0.81	0.2793	0.2477
18	2.36	0.0459	40	55	0.6942	0.2600	0.82	0.3593	0.3190

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative				
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	$I_d = (2I_e+I_g)/3$	
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
26	0.0983	0.0840	0.63	0.0762	0.0817	1.01	0.0623	0.0889	0.0873
24	0.1782	0.1233	0.71	0.1272	0.1133	0.91	0.1132	0.1267	0.1200
22	0.2702	0.1567	0.72	0.1759	0.1567	0.90	0.1559	0.1600	0.1600
20	0.4012	0.2000	0.77	0.2371	0.2000	0.86	0.2095	0.2000	0.2000
18	0.6179	0.2600	0.80	0.3160	0.2600	0.84	0.2987	0.2600	0.2600

TABLE 6.2 - Inward (Positive) Uniform Allowable Loads (HR-36):

Gauge	Span	Limit Condition	Panel Span (Support Spacing) 2' - 0"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"	12' - 0"
26	Single Span	ASD, W/Ω	456	203	114	73	51	37	29	18	13
		LRFD, ϕW	724	322	181	116	80	59	45	29	20
		L/240	-	-	91	47	27	17	11	6	3
		L/180	-	-	-	62	36	23	15	8	4
		L/120	-	-	-	-	-	34	23	12	7
	Double Span	ASD, W/Ω	301	149	87	57	40	29	22	14	10
		LRFD, ϕW	455	224	132	86	60	44	34	21	15
		L/240	-	-	-	-	-	-	-	14	8
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	351	178	107	70	49	36	28	18	12
		LRFD, ϕW	530	269	161	106	74	55	42	27	19
		L/240	-	-	-	-	-	32	21	11	6
		L/180	-	-	-	-	-	-	-	15	8
		L/120	-	-	-	-	-	-	-	-	-
24	Single Span	ASD, W/Ω	635	282	159	102	71	52	40	25	18
		LRFD, ϕW	1007	448	252	161	112	82	63	40	28
		L/240	-	-	130	66	38	24	16	8	5
		L/180	-	-	-	89	51	32	22	11	6
		L/120	-	-	-	-	-	48	32	17	10
	Double Span	ASD, W/Ω	505	237	136	88	61	45	35	22	16
		LRFD, ϕW	760	358	205	132	92	68	52	33	23
		L/240	-	-	-	-	-	-	-	20	12
		L/180	-	-	-	-	-	-	-	-	15
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	605	290	168	109	76	56	44	27	19
		LRFD, ϕW	911	437	254	165	115	85	66	41	29
		L/240	-	-	-	-	73	46	31	16	9
		L/180	-	-	-	-	-	-	41	21	12
		L/120	-	-	-	-	-	-	-	-	18
22	Single Span	ASD, W/Ω	878	390	219	140	98	72	55	35	24
		LRFD, ϕW	1393	619	348	223	155	114	87	56	39
		L/240	-	388	164	84	49	31	20	10	6
		L/180	-	-	219	112	65	41	27	14	8
		L/120	-	-	-	-	97	61	41	21	12
	Double Span	ASD, W/Ω	715	332	189	122	85	63	48	30	21
		LRFD, ϕW	1077	500	285	183	129	95	72	46	32
		L/240	-	-	-	-	-	-	-	25	15
		L/180	-	-	-	-	-	-	-	-	19
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	866	409	235	152	106	78	60	39	27
		LRFD, ϕW	1305	615	354	229	160	118	90	58	40
		L/240	-	-	-	-	92	58	39	20	11
		L/180	-	-	-	-	-	77	52	26	15
		L/120	-	-	-	-	-	-	-	-	23

TABLE 6.2 (Cont'd) - Inward (Positive) Uniform Allowable Loads (HR-36):

Gauge	Span	Limit Condition	Panel Span (Support Spacing) 2' - 0"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"	12' - 0"
20	Single Span	ASD, W/Ω	947	421	237	151	105	77	59	38	26
		LRFD, ϕW	1502	667	375	240	167	123	94	60	42
		L/240	-	-	205	105	61	38	26	13	8
		L/180	-	-	-	140	81	51	34	17	10
		L/120	-	-	-	-	-	76	51	26	15
	Double Span	ASD, W/Ω	778	360	205	131	92	68	51	33	23
		LRFD, ϕW	1172	541	308	198	138	102	78	49	34
		L/240	-	-	-	-	-	-	-	32	18
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	946	443	254	164	114	84	64	41	29
		LRFD, ϕW	1426	667	382	247	172	127	97	62	43
		L/240	-	-	-	-	-	72	48	25	14
		L/180	-	-	-	-	-	-	-	33	19
		L/120	-	-	-	-	-	-	-	-	-
18	Single Span	ASD, W/Ω	1261	561	315	202	140	103	79	50	35
		LRFD, ϕW	2001	889	500	320	222	163	125	80	56
		L/240	-	-	266	136	79	50	33	17	10
		L/180	-	-	-	182	105	66	44	23	13
		L/120	-	-	-	-	-	99	67	34	20
	Double Span	ASD, W/Ω	1094	508	291	187	130	96	73	47	32
		LRFD, ϕW	1647	765	438	282	196	145	111	71	49
		L/240	-	-	-	-	-	-	-	41	24
		L/180	-	-	-	-	-	-	-	-	32
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	1322	625	360	233	163	120	92	59	40
		LRFD, ϕW	1992	941	542	351	245	181	139	89	61
		L/240	-	-	-	-	149	94	63	32	19
		L/180	-	-	-	-	-	-	84	43	25
		L/120	-	-	-	-	-	-	-	-	37

TABLE 6.3 - Allowable Reactions at Supports (HR-36):

Gauge	Condition	Bearing Length of Webs: ASD (P_n/Ω) *(lbs/ft width)* 1"	1.5"	2"	3"	LRFD (ϕP_n) *(lbs/ft width)* 1"	1.5"	2"	3"
26	End	188	215	239	278	287	330	365	425
	Interior	310	349	382	438	461	520	569	651
24	End	274	312	344	398	419	477	527	609
	Interior	453	507	552	628	674	754	821	934
22	End	428	485	533	614	655	742	815	939
	Interior	711	791	858	970	1058	1176	1276	1443
20	End	485	547	599	687	742	837	917	1052
	Interior	809	895	968	1090	1203	1331	1440	1621
18	End	788	883	964	1098	1205	1351	1474	1681
	Interior	1322	1454	1565	1751	1967	2163	2327	2604

TABLE 6.4 - Outward (Negative) Uniform Allowable Loads (No. 26 gauge HR-36):

HR-36, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/5	296	443	236	355	197	296	148	222	118	177	85	134	62	99	48	75	30	43
		#12	36/3	177	266	142	213	118	177	89	133	71	106	59	89	51	76	44	66	30	43
	12ga (.1050")	#12	36/5	296	443	236	355	197	296	148	222	118	177	85	134	62	99	48	75	30	43
		#12	36/3	177	266	142	213	118	177	89	133	71	106	59	89	51	76	44	66	30	43
	14ga (.0700")	#12	36/5	232	348	186	278	155	232	116	174	93	139	77	116	62	99	48	75	30	43
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/5	196	293	156	235	130	196	98	147	78	117	65	98	56	84	48	73	30	43
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/5	152	228	122	183	101	152	76	114	61	91	51	76	43	65	38	57	30	43
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/5	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/5	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/5	296	443	236	355	197	296	148	222	118	177	85	134	62	99	48	75	30	43
		#12	36/3	177	266	142	213	118	177	89	133	71	106	59	89	51	76	44	66	30	43
	12ga (.1050")	#12	36/5	241	361	193	289	161	241	120	181	96	145	80	120	62	99	48	75	30	43
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/5	161	241	129	193	107	161	80	120	64	96	54	80	46	69	40	60	30	43
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/5	135	203	108	162	90	135	68	102	54	81	45	68	39	58	34	51	27	41
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/5	105	158	84	126	70	105	53	79	42	63	35	53	30	45	26	40	21	32
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/5	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/5	67	101	54	81	45	67	34	51	27	40	22	34	19	29	17	25	13	20
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/5	87	118	70	94	58	79	44	59	35	47	29	39	25	34	22	29	17	24
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/5	111	149	88	119	74	100	55	75	44	60	37	50	32	43	28	37	22	30
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/5	134	181	107	145	89	120	67	90	54	72	45	60	38	52	33	45	27	36
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/5	161	218	129	174	108	145	81	109	65	87	54	73	46	62	40	55	30	43
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/5	221	298	177	238	147	199	110	149	88	119	74	99	62	85	48	75	30	43
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 6.5 - Outward (Negative) Uniform Allowable Loads (No. 24 gauge HR-36):

HR-36, 24ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/5	314	471	251	377	209	314	157	236	126	189	88	140	65	103	50	79	32	50
		#12	36/3	189	283	151	226	126	189	94	141	75	113	63	94	54	81	47	71	32	50
	12ga (.1050")	#12	36/5	314	471	251	377	209	314	157	236	126	189	88	140	65	103	50	79	32	50
		#12	36/3	189	283	151	226	126	189	94	141	75	113	63	94	54	81	47	71	32	50
	14ga (.0700")	#12	36/5	232	348	186	278	155	232	116	174	93	139	77	116	65	99	50	79	32	50
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/5	196	293	156	235	130	196	98	147	78	117	65	98	56	84	49	73	32	50
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/5	152	228	122	183	101	152	76	114	61	91	51	76	43	65	38	57	30	46
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/5	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/5	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/5	310	465	248	372	207	310	155	232	124	186	88	140	65	103	50	79	32	50
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	46	70	32	50
	12ga (.1050")	#12	36/5	241	361	193	289	161	241	120	181	96	145	80	120	65	103	50	79	32	50
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/5	161	241	129	193	107	161	80	120	64	96	54	80	46	69	40	60	32	48
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/5	135	203	108	162	90	135	68	102	54	81	45	68	39	58	34	51	27	41
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/5	105	158	84	126	70	105	53	79	42	63	35	53	30	45	26	40	21	32
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/5	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/5	67	101	54	81	45	67	34	51	27	40	22	34	19	29	17	25	13	20
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/5	87	118	70	94	58	79	44	59	35	47	29	39	25	34	22	29	17	24
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/5	111	149	88	119	74	100	55	75	44	60	37	50	32	43	28	37	22	30
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/5	134	181	107	145	89	120	67	90	54	72	45	60	38	52	33	45	27	36
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/5	161	218	129	174	108	145	81	109	65	87	54	73	46	62	40	55	32	44
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/5	221	298	177	238	147	199	110	149	88	119	74	99	63	85	50	75	32	50
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 6.6 - Outward (Negative) Uniform Allowable Loads (No. 22 gauge HR-36):

HR-36, 22ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/5	398	597	319	478	265	398	199	299	159	239	122	193	90	142	69	109	44	70
		#12	36/3	239	358	191	287	159	239	119	179	96	143	80	119	68	102	60	90	44	70
	12ga (.1050")	#12	36/5	348	522	278	418	232	348	174	261	139	209	116	174	90	142	69	109	44	70
		#12	36/3	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	42	63
	14ga (.0700")	#12	36/5	232	348	186	278	155	232	116	174	93	139	77	116	66	99	58	87	44	70
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/5	196	293	156	235	130	196	98	147	78	117	65	98	56	84	49	73	39	59
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/5	152	228	122	183	101	152	76	114	61	91	51	76	43	65	38	57	30	46
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/5	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/5	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/5	310	465	248	372	207	310	155	232	124	186	103	155	89	133	69	109	44	70
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	46	70	37	56
	12ga (.1050")	#12	36/5	241	361	193	289	161	241	120	181	96	145	80	120	69	103	60	90	44	70
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/5	161	241	129	193	107	161	80	120	64	96	54	80	46	69	40	60	32	48
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/5	135	203	108	162	90	135	68	102	54	81	45	68	39	58	34	51	27	41
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/5	105	158	84	126	70	105	53	79	42	63	35	53	30	45	26	40	21	32
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/5	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/5	67	101	54	81	45	67	34	51	27	40	22	34	19	29	17	25	13	20
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/5	87	118	70	94	58	79	44	59	35	47	29	39	25	34	22	29	17	24
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/5	111	149	88	119	74	100	55	75	44	60	37	50	32	43	28	37	22	30
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/5	134	181	107	145	89	120	67	90	54	72	45	60	38	52	33	45	27	36
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/5	161	218	129	174	108	145	81	109	65	87	54	73	46	62	40	55	32	44
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/5	221	298	177	238	147	199	110	149	88	119	74	99	63	85	55	75	44	60
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 6.7 - Outward (Negative) Uniform Allowable Loads (No. 20 gauge HR-36):

HR-36, 20ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/5	406	608	325	487	270	406	203	304	162	243	131	203	97	153	74	117	47	75
		#12	36/3	243	365	195	292	162	243	122	183	97	146	81	122	70	104	61	91	47	73
	12ga (.1050")	#12	36/5	348	522	278	418	232	348	174	261	139	209	116	174	97	149	74	117	47	75
		#12	36/3	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	42	63
	14ga (.0700")	#12	36/5	232	348	186	278	155	232	116	174	93	139	77	116	66	99	58	87	46	70
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/5	196	293	156	235	130	196	98	147	78	117	65	98	56	84	49	73	39	59
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/5	152	228	122	183	101	152	76	114	61	91	51	76	43	65	38	57	30	46
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/5	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/5	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/5	310	465	248	372	207	310	155	232	124	186	103	155	89	133	74	116	47	75
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	46	70	37	56
	12ga (.1050")	#12	36/5	241	361	193	289	161	241	120	181	96	145	80	120	69	103	60	90	47	72
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/5	161	241	129	193	107	161	80	120	64	96	54	80	46	69	40	60	32	48
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/5	135	203	108	162	90	135	68	102	54	81	45	68	39	58	34	51	27	41
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/5	105	158	84	126	70	105	53	79	42	63	35	53	30	45	26	40	21	32
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/5	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/5	67	101	54	81	45	67	34	51	27	40	22	34	19	29	17	25	13	20
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/5	87	118	70	94	58	79	44	59	35	47	29	39	25	34	22	29	17	24
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/5	111	149	88	119	74	100	55	75	44	60	37	50	32	43	28	37	22	30
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/5	134	181	107	145	89	120	67	90	54	72	45	60	38	52	33	45	27	36
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/5	161	218	129	174	108	145	81	109	65	87	54	73	46	62	40	55	32	44
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/5	221	298	177	238	147	199	110	149	88	119	74	99	63	85	55	75	44	60
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 6.8 - Outward (Negative) Uniform Allowable Loads (No. 18 gauge HR-36):

HR-36, 18ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/5	448	671	358	537	298	448	224	336	179	269	149	224	128	192	99	156	63	100
		#12	36/3	269	403	215	322	179	269	134	201	107	161	90	134	77	115	67	101	54	81
	12ga (.1050")	#12	36/5	348	522	278	418	232	348	174	261	139	209	116	174	99	149	87	131	63	100
		#12	36/3	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	42	63
	14ga (.0700")	#12	36/5	232	348	186	278	155	232	116	174	93	139	77	116	66	99	58	87	46	70
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/5	196	293	156	235	130	196	98	147	78	117	65	98	56	84	49	73	39	59
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/5	152	228	122	183	101	152	76	114	61	91	51	76	43	65	38	57	30	46
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/5	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/5	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/5	310	465	248	372	207	310	155	232	124	186	103	155	89	133	77	116	62	93
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	46	70	37	56
	12ga (.1050")	#12	36/5	241	361	193	289	161	241	120	181	96	145	80	120	69	103	60	90	48	72
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/5	161	241	129	193	107	161	80	120	64	96	54	80	46	69	40	60	32	48
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/5	135	203	108	162	90	135	68	102	54	81	45	68	39	58	34	51	27	41
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/5	105	158	84	126	70	105	53	79	42	63	35	53	30	45	26	40	21	32
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/5	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/5	67	101	54	81	45	67	34	51	27	40	22	34	19	29	17	25	13	20
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/5	87	118	70	94	58	79	44	59	35	47	29	39	25	34	22	29	17	24
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/5	111	149	88	119	74	100	55	75	44	60	37	50	32	43	28	37	22	30
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/5	134	181	107	145	89	120	67	90	54	72	45	60	38	52	33	45	27	36
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/5	161	218	129	174	108	145	81	109	65	87	54	73	46	62	40	55	32	44
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/5	221	298	177	238	147	199	110	149	88	119	74	99	63	85	55	75	44	60
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 6.9 - Shear and Flexibility (No. 26 gauge HR-36, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	26 ga	6"	q_a q_f	286 460	278 448	273 439	265 427	261 420	257 414	255 410	253 407	250 402
			F	20.8 -1.1R	21.1 -1R	21.3 -0.9R	21.6 -0.7R	21.8 -0.6R	21.9 -0.5R	22 -0.5R	22.1 -0.4R	22.1 -0.4R
		12"	q_a q_f	236 379	236 380	211 340	197 317	188 302	181 291	176 284	173 278	167 269
			F	25.6 -2.7R	26.4 -2.6R	27 -2.4R	27.9 -2.2R	28.5 -1.9R	28.9 -1.7R	29.2 -1.6R	29.5 -1.4R	29.8 -1.2R
		18"	q_a q_f	236 379	205 330	180 290	172 277	167 268	144 231	144 232	144 232	132 212
			F	28.9 -4.2R	30.4 -4.2R	31.5 -4.1R	33.1 -3.8R	34.2 -3.5R	35 -3.3R	35.6 -3R	36.1 -2.8R	36.8 -2.5R
		24"	q_a q_f	195 315	205 330	180 290	143 230	143 231	119 191	124 200	109 175	103 165
			F	31.4 -5.4R	33.4 -5.6R	35 -5.6R	37.4 -5.4R	39.1 -5.2R	40.3 -4.9R	41.3 -4.6R	42.1 -4.4R	43.2 -3.9R
		30"	q_a q_f	195 315	165 266	180 290	143 230	113 182	119 191	101 163	109 175	87 140
			F	33.3 -6.5R	35.8 -6.8R	37.9 -7R	41 -7R	43.3 -6.8R	45 -6.5R	46.4 -6.3R	47.5 -6R	49.2 -5.4R
		36"	q_a q_f	195 315	165 266	142 229	143 230	113 182	93 149	101 163	89 143	87 140
			F	34.9 -7.3R	37.8 -7.8R	40.2 -8.1R	44.1 -8.4R	47 -8.3R	49.2 -8.2R	51 -7.9R	52.4 -7.6R	54.6 -7.1R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 6.10 - Shear and Flexibility (No. 26 gauge HR-36, 36/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/5	26 ga	6"	q_a q_f	388 624	370 596	357 575	340 547	329 530	321 517	316 508	312 502	306 492
			F	20.2 -1.3R	20.6 -1.2R	20.8 -1.1R	21.2 -0.9R	21.4 -0.8R	21.6 -0.7R	21.7 -0.6R	21.8 -0.6R	22 -0.5R
		12"	q_a q_f	302 487	298 480	258 416	234 377	219 352	208 336	201 323	195 314	187 301
			F	23.9 -2.8R	24.8 -2.8R	25.6 -2.7R	26.6 -2.5R	27.4 -2.4R	27.9 -2.2R	28.3 -2R	28.7 -1.9R	29.1 -1.6R
		18"	q_a q_f	302 487	254 409	218 350	202 325	192 309	158 255	158 254	158 254	142 229
			F	26.2 -4R	27.7 -4.1R	28.9 -4.2R	30.8 -4.1R	32.1 -4R	33.1 -3.8R	33.9 -3.6R	34.5 -3.4R	35.4 -3.1R
		24"	q_a q_f	247 398	254 409	218 350	164 264	160 258	132 212	135 217	118 190	110 178
			F	27.8 -4.9R	29.8 -5.2R	31.4 -5.4R	34 -5.6R	35.9 -5.6R	37.4 -5.4R	38.6 -5.3R	39.5 -5.1R	41 -4.7R
		30"	q_a q_f	247 398	204 328	218 350	164 264	129 207	132 212	112 181	118 190	95 152
			F	29 -5.6R	31.4 -6.1R	33.3 -6.5R	36.6 -6.9R	39 -7R	41 -7R	42.6 -6.9R	43.9 -6.7R	46 -6.4R
		36"	q_a q_f	247 398	204 328	169 273	164 264	129 207	105 170	112 181	98 158	95 152
			F	29.9 -6.1R	32.6 -6.8R	34.9 -7.3R	38.7 -8R	41.7 -8.3R	44.1 -8.4R	46.1 -8.4R	47.8 -8.3R	50.4 -8R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 6.11 - Shear and Flexibility (No. 24 gauge HR-36, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	24 ga	6"	q_a q_f	315 506	308 496	303 489	297 478	293 471	290 467	288 463	286 460	284 456
			F	16.4 -0.9R	16.6 -0.8R	16.8 -0.8R	17 -0.6R	17.2 -0.5R	17.3 -0.5R	17.4 -0.4R	17.4 -0.4R	17.5 -0.3R
		12"	q_a q_f	261 421	264 425	238 383	224 361	215 346	209 336	204 329	201 323	196 315
			F	20.5 -2.4R	21.2 -2.2R	21.7 -2.1R	22.5 -1.9R	23 -1.7R	23.3 -1.5R	23.6 -1.4R	23.8 -1.2R	24.1 -1.1R
		18"	q_a q_f	261 421	229 369	202 326	196 315	191 308	166 267	167 269	168 270	155 249
			F	23.4 -3.6R	24.6 -3.6R	25.6 -3.5R	27 -3.3R	27.9 -3R	28.6 -2.8R	29.1 -2.6R	29.6 -2.4R	30.2 -2.1R
		24"	q_a q_f	215 347	229 369	202 326	162 261	164 265	141 227	146 235	129 207	122 197
			F	25.5 -4.7R	27.2 -4.8R	28.6 -4.8R	30.7 -4.7R	32.1 -4.5R	33.2 -4.2R	34 -4R	34.7 -3.8R	35.7 -3.4R
		30"	q_a q_f	215 347	183 295	202 326	162 261	133 214	141 227	120 193	129 207	103 166
			F	27.2 -5.6R	29.3 -5.9R	31.1 -6R	33.8 -6R	35.8 -5.9R	37.3 -5.7R	38.4 -5.4R	39.4 -5.2R	40.8 -4.7R
		36"	q_a q_f	215 347	183 295	158 255	162 261	133 214	109 175	120 193	104 168	103 166
			F	28.5 -6.3R	31 -6.8R	33.1 -7R	36.4 -7.2R	38.9 -7.2R	40.9 -7.1R	42.4 -6.8R	43.6 -6.6R	45.6 -6.1R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 6.12 - Shear and Flexibility (No. 24 gauge HR-36, 36/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/5	24 ga	6"	q_a q_f	434 699	418 672	406 653	389 627	379 610	372 599	367 590	363 584	357 574
			F	15.8 -1.1R	16.1 -1R	16.4 -0.9R	16.7 -0.8R	16.9 -0.7R	17 -0.6R	17.1 -0.6R	17.2 -0.5R	17.3 -0.4R
		12"	q_a q_f	338 544	337 543	294 473	269 433	254 408	243 391	235 379	229 369	221 356
			F	19 -2.4R	19.8 -2.4R	20.5 -2.4R	21.4 -2.2R	22 -2R	22.5 -1.9R	22.8 -1.7R	23.1 -1.6R	23.5 -1.4R
		18"	q_a q_f	338 544	285 459	245 395	231 372	223 358	187 302	187 301	188 302	170 273
			F	21 -3.4R	22.3 -3.6R	23.4 -3.6R	24.9 -3.6R	26.1 -3.5R	27 -3.3R	27.6 -3.1R	28.2 -3R	29 -2.7R
		24"	q_a q_f	272 439	285 459	245 395	189 304	188 303	155 250	159 256	139 224	131 210
			F	22.4 -4.2R	24.1 -4.5R	25.5 -4.7R	27.7 -4.8R	29.4 -4.8R	30.7 -4.7R	31.7 -4.6R	32.5 -4.4R	33.8 -4.1R
		30"	q_a q_f	272 439	226 363	245 395	189 304	149 240	155 250	131 211	139 224	111 179
			F	23.4 -4.8R	25.5 -5.3R	27.2 -5.6R	29.9 -5.9R	32.1 -6R	33.8 -6R	35.2 -5.9R	36.3 -5.8R	38.1 -5.5R
		36"	q_a q_f	272 439	226 363	190 307	189 304	149 240	122 197	131 211	115 184	111 179
			F	24.2 -5.3R	26.5 -5.9R	28.5 -6.3R	31.8 -6.9R	34.4 -7.1R	36.4 -7.2R	38.2 -7.2R	39.6 -7.2R	41.9 -6.9R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 6.13 - Shear and Flexibility (No. 22 gauge HR-36, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	22 ga	6"	q_a q_f	404 650	402 648	397 640	391 629	386 622	383 617	381 613	379 610	376 606
			F	13.5 -0.8R	13.8 -0.7R	13.9 -0.7R	14.1 -0.6R	14.3 -0.5R	14.3 -0.4R	14.4 -0.4R	14.5 -0.3R	14.5 -0.3R
		12"	q_a q_f	343 552	348 560	316 508	300 483	289 466	282 454	277 446	273 439	267 429
			F	17.2 -2.1R	17.8 -2R	18.3 -1.9R	19 -1.7R	19.4 -1.5R	19.7 -1.3R	20 -1.2R	20.1 -1.1R	20.4 -0.9R
		18"	q_a q_f	343 552	303 488	269 433	262 422	258 416	225 363	228 366	229 369	212 342
			F	19.7 -3.2R	20.8 -3.2R	21.7 -3.1R	22.9 -2.9R	23.8 -2.7R	24.4 -2.5R	24.9 -2.3R	25.2 -2.2R	25.8 -1.9R
		24"	q_a q_f	281 453	303 488	269 433	217 349	222 357	191 308	199 320	177 286	169 272
			F	21.6 -4.2R	23.2 -4.3R	24.4 -4.3R	26.2 -4.2R	27.5 -4R	28.5 -3.8R	29.2 -3.5R	29.8 -3.3R	30.7 -3R
		30"	q_a q_f	281 453	240 387	269 433	217 349	180 290	191 308	166 268	177 286	143 230
			F	23.1 -5R	25 -5.2R	26.6 -5.3R	29 -5.4R	30.7 -5.2R	32.1 -5R	33.1 -4.8R	34 -4.6R	35.3 -4.2R
		36"	q_a q_f	281 453	240 387	208 335	217 349	180 290	150 241	166 268	144 232	143 230
			F	24.3 -5.6R	26.5 -6R	28.4 -6.3R	31.4 -6.4R	33.6 -6.4R	35.3 -6.3R	36.6 -6.1R	37.7 -5.9R	39.4 -5.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 6.14 - Shear and Flexibility (No. 22 gauge HR-36, 36/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/5	22 ga	6"	q_a q_f	574 923	555 893	541 871	523 841	511 822	503 809	497 800	492 792	486 782
			F	13 -1R	13.3 -0.9R	13.5 -0.8R	13.8 -0.7R	14 -0.6R	14.1 -0.6R	14.2 -0.5R	14.3 -0.5R	14.4 -0.4R
		12"	q_a q_f	447 719	449 723	393 633	364 586	345 555	332 535	323 519	315 508	305 492
			F	15.9 -2.1R	16.6 -2.1R	17.2 -2.1R	18 -2R	18.5 -1.8R	19 -1.7R	19.3 -1.5R	19.5 -1.4R	19.9 -1.3R
		18"	q_a q_f	447 719	379 610	327 527	312 502	302 487	257 414	258 416	259 417	236 379
			F	17.6 -3.1R	18.8 -3.2R	19.7 -3.2R	21.1 -3.2R	22.2 -3.1R	22.9 -2.9R	23.5 -2.8R	24 -2.6R	24.7 -2.4R
		24"	q_a q_f	357 574	379 610	327 527	255 410	256 413	213 344	221 356	192 309	181 291
			F	18.9 -3.7R	20.4 -4R	21.6 -4.2R	23.6 -4.3R	25.1 -4.3R	26.2 -4.2R	27.1 -4R	27.9 -3.9R	29 -3.6R
		30"	q_a q_f	357 574	296 476	327 527	255 410	203 327	213 344	181 292	192 309	153 247
			F	19.8 -4.3R	21.6 -4.7R	23.1 -5R	25.6 -5.3R	27.5 -5.4R	29 -5.4R	30.2 -5.3R	31.2 -5.2R	32.8 -4.9R
		36"	q_a q_f	357 574	296 476	252 405	255 410	203 327	167 269	181 292	157 253	153 247
			F	20.5 -4.7R	22.5 -5.2R	24.3 -5.6R	27.2 -6.1R	29.5 -6.3R	31.4 -6.4R	32.9 -6.4R	34.2 -6.4R	36.2 -6.1R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 6.15 - Shear and Flexibility (No. 20 gauge HR-36, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	20 ga	6"	q_a q_f	411 662	411 662	411 662	408 658	405 651	402 647	400 644	398 641	396 638
			F	11.7 -0.8R	11.9 -0.7R	12 -0.6R	12.2 -0.5R	12.3 -0.4R	12.4 -0.4R	12.5 -0.3R	12.5 -0.3R	12.6 -0.2R
		12"	q_a q_f	359 577	365 587	333 536	318 512	309 497	302 486	297 478	293 471	287 462
			F	15 -1.9R	15.6 -1.8R	16 -1.7R	16.6 -1.5R	17 -1.4R	17.3 -1.2R	17.5 -1.1R	17.7 -1R	17.9 -0.9R
		18"	q_a q_f	359 577	319 513	284 458	279 449	276 444	242 389	245 395	247 398	230 370
			F	17.3 -2.9R	18.3 -2.9R	19.1 -2.9R	20.2 -2.7R	21 -2.5R	21.6 -2.3R	22 -2.1R	22.3 -2R	22.8 -1.7R
		24"	q_a q_f	294 473	319 513	284 458	231 371	237 382	205 330	214 345	192 309	183 295
			F	19.1 -3.8R	20.5 -3.9R	21.6 -3.9R	23.2 -3.8R	24.4 -3.6R	25.3 -3.4R	26 -3.2R	26.5 -3R	27.3 -2.7R
		30"	q_a q_f	294 473	252 406	284 458	231 371	192 309	205 330	180 290	192 309	157 252
			F	20.4 -4.5R	22.2 -4.7R	23.6 -4.9R	25.8 -4.9R	27.4 -4.8R	28.6 -4.6R	29.5 -4.4R	30.3 -4.2R	31.5 -3.8R
		36"	q_a q_f	294 473	252 406	219 352	231 371	192 309	163 262	180 290	158 255	157 252
			F	21.5 -5.1R	23.5 -5.5R	25.2 -5.7R	27.9 -5.9R	29.9 -5.8R	31.5 -5.7R	32.7 -5.5R	33.7 -5.3R	35.3 -4.9R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 6.16 - Shear and Flexibility (No. 20 gauge HR-36, 36/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/5	20 ga	6"	q_a q_f	603 970	585 942	573 922	556 895	545 877	537 865	532 856	528 849	522 840
			F	11.2 -0.9R	11.5 -0.8R	11.7 -0.8R	11.9 -0.7R	12.1 -0.6R	12.2 -0.5R	12.3 -0.5R	12.4 -0.4R	12.5 -0.3R
		12"	q_a q_f	471 758	476 766	419 674	390 627	371 598	359 578	350 563	343 551	333 535
			F	13.8 -2R	14.5 -1.9R	15 -1.9R	15.7 -1.8R	16.2 -1.6R	16.6 -1.5R	16.9 -1.4R	17.1 -1.3R	17.5 -1.1R
		18"	q_a q_f	471 758	401 646	347 559	334 537	325 524	278 447	280 450	281 452	257 413
			F	15.4 -2.8R	16.5 -2.9R	17.3 -2.9R	18.6 -2.9R	19.5 -2.8R	20.2 -2.7R	20.8 -2.5R	21.2 -2.4R	21.9 -2.2R
		24"	q_a q_f	373 601	401 646	347 559	271 436	275 443	232 374	242 389	210 339	198 319
			F	16.6 -3.4R	17.9 -3.7R	19.1 -3.8R	20.9 -3.9R	22.2 -3.9R	23.2 -3.8R	24.1 -3.7R	24.7 -3.6R	25.8 -3.3R
		30"	q_a q_f	373 601	310 500	347 559	271 436	219 352	232 374	198 318	210 339	167 269
			F	17.4 -3.9R	19 -4.3R	20.4 -4.5R	22.7 -4.8R	24.4 -4.9R	25.8 -4.9R	26.9 -4.8R	27.8 -4.7R	29.2 -4.4R
		36"	q_a q_f	373 601	310 500	264 426	271 436	219 352	180 291	198 318	171 276	167 269
			F	18 -4.3R	19.9 -4.8R	21.5 -5.1R	24.1 -5.6R	26.2 -5.8R	27.9 -5.9R	29.3 -5.9R	30.5 -5.8R	32.3 -5.6R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 6.17 - Shear and Flexibility (No. 18 gauge HR-36, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)								
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	18 ga	6"	q_a q_f	447 720	447 720	447 720	447 720	447 720	447 720	447 720	447 720	447 720
			F	9.5 -0.7R	9.7 -0.6R	9.8 -0.5R	10 -0.4R	10.1 -0.4R	10.2 -0.3R	10.2 -0.3R	10.3 -0.3R	10.3 -0.2R
		12"	q_a q_f	423 681	433 697	403 649	392 631	384 618	379 610	375 604	372 599	368 592
			F	12.4 -1.7R	13 -1.6R	13.3 -1.5R	13.9 -1.3R	14.2 -1.2R	14.5 -1.1R	14.7 -1R	14.8 -0.9R	15 -0.8R
		18"	q_a q_f	423 681	384 618	349 561	349 561	349 561	311 501	317 511	321 517	303 488
			F	14.5 -2.6R	15.4 -2.6R	16.1 -2.5R	17.1 -2.3R	17.7 -2.2R	18.2 -2R	18.6 -1.9R	18.9 -1.7R	19.3 -1.5R
		24"	q_a q_f	348 561	384 618	349 561	290 466	303 488	266 428	280 450	253 407	245 394
			F	16 -3.3R	17.2 -3.4R	18.2 -3.4R	19.7 -3.3R	20.7 -3.2R	21.5 -3R	22.1 -2.8R	22.6 -2.7R	23.3 -2.4R
		30"	q_a q_f	348 561	303 487	349 561	290 466	245 394	266 428	235 379	253 407	211 340
			F	17.2 -4R	18.7 -4.2R	20 -4.3R	21.9 -4.3R	23.3 -4.2R	24.4 -4R	25.2 -3.8R	25.9 -3.7R	26.9 -3.3R
		36"	q_a q_f	348 561	303 487	265 427	290 466	245 394	211 339	235 379	211 339	211 340
			F	18.1 -4.5R	19.9 -4.8R	21.4 -5R	23.8 -5.2R	25.6 -5.1R	26.9 -5R	28 -4.9R	28.9 -4.7R	30.3 -4.3R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 6.18 - Shear and Flexibility (No. 18 gauge HR-36, 36/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)								
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/5	18 ga	6"	q_a q_f	718 1155	705 1135	696 1120	684 1101	676 1088	670 1079	666 1073	663 1068	659 1061
			F	9.1 -0.8R	9.4 -0.7R	9.5 -0.7R	9.8 -0.6R	9.9 -0.5R	10 -0.4R	10.1 -0.4R	10.1 -0.4R	10.2 -0.3R
		12"	q_a q_f	572 921	588 946	526 846	499 804	483 777	471 758	463 745	456 735	447 720
			F	11.4 -1.7R	12 -1.7R	12.4 -1.7R	13.1 -1.6R	13.6 -1.4R	13.9 -1.3R	14.1 -1.2R	14.3 -1.1R	14.6 -1R
		18"	q_a q_f	572 921	496 798	434 699	428 689	424 683	366 589	372 599	377 607	349 561
			F	12.8 -2.4R	13.8 -2.5R	14.5 -2.6R	15.6 -2.5R	16.4 -2.5R	17.1 -2.3R	17.5 -2.2R	17.9 -2.1R	18.5 -1.9R
		24"	q_a q_f	447 719	496 798	434 699	344 554	357 575	305 492	321 517	285 459	273 440
			F	13.8 -3R	15 -3.2R	16 -3.3R	17.6 -3.4R	18.8 -3.4R	19.7 -3.3R	20.4 -3.2R	21 -3.1R	21.9 -2.9R
		30"	q_a q_f	447 719	374 603	434 699	344 554	283 455	305 492	266 428	285 459	230 371
			F	14.6 -3.4R	16 -3.7R	17.2 -4R	19.2 -4.2R	20.7 -4.3R	21.9 -4.3R	22.9 -4.2R	23.7 -4.1R	25 -3.9R
		36"	q_a q_f	447 719	374 603	321 516	344 554	283 455	238 383	266 428	233 375	230 371
			F	15.1 -3.8R	16.7 -4.2R	18.1 -4.5R	20.5 -4.9R	22.3 -5.1R	23.8 -5.2R	25 -5.1R	26.1 -5.1R	27.7 -4.9R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

7.0 Reversed HR-36®

Figure 7.1 - Basic Dimensions and Panel Attachment (Reversed HR-36):

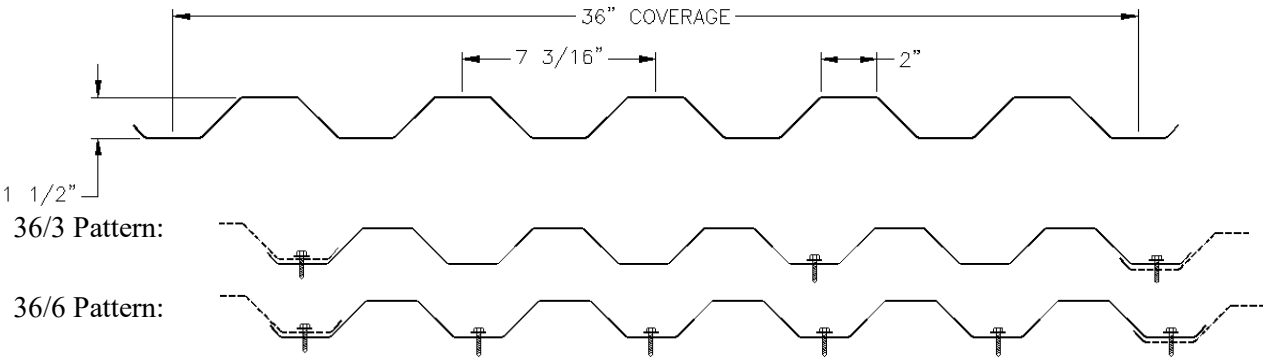


TABLE 7.1 - Section Properties (Reversed HR-36):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
26	0.89	0.0173	80	82	0.2617	0.0983	0.71	0.1224	0.1382
24	1.20	0.0232	50	65	0.3530	0.1333	0.72	0.1635	0.1845
22	1.51	0.0294	50	65	0.4447	0.1667	0.72	0.2064	0.2328
20	1.82	0.0354	40	55	0.5354	0.2000	0.72	0.2477	0.2790
18	2.36	0.0459	40	55	0.6942	0.2600	0.73	0.3190	0.3593

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative				
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	$I_d = (2I_e+I_g)/3$	
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
26	0.0991	0.0817	0.51	0.0627	0.0840	0.89	0.0768	0.0872	0.0888
24	0.1796	0.1133	0.61	0.1135	0.1233	0.84	0.1277	0.1200	0.1267
22	0.2723	0.1567	0.64	0.1564	0.1567	0.79	0.1766	0.1600	0.1600
20	0.4039	0.2000	0.67	0.2102	0.2000	0.77	0.2379	0.2000	0.2000
18	0.6179	0.2600	0.71	0.2987	0.2600	0.74	0.3160	0.2600	0.2600

TABLE 7.2 - Inward (Positive) Uniform Allowable Load Table (Reversed HR-36):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
26	Single Span	ASD, W/Ω	375	240	167	94	60	42	31	23	15
		LRFD, ϕW	596	381	265	149	95	66	49	37	24
		L/240	-	-	-	89	46	26	17	11	6
		L/180	-	-	-	-	-	35	22	15	8
		L/120	-	-	-	-	-	-	-	22	11
	Double Span	ASD, W/Ω	342	239	175	104	68	49	35	27	18
		LRFD, ϕW	517	361	264	157	103	73	54	41	27
		L/240	-	-	-	-	-	-	-	27	14
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	392	279	207	126	84	60	44	34	22
		LRFD, ϕW	593	421	313	190	127	90	67	51	33
		L/240	-	-	-	-	-	50	31	21	11
		L/180	-	-	-	-	-	-	42	28	14
		L/120	-	-	-	-	-	-	-	-	22
24	Single Span	ASD, W/Ω	567	363	252	142	91	63	46	35	23
		LRFD, ϕW	899	575	399	225	144	100	73	56	36
		L/240	-	-	-	123	63	36	23	15	8
		L/180	-	-	-	-	84	49	31	20	10
		L/120	-	-	-	-	-	-	46	31	16
	Double Span	ASD, W/Ω	555	371	265	153	99	69	50	39	25
		LRFD, ϕW	836	559	399	230	149	104	76	59	38
		L/240	-	-	-	-	-	-	-	37	19
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	659	448	322	189	123	86	64	48	31
		LRFD, ϕW	994	675	485	284	185	129	96	73	47
		L/240	-	-	-	-	119	69	43	29	15
		L/180	-	-	-	-	-	-	58	39	20
		L/120	-	-	-	-	-	-	-	-	30
22	Single Span	ASD, W/Ω	780	499	347	195	125	87	64	49	31
		LRFD, ϕW	1238	792	550	310	198	138	101	77	50
		L/240	-	-	-	164	84	49	31	20	10
		L/180	-	-	-	-	112	65	41	27	14
		L/120	-	-	-	-	-	-	61	41	21
	Double Span	ASD, W/Ω	794	526	373	214	138	97	71	54	35
		LRFD, ϕW	1195	791	561	322	208	145	107	81	53
		L/240	-	-	-	-	-	-	-	49	25
		L/180	-	-	-	-	-	-	-	-	34
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	953	639	456	264	171	119	88	67	43
		LRFD, ϕW	1436	963	687	397	258	180	133	102	65
		L/240	-	-	-	-	158	92	58	39	20
		L/180	-	-	-	-	-	-	77	52	26
		L/120	-	-	-	-	-	-	-	-	40

TABLE 7.2 (Cont'd) - Inward (Positive) Uniform Allowable Load Table (Reversed HR-36):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
20	Single Span	ASD, W/Ω	839	537	373	210	134	93	69	52	34
		LRFD, ϕW	1331	852	592	333	213	148	109	83	53
		L/240	-	-	-	205	105	61	38	26	13
		L/180	-	-	-	-	-	81	51	34	17
		L/120	-	-	-	-	-	-	-	51	26
	Double Span	ASD, W/Ω	867	572	404	231	149	104	76	58	38
		LRFD, ϕW	1306	861	608	348	224	156	115	88	57
		L/240	-	-	-	-	-	-	-	-	32
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	1046	698	496	286	185	129	96	73	47
		LRFD, ϕW	1576	1051	747	430	278	194	144	110	71
		L/240	-	-	-	-	-	115	72	48	25
		L/180	-	-	-	-	-	-	-	64	33
		L/120	-	-	-	-	-	-	-	-	-
18	Single Span	ASD, W/Ω	1192	763	530	298	191	132	97	75	48
		LRFD, ϕW	1892	1211	841	473	303	210	154	118	76
		L/240	-	-	-	266	136	79	50	33	17
		L/180	-	-	-	-	182	105	66	44	23
		L/120	-	-	-	-	-	-	-	67	34
	Double Span	ASD, W/Ω	1146	758	536	307	198	138	102	78	50
		LRFD, ϕW	1726	1140	807	461	298	208	153	117	75
		L/240	-	-	-	-	-	-	-	-	41
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	1381	923	658	380	246	172	127	97	62
		LRFD, ϕW	2081	1390	990	571	370	259	191	146	93
		L/240	-	-	-	-	-	149	94	63	32
		L/180	-	-	-	-	-	-	125	84	43
		L/120	-	-	-	-	-	-	-	-	-

TABLE 7.3 - Allowable Reactions at Supports (Reversed HR-36):

Gauge	Condition	Bearing Length of Webs							
		ASD (P_n/Ω) *(lbs/ft width)*				**LRFD (ϕP_n)** *(lbs/ft width)*			
		1"	1.5"	2"	3"	1"	1.5"	2"	3"
26	End	188	215	239	278	287	330	365	425
	Interior	310	349	382	438	461	520	569	651
24	End	274	312	344	398	419	477	527	609
	Interior	453	507	552	628	674	754	821	934
22	End	428	485	533	614	655	742	815	939
	Interior	711	791	858	970	1058	1176	1276	1443
20	End	485	547	599	687	742	837	917	1052
	Interior	809	895	968	1090	1203	1331	1440	1621
18	End	788	883	964	1098	1205	1351	1474	1681
	Interior	1322	1454	1565	1751	1967	2163	2327	2604

Table 7.4 - Outward (Negative) Uniform Allowable Loads (No. 26 gauge Reversed HR-36):

Reversed HR-36, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	355	532	284	426	236	355	156	248	100	159	70	110	51	81	39	62	25	40
		#12	36/3	177	266	142	213	118	177	89	133	71	106	59	89	51	76	39	62	25	40
	12ga (.1050")	#12	36/6	355	532	284	426	236	355	156	248	100	159	70	110	51	81	39	62	25	40
		#12	36/3	177	266	142	213	118	177	89	133	71	106	59	89	51	76	39	62	25	40
	14ga (.0700")	#12	36/6	278	418	223	334	186	278	139	209	100	159	70	110	51	81	39	62	25	40
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	25	40
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	117	176	94	141	70	110	51	81	39	62	25	40
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	91	137	73	110	61	91	51	78	39	62	25	40
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	70	106	56	84	47	70	40	60	35	53	25	40
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	58	88	47	70	39	58	33	50	29	44	23	35
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	355	532	284	426	236	355	156	248	100	159	70	110	51	81	39	62	25	40
		#12	36/3	177	266	142	213	118	177	89	133	71	106	59	89	51	76	39	62	25	40
	12ga (.1050")	#12	36/6	289	434	231	347	193	289	145	217	100	159	70	110	51	81	39	62	25	40
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	25	40
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	96	145	77	116	64	96	51	81	39	62	25	40
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	81	122	65	97	54	81	46	70	39	61	25	40
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	63	95	51	76	42	63	36	54	32	47	25	38
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	40	61	32	49	27	40	23	35	20	30	16	24
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	52	71	42	57	35	47	30	40	26	35	21	28
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/6	133	179	106	143	88	119	66	90	53	72	44	60	38	51	33	45	25	36
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/6	161	217	128	173	107	145	80	108	64	87	54	72	46	62	39	54	25	40
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	97	131	78	105	65	87	51	75	39	62	25	40
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/6	265	358	212	286	177	238	132	179	100	143	70	110	51	81	39	62	25	40
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	25	36

TABLE 7.5 - Outward (Negative) Uniform Allowable Loads (No. 24 gauge Reversed HR-36):

Reversed HR-36, 24ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	377	566	302	452	251	377	177	281	113	180	79	125	58	92	44	70	28	45
		#12	36/3	189	283	151	226	126	189	94	141	75	113	63	94	54	81	44	70	28	45
	12ga (.1050")	#12	36/6	377	566	302	452	251	377	177	281	113	180	79	125	58	92	44	70	28	45
		#12	36/3	189	283	151	226	126	189	94	141	75	113	63	94	54	81	44	70	28	45
	14ga (.0700")	#12	36/6	278	418	223	334	186	278	139	209	111	167	79	125	58	92	44	70	28	45
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	117	176	94	141	78	117	58	92	44	70	28	45
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	91	137	73	110	61	91	52	78	44	68	28	45
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	70	106	56	84	47	70	40	60	35	53	28	42
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	58	88	47	70	39	58	33	50	29	44	23	35
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	372	558	297	446	248	372	177	279	113	180	79	125	58	92	44	70	28	45
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	44	70	28	45
	12ga (.1050")	#12	36/6	289	434	231	347	193	289	145	217	113	174	79	125	58	92	44	70	28	45
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	28	43
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	96	145	77	116	64	96	55	83	44	70	28	45
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	81	122	65	97	54	81	46	70	41	61	28	45
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	63	95	51	76	42	63	36	54	32	47	25	38
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	40	61	32	49	27	40	23	35	20	30	16	24
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	52	71	42	57	35	47	30	40	26	35	21	28
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/6	133	179	106	143	88	119	66	90	53	72	44	60	38	51	33	45	27	36
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/6	161	217	128	173	107	145	80	108	64	87	54	72	46	62	40	54	28	43
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	97	131	78	105	65	87	55	75	44	65	28	45
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/6	265	358	212	286	177	238	132	179	106	143	79	119	58	92	44	70	28	45
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 7.6 - Outward (Negative) Uniform Allowable Loads (No. 22 gauge Reversed HR-36):

Reversed HR-36, 22ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	478	717	382	573	319	478	239	358	156	248	108	172	80	126	61	97	39	62
		#12	36/3	239	358	191	287	159	239	119	179	96	143	80	119	68	102	60	90	39	62
	12ga (.1050")	#12	36/6	418	627	334	501	278	418	209	313	156	248	108	172	80	126	61	97	39	62
		#12	36/3	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	39	62
	14ga (.0700")	#12	36/6	278	418	223	334	186	278	139	209	111	167	93	139	80	119	61	97	39	62
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	117	176	94	141	78	117	67	101	59	88	39	62
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	91	137	73	110	61	91	52	78	46	68	37	55
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	70	106	56	84	47	70	40	60	35	53	28	42
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	58	88	47	70	39	58	33	50	29	44	23	35
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	372	558	297	446	248	372	186	279	149	223	108	172	80	126	61	97	39	62
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	46	70	37	56
	12ga (.1050")	#12	36/6	289	434	231	347	193	289	145	217	116	174	96	145	80	124	61	97	39	62
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	96	145	77	116	64	96	55	83	48	72	39	58
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	81	122	65	97	54	81	46	70	41	61	32	49
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	63	95	51	76	42	63	36	54	32	47	25	38
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	40	61	32	49	27	40	23	35	20	30	16	24
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	52	71	42	57	35	47	30	40	26	35	21	28
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/6	133	179	106	143	88	119	66	90	53	72	44	60	38	51	33	45	27	36
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/6	161	217	128	173	107	145	80	108	64	87	54	72	46	62	40	54	32	43
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	97	131	78	105	65	87	55	75	48	65	39	52
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/6	265	358	212	286	177	238	132	179	106	143	88	119	76	102	61	89	39	62
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 7.7 - Outward (Negative) Uniform Allowable Loads (No. 20 gauge Reversed HR-36):

Reversed HR-36, 20ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	487	730	389	584	325	487	243	365	168	266	117	185	86	136	66	104	42	67
		#12	36/3	243	365	195	292	162	243	122	183	97	146	81	122	70	104	61	91	42	67
	12ga (.1050")	#12	36/6	418	627	334	501	278	418	209	313	167	251	117	185	86	136	66	104	42	67
		#12	36/3	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	42	63
	14ga (.0700")	#12	36/6	278	418	223	334	186	278	139	209	111	167	93	139	80	119	66	104	42	67
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	117	176	94	141	78	117	67	101	59	88	42	67
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	91	137	73	110	61	91	52	78	46	68	37	55
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	70	106	56	84	47	70	40	60	35	53	28	42
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	58	88	47	70	39	58	33	50	29	44	23	35
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	372	558	297	446	248	372	186	279	149	223	117	185	86	136	66	104	42	67
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	46	70	37	56
	12ga (.1050")	#12	36/6	289	434	231	347	193	289	145	217	116	174	96	145	83	124	66	104	42	67
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	96	145	77	116	64	96	55	83	48	72	39	58
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	81	122	65	97	54	81	46	70	41	61	32	49
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	63	95	51	76	42	63	36	54	32	47	25	38
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	40	61	32	49	27	40	23	35	20	30	16	24
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	52	71	42	57	35	47	30	40	26	35	21	28
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/6	133	179	106	143	88	119	66	90	53	72	44	60	38	51	33	45	27	36
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/6	161	217	128	173	107	145	80	108	64	87	54	72	46	62	40	54	32	43
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	97	131	78	105	65	87	55	75	48	65	39	52
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/6	265	358	212	286	177	238	132	179	106	143	88	119	76	102	66	89	42	67
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 7.8 - Outward (Negative) Uniform Allowable Loads (No. 18 gauge Reversed HR-36):

Reversed HR-36, 18ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	537	806	430	644	358	537	269	403	215	322	166	263	122	193	93	148	60	95
		#12	36/3	269	403	215	322	179	269	134	201	107	161	90	134	77	115	67	101	54	81
	12ga (.1050")	#12	36/6	418	627	334	501	278	418	209	313	167	251	139	209	119	179	93	148	60	95
		#12	36/3	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	42	63
	14ga (.0700")	#12	36/6	278	418	223	334	186	278	139	209	111	167	93	139	80	119	70	104	56	84
		#12	36/3	139	209	111	167	93	139	70	104	56	84	46	70	40	60	35	52	28	42
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	117	176	94	141	78	117	67	101	59	88	47	70
		#12	36/3	117	176	94	141	78	117	59	88	47	70	39	59	34	50	29	44	23	35
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	91	137	73	110	61	91	52	78	46	68	37	55
		#12	36/3	91	137	73	110	61	91	46	68	37	55	30	46	26	39	23	34	18	27
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	70	106	56	84	47	70	40	60	35	53	28	42
		#12	36/3	70	106	56	84	47	70	35	53	28	42	23	35	20	30	18	26	14	21
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	58	88	47	70	39	58	33	50	29	44	23	35
		#12	36/3	58	88	47	70	39	58	29	44	23	35	19	29	17	25	15	22	12	18
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	372	558	297	446	248	372	186	279	149	223	124	186	106	159	93	139	60	95
		#12	36/3	186	279	149	223	124	186	93	139	74	112	62	93	53	80	46	70	37	56
	12ga (.1050")	#12	36/6	289	434	231	347	193	289	145	217	116	174	96	145	83	124	72	108	58	87
		#12	36/3	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	96	145	77	116	64	96	55	83	48	72	39	58
		#12	36/3	96	145	77	116	64	96	48	72	39	58	32	48	28	41	24	36	19	29
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	81	122	65	97	54	81	46	70	41	61	32	49
		#12	36/3	81	122	65	97	54	81	41	61	32	49	27	41	23	35	20	30	16	24
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	63	95	51	76	42	63	36	54	32	47	25	38
		#12	36/3	63	95	51	76	42	63	32	47	25	38	21	32	18	27	16	24	13	19
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	49	73	39	58	32	49	28	42	24	37	19	29
		#12	36/3	49	73	39	58	32	49	24	37	19	29	16	24	14	21	12	18	10	15
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	40	61	32	49	27	40	23	35	20	30	16	24
		#12	36/3	40	61	32	49	27	40	20	30	16	24	13	20	12	17	10	15	8	12
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	52	71	42	57	35	47	30	40	26	35	21	28
		#14	36/3	52	71	42	57	35	47	26	35	21	28	17	24	15	20	13	18	10	14
	19/32"	#14	36/6	133	179	106	143	88	119	66	90	53	72	44	60	38	51	33	45	27	36
		#14	36/3	66	90	53	72	44	60	33	45	27	36	22	30	19	26	17	22	13	18
	23/32"	#14	36/6	161	217	128	173	107	145	80	108	64	87	54	72	46	62	40	54	32	43
		#14	36/3	80	108	64	87	54	72	40	54	32	43	27	36	23	31	20	27	16	22
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	97	131	78	105	65	87	55	75	48	65	39	52
		#9	36/3	97	131	78	105	65	87	48	65	39	52	32	44	28	37	24	33	19	26
		#14	36/6	265	358	212	286	177	238	132	179	106	143	88	119	76	102	66	89	53	72
		#14	36/3	132	179	106	143	88	119	66	89	53	72	44	60	38	51	33	45	26	36

TABLE 7.9 - Shear and Flexibility (No. 26 gauge Reversed HR-36, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	26 ga	6"	q_a q_f	240 386	240 386	240 386	240 386	240 386	240 386	240 386	240 386	240 386
			F	8.8 -0.5R	9 -0.5R	9.1 -0.5R	9.2 -0.4R	9.3 -0.3R	9.4 -0.3R	9.4 -0.3R	9.5 -0.2R	9.5 -0.2R
		12"	q_a q_f	240 386	240 386	240 386	221 356	209 336	200 321	193 310	187 302	180 289
			F	10.5 -1.2R	10.9 -1.2R	11.2 -1.2R	11.7 -1.1R	12 -1R	12.2 -0.9R	12.4 -0.8R	12.5 -0.8R	12.7 -0.7R
		18"	q_a q_f	240 386	240 386	215 347	200 322	190 307	166 267	163 263	161 259	146 235
			F	11.6 -1.8R	12.3 -1.8R	12.8 -1.8R	13.6 -1.8R	14.1 -1.7R	14.5 -1.6R	14.8 -1.5R	15.1 -1.4R	15.5 -1.3R
		24"	q_a q_f	240 386	240 386	215 347	176 283	170 274	147 236	146 236	131 210	121 194
			F	12.4 -2.2R	13.2 -2.3R	13.9 -2.4R	15 -2.4R	15.9 -2.4R	16.5 -2.3R	17 -2.2R	17.4 -2.1R	18 -2R
		30"	q_a q_f	240 386	210 338	215 347	176 283	147 237	147 236	127 205	131 210	105 169
			F	13 -2.5R	14 -2.7R	14.9 -2.9R	16.3 -3R	17.3 -3R	18.2 -3R	18.8 -2.9R	19.4 -2.9R	20.2 -2.7R
		36"	q_a q_f	240 386	210 338	185 298	176 283	147 237	123 198	127 205	112 180	105 169
			F	13.4 -2.8R	14.6 -3.1R	15.6 -3.3R	17.3 -3.5R	18.5 -3.6R	19.6 -3.6R	20.4 -3.6R	21.1 -3.6R	22.3 -3.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 7.10 - Shear and Flexibility (No. 26 gauge Reversed HR-36, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/6	26 ga	6"	q_a q_f	483 778	454 731	432 696	402 647	382 615	368 593	358 576	350 564	319 510
			F	8.4 -0.6R	8.6 -0.6R	8.7 -0.6R	9 -0.5R	9.1 -0.4R	9.2 -0.4R	9.3 -0.4R	9.3 -0.3R	9.4 -0.3R
		12"	q_a q_f	407 656	387 623	338 543	297 478	271 436	253 407	240 386	230 370	215 346
			F	9.6 -1.1R	10 -1.2R	10.3 -1.2R	10.9 -1.2R	11.3 -1.2R	11.5 -1.1R	11.8 -1R	11.9 -1R	12.2 -0.9R
		18"	q_a q_f	407 656	346 558	299 482	266 429	245 395	206 332	199 320	194 312	171 275
			F	10.2 -1.5R	10.8 -1.6R	11.4 -1.7R	12.2 -1.8R	12.8 -1.8R	13.3 -1.8R	13.7 -1.8R	14.1 -1.7R	14.6 -1.6R
		24"	q_a q_f	359 579	346 558	299 482	234 376	218 351	180 289	176 284	154 248	139 224
			F	10.6 -1.8R	11.4 -2R	12.1 -2.1R	13.2 -2.3R	14 -2.4R	14.7 -2.4R	15.3 -2.4R	15.8 -2.4R	16.5 -2.3R
		30"	q_a q_f	359 579	301 485	299 482	234 376	186 300	180 289	154 247	154 248	123 199
			F	10.9 -2R	11.8 -2.2R	12.6 -2.4R	13.9 -2.7R	14.9 -2.9R	15.8 -3R	16.6 -3R	17.2 -3R	18.2 -3R
		36"	q_a q_f	359 579	301 485	258 416	234 376	186 300	153 247	154 247	134 216	123 199
			F	11.1 -2.1R	12.1 -2.4R	13 -2.7R	14.5 -3R	15.7 -3.3R	16.7 -3.4R	17.6 -3.6R	18.4 -3.6R	19.7 -3.6R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 7.11 - Shear and Flexibility (No. 24 gauge Reversed HR-36, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	24 ga	6"	q_a q_f	255 410	255 410	255 410	255 410	255 410	255 410	255 410	255 410	255 410
			F	6.9 -0.5R	7 -0.4R	7.1 -0.4R	7.3 -0.3R	7.3 -0.3R	7.4 -0.3R	7.4 -0.2R	7.5 -0.2R	7.5 -0.2R
		12"	q_a q_f	255 410	255 410	255 410	248 399	236 379	227 365	220 354	215 346	207 334
			F	8.4 -1R	8.7 -1R	9 -1R	9.4 -0.9R	9.6 -0.8R	9.8 -0.8R	10 -0.7R	10.1 -0.7R	10.3 -0.6R
		18"	q_a q_f	255 410	255 410	238 383	224 360	215 346	188 303	186 300	185 298	169 272
			F	9.3 -1.5R	9.9 -1.6R	10.3 -1.6R	11 -1.5R	11.5 -1.5R	11.8 -1.4R	12.1 -1.3R	12.3 -1.2R	12.7 -1.1R
		24"	q_a q_f	255 410	255 410	238 383	195 315	191 308	166 267	167 269	150 241	139 224
			F	10 -1.9R	10.7 -2R	11.3 -2.1R	12.3 -2.1R	13 -2.1R	13.5 -2R	14 -1.9R	14.3 -1.9R	14.8 -1.7R
		30"	q_a q_f	255 410	229 369	238 383	195 315	164 265	166 267	146 235	150 241	122 197
			F	10.5 -2.2R	11.4 -2.3R	12.1 -2.5R	13.3 -2.6R	14.3 -2.6R	15 -2.6R	15.6 -2.5R	16 -2.5R	16.8 -2.3R
		36"	q_a q_f	255 410	229 369	202 326	195 315	164 265	141 227	146 235	129 207	122 197
			F	10.9 -2.4R	11.9 -2.6R	12.8 -2.8R	14.2 -3R	15.3 -3.1R	16.2 -3.1R	16.9 -3.1R	17.6 -3.1R	18.5 -2.9R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 7.12 - Shear and Flexibility (No. 24 gauge Reversed HR-36, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/6	24 ga	6"	q_a q_f	534 860	506 815	485 781	456 734	437 704	424 682	414 666	406 654	395 636
			F	6.6 -0.5R	6.7 -0.5R	6.9 -0.5R	7 -0.4R	7.1 -0.4R	7.2 -0.4R	7.3 -0.3R	7.3 -0.3R	7.4 -0.3R
		12"	q_a q_f	447 720	430 692	377 606	336 540	309 497	290 468	277 446	266 429	252 405
			F	7.5 -1R	7.9 -1R	8.2 -1R	8.7 -1R	9 -1R	9.3 -1R	9.5 -0.9R	9.6 -0.9R	9.8 -0.8R
		18"	q_a q_f	447 720	382 616	332 534	299 481	278 448	237 381	230 370	225 362	200 322
			F	8.1 -1.3R	8.6 -1.4R	9.1 -1.5R	9.8 -1.6R	10.4 -1.6R	10.8 -1.6R	11.2 -1.5R	11.4 -1.5R	11.9 -1.4R
		24"	q_a q_f	391 629	382 616	332 534	260 418	246 396	206 332	203 327	177 285	161 260
			F	8.5 -1.5R	9.1 -1.7R	9.7 -1.8R	10.7 -2R	11.4 -2.1R	12 -2.1R	12.5 -2.1R	12.9 -2.1R	13.6 -2R
		30"	q_a q_f	391 629	328 529	332 534	260 418	210 339	206 332	175 282	177 285	142 228
			F	8.7 -1.7R	9.5 -1.9R	10.2 -2.1R	11.3 -2.3R	12.2 -2.5R	13 -2.6R	13.6 -2.6R	14.2 -2.6R	15 -2.6R
		36"	q_a q_f	391 629	328 529	282 453	260 418	210 339	173 279	175 282	153 246	142 228
			F	8.9 -1.8R	9.7 -2.1R	10.5 -2.3R	11.8 -2.6R	12.9 -2.8R	13.8 -3R	14.5 -3.1R	15.2 -3.1R	16.3 -3.1R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 7.13 - Shear and Flexibility (No. 22 gauge Reversed HR-36, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)								
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	22 ga	6"	q_a q_f	323 520	323 520	323 520	323 520	323 520	323 520	323 520	323 520	323 520
			F	5.7 -0.4R	5.8 -0.4R	5.9 -0.3R	6 -0.3R	6.1 -0.3R	6.1 -0.2R	6.2 -0.2R	6.2 -0.2R	6.2 -0.2R
		12"	q_a q_f	323 520	323 520	323 520	323 520	313 504	303 488	295 475	289 466	280 452
			F	7 -0.9R	7.3 -0.9R	7.5 -0.9R	7.9 -0.8R	8.1 -0.8R	8.3 -0.7R	8.4 -0.6R	8.5 -0.6R	8.7 -0.5R
		18"	q_a q_f	323 520	323 520	311 500	296 476	286 460	252 406	251 403	249 402	229 369
			F	7.8 -1.3R	8.3 -1.4R	8.7 -1.4R	9.3 -1.4R	9.8 -1.3R	10.1 -1.2R	10.3 -1.2R	10.5 -1.1R	10.8 -1R
		24"	q_a q_f	323 520	323 520	311 500	257 414	254 409	221 356	224 361	201 324	189 304
			F	8.4 -1.7R	9.1 -1.8R	9.6 -1.8R	10.5 -1.9R	11.1 -1.8R	11.6 -1.8R	12 -1.7R	12.3 -1.6R	12.7 -1.5R
		30"	q_a q_f	323 520	296 477	311 500	257 414	217 350	221 356	195 314	201 324	166 268
			F	8.9 -1.9R	9.7 -2.1R	10.3 -2.2R	11.4 -2.3R	12.2 -2.3R	12.9 -2.3R	13.4 -2.3R	13.8 -2.2R	14.5 -2.1R
		36"	q_a q_f	323 520	296 477	263 423	257 414	217 350	187 301	195 314	174 280	166 268
			F	9.2 -2.1R	10.1 -2.3R	10.9 -2.5R	12.2 -2.7R	13.2 -2.8R	14 -2.8R	14.6 -2.8R	15.2 -2.7R	16 -2.6R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 7.14 - Shear and Flexibility (No. 22 gauge Reversed HR-36, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)								
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/6	22 ga	6"	q_a q_f	699 1125	666 1073	642 1034	609 980	587 945	571 920	560 901	551 887	538 866
			F	5.4 -0.5R	5.5 -0.4R	5.6 -0.4R	5.8 -0.4R	5.9 -0.3R	6 -0.3R	6 -0.3R	6.1 -0.3R	6.1 -0.2R
		12"	q_a q_f	583 939	565 910	497 801	447 720	415 668	392 631	375 605	363 584	344 555
			F	6.3 -0.9R	6.6 -0.9R	6.9 -0.9R	7.3 -0.9R	7.6 -0.9R	7.8 -0.8R	8 -0.8R	8.1 -0.8R	8.3 -0.7R
		18"	q_a q_f	583 939	500 806	435 700	397 639	372 600	318 511	311 500	305 491	274 440
			F	6.8 -1.2R	7.2 -1.3R	7.6 -1.3R	8.3 -1.4R	8.8 -1.4R	9.2 -1.4R	9.5 -1.3R	9.7 -1.3R	10.1 -1.2R
		24"	q_a q_f	505 813	500 806	435 700	342 550	327 527	278 447	276 445	240 387	220 354
			F	7.1 -1.4R	7.7 -1.5R	8.2 -1.6R	9 -1.8R	9.7 -1.8R	10.2 -1.9R	10.7 -1.9R	11 -1.8R	11.6 -1.8R
		30"	q_a q_f	505 813	425 684	435 700	342 550	280 450	278 447	237 381	240 387	192 309
			F	7.3 -1.5R	8 -1.7R	8.6 -1.9R	9.6 -2.1R	10.4 -2.2R	11.1 -2.3R	11.7 -2.3R	12.1 -2.3R	12.9 -2.3R
		36"	q_a q_f	505 813	425 684	365 588	342 550	280 450	232 373	237 381	206 331	192 309
			F	7.5 -1.6R	8.2 -1.8R	8.9 -2R	10 -2.3R	11 -2.5R	11.8 -2.6R	12.5 -2.7R	13.1 -2.8R	14 -2.8R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 7.15 - Shear and Flexibility (No. 20 gauge Reversed HR-36, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	20 ga	6"	q_a q_f	329 530	329 530	329 530	329 530	329 530	329 530	329 530	329 530	329 530
			F	4.9 -0.4R	5 -0.3R	5.1 -0.3R	5.2 -0.3R	5.3 -0.2R	5.3 -0.2R	5.3 -0.2R	5.4 -0.2R	5.4 -0.1R
		12"	q_a q_f	329 530	329 530	329 530	329 530	329 530	321 517	314 505	308 496	300 483
			F	6.1 -0.8R	6.4 -0.8R	6.6 -0.8R	6.9 -0.7R	7.1 -0.7R	7.3 -0.6R	7.4 -0.6R	7.5 -0.5R	7.6 -0.5R
		18"	q_a q_f	329 530	329 530	325 523	311 501	303 487	268 432	267 430	267 430	247 397
			F	6.9 -1.2R	7.3 -1.3R	7.7 -1.3R	8.2 -1.2R	8.6 -1.2R	8.9 -1.1R	9.1 -1.1R	9.3 -1R	9.6 -0.9R
		24"	q_a q_f	329 530	329 530	325 523	270 435	269 433	235 378	239 385	215 347	203 327
			F	7.4 -1.5R	8 -1.6R	8.5 -1.7R	9.3 -1.7R	9.8 -1.7R	10.3 -1.6R	10.6 -1.6R	10.9 -1.5R	11.3 -1.4R
		30"	q_a q_f	329 530	307 495	325 523	270 435	229 369	235 378	208 335	215 347	179 287
			F	7.8 -1.8R	8.5 -1.9R	9.1 -2R	10.1 -2.1R	10.9 -2.1R	11.4 -2.1R	11.9 -2.1R	12.3 -2R	12.9 -1.9R
		36"	q_a q_f	329 530	307 495	273 439	270 435	229 369	198 318	208 335	186 299	179 287
			F	8.1 -1.9R	8.9 -2.1R	9.6 -2.3R	10.8 -2.5R	11.7 -2.5R	12.4 -2.5R	13 -2.5R	13.5 -2.5R	14.3 -2.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 7.16 - Shear and Flexibility (No. 20 gauge Reversed HR-36, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/6	20 ga	6"	q_a q_f	730 1175	699 1126	677 1089	645 1039	624 1005	610 982	599 964	591 951	579 931
			F	4.6 -0.4R	4.8 -0.4R	4.9 -0.4R	5 -0.3R	5.1 -0.3R	5.2 -0.3R	5.2 -0.3R	5.3 -0.2R	5.3 -0.2R
		12"	q_a q_f	608 979	593 955	524 843	475 764	443 713	420 677	404 650	391 630	373 601
			F	5.4 -0.8R	5.7 -0.8R	6 -0.8R	6.3 -0.8R	6.6 -0.8R	6.8 -0.8R	7 -0.7R	7.1 -0.7R	7.3 -0.6R
		18"	q_a q_f	608 979	523 843	456 735	420 676	397 638	339 546	333 536	329 529	296 476
			F	5.9 -1.1R	6.3 -1.1R	6.7 -1.2R	7.3 -1.3R	7.7 -1.3R	8.1 -1.3R	8.3 -1.2R	8.6 -1.2R	8.9 -1.1R
		24"	q_a q_f	523 842	523 843	456 735	359 579	347 559	295 475	295 475	260 418	238 383
			F	6.2 -1.2R	6.7 -1.4R	7.2 -1.5R	7.9 -1.6R	8.5 -1.7R	9 -1.7R	9.4 -1.7R	9.8 -1.7R	10.3 -1.6R
		30"	q_a q_f	523 842	441 710	456 735	359 579	295 474	295 475	254 409	260 418	207 333
			F	6.4 -1.4R	7 -1.5R	7.5 -1.7R	8.5 -1.9R	9.2 -2R	9.8 -2.1R	10.3 -2.1R	10.8 -2.1R	11.5 -2.1R
		36"	q_a q_f	523 842	441 710	379 611	359 579	295 474	246 397	254 409	221 356	207 333
			F	6.5 -1.5R	7.2 -1.7R	7.8 -1.9R	8.9 -2.1R	9.7 -2.3R	10.5 -2.4R	11.1 -2.5R	11.6 -2.5R	12.5 -2.5R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 7.17 - Shear and Flexibility (No. 18 gauge Reversed HR-36, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)								
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/3	18 ga	6"	q_a q_f	358 576	358 576	358 576	358 576	358 576	358 576	358 576	358 576	358 576
			F	4 -0.3R	4.1 -0.3R	4.2 -0.3R	4.3 -0.2R	4.3 -0.2R	4.4 -0.2R	4.4 -0.2R	4.4 -0.1R	4.4 -0.1R
		12"	q_a q_f	358 576	358 576	358 576	358 576	358 576	358 576	358 576	358 576	358 576
			F	5 -0.7R	5.3 -0.7R	5.5 -0.7R	5.8 -0.7R	5.9 -0.6R	6.1 -0.6R	6.2 -0.5R	6.3 -0.5R	6.4 -0.4R
		18"	q_a q_f	358 576	358 576	358 576	358 576	358 576	334 538	336 542	338 544	318 511
			F	5.7 -1.1R	6.1 -1.1R	6.4 -1.1R	6.9 -1.1R	7.2 -1R	7.5 -1R	7.7 -0.9R	7.9 -0.9R	8.1 -0.8R
		24"	q_a q_f	358 576	358 576	358 576	327 526	331 533	294 473	303 487	275 443	263 424
			F	6.2 -1.3R	6.7 -1.4R	7.1 -1.5R	7.8 -1.5R	8.3 -1.5R	8.7 -1.4R	9 -1.4R	9.3 -1.3R	9.6 -1.2R
		30"	q_a q_f	358 576	356 573	358 576	327 526	281 452	294 473	262 423	275 443	231 373
			F	6.5 -1.5R	7.2 -1.7R	7.7 -1.8R	8.6 -1.8R	9.2 -1.9R	9.7 -1.8R	10.1 -1.8R	10.5 -1.8R	11 -1.6R
		36"	q_a q_f	358 576	356 573	319 513	327 526	281 452	244 393	262 423	236 381	231 373
			F	6.8 -1.7R	7.5 -1.9R	8.2 -2R	9.2 -2.2R	10 -2.2R	10.6 -2.2R	11.1 -2.2R	11.6 -2.2R	12.3 -2.1R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 7.18 - Shear and Flexibility (No. 18 gauge Reversed HR-36, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)								
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
36/6	18 ga	6"	q_a q_f	856 1377	832 1340	814 1311	790 1272	774 1246	763 1228	754 1214	748 1204	738 1189
			F	3.8 -0.4R	3.9 -0.4R	4 -0.3R	4.1 -0.3R	4.2 -0.3R	4.2 -0.2R	4.3 -0.2R	4.3 -0.2R	4.4 -0.2R
		12"	q_a q_f	715 1151	712 1146	637 1026	592 953	562 904	541 870	525 845	513 826	496 798
			F	4.5 -0.7R	4.7 -0.7R	4.9 -0.7R	5.3 -0.7R	5.5 -0.7R	5.7 -0.7R	5.8 -0.6R	5.9 -0.6R	6.1 -0.5R
		18"	q_a q_f	715 1151	624 1005	549 885	520 837	502 808	433 697	431 694	430 692	392 631
			F	4.9 -0.9R	5.2 -1R	5.6 -1.1R	6.1 -1.1R	6.5 -1.1R	6.8 -1.1R	7 -1.1R	7.2 -1R	7.5 -1R
		24"	q_a q_f	604 972	624 1005	549 885	438 705	435 700	372 599	379 610	337 542	315 507
			F	5.1 -1.1R	5.6 -1.2R	6 -1.3R	6.7 -1.4R	7.2 -1.5R	7.6 -1.5R	8 -1.5R	8.3 -1.5R	8.7 -1.4R
		30"	q_a q_f	604 972	513 826	549 885	438 705	361 582	372 599	324 521	337 542	273 440
			F	5.3 -1.2R	5.8 -1.4R	6.3 -1.5R	7.1 -1.7R	7.8 -1.8R	8.3 -1.8R	8.8 -1.9R	9.2 -1.9R	9.8 -1.8R
		36"	q_a q_f	604 972	513 826	443 714	438 705	361 582	307 493	324 521	286 461	273 440
			F	5.4 -1.3R	6 -1.5R	6.5 -1.6R	7.5 -1.9R	8.2 -2R	8.9 -2.1R	9.4 -2.2R	9.9 -2.2R	10.7 -2.2R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

8.0 Mini-V-Beam

FIGURE 8.1 - Basic Dimensions and Panel Attachment (Mini-V-Beam):

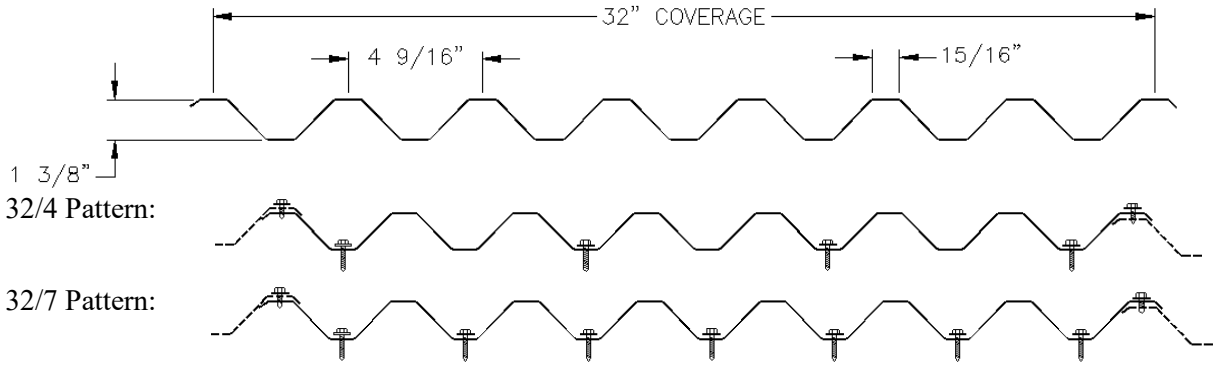


TABLE 8.1 - Section Properties (Mini-V-Beam):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
26	0.92	0.0173	80	82	0.270	0.071	0.72	0.107	0.0990
24	1.23	0.0232	50	65	0.361	0.096	0.73	0.142	0.1322
22	1.56	0.0294	50	65	0.458	0.120	0.73	0.179	0.1668
20	1.88	0.0354	40	55	0.551	0.146	0.73	0.215	0.2000
18	2.43	0.0459	40	55	0.715	0.191	0.74	0.277	0.2573

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative				
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	$I_d = (2I_e+I_g)/3$	
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
26	0.140	0.071	0.69	0.092	0.070	0.75	0.088	0.0708	0.0705
24	0.243	0.096	0.71	0.131	0.096	0.73	0.129	0.0956	0.0956
22	0.350	0.120	0.72	0.166	0.120	0.72	0.167	0.1200	0.1200
20	0.480	0.146	0.73	0.200	0.146	0.73	0.200	0.1463	0.1463
18	0.687	0.191	0.74	0.257	0.191	0.74	0.257	0.1913	0.1913

TABLE 8.2 - Inward (Positive) Uniform Allowable Loads (Mini-V-Beam):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
26	Single Span	ASD, W/Ω	551	353	245	138	88	61	45	34	22
		LRFD, ϕW	875	560	389	219	140	97	71	55	35
		L/240	-	297	172	72	37	21	14	9	5
		L/180	-	-	229	97	49	29	18	12	6
		L/120	-	-	-	-	74	43	27	18	9
	Double Span	ASD, W/Ω	441	297	214	124	81	56	42	32	20
		LRFD, ϕW	664	449	322	187	122	85	63	48	31
		L/240	-	-	-	-	-	52	33	22	11
		L/180	-	-	-	-	-	-	-	29	15
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	517	357	258	153	100	70	51	40	26
		LRFD, ϕW	781	538	389	230	150	106	78	60	39
		L/240	-	-	-	137	70	41	26	17	9
		L/180	-	-	-	-	93	54	34	23	12
		L/120	-	-	-	-	-	-	51	34	18
24	Single Span	ASD, W/Ω	652	417	290	163	104	72	53	41	26
		LRFD, ϕW	1034	662	460	259	165	115	84	65	41
		L/240	-	401	232	98	50	29	18	12	6
		L/180	-	-	-	131	67	39	24	16	8
		L/120	-	-	-	-	100	58	37	24	13
	Double Span	ASD, W/Ω	603	394	277	157	101	71	52	39	25
		LRFD, ϕW	907	593	416	236	152	106	78	59	38
		L/240	-	-	-	-	-	70	44	29	15
		L/180	-	-	-	-	-	-	-	-	20
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	734	484	342	195	126	88	65	49	31
		LRFD, ϕW	1106	729	514	294	189	132	97	74	48
		L/240	-	-	-	185	95	55	34	23	12
		L/180	-	-	-	-	126	73	46	31	16
		L/120	-	-	-	-	-	-	-	46	24
22	Single Span	ASD, W/Ω	831	532	369	208	133	92	68	52	33
		LRFD, ϕW	1318	843	586	329	211	146	108	82	53
		L/240	-	503	291	123	63	36	23	15	8
		L/180	-	-	-	164	84	49	31	20	10
		L/120	-	-	-	-	126	73	46	31	16
	Double Span	ASD, W/Ω	798	517	362	206	131	92	68	51	33
		LRFD, ϕW	1200	779	545	309	198	138	102	77	50
		L/240	-	-	-	-	-	88	55	37	19
		L/180	-	-	-	-	-	-	-	49	25
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	979	640	449	256	164	114	84	64	41
		LRFD, ϕW	1473	962	676	385	247	172	127	96	62
		L/240	-	-	-	232	119	69	43	29	15
		L/180	-	-	-	-	158	92	58	39	20
		L/120	-	-	-	-	-	-	-	58	30

TABLE 8.2 (Cont'd) - Inward (Positive) Uniform Allowable Loads (Mini-V-Beam):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
20	Single Span	ASD, W/Ω	798	511	355	200	128	89	65	50	32
		LRFD, ϕW	1266	810	563	317	203	141	103	79	51
		L/240	-	-	-	150	77	44	28	19	10
		L/180	-	-	-	-	102	59	37	25	13
		L/120	-	-	-	-	-	-	56	37	19
	Double Span	ASD, W/Ω	770	499	348	197	126	88	64	49	32
		LRFD, ϕW	1158	751	524	296	190	132	97	74	48
		L/240	-	-	-	-	-	-	-	45	23
		L/180	-	-	-	-	-	-	-	-	31
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	948	617	433	246	158	109	81	61	39
		LRFD, ϕW	1427	929	651	370	237	165	121	93	59
		L/240	-	-	-	-	145	84	53	35	18
		L/180	-	-	-	-	-	-	70	47	24
		L/120	-	-	-	-	-	-	-	-	36
18	Single Span	ASD, W/Ω	1027	657	456	257	164	114	84	64	41
		LRFD, ϕW	1629	1043	724	407	261	181	133	102	65
		L/240	-	-	-	196	100	58	37	24	13
		L/180	-	-	-	-	134	77	49	33	17
		L/120	-	-	-	-	-	-	73	49	25
	Double Span	ASD, W/Ω	991	642	449	254	163	113	83	64	41
		LRFD, ϕW	1491	965	675	382	245	171	125	96	61
		L/240	-	-	-	-	-	-	-	59	30
		L/180	-	-	-	-	-	-	-	-	40
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	1221	795	557	316	203	142	104	79	51
		LRFD, ϕW	1837	1196	838	476	306	213	157	119	76
		L/240	-	-	-	-	189	110	69	46	24
		L/180	-	-	-	-	-	-	92	62	32
		L/120	-	-	-	-	-	-	-	-	47

TABLE 8.3 - Allowable Reactions at Supports (Mini-V-Beam):

Gauge	Condition	Bearing Length of Webs							
		ASD (P_n/Ω) *(lbs/ft width)*				**LRFD (ϕP_n)** *(lbs/ft width)*			
		1"	1.5"	2"	3"	1"	1.5"	2"	3"
26	End	302	347	384	447	462	530	588	684
	Interior	490	552	604	692	729	821	899	1029
24	End	439	500	552	638	671	765	844	976
	Interior	716	801	872	992	1065	1191	1297	1476
22	End	684	775	852	981	1047	1186	1304	1501
	Interior	1123	1249	1355	1532	1670	1857	2015	2279
20	End	774	873	957	1097	1184	1336	1464	1679
	Interior	1277	1414	1528	1721	1900	2103	2274	2560
18	End	1255	1407	1535	1750	1921	2153	2349	2678
	Interior	2088	2295	2470	2764	3106	3414	3675	4111

TABLE 8.4 - Outward (Negative) Uniform Allowable Loads (No. 26 gauge Mini-V-Beam):

Mini-V-Beam, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	32/7	465	698	372	559	310	465	230	349	147	233	102	162	75	102	57	68	35	35
		#12	32/4	266	399	213	319	177	266	133	199	106	160	89	133	75	102	57	68	35	35
	12ga (.1050")	#12	32/7	465	698	372	559	310	465	230	349	147	233	102	162	75	102	57	68	35	35
		#12	32/4	266	399	213	319	177	266	133	199	106	160	89	133	75	102	57	68	35	35
	14ga (.0700")	#12	32/7	365	548	292	439	244	365	183	274	146	219	102	162	75	102	57	68	35	35
		#12	32/4	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	68	35	35
	16ga (.0590")	#12	32/7	308	462	246	370	205	308	154	231	123	185	102	154	75	102	57	68	35	35
		#12	32/4	176	264	141	211	117	176	88	132	70	106	59	88	50	75	44	66	35	35
	18ga (.0459")	#12	32/7	240	359	192	288	160	240	120	180	96	144	80	120	68	102	57	68	35	35
		#12	32/4	137	205	110	164	91	137	68	103	55	82	46	68	39	59	34	51	27	35
	20ga (.0354")	#12	32/7	185	277	148	222	123	185	92	139	74	111	62	92	53	79	46	68	35	35
		#12	32/4	106	158	84	127	70	106	53	79	42	63	35	53	30	45	26	40	21	32
	22ga (.0294")	#12	32/7	154	230	123	184	102	154	77	115	61	92	51	77	44	66	38	58	31	35
		#12	32/4	88	132	70	105	58	88	44	66	35	53	29	44	25	38	22	33	18	26
Steel (Gr 33 min.)	≥10ga (.1350")	#12	32/7	465	698	372	559	310	465	230	349	147	233	102	162	75	102	57	68	35	35
		#12	32/4	266	399	213	319	177	266	133	199	106	160	89	133	75	102	57	68	35	35
	12ga (.1050")	#12	32/7	380	569	304	455	253	380	190	285	147	228	102	162	75	102	57	68	35	35
		#12	32/4	217	325	174	260	145	217	108	163	87	130	72	108	62	93	54	68	35	35
	14ga (.0700")	#12	32/7	253	380	202	304	169	253	127	190	101	152	84	127	72	102	57	68	35	35
		#12	32/4	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	35
	16ga (.0590")	#12	32/7	213	320	171	256	142	213	107	160	85	128	71	107	61	91	53	68	35	35
		#12	32/4	122	183	97	146	81	122	61	91	49	73	41	61	35	52	30	46	24	35
	18ga (.0459")	#12	32/7	166	249	133	199	111	166	83	124	66	100	55	83	47	71	41	62	33	35
		#12	32/4	95	142	76	114	63	95	47	71	38	57	32	47	27	41	24	36	19	28
	20ga (.0354")	#12	32/7	128	192	102	154	85	128	64	96	51	77	43	64	37	55	32	48	26	35
		#12	32/4	73	110	58	88	49	73	37	55	29	44	24	37	21	31	18	27	15	22
	22ga (.0294")	#12	32/7	106	159	85	128	71	106	53	80	43	64	35	53	30	46	27	40	21	32
		#12	32/4	61	91	49	73	40	61	30	46	24	36	20	30	17	26	15	23	12	18
Plywood & OSB	15/32"	#14	32/7	137	186	110	148	92	124	69	93	55	74	46	62	39	53	34	46	27	35
		#14	32/4	79	106	63	85	52	71	39	53	31	42	26	35	22	30	20	27	16	21
	19/32"	#14	32/7	174	235	139	188	116	157	87	118	70	94	58	78	50	67	44	59	35	35
		#14	32/4	100	134	80	107	66	90	50	67	40	54	33	45	28	38	25	34	20	27
	23/32"	#14	32/7	211	285	169	228	141	190	105	142	84	114	70	95	60	81	53	68	35	35
		#14	32/4	120	163	96	130	80	108	60	81	48	65	40	54	34	46	30	41	24	33
Lumber (DFL)	1" min	#9	32/7	254	343	203	275	170	229	127	172	102	137	85	114	73	98	57	68	35	35
		#9	32/4	145	196	116	157	97	131	73	98	58	78	48	65	42	56	36	49	29	35
		#14	32/7	348	469	278	376	232	313	174	235	139	188	102	156	75	102	57	68	35	35
		#14	32/4	199	268	159	215	132	179	99	134	79	107	66	89	57	77	50	67	35	35

TABLE 8.5 - Outward (Negative) Uniform Allowable Loads (No. 24 gauge Mini-V-Beam):

Mini-V-Beam, 24ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	32/7	495	742	396	594	330	495	204	323	130	207	91	144	67	106	51	81	33	47
		#12	32/4	283	424	226	339	189	283	141	212	113	170	91	141	67	106	51	81	33	47
	12ga (.1050")	#12	32/7	495	742	396	594	330	495	204	323	130	207	91	144	67	106	51	81	33	47
		#12	32/4	283	424	226	339	189	283	141	212	113	170	91	141	67	106	51	81	33	47
	14ga (.0700")	#12	32/7	365	548	292	439	244	365	183	274	130	207	91	144	67	106	51	81	33	47
		#12	32/4	209	313	167	251	139	209	104	157	84	125	70	104	60	90	51	78	33	47
	16ga (.0590")	#12	32/7	308	462	246	370	205	308	154	231	123	185	91	144	67	106	51	81	33	47
		#12	32/4	176	264	141	211	117	176	88	132	70	106	59	88	50	75	44	66	33	47
	18ga (.0459")	#12	32/7	240	359	192	288	160	240	120	180	96	144	80	120	67	103	51	81	33	47
		#12	32/4	137	205	110	164	91	137	68	103	55	82	46	68	39	59	34	51	27	41
	20ga (.0354")	#12	32/7	185	277	148	222	123	185	92	139	74	111	62	92	53	79	46	69	33	47
		#12	32/4	106	158	84	127	70	106	53	79	42	63	35	53	30	45	26	40	21	32
	22ga (.0294")	#12	32/7	154	230	123	184	102	154	77	115	61	92	51	77	44	66	38	58	31	46
		#12	32/4	88	132	70	105	58	88	44	66	35	53	29	44	25	38	22	33	18	26
Steel (Gr 33 min.)	≥10ga (.1350")	#12	32/7	488	732	390	586	325	488	204	323	130	207	91	144	67	106	51	81	33	47
		#12	32/4	279	418	223	335	186	279	139	209	112	167	91	139	67	106	51	81	33	47
	12ga (.1050")	#12	32/7	380	569	304	455	253	380	190	285	130	207	91	144	67	106	51	81	33	47
		#12	32/4	217	325	174	260	145	217	108	163	87	130	72	108	62	93	51	81	33	47
	14ga (.0700")	#12	32/7	253	380	202	304	169	253	127	190	101	152	84	127	67	106	51	81	33	47
		#12	32/4	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	16ga (.0590")	#12	32/7	213	320	171	256	142	213	107	160	85	128	71	107	61	91	51	80	33	47
		#12	32/4	122	183	97	146	81	122	61	91	49	73	41	61	35	52	30	46	24	37
	18ga (.0459")	#12	32/7	166	249	133	199	111	166	83	124	66	100	55	83	47	71	41	62	33	47
		#12	32/4	95	142	76	114	63	95	47	71	38	57	32	47	27	41	24	36	19	28
	20ga (.0354")	#12	32/7	128	192	102	154	85	128	64	96	51	77	43	64	37	55	32	48	26	38
		#12	32/4	73	110	58	88	49	73	37	55	29	44	24	37	21	31	18	27	15	22
	22ga (.0294")	#12	32/7	106	159	85	128	71	106	53	80	43	64	35	53	30	46	27	40	21	32
		#12	32/4	61	91	49	73	40	61	30	46	24	36	20	30	17	26	15	23	12	18
Plywood & OSB	15/32"	#14	32/7	137	186	110	148	92	124	69	93	55	74	46	62	39	53	34	46	27	37
		#14	32/4	79	106	63	85	52	71	39	53	31	42	26	35	22	30	20	27	16	21
	19/32"	#14	32/7	174	235	139	188	116	157	87	118	70	94	58	78	50	67	44	59	33	47
		#14	32/4	100	134	80	107	66	90	50	67	40	54	33	45	28	38	25	34	20	27
	23/32"	#14	32/7	211	285	169	228	141	190	105	142	84	114	70	95	60	81	51	71	33	47
		#14	32/4	120	163	96	130	80	108	60	81	48	65	40	54	34	46	30	41	24	33
Lumber (DFL)	1" min	#9	32/7	254	343	203	275	170	229	127	172	102	137	85	114	67	98	51	81	33	47
		#9	32/4	145	196	116	157	97	131	73	98	58	78	48	65	42	56	36	49	29	39
		#14	32/7	348	469	278	376	232	313	174	235	130	188	91	144	67	106	51	81	33	47
		#14	32/4	199	268	159	215	132	179	99	134	79	107	66	89	57	77	50	67	33	47

TABLE 8.6 - Outward (Negative) Uniform Allowable Loads (No. 22 gauge Mini-V-Beam):

Mini-V-Beam, 22ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	32/7	627	941	502	752	418	627	260	412	166	264	115	183	85	134	65	103	42	59
		#12	32/4	358	537	287	430	239	358	179	269	143	215	115	179	85	134	65	103	42	59
	12ga (.1050")	#12	32/7	548	822	439	658	365	548	260	411	166	264	115	183	85	134	65	103	42	59
		#12	32/4	313	470	251	376	209	313	157	235	125	188	104	157	85	134	65	103	42	59
	14ga (.0700")	#12	32/7	365	548	292	439	244	365	183	274	146	219	115	183	85	134	65	103	42	59
		#12	32/4	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	42	59
	16ga (.0590")	#12	32/7	308	462	246	370	205	308	154	231	123	185	103	154	85	132	65	103	42	59
		#12	32/4	176	264	141	211	117	176	88	132	70	106	59	88	50	75	44	66	35	53
	18ga (.0459")	#12	32/7	240	359	192	288	160	240	120	180	96	144	80	120	68	103	60	90	42	59
		#12	32/4	137	205	110	164	91	137	68	103	55	82	46	68	39	59	34	51	27	41
	20ga (.0354")	#12	32/7	185	277	148	222	123	185	92	139	74	111	62	92	53	79	46	69	37	55
		#12	32/4	106	158	84	127	70	106	53	79	42	63	35	53	30	45	26	40	21	32
	22ga (.0294")	#12	32/7	154	230	123	184	102	154	77	115	61	92	51	77	44	66	38	58	31	46
		#12	32/4	88	132	70	105	58	88	44	66	35	53	29	44	25	38	22	33	18	26
Steel (Gr 33 min.)	≥10ga (.1350")	#12	32/7	488	732	390	586	325	488	244	366	166	264	115	183	85	134	65	103	42	59
		#12	32/4	279	418	223	335	186	279	139	209	112	167	93	139	80	120	65	103	42	59
	12ga (.1050")	#12	32/7	380	569	304	455	253	380	190	285	152	228	115	183	85	134	65	103	42	59
		#12	32/4	217	325	174	260	145	217	108	163	87	130	72	108	62	93	54	81	42	59
	14ga (.0700")	#12	32/7	253	380	202	304	169	253	127	190	101	152	84	127	72	108	63	95	42	59
		#12	32/4	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	16ga (.0590")	#12	32/7	213	320	171	256	142	213	107	160	85	128	71	107	61	91	53	80	42	59
		#12	32/4	122	183	97	146	81	122	61	91	49	73	41	61	35	52	30	46	24	37
	18ga (.0459")	#12	32/7	166	249	133	199	111	166	83	124	66	100	55	83	47	71	41	62	33	50
		#12	32/4	95	142	76	114	63	95	47	71	38	57	32	47	27	41	24	36	19	28
	20ga (.0354")	#12	32/7	128	192	102	154	85	128	64	96	51	77	43	64	37	55	32	48	26	38
		#12	32/4	73	110	58	88	49	73	37	55	29	44	24	37	21	31	18	27	15	22
	22ga (.0294")	#12	32/7	106	159	85	128	71	106	53	80	43	64	35	53	30	46	27	40	21	32
		#12	32/4	61	91	49	73	40	61	30	46	24	36	20	30	17	26	15	23	12	18
Plywood & OSB	15/32"	#14	32/7	137	186	110	148	92	124	69	93	55	74	46	62	39	53	34	46	27	37
		#14	32/4	79	106	63	85	52	71	39	53	31	42	26	35	22	30	20	27	16	21
	19/32"	#14	32/7	174	235	139	188	116	157	87	118	70	94	58	78	50	67	44	59	35	47
		#14	32/4	100	134	80	107	66	90	50	67	40	54	33	45	28	38	25	34	20	27
	23/32"	#14	32/7	211	285	169	228	141	190	105	142	84	114	70	95	60	81	53	71	42	57
		#14	32/4	120	163	96	130	80	108	60	81	48	65	40	54	34	46	30	41	24	33
Lumber (DFL)	1" min	#9	32/7	254	343	203	275	170	229	127	172	102	137	85	114	73	98	64	86	42	59
		#9	32/4	145	196	116	157	97	131	73	98	58	78	48	65	42	56	36	49	29	39
		#14	32/7	348	469	278	376	232	313	174	235	139	188	115	156	85	134	65	103	42	59
		#14	32/4	199	268	159	215	132	179	99	134	79	107	66	89	57	77	50	67	40	54

TABLE 8.7 - Outward (Negative) Uniform Allowable Loads (No. 20 gauge Mini-V-Beam):

Mini-V-Beam, 20ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	32/7	639	958	511	767	426	639	249	396	160	253	111	176	81	129	62	99	40	63
		#12	32/4	365	548	292	438	243	365	183	274	146	219	111	176	81	129	62	99	40	63
	12ga (.1050")	#12	32/7	548	822	439	658	365	548	249	396	160	253	111	176	81	129	62	99	40	63
		#12	32/4	313	470	251	376	209	313	157	235	125	188	104	157	81	129	62	99	40	63
	14ga (.0700")	#12	32/7	365	548	292	439	244	365	183	274	146	219	111	176	81	129	62	99	40	63
		#12	32/4	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	40	63
	16ga (.0590")	#12	32/7	308	462	246	370	205	308	154	231	123	185	103	154	81	129	62	99	40	63
		#12	32/4	176	264	141	211	117	176	88	132	70	106	59	88	50	75	44	66	35	53
	18ga (.0459")	#12	32/7	240	359	192	288	160	240	120	180	96	144	80	120	68	103	60	90	40	63
		#12	32/4	137	205	110	164	91	137	68	103	55	82	46	68	39	59	34	51	27	41
	20ga (.0354")	#12	32/7	185	277	148	222	123	185	92	139	74	111	62	92	53	79	46	69	37	55
		#12	32/4	106	158	84	127	70	106	53	79	42	63	35	53	30	45	26	40	21	32
	22ga (.0294")	#12	32/7	154	230	123	184	102	154	77	115	61	92	51	77	44	66	38	58	31	46
		#12	32/4	88	132	70	105	58	88	44	66	35	53	29	44	25	38	22	33	18	26
Steel (Gr 33 min.)	≥10ga (.1350")	#12	32/7	488	732	390	586	325	488	244	366	160	253	111	176	81	129	62	99	40	63
		#12	32/4	279	418	223	335	186	279	139	209	112	167	93	139	80	120	62	99	40	63
	12ga (.1050")	#12	32/7	380	569	304	455	253	380	190	285	152	228	111	176	81	129	62	99	40	63
		#12	32/4	217	325	174	260	145	217	108	163	87	130	72	108	62	93	54	81	40	63
	14ga (.0700")	#12	32/7	253	380	202	304	169	253	127	190	101	152	84	127	72	108	62	95	40	63
		#12	32/4	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	16ga (.0590")	#12	32/7	213	320	171	256	142	213	107	160	85	128	71	107	61	91	53	80	40	63
		#12	32/4	122	183	97	146	81	122	61	91	49	73	41	61	35	52	30	46	24	37
	18ga (.0459")	#12	32/7	166	249	133	199	111	166	83	124	66	100	55	83	47	71	41	62	33	50
		#12	32/4	95	142	76	114	63	95	47	71	38	57	32	47	27	41	24	36	19	28
	20ga (.0354")	#12	32/7	128	192	102	154	85	128	64	96	51	77	43	64	37	55	32	48	26	38
		#12	32/4	73	110	58	88	49	73	37	55	29	44	24	37	21	31	18	27	15	22
	22ga (.0294")	#12	32/7	106	159	85	128	71	106	53	80	43	64	35	53	30	46	27	40	21	32
		#12	32/4	61	91	49	73	40	61	30	46	24	36	20	30	17	26	15	23	12	18
Plywood & OSB	15/32"	#14	32/7	137	186	110	148	92	124	69	93	55	74	46	62	39	53	34	46	27	37
		#14	32/4	79	106	63	85	52	71	39	53	31	42	26	35	22	30	20	27	16	21
	19/32"	#14	32/7	174	235	139	188	116	157	87	118	70	94	58	78	50	67	44	59	35	47
		#14	32/4	100	134	80	107	66	90	50	67	40	54	33	45	28	38	25	34	20	27
	23/32"	#14	32/7	211	285	169	228	141	190	105	142	84	114	70	95	60	81	53	71	40	57
		#14	32/4	120	163	96	130	80	108	60	81	48	65	40	54	34	46	30	41	24	33
Lumber (DFL)	1" min	#9	32/7	254	343	203	275	170	229	127	172	102	137	85	114	73	98	62	86	40	63
		#9	32/4	145	196	116	157	97	131	73	98	58	78	48	65	42	56	36	49	29	39
		#14	32/7	348	469	278	376	232	313	174	235	139	188	111	156	81	129	62	99	40	63
		#14	32/4	199	268	159	215	132	179	99	134	79	107	66	89	57	77	50	67	40	54

TABLE 8.8 - Outward (Negative) Uniform Allowable Loads (No. 18 gauge Mini-V-Beam):

Mini-V-Beam, 18ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"		10' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	32/7	705	1057	564	846	470	705	321	509	205	326	143	226	105	166	80	127	51	81
		#12	32/4	403	604	322	483	269	403	201	302	161	242	134	201	105	166	80	127	51	81
	12ga (.1050")	#12	32/7	548	822	439	658	365	548	274	411	205	326	143	226	105	166	80	127	51	81
		#12	32/4	313	470	251	376	209	313	157	235	125	188	104	157	90	134	78	117	51	81
	14ga (.0700")	#12	32/7	365	548	292	439	244	365	183	274	146	219	122	183	104	157	80	127	51	81
		#12	32/4	209	313	167	251	139	209	104	157	84	125	70	104	60	90	52	78	42	63
	16ga (.0590")	#12	32/7	308	462	246	370	205	308	154	231	123	185	103	154	88	132	77	116	51	81
		#12	32/4	176	264	141	211	117	176	88	132	70	106	59	88	50	75	44	66	35	53
	18ga (.0459")	#12	32/7	240	359	192	288	160	240	120	180	96	144	80	120	68	103	60	90	48	72
		#12	32/4	137	205	110	164	91	137	68	103	55	82	46	68	39	59	34	51	27	41
	20ga (.0354")	#12	32/7	185	277	148	222	123	185	92	139	74	111	62	92	53	79	46	69	37	55
		#12	32/4	106	158	84	127	70	106	53	79	42	63	35	53	30	45	26	40	21	32
	22ga (.0294")	#12	32/7	154	230	123	184	102	154	77	115	61	92	51	77	44	66	38	58	31	46
		#12	32/4	88	132	70	105	58	88	44	66	35	53	29	44	25	38	22	33	18	26
Steel (Gr 33 min.)	≥10ga (.1350")	#12	32/7	488	732	390	586	325	488	244	366	195	293	143	226	105	166	80	127	51	81
		#12	32/4	279	418	223	335	186	279	139	209	112	167	93	139	80	120	70	105	51	81
	12ga (.1050")	#12	32/7	380	569	304	455	253	380	190	285	152	228	127	190	105	163	80	127	51	81
		#12	32/4	217	325	174	260	145	217	108	163	87	130	72	108	62	93	54	81	43	65
	14ga (.0700")	#12	32/7	253	380	202	304	169	253	127	190	101	152	84	127	72	108	63	95	51	76
		#12	32/4	145	217	116	174	96	145	72	108	58	87	48	72	41	62	36	54	29	43
	16ga (.0590")	#12	32/7	213	320	171	256	142	213	107	160	85	128	71	107	61	91	53	80	43	64
		#12	32/4	122	183	97	146	81	122	61	91	49	73	41	61	35	52	30	46	24	37
	18ga (.0459")	#12	32/7	166	249	133	199	111	166	83	124	66	100	55	83	47	71	41	62	33	50
		#12	32/4	95	142	76	114	63	95	47	71	38	57	32	47	27	41	24	36	19	28
	20ga (.0354")	#12	32/7	128	192	102	154	85	128	64	96	51	77	43	64	37	55	32	48	26	38
		#12	32/4	73	110	58	88	49	73	37	55	29	44	24	37	21	31	18	27	15	22
	22ga (.0294")	#12	32/7	106	159	85	128	71	106	53	80	43	64	35	53	30	46	27	40	21	32
		#12	32/4	61	91	49	73	40	61	30	46	24	36	20	30	17	26	15	23	12	18
Plywood & OSB	15/32"	#14	32/7	137	186	110	148	92	124	69	93	55	74	46	62	39	53	34	46	27	37
		#14	32/4	79	106	63	85	52	71	39	53	31	42	26	35	22	30	20	27	16	21
	19/32"	#14	32/7	174	235	139	188	116	157	87	118	70	94	58	78	50	67	44	59	35	47
		#14	32/4	100	134	80	107	66	90	50	67	40	54	33	45	28	38	25	34	20	27
	23/32"	#14	32/7	211	285	169	228	141	190	105	142	84	114	70	95	60	81	53	71	42	57
		#14	32/4	120	163	96	130	80	108	60	81	48	65	40	54	34	46	30	41	24	33
Lumber (DFL)	1" min	#9	32/7	254	343	203	275	170	229	127	172	102	137	85	114	73	98	64	86	51	69
		#9	32/4	145	196	116	157	97	131	73	98	58	78	48	65	42	56	36	49	29	39
		#14	32/7	348	469	278	376	232	313	174	235	139	188	116	156	99	134	80	117	51	81
		#14	32/4	199	268	159	215	132	179	99	134	79	107	66	89	57	77	50	67	40	54

TABLE 8.9 - Shear and Flexibility (No. 26 gauge Mini-V-Beam, 32/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
32/4	26 ga	6"	q_a q_f	371 598	356 572	344 554	329 529	319 513	312 502	307 493	303 487	245 393
			F	22 -1.4R	22.4 -1.3R	22.7 -1.2R	23.1 -1R	23.4 -0.9R	23.6 -0.8R	23.7 -0.7R	23.8 -0.6R	23.9 -0.5R
		12"	q_a q_f	296 476	291 469	254 409	231 372	217 349	206 332	199 320	193 311	185 298
			F	26.3 -3.1R	27.4 -3.1R	28.2 -3R	29.4 -2.8R	30.2 -2.6R	30.8 -2.4R	31.2 -2.2R	31.6 -2R	32.1 -1.8R
		18"	q_a q_f	296 476	250 403	216 348	201 323	191 308	160 258	159 255	159 255	143 230
			F	29.1 -4.5R	30.8 -4.7R	32.1 -4.7R	34.2 -4.6R	35.6 -4.4R	36.7 -4.2R	37.6 -4R	38.3 -3.8R	39.3 -3.4R
		24"	q_a q_f	244 394	250 403	216 348	166 268	163 262	134 215	136 219	119 192	111 179
			F	31 -5.6R	33.2 -6R	35.1 -6.2R	37.9 -6.3R	40.1 -6.2R	41.7 -6.1R	43 -5.9R	44.1 -5.6R	45.7 -5.2R
		30"	q_a q_f	244 394	203 327	216 348	166 268	131 211	134 215	113 182	119 192	95 153
			F	32.5 -6.4R	35.1 -7R	37.4 -7.4R	41 -7.8R	43.7 -7.9R	45.9 -7.8R	47.7 -7.7R	49.2 -7.5R	51.4 -7R
		36"	q_a q_f	244 394	203 327	172 277	166 268	131 211	107 173	113 182	99 160	95 153
			F	33.5 -7.1R	36.6 -7.8R	39.2 -8.4R	43.5 -9.1R	46.8 -9.4R	49.6 -9.4R	51.8 -9.4R	53.6 -9.3R	56.6 -8.9R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 8.10 - Shear and Flexibility (No. 26 gauge Mini-V-Beam, 32/7):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
32/7	26 ga	6"	q_a q_f	500 805	466 750	441 710	409 658	388 625	374 603	364 586	356 574	245 393
			F	21.2 -1.5R	21.7 -1.5R	22 -1.4R	22.6 -1.3R	22.9 -1.1R	23.1 -1R	23.3 -0.9R	23.5 -0.9R	23.7 -0.7R
		12"	q_a q_f	392 632	375 604	320 516	282 453	257 414	239 385	226 364	218 350	206 331
			F	24.3 -3R	25.4 -3.1R	26.3 -3.1R	27.7 -3.1R	28.7 -3R	29.4 -2.8R	30 -2.7R	30.4 -2.5R	31.1 -2.3R
		18"	q_a q_f	392 632	324 522	275 443	245 394	225 363	186 300	181 291	178 287	158 255
			F	26.1 -4R	27.7 -4.3R	29.1 -4.5R	31.3 -4.7R	32.9 -4.7R	34.2 -4.6R	35.2 -4.5R	36 -4.4R	37.3 -4.1R
		24"	q_a q_f	330 531	324 522	275 443	205 330	194 312	160 257	158 255	138 223	127 204
			F	27.3 -4.7R	29.3 -5.2R	31 -5.6R	33.9 -6R	36.1 -6.2R	37.9 -6.3R	39.4 -6.3R	40.7 -6.2R	42.6 -5.9R
		30"	q_a q_f	330 531	270 435	275 443	205 330	162 261	160 257	136 218	138 223	111 178
			F	28.1 -5.2R	30.4 -5.9R	32.4 -6.4R	35.9 -7.1R	38.7 -7.5R	41 -7.8R	42.9 -7.9R	44.5 -7.9R	47.1 -7.7R
		36"	q_a q_f	330 531	270 435	224 361	205 330	162 261	133 215	136 218	119 191	111 178
			F	28.7 -5.6R	31.3 -6.4R	33.5 -7.1R	37.5 -8R	40.7 -8.7R	43.5 -9.1R	45.8 -9.3R	47.8 -9.4R	51.1 -9.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 8.11 - Shear and Flexibility (No. 24 gauge Mini-V-Beam, 32/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
32/4	24 ga	6"	q_a q_f	414 666	399 643	389 625	374 602	365 587	358 577	354 569	350 563	345 555
			F	17.3 -1.2R	17.7 -1.1R	17.9 -1R	18.2 -0.9R	18.5 -0.8R	18.6 -0.7R	18.7 -0.6R	18.8 -0.5R	18.9 -0.5R
		12"	q_a q_f	329 530	328 528	288 464	265 426	250 403	240 386	232 374	227 365	219 352
			F	21 -2.7R	21.9 -2.7R	22.6 -2.6R	23.6 -2.4R	24.3 -2.2R	24.9 -2.1R	25.2 -1.9R	25.5 -1.8R	26 -1.5R
		18"	q_a q_f	329 530	281 452	243 391	229 369	221 355	188 303	188 302	187 301	170 274
			F	23.4 -3.9R	24.8 -4R	26 -4.1R	27.8 -4R	29 -3.8R	30 -3.7R	30.7 -3.5R	31.3 -3.3R	32.2 -2.9R
		24"	q_a q_f	269 433	281 452	243 391	190 306	189 304	157 253	161 259	140 225	131 211
			F	25.1 -4.8R	27 -5.1R	28.5 -5.3R	31 -5.4R	32.9 -5.4R	34.3 -5.2R	35.4 -5.1R	36.3 -4.9R	37.7 -4.5R
		30"	q_a q_f	269 433	224 361	243 391	190 306	151 244	157 253	133 214	140 225	112 180
			F	26.3 -5.5R	28.6 -6R	30.5 -6.4R	33.6 -6.7R	36 -6.8R	37.9 -6.8R	39.5 -6.6R	40.7 -6.5R	42.7 -6.1R
		36"	q_a q_f	269 433	224 361	192 308	190 306	151 244	124 200	133 214	115 186	112 180
			F	27.2 -6.1R	29.8 -6.8R	32.1 -7.2R	35.8 -7.8R	38.7 -8.1R	41.1 -8.2R	43 -8.1R	44.6 -8R	47.1 -7.7R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 8.12 - Shear and Flexibility (No. 24 gauge Mini-V-Beam, 32/7):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
32/7	24 ga	6"	q_a q_f	563 907	529 851	504 812	472 760	452 727	438 705	428 689	420 676	381 610
			F	16.6 -1.3R	17 -1.3R	17.3 -1.2R	17.7 -1.1R	18 -1R	18.2 -0.9R	18.4 -0.8R	18.5 -0.7R	18.7 -0.6R
		12"	q_a q_f	437 703	423 681	362 583	322 519	297 478	280 451	268 431	258 415	245 395
			F	19.2 -2.6R	20.2 -2.7R	21 -2.7R	22.2 -2.7R	23 -2.6R	23.6 -2.4R	24.1 -2.3R	24.5 -2.2R	25.1 -2R
		18"	q_a q_f	437 703	362 583	308 496	280 451	262 423	217 350	213 342	209 337	187 301
			F	20.8 -3.5R	22.2 -3.7R	23.4 -3.9R	25.3 -4.1R	26.7 -4.1R	27.8 -4R	28.7 -3.9R	29.4 -3.8R	30.5 -3.5R
		24"	q_a q_f	362 582	362 583	308 496	233 375	223 360	185 297	185 297	160 258	148 238
			F	21.8 -4.1R	23.5 -4.5R	25.1 -4.8R	27.5 -5.2R	29.5 -5.4R	31 -5.4R	32.3 -5.4R	33.4 -5.3R	35.1 -5.1R
		30"	q_a q_f	362 582	296 477	308 496	233 375	184 297	185 297	157 253	160 258	128 207
			F	22.5 -4.5R	24.5 -5.1R	26.3 -5.5R	29.3 -6.2R	31.7 -6.5R	33.6 -6.7R	35.3 -6.8R	36.7 -6.8R	39 -6.7R
		36"	q_a q_f	362 582	296 477	249 401	233 375	184 297	152 245	157 253	136 219	128 207
			F	23.1 -4.8R	25.3 -5.5R	27.2 -6.1R	30.6 -6.9R	33.4 -7.5R	35.8 -7.8R	37.8 -8R	39.5 -8.1R	42.4 -8.1R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 8.13 - Shear and Flexibility (No. 22 gauge Mini-V-Beam, 32/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
32/4	22 ga	6"	q_a q_f	544 875	527 849	516 830	499 804	489 788	482 776	477 767	473 761	467 751
			F	14.3 -1.1R	14.6 -1R	14.8 -0.9R	15.1 -0.8R	15.3 -0.7R	15.5 -0.6R	15.6 -0.5R	15.6 -0.5R	15.7 -0.4R
		12"	q_a q_f	434 699	435 701	385 619	357 574	339 546	327 526	318 511	311 500	301 485
			F	17.6 -2.4R	18.4 -2.4R	19 -2.3R	19.9 -2.2R	20.5 -2R	21 -1.8R	21.3 -1.7R	21.6 -1.6R	22 -1.4R
		18"	q_a q_f	434 699	372 599	323 520	308 496	299 481	256 411	256 412	257 413	234 377
			F	19.7 -3.5R	21 -3.6R	22 -3.6R	23.6 -3.6R	24.7 -3.4R	25.6 -3.2R	26.2 -3.1R	26.7 -2.9R	27.5 -2.6R
		24"	q_a q_f	352 566	372 599	323 520	253 408	255 410	216 347	223 359	194 312	182 293
			F	21.2 -4.3R	22.9 -4.6R	24.3 -4.7R	26.5 -4.8R	28.1 -4.8R	29.4 -4.7R	30.4 -4.5R	31.2 -4.3R	32.4 -4R
		30"	q_a q_f	352 566	294 473	323 520	253 408	205 331	216 347	183 295	194 312	154 248
			F	22.3 -4.9R	24.3 -5.4R	26 -5.6R	28.8 -6R	30.9 -6R	32.6 -6R	34 -5.9R	35.1 -5.7R	36.8 -5.4R
		36"	q_a q_f	352 566	294 473	251 405	253 408	205 331	169 273	183 295	159 256	154 248
			F	23.1 -5.4R	25.4 -6R	27.4 -6.4R	30.7 -6.9R	33.3 -7.2R	35.4 -7.2R	37.1 -7.2R	38.5 -7.1R	40.8 -6.8R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 8.14 - Shear and Flexibility (No. 22 gauge Mini-V-Beam, 32/7):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
32/7	22 ga	6"	q_a q_f	748 1204	707 1138	678 1092	640 1030	616 991	599 964	587 945	578 930	540 864
			F	13.6 -1.2R	14 -1.1R	14.3 -1.1R	14.7 -1R	14.9 -0.9R	15.1 -0.8R	15.3 -0.7R	15.4 -0.7R	15.5 -0.6R
		12"	q_a q_f	576 927	563 907	484 779	434 699	403 649	382 615	367 591	355 572	339 546
			F	16 -2.3R	16.9 -2.4R	17.6 -2.4R	18.6 -2.4R	19.4 -2.3R	19.9 -2.2R	20.4 -2R	20.7 -1.9R	21.2 -1.7R
		18"	q_a q_f	576 927	479 771	408 657	375 604	355 571	297 478	293 472	290 466	259 416
			F	17.4 -3.1R	18.6 -3.3R	19.7 -3.5R	21.3 -3.6R	22.6 -3.6R	23.6 -3.6R	24.4 -3.5R	25 -3.4R	26 -3.1R
		24"	q_a q_f	471 758	479 771	408 657	312 503	303 488	251 404	253 408	220 355	203 327
			F	18.3 -3.6R	19.8 -4R	21.2 -4.3R	23.4 -4.6R	25.1 -4.8R	26.5 -4.8R	27.6 -4.8R	28.6 -4.7R	30.1 -4.6R
		30"	q_a q_f	471 758	386 622	408 657	312 503	248 399	251 404	213 344	220 355	175 282
			F	18.9 -4R	20.7 -4.5R	22.3 -4.9R	24.9 -5.5R	27 -5.8R	28.8 -6R	30.3 -6R	31.5 -6R	33.5 -5.9R
		36"	q_a q_f	471 758	386 622	327 526	312 503	248 399	205 329	213 344	185 299	175 282
			F	19.4 -4.3R	21.3 -4.9R	23.1 -5.4R	26.1 -6.2R	28.6 -6.6R	30.7 -6.9R	32.5 -7.1R	34 -7.2R	36.6 -7.2R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 8.15 - Shear and Flexibility (No. 20 gauge Mini-V-Beam, 32/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
32/4	20 ga	6"	q_a q_f	569 916	554 892	544 875	529 852	519 836	513 826	508 818	504 812	499 803
			F	12.3 -1R	12.6 -0.9R	12.8 -0.8R	13.1 -0.7R	13.3 -0.6R	13.4 -0.5R	13.5 -0.5R	13.5 -0.4R	13.6 -0.4R
		12"	q_a q_f	456 734	460 741	408 657	381 614	364 586	352 567	343 553	337 542	327 526
			F	15.3 -2.2R	16 -2.2R	16.6 -2.1R	17.5 -2R	18 -1.8R	18.4 -1.7R	18.7 -1.5R	19 -1.4R	19.3 -1.2R
		18"	q_a q_f	456 734	393 632	342 551	329 529	321 516	275 443	277 446	278 448	255 410
			F	17.2 -3.2R	18.4 -3.3R	19.4 -3.3R	20.8 -3.2R	21.8 -3.1R	22.6 -3R	23.2 -2.8R	23.7 -2.6R	24.4 -2.4R
		24"	q_a q_f	367 591	393 632	342 551	269 434	273 439	232 374	240 387	212 342	199 321
			F	18.6 -3.9R	20.1 -4.2R	21.4 -4.3R	23.4 -4.4R	24.9 -4.4R	26.1 -4.2R	27 -4.1R	27.7 -3.9R	28.9 -3.6R
		30"	q_a q_f	367 591	308 496	342 551	269 434	221 356	232 374	200 321	212 342	168 271
			F	19.6 -4.5R	21.4 -4.9R	23 -5.1R	25.6 -5.4R	27.5 -5.5R	29 -5.5R	30.3 -5.4R	31.3 -5.2R	32.9 -4.9R
		36"	q_a q_f	367 591	308 496	264 424	269 434	221 356	183 294	200 321	173 279	168 271
			F	20.4 -4.9R	22.5 -5.5R	24.3 -5.9R	27.3 -6.3R	29.7 -6.5R	31.5 -6.6R	33.1 -6.6R	34.4 -6.5R	36.5 -6.2R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 8.16 - Shear and Flexibility (No. 20 gauge Mini-V-Beam, 32/7):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
32/7	20 ga	6"	q_a q_f	790 1272	751 1209	723 1165	686 1105	663 1068	647 1042	635 1023	626 1008	614 988
			F	11.7 -1.1R	12.1 -1R	12.3 -1R	12.7 -0.9R	12.9 -0.8R	13.1 -0.7R	13.2 -0.7R	13.3 -0.6R	13.5 -0.5R
		12"	q_a q_f	606 976	597 962	515 829	465 749	434 699	413 665	398 640	386 622	370 595
			F	13.9 -2.1R	14.7 -2.2R	15.3 -2.2R	16.3 -2.2R	16.9 -2.1R	17.5 -2R	17.8 -1.9R	18.2 -1.8R	18.6 -1.6R
		18"	q_a q_f	606 976	505 813	431 694	400 644	381 613	322 518	319 514	317 510	283 455
			F	15.1 -2.8R	16.3 -3R	17.2 -3.2R	18.8 -3.3R	19.9 -3.3R	20.8 -3.2R	21.5 -3.2R	22.1 -3.1R	23 -2.8R
		24"	q_a q_f	491 790	505 813	431 694	331 534	326 524	270 435	275 442	239 385	221 355
			F	16 -3.3R	17.4 -3.6R	18.6 -3.9R	20.6 -4.2R	22.2 -4.4R	23.4 -4.4R	24.5 -4.4R	25.3 -4.3R	26.7 -4.1R
		30"	q_a q_f	491 790	403 649	431 694	331 534	264 425	270 435	230 371	239 385	189 305
			F	16.5 -3.7R	18.2 -4.1R	19.6 -4.5R	22 -5R	23.9 -5.3R	25.5 -5.4R	26.9 -5.5R	28 -5.5R	29.9 -5.4R
		36"	q_a q_f	491 790	403 649	341 549	331 534	264 425	219 352	230 371	200 322	189 305
			F	17 -3.9R	18.8 -4.5R	20.4 -4.9R	23.1 -5.6R	25.4 -6.1R	27.3 -6.3R	28.9 -6.5R	30.3 -6.6R	32.6 -6.6R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 8.17 - Shear and Flexibility (No. 18 gauge Mini-V-Beam, 32/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
32/4	18 ga	6"	q_a q_f	670 1078	659 1061	652 1049	642 1033	635 1022	630 1015	627 1010	624 1005	621 1000
			F	10 -0.9R	10.3 -0.8R	10.5 -0.7R	10.7 -0.6R	10.9 -0.5R	11 -0.5R	11.1 -0.4R	11.1 -0.4R	11.2 -0.3R
		12"	q_a q_f	548 883	561 904	507 816	483 778	468 753	457 736	450 724	444 714	435 700
			F	12.7 -1.9R	13.3 -1.9R	13.8 -1.9R	14.6 -1.7R	15.1 -1.6R	15.4 -1.5R	15.7 -1.4R	15.9 -1.3R	16.2 -1.1R
		18"	q_a q_f	548 883	481 774	425 684	418 673	414 667	360 580	366 589	370 596	343 553
			F	14.4 -2.8R	15.4 -2.9R	16.2 -2.9R	17.5 -2.8R	18.4 -2.7R	19.1 -2.6R	19.6 -2.5R	20 -2.3R	20.6 -2.1R
		24"	q_a q_f	437 703	481 774	425 684	340 547	352 567	302 487	317 511	283 455	271 436
			F	15.6 -3.4R	16.9 -3.7R	18 -3.8R	19.8 -3.9R	21.1 -3.8R	22.1 -3.7R	22.9 -3.6R	23.6 -3.5R	24.6 -3.2R
		30"	q_a q_f	437 703	370 595	425 684	340 547	281 452	302 487	264 425	283 455	232 373
			F	16.4 -3.9R	18.1 -4.3R	19.5 -4.5R	21.7 -4.8R	23.4 -4.8R	24.7 -4.8R	25.8 -4.7R	26.7 -4.6R	28.1 -4.3R
		36"	q_a q_f	437 703	370 595	319 513	340 547	281 452	239 384	264 425	234 377	232 373
			F	17.1 -4.3R	19 -4.8R	20.6 -5.1R	23.2 -5.6R	25.3 -5.7R	26.9 -5.8R	28.3 -5.8R	29.4 -5.7R	31.2 -5.5R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 8.18 - Shear and Flexibility (No. 18 gauge Mini-V-Beam, 32/7):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"	10' - 0"
32/7	18 ga	6"	q_a q_f	965 1554	932 1501	909 1463	877 1412	857 1380	844 1358	834 1342	826 1330	815 1312
			F	9.5 -0.9R	9.8 -0.9R	10 -0.9R	10.4 -0.8R	10.6 -0.7R	10.7 -0.6R	10.8 -0.6R	10.9 -0.5R	11 -0.4R
		12"	q_a q_f	738 1188	744 1198	648 1044	600 965	569 916	548 882	533 857	521 839	505 812
			F	11.4 -1.9R	12.1 -1.9R	12.7 -1.9R	13.5 -1.9R	14.1 -1.8R	14.6 -1.7R	14.9 -1.6R	15.2 -1.5R	15.6 -1.4R
		18"	q_a q_f	738 1188	622 1001	534 860	511 822	496 799	421 679	424 682	425 685	387 623
			F	12.5 -2.5R	13.5 -2.7R	14.4 -2.8R	15.7 -2.9R	16.7 -2.9R	17.5 -2.8R	18.1 -2.8R	18.6 -2.7R	19.4 -2.5R
		24"	q_a q_f	580 934	622 1001	534 860	414 666	418 674	354 569	366 589	322 518	301 485
			F	13.3 -2.9R	14.5 -3.2R	15.6 -3.4R	17.3 -3.7R	18.7 -3.8R	19.8 -3.9R	20.7 -3.8R	21.5 -3.8R	22.7 -3.6R
		30"	q_a q_f	580 934	479 771	534 860	414 666	336 542	354 569	303 489	322 518	255 411
			F	13.8 -3.2R	15.2 -3.6R	16.4 -3.9R	18.6 -4.4R	20.3 -4.6R	21.7 -4.8R	22.8 -4.8R	23.9 -4.8R	25.5 -4.7R
		36"	q_a q_f	580 934	479 771	406 654	414 666	336 542	279 449	303 489	264 426	255 411
			F	14.1 -3.4R	15.7 -3.9R	17.1 -4.3R	19.5 -4.9R	21.5 -5.3R	23.2 -5.6R	24.6 -5.7R	25.9 -5.8R	27.9 -5.8R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

9.0 Nor-Clad®

FIGURE 9.1 - Basic Dimensions and Panel Attachment (Nor-Clad):

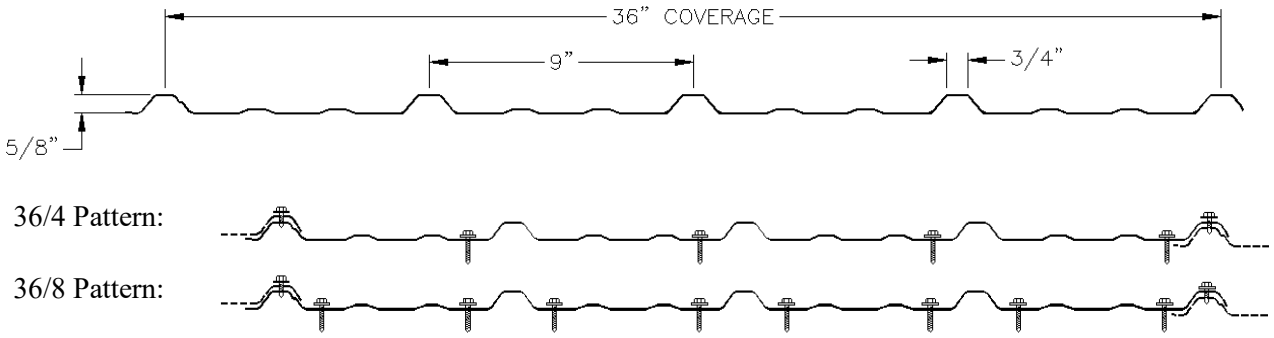


TABLE 9.1 - Section Properties (Nor-Clad):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
29	0.65	0.0139	80	82	0.1912	0.0080	0.15	0.0164	0.0539
26	0.81	0.0173	80	82	0.2380	0.0100	0.15	0.0204	0.0663

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative				
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	$I_d = (2I_e+I_g)/3$	
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
29	0.0259	0.0080	0.14	0.0147	0.0057	0.30	0.0149	0.0080	0.0064
26	0.0360	0.0100	0.15	0.0195	0.0097	0.30	0.0188	0.0100	0.0098

TABLE 9.2 - Inward (Positive) Uniform Allowable Loads (Nor-Clad):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	6' - 0"
29	Single Span	ASD, W/Ω	199	88	56	39	29	22	17	14	10
		LRFD, ϕW	316	140	89	62	46	35	28	22	16
		L/240	-	66	34	19	12	8	6	4	2
		L/180	-	87	45	26	16	11	8	6	3
		L/120	-	-	-	39	24	16	12	8	5
	Double Span	ASD, W/Ω	196	88	57	39	28	22	17	13	9
		LRFD, ϕW	296	132	85	59	43	33	26	21	14
		L/240	-	-	-	-	-	20	14	10	6
		L/180	-	-	-	-	-	-	-	-	8
		L/180	-	-	-	-	-	-	-	-	8
	Triple Span	ASD, W/Ω	243	110	70	49	36	27	21	18	12
		LRFD, ϕW	366	165	106	73	54	41	32	27	19
		L/240	-	-	63	37	23	15	11	8	5
		L/180	-	-	-	49	31	21	14	11	6
		L/120	-	-	-	-	-	-	-	16	9
26	Single Span	ASD, W/Ω	264	117	75	52	38	29	23	19	13
		LRFD, ϕW	418	185	118	82	60	46	37	30	21
		L/240	-	82	42	24	15	10	7	5	3
		L/180	-	109	56	32	20	14	10	7	4
		L/120	-	-	-	49	31	20	14	10	6
	Double Span	ASD, W/Ω	248	111	71	50	36	28	22	17	12
		LRFD, ϕW	373	167	107	75	54	42	33	26	18
		L/240	-	-	-	-	-	25	17	13	7
		L/180	-	-	-	-	-	-	-	17	10
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	307	138	89	61	45	34	27	22	15
		LRFD, ϕW	462	208	134	93	68	52	41	34	23
		L/240	-	-	79	46	29	19	14	10	6
		L/180	-	-	-	61	38	26	18	13	8
		L/120	-	-	-	-	-	-	-	20	11

TABLE 9.3 - Allowable Reactions at Supports (Nor-Clad):

Reactions at Supports based on Web Crippling					
Gauge	Condition	Bearing Length of Webs			
		ASD (P_n/Ω) *(lbs/ft width)*		LRFD (ϕP_n) *(lbs/ft width)*	
		1"	1.5"	1"	1.5"
29	End	123	142	188	217
	Interior	162	184	241	273
26	End	184	211	281	323
	Interior	251	283	373	420

TABLE 9.4 - Outward (Negative) Uniform Allowable Loads (No. 29 gauge Nor-Clad):

Nor-Clad, 29ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)															
				Attachment Spacing, (ft-in)															
				16"		2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		4' - 6"		5' - 0"		6' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/8	330	524	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	285	427	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
	12ga (.1050")	#12	36/8	330	524	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	285	427	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
	14ga (.0700")	#12	36/8	330	524	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	278	418	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
	16ga (.0590")	#12	36/8	330	524	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	235	352	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
	18ga (.0459")	#12	36/8	330	524	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	183	274	122	183	94	146	65	103	48	74	37	50	29	35	23	26	15	15
	20ga (.0354")	#12	36/8	282	422	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	141	211	94	141	75	113	63	94	48	74	37	50	29	35	23	26	15	15
	22ga (.0294")	#12	36/8	234	351	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	117	175	78	117	62	94	52	78	45	67	37	50	29	35	23	26	15	15
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/8	330	524	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	285	427	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
	12ga (.1050")	#12	36/8	330	524	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	285	427	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
	14ga (.0700")	#12	36/8	330	524	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	193	289	129	193	94	149	65	103	48	74	37	50	29	35	23	26	15	15
	16ga (.0590")	#12	36/8	325	487	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	162	244	108	162	87	130	65	103	48	74	37	50	29	35	23	26	15	15
	18ga (.0459")	#12	36/8	253	379	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	126	190	84	126	67	101	56	84	48	72	37	50	29	35	23	26	15	15
	20ga (.0354")	#12	36/8	195	292	130	195	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	97	146	65	97	52	78	43	65	37	56	32	49	29	35	23	26	15	15
	22ga (.0294")	#12	36/8	162	243	108	162	86	130	65	103	48	74	37	50	29	35	23	26	15	15
		#12	36/4	81	121	54	81	43	65	36	54	31	46	27	40	24	35	22	26	15	15
Plywood & OSB	15/32"	#14	36/8	209	283	140	189	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#14	36/4	105	141	70	94	56	75	47	63	40	54	35	47	29	35	23	26	15	15
	19/32"	#14	36/8	265	358	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#14	36/4	133	179	88	119	71	96	59	80	48	68	37	50	29	35	23	26	15	15
	23/32"	#14	36/8	321	434	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#14	36/4	161	217	107	145	86	116	65	96	48	74	37	50	29	35	23	26	15	15
Lumber (DFL)	1" min	#9	36/8	330	523	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#9	36/4	194	262	129	174	94	140	65	103	48	74	37	50	29	35	23	26	15	15
		#14	36/8	330	524	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15
		#14	36/4	265	358	147	233	94	149	65	103	48	74	37	50	29	35	23	26	15	15

TABLE 9.5 - Outward (Negative) Uniform Allowable Loads (No. 26 gauge Nor-Clad):

Nor-Clad, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				16"		2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		4' - 6"		5' - 0"		6' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/8	437	694	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#12	36/4	355	532	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
	12ga (.1050")	#12	36/8	437	694	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#12	36/4	355	532	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
	14ga (.0700")	#12	36/8	437	694	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#12	36/4	278	418	186	278	124	197	86	137	63	101	49	76	38	53	31	39	22	22
	16ga (.0590")	#12	36/8	437	694	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#12	36/4	235	352	156	235	124	188	86	137	63	101	49	76	38	53	31	39	22	22
	18ga (.0459")	#12	36/8	365	548	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#12	36/4	183	274	122	183	97	146	81	122	63	101	49	76	38	53	31	39	22	22
	20ga (.0354")	#12	36/8	282	422	188	282	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#12	36/4	141	211	94	141	75	113	63	94	54	80	47	70	38	53	31	39	22	22
	22ga (.0294")	#12	36/8	234	351	156	234	124	187	86	137	63	101	49	76	38	53	31	39	22	22
		#12	36/4	117	175	78	117	62	94	52	78	45	67	39	58	35	52	31	39	22	22
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/8	437	694	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#12	36/4	355	532	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
	12ga (.1050")	#12	36/8	437	694	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#12	36/4	289	434	193	289	124	197	86	137	63	101	49	76	38	53	31	39	22	22
	14ga (.0700")	#12	36/8	386	578	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#12	36/4	193	289	129	193	103	154	86	129	63	101	49	76	38	53	31	39	22	22
	16ga (.0590")	#12	36/8	325	487	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#12	36/4	162	244	108	162	87	130	72	108	62	93	49	76	38	53	31	39	22	22
	18ga (.0459")	#12	36/8	253	379	169	253	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#12	36/4	126	190	84	126	67	101	56	84	48	72	42	63	37	53	31	39	22	22
	20ga (.0354")	#12	36/8	195	292	130	195	104	156	86	130	63	101	49	76	38	53	31	39	22	22
		#12	36/4	97	146	65	97	52	78	43	65	37	56	32	49	29	43	26	39	22	22
	22ga (.0294")	#12	36/8	162	243	108	162	86	130	72	108	62	93	49	76	38	53	31	39	22	22
		#12	36/4	81	121	54	81	43	65	36	54	31	46	27	40	24	36	22	32	18	22
Plywood & OSB	15/32"	#14	36/8	209	283	140	189	112	151	86	126	63	101	49	76	38	53	31	39	22	22
		#14	36/4	105	141	70	94	56	75	47	63	40	54	35	47	31	42	28	38	22	22
	19/32"	#14	36/8	265	358	177	239	124	191	86	137	63	101	49	76	38	53	31	39	22	22
		#14	36/4	133	179	88	119	71	96	59	80	51	68	44	60	38	53	31	39	22	22
	23/32"	#14	36/8	321	434	194	289	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#14	36/4	161	217	107	145	86	116	71	96	61	83	49	72	38	53	31	39	22	22
Lumber (DFL)	1" min	#9	36/8	388	523	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#9	36/4	194	262	129	174	103	140	86	116	63	100	49	76	38	53	31	39	22	22
		#14	36/8	437	694	194	308	124	197	86	137	63	101	49	76	38	53	31	39	22	22
		#14	36/4	265	358	177	238	124	191	86	137	63	101	49	76	38	53	31	39	22	22

TABLE 9.6 - Shear and Flexibility (No. 29 gauge Nor-Clad, 36/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	6' - 0"
36/4	29 ga	6"	q_a q_f	293 472	262 422	251 405	244 392	238 383	233 375	208 332	168 269	117 187
			F	22.3 -1.5R	23.1 -1.3R	23.5 -1.2R	23.7 -1.1R	23.9 -1R	24.1 -0.9R	24.2 -0.9R	24.3 -0.8R	24.5 -0.7R
		12"	q_a q_f	265 427	206 332	204 329	178 286	181 291	162 261	166 268	152 245	117 187
			F	25.7 -3.1R	27.7 -3.1R	28.8 -3R	29.5 -2.9R	30.1 -2.8R	30.6 -2.7R	31 -2.5R	31.4 -2.4R	31.9 -2.2R
		18"	q_a q_f	227 365	206 332	174 280	150 241	157 253	140 226	126 203	134 216	114 183
			F	27.8 -4.2R	30.8 -4.6R	32.5 -4.7R	33.8 -4.7R	34.9 -4.6R	35.8 -4.5R	36.5 -4.4R	37.1 -4.3R	38.2 -4R
		24"	q_a q_f	227 365	168 271	174 280	150 241	131 211	116 187	126 203	115 185	96 154
			F	29.2 -5R	33.1 -5.8R	35.3 -6.1R	37.1 -6.2R	38.6 -6.2R	39.9 -6.2R	41 -6.2R	41.9 -6.1R	43.5 -5.8R
		30"	q_a q_f	227 365	168 271	139 224	150 241	131 211	116 187	104 167	93 150	96 154
			F	30.2 -5.6R	34.7 -6.7R	37.4 -7.2R	39.7 -7.5R	41.6 -7.7R	43.3 -7.8R	44.7 -7.8R	46 -7.8R	48.1 -7.6R
		36"	q_a q_f	227 365	168 271	139 224	118 191	131 211	116 187	104 167	93 150	77 124
			F	30.9 -6R	36 -7.5R	39.1 -8.2R	41.8 -8.6R	44.1 -9R	46.1 -9.2R	47.8 -9.3R	49.4 -9.4R	52 -9.3R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 9.7 - Shear and Flexibility (No. 26 gauge Nor-Clad, 36/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	6' - 0"
36/4	26 ga	6"	q_a q_f	374 603	339 545	327 526	318 512	311 501	306 493	289 463	234 375	163 260
			F	18.5 -1.3R	19.3 -1.2R	19.6 -1.1R	19.8 -1R	20 -0.9R	20.2 -0.8R	20.3 -0.8R	20.4 -0.7R	20.5 -0.6R
		12"	q_a q_f	339 546	266 428	266 428	233 374	237 382	214 344	220 354	202 325	163 260
			F	21.6 -2.7R	23.4 -2.8R	24.3 -2.7R	25 -2.6R	25.6 -2.5R	26 -2.4R	26.4 -2.3R	26.7 -2.2R	27.2 -2R
		18"	q_a q_f	288 464	266 428	226 363	195 314	206 331	184 297	166 268	178 286	151 243
			F	23.5 -3.7R	26.2 -4.1R	27.7 -4.2R	28.9 -4.2R	29.8 -4.1R	30.6 -4R	31.3 -3.9R	31.8 -3.8R	32.8 -3.6R
		24"	q_a q_f	288 464	215 346	226 363	195 314	171 275	152 244	166 268	151 244	128 206
			F	24.7 -4.5R	28.2 -5.2R	30.2 -5.4R	31.8 -5.6R	33.2 -5.6R	34.3 -5.6R	35.3 -5.5R	36.1 -5.4R	37.5 -5.2R
		30"	q_a q_f	288 464	215 346	179 288	195 314	171 275	152 244	136 219	123 198	128 206
			F	25.6 -5R	29.7 -6R	32.1 -6.5R	34.1 -6.7R	35.9 -6.9R	37.3 -7R	38.6 -7R	39.7 -7R	41.6 -6.8R
		36"	q_a q_f	288 464	215 346	179 288	152 245	171 275	152 244	136 219	123 198	102 164
			F	26.3 -5.4R	30.8 -6.7R	33.6 -7.3R	36 -7.8R	38.1 -8R	39.9 -8.2R	41.4 -8.3R	42.8 -8.4R	45.2 -8.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

Note: Shear Tables 9.6 & 9.7 based on 36/4 attachment pattern. Values acceptable for use (conservative) for 36/8 attachment pattern.

10.0 Nu-Wave® Corrugated

FIGURE 10.1 - Basic Dimensions and Panel Attachment (Nu-Wave Corrugated):

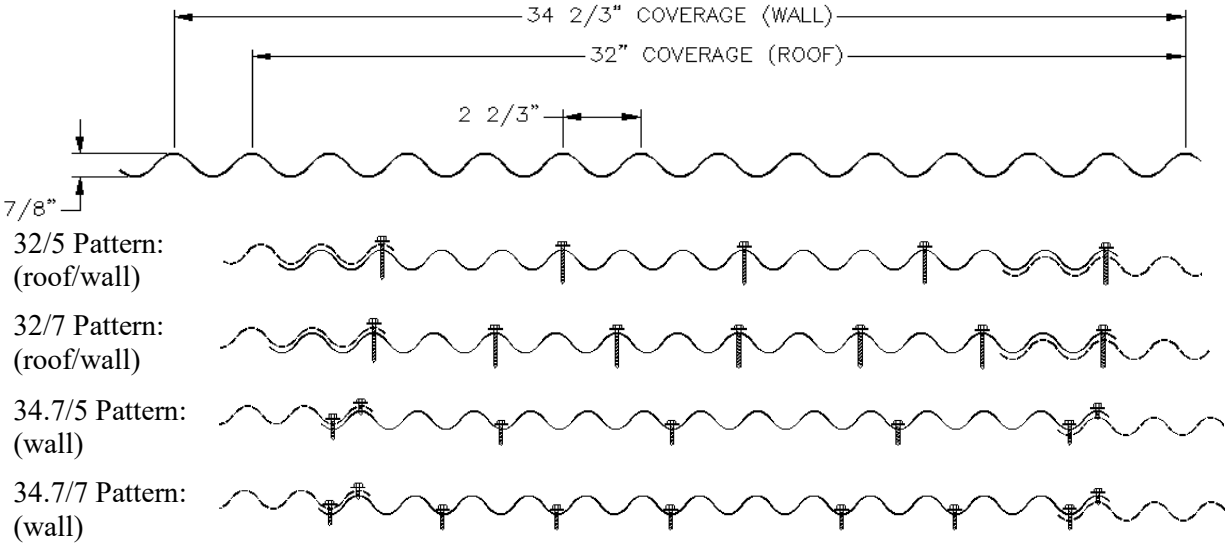


TABLE 10.1 - Section Properties (Nu-Wave Corrugated):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
26	0.94	0.0173	80	82	0.2749	0.0256	0.44	0.0579	0.0579
24	1.25	0.0232	50	65	0.3682	0.0346	0.44	0.0769	0.0769
22	1.59	0.0294	50	65	0.4661	0.0415	0.45	0.0964	0.0964
20	1.91	0.0354	40	55	0.5606	0.0519	0.45	0.1150	0.1150

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative				
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	$I_d = (2I_e+I_g)/3$	
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
26	0.2117	0.0256	0.44	0.0579	0.0256	0.44	0.0579	0.0256	0.0256
24	0.3369	0.0346	0.45	0.0769	0.0346	0.45	0.0769	0.0346	0.0346
22	0.4589	0.0415	0.43	0.0964	0.0415	0.43	0.0964	0.0415	0.0415
20	0.5550	0.0519	0.45	0.1150	0.0519	0.45	0.1150	0.0519	0.0519

TABLE 10.2 - Inward (Positive) Uniform Allowable Loads (Nu-Wave Corrugated):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
26	Single Span	ASD, W/Ω	347	222	154	113	87	55	39	28	22
		LRFD, ϕW	550	352	244	180	137	88	61	45	34
		L/240	210	107	62	39	26	13	8	5	3
		L/180	280	143	83	52	35	18	10	7	4
		L/120	-	215	124	78	52	27	16	10	7
	Double Span	ASD, W/Ω	334	217	151	111	85	55	38	28	21
		LRFD, ϕW	503	326	227	168	128	83	57	42	32
		L/240	-	-	150	94	63	32	19	12	8
		L/180	-	-	-	-	84	43	25	16	11
		L/120	-	-	-	-	-	-	37	24	16
	Triple Span	ASD, W/Ω	411	268	188	138	106	69	47	35	27
		LRFD, ϕW	619	403	282	208	160	103	71	53	41
		L/240	396	203	117	74	50	25	15	9	6
		L/180	-	-	156	99	66	34	20	12	8
		L/120	-	-	-	-	99	51	29	18	12
24	Single Span	ASD, W/Ω	384	246	171	125	96	61	43	31	24
		LRFD, ϕW	609	390	271	199	152	97	68	50	38
		L/240	284	145	84	53	35	18	11	7	4
		L/180	378	194	112	71	47	24	14	9	6
		L/120	-	-	168	106	71	36	21	13	9
	Double Span	ASD, W/Ω	370	239	167	123	95	60	42	31	23
		LRFD, ϕW	556	360	252	186	143	91	64	46	35
		L/240	-	-	-	-	85	44	25	16	11
		L/180	-	-	-	-	-	58	34	21	14
		L/120	-	-	-	-	-	-	-	-	21
	Triple Span	ASD, W/Ω	455	297	208	154	118	75	52	39	30
		LRFD, ϕW	685	446	313	231	177	114	79	58	45
		L/240	-	274	159	100	67	34	20	12	8
		L/180	-	-	-	133	89	46	26	17	11
		L/120	-	-	-	-	-	69	40	25	17
22	Single Span	ASD, W/Ω	481	308	214	157	120	77	53	39	30
		LRFD, ϕW	763	488	339	249	191	122	85	62	48
		L/240	340	174	101	64	43	22	13	8	5
		L/180	454	232	134	85	57	29	17	11	7
		L/120	-	-	202	127	85	44	25	16	11
	Double Span	ASD, W/Ω	463	300	210	154	119	76	53	39	29
		LRFD, ϕW	697	452	316	232	179	115	80	59	44
		L/240	-	-	-	153	102	52	30	19	13
		L/180	-	-	-	-	-	70	40	25	17
		L/120	-	-	-	-	-	-	-	38	26
	Triple Span	ASD, W/Ω	571	371	261	193	148	95	65	48	37
		LRFD, ϕW	859	559	392	290	223	143	99	72	55
		L/240	-	329	190	120	80	41	24	15	10
		L/180	-	-	254	160	107	55	32	20	13
		L/120	-	-	-	-	-	82	48	30	20

TABLE 10.2 (Cont'd) - Inward (Positive) Uniform Allowable Loads (Nu-Wave Corrugated)

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
20	Single Span	ASD, W/Ω	459	294	204	150	115	73	51	37	29
		LRFD, ϕW	728	466	324	238	182	116	81	59	46
		L/240	425	218	126	79	53	27	16	10	7
		L/180	-	290	168	106	71	36	21	13	9
		L/120	-	-	-	-	106	54	32	20	13
	Double Span	ASD, W/Ω	442	286	201	148	114	72	50	37	28
		LRFD, ϕW	665	431	302	222	171	109	75	55	42
		L/240	-	-	-	-	-	66	38	24	16
		L/180	-	-	-	-	-	-	-	32	21
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	544	354	248	184	141	91	63	46	35
		LRFD, ϕW	819	533	374	276	212	137	95	70	53
		L/240	-	-	238	150	100	51	30	19	13
		L/180	-	-	-	-	134	69	40	25	17
		L/120	-	-	-	-	-	-	59	37	25

TABLE 10.3 - Allowable Reactions at Supports (Nu-Wave Corrugated):

Reactions at Supports based on Web Crippling			
Gauge	**Condition**	**Bearing Length of Webs**	
		ASD (P_n/Ω) (*lbs/ft width*)	**LRFD (ϕP_n) (*lbs/ft width*)**
		1.5"	**1.5"**
26	End Interior	509	815
		711	1138
24	End Interior	540	864
		879	1408
22	End Interior	836	1339
		1406	2251
20	End Interior	1118	1791
		2062	3301

TABLE 10.4 - Outward (Negative) Uniform Allowable Loads (No. 26 gauge Nu-Wave Corrugated):

Nu-Wave Corrugated, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft^2)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	34.7/7	430	644	344	516	257	407	189	296	144	198	92	101	59	59	37	37	25	25
		#12	34.7/5	307	460	246	368	205	307	175	263	144	198	92	101	59	59	37	37	25	25
	12ga (.1050")	#12	34.7/7	430	644	344	516	257	407	189	296	144	198	92	101	59	59	37	37	25	25
		#12	34.7/5	307	460	246	368	205	307	175	263	144	198	92	101	59	59	37	37	25	25
	14ga (.0700")	#12	34.7/7	337	506	270	405	225	337	189	289	144	198	92	101	59	59	37	37	25	25
		#12	34.7/5	241	361	193	289	161	241	138	207	120	181	92	101	59	59	37	37	25	25
	16ga (.0590")	#12	34.7/7	284	426	227	341	190	284	162	244	142	198	92	101	59	59	37	37	25	25
		#12	34.7/5	203	305	162	244	135	203	116	174	102	152	81	101	59	59	37	37	25	25
	18ga (.0459")	#12	34.7/7	221	332	177	265	147	221	126	190	111	166	88	101	59	59	37	37	25	25
		#12	34.7/5	158	237	126	190	105	158	90	135	79	118	63	95	53	59	37	37	25	25
	20ga (.0354")	#12	34.7/7	171	256	136	205	114	171	97	146	85	128	68	101	57	59	37	37	25	25
		#12	34.7/5	122	183	97	146	81	122	70	104	61	91	49	73	41	59	35	37	25	25
	22ga (.0294")	#12	34.7/7	142	213	113	170	94	142	81	121	71	106	57	85	47	59	37	37	25	25
		#12	34.7/5	101	152	81	121	67	101	58	87	51	76	40	61	34	51	29	37	25	25
Steel (Gr 33 min.)	≥10ga (.1350")	#12	34.7/7	430	644	344	516	257	407	189	296	144	198	92	101	59	59	37	37	25	25
		#12	34.7/5	307	460	246	368	205	307	175	263	144	198	92	101	59	59	37	37	25	25
	12ga (.1050")	#12	34.7/7	350	525	280	420	234	350	189	296	144	198	92	101	59	59	37	37	25	25
		#12	34.7/5	250	375	200	300	167	250	143	214	125	188	92	101	59	59	37	37	25	25
	14ga (.0700")	#12	34.7/7	234	350	187	280	156	234	133	200	117	175	92	101	59	59	37	37	25	25
		#12	34.7/5	167	250	133	200	111	167	95	143	83	125	67	100	56	59	37	37	25	25
	16ga (.0590")	#12	34.7/7	197	295	157	236	131	197	112	169	98	148	79	101	59	59	37	37	25	25
		#12	34.7/5	141	211	112	169	94	141	80	121	70	105	56	84	47	59	37	37	25	25
	18ga (.0459")	#12	34.7/7	153	230	123	184	102	153	88	131	77	115	61	92	51	59	37	37	25	25
		#12	34.7/5	109	164	88	131	73	109	63	94	55	82	44	66	36	55	31	37	25	25
	20ga (.0354")	#12	34.7/7	118	177	94	142	79	118	67	101	59	89	47	71	39	59	34	37	25	25
		#12	34.7/5	84	127	67	101	56	84	48	72	42	63	34	51	28	42	24	36	21	25
	22ga (.0294")	#12	34.7/7	98	147	78	118	65	98	56	84	49	74	39	59	33	49	28	37	25	25
		#12	34.7/5	70	105	56	84	47	70	40	60	35	53	28	42	23	35	20	30	18	25
Plywood & OSB	15/32"	#14	34.7/7	127	171	102	137	85	114	73	98	63	86	51	69	42	57	36	37	25	25
		#14	34.7/5	91	122	73	98	60	82	52	70	45	61	36	49	30	41	26	35	23	25
	19/32"	#14	34.7/7	161	217	129	174	107	145	92	124	80	108	64	87	54	59	37	37	25	25
		#14	34.7/5	115	155	92	124	77	103	66	89	57	77	46	62	38	52	33	37	25	25
	23/32"	#14	34.7/7	195	263	156	210	130	175	111	150	97	131	78	101	59	59	37	37	25	25
		#14	34.7/5	139	188	111	150	93	125	79	107	69	94	56	75	46	59	37	37	25	25
Lumber (DFL)	1" min	#9	34.7/7	235	317	188	254	157	211	134	181	117	158	92	101	59	59	37	37	25	25
		#9	34.7/5	168	226	134	181	112	151	96	129	84	113	67	91	56	59	37	37	25	25
		#14	34.7/7	321	433	257	347	214	289	183	248	144	198	92	101	59	59	37	37	25	25
		#14	34.7/5	229	310	183	248	153	206	131	177	115	155	92	101	59	59	37	37	25	25

Note: Load table above based on 34.7” installation coverage. Values acceptable for use (conservative) for 32” installation coverage.

TABLE 10.5 - Outward (Negative) Uniform Allowable Loads (No. 24 gauge Nu-Wave Corrugated):

Nu-Wave Corrugated, 24ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft^2)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	34.7/7	457	685	307	487	213	338	157	248	120	190	77	122	53	79	39	50	30	33
		#12	34.7/5	326	489	261	391	213	326	157	248	120	190	77	122	53	79	39	50	30	33
	12ga (.1050")	#12	34.7/7	457	685	307	487	213	338	157	248	120	190	77	122	53	79	39	50	30	33
		#12	34.7/5	326	489	261	391	213	326	157	248	120	190	77	122	53	79	39	50	30	33
	14ga (.0700")	#12	34.7/7	337	506	270	405	213	337	157	248	120	190	77	122	53	79	39	50	30	33
		#12	34.7/5	241	361	193	289	161	241	138	207	120	181	77	122	53	79	39	50	30	33
	16ga (.0590")	#12	34.7/7	284	426	227	341	190	284	157	244	120	190	77	122	53	79	39	50	30	33
		#12	34.7/5	203	305	162	244	135	203	116	174	102	152	77	122	53	79	39	50	30	33
	18ga (.0459")	#12	34.7/7	221	332	177	265	147	221	126	190	111	166	77	122	53	79	39	50	30	33
		#12	34.7/5	158	237	126	190	105	158	90	135	79	118	63	95	53	79	39	50	30	33
	20ga (.0354")	#12	34.7/7	171	256	136	205	114	171	97	146	85	128	68	102	53	79	39	50	30	33
		#12	34.7/5	122	183	97	146	81	122	70	104	61	91	49	73	41	61	35	50	30	33
	22ga (.0294")	#12	34.7/7	142	213	113	170	94	142	81	121	71	106	57	85	47	71	39	50	30	33
		#12	34.7/5	101	152	81	121	67	101	58	87	51	76	40	61	34	51	29	43	25	33
Steel (Gr 33 min.)	≥10ga (.1350")	#12	34.7/7	450	676	307	487	213	338	157	248	120	190	77	122	53	79	39	50	30	33
		#12	34.7/5	322	483	257	386	213	322	157	248	120	190	77	122	53	79	39	50	30	33
	12ga (.1050")	#12	34.7/7	350	525	280	420	213	338	157	248	120	190	77	122	53	79	39	50	30	33
		#12	34.7/5	250	375	200	300	167	250	143	214	120	188	77	122	53	79	39	50	30	33
	14ga (.0700")	#12	34.7/7	234	350	187	280	156	234	133	200	117	175	77	122	53	79	39	50	30	33
		#12	34.7/5	167	250	133	200	111	167	95	143	83	125	67	100	53	79	39	50	30	33
	16ga (.0590")	#12	34.7/7	197	295	157	236	131	197	112	169	98	148	77	118	53	79	39	50	30	33
		#12	34.7/5	141	211	112	169	94	141	80	121	70	105	56	84	47	70	39	50	30	33
	18ga (.0459")	#12	34.7/7	153	230	123	184	102	153	88	131	77	115	61	92	51	77	39	50	30	33
		#12	34.7/5	109	164	88	131	73	109	63	94	55	82	44	66	36	55	31	47	27	33
	20ga (.0354")	#12	34.7/7	118	177	94	142	79	118	67	101	59	89	47	71	39	59	34	50	30	33
		#12	34.7/5	84	127	67	101	56	84	48	72	42	63	34	51	28	42	24	36	21	32
	22ga (.0294")	#12	34.7/7	98	147	78	118	65	98	56	84	49	74	39	59	33	49	28	42	25	33
		#12	34.7/5	70	105	56	84	47	70	40	60	35	53	28	42	23	35	20	30	18	26
Plywood & OSB	15/32"	#14	34.7/7	127	171	102	137	85	114	73	98	63	86	51	69	42	57	36	49	30	33
		#14	34.7/5	91	122	73	98	60	82	52	70	45	61	36	49	30	41	26	35	23	31
	19/32"	#14	34.7/7	161	217	129	174	107	145	92	124	80	108	64	87	53	72	39	50	30	33
		#14	34.7/5	115	155	92	124	77	103	66	89	57	77	46	62	38	52	33	44	29	33
	23/32"	#14	34.7/7	195	263	156	210	130	175	111	150	97	131	77	105	53	79	39	50	30	33
		#14	34.7/5	139	188	111	150	93	125	79	107	69	94	56	75	46	63	39	50	30	33
Lumber (DFL)	1" min	#9	34.7/7	235	317	188	254	157	211	134	181	117	158	77	122	53	79	39	50	30	33
		#9	34.7/5	168	226	134	181	112	151	96	129	84	113	67	91	53	75	39	50	30	33
		#14	34.7/7	321	433	257	347	213	289	157	248	120	190	77	122	53	79	39	50	30	33
		#14	34.7/5	229	310	183	248	153	206	131	177	115	155	77	122	53	79	39	50	30	33

Note: Load table above based on 34.7” installation coverage. Values acceptable for use (conservative) for 32” installation coverage.

TABLE 10.6 - Outward (Negative) Uniform Allowable Loads (No. 22 gauge Nu-Wave Corrugated):

Nu-Wave Corrugated, 22ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft^2)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	34.7/7	579	868	385	611	267	424	196	312	150	238	96	153	67	95	49	60	38	40
		#12	34.7/5	413	620	331	496	267	413	196	312	150	238	96	153	67	95	49	60	38	40
	12ga (.1050")	#12	34.7/7	506	759	385	607	267	424	196	312	150	238	96	153	67	95	49	60	38	40
		#12	34.7/5	361	542	289	434	241	361	196	310	150	238	96	153	67	95	49	60	38	40
	14ga (.0700")	#12	34.7/7	337	506	270	405	225	337	193	289	150	238	96	153	67	95	49	60	38	40
		#12	34.7/5	241	361	193	289	161	241	138	207	120	181	96	145	67	95	49	60	38	40
	16ga (.0590")	#12	34.7/7	284	426	227	341	190	284	162	244	142	213	96	153	67	95	49	60	38	40
		#12	34.7/5	203	305	162	244	135	203	116	174	102	152	81	122	67	95	49	60	38	40
	18ga (.0459")	#12	34.7/7	221	332	177	265	147	221	126	190	111	166	88	133	67	95	49	60	38	40
		#12	34.7/5	158	237	126	190	105	158	90	135	79	118	63	95	53	79	45	60	38	40
	20ga (.0354")	#12	34.7/7	171	256	136	205	114	171	97	146	85	128	68	102	57	85	49	60	38	40
		#12	34.7/5	122	183	97	146	81	122	70	104	61	91	49	73	41	61	35	52	30	40
	22ga (.0294")	#12	34.7/7	142	213	113	170	94	142	81	121	71	106	57	85	47	71	40	60	35	40
		#12	34.7/5	101	152	81	121	67	101	58	87	51	76	40	61	34	51	29	43	25	38
Steel (Gr 33 min.)	≥10ga (.1350")	#12	34.7/7	450	676	360	540	267	424	196	312	150	238	96	153	67	95	49	60	38	40
		#12	34.7/5	322	483	257	386	214	322	184	276	150	238	96	153	67	95	49	60	38	40
	12ga (.1050")	#12	34.7/7	350	525	280	420	234	350	196	300	150	238	96	153	67	95	49	60	38	40
		#12	34.7/5	250	375	200	300	167	250	143	214	125	188	96	150	67	95	49	60	38	40
	14ga (.0700")	#12	34.7/7	234	350	187	280	156	234	133	200	117	175	93	140	67	95	49	60	38	40
		#12	34.7/5	167	250	133	200	111	167	95	143	83	125	67	100	56	83	48	60	38	40
	16ga (.0590")	#12	34.7/7	197	295	157	236	131	197	112	169	98	148	79	118	66	95	49	60	38	40
		#12	34.7/5	141	211	112	169	94	141	80	121	70	105	56	84	47	70	40	60	35	40
	18ga (.0459")	#12	34.7/7	153	230	123	184	102	153	88	131	77	115	61	92	51	77	44	60	38	40
		#12	34.7/5	109	164	88	131	73	109	63	94	55	82	44	66	36	55	31	47	27	40
	20ga (.0354")	#12	34.7/7	118	177	94	142	79	118	67	101	59	89	47	71	39	59	34	51	30	40
		#12	34.7/5	84	127	67	101	56	84	48	72	42	63	34	51	28	42	24	36	21	32
	22ga (.0294")	#12	34.7/7	98	147	78	118	65	98	56	84	49	74	39	59	33	49	28	42	25	37
		#12	34.7/5	70	105	56	84	47	70	40	60	35	53	28	42	23	35	20	30	18	26
Plywood & OSB	15/32"	#14	34.7/7	127	171	102	137	85	114	73	98	63	86	51	69	42	57	36	49	32	40
		#14	34.7/5	91	122	73	98	60	82	52	70	45	61	36	49	30	41	26	35	23	31
	19/32"	#14	34.7/7	161	217	129	174	107	145	92	124	80	108	64	87	54	72	46	60	38	40
		#14	34.7/5	115	155	92	124	77	103	66	89	57	77	46	62	38	52	33	44	29	39
	23/32"	#14	34.7/7	195	263	156	210	130	175	111	150	97	131	78	105	65	88	49	60	38	40
		#14	34.7/5	139	188	111	150	93	125	79	107	69	94	56	75	46	63	40	54	35	40
Lumber (DFL)	1" min	#9	34.7/7	235	317	188	254	157	211	134	181	117	158	94	127	67	95	49	60	38	40
		#9	34.7/5	168	226	134	181	112	151	96	129	84	113	67	91	56	75	48	60	38	40
		#14	34.7/7	321	433	257	347	214	289	183	248	150	217	96	153	67	95	49	60	38	40
		#14	34.7/5	229	310	183	248	153	206	131	177	115	155	92	124	67	95	49	60	38	40

Note: Load table above based on 34.7" installation coverage. Values acceptable for use (conservative) for 32" installation coverage.

TABLE 10.7 - Outward (Negative) Uniform Allowable Loads (No. 20 gauge Nu-Wave Corrugated):

Nu-Wave Corrugated, 20ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	34.7/7	574	884	367	582	255	404	187	297	143	228	92	146	64	101	47	74	36	50
		#12	34.7/5	421	632	337	505	255	404	187	297	143	228	92	146	64	101	47	74	36	50
	12ga (.1050")	#12	34.7/7	506	759	367	582	255	404	187	297	143	228	92	146	64	101	47	74	36	50
		#12	34.7/5	361	542	289	434	241	361	187	297	143	228	92	146	64	101	47	74	36	50
	14ga (.0700")	#12	34.7/7	337	506	270	405	225	337	187	289	143	228	92	146	64	101	47	74	36	50
		#12	34.7/5	241	361	193	289	161	241	138	207	120	181	92	145	64	101	47	74	36	50
	16ga (.0590")	#12	34.7/7	284	426	227	341	190	284	162	244	142	213	92	146	64	101	47	74	36	50
		#12	34.7/5	203	305	162	244	135	203	116	174	102	152	81	122	64	101	47	74	36	50
	18ga (.0459")	#12	34.7/7	221	332	177	265	147	221	126	190	111	166	88	133	64	101	47	74	36	50
		#12	34.7/5	158	237	126	190	105	158	90	135	79	118	63	95	53	79	45	68	36	50
	20ga (.0354")	#12	34.7/7	171	256	136	205	114	171	97	146	85	128	68	102	57	85	47	73	36	50
		#12	34.7/5	122	183	97	146	81	122	70	104	61	91	49	73	41	61	35	52	30	46
	22ga (.0294")	#12	34.7/7	142	213	113	170	94	142	81	121	71	106	57	85	47	71	40	61	35	50
		#12	34.7/5	101	152	81	121	67	101	58	87	51	76	40	61	34	51	29	43	25	38
Steel (Gr 33 min.)	≥10ga (.1350")	#12	34.7/7	450	676	360	540	255	404	187	297	143	228	92	146	64	101	47	74	36	50
		#12	34.7/5	322	483	257	386	214	322	184	276	143	228	92	146	64	101	47	74	36	50
	12ga (.1050")	#12	34.7/7	350	525	280	420	234	350	187	297	143	228	92	146	64	101	47	74	36	50
		#12	34.7/5	250	375	200	300	167	250	143	214	125	188	92	146	64	101	47	74	36	50
	14ga (.0700")	#12	34.7/7	234	350	187	280	156	234	133	200	117	175	92	140	64	101	47	74	36	50
		#12	34.7/5	167	250	133	200	111	167	95	143	83	125	67	100	56	83	47	71	36	50
	16ga (.0590")	#12	34.7/7	197	295	157	236	131	197	112	169	98	148	79	118	64	98	47	74	36	50
		#12	34.7/5	141	211	112	169	94	141	80	121	70	105	56	84	47	70	40	60	35	50
	18ga (.0459")	#12	34.7/7	153	230	123	184	102	153	88	131	77	115	61	92	51	77	44	66	36	50
		#12	34.7/5	109	164	88	131	73	109	63	94	55	82	44	66	36	55	31	47	27	41
	20ga (.0354")	#12	34.7/7	118	177	94	142	79	118	67	101	59	89	47	71	39	59	34	51	30	44
		#12	34.7/5	84	127	67	101	56	84	48	72	42	63	34	51	28	42	24	36	21	32
	22ga (.0294")	#12	34.7/7	98	147	78	118	65	98	56	84	49	74	39	59	33	49	28	42	25	37
		#12	34.7/5	70	105	56	84	47	70	40	60	35	53	28	42	23	35	20	30	18	26
Plywood & OSB	15/32"	#14	34.7/7	127	171	102	137	85	114	73	98	63	86	51	69	42	57	36	49	32	43
		#14	34.7/5	91	122	73	98	60	82	52	70	45	61	36	49	30	41	26	35	23	31
	19/32"	#14	34.7/7	161	217	129	174	107	145	92	124	80	108	64	87	54	72	46	62	36	50
		#14	34.7/5	115	155	92	124	77	103	66	89	57	77	46	62	38	52	33	44	29	39
	23/32"	#14	34.7/7	195	263	156	210	130	175	111	150	97	131	78	105	64	88	47	74	36	50
		#14	34.7/5	139	188	111	150	93	125	79	107	69	94	56	75	46	63	40	54	35	47
Lumber (DFL)	1" min	#9	34.7/7	235	317	188	254	157	211	134	181	117	158	92	127	64	101	47	74	36	50
		#9	34.7/5	168	226	134	181	112	151	96	129	84	113	67	91	56	75	47	65	36	50
		#14	34.7/7	321	433	257	347	214	289	183	248	143	217	92	146	64	101	47	74	36	50
		#14	34.7/5	229	310	183	248	153	206	131	177	115	155	92	124	64	101	47	74	36	50

Note: Load table above based on 34.7" installation coverage. Values acceptable for use (conservative) for 32" installation coverage.

TABLE 10.8 - Shear and Flexibility (No. 26 gauge Nu-Wave Corrugated, 34.7/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
34.67/5	26 ga	6"	q_a q_f	442 711	418 673	401 645	387 623	376 605	360 579	315 503	231 370	177 283
			F	21.2 -1.4R	21.7 -1.3R	22 -1.3R	22.2 -1.2R	22.4 -1.1R	22.7 -1R	22.9 -0.9R	23.1 -0.8R	23.2 -0.7R
		12"	q_a q_f	374 603	358 577	315 507	310 500	280 451	257 414	241 388	230 370	177 283
			F	24.3 -2.8R	25.3 -2.9R	26.1 -2.9R	26.8 -2.9R	27.4 -2.8R	28.3 -2.7R	28.9 -2.5R	29.4 -2.4R	29.8 -2.2R
		18"	q_a q_f	374 603	321 517	279 449	280 450	251 404	233 374	198 319	192 309	177 283
			F	26.1 -3.8R	27.6 -4.1R	28.9 -4.2R	30 -4.3R	30.9 -4.4R	32.4 -4.3R	33.5 -4.2R	34.5 -4.1R	35.2 -3.9R
		24"	q_a q_f	330 531	321 517	279 449	246 396	219 353	207 333	175 282	172 277	150 242
			F	27.3 -4.5R	29.2 -5R	30.9 -5.3R	32.3 -5.5R	33.5 -5.7R	35.6 -5.8R	37.2 -5.8R	38.6 -5.7R	39.7 -5.6R
		30"	q_a q_f	330 531	279 448	279 449	246 396	219 353	179 289	175 282	150 241	150 242
			F	28.2 -5R	30.4 -5.7R	32.3 -6.1R	34 -6.5R	35.6 -6.7R	38.1 -7.1R	40.3 -7.2R	42 -7.3R	43.5 -7.2R
		36"	q_a q_f	330 531	279 448	240 386	246 396	219 353	179 289	150 241	150 241	130 210
			F	28.8 -5.4R	31.3 -6.2R	33.5 -6.8R	35.4 -7.3R	37.2 -7.6R	40.2 -8.2R	42.8 -8.5R	44.9 -8.7R	46.7 -8.7R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 10.9 - Shear and Flexibility (No. 26 gauge Nu-Wave Corrugated, 34.7/7):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
34.67/7	26 ga	6"	q_a q_f	549 885	510 822	481 775	459 739	442 711	416 669	315 503	231 370	177 283
			F	20.6 -1.5R	21.1 -1.4R	21.4 -1.4R	21.7 -1.3R	22 -1.3R	22.3 -1.2R	22.6 -1.1R	22.8 -1R	22.9 -0.9R
		12"	q_a q_f	465 748	436 701	378 608	367 591	328 528	296 477	274 441	231 370	177 283
			F	22.9 -2.6R	24 -2.8R	24.8 -2.9R	25.5 -2.9R	26.1 -2.9R	27.1 -2.9R	27.8 -2.8R	28.4 -2.6R	28.9 -2.5R
		18"	q_a q_f	465 748	392 632	338 544	332 535	296 476	269 434	228 367	218 351	177 283
			F	24.2 -3.4R	25.6 -3.7R	26.9 -4R	27.9 -4.1R	28.9 -4.2R	30.4 -4.3R	31.7 -4.4R	32.7 -4.3R	33.5 -4.2R
		24"	q_a q_f	414 666	392 632	338 544	295 476	262 422	242 389	203 327	196 315	170 274
			F	25 -3.9R	26.7 -4.4R	28.3 -4.8R	29.6 -5.1R	30.8 -5.3R	32.9 -5.6R	34.6 -5.7R	36 -5.8R	37.2 -5.8R
		30"	q_a q_f	414 666	345 556	338 544	295 476	262 422	213 343	203 327	173 278	170 274
			F	25.6 -4.2R	27.5 -4.8R	29.3 -5.4R	30.8 -5.8R	32.3 -6.1R	34.7 -6.6R	36.8 -6.9R	38.6 -7.1R	40.2 -7.2R
		36"	q_a q_f	414 666	345 556	295 475	295 476	262 422	213 343	176 284	173 278	151 242
			F	26 -4.5R	28.1 -5.2R	30 -5.8R	31.8 -6.3R	33.4 -6.8R	36.2 -7.4R	38.7 -7.9R	40.8 -8.3R	42.7 -8.5R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 10.10 - Shear and Flexibility (No. 24 gauge Nu-Wave Corrugated, 34.7/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
34.67/5	24 ga	6"	q_a q_f	487 784	465 749	448 722	435 701	425 684	410 660	399 642	361 578	276 442
			F	16.5 -1.2R	16.9 -1.2R	17.2 -1.1R	17.4 -1R	17.6 -1R	17.9 -0.9R	18 -0.8R	18.2 -0.7R	18.3 -0.6R
		12"	q_a q_f	411 662	398 640	351 566	349 562	316 509	293 472	277 446	265 427	256 412
			F	19.2 -2.4R	20.1 -2.5R	20.8 -2.5R	21.4 -2.5R	21.9 -2.4R	22.6 -2.3R	23.2 -2.2R	23.6 -2.1R	24 -1.9R
		18"	q_a q_f	411 662	354 571	309 498	313 504	281 453	264 425	225 363	220 354	216 348
			F	20.8 -3.3R	22.1 -3.5R	23.2 -3.7R	24.1 -3.7R	24.9 -3.8R	26.2 -3.7R	27.2 -3.7R	28 -3.5R	28.6 -3.4R
		24"	q_a q_f	359 578	354 571	309 498	273 440	244 393	233 375	198 319	196 316	174 279
			F	21.8 -3.9R	23.5 -4.3R	24.9 -4.6R	26.1 -4.8R	27.2 -4.9R	29 -5R	30.4 -5R	31.5 -5R	32.5 -4.9R
		30"	q_a q_f	359 578	304 489	309 498	273 440	244 393	200 322	198 319	172 276	174 279
			F	22.6 -4.4R	24.5 -4.9R	26.1 -5.3R	27.6 -5.6R	28.9 -5.8R	31.2 -6.1R	33 -6.2R	34.5 -6.3R	35.8 -6.2R
		36"	q_a q_f	359 578	304 489	262 421	273 440	244 393	200 322	169 272	172 276	149 241
			F	23.1 -4.7R	25.2 -5.3R	27.1 -5.9R	28.8 -6.3R	30.3 -6.6R	33 -7.1R	35.1 -7.3R	37 -7.5R	38.6 -7.5R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 10.11 - Shear and Flexibility (No. 24 gauge Nu-Wave Corrugated, 34.7/7):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
34.67/7	24 ga	6"	q_a q_f	608 979	570 917	541 872	519 836	502 809	477 768	459 739	361 578	276 442
			F	16 -1.3R	16.4 -1.2R	16.7 -1.2R	17 -1.1R	17.2 -1.1R	17.5 -1R	17.7 -0.9R	17.9 -0.8R	18 -0.8R
		12"	q_a q_f	510 821	483 778	421 677	412 664	369 595	337 542	314 505	297 478	276 442
			F	18 -2.3R	18.9 -2.4R	19.6 -2.5R	20.3 -2.5R	20.8 -2.5R	21.6 -2.5R	22.3 -2.4R	22.8 -2.3R	23.2 -2.2R
		18"	q_a q_f	510 821	432 696	373 600	371 597	331 532	304 490	258 415	249 400	241 389
			F	19.1 -2.9R	20.4 -3.2R	21.4 -3.4R	22.3 -3.6R	23.2 -3.7R	24.5 -3.8R	25.6 -3.8R	26.4 -3.7R	27.2 -3.7R
		24"	q_a q_f	449 723	432 696	373 600	327 526	290 467	271 436	229 368	223 360	195 314
			F	19.8 -3.4R	21.3 -3.8R	22.6 -4.1R	23.8 -4.4R	24.8 -4.6R	26.6 -4.8R	28.1 -5R	29.3 -5R	30.3 -5R
		30"	q_a q_f	449 723	375 604	373 600	327 526	290 467	236 380	229 368	196 316	195 314
			F	20.3 -3.7R	22 -4.2R	23.5 -4.6R	24.8 -5R	26.1 -5.3R	28.2 -5.7R	30 -6R	31.6 -6.1R	32.9 -6.2R
		36"	q_a q_f	449 723	375 604	321 517	327 526	290 467	236 380	197 318	196 316	171 275
			F	20.7 -3.9R	22.5 -4.5R	24.1 -5R	25.7 -5.5R	27 -5.8R	29.5 -6.4R	31.6 -6.8R	33.5 -7.1R	35.1 -7.3R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 10.12 - Shear and Flexibility (No. 22 gauge Nu-Wave Corrugated, 34.7/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
34.67/5	22 ga	6"	q_a q_f	623 1003	610 983	592 952	577 929	565 910	548 882	535 862	494 791	379 606
			F	13.6 -1.1R	13.9 -1R	14.2 -1R	14.4 -0.9R	14.5 -0.9R	14.7 -0.8R	14.9 -0.7R	15 -0.6R	15.1 -0.6R
		12"	q_a q_f	535 862	522 841	464 747	464 747	421 678	393 633	374 602	359 578	348 560
			F	15.9 -2.2R	16.7 -2.2R	17.4 -2.2R	17.9 -2.2R	18.3 -2.2R	19 -2.1R	19.5 -1.9R	19.9 -1.8R	20.2 -1.7R
		18"	q_a q_f	535 862	464 747	406 654	415 668	374 602	353 569	303 487	297 479	293 472
			F	17.3 -2.9R	18.5 -3.1R	19.5 -3.3R	20.3 -3.3R	21 -3.3R	22.2 -3.3R	23 -3.2R	23.7 -3.1R	24.3 -3R
		24"	q_a q_f	464 747	464 747	406 654	359 578	321 517	310 500	264 425	264 425	234 376
			F	18.3 -3.5R	19.7 -3.8R	21 -4.1R	22.1 -4.2R	23 -4.3R	24.6 -4.4R	25.9 -4.5R	26.9 -4.4R	27.8 -4.3R
		30"	q_a q_f	464 747	393 633	406 654	359 578	321 517	264 425	264 425	229 369	234 376
			F	18.9 -3.9R	20.6 -4.3R	22.1 -4.7R	23.4 -5R	24.6 -5.2R	26.6 -5.4R	28.2 -5.5R	29.5 -5.6R	30.7 -5.6R
		36"	q_a q_f	464 747	393 633	339 546	359 578	321 517	264 425	224 360	229 369	202 325
			F	19.4 -4.2R	21.3 -4.7R	23 -5.2R	24.5 -5.6R	25.8 -5.9R	28.2 -6.3R	30.1 -6.5R	31.8 -6.6R	33.2 -6.7R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 10.13 - Shear and Flexibility (No. 22 gauge Nu-Wave Corrugated, 34.7/7):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
34.67/7	22 ga	6"	q_a q_f	796 1282	751 1210	718 1156	692 1115	672 1082	642 1034	621 1000	494 791	379 606
			F	13.1 -1.1R	13.5 -1.1R	13.8 -1.1R	14 -1R	14.2 -1R	14.4 -0.9R	14.6 -0.8R	14.8 -0.7R	14.9 -0.7R
		12"	q_a q_f	664 1069	635 1023	555 893	547 881	492 792	451 727	423 681	403 648	379 606
			F	14.9 -2R	15.7 -2.1R	16.3 -2.2R	16.9 -2.2R	17.3 -2.2R	18.1 -2.2R	18.7 -2.1R	19.1 -2R	19.5 -1.9R
		18"	q_a q_f	664 1069	565 909	488 786	490 789	438 705	406 654	345 556	335 539	327 526
			F	15.9 -2.6R	17 -2.9R	17.9 -3R	18.7 -3.2R	19.5 -3.2R	20.6 -3.3R	21.6 -3.3R	22.4 -3.3R	23 -3.2R
		24"	q_a q_f	579 932	565 909	488 786	428 689	381 613	359 579	304 489	299 482	264 425
			F	16.5 -3R	17.8 -3.4R	19 -3.6R	20 -3.9R	20.9 -4R	22.5 -4.3R	23.8 -4.4R	24.9 -4.5R	25.8 -4.5R
		30"	q_a q_f	579 932	485 781	488 786	428 689	381 613	310 500	304 489	263 423	264 425
			F	16.9 -3.2R	18.4 -3.7R	19.8 -4.1R	21 -4.4R	22.1 -4.7R	24 -5.1R	25.6 -5.3R	26.9 -5.5R	28.1 -5.5R
		36"	q_a q_f	579 932	485 781	415 668	428 689	381 613	310 500	261 421	263 423	229 369
			F	17.2 -3.4R	18.9 -4R	20.3 -4.5R	21.7 -4.9R	22.9 -5.2R	25.1 -5.7R	27 -6.1R	28.6 -6.3R	30 -6.5R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 10.14 - Shear and Flexibility (No. 20 gauge Nu-Wave Corrugated, 34.7/5):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
34.67/5	20 ga	6"	q_a q_f	635 1022	635 1022	621 1001	608 979	597 961	581 935	569 917	561 903	514 823
			F	11.7 -1R	12 -0.9R	12.2 -0.9R	12.4 -0.8R	12.5 -0.8R	12.7 -0.7R	12.9 -0.6R	13 -0.6R	13.1 -0.5R
		12"	q_a q_f	558 898	548 882	488 786	490 789	447 719	419 675	400 644	386 621	375 604
			F	13.8 -2R	14.5 -2R	15.1 -2R	15.6 -2R	16 -2R	16.6 -1.9R	17 -1.8R	17.4 -1.7R	17.7 -1.6R
		18"	q_a q_f	558 898	485 781	426 685	438 705	395 637	376 606	323 520	319 513	316 508
			F	15.1 -2.7R	16.2 -2.9R	17 -3R	17.8 -3R	18.4 -3R	19.5 -3R	20.3 -3R	20.9 -2.9R	21.4 -2.8R
		24"	q_a q_f	480 774	485 781	426 685	378 608	338 544	329 530	281 452	282 455	250 403
			F	15.9 -3.2R	17.3 -3.5R	18.4 -3.7R	19.4 -3.9R	20.3 -4R	21.7 -4.1R	22.9 -4.1R	23.8 -4R	24.6 -3.9R
		30"	q_a q_f	480 774	408 657	426 685	378 608	338 544	279 448	281 452	244 393	250 403
			F	16.5 -3.5R	18.1 -4R	19.4 -4.3R	20.6 -4.5R	21.7 -4.7R	23.5 -4.9R	25 -5.1R	26.2 -5.1R	27.2 -5.1R
		36"	q_a q_f	480 774	408 657	353 568	378 608	338 544	279 448	236 380	244 393	216 347
			F	17 -3.8R	18.7 -4.3R	20.2 -4.7R	21.6 -5.1R	22.8 -5.3R	24.9 -5.7R	26.7 -5.9R	28.2 -6R	29.5 -6.1R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 10.15 - Shear and Flexibility (No. 20 gauge Nu-Wave Corrugated, 34.7/7):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
34.67/7	20 ga	6"	q_a q_f	832 1340	790 1271	758 1220	733 1181	714 1150	685 1104	665 1071	650 1047	514 823
			F	11.2 -1R	11.6 -1R	11.8 -1R	12 -0.9R	12.2 -0.9R	12.4 -0.8R	12.6 -0.7R	12.8 -0.7R	12.9 -0.6R
		12"	q_a q_f	692 1113	666 1073	584 940	579 933	521 839	481 775	453 730	433 697	417 672
			F	12.9 -1.8R	13.6 -2R	14.2 -2R	14.7 -2R	15.1 -2R	15.8 -2R	16.3 -1.9R	16.7 -1.9R	17 -1.8R
		18"	q_a q_f	692 1113	590 950	511 823	517 832	463 745	432 696	367 592	358 577	351 565
			F	13.8 -2.4R	14.8 -2.6R	15.6 -2.8R	16.4 -2.9R	17 -3R	18.1 -3R	19 -3R	19.7 -3R	20.3 -3R
		24"	q_a q_f	599 965	590 950	511 823	449 723	399 643	380 612	322 518	319 514	281 453
			F	14.3 -2.7R	15.5 -3.1R	16.6 -3.3R	17.5 -3.5R	18.4 -3.7R	19.8 -3.9R	21 -4R	22 -4.1R	22.8 -4.1R
		30"	q_a q_f	599 965	503 809	511 823	449 723	399 643	326 525	322 518	279 449	281 453
			F	14.7 -3R	16.1 -3.4R	17.3 -3.7R	18.4 -4R	19.4 -4.3R	21.1 -4.6R	22.6 -4.8R	23.8 -5R	24.9 -5R
		36"	q_a q_f	599 965	503 809	431 693	449 723	399 643	326 525	275 443	279 449	244 393
			F	15 -3.1R	16.5 -3.6R	17.8 -4.1R	19 -4.4R	20.2 -4.7R	22.2 -5.2R	23.9 -5.5R	25.4 -5.8R	26.7 -5.9R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

11.0 PBR

Figure 11.1 - Basic Dimensions and Panel Attachment (PBR):

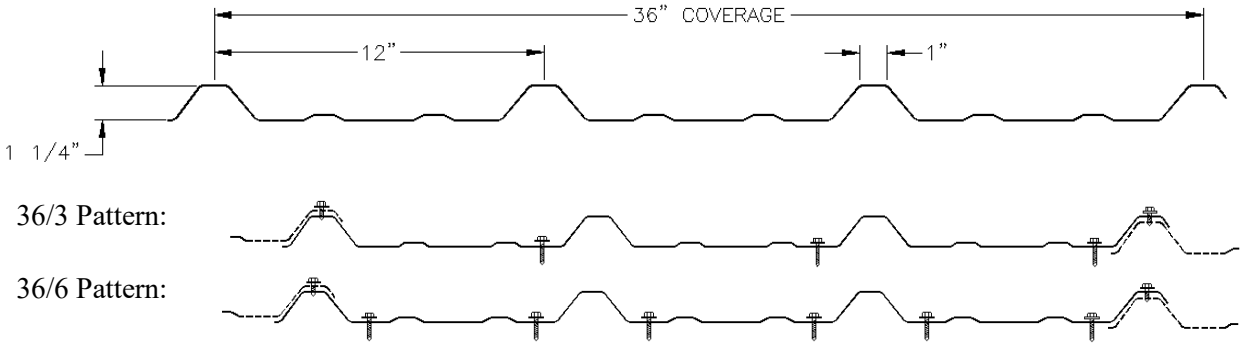


TABLE 11.1 - Section Properties (PBR):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
26	0.85	0.0173	80	82	0.2499	0.0487	0.33	0.0516	0.1482
24	1.14	0.0232	50	65	0.3351	0.0667	0.33	0.0690	0.1971
22	1.44	0.0294	50	65	0.4246	0.0833	0.33	0.0873	0.2473

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative				
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	$I_d = (2I_e+I_g)/3$	
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
26	0.0397	0.0447	0.27	0.0377	0.0350	0.58	0.0457	0.0460	0.0396
24	0.0682	0.0633	0.31	0.0609	0.0517	0.54	0.0629	0.0644	0.0567
22	0.0985	0.0833	0.33	0.0853	0.0700	0.52	0.0807	0.0833	0.0744

TABLE 11.2 - Inward (Positive) Uniform Allowable Loads (PBR):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
26	Single Span	ASD, W/Ω	226	144	100	74	56	36	25	18	14
		LRFD, ϕW	358	229	159	117	90	57	40	29	22
		L/240	-	-	-	70	47	24	14	9	6
		L/180	-	-	-	-	-	32	19	12	8
		L/120	-	-	-	-	-	-	-	18	12
	Double Span	ASD, W/Ω	253	166	117	86	66	43	29	21	17
		LRFD, ϕW	381	250	176	130	100	64	45	33	25
		L/240	-	-	-	-	-	-	-	21	14
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	307	204	144	107	82	53	37	27	21
		LRFD, ϕW	463	307	217	161	124	80	55	41	32
		L/240	-	-	-	-	-	46	26	17	11
		L/180	-	-	-	-	-	-	35	22	15
		L/120	-	-	-	-	-	-	-	-	-
24	Single Span	ASD, W/Ω	304	195	135	99	76	49	34	25	19
		LRFD, ϕW	482	309	214	158	121	77	54	39	30
		L/240	-	-	-	99	66	34	20	12	8
		L/180	-	-	-	-	-	45	26	16	11
		L/120	-	-	-	-	-	-	-	25	17
	Double Span	ASD, W/Ω	301	196	136	100	77	49	35	25	19
		LRFD, ϕW	453	294	205	151	116	74	52	38	29
		L/240	-	-	-	-	-	-	-	-	-
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	370	242	170	125	96	62	43	32	24
		LRFD, ϕW	557	364	255	188	145	93	64	48	37
		L/240	-	-	-	-	-	-	37	23	16
		L/180	-	-	-	-	-	-	-	31	21
		L/120	-	-	-	-	-	-	-	-	-
22	Single Span	ASD, W/Ω	426	273	189	139	106	68	47	35	27
		LRFD, ϕW	676	432	300	221	169	108	75	55	42
		L/240	-	-	-	127	85	44	25	16	11
		L/180	-	-	-	-	-	58	34	21	14
		L/120	-	-	-	-	-	-	-	32	21
	Double Span	ASD, W/Ω	389	252	176	129	100	63	44	33	25
		LRFD, ϕW	585	379	264	195	150	96	67	49	38
		L/240	-	-	-	-	-	-	-	-	-
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	480	312	219	161	124	80	55	41	30
		LRFD, ϕW	722	469	329	243	187	120	83	61	46
		L/240	-	-	-	-	-	-	48	30	20
		L/180	-	-	-	-	-	-	-	40	27
		L/120	-	-	-	-	-	-	-	-	-

TABLE 11.3 - Allowable Reactions at Supports (PBR):

Reactions at Supports based on Web Crippling									
Gauge	Condition	Bearing Length of Webs							
		ASD (Pn/Ω) *(lbs/ft width)*				LRFD (ϕPn) *(lbs/ft width)*			
		1"	1.5"	2"	3"	1"	1.5"	2"	3"
26	End	126	145	161	187	193	222	246	286
	Interior	190	214	235	269	283	319	349	400
24	End	183	209	230	266	280	319	352	408
	Interior	281	314	342	390	418	468	509	579
22	End	285	323	355	409	436	494	543	625
	Interior	444	494	536	606	661	735	797	901

TABLE 11.4 - Outward (Negative) Uniform Allowable Loads (No. 26 gauge PBR):

PBR, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)															
				Attachment Spacing, (ft-in)															
				2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	355	532	241	382	167	265	123	195	94	149	60	96	42	66	31	49	24	37
		#12	36/3	177	266	142	213	118	177	101	152	89	133	60	96	42	66	31	49	24	37
	12ga (.1050")	#12	36/6	355	532	241	382	167	265	123	195	94	149	60	96	42	66	31	49	24	37
		#12	36/3	177	266	142	213	118	177	101	152	89	133	60	96	42	66	31	49	24	37
	14ga (.0700")	#12	36/6	278	418	223	334	167	265	123	195	94	149	60	96	42	66	31	49	24	37
		#12	36/3	139	209	111	167	93	139	80	119	70	104	56	84	42	66	31	49	24	37
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	123	195	94	149	60	96	42	66	31	49	24	37
		#12	36/3	117	176	94	141	78	117	67	101	59	88	47	70	39	59	31	49	24	37
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	104	157	91	137	60	96	42	66	31	49	24	37
		#12	36/3	91	137	73	110	61	91	52	78	46	68	37	55	30	46	26	39	23	34
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	80	121	70	106	56	84	42	66	31	49	24	37
		#12	36/3	70	106	56	84	47	70	40	60	35	53	28	42	23	35	20	30	18	26
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	67	100	58	88	47	70	39	58	31	49	24	37
		#12	36/3	58	88	47	70	39	58	33	50	29	44	23	35	19	29	17	25	15	22
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	355	532	241	382	167	265	123	195	94	149	60	96	42	66	31	49	24	37
		#12	36/3	177	266	142	213	118	177	101	152	89	133	60	96	42	66	31	49	24	37
	12ga (.1050")	#12	36/6	289	434	231	347	167	265	123	195	94	149	60	96	42	66	31	49	24	37
		#12	36/3	145	217	116	174	96	145	83	124	72	108	58	87	42	66	31	49	24	37
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	110	165	94	145	60	96	42	66	31	49	24	37
		#12	36/3	96	145	77	116	64	96	55	83	48	72	39	58	32	48	28	41	24	36
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	93	139	81	122	60	96	42	66	31	49	24	37
		#12	36/3	81	122	65	97	54	81	46	70	41	61	32	49	27	41	23	35	20	30
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	72	108	63	95	51	76	42	63	31	49	24	37
		#12	36/3	63	95	51	76	42	63	36	54	32	47	25	38	21	32	18	27	16	24
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	56	84	49	73	39	58	32	49	28	42	24	37
		#12	36/3	49	73	39	58	32	49	28	42	24	37	19	29	16	24	14	21	12	18
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	46	69	40	61	32	49	27	40	23	35	20	30
		#12	36/3	40	61	32	49	27	40	23	35	20	30	16	24	13	20	12	17	10	15
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	60	81	52	71	42	57	35	47	30	40	24	35
		#14	36/3	52	71	42	57	35	47	30	40	26	35	21	28	17	24	15	20	13	18
	19/32"	#14	36/6	133	179	106	143	88	119	76	102	66	90	53	72	42	60	31	49	24	37
		#14	36/3	66	90	53	72	44	60	38	51	33	45	27	36	22	30	19	26	17	22
	23/32"	#14	36/6	161	217	128	173	107	145	92	124	80	108	60	87	42	66	31	49	24	37
		#14	36/3	80	108	64	87	54	72	46	62	40	54	32	43	27	36	23	31	20	27
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	111	149	94	131	60	96	42	66	31	49	24	37
		#9	36/3	97	131	78	105	65	87	55	75	48	65	39	52	32	44	28	37	24	33
		#14	36/6	265	358	212	286	167	238	123	195	94	149	60	96	42	66	31	49	24	37
		#14	36/3	132	179	106	143	88	119	76	102	66	89	53	72	42	60	31	49	24	37

TABLE 11.5 - Outward (Negative) Uniform Allowable Loads (No. 24 gauge PBR):

PBR, 24ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	377	566	243	386	169	268	124	197	95	151	61	96	42	67	31	49	24	38
		#12	36/3	189	283	151	226	126	189	108	162	94	141	61	96	42	67	31	49	24	38
	12ga (.1050")	#12	36/6	377	566	243	386	169	268	124	197	95	151	61	96	42	67	31	49	24	38
		#12	36/3	189	283	151	226	126	189	108	162	94	141	61	96	42	67	31	49	24	38
	14ga (.0700")	#12	36/6	278	418	223	334	169	268	124	197	95	151	61	96	42	67	31	49	24	38
		#12	36/3	139	209	111	167	93	139	80	119	70	104	56	84	42	67	31	49	24	38
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	124	197	95	151	61	96	42	67	31	49	24	38
		#12	36/3	117	176	94	141	78	117	67	101	59	88	47	70	39	59	31	49	24	38
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	104	157	91	137	61	96	42	67	31	49	24	38
		#12	36/3	91	137	73	110	61	91	52	78	46	68	37	55	30	46	26	39	23	34
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	80	121	70	106	56	84	42	67	31	49	24	38
		#12	36/3	70	106	56	84	47	70	40	60	35	53	28	42	23	35	20	30	18	26
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	67	100	58	88	47	70	39	58	31	49	24	38
		#12	36/3	58	88	47	70	39	58	33	50	29	44	23	35	19	29	17	25	15	22
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	372	558	243	386	169	268	124	197	95	151	61	96	42	67	31	49	24	38
		#12	36/3	186	279	149	223	124	186	106	159	93	139	61	96	42	67	31	49	24	38
	12ga (.1050")	#12	36/6	289	434	231	347	169	268	124	197	95	151	61	96	42	67	31	49	24	38
		#12	36/3	145	217	116	174	96	145	83	124	72	108	58	87	42	67	31	49	24	38
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	110	165	95	145	61	96	42	67	31	49	24	38
		#12	36/3	96	145	77	116	64	96	55	83	48	72	39	58	32	48	28	41	24	36
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	93	139	81	122	61	96	42	67	31	49	24	38
		#12	36/3	81	122	65	97	54	81	46	70	41	61	32	49	27	41	23	35	20	30
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	72	108	63	95	51	76	42	63	31	49	24	38
		#12	36/3	63	95	51	76	42	63	36	54	32	47	25	38	21	32	18	27	16	24
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	56	84	49	73	39	58	32	49	28	42	24	37
		#12	36/3	49	73	39	58	32	49	28	42	24	37	19	29	16	24	14	21	12	18
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	46	69	40	61	32	49	27	40	23	35	20	30
		#12	36/3	40	61	32	49	27	40	23	35	20	30	16	24	13	20	12	17	10	15
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	60	81	52	71	42	57	35	47	30	40	24	35
		#14	36/3	52	71	42	57	35	47	30	40	26	35	21	28	17	24	15	20	13	18
	19/32"	#14	36/6	133	179	106	143	88	119	76	102	66	90	53	72	42	60	31	49	24	38
		#14	36/3	66	90	53	72	44	60	38	51	33	45	27	36	22	30	19	26	17	22
	23/32"	#14	36/6	161	217	128	173	107	145	92	124	80	108	61	87	42	67	31	49	24	38
		#14	36/3	80	108	64	87	54	72	46	62	40	54	32	43	27	36	23	31	20	27
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	111	149	95	131	61	96	42	67	31	49	24	38
		#9	36/3	97	131	78	105	65	87	55	75	48	65	39	52	32	44	28	37	24	33
		#14	36/6	265	358	212	286	169	238	124	197	95	151	61	96	42	67	31	49	24	38
		#14	36/3	132	179	106	143	88	119	76	102	66	89	53	72	42	60	31	49	24	38

TABLE 11.6 - Outward (Negative) Uniform Allowable Loads (No. 22 gauge PBR):

PBR, 22ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	478	717	341	540	236	375	174	276	133	211	85	135	59	94	43	69	33	53
		#12	36/3	239	358	191	287	159	239	137	205	119	179	85	135	59	94	43	69	33	53
	12ga (.1050")	#12	36/6	418	627	334	501	236	375	174	276	133	211	85	135	59	94	43	69	33	53
		#12	36/3	209	313	167	251	139	209	119	179	104	157	84	125	59	94	43	69	33	53
	14ga (.0700")	#12	36/6	278	418	223	334	186	278	159	239	133	209	85	135	59	94	43	69	33	53
		#12	36/3	139	209	111	167	93	139	80	119	70	104	56	84	46	70	40	60	33	52
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	134	201	117	176	85	135	59	94	43	69	33	53
		#12	36/3	117	176	94	141	78	117	67	101	59	88	47	70	39	59	34	50	29	44
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	104	157	91	137	73	110	59	91	43	69	33	53
		#12	36/3	91	137	73	110	61	91	52	78	46	68	37	55	30	46	26	39	23	34
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	80	121	70	106	56	84	47	70	40	60	33	53
		#12	36/3	70	106	56	84	47	70	40	60	35	53	28	42	23	35	20	30	18	26
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	67	100	58	88	47	70	39	58	33	50	29	44
		#12	36/3	58	88	47	70	39	58	33	50	29	44	23	35	19	29	17	25	15	22
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	372	558	297	446	236	372	174	276	133	211	85	135	59	94	43	69	33	53
		#12	36/3	186	279	149	223	124	186	106	159	93	139	74	112	59	93	43	69	33	53
	12ga (.1050")	#12	36/6	289	434	231	347	193	289	165	248	133	211	85	135	59	94	43	69	33	53
		#12	36/3	145	217	116	174	96	145	83	124	72	108	58	87	48	72	41	62	33	53
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	110	165	96	145	77	116	59	94	43	69	33	53
		#12	36/3	96	145	77	116	64	96	55	83	48	72	39	58	32	48	28	41	24	36
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	93	139	81	122	65	97	54	81	43	69	33	53
		#12	36/3	81	122	65	97	54	81	46	70	41	61	32	49	27	41	23	35	20	30
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	72	108	63	95	51	76	42	63	36	54	32	47
		#12	36/3	63	95	51	76	42	63	36	54	32	47	25	38	21	32	18	27	16	24
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	56	84	49	73	39	58	32	49	28	42	24	37
		#12	36/3	49	73	39	58	32	49	28	42	24	37	19	29	16	24	14	21	12	18
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	46	69	40	61	32	49	27	40	23	35	20	30
		#12	36/3	40	61	32	49	27	40	23	35	20	30	16	24	13	20	12	17	10	15
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	60	81	52	71	42	57	35	47	30	40	26	35
		#14	36/3	52	71	42	57	35	47	30	40	26	35	21	28	17	24	15	20	13	18
	19/32"	#14	36/6	133	179	106	143	88	119	76	102	66	90	53	72	44	60	38	51	33	45
		#14	36/3	66	90	53	72	44	60	38	51	33	45	27	36	22	30	19	26	17	22
	23/32"	#14	36/6	161	217	128	173	107	145	92	124	80	108	64	87	54	72	43	62	33	53
		#14	36/3	80	108	64	87	54	72	46	62	40	54	32	43	27	36	23	31	20	27
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	111	149	97	131	78	105	59	87	43	69	33	53
		#9	36/3	97	131	78	105	65	87	55	75	48	65	39	52	32	44	28	37	24	33
		#14	36/6	265	358	212	286	177	238	151	204	132	179	85	135	59	94	43	69	33	53
		#14	36/3	132	179	106	143	88	119	76	102	66	89	53	72	44	60	38	51	33	45

TABLE 11.7 - Shear and Flexibility (No. 26 gauge PBR, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/3	26 ga	6"	q_a q_f	278 447	271 437	267 429	263 423	260 419	256 412	253 408	251 405	250 402
			F	20 -1.1R	20.3 -0.9R	20.5 -0.8R	20.7 -0.8R	20.8 -0.7R	20.9 -0.6R	21.1 -0.5R	21.1 -0.5R	21.2 -0.4R
		12"	q_a q_f	220 355	224 361	199 320	205 330	187 301	179 288	174 280	170 274	167 269
			F	24.9 -2.7R	25.7 -2.6R	26.3 -2.4R	26.8 -2.3R	27.2 -2.1R	27.7 -1.9R	28.1 -1.7R	28.4 -1.5R	28.7 -1.4R
		18"	q_a q_f	220 355	190 305	165 266	178 286	160 258	157 253	135 217	137 220	138 222
			F	28.3 -4.2R	29.8 -4.2R	30.9 -4.1R	31.7 -3.9R	32.4 -3.8R	33.5 -3.5R	34.3 -3.2R	34.9 -3R	35.4 -2.7R
		24"	q_a q_f	175 281	190 305	165 266	146 235	130 209	133 214	110 177	115 186	100 162
			F	30.9 -5.5R	32.9 -5.6R	34.5 -5.6R	35.8 -5.5R	36.9 -5.4R	38.5 -5.1R	39.7 -4.8R	40.7 -4.5R	41.5 -4.3R
		30"	q_a q_f	175 281	146 235	165 266	146 235	130 209	102 164	110 177	93 149	100 162
			F	33 -6.5R	35.5 -6.8R	37.5 -7R	39.2 -7R	40.6 -7R	42.8 -6.8R	44.6 -6.5R	45.9 -6.2R	47 -5.9R
		36"	q_a q_f	175 281	146 235	124 199	146 235	130 209	102 164	83 134	93 149	81 130
			F	34.6 -7.4R	37.5 -7.9R	40 -8.2R	42 -8.4R	43.8 -8.4R	46.6 -8.3R	48.8 -8.1R	50.6 -7.8R	52 -7.5R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 11.8 - Shear and Flexibility (No. 26 gauge PBR, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/6	26 ga	6"	q_a q_f	441 710	416 670	398 640	384 619	374 602	358 577	348 560	340 547	298 477
			F	18.9 -1.4R	19.3 -1.3R	19.6 -1.2R	19.8 -1.1R	20 -1.1R	20.3 -0.9R	20.5 -0.8R	20.7 -0.8R	20.8 -0.7R
		12"	q_a q_f	349 562	338 544	292 470	291 469	260 419	240 387	227 365	217 349	209 337
			F	21.9 -2.7R	22.9 -2.8R	23.7 -2.8R	24.3 -2.8R	24.9 -2.7R	25.7 -2.6R	26.3 -2.4R	26.8 -2.3R	27.2 -2.1R
		18"	q_a q_f	349 562	292 470	250 402	256 412	227 366	213 343	176 284	173 278	170 274
			F	23.7 -3.7R	25.2 -4R	26.4 -4.1R	27.5 -4.2R	28.3 -4.2R	29.8 -4.2R	30.9 -4.1R	31.7 -3.9R	32.4 -3.8R
		24"	q_a q_f	293 471	292 470	250 402	218 350	190 306	182 293	150 242	150 241	130 210
			F	24.9 -4.4R	26.8 -4.8R	28.4 -5.1R	29.7 -5.3R	30.9 -5.5R	32.9 -5.6R	34.5 -5.6R	35.8 -5.5R	36.9 -5.4R
		30"	q_a q_f	293 471	241 389	250 402	218 350	190 306	150 242	150 242	127 205	130 210
			F	25.8 -4.9R	27.9 -5.5R	29.8 -6R	31.5 -6.3R	33 -6.5R	35.5 -6.8R	37.5 -7R	39.2 -7R	40.6 -7R
		36"	q_a q_f	293 471	241 389	204 329	218 350	190 306	150 242	124 199	127 205	111 178
			F	26.4 -5.3R	28.8 -6.1R	31 -6.6R	32.9 -7.1R	34.6 -7.4R	37.5 -7.9R	40 -8.2R	42 -8.4R	43.8 -8.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 11.9 - Shear and Flexibility (No. 24 gauge PBR, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)								
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/3	24 ga	6"	q_a q_f	308 495	302 486	298 480	295 475	292 471	289 465	286 461	285 458	283 456
			F	15.8 -0.9R	16 -0.8R	16.2 -0.7R	16.3 -0.7R	16.4 -0.6R	16.6 -0.5R	16.7 -0.4R	16.7 -0.4R	16.8 -0.4R
		12"	q_a q_f	247 397	253 407	226 364	234 377	214 345	207 333	202 325	198 319	195 314
			F	20 -2.3R	20.7 -2.2R	21.2 -2.1R	21.6 -2R	21.9 -1.8R	22.4 -1.6R	22.8 -1.5R	23 -1.3R	23.2 -1.2R
		18"	q_a q_f	247 397	214 345	188 302	203 328	184 297	182 293	157 253	160 257	162 260
			F	23 -3.6R	24.2 -3.6R	25.1 -3.5R	25.9 -3.4R	26.5 -3.3R	27.4 -3R	28.1 -2.8R	28.6 -2.5R	29 -2.4R
		24"	q_a q_f	194 313	214 345	188 302	166 268	149 240	154 248	131 212	138 222	121 194
			F	25.2 -4.7R	26.9 -4.8R	28.3 -4.8R	29.4 -4.8R	30.3 -4.7R	31.7 -4.4R	32.8 -4.2R	33.6 -3.9R	34.3 -3.7R
		30"	q_a q_f	194 313	163 263	188 302	166 268	149 240	121 194	131 212	111 179	121 194
			F	26.9 -5.6R	29.1 -5.9R	30.8 -6R	32.3 -6R	33.5 -6R	35.5 -5.8R	37 -5.6R	38.1 -5.3R	39 -5.1R
		36"	q_a q_f	194 313	163 263	140 225	166 268	149 240	121 194	99 159	111 179	96 155
			F	28.3 -6.4R	30.9 -6.8R	33 -7.1R	34.8 -7.2R	36.3 -7.3R	38.8 -7.2R	40.6 -7R	42.2 -6.8R	43.4 -6.5R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 11.10 - Shear and Flexibility (No. 24 gauge PBR, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)								
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/6	24 ga	6"	q_a q_f	494 795	470 756	452 728	439 707	429 691	414 667	404 650	396 638	390 628
			F	14.8 -1.2R	15.1 -1.1R	15.4 -1R	15.6 -1R	15.8 -0.9R	16 -0.8R	16.2 -0.7R	16.3 -0.7R	16.4 -0.6R
		12"	q_a q_f	389 626	381 613	330 531	333 535	298 479	277 446	263 424	253 407	245 395
			F	17.4 -2.4R	18.3 -2.4R	18.9 -2.4R	19.5 -2.4R	20 -2.3R	20.7 -2.2R	21.2 -2.1R	21.6 -2R	21.9 -1.8R
		18"	q_a q_f	389 626	326 526	280 451	290 467	258 416	245 394	207 333	204 328	202 325
			F	19 -3.2R	20.2 -3.4R	21.3 -3.5R	22.2 -3.6R	23 -3.6R	24.2 -3.6R	25.1 -3.5R	25.9 -3.4R	26.5 -3.3R
		24"	q_a q_f	321 517	326 526	280 451	244 393	216 348	211 339	174 280	176 283	153 246
			F	20 -3.8R	21.6 -4.2R	23 -4.4R	24.2 -4.6R	25.2 -4.7R	26.9 -4.8R	28.3 -4.8R	29.4 -4.8R	30.3 -4.7R
		30"	q_a q_f	321 517	265 427	280 451	244 393	216 348	172 277	174 280	148 238	153 246
			F	20.8 -4.3R	22.6 -4.8R	24.2 -5.1R	25.7 -5.4R	26.9 -5.6R	29.1 -5.9R	30.8 -6R	32.3 -6R	33.5 -6R
		36"	q_a q_f	321 517	265 427	225 363	244 393	216 348	172 277	142 228	148 238	128 207
			F	21.3 -4.6R	23.4 -5.2R	25.2 -5.7R	26.9 -6.1R	28.3 -6.4R	30.9 -6.8R	33 -7.1R	34.8 -7.2R	36.3 -7.3R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 11.11 - Shear and Flexibility (No. 22 gauge PBR, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/3	22 ga	6"	q_a q_f	402 647	396 637	392 630	388 625	386 621	382 615	379 611	378 608	376 606
			F	13.1 -0.8R	13.3 -0.7R	13.4 -0.7R	13.5 -0.6R	13.6 -0.5R	13.8 -0.5R	13.8 -0.4R	13.9 -0.4R	14 -0.3R
		12"	q_a q_f	326 525	335 539	302 486	313 504	289 465	280 451	274 441	270 434	266 429
			F	16.8 -2.1R	17.4 -2R	17.9 -1.8R	18.3 -1.7R	18.5 -1.6R	19 -1.5R	19.3 -1.3R	19.5 -1.2R	19.7 -1.1R
		18"	q_a q_f	326 525	285 459	251 404	273 440	249 400	247 398	215 346	219 352	222 357
			F	19.4 -3.2R	20.5 -3.2R	21.4 -3.1R	22 -3R	22.6 -2.9R	23.4 -2.7R	24 -2.5R	24.5 -2.3R	24.8 -2.1R
		24"	q_a q_f	256 412	285 459	251 404	223 360	201 323	209 337	179 289	189 304	168 271
			F	21.4 -4.2R	23 -4.3R	24.2 -4.3R	25.1 -4.2R	26 -4.1R	27.2 -3.9R	28.2 -3.7R	28.9 -3.5R	29.5 -3.3R
		30"	q_a q_f	256 412	216 348	251 404	223 360	201 323	166 267	179 289	156 251	168 271
			F	23 -5R	24.9 -5.2R	26.4 -5.3R	27.7 -5.4R	28.8 -5.3R	30.6 -5.2R	31.9 -5R	32.9 -4.7R	33.7 -4.5R
		36"	q_a q_f	256 412	216 348	186 299	223 360	201 323	166 267	137 221	156 251	135 217
			F	24.2 -5.7R	26.5 -6.1R	28.4 -6.3R	29.9 -6.4R	31.3 -6.4R	33.5 -6.4R	35.2 -6.2R	36.5 -6R	37.6 -5.8R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 11.12 - Shear and Flexibility (No. 22 gauge PBR, 36/6):

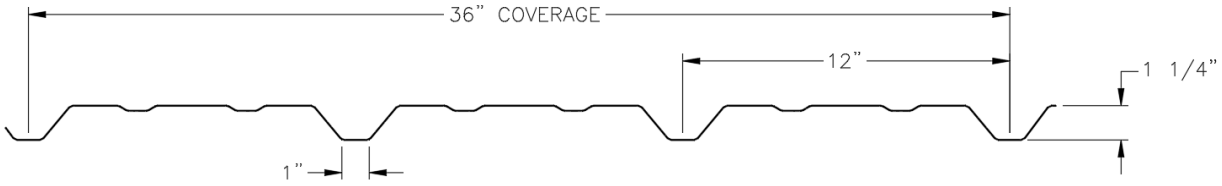
With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/6	22 ga	6"	q_a q_f	652 1050	624 1005	604 973	589 948	577 929	560 902	548 882	539 868	533 857
			F	12.2 -1R	12.5 -1R	12.7 -0.9R	12.9 -0.9R	13.1 -0.8R	13.3 -0.7R	13.4 -0.7R	13.5 -0.6R	13.6 -0.5R
		12"	q_a q_f	512 824	506 815	441 709	447 719	401 646	376 605	359 578	346 558	337 542
			F	14.5 -2.1R	15.3 -2.1R	15.9 -2.1R	16.4 -2.1R	16.8 -2.1R	17.4 -2R	17.9 -1.8R	18.3 -1.7R	18.5 -1.6R
		18"	q_a q_f	512 824	432 695	371 598	388 625	346 558	331 533	281 452	279 449	278 447
			F	15.9 -2.8R	17 -3R	18 -3.1R	18.8 -3.2R	19.4 -3.2R	20.5 -3.2R	21.4 -3.1R	22 -3R	22.6 -2.9R
		24"	q_a q_f	418 674	432 695	371 598	325 523	288 463	284 457	238 382	242 389	210 339
			F	16.8 -3.4R	18.2 -3.7R	19.5 -3.9R	20.5 -4.1R	21.4 -4.2R	23 -4.3R	24.2 -4.3R	25.1 -4.2R	26 -4.1R
		30"	q_a q_f	418 674	347 558	371 598	325 523	288 463	231 372	238 382	202 326	210 339
			F	17.5 -3.8R	19.1 -4.2R	20.6 -4.6R	21.9 -4.8R	23 -5R	24.9 -5.2R	26.4 -5.3R	27.7 -5.4R	28.8 -5.3R
		36"	q_a q_f	418 674	347 558	295 474	325 523	288 463	231 372	191 308	202 326	176 283
			F	18 -4.1R	19.8 -4.6R	21.4 -5.1R	22.9 -5.4R	24.2 -5.7R	26.5 -6.1R	28.4 -6.3R	29.9 -6.4R	31.3 -6.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

12.0 Reversed PBR

Figure 12.1 - Basic Dimensions and Panel Attachment (Reversed PBR):



36/4 Pattern:

TABLE 12.1 - Section Properties (Reversed PBR):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
26	0.85	0.0173	80	82	0.2499	0.0487	0.94	0.1482	0.0516
24	1.14	0.0232	50	65	0.3351	0.0667	0.94	0.1971	0.0690
22	1.44	0.0294	50	65	0.4246	0.0833	0.95	0.2473	0.0873

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative				
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	$I_d = (2I_e+I_g)/3$	
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
26	0.0397	0.0350	0.69	0.0457	0.0447	1.00	0.0377	0.0396	0.0460
24	0.0682	0.0517	0.74	0.0629	0.0633	0.97	0.0609	0.0567	0.0644
22	0.0985	0.0700	0.79	0.0807	0.0833	0.94	0.0853	0.0744	0.0833

TABLE 12.2 - Inward (Positive) Uniform Allowable Loads (Reversed PBR):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
26	Single Span	ASD, W/Ω	274	175	122	89	68	44	30	22	17
		LRFD, ϕW	434	278	193	142	109	69	48	35	27
		L/240	-	166	96	60	41	21	12	8	5
		L/180	-	-	-	81	54	28	16	10	7
		L/120	-	-	-	-	-	41	24	15	10
	Double Span	ASD, W/Ω	213	139	98	72	56	35	24	18	14
		LRFD, ϕW	321	210	147	109	84	53	37	27	21
		L/240	-	-	-	-	-	-	-	-	12
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	261	171	120	89	69	44	30	22	17
		LRFD, ϕW	394	258	181	134	104	66	46	34	26
		L/240	-	-	-	-	-	39	23	14	10
		L/180	-	-	-	-	-	-	30	19	13
		L/120	-	-	-	-	-	-	-	-	-
24	Single Span	ASD, W/Ω	314	201	140	103	79	50	35	26	20
		LRFD, ϕW	498	319	221	163	125	80	55	41	31
		L/240	-	-	138	87	58	30	17	11	7
		L/180	-	-	-	-	77	40	23	14	10
		L/120	-	-	-	-	-	-	34	22	15
	Double Span	ASD, W/Ω	293	190	132	98	75	47	33	25	18
		LRFD, ϕW	440	285	199	147	113	72	50	37	28
		L/240	-	-	-	-	-	-	-	-	17
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	359	234	164	122	93	60	41	30	23
		LRFD, ϕW	541	352	247	183	141	90	63	46	35
		L/240	-	-	-	-	-	56	32	20	14
		L/180	-	-	-	-	-	-	-	27	18
		L/120	-	-	-	-	-	-	-	-	-
22	Single Span	ASD, W/Ω	403	258	179	131	101	64	45	33	25
		LRFD, ϕW	639	409	284	209	160	102	71	52	40
		L/240	-	-	-	114	76	39	23	14	10
		L/180	-	-	-	-	-	52	30	19	13
		L/120	-	-	-	-	-	-	-	28	19
	Double Span	ASD, W/Ω	410	266	186	137	105	67	46	34	26
		LRFD, ϕW	617	400	280	206	158	101	70	51	39
		L/240	-	-	-	-	-	-	-	-	23
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	505	329	231	170	131	84	59	43	33
		LRFD, ϕW	760	495	347	256	197	126	88	65	50
		L/240	-	-	-	-	-	74	43	27	18
		L/180	-	-	-	-	-	-	57	36	24
		L/120	-	-	-	-	-	-	-	-	-

TABLE 12.3 - Outward (Negative) Uniform Allowable Loads (No. 26 gauge Reversed PBR):

Reversed PBR, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/4	236	355	189	284	158	236	135	203	114	177	73	116	51	80	37	59	29	44
	12ga (.1050")	#12	36/4	236	355	189	284	158	236	135	203	114	177	73	116	51	80	37	59	29	44
	14ga (.0700")	#12	36/4	186	278	149	223	124	186	106	159	93	139	73	111	51	80	37	59	29	44
	16ga (.0590")	#12	36/4	156	235	125	188	104	156	89	134	78	117	63	94	51	78	37	59	29	44
	18ga (.0459")	#12	36/4	122	183	97	146	81	122	70	104	61	91	49	73	41	61	35	52	29	44
	20ga (.0354")	#12	36/4	94	141	75	113	63	94	54	80	47	70	38	56	31	47	27	40	23	35
	22ga (.0294")	#12	36/4	78	117	62	94	52	78	45	67	39	58	31	47	26	39	22	33	19	29
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/4	236	355	189	284	158	236	135	203	114	177	73	116	51	80	37	59	29	44
	12ga (.1050")	#12	36/4	193	289	154	231	129	193	110	165	96	145	73	116	51	80	37	59	29	44
	14ga (.0700")	#12	36/4	129	193	103	154	86	129	73	110	64	96	51	77	43	64	37	55	29	44
	16ga (.0590")	#12	36/4	108	162	87	130	72	108	62	93	54	81	43	65	36	54	31	46	27	41
	18ga (.0459")	#12	36/4	84	126	67	101	56	84	48	72	42	63	34	51	28	42	24	36	21	32
	20ga (.0354")	#12	36/4	65	97	52	78	43	65	37	56	32	49	26	39	22	32	19	28	16	24
	22ga (.0294")	#12	36/4	54	81	43	65	36	54	31	46	27	40	22	32	18	27	15	23	13	20
Plywood & OSB	15/32"	#14	36/4	70	94	56	75	47	63	40	54	35	47	28	38	23	31	20	27	17	24
	19/32"	#14	36/4	88	119	71	96	59	80	51	68	44	60	35	48	29	40	25	34	22	30
	23/32"	#14	36/4	107	145	86	116	71	96	61	83	54	72	43	58	36	48	31	41	27	36
Lumber (DFL)	1" min	#9	36/4	129	174	103	140	86	116	74	100	65	87	52	70	43	58	37	50	29	44
		#14	36/4	177	238	141	191	118	159	101	136	88	119	71	95	51	79	37	59	29	44

TABLE 12.4 - Outward (Negative) Uniform Allowable Loads (No. 24 gauge Reversed PBR):

Reversed PBR, 24ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/4	251	377	201	302	168	251	128	203	98	156	63	100	44	69	32	51	25	39
	12ga (.1050")	#12	36/4	251	377	201	302	168	251	128	203	98	156	63	100	44	69	32	51	25	39
	14ga (.0700")	#12	36/4	186	278	149	223	124	186	106	159	93	139	63	100	44	69	32	51	25	39
	16ga (.0590")	#12	36/4	156	235	125	188	104	156	89	134	78	117	63	94	44	69	32	51	25	39
	18ga (.0459")	#12	36/4	122	183	97	146	81	122	70	104	61	91	49	73	41	61	32	51	25	39
	20ga (.0354")	#12	36/4	94	141	75	113	63	94	54	80	47	70	38	56	31	47	27	40	23	35
	22ga (.0294")	#12	36/4	78	117	62	94	52	78	45	67	39	58	31	47	26	39	22	33	19	29
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/4	248	372	198	297	165	248	128	203	98	156	63	100	44	69	32	51	25	39
	12ga (.1050")	#12	36/4	193	289	154	231	129	193	110	165	96	145	63	100	44	69	32	51	25	39
	14ga (.0700")	#12	36/4	129	193	103	154	86	129	73	110	64	96	51	77	43	64	32	51	25	39
	16ga (.0590")	#12	36/4	108	162	87	130	72	108	62	93	54	81	43	65	36	54	31	46	25	39
	18ga (.0459")	#12	36/4	84	126	67	101	56	84	48	72	42	63	34	51	28	42	24	36	21	32
	20ga (.0354")	#12	36/4	65	97	52	78	43	65	37	56	32	49	26	39	22	32	19	28	16	24
	22ga (.0294")	#12	36/4	54	81	43	65	36	54	31	46	27	40	22	32	18	27	15	23	13	20
Plywood & OSB	15/32"	#14	36/4	70	94	56	75	47	63	40	54	35	47	28	38	23	31	20	27	17	24
	19/32"	#14	36/4	88	119	71	96	59	80	51	68	44	60	35	48	29	40	25	34	22	30
	23/32"	#14	36/4	107	145	86	116	71	96	61	83	54	72	43	58	36	48	31	41	25	36
Lumber (DFL)	1" min	#9	36/4	129	174	103	140	86	116	74	100	65	87	52	70	43	58	32	50	25	39
		#14	36/4	177	238	141	191	118	159	101	136	88	119	63	95	44	69	32	51	25	39

TABLE 12.5 - Outward (Negative) Uniform Allowable Loads (No. 22 gauge Reversed PBR):

Reversed PBR, 22ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)															
				Attachment Spacing, (ft-in)															
				2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/4	319	478	255	382	212	319	164	261	126	200	81	128	56	89	41	65	31	50
	12ga (.1050")	#12	36/4	278	418	223	334	186	278	159	239	126	200	81	128	56	89	41	65	31	50
	14ga (.0700")	#12	36/4	186	278	149	223	124	186	106	159	93	139	74	111	56	89	41	65	31	50
	16ga (.0590")	#12	36/4	156	235	125	188	104	156	89	134	78	117	63	94	52	78	41	65	31	50
	18ga (.0459")	#12	36/4	122	183	97	146	81	122	70	104	61	91	49	73	41	61	35	52	30	46
	20ga (.0354")	#12	36/4	94	141	75	113	63	94	54	80	47	70	38	56	31	47	27	40	23	35
	22ga (.0294")	#12	36/4	78	117	62	94	52	78	45	67	39	58	31	47	26	39	22	33	19	29
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/4	248	372	198	297	165	248	142	212	124	186	81	128	56	89	41	65	31	50
	12ga (.1050")	#12	36/4	193	289	154	231	129	193	110	165	96	145	77	116	56	89	41	65	31	50
	14ga (.0700")	#12	36/4	129	193	103	154	86	129	73	110	64	96	51	77	43	64	37	55	31	48
	16ga (.0590")	#12	36/4	108	162	87	130	72	108	62	93	54	81	43	65	36	54	31	46	27	41
	18ga (.0459")	#12	36/4	84	126	67	101	56	84	48	72	42	63	34	51	28	42	24	36	21	32
	20ga (.0354")	#12	36/4	65	97	52	78	43	65	37	56	32	49	26	39	22	32	19	28	16	24
	22ga (.0294")	#12	36/4	54	81	43	65	36	54	31	46	27	40	22	32	18	27	15	23	13	20
Plywood & OSB	15/32"	#14	36/4	70	94	56	75	47	63	40	54	35	47	28	38	23	31	20	27	17	24
	19/32"	#14	36/4	88	119	71	96	59	80	51	68	44	60	35	48	29	40	25	34	22	30
	23/32"	#14	36/4	107	145	86	116	71	96	61	83	54	72	43	58	36	48	31	41	27	36
Lumber (DFL)	1" min	#9	36/4	129	174	103	140	86	116	74	100	65	87	52	70	43	58	37	50	31	44
		#14	36/4	177	238	141	191	118	159	101	136	88	119	71	95	56	79	41	65	31	50

TABLE 12.6 - Shear and Flexibility (No. 26 gauge Reversed PBR, 36/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/4	26 ga	6"	q_a q_f	360 579	356 572	344 554	335 540	328 528	317 511	310 499	304 489	298 477
			F	8.3 -0.6R	8.5 -0.5R	8.6 -0.5R	8.7 -0.5R	8.8 -0.4R	8.9 -0.4R	8.9 -0.3R	9 -0.3R	9 -0.3R
		12"	q_a q_f	318 512	309 497	275 443	274 441	249 401	232 373	220 354	211 339	204 328
			F	9.8 -1.2R	10.2 -1.2R	10.5 -1.2R	10.8 -1.2R	11 -1.1R	11.3 -1.1R	11.6 -1R	11.8 -0.9R	11.9 -0.9R
		18"	q_a q_f	318 512	277 446	244 393	247 398	223 359	210 338	180 290	176 283	173 278
			F	10.7 -1.7R	11.3 -1.8R	11.9 -1.8R	12.3 -1.8R	12.7 -1.8R	13.3 -1.8R	13.7 -1.7R	14.1 -1.6R	14.4 -1.6R
		24"	q_a q_f	280 451	277 446	244 393	217 349	194 313	186 299	158 255	157 253	137 220
			F	11.3 -2R	12.1 -2.2R	12.8 -2.3R	13.4 -2.4R	13.9 -2.4R	14.8 -2.4R	15.5 -2.4R	16 -2.3R	16.4 -2.3R
		30"	q_a q_f	280 451	240 386	244 393	217 349	194 313	160 258	158 255	134 217	137 220
			F	11.7 -2.3R	12.7 -2.5R	13.6 -2.7R	14.3 -2.8R	15 -2.9R	16 -3R	16.9 -3R	17.6 -3R	18.2 -3R
		36"	q_a q_f	280 451	240 386	208 334	217 349	194 313	160 258	132 213	134 217	117 188
			F	12.1 -2.5R	13.2 -2.8R	14.2 -3R	15 -3.2R	15.8 -3.4R	17.1 -3.5R	18.1 -3.6R	19 -3.6R	19.7 -3.6R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 12.7 - Shear and Flexibility (No. 24 gauge Reversed PBR, 36/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/4	24 ga	6"	q_a q_f	382 616	382 616	382 616	374 603	368 592	358 577	351 565	346 557	342 550
			F	6.5 -0.5R	6.7 -0.5R	6.8 -0.4R	6.8 -0.4R	6.9 -0.4R	7 -0.3R	7.1 -0.3R	7.1 -0.3R	7.2 -0.2R
		12"	q_a q_f	349 562	342 550	307 494	307 494	281 452	264 425	252 405	243 391	236 379
			F	7.8 -1R	8.1 -1R	8.4 -1R	8.7 -1R	8.8 -1R	9.1 -0.9R	9.4 -0.9R	9.5 -0.8R	9.6 -0.7R
		18"	q_a q_f	349 562	306 493	270 435	276 445	251 404	238 383	205 331	202 325	200 321
			F	8.6 -1.5R	9.1 -1.5R	9.6 -1.6R	10 -1.6R	10.3 -1.6R	10.8 -1.5R	11.2 -1.5R	11.5 -1.4R	11.7 -1.3R
		24"	q_a q_f	305 491	306 493	270 435	241 388	216 349	210 338	180 289	180 290	160 257
			F	9.1 -1.8R	9.8 -1.9R	10.4 -2R	10.9 -2R	11.4 -2.1R	12.1 -2.1R	12.7 -2.1R	13.1 -2R	13.5 -2R
		30"	q_a q_f	305 491	261 421	270 435	241 388	216 349	179 288	180 289	156 251	160 257
			F	9.5 -2R	10.3 -2.2R	11.1 -2.3R	11.7 -2.4R	12.3 -2.5R	13.2 -2.6R	13.9 -2.6R	14.5 -2.6R	15.1 -2.6R
		36"	q_a q_f	305 491	261 421	227 366	241 388	216 349	179 288	151 243	156 251	135 218
			F	9.8 -2.2R	10.7 -2.4R	11.6 -2.6R	12.3 -2.8R	13 -2.9R	14.1 -3R	15 -3.1R	15.8 -3.1R	16.4 -3.1R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 12.8 - Shear and Flexibility (No. 22 gauge Reversed PBR, 36/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)								
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/4	22 ga	6"	q_a q_f	485 780	485 780	485 780	485 780	485 780	475 764	467 752	461 743	457 735
			F	5.4 -0.4R	5.5 -0.4R	5.6 -0.4R	5.7 -0.4R	5.7 -0.3R	5.8 -0.3R	5.9 -0.3R	5.9 -0.2R	5.9 -0.2R
		12"	q_a q_f	454 730	448 721	404 650	406 654	373 601	353 569	339 545	328 528	320 515
			F	6.5 -0.9R	6.8 -0.9R	7.1 -0.9R	7.3 -0.9R	7.4 -0.9R	7.7 -0.8R	7.9 -0.8R	8 -0.7R	8.2 -0.7R
		18"	q_a q_f	454 730	400 644	355 571	366 589	333 536	318 513	276 444	273 440	271 436
			F	7.2 -1.3R	7.7 -1.4R	8.1 -1.4R	8.4 -1.4R	8.7 -1.4R	9.2 -1.4R	9.5 -1.3R	9.8 -1.2R	10 -1.2R
		24"	q_a q_f	394 635	400 644	355 571	317 511	286 460	280 450	240 387	242 390	216 347
			F	7.7 -1.6R	8.3 -1.7R	8.8 -1.8R	9.3 -1.8R	9.7 -1.8R	10.3 -1.9R	10.9 -1.8R	11.3 -1.8R	11.6 -1.7R
		30"	q_a q_f	394 635	339 546	355 571	317 511	286 460	237 382	240 387	210 338	216 347
			F	8 -1.8R	8.8 -1.9R	9.4 -2.1R	10 -2.2R	10.5 -2.2R	11.3 -2.3R	12 -2.3R	12.5 -2.3R	13 -2.3R
		36"	q_a q_f	394 635	339 546	295 475	317 511	286 460	237 382	202 325	210 338	184 297
			F	8.3 -1.9R	9.1 -2.2R	9.9 -2.3R	10.5 -2.5R	11.1 -2.6R	12.1 -2.7R	12.9 -2.8R	13.6 -2.8R	14.1 -2.8R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 12.9 - Allowable Reactions at Supports (Reversed PBR):

Reactions at Supports based on Web Crippling									
Gauge	Condition	Bearing Length of Webs							
		ASD (Pn/Ω) *(lbs/ft width)*				LRFD (ϕPn) *(lbs/ft width)*			
		1"	1.5"	2"	3"	1"	1.5"	2"	3"
26	End	126	145	161	187	193	222	246	286
	Interior	190	214	235	269	283	319	349	400
24	End	183	209	230	266	280	319	352	408
	Interior	281	314	342	390	418	468	509	579
22	End	285	323	355	409	436	494	543	625
	Interior	444	494	536	606	661	735	797	901

13.0 Strata Rib®

Figure 13.1 - Basic Dimensions and Panel Attachment (Strata Rib):

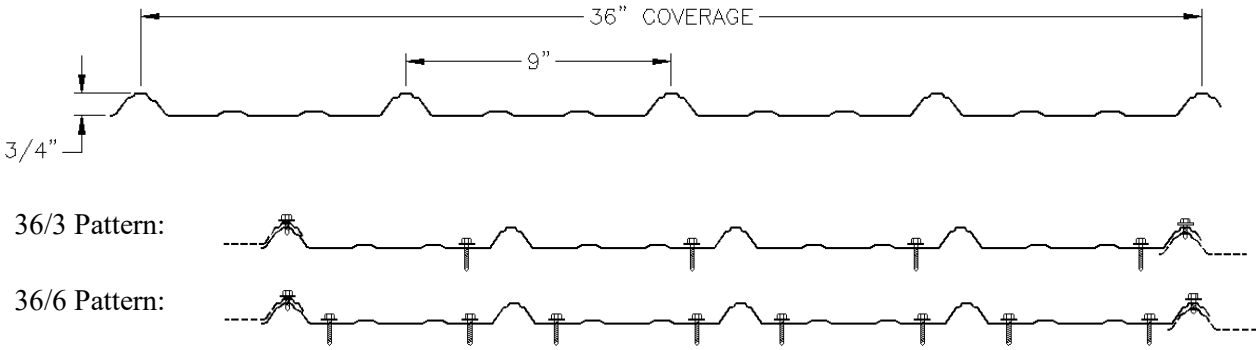


TABLE 13.1 - Section Properties (Strata Rib):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
29	0.65	0.0139	80	82	0.1914	0.0103	0.16	0.0170	0.0664
26	0.81	0.0173	80	82	0.2382	0.0130	0.16	0.0211	0.0817

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative				
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	$I_d = (2I_e+I_g)/3$	
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
29	0.0285	0.0103	0.16	0.0170	0.0070	0.34	0.0144	0.0103	0.0081
26	0.0379	0.0130	0.16	0.0211	0.0090	0.32	0.0181	0.0130	0.0103

TABLE 13.2 - Inward (Positive) Uniform Allowable Loads (Strata Rib):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	6' - 0"
29	Single Span	ASD, W/Ω	230	102	65	45	33	25	20	16	11
		LRFD, ϕW	365	162	103	72	53	40	32	26	18
		L/240	-	85	43	25	16	11	7	5	3
		L/180	-	-	58	33	21	14	10	7	4
		L/120	-	-	-	-	32	21	15	11	6
	Double Span	ASD, W/Ω	185	84	54	38	28	21	17	13	9
		LRFD, ϕW	279	126	81	57	42	32	25	20	13
		L/240	-	-	-	-	-	-	-	-	8
		L/180	-	-	-	-	-	-	-	-	-
		L/180	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	227	104	67	47	35	26	20	17	12
		LRFD, ϕW	342	157	101	70	52	39	31	26	18
		L/240	-	-	-	-	30	20	14	10	6
		L/180	-	-	-	-	-	-	19	14	8
		L/120	-	-	-	-	-	-	-	-	-
26	Single Span	ASD, W/Ω	285	126	81	56	41	32	25	20	14
		LRFD, ϕW	453	200	128	89	65	50	40	32	22
		L/240	-	107	55	32	20	13	9	7	4
		L/180	-	-	73	42	27	18	12	9	5
		L/120	-	-	-	-	40	27	19	14	8
	Double Span	ASD, W/Ω	233	105	68	47	34	27	21	17	12
		LRFD, ϕW	350	159	102	71	52	40	32	26	18
		L/240	-	-	-	-	-	-	-	16	10
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	285	131	85	59	43	33	26	21	15
		LRFD, ϕW	429	197	128	89	65	50	40	32	23
		L/240	-	-	-	-	38	25	18	13	7
		L/180	-	-	-	-	-	-	24	17	10
		L/120	-	-	-	-	-	-	-	-	-

TABLE 13.3 - Allowable Reactions at Supports (Strata Rib):

Reactions at Supports based on Web Crippling							
Gauge	Condition	Bearing Length of Webs					
		ASD (Pn/Ω) *(lbs/ft width)*			LRFD (ϕPn) *(lbs/ft width)*		
		1"	1.5"	2"	1"	1.5"	2"
29	End	131	151	168	200	231	257
	Interior	187	212	233	278	315	346
26	End	196	224	249	299	343	380
	Interior	285	321	351	424	478	523

TABLE 13.4 - Outward (Negative) Uniform Allowable Loads (No. 29 gauge Strata Rib):

Strata Rib, 29ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
		Nom. Size	Attach. Pattern	16"		2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		4' - 6"		5' - 0"		6' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/8	382	606	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#12	36/4	285	427	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
	12ga (.1050")	#12	36/8	382	606	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#12	36/4	285	427	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
	14ga (.0700")	#12	36/8	382	606	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#12	36/4	278	418	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
	16ga (.0590")	#12	36/8	382	606	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#12	36/4	235	352	156	235	109	172	75	120	55	88	42	63	34	44	27	32	19	19
	18ga (.0459")	#12	36/8	365	548	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#12	36/4	183	274	122	183	97	146	75	120	55	88	42	63	34	44	27	32	19	19
	20ga (.0354")	#12	36/8	282	422	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#12	36/4	141	211	94	141	75	113	63	94	54	80	42	63	34	44	27	32	19	19
	22ga (.0294")	#12	36/8	234	351	156	234	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#12	36/4	117	175	78	117	62	94	52	78	45	67	39	58	34	44	27	32	19	19
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/8	382	606	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#12	36/4	285	427	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
	12ga (.1050")	#12	36/8	382	606	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#12	36/4	285	427	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
	14ga (.0700")	#12	36/8	382	578	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#12	36/4	193	289	129	193	103	154	75	120	55	88	42	63	34	44	27	32	19	19
	16ga (.0590")	#12	36/8	325	487	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#12	36/4	162	244	108	162	87	130	72	108	55	88	42	63	34	44	27	32	19	19
	18ga (.0459")	#12	36/8	253	379	169	253	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#12	36/4	126	190	84	126	67	101	56	84	48	72	42	63	34	44	27	32	19	19
	20ga (.0354")	#12	36/8	195	292	130	195	104	156	75	120	55	88	42	63	34	44	27	32	19	19
		#12	36/4	97	146	65	97	52	78	43	65	37	56	32	49	29	43	26	32	19	19
	22ga (.0294")	#12	36/8	162	243	108	162	86	130	72	108	55	88	42	63	34	44	27	32	19	19
		#12	36/4	81	121	54	81	43	65	36	54	31	46	27	40	24	36	22	32	18	19
Plywood & OSB	15/32"	#14	36/8	209	283	140	189	109	151	75	120	55	88	42	63	34	44	27	32	19	19
		#14	36/4	105	141	70	94	56	75	47	63	40	54	35	47	31	42	27	32	19	19
	19/32"	#14	36/8	265	358	170	239	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#14	36/4	133	179	88	119	71	96	59	80	51	68	42	60	34	44	27	32	19	19
	23/32"	#14	36/8	321	434	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#14	36/4	161	217	107	145	86	116	71	96	55	83	42	63	34	44	27	32	19	19
Lumber (DFL)	1" min	#9	36/8	382	523	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#9	36/4	194	262	129	174	103	140	75	116	55	88	42	63	34	44	27	32	19	19
		#14	36/8	382	606	170	269	109	172	75	120	55	88	42	63	34	44	27	32	19	19
		#14	36/4	265	358	170	238	109	172	75	120	55	88	42	63	34	44	27	32	19	19

TABLE 13.5 - Outward (Negative) Uniform Allowable Loads (No. 26 gauge Strata Rib):

Strata Rib, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)															
				Attachment Spacing, (ft-in)															
				16"		2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		4' - 6"		5' - 0"		6' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/8	473	751	210	334	135	213	93	148	69	109	53	80	42	56	34	41	23	24
		#12	36/4	355	532	210	334	135	213	93	148	69	109	53	80	42	56	34	41	23	24
	12ga (.1050")	#12	36/8	473	751	210	334	135	213	93	148	69	109	53	80	42	56	34	41	23	24
		#12	36/4	355	532	210	334	135	213	93	148	69	109	53	80	42	56	34	41	23	24
	14ga (.0700")	#12	36/8	473	751	210	334	135	213	93	148	69	109	53	80	42	56	34	41	23	24
		#12	36/4	278	418	186	278	135	213	93	148	69	109	53	80	42	56	34	41	23	24
	16ga (.0590")	#12	36/8	469	704	210	334	135	213	93	148	69	109	53	80	42	56	34	41	23	24
		#12	36/4	235	352	156	235	125	188	93	148	69	109	53	80	42	56	34	41	23	24
	18ga (.0459")	#12	36/8	365	548	210	334	135	213	93	148	69	109	53	80	42	56	34	41	23	24
		#12	36/4	183	274	122	183	97	146	81	122	69	104	53	80	42	56	34	41	23	24
	20ga (.0354")	#12	36/8	282	422	188	282	135	213	93	148	69	109	53	80	42	56	34	41	23	24
		#12	36/4	141	211	94	141	75	113	63	94	54	80	47	70	42	56	34	41	23	24
	22ga (.0294")	#12	36/8	234	351	156	234	125	187	93	148	69	109	53	80	42	56	34	41	23	24
		#12	36/4	117	175	78	117	62	94	52	78	45	67	39	58	35	52	31	41	23	24
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/8	473	751	210	334	135	213	93	148	69	109	53	80	42	56	34	41	23	24
		#12	36/4	355	532	210	334	135	213	93	148	69	109	53	80	42	56	34	41	23	24
	12ga (.1050")	#12	36/8	473	751	210	334	135	213	93	148	69	109	53	80	42	56	34	41	23	24
		#12	36/4	289	434	193	289	135	213	93	148	69	109	53	80	42	56	34	41	23	24
	14ga (.0700")	#12	36/8	386	578	210	334	135	213	93	148	69	109	53	80	42	56	34	41	23	24
		#12	36/4	193	289	129	193	103	154	86	129	69	109	53	80	42	56	34	41	23	24
	16ga (.0590")	#12	36/8	325	487	210	325	135	213	93	148	69	109	53	80	42	56	34	41	23	24
		#12	36/4	162	244	108	162	87	130	72	108	62	93	53	80	42	56	34	41	23	24
	18ga (.0459")	#12	36/8	253	379	169	253	135	202	93	148	69	109	53	80	42	56	34	41	23	24
		#12	36/4	126	190	84	126	67	101	56	84	48	72	42	63	37	56	34	41	23	24
	20ga (.0354")	#12	36/8	195	292	130	195	104	156	87	130	69	109	53	80	42	56	34	41	23	24
		#12	36/4	97	146	65	97	52	78	43	65	37	56	32	49	29	43	26	39	22	24
	22ga (.0294")	#12	36/8	162	243	108	162	86	130	72	108	62	93	53	80	42	56	34	41	23	24
		#12	36/4	81	121	54	81	43	65	36	54	31	46	27	40	24	36	22	32	18	24
Plywood & OSB	15/32"	#14	36/8	209	283	140	189	112	151	93	126	69	108	53	80	42	56	34	41	23	24
		#14	36/4	105	141	70	94	56	75	47	63	40	54	35	47	31	42	28	38	23	24
	19/32"	#14	36/8	265	358	177	239	135	191	93	148	69	109	53	80	42	56	34	41	23	24
		#14	36/4	133	179	88	119	71	96	59	80	51	68	44	60	39	53	34	41	23	24
	23/32"	#14	36/8	321	434	210	289	135	213	93	148	69	109	53	80	42	56	34	41	23	24
		#14	36/4	161	217	107	145	86	116	71	96	61	83	53	72	42	56	34	41	23	24
Lumber (DFL)	1" min	#9	36/8	388	523	210	334	135	213	93	148	69	109	53	80	42	56	34	41	23	24
		#9	36/4	194	262	129	174	103	140	86	116	69	100	53	80	42	56	34	41	23	24
		#14	36/8	473	715	210	334	135	213	93	148	69	109	53	80	42	56	34	41	23	24
		#14	36/4	265	358	177	238	135	191	93	148	69	109	53	80	42	56	34	41	23	24

TABLE 13.6 - Shear and Flexibility (No. 29 gauge Strata Rib, 36/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	6' - 0"
36/4	29 ga	6"	q_a q_f	293 472	262 422	251 405	244 392	238 383	233 375	229 369	204 326	141 226
			F	22.3 -1.5R	23.1 -1.3R	23.5 -1.2R	23.8 -1.1R	24 -1R	24.1 -0.9R	24.3 -0.9R	24.4 -0.8R	24.5 -0.7R
		12"	q_a q_f	265 427	206 331	204 328	178 286	180 291	162 261	166 268	152 245	141 226
			F	25.8 -3.1R	27.8 -3.1R	28.8 -3R	29.6 -2.9R	30.2 -2.8R	30.7 -2.7R	31.1 -2.5R	31.4 -2.4R	31.9 -2.2R
		18"	q_a q_f	226 364	206 331	174 280	150 241	157 252	140 225	126 203	134 216	114 183
			F	27.9 -4.2R	30.9 -4.6R	32.5 -4.7R	33.8 -4.7R	34.9 -4.6R	35.8 -4.5R	36.5 -4.4R	37.2 -4.3R	38.2 -4R
		24"	q_a q_f	226 364	168 270	174 280	150 241	131 211	116 187	126 203	115 185	96 155
			F	29.2 -5R	33.1 -5.8R	35.3 -6.1R	37.1 -6.2R	38.6 -6.2R	39.9 -6.2R	41 -6.2R	42 -6.1R	43.5 -5.8R
		30"	q_a q_f	226 364	168 270	139 224	150 241	131 211	116 187	104 168	93 150	96 155
			F	30.2 -5.6R	34.8 -6.7R	37.5 -7.2R	39.7 -7.5R	41.6 -7.7R	43.3 -7.8R	44.7 -7.8R	46 -7.8R	48.1 -7.6R
		36"	q_a q_f	226 364	168 270	139 224	118 190	131 211	116 187	104 168	93 150	77 124
			F	31 -6R	36 -7.5R	39.2 -8.2R	41.8 -8.6R	44.1 -9R	46.1 -9.2R	47.9 -9.3R	49.4 -9.4R	52.1 -9.3R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 13.7 - Shear and Flexibility (No. 26 gauge Strata Rib, 36/4):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	16"	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	4' - 6"	5' - 0"	6' - 0"
36/4	26 ga	6"	q_a q_f	374 602	338 545	326 526	318 511	311 501	306 493	302 486	285 456	198 317
			F	18.6 -1.3R	19.3 -1.2R	19.6 -1.1R	19.9 -1R	20 -0.9R	20.2 -0.8R	20.3 -0.8R	20.4 -0.7R	20.5 -0.6R
		12"	q_a q_f	339 546	266 428	266 427	232 374	237 382	214 344	220 354	202 325	194 312
			F	21.7 -2.7R	23.4 -2.8R	24.4 -2.7R	25 -2.6R	25.6 -2.5R	26 -2.4R	26.4 -2.3R	26.7 -2.2R	27.2 -2R
		18"	q_a q_f	288 464	266 428	225 363	195 313	206 331	184 296	166 268	178 286	151 243
			F	23.5 -3.7R	26.2 -4.1R	27.7 -4.2R	28.9 -4.2R	29.8 -4.1R	30.6 -4R	31.3 -3.9R	31.9 -3.8R	32.8 -3.6R
		24"	q_a q_f	288 464	215 346	225 363	195 313	171 275	151 244	166 268	151 244	128 206
			F	24.8 -4.5R	28.2 -5.2R	30.2 -5.4R	31.8 -5.6R	33.2 -5.6R	34.3 -5.6R	35.3 -5.5R	36.2 -5.4R	37.6 -5.2R
		30"	q_a q_f	288 464	215 346	178 287	195 313	171 275	151 244	136 219	123 198	128 206
			F	25.6 -5R	29.7 -6R	32.1 -6.5R	34.2 -6.7R	35.9 -6.9R	37.4 -7R	38.6 -7R	39.8 -7R	41.7 -6.8R
		36"	q_a q_f	288 464	215 346	178 287	152 245	171 275	151 244	136 219	123 198	102 164
			F	26.3 -5.4R	30.9 -6.7R	33.7 -7.3R	36 -7.8R	38.1 -8R	39.9 -8.2R	41.5 -8.3R	42.9 -8.4R	45.2 -8.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

Note: Shear Tables 12.6 & 12.7 based on 36/4 attachment pattern. Values acceptable for use (conservative) for 36/8 pattern.

14.0 U-Panel

Figure 14.1 - Basic Dimensions and Panel Attachment (U-Panel):

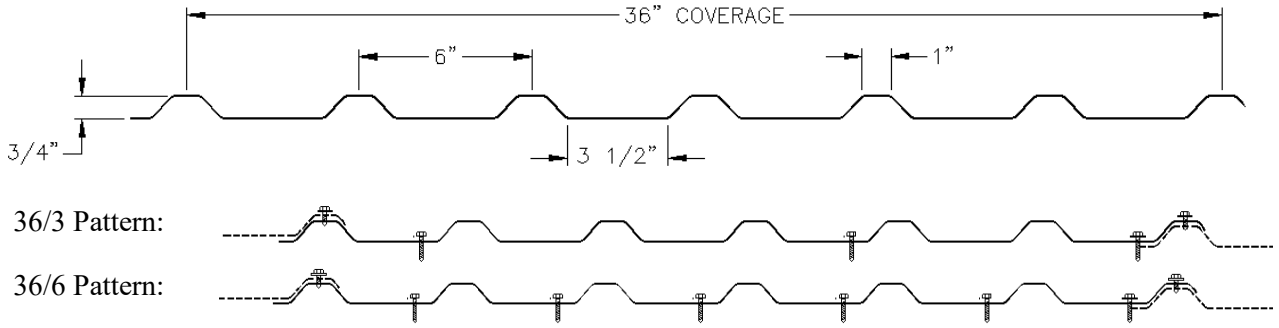


TABLE 14.1 - Section Properties (U-Panel):

Gauge	Weight	Base Metal Thickness	Yield Strength	Tensile Strength	Gross Section Properties				
					Area	Moment of Inertia	Distance to N.A. from Bottom	Positive Section Modulus	Negative Section Modulus
	w	t	Fy	Fu	A_g	I_g	y_b	S_g+	S_g-
	psf	in	ksi	ksi	in^2/ft	in^4/ft	in	in^3/ft	in^3/ft
29	0.68	0.0139	80	82	0.2000	0.0210	0.27	0.0388	0.0772
26	0.85	0.0173	80	82	0.2490	0.0260	0.27	0.0482	0.0954
24	1.14	0.0232	50	65	0.3338	0.0333	0.28	0.0643	0.1266
22	1.44	0.0294	50	65	0.4230	0.0433	0.28	0.0810	0.1587

Gauge	Effective Section Properties							Uniform Load Only	
	Area	Positive			Negative				
		Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	Moment of Inertia	Distance to N.A. from Bottom	Section Modulus	$I_d = (2I_e+I_g)/3$	
	A_e/ft	I_e+	y_b	S_e+	I_e-	y_b	S_e-	I+	I-
	in^2	in^4/ft	in	in^3/ft	in^4/ft	in	in^3/ft	in^4/ft	in^4/ft
29	0.0261	0.0203	0.21	0.0264	0.0133	0.46	0.0245	0.0206	0.0159
26	0.0420	0.0260	0.25	0.0410	0.0177	0.43	0.0357	0.0260	0.0204
24	0.0703	0.0333	0.27	0.0618	0.0273	0.41	0.0566	0.0333	0.0293
22	0.0988	0.0433	0.27	0.0810	0.0400	0.39	0.0736	0.0433	0.0411

TABLE 14.2 - Inward (Positive) Uniform Allowable Loads (U-Panel):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
29	Single Span	ASD, W/Ω	158	101	70	52	39	25	18	13	10
		LRFD, ϕW	250	160	111	82	63	40	28	20	16
		L/240	-	86	50	31	21	11	6	4	3
		L/180	-	-	67	42	28	14	8	5	4
		L/120	-	-	-	-	-	22	12	8	5
	Double Span	ASD, W/Ω	142	92	64	47	36	23	15	12	8
		LRFD, ϕW	214	138	96	70	54	35	23	18	13
		L/240	-	-	-	-	-	-	15	9	6
		L/180	-	-	-	-	-	-	-	-	-
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	175	114	79	59	45	29	20	15	11
		LRFD, ϕW	264	172	120	89	68	43	30	22	17
		L/240	-	-	-	-	40	20	12	7	5
		L/180	-	-	-	-	-	27	16	10	7
		L/120	-	-	-	-	-	-	-	-	10
26	Single Span	ASD, W/Ω	246	157	109	80	61	39	27	20	15
		LRFD, ϕW	390	249	173	127	97	62	43	32	24
		L/240	213	109	63	40	27	14	8	5	3
		L/180	-	145	84	53	36	18	11	7	4
		L/120	-	-	-	80	53	27	16	10	7
	Double Span	ASD, W/Ω	207	134	93	69	53	33	23	17	13
		LRFD, ϕW	312	202	141	103	80	50	35	26	20
		L/240	-	-	-	-	-	33	19	12	8
		L/180	-	-	-	-	-	-	-	16	11
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	257	166	116	85	65	42	29	21	16
		LRFD, ϕW	386	250	175	129	99	64	44	32	24
		L/240	-	-	-	75	50	26	15	9	6
		L/180	-	-	-	-	-	34	20	13	8
		L/120	-	-	-	-	-	-	-	19	13
24	Single Span	ASD, W/Ω	308	197	137	101	77	49	34	25	19
		LRFD, ϕW	489	313	217	160	122	78	54	40	31
		L/240	273	140	81	51	34	17	10	6	4
		L/180	-	186	108	68	46	23	13	8	6
		L/120	-	-	-	-	68	35	20	13	9
	Double Span	ASD, W/Ω	273	177	123	91	70	44	31	22	17
		LRFD, ϕW	410	266	186	137	105	67	46	34	26
		L/240	-	-	-	-	-	42	24	15	10
		L/180	-	-	-	-	-	-	-	20	14
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	336	219	153	113	87	56	38	29	21
		LRFD, ϕW	505	329	230	170	130	84	58	43	32
		L/240	-	-	153	96	64	33	19	12	8
		L/180	-	-	-	-	86	44	25	16	11
		L/120	-	-	-	-	-	-	38	24	16

TABLE 14.3 (Cont'd) - Inward (Positive) Uniform Allowable Loads (U-Panel):

Gauge	Span	Limit Condition	Panel Span (Support Spacing)								
			2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
22	Single Span	ASD, W/Ω	404	259	180	132	101	65	45	33	25
		LRFD, ϕW	641	410	285	209	160	103	71	52	40
		L/240	355	182	105	66	44	23	13	8	6
		L/180	-	242	140	88	59	30	18	11	7
		L/120	-	-	-	-	89	45	26	17	11
	Double Span	ASD, W/Ω	353	229	160	118	91	57	40	29	22
		LRFD, ϕW	532	345	241	178	137	87	60	44	34
		L/240	-	-	-	-	-	55	32	20	13
		L/180	-	-	-	-	-	-	-	27	18
		L/120	-	-	-	-	-	-	-	-	-
	Triple Span	ASD, W/Ω	435	284	199	147	113	73	50	37	28
		LRFD, ϕW	655	427	300	221	170	109	76	56	43
		L/240	-	-	199	125	84	43	25	16	10
		L/180	-	-	-	-	112	57	33	21	14
		L/120	-	-	-	-	-	-	50	31	21

TABLE 14.4 - Allowable Reactions at Supports (U-Panel):

Reactions at Supports based on Web Crippling									
Gauge	Condition	Bearing Length of Webs							
		ASD (P_n/Ω) *(lbs/ft width)*				LRFD (ϕP_n) *(lbs/ft width)*			
		1"	1.5"	2"	2.5"	1"	1.5"	2"	2.5"
29	End	170	196	218	237	260	300	333	363
	Interior	237	269	295	319	353	400	439	474
26	End	256	293	325	353	391	449	497	540
	Interior	366	412	451	486	544	613	671	722
24	End	367	418	461	499	561	639	705	763
	Interior	540	604	658	706	803	899	979	1050
22	End	567	643	706	763	868	983	1081	1167
	Interior	853	948	1029	1100	1269	1411	1530	1636

TABLE 14.5 - Outward (Negative) Uniform Allowable Loads (29ga U-Panel):

U-Panel, 29ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)															
				Attachment Spacing, (ft-in)															
		Nom. Size	Attach. Pattern	2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness			ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	263	417	168	267	117	186	86	136	66	104	42	63	29	36	21	23	15	15
		#12	36/3	142	214	114	171	95	142	81	122	66	104	42	63	29	36	21	23	15	15
	12ga (.1050")	#12	36/6	263	417	168	267	117	186	86	136	66	104	42	63	29	36	21	23	15	15
		#12	36/3	142	214	114	171	95	142	81	122	66	104	42	63	29	36	21	23	15	15
	14ga (.0700")	#12	36/6	263	417	168	267	117	186	86	136	66	104	42	63	29	36	21	23	15	15
		#12	36/3	139	209	111	167	93	139	80	119	66	104	42	63	29	36	21	23	15	15
	16ga (.0590")	#12	36/6	235	352	168	267	117	186	86	136	66	104	42	63	29	36	21	23	15	15
		#12	36/3	117	176	94	141	78	117	67	101	59	88	42	63	29	36	21	23	15	15
	18ga (.0459")	#12	36/6	183	274	146	219	117	183	86	136	66	104	42	63	29	36	21	23	15	15
		#12	36/3	91	137	73	110	61	91	52	78	46	68	37	55	29	36	21	23	15	15
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	80	121	66	104	42	63	29	36	21	23	15	15
		#12	36/3	70	106	56	84	47	70	40	60	35	53	28	42	23	35	20	23	15	15
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	67	100	58	88	42	63	29	36	21	23	15	15
		#12	36/3	58	88	47	70	39	58	33	50	29	44	23	35	19	29	17	23	15	15
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	263	417	168	267	117	186	86	136	66	104	42	63	29	36	21	23	15	15
		#12	36/3	142	214	114	171	95	142	81	122	66	104	42	63	29	36	21	23	15	15
	12ga (.1050")	#12	36/6	263	417	168	267	117	186	86	136	66	104	42	63	29	36	21	23	15	15
		#12	36/3	142	214	114	171	95	142	81	122	66	104	42	63	29	36	21	23	15	15
	14ga (.0700")	#12	36/6	193	289	154	231	117	186	86	136	66	104	42	63	29	36	21	23	15	15
		#12	36/3	96	145	77	116	64	96	55	83	48	72	39	58	29	36	21	23	15	15
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	86	136	66	104	42	63	29	36	21	23	15	15
		#12	36/3	81	122	65	97	54	81	46	70	41	61	32	49	27	36	21	23	15	15
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	72	108	63	95	42	63	29	36	21	23	15	15
		#12	36/3	63	95	51	76	42	63	36	54	32	47	25	38	21	32	18	23	15	15
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	56	84	49	73	39	58	29	36	21	23	15	15
		#12	36/3	49	73	39	58	32	49	28	42	24	37	19	29	16	24	14	21	12	15
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	46	69	40	61	32	49	27	36	21	23	15	15
		#12	36/3	40	61	32	49	27	40	23	35	20	30	16	24	13	20	12	17	10	15
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	60	81	52	71	42	57	29	36	21	23	15	15
		#14	36/3	52	71	42	57	35	47	30	40	26	35	21	28	17	24	15	20	13	15
	19/32"	#14	36/6	133	179	106	143	88	119	76	102	66	90	42	63	29	36	21	23	15	15
		#14	36/3	66	90	53	72	44	60	38	51	33	45	27	36	22	30	19	23	15	15
	23/32"	#14	36/6	161	217	128	173	107	145	86	124	66	104	42	63	29	36	21	23	15	15
		#14	36/3	80	108	64	87	54	72	46	62	40	54	32	43	27	36	21	23	15	15
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	117	174	86	136	66	104	42	63	29	36	21	23	15	15
		#9	36/3	97	131	78	105	65	87	55	75	48	65	39	52	29	36	21	23	15	15
		#14	36/6	263	358	168	267	117	186	86	136	66	104	42	63	29	36	21	23	15	15
		#14	36/3	132	179	106	143	88	119	76	102	66	89	42	63	29	36	21	23	15	15

TABLE 14.6 - Outward (Negative) Uniform Allowable Loads (No. 26 gauge U-Panel):

U-Panel, 26ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	355	532	262	415	182	289	134	212	102	158	65	81	45	47	29	29	20	20
		#12	36/3	177	266	142	213	118	177	101	152	89	133	65	81	45	47	29	29	20	20
	12ga (.1050")	#12	36/6	355	532	262	415	182	289	134	212	102	158	65	81	45	47	29	29	20	20
		#12	36/3	177	266	142	213	118	177	101	152	89	133	65	81	45	47	29	29	20	20
	14ga (.0700")	#12	36/6	278	418	223	334	182	278	134	212	102	158	65	81	45	47	29	29	20	20
		#12	36/3	139	209	111	167	93	139	80	119	70	104	56	81	45	47	29	29	20	20
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	134	201	102	158	65	81	45	47	29	29	20	20
		#12	36/3	117	176	94	141	78	117	67	101	59	88	47	70	39	47	29	29	20	20
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	104	157	91	137	65	81	45	47	29	29	20	20
		#12	36/3	91	137	73	110	61	91	52	78	46	68	37	55	30	46	26	29	20	20
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	80	121	70	106	56	81	45	47	29	29	20	20
		#12	36/3	70	106	56	84	47	70	40	60	35	53	28	42	23	35	20	29	18	20
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	67	100	58	88	47	70	39	47	29	29	20	20
		#12	36/3	58	88	47	70	39	58	33	50	29	44	23	35	19	29	17	25	15	20
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	355	532	262	415	182	289	134	212	102	158	65	81	45	47	29	29	20	20
		#12	36/3	177	266	142	213	118	177	101	152	89	133	65	81	45	47	29	29	20	20
	12ga (.1050")	#12	36/6	289	434	231	347	182	289	134	212	102	158	65	81	45	47	29	29	20	20
		#12	36/3	145	217	116	174	96	145	83	124	72	108	58	81	45	47	29	29	20	20
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	110	165	96	145	65	81	45	47	29	29	20	20
		#12	36/3	96	145	77	116	64	96	55	83	48	72	39	58	32	47	28	29	20	20
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	93	139	81	122	65	81	45	47	29	29	20	20
		#12	36/3	81	122	65	97	54	81	46	70	41	61	32	49	27	41	23	29	20	20
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	72	108	63	95	51	76	42	47	29	29	20	20
		#12	36/3	63	95	51	76	42	63	36	54	32	47	25	38	21	32	18	27	16	20
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	56	84	49	73	39	58	32	47	28	29	20	20
		#12	36/3	49	73	39	58	32	49	28	42	24	37	19	29	16	24	14	21	12	18
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	46	69	40	61	32	49	27	40	23	29	20	20
		#12	36/3	40	61	32	49	27	40	23	35	20	30	16	24	13	20	12	17	10	15
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	60	81	52	71	42	57	35	47	29	29	20	20
		#14	36/3	52	71	42	57	35	47	30	40	26	35	21	28	17	24	15	20	13	18
	19/32"	#14	36/6	133	179	106	143	88	119	76	102	66	90	53	72	44	47	29	29	20	20
		#14	36/3	66	90	53	72	44	60	38	51	33	45	27	36	22	30	19	26	17	20
	23/32"	#14	36/6	161	217	128	173	107	145	92	124	80	108	64	81	45	47	29	29	20	20
		#14	36/3	80	108	64	87	54	72	46	62	40	54	32	43	27	36	23	29	20	20
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	111	149	97	131	65	81	45	47	29	29	20	20
		#9	36/3	97	131	78	105	65	87	55	75	48	65	39	52	32	44	28	29	20	20
		#14	36/6	265	358	212	286	177	238	134	204	102	158	65	81	45	47	29	29	20	20
		#14	36/3	132	179	106	143	88	119	76	102	66	89	53	72	44	47	29	29	20	20

TABLE 14.7 - Outward (Negative) Uniform Allowable Loads (No. 24 gauge U-Panel):

U-Panel, 24ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	377	566	247	391	171	272	126	200	96	153	62	98	43	67	31	42	24	28
		#12	36/3	189	283	151	226	126	189	108	162	94	141	62	98	43	67	31	42	24	28
	12ga (.1050")	#12	36/6	377	566	247	391	171	272	126	200	96	153	62	98	43	67	31	42	24	28
		#12	36/3	189	283	151	226	126	189	108	162	94	141	62	98	43	67	31	42	24	28
	14ga (.0700")	#12	36/6	278	418	223	334	171	272	126	200	96	153	62	98	43	67	31	42	24	28
		#12	36/3	139	209	111	167	93	139	80	119	70	104	56	84	43	67	31	42	24	28
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	126	200	96	153	62	98	43	67	31	42	24	28
		#12	36/3	117	176	94	141	78	117	67	101	59	88	47	70	39	59	31	42	24	28
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	104	157	91	137	62	98	43	67	31	42	24	28
		#12	36/3	91	137	73	110	61	91	52	78	46	68	37	55	30	46	26	39	23	28
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	80	121	70	106	56	84	43	67	31	42	24	28
		#12	36/3	70	106	56	84	47	70	40	60	35	53	28	42	23	35	20	30	18	26
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	67	100	58	88	47	70	39	58	31	42	24	28
		#12	36/3	58	88	47	70	39	58	33	50	29	44	23	35	19	29	17	25	15	22
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	372	558	247	391	171	272	126	200	96	153	62	98	43	67	31	42	24	28
		#12	36/3	186	279	149	223	124	186	106	159	93	139	62	98	43	67	31	42	24	28
	12ga (.1050")	#12	36/6	289	434	231	347	171	272	126	200	96	153	62	98	43	67	31	42	24	28
		#12	36/3	145	217	116	174	96	145	83	124	72	108	58	87	43	67	31	42	24	28
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	110	165	96	145	62	98	43	67	31	42	24	28
		#12	36/3	96	145	77	116	64	96	55	83	48	72	39	58	32	48	28	41	24	28
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	93	139	81	122	62	97	43	67	31	42	24	28
		#12	36/3	81	122	65	97	54	81	46	70	41	61	32	49	27	41	23	35	20	28
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	72	108	63	95	51	76	42	63	31	42	24	28
		#12	36/3	63	95	51	76	42	63	36	54	32	47	25	38	21	32	18	27	16	24
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	56	84	49	73	39	58	32	49	28	42	24	28
		#12	36/3	49	73	39	58	32	49	28	42	24	37	19	29	16	24	14	21	12	18
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	46	69	40	61	32	49	27	40	23	35	20	28
		#12	36/3	40	61	32	49	27	40	23	35	20	30	16	24	13	20	12	17	10	15
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	60	81	52	71	42	57	35	47	30	40	24	28
		#14	36/3	52	71	42	57	35	47	30	40	26	35	21	28	17	24	15	20	13	18
	19/32"	#14	36/6	133	179	106	143	88	119	76	102	66	90	53	72	43	60	31	42	24	28
		#14	36/3	66	90	53	72	44	60	38	51	33	45	27	36	22	30	19	26	17	22
	23/32"	#14	36/6	161	217	128	173	107	145	92	124	80	108	62	87	43	67	31	42	24	28
		#14	36/3	80	108	64	87	54	72	46	62	40	54	32	43	27	36	23	31	20	27
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	111	149	96	131	62	98	43	67	31	42	24	28
		#9	36/3	97	131	78	105	65	87	55	75	48	65	39	52	32	44	28	37	24	28
		#14	36/6	265	358	212	286	171	238	126	200	96	153	62	98	43	67	31	42	24	28
		#14	36/3	132	179	106	143	88	119	76	102	66	89	53	72	43	60	31	42	24	28

TABLE 14.8 - Outward (Negative) Uniform Allowable Loads (No. 22 gauge U-Panel):

U-Panel, 22ga

Substrate		Fastener		Panel System Negative (Outward) Uniform Load Capacity, (lbs/ft²)																	
				Attachment Spacing, (ft-in)																	
				2' - 0"		2' - 6"		3' - 0"		3' - 6"		4' - 0"		5' - 0"		6' - 0"		7' - 0"		8' - 0"	
Material / Grade	Thick-ness	Nom. Size	Attach. Pattern	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW	ASD W/Ω	LRFD ϕW
Steel (Gr 50 min.)	≥10ga (.1350")	#12	36/6	478	717	323	513	224	356	165	262	126	200	81	128	56	89	41	59	32	40
		#12	36/3	239	358	191	287	159	239	137	205	119	179	81	128	56	89	41	59	32	40
	12ga (.1050")	#12	36/6	418	627	323	501	224	356	165	262	126	200	81	128	56	89	41	59	32	40
		#12	36/3	209	313	167	251	139	209	119	179	104	157	81	125	56	89	41	59	32	40
	14ga (.0700")	#12	36/6	278	418	223	334	186	278	159	239	126	200	81	128	56	89	41	59	32	40
		#12	36/3	139	209	111	167	93	139	80	119	70	104	56	84	46	70	40	59	32	40
	16ga (.0590")	#12	36/6	235	352	188	282	156	235	134	201	117	176	81	128	56	89	41	59	32	40
		#12	36/3	117	176	94	141	78	117	67	101	59	88	47	70	39	59	34	50	29	40
	18ga (.0459")	#12	36/6	183	274	146	219	122	183	104	157	91	137	73	110	56	89	41	59	32	40
		#12	36/3	91	137	73	110	61	91	52	78	46	68	37	55	30	46	26	39	23	34
	20ga (.0354")	#12	36/6	141	211	113	169	94	141	80	121	70	106	56	84	47	70	40	59	32	40
		#12	36/3	70	106	56	84	47	70	40	60	35	53	28	42	23	35	20	30	18	26
	22ga (.0294")	#12	36/6	117	175	94	140	78	117	67	100	58	88	47	70	39	58	33	50	29	40
		#12	36/3	58	88	47	70	39	58	33	50	29	44	23	35	19	29	17	25	15	22
Steel (Gr 33 min.)	≥10ga (.1350")	#12	36/6	372	558	297	446	224	356	165	262	126	200	81	128	56	89	41	59	32	40
		#12	36/3	186	279	149	223	124	186	106	159	93	139	74	112	56	89	41	59	32	40
	12ga (.1050")	#12	36/6	289	434	231	347	193	289	165	248	126	200	81	128	56	89	41	59	32	40
		#12	36/3	145	217	116	174	96	145	83	124	72	108	58	87	48	72	41	59	32	40
	14ga (.0700")	#12	36/6	193	289	154	231	129	193	110	165	96	145	77	116	56	89	41	59	32	40
		#12	36/3	96	145	77	116	64	96	55	83	48	72	39	58	32	48	28	41	24	36
	16ga (.0590")	#12	36/6	162	244	130	195	108	162	93	139	81	122	65	97	54	81	41	59	32	40
		#12	36/3	81	122	65	97	54	81	46	70	41	61	32	49	27	41	23	35	20	30
	18ga (.0459")	#12	36/6	126	190	101	152	84	126	72	108	63	95	51	76	42	63	36	54	32	40
		#12	36/3	63	95	51	76	42	63	36	54	32	47	25	38	21	32	18	27	16	24
	20ga (.0354")	#12	36/6	97	146	78	117	65	97	56	84	49	73	39	58	32	49	28	42	24	37
		#12	36/3	49	73	39	58	32	49	28	42	24	37	19	29	16	24	14	21	12	18
	22ga (.0294")	#12	36/6	81	121	65	97	54	81	46	69	40	61	32	49	27	40	23	35	20	30
		#12	36/3	40	61	32	49	27	40	23	35	20	30	16	24	13	20	12	17	10	15
Plywood & OSB	15/32"	#14	36/6	105	141	84	113	70	94	60	81	52	71	42	57	35	47	30	40	26	35
		#14	36/3	52	71	42	57	35	47	30	40	26	35	21	28	17	24	15	20	13	18
	19/32"	#14	36/6	133	179	106	143	88	119	76	102	66	90	53	72	44	60	38	51	32	40
		#14	36/3	66	90	53	72	44	60	38	51	33	45	27	36	22	30	19	26	17	22
	23/32"	#14	36/6	161	217	128	173	107	145	92	124	80	108	64	87	54	72	41	59	32	40
		#14	36/3	80	108	64	87	54	72	46	62	40	54	32	43	27	36	23	31	20	27
Lumber (DFL)	1" min	#9	36/6	194	262	155	209	129	174	111	149	97	131	78	105	56	87	41	59	32	40
		#9	36/3	97	131	78	105	65	87	55	75	48	65	39	52	32	44	28	37	24	33
		#14	36/6	265	358	212	286	177	238	151	204	126	179	81	128	56	89	41	59	32	40
		#14	36/3	132	179	106	143	88	119	76	102	66	89	53	72	44	60	38	51	32	40

TABLE 14.9 - Shear and Flexibility (No. 29 gauge U-Panel, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/3	29 ga	6"	q_a q_f	215 346	209 337	205 330	202 325	199 321	196 315	193 311	175 280	134 214
			F	24.3 -1.2R	24.6 -1R	24.8 -0.9R	25 -0.8R	25.1 -0.8R	25.3 -0.7R	25.4 -0.6R	25.5 -0.5R	25.6 -0.4R
		12"	q_a q_f	169 272	171 275	151 243	155 250	141 226	134 216	130 209	127 204	124 200
			F	29.8 -3R	30.7 -2.8R	31.4 -2.7R	31.9 -2.5R	32.3 -2.4R	32.9 -2.1R	33.4 -1.9R	33.7 -1.7R	33.9 -1.5R
		18"	q_a q_f	169 272	144 232	125 201	134 216	120 194	118 189	101 162	101 163	102 164
			F	33.7 -4.7R	35.3 -4.6R	36.5 -4.5R	37.5 -4.3R	38.3 -4.2R	39.4 -3.8R	40.3 -3.5R	41 -3.3R	41.5 -3R
		24"	q_a q_f	134 215	144 232	125 201	110 177	98 157	99 160	83 133	86 139	75 121
			F	36.7 -6.1R	38.9 -6.2R	40.6 -6.2R	42 -6.1R	43.2 -6R	45.1 -5.7R	46.4 -5.3R	47.5 -5R	48.3 -4.7R
		30"	q_a q_f	134 215	111 179	125 201	110 177	98 157	78 125	83 133	70 113	75 121
			F	39 -7.3R	41.7 -7.7R	44 -7.8R	45.9 -7.8R	47.5 -7.7R	50 -7.5R	51.8 -7.2R	53.3 -6.8R	54.5 -6.5R
		36"	q_a q_f	134 215	111 179	95 153	110 177	98 157	78 125	64 103	70 113	61 98
			F	40.8 -8.3R	44.1 -8.9R	46.8 -9.2R	49.1 -9.3R	51.1 -9.4R	54.2 -9.3R	56.7 -9R	58.6 -8.7R	60.2 -8.3R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 14.10 - Shear and Flexibility (No. 29 gauge U-Panel, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/6	29 ga	6"	q_a q_f	337 543	316 509	301 485	290 467	281 453	268 432	238 381	175 280	134 214
			F	23 -1.5R	23.5 -1.4R	23.8 -1.3R	24.1 -1.3R	24.3 -1.2R	24.6 -1R	24.8 -0.9R	25 -0.8R	25.1 -0.8R
		12"	q_a q_f	267 430	257 414	221 356	220 354	195 315	180 289	169 272	161 259	134 214
			F	26.5 -3.1R	27.6 -3.1R	28.5 -3.1R	29.2 -3.1R	29.8 -3R	30.7 -2.8R	31.4 -2.7R	31.9 -2.5R	32.3 -2.4R
		18"	q_a q_f	267 430	223 358	190 306	193 311	171 276	160 257	133 214	130 209	127 204
			F	28.6 -4.2R	30.2 -4.4R	31.6 -4.6R	32.7 -4.7R	33.7 -4.7R	35.3 -4.6R	36.5 -4.5R	37.5 -4.3R	38.3 -4.2R
		24"	q_a q_f	225 362	223 358	190 306	165 266	145 234	138 222	114 184	113 182	98 158
			F	29.9 -5R	32 -5.4R	33.8 -5.8R	35.3 -6R	36.7 -6.1R	38.9 -6.2R	40.6 -6.2R	42 -6.1R	43.2 -6R
		30"	q_a q_f	225 362	185 298	190 306	165 266	145 234	115 185	114 184	97 156	98 158
			F	30.9 -5.6R	33.3 -6.2R	35.5 -6.7R	37.3 -7.1R	39 -7.3R	41.7 -7.7R	44 -7.8R	45.9 -7.8R	47.5 -7.7R
		36"	q_a q_f	225 362	185 298	157 252	165 266	145 234	115 185	95 153	97 156	84 135
			F	31.7 -6R	34.4 -6.8R	36.8 -7.5R	38.9 -8R	40.8 -8.3R	44.1 -8.9R	46.8 -9.2R	49.1 -9.3R	51.1 -9.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 14.11 - Shear and Flexibility (No. 26 gauge U-Panel, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/3	26 ga	6"	q_a q_f	277 446	270 435	266 428	262 422	260 418	256 412	253 407	242 387	185 296
			F	20.3 -1.1R	20.6 -0.9R	20.8 -0.8R	20.9 -0.8R	21 -0.7R	21.2 -0.6R	21.3 -0.5R	21.4 -0.4R	21.4 -0.4R
		12"	q_a q_f	218 352	223 358	197 318	204 328	186 299	178 287	173 278	169 272	166 268
			F	25.2 -2.7R	26 -2.5R	26.6 -2.4R	27.1 -2.2R	27.4 -2.1R	28 -1.9R	28.4 -1.7R	28.7 -1.5R	28.9 -1.4R
		18"	q_a q_f	218 352	188 302	163 263	176 284	159 256	156 251	134 216	136 218	137 220
			F	28.7 -4.2R	30.1 -4.1R	31.2 -4R	32.1 -3.9R	32.8 -3.7R	33.8 -3.4R	34.6 -3.2R	35.2 -2.9R	35.7 -2.7R
		24"	q_a q_f	172 277	188 302	163 263	144 232	128 207	132 212	112 180	117 188	102 165
			F	31.3 -5.5R	33.3 -5.6R	34.9 -5.6R	36.2 -5.5R	37.2 -5.4R	38.9 -5.1R	40.1 -4.8R	41 -4.5R	41.8 -4.2R
		30"	q_a q_f	172 277	144 231	163 263	144 232	128 207	104 167	112 180	95 153	102 165
			F	33.4 -6.6R	35.9 -6.9R	37.9 -7R	39.6 -7R	41 -6.9R	43.3 -6.7R	45 -6.4R	46.3 -6.1R	47.4 -5.8R
		36"	q_a q_f	172 277	144 231	123 198	144 232	128 207	104 167	86 138	95 153	82 133
			F	35.1 -7.5R	38 -8R	40.5 -8.2R	42.5 -8.4R	44.3 -8.4R	47.1 -8.3R	49.3 -8.1R	51 -7.8R	52.4 -7.5R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 14.12 - Shear and Flexibility (No. 26 gauge U-Panel, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/6	26 ga	6"	q_a q_f	437 703	412 664	395 636	381 614	371 598	356 573	329 527	242 387	185 296
			F	19.1 -1.3R	19.6 -1.3R	19.9 -1.2R	20.1 -1.1R	20.3 -1.1R	20.6 -0.9R	20.8 -0.8R	20.9 -0.8R	21 -0.7R
		12"	q_a q_f	344 554	334 537	288 463	288 464	257 413	238 382	224 361	215 346	185 296
			F	22.2 -2.7R	23.2 -2.8R	24 -2.8R	24.6 -2.7R	25.2 -2.7R	26 -2.5R	26.6 -2.4R	27.1 -2.2R	27.4 -2.1R
		18"	q_a q_f	344 554	287 462	245 395	252 406	224 360	210 339	177 285	174 280	171 275
			F	24.1 -3.7R	25.6 -4R	26.8 -4.1R	27.8 -4.2R	28.7 -4.2R	30.1 -4.1R	31.2 -4R	32.1 -3.9R	32.8 -3.7R
		24"	q_a q_f	286 461	287 462	245 395	214 344	189 304	182 293	151 243	151 243	131 212
			F	25.3 -4.5R	27.2 -4.9R	28.8 -5.2R	30.1 -5.4R	31.3 -5.5R	33.3 -5.6R	34.9 -5.6R	36.2 -5.5R	37.2 -5.4R
		30"	q_a q_f	286 461	236 380	245 395	214 344	189 304	151 242	151 243	128 207	131 212
			F	26.2 -5R	28.4 -5.6R	30.3 -6R	31.9 -6.3R	33.4 -6.6R	35.9 -6.9R	37.9 -7R	39.6 -7R	41 -6.9R
		36"	q_a q_f	286 461	236 380	200 322	214 344	189 304	151 242	124 200	128 207	112 180
			F	26.9 -5.4R	29.3 -6.1R	31.4 -6.7R	33.3 -7.1R	35.1 -7.5R	38 -8R	40.5 -8.2R	42.5 -8.4R	44.3 -8.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 14.13 - Shear and Flexibility (No. 24 gauge U-Panel, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/3	24 ga	6"	q_a q_f	307 494	301 485	297 479	294 474	292 470	288 464	286 461	284 458	278 445
			F	16 -0.9R	16.2 -0.8R	16.4 -0.7R	16.5 -0.7R	16.6 -0.6R	16.7 -0.5R	16.8 -0.4R	16.9 -0.4R	17 -0.3R
		12"	q_a q_f	245 394	251 404	225 362	233 375	213 343	206 332	201 324	197 318	195 313
			F	20.2 -2.3R	20.9 -2.2R	21.4 -2.1R	21.8 -1.9R	22.2 -1.8R	22.6 -1.6R	23 -1.4R	23.2 -1.3R	23.4 -1.2R
		18"	q_a q_f	245 394	212 342	186 299	202 325	183 294	181 291	156 252	159 256	161 259
			F	23.2 -3.6R	24.5 -3.6R	25.4 -3.5R	26.1 -3.4R	26.8 -3.2R	27.7 -3R	28.3 -2.7R	28.9 -2.5R	29.3 -2.3R
		24"	q_a q_f	192 308	212 342	186 299	164 265	147 237	153 246	130 210	137 221	122 196
			F	25.5 -4.7R	27.2 -4.8R	28.6 -4.8R	29.7 -4.7R	30.6 -4.6R	32 -4.4R	33.1 -4.1R	33.9 -3.9R	34.5 -3.6R
		30"	q_a q_f	192 308	161 259	186 299	164 265	147 237	121 195	130 210	113 183	122 196
			F	27.3 -5.7R	29.5 -5.9R	31.2 -6R	32.7 -6R	33.9 -6R	35.8 -5.8R	37.3 -5.6R	38.4 -5.3R	39.3 -5R
		36"	q_a q_f	192 308	161 259	138 222	164 265	147 237	121 195	101 162	113 183	99 159
			F	28.7 -6.5R	31.3 -6.9R	33.4 -7.1R	35.2 -7.2R	36.7 -7.3R	39.1 -7.2R	41 -7R	42.5 -6.7R	43.7 -6.5R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 14.14 - Shear and Flexibility (No. 24 gauge U-Panel, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/6	24 ga	6"	q_a q_f	490 789	466 751	449 723	436 703	426 687	412 663	402 647	363 581	278 445
			F	15 -1.2R	15.3 -1.1R	15.6 -1R	15.8 -1R	16 -0.9R	16.2 -0.8R	16.4 -0.7R	16.5 -0.7R	16.6 -0.6R
		12"	q_a q_f	383 617	376 606	326 525	329 530	294 474	274 442	261 420	251 404	244 392
			F	17.6 -2.4R	18.5 -2.4R	19.2 -2.4R	19.7 -2.4R	20.2 -2.3R	20.9 -2.2R	21.4 -2.1R	21.8 -1.9R	22.2 -1.8R
		18"	q_a q_f	383 617	321 517	275 443	286 461	255 410	242 390	205 330	203 326	201 323
			F	19.3 -3.2R	20.5 -3.4R	21.6 -3.6R	22.5 -3.6R	23.2 -3.6R	24.5 -3.6R	25.4 -3.5R	26.1 -3.4R	26.8 -3.2R
		24"	q_a q_f	315 507	321 517	275 443	240 387	213 342	208 335	175 281	177 284	154 248
			F	20.3 -3.8R	21.9 -4.2R	23.3 -4.5R	24.5 -4.6R	25.5 -4.7R	27.2 -4.8R	28.6 -4.8R	29.7 -4.7R	30.6 -4.6R
		30"	q_a q_f	315 507	260 418	275 443	240 387	213 342	172 276	175 281	149 240	154 248
			F	21.1 -4.3R	23 -4.8R	24.6 -5.2R	26 -5.5R	27.3 -5.7R	29.5 -5.9R	31.2 -6R	32.7 -6R	33.9 -6R
		36"	q_a q_f	315 507	260 418	220 355	240 387	213 342	172 276	142 229	149 240	129 208
			F	21.7 -4.7R	23.7 -5.3R	25.6 -5.8R	27.2 -6.2R	28.7 -6.5R	31.3 -6.9R	33.4 -7.1R	35.2 -7.2R	36.7 -7.3R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 14.15 - Shear and Flexibility (No. 22 gauge U-Panel, 36/3):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/3	22 ga	6"	q_a q_f	401 645	395 636	391 629	388 624	385 620	382 614	379 610	377 607	376 605
			F	13.2 -0.8R	13.4 -0.7R	13.6 -0.6R	13.7 -0.6R	13.8 -0.5R	13.9 -0.5R	14 -0.4R	14 -0.3R	14.1 -0.3R
		12"	q_a q_f	324 521	333 537	300 484	312 502	287 462	279 449	273 440	269 433	265 427
			F	17 -2.1R	17.6 -2R	18.1 -1.8R	18.4 -1.7R	18.7 -1.6R	19.1 -1.4R	19.4 -1.3R	19.7 -1.2R	19.8 -1.1R
		18"	q_a q_f	324 521	283 455	249 401	272 437	247 398	246 396	213 344	218 350	221 355
			F	19.7 -3.2R	20.8 -3.2R	21.6 -3.1R	22.3 -3R	22.8 -2.9R	23.6 -2.6R	24.2 -2.4R	24.7 -2.2R	25 -2.1R
		24"	q_a q_f	253 407	283 455	249 401	221 356	198 320	208 334	178 287	188 302	167 269
			F	21.7 -4.2R	23.2 -4.3R	24.4 -4.3R	25.4 -4.2R	26.2 -4.1R	27.5 -3.9R	28.4 -3.7R	29.1 -3.4R	29.7 -3.2R
		30"	q_a q_f	253 407	213 343	249 401	221 356	198 320	164 264	178 287	155 250	167 269
			F	23.3 -5R	25.2 -5.3R	26.8 -5.4R	28 -5.4R	29.1 -5.3R	30.8 -5.2R	32.1 -4.9R	33.2 -4.7R	34 -4.5R
		36"	q_a q_f	253 407	213 343	183 294	221 356	198 320	164 264	139 223	155 250	137 221
			F	24.6 -5.7R	26.8 -6.1R	28.7 -6.3R	30.3 -6.4R	31.6 -6.4R	33.8 -6.4R	35.5 -6.2R	36.8 -6R	37.9 -5.7R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

TABLE 14.16 - Shear and Flexibility (No. 22 gauge U-Panel, 36/6):

With min. #12 SD HWH Screw into supports and min. #12 SD HWH Screw at side laps

Support Fastener Pattern	Gage	Seam Attach. Spacing	Allowable Shear (q_a) (plf), Factored Shear (q_f) (plf), and Flexibility Factor (F) (10^{-6} in/lbs)									
			Span →	2' - 0"	2' - 6"	3' - 0"	3' - 6"	4' - 0"	5' - 0"	6' - 0"	7' - 0"	8' - 0"
36/6	22 ga	6"	q_a q_f	648 1042	620 999	601 967	586 943	574 925	558 898	546 879	528 845	404 647
			F	12.3 -1R	12.7 -1R	12.9 -0.9R	13.1 -0.9R	13.2 -0.8R	13.4 -0.7R	13.6 -0.6R	13.7 -0.6R	13.8 -0.5R
		12"	q_a q_f	505 814	501 806	435 701	442 712	397 639	373 600	356 573	344 554	335 539
			F	14.7 -2.1R	15.5 -2.1R	16.1 -2.1R	16.6 -2.1R	17 -2.1R	17.6 -2R	18.1 -1.8R	18.4 -1.7R	18.7 -1.6R
		18"	q_a q_f	505 814	426 685	366 589	384 618	342 551	328 527	278 447	276 445	275 443
			F	16.1 -2.9R	17.3 -3.1R	18.2 -3.2R	19 -3.2R	19.7 -3.2R	20.8 -3.2R	21.6 -3.1R	22.3 -3R	22.8 -2.9R
		24"	q_a q_f	410 661	426 685	366 589	319 514	283 456	280 451	236 381	241 388	211 340
			F	17.1 -3.4R	18.5 -3.7R	19.7 -4R	20.8 -4.1R	21.7 -4.2R	23.2 -4.3R	24.4 -4.3R	25.4 -4.2R	26.2 -4.1R
		30"	q_a q_f	410 661	340 547	366 589	319 514	283 456	230 370	236 381	203 326	211 340
			F	17.8 -3.8R	19.4 -4.3R	20.9 -4.6R	22.2 -4.9R	23.3 -5R	25.2 -5.3R	26.8 -5.4R	28 -5.4R	29.1 -5.3R
		36"	q_a q_f	410 661	340 547	288 464	319 514	283 456	230 370	191 308	203 326	177 284
			F	18.3 -4.1R	20.1 -4.7R	21.8 -5.1R	23.2 -5.5R	24.6 -5.7R	26.8 -6.1R	28.7 -6.3R	30.3 -6.4R	31.6 -6.4R

Note: Presented shear capacities do not include parallel edge fastener limitations. See General Notes for details. 'R' = Panel attachment spacing (span) ÷ panel length.

CALIFORNIA SUPPLEMENT

ASC PROFILES LLC
2110 Enterprise Blvd.
West Sacramento, CA 95691
(800) 360-2477
www.ascprofiles.com

AEP SPAN AND ASC BUILDING PRODUCTS: SINGLE SKIN STEEL ROOF AND WALL PANELS WITH EXPOSED FASTENERS

CSI Sections:

07 61 00 Sheet Metal Roofing
07 64 00 Sheet Metal Wall Cladding

1.0 RECOGNITION

ASC Profiles LLC Single Skin Steel Roof and Wall Panels with Exposed Fasteners as evaluated and represented in IAPMO UES Evaluation Report ER-0550 and with changes as noted in this supplement are satisfactory alternatives for use in buildings built under the following codes (and regulations):

- 2022 and 2019 California Building Code® (CBC)
- 2022 and 2019 California Residential Code® (CRC)

2.0 LIMITATIONS

Use of the ASC Profiles LLC Single Skin Steel Roof and Wall Panels with Exposed Fasteners recognized in this report is subject to the following limitations:

2.1 ASC Profiles LLC Single Skin Steel Roof and Wall Panels with Exposed Fasteners shall comply with the provisions applicable to the 2021 and 2018 IBC or 2021 and 2018 IRC in IAPMO UES ER-550.

2.2 Roof panels may be used in "new buildings located in any Fire Hazard Severity Zone or any Wildland-Urban Interface Fire Area designated by the enforcing agency constructed after the application date stipulated in CBC Section 701A.3.1 shall comply with the provisions" in accordance with Sections 701A.3 and 705A of the CBC and with the 2021 or 2018 IBC as presented in ER-550.

2.3 Pertaining to structures under the jurisdiction of DSA and HCAi (formerly OSHPD), designs for the transfer of anchorage forces into the diaphragm shall comply with CBC Section 1613A.5.1 of the 2022 and 2019 CBC.

2.4 This supplement expires concurrently with ER-550.

CITY OF LOS ANGELES SUPPLEMENT

ASC PROFILES LLC
2110 Enterprise Blvd.
West Sacramento, CA 95691
(800) 360-2477
www.ascprofiles.com

AEP SPAN AND ASC BUILDING PRODUCTS: SINGLE SKIN STEEL ROOF AND WALL PANELS WITH EXPOSED FASTENERS

CSI Sections:

07 61 00 Sheet Metal Roofing
07 64 00 Sheet Metal Wall Cladding

1.0 RECOGNITION

ASC Profiles LLC Single Skin Steel Roof and Wall Panels with Exposed Fasteners as evaluated and represented in IAPMO UES Evaluation Report ER-0550 and with changes as noted in this supplement are satisfactory alternatives for use in buildings built under the following codes (and regulations):

- 2023 and 2020 City of Los Angeles Building Code (LABC)
- 2023 and 2020 City of Los Angeles Residential Code (LARC)

2.0 LIMITATIONS

Roof panels recognized in this report supplement is subject to the following limitations:

2.1 ASC Profiles LLC Single Skin Steel Roof and Wall Panels with Exposed Fasteners shall be installed and identified in accordance with this report, codes listed in Section 1.0 of this report, and the manufacturer's instructions. Where conflicts occur, the more restrictive shall govern.

2.2 ASC Profiles LLC Single Skin Steel Roof and Wall Panels with Exposed Fasteners shall comply with the provisions applicable to the 2022 and 2019 CBC or CRC, as applicable, in the California supplement to IAPMO UES ER-550.

2.3 Prior to installation, calculations and details demonstrating compliance with this approval report and the 2023 and 2020 Los Angeles Building Code or 2023 and 2020 Los Angeles Residential Code, as applicable, shall be submitted to the structural plan check section for review and approval. The calculations and details shall be prepared stamped, and signed by a California registered design professional.

2.4 The design, installation, and inspection of the ASC Profiles LLC Single Skin Steel Roof and Wall Panels with Exposed Fasteners shall be in accordance with LABC Chapters 15, 16, and 17 as applicable, due to local amendments to these chapters.

2.5 This supplement expires concurrently with ER-550.