

Code Compliance Research Report CCRR-0499

Issue Date: 07-03-2023 Revision Date: 07-15-2024 Renewal Date: 07-31 2025

DIVISION: 07 00 00 – Thermal and Moisture Protection Section: 07 41 13 – Metal Wall Panels

REPORT HOLDER: Morin Corporation 685 Middle Street Bristol, CT 06010 +1-386-626-6789 www.morincorp.com harshp@morincorp.com

REPORT SUBJECT:

Morin Integrity, Matrix and Pulse Series Wall Cladding Panels

1.0 SCOPE OF EVALUATION

1.1 This Research Report addresses compliance with the following Codes:

• 2024, 2021 and 2018 International Building Code® (IBC)

NOTE: This report references the most recent editions of the codes cited. Section numbers in earlier editions may differ.

1.2 The Integrity, Matrix and Pulse Series Wall Cladding Panels have been evaluated for the following properties (see Table 1):

- Physical properties
- Wind resistance

1.3 The Integrity, Matrix and Pulse Series Wall Cladding Panels have been evaluated for the following uses (see Table 1):

Exterior wall cladding in Types I, II, III, IV and V construction

2.0 STATEMENT OF COMPLIANCE

The Integrity, Matrix and Pulse Series Wall Cladding Panels comply with the Codes listed in Section 1.1, for the properties stated in Section 1.2 and uses stated in Section 1.3, when installed as described in this report, including the Conditions of Use stated in Section 6.

3.0 DESCRIPTION

3.1 Integrity, Matrix and Pulse Series Panels: The cladding panels are made of steel sheet, 55% aluminum-zinc alloy-coated structural steel (SS), Grade 40 or 50, Class 1, conforming to ASTM A792; aluminum conforming to ASTM B209, Type 3003-H14/3004-H34; or zinc conforming to EN 988 and IBC Table 1507.4.3(1). See the span tables and figures at the end of this report for thicknesses and profiles.

3.2 Panel Clips: The MIP panels clips are illustrated in Figure 1. The 18 ga. clips are formed from G90 galvanized steel conforming to ASTM A792.

3.3 Fasteners: Fasteners shall be self-drilling, self-tapping corrosion-resistant screws. Screw size and specification are determined by the design.

4.0 PERFORMANCE CHARACTERISTICS

4.1 Wind Resistance: When installed as described in this report, the panels have an allowable wind resistance as denoted in the Span Tables at the end of this report.

5.0 INSTALLATION

5.1 General:

The Integrity, Matrix and Pulse Series Wall Cladding Panels must be installed in accordance with the manufacturer's published installation instructions, the applicable Code, and this Research Report. A copy of the manufacturer's instructions must be available on the jobsite during installation.

The panels must be oriented perpendicular to steel framing complying with the code. Framing members must be specified by design and must be justified by engineering analysis. The panels must be attached to framing using one







MIP clip at each framing member, at the maximum spans noted in the tables at the end of this report. The type of fastener and the number of fasteners used per clip must be designed and calculations by a registered design professional must be provided to the building official.

A water-resistive barrier complying with IBC Section 1403.2 must be installed behind the panels and must be installed as required by that section of the code.

For use in Types I, II, III or IV construction on buildings greater than 40 feet above grade, evidence the water-resistive barrier complies with IBC Section 1402.5, Exception 2, or a report of testing in accordance with NFPA 285 for an assembly representative of the final construction, must be submitted to the building official.

6.0 CONDITIONS OF USE

6.1 Installation must comply with this Research Report, the manufacturer's published installation instructions, and the applicable Code. In the event of a conflict, this report governs.

6.2 Structural calculations demonstrating that applied loads are less than the allowable loads must be submitted to the local building official for approval.

6.3 The approval of the structural substrate to which the panels are attached is beyond the scope of this report.

6.4 A licensed design professional shall analyze the fasteners for pullout for use atop the specified framing. The framing shall be verified by the structural plans examiner.

6.5 Use of the panels as bracing against lateral wind or earthquake forces is outside the scope of this report.

6.6 The panels are manufactured under a quality control program with inspections by Intertek Testing Services NA, Inc.

7.0 SUPPORTING EVIDENCE

7.1 Reports of tests in accordance with ASTM E1592 and ASTM E330.

7.2 Intertek Listing Report "Morin Integrity, Matrix and Pulse Series Cladding Panels", on the <u>Intertek Directory of Building Products</u>.

8.0 IDENTIFICATION

The Integrity, Matrix and Pulse Series panels are identified with the manufacturer's name (Morin Corporation), the product name, job or lot number, the Intertek Mark as shown below, the Intertek Control Number and the Code Compliance Research Report number (CCRR-0499).



9.0 OTHER CODES

This section is not applicable.

10.0 CODE COMPLIANCE RESEARCH REPORT USE

10.1 Approval of building products and/or materials can only be granted by a building official having legal authority in the specific jurisdiction where approval is sought.

10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

10.3 Reference to the <u>https://bpdirectory.intertek.com</u> is recommended to ascertain the current version and status of this report.









MIP SERIES CLIP

Figure 1 – MIP Series Clip

Notes for the following Span Tables and Drawings:

- 1. Values shown are uniformly distributed negative loads for multiple span conditions (≥3 spans)
- 2. Values do not include consideration of sub-framing or fasteners, to be determined by qualified personnel
- 3. All pressures values reflect safety factor of 2.0 (Ultimate load/2.0)
- 4. Ultimate loads determined from ASTM E1592 testing which is limited to the assembly of Metal panel, MIP clip and fasteners system, does not include flashing, sealants, sub-framing, metal studs, & insulation
- 5. Requires use of MIP Clip
- 6. * Indicates tested material (all other values are interpolated)
- 7. For project specific calculations, please contact Morin Technical Services at 800-640-9501

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TABLE 1 – INTEGRITY SERIES PANELS – ILLUSTRATIONS, ALLOWABLE LOADS AND SPANS

S-16 Span Tables and Profile Drawing

Panel Type:	S-16
Material Type:	Aluminum
Deflection Limit:	L/180
Clip Type:	MIP clip

Panel	Panel		Allowable Uplift Pressures, psf										
Width	Thickness		Panel Span, ft										
in.	in.	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0			
16	0.032*	64.5	59.1	53.6	48.1	42.7	37.2	31.7	26.2	20.8			
	0.040*	65.2	57.9	50.6	43.4	36.1	28.8	21.5	14.2	6.9			
	0.050												

Panel Type:	S-16
Material Type:	Galvalume
Deflection Limit:	L/180
Clip Type:	MIP clip

Panel	Panel		Allowable Uplift Pressures, psf										
Width	Thickness		Panel Span, ft										
in.	in.	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0			
16	20ga*	89.4	83.1	76.8	70.5	64.2	57.9	51.6	45.3	39.0			
	22ga	69.6	64.6	59.5	54.4	49.4	44.3	39.2	34.2	29.1			
	24ga*	49.8	46.0	42.1	38.3	34.5	30.6	26.7	23.0	19.1			







X-12 Span Tables and Profile Drawing

Panel Type:	X-12
Material Type:	Aluminum
Deflection Limit:	L/180
Clip Type:	Integrity Series Clip

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	0.032*	67.2	56.1	50.5	45.0	39.4	33.9	28.3	22.8	17.2	11.6
	0.04	89.5	74.0	66.2	58.4	50.6	42.9	35.1	27.3	19.5	11.7
	0.050*	111.8	91.8	81.8	71.8	61.8	51.8	41.8	31.8	21.8	11.8

Panel Type:	X-12
Material Type:	Galvalume
Deflection Limit:	L/180
Clip Type:	Integrity Series Clip

Panel	Panel		Allowable Uplift Pressures, psf									
Width	Thickness		Panel Span, ft									
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	
12	18ga*	171.7	142.5	127.9	113.2	98.6	84.0	69.3	54.7	40.1	25.4	
	20ga	158.3	130.5	116.7	102.7	88.9	75.0	61.1	47.2	33.3	19.4	
	22ga	144.8	118.6	105.4	92.3	79.1	66.0	52.8	39.7	26.6	13.4	
	24ga*	131.4	106.6	94.2	81.8	69.4	57.0	44.6	32.2	19.8	7.4	

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Panel Type:	X-12
Material Type:	Zinc

Clip Type: Integrity Series Clip

Panel	Panel		Allowable Uplift Pressures, psf									
Width	Thickness		Panel Span, ft									
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	
12	1.0mm*	69.3	60.7	56.3	52.0	47.7	43.3	39.0	34.7	30.3	26.0	







X-16 Span Tables and Profile Drawing

Panel Type:	X-16
Material Type:	Aluminum

Clip Type: Integrity Series Clip

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
16	0.032*	30.1	28.1	27.0	26.0	25.0	23.0	22.9	21.9	20.8	19.8
	0.04	58.4	51.1	47.5	43.9	40.3	36.7	33.1	29.4	25.8	22.2
	0.050*	93.7	80.0	73.2	66.3	59.4	52.6	45.7	38.9	32.0	25.1

Panel Type: X-16 Material Type: Galvalume Deflection Limit: L/180 Clip Type: Integrity Series Clip

Panel	Panel				A	lowable Uplift	Pressures, ps	f					
Width	Thickness		Panel Span, ft										
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0		
16	18ga*	116.4	96.8	87.0	77.2	67.4	57.6	47.8	38.0	28.2	18.4		
	20ga	106.3	88.3	79.3	70.3	61.3	52.3	43.3	34.3	25.3	16.3		
	22ga	96.3	79.9	71.7	63.5	55.2	47.0	38.8	30.6	22.4	14.1		
	24ga*	86.2	71.4	64.0	56.6	49.2	41.7	34.3	26.9	19.5	-		







XA-12 Span Tables and Profile Drawing

Panel Type:	XA-12
Material Type:	Galvalume
Deflection Limit:	L/180
Clip Type:	MIP Clip

Panel	Panel		Allowable Uplift Pressures, psf											
Width	Thickness		Panel Span, ft											
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0			
	18ga	111.1	100.3	94.9	89.5	84.1	78.7	73.3	67.9	62.5	57.1			
12	20ga*	106.7	93.7	87.2	80.6	74.1	67.6	61.1	54.6	48.1	41.6			
	22ga	88.0	77.2	71.8	66.3	60.9	55.5	50.1	44.7	39.2	33.8			
	24ga*	69.4	60.7	56.4	52.0	47.7	43.4	39.0	34.7	30.4	26.0			







XA-16 Span Tables and Profile Drawing

Panel Type: XA-16 Material Type: Aluminum Deflection Limit: L/180 Clip Type: MIP Clip

Panel	Panel		Allowable Uplift Pressures, psf											
Width	Thickness		Panel Span, ft											
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0			
16	0.032	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
	0.040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
	0.050*	69.8	61.5	57.4	53.3	49.2	45.1	41.0	36.8	32.7	28.6			

Panel Type:	XA-16
Material Type:	Galvalume
Deflection Limit:	L/180
Clip Type:	Galvalume

Panel	Panel		Allowable Uplift Pressures, psf										
Width	Thickness		Panel Span, ft										
in.	in.	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0			
16	20ga*	64.1	60.7	57.2	53.7	50.3	46.8	43.3	39.9	36.4			
	22ga*	54.7	50.8	46.9	43.0	39.1	35.2	31.2	27.3	23.4			
	24ga	43.0	39.8	36.5	33.2	30.0	26.7	23.4	20.2	16.9			









XAB-16 Span Tables and Profile Drawing

Panel Type:	XAB-16
Material Type:	Aluminum

Clip Type: Integrity Series Clip

Panel	Panel		Allowable Uplift Pressures, psf										
Width	Thickness		Panel Span, ft										
in.	in.	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0			
16	0.032*	34.0	31.7	29.3	27.0	24.7	22.0	20.0	17.7	15.3			
	0.040	69.9	63.3	56.8	50.2	43.6	37.1	30.5	23.9	17.4			
	0.050*	114.6	103.0	91.1	79.3	67.5	55.6	43.6	32.0	20.1			

Panel Type:	XAB-16
Material Type:	Galvalume
Deflection Limit:	L/180
Clip Type:	Galvalume

Panel	el Panel Allowable Uplift Pressures, psf												
Width	Thickness		Panel Span, ft										
in.	in.	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0			
16	18ga	89.1	83.4	77.6	71.1	66.2	60.6	54.8	49.1	43.3			
	20ga*	85.4	78.6	71.8	65.0	58.2	51.5	44.7	37.9	31.1			
	22ga	81.7	73.9	66.0	58.2	50.3	42.5	34.6	26.8	18.9			
	24ga*	78.0	69.1	60.2	51.3	42.3	33.4	24.5	15.6	6.7			

16" NOMINAL







XB-12 Span Tables and Profile Drawing

Panel Type:	XB-12
Material Type:	Galvalume
Deflection Limit:	L/180
Clip Type:	Galvalume

Panel	Panel		Allowable Uplift Pressures, psf									
Width	Thickness					Panel S	pan, ft					
in.	in.	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0		
12	18ga†	102.0	94.1	86.2	78.4	70.5	62.6	54.7	46.9	39.0		
	20ga*	92.7	85.4	78.0	70.6	63.3	55.9	48.5	41.2	33.8		
	22ga	73.7	68.0	62.4	56.8	51.1	45.5	39.9	34.2	28.6		
	24ga*	54.6	50.7	46.8	42.9	39.0	35.1	31.2	27.3	23.4		









XB-16 Span Tables and Profile Drawing

Panel Type: XB-16 Material Type: Aluminum Deflection Limit: L/180 Clip Type: Integrity Series Clip

Panel	Panel		Allowable Uplift Pressures, psf										
Width	Thickness		Panel Span, ft										
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0		
12	0.032*	46.8	41.6	39.0	36.4	33.8	31.2	28.6	26.0	23.4	20.8		
	0.04	53.0	47.0	44.0	41.0	38.1	35.1	32.1	29.1	26.1	23.1		
	0.050*	60.7	53.8	50.3	46.8	43.4	39.9	36.4	33.0	29.5	26.0		

Panel Type:	XB-16
Material Type:	Galvalume
Deflection Limit:	L/180
Clip Type:	Galvalume

Panel	Panel				A	lowable Uplift	t Pressures, ps	f					
Width	Thickness		Panel Span, ft										
in.	in.	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0			
16	18ga	85.7	78.1	70.2	62.3	54.7	46.8	38.9	31.3	23.4			
	20ga*	71.9	65.9	59.8	53.7	47.7	41.6	35.5	29.5	23.4			
	22ga*	58.1	53.7	49.4	45.1	40.7	36.4	32.1	27.7	23.4			
	24ga	44.2	41.6	39.0	36.4	33.8	31.2	28.6	26.0	23.4			









XC-12 Span Tables and Profile Drawing

Panel Type:	XC-12
Material Type:	Aluminum

Clip Type: Integrity Series Clip

Panel	Panel		Allowable Uplift Pressures, psf										
Width	Thickness		Panel Span, ft										
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0		
12	0.032*	71.1	61.5	56.8	52.0	47.2	42.5	37.7	32.9	28.2	23.4		
	0.04	90.9	78.2	71.8	65.4	59.0	52.6	46.3	39.9	33.5	27.1		
	0.050*	115.7	98.9	90.5	82.1	73.7	65.4	57.0	48.6	40.2	31.8		

Panel Type: XC-12 Material Type: Galvalume Deflection Limit: L/180 Clip Type:

Panel	Panel		Allowable Uplift Pressures, psf										
Width	Thickness		Panel Span, ft										
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0		
12	18ga	122.6	101.6	91.1	80.6	70.1	59.6	49.1	38.6	28.1	17.6		
	20ga*	110.2	91.3	81.9	72.4	63.0	53.5	44.1	34.6	25.2	15.7		
	22ga	97.9	81.1	72.7	64.3	55.9	47.4	39.0	30.6	22.2	13.8		
	24ga*	85.5	70.8	63.4	56.1	48.7	41.3	34.0	26.6	19.2	11.9		









XF-12 Span Tables and Profile Drawing

Panel Type:	XF-12
Material Type:	Galvalume
Deflection Limit:	L/180
Clip Type:	Integrity Series Clip

Panel	Panel		Allowable Uplift Pressures, psf										
Width	Thickness		Panel Span, ft										
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0		
12	18ga*	126.7	105.3	94.6	83.9	73.2	62.5	51.8	41.1	30.4	19.7		
	20ga	102.8	86.0	77.6	69.2	60.9	52.5	44.1	35.7	27.3	18.9		
	22ga	78.9	66.7	60.6	54.5	48.5	42.4	36.3	30.2	24.1	18.0		
	24ga*	54.9	47.4	43.6	39.9	36.1	32.3	28.6	24.8	21.0	17.3		



XG-12 Span Tables and Profile Drawing

Panel Type:	XG-12
Material Type:	Galvalume
Deflection Limit:	L/180
Clip Type:	MIP Clip

Panel	Panel		Allowable Uplift Pressures, psf											
Width	Thickness		Panel Span, ft											
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0			
12	20ga*	116.8	100.8	92.7	84.7	76.6	68.6	60.5	52.5	44.5	36.4			
	22ga	89.6	77.7	71.7	65.8	59.8	53.8	47.8	41.9	35.9	29.9			
	24ga*	62.4	54.6	50.7	46.8	42.9	39.0	35.1	31.2	27.3	23.4			









TABLE 2 – MATRIX SERIES PANELS – ILLUSTRATIONS, ALLOWABLE LOADS AND SPANS

MX1.0 Span Tables and Profile Drawing

Panel Type:	MX1.0
Material Type:	Aluminum
Deflection Limit:	L/180
Clip Type:	Matrix Series Clip

Panel Panel					A	lowable Uplif	t Pressures, ps	f					
Width	Thickness		Panel Span, ft										
in.	in.	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0			
12	0.03 *	58.9	52.0	45.1	38.2	31.3	24.4	17.5	10.5	3.6			
12	0.04 *	94.7	83.8	73.0	62.2	51.3	40.5	29.7	18.8	8.0			
12	0.05	139.4	123.7	107.9	92.2	76.4	60.7	44.9	29.3	13.4			

Panel Type:	MX1.0
Material Type:	Steel
Deflection Limit:	L/180
Clip Type:	Matrix Series Clip

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness					Panel S	pan, ft				
in.	in.	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	
12	18ga	118.6	106.4	94.2	82.0	69.7	57.5	45.3	33.1	20.8	
12	20ga *	102.2	91.5	80.7	70.0	59.2	48.5	37.7	27.0	16.3	
12	22ga *	96.4	84.9	73.4	61.9	50.3	38.8	27.3	15.8	4.3	
12	24ga *	69.2	61.4	53.6	45.8	38.0	30.2	22.4	14.6	6.8	

Panel Type: MX1.0 Material Type: Zinc Deflection Limit: L/180 Clip Type: Matrix Series Clip

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	1mm	80.6	68.9	63.1	57.2	51.4	45.5	39.7	33.8	28.0	22.1







MX2.0 Span Tables and Profile Drawing

Panel Type:	MX2.0				
Material Type:	Aluminum				
Deflection Limit:	L/180				
Clip Type:	Matrix Series Clip				

Panel	Panel				t Pressures, ps	ressures, psf				
Width 1	Thickness		Panel Span, ft							
in.	in.	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	0.032*	57.6	53.8	49.9	46.1	42.2	38.4	34.5	30.7	26.8
	0.04	71.0	65.8	60.7	55.6	50.4	45.3	40.2	35.0	29.9
	0.050*	87.5	80.8	74.1	67.4	60.7	54.0	47.2	40.5	33.8

Panel Type:	MX2.0
Material Type:	Steel
Deflection Limit:	L/180
Clip Type:	Galvalume

Panel Panel Allowable Uplift Pressures, psf Width Thickness Panel Span, ft 2.0 2.5 3.0 4.5 5.0 5.5 1.0 3.5 4.0 6.0 in. in. 12 18ga 137.9 118.6 109.0 99.4 89.7 80.1 70.5 60.9 51.2 41.6 20ga* 113.9 98.4 90.7 82.9 75.2 67.4 59.7 51.9 44.2 36.4 22ga 88.1 76.7 71.0 65.4 59.7 54.0 48.3 42.6 36.9 31.2 66.0 50.0 38.0 24ga* 58.0 54.0 46.0 42.0 34.0 30.0 26.0







MX3.0 Span Tables and Profile Drawing

Panel Type: MX 3.0 Material Type: Aluminum Deflection Limit: L/180 Clip Type: Matrix Series Clip

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness	5	Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	0.032*	64.1	55.5	51.1	46.8	42.5	38.1	33.8	29.5	25.1	20.8
	0.04	72.3	62.4	57.5	52.6	47.7	42.8	37.9	32.9	28.0	23.1
	0.05*	82.3	71.1	65.4	59.8	54.2	48.5	42.9	37.3	31.6	26.0

Panel Type:	MX3.0
Material Type:	Steel
Deflection Limit:	L/180
Clip Type:	Galvalume

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness					Panel S	pan, ft				
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	18ga	125.3	109.1	100.9	92.8	84.7	76.6	68.5	60.4	52.3	44.2
	20ga*	105.8	91.9	85.0	78.1	71.1	64.2	57.2	50.3	43.4	36.4
	22ga	86.4	74.8	69.0	63.3	57.5	51.7	45.9	40.2	34.4	28.6
	24ga*	66.9	57.7	53.1	48.5	43.9	39.2	34.6	30.0	25.4	20.8









MX4.0 Span Tables and Profile Drawing

Panel Type:	MX4.0
Material Type:	Aluminum
Deflection Limit:	L/180
Clip Type:	Matrix Series Clip

Panel	Panel	Allowable Uplift Pressures, psf									
Width	Thickness		Panel Span, ft								
in.	in.	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	
12	0.032	47.7	41.8	35.8	29.9	24.0	18.0	12.1	6.2	-	
	0.040*	63.4	57.3	51.1	45.0	38.8	32.7	26.5	20.4	14.2	
	0.050*	83.0	76.6	70.2	63.8	58.4	51.0	44.5	38.1	31.7	

Panel Type:	MX4.0
Material Type:	Steel
Deflection Limit:	L/180
Clip Type:	Matrix Series Clip

Panel	Panel	Allowable Uplift Pressures, psf										
Width Thickness			Panel Span, ft									
in.	in.	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0		
12	18ga*	78.0	72.8	67.6	62.4	57.2	52.0	46.8	41.6	36.4		
	20ga	79.1	72.8	66.4	60.0	53.7	45.6	39.3	32.9	28.2		
	22ga*	80.3	72.8	65.2	57.7	50.1	42.6	35.0	27.4	20.0		
	24ga*	59.9	54.9	49.9	44.9	39.9	35.0	30.0	25.0	20.0		



MX6.0 Span Tables and Profile Drawing







Type:	MX6.0
ial Type:	Aluminum
tion Limit:	L/180
/pe:	Matrix Series Clip

Panel		Allowable Uplift Pressures, psf								
Thickness		Panel Span, ft								
in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
0.032	73.1	65.6	61.9	58.1	54.4	50.6	46.9	43.1	39.3	35.6
0.040*	79.8	71.1	66.8	62.4	58.1	53.8	49.4	45.1	40.8	36.4
0.050*	88.1	78.0	72.9	67.9	62.8	57.7	52.7	47.6	42.5	37.5

Panel Type:	MX6.0
Material Type:	Steel
Deflection Limit:	L/180
Clip Type:	Matrix Series Clip

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	18ga*	118.5	102.8	94.9	87.1	79.3	71.4	63.6	55.7	47.9	40.1
	20ga	107.8	93.4	86.1	78.9	71.6	64.4	57.2	49.9	42.7	35.5
	22ga	97.2	83.9	77.3	70.7	64.0	57.4	50.8	44.1	37.5	30.9
	24ga*	86.6	74.5	68.5	62.5	56.4	50.4	44.4	38.3	32.3	26.3

Panel Type:	MX6.0
Material Type:	Zinc
Deflection Limit:	L/180
Clip Type:	Matrix Series Clip

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	1mm	78.2	67.7	62.5	57.3	52.1	46.9	41.7	36.4	31.2	26.0







MX7.0 Span Tables and Profile Drawing

Panel Type:	MX7.0
Seam Hght:	
Material Type:	Aluminum
Deflection Limit:	L/180
Clip Type:	Galvalume

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	0.032	88.5	75.4	68.9	62.4	55.9	49.4	42.9	36.4	29.9	23.4
	0.04	101.4	86.5	79.1	71.6	64.2	56.7	49.2	41.8	34.3	26.9
	0.050*	117.7	100.4	91.7	83.1	74.4	65.8	57.2	48.5	39.9	31.2

Panel Type:	MX7.0
Material Type:	Steel
Deflection Limit:	L/180
Clip Type:	Matrix Series Clip

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	18ga*	101.5	89.6	83.7	77.8	71.8	65.9	59.9	54.0	48.0	42.1
	20ga	91.8	80.7	75.2	69.6	64.1	58.6	53.0	47.5	42.0	36.4
	22ga	82.0	71.8	66.6	61.5	56.4	51.3	46.1	41.0	35.9	30.8
	24ga*	72.3	62.8	58.1	53.4	48.7	44.0	39.2	34.5	29.8	25.1







MX8.0 Span Tables and Profile Drawing

Panel Type:	MX8.0
Material Type:	Aluminum
Deflection Limit:	L/180
Clip Type:	Galvalume

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	0.032*	78.0	66.5	60.8	55.1	49.4	43.7	38.0	32.2	26.5	20.8
	0.04	86.4	74.9	69.2	63.5	57.8	52.0	46.3	40.6	34.9	29.2
	0.050*	95.0	83.9	78.4	72.8	67.3	61.8	56.2	50.7	45.2	39.6

Panel Type:	MX8.0
Material Type:	Steel
Deflection Limit:	L/180
Clip Type:	Galvalume

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	18ga*	86.9	76.8	71.8	66.7	61.7	56.6	51.6	46.5	41.5	36.4
	20ga	83.1	73.4	68.5	63.7	58.9	54.0	49.2	44.3	39.5	34.7
	22ga	79.2	70.0	65.3	60.7	56.1	51.4	46.8	42.2	37.6	32.9
	24ga*	78.8	68.3	63.0	57.7	52.4	47.1	41.9	36.6	31.3	26.0







MX9.0 Span Tables and Profile Drawing

Panel Type: MX-9 Material Type: Aluminum Deflection Limit: L/180 Clip Type: MIP Clip

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	0.032*	62.0	53.8	49.7	45.6	41.4	37.3	33.2	29.1	24.9	20.8
	0.040	78.3	68.0	62.8	57.7	52.5	47.4	42.2	37.1	32.0	26.8
	0.050*	98.5	85.7	79.3	72.8	66.4	60.0	53.6	47.1	40.7	34.3

Panel Type:	MX9.0
Material Type:	Steel
Deflection Limit:	L/180
Clip Type:	Matrix Series Clip

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	18ga*	118.2	101.9	93.7	85.6	77.4	69.3	61.1	53.0	44.8	36.7
	20ga	107.3	92.5	85.1	77.6	70.2	62.8	55.4	48.0	40.6	33.1
	22ga	96.4	83.1	76.4	69.7	63.0	56.3	49.7	43.0	36.3	29.6
	24ga*	85.6	73.7	67.8	61.8	55.9	49.9	44.0	38.0	32.1	26.1



MX10.0 Span Tables and Profile Drawing







Panel Type: MX-10 Material Type: Aluminum Deflection Limit: L/180 Clip Type: MIP Clip

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	0.032	83.8	70.5	63.8	57.1	50.4	43.7	37.0	30.3	23.6	16.9
	0.040*	82.6	71.3	65.6	60.0	54.3	48.6	43.0	37.3	31.7	26.0
	0.050*	70.8	64.1	60.8	57.5	54.1	50.8	47.5	44.1	40.8	37.5

Panel Type:	MX10.0
Material Type:	Steel
Deflection Limit:	L/180
Clip Type:	Matrix Series Clip

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	18ga*	120.0	106.9	100.4	93.9	87.3	80.8	74.2	67.7	61.1	54.6
	20ga	119.6	105.1	97.8	90.5	83.2	75.9	68.7	61.4	54.1	46.8
	22ga*	119.2	103.2	95.2	87.2	79.1	71.1	63.1	55.1	47.1	39.1
	24ga	118.8	101.3	92.6	83.8	75.0	66.3	57.5	48.8	40.0	31.3



MX11.0 Span Tables and Profile Drawing







Panel Type:	MX11.0
Material Type:	Aluminum
Deflection Limit:	L/180
Clip Type:	Matrix Series Clip

Panel	Panel		Allowable Uplift Pressures, psf								
Width	Thickness		Panel Span, ft								
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	0.032	55.5	48.6	45.1	41.6	38.2	34.7	31.2	27.7	24.3	20.8
	0.040*	71.7	62.4	57.8	53.2	48.5	43.9	39.3	34.7	30.0	25.4
	0.050*	91.9	79.7	73.7	67.6	61.5	55.5	49.4	43.3	37.3	31.2

Panel Type:	MX-11
Material Type:	Galvalume
Deflection Limit:	L/180
Clip Type:	MIP Clip

Panel	Panel		Allowable Uplift Pressures, psf										
Width	Thickness		Panel Span, ft										
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0		
12	18ga*	105.7	91.9	84.9	78.0	71.1	64.1	57.2	50.3	43.3	36.4		
	20ga	92.8	80.2	73.9	67.6	61.4	55.1	48.8	42.5	36.2	29.9		
	22ga	86.3	74.3	68.4	62.4	56.5	50.5	44.5	38.6	32.6	26.7		
	24ga*	79.7	68.5	62.8	57.2	51.6	45.9	40.3	34.7	29.0	23.4		







TABLE 3 – PULSE SERIES PANELS – ILLUSTRATIONS, ALLOWABLE LOADS AND SPANS

P1 Span Tables and Profile Drawing

Panel Type:	P-1
Material Type:	Aluminum
Deflection Limit:	L/180
Clip Type:	MIP Clip

Panel	Panel		Allowable Uplift Pressures, psf									
Width	Thickness		Panel Span, ft									
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	
12	0.032*	68.0	58.7	54.1	49.4	44.7	40.1	35.4	30.8	26.1	21.5	
	0.040	84.1	73.3	68.0	62.6	57.2	51.9	46.5	41.1	35.8	30.4	
	0.050*	104.0	91.5	85.3	79.1	72.8	66.6	60.3	54.1	47.8	41.6	

Panel Type: P1 Material Type: Steel Deflection Limit: L/180

Clip Type: Pulse Series Clip

Panel	Panel		Allowable Uplift Pressures, psf									
Width	Thickness		Panel Span, ft									
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	
12	18ga*	118.8	103.6	96.0	88.4	80.8	73.2	65.6	58.0	50.4	42.8	
	20ga	105.0	91.1	84.2	77.2	70.3	63.3	56.4	49.4	42.5	35.5	
	22ga	91.2	78.6	72.3	66.0	59.7	53.5	47.2	40.9	34.6	28.3	
	24ga*	77.4	66.1	60.5	54.9	49.2	43.6	38.0	32.3	26.7	21.1	









P2 Span Tables and Profile Drawing

Panel Type:	P-2
Material Type:	Aluminum
Deflection Limit:	L/180
Clip Type:	MIP Clip

Panel	Panel		Allowable Uplift Pressures, psf									
Width	Thickness		Panel Span, ft									
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	
12	0.032	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	0.040*	91.9	79.7	73.7	67.6	61.5	55.5	49.4	43.3	37.3	31.2	
	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Panel Type: P2 Material Type: Steel Deflection Limit: L/180 Clip Type: Pulse Series Clip

Panel	Panel		Allowable Uplift Pressures, psf									
Width	Thickness		Panel Span, ft									
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	
12	18ga*	99.9	87.7	81.6	75.5	69.3	63.2	57.1	51.0	44.9	38.8	
	20ga	93.0	81.1	75.1	69.2	63.3	57.3	51.4	45.4	39.5	33.6	
	22ga	86.0	74.5	68.7	63.0	57.2	51.4	45.7	39.9	34.1	28.4	
	24ga*	79.1	67.9	62.3	56.7	51.1	45.5	39.9	34.3	28.7	23.2	







P3 Span Tables and Profile Drawing

Panel Type:P-3Material Type:AluminumDeflection Limit:L/180Clip Type:MIP Clip

Pane	l Panel		Allowable Uplift Pressures, psf										
Widt	h Thickness		Panel Span, ft										
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0		
12	0.032*	64.1	55.5	51.1	46.8	42.5	38.1	33.8	29.5	25.1	20.8		
	0.040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
	0.050	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Panel Type:	P-3
Material Type:	Galvalume
Deflection Limit:	L/180
Clip Type:	MIP Clip

Panel	Panel		Allowable Uplift Pressures, psf									
Width	Thickness		Panel Span, ft									
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	
12	18ga*	112.6	100.9	95.0	89.1	83.2	77.3	71.5	65.6	59.7	53.8	
	20ga	93.5	84.3	79.6	75.0	70.4	65.7	61.1	56.5	51.8	47.2	
	22ga	74.4	67.7	64.3	60.9	57.5	54.2	50.8	47.4	44.0	40.7	
	24ga*	55.3	51.1	48.9	46.8	44.7	42.6	40.4	38.3	36.2	34.1	









P4 Span Tables and Profile Drawing

Panel Type:	P-4
Material Type:	Aluminum
Deflection Limit:	L/180
Clip Type:	MIP Clip

Panel	Panel		Allowable Uplift Pressures, psf										
Width	Thickness		Panel Span, ft										
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0		
12	0.032*	55.5	48.5	45.1	41.6	38.1	34.7	31.2	27.7	24.3	20.8		
	0.040	72.4	63.9	59.7	55.5	51.2	47.0	42.8	38.5	34.3	30.0		
	0.050*	93.6	83.2	78.0	72.8	67.6	62.4	57.2	52.0	46.8	41.6		

Panel Type:	P-4
Material Type:	Galvalume
Deflection Limit:	L/180
Clip Type:	Galvalume

Panel	Panel	Allowable Uplift Pressures, psf									
Width	Thickness	Panel Span, ft									
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	18ga*	93.1	81.6	75.9	70.2	64.5	58.8	53.1	47.3	41.6	35.9
	20ga	82.5	72.4	67.3	62.2	57.1	52.1	47.0	41.9	36.8	31.8
	22ga	72.1	63.2	58.7	54.3	49.8	45.4	40.9	36.5	32.0	27.6
	24ga*	61.5	53.9	50.1	46.3	42.4	38.6	34.8	31.0	27.2	23.4







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P9 Span Tables and Profile Drawing

Panel Type: P-9 Material Type: Aluminum Deflection Limit: L/180 Clip Type: MIP Clip

Panel	Panel	Allowable Uplift Pressures, psf									
Width	Thickness	Panel Span, ft									
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	0.032	64.1	55.2	50.8	46.3	41.9	37.4	33.0	28.5	24.1	19.7
	0.040*	79.5	68.8	63.4	58.1	52.8	47.4	42.1	36.7	31.4	26.0
	0.050*	98.7	85.7	79.3	72.8	66.3	59.9	53.4	46.9	40.4	34.0

Panel Type: P9 Material Type: Steel Deflection Limit: L/180 Clip Type: Pulse Series Clip

Panel	Panel	Allowable Uplift Pressures, psf									
Width	Thickness	Panel Span, ft									
in.	in.	1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
12	18ga*	105.6	92.5	85.9	79.3	72.7	66.1	59.6	53.0	46.4	39.8
	20ga	94.3	82.4	76.5	70.6	64.7	58.8	52.9	47.0	41.1	35.2
	22ga	82.9	72.4	67.2	62.0	56.7	51.5	46.3	41.1	35.8	30.6
	24ga*	71.5	62.4	57.9	53.3	48.8	44.2	39.7	35.1	30.6	26.0





