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Renewal Date: 07-31-2026

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

REPORT HOLDER:
Morin Corporation
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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 6.0.

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 panel 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 [Intertek Directory of Building Products](#).

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.

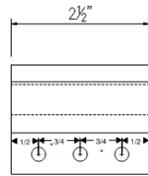
10.0 CODE COMPLIANCE RESEARCH REPORT USE

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.

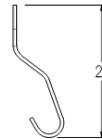
10.2 Code Compliance Research Reports shall not be used in any manner that implies an endorsement of the product by Intertek.

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

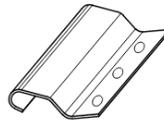




TOP VIEW



SIDE VIEW



MATERIAL:
18 GAUGE GALVALUME

Figure 1 – MIP Series Clip

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

Profile Options		
Integrity X-12 	Integrity XE-12 	Integrity XAB-16
Integrity XA-12 	Integrity XF-12 	Integrity XAAB-16
Integrity XB-12 	Integrity XG-12 	Integrity XABB-16
Integrity XC-12 	Integrity X-16 	Integrity XB-16
Integrity XD-12 	Integrity XA-16 	Integrity S-16



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TABLE 1 – INTEGRITY SERIES PANELS – ILLUSTRATIONS, ALLOWABLE LOADS AND SPANS (cont.)

Galvalume

Panel Type	Panel Width (in.)	Panel Thickness (in.)	Deflection Limit	Clip Type	Allowable Uplift Pressures (psf), Panel Span (ft.)									
					1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
X-12	12	24*	L/180	MIP Clip	131.4	106.6	94.2	81.8	69.4	57.0	44.6	32.2	19.8	7.4
		22			141.5	115.6	102.6	89.7	76.7	63.8	50.8	37.8	24.9	11.9
		20			151.6	124.6	111.1	97.6	84.0	70.5	57.0	43.5	30.0	16.4
		18*			171.7	142.5	127.8	113.2	98.6	83.9	69.3	54.7	40.0	25.4
X-16	16	24*			86.2	71.4	64.0	56.6	49.2	41.7	34.3	26.9	19.5	12.1
		22			93.8	77.8	69.8	61.7	53.7	45.7	37.7	29.7	21.7	13.7
		20			101.4	84.2	75.5	66.9	58.3	49.7	41.1	32.5	23.9	15.2
		18*			116.4	96.8	87.0	77.2	67.4	57.6	47.8	38.0	28.2	18.4
XA-12	12	24*			69.4	60.7	56.4	52.0	47.7	43.4	39.0	34.7	30.4	26.0
		22			88.0	77.2	71.8	66.3	60.9	55.5	50.1	44.7	39.2	33.8
		20*			106.7	93.7	87.2	80.6	74.1	67.6	61.1	54.6	48.1	41.6
		18			111.1	100.3	94.9	89.5	84.1	78.7	73.3	67.9	62.5	57.1
XA-16	16	24*			41.2	35.9	33.3	30.7	28.1	25.5	22.9	20.2	17.6	15.0
		22*			62.6	54.7	50.8	46.9	43.0	39.1	35.2	31.2	27.3	23.4
		20*			71.1	64.1	60.7	57.2	53.7	50.3	46.8	43.3	39.9	36.4
		18*			112.8	97.5	89.8	82.2	74.5	66.8	59.2	51.5	43.8	36.2
XB-12	12	24*	62.4	54.6	50.7	46.8	42.9	39.0	35.1	31.2	27.3	23.4		
		22	84.9	73.7	68.0	62.4	56.8	51.1	45.5	39.9	34.2	28.6		
		20*	107.5	92.7	85.4	78.0	70.6	63.6	55.9	48.5	41.2	33.8		
		18*	129.5	113.6	105.7	97.8	89.9	82.0	74.1	66.1	58.2	50.3		
XB-16	16	22*	66.7	58.1	53.7	49.4	45.1	40.7	36.4	32.1	27.7	23.4		
		20*	84.1	71.9	65.9	59.8	53.7	47.7	41.6	35.5	29.5	23.4		
		18	101.4	85.8	78.0	70.2	62.4	54.6	46.8	39.0	31.2	23.4		

Notes:

- 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 (steel material, unless noted otherwise) with minimum 2 fasteners.
- 6 * Indicates tested material (all other values are interpolated).
- 7 Galvalume material conforming to ASTM A792.
- 8 Please refer to Morin website for span charts pertaining to perforated panels.
- 9 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 (cont.)

Galvalume (continued)

Panel Type	Panel Width (in.)	Panel Thickness (in.)	Deflection Limit	Clip Type	Allowable Uplift Pressures (psf), Panel Span (ft.)									
					1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
XAB-16	16	24*	L/180	MIP Clip	95.9	78.0	69.1	60.2	51.3	42.4	33.5	24.5	15.6	6.7
		22			97.4	81.7	73.9	66.0	58.2	50.3	42.5	34.6	26.8	18.9
		20*			98.9	85.4	78.6	71.8	65.0	58.2	51.5	44.7	37.9	31.1
		18*			100.5	89.0	83.3	77.6	71.9	66.2	60.5	54.7	49.0	43.3
22*		83.7			72.9	67.4	62.0	56.6	51.1	45.7	40.3	34.8	29.4	
XAAB-16		20			88.8	77.4	71.7	66.0	60.3	54.5	48.8	43.1	37.4	31.7
		18*			99.0	86.4	80.1	73.9	67.6	61.3	55.0	48.7	42.4	36.2
XABB-16		22*			86.1	73.1	66.6	60.1	53.6	47.1	40.6	34.1	27.6	21.2
XC-12	12	22			98.0	81.1	72.7	64.3	55.9	47.5	39.1	30.6	22.2	13.8
		20*			110.2	91.3	81.9	72.4	63.0	53.5	44.1	34.6	25.2	15.7
		18*			128.1	112.2	104.3	96.4	88.4	80.5	72.6	64.7	56.7	48.8
XD-12		18*			99.6	89.3	84.2	79.1	73.9	68.8	63.7	58.5	53.4	48.3
		XE-12			18*	119.5	105.5	98.5	91.5	84.5	77.5	70.5	63.5	56.5
XF-12					24*	54.9	47.4	43.6	39.9	36.1	32.3	28.6	24.8	21.0
		22			73.0	61.9	56.4	50.9	45.4	39.9	34.4	28.9	23.4	17.9
		20*			91.0	76.5	69.2	62.0	54.7	47.5	40.2	33.0	25.7	18.5
	18*	126.7	105.3	94.6	83.9	73.2	62.5	51.8	41.1	30.3	19.6			
XG-12	24*	66.6	57.9	53.6	49.3	45.0	40.7	36.4	32.0	27.7	23.4			
	22	91.7	79.3	73.2	67.0	60.8	54.6	48.5	42.3	36.1	29.9			
	20*	116.8	100.8	92.7	84.7	76.6	68.6	60.5	52.5	44.5	36.4			
	18*	100.3	89.1	83.5	77.9	72.2	66.6	61.0	55.4	49.8	44.2			
S-16	16	24	57.4	49.8	45.9	42.1	38.3	34.4	30.6	26.8	22.9	19.1		
		22*	79.8	69.6	64.6	59.5	54.4	49.4	44.3	39.2	34.2	29.1		
		20*	102.0	89.4	83.1	76.8	70.5	64.2	57.9	51.6	45.3	39.0		
		18*	100.4	87.3	80.8	74.3	67.7	61.2	54.6	48.1	41.5	35.0		

Notes:

- 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 (steel material, unless noted otherwise) with minimum 2 fasteners.
- 6 * Indicates tested material (all other values are interpolated).
- 7 Galvalume material conforming to ASTM A792.
- 8 Please refer to Morin website for span charts pertaining to perforated panels.
- 9 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 (cont.)

Aluminum

Panel Type	Panel Width (in.)	Panel Thickness (in.)	Deflection Limit	Clip Type	Allowable Uplift Pressures (psf), Panel Span (ft.)									
					1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
X-12	12	0.032*	L/180	MIP Clip	67.3	56.1	50.6	45.0	39.4	33.9	28.3	22.7	17.2	11.6
		0.040			87.1	72.0	64.4	56.9	49.4	41.8	34.3	26.8	19.2	11.7
		0.050*			111.8	91.8	81.8	71.8	61.8	51.8	41.8	31.8	21.8	11.8
X-16	16	0.032*			30.1	28.1	27.0	26.0	25.0	23.0	22.9	21.9	20.8	19.8
		0.040			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
XA-12	12	0.050*			99.5	86.9	80.6	74.4	68.1	61.8	55.5	49.2	42.9	36.7
XA-16	16	0.032*			33.1	29.8	28.1	26.5	24.9	23.2	21.6	19.9	18.3	16.6
		0.040			48.7	43.4	40.7	38.0	35.3	32.6	30.0	27.3	24.6	21.9
		0.050*			69.8	61.5	57.4	53.3	49.2	45.1	41.0	36.8	32.7	28.6
XB-12	12	0.032*			60.3	52.4	48.5	44.5	40.6	36.6	32.7	28.7	24.8	20.8
		0.040			69.7	61.4	57.2	53.1	48.9	44.7	40.6	36.4	32.3	28.1
		0.050*			99.5	86.9	80.6	74.4	68.1	61.8	55.5	49.2	42.9	36.7
XB-16	16	0.040			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	32.0	28.6	25.0
		0.040			83.1	69.9	63.3	56.8	50.2	43.6	37.1	30.5	23.9	17.4
XAB-16	16	0.050*			138.4	114.6	103.0	91.1	79.3	67.5	55.6	43.6	32.0	20.1
0.040*		58.3			50.3	46.4	42.4	38.4	34.5	30.5	26.5	22.5	18.6	
0.050*		76.2			65.9	60.7	55.6	50.5	45.3	40.2	35.0	29.9	24.8	
XABB-16	16	0.040*			69.6	60.0	55.2	50.5	45.7	40.9	36.1	31.3	26.5	21.7
		0.050*			74.7	66.6	62.5	58.5	54.4	50.4	46.3	42.3	38.2	34.2
		0.040			90.9	78.2	71.8	65.4	59.0	52.6	46.3	39.9	33.5	27.1
XC-12	12	0.050*			115.7	98.9	90.5	82.1	73.7	65.4	57.0	48.6	40.2	31.8
		0.040			65.0	56.3	51.9	47.6	43.3	38.9	34.6	30.2	25.9	21.5
XD-12	12	0.050*			98.9	86.3	79.9	73.6	67.3	61.0	54.6	48.3	42.0	35.7
		0.032*			67.1	57.2	52.2	47.3	42.3	37.3	32.4	27.4	22.4	17.5
XE-12	12	0.040			66.9	57.7	53.0	48.4	43.8	39.1	34.5	29.9	25.2	20.6
		0.050*			66.7	58.2	54.0	49.8	45.6	41.4	37.2	32.9	28.7	24.5
		0.050*			83.2	74.0	69.4	64.8	60.1	55.5	50.9	46.3	41.7	37.1
XF-12	12	0.032*			23.9	21.3	20.0	18.7	17.4	16.1	14.8	13.5	12.2	10.9
		0.040	32.9	30.1	28.6	27.2	25.8	24.4	22.9	21.5	20.1	18.7		
		0.050*	44.2	41.0	39.4	37.9	36.3	34.7	33.1	31.5	29.9	28.4		
S-16	16	0.032*	75.5	64.5	59.1	53.6	48.1	42.7	37.2	31.7	26.2	20.8		
		0.040	79.7	65.2	57.9	50.6	43.4	36.1	28.8	21.5	14.2	6.9		

Notes:

- 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 (steel material, unless noted otherwise) with minimum 2 fasteners.
- 6 * Indicates tested material (all other values are interpolated).
- 7 Aluminum material conforming to 3003-H14; reach out to Morin technical for anodized (5005-H34) or any other Aluminum material.
- 8 Please refer to Morin website for span charts pertaining to perforated panels.
- 9 For project specific calculations, please contact Morin Technical Services at 800-640-9501.



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

<p>Matrix MX-1</p>	<p>Matrix MX-6</p>	<p>Matrix MX-11</p>
<p>Matrix MX-2</p>	<p>Matrix MX-7</p>	<p>Matrix MX-12</p>
<p>Matrix MX-3</p>	<p>Matrix MX-8</p>	<p>Matrix MX-13</p>
<p>Matrix MX-4</p>	<p>Matrix MX-9</p>	<p>Matrix MX-14</p>
<p>Matrix MX-5</p>	<p>Matrix MX-10</p>	<p>Matrix MX-15</p>





TABLE 2 – MATRIX SERIES PANELS – ILLUSTRATIONS, ALLOWABLE LOADS AND SPANS (cont.)

Galvalume

Panel Type	Panel Width (in.)	Panel Thickness (in.)	Deflection Limit	Clip Type	Allowable Uplift Pressures (psf), Panel Span (ft.)										
					1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	
MX-1	12	24*	L/180	MIP Clip	84.8	69.2	61.4	53.6	45.8	38.0	30.2	22.4	14.6	6.8	
		22*			119.5	96.4	84.9	73.4	61.9	50.4	38.9	27.3	15.8	4.3	
		20*			123.6	102.2	91.4	80.7	70.0	59.2	48.5	37.8	27.0	16.3	
		18*			89.4	79.9	75.2	70.5	65.7	61.0	56.3	51.5	46.8	42.1	
MX-2		24*			66.0	58.0	54.0	50.0	46.0	42.0	38.0	34.0	30.0	26.0	
		22			90.0	78.2	72.3	66.5	60.6	54.7	48.8	43.0	37.1	31.2	
		20*			113.9	98.4	90.7	82.9	75.2	67.4	59.7	51.9	44.2	36.4	
		18			137.9	118.6	109.0	99.4	89.7	80.1	70.5	60.9	51.2	41.6	
MX-3		24*			66.9	57.7	53.1	48.5	43.9	39.2	34.6	30.0	25.4	20.8	
		22			86.4	74.8	69.0	63.3	57.5	51.7	45.9	40.2	34.4	28.6	
		20*			105.8	91.9	85.0	78.1	71.1	64.2	57.2	50.3	43.4	36.4	
	18*	109.6	97.1	90.8	84.5	78.2	71.9	65.7	59.4	53.1	46.8				
MX-4	24*	69.4	59.7	54.8	50.0	45.1	40.2	35.4	30.5	25.7	20.8				
	22	73.7	64.4	59.7	55.0	50.4	45.7	41.0	36.3	31.7	27.0				
	20	78.1	69.1	64.6	60.1	55.6	51.1	46.7	42.2	37.7	33.2				
	18*	86.7	78.4	74.3	70.2	66.1	62.0	57.9	53.7	49.6	45.5				
MX-5	24*	84.4	72.4	66.3	60.3	54.3	48.3	42.2	36.2	30.2	24.2				
	22	97.4	84.0	77.2	70.5	63.8	57.0	50.3	43.6	36.9	30.1				
	20	110.4	95.6	88.1	80.7	73.3	65.8	58.4	51.0	43.6	36.1				
	18*	136.3	118.6	109.8	101.0	92.1	83.3	74.5	65.7	56.8	48.0				
MX-6	22	94.6	81.6	75.1	68.6	62.2	55.7	49.2	42.7	36.2	29.7				
	20	102.6	88.7	81.8	74.8	67.9	60.9	54.0	47.1	40.1	33.2				
	18*	118.5	102.8	94.9	87.1	79.3	71.4	63.6	55.7	47.9	40.1				
	22	79.6	69.6	64.5	59.5	54.5	49.5	44.4	39.4	34.4	29.4				
MX-7	20	87.0	76.3	71.0	65.6	60.3	55.0	49.6	44.3	39.0	33.6				
	18*	101.5	89.6	83.7	77.8	71.8	65.9	59.9	54.0	48.0	42.1				
MX-8	22	80.9	70.4	65.2	60.0	54.7	49.5	44.3	39.1	33.8	28.6				
	20	82.9	72.6	67.4	62.2	57.1	51.9	46.7	41.6	36.4	31.2				
	18*	86.9	76.8	71.8	66.7	61.7	56.6	51.6	46.5	41.5	36.4				
	22	93.7	80.7	74.2	67.8	61.3	54.8	48.3	41.8	35.3	28.9				
MX-9	20	101.9	87.8	80.8	73.7	66.7	59.6	52.6	45.6	38.5	31.5				
	18*	118.2	101.9	93.7	85.6	77.4	69.3	61.1	53.0	44.8	36.7				
	22*	103.2	87.1	79.1	71.1	63.1	55.1	47.1	39.0	31.0	23.0				
MX-10	20	108.8	93.8	86.3	78.7	71.2	63.7	56.2	48.6	41.1	33.6				
	18*	120.0	106.9	100.4	93.9	87.3	80.8	74.2	67.7	61.1	54.6				
	22	86.3	74.3	68.4	62.4	56.5	50.5	44.5	38.6	32.6	26.7				
MX-11	20	92.8	80.2	73.9	67.6	61.4	55.1	48.8	42.5	36.2	29.9				
	18*	105.7	91.9	84.9	78.0	71.1	64.1	57.2	50.3	43.3	36.4				
	24*	70.1	60.6	55.9	51.2	46.5	41.8	37.1	32.3	27.6	22.9				
MX-15	22	82.1	71.6	66.3	61.0	55.7	50.4	45.1	39.9	34.6	29.3				
	20	94.2	82.5	76.6	70.8	64.9	59.1	53.2	47.4	41.5	35.7				
	18*	118.1	104.1	97.2	90.2	83.2	76.3	69.3	62.3	55.4	48.4				

Notes:

- 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 (steel material, unless noted otherwise) with minimum 2 fasteners.
- 6 * Indicates tested material (all other values are interpolated).
- 7 Galvalume material conforming to ASTM A792.
- 8 Please refer to Morin website for span charts pertaining to perforated panels.
- 9 For project specific calculations, please contact Morin Technical Services at 800-640-9501



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TABLE 2 – MATRIX SERIES PANELS – ILLUSTRATIONS, ALLOWABLE LOADS AND SPANS (cont.)

Aluminum

Panel Type	Panel Width (in.)	Panel Thickness (in.)	Deflection Limit	Clip Type	Allowable Uplift Pressures (psf), Panel Span (ft.)									
					1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
MX-1	12	0.032*	L/180	MIP Clip	72.8	58.9	52.0	45.1	38.2	31.3	24.4	17.4	10.5	3.6
		0.040*			116.3	94.7	83.8	73.0	62.2	51.3	40.5	29.7	18.8	8.0
		0.050*			87.9	79.7	75.6	71.5	67.4	63.3	59.2	55.1	51.0	47.0
MX-2		0.032*			65.3	57.6	53.8	49.9	46.1	42.2	38.4	34.5	30.7	26.8
		0.040			81.2	71.0	65.8	60.7	55.6	50.4	45.3	40.2	35.0	29.9
		0.050*			101.0	87.5	80.8	74.1	67.4	60.7	54.0	47.2	40.5	33.8
MX-3		0.032*			64.1	55.5	51.1	46.8	42.5	38.1	33.8	29.5	25.1	20.8
		0.040			72.3	62.4	57.5	52.6	47.7	42.8	37.9	32.9	28.0	23.1
		0.050*			82.3	71.1	65.4	59.8	54.2	48.5	42.9	37.3	31.6	26.0
MX-4		0.032*			43.9	39.0	36.5	34.1	31.6	29.2	26.7	24.3	21.8	19.4
		0.040*			75.7	63.4	57.3	51.1	45.0	38.8	32.7	26.5	20.4	14.2
		0.050*			95.9	83.1	76.7	70.2	63.8	57.4	51.0	44.6	38.2	31.7
MX-5		0.032*			75.1	64.8	59.7	54.5	49.3	44.2	39.0	33.9	28.7	23.6
		0.040			90.9	78.2	71.9	65.5	59.2	52.9	46.5	40.2	33.9	27.5
		0.050*			110.5	94.9	87.1	79.3	71.5	63.7	55.9	48.1	40.3	32.5
MX-6	0.040*	79.7	71.1	66.7	62.4	58.1	53.7	49.4	45.1	40.7	36.4			
	0.050*	88.2	78.0	73.0	67.9	62.8	57.8	52.7	47.6	42.6	37.5			
	0.040	101.4	86.5	79.1	71.6	64.2	56.7	49.2	41.8	34.3	26.9			
MX-7	0.050*	117.7	100.4	91.7	83.1	74.4	65.8	57.2	48.5	39.9	31.2			
	0.040	85.5	74.3	68.6	63.0	57.3	51.7	46.1	40.4	34.8	29.2			
	0.050*	95.0	83.9	78.4	72.8	67.3	61.8	56.2	50.7	45.2	39.6			
MX-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			
	0.040*	82.6	71.3	65.6	60.0	54.3	48.6	43.0	37.3	31.7	26.0			
MX-9	0.050*	70.8	64.1	60.8	57.5	54.1	50.8	47.5	44.1	40.8	37.5			
	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			
MX-10	0.032*	41.5	36.8	34.4	32.0	29.6	27.2	24.9	22.5	20.1	17.7			
	0.040	71.2	62.2	57.8	53.3	48.8	44.4	39.9	35.4	30.9	26.5			
	0.050*	108.2	94.1	87.0	79.9	72.8	65.8	58.7	51.6	44.5	37.5			

Notes:

- 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 (steel material, unless noted otherwise) with minimum 2 fasteners.
- 6 * Indicates tested material (all other values are interpolated).
- 7 Aluminum material conforming to 3003-H14; reach out to Morin technical for anodized (5005-H34) or any other Aluminum material.
- 8 Please refer to Morin website for span charts pertaining to perforated panels.
- 9 For project specific calculations, please contact Morin Technical Services at 800-640-9501.



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

Profile Options	
<p>Pulse P-1</p>	<p>Pulse P-9</p>
<p>Pulse P-2</p>	<p>Pulse P-10</p>
<p>Pulse P-3</p>	<p>Pulse P-11</p>
<p>Pulse P-4</p>	





TABLE 3 – PULSE SERIES PANELS – ILLUSTRATIONS, ALLOWABLE LOADS AND SPANS (cont.)

Galvalume

Panel Type	Panel Width (in.)	Panel Thickness (in.)	Deflection Limit	Clip Type	Allowable Uplift Pressures (psf), Panel Span (ft.)									
					1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
P-1	12	24*	L/180	MIP Clip	77.4	66.1	60.5	54.9	49.2	43.6	38.0	32.3	26.7	21.1
		22			91.2	78.6	72.3	66.0	59.7	53.5	47.2	40.9	34.6	28.3
		20			105.0	91.1	84.2	77.2	70.3	63.3	56.4	49.4	42.5	35.5
		18*			118.8	103.6	96.0	88.4	80.8	73.2	65.6	58.0	50.4	42.8
P-2		24*			79.1	67.9	62.3	56.7	51.1	45.5	39.9	34.3	28.7	23.2
		22			86.0	74.5	68.7	63.0	57.2	51.4	45.7	39.9	34.1	28.4
		20			93.0	81.1	75.1	69.2	63.3	57.3	51.4	45.4	39.5	33.6
		18*			99.9	87.7	81.6	75.5	69.3	63.2	57.1	51.0	44.9	38.8
P-3		24*			55.3	51.1	48.9	46.8	44.7	42.6	40.4	38.3	36.2	34.1
		22			74.4	67.7	64.3	60.9	57.5	54.2	50.8	47.4	44.0	40.7
		20			93.5	84.3	79.6	75.0	70.4	65.7	61.1	56.5	51.8	47.2
		18*			112.6	100.9	95.0	89.1	83.2	77.3	71.5	65.6	59.7	53.8
P-4	24*	61.5	53.9	50.1	46.3	42.4	38.6	34.8	31.0	27.2	23.4			
	22	72.1	63.2	58.7	54.3	49.8	45.4	40.9	36.5	32.0	27.6			
	20	82.5	72.4	67.3	62.2	57.1	52.1	47.0	41.9	36.8	31.8			
	18*	93.1	81.6	75.9	70.2	64.5	58.8	53.1	47.3	41.6	35.9			
P-9	24*	71.5	62.4	57.9	53.3	48.8	44.2	39.7	35.1	30.6	26.0			
	22	82.9	72.4	67.2	62.0	56.7	51.5	46.3	41.1	35.8	30.6			
	20	94.3	82.4	76.5	70.6	64.7	58.8	52.9	47.0	41.1	35.2			
	18*	105.6	92.5	85.9	79.3	72.7	66.1	59.6	53.0	46.4	39.8			
P-11	24*	58.6	52.8	50.0	47.1	44.2	41.4	38.5	35.6	32.8	29.9			
	22	77.3	68.7	64.3	60.0	55.6	51.3	46.9	42.6	38.2	33.9			
	20	96.1	84.5	78.7	72.8	67.0	61.2	55.4	49.5	43.7	37.9			
	18*	133.4	115.9	107.1	98.4	89.6	80.8	72.1	63.3	54.6	45.8			

Notes:

- 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 (steel material, unless noted otherwise) with minimum 2 fasteners.
- 6 * Indicates tested material (all other values are interpolated).
- 7 Galvalume material conforming to ASTM A792.
- 8 Please refer to Morin website for span charts pertaining to perforated panels.
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TABLE 3 – PULSE SERIES PANELS – ILLUSTRATIONS, ALLOWABLE LOADS AND SPANS (cont.)

Aluminum

Panel Type	Panel Width (in.)	Panel Thickness (in.)	Deflection Limit	Clip Type	Allowable Uplift Pressures (psf), Panel Span (ft.)									
					1.0	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0
P-1	12	0.032*	L/180	MIP Clip	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
P-2		0.032*			45.5	38.5	35.0	31.5	27.9	24.4	20.9	17.4	13.9	10.4
		0.040*			77.3	66.8	61.6	56.4	51.2	46.0	40.8	35.5	30.3	25.1
		0.050*			97.4	83.7	76.8	69.9	63.0	56.1	49.3	42.4	35.5	28.6
P-3		0.032*			64.1	55.5	51.1	46.8	42.5	38.1	33.8	29.5	25.1	20.8
		0.040			75.1	65.7	61.0	56.3	51.5	46.8	42.1	37.4	32.7	28.0
		0.050*			88.9	78.5	73.3	68.1	62.9	57.7	52.5	47.3	42.1	36.9
P-4		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	59.8	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
P-9	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			
P-11	0.032*	47.9	42.5	39.8	37.2	34.5	31.8	29.1	26.5	23.8	21.1			
	0.040	56.2	49.5	46.1	42.8	39.4	36.1	32.7	29.3	26.0	22.6			
	0.050*	89.3	78.7	73.5	68.2	62.9	57.7	52.4	47.1	41.9	36.6			

Notes:

- 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 (steel material, unless noted otherwise) with minimum 2 fasteners.
- 6 * Indicates tested material (all other values are interpolated).
- 7 Aluminum material conforming to 3003-H14; reach out to Morin technical for anodized (5005-H34) or any other Aluminum material.
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