Metal Roof and Wall Systems

PBU Panel

SECTION PROPERTIES								
			NEGATIVE BENDING			POSITIVE BENDING		
PANEL	Fy	WEIGHT	Ixe	Sxe	Maxo	Ixe	Sxe	Maxo
GAUGE	(KSI)	(PSF)	(IN.4/FT.)	(IN.3/FT.)	(KIP-IN.)	(IN.4/FT.)	(IN.3/FT.)	(KIP-IN.)
29	60*	0.75	0.0112	0.0239	0.8579	0.016	0.0270	0.9714
26	60*	0.94	0.0304	0.0514	1.848	0.0371	0.0374	1.3456
24	50	1.14	0.0214	0.0494	1.4796	0.031	0.0555	1.6618
22	50	1.44	0.0301	0.0731	2.1897	0.0419	0.0754	2.2565

* Fy is 80-ksi reduced to 60-ksi in accordance with the 2001 edition of the North American Specification For Design Of Cold-Formed Steel Structural Members - A2.3.2.

NOTES:

1. All calculations for the properties of PBU panels are calculated in accordance with the 2001 edition of the North American Specification For Design Of Cold-Formed Steel Structural Members.
2. Ixe is for deflection determination.
3. Sxe is for bending.
4. Maxo is allowable bending moment.
5. All values are for one foot of panel width.

The Engineering data contained herein is for the expressed use of customers and design professionals. Along with this data, it is recommended that the design professional have a copy of the most current version of the *North American Specification for the Design of Cold-Formed Steel Structural Members* published by the American Iron and Steel Institute to facilitate design. This Specification contains the design criteria for cold-formed steel components. Along with the Specification, the designer should reference the most current building code applicable to the project jobsite in order to determine environmental loads. If further information or guidance regarding cold-formed design practices is desired, please contact the manufacturer.

Metal Roof and Wall Systems

ALLOWABLE UNIFORM LOADS IN POUNDS PER SQUARE FOOT

PBU Panel

29 Gauge (Fy = 60 KSI)								
SPAN TYPE	**LOAD TYPE**	**SPAN IN FEET**						
		3.0	**4.0**	**5.0**	**6.0**	**7.0**	**8.0**	**9.0**
SINGLE	**NEGATIVE WIND LOAD**	63.5	35.7	22.9	15.9	11.7	8.9	7.1
	LIVE LOAD/DEFLECTION	51.8	21.9	11.2	6.5	4.1	2.7	1.9
2-SPAN	**NEGATIVE WIND LOAD**	72.0	40.5	25.9	18.0	13.2	10.1	8.0
	LIVE LOAD/DEFLECTION	63.5	35.7	22.9	15.6	9.8	6.6	4.6
3-SPAN	**NEGATIVE WIND LOAD**	89.9	50.6	32.4	22.5	16.5	12.6	10.0
	LIVE LOAD/DEFLECTION	79.4	41.2	21.1	12.2	7.7	5.2	3.6
4-SPAN	**NEGATIVE WIND LOAD**	84.0	47.2	30.2	21.0	15.4	11.8	9.3
	LIVE LOAD/DEFLECTION	74.2	41.7	22.4	13.0	8.2	5.5	3.8

26 Gauge (Fy = 60 KSI)								
SPAN TYPE	**LOAD TYPE**	**SPAN IN FEET**						
		3.0	**4.0**	**5.0**	**6.0**	**7.0**	**8.0**	**9.0**
SINGLE	**NEGATIVE WIND LOAD**	92.5	52.0	33.3	23.1	17.0	13.0	10.3
	LIVE LOAD/DEFLECTION	75.8	32.0	16.4	9.5	6.0	4.0	2.8
2-SPAN	**NEGATIVE WIND LOAD**	108.6	61.1	39.1	27.2	20.0	15.3	12.1
	LIVE LOAD/DEFLECTION	92.5	52.0	33.3	22.8	14.4	9.6	6.8
3-SPAN	**NEGATIVE WIND LOAD**	135.8	76.4	48.9	33.9	24.9	19.1	15.1
	LIVE LOAD/DEFLECTION	115.6	60.3	30.9	17.9	11.3	7.5	5.3
4-SPAN	**NEGATIVE WIND LOAD**	126.8	71.3	45.6	31.7	23.3	17.8	14.1
	LIVE LOAD/DEFLECTION	108.0	60.7	32.8	19.0	11.9	8.0	5.6

24 Gauge (Fy = 50 KSI)								
SPAN TYPE	**LOAD TYPE**	**SPAN IN FEET**						
		3.0	**4.0**	**5.0**	**6.0**	**7.0**	**8.0**	**9.0**
SINGLE	**NEGATIVE WIND LOAD**	109.6	61.7	39.5	27.4	20.1	15.4	12.2
	LIVE LOAD/DEFLECTION	100.4	42.3	21.7	12.5	7.9	5.3	3.7
2-SPAN	**NEGATIVE WIND LOAD**	123.1	69.2	44.3	30.8	22.6	17.3	13.7
	LIVE LOAD/DEFLECTION	109.6	61.7	39.5	27.4	19.0	12.7	9.0
3-SPAN	**NEGATIVE WIND LOAD**	153.9	86.6	55.4	38.5	28.3	21.6	17.1
	LIVE LOAD/DEFLECTION	137.0	77.1	40.9	23.7	14.9	10.0	7.0
4-SPAN	**NEGATIVE WIND LOAD**	143.7	80.8	51.7	35.9	26.4	20.2	16.0
	LIVE LOAD/DEFLECTION	127.9	72.0	43.4	25.1	15.8	10.6	7.4

22 Gauge (Fy = 50 KSI)								
SPAN TYPE	**LOAD TYPE**	**SPAN IN FEET**						
		3.0	**4.0**	**5.0**	**6.0**	**7.0**	**8.0**	**9.0**
SINGLE	**NEGATIVE WIND LOAD**	162.2	91.2	58.4	40.6	29.8	22.8	18.0
	LIVE LOAD/DEFLECTION	135.6	57.2	29.3	17.0	10.7	7.2	5.0
2-SPAN	**NEGATIVE WIND LOAD**	167.1	94.0	60.2	41.8	30.7	23.5	18.6
	LIVE LOAD/DEFLECTION	160.5	91.2	58.4	40.6	25.7	17.2	12.1
3-SPAN	**NEGATIVE WIND LOAD**	208.9	117.5	75.2	52.2	38.4	29.4	23.2
	LIVE LOAD/DEFLECTION	197.2	108.0	55.3	32.0	20.1	13.5	9.5
4-SPAN	**NEGATIVE WIND LOAD**	195.1	109.7	70.2	48.8	35.8	27.4	21.7
	LIVE LOAD/DEFLECTION	185.2	106.5	58.7	34.0	21.4	14.3	10.1

NOTES:

1) Allowable loads are based on uniform span lengths and Fy = 50 and 60-ksi.
2) LIVE LOAD is limited by bending, shear, combined shear & bending and web crippling.
3) **NEGATIVE WIND LOAD does not contain a 33.333% increase and does not consider fastener pullout or pullover.**
4) Above loads consider a maximum deflection ratio of L/180.
5) The weight of the panel has not been deducted from the allowable loads.
6) The use of any accessories other than those provided by the manufacturer may damage panels, void all warranties and will void all engineering data.
7) This material is subject to change without notice. Please contact MBCI for most current data.

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