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STANDING SEAM METAL ROOF PANEL

WESTERN LOCK®

16" WIDE PANEL – LOAD TABLES

WSMR UL Certificate Number: R40094

Issue Date: 7/23/2020

Load Tables extracted from UL report number R14692

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New Tech 675 Snap-On Panel

Width	16.00 in
Alloy	ASTM A653, G50 (Fy= 50 ksi)
Gauge	24 (0.024 in)

ALLOWABLE STRENGTH DESIGN (ASD)
Wind Load Factor = 1.0
ALLOWABLE UNIFORM LOAD (PSF)
SPAN LENGTH (Feet)

SPAN	DEFLECTION	SPAN LENGTH (Feet)								
		2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00
1	L/180	230	182	147	121	102	86	74	65	57
	L/240	230	182	147	121	102	86	74	65	57
	L/360	230	182	147	121	102	86	74	65	57
2	L/180	230	182	147	121	102	86	74	65	57
	L/240	230	182	147	121	102	86	74	65	57
	L/360	230	182	147	121	102	86	74	65	57
3	L/180	260	207	168	139	117	100	86	75	66
	L/240	260	207	168	139	117	100	86	75	66
	L/360	260	207	168	139	117	100	86	75	66

- Formula's used in Load Tables for FLEXURE and DEFLECTION are:
One Span - $M_p = .125wl^2$, $M_n = .125wl^2$, $x = .0130wl^4/EI$
Two Span - $M_p = .125wl^2$, $M_n = .096wl^2$, $x = .0092wl^4/EI$
Three Span - $M_p = .080wl^2$, $M_n = .107wl^2$, $x = .0069wl^4/EI$
Modulus of Elasticity (E) = 29,500 ksi

- Allowable uniform loads are determined per the following:
 - Allowable Shear Stress (Fv) [AISI C3.2]
 - Combined Bending and Shear [AISI C3.3]
 - Combined Bending & Web Crippling [AISI C3.5]

- Factors of Safety used to determine uniform loads:
 - Ω (Bending) = 1.67
 - Ω (Shear) = 1.67
 - Ω (Web Crippling) = 1.85

4. Allowance has been made for member Dead Weight.

5. Minimum panel support bearing length = 2.00 in

- Concentrated load = 150 lb at mid-span, load width = 4 in
 - Simple Span : Max. Span = 5.451 ft (L/180)
 - Two Span : Max. Span = 6.590 ft (L/180)
 - Three Span : Max. Span = 7.097 ft (L/180)

New Tech 675 Snap-On Panel

Width	16.00 in
Alloy	ASTM A653, G50 (Fy= 50 ksi)
Gauge	24 (0.024 in)

ALLOWABLE STRENGTH DESIGN (ASD)
Wind Load Factor = 1.0
ALLOWABLE UNIFORM LOAD (PSF)
SPAN LENGTH (Feet)

SPAN	DEFLECTION	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25
1	L/180	50	44	40	36	32	29	27	24	22
	L/240	50	44	40	36	32	29	27	24	22
	L/360	50	44	39	34	29	25	22	19	17
2	L/180	50	44	40	36	32	29	27	24	22
	L/240	50	44	40	36	32	29	27	24	22
	L/360	50	44	40	36	32	29	27	24	22
3	L/180	58	52	46	42	38	34	31	29	26
	L/240	58	52	46	42	38	34	31	29	26
	L/360	58	52	46	42	38	34	31	29	26

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ALLOWABLE STRENGTH DESIGN (ASD)
Wind Load Factor = 1.0
ALLOWABLE UNIFORM LOAD (PSF)
SPAN LENGTH (Feet)

SPAN DEFLECTION		SPAN LENGTH (Feet)								
		6.50	6.75	7.00	7.25	7.50	7.75	8.00	8.25	8.50
1	L/180	21	19	18	16	15	14	13	12	11
	L/240	21	19	18	16	15	14	12	11	10
	L/360	15	14	12	11	10	9	8	7	7
2	L/180	21	19	18	16	15	14	13	12	11
	L/240	21	19	18	16	15	14	13	12	11
	L/360	21	19	17	16	14	13	12	11	10
3	L/180	24	22	21	19	18	17	16	15	14
	L/240	24	22	21	19	18	17	16	15	14
	L/360	24	22	21	19	18	17	15	14	13

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SPAN LENGTH (Feet)

SPAN	DEFLECTION	SPAN LENGTH (Feet)								
		8.75	9.00	9.25	9.50	9.75	10.00	10.25	10.50	10.75
1	L/180	11	10	9	9	8	8	7	7	7
	L/240	9	9	8	7	7	6	6	5	5
	L/360	6	6	5	5	5	4	4	4	3
2	L/180	11	10	9	9	8	8	7	7	7
	L/240	11	10	9	9	8	8	7	7	7
	L/360	9	8	8	7	6	6	6	5	5
3	L/180	13	12	11	11	10	9	9	8	8
	L/240	13	12	11	11	10	9	9	8	8
	L/360	12	11	10	9	9	8	7	7	6

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