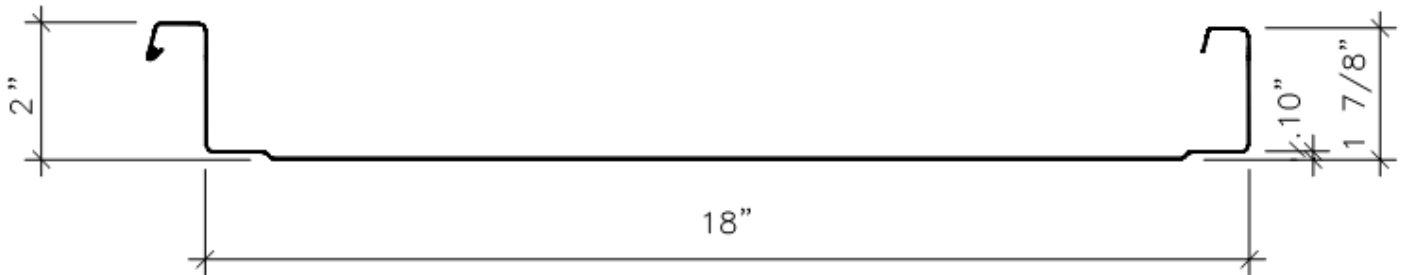




Allsouth Pre-Engineered Components
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 Phone (334) 699-8394
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PanelCraft 18 Panel



Section Properties

Section Properties:				18" wide, 50 ksi PC 218 Panel						
Gauge	Thickness in.	Weight psf	Yield Stress ksi	Allowable Shear kips/ft	Top in Compression (Positive Bending)			Bottom in Compression (Negative Bending)		
					I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft	I _{xx} in ⁴ /ft	S _{xx} in ³ /ft	M _a in.kips/ft
24	0.0221	1.218	50.0	0.70	0.1760	0.0987	2.955	0.0800	0.0676	2.023
22	0.0275	1.507	50.0	1.09	0.2253	0.1281	3.837	0.1027	0.0889	2.661

Notes on Section Properties:

- * Section properties and allowables are calculated in accordance with North American Specification for the Design of Cold-Formed Steel Structural Members (2001 Edition & 2004 Supplement)
- * I +/- is for deflection determination, S +/- is for bending determination & M_a is allowable bending moment.
- * M_a is allowable bending moment and V_a is allowable shear.
- * All values are for one foot of panel width.
- * Minimum deliverable bare steel thickness should not be less than 0.95 of design thickness.

Web Crippling:

24 gauge: Allowable intermediate bearing at 2.5" = 0.318 kips/ft
 Allowable end bearing at 2.5" = 0.112 kips/ft

22 gauge: Allowable intermediate bearing at 2.5" = 0.476 kips/ft
 Allowable end bearing at 2.5" = 0.168 kips/ft



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Allowable Gravity Loads
 All loads in pounds / SF

Gauge	Span Condition		Span (ft)							
			2	2.5	3	3.5	4	4.5	5	6
24	SS	Stress	492.6	315.2	218.9	160.8	123.1	97.3	78.8	54.7
		L/180	1923.0	984.6	569.8	358.8	240.4	168.8	123.1	71.2
	DS	Stress	289.1	194.5	139.1	104.2	80.7	64.4	52.5	36.7
		L/180	4628.2	2369.6	1371.3	863.6	578.5	406.3	296.2	171.4
	TS	Stress	325.4	221.2	159.3	119.8	93.1	74.4	60.8	42.6
		L/180	3628.8	1857.9	1075.2	677.1	453.6	318.6	232.2	134.4
22	SS	Stress	639.4	409.2	284.2	208.8	159.9	126.3	102.3	71.0
		L/180	2462.0	1260.5	729.5	459.4	307.7	216.1	157.6	91.2
	DS	Stress	395.0	262.8	186.6	139.0	107.4	85.4	69.5	48.6
		L/180	5925.5	3033.9	1755.7	1105.6	740.7	520.2	379.2	219.5
	TS	Stress	448.0	300.6	214.6	160.5	124.3	99.0	80.7	56.5
		L/180	4645.9	2378.7	1376.6	866.9	580.7	407.9	297.3	172.1

Notes on Load Table:

- * Allowable load based on stress is the smallest load due to bending, shear and combined bending and shear.
- * Allowable load based on deflection limit cannot exceed allowable load based on stress.
- * These loads are for panel strength. Frames, purlins, clips, fasteners and all supports must be designed to resist all loads imposed on the panel.
- * Allowable uplift loads based on stress have not been increased by 33.33 % for wind uplift.
- * Allowable loads for deflection are based on deflection limitation of span/180.
- * For roof panels, self weight of the panel has to be deducted from the allowable inward load to arrive at the actual 'live load' carrying capacity of the panel.
- * SS = Simple span, DS = Double Span and TS = Three or more spans



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PanelCraft 18 Panel

Allowable Wind Uplift Loads - 24 Gage Material 50 ksi

All loads in pounds / SF

TripleLok Seam

Span	1592 Test Ultimate Load	1592 Design Load	COE Design Load
2.0			
2.5	135.2	67.6	81.9
3.0		61.7	74.8
3.5		52.9	64.1
4.0		46.3	56.1
4.5		41.1	49.8
5.0	72.8	36.4	44.1

QuadLok Seam

Span	1592 Test Ultimate Load	1592 Design Load	COE Design Load
2.0			
2.5	156.0	78.0	94.5
3.0		71.8	85.5
3.5		65.5	77.1
4.0		58.5	69.6
4.5		52.0	62.8
5.0	93.6	46.8	56.7

- Notes:
1. The above tabulated loads are generated from certified ASTM E-1592 testing.
 2. Intermediate design loads are interpolated from ultimate test loads.
 3. Design loads contain a safety factor of 2.0 calculated per AISI.
 4. COE design load contains a 1.65 safety factor per COE 07416 Specification.
 5. These load capacities are for the panel itself. Frames, purlins, clips, fasteners, and all supports must be designed to resist all loads imposed by the panel.
 6. Allowable wind uplift loads have not been increased by 33% as allowed by some codes when wind load controls.
 7. This material is subject to change with out notice. Contact Building Research Systems for most current values.



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PanelCraft 18 Panel

Allowable Wind Uplift Loads - 22 Gage Material 50 ksi

All loads in pounds / SF

TripleLok Seam

Span	1592 Test Ultimate Load	1592 Design Load	COE Design Load
2.0			
2.5	156.0	78.0	94.5
3.0		72.8	87.4
3.5		67.6	80.7
4.0		62.4	74.4
4.5		57.2	68.5
5.0	104.0	52.0	63.0

QuadLok Seam

Span	1592 Test Ultimate Load	1592 Design Load	COE Design Load
2.0			
2.5	182.0	91.0	110.3
3.0		83.2	98.8
3.5		74.3	88.4
4.0		65.0	78.9
4.5		57.8	70.5
5.0	104.0	52.0	63.0

- Notes:
1. The above tabulated loads are generated from certified ASTM E-1592 testing.
 2. Intermediate design loads are interpolated from ultimate test loads.
 3. Design loads contain a safety factor of 2.0 calculated per AISI.
 4. COE design load contains a 1.65 safety factor per COE 07416 Specification.
 5. These load capacities are for the panel itself. Frames, purlins, clips, fasteners, and all supports must be designed to resist all loads imposed by the panel.
 6. Allowable wind uplift loads have not been increased by 33% as allowed by some codes when wind load controls.
 7. This material is subject to change with out notice. Contact Building Research Systems for most current values.