

RD1-Pancake Allowable Load Table (PSF) for Three or More Spans

Panel Strength and Deflection Limit Criteria

Panel Thickness	Panel Span (ft)										
	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-5"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"
2"	72	61	52	46	40	36	32	29	26	23	21
2.5"	90	76	65	58	51	45	41	37	33	30	28
3"	106	90	77	68	61	55	50	45	41	37	34
4"	136	115	100	88	78	70	64	59	54	50	47
5"	162	138	119	105	94	84	77	70	65	60	56
6"	185	157	136	120	107	96	88	80	74	69	64
8"	218	185	161	142	127	114	104	95	88	81	76

Connection Strength Criteria - Fasteners Across Panel Width

Fastening Pattern	Support Gauge	Panel Span (ft)										
		3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-5"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"
(3) Fasteners Across Panel Width	16 gauge min.	75	64	55	49	44	40	36	33	31	29	27
(4) Fasteners Across Panel Width	16 gauge min.	100	85	74	65	59	53	48	44	41	38	36

Notes:

1. Load span table is based on Allowable Stress Design (ASD).
2. Table is based on values derived from transverse load testing per ASTM E72, ASTM E1592 and strength of fasteners.
3. Panel Properties are based on **26 gauge exterior** and **26 gauge interior** facings. Inquire about other gauges.
4. The lowest load between Panel Strength, Deflection Limit and Connection Strength shall be used to determine spans.
5. The deflection limit criteria is L/240.
6. Connection based on ¼-14 or ¼-20 DP3 or DP5 self-drilling fasteners installed into min. 16 gauge or 12 gauge steel.
7. Safety Factor = 2.5 for buckling, 3.0 for core shear, 2.0 for wall clip, 3.0 for fastening pullover/pullout.
8. White single-ply roofing membrane or single skin roof panels must be installed over the IMP for weatherproofing. See the OneDek Design Guide for membrane allowable loads.
9. Panel weights can be found on a separate Panel Weights Table.
10. Structural design of roof supports has not been considered and must be designed the support professional.
11. Thermal effects from controlled environment and cold storage applications have not been considered.
12. Load tables do not account for sliding snow/drag loads.
13. Load table for pressure assumes a minimum purlin bearing width of 2.5". For 6" thick panels, maximum loads can be increased for larger purlin widths. Consult your AWIP representative for more information.
14. In Canada, to use load table for pressure, calculate total factored load as per NBCC load combinations, divide by 1.5, and compare to values in the table. Example: $(1.25 \times \text{panel wt.} + 1.5 \times \text{snow load/LL} + 0.4 \times \text{downward wind})/1.5$.
15. In Canada, for wind uplift use specified wind loads calculated as per NBCC and compare to load table values.
16. Consult your AWIP representative for project specific calculations.
17. Consult your AWIP representative for design per FM Global Loss Prevention Data Sheet 1-28 and FM 4881 requirements.
18. Load tables are subject to change without notice – visit www.awipanel.com for the latest information.



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