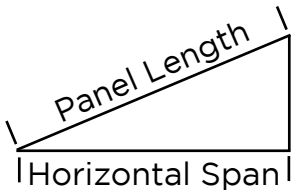
R-CONTROL SIPs

SIP No. 2042

Subject: Load Design Chart Adjustments for Sloped Roofs

Date: November 2007

R-Control SIP Load Design Charts are based upon tests and calculations using flat panel installations. In many applications, the panels will be installed at a slope. When installed at a slope, the building designer must make adjustments in the design procedure to ensure that R-Control SIPs with sufficient load capacity are chosen. This bulletin includes a worksheet to adjust the panel length and load based upon the roof slope. The correct panel length and loading are critical for proper panel selection.



LOAD ADJUSTMENT FOR PITCHED ROOF

Dead Load _____(3)

Correction Factor _____(4)

Net Dead Load (3)÷(4) _____(5)

Live Load _____(6)

Correction Factor _____(7)

Net Live Load (6)÷(7)÷(7) _____(8)

Total Load, (5)+(8) _____

SPAN ADJUSTMENT FOR PITCHED ROOF

Horizontal Span _____(1)

Correction Factor _____(2)

Panel Length, (1)x(2) _____

The actual panel length and loading should be calculated as follows:

- Determine the actual panel length by multiplying the horizontal span by the correction factor.
- Determine the actual dead load by dividing the dead load (including panel weight plus ceiling finish plus roofing) in psf by the correction factor.
- Determine the appropriate live (snow) load in accordance with the appropriate building code (considering sliding or snow drifting snow load increases or sliding snow load decreases where appropriate) and divide that load by the square of the correction factor.
- Compare the sum of the dead and live loads to the load design chart for the panel length required. It must be less than the allowable load for the desired total load deflection.

Roof Slope	Correction Factor
4/12	1.05
5/12	1.08
6/12	1.12
7/12	1.16
8/12	1.20
9/12	1.25
10/12	1.30
11/12	1.36
12/12	1.41

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