R-CONTROL® SIPs

SIP No. 2029

Subject: **Roof Cantilevers**

Date: **November 2007 (Revised May 2018)**

R-Control SIPs used as roofs are often extended beyond the building wall line to create overhangs. Overhangs result in the R-Control SIP being placed in a cantilever condition.

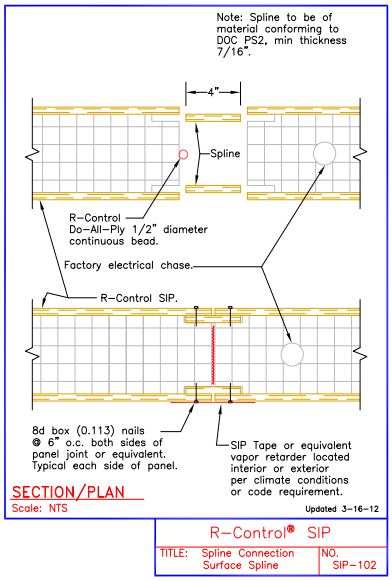
Engineering analysis and full scale loading tests have been used to determine the design recommendations for R-Control Roof SIPs placed in these cantilever roof conditions.

Roof Cantilevers - Transverse Loads - PSF
LOAD DESIGN CHART #9[1]
SPLINE DETAILS SIP-102, SIP-102g, or SIP-102m

SIP THICKNESS	DEFLECTION[2] LIMIT	SIP CANTILEVER (feet)			
		1	2	3	4
4-1/2"	L/240	43	43	43	
6-1/2"	L/240	66	65	60	42
8-1/4"	L/240	68	68	65	42
10-1/4"	L/240	69	69	60	49
12-1/4"	L/240	69	63	52	46

[1] VALUES ARE APPLICABLE TO SIPS INSTALLED WITH THE STRONG AXIS OF THE OSB FACINGS PARALLEL TO SIP SPAN AND WITH AN 8' BACKSPAN.
[2] LIVE LOAD AT L/240 AND TOTAL LOAD AT L/180.

GENERAL NOTES:
- CHART VALUES ARE POUNDS PER SQUARE FOOT.
- SURFACE, BLOCK, OR LUMBER BLOCK SPLINE CONNECTED TO SIP FACING WITH 8D BOX (0.113) NAILS 6" O.C.
- CONTINUOUS SUPPORT WITH A MINIMUM BEARING OF 1-1/2" AT EACH SUPPORT REQUIRED.
- CHART IS BASED UPON UNIFORM LOADS.
- LOADS LIMITED BY DEFLECTION OR ULTIMATE FAILURE LOAD DIVIDED BY A FACTOR OF SAFETY OF THREE.
- FOR SLOPED SIPS, THE LOADING CONDITIONS AND SIP CAPACITIES SHOULD BE REVIEWED BASED UPON THE INCLINED SIP LENGTH. REFER TO R-CONTROL SIP TECHNICAL BULLETIN SIP NO. 2042.
- VALUES ARE FOR TOTAL LOAD (DEAD LOAD + LIVE LOAD).
- THE DEAD LOAD SHALL NOT EXCEED 20% OF THE TOTAL LOAD.



Roof Cantilevers - Transverse Loads - PSF
LOAD DESIGN CHART #9A[1]
SPLINE DETAILS SIP-102d

SIP THICKNESS	DEFLECTION[2] LIMIT	SIP CANTILEVER (inches)			
		12”	24”	36”	48”
4-1/2”	L/240	56[2]	60[2]	55[2]	47[2]
6-1/2”	L/240	80[2]	80[2]	80[2]	73[2]
8-1/4”	L/240	80[2]	80[2]	80[2]	80[2]
10-1/4”	L/240	80[2]	80[2]	80[2]	80[2]
12-1/4”	L/240	80[2]	80[2]	80[2]	80[2]

[1] VALUES ARE APPLICABLE TO SIPS INSTALLED WITH THE STRONG AXIS OF THE OSB FACINGS PARALLEL TO SIP SPAN AND WITH AN 8’ BACKSPAN.
[2] LIVE LOAD AT L/240 AND TOTAL LOAD AT L/180.

GENERAL NOTES:
- CHART VALUES ARE POUNDS PER SQUARE FOOT.
- 2X LUMBER SPLINE 4FT. O.C. CONNECTED TO SIP FACING WITH 8D BOX (0.113) NAILS 6” O.C.
- CONTINUOUS SUPPORT WITH A MINIMUM BEARING OF 1-1/2” AT EACH SUPPORT REQUIRED.
- CHART IS BASED UPON UNIFORM LOADS.
- LOADS LIMITED BY DEFLECTION OR ULTIMATE FAILURE LOAD DIVIDED BY A FACTOR OF SAFETY OF THREE.
- FOR SLOPED SIPS, THE LOADING CONDITIONS AND SIP CAPACITIES SHOULD BE REVIEWED BASED UPON THE INCLINED SIP LENGTH. REFER TO R-CONTROL SIP TECHNICAL BULLETIN SIP NO. 2042.
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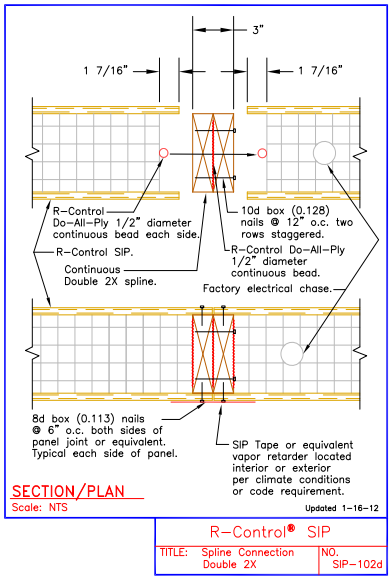

R-Control SIPs are made exclusively with Foam-Control. R-Control SIPs and Foam-Control are manufactured by AFM Corporation licensees.