

UNIRAC TECHNICAL BULLETIN

Bulletin Number: TB-110919-1300-0

Product/Theme: Splice Bar and Expansion Joint Locations between Rail Attachments

Background: Unirac has specified guidelines for cantilever allowances on the SolarMount, SolarMount-I and SunFrame product lines which is $\frac{1}{3}$ of the maximum engineered span, specific to the application. What this “cantilever” references is the overhang of rail past the first or last attachment for a given continuous run of installed rail. A question that has come up is “Where should a rail splice or expansion joint be located between a pair of attachments?” This technical bulletin is intended to answer this.

Note that both the rail splice and expansion joint use the same splice bar, but they have different configurations and recommended distances from attachments.

Description:

1) A splice joint is an assembly where the ends of 2 rails are joined to form a continuous run of rail. This application uses 4 fasteners (2 per rail) to attach the splice bar to the rails. The splice bar is centered over the location where the 2 rails touch as shown in Figure 1. Spliced rail locations can be positioned anywhere within the engineered span.

2) An expansion joint is where the ends of 2 rails are aligned with a splice bar, but is fastened to only one of the rails. Use 2 fasteners to attach the splice bar to the chosen rail and leave a minimum gap of $\frac{1}{2}$ ” between the adjacent rail ends. An expansion joint must not be spanned by a PV module. This would prevent thermal expansion and contraction of the rail run. The location of an expansion joint must be less than or equal to $\frac{1}{3}$ of the engineered span from either attachment. For example, between a 48” engineered span the expansion joint must be within 16” from either attachment as shown in Figure 2.

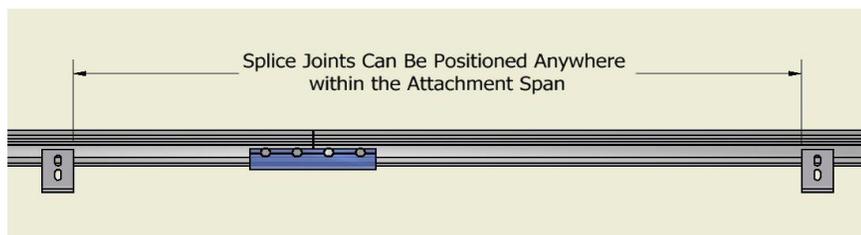


Figure 1

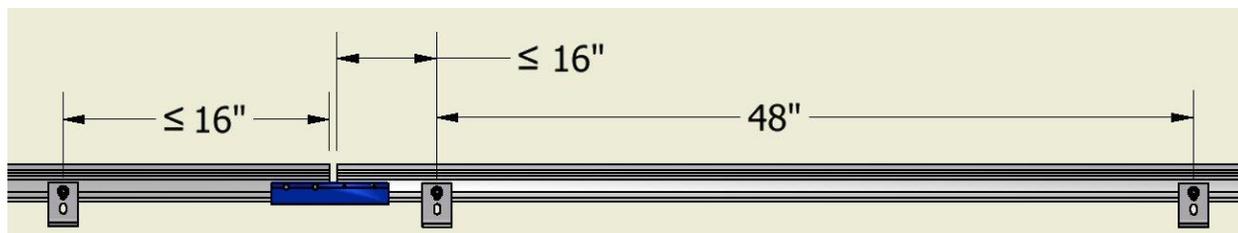


Figure 2

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