



SIP No. 2068

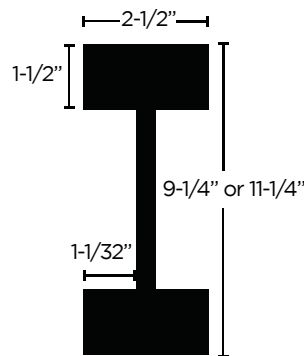
Subject: SIP Engineered Splines – Design Data

Date: May 2008 (Revised February 2012)

R-Control I-Beam splines are a companion product that provide additional strength and span capacity to R-Control SIPs assemblies. When the I-Beam splines are used with R-Control SIPs the composite panel/spline engineering data is detailed in the R-Control Load Design Charts.

However, on occasion it may be necessary to engineer a portion of a structure using the design capacities of the I-Beam. This bulletin provides the design capacities of the R-Control I-Beam for use in these instances.

R-Control I-Beams



R-Control I-Beam Spline Reference Design Values ¹						
Joist Depth (in)	Joist Weight (plf)	EI (10 ⁶ lbs-in ²)	K	Moment ² M _r (ft-lb)	Shear ² V _r (lb)	End Reaction ² R _{r,e} (lb)
9-1/4"	3.3	246	5.3	5050	1685	1375
11-1/4"	3.5	395	5.3	6545	2120	1375

¹ Please refer to ICC-ES ESR-2994 for general design information

² Moment and shear values and end reactions are for normal duration of load

³ Maximum end reaction is based 1-3/4" (44 mm) bearing length

⁴ The formula below shall be used to determine total deflection of uniformly loaded simple span.

$$\text{Defl.} = (22.5WL^4/EI) + (12WL^2/Kdx10^5)$$

Defl. = Deflection in inches.

W = Uniform Load (plf).

L = Clear Span (ft).

D = Out to Out depth of joist in inches.



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