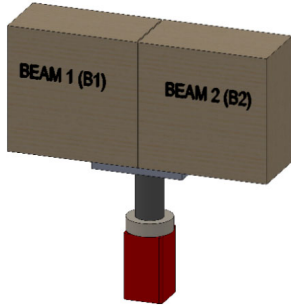




BLACKJACK / REDJACK SUPPORTING SPLIT-BEAM (SCL)

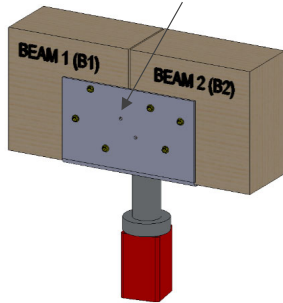
Use in conjunction with MiTek's current Structural Products Catalogue

When MiTek Adjustable Columns are used to support beams that are not continuous over the column top, the maximum allowable load is reduced due to the difference in end reactions from the two beams. Use the table below to determine if the combination of Adjustable Column and Top Plate or Column Cap size will work for your application. **Ensure two beams meet at the centre of the column.**



Split-beam on Top Plate

Do not install screws through the four (4) center holes (2 each side) to avoid lumber splitting at beam end.)



Split-beam on Column Cap

Wood Species	Beam Size	Column-top Support Type	Column Series	Maximum Unfactored Reaction (lbs) of Either Beam (DL + LL)					
				Load Ratio					
				0.0	0.1	0.2	0.3	0.4	0.5
Top Plate									
SCL (Specified fcp = 1365 psi)	2-ply 1-3/4" SCL	B (3.5 x 7)	RJ25x120	3600	5050	5350	5350	5350	5350
			BJ30x120	3650	5250	6200	6200	6200	6200
			RJ30x120	3700	5300	6200	6200	6200	6200
			RJ30x144	3550	5200	6200	6200	6200	6200
	3-ply 1-3/4" SCL	C (5.25 x 7)	RJ25x120	5150	5800	5800	5800	5800	5800
			BJ30x120	5200	7200	8200	8400	8400	8400
			RJ30x120	5200	7250	9250	9750	9950	10250
			RJ30x144	5150	7150	8150	8450	8450	8450
	4-ply 1-3/4" SCL	D (7 x 7)	RJ25x120	5600	5600	5600	5600	5600	5600
			BJ30x120	6750	9350	10300	10300	10300	10300
			RJ30x120	6800	10400	12250	12250	12250	12250
			RJ30x144	6250	8950	8950	8950	8950	8950
Column Cap									
SCL (Specified fcp = 1365 psi)	2-ply 1-3/4" SCL	CCK35 (3.625 x 11)	RJ25x120	5350	5350	5350	5350	5350	5350
			BJ30x120	6700	7750	8900	9700	9700	9700
			RJ30x120	6750	7800	9000	10000	10300	10300
			RJ30x144	6750	7750	8500	8500	8500	8500
	3-ply 1-3/4" SCL	CCK55 (5.5 x 11)	RJ25x120	5900	5900	5900	5900	5900	5900
			BJ30x120	9400	10200	10250	10250	10250	10250
			RJ30x120	9450	10200	11000	11500	11800	11950
			RJ30x144	8900	8900	8900	8900	8900	8900
	4-ply 1-3/4" SCL	CCK71 (7.25 x 11)	RJ25x120	5750	5750	5750	5750	5750	5750
			BJ30x120	10550	10550	10550	10550	10550	10550
			RJ30x120	11800	12050	12050	12300	12350	12350
			RJ30x144	9150	9150	9150	9150	9150	9150

Table values are for SCL beam with Specified Compression Perpendicular to Grain strength (fcp) ≥ 1365 psi.

B1_{DL}: Dead load reaction (unfactored) of Beam 1 B2_{DL}: Dead load reaction (unfactored) of Beam 2
 B1_{TL}: Total load reaction (unfactored) of Beam 1 B2_{TL}: Total load reaction (unfactored) of Beam 2

- Calculate the ratio of DL of one beam to the TL of the other beam.
 In this example, $B1_{DL} / B2_{TL} = 500 / 6000 = 0.083$ ← **smaller value, use this ratio**
 $B2_{DL} / B1_{TL} = 1500 / 2500 = 0.60$
- Determine the smaller value of the two ratios from step 1.
 In this example, Load Ratio = 0.083
- From the table above, determine the allowable total load (dead load + live load) of either beam based on the load ratio, beam size, column-top support type, and adjustable column series.
 In this example,

Example:
 Each beam is a 3-Ply 1-3/4" LVL with Specified fcp = 1365 psi. The end reactions on each beam are:
 B1_{DL} = 500 lbs (unfactored)
 B1_{TL} = 2500 lbs (unfactored)
 B2_{DL} = 1500 lbs (unfactored)
 B2_{TL} = 6000 lbs (unfactored)

Top Plate Option: Use Type-C top plate on BJ30 series column, maximum column height 120".

At Ratio = 0.0, the allowable total load is 5,200 lbs.

At Ratio = 0.1, the allowable total load is 7,200 lbs.

Using interpolation, the allowable total load of either beam is 6,867 lbs for 0.083 load ratio.

Compare this to the unfactored total load reaction of each beam: 6,867 lbs > 6,000 lbs **OK**

Column Cap Option: Use CCK55 column cap on BJ30 series column, maximum column height 120".

At Ratio = 0.0, the allowable total load is 9,400 lbs.

At Ratio = 0.1, the allowable total load is 10,200 lbs.

Using interpolation, the allowable total load of either beam is 10,067 lbs for 0.083 ratio.

Compare this to the unfactored total load reaction of each beam: 10,067 lbs > 6,000 lbs **OK**

Customer Service & Technical Assistance

PHONE: 1-800-268-3434 • EMAIL: CustomerService.mitek@mii.com

MiTek.ca

Expiry: 12/31/2024

3/12/2024