



# STRUCTURAL COLUMNS AND PLATE KITS CATALOGUE

## BLACKJACK 2.5 Adjustable Support Column

Adjustable Support Column BlackJack 2.5 is designed and tested to meet or exceed the CAN/CGSB-7.2-94 Adjustable Steel Columns standard.

**Materials:** Tube: 2-1/2" x 2-1/2"; 11 gauge

Top Plate: 3-1/2" x 6"; 3/8" thick

Bottom Plate: 4-1/2" x 6"; 3 gauge

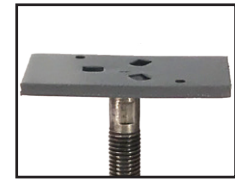
**Finish:** Tube – Powder-coated Black Paint; Plates – Grey Primer Paint

### Installation:

- Ensure column is installed in a vertical and plumb position.
- Column base shall be aligned and secured to a proper supporting slab.
- Top plate shall cover the full width of the supported beam. Beam shall be centered on the top plate and continuous across the entire length of the plate. Split beam installation is not permitted.
- For multiple ply beams, ensure to laminate plies together to act as a single member.
- Square tube may be cut down, ensure cut is smooth, square and level.
- Rotate jack screw to desired height. Secure the top plate to beam with two (2) 1/4" x 2" screws for wood beam, self tapping screws or tack weld for steel beam.



**BLACKJACK 2.5**



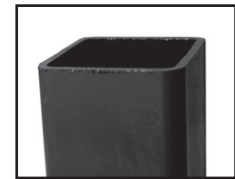
**Top plate**



**Bottom plate**



**BLACKJACK 2.5  
Adjustment assembly**



**Square tube may be cut  
(cut must be smooth  
and square)**

MiTek Stock No.	Adjustable Height		Extended Length		Column Capacity (supporting steel beam)				No. of Plies	Factored Bearing Resistance, 100% <sup>3</sup>					
	in	mm	in	mm	Allowable Load <sup>1</sup>		Factored Resistance <sup>2</sup>			1-3/4" SCL ( $f_{cp} = 1,365 \text{ psi}$ ) <sup>4</sup>		D Fir-L		S-P-F	
					lb	kN	lb	kN		lb	kN	lb	kN	lb	kN
BJ25x90	86 - 90	2184 - 2286	90	2286	10000	44.5	14400	64.1	1-Ply	11465	51.0	7310	32.5	5535	24.6
BJ25x110	106 - 110	2692 - 2794	110	2794					2-Ply	14400	64.1	14400	64.1	11070	49.2
									3-Ply <sup>5</sup>	--	--	12790	56.9	9685	43.1
									4-Ply <sup>5</sup>	--	--	14400	64.1	12915	57.4

1) Column Allowable Load has been determined through testing standards prescribed in the National Research Council Evaluation Directive for Adjustable Steel Columns using a safety factor of 2.25.

2) The Factored Resistance of the column is soft converted by multiplying the Allowable Load by 1.44.

3) Factored Bearing Resistances are for standard term loading; reduce for other load durations in accordance with the code.

4) SCL Factored Bearing Resistance assumes 1-3/4" ply width and specified compression perpendicular to grain  $f_{cp} = 1,365 \text{ psi}$  (9.4 MPa). For beams of **weaker specified  $f_{cp}$  or smaller width**, calculate the Factored Beam Bearing Resistance as follows: overall beam width x plate length x  $f_{cp}$  x 0.8.

Use the minimum of the calculated "Factored Beam Bearing Resistance" and the "Factored Resistance of the Column Capacity supporting steel beam" as the Factored Resistance of the column supporting the respective beam.

5) For 3-ply or 4-ply 2x beams, rotate plate to ensure full plate coverage over the width of the beam.

6) Column is not capable of resisting lateral or uplift load.

# BLACKJACK/REDJACK Column Kits and Plate Kits

## UPDATED PRODUCT LINE - COLUMN KITS AND PLATE KITS

Same strong columns now available in Column Kits and Plate Kits to fit different beam and load requirements.

REDJACK 2.5, BLACKJACK 3.0 and REDJACK 3.0 structural columns are now available in two distinct kits:

- **Column Kits** consist of a column tube, collar and screw assembly.
- **Plate Kits** only include top and bottom plates and replace the former Universal Component Kit.

Column Kits and Plate Kits are sold and used together, and provide better flexibility to suit various project applications and load requirements.

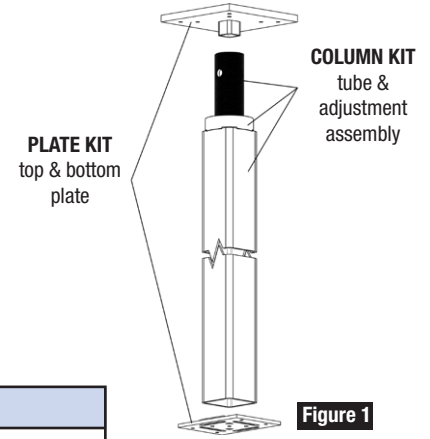



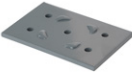









Figure 1

Selecting your BlackJack or RedJack Column Kit			
Use your height and capacity requirement to determine the correct MiTek Column Kit for your project.			
	REDJACK 2.5	BLACKJACK 3.0	REDJACK 3.0
Column kit			
	2.5" x 2.5" tube, 11 gauge	3.0" x 3.0" tube, 10 gauge	3.0" x 3.0" tube, 8 gauge
Extended lengths available * (maximum 4" adjustment)	96", 102", 108" and 120"	96", 102", 108" and 120"	90", 96", 102", 108", 114", 120" and 144"

\* For additional flexibility, column tubes can be cut to adapt to your project's height requirement. Ensure cut is smooth and square.

Selecting your Plate Kit				
Use your beam material and beam width to determine the correct MiTek Plate Kit for your project.				
	PKA: Plate A** + PL	PKB: Top Plate B* + PL	PKC: Top Plate C* + PL	PKD: Top Plate D* + PL
Plate kit	 3.5" x 5.25" x 3 gauge  4.5" x 6" x 3 gauge (PKA & PL are interchangeable only on RJ25 columns)	 3.5" x 7" x 1/2"  4.5" x 6" x 3 gauge	 5.25" x 7" x 1/2"  4.5" x 6" x 3 gauge	 7" x 7" x 1/2"  4.5" x 6" x 3 gauge
	Intended Use - Plates A, B, C or D	Steel beam 2 or 3-ply lumber beam 2 or 3-ply SCL beam or as a bottom plate of RJ 2.5	2, 3 or 4-ply lumber beam 2, 3 or 4-ply SCL beam	3 or 4-ply lumber beam 3 or 4-ply SCL beam
Intended Use - PL	Bottom plate, or 3 or 4-ply lumber beam as top plate of RJ 2.5	Bottom plate	Bottom plate	Bottom plate

MiTek Plate Kits are sold separately from MiTek Structural Column Kits. MiTek Plate Kits are to be exclusively used with MiTek REDJACK 2.5, BLACKJACK 3.0, & REDJACK 3.0 column kits.

When choosing your plate kit and column kit for your application, both the column capacity and the plate capacity must be considered. The lower value governs. For Steel Beams, use Plate Kit A and column capacity as the top plate bearing capacity is not relevant.

\* Plates are shown upside down for illustration purposes. Refer to figure 1 for plate position when installed.

\*\* Plate A is shown in the bottom plate position.

# BLACKJACK / REDJACK Adjustable Support Columns

Adjustable Support Columns are designed and tested to meet or exceed the CAN/CGSB-7.2-94 Adjustable Steel Columns standard. REDJACK 2.5, BLACKJACK 3.0 and REDJACK 3.0 are assembled with Column Cap (CCK) or Plate at the column top to support dimensional lumber, SCL or steel beams.

**Materials:** See chart below

**Finish:** REDJACK 2.5 & REDJACK 3.0 Tube – Powder-Coated Red Paint;  
 BLACKJACK 3.0 Tube – Powder-Coated Black Paint;  
 Plates, Column Caps – Grey Primer Paint

**Installation:**

- Ensure column is installed in a vertical and plumb position.
- Column base shall be aligned and secured to a proper supporting slab.
- Top plate shall cover the full width of the supported beam. Beam shall be centered on the top plate and continuous across the entire length of the plate. For split beam applications, please contact MiTek.
- For multiple ply beams, ensure to laminate plies together to act as a single member.
- Square tube may be cut down, ensure cut is smooth, square and level.
- Turn threaded collar or threaded pipe to extend the column to the desired height. Maximum 4" adjustment. Secure the top plate to beam with four (4) 1/4" x 2" screws for wood beam, self tapping screws or tack weld for steel beam.

- HEAVY DUTY ADJUSTMENT ASSEMBLY FOR MAXIMUM LOADS
- MODULAR DESIGN FOR GREATEST JOB SITE FLEXIBILITY
- SQUARE POST FOR EASY AND ACCURATE CUT DOWN
- USE REBAR/ROD THROUGH 9/16" HOLE FOR HEIGHT ADJUSTMENT

**Column Height Specification Table**

REDJACK 2.5: Tube 2-1/2" x 2-1/2", 11 Gauge				
MiTek Stock No.	Adjustable Height		Extended Length	
	in	mm	in	mm
RJ25x96	92 - 96	2337 - 2438	96	2438
RJ25x102	98 - 102	2489 - 2591	102	2591
RJ25x108	104 - 108	2642 - 2743	108	2743
RJ25x120	116 - 120	2946 - 3048	120	3048

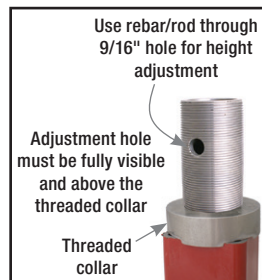
BLACKJACK 3.0: Tube 3" x 3", 10 Gauge				
MiTek Stock No.	Adjustable Height		Extended Length	
	in	mm	in	mm
BJ30x96	92 - 96	2337 - 2438	96	2438
BJ30x102	98 - 102	2489 - 2591	102	2591
BJ30x108	104 - 108	2642 - 2743	108	2743
BJ30x120	116 - 120	2946 - 3048	120	3048

REDJACK 3.0: Tube 3" x 3", 8 Gauge				
MiTek Stock No.	Adjustable Height		Extended Length	
	in	mm	in	mm
RJ30x90	86 - 90	2184 - 2286	90	2286
RJ30x96	92 - 96	2337 - 2438	96	2438
RJ30x102	98 - 102	2489 - 2591	102	2591
RJ30x108	104 - 108	2642 - 2743	108	2743
RJ30x114	110 - 114	2794 - 2896	114	2896
RJ30x120	116 - 120	2946 - 3048	120	3048
RJ30x144	140 - 144	3556 - 3658	144	3658



REDJACK 2.5      BLACKJACK 3.0      REDJACK 3.0



**BLACKJACK 3.0, REDJACK 2.5 and 3.0 Adjustment Assembly**



**Square tube design**

# BLACKJACK / REDJACK Adjustable Support Columns

Plate Specification Table

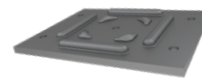
Plate	Dimensions (in)		Gauge / Thickness	Beam Size	Installation Notes
	W	L			
PL (4.5 x 6) Bottom Plate	4.5	6	3 GA	3-Ply 2x	Inter-changeable with A (3.5 x 5.25) plate and use as top plate on RJ25 columns
				4-Ply 2x	
A (3.5 x 5.25) Top Plate	3.5	5.25	3 GA	2-Ply SCL	Inter-changeable with PL (4.5 x 6) plate and use as bottom plate on RJ25 columns
				3-Ply SCL	
				2-Ply 2x	
				3-Ply 2x	
B (3.5 x 7) Top Plate	3.5	7	1/2"	2-Ply SCL	Use 4 outer holes for beam attachment
				4-Ply SCL	
				2-Ply 2x	
				4-Ply 2x	Use 4 inner holes for beam attachment
				3-Ply SCL	
				3-Ply 2x	
C (5.25 x 7) Top Plate	5.25	7	1/2"	3-Ply SCL	Use all 4 holes for beam attachment
				4-Ply SCL	
				3-Ply 2x	
				4-Ply 2x	
D (7 x 7) Top Plate	7	7	1/2"	4-Ply SCL	Use 4 outer holes for beam attachment
				4-Ply 2x	
				3-Ply SCL	Use 4 inner holes for beam attachment
				3-Ply 2x	

Each component kit comes with one PL plate + one A or B or C or D plate.

SCL members assume 1-3/4" width.

**Bold:** Beam size that plate is sized for.

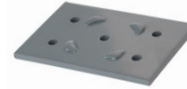
Grey shades: Rotate plate to fit, beam width parallel with the longer side of the plate.



**PL (4.5 x 6)  
Bottom Plate**



**A (3.5 x 5.25)  
Top Plate**



**A (3.5 x 5.25)  
used as Bottom Plate on  
RJ25 column assembly**



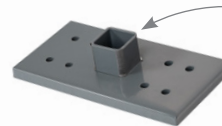
**B (3.5 x 7)  
Top Plate**



**C (5.25 x 7)  
Top Plate**



**D (7 x 7)  
Top Plate**



**C (5.25 x 7)  
Plate shown upside down  
for illustration purposes**

B, C & D plates are designed with a small tube at the bottom. Slide the tube into the threaded pipe component for stability.

## CCK BLACKJACK / REDJACK Column Caps

Cap version for BLACKJACK 3.0 / REDJACK 2.5/3.0 Adjustable Structural Columns, CCK are sized to suit various SCL beam sizes and 3-ply/4-ply dimensional lumber beams. Cap style design helps to resist beam rotation.

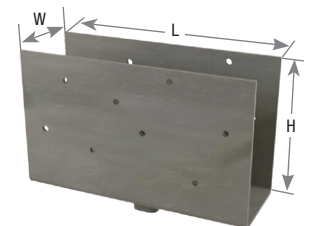
**Materials:** CCK35, CCK45, CCK55, CCK60: 7 gauge ASTM A1011;  
CCK525, CCK71: 3 gauge ASTM A 36 steel

### Installation:

- Replaces BLACKJACK / REDJACK Top Plate.
- Slide column cap tube into the top of the threaded pipe component.
- MiTek's WS3 structural wood screws, 1/4" dia. x 3" long, are supplied with CCK Column Caps.
- Beam shall be continuous across the entire length of the column cap. For split beam applications, please contact MiTek.



**Typical CCK Installation**



**CCK35**

MiTek Stock No.	Steel Gauge	Dimensions (in)			Fastener Schedule <sup>3</sup>		D Fir-L Factored Resistance		S-P-F Factored Resistance	
		W	H	L	Beam		Bearing (100%) <sup>1,2,5</sup>		Bearing (100%) <sup>1,2,5</sup>	
					Qty	Type	Lbs	kN	Lbs	kN
CCK35	7	3-5/8	6-1/2	11	16	WS3	31270	139.1	23675	105.3
CCK45	7	4-5/8	6-1/2	11	16	WS3	40195	178.8	30440	135.4
CCK525	3	5-1/4	8	13	16	WS3	49900	222.0	40970	182.2
CCK55	7	5-1/2	6-1/2	11	16	WS3	46905	208.6	35515	158.0
CCK60	7	6-1/8	6-1/2	11	16	WS3	49900	222.0	40590	180.5
CCK71	3	7-1/4	6-1/2	11	16	WS3	49900	222.0	47350	210.6

Each Column Cap Kit comes with one CCK Column Cap + one PL (4.5 x 6) Bottom Plate

1) Factored bearing resistances are for standard term loading; reduce for other load durations in accordance with the code.  
2) Bearing loads are based on compression perpendicular to grain values published in CSA O86:19 and having the bucket base in full contact with the supported member.  
3) MiTek's WS3 structural wood screws are 1/4" dia. x 3" long and are included with CCK Column Caps.

4) Beams shall be designed to support the required loads. Beam shear may limit loads to less than listed.  
5) The factored resistance of the CCK may exceed the column capacity. Refer to the BLACKJACK / REDJACK Column load tables (supporting steel beam) for the maximum factored resistance based on column length.  
New products or updated product information are designated in blue font.

# REDJACK 2.5 Adjustable Support Columns

Unit: lb (Imperial)

REDJACK 2.5, TOP PLATE: PL (4.5 x 6) / A (3.5 x 5.25)											
MiTek Stock No.	Maximum Overall Column Length (in)	Column Capacity (supporting steel beam) Factored Resistance (lb) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (lb) <sup>2,3,5</sup>								
			1-3/4" SCL (f <sub>cp</sub> = 1,365 psi) <sup>4</sup>			D Fir-L			S-P-F		
			1-Ply	2-Ply	3-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
			A (3.5x5.25)	A (3.5x5.25)	A (3.5x5.25)	A (3.5x5.25)	PL (4.5x6)	PL (4.5x6)	A (3.5x5.25)	PL (4.5x6)	PL (4.5x6)
RJ25x96	84	25600	10030	20060	20060	12790	21920	21920	9680	16600	16600
	90	23400					21920	21920			
	96	21600					21600	21600			
RJ25x102	102	19750	10030	19750	19750	12790	19750	19750	9680	16600	16600
RJ25x108	108	18300		18300	18300		18300	18300			
RJ25x120	114	16800		16800	16800		12790	16800			
	120	15500	15500	15500	15500	15500		15500	15500	15500	

REDJACK 2.5, TOP PLATE: B (3.5 x 7)											
MiTek Stock No.	Maximum Overall Column Length (in)	Column Capacity (supporting steel beam) Factored Resistance (lb) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (lb) <sup>2,3,5</sup>								
			1-3/4" SCL (f <sub>cp</sub> = 1,365 psi) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
RJ25x96	84	25600	25600	20060	25600	17050	12790	17050	12910	9680	12910
	90	23400	23400		23400						
	96	21600	21600		21600						
RJ25x102	102	19750	19750	19750	19750	17050	12790	17050	12910	9680	12910
RJ25x108	108	18300	18300	18300	18300						
RJ25x120	114	16800	16800	16800	16800						
	120	15500	15500	15500	15500	15500	15500				

REDJACK 2.5, TOP PLATE: C (5.25 x 7)											
MiTek Stock No.	Maximum Overall Column Length (in)	Column Capacity (supporting steel beam) Factored Resistance (lb) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (lb) <sup>2,3,5</sup>								
			1-3/4" SCL (f <sub>cp</sub> = 1,365 psi) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
RJ25x96	84	25600	25600	25600	25600	17050	25580	25580	12910	19370	19370
	90	23400	23400	23400	23400		23400	23400			
	96	21600	21600	21600	21600		21600	21600			
RJ25x102	102	19750	19750	19750	19750	17050	19750	19750	12910	19370	19370
RJ25x108	108	18300	18300	18300	18300		18300	18300		18300	
RJ25x120	114	16800	16800	16800	16800		16800	16800		16800	12910
	120	15500	15500	15500	15500	15500	15500	15500	15500	15500	

RedJack 2.5, TOP PLATE: D (7 x 7)											
MiTek Stock No.	Maximum Overall Column Length (in)	Column Capacity (supporting steel beam) Factored Resistance (lb) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (lb) <sup>2,3,5</sup>								
			1-3/4" SCL (f <sub>cp</sub> = 1,365 psi) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
RJ25x96	84	25600	25600	25600	25600	17050	25580	25600	12910	19370	25600
	90	23400	23400	23400	23400		23400	23400			23400
	96	21600	21600	21600	21600		21600	21600			21600
RJ25x102	102	19750	19750	19750	19750	17050	19750	19750	12910	19370	19750
RJ25x108	108	18300	18300	18300	18300		18300	18300		18300	18300
RJ25x120	114	16800	16800	16800	16800		16800	16800		16800	12910
	120	15500	15500	15500	15500	15500	15500	15500	15500	15500	

- 1) Column Factored Resistance is limited by the tube's axial compressive strength. The depicted values are established in accordance with CSA S16.
- 2) Factored Resistance supporting wood beam is limited by the lesser of column tube's axial compressive strength and beam's compression perpendicular to grain strength.
- 3) Factored Resistances are for standard term loading; reduce for other load durations in accordance to the code.
- 4) SCL Factored Beam Bearing Resistance assumes 1-3/4" ply width and specified compression perpendicular to grain f<sub>cp</sub> = 1,365 psi. For beams of **weaker specified f<sub>cp</sub> or smaller width**, calculate the Factored Beam Bearing Resistance as follows: overall beam width x plate length x f<sub>cp</sub> x 0.8.  
Use the minimum of the calculated "Factored Beam Bearing Resistance" and the "Factored Resistance of the Column Capacity supporting steel beam" as the Factored Resistance of the column supporting the respective beam.
- 5) Grey shades: Rotate plate to fit, beam width parallel with the longer side of the plate.
- 6) Column is not capable of resisting lateral or uplift load.
- 7) Table values not applicable to split beam installation. For beams not continuous across the entire length of the supporting top plate, please contact MiTek.



For Overall Column Length not listed in the table, use the capacity of the next longer Column Length in line.  
Example: For REDJACK 2.5 having an overall length of 100" (2540 mm) use the values of the 102" (2591 mm) Column Length

# REDJACK 2.5 Adjustable Support Columns

Unit: kN (Metric)

REDJACK 2.5, TOP PLATE: PL (4.5 x 6) / A (3.5 x 5.25)											
MiTek Stock No.	Maximum Overall Column Length (mm)	Column Capacity (supporting steel beam) Factored Resistance (kN) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (kN) <sup>2,3,5</sup>								
			1-3/4" SCL ( $f_{cp} = 1,365 \text{ psi}$ ) <sup>4</sup>			D Fir-L			S-P-F		
			1-Ply A (3.5x5.25)	2-Ply A (3.5x5.25)	3-Ply A (3.5x5.25)	2-Ply A (3.5x5.25)	3-Ply PL (4.5x6)	4-Ply PL (4.5x6)	2-Ply A (3.5x5.25)	3-Ply PL (4.5x6)	4-Ply PL (4.5x6)
RJ25x96	2134	113.9	44.6	89.2	89.2	56.9	97.5	97.5	43.1	73.8	73.8
	2286	104.1									
	2438	96.1									
RJ25x102	2591	87.9	44.6	87.9	87.9	56.9	87.9	87.9	43.1	73.8	73.8
RJ25x108	2743	81.4		81.4	81.4		81.4	81.4			
RJ25x120	2896	74.7	44.6	74.7	74.7	56.9	74.7	74.7	43.1	73.8	73.8
	3048	68.9		68.9	68.9		68.9	68.9		68.9	

REDJACK 2.5, TOP PLATE: B (3.5 x 7)											
MiTek Stock No.	Maximum Overall Column Length (mm)	Column Capacity (supporting steel beam) Factored Resistance (kN) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (kN) <sup>2,3,5</sup>								
			1-3/4" SCL ( $f_{cp} = 1,365 \text{ psi}$ ) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
RJ25x96	2134	113.9	113.9	89.2	113.9	75.8	56.9	75.8	57.4	43.1	57.4
	2286	104.1	104.1		104.1						
	2438	96.1	96.1		96.1						
RJ25x102	2591	87.9	87.9	87.9	87.9	75.8	56.9	75.8	57.4	43.1	57.4
RJ25x108	2743	81.4	81.4	81.4	81.4						
RJ25x120	2896	74.7	74.7	74.7	74.7	56.9	74.7	74.7	57.4	43.1	57.4
	3048	68.9	68.9	68.9	68.9						

REDJACK 2.5, TOP PLATE: C (5.25 x 7)											
MiTek Stock No.	Maximum Overall Column Length (mm)	Column Capacity (supporting steel beam) Factored Resistance (kN) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (kN) <sup>2,3,5</sup>								
			1-3/4" SCL ( $f_{cp} = 1,365 \text{ psi}$ ) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
RJ25x96	2134	113.9	113.9	113.9	113.9	75.8	113.8	113.8	57.4	86.2	86.2
	2286	104.1	104.1	104.1	104.1						
	2438	96.1	96.1	96.1	96.1						
RJ25x102	2591	87.9	87.9	87.9	87.9	75.8	87.9	87.9	57.4	86.2	86.2
RJ25x108	2743	81.4	81.4	81.4	81.4					81.4	81.4
RJ25x120	2896	74.7	74.7	74.7	74.7	74.7	74.7	74.7	57.4	74.7	74.7
	3048	68.9	68.9	68.9	68.9	68.9	68.9	68.9		68.9	

RedJack 2.5, TOP PLATE: D (7 x 7)													
MiTek Stock No.	Maximum Overall Column Length (mm)	Column Capacity (supporting steel beam) Factored Resistance (kN) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (kN) <sup>2,3,5</sup>										
			1-3/4" SCL ( $f_{cp} = 1,365 \text{ psi}$ ) <sup>4</sup>			D Fir-L			S-P-F				
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply		
RJ25x96	2134	113.9	113.9	113.9	113.9	75.8	113.8	113.9	57.4	86.2	113.9		
	2286	104.1	104.1	104.1	104.1						104.1	104.1	104.1
	2438	96.1	96.1	96.1	96.1						96.1	96.1	96.1
RJ25x102	2591	87.9	87.9	87.9	87.9	75.8	87.9	87.9	57.4	86.2	87.9		
RJ25x108	2743	81.4	81.4	81.4	81.4					81.4	81.4	81.4	81.4
RJ25x120	2896	74.7	74.7	74.7	74.7	74.7	74.7	74.7	57.4	74.7	74.7		
	3048	68.9	68.9	68.9	68.9	68.9	68.9	68.9		68.9			

- 1) Column Factored Resistance is limited by the tube's axial compressive strength. The depicted values are established in accordance with CSA S16.
- 2) Factored Resistance supporting wood beam is limited by the lesser of column tube's axial compressive strength and beam's compression perpendicular to grain strength.
- 3) Factored Resistances are for standard term loading; reduce for other load durations in accordance to the code.
- 4) SCL Factored Beam Bearing Resistance assumes 1-3/4" ply width and specified compression perpendicular to grain  $f_{cp} = 1,365 \text{ psi}$  (9.4 MPa). For beams of **weaker specified  $f_{cp}$  or smaller width**, calculate the Factored Beam Bearing Resistance as follows: overall beam width x plate length x  $f_{cp}$  x 0.8.  
Use the minimum of the calculated "Factored Beam Bearing Resistance" and the "Factored Resistance of the Column Capacity supporting steel beam" as the Factored Resistance of the column supporting the respective beam.
- 5) Grey shades: Rotate plate to fit, beam width parallel with the longer side of the plate.
- 6) Column is not capable of resisting lateral or uplift load.
- 7) Table values not applicable to split beam installation. For beams not continuous across the entire length of the supporting top plate, please contact MiTek.



# BLACKJACK 3.0 Adjustable Support Columns

Unit: lb (Imperial)

BLACKJACK 3.0, TOP PLATE: A (3.5 x 5.25)											
MiTek Stock No.	Maximum Overall Column Length (in)	Column Capacity (supporting steel beam) Factored Resistance (lb) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (lb) <sup>2,3,5</sup>								
			1-3/4" SCL ( $f_{cp} = 1,365$ psi) <sup>4</sup>			D Fir-L			S-P-F		
			1-Ply	2-Ply	3-Ply	1-Ply	2-Ply	3-Ply	1-Ply	2-Ply	3-Ply
BJ30x96	84	41500	10030	20060	20060	6390	12790	12790	4840	9680	9680
	90	38600									
	96	36100									
BJ30x102	102	33650	10030	20060	20060	6390	12790	12790	4840	9680	9680
BJ30x108	108	31400									
BJ30x120	114	29200	10030	20060	20060	6390	12790	12790	4840	9680	9680
	120	27200									

BLACKJACK 3.0, TOP PLATE: B (3.5 x 7)											
MiTek Stock No.	Maximum Overall Column Length (in)	Column Capacity (supporting steel beam) Factored Resistance (lb) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (lb) <sup>2,3,5</sup>								
			1-3/4" SCL ( $f_{cp} = 1,365$ psi) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
BJ30x96	84	41500	26750	20060	26750	17050	12790	17050	12910	9680	12910
	90	38600									
	96	36100									
BJ30x102	102	33650	26750	20060	26750	17050	12790	17050	12910	9680	12910
BJ30x108	108	31400									
BJ30x120	114	29200	26750	20060	26750	17050	12790	17050	12910	9680	12910
	120	27200									

BLACKJACK 3.0, TOP PLATE: C (5.25 x 7)											
MiTek Stock No.	Maximum Overall Column Length (in)	Column Capacity (supporting steel beam) Factored Resistance (lb) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (lb) <sup>2,3,5</sup>								
			1-3/4" SCL ( $f_{cp} = 1,365$ psi) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
BJ30x96	84	41500	26750	40130	40130	17050	25580	25580	12910	19370	19370
	90	38600		38600	38600						
	96	36100		36100	36100						
BJ30x102	102	33650	26750	33650	33650	17050	25580	25580	12910	19370	19370
BJ30x108	108	31400		31400	31400						
BJ30x120	114	29200	26750	29200	29200	17050	25580	25580	12910	19370	19370
	120	27200		27200	27200						

BLACKJACK 3.0, TOP PLATE: D (7 x 7)											
MiTek Stock No.	Maximum Overall Column Length (in)	Column Capacity (supporting steel beam) Factored Resistance (lb) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (lb) <sup>2,3,5</sup>								
			1-3/4" SCL ( $f_{cp} = 1,365$ psi) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
BJ30x96	84	41500	26750	40130	41500	17050	25580	34110	12910	19370	25820
	90	38600		38600	38600						
	96	36100		36100	36100						
BJ30x102	102	33650	26750	33650	33650	17050	25580	33650	12910	19370	25820
BJ30x108	108	31400		31400	31400			31400			
BJ30x120	114	29200	26750	29200	29200	17050	25580	29200	12910	19370	25820
	120	27200		27200	27200						

- 1) Column Factored Resistance is limited by the tube's axial compressive strength. The depicted values are established in accordance with CSA S16.
- 2) Factored Resistance supporting wood beam is limited by the lesser of column tube's axial compressive strength and beam's compression perpendicular to grain strength.
- 3) Factored Resistances are for standard term loading; reduce for other load durations in accordance to the code.
- 4) SCL Factored Beam Bearing Resistance assumes 1-3/4" ply width and specified compression perpendicular to grain  $f_{cp} = 1,365$  psi. For beams of **weaker specified  $f_{cp}$  or smaller width**, calculate the Factored Beam Bearing Resistance as follows: overall beam width x plate length x  $f_{cp}$  x 0.8.  
Use the minimum of the calculated "Factored Beam Bearing Resistance" and the "Factored Resistance of the Column Capacity supporting steel beam" as the Factored Resistance of the column supporting the respective beam.
- 5) Grey shades: Rotate plate to fit, beam width parallel with the longer side of the plate.
- 6) Column is not capable of resisting lateral or uplift load.
- 7) Table values not applicable to split beam installation. For beams not continuous across the entire length of the supporting top plate, please contact MiTek.



For Overall Column Length not listed in the table, use the capacity of the next longer Column Length in line.  
 Example: For BLACKJACK 3.0 having an overall length of 100" (2540 mm) use the values of the 102" (2591 mm) Column Length



# BLACKJACK 3.0 Adjustable Support Columns

Unit: kN (Metric)

BLACKJACK 3.0, TOP PLATE: A (3.5 x 5.25)											
MiTek Stock No.	Maximum Overall Column Length (mm)	Column Capacity (supporting steel beam)	Factored Resistance (supporting wood beam), 100% (kN) <sup>2,3,5</sup>								
			1-3/4" SCL ( $f_{cp} = 1,365$ psi) <sup>4</sup>			D Fir-L			S-P-F		
		Factored Resistance (kN) <sup>1</sup>	1-Ply	2-Ply	3-Ply	1-Ply	2-Ply	3-Ply	1-Ply	2-Ply	3-Ply
BJ30x96	2134	184.6	44.6	89.2	89.2	28.4	56.9	56.9	21.5	43.1	43.1
	2286	171.7									
	2438	160.6									
BJ30x102	2591	149.7	44.6	89.2	89.2	28.4	56.9	56.9	21.5	43.1	43.1
BJ30x108	2743	139.7									
BJ30x120	2896	129.9	44.6	89.2	89.2	28.4	56.9	56.9	21.5	43.1	43.1
	3048	121.0									

BLACKJACK 3.0, TOP PLATE: B (3.5 x 7)											
MiTek Stock No.	Maximum Overall Column Length (mm)	Column Capacity (supporting steel beam)	Factored Resistance (supporting wood beam), 100% (kN) <sup>2,3,5</sup>								
			1-3/4" SCL ( $f_{cp} = 1,365$ psi) <sup>4</sup>			D Fir-L			S-P-F		
		Factored Resistance (kN) <sup>1</sup>	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
BJ30x96	2134	184.6	119.0	89.2	119.0	75.8	56.9	75.8	57.4	43.1	57.4
	2286	171.7									
	2438	160.6									
BJ30x102	2591	149.7	119.0	89.2	119.0	75.8	56.9	75.8	57.4	43.1	57.4
BJ30x108	2743	139.7									
BJ30x120	2896	129.9	119.0	89.2	119.0	75.8	56.9	75.8	57.4	43.1	57.4
	3048	121.0									

BLACKJACK 3.0, TOP PLATE: C (5.25 x 7)												
MiTek Stock No.	Maximum Overall Column Length (mm)	Column Capacity (supporting steel beam)	Factored Resistance (supporting wood beam), 100% (kN) <sup>2,3,5</sup>									
			1-3/4" SCL ( $f_{cp} = 1,365$ psi) <sup>4</sup>			D Fir-L			S-P-F			
		Factored Resistance (kN) <sup>1</sup>	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	
BJ30x96	2134	184.6	119.0		178.5	178.5	75.8	113.8	113.8	57.4	86.2	86.2
	2286	171.7			171.7	171.7						
	2438	160.6			160.6	160.6						
BJ30x102	2591	149.7	119.0		149.7	149.7	75.8	113.8	113.8	57.4	86.2	86.2
BJ30x108	2743	139.7			139.7	139.7						
BJ30x120	2896	129.9	119.0		129.9	129.9	75.8	113.8	113.8	57.4	86.2	86.2
	3048	121.0			121.0	121.0						

BLACKJACK 3.0, TOP PLATE: D (7 x 7)												
MiTek Stock No.	Maximum Overall Column Length (mm)	Column Capacity (supporting steel beam)	Factored Resistance (supporting wood beam), 100% (kN) <sup>2,3,5</sup>									
			1-3/4" SCL ( $f_{cp} = 1,365$ psi) <sup>4</sup>			D Fir-L			S-P-F			
		Factored Resistance (kN) <sup>1</sup>	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	
BJ30x96	2134	184.6	119.0		178.5	184.6	75.8	113.8	151.7	57.4	86.2	114.9
	2286	171.7			171.7	171.7						
	2438	160.6			160.6	160.6						
BJ30x102	2591	149.7	119.0		149.7	149.7	75.8	113.8	149.7	57.4	86.2	114.9
BJ30x108	2743	139.7			139.7	139.7			139.7			
BJ30x120	2896	129.9	119.0		129.9	129.9	75.8	113.8	129.9	57.4	86.2	114.9
	3048	121.0			121.0	121.0						

- 1) Column Factored Resistance is limited by the tube's axial compressive strength. The depicted values are established in accordance with CSA S16.
- 2) Factored Resistance supporting wood beam is limited by the lesser of column tube's axial compressive strength and beam's compression perpendicular to grain strength.
- 3) Factored Resistances are for standard term loading; reduce for other load durations in accordance to the code.
- 4) SCL Factored Beam Bearing Resistance assumes 1-3/4" ply width and specified compression perpendicular to grain  $f_{cp} = 1,365$  psi (9.4 MPa). For beams of **weaker specified  $f_{cp}$  or smaller width**, calculate the Factored Beam Bearing Resistance as follows: overall beam width x plate length x  $f_{cp}$  x 0.8.  
Use the minimum of the calculated "Factored Beam Bearing Resistance" and the "Factored Resistance of the Column Capacity supporting steel beam" as the Factored Resistance of the column supporting the respective beam.
- 5) Grey shades: Rotate plate to fit, beam width parallel with the longer side of the plate.
- 6) Column is not capable of resisting lateral or uplift load.
- 7) Table values not applicable to split beam installation. For beams not continuous across the entire length of the supporting top plate, please contact MiTek.



# REDJACK 3.0 Adjustable Support Columns

Unit: lb (Imperial)

REDJACK 3.0, TOP PLATE: A (3.5 x 5.25)											
MiTek Stock No.	Maximum Overall Column Length (in)	Column Capacity (supporting steel beam) Factored Resistance (lb) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (lb) <sup>2,3,5</sup>								
			1-3/4" SCL (f <sub>cp</sub> = 1,365 psi) <sup>4</sup>			D Fir-L			S-P-F		
			1-Ply	2-Ply	3-Ply	1-Ply	2-Ply	3-Ply	1-Ply	2-Ply	3-Ply
RJ30x90	84	49900	10030	20060	20060	6390	12790	12790	4840	9680	9680
	90	46400									
RJ30x96	96	43400	10030	20060	20060	6390	12790	12790	4840	9680	9680
RJ30x102	102	40300									
RJ30x108	108	37600	10030	20060	20060	6390	12790	12790	4840	9680	9680
RJ30x114	114	35100									
RJ30x120	120	32700	10030	20060	20060	6390	12790	12790	4840	9680	9680
RJ30x144	144	24800									

REDJACK 3.0, TOP PLATE: B (3.5 x 7)											
MiTek Stock No.	Maximum Overall Column Length (in)	Column Capacity (supporting steel beam) Factored Resistance (lb) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (lb) <sup>2,3,5</sup>								
			1-3/4" SCL (f <sub>cp</sub> = 1,365 psi) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
RJ30x90	84	49900	26750	20060	26750	17050	12790	17050	12910	9680	12910
	90	46400									
RJ30x96	96	43400	26750	20060	26750	17050	12790	17050	12910	9680	12910
RJ30x102	102	40300									
RJ30x108	108	37600	26750	20060	26750	17050	12790	17050	12910	9680	12910
RJ30x114	114	35100									
RJ30x120	120	32700	26750	20060	26750	17050	12790	17050	12910	9680	12910
RJ30x144	144	24800									

REDJACK 3.0, TOP PLATE: C (5.25 x 7)											
MiTek Stock No.	Maximum Overall Column Length (in)	Column Capacity (supporting steel beam) Factored Resistance (lb) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (lb) <sup>2,3,5</sup>								
			1-3/4" SCL (f <sub>cp</sub> = 1,365 psi) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
RJ30x90	84	49900	26750	40130	40130	17050	25580	25580	12910	19370	19370
	90	46400									
RJ30x96	96	43400	26750	40130	40130	17050	25580	25580	12910	19370	19370
RJ30x102	102	40300									
RJ30x108	108	37600	26750	37600	37600	17050	25580	25580	12910	19370	19370
RJ30x114	114	35100									
RJ30x120	120	32700	26750	32700	32700	17050	25580	25580	12910	19370	19370
RJ30x144	144	24800									

REDJACK 3.0, TOP PLATE: D (7 x 7)											
MiTek Stock No.	Maximum Overall Column Length (in)	Column Capacity (supporting steel beam) Factored Resistance (lb) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (lb) <sup>2,3,5</sup>								
			1-3/4" SCL (f <sub>cp</sub> = 1,365 psi) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
RJ30x90	84	49900	26750	40130	49900	17050	25580	34110	12910	19370	25820
	90	46400									
RJ30x96	96	43400	26750	40130	43400	17050	25580	34110	12910	19370	25820
RJ30x102	102	40300									
RJ30x108	108	37600	26750	37600	37600	17050	25580	34110	12910	19370	25820
RJ30x114	114	35100									
RJ30x120	120	32700	26750	32700	32700	17050	25580	32700	12910	19370	25820
RJ30x144	144	24800									

- 1) Column Factored Resistance is limited by the tube's axial compressive strength. The depicted values are established in accordance with CSA S16.
- 2) Factored Resistance supporting wood beam is limited by the lesser of column tube's axial compressive strength and beam's compression perpendicular to grain strength.
- 3) Factored Resistances are for standard term loading; reduce for other load durations in accordance to the code.
- 4) SCL Factored Beam Bearing Resistance assumes 1-3/4" ply width and specified compression perpendicular to grain f<sub>cp</sub> = 1,365 psi. For beams of weaker specified f<sub>cp</sub> or smaller width, calculate the Factored Beam Bearing Resistance as follows: overall beam width x plate length x f<sub>cp</sub> x 0.8. Use the minimum of the calculated "Factored Beam Bearing Resistance" and the "Factored Resistance of the Column Capacity supporting steel beam" as the Factored Resistance of the column supporting the respective beam.
- 5) Grey shades: Rotate plate to fit, beam width parallel with the longer side of the plate.
- 6) Column is not capable of resisting lateral or uplift load.
- 7) Table values not applicable to split beam installation. For beams not continuous across the entire length of the supporting top plate, please contact MiTek.



For Overall Column Length not listed in the table, use the capacity of the next longer Column Length in line.  
 Example: For REDJACK 3.0 having an overall length of 100" (2540 mm) use the values of the 102" (2591 mm) Column Length

# REDJACK 3.0 Adjustable Support Columns

Unit: kN (Metric)

REDJACK 3.0, TOP PLATE: A (3.5 x 5.25)											
MiTek Stock No.	Maximum Overall Column Length (mm)	Column Capacity (supporting steel beam) Factored Resistance (kN) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (kN) <sup>2,3,5</sup>								
			1-3/4" SCL ( $f_{cp} = 1,365 \text{ psi}$ ) <sup>4</sup>			D Fir-L			S-P-F		
			1-Ply	2-Ply	3-Ply	1-Ply	2-Ply	3-Ply	1-Ply	2-Ply	3-Ply
RJ30x90	2134	222.0	44.6	89.2	89.2	28.4	56.9	56.9	21.5	43.1	43.1
	2286	206.4									
RJ30x96	2438	193.1	44.6	89.2	89.2	28.4	56.9	56.9	21.5	43.1	43.1
RJ30x102	2591	179.3									
RJ30x108	2743	167.3	44.6	89.2	89.2	28.4	56.9	56.9	21.5	43.1	43.1
RJ30x114	2896	156.1									
RJ30x120	3048	145.5	44.6	89.2	89.2	28.4	56.9	56.9	21.5	43.1	43.1
RJ30x144	3658	110.3									

REDJACK 3.0, TOP PLATE: B (3.5 x 7)											
MiTek Stock No.	Maximum Overall Column Length (mm)	Column Capacity (supporting steel beam) Factored Resistance (kN) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (kN) <sup>2,3,5</sup>								
			1-3/4" SCL ( $f_{cp} = 1,365 \text{ psi}$ ) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
RJ30x90	2134	222.0	119.0	89.2	119.0	75.8	56.9	75.8	57.4	43.1	57.4
	2286	206.4									
RJ30x96	2438	193.1	119.0	89.2	119.0	75.8	56.9	75.8	57.4	43.1	57.4
RJ30x102	2591	179.3									
RJ30x108	2743	167.3	119.0	89.2	119.0	75.8	56.9	75.8	57.4	43.1	57.4
RJ30x114	2896	156.1									
RJ30x120	3048	145.5	119.0	89.2	119.0	75.8	56.9	75.8	57.4	43.1	57.4
RJ30x144	3658	110.3			110.3						

REDJACK 3.0, TOP PLATE: C (5.25 x 7)											
MiTek Stock No.	Maximum Overall Column Length (mm)	Column Capacity (supporting steel beam) Factored Resistance (kN) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (kN) <sup>2,3,5</sup>								
			1-3/4" SCL ( $f_{cp} = 1,365 \text{ psi}$ ) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
RJ30x90	2134	222.0	119.0	178.5	178.5	75.8	113.8	113.8	57.4	86.2	86.2
	2286	206.4									
RJ30x96	2438	193.1	119.0	178.5	178.5	75.8	113.8	113.8	57.4	86.2	86.2
RJ30x102	2591	179.3									
RJ30x108	2743	167.3	119.0	167.3	167.3	75.8	113.8	113.8	57.4	86.2	86.2
RJ30x114	2896	156.1		156.1	156.1						
RJ30x120	3048	145.5	119.0	145.5	145.5	75.8	113.8	113.8	57.4	86.2	86.2
RJ30x144	3658	110.3					110.3	110.3			

REDJACK 3.0, TOP PLATE: D (7 x 7)											
MiTek Stock No.	Maximum Overall Column Length (mm)	Column Capacity (supporting steel beam) Factored Resistance (kN) <sup>1</sup>	Factored Resistance (supporting wood beam), 100% (kN) <sup>2,3,5</sup>								
			1-3/4" SCL ( $f_{cp} = 1,365 \text{ psi}$ ) <sup>4</sup>			D Fir-L			S-P-F		
			2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply	2-Ply	3-Ply	4-Ply
RJ30x90	2134	222.0	119.0	178.5	222.0	75.8	113.8	151.7	57.4	86.2	114.9
	2286	206.4			206.4						
RJ30x96	2438	193.1	119.0	178.5	193.1	75.8	113.8	151.7	57.4	86.2	114.9
RJ30x102	2591	179.3			179.3						
RJ30x108	2743	167.3	119.0	167.3	167.3	75.8	113.8	151.7	57.4	86.2	114.9
RJ30x114	2896	156.1			156.1						
RJ30x120	3048	145.5	119.0	145.5	145.5	75.8	113.8	145.5	57.4	86.2	114.9
RJ30x144	3658	110.3					110.3	110.3			

- 1) Column Factored Resistance is limited by the tube's axial compressive strength. The depicted values are established in accordance with CSA S16.
- 2) Factored Resistance supporting wood beam is limited by the lesser of column tube's axial compressive strength and beam's compression perpendicular to grain strength.
- 3) Factored Resistances are for standard term loading; reduce for other load durations in accordance to the code.
- 4) SCL Factored Beam Bearing Resistance assumes 1-3/4" ply width and specified compression perpendicular to grain  $f_{cp} = 1,365 \text{ psi}$  (9.4 MPa). For beams of **weaker specified  $f_{cp}$  or smaller width**, calculate the Factored Beam Bearing Resistance as follows: overall beam width x plate length x  $f_{cp}$  x 0.8. Use the minimum of the calculated "Factored Beam Bearing Resistance" and the "Factored Resistance of the Column Capacity supporting steel beam" as the Factored Resistance of the column supporting the respective beam.
- 5) Grey shades: Rotate plate to fit, beam width parallel with the longer side of the plate.
- 6) Column is not capable of resisting lateral or uplift load.
- 7) Table values not applicable to split beam installation. For beams not continuous across the entire length of the supporting top plate, please contact MiTek.



# Footing Specifications

Use in conjunction with MiTek Adjustable Support Columns, BLACKJACK & REDJACK series

**Table 1. Concrete Footing Recommendations, 20 MPa Concrete Strength**

Soil Bearing Capacity kPa (psf)	Max. Footing Capacity				Min. Footing Dimensions b x b x h	Rebar Specifications	
	Unfactored Load, P <sub>s</sub> (Working Stress Design)		Factored Load, P <sub>r</sub> (Limit States Design)			Qty & Size	Spacing, s
	kN	(lb)	kN	(lb)			
75 (1,570)	27.8	(6,270)	40.4	(9,090)	24" x 24" x 9"	2 - 10M	18" E/W
	43.5	(9,790)	63.1	(14,200)	30" x 30" x 9"	3 - 10M	12" E/W
	62.7	(14,100)	90.9	(20,440)	36" x 36" x 9"	2 - 15M	19.5" E/W
	85.3	(19,190)	123.7	(27,820)	42" x 42" x 9"	4 - 10M	10" E/W
	111.4	(25,060)	161.6	(36,340)	2 - 15M	19.5" E/W	
	141.0	(31,720)	204.5	(45,990)	42" x 42" x 9"	6 - 10M	8" E/W
	174.1	(39,160)	252.5	(56,780)	48" x 48" x 9"	3 - 15M	19.5" E/W
	210.7	(47,380)	305.6	(68,710)	54" x 54" x 10"	7 - 10M	8" E/W
100 (2,090)	37.1	(8,350)	53.8	(12,110)	24" x 24" x 9"	2 - 10M	18" E/W
	58.0	(13,050)	84.1	(18,930)	30" x 30" x 9"	3 - 10M	12" E/W
	83.6	(18,800)	121.2	(27,260)	36" x 36" x 9"	2 - 15M	19.5" E/W
	113.8	(25,580)	165.0	(37,100)	42" x 42" x 9"	4 - 10M	10" E/W
	148.6	(33,420)	215.5	(48,450)	48" x 48" x 10"	3 - 15M	15" E/W
	188.1	(42,290)	272.7	(61,320)	48" x 48" x 11"	7 - 10M	7" E/W
	210.7	(47,380)	305.6	(68,710)	54" x 54" x 12"	4 - 15M	14" E/W
	210.7	(47,380)	305.6	(68,710)	66" x 66" x 12"	9 - 10M	6" E/W
125 (2,610)	46.4	(10,440)	67.3	(15,140)	24" x 24" x 9"	6 - 15M	12" E/W
	72.5	(16,320)	105.2	(23,660)	30" x 30" x 9"	3 - 10M	9" E/W
	104.5	(23,500)	151.5	(34,070)	36" x 36" x 9"	2 - 15M	19.5" E/W
	142.2	(31,980)	206.2	(46,370)	42" x 42" x 10"	5 - 10M	7.5" E/W
	185.8	(41,770)	269.4	(60,570)	48" x 48" x 11"	3 - 15M	15" E/W
	185.8	(41,770)	269.4	(60,570)	48" x 48" x 12"	6 - 10M	7" E/W
	185.8	(41,770)	269.4	(60,570)	48" x 48" x 12"	3 - 15M	18" E/W
	185.8	(41,770)	269.4	(60,570)	48" x 48" x 12"	4 - 15M	14" E/W
150 (3,130)	55.7	(12,530)	80.8	(18,170)	24" x 24" x 9"	3 - 10M	9" E/W
	87.0	(19,580)	126.2	(28,390)	30" x 30" x 9"	2 - 15M	18" E/W
	125.4	(28,200)	181.8	(40,880)	36" x 36" x 10"	4 - 10M	8" E/W
	170.7	(38,380)	247.5	(55,650)	42" x 42" x 11"	3 - 15M	12" E/W
	222.9	(50,130)	323.3	(72,680)	48" x 48" x 12"	5 - 10M	7.5" E/W
	222.9	(50,130)	323.3	(72,680)	48" x 48" x 12"	3 - 15M	15" E/W
	222.9	(50,130)	323.3	(72,680)	48" x 48" x 12"	6 - 10M	7" E/W
	222.9	(50,130)	323.3	(72,680)	48" x 48" x 12"	3 - 15M	18" E/W
300 (6,270)	111.4	(25,060)	161.6	(36,340)	24" x 24" x 10"	8 - 10M	6" E/W
	174.1	(39,160)	252.5	(56,780)	30" x 30" x 11"	4 - 15M	9" E/W
	174.1	(39,160)	252.5	(56,780)	30" x 30" x 11"	5 - 10M	6" E/W
	250.8	(56,390)	363.7	(81,770)	36" x 36" x 13"	4 - 15M	8" E/W
250.8	(56,390)	363.7	(81,770)	36" x 36" x 13"	6 - 10M	6" E/W	
250.8	(56,390)	363.7	(81,770)	36" x 36" x 13"	4 - 15M	10" E/W	

- 1) Footing design is in accordance with CAN/CSA A23.3, and meets or exceeds the prescriptive requirements of NBCC Part 9 and its provincial counterparts.
- 2) Soil bearing capacity and load(s) to be supported by the footing shall be verified by an engineer.
- 3) Concrete shall be normal Portland cement, Type 10 or Type 50 as required, slump +/- 75 mm (3"), entrained air 4-7%, maximum aggregate 20 mm (3/4") diameter, minimum strength of 20 MPa (2,900 psi) at 28 days.
- 4) Rebar shall be Grade 400, tied at all intersections, and placed in conformance with Figure 1.
- 5) Refer to Table 1 for footing size (b x b x h) and rebar spacing (s). Footing height (h) indicates the depth of footing below the column base plate. Rebar edge distance (e) and depth of concrete below rebar (c) shall be no less than 3".

Figure 1 :  
Rebar layout

