Adjustable Support Columns

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

Materials: Bottom Plates: 4-1/2" x 6" - 3 gauge
BLACKJACK 2.5: Tube 2-1/2" x 2-1/2" - 11 gauge; Top Plate 3-1/2" x 6" - 3/8" thick
REDJACK 2.5: Tube 2-1/2" x 2-1/2" - 11 gauge, Top Plate 4-1/2" x 6" - 3 gauge
BLACKJACK 3.0: Tube 3" x 3" - 10 gauge, Top Plate 4-1/2" x 6" - 3 gauge
REDJACK 3.0: Tube 3" x 3" - 8 gauge, Top Plate 4-1/2" x 6" - 3 gauge

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

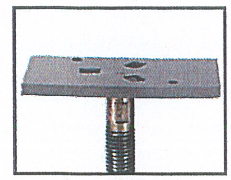
Installation:

- 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.
- Square tube may be cut down, ensure cut is smooth, square and level.

BLACKJACK 2.5: Rotate jack screw to desired height. Secure the top plate to wood beam with two (2) 1/4" x 2" lag screws

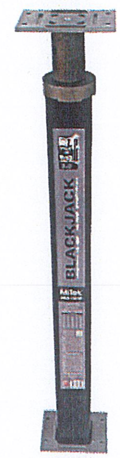
REDJACK 2.5, BLACKJACK 3.0, REDJACK 3.0: Turn threaded collar to extend the column to the desired height. Maximum 4" adjustment. Secure the top plate to wood beam with four (4) ¼" x 2" lag screws.

BLACKJACK 2.5



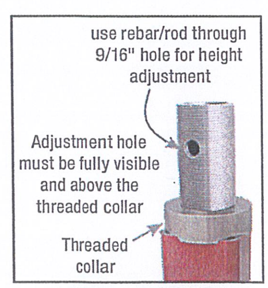
BLACKJACK 2.5 Adjustment assembly

REDJACK 2.5



BLACKJACK 3.0

REDJACK 3.0



BLACKJACK 3.0, REDJACK 2.5/3.0 Adjustment Assembly

Use in conjunction with MiTek's current Canadian Product Catalogue for detailed information.

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BLACKJACK 2.5							
Maximum Overall Column Length		Allowable Load[1,4]			Factored Resistance[3,4]		
in	mm	lb	kN	kg	lb	kN	kg
110	2794	10000	44	4536	14400	64	6532

REDJACK 2.5							
Maximum Overall Column Length		Allowable Load[1,4]			Factored Resistance[2,4]		
in	mm	lb	kN	kg	lb	kN	kg
80	2032	16900	75	7665	26000	116	11815
84	2134	15500	69	7030	24300	108	11020
90	2286	15000	67	6805	23700	105	10750
96	2438	13600	60	6170	21800	97	9935
102	2591	12800	57	5805	20050	89	9095
108	2743	12200	54	5535	18400	82	8385
114	2896	11500	51	5215	17000	76	7710
120	3048	10900	48	4945	15600	70	7120

BLACKJACK 3.0							
Maximum Overall Column Length		Allowable Load[1,4]			Factored Resistance[2,4]		
in	mm	lb	kN	kg	lb	kN	kg
80	2032	30400	135	13790	41500	185	18825
84	2134	27600	123	12520	39600	176	17960
90	2286	26400	117	11975	38600	172	17510
96	2438	24000	107	10885	36100	161	16375
102	2591	22900	102	10385	33650	150	15265
108	2743	22300	99	10115	31400	140	14245
114	2896	22000	98	9980	29900	133	13560
120	3048	21900	97	9935	27200	121	12340

REDJACK 3.0							
Maximum Overall Column Length		Allowable Load[1,4]			Factored Resistance[2,4]		
in	mm	lb	kN	kg	lb	kN	kg
80	2032	39600	176	17960	49900	222	22685
84	2134	36600	163	16600	47300	210	21455
90	2286	35500	158	16100	46400	206	21045
96	2438	32100	143	14560	43400	193	19730
102	2591	30000	133	13610	40300	179	18280
108	2743	28300	126	12835	37600	168	17105
114	2896	27500	122	12475	35100	156	15920
120	3048	26800	119	12155	32700	145	14840
144	3658	21300	95	9660	24800	111	11250

For Overall Column Length not listed in the table, use the capacity of next longer Column Length in line.

Example:
For a RedJack 3.0 having an overall column length of 100", use the capacity of 102" Column Length (i.e., Allowable Load = 30000 lb, Factored Resistance = 40300 lb).

1) The Allowable Loads have been determined thru testing standards prescribed in the National Research Council Evaluation Directive for Adjustable Steel Columns using a safety factor of 2.25.
2) The Factored Resistances of REDJACK 2.5, BLACKJACK 3.0 and REDJACK 3.0 columns are limited by the resistance of the tubes. The depicted values are established in accordance with CSA S16, Design of Steel Structures, using Resistance Factor Φ = 0.90.
3) The Factored Resistance of the BLACKJACK 2.5 column assembly is limited by the strength of the adjustable screw assembly. The depicted value is soft converted by multiplying the Allowable Load by 1.44.
4) The bearing resistance of the supported beam should be checked by the building designer using the appropriate CSA standard.

Use in conjunction with MiTek's current Canadian Product Catalogue for detailed information.

MiTek®

MiTek supplies quality products to build Stronger Safer Structures
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IRONMAN METALS INC.

December 19, 2018

LTS 2P ENGINEERED - 2.5"x2.5" (50 ksi)

COLUMN	COLUMN CAPACITIES (lbs)									
	LTS 2P									
	HEIGHT	7'6"	8'0"	8'6"	9'0"	9'6"	10'	12'	14'	16'
	WSD	15100	14000	13000	12000	10400	9600	7200	5500	4300
	LSD	21300	19800	18350	17000	14650	13550	10100	7750	6100

PLATE	PLATE CAPACITIES (lbs)									
OPTION TO INTERCHANGE ANY PLATE	Plate Size (in)		LVL (psi)	3.5"	5.25"	7.0"	8.75"	DM (psi)	4.5"	6.0"
	WSD	3.5 x 7	769	18800	14100	18800		436	6900	9200
	LSD		1080	26500	19800	26500		615	9700	13000
	WSD	6 x 7	769	18800	28300	32300		436	13700	18300
	LSD		1080	26500	39900	45500		615	19300	25800

FOOTING	FOOTING CAPACITIES (lbs)							
Soil Bearing Capacity	FOOTING SIZE (in)	PLATE (in)	WSD	LSD	10MM	15MM	20MM	REINFORCING EVENLY SPACED EITHER WAY AND TIED – SEE FULL FOOTING CHART FOR MORE INSTRUCTION
WSD – 2000 psf LSD – 2800 psf	24 x 24 x 9	ANY	8000	11400	3	3		
	30 x 30 x 9	ANY	10000	14200	4	3	3	
	36 x 36 x 10	ANY	14000	19900	5	3	3	
	42 x 42 x 10	ANY	20000	28400	6	4	4	
WSD – 2500 psf LSD – 3500 psf	24 x 24 x 9	ANY	10000	14200	3	3	3	
	30 x 30 x 9	ANY	14000	19900	4	3	3	
	36 x 36 x 10	ANY	16000	22700	5	3	3	
	42 x 42 x 10	ANY	28000	39800	6	4	4	

NOTE CONSULT FOOTING CHART FOR FURTHER INFORMATION

INSTALL

Step 1	Measure the distance between bottom of beam and top of footing
Step 2	Remove both plates from screw assembly by removing the nut
Step 3	Replace nut on the rod until it reaches the pressed threads
Step 4	Extend screw to its midpoint for future adjustment
Step 5	Take measurement of complete column including top and base plates
Step 6	Take measurement from step # 1 and subtract from step # 5
Step 7	Cut off difference from bottom of column and be sure cut is true
Step 8	Choose plate to cover full width of beam
Step 9	Place plate on top of nut with rod inserted in the center of the hole
Step 10	Place other plate under column using centering ring
Step 11	Center column on footing and beam and affix both
Step 12	Using holes, affix top plate to beam with 1/4" lags, predrill if necessary
Step 13	Cast into concrete floor or weld column to base plate and anchor with 4-3/8"Ø A. bolts set in epoxy
Step 14	Be sure column is in a completely vertical position to support beam

PROFESSIONAL ENGINEER
MD MIZANUR RAHMAN
ALBERTA

PERMIT TO PRACTICE
MR ENGINEERING LTD.
Date: December 19, 2018
PERMIT NUMBER: P11387
The Association of Professional Engineers And Geoscientists of Alberta