STEMCO Inc.

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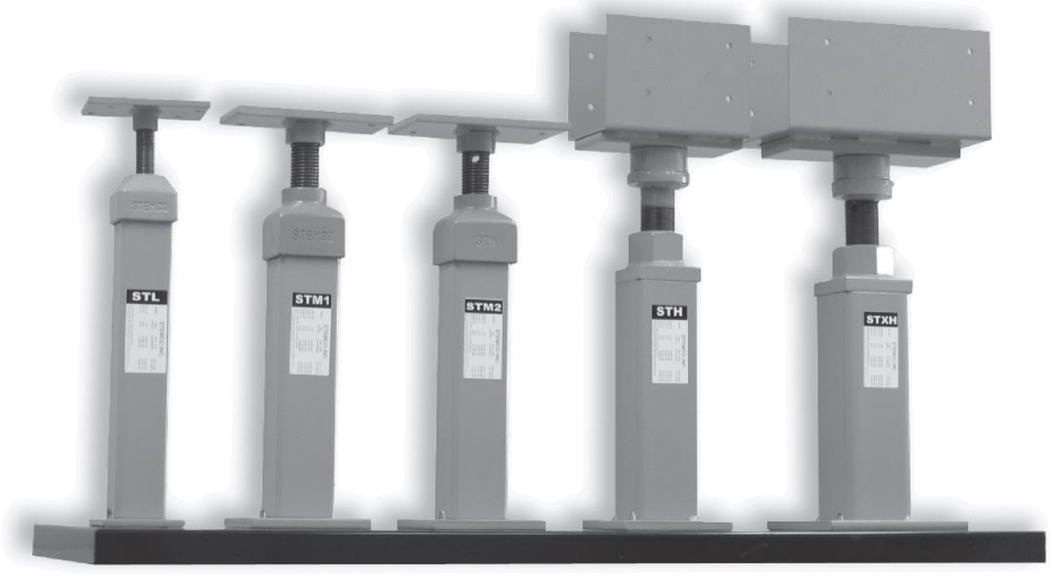
ENGINEERED COLUMNS



Adjustable Steel Columns designed to support:

- Engineered Wood
- Dimensional Lumber
- Steel Beams

"We Support You"

STEMCO INC.

ENGINEERED COLUMNS

Products

Key Features

- Each Stemco Column covers a wide load range
- STL & STM top and base plates are interchangeable to varying beam widths
- The 8’ - 6” column lengths can be used for 8’ and 9’ basements
- Large threaded ends are very durable and easy to adjust
- 3” extension adjustment is available on all columns
- Easily adjusted with only a bar or wrench
- The square tubing can be easily trimmed to length on site
- Top grade Canadian Structural Steel Construction

Product Code	Capacity Unfactored Loads (lbs)	Capacity Factored Loads (lbs)	Maximum Extension	Base / Top Plate Size	Saddle Size
STS-7.5 - NS	11,190	15,890	7’ - 6”	B 4”x4” / T 3.5”x5.25”	varies
STS-8.0 - NS	10,175	14,440	8’ - 0”	B 4”x4” / T 3.5”x5.25”	varies
STS-8.5	9,200	13,080	8’ - 6”	B 4”x4” / T 3.5”x5.25”	varies
STS-10	7,050	10,040	10’ - 0”	B 4”x4” / T 3.5”x5.25”	varies
STL-7.4 - NS	17,080	24,250	7’ - 5”	Larger Top Plate Req’d.	varies
STL-8.0 - NS	15,720	22,320	8’ - 0”	4”x6” 5”x7”	varies
STL-8.5	14,400	20,450	8’ - 6”	4”x6” 5”x7”	varies
STL-10	11,300	16,040	10’ - 0”	4”x6” 5”x7”	varies
STM1-7.4 - NS	26,070	37,030	7’ - 5”	4”x8” 6”x8”	varies
STM1-8.0 - NS	24,390	34,630	8’ - 0”	4”x8” 6”x8”	varies
STM1-8.5	22,730	32,280	8’ - 6”	4”x8” 6”x8”	varies
STM1-10	18,300	25,980	10’ - 0”	4”x8” 6”x8”	varies
STM1-12	13,970	19,830	12’ - 0”	4”x8” 6”x8”	varies
STM1-14	10,830	15,390	14’ - 0”	4”x8” 6”x8”	varies
STM2-8.0 - NS	34,140	48,470	8’ - 0”	4”x8” 6”x8”	varies
STM2-8.5	31,730	45,060	8’ - 6”	4”x8” 6”x8”	varies
STM2-10	25,600	36,340	10’ - 0”	4”x8” 6”x8”	varies
STM2-12	19,390	27,530	12’ - 0”	4”x8” 6”x8”	varies
STM2-14	15,000	21,300	14’ - 0”	4”x8” 6”x8”	varies
STM2-16	11,840	16,810	16’ - 0”	4”x8” 6”x8”	varies
STH-8.0 - NS	48,200	68,440	8’ - 0”	B 6”x6” / T 7”x10”	varies
STH-8.5	45,500	64,600	8’ - 6”	B 6”x6” / T 7”x10”	varies
STH-10	37,740	53,600	10’ - 0”	B 6”x6” / T 7”x10”	varies
STH-12	29,640	42,100	12’ - 0”	B 6”x6” / T 7”x10”	varies
STH-14	23,390	33,210	14’ - 0”	B 6”x6” / T 7”x10”	varies
STH-16	18,750	26,620	16’ - 0”	B 6”x6” / T 7”x10”	varies
STXH-8.0 - NS	80,070	113,700	8’ - 0”	Larger Top Plate Req’d	varies
STXH-8.5	76,210	108,230	8’ - 6”	B 8”x8” / T 7”x14”	varies
STXH-10	65,090	92,420	10’ - 0”	B 8”x8” / T 7”x14”	varies
STXH-12	52,300	74,270	12’ - 0”	B 8”x8” / T 7”x14”	varies
STXH-14	42,200	59,930	14’ - 0”	B 8”x8” / T 7”x14”	varies
STXH-16	34,340	48,770	16’ - 0”	B 8”x8” / T 7”x14”	varies
STXH-18	28,170	40,000	18’ - 0”	B 8”x8” / T 7”x14”	varies

The above columns have been designed and tested to meet the requirements of the NBC and ABC parts 4 and 9.
The design has been carried out in accordance with CAN/CSA S16.1 - latest edition.
NS – Non Stock length – Column capacity indicated is when a longer length column is installed at the length indicated.
IMPORTANT – STS COLUMN BASE MUST BE ENCASED IN A MINIMUM 3" THICK FLOOR SLAB TO ACHIEVE FULL CAPACITY.

Top Plate Capacity Unfactored Loads (lbs)	Beam Type	Beam Width	Plate Size
11,190	* Engineered Lumber Beams	3.5”	3.5” x 5.25”
11,190		5.25”	3.5” x 5.25” @ 90°
15,750		3.5”	4” x 6”
15,750		5.25”	4” x 6” @ 90°
16,000		5.25”	5” x 7”
16,000		7”	5” x 7” @ 90°
21,000		3.5”	4” x 8”
31,500		5.25”	6” x 8”
36,000		7”	6” x 8”
39,400		5.25”	7” x 10”
52,500		7”	7” x 10”
73,500		7”	7” x 14”
7,090	** Dimensional Lumber Beams	4.5”	3.5” x 5.25” @ 90°
10,800		4.5”	4” x 6”
14,175		4.5”	5” x 7”
15,750		6”	5” x 7”
16,200		4.5”	6” x 8”
21,600		6”	6” x 8”

NOTE – The above column capacities are based on concentric loading of the column or a single beam covering the entire top bearing plate.

If two beam ends are supported on one column, consult our "Spliced Beam Calculation" in the Printable Brochures section of our website.

As required by CSA 086, all beams shall have adequate attachment and positioning of lateral bracing to achieve member stability (As determined by the building designer).

NOTE – Column top plate bearing capacities may be governed by the type and width of beam used.

* Based on 750 psi Lumber Allowable Bearing Capacity
Versa-Lam has 860 psi Lumber Allowable Bearing Capacity
** Based on 450 psi Lumber Allowable Bearing Capacity

BROCHURE DATE - JUNE, 2019

British Columbia

Alberta

Saskatchewan

Manitoba

Ontario

STEMCO INC.

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Footings & Installation

The following are minimum footing specifications unless specified by others.

Soil Bearing Capacity	STEMCO Baseplate Size	Footing Capacity (Unfactored Loads)	Footing Capacity (Unfactored Loads)	Footing Capacity (Factored Loads)	Footing Capacity (Factored Loads)	Dimensions		Amount and Size of Rebar	Rebar Spacing in Each Direction
psf	(inches)	(lbs)	(KN)	(lbs)	(KN)	S (inches)	H (inches)	Each Direction	(inches)
2000 (Allowable / Unfactored) or 2850 (Limit States Design / Factored)	4x4	11,500	51	16,330	72.6	30	10	4-10M	8.5
	4x6	16,000	71	22,880	101.5	36	10	5-10M	8
	4x8	20,000	89	28,600	127.3	40	10	6-10M	7
	4x8	25,000	111	35,750	158.7	44	10	6-10M	8
	4x8	30,000	133	42,900	190.2	48	10	7-10M	7.5
	4x8	35,000	156	50,050	223.1	52	10	7-10M	8
	6x6	40,000	178	57,200	254.5	56	11	8-10M	7.5
	6x6	50,000	222	71,500	317.5	63	12	10-10M	6.5
	8x8	60,000	267	85,800	381.8	69	13	12-10M	6
	8x8	70,000	311	100,100	444.7	74	13	14-10M	5.5
	8x8	80,000	356	113,600	504.9	80	14	14-10M	5
3000 (Allowable / Unfactored) or 4250 (Limit States Design / Factored)	4x4	11,500	51	16,330	72.6	24	10	4-10M	6.5
	4x6	16,000	71	22,880	101.5	29	10	4-10M	8
	4x8	20,000	89	28,600	127.3	32	10	5-10M	7
	4x8	25,000	111	35,750	158.7	36	10	5-10M	8
	4x8	30,000	133	42,900	190.2	39	10	5-10M	8.5
	4x8	35,000	156	50,050	223.1	42	10	6-10M	7.5
	6x6	40,000	178	57,200	254.5	45	11	7-10M	7
	6x6	50,000	222	71,500	317.5	50	12	8-10M	6.5
	8x8	60,000	267	85,800	381.8	55	13	10-10M	5.5
	8x8	70,000	311	100,100	444.7	60	13	10-10M	6
	8x8	80,000	356	113,600	504.9	80	14	12-10M	5.5

FOOTING NOTES:

1. Concrete strength will be a minimum of 20 Mpa (3000 psi) at 28 days.
2. Concrete shall be Type GU (or “As Specified by Others”) with a max of 20mm (3/4”) aggregate and 3” slump.
3. Rebar shall be grade 400.
4. Rebar is to be tied at all intersections.
5. Column shall be placed in the centre of the footing. Eccentric loading reduces the footing capacity.

STEMCO Column Assembly:

1. Support and brace the beam in its intended position using lumber.
2. Measure the distance from the top of the footing to the underside of the beam and write down this number.
3. IMPORTANT. Position the threaded rod in the support head at the midpoint of its extension to allow for future up or down adjustment.
4. Measure the length of your original column from the bottom of the baseplate to the top of the head/top plate assembly.
5. Subtract Step 2 and Step 4 measurements and record the number.
6. Remove head and trim top of column by the value calculated in Step 5 using an approved metal cutting blade. The cut must be level, true and free of nicks or burrs.
7. Centre the assembled column under the beam and centre on the footing. Plumb column in both directions.
8. Drill 3/16” x 2.5” holes into the wood beam through holes in the top plate and install 1/4” x 3” lag bolts.
9. Column bases shall be encased by a floor slab or equivalently secured as specified by others.