

STEMCO Inc.

Phone: (780) 955-3556

Fax: (780) 401-3126

www.stemco.ca

Distributed by:



ENGINEERED COLUMNS



Adjustable Steel Columns designed to support:

- Engineered Wood
- Dimensional Lumber
- Steel Beams

“We Support You”



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

For more information visit our website: www.stemco.ca



British Columbia



Alberta



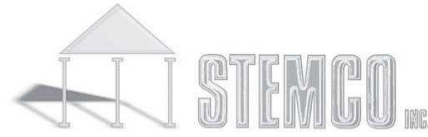
Saskatchewan



Manitoba



Ontario



ENGINEERED COLUMNS

The following are minimum footing specifications unless specified by others.

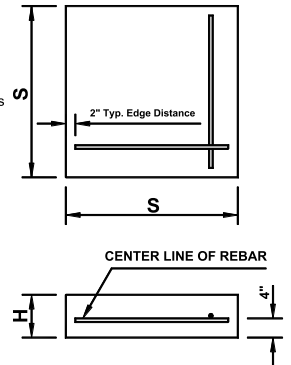
| Soil Bearing Capacity | STEMCO Baseplate Size | Footing Capacity (Unfactored Loads) | Footing Capacity (Unfactored Loads) | Footing Capacity (Factored Loads) | Footing Capacity (Factored Loads) | Dimensions | | Amount and Size of Rebar | Rebar Spacing in Each Direction |
|---------------------------------------|-------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|------------|------------|--------------------------|---------------------------------|
| | | | | | | S (inches) | H (inches) | | |
| psf | (inches) | (lbs) | (KN) | (lbs) | (KN) | S (inches) | H (inches) | Each Direction | (inches) |
| 2000 (Allowable / Unfactored) | 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 |
| 2850 (Limit States Design / Factored) | 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) | 4x4 | 11,500 | 51 | 16,330 | 72.6 | 24 | 10 | 4-10M |
| 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 |
| 4250 (Limit States Design / Factored) | 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:

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

STEMCO Column Assembly:

- Support and brace the beam in its intended position using lumber.
- Measure the distance from the top of the footing to the underside of the beam and write down this number.
- IMPORTANT.** Position the threaded rod in the support head at the midpoint of its extension to allow for future up or down adjustment.
- Measure the length of your original column from the bottom of the baseplate to the top of the head/top plate assembly.
- Subtract Step 2 and Step 4 measurements and record the number.
- 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.
- Centre the assembled column under the beam and centre on the footing. Plumb column in both directions.
- 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.
- Column bases shall be encased by a floor slab or equivalently secured as specified by others.



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