



Expanding Your Solutions

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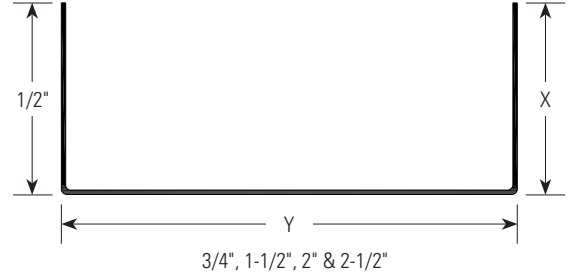
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# "U" - UNPUNCHED U-SHAPED CHANNEL • 2" x 54 Mil.

## Geometric Properties

2" "U" channels are fabricated in 1/2" legs. All CEMCO U-Shaped channels are produced from hot-dipped galvanized steel in standard G60 coating. G90 is available upon special request.



## Steel Thickness

| Thickness (mil) | Design Thickness (in) <sup>1</sup> | Minimum Thickness (in) <sup>1,2</sup> |
|-----------------|------------------------------------|---------------------------------------|
| 54              | 0.0566 (1.44 mm)                   | 0.0538 (1.37 mm)                      |

**Notes:** 1. Uncoated Steel Thickness. Thickness is for carbon sheet steel. 2. Minimum Thickness represents 95% of the design thickness and is the minimum acceptable thickness delivered to the job site, based on Section A4.3 of the AISI S100-2007.

**Color Code (painted on ends):** 54-mil: Green

## ASTM & Code Standards:

- ASTM A653/A653M, 924/A924M, A1003/1003, C955 & C1007
- ICC-ES & SFIA Code Compliance Certification Program
- ICC ESR-3016
- ATI CRR-0224
- IBC: 2012, 2015, 2018
- CBC: 2013, 2016
- AISI: S100-07, S100-12, S100-16, S200-12, S240-15

**CSI Division:** 05.40.00 – Cold-Formed Metal Framing

## LEED v4 for Building and Design Construction

- MR Prerequisite: Construction and Demolition Waste Management Planning.
- MR Credit: Construction and Demolition Waste Management.
- MR Credit: Building Product Disclosure and Optimization – Sourcing of Raw Materials, Option 2.
- MR Credit: Building Product Disclosure and Optimization – Environmental Product Declarations, Options 1 & 2.
- MR Credit: Building Product Disclosure and Optimization – Material Ingredients, Option 1.
- MR Credit: Building Life-Cycle Impact Reduction, Option 4.

**CEMCO cold-formed steel framing products contain 30% to 37% recycled steel.**

- Total Recycled Content: 36.9%
- Post-Consumer: 19.8%
- Pre-Consumer: 14.4%



## U-Channel Section Properties

| Section    | Design Thickness (in) | Gross Properties        |                |                                   |                     |                                   |                     | Effective Properties              |                                   |                       |                      |
|------------|-----------------------|-------------------------|----------------|-----------------------------------|---------------------|-----------------------------------|---------------------|-----------------------------------|-----------------------------------|-----------------------|----------------------|
|            |                       | Area (in <sup>2</sup> ) | Weight (lb/ft) | I <sub>x</sub> (in <sup>4</sup> ) | R <sub>x</sub> (in) | I <sub>y</sub> (in <sup>4</sup> ) | R <sub>y</sub> (in) | I <sub>x</sub> (in <sup>4</sup> ) | S <sub>x</sub> (in <sup>3</sup> ) | M <sub>a</sub> (in-k) | V <sub>a</sub> (lbs) |
| 200U050-54 | 0.0566                | 0.157                   | 0.54           | 0.079                             | 0.709               | 0.003                             | 0.136               | 0.079                             | 0.079                             | 1.87                  | 1190                 |

**Notes:** 1. For Deflection calculations, use effective I<sub>xx</sub>.

## U-Shaped Channels Allowable Ceiling Spans

| Section    |       | Uniform Load                    |        |       |        |       |                                 |       |       |       |        |                                  |       |       |       |       |        |
|------------|-------|---------------------------------|--------|-------|--------|-------|---------------------------------|-------|-------|-------|--------|----------------------------------|-------|-------|-------|-------|--------|
|            |       | 4 psf Channel Spacing o.c. (in) |        |       |        |       | 6 psf Channel Spacing o.c. (in) |       |       |       |        | 13 psf Channel Spacing o.c. (in) |       |       |       |       |        |
|            |       | 24                              | 36     | 48    | 60     | 72    | 24                              | 36    | 48    | 60    | 72     | 24                               | 36    | 48    | 60    | 72    |        |
| 200U050-54 | L/240 | Single                          | 5'-10" | 5'-1" | 4'-8"  | 4'-4" | 4'-1"                           | 5'-1" | 4'-6" | 4'-1" | 3'-10" | 3'-7"                            | 4'-0" | 3'-6" | 3'-2" | 3'-0" | 2'-10" |
|            |       | Multiple                        | 7'-5"  | 6'-6" | 5'-11" | 5'-6" | 5'-2"                           | 6'-6" | 5'-8" | 5'-2" | 4'-10" | 4'-7"                            | 5'-1" | 4'-5" | 4'-0" | 3'-9" | 3'-6"  |
|            | L/360 | Single                          | 5'-10" | 5'-1" | 4'-8"  | 4'-4" | 4'-1"                           | 5'-1" | 4'-6" | 4'-1" | 3'-10" | 3'-7"                            | 4'-0" | 3'-6" | 3'-2" | 3'-0" | 2'-10" |
|            |       | Multiple                        | 7'-5"  | 5'-1" | 5'-11" | 5'-6" | 5'-2"                           | 6'-6" | 5'-8" | 5'-2" | 4'-10" | 4'-7"                            | 5'-1" | 4'-5" | 4'-0" | 3'-9" | 3'-6"  |

- Notes:**
1. F<sub>y</sub> = 50 ksi for all sections.
  2. Multiple span indicates two or more equal spans with channel continuous over interior supports.
  2. Bearing Lengths = 0.75".
  3. Allowable spans based on the compression flange laterally unbraced.

## Technical Services

Technical Services: 800.416.2278  
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www.cemcosteel.com



This technical information reflects the most current information available and supersedes any and all previous publications effective December 21, 2018.