



Expanding Your Solutions

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"U" - UNPUNCHED U-SHAPED CHANNEL • 2-1/2" x 54 Mil.

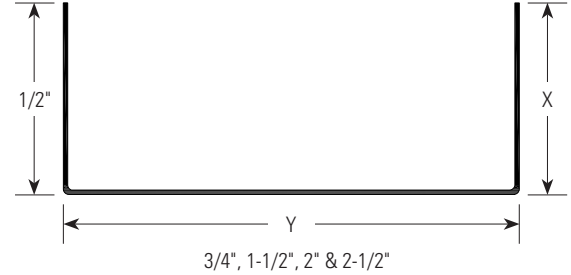
Geometric Properties

2-1/2" "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) ¹	Minimum Thickness (in) ^{1,2}
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 CCRR-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 50 ksi			
		Area (in ²)	Weight (lb/ft)	I _x (in ⁴)	R _x (in)	I _y (in ⁴)	R _y (in)	I _x (in ⁴)	S _x (in ³)	M _a (in-k)	V _a (lbs)
250U050-54	0.0566	0.186	0.63	0.139	0.866	0.003	0.128	0.0139	0.111	2.64	1540

Notes: 1. For Deflection calculations, use effective I_{xx}.

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
250U050-54	L/240	Single	6'-1"	5'-4"	4'-10"	4'-6"	4'-3"	5'-4"	4'-8"	4'-3"	4'-0"	3'-9"	4'-0"	3'-6"	3'-2"	3'-0"	2'-10"
		Multiple	7'-9"	6'-9"	6'-2"	5'-9"	5'-5"	6'-9"	5'-11"	5'-5"	5'-0"	4'-9"	5'-3"	4'-7"	4'-3"	3'-11"	3'-9"
	L/360	Single	6'-1"	5'-4"	4'-10"	4'-6"	4'-3"	5'-4"	4'-8"	4'-3"	4'-0"	3'-9"	4'-2"	3'-8"	3'-4"	3'-1"	2'-11"
		Multiple	7'-9"	6'-9"	6'-2"	5'-9"	5'-5"	6'-9"	5'-11"	5'-5"	5'-0"	4'-9"	5'-3"	4'-7"	4'-3"	3'-11"	3'-9"

Notes:

1. F_y = 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 October 07, 2025.

10-07-25 AT