



Expanding Your Solutions

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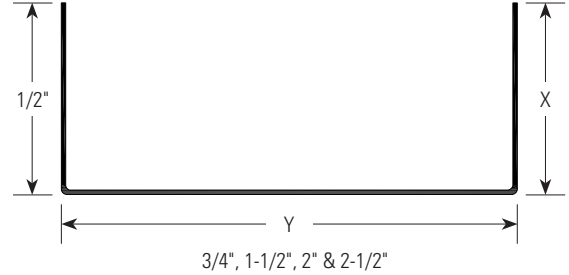
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"U" - UNPUNCHED U-SHAPED CHANNEL • 2-1/2" x 54 Mil.

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 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 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.
 3. Allowable spans based on the compression flange laterally unbraced.

Technical Services

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This technical information reflects the most current information available and supersedes any and all previous publications effective October 07, 2025.