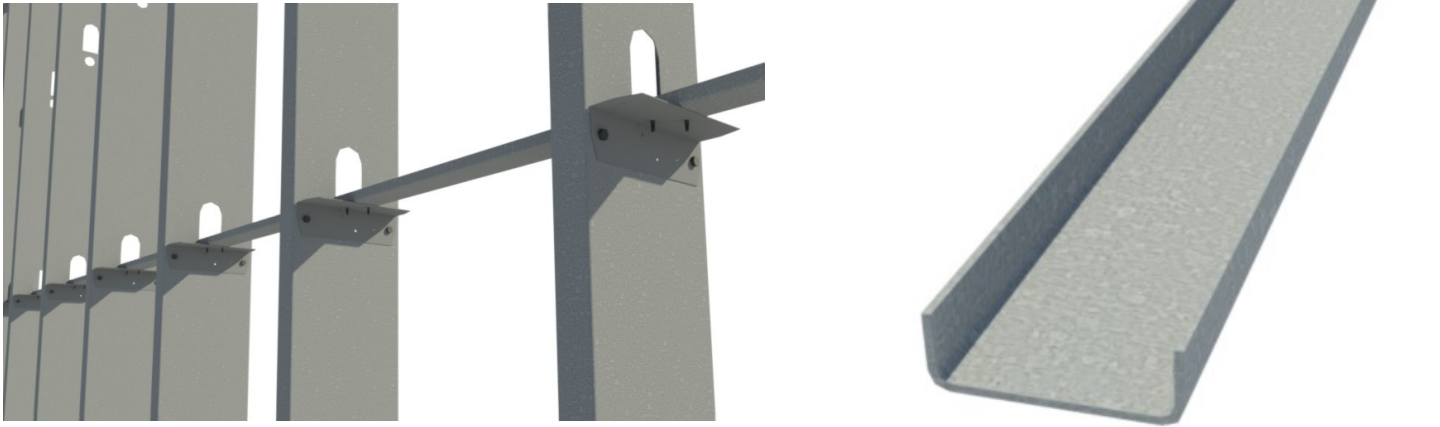


CARRYING CHANNEL

DATA SHEET

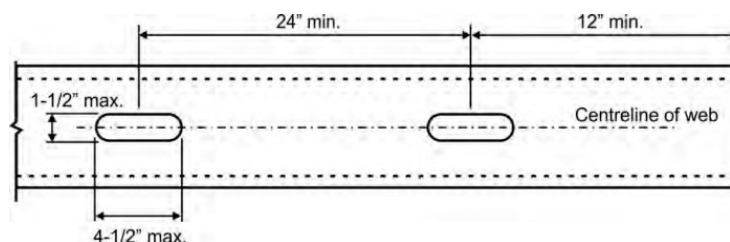


DCM Carrying Channel or U-Channel is the most common bridging method used to provide resistance to stud rotation and minor axis bending under wind and axial loads. Carrying Channel is passed through stud knockouts and secured with DCM Bridging Clips and screws as per ASTM C 754 installation requirements.

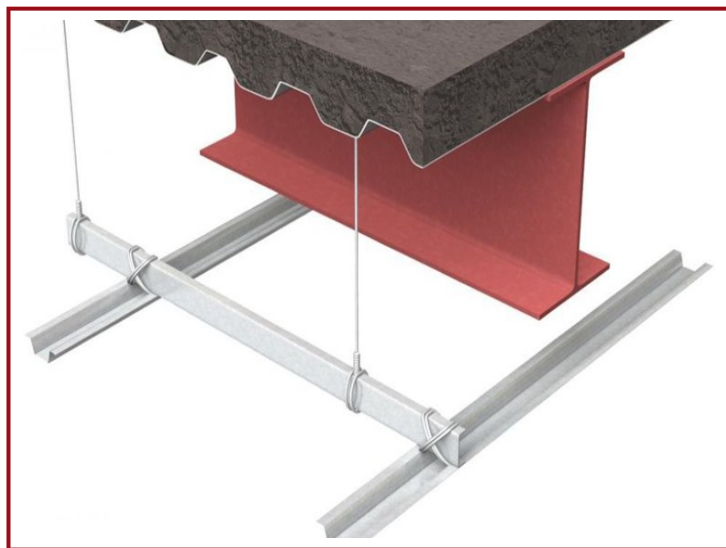
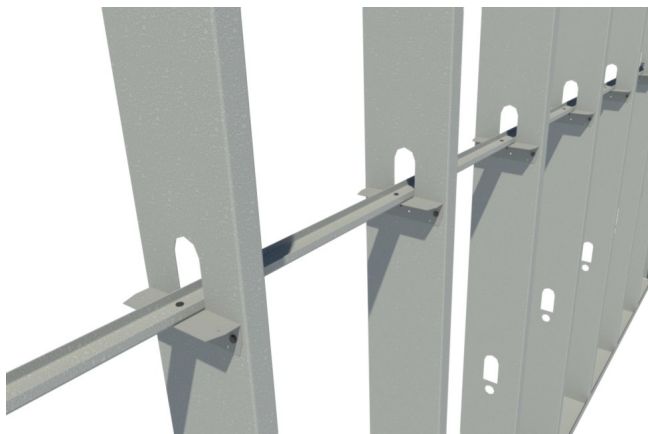
In addition to sheathing requirements, bridging must be spaced at 5'-0" o.c. or less, in order to align members and to provide the necessary structural integrity during construction and the completed structure for wind load applications. For combined wind and axial load-bearing applications, bridging must be installed at 4'-0" o.c. or less.

Stud Knockouts and Carrying Channel Spacing

When provided, factory punchouts shall be located along the centreline of the webs of the members and shall have a minimum centre-to-centre spacing of 24". Punchouts for members greater than 2.5" deep are a maximum of 1.5" wide by 4.5" in length. Any configuration or combination of holes that fit within the punchout width and length limitations stated above shall be permitted; other punchout configurations and locations not in compliance with the stated limitations must be approved by a design professional. Perforations are assumed to be located at mid-depth and spaced at a minimum of 24" o.c. The distance from the centreline of the last perforation to the end of wall stud or joist is assumed to be 12" minimum.



The maximum knockout width shall be half the member depth or 2-1/2", whichever is less. Therefore, for 1-5/8" and 2-1/2" studs, a 3/4" wide knockout is used to accommodate a 3/4" wide carrying channel, when bridging is required.



Drop Ceiling Assembly

Carrying channels are used in drop ceiling assemblies by suspending them from the overhead structure using hanger wire. Drywall furring channel is commonly clipped with metal furring channel clips or wire-tied perpendicular to the underside of the U-Channel at appropriate intervals for screw-attaching drywall. Assemblies are installed per the project specification or ASTM C 754 requirements.

Carrying Channel Section Properties

Section Designation	Base Design Thickness (in.)	Web Depth (in.)	Flange Depth (in.)	F _y (ksi)	Gross							Effective		
					Weight (lb/ft)	Area (in ²)	I _x (in ⁴)	r _x (in.)	I _y (in ⁴)	r _y (in.)	V _{rg} (kip)	I _{xd} (in ⁴)	S _{xe} (in ³)	M _{rx} (k-in.)
					75U50-54	0.0566	0.75	0.50	50	0.296	0.0871	0.00726	0.289	0.00211
150U50-43	0.0451	1.50	0.50	33	0.357	0.105	0.0324	0.555	0.00226	0.147	0.905	0.0324	0.0431	1.49
150U50-54	0.0566	1.50	0.50	50	0.441	0.130	0.0390	0.549	0.00272	0.145	1.65	0.0390	0.0520	2.73
150U75-54	0.0566	1.50	0.75	50	0.537	0.158	0.0537	0.583	0.00865	0.234	1.65	0.0537	0.0705	3.17

NOTE: Cold work of forming is applied when applicable.

Carrying Channel Allowable Ceiling Spans L/240

Section	Yield Strength FY (ksi)	Spans	4 psf dead load Channel Spacing (in.) o.c.				
			24	36	48	60	72
			075U050-54	50	Single	3' 11"	3' 5"
075U050-54	50	Multiple	4' 10"	4' 2"	3' 10"	3' 7"	3' 4"
150U050-54	50	Single	5' 6"	4' 10"	4' 5"	4' 1"	3' 10"
150U050-54	50	Multiple	7' 1"	6' 2"	5' 8"	5' 3"	4' 11"

Carrying Channel Allowable Ceiling Spans L/240

Section	Yield Strength FY (ksi)	Spans	6 psf dead load				
			Channel Spacing (in.) o.c.				
			24	36	48	60	72
075U050-54	50	Single	3' 5"	3' 0"	2' 9"	2' 6"	2' 4"
075U050-54	50	Multiple	4' 2"	3' 8"	3' 4"	3' 1"	2' 10"
150U050-54	50	Single	4' 10"	4' 3"	3' 10"	3' 7"	3' 5"
150U050-54	50	Multiple	6' 2"	5' 5"	4' 11"	4' 7"	4' 4"

Carrying Channel Allowable Ceiling Spans L/240

Section	Yield Strength FY (ksi)	Spans	13 psf dead load				
			Channel Spacing (in.) o.c.				
			24	36	48	60	72
075U050-54	50	Single	2' 8"	2' 4"	2' 1"	1' 11"	1' 10"
075U050-54	50	Multiple	3' 3"	2' 9"	2' 4"	2' 1"	1' 11"
150U050-54	50	Single	3' 9"	3' 4"	3' 0"	2' 10"	2' 8"
150U050-54	50	Multiple	4' 10"	4' 2"	3' 9"	3' 5"	3' 1"

Carrying Channel Allowable Ceiling Spans L/240

Section	Yield Strength FY (ksi)	Spans	15 psf dead load				
			Channel Spacing (in.) o.c.				
			24	36	48	60	72
075U050-54	50	Single	2' 6"	2' 2"	2' 0"	1' 10"	1' 9"
075U050-54	50	Multiple	3' 1"	2' 7"	2' 2"	2' 0"	1' 10"
150U050-54	50	Single	3' 7"	3' 2"	2' 11"	2' 8"	2' 6"
150U050-54	50	Multiple	4' 7"	4' 0"	3' 7"	3' 2"	2' 10"

Carrying Channel Allowable Ceiling Spans L/360

Section	Yield Strength FY (ksi)	Spans	4 psf dead load				
			Channel Spacing (in.) o.c.				
			24	36	48	60	72
075U050-54	50	Single	3' 5"	3' 0"	2' 9"	2' 6"	2' 4"
075U050-54	50	Multiple	4' 2"	3' 8"	3' 4"	3' 1"	2' 11"
150U050-54	50	Single	5' 6"	4' 10"	4' 5"	4' 1"	3' 10"
150U050-54	50	Multiple	7' 1"	6' 2"	5' 8"	5' 3"	4' 11"

Carrying Channel Allowable Ceiling Spans L/360

Section	Yield Strength FY (ksi)	Spans	6 psf dead load Channel Spacing (in.) o.c.				
			24	36	48	60	72
075U050-54	50	Single	3' 0"	2' 7"	2' 4"	2' 2"	2' 1"
075U050-54	50	Multiple	3' 8"	3' 2"	2' 11"	2' 8"	2' 7"
150U050-54	50	Single	4' 10"	4' 3"	3' 10"	3' 7"	3' 5"
150U050-54	50	Multiple	6' 2"	5' 5"	4' 11"	4' 7"	4' 4"

Carrying Channel Allowable Ceiling Spans L/360

Section	Yield Strength FY (ksi)	Spans	13 psf dead load Channel Spacing (in.) o.c.				
			24	36	48	60	72
075U050-54	50	Single	2' 4"	2' 0"	1' 10"	1' 8"	1' 7"
075U050-54	50	Multiple	2' 10"	2' 6"	2' 3"	2' 1"	1' 11"
150U050-54	50	Single	3' 9"	3' 4"	3' 0"	2' 10"	2' 8"
150U050-54	50	Multiple	4' 10"	4' 2"	3' 9"	3' 5"	3' 1"

Carrying Channel Allowable Ceiling Spans L/360

Section	Yield Strength FY (ksi)	Spans	15 psf dead load Channel Spacing (in.) o.c.				
			24	36	48	60	72
075U050-54	50	Single	2' 2"	1' 11"	1' 9"	1' 7"	1' 6"
075U050-54	50	Multiple	2' 8"	2' 4"	2' 2"	2' 0"	1' 9"
150U050-54	50	Single	3' 7"	3' 2"	2' 11"	2' 8"	2' 6"
150U050-54	50	Multiple	4' 7"	4' 0"	3' 7"	3' 2"	2' 10"

Notes:

1. Allowable ceiling spans are based on effective properties.
2. Multiple span indicates two or more equal spans with channel continuous over centre support.
3. Bearing length = 0.75"
4. Table values are based on the compression flange laterally unsupported.



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Manufactured in accordance with CAN/CSA S-136-16 (North American specification for the design of cold-formed steel structural members), ASTM A653/A653M (Standard for steel sheet, zinc-coated (galvanized) or zinc-iron alloy-coated by the hot-dip process), ASTM C645 (Standard specification for non-structural steel framing members), and Standard CSSBI 61-18 (Manufacturer Certification Requirements for Cold Formed Steel Framing Members - Certificate of Registration reference number Q107858).