Saturn Metal

PRODUCT & TECHNICAL CATALOGUE

COLD-FORMED STEEL FRAMING SYSTEMS

Interior and structural steel studs and tracks from 1-5/8" to 14" in 18 to 97 mils, with cold-formed joists, deflection track, shaftwall, channels, clips, trims, lath, mesh, wire and steel deck.



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ABOUT SATURN METAL

Cold-formed steel framing · Ontario, Canada

Saturn Metal offers cold-formed steel framing and building products for commercial and residential construction: studs and tracks from 1-5/8" to 14" deep in six thicknesses, with the channels, clips, connectors, trims, mesh, wire, deck and accessories that complete the system.

WHAT WE OFFER

- Interior (non-structural) steel studs and tracks, 18 mil
- Structural studs, tracks and deep-leg tracks, 33 to 97 mil, cold-formed joists
- Slotted deflection track, flex track and deflection clips
- Shaftwall studs and J-track
- Furring, resilient and carrying channel / bridging channel / bracing channel, angle, Z-bar and windbrace
- Brick veneer connectors and ties
- Drywall corner beads, L trim and J trim
- Metal lath, security mesh, hanger wire, tie wire and steel deck
- Custom flat stock and bent shapes, 18 to 97 mil (25 to 12 ga)

CERTIFICATIONS & MEMBERSHIPS

Our cold-formed framing members are product certified by CISC to CSSBI 61:24. Certification covers only the members named in our Product Scope Listing, not every product in this catalogue; memberships are shown for identification. Ask us for current documentation for a specific product.

HOW TO ORDER

1 **Send your takeoff**
Email your material list or drawings to Sales@SaturnMetal.ca, or call +1 (416) 746-8000.

2 **Use part numbers**
List the S-T-U-F part number, length and quantity for each item. See page 04 to read a part number.

3 **Get your quote**
We confirm sizes, thicknesses and lengths, and send pricing and lead times.

4 **Confirm and receive**
Approve the quote and we schedule your order.

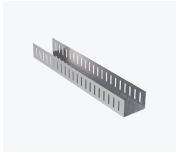
CUSTOM WORK

Need a special length, width or bent shape? Sketch it on our special profile request form (data sheet DS-30, page 2) and send it to us.

PRODUCT FAMILIES AT A GLANCE



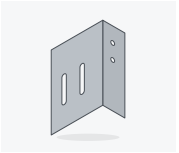
Studs & track
1-5/8" to 14", 18 to 97 mil
PAGE 07



Deflection & flex
Head of wall, curved walls
PAGE 14



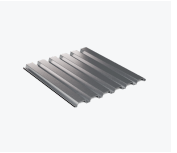
Channels
Ceilings, bridging, furring
PAGE 17



Clips
Rigid, deflection, masonry
PAGE 24



Beads & trims
Corners and board edges
PAGE 25



Lath, mesh & deck
Plaster, security, roofs, floors
PAGE 27

PRODUCT IDENTIFICATION

How to read an S-T-U-F part number

THE S-T-U-F SYSTEM

Every stud and track in this catalogue carries an industry-standard S-T-U-F designator. Use it on drawings, takeoffs and orders so everyone means the same member.

600 S 162 - 54

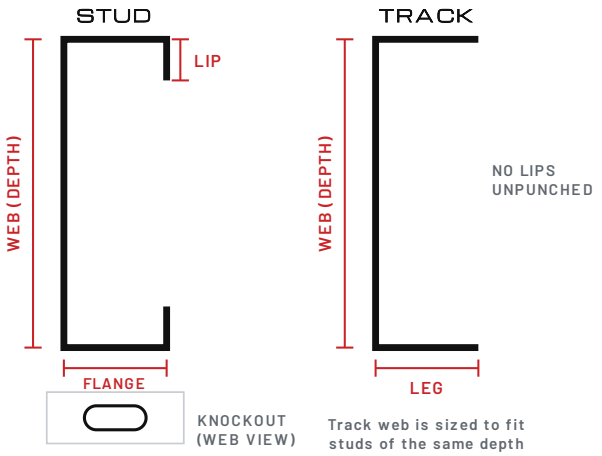
PART	MEANING	EXAMPLE
600	Web depth, in 1/100 inch	600 = 6"
S	Style: S stud or joist · T track · ST slotted track · U channel · F furring	S = stud
162	Flange (stud) or leg (track) width, in 1/100 inch	162 = 1-5/8"
54	Minimum base-steel thickness, in mils (1/1000 inch)	54 = 0.054" (16 ga)

COLOUR CODE

Structural members are marked with a colour by thickness so crews can check them on site.

- **18** —
- **33** white
- **43** yellow
- **54** green
- **68** orange
- **97** red

MEMBER ANATOMY



FLANGE CODE	FLANGE	LIP (RETURN)
125	1-1/4"	3/16"
162	1-5/8"	1/2"
200	2"	5/8"
250	2-1/2"	5/8"
300	3"	5/8"

Studs have service knockouts on the web centreline for pipe, conduit and bridging channel: at least 24" apart, and no larger than 1-1/2" wide × 4-1/2" long on studs deeper than 2-1/2". Tracks are unpunched.

ORDERING EXAMPLE

PART NUMBER	LENGTH	QUANTITY	COLOUR MARK
362S162-54	10'-0"	120 pcs	Green
3-5/8" stud, 1-5/8" flange, 54 mil	Structural members in the length you order	Per length	54 mil, 16 ga reference

MORE EXAMPLES

162S125-18
1-5/8" interior stud, 1-1/4" flange, 18 mil
SECTION B

362T125-18
3-5/8" track, 1-1/4" leg, 18 mil
SECTION B

400ST250-43
4" slotted track, 2-1/2" leg, 43 mil
SECTION D

1000S250-68
10" cold-formed joist, 2-1/2" flange, 68 mil
SECTION C

The first number is always the web depth, the second the flange or leg. The last number is thickness in mils: always order by mils, because gauge numbers vary between makers. A track takes the same web size as the stud it holds.

STEEL THICKNESS & MATERIAL

Designation, design thickness, colour code and material

GAUGE REF.	MILS	MIN. BASE STEEL	MM	DESIGN THICKNESS	MM	COLOUR CODE	YIELD	MIN. COATING
25	**18**	0.018"	0.46	0.0188"	0.48	None	33 ksi	G40
20	**33**	0.033"	0.84	0.0346"	0.88	White	33 ksi	G60
18	**43**	0.043"	1.09	0.0451"	1.15	Yellow	33 ksi	G60
16	**54**	0.054"	1.37	0.0566"	1.44	Green	50 ksi	G60
14	**68**	0.068"	1.73	0.0713"	1.81	Orange	50 ksi	G60
12	**97**	0.097"	2.46	0.1017"	2.58	Red	50 ksi	G60

Designation thickness in mils is the minimum base-steel thickness, 95% of the design thickness, per CSA S136. Gauge numbers are for reference only. Always specify by mils.

STEEL

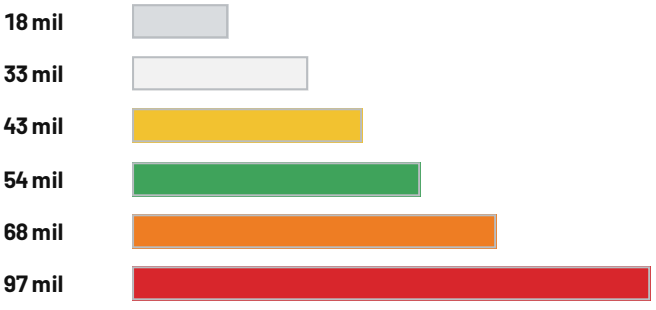
- Cold-formed from hot-dip galvanized sheet steel to ASTM A1003/A1003M
- Zinc coating to ASTM A653/A653M
- Structural members: G60 minimum coating
- Interior stud members (18 mil): G40 minimum coating

DESIGN & INSTALLATION STANDARDS

- CSA S136: design of cold-formed steel structural members
- ASTM C645: non-structural steel framing members
- ASTM C955: structural (load-bearing) framing members
- ASTM C754 and C1007: installation of framing

THICKNESS COMPARED

Bar length is proportional to design thickness.



GALVANIZED COATING

COATING	METRIC	TOTAL ZINC, BOTH SIDES	TYPICAL USE
G40	Z120	0.40 oz/ft^2	Interior stud framing
G60	Z180	0.60 oz/ft^2	Structural framing
G90	Z275	0.90 oz/ft^2	Exterior, high moisture

Coating designations per ASTM A653/A653M. Heavier coatings on request.

WHICH THICKNESS?

18 MIL · 25 GA	33 MIL · 20 GA	43 MIL · 18 GA	54 MIL · 16 GA	68 MIL · 14 GA	97 MIL · 12 GA
Interior non-structural partitions, ceilings and bulkheads with gypsum board	Taller interior partitions and heavier finishes; light infill where the design allows	Exterior infill and curtain wall, cold-formed joists, lighter load-bearing walls	Load-bearing walls, curtain wall under higher wind load, floor joists	Heavier load-bearing walls, jambs, headers and longer-span joists	The heaviest members: multi-storey bearing walls, built-up headers, long spans

! General guidance only. Select structural members by the loads they carry and the wall heights required: member size, thickness, spacing, bracing and connections are the responsibility of the engineer of record.

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INTERIOR STEEL STUD FRAMING · 18 MIL

Non-structural studs and tracks for interior partitions, ceilings and bulkheads

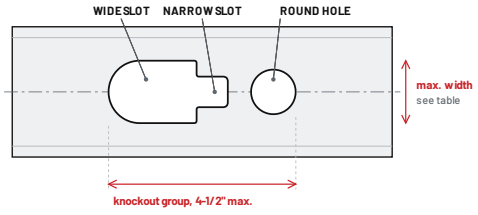
GAUGE REF.	DESIGNATION	MIN. THICKNESS	DESIGN THICKNESS	COLOUR CODE	YIELD · COATING
25	18 mil	0.018" · 0.46 mm	0.0188" · 0.48 mm	None	33 ksi · G40



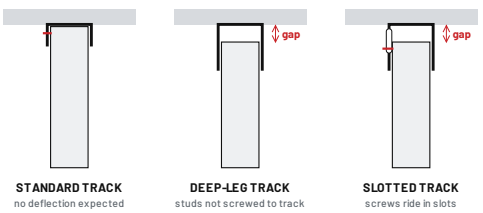
Light-gauge studs and tracks for interior non-load-bearing walls finished with gypsum board. Web knockouts let services and bridging channel pass through.

- Widths 1-5/8", 2-1/2", 3-5/8" and 6"
- 1-1/4" stud flange; tracks with 1-1/4", 2" or 3" legs
- Lengths 8', 9', 10' and 12' for studs; 10' for track
- For higher walls or heavy finishes, step up to 33 mil (section C)

PART NO.	WIDTH	MEMBER	FLANGE / LEG	LIP	LENGTHS
162S125-18	1-5/8"	Stud	1-1/4"	3/16"	8' · 9' · 10' · 12'
162T125-18	1-5/8"	Track	1-1/4"	—	10'
162T200-18	1-5/8"	Deep leg track	2"	—	10'
250S125-18	2-1/2"	Stud	1-1/4"	3/16"	8' · 9' · 10' · 12'
250T125-18	2-1/2"	Track	1-1/4"	—	10'
250T200-18	2-1/2"	Deep leg track	2"	—	10'
250T300-18	2-1/2"	Deep leg track	3"	—	10'
362S125-18	3-5/8"	Stud	1-1/4"	3/16"	8' · 9' · 10' · 12'
362T125-18	3-5/8"	Track	1-1/4"	—	10'
362T200-18	3-5/8"	Deep leg track	2"	—	10'
362T300-18	3-5/8"	Deep leg track	3"	—	10'
600S125-18	6"	Stud	1-1/4"	3/16"	8' · 9' · 10' · 12'
600T125-18	6"	Track	1-1/4"	—	10'
600T200-18	6"	Deep leg track	2"	—	10'
600T300-18	6"	Deep leg track	3"	—	10'



KEYHOLE KNOCKOUT · 18 MIL STUDS



HEAD OF WALL · STANDARD, DEEP-LEG, SLOTTED · SECTION D

STUD & TRACK SIZES

142 studs · 121 tracks · 1-5/8" to 14" · 18 to 97 mil

Saturn Metal

HOW TO READ — Find the **width**, then the **flange** (or leg). Each chip is a **thickness in mils** we offer in that size. Example: a 6" stud with a 1-5/8" flange comes in 33, 43, 54, 68 and 97 mil, so 600S162-54 is offered.

18 25 ga · 33 20 ga · 43 18 ga · 54 16 ga · 68 14 ga · 97 12 ga

STUDS · C-shape with lips

WIDTH	1-1/4" FLANGE · 3/16" LIP	1-5/8" FLANGE · 1/2" LIP	2", 2-1/2" OR 3" FLANGE · 5/8" LIP
1-5/8"	18 33	—	—
2-1/2"	18 33 43	33 43 54	—
3-5/8"	18 33 43	33 43 54 68 97	33 43 54 68 97
4"	—	33 43 54 68 97	33 43 54 68 97
6"	18 33 43	33 43 54 68 97	33 43 54 68 97
8"	—	33 43 54 68 97	33 43 54 68 97
10"	—	43 54 68 97	43 54 68 97
12"	—	43 54 68 97	43 54 68 97
14"	—	43 54 68 97	43 54 68 97

18 mil studs come in 8', 9', 10' and 12' lengths. Studs from 33 mil come in the length you order.

TRACKS · U-shape, no lips

Legs: **1-1/4"** standard, **2"** and **3"** deep-leg, on every width except 1-5/8" (1-1/4" and 2" only).

WIDTH	THICKNESSES, MIL
1-5/8"	18 33
2-1/2"	18 33 43 54
3-5/8"	18 33 43 54 68 97
4"	33 43 54 68 97
6"	18 33 43 54 68 97

WIDTH	THICKNESSES, MIL
8"	33 43 54 68 97
10"	33 43 54 68 97
12"	43 54 68 97
14"	43 54 68 97

Tracks are unpunched, in 10' lengths.

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STRUCTURAL · 33 MIL

41 studs and tracks · 20 ga reference · colour white

GAUGE REF.	DESIGNATION	MIN. THICKNESS	DESIGN THICKNESS	COLOUR CODE	YIELD · COATING
20	33 mil	0.033" · 0.84 mm	0.0346" · 0.88 mm	White	33 ksi · G60



Structural C studs with 1-1/4" to 3" flanges and stiffening lips, plus matching track and deep-leg track. The lightest structural thickness: taller interior partitions, heavier finishes such as tile and stone, and light exterior infill where the design allows. Stud webs have oval service knockouts on the centreline, at least 24" apart and no larger than 1-1/2" × 4-1/2".

1-5/8"

162S125-33	Stud · 1-1/4" fl.
162T125-33	Track · 1-1/4" leg
162T200-33	Deep track · 2" leg

2-1/2"

250S125-33	Stud · 1-1/4" fl.
250S162-33	Stud · 1-5/8" fl.
250T125-33	Track · 1-1/4" leg
250T200-33	Deep track · 2" leg
250T300-33	Deep track · 3" leg

3-5/8"

362S125-33	Stud · 1-1/4" fl.
362S162-33	Stud · 1-5/8" fl.
362S200-33	Stud · 2" fl.
362S250-33	Stud · 2-1/2" fl.
362S300-33	Stud · 3" fl.
362T125-33	Track · 1-1/4" leg
362T200-33	Deep track · 2" leg
362T300-33	Deep track · 3" leg

4"

400S162-33	Stud · 1-5/8" fl.
400S200-33	Stud · 2" fl.
400S250-33	Stud · 2-1/2" fl.
400S300-33	Stud · 3" fl.
400T125-33	Track · 1-1/4" leg
400T200-33	Deep track · 2" leg
400T300-33	Deep track · 3" leg

6"

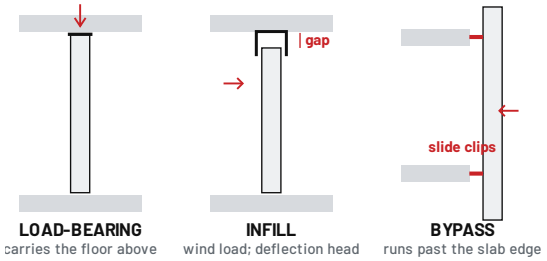
600S125-33	Stud · 1-1/4" fl.
600S162-33	Stud · 1-5/8" fl.
600S200-33	Stud · 2" fl.
600S250-33	Stud · 2-1/2" fl.
600S300-33	Stud · 3" fl.
600T125-33	Track · 1-1/4" leg
600T200-33	Deep track · 2" leg
600T300-33	Deep track · 3" leg

8"

800S162-33	Stud · 1-5/8" fl.
800S200-33	Stud · 2" fl.
800S250-33	Stud · 2-1/2" fl.
800S300-33	Stud · 3" fl.
800T125-33	Track · 1-1/4" leg
800T200-33	Deep track · 2" leg
800T300-33	Deep track · 3" leg

10"

1000T125-33	Track · 1-1/4" leg
1000T200-33	Deep track · 2" leg
1000T300-33	Deep track · 3" leg



THREE KINDS OF WALL

- **Load-bearing:** carries the floor or roof above, studs under the joists
- **Infill:** fills between floors and carries wind only; needs a deflection head
- **Bypass:** runs past the slab edge on slide clips, so the slab can move
- Which kind, and the thickness it needs, is the engineer of record's call

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STRUCTURAL · 43 MIL

56 studs and tracks · 18 ga reference · colour yellow

GAUGE REF.	DESIGNATION	MIN. THICKNESS	DESIGN THICKNESS	COLOUR CODE	YIELD · COATING
18	43 mil	0.043" · 1.09 mm	0.0451" · 1.15 mm	Yellow	33 ksi · G60



Structural C studs with 1-1/4" to 3" flanges and stiffening lips, plus matching track and deep-leg track. Exterior infill and curtain-wall studs, cold-formed joists at 6" and 8", and lighter load-bearing walls. Stud webs have oval service knockouts on the centreline, at least 24" apart and no larger than 1-1/2" × 4-1/2".

2-1/2"

250S125-43	Stud · 1-1/4" fl.
250S162-43	Stud · 1-5/8" fl.
250T125-43	Track · 1-1/4" leg
250T200-43	Deep track · 2" leg
250T300-43	Deep track · 3" leg

3-5/8"

362S125-43	Stud · 1-1/4" fl.
362S162-43	Stud · 1-5/8" fl.
362S200-43	Stud · 2" fl.
362S250-43	Stud · 2-1/2" fl.
362S300-43	Stud · 3" fl.
362T125-43	Track · 1-1/4" leg
362T200-43	Deep track · 2" leg
362T300-43	Deep track · 3" leg

4"

400S162-43	Stud · 1-5/8" fl.
400S200-43	Stud · 2" fl.
400S250-43	Stud · 2-1/2" fl.
400S300-43	Stud · 3" fl.
400T125-43	Track · 1-1/4" leg
400T200-43	Deep track · 2" leg
400T300-43	Deep track · 3" leg

6"

600S125-43	Stud · 1-1/4" fl.
600S162-43	Stud · 1-5/8" fl.
600S200-43	Stud · 2" fl.
600S250-43	Stud · 2-1/2" fl.
600S300-43	Stud · 3" fl.
600T125-43	Track · 1-1/4" leg
600T200-43	Deep track · 2" leg
600T300-43	Deep track · 3" leg

8"

800S162-43	Stud · 1-5/8" fl.
800S200-43	Stud · 2" fl.
800S250-43	Stud · 2-1/2" fl.
800S300-43	Stud · 3" fl.
800T125-43	Track · 1-1/4" leg
800T200-43	Deep track · 2" leg
800T300-43	Deep track · 3" leg

10"

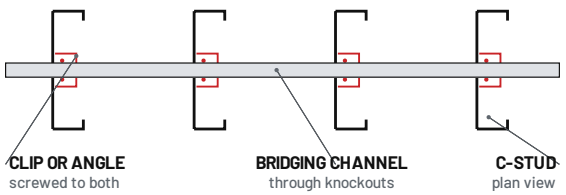
1000S162-43	Stud · 1-5/8" fl.
1000S200-43	Stud · 2" fl.
1000S250-43	Stud · 2-1/2" fl.
1000S300-43	Stud · 3" fl.
1000T125-43	Track · 1-1/4" leg
1000T200-43	Deep track · 2" leg
1000T300-43	Deep track · 3" leg

12"

1200S162-43	Stud · 1-5/8" fl.
1200S200-43	Stud · 2" fl.
1200S250-43	Stud · 2-1/2" fl.
1200S300-43	Stud · 3" fl.
1200T125-43	Track · 1-1/4" leg
1200T200-43	Deep track · 2" leg
1200T300-43	Deep track · 3" leg

14"

1400S162-43	Stud · 1-5/8" fl.
1400S200-43	Stud · 2" fl.
1400S250-43	Stud · 2-1/2" fl.
1400S300-43	Stud · 3" fl.
1400T125-43	Track · 1-1/4" leg
1400T200-43	Deep track · 2" leg
1400T300-43	Deep track · 3" leg



BRIDGING THE STUDS

- Bridging channel runs through the knockouts and is fixed at every stud with a bridging clip or clip angle
- Rows are set by the design; curtain-wall studs are commonly bridged at about 5' o.c.
- Studs are bridged before sheathing, when wind can twist the free flange
- See Carrying / bridging channel and Clip solutions in section E

STRUCTURAL · 54 MIL

53 studs and tracks · 16 ga reference · colour green

GAUGE REF.	DESIGNATION	MIN. THICKNESS	DESIGN THICKNESS	COLOUR CODE	YIELD · COATING
16	54 mil	0.054" · 1.37 mm	0.0566" · 1.44 mm	Green	50 ksi · G60



Structural C studs with 1-1/4" to 3" flanges and stiffening lips, plus matching track and deep-leg track. Load-bearing walls, curtain wall under higher wind loads and floor joists. From 54 mil the minimum yield strength steps up to 50 ksi. Stud webs have oval service knockouts on the centreline, at least 24" apart and no larger than 1-1/2" × 4-1/2".

2-1/2"

250S162-54	Stud · 1-5/8" fl.
250T125-54	Track · 1-1/4" leg
250T200-54	Deep track · 2" leg
250T300-54	Deep track · 3" leg

3-5/8"

362S162-54	Stud · 1-5/8" fl.
362S200-54	Stud · 2" fl.
362S250-54	Stud · 2-1/2" fl.
362S300-54	Stud · 3" fl.
362T125-54	Track · 1-1/4" leg
362T200-54	Deep track · 2" leg
362T300-54	Deep track · 3" leg

4"

400S162-54	Stud · 1-5/8" fl.
400S200-54	Stud · 2" fl.
400S250-54	Stud · 2-1/2" fl.
400S300-54	Stud · 3" fl.
400T125-54	Track · 1-1/4" leg
400T200-54	Deep track · 2" leg
400T300-54	Deep track · 3" leg

6"

600S162-54	Stud · 1-5/8" fl.
600S200-54	Stud · 2" fl.
600S250-54	Stud · 2-1/2" fl.
600S300-54	Stud · 3" fl.
600T125-54	Track · 1-1/4" leg
600T200-54	Deep track · 2" leg
600T300-54	Deep track · 3" leg

8"

800S162-54	Stud · 1-5/8" fl.
800S200-54	Stud · 2" fl.
800S250-54	Stud · 2-1/2" fl.
800S300-54	Stud · 3" fl.
800T125-54	Track · 1-1/4" leg
800T200-54	Deep track · 2" leg
800T300-54	Deep track · 3" leg

10"

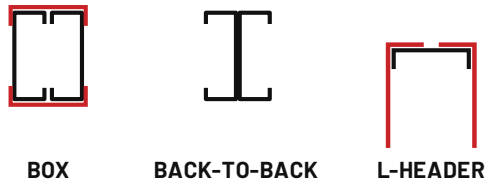
1000S162-54	Stud · 1-5/8" fl.
1000S200-54	Stud · 2" fl.
1000S250-54	Stud · 2-1/2" fl.
1000S300-54	Stud · 3" fl.
1000T125-54	Track · 1-1/4" leg
1000T200-54	Deep track · 2" leg
1000T300-54	Deep track · 3" leg

12"

1200S162-54	Stud · 1-5/8" fl.
1200S200-54	Stud · 2" fl.
1200S250-54	Stud · 2-1/2" fl.
1200S300-54	Stud · 3" fl.
1200T125-54	Track · 1-1/4" leg
1200T200-54	Deep track · 2" leg
1200T300-54	Deep track · 3" leg

14"

1400S162-54	Stud · 1-5/8" fl.
1400S200-54	Stud · 2" fl.
1400S250-54	Stud · 2-1/2" fl.
1400S300-54	Stud · 3" fl.
1400T125-54	Track · 1-1/4" leg
1400T200-54	Deep track · 2" leg
1400T300-54	Deep track · 3" leg



red = track or angle · black = C-stud or track

BUILT-UP MEMBERS

- **Box:** a stud inside a track, or two tracks, screwed together for jambs and posts
- **Back-to-back:** two studs web to web, for king studs and headers
- **L-header:** track pieces over the opening; light headers in bearing walls
- Built-up sections, their screws and their bearing are detailed by the engineer of record

STRUCTURAL · 68 MIL

49 studs and tracks · 14 ga reference · colour orange

GAUGE REF.	DESIGNATION	MIN. THICKNESS	DESIGN THICKNESS	COLOUR CODE	YIELD · COATING
14	68 mil	0.068" · 1.73 mm	0.0713" · 1.81 mm	Orange	50 ksi · G60



Structural C studs with 1-1/4" to 3" flanges and stiffening lips, plus matching track and deep-leg track. Heavier load-bearing walls, jamb and king studs, headers and longer-span joists. Stud webs have oval service knockouts on the centreline, at least 24" apart and no larger than 1-1/2" × 4-1/2".

3-5/8"

362S162-68	Stud · 1-5/8" fl.
362S200-68	Stud · 2" fl.
362S250-68	Stud · 2-1/2" fl.
362S300-68	Stud · 3" fl.
362T125-68	Track · 1-1/4" leg
362T200-68	Deep track · 2" leg
362T300-68	Deep track · 3" leg

4"

400S162-68	Stud · 1-5/8" fl.
400S200-68	Stud · 2" fl.
400S250-68	Stud · 2-1/2" fl.
400S300-68	Stud · 3" fl.
400T125-68	Track · 1-1/4" leg
400T200-68	Deep track · 2" leg
400T300-68	Deep track · 3" leg

6"

600S162-68	Stud · 1-5/8" fl.
600S200-68	Stud · 2" fl.
600S250-68	Stud · 2-1/2" fl.
600S300-68	Stud · 3" fl.
600T125-68	Track · 1-1/4" leg
600T200-68	Deep track · 2" leg
600T300-68	Deep track · 3" leg

8"

800S162-68	Stud · 1-5/8" fl.
800S200-68	Stud · 2" fl.
800S250-68	Stud · 2-1/2" fl.
800S300-68	Stud · 3" fl.
800T125-68	Track · 1-1/4" leg
800T200-68	Deep track · 2" leg
800T300-68	Deep track · 3" leg

10"

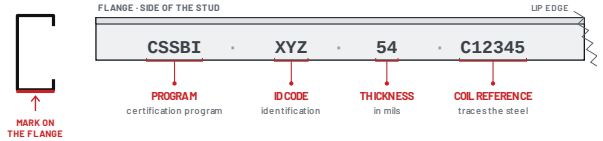
1000S162-68	Stud · 1-5/8" fl.
1000S200-68	Stud · 2" fl.
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12"

1200S162-68	Stud · 1-5/8" fl.
1200S200-68	Stud · 2" fl.
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1400S300-68	Stud · 3" fl.
1400T125-68	Track · 1-1/4" leg
1400T200-68	Deep track · 2" leg
1400T300-68	Deep track · 3" leg



READING THE MARK

- Certified members carry a mark on the flange: program, maker ID, thickness in mils, coil reference
- The thickness on the mark is the minimum base steel: the same number as the part number
- Match the mark to the drawings before the wall goes up
- Colour marking by thickness helps crews check members on site

STRUCTURAL · 97 MIL

49 studs and tracks · 12 ga reference · colour red

GAUGE REF.	DESIGNATION	MIN. THICKNESS	DESIGN THICKNESS	COLOUR CODE	YIELD · COATING
12	97 mil	0.097" · 2.46 mm	0.1017" · 2.58 mm	Red	50 ksi · G60



Structural C studs with 1-1/4" to 3" flanges and stiffening lips, plus matching track and deep-leg track. The heaviest members: multi-storey bearing walls, built-up headers and jambs, and long-span cold-formed joists. Stud webs have oval service knockouts on the centreline, at least 24" apart and no larger than 1-1/2" × 4-1/2".

3-5/8"

362S162-97	Stud · 1-5/8" fl.
362S200-97	Stud · 2" fl.
362S250-97	Stud · 2-1/2" fl.
362S300-97	Stud · 3" fl.
362T125-97	Track · 1-1/4" leg
362T200-97	Deep track · 2" leg
362T300-97	Deep track · 3" leg

4"

400S162-97	Stud · 1-5/8" fl.
400S200-97	Stud · 2" fl.
400S250-97	Stud · 2-1/2" fl.
400S300-97	Stud · 3" fl.
400T125-97	Track · 1-1/4" leg
400T200-97	Deep track · 2" leg
400T300-97	Deep track · 3" leg

6"

600S162-97	Stud · 1-5/8" fl.
600S200-97	Stud · 2" fl.
600S250-97	Stud · 2-1/2" fl.
600S300-97	Stud · 3" fl.
600T125-97	Track · 1-1/4" leg
600T200-97	Deep track · 2" leg
600T300-97	Deep track · 3" leg

8"

800S162-97	Stud · 1-5/8" fl.
800S200-97	Stud · 2" fl.
800S250-97	Stud · 2-1/2" fl.
800S300-97	Stud · 3" fl.
800T125-97	Track · 1-1/4" leg
800T200-97	Deep track · 2" leg
800T300-97	Deep track · 3" leg

10"

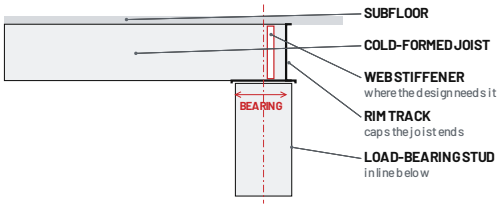
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12"

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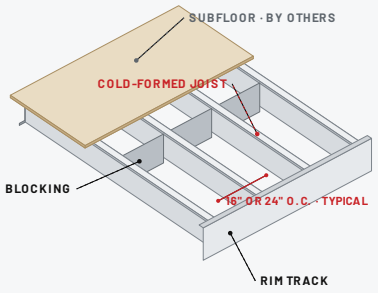
BEARING AND STIFFENERS

- At a support, the joist bears on the wall or beam over a set bearing length
- A web stiffener (a stud or track piece) carries the reaction through the web where the design needs it
- Rim track caps the joist ends and keeps them in line
- Bearing lengths, stiffeners and connections are set by the engineer of record

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LSF FLOOR SYSTEM · COLD-FORMED JOIST

Light steel floor framing with cold-formed joists, rim track, blocking and clips

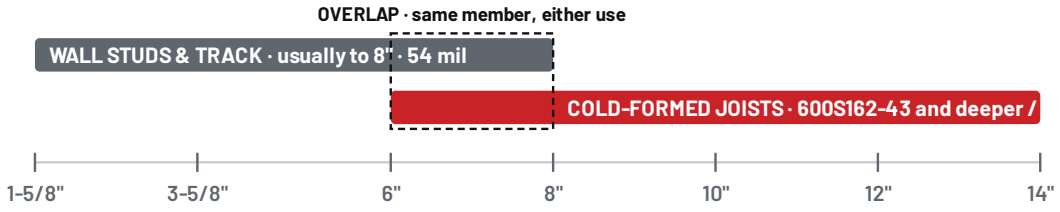


A cold-formed joist is a structural C-section laid flat as a floor or roof joist. Joists sit side by side at a set spacing, each end is capped with rim track, and blocking and strap keep them straight.

- Straight, light and non-combustible
- Same steel and part numbers as our structural studs and tracks
- Floors, mezzanines and roofs, with web knockouts for services

DEPTHS	FLANGES	THICKNESS	GAUGE REF.	SPACING	COATING
6" – 14"	1-5/8" – 3"	43 – 97 mil	18 – 12 ga	12 · 16 · 24"	G60

STUD OR JOIST?



From 600S162-43 up, the same C-section works as a wall stud or a floor joist. Walls seldom go past 8" and 54 mil (16 ga); deeper and heavier sections are used mainly as cold-formed joists.

SYSTEM PARTS

PART	WHAT IT DOES	FROM THIS CATALOGUE
Cold-formed joist	Main floor member, spanning between walls or beams	Structural C-section 6"–14", 43–97 mil
Rim track	Caps the joist ends and holds them in line	Track of the same depth, e.g. 1000T125-54
Web stiffener	Stiffens the joist web at bearings and point loads	Stud or track pieces, as designed
Blocking & strap	Helps keep joists straight and restrains rolling	Track pieces and flat strap
Joist clips	Fix joists to rim track, headers and beams	Joist end clip · support clips

COLD-FORMED JOIST SIZES

COLD-FORMED JOIST	FLANGES	43 MIL	54 MIL	68 MIL	97 MIL
6"	1-5/8" – 3"	●	●	●	●
8"	1-5/8" – 3"	●	●	●	●
10"	1-5/8" – 3"	○	●	●	●
12"	1-5/8" – 3"	○	○	●	●
14"	1-5/8" – 3"	○	○	●	●

● usual cold-formed joist section · ○ size offered, used more as a stud or track at this depth.

Part number = depth + S + flange + thickness, e.g. 1000S250-68; rim track uses the same depth with T, e.g. 1000T125-68. Steel to ASTM A1003, galvanized to ASTM A653, members to ASTM C955, design to CSA S136. Joist size, spacing, span, web stiffeners, bridging, connections and floor vibration are set by the engineer of record; this catalogue does not give floor span tables. Spacing shown is typical.

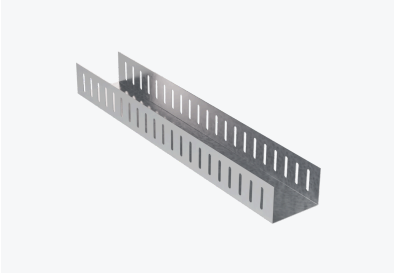
DESIGN POINTS TO CONFIRM WITH THE ENGINEER

- Strength and deflection: commonly L/360, L/480 for stiffer floors
- Web stiffeners at interior supports, and at ends where loads are high
- Enough bearing length at each support
- Subfloor braces the top flange; bottom flange braced at intervals
- Rows of bridging increase with span, to CSA S136
- Joists braced against rotation at every support

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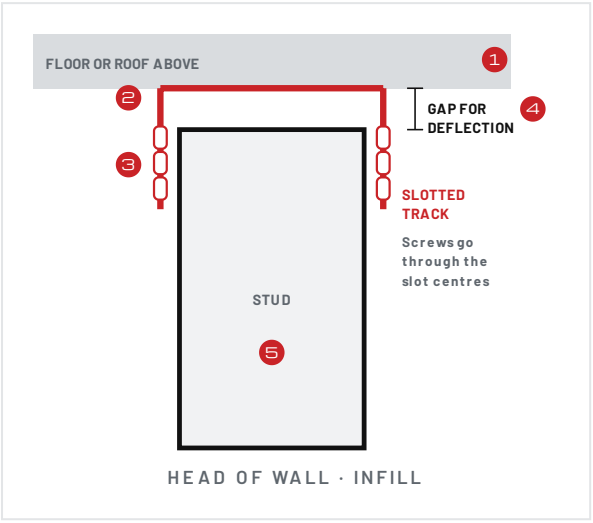
SLOTTED TRACK & DEFLECTION

Head-of-wall deflection track · 34 sizes



Floors and roofs bend under load. A wall built tight to the structure above gets pushed down and can crack its finishes. Slotted track helps prevent this: its legs have vertical slots, so studs screwed through them can slide up and down while the structure moves.

- 2-1/2" legs for deflection and strength
- Widths 2-1/2" to 12", 18 to 97 mil
- Studs can go anywhere along the track
- Standard length 10'



HEAD OF WALL · INFILL

TYPICAL INSTALLATION

1. Fasten the track web to the floor or roof above.
2. Cut studs short to leave the design gap under the track.
3. Screw each stud to both legs through the middle of a slot, so it can move up or down.
4. Hang drywall from the studs only. Keep screws out of the track and the gap zone.

! The gap size, track thickness, fasteners and anchor spacing come from the engineer of record.

READING THE DIAGRAM

1	**Floor or roof above.** The structure that bends down under load.
2	**Slotted track.** Fixed to the structure. Its legs have vertical slots.
3	**Screws in the slots.** Set at the middle of each slot, so the stud can slide both ways.
4	**Deflection gap.** Space left above the stud so the structure can come down without touching it.
5	**Stud.** Stays put and carries no load from above.

SIZES & PART NUMBERS

WIDTH	18 MIL	33 MIL	43 MIL	54 MIL	68 MIL	97 MIL
2-1/2"	250ST250-18	250ST250-33	250ST250-43	—	—	—
3-5/8"	362ST250-18	362ST250-33	362ST250-43	362ST250-54	362ST250-68	362ST250-97
4"	—	400ST250-33	400ST250-43	400ST250-54	400ST250-68	400ST250-97
6"	600ST250-18	600ST250-33	600ST250-43	600ST250-54	600ST250-68	600ST250-97
8"	—	800ST250-33	800ST250-43	800ST250-54	800ST250-68	800ST250-97
10"	—	1000ST250-33	1000ST250-43	1000ST250-54	1000ST250-68	1000ST250-97
12"	—	—	1200ST250-43	1200ST250-54	1200ST250-68	1200ST250-97

Part number shown in each cell. — means not offered in that size.

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FLEX TRACK

Bendable track for curved walls, arches and ceilings

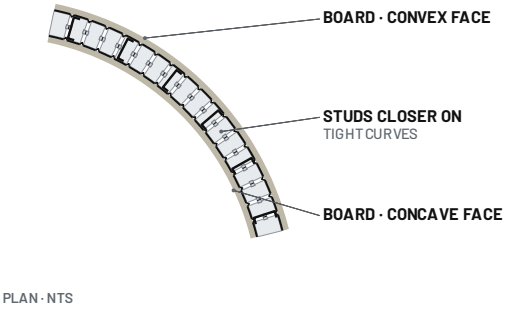


Flex track is a chain of short U-shaped segments, linked by folded pleats in the legs and a tab in the web. It bends by hand to any smooth curve, in plan or in elevation, so curved framing goes up without cutting and kerfing standard track.

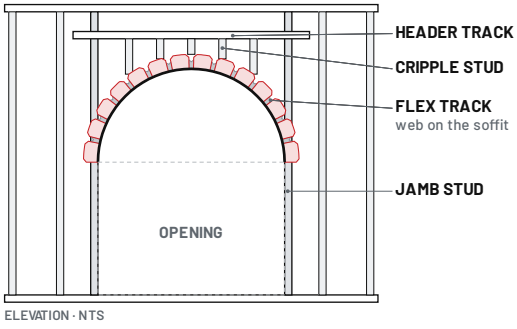
- Bends both ways: walls, arches and ceilings
- Shapes by hand on site, no special tools
- Works with steel or wood studs
- For non-load-bearing framing

WIDTHS	THICKNESS	YIELD	COATING	LENGTH	USE
2-1/2" · 3-5/8" · 6"	18 · 33 mil	33 ksi	G40 min.	8'	Non-structural

TYPICAL DETAILS



PLAN · NTS



ELEVATION · NTS

WHERE TO USE IT

Curved walls
Convex, concave or S-shaped partitions

Arches
Arched openings and door heads

Barrel vaults
Curved ceilings and vaulted soffits

Wavy ceilings
Flowing ceiling lines and clouds

Bulkheads
Curved drops and feature soffits

Columns
Round column wraps and enclosures

TYPICAL INSTALLATION

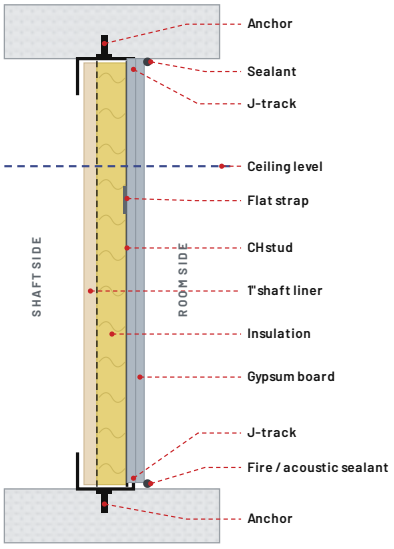
1. Mark the curve on the floor and matching ceiling line.
2. Bend the track by hand to follow the marked line.
3. Fasten the track to the structure to hold the shape.
4. Set studs at the marked points and screw them to both legs.
5. Board with drywall suited to the radius of the curve.

Stud spacing and fastening follow the project design and the board maker's bending limits.

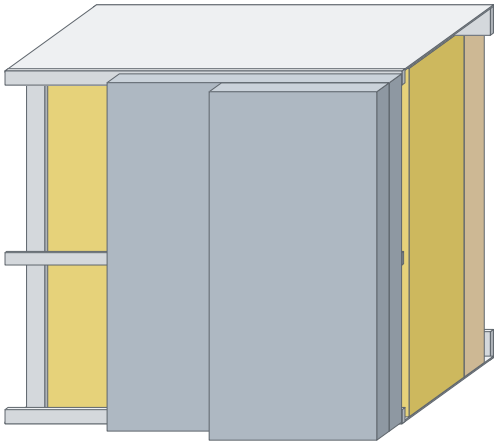
SHAFTWALL SYSTEM

CH stud and J-track for fire-rated shaft enclosures

SECTION VIEW



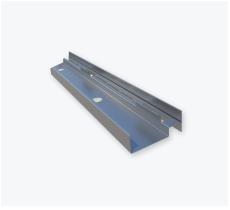
AXONOMETRIC VIEW



Gypsum board (2 layers) · 1" shaft liner · Insulation · CH stud · J-track

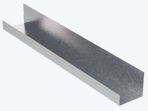
Shaftwall assemblies enclose elevator shafts, stairwells, chases and mechanical rooms. They are built from one side: 1" gypsum shaft-liner panels slide into CH studs, which friction-fit between J-tracks at floor and ceiling.

- Built from outside the shaft, no scaffolding inside
- J-track long leg faces the shaft as a backstop
- 3" J-track also used as a jamb strut at openings
- Fire ratings come from the tested assembly of the gypsum board maker



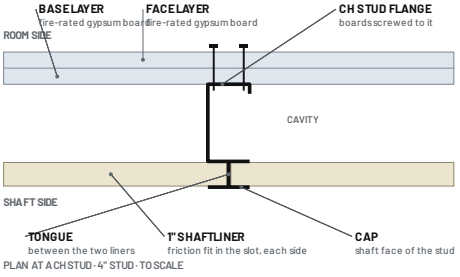
CH STUD

WIDTHS	2-1/2" · 4" · 6"
THICKNESS	18 mil (25 ga): 2-1/2", 4" 33 mil (20 ga): 2-1/2", 4", 6"
LENGTHS	8' · 9' · 10' · 12' · 14' · to order

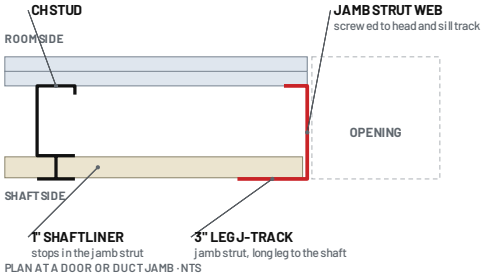


J-TRACK

WIDTHS	2-1/2" · 4" · 6"
THICKNESS	18 mil (25 ga): 2-1/2", 4" 33 mil (20 ga): 2-1/2", 4", 6"
LONG LEG	2-1/4" · 3"
LENGTH	10'



PLAN AT A CH STUD · 4" STUD, TO SCALE



PLAN AT A DOOR OR DUCT JAMB · 3" LEG J-TRACK AS THE JAMB STRUT

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CARRYING CHANNEL / BRIDGING CHANNEL / BRACING CHANNEL

Cold-formed U channel for ceilings, stud bridging and stud bracing

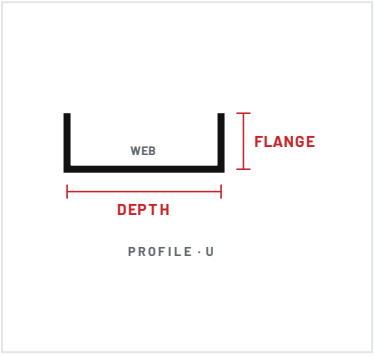


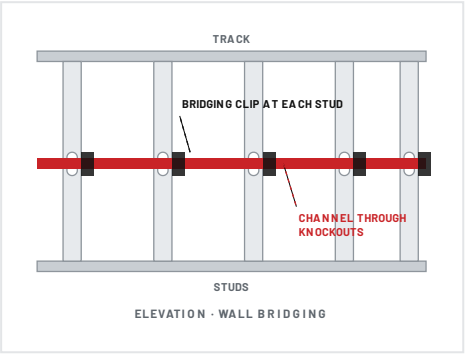
One cold-formed U channel (often just called U channel), known by three names for its three jobs. As **carrying channel**, hung on wire, it is the main runner of a suspended drywall ceiling. As **bridging channel**, run through the stud knockouts, it ties a line of studs together. As **bracing channel**, it braces the studs against twisting and bowing under wind and axial load.

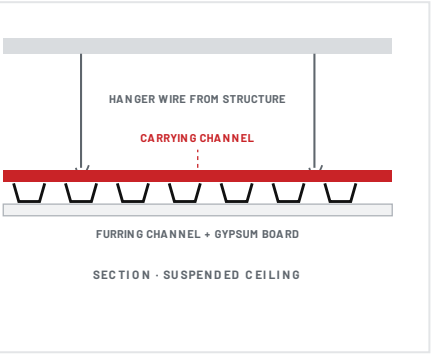
- Main runner for suspended drywall ceilings
- Horizontal bridging and bracing through stud knockouts
- Fixed to studs with bridging clips and screws
- Galvanized for corrosion protection

STYLE CODE	DEPTHS	FLANGES	THICKNESS	LENGTHS	YIELD
U	3/4" · 1-1/2"	1/2" · 3/4"	43 · 54 mil	10' · 12'	33 ksi

TYPICAL DETAILS







CHOOSING A SIZE

CHANNEL	THICKNESS	TYPICAL USE
3/4" × 1/2"	43 · 54 mil	Bridging 1-5/8" and 2-1/2" studs
1-1/2" × 1/2"	43 · 54 mil	Bridging 3-5/8" and deeper studs · ceiling main runner
1-1/2" × 3/4"	54 mil	Heavier ceilings and longer spans

Part number example: 150U50-54 = 1-1/2" U channel, 1/2" flange, 54 mil.

TYPICAL INSTALLATION

1. **Bridging:** slide the channel through the knockouts and fix it to every stud with a bridging clip.
2. Splice by lapping the ends and screwing them together.
3. **Ceilings:** hang the channel on wire from the structure, level it, then tie furring channel across it.

Bridging rows, hanger spacing and channel size follow the project design.

PART NUMBERS

PART NO.	DEPTH	FLANGE	THICKNESS	LENGTHS	TYPICAL JOB
075U50-43	3/4"	1/2"	43 mil · 18 ga	10' · 12'	Bridging 1-5/8" and 2-1/2" studs
075U50-54	3/4"	1/2"	54 mil · 16 ga	10' · 12'	Bridging 1-5/8" and 2-1/2" studs
150U50-43	1-1/2"	1/2"	43 mil · 18 ga	10' · 12'	Bridging 3-5/8" and deeper studs · ceiling main runner
150U50-54	1-1/2"	1/2"	54 mil · 16 ga	10' · 12'	Bridging and bracing · ceiling main runner
150U75-54	1-1/2"	3/4"	54 mil · 16 ga	10' · 12'	Heavier ceilings and longer spans

Depth code + U + flange code + thickness in mils, the same S-T-U-F system as the studs. Galvanized to ASTM A653.

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ANGLE/L-TRACK

90° steel angle for interior steel stud framing

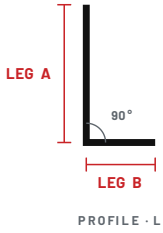


A plain 90° steel angle, often called L-track. It connects, stiffens and finishes framing wherever a full track or stud is too big, and gives bulkheads, soffits and column boxes clean, square edges.

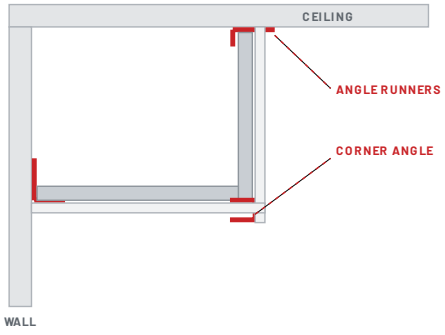
- Three standard sizes: 1" × 2", 2" × 2", 1-1/2" × 1-1/2"
- 18 mil (25 ga) and 33 mil (20 ga)
- Standard 10' lengths, other lengths on request
- Custom angles to order, 25 to 12 ga, up to 12'

ANGLE	SIZES	THICKNESS	YIELD	COATING	LENGTH
90°	3 standard	18 · 33 mil	33 ksi	G40 · G60	10'

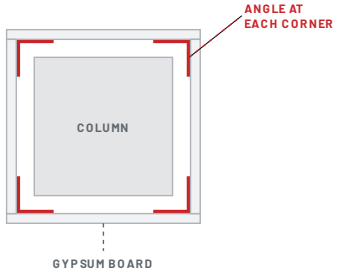
TYPICAL DETAILS



PROFILE · L



SECTION · BULKHEAD



PLAN · COLUMN WRAP

SIZES & THICKNESS

SIZE	18 MIL · 25 GA	33 MIL · 20 GA
1" × 2"	G40 · 10'	G60 · 10'
2" × 2"	G40 · 10'	G60 · 10'
1-1/2" × 1-1/2"	G40 · 10'	G60 · 10'

All sizes 33 ksi. Other sizes, thicknesses and lengths on request. Specified to ASTM C645, A1003 and A653.

WHERE TO USE IT

Bulkheads & soffits
Runners and corners for drops

Column wraps
Square boxes around columns

Floor & ceiling runners
Light runners where track will not fit

Chase walls
Framing for shafts and chases

Lapped framing
Connecting and reinforcing members

Laminated partitions
Edges of laminated drywall walls

7/8" FURRING CHANNEL

Hat channel for furring walls and ceilings

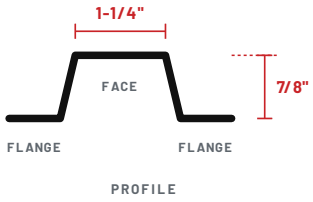


Furring channel, also called hat channel after its hat-shaped section, is a light channel whose two flanges fasten to the wall or framing, and its flat face gives a straight, even surface to screw drywall or cladding to.

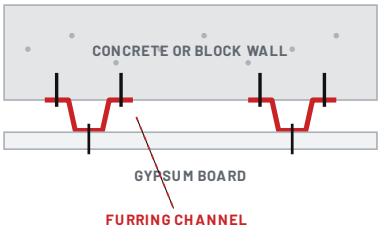
- Furs out masonry, concrete and uneven walls
- Builds flat drywall ceilings under carrying channel
- Takes drywall screws on a 1-1/4" face
- Galvanized steel, cut to length on site

STYLE CODE	DEPTH	FACE	THICKNESS	LENGTHS	YIELD
F	7/8"	1-1/4"	18 · 33 · 43 mil	10' · 12'	33 ksi

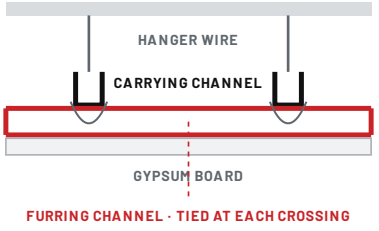
TYPICAL DETAILS



PROFILE



PLAN · WALL ON MASONRY



SECTION · SUSPENDED CEILING

WHERE TO USE IT

Drywall on masonry
Board over concrete or block walls

Suspended ceilings
Tied under carrying channel

Ceilings on joists
Fastened across wood or steel joists

Cladding & siding
Furs out over studs or sheathing

Levelling walls
Straightens uneven surfaces

Service space
Room for wiring behind the board

TYPICAL INSTALLATION

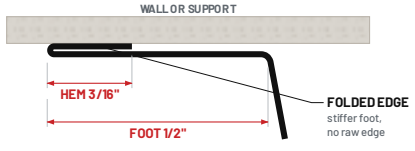
1. Run channels at right angles to the joists or carrying channel.
2. Space them to suit the board: usually 16" or 24" on centre.
3. Fasten through both flanges at every support.
4. On ceilings, tie with 18 ga tie wire or clip at each crossing.
5. Splice by nesting the ends and tying or screwing them together.

Spacing, span and thickness follow the project design, the ceiling load and the board maker's limits.

PART NUMBERS

PART NO.	THICKNESS	FLANGES	COATING	LENGTHS
087F125-18	18 mil · 25 ga	Hemmed, 3/16" fold	G40	10' · 12'
087F125-33	33 mil · 20 ga	Plain	G60	10' · 12'
087F125-43	43 mil · 18 ga	Plain	G60	10' · 12'

087 = 7/8" depth, F = furring, 125 = 1-1/4" face. Yield 33 ksi. Steel to ASTM A1003, coating to ASTM A653, installed to ASTM C754 and C841.



HEMMED FLANGE · 18 MIL ONLY · A FOLDED FOOT WITH NO RAW EDGE

HANGER WIRE & TIE WIRE

Galvanized wire for suspended ceilings, lath and plaster

The small parts that hold a ceiling up. Hanger wire carries the ceiling from the structure, and tie wire locks the channels and lath together. Both are galvanized steel.



HANGER WIRE

GAUGE	9 ga · 12 ga
LENGTH	12'
BUNDLE	9 ga: 76 pcs 12 ga: 149 pcs

- Hangs suspended drywall and plaster ceilings
- Carries carrying channel and grid from the structure
- Straight 12-ft lengths, ready to hang

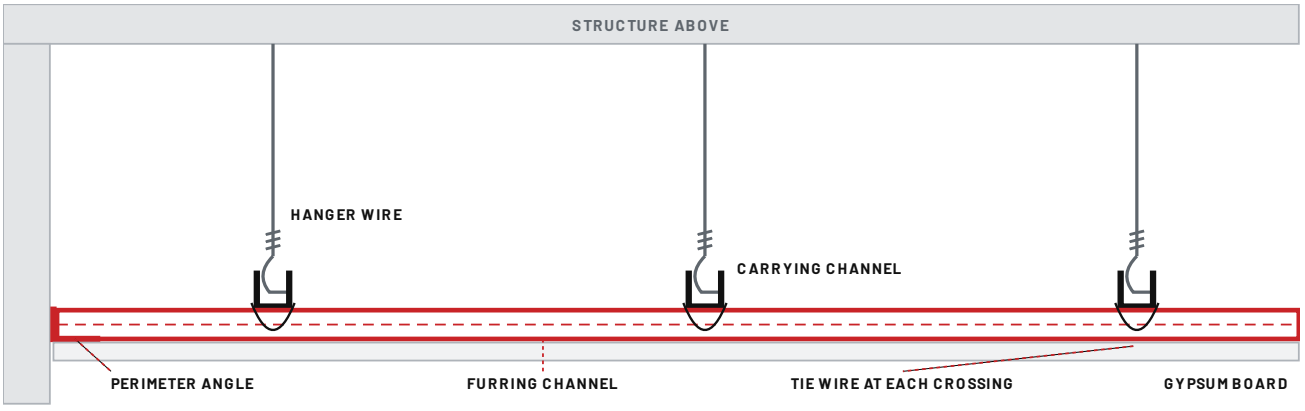


TIE WIRE

GAUGE	18 ga
LENGTHS	27" · 42"
SOLD	Bundle

- Ties furring channel to carrying channel
- Ties metal lath to channels and laps
- Short lengths, soft and easy to twist

WHERE THEY GO



SECTION · SUSPENDED DRYWALL CEILING

GAUGE	DIAMETER	PRODUCT
9 ga	0.148"	Hanger wire
12 ga	0.1055"	Hanger wire
18 ga	0.0475"	Tie wire

Steel wire gauge (W&M). Galvanized steel wire to ASTM A641. Hanger spacing, wire size and attachment to the structure follow the project design and ASTM C754 / C636; wrap hangers three tight turns.

ALSO FOR THE CEILING

Carrying channel, 7/8" furring channel and perimeter angle complete the system. See the pages before this one.

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RESILIENT CHANNEL

RC1 · single-leg channel that holds drywall off the framing for sound control

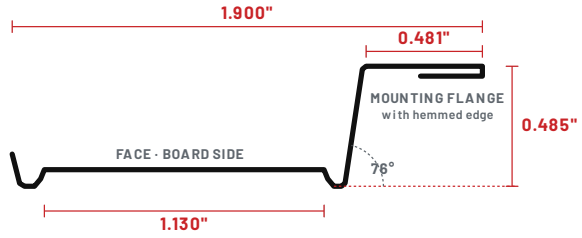


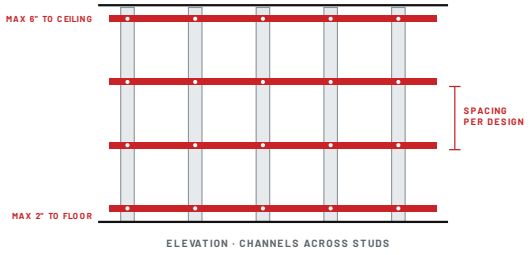
Resilient channel, also called resilient bar or RC-1, is screwed across studs or joists, and the drywall is screwed to the channel instead of the framing. The slotted web flexes, so less sound passes through the steel. It is a common way to help reach a specified STC rating, and also levels wood-joist ceilings in basements.

- For steel and wood studs, LSF and wood joists
- Slotted web for resiliency
- Levels uneven joists for drywall
- Specified to ASTM A653 and C645

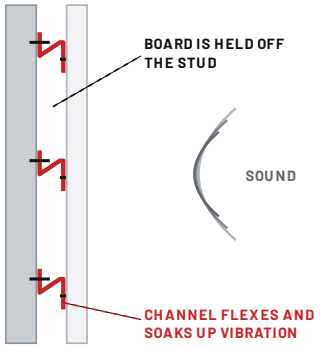
CODE	WIDTH · DEPTH	THICKNESS	LENGTH	YIELD	COATING
RC1	1.900" · 0.485"	18 mil · 25 ga	12'	33 ksi	G40

TYPICAL DETAILS





ELEVATION · CHANNELS ACROSS STUDS



SECTION · HOW IT ISOLATES

KEEP THE ISOLATION WORKING

- Never screw drywall straight into a stud or joist: one screw can bridge the gap
- Use screws short enough that they miss the framing
- Keep board edges off the floor, structure and side walls; seal with acoustic sealant
- STC and fire ratings come from the tested assembly

TYPICAL INSTALLATION · ASTM C754

1. Run the channel at right angles to the studs or joists.
2. On walls, fix it mounting flange down; at the floor row the flange may face up for easier fastening.
3. Lowest row within 2" of the floor, top row within 6" of the ceiling, measured to the centre of the face.
4. Screw the flange to every stud or joist; screw the board to the face only.

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WINDBRACE

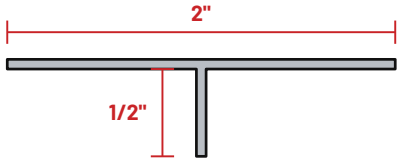
Galvanized steel let-in bracing for framed walls



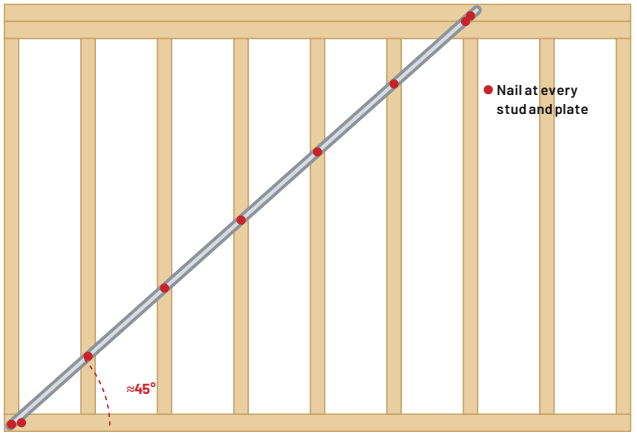
Windbrace is a light T-shaped steel strap that runs diagonally across a framed wall. It keeps the wall square and helps keep it from racking while the frame is going up, before sheathing and finishes are on.

The 1/2" web sits in a single saw cut, so the flat 2" face lies almost flush with the framing. Sheathing, rigid insulation or drywall go straight over it.

FACE WIDTH	WEB DEPTH	THICKNESS	DESIGN THICKNESS	LENGTH	YIELD · COATING
2"	1/2"	33 mil · 20 ga	0.0346"	11'-3"	33 ksi · G60



FLAT FACE · CENTRE WEB



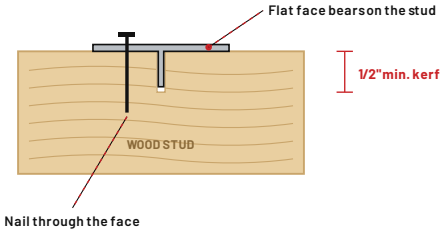
TOP & BOTTOM PLATES · STUDS · DIAGONAL WINDBRACE

WHY USE IT

- One saw cut, then nail
- Thin, flat face leaves room for continuous exterior insulation
- Works on the inside or outside face of the wall
- Galvanized G60 for the time the frame is open to weather
- Straight edge doubles as a guide for marking the cut line

TYPICAL INSTALLATION ON WOOD FRAMING

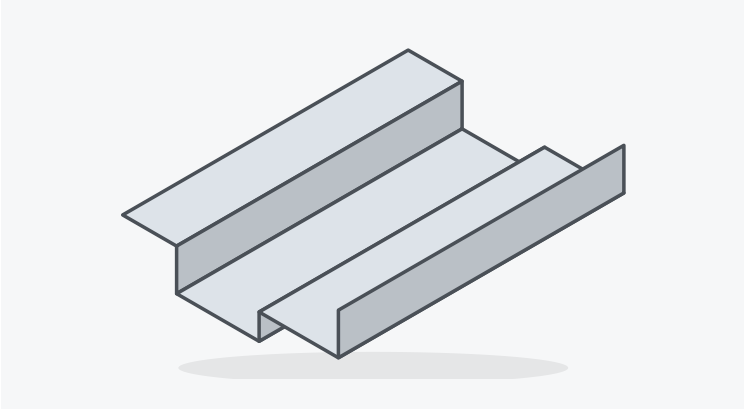
1. Lay the brace across the wall at about 45°, from a bottom corner to the top plate, and mark along its edge.
2. Make one saw cut along the line, at least 1/2" deep, through the studs and plates.
3. Push the web into the cut so the face sits on the framing.
4. Nail through the face into every stud and both plates.
5. For walls framed on the deck: set the web in the cut, tack one nail at the top plate, stand and plumb the wall, then nail off.



Windbrace is a construction bracing aid. Where it is used to meet the wall bracing rules of the building code, the brace type, layout and nailing come from the code and the project designer. It does not replace structural sheathing or engineered shear walls.

CUSTOM PROFILES

Flat stock, angles, Z-bar and multi-bend profiles to your size and sketch



Need a shape that isn't in this catalogue? Saturn Metal offers custom bent profiles to your sketch: one bend, two bends or many, with any leg sizes and angles, in the length you need up to 12'. Sketch it on the special profile request form (data sheet DS-30, page 2) and send it to us.

ANY LENGTH UP TO
12'

18-97
MIL

PROFILES BY NUMBER OF BENDS

FLAT STOCK
No bend. Strapping, backing, blocking.

ONE BEND
Angles, clip angles, closures.

Z-BAR

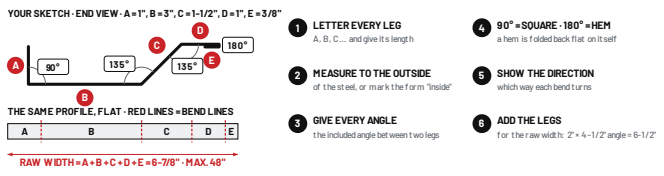
TWO BENDS
Z-bar furring, offsets and steps.

MULTIPLE BENDS
Hat, step and special profiles.

PROFILE	18	33	43	54	68	97
Flat stock	●	●	●	●	●	●
One bend	●	●	●	●	●	●
Two bends · Z	●	●	●	●	●	●
Multiple bends	●	●	●	●	●	●

Thickness in mils. Every profile comes in the length you order, up to 12'. Raw width (all legs added together) up to 48".

HOW TO SKETCH IT



LETTER EVERY LEG, MEASURE TO THE OUTSIDE, SHOW THE DIRECTION AND GIVE EVERY ANGLE

WHAT TO TELL US

- **Legs and angles:** the length of each leg, outside to outside, and the angle at each bend
- **Raw width:** all legs added together, up to 48". A 2" × 4-1/2" angle has a raw width of 6-1/2"
- **Thickness and coating:** mils (18 to 97) and the coating you need
- **Length and quantity:** up to 12', and how many pieces
- **Holes or slots:** size, spacing and where they go, if any

Use the special profile request form on page 2 of data sheet DS-30, or send a drawing. We confirm the profile back to you before it goes ahead.

CLIP SOLUTIONS

23 clips for rigid, deflection, masonry and specialty connections

10	06	03	04
RIGID CONNECTIONS	DEFLECTION & BYPASS	MASONRY VENEER	SPECIALTY

RIGID CONNECTIONS — 10 CLIPS

Fixed joints where no movement is wanted

01 **Bridging clip**
Ties bridging channel to each stud through the knockout, helping restrain studs against twisting.

02 **Joist end clip**
Fastens joist ends to rim track, headers and beams, and doubles as blocking.

03 **Snap-on bridging clip**
Snaps over 1-1/2" channel in the knockout for fast bridging with fewer screws.

04 **Moment clip**
Anchors knee walls and short shear walls to the foundation against sideways push and uplift.

05 **Rigid end clip**
A simple pre-punched angle that fixes a stud or joist end to the structure.

06 **Extended rigid clip**
Makes a rigid connection when the wall sits further out from the slab edge.

07 **Anchor clip**
Stiffened clip that holds walls and trusses down against uplift and rotation.

08 **Support clip**
Pre-punched angles for openings, joists, blocking and rigid bypass framing.

09 **Stiffened angle**
Ribbed angle for rigid stud-to-structure and joist connections.

10 **Wide-leg stiffened angle**
Wide-leg ribbed angle for rigid connections with a larger standoff.

Capacities, fastening, approvals and installation of clips and connectors follow each product's published technical data and the engineer's design.

DEFLECTION & BYPASS — 6 CLIPS

Let the structure move without loading the wall

11 **Top deflection clip**
Holds head-of-wall studs in line while the slab above moves up and down.

12 **Web slide clip**
Slotted clip that ties bypass studs to the slab edge and still lets it move.

13 **Extended slide clip**
Bypass slide clip for curtain walls set further out from the slab.

14 **Deflection strut**
Long slotted strut that spans large gaps between a bypass wall and the structure.

15 **Flange hook clip**
Bypass clip that hooks the stud flange, with no screws into the stud.

16 **Hybrid bypass clip**
One clip that installs as either a rigid or a sliding connection.

MASONRY VENEER — 3 CLIPS

Tie brick veneer back to the steel stud wall

17 **Side-mount brick connector**
Screws to the stud web and ties brick veneer back to the steel stud wall.

18 **Adjustable brick connector**
Slides to suit thicker sheathing and insulation behind the brick.

19 **Surface-mount brick tie**
Fixes to the wall face and ties veneer back through exterior insulation.

SPECIALTY — 4 CLIPS

Site, drywall, ceiling and acoustic clips

20 **Scaffold clip**
Gives scaffold ties a solid anchor point on a framed wall during construction.

21 **Drywall corner clip**
Backs drywall at inside corners, so no extra corner stud is needed.

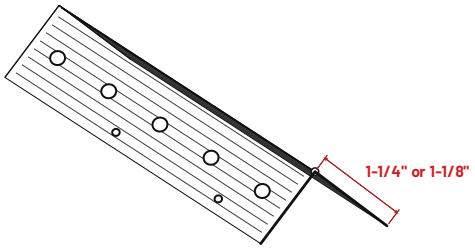
22 **Grid relocation clip**
Joins a cross tee to a main tee anywhere, for off-module ceiling layouts.

23 **Sound isolation clip**
Holds furring channel off the stud to cut sound passing through the wall.

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DRYWALL BEADS & TRIMS

Galvanneal corner beads, L trim and J trim

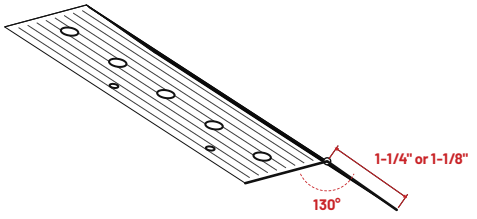


CB-90

DRYWALL CORNER BEAD · 90°

A galvanneal steel bead that protects outside 90° corners. Punched holes and a knurled surface give the joint compound a good key, so the corner stays straight and hard-wearing. Fastens with nails, screws or a clinch-on tool.

ANGLE	FLANGES	COATING
90°	**1-1/4"**	**Galvanneal**

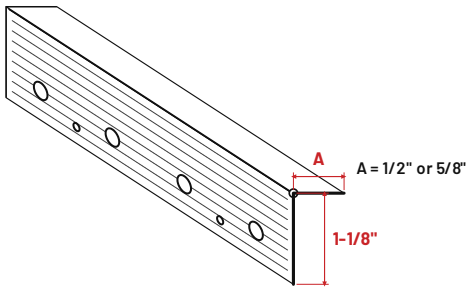


CB-130

DRYWALL CORNER BEAD · 130°

A galvanneal steel bead for wide-angle outside corners of 130°, and also fits 135° corners such as bay windows and angled walls. The same punched, knurled flanges key the compound.

ANGLE	FLANGES	COATING
130° · fits 135°	**1-1/4"**	**Galvanneal**

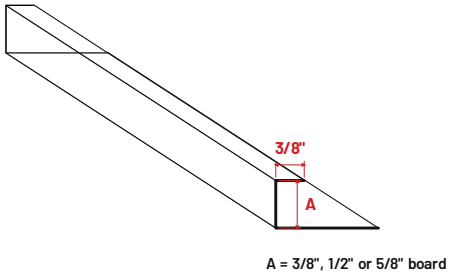


LT

DRYWALL METAL TRIM · L

Gives a neat, protected finish to the board edge at window and door jambs where wood trim is left out. Holes in the flange key the joint compound.

BOARD	FLANGE	FINISH
1/2" · 5/8"	**1-1/8"**	**Joint compound**



JT

METAL TRIM · J

Protects the board edge at door and window openings, and where drywall meets concrete or other materials. Finishing compound is optional.

BOARD	RETURN	FINISH
3/8" · 1/2" · 5/8"	**3/8"**	**Optional**

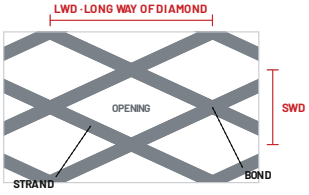
Corner beads are galvanneal (zinc-iron coated) steel, which gives joint compound and paint a good grip. Trims to ASTM C1047, steel to ASTM A1003, coating to ASTM A653. Lengths 8' to 12' by product. Drawings are typical, not to scale: large holes on the flange centreline, small nail holes between them, in every other space. Custom trim profiles on request.

MESH & LATH

Security mesh and galvanized metal lath

Two steel meshes, two different jobs: one keeps people out, the other gives plaster something to grip.





ANATOMY · 3/4" #9F TO SCALE

SECURITY · EXPANDED METAL

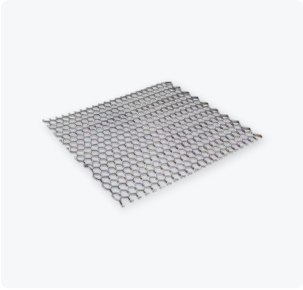
SECURITY MESH

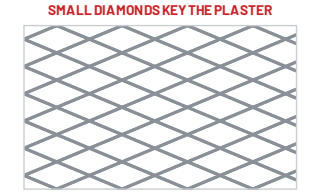
A solid steel sheet slit and stretched into diamonds, then pressed flat. Fixed to the framing behind the board, it adds a layer of steel that helps a partition resist forced entry.

- One piece of steel with no welds or wires
- Vaults, pharmacies, server rooms and cash offices

STYLE	SWD × LWD	STRAND	SHEET
3/4" #9F	0.92" × 2.0"	#9 ga, flattened	4' × 8'
1-1/2" #9F	1.33" × 3.0"	#9 ga, flattened	4' × 8'

#9 = strand gauge · F = flattened · other patterns on request.





SMALL DIAMOND MESH

PLASTER BASE · DIAMOND MESH

GALVANIZED METAL LATH

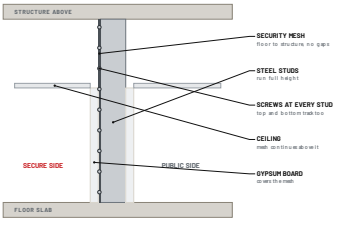
Light expanded steel with a small, stiff diamond. The first coat of plaster or mortar pushes through the openings and locks around every strand.

WEIGHT	SHEET	SUITS
1.75 lb/yd^2	27" × 96"	Interior plaster, ceilings, tile base
2.5 lb/yd^2	27" × 97"	Stucco, stone and masonry veneer

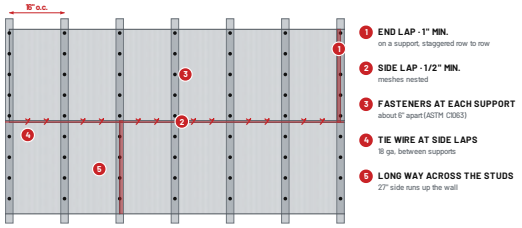
G60 galvanized · bundles of 10 sheets (20 yd^2) · 2.5 lb/yd^2 is a standard ASTM C847 diamond mesh weight.

WHICH ONE DO I NEED?

	SECURITY MESH	METAL LATH
Main job	Resist break-through	Hold plaster and mortar
Opening	3/4" or 1-1/2" diamond	Small diamond
Ends up	Behind drywall	Inside the plaster



SECURITY MESH · WALL SECTION · MESH ON THE SECURE SIDE, BEHIND THE BOARD



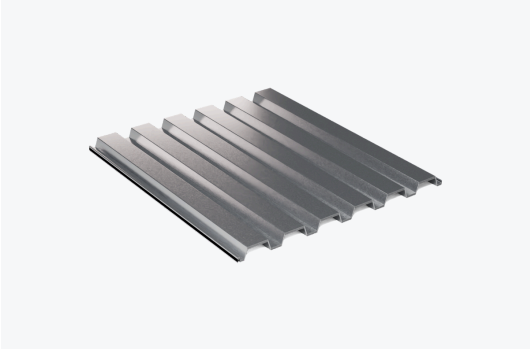
METAL LATH · LAPS AND FASTENING · LONG WAY ACROSS THE SUPPORTS

Lath to ASTM C847, installed to ASTM C1063 (cement plaster and stucco) or C841 (gypsum plaster): long way across the supports, end laps 1" minimum, side laps 1/2" minimum, fastened at every support. Security mesh is fastened to every stud and to the top and bottom track before the board goes on; expanded metal to ASTM F1267. Fastener type and spacing follow the project specification.

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STEEL DECK SYSTEMS

Roof deck, composite floor deck and form deck

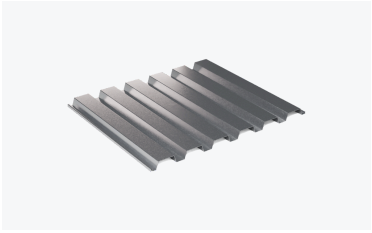


ONE DECK FAMILY FOR THE WHOLE BUILDING

The steel deck is hot-dip galvanized structural sheet. One family of trapezoidal profiles covers roofs, composite concrete floors and permanent forms, so a whole building can be decked from one source.

Section properties, load tables, fire listings and approvals are those published for the specific deck product.

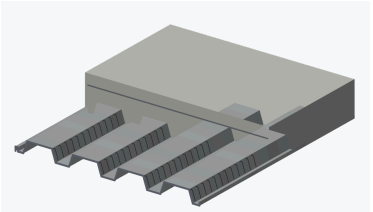
- Roof, floor and form profiles in 1-1/2" and 3" depths
- Every sheet in the length you order
- Galvanized, galvanneal or prepainted finish



ROOF DECK

Spans between joists or beams and carries insulation, membrane, snow and wind. Ties the roof into one diaphragm.

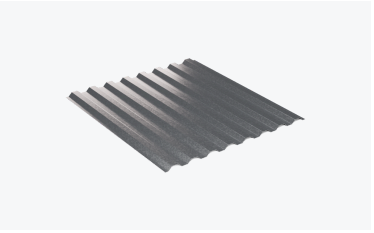
1-1/2" · 3" DEEP



COMPOSITE FLOOR DECK

Embossed ribs bond with the concrete. The deck forms the slab during the pour and reinforces it once cured.

1-1/2" · 3" DEEP



FORM DECK

A light, shallow corrugated sheet that stays in place as a permanent form for slabs and toppings.

SHALLOW CORRUGATION

WHICH DECK DO I NEED?

	ROOF DECK	COMPOSITE FLOOR DECK	FORM DECK
Main job	Carry the roof	Form and reinforce a slab	Form a slab
Works with concrete	No	Yes · bonds to it	Holds it · no bond
Ribs	Plain, or perforated for sound	Embossed	Shallow corrugation
Usual finish	Galvanized or prepainted	Galvanneal	Galvanized
Diaphragm	Yes	Yes	By design

MATERIAL AT A GLANCE

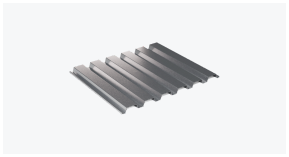
STEEL	MIN. YIELD	GAUGES	GALVANIZED	GALVANNEAL	LENGTHS
ASTM A653 SS	**33 ksi · 230 MPa**	**22 · 20 · 18 · 16**	**G90 · Z275**	**A25 · ZF75**	**To order**

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ROOF DECK · 1-1/2" & 3"

1-1/2" everyday roof deck and 3" deep-rib deck for longer spans

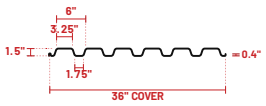
The 1-1/2" deck is the everyday roof deck. Doubling the depth to 3" lets the deck span much farther between supports, so fewer joists or purlins are needed; its three rib spacings trade stiffness against coverage per sheet.

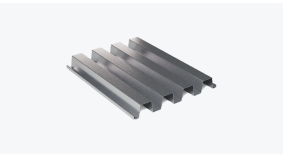


1-1/2" DEEP · 6" RIBS

36" COVER

The everyday roof deck.

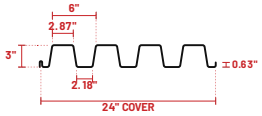


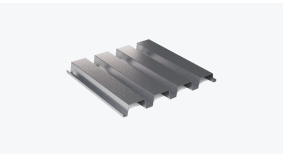


3" DEEP · 6" RIBS

24" COVER

Closest rib spacing. The stiffest of the three for its weight.

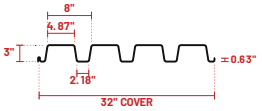


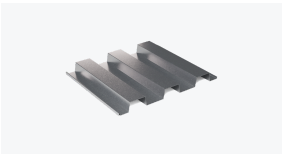


3" DEEP · 8" RIBS

32" COVER

A balance of span and coverage for heavier roofs.

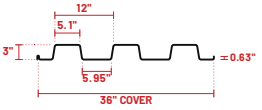




3" DEEP · 12" RIBS

36" COVER

Widest sheet coverage for long, open roofs.



AT A GLANCE

PROFILE	RIB SPACING	COVER	SHEETS / 100 FT
1-1/2" (38 mm)	6" (152 mm)	36" (914 mm)	34
3" (76 mm)	6" (152 mm)	24" (610 mm)	50
3" (76 mm)	8" (203 mm)	32" (813 mm)	38
3" (76 mm)	12" (305 mm)	36" (914 mm)	34

Sheets needed across 100 ft of roof, rounded up. Every sheet in the length you order.

THICKNESS

GAUGE	BASE STEEL	METRIC
22	0.030"	0.76 mm
20	0.036"	0.91 mm
18	0.048"	1.22 mm
16	0.060"	1.52 mm

FINISHES

GALVANIZED	G90 · Z275 (standard)
GALVANNEAL	A25 · ZF75
PREPAINTED	White underside on request

1-1/2" ROOF DECK

The most common profile for commercial and industrial roofs. Narrow ribs, open at the bottom, leave a wide, flat top for insulation boards and membrane, and the 36" sheet covers ground quickly.

- Roofs over open-web steel joists and beams
- Carries insulation, membrane, snow and wind uplift
- Works as the roof diaphragm with the frame
- Perforated acoustic version for exposed ceilings

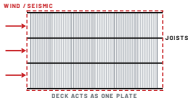
3" DECK · WHERE IT FITS

- Longer spans between joists, purlins or beams
- Heavier roofs: green roofs, equipment and snow drift areas
- Acoustic perforated version for exposed deck ceilings
- 22 to 16 gauge · galvanized, galvanneal or prepainted



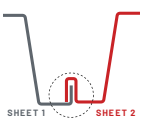
ACOUSTIC OPTION

Perforated webs with sound-absorbing batts in the ribs turn an exposed deck into a sound-absorbing ceiling for gyms, warehouses and halls.



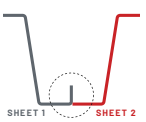
DECK AS A DIAPHRAGM

Fastened to the joists and to each other, deck sheets act as one stiff horizontal plate that carries wind and seismic forces to the braced walls and frames.



SIDE LAP · INTERLOCKING

A bead on one sheet hooks over the edge lip of the next, locking the sheets together along the side lap.

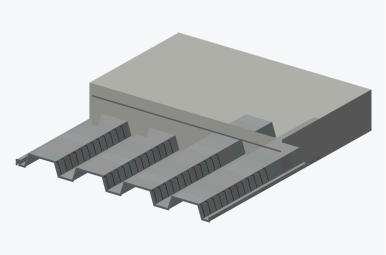


SIDE LAP · PLAIN

Plain edges sit side by side, next to the lip of the adjoining sheet. Offered on each deck profile.

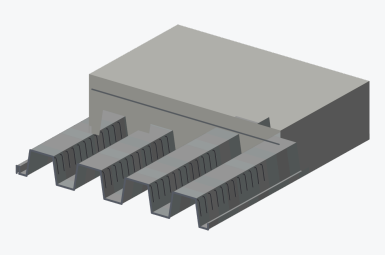
COMPOSITE FLOOR DECK

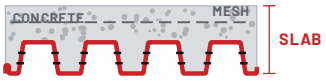
Embossed steel deck that works with the concrete slab



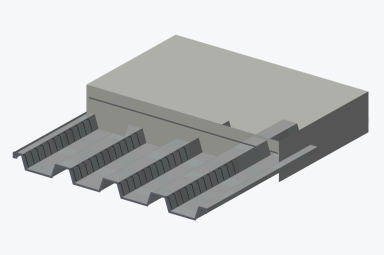


1-1/2" DECK · STANDARD





3" DECK · STANDARD





1-1/2" DECK · INVERTED

Standard or inverted: the same sheet can be laid either way up. Inverted puts the wide ribs down, so more concrete sits in the ribs for a heavier, stiffer slab.

1 · FORM

Carries the wet concrete and the crew, so less formwork and shoring.

2 · REINFORCEMENT

Embossments on the ribs lock into the cured slab and act as its bottom steel.

3 · DIAPHRAGM

Ties floor and frame together against wind and earthquake forces.

PROFILES

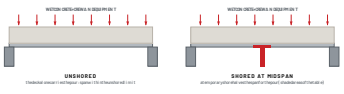
DEPTH	RIB SPACING	COVER
1-1/2" (38 mm)	6"	36"
3" (76 mm)	6"	24"
3" (76 mm)	8"	32"
3" (76 mm)	12"	36"

Every profile comes standard or inverted.

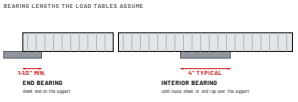
SPECIFICATION

FINISH	Galvanneal A25 · ZF75 standard; G90 on request
GAUGES	22 · 20 · 18 · 16
SLAB	Normal or lightweight concrete
DESIGN	CSA S136 · CSSBI 12M
FIRE	Only as listed in a ULC/UL design

Galvanneal has a matte surface that spray fireproofing and paint grip well.



UNSHORED OR SHORED AT MID-SPAN, AS THE DECK DESIGN REQUIRES



END AND INTERIOR BEARING LENGTHS THE LOAD TABLES ASSUME

ORDERING DECK

- Profile and depth, standard or inverted
- Gauge and finish (galvanneal, G90 or prepainted)
- Sheet lengths from your layout, and the quantity of each
- Pour stop, cover plates, closures and fasteners
- The deck design from the engineer of record

FORM DECK & ACCESSORIES

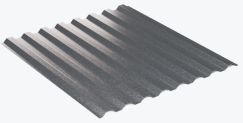
Permanent form deck, finishing pieces and material data

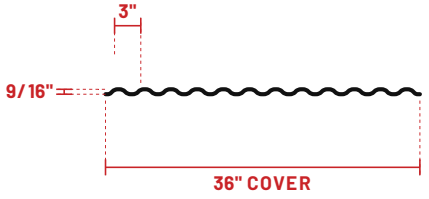
PERMANENT FORM

FORM DECK

A light, shallow corrugated sheet that stays in place under a concrete slab or topping. It replaces removable formwork on mezzanines, stair landings, roof slabs and short spans between beams or joists.

- Non-composite: the slab carries the load once cured
- 30" or 36" cover · lengths to order
- Galvanized; painted underside on request

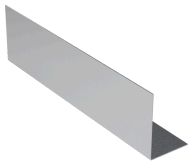




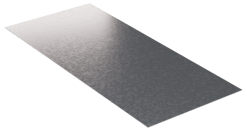
PROFILE · FORM DECK

DECK ACCESSORIES

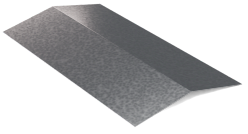
Galvanized steel deck accessories, in the lengths you order.



Pour stop
Galvanized steel angle that holds the slab edge · 20–12 ga



Cover plate
Flat galvanized strip that bridges gaps and joints



Ridge & valley plate
Galvanized plate with one bend that covers slope changes

MATERIAL SPECIFICATION

STEEL	ASTM A653 / A653M structural sheet
YIELD	33 ksi (230 MPa) minimum
COATINGS	G90 / Z275 galvanized · A25 / ZF75 galvanneal · prepainted
DESIGN	CSA S136
ROOF DECK	CSSBI 10M
COMPOSITE	CSSBI 12M

BASE STEEL THICKNESS

GAUGE	INCH	METRIC
22	0.030"	0.76 mm
20	0.036"	0.91 mm
18	0.048"	1.22 mm
16	0.060"	1.52 mm

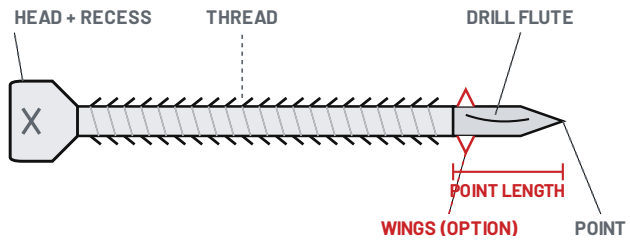
TECHNICAL DATA

Load tables, section properties and fire-rated assembly information for each deck product can be provided on request. Deck design is by the engineer of record.

FASTENING GUIDE

Choosing screws for steel framing, drywall, lath and sheathing

PARTS OF A SELF-DRILLING SCREW



The **flute** carries chips out while the point drills. The **point length** must be long enough to finish the hole before the first thread bites; threads advance much faster than the point can cut. **Wings** ream a clearance hole through wood over 1/2" thick and snap off when they reach the steel.



SCREW TYPES · C1002 / C954

TYPE	THREAD · POINT	USE
S	Fine · sharp	Gypsum board to light steel studs
S-12	Fine · drill	Gypsum board to heavier steel (ASTM C954)
W	Coarse · sharp	Gypsum board to wood
G	Coarse, high thread	Gypsum board to gypsum board
A	Coarse tapping	Metal lath to wood or steel

Fine threads grip thin steel; coarse threads grip wood. Sharp points suit steel up to 33 mil (20 ga); use self-drilling points on heavier steel.

CHOOSE THE DRILL POINT BY TOTAL STEEL THICKNESS



Add up every steel layer plus any gap between them. The total must sit inside the point's range. Typical ranges; exact capacity varies by screw size and maker.

TYPICAL SCREW BY CONNECTION

CONNECTION	TYPICAL SCREW	POINT
Drywall to 18–33 mil studs	#6 bugle head, fine thread, 1" – 1-5/8"	Sharp
Drywall to 43–68 mil studs	#6 bugle head, self-drilling	#2
Stud to track, 18–33 mil	#6 – #8 pan or wafer head, 7/16" – 1/2"	Sharp or #2
Stud to track, 43–97 mil	#10 – #12 pan or hex washer head	#3, #4 for thick stacks
Metal lath to studs	Wafer head, fine thread or drill point	Sharp or #2
Plywood / OSB to steel	Flat or wafer head, winged	#3 winged
Cement board to steel	#8 wafer head with nibs, corrosion resistant	#2
Hanger wire to deck or joist	Eye-lag screw	Drill
Brick connectors to studs	#10 – #12 hex washer head, corrosion resistant	#3

SCREW SIZE

SIZE	DIAMETER
#6	0.138"
#8	0.164"
#10	0.190"
#12	0.216"
1/4"	0.250"

FINISH AND CORROSION

FINISH	WHERE
Phosphate	Interior, dry
Clear / yellow zinc	Interior; exterior only when covered, e.g. lath under stucco
Exterior-grade coating	Exterior sheathing, cement board, wet areas
Stainless steel	Coastal, treated wood and high-corrosion sites

Use at least three threads through the last layer of steel. Screw type, size, spacing and edge distance for structural connections follow the engineer of record and the screw maker's published data. Steel thickness in mils and gauge: see Steel thickness & material.

REFERENCE STANDARDS & NOTES

Standards referenced in this catalogue and legal notes

STANDARD	TITLE
CSA S136	North American specification for the design of cold-formed steel structural members
ASTM A1003/A1003M	Steel sheet for cold-formed framing members
ASTM A653/A653M	Zinc-coated (galvanized) steel sheet by the hot-dip process
ASTM C645	Non-structural steel framing members
ASTM C955	Cold-formed steel structural framing members
ASTM C754	Installation of steel framing members to receive gypsum panels
ASTM C1007	Installation of load-bearing steel studs and accessories
ASTM C1047	Accessories for gypsum wallboard and gypsum veneer base
ASTM C847	Metal lath

STANDARD	TITLE
ASTM C841 · C1063	Installation of lathing and furring for gypsum plaster · for portland cement plaster
ASTM C636	Installation of metal ceiling suspension systems
ASTM A641/A641M	Zinc-coated (galvanized) carbon steel wire
ASTM F1267	Metal, expanded, steel
ASTM C954	Steel drill screws for gypsum panels and metal plaster bases to steel studs
ASTM C1002	Self-piercing tapping screws for gypsum panels and metal plaster bases
CSSBI 10M / 12M	Standards for steel roof deck and composite steel deck
CSA A370	Connectors for masonry
CSA S304	Design of masonry structures
CAN/ULC-S101	Fire endurance tests of building construction

TECHNICAL NOTES

- Dimensions are nominal, in inches unless noted
- Specify thickness in mils; gauge numbers are for reference
- Store bundles off the ground, covered and sloped to drain

IMPORTANT

Information in this catalogue is for general product selection only. Structural design, load tables, fire and sound ratings must come from the engineer of record and the tested assembly listings. Specifications may change without notice.

LEGAL NOTES

- Showing a product in this catalogue does not mean it is tested, certified or listed by Saturn Metal
- Saturn Metal is a metal products manufacturer and/or supplier; showing a product in this catalogue does not mean it is manufactured by Saturn Metal
- Certifications, memberships, test reports and listings apply only to the products and assemblies named in them. Ask us for current documentation for the specific product before specifying.
- Products are sold subject to their published specifications, installation instructions and warranty terms.
- Standards are listed to identify the type of product; confirm the specific product against its own documentation.
- Pictures and drawings are illustrative, not to scale unless noted. Actual products may differ in appearance.
- Typical installation steps are general information, not engineering or installation advice. Follow the product's published instructions, the building code and the engineer of record.
- All sales are subject to Saturn Metal's written quotation and terms of sale. Standard designations and trademarks belong to their owners.

GLOSSARY

Web the flat back of a stud or track; its depth is the first number of the part number

Mil 1/1000 inch; minimum base-steel thickness, the last number of the part number

Deflection downward movement of a floor or roof under load, allowed for at the head of a wall

Flange / leg the sides of a stud (flange) or track (leg), at right angles to the web

Design thickness the thickness used in design: minimum thickness ÷ 0.95

Bypass wall an exterior wall whose studs run past the slab edge on clips

Lip the short return on a stud flange that stiffens it; tracks have none

G40 · G60 · G90 zinc coating weight in oz/ft^2, both sides, to ASTM A653

Engineer of record the engineer responsible for the project design, who sizes and details structural members

SEND US YOUR TAKEOFF.
WE'LL QUOTE IT.

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