Metal Framing — ZI14-1316

1⅝" x 13⁄16" Channel

Standard finish is Pre-Galvanized (PG).
Green Painted (GN) is made to order.
Metal thickness is 14 gauge (0.075").

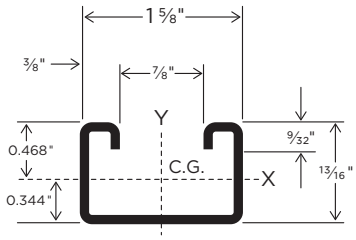
ELEMENTS OF SECTION

CATALOG NUMBER	STOCK NUMBER	PUNCH	LENGTH	WEIGHT	AREA OF SECTION	AXIS X-X			AXIS Y-Y			BUNDLE QTY
			ft.	lbs./ft.	in.²	I (in.⁴)	S (in.³)	R (in.)	I (in.⁴)	S (in.³)	R (in.)	ft.
ZI14-1316	5202310000	Solid	10	0.93	0.275	0.028	0.060	0.319	0.116	0.142	0.649	500
	5202010000	HS		0.86								500
	5202110000	FS		0.86								500
	—	P										—
ZI14-1316 BTB	5202210000	HS/BTB*	10	1.72	0.550	0.121	0.149	0.469	0.232	0.284	0.649	250
ZI14-1316	5202320000	Solid	20	0.93	0.275	0.028	0.060	0.319	0.116	0.142	0.649	500
	5202020000	HS		0.86								500
	5202120000	FS		0.86								500
	—	P										—
ZI14-1316 BTB	5202220000	HS/BTB*	20	1.72	0.550	0.121	0.149	0.469	0.232	0.284	0.649	300

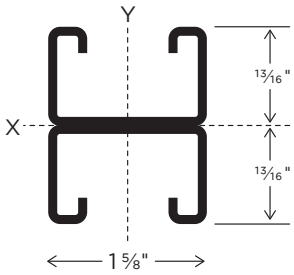
I: Moment of inertia
S: Section modulus
R: Radius of gyration
**BTB is welded back to back*

BEAM AND COLUMN LOADS DATA

CATALOG NUMBER	BEAM SPAN OR UNBRACED COLUMN HEIGHT	UNIFORM LOAD AT STRESS OF 25,000 PSI	DEFLECTION AT STRESS OF 25,000 PSI	UNIFORM LOAD WHEN MAXIMUM DEFLECTION = SPAN/240	MAXIMUM ALLOWABLE LOAD OF COLUMN
	in.	lbs.	in.	lbs.	lbs.
ZI14-1316	18	625	0.058	625	4600
	24	468	0.103	451	4150
	30	380	0.164	289	3900
	36	310	0.232	200	3580
	42	270	0.320	147	3300
	48	235	0.417	113	2900
	60	190	0.658	72	2550
	72	155	0.928	50	750
	84	130	1.235	36	560
	96	—	—	—	—
	120	—	—	—	—
ZI14-1316 BTB	18	5000	0.036	1680	9600
	24	3700	0.062	1220	9400
	30	2900	0.098	985	8950
	36	2400	0.142	820	8480
	42	2100	0.195	636	8100
	48	1800	0.254	487	7600
	60	1500	0.396	312	7000
	72	1220	0.554	217	5800
	84	1050	0.769	159	3950
	96	—	—	—	—
	120	—	—	—	—



ZI14-1316



ZI14-1316 BTB

Beam Loads: *Loads listed are uniformly distributed; for loads concentrated at center of span, multiply uniform load at table by 0.5 and multiply the deflection by 0.8. When deflection is not a factor, use stress of 25,000 psi. When deflection is a factor, use deflection of SPAN/240.*

All weights and dimensions shown are subject to commercial tolerances.

ZI-031425

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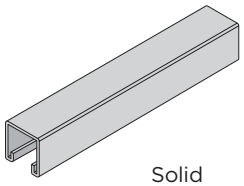
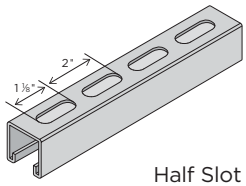
Metal Framing — ZI14-1316

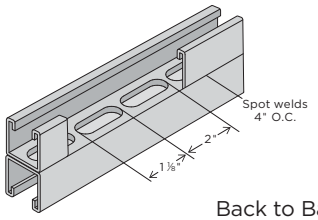
Punching Options



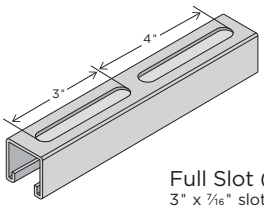
Solid



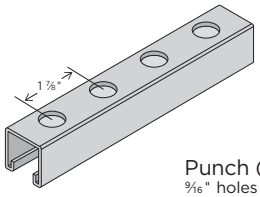
Half Slot (HS)
1⅛" x ⅜" slots punched on 2" centers



Back to Back (BTB)
Back to back channel with standard half-slots



Full Slot (FS)
3" x 7⁄16" slots punched on 4" centers



Punch (P)
⅜" holes punched on 1⅛" centers

Material Specifications and Finishes

Carbon Steel — Structural grade steel sheet coil that has been melted and rolled at the steel mill to conform to ASTM A1011 SS GR 33 (Hot Rolled) and ASTM A653 SS GR 33 (Galvanized). These ASTM specifications require the mechanical properties to be a minimum of 33 ksi yield and 52 ksi tensile. Additionally, the mechanical properties of the incoming steel are further increased in the actual rollforming process. This is sometimes referred to as "work hardening."

Stainless Steel — Chromium-nickel austenitic steel sheet coil that has been melted, rolled and annealed at the steel mill to conform to ASTM A240 Type 304. Generally, stainless steel has a higher yield and tensile than carbon steel produced to GR 33. The mechanical properties of the incoming steel (stainless) tend not to increase as much as carbon steel in the rollforming process. Strut produced from stainless steel offers superior protection in harsh and corrosive environments.

PL — Plain. Plain strut does not have any protective coating other than the residual mill oil and rolling lubricant that is applied in the rollforming process. Using bare strut in any application where it may be exposed to corrosion is not recommended.

PG — Pre-Galvanized, also known as Hot-Dip Mill Galvanized or Mill Galvanized, is produced at the steel mills. Coils of carbon steel weighing up to 40 tons are unwound and passed (continuously) through a vessel containing molten zinc. This vessel is commonly referred to as a "Galvanizing Pot" or "Zinc Pot." The molten zinc alloys itself to the base metal (carbon steel) and is then cooled in a uniform manner and rewound back into a coil. The amount of zinc applied to the base metal used for manufacturing ZI-Strut meets all specifications of ASTM G90, which requires 0.9 oz. minimum per square foot of base metal. The nominal coating weight for G90 is 1.25 oz. per square foot. Prior to rewinding the pre-galvanized coil, a chromate coating (chem treat) and/or a light coating of rolling oil may be applied to prevent oxidation.

GN — Green Painted. Plain strut is thoroughly cleaned to remove all residual mill oils and rolling lubricants. The cleaned strut is then pre-treated with a phosphoric coating for additional corrosion resistance and improved paint adherence. From here, a high grade of polyester powder paint is electrostatically applied. The strut is then placed on an overhead conveyor and is cycled through a curing oven for 20 minutes at 400°F (204°C). Upon completion of this process, the paint is chemically bonded to the base steel.*

Note: Specifications subject to change without notice.

*Zekelman Industries reserves the right to substitute alternate paint systems that will be of equal or superior quality to the system described above.

SUBMITTAL INFORMATION

PROJECT: _____ CONTRACTOR: _____ DATE: _____

ENGINEER: _____ SPECIFICATION REFERENCE: _____ SYSTEM TYPE: _____

LOCATIONS: _____ COMMENTS: _____

ZI-031425

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