

Metal Framing – ZI12-2716

1 5/8" x 2 7/16" Channel

Standard finish is Pre-Galvanized (PG).
Green Painted (GN) is made to order.
Metal thickness is 12 gauge (0.105").

ELEMENTS OF SECTION

CATALOG NUMBER	STOCK NUMBER	PUNCH	LENGTH	WEIGHT	AREA OF SECTION	AXIS X-X			AXIS Y-Y			BUNDLE QTY
						I (in. ⁴)	S (in. ³)	R (in.)	I (in. ⁴)	S (in. ³)	R (in.)	
ZI12-2716	—	Solid	10	2.47	0.725	0.520	0.395	0.847	0.337	0.415	0.682	—
	5207010000	HS										400
	5207210000	FS										400
ZI12-2716 BTB	—	P	10	4.94	1.450	2.865	1.175	1.405	0.674	0.830	0.682	—
	5207110000	HS/BTB*										250
	—	Solid										—
ZI12-2716	5207020000	HS	20	2.47	0.725	0.520	0.395	0.847	0.337	0.415	0.682	400
	5207220000	FS										400
	—	P										—
ZI12-2716 BTB	5207120000	HS/BTB*	20	4.94	1.450	2.865	1.175	1.405	0.674	0.830	0.682	300

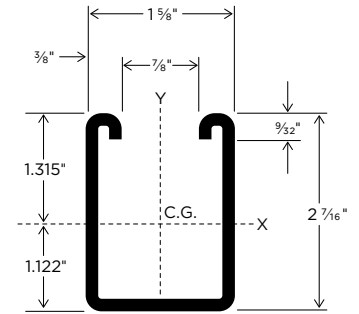
I: Moment of inertia
S: Section modulus
R: Radius of gyration
*BTB is welded back to back

BEAM AND COLUMN LOADS DATA

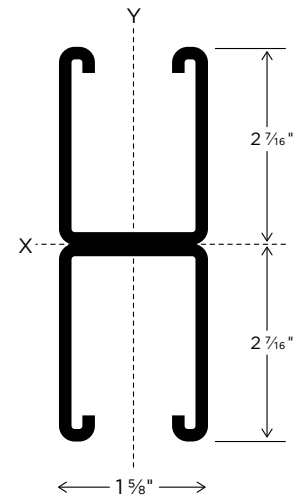
CATALOG NUMBER	BEAM SPAN OR UNBRACED COLUMN HEIGHT	UNIFORM LOAD AT STRESS OF 25,000 PSI	DEFLECTION AT STRESS OF 25,000 PSI	UNIFORM LOAD WHEN MAXIMUM DEFLECTION = SPAN/240	MAXIMUM ALLOWABLE LOAD OF COLUMN
	in.	lbs.	in.	lbs.	lbs.
ZI12-2716	18	4400	0.022	4400	10500
	24	3280	0.039	3280	9800
	30	2650	0.062	2650	9650
	36	2180	0.088	2180	9000
	42	1880	0.120	1880	8800
	48	1620	0.154	1620	8150
	60	1320	0.246	1320	6900
	72	1100	0.354	930	5850
	84	930	0.475	684	5000
	96	820	0.626	523	4450
	120	645	0.962	335	3200
	ZI12-2716 BTB	18	13000	0.012	13000
24		9800	0.021	9800	18450
30		7700	0.032	7700	18380
36		6450	0.047	6450	18300
42		5450	0.063	5450	18200
48		4800	0.083	4800	18100
60		3850	0.130	3850	17900
72		3200	0.187	3200	17550
84		2750	0.255	2750	16650
96		2420	0.335	2420	14800
120		1920	0.519	1846	9000

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.



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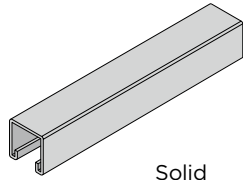


ZI12-2716 BTB

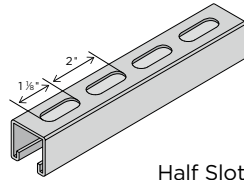
ZI-031924

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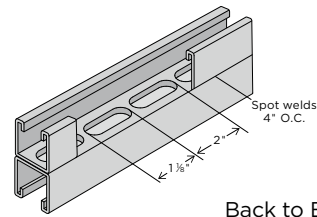
Punching Options



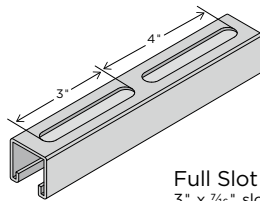
Solid



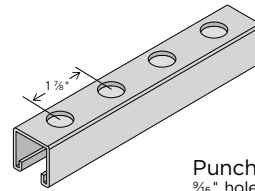
Half Slot (HS)
1 1/2" x 3/16" slots punched
on 2" centers



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



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



Punch (P)
3/16" holes punched
on 1 1/2" 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: _____

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