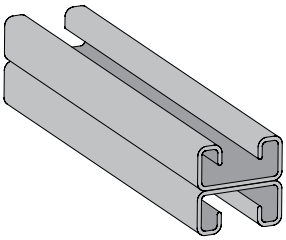
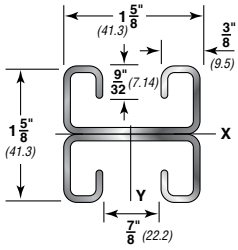
☐ **AS 500BTB** ☐ **PL,** ☐ **GR,** ☐ **PG,** ☐ **SS,** ☐ **ZTC,** ☐ **HG**

☐ **Solid,** ☐ **EH,** ☐ **H,** ☐ **S,** ☐ **Other** _____

BTB WELDED





Wt/100 Ft for Solid Back-to-Back: 206 Lbs

☐ **AS 500 Welded** ☐ **PL,** ☐ **GR,** ☐ **PG,** ☐ **Other** _____

☐ **Solid,** ☐ **EH,** ☐ **H,** ☐ **S,** ☐ **Other** _____

OTHER WELDED

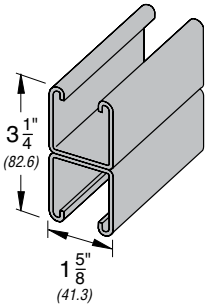
☐ **BTS:** Back-to-Side
☐ **STS:** Side-to-Side
☐ **STSR:** Side-to-Reverse Side

WELDED COMBINATIONS

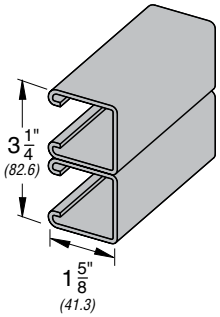
All welded combinations illustrated below are available in any of our Anvil-Strut channels (1⅝" x 1⅝" shown), in any of the following material or finishes: Plain, Pre-Galvanized, powder coated Supr-Green or Stainless Steel.

NOTE: SLOTTED CHANNELS AVAILABLE IN ALL WELDED COMBINATIONS.

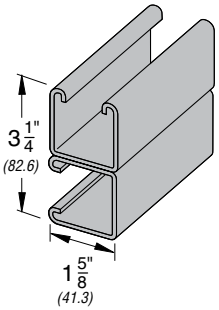
Suffix BTB



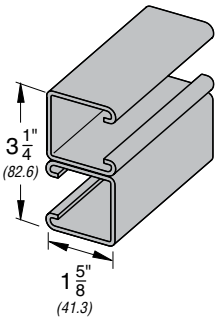
Suffix STS



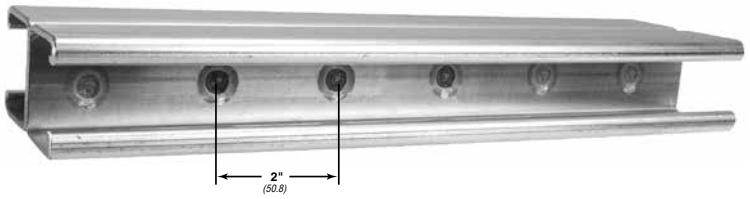
Suffix BTS



Suffix STSR



Our welded channels are spot welded 2" *(50.8mm)* on center, dimensions shown are for welded variations of any channel with or without slotted holes.



LEGEND:

GR: Powder Coated Supr-Green **EG:** Electro-Galvanized **PG:** Pre-Galvanized **AL:** Aluminum **HG:** Hot Dipped Galvanized **PL:** Plain **SS:** Stainless Steel **ZTC:** Zinc Trivalent Chromium

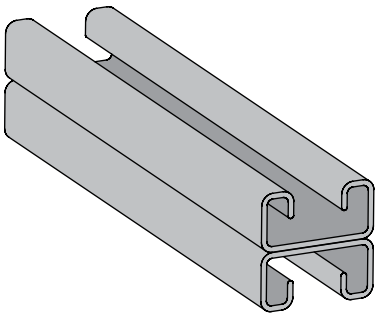
Stainless Steel (**SS**), Zinc Trivalent Chromium (**ZTC**) and Hot Dipped Galvanized (**HG**) are specialty finishes. Pricing is located in the Specialty Strut Section of the Anvil-Strut price book.

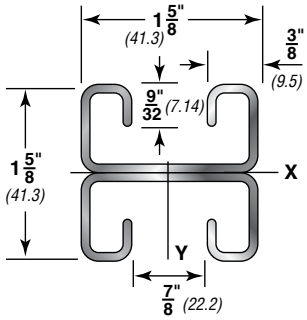
PROJECT INFORMATION	APPROVAL STAMP
Project:	☐ **Approved**
Address:	☐ **Approved as noted**
Contractor:	☐ **Not approved**
Engineer:	**Remarks:**
Submittal Date:	
Notes 1:	
Notes 2:	

AS 500 BTB

1⅝" X 1⅝" *(41.3 x 41.3mm)*
14 Gauge Back-to-Back • wt./100 ft. - 206#

Stocked in pre-galvanized, plain, powder coated Supr-Green, zinc trivalent chromium, and hot dipped galvanized, in 10 & 20 ft. lengths. Note: Also available in Stainless Steel 304 & 316 Alloys. Other materials, finishes & lengths are available upon request.





PROPERTIES OF SECTION

Catalog No.	Wt./Ft.		Area of Section		X-X Axis						Y-Y Axis					
	Lbs.	Kg	Sq. In.	Sq. cm	I in⁴	I cm⁴	S in³	S cm³	r in.	r cm	I in⁴	I cm⁴	S in³	S cm³	r in.	r cm
AS 500 BTB	2.06	*3.1*	0.589	*3.800*	0.123	*5.120*	0.151	*2.474*	0.457	*1.161*	0.22	*9.157*	0.271	*4.441*	0.611	*1.552*

I = Moment of Inertia S = Section Modulus r = Radius of Gyration

BEAM & COLUMN LOADS

Span or Unbraced Height	Static Beam Load (X-X Axis)						Max. Allowable Load at Slot Face	Column Loading Data			
	Max Allowable Uniform Load	Deflection at Uniform Load	Uniform Load at Deflection					Max. Column Load Applied at C.G.			
			Span/180 Deflection	Span/240 Deflection	Span/360 Deflection	Weight of Channel		k=.65	k=.80	k=1.0	k=1.2
In	Lbs	In	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs
12	1,090 *	0.02	1,090 *	1,090 *	1,090 *	2.1	3,420	13,500	13,380	13,180	12,940
18	1,090 *	0.04	1,090 *	1,090 *	1,090 *	3.1	3,340	13,210	12,940	12,510	12,010
24	1,090 *	0.06	1,090 *	1,090 *	1,090 *	4.1	3,230	12,810	12,350	11,630	10,810
30	1,010	0.10	1,010	1,010	860	5.2	3,100	12,310	11,630	10,590	9,450
36	850	0.14	850	850	600	6.2	2,950	11,730	10,810	9,450	8,010
42	720	0.19	720	660	440	7.2	2,790	11,080	9,920	8,250	6,590
48	630	0.25	630	500	340	8.2	2,620	10,370	8,970	7,060	5,260
60	510	0.39	430	320	220	10.3	2,280	8,850	7,060	4,850	3,370
72	420	0.57	300	220	150	12.4	1,940	7,300	5,260	3,370	2,340
84	360	0.77	220	160	110	14.4	1,630	5,800	3,860	2,470	**
96	320	1.01	170	130	80	16.5	1,390	4,480	2,960	**	**
108	280	1.27	130	100	70	18.5	1,190	3,540	2,340	**	**
120	250	1.57	110	80	50	20.6	**	2,870	**	**	**
144	210	2.27	70	60	40	24.7	**	**	**	**	**
168	180	3.08	50	40	30	28.8	**	**	**	**	**
180	170	3.54	50	40	NR	30.9	**	**	**	**	**
192	160	4.03	40	NR	NR	33.0	**	**	**	**	**
216	140	5.10	NR	NR	NR	37.1	**	**	**	**	**
240	130	6.29	NR	NR	NR	41.2	**	**	**	**	**

Bearing Load may limit load

* Load limited by spot weld shear

** Not recommended - KL/r exceeds 200

Notes

1. The beam capacities shown above include the weight of the strut beam. The beam weight must be subtracted from these capacities to arrive at the net beam capacity.
2. Refer to the Anvil-Strut Catalog for reduction factors for unbraced lengths.
3. Allowable beam loads are based on a uniformly loaded, simply supported beam. For capacities of a beam loaded at midspan at a single point, multiply the beam capacity by 50% and deflection by 80%.
4. The above chart shows beam capacities for strut without holes. For strut with holes, multiply by the following:
   EH by 88%, S by 90%,
   H (9/16 holes) by 88%, KO by 82% .

BEAM & COLUMN LOADS - METRIC

Span or Unbraced Height	Static Beam Load (X-X Axis)						Max. Allowable Load at Slot Face	Column Loading Data			
	Max Allowable Uniform Load	Deflection at Uniform Load	Uniform Load at Deflection					Max. Column Load Applied at C.G.			
			Span/180 Deflection	Span/240 Deflection	Span/360 Deflection	Weight of Channel		k=.65	k=.80	k=1.0	k=1.2
mm	*Kn*	*mm*	*Kn*	*Kn*	*Kn*	*Kg*	*Kn*	*Kn*	*Kn*	*Kn*	*Kn*
305	4.8 *	0.5	4.8 *	4.8 *	4.8 *	1.0	15.2	60.1	59.5	58.6	57.6
457	4.8 *	1.0	4.8 *	4.8 *	4.8 *	1.4	14.9	58.8	57.6	55.6	53.4
610	4.8 *	1.5	4.8 *	4.8 *	4.8 *	1.9	14.4	57.0	54.9	51.7	48.1
762	4.5	2.5	4.5	4.5	3.8	2.4	13.8	54.8	51.7	47.1	42.0
914	3.8	3.6	3.8	3.8	2.7	2.8	13.1	52.2	48.1	42.0	35.6
1,067	3.2	4.8	3.2	2.9	2.0	3.3	12.4	49.3	44.1	36.7	29.3
1,219	2.8	6.4	2.8	2.2	1.5	3.7	11.7	46.1	39.9	31.4	23.4
1,524	2.3	9.9	1.9	1.4	1.0	4.7	10.1	39.4	31.4	21.6	15.0
1,829	1.9	14.5	1.3	1.0	0.7	5.6	8.6	32.5	23.4	15.0	10.4
2,134	1.6	19.6	1.0	0.7	0.5	6.5	7.3	25.8	17.2	11.0	**
2,438	1.4	25.7	0.8	0.6	0.4	7.5	6.2	19.9	13.2	**	**
2,743	1.2	32.3	0.6	0.4	0.3	8.4	5.3	15.7	10.4	**	**
3,048	1.1	39.9	0.5	0.4	0.2	9.3	**	12.8	**	**	**
3,658	0.9	57.7	0.3	0.3	0.2	11.2	**	**	**	**	**
4,267	0.8	78.2	0.2	0.2	0.1	13.1	**	**	**	**	**
4,572	0.8	89.9	0.2	0.2	NR	14.0	**	**	**	**	**
4,877	0.7	102.4	0.2	NR	NR	15.0	**	**	**	**	**
5,486	0.6	129.5	NR	NR	NR	16.8	**	**	**	**	**
6,096	0.6	159.8	NR	NR	NR	18.7	**	**	**	**	**

CHANNEL SPECIFICATIONS

Materials

CARBON STEEL

Channels are formed from high-quality, structural grade carbon steel which has been manufactured in accordance with ASTM A-1011-04-SS Grade 33 (hot rolled), or ASTM 366 (cold rolled), with mechanical properties of 33 ksi minimum yield and 52 ksi minimum tensile strength. The precision roll-forming process by which the channels are formed “cold works" the steel, thereby increasing its mechanical properties.

STAINLESS STEEL

Channels are formed from chromium-nickel stainless steel sheet manufactured in accordance with ASTM A-240 specification, offered in both AISI Type 304 and 316 material to provide protection in varying corrosive conditions.

ALUMINUM

Extruded aluminum channel is produced from 6063-T6 alloy, and fittings are produced from 5052-H32 alloy, both in accordance with ASTM B-221 specifications. Aluminum is suitable for use in various corrosive environments.

Finishes

PRE-GALVANIZED

Hot dip, mill galvanized coating produced through a process of continuously passing the steel through a bath of molten zinc. This process is performed in accordance with ASTM A-653. The thickness of the zinc coating conforms with ASTM G-90 which represents a coating thickness of .90 ounces of zinc per square foot. This coating is applied to the steel master coils prior to slitting and fabrication.

HOT DIP GALVANIZED - POST FABRICATION

The finished channel is completely immersed in a bath of molten zinc, resulting in the complete coating of all surfaces of the product, including edges and welds. Strut channels that are hot dip galvanized, have a total coating weight of 3.0 ounces of zinc per square foot in accordance with ASTM A-123 specification. This coating provides superior results in applications calling for prolonged outdoor exposure.

SUPR-GREEN POWDER COATING

Strut channels are coated after fabrication with polyester powder finish. This coating is applied using an electrostatic spray process, beginning with cleaning and phosphating, through a bonderite pretreatment process, and ending with oven curing. The resulting finish provides a high quality appearance and durability. Powder Coating is in accordance with ASTM B-117 (standard practice for operating salt spray (fog) apparatus) to 500 hours with less than ⅛" scribe creep.

ZINC TRIVALENT CHROMIUM

The finished channel undergoes a multi-step process consisting of electrogalvanizing, in accordance with ASTM B-633-85, followed by an application of zinc trivalent chromium, which provides the distinctive gold coloration of the finish. All surfaces are coated because the process is performed after fabrication.

PVC

A corrosive resistant PVC (polyvinyl chloride) coating is applied over the completed strut channel. The coating process consists of surface pretreatment, followed by preheating of the part, which is then passed through a fluidized bed of vinyl plastic powder. The powder melts onto the heated channel forming a smooth coating which undergoes a final heat curing.