

Welded Channel Fig. AS 150BTB, AS 150



Wt/100 Ft for Solid Back-to-Back: 508 Lbs

Specifications

Size:

4⁷/₈" X 1⁵/₈" (123.8 x 41.3mm)
12 Gauge Back-to-Back • wt./100 ft. - 508 lbs

Materials:

Carbon Steel
Stainless Steel
Aluminum

Finishes

Pre-Galvanized
Hot Dip Galvanized - Post Fabrication
Supr-Green Powder Coating
Zinc Trivalent Chromium
PVC

Description

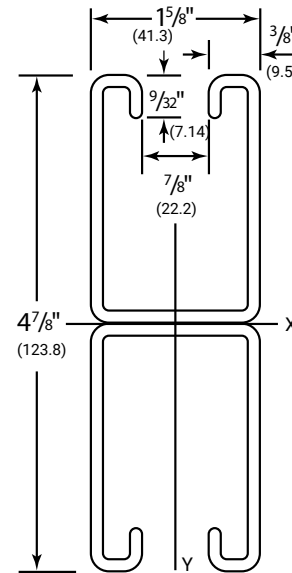
Anvil-Strut channels are manufactured by a series of forming dies, or rolls, which progressively cold work the strip steel into the desired channel configuration. This method produces a cross section of uniform dimensions within a tolerance of plus or minus 0.015", on outside dimensions.

BTB Welded

AS 150BTB
PL, GR, PG, Other
Solid, EH, H, S, Other

Other Welded

AS 150 Welded
PL, GR, PG, Other
Solid, EH, H, S, Other
BTS: Back-to-Side
STS: Side-to-Side
STSR: Side-to-Reverse-Side



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:	

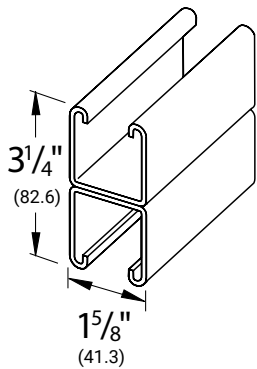
Welded Channel Fig. AS 150BTB, AS 150

Welded Combinations

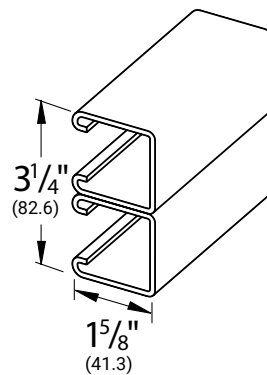
All welded combinations illustrated below are available in any of our Anvil-Strut channels ($1\frac{5}{8}$ " x $1\frac{5}{8}$ " shown), in any of the following material or finishes: Plain, Pre-Galvanized, powder coated Supr-Green or Stainless Steel.

Note: Slotted channels available in all welded combinations.

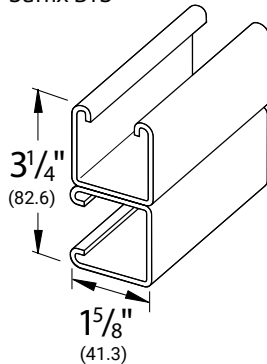
Suffix BTB



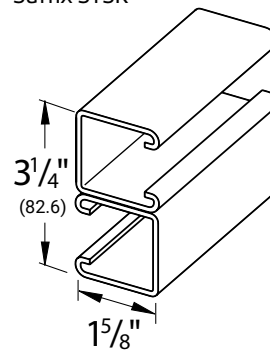
Suffix STS



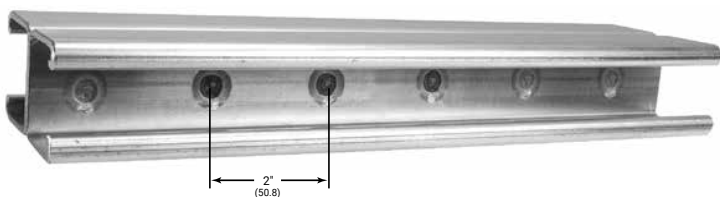
Suffix BTS



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.



Welded Channel Fig. AS 150BTB, AS 150

47/8" X 1 1/8" (123.8 x 41.3mm)
12 Gauge Back-to-Back • wt./100 ft. – 508 lbs
Stocked in pre-galvanized, plain & powder coated
Supr-Green, in both 10 & 20 ft. lengths. Other materials,
finishes & lengths are available upon request.

Properties of Section

Catalog Number	Wt./Ft.		Area of Selection		X-X Axis						Y-Y Axis					
	Lbs.	Kg.	Sq. In.	Sq. CM	I in ⁴	I cm ⁴	S in ³	S cm ³	r in	r cm	I in ⁴	I cm ⁴	S in ³	S cm ³	r in	r cm
AS 150 BTB	5.08	7.6	1.439	9.284	2.832	117.876	1.162	19.042	1.403	3.564	0.667	27.763	0.82	13.437	0.681	1.730

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

Beam and Column Loads

Span or Unbraced Height	Static Beam Load (X-X Axis)							Column Loading Data				
	Max Allowable Uniform Load	Deflection at Uniform Load	Uniform Load at Deflection				Max. Allowable Load at Slot Face	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	5,220*	0.01	5,220*	5,220*	5,220*	5.1	8,800	33,310	33,180	32,950	32,680	
18	5,220*	0.01	5,220*	5,220*	5,220*	7.6	8,750	32,980	32,680	32,190	31,600	
24	5,220*	0.02	5,220*	5,220*	5,220*	10.2	8,680	32,530	32,000	31,150	30,140	
30	5,220*	0.03	5,220*	5,220*	5,220*	12.7	8,590	31,950	31,150	29,860	28,360	
36	5,220*	0.05	5,220*	5,220*	5,220*	15.2	8,480	31,270	30,140	28,360	26,330	
42	5,220*	0.06	5,220*	5,220*	5,220*	17.8	8,350	30,470	28,980	26,680	24,120	
48	4,870	0.08	4,870	4,870	4,870	20.3	8,200	29,580	27,710	24,870	21,790	
60	3,900	0.13	3,900	3,900	3,900	25.4	7,860	27,540	24,870	21,010	17,090	
72	3,250	0.19	3,250	3,250	3,250	30.5	7,440	25,240	21,790	17,090	12,670	
84	2,780	0.26	2,780	2,780	2,530	35.6	6,960	22,770	18,650	13,390	9,310	
96	2,440	0.34	2,440	2,440	1,930	40.6	6,420	20,220	15,570	10,270	7,130	
108	2,160	0.43	2,160	2,160	1,530	45.7	5,820	17,670	12,670	8,110	5,630	
120	1,950	0.52	1,950	1,860	1,240	50.8	5,230	15,200	10,270	6,570	**	
144	1,620	0.76	1,620	1,290	860	61.0	4,230	10,800	7,130	**	**	
168	1,390	1.03	1,260	950	630	71.1	3,470	7,930	5,240	**	**	
180	1,300	1.18	1,100	830	550	76.2	**	6,910	**	**	**	
192	1,220	1.34	970	730	480	81.3	**	6,070	**	**	**	
216	1,080	1.70	760	570	380	91.4	**	**	**	**	**	
240	970	2.10	620	460	310	101.6	**	**	**	**	**	

Bearing Load may limit load
* Load limited by spot weld shear
** Not recommended – KL/r exceeds 200

Notes

- 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.
- Refer to the Anvil-Strut Catalog for reduction factors for unbraced lengths
- 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%.
- 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 (1/16 holes) by 88%, KO by 82%.



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Beam and Column Loads – Metric

Span or Unbraced Height	Static Beam Load (X-X Axis)							Column Loading Data			
	Max Allowable Uniform Load	Deflection at Uniform Load	Uniform Load at Deflection			Weight of Channel	Max. Allowable Load at Slot Face	Max. Column Load Applied at C.G.			
			Span/180 Deflection	Span/240 Deflection	Span/360 Deflection			k=.65	k=.80	k=1.0	k=1.2
mm	Kn	mm	Kn	Kn	Kn	Kg	Kn	Kn	Kn	Kn	Kn
305	23.2*	0.3	23.2*	23.2*	23.2*	2.3	39.1	148.2	147.6	146.6	145.4
457	23.2*	0.3	23.2*	23.2*	23.2*	3.4	38.9	146.7	145.4	143.2	140.6
610	23.2*	0.5	23.2*	23.2*	23.2*	4.6	38.6	144.7	142.3	138.6	134.1
762	23.2*	0.8	23.2*	23.2*	23.2*	5.8	38.2	142.1	138.6	132.8	126.2
914	23.2*	1.3	23.2*	23.2*	23.2*	6.9	37.7	139.1	134.1	126.2	117.1
1,067	23.2*	1.5	23.2*	23.2*	23.2*	8.1	37.1	135.5	128.9	118.7	107.3
1,219	21.7	2.0	21.7	21.7	21.7	9.2	36.5	131.6	123.3	110.6	96.9
1,524	17.3	3.3	17.3	17.3	17.3	11.5	35.0	122.5	110.6	93.5	76.0
1,829	14.5	4.8	14.5	14.5	14.5	13.8	33.1	112.3	96.9	76.0	56.4
2,134	12.4	6.6	12.4	12.4	11.3	16.1	31.0	101.3	83.0	59.6	41.4
2,438	10.9	8.6	10.9	10.9	8.6	18.4	28.6	89.9	69.3	45.7	31.7
2,743	9.6	10.9	9.6	9.6	6.8	20.7	25.9	78.6	56.4	36.1	25.0
3,048	8.7	13.2	8.7	8.3	5.5	23.0	23.3	67.6	45.7	29.2	**
3,658	7.2	19.3	7.2	5.7	3.8	27.7	18.8	48.0	31.7	**	**
4,267	6.2	26.2	5.6	4.2	2.8	32.3	15.4	35.3	23.3	**	**
4,572	5.8	30.0	4.9	3.7	2.4	34.6	**	30.7	**	**	**
4,877	5.4	34.0	4.3	3.2	2.1	36.9	**	27.0	**	**	**
5,486	4.8	43.2	3.4	2.5	1.7	41.5	**	**	**	**	**
6,096	4.3	53.3	2.8	2.0	1.4	46.1	**	**	**	**	**

Welded Channel Fig. AS 150BTB, AS 150

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 1/8" 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.