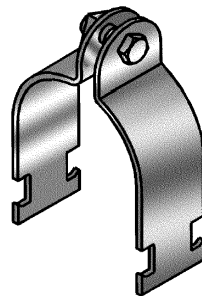
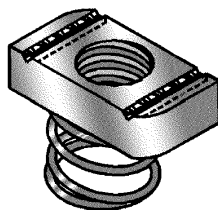
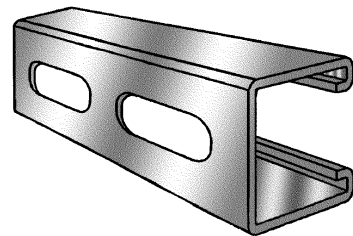
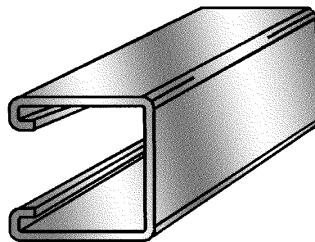




**EMPIRE**  
INDUSTRIES INC.

# STRUT & STRUT ACCESSORIES

ENGINEERING CATALOG



Empire Strut and Strut Fittings Provide an  
Economical Solution for Electrical, Mechanical  
and Industrial Support Applications

180 Olcott St. Manchester, CT 06040 \* PO Box 1020 Manchester, CT 06045-1020

USA 800-243-4844

Local 860-647-1431

Fax 860-647-1160

[www.empireindustries.com](http://www.empireindustries.com)



# Technical Data

## Materials

### **CARBON STEEL**

Channel is formed from high quality, structural grade carbon steel and has been manufactured in accordance with ASTM A570 specification Grade 33 (hot rolled) or ASTM-366 (cold rolled).

### **STAINLESS STEEL**

Channel is formed from chromium-nickel stainless steel manufactured in accordance with ASTM A420 specification offered in both AISI Type 304 and 316 material. Stainless steel is resistant to corrosion and is ideal for use in extreme ambient temperatures.

## Finishes

### **PRE-GALVANIZED**

A hot dip mill galvanized coating is produced by continuously passing the steel through a bath of molten zinc in accordance with ASTM A653. This coating is applied to steel master coils prior to slitting and fabrication. Pre-galvanized steel is not recommended for outdoor, unprotected use. It is suitable for extended exposure in dry mildly corrosive environments.

### **HOT DIP GALVANIZED - AFTER 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. Channel that is hot dip galvanized has a total coating weight of 3.0 ounces of zinc per square foot (1.5 ounces per side) in accordance with ASTM A123 specification. This coating provides superior results for prolonged outdoor exposure applications.

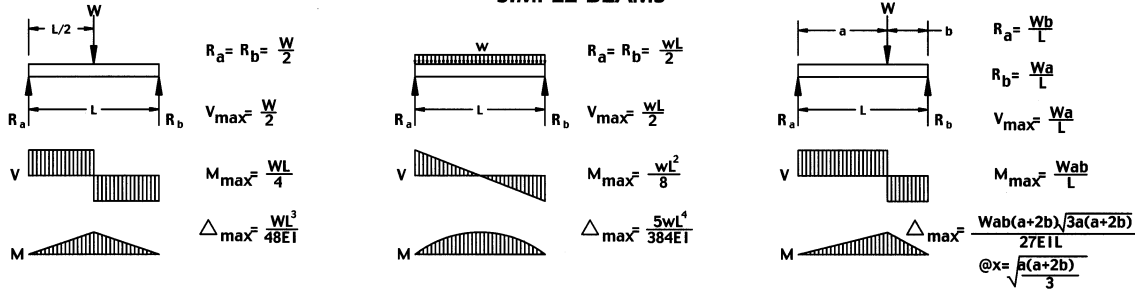
### **GREEN POWDER COATING**

Channel is coated after fabrication with a polyester powder finish. This coating provides a high quality appearance as well as surface durability. Once the channel is pre-treated and cleaned through a bonderite process, the coating is applied using an electro-static spray process. The channel then proceeds through a baking process which results in a chemical bond between the channel and the polyester powder finish.

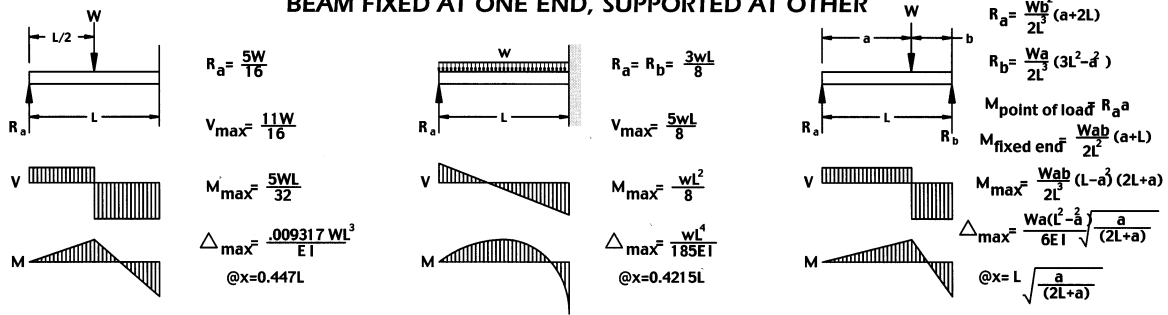
# Technical Data

## Common Beam Loading Formulas

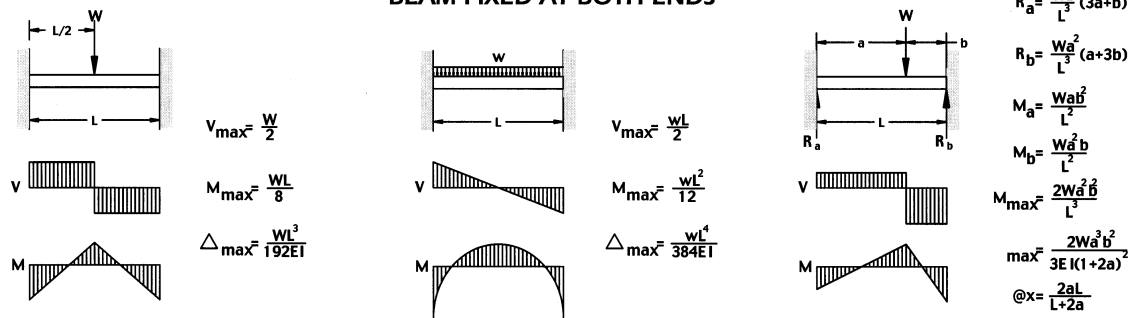
### SIMPLE BEAMS



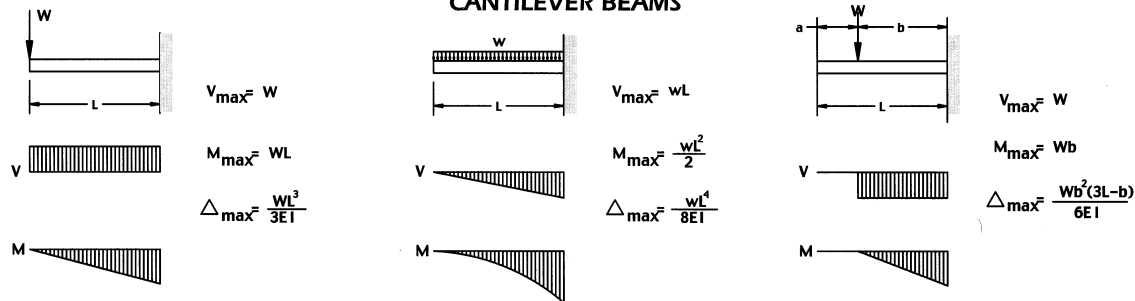
### BEAM FIXED AT ONE END, SUPPORTED AT OTHER



### BEAM FIXED AT BOTH ENDS



### CANTILEVER BEAMS



R- Reaction  
M-Moment  
W-Concentrated Load

w-Uniform Load (Weight/Unit Length)  
V-Shear  
L-Length

Δ-Deflection  
E-Modulus of Elasticity  
I-Moment of Inertia

# Technical Data

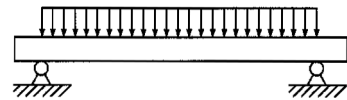
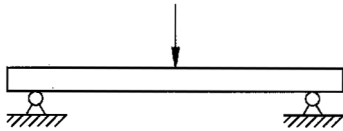
## Fundamentals of Design

### BEAMS

Beams are members which are subjected to loads at right angles (perpendicular) to their length. Most commonly, beams are horizontal and are therefore subjected to vertical loads usually related to gravity, i.e.- a shelf, platform or support for pipe or conduit. Loads cause beams to bend, called deflection. The ultimate consideration when designing a beam structure is whether or not it is strong enough. In other words, will it hold the anticipated load and provide a safety factor for unanticipated loads or other variations in conditions. A beam's ability to support a load is determined by its allowable bending moment and resulting amount of deflection. This load carrying ability is dependent on a number of factors: the amount of load, the type of load, the manner in which the beam is supported and the stiffness of the beam (a function of the beam's shape and the material from which it is made).

### Types of Beam Loading

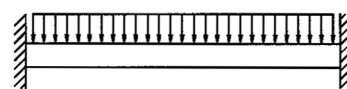
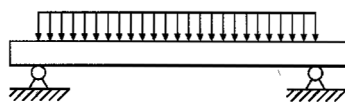
**Point Load** - A point load is concentrated at a single point along the beam's span (in reality, the load is concentrated over a very small length of the beam).



**Uniform Load** - A uniform load is spread evenly over the length of the beam from support to support.

### Types of Beam Support Conditions

**Simple Beam** - A simple beam is supported at both ends by non-fixed connections which prevent vertical movement at the support point, but allow the beam to rotate or flex into a normal deflected shape. The majority of bolted metal framing connections closely approximate these conditions. The loading data presented in this catalog is based on simple beam analysis unless otherwise noted.

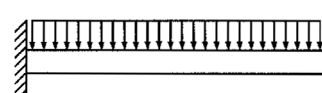
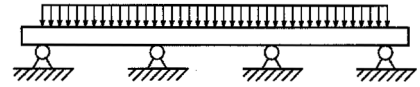


**Fixed Beam** - A fixed beam has rigid connections at each end that restrict the rotation of the beam and resist its deflection. The increased stiffness provided by this resistance to rotation provides a greater load capacity than that of an equivalent simple beam. A fixed-end

beam would result when a channel span is welded to rigid upright supports.

### Continuous Beam -

A continuous beam rests on more than two supports. The outside spans of a continuous beam will act like simple beams, while the interior spans will behave in a manner similar to fixed beams.

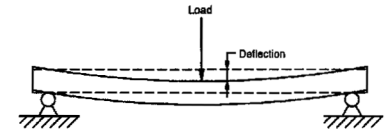


**Cantilever Beams** - A cantilever beam is supported by a fixed, rigid connection at one end and is totally

unsupported at the opposite end. Shelf brackets and many of the strut brackets shown in this catalog are examples of cantilever beams.

### Loading and Deflection

All beams will deflect or "sag" when a load is applied. The magnitude of the deflection is dependent on the following factors:



- (a) The amount of load plus the weight of the beam itself.
- (b) The manner in which the load is distributed.
- (c) The method by which the beam is supported.
- (d) The cross sectional shape of the beam.
- (e) The material from which the beam is made.

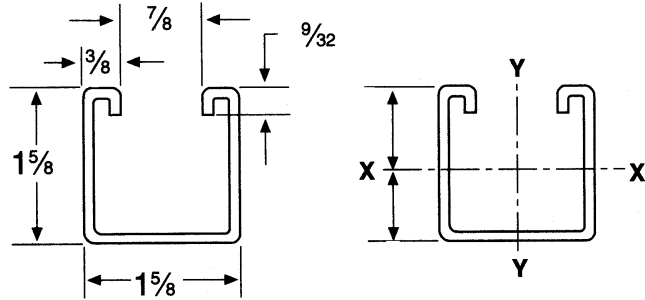
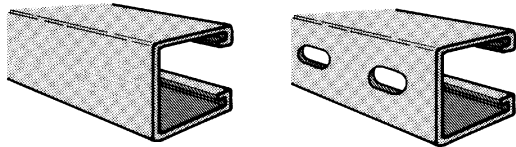
The stiffness of the beam derived from its cross sectional shape is defined by its "Moment of Inertia" or "I". The greater the "I" value of a beam, the greater its stiffness and the smaller its deflection. "I" values are given for both major axis (X-X and Y-Y). Increasing the height of the strut channel (Y-Y axis) is a straightforward way to increase its stiffness and lower its deflection.

The stiffness of a beam derived from its material composition is defined by its "Modulus of Elasticity" or "E". The greater the "E" value of the beam's material, the stiffer it is, and the smaller the deflection. A material's elasticity does not necessarily relate to its strength but rather its deflection under a given load.

The beam capacities in this catalog include the weight of the beam itself. Therefore, the strut beam weight must be subtracted from the loading capacities given to provide the net beam capacity.

# 7000 & 7001

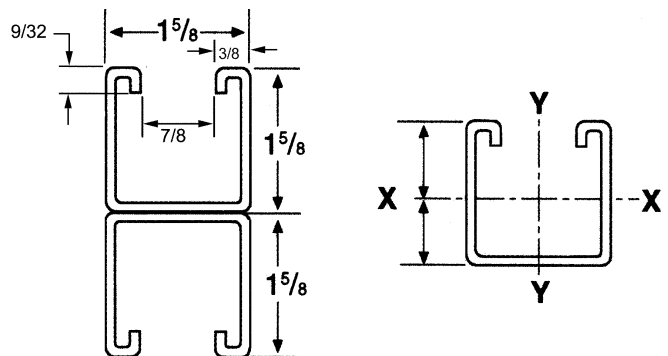
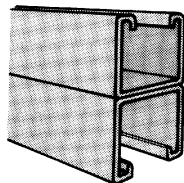
**1-5/8 X 1-5/8  
12 GAUGE STRUT  
SOLID & SLOTTED**



Empire Part#	Finish	Standard Length	Weight Per foot (Lbs.)
7000 (SOLID)	Plain Pre-Galvanized Green Painted	10' or 20'	1.90
7001 (SLOTTED)			1.85
<b>NOTE:</b> Other materials, finishes and lengths are available on request			

# 7000A & 7001A

**1-5/8 X 1-5/8  
12 GAUGE BACK-TO-BACK  
STRUT  
SOLID & SLOTTED**



Empire Part#	Finish	Standard Length	Weight Per foot (Lbs.)
7000A (SOLID)	Plain Pre-Galvanized Green Painted	10' or 20'	3.80
7001A (SLOTTED)			3.70
<b>NOTE:</b> Other materials, finishes and lengths are available on request			

## Properties of Section

EMPIRE FIGURE NUMBER	Wt./Ft. Lbs.	Area of Section Sq. In.	X-X Axis			Y-Y Axis		
			I in <sup>4</sup>	S in <sup>3</sup>	r in.	I in <sup>4</sup>	S in <sup>3</sup>	r in.
7000	1.94	.544	0.180	0.195	05.75	0.233	0.287	0.655
7000A	3.88	1.088	0.896	0.570	0.908	0.466	0.574	0.655

I = Moment of Inertia

S = Section Modulus

r = Radius of Gyration

## Beam and Column Loads

SPAN OR COLUMN (IN)	EMPIRE FIGURE NUMBER	MAX LOAD OF COLUMN LOADED @ C.G. (LBS)	STATIC BEAM LOAD (X-X AXIS)			
			ALLOWABLE UNIFORM LOAD @ 25,000 PSI (LBS)	DEFLECTION @ 25,000 PSI (IN)	UNIFORM LOAD @ L/240 (LBS)	UNIFORM LOAD @ L/360 (LBS)
12	7000	7,109	3,249	0.014	**	**
	7000A	14,862	2,610	0.008	**	**
18	7000	6,549	2,166	0.031	**	**
	7000A	14,402	2,610 ***	0.018	**	**
24	7000	5,938	1,625	0.055	**	**
	7000A	13,919	2,610 ***	0.032	**	**
30	7000	5,337	1,300	0.086	**	1,257
	7000A	13,473	2,610 ***	0.050	**	**
36	7000	4,771	1,083	0.124	**	873
	7000A	13,090	2,610 ***	0.072	**	**
42	7000	4,242	928	0.169	**	641
	7000A	12,771	2610 ***	0.099	**	**
48	7000	3,745	812	0.220	737	491
	7000A	12,511	2,374	0.129	**	**
60	7000	3,012	650	0.344	471	314
	7000A	11,685	1,899	0.202	**	1,566
72	7000	2,514	542	0.496	327	218
	7000A	10,078	1,582	0.291	**	1,087
84	7000	2,136	464	0.675	240	160
	7000A	8,180	1,356	0.396	1,199	799
96	7000	1,834	406	0.882	184	123
	7000A	6,291	1,187	0.517	917	611
108	7000	1,585	361	1.116	145	97
	7000A	4,971	1,055	0.655	725	483
120	7000	*	325	1.378	117	78
	7000A	4,026	949	0.808	587	391
180	7000	*	217	3.099	52	35
	7000A	*	633	1.819	261	174
240	7000	*	163	5.510	29	19
	7000A	*	474	3.233	147	98

### NOTES

\* Not recommended - KL/r exceeds 200

\*\* For these loads, the uniform beam capacity is lower than the L/240 or L/360 beam capacity and is therefore the governing restraint

\*\*\* Load limited by spotweld shear

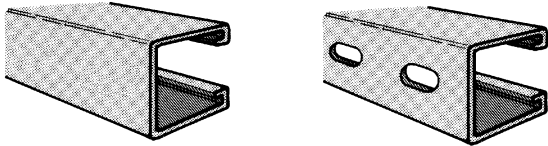
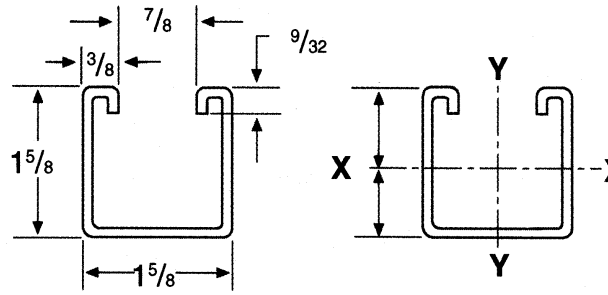
1. The beam capacities shown above include the weight of the strut beam. The beam weight must be subtracted from these capacities to arrive at the net beam capacity.

2. Allowable beam loads are based on a uniform 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%.

3. The above chart shows beam capacities for strut without holes. For strut with holes, multiply the following: 7/8" diameter Knockout by 82%, Round Hole 3/4" by 85% and Round Hole 9/16" by 88%, Slotted 9/16" x 1-1/8" by 88%, 13/32" x 3" by 90%.

# 7100 & 7101

**1-5/8 X 1-5/8  
14 GAUGE STRUT  
SOLID & SLOTTED**



Empire Part#	Finish	Standard Length	Weight Per foot (Lbs.)
7100 (SOLID)	Plain Pre-Galvanized Green Painted	10' or 20'	1.40
7101 (SLOTTED)			1.36
<b>NOTE:</b> Other materials, finishes and lengths are available on request			



## Properties of Section

EMPIRE FIGURE NUMBER	Wt./Ft. Lbs.	Area of Section Sq. In.	X-X Axis			Y-Y Axis		
			I in <sup>4</sup>	S in <sup>3</sup>	r in.	I in <sup>4</sup>	S in <sup>3</sup>	r in.
7100	1.45	.407	0.143	0.158	0.593	0.179	0.221	0.664

I = Moment of Inertia

S = Section Modulus

r = Radius of Gyration

## Beam and Column Loads

SPAN OR COLUMN (IN)	EMPIRE FIGURE NUMBER	MAX LOAD OF COLUMN LOADED @ C.G. (LBS)	STATIC BEAM LOAD (X-X AXIS)			
			ALLOWABLE UNIFORM LOAD @ 25,000 PSI (LBS)	DEFLECTION @ 25,000 PSI (IN)	UNIFORM LOAD @ L/240 (LBS)	UNIFORM LOAD @ L/360 (LBS)
12	7100	5,548	2,631	0.014	**	**
18	7100	5,066	1,754	0.032	**	**
24	7100	4,473	1,316	0.056	**	**
30	7100	3,817	1,052	0.088	**	**
36	7100	3,141	877	0.126	**	695
42	7100	2,546	752	0.172	**	511
48	7100	2,148	658	0.224	587	391
60	7100	1,659	526	0.350	376	250
72	7100	1,370	439	0.504	261	174
84	7100	1,174	376	0.687	192	128
96	7100	1,028	329	0.897	147	98
108	7100	911	292	1.135	116	77
120	7100	*	263	1,140	94	63
180	7100	*	175	3.153	42	28
240	7100	*	132	5.605	23	16

### NOTES

\* Not recommended - KL/r exceeds 200

\*\* For these loads, the uniform beam capacity is lower than the L/240 or L/360 beam capacity and is therefore the governing restraint

\*\*\* Load limited by spotweld shear

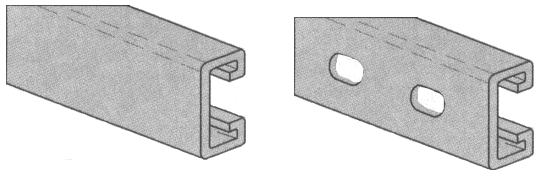
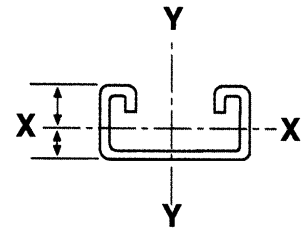
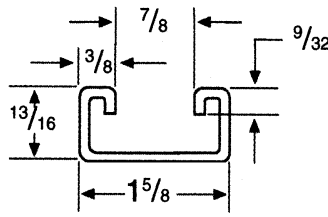
1. The beam capacities shown above include the weight of the strut beam. The beam weight must be subtracted from these capacities to arrive at the net beam capacity.

2. Allowable beam loads are based on a uniform 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%.

3. The above chart shows beam capacities for strut without holes. For strut with holes, multiply the following: 7/8" diameter Knockout by 82%, Round Hole 3/4" by 85% and Round Hole 9/16" by 88%, Slotted 9/16" x 1-1/8" by 88% and Slotted 13/32" x 3" by 90%.

**7200 & 7201**

**13/16" X 1-5/8**  
**14 GAUGE STRUT**  
**SOLID & SLOTTED**



Empire Part#	Finish	Standard Length	Weight Per foot (Lbs.)
7200 (SOLID)	Plain Pre-Galvanized Green Painted	10' or 20'	.97
7201 (SLOTTED)			.87
<b>NOTE:</b> Other materials, finishes and lengths are available on request			

## Properties of Section

EMPIRE FIGURE NUMBER	Wt./Ft. Lbs.	Area of Section Sq. In.	X-X Axis			Y-Y Axis		
			I in <sup>4</sup>	S in <sup>3</sup>	r in.	I in <sup>4</sup>	S in <sup>3</sup>	r in.
7200	1.03	0.286	0.025	0.053	0.298	0.106	0.131	0.610

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

## Beam and Column Loads

SPAN OR COLUMN (IN)	EMPIRE FIGURE NUMBER	MAX LOAD OF COLUMN LOADED @ C.G. (LBS)	STATIC BEAM LOAD (X-X AXIS)			
			ALLOWABLE UNIFORM LOAD @ 25,000 PSI (LBS)	DEFLECTION @ 25,000 PSI (IN)	UNIFORM LOAD @ L/240 (LBS)	UNIFORM LOAD @ L/360 (LBS)
12	7200	3,598	887	0.027	**	**
18	7200	3,340	591	0.060	**	493
24	7200	3,086	444	0.106	416	277
30	7200	2,854	355	0.166	266	177
36	7200	2,654	296	0.240	185	123
42	7200	2,449	254	0.327	136	91
48	7200	2,259	222	0.427	104	69
60	7200	*	177	0.667	66	14
72	7200	*	148	0.960	46	31
84	7200	*	127	1.037	34	23
96	7200	*	111	1.707	26	17
108	7200	*	99	2.160	21	14
120	7200	*	89	2.668	17	11
180	7200	*	59	6.003	7	5
240	7200	*	44	10.672	4	3

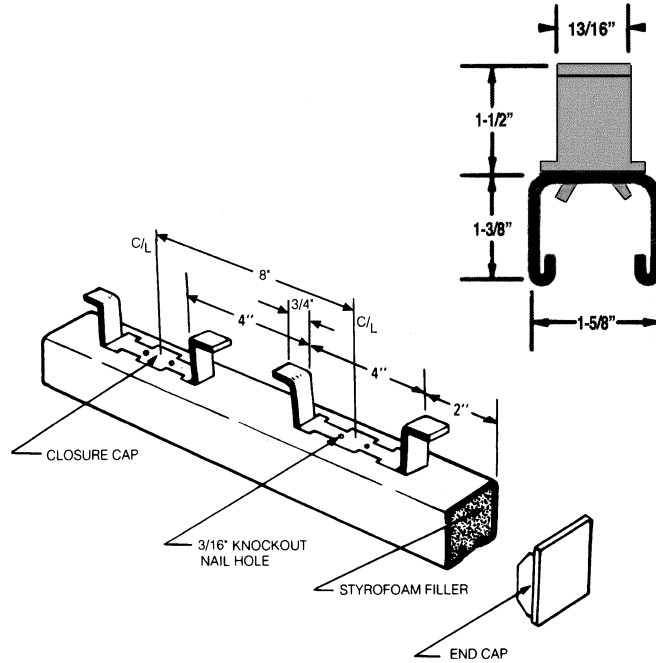
### NOTES

- \* Not recommended - KL/r exceeds 200
- \*\* For these loads, the uniform beam capacity is lower than the L/240 or L/360 beam capacity and is therefore the governing restraint
- \*\*\* Load limited by spotweld shear

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. Allowable beam loads are based on a uniform 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%.
3. The above chart shows beam capacities for strut without holes. For strut with holes, multiply the following: 7/8" diameter Knockout by 82%, Round Hole 3/4" by 85% and Round Hole 9/16" by 88%, Slotted 9/16" x 1-1/8" by 88% and Slotted 13/32" x 3" by 90%.

# 7225

**1-3/8" x 1-5/8"**  
**12 GAUGE**  
**CONTINUOUS**  
**CONCRETE INSERT**



Empire Part#	Finish	Standard Length
7225	Plain Pre-Galvanized	10' or 20' Other lengths available

**FEATURES:**

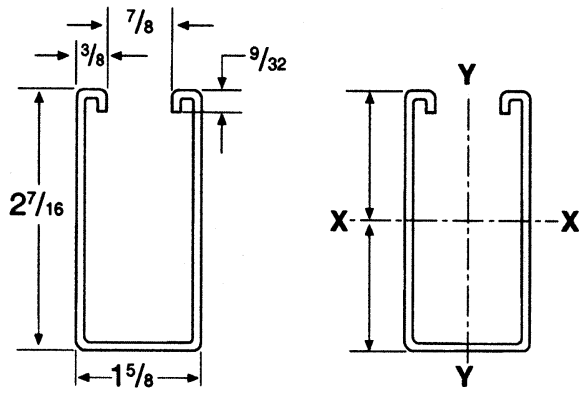
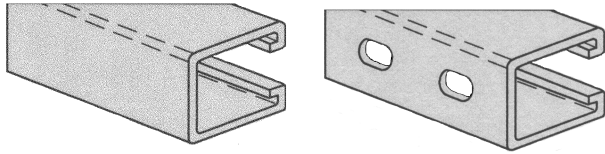
- Loading data was calculated in a concrete mixture which was proportioned so that the compression strength of the concrete was 2,500 to 3,000 pounds per square inch and that the load is dependent on the surrounding concrete.
- Tests were performed with a safety factor of 3, and in accordance with the MFMA Specifications.
- Concrete inserts are supplied with an end cap and either a styrofoam filler or plastic strip installed in the insert channel to prevent concrete seepage.
- Inserts should be secured to forms at 16" intervals.
- When ordering, please indicate finish and either foam filler, or plastic closure.

EMPIRE FIGURE NUMBER	Length/ Inch	Weight C. Pcs.	Max. Allowable Load Per Section
7225	3	87	500
7225	4	103	800
7225	6	134	1000
7225	8	206	1200
7225	12	188	2000
7225	18	282	2000
7225	24	376	2000
7225	30	470	2000
7225	36	564	2000
7225	48	752	2000
7225	60	940	2000
7225	72	1128	2000
7225	84	1316	2000
7225	96	1504	2000
7225	108	1692	2000
7225	120	1880	2000
7225	240	3760	2000

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# 7230 & 7231

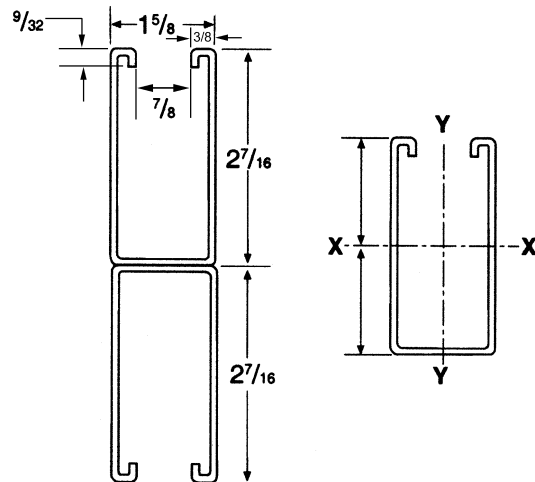
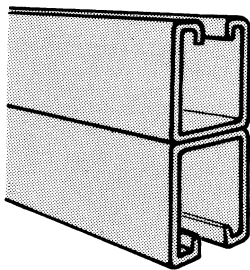
**2-7/16" x 1-5/8"**  
**12 GAUGE STRUT**  
**SOLID & SLOTTED**



Empire Part#	Finish	Standard Length	Weight Per foot (Lbs.)
7230 (SOLID)	Plain Pre-Galvanized Green Painted	10' or 20'	2.59
7231 (SLOTTED)			2.52
<b>NOTE:</b> Other materials, finishes and lengths are available on request			

# 7241 & 7240

**2-7/16" x 1-5/8"**  
**12 GAUGE BACK-TO-BACK**  
**STRUT**  
**SOLID & SLOTTED**



Empire Part#	Finish	Standard Length	Weight Per foot (Lbs.)
7241 (SOLID)	Plain Pre-Galvanized Green Painted	10' or 20'	5.04
7240 (SLOTTED)			5.18
<b>NOTE:</b> Other materials, finishes and lengths are available on request			

## Properties of Section

EMPIRE FIGURE NUMBER	Wt./Ft. Lbs.	Area of Section Sq. In.	X-X Axis			Y-Y Axis		
			I in <sup>4</sup>	S in <sup>3</sup>	r in.	I in <sup>4</sup>	S in <sup>3</sup>	r in.
7230	2.54	0.714	0.509	0.378	0.844	0.331	0.408	0.681
7240	5.08	1.142	2.721	1.141	1.381	0.663	0.815	0.681

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

## Beam and Column Loads

SPAN OR COLUMN (IN)	EMPIRE FIGURE NUMBER	MAX LOAD OF COLUMN LOADED @ C.G. (LBS)	STATIC BEAM LOAD (X-X AXIS)			
			ALLOWABLE UNIFORM LOAD @ 25,000 PSI (LBS)	DEFLECTION @ 25,000 PSI (IN)	UNIFORM LOAD @ L/240 (LBS)	UNIFORM LOAD @ L/360 (LBS)
12	7230	9,774	6,305	0.009	**	**
	7240	20,586	3,880 ***	0.005	**	**
18	7230	8,861	4,203	0.021	**	**
	7240	19,931	3,880 ***	0.012	**	**
24	7230	7,744	3,125	0.038	**	**
	7240	19,144	3,880 ***	0.021	**	**
30	7230	6,524	2,522	0.059	**	**
	7240	18,304	3,880 ***	0.033	**	**
36	7230	5,275	2,102	0.085	**	**
	7240	17,474	3,880 ***	0.048	**	**
42	7230	4,284	1,801	0.116	**	**
	7240	16,693	3,880 ***	0.065	**	**
48	7230	3,629	1,576	0.151	**	1,390
	7240	15,981	3,880 ***	0.085	**	**
60	7230	2,824	1,261	0.236	**	890
	7240	14,790	3,803	0.133	**	**
72	7230	2,346	1,051	0.340	927	618
	7240	13,881	3,169	0.192	**	**
84	7230	2,021	901	0.463	681	454
	7240	12,054	2,716	0.261	**	2,427
96	7230	1,778	788	0.605	521	347
	7240	9,409	2,377	0.341	**	1,858
108	7230	1,584	701	0.765	412	275
	7240	7,434	2,113	0.431	**	1,468
120	7230	1,422	630	0.945	334	222
	7240	6,022	1,901	0.532	1,784	1,189
180	7230	*	420	2.126	148	99
	7240	*	1,268	1.199	793	529
240	7230	*	315	3.780	83	56
	7240	*	951	2.131	446	297

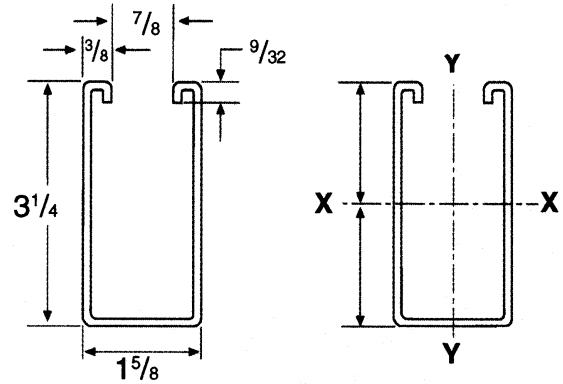
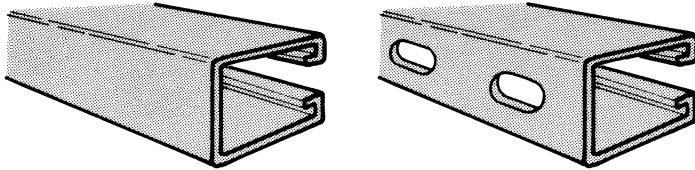
**NOTES**

\* Not recommended - KL/r exceeds 200  
 \*\* For these loads, the uniform beam capacity is lower than the L/240 or L/360 beam capacity and is therefore the governing restraint  
 \*\*\* Load limited by spotweld shear

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. Allowable beam loads are based on a uniform 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%.
3. The above chart shows beam capacities for strut without holes. For strut with holes, multiply the following: 7/8" diameter Knockout by 82%, Round Hole 3/4" by 85% and Round Hole 9/16" by 88%, Slotted 9/16" x 1-1/8" by 88% and Slotted 13/32" x 3" by 90%.

# 7250 & 7251

**3-1/4" X 1-5/8"**  
**12 GAUGE STRUT**  
**SOLID & SLOTTED**



Empire Part#	Finish	Standard Length	Weight Per foot (Lbs.)
7250 (SOLID)	Plain Pre-Galvanized Green Painted	10' or 20'	3.13
7251 (SLOTTED)			3.08
<b>NOTE:</b> Other materials, finishes and lengths are available on request			



## Properties of Section

EMPIRE FIGURE NUMBER	Wt./Ft. Lbs.	Area of Section Sq. In.	X-X Axis			Y-Y Axis		
			I in <sup>4</sup>	S in <sup>3</sup>	r in.	I in <sup>4</sup>	S in <sup>3</sup>	r in.
7250	3.13	.844	1.073	0.609	1.102	0.429	0.529	0.697

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

## Beam and Column Loads

SPAN OR COLUMN (IN)	EMPIRE FIGURE NUMBER	MAX LOAD OF COLUMN LOADED @ C.G. (LBS)	STATIC BEAM LOAD (X-X AXIS)			
			ALLOWABLE UNIFORM LOAD @ 25,000 PSI (LBS)	DEFLECTION @ 25,000 PSI (IN)	UNIFORM LOAD @ L/240 (LBS)	UNIFORM LOAD @ L/360 (LBS)
12	7250	12,428	10,155	0.007	**	**
18	7250	11,161	6,770	0.016	**	**
24	7250	9,531	5,077	0.029	**	**
30	7250	7,642	4,062	0.045	**	**
36	7250	5,767	3,385	0.065	**	**
42	7250	4,550	2,901	0.088	**	**
48	7250	3,754	2,539	.115	**	**
60	7250	2,830	2,031	0.180	**	1,876
72	7250	2,268	1,692	0.260	**	1,303
84	7250	1,972	1,451	0.354	1,436	957
96	7250	1,688	1,269	0.462	1,099	733
108	7250	1,509	1,128	0.585	869	579
120	7250	1,366	1,015	0.722	703	469
180	7250	*	667	1.624	313	208
240	7250	*	508	2.887	176	117

**NOTES**

- \* Not recommended - KL/r exceeds 200
- \*\* For these loads, the uniform beam capacity is lower than the L/240 or L/360 beam capacity and is therefore the governing restraint
- \*\*\* Load limited by spotweld shear

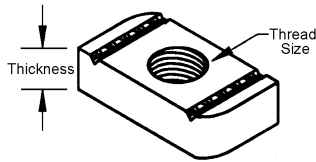
1. The beam capacities shown above include the weight of the strut beam. The beam weight must be subtracted from these capacities to arrive at the net beam capacity.
2. Allowable beam loads are based on a uniform loaded, simply supported beam. For capacities of a beam loaded at midspan at a single point, multiply the beam capacity by 50% and deflection by 80%.
3. The above chart shows beam capacities for strut without holes. For strut with holes, multiply the following: 7/8" diameter Knockout by 82%, Round Hole 3/4" by 85% and Round Hole 9/16" by 88%, Slotted 9/16" x 1-1/8" by 88% and Slotted 13/32" x 3" by 90%.

# 8000

## STRUT NUT WITHOUT SPRING

**Material:**

Electro-galvanized carbon steel.  
Also available in stainless steel.



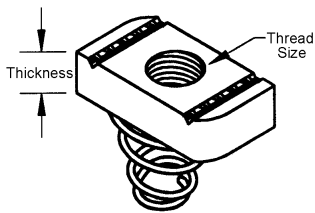
Rod (Thread) Size	Thickness	Weight Each (lbs)
#8-32	1/4"	0.06
#10-24	1/4"	0.06
#10-32	1/4"	0.06
1/4"	1/4"	0.06
5/16"	3/8"	0.09
3/8"	3/8"	0.09
7/16"	3/8"	0.09
1/2"	3/8"	0.09
5/8"	1/2"	0.13
3/4"	1/2"	0.13
7/8"	1/2"	0.13

# 8050

## STRUT NUT WITH SHORT SPRING

**Material:**

Electro-galvanized carbon steel.  
Also available in stainless steel.



Rod (Thread) Size	Thickness	Weight Each (lbs)
#8-32	1/4"	0.07
#10-24	1/4"	0.07
#10-32	1/4"	0.07
1/4"	1/4"	0.07
5/16"	3/8"	0.06
3/8"	3/8"	0.09
7/16"	3/8"	0.09
1/2"	3/8"	0.09
5/8"	1/2"	0.10

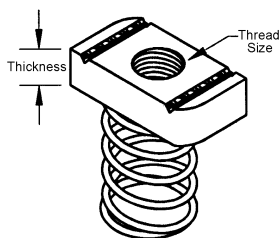
# 8100

## STRUT NUT WITH REGULAR SPRING

**Material:**

Electro-galvanized carbon steel.  
Also available in stainless steel. (8100SX)

**Note:** To be used on 1-3/8" and 1-5/8" strut.



Rod (Thread) Size	Thickness	Weight Each (lbs)
#8-32	1/4"	0.075
#10-24	1/4"	0.075
#10-32	1/4"	0.075
1/4"	1/4"	0.070
5/16"	3/8"	0.100
3/8"	3/8"	0.100
7/16"	3/8"	0.100
1/2"	3/8"	0.120
5/8"	1/2"	0.150
3/4"	1/2"	0.150
7/8"	1/2"	0.150

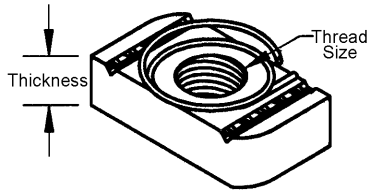
# 8150

## TOP SPRING STRUT NUT

**Material:**

Electro-galvanized carbon steel.

**Note:** Not to be used on 13/16" or 1" strut.



Rod (Thread) Size	Thickness	Weight Each (lbs)
#8-32	1/4"	0.07
#10-24	1/4"	0.07
#10-32	1/4"	0.07
1/4"	1/4"	0.07
5/16"	3/8"	0.10
3/8"	3/8"	0.10
1/2"	3/8"	0.12

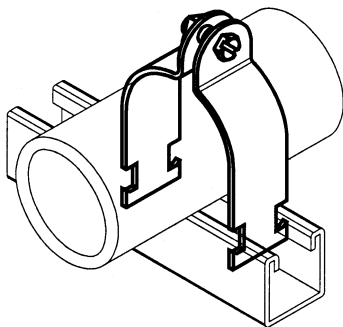
# 8200 & 8200SS

## RIGID IPS STRUT CLAMP ASSEMBLED

**Material:**

8200-Electro-galvanized carbon steel

8200SS-304 stainless steel

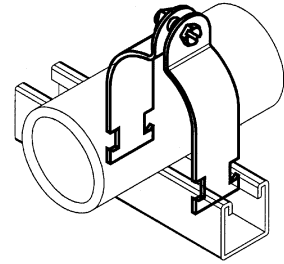


Pipe Size	Pipe OD	Max Rec Load (lbs)	Weight Each (lbs)
3/8"	0.675	400	0.10
1/2"	0.840	400	0.10
3/4"	1.050	600	0.15
1"	1.315	600	0.17
1-1/4"	1.660	600	0.18
1-1/2"	1.900	800	0.29
2"	2.375	800	0.34
2-1/2"	2.875	800	0.40
3"	3.500	800	0.47
3-1/2"	4.000	1000	0.62
4"	4.500	1000	0.67
5"	5.563	1000	0.80
6"	6.625	1000	1.02
8"	8.625	1000	1.30
10"	10.750	1000	1.43
12"	12.750	1000	1.75

# 8250

## OD Tubing Strut Clamp Assembled



**Material:**

Electro-galvanized carbon steel. Also available in 304 stainless steel.

Pipe Size	Max Rec Load (lbs)	Weight Each (lbs)	Pipe Size	Max Rec Load (lbs)	Weight Each (lbs)
1/4"	400	0.09	3-3/4"	1000	0.51
3/8"	400	0.09	3-7/8"	1000	0.52
1/2"	400	0.07	4"	1000	0.52
5/8"	400	0.09	4-1/8"	1000	0.53
3/4"	400	0.13	4-1/4"	1000	0.54
7/8"	400	0.14	4-3/8"	1000	0.55
1"	600	0.15	4-1/2"	1000	0.55
1-1/8"	600	0.16	4-5/8"	1000	0.57
1-1/4"	600	0.18	4-3/4"	1000	0.58
1-3/8"	600	0.19	4-7/8"	1000	0.60
1-1/2"	600	0.20	5"	1000	0.62
1-5/8"	600	0.21	5-1/8"	1000	0.64
1-3/4"	800	0.22	5-1/4"	1000	0.66
1-7/8"	800	0.22	5-3/8"	1000	0.68
2"	800	0.23	5-1/2"	1000	0.70
2-1/8"	800	0.23	5-5/8"	1000	0.72
2-1/4"	800	0.25	5-3/4"	1000	0.74
2-3/8"	800	0.26	5-7/8"	1000	0.76
2-1/2"	800	0.38	6"	1000	0.79
2-5/8"	800	0.38	6-1/8"	1000	0.83
2-3/4"	800	0.39	6-1/4"	1000	0.87
2-7/8"	800	0.40	6-3/8"	1000	0.90
3"	800	0.42	6-1/2"	1000	0.95
3-1/8"	800	0.44	6-5/8"	1000	1.02
3-1/4"	800	0.46	6-3/4"	1000	1.05
3-3/8"	800	0.48	6-7/8"	1000	1.10
3-1/2"	800	0.50	7"	1000	1.16
3-5/8"	800	0.50	8-3/8"	1000	1.25

**USE THE FOLLOWING CLAMPS FOR NO-HUB CAST IRON SOIL PIPE**

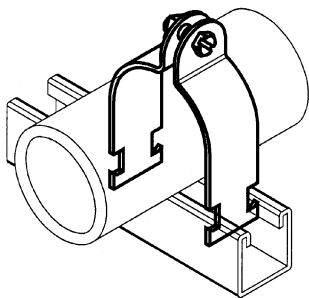
No-Hub Cast Iron Nominal Pipe Size	Use The Following Strut Clamp
1-1/2"	8200 - 1-1/2"
2"	8200 - 2"
3"	8250 - 3-3/8"
4"	8250 - 4-3/8"
5"	8250 - 5-3/8"
6"	8250 - 6-3/8"
8"	8250 - 8-3/8"
10"-12"	CALL

# 8300CT & 8300CTP

## COPPER TUBING STRUT PIPE CLAMP - ASSEMBLED EPOXY COATED *COPPER-GARD* (CT) and COPPER PLATED (CTP)

**Copper-Gard epoxy products offer superior corrosion protection**

**Material:**  
Epoxy coated over electro-galvanized steel (CT).  
Copper plated carbon steel (CTP).

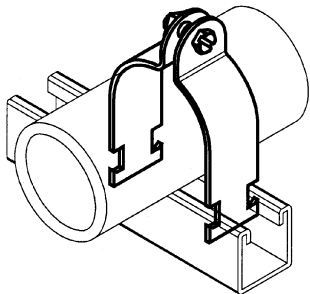


Tube Size	Max Rec Load (lbs)	Weight Each (lbs)
3/8"	400	0.09
1/2"	400	0.10
3/4"	400	0.12
1"	600	0.15
1-1/4"	600	0.17
1-1/2"	600	0.19
2"	800	0.32
2-1/2"	800	0.37
3"	800	0.43
3-1/2"	1000	0.56
4"	1000	0.62
5"	1000	0.75
6"	1000	0.96

# 8350

## UNIVERSAL PIPE STRUT CLAMP ASSEMBLED

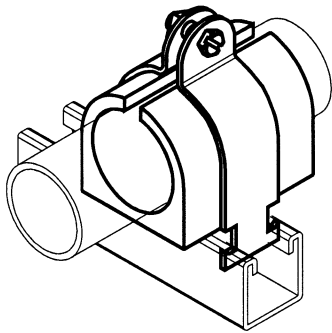
**Material:**  
Electro-galvanized carbon steel.



Pipe Size	OD SIZE RANGE	Max Rec Load (lbs)	Weight Each (lbs)
3/8"	.557 - .706	400	0.18
1/2"	.701 - .875	400	0.20
3/4"	.917 - 1.031	400	0.22
1"	1.125 - 1.375	400	0.24
1-1/4"	1.50 - 1.691	400	0.27
1-1/2"	1.735 - 1.931	600	0.30
2"	2.192 - 2.40	600	0.35

# 8500

## CUSHION STRUT CLAMP



**Material:**

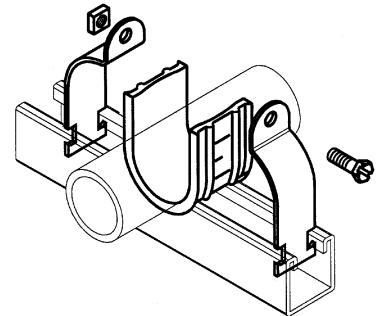
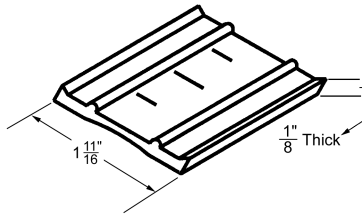
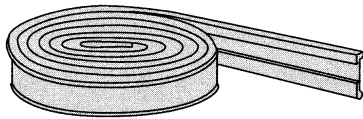
Electro-galvanized steel with thermoplastic insulating liner.

Also available in IPS sizes.  
Also available in stainless steel.

OD Size	Nom. Tube Size	Weight Each (lbs)
1/4"	1/8"	0.110
3/8"	1/4"	0.110
1/2"	3/8"	0.110
5/8"	1/2"	0.120
3/4"	5/8"	0.130
7/8"	3/4"	0.200
1"	7/8"	0.210
1-1/8"	1"	0.275
1-1/4"	1-1/8"	0.292
1-3/8"	1-1/4"	0.310
1-1/2"	1-3/8"	0.354
1-5/8"	1-1/2"	0.400
1-3/4"	1-5/8"	0.413
1-7/8"	1-3/4"	0.425
2"	1-7/8"	0.454
2-1/8"	2"	0.483
2-3/8"	2-1/4"	0.600
2-5/8"	2-1/2"	0.610
3-1/8"	3"	0.650
4-1/8"	4"	0.900

# 8550

## CUSHION PIPE WRAP



**Material:** Elastomer (EPDM)

**Dimensions:** 1/8" thick x 1-11/16" wide.

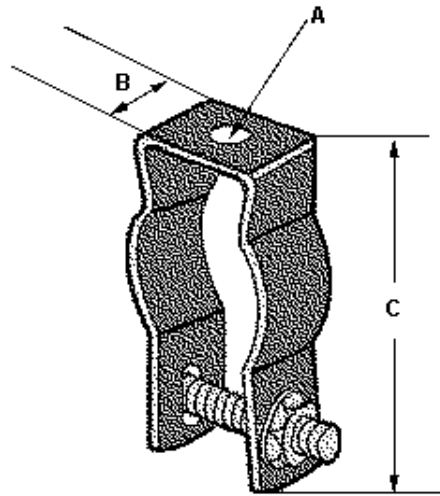
**Weight:** 2.50 lbs per roll.

**Note:** This cushion wrap is designed for use with HVAC, refrigeration and hydraulic lines. Wrap can be cut to size for any pipe material and size. It provides protection from galvanic action between dissimilar metals, as well as absorbs sound and vibration between pipe and mounting materials. Service temperature -70° to +300° fahrenheit.

# 8575

## CONDUIT CLAMP *with bolt & nut*

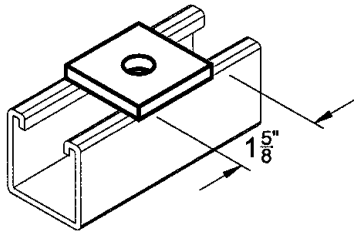
**Material:**  
Electro-galvanized carbon steel.



Size	FITS RIGID & PIPE SIZE	FITS EMT	A	B	C	Weight Each (lbs)
1/2"	3/8" & 1/2"	1/2"	1/4"	3/4"	1-7/8"	0.062
3/4"	3/4"	3/4"	1/4"	3/4"	2-1/8"	0.08
1"	1"	1"	1/4"	7/8"	2-9/16"	0.10
1-1/4"	1-1/4"	1-1/2"	1/4"	7/8"	3"	0.11
1-1/2"	1-1/2"	-	1/4"	1"	3-1/8"	0.12
2"	2	2"	5/16"	1-1/4"	3-7/8"	0.23

**9001FF**

**SQUARE STRUT WASHER**  
1-5/8" X 1-5/8"

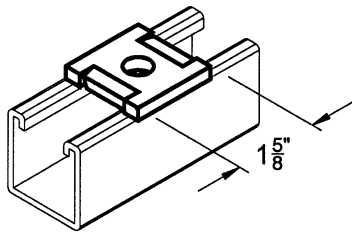


Rod size	Weight
1/4"	.18
3/8"	.18
1/2"	.17
5/8"	.16
3/4"	.16
7/8"	.15

<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"

**9002FF**

**SQUARE WASHER WITH GUIDES**  
1-5/8" X 1-5/8"

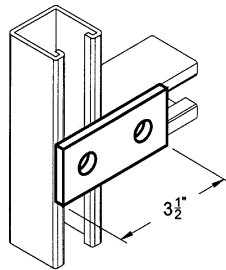


Rod size	Weight
1/4"	.18
3/8"	.18
1/2"	.17
5/8"	.16
3/4"	.16

<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"

**9003FF**

**2-HOLE SPLICE PLATE**  
1-5/8" X 3-1/2"

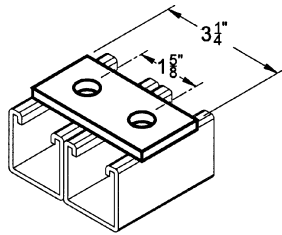


<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.37



**9004FF**

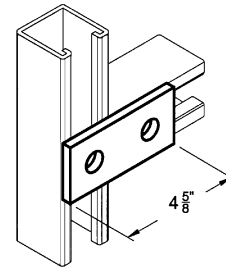
**2-HOLE SPLICE PLATE  
SIDE TO SIDE STRUT  
1-5/8" X 3-1/4"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each lbs:</b>	.34

**9005FF**

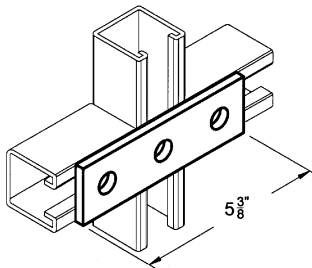
**2-HOLE SPLICE PLATE  
1-5/8" X 4-5/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.46

**9006FF**

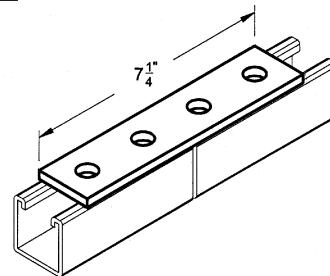
**3-HOLE SPLICE PLATE  
1-5/8" X 5-3/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.55

**9007FF**

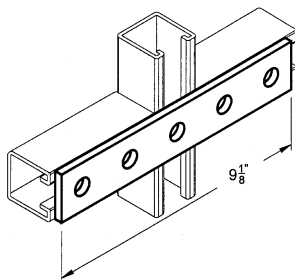
**4-HOLE SPLICE PLATE  
1-5/8" X 7-1/4"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.76

**9008FF**

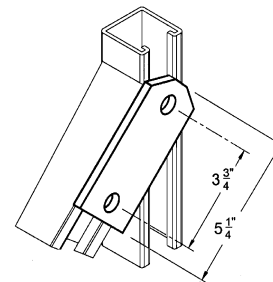
**5-HOLE SPLICE PLATE  
1-5/8" X 9-1/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.95

**9009FF**

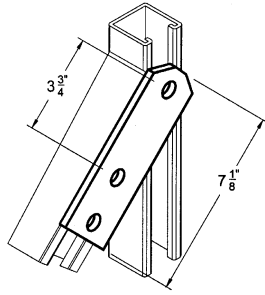
**2-HOLE SWIVEL PLATE  
1-5/8" X 5-1/4"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.48

**9010FF**

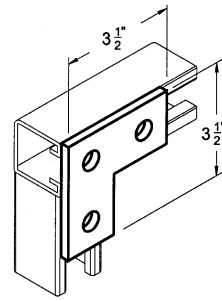
**3-HOLE SWIVEL PLATE**  
1-5/8" X 7-1/8"



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.69

**9011FF**

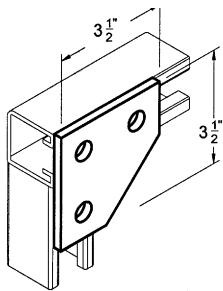
**3-HOLE CORNER PLATE**  
3-1/2" X 3-1/2"



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.56

**9012FF**

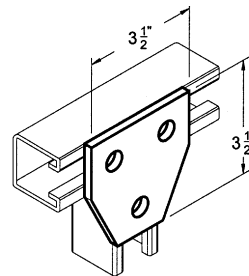
**3-HOLE CORNER GUSSET**  
3-1/2" X 3-1/2"



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.70

**9013FF**

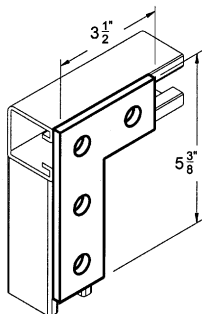
**3-HOLE TEE GUSSET**  
3-1/2" X 3-1/2"



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.70

**9014FF**

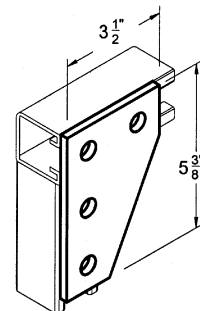
**4-HOLE CORNER PLATE**  
3-1/2" X 5-3/8"



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.75

**9015FF**

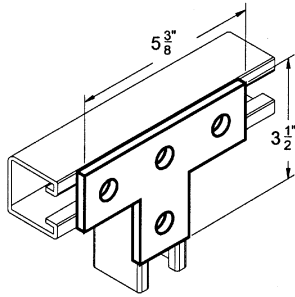
**4-HOLE TEE CORNER GUSSET**  
3-1/2" X 5-3/8"



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.02

**9016FF**

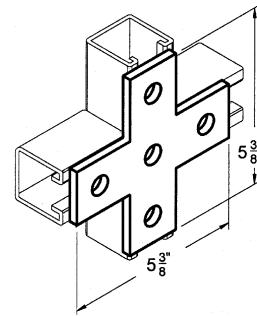
**4-HOLE TEE PLATE**  
3-1/2" X 5-3/8"



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.75

**9017FF**

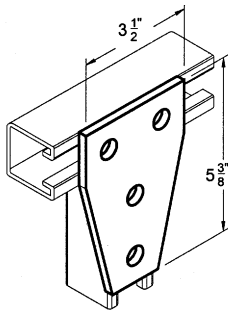
**5-HOLE CROSS PLATE**  
5-3/8" X 5-3/8"



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.00

**9018FF**

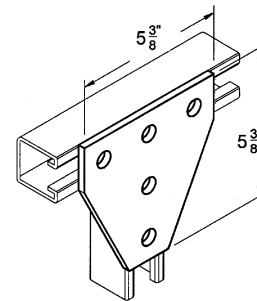
**4-HOLE TEE GUSSET**  
3-1/2" X 5-3/8"



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.00

**9019FF**

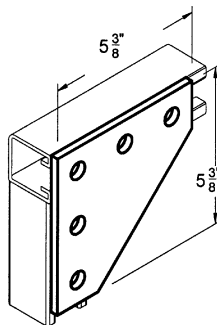
**5-HOLE TEE GUSSET**  
5-3/8" X 5-3/8"



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.43

**9020FF**

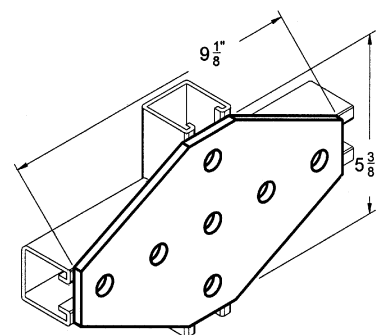
**5-HOLE CORNER GUSSET**  
5-3/8" X 5-3/8"



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.45

**9021FF**

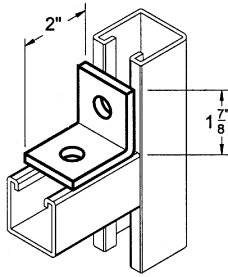
**7-HOLE CROSS GUSSET**  
5-3/8" X 9-1/8"



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	2.32

**9022CA**

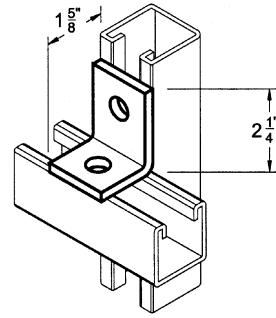
**2-HOLE CORNER ANGLE**  
**1-7/8" X 2"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.37

**9023CA**

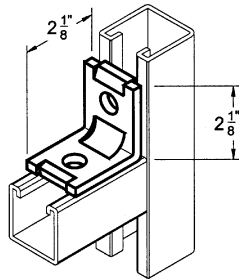
**2-HOLE CORNER ANGLE**  
**1-5/8" X 2 1/4"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.37

**9024CA**

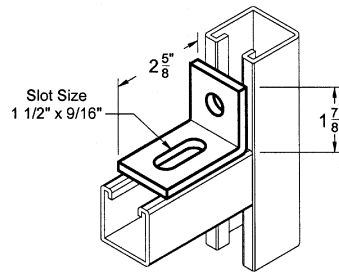
**2-HOLE CORNER ANGLE**  
**WITH GUIDES**  
**2-1/8" X 2 1/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.41

**9025CA**

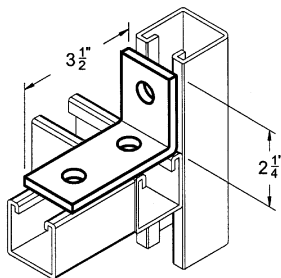
**1-HOLE ADJUSTABLE**  
**CORNER ANGLE WITH SLOT**  
**1-7/8" X 2-5/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.38

**9026CA**

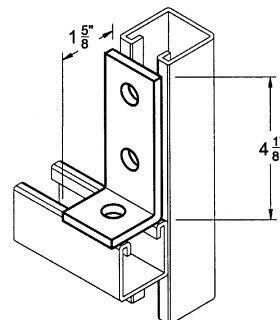
**3-HOLE CORNER ANGLE**  
**2-1/4" X 3-1/2"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.56

**9027CA**

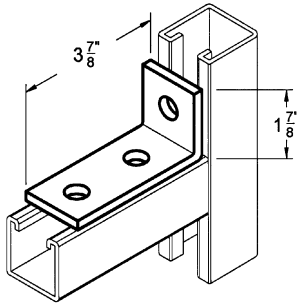
**3-HOLE CORNER ANGLE**  
**1-5/8" X 4-1/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.56

**9028CA**

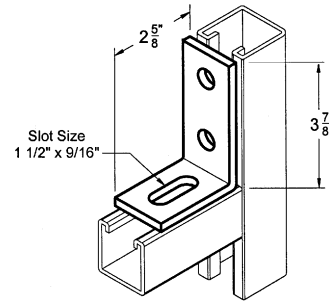
**3-HOLE CORNER ANGLE**  
**1-7/8" X 3-7/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.58

**9029CA**

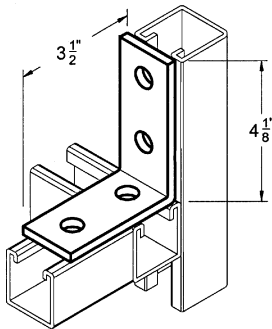
**2-HOLE ADJUSTABLE**  
**CORNER ANGLE WITH SLOT**  
**2-5/8" X 3-7/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.61

**9030CA**

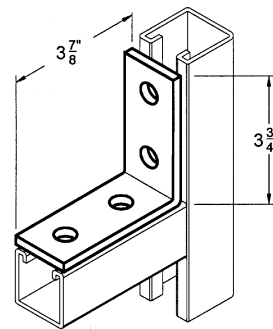
**4-HOLE CORNER ANGLE**  
**3-1/2" X 4-1/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.78

**9031CA**

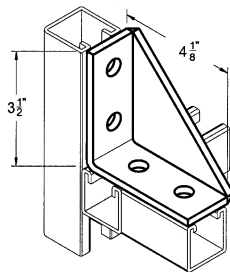
**4-HOLE CORNER ANGLE**  
**3-3/4" X 3-7/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.76

**9032CA**

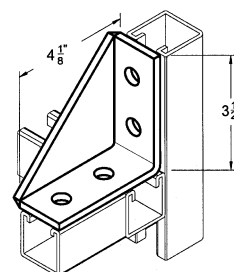
**4-HOLE WEBBED CORNER**  
**ANGLE, RIGHT HAND**  
**3-1/2" X 4-1/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.12

**9033CA**

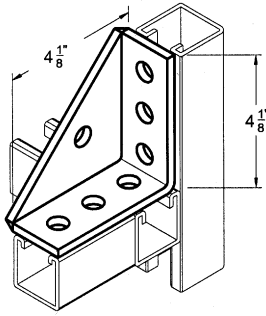
**4-HOLE WEBBED CORNER**  
**ANGLE, LEFT HAND**  
**3-1/2" X 4-1/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.12

**9034CA**

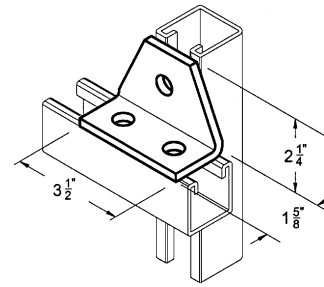
**7-HOLE UNIVERSAL  
CORNER ANGLE  
4-1/8" X 4-1/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.32

**9035CA**

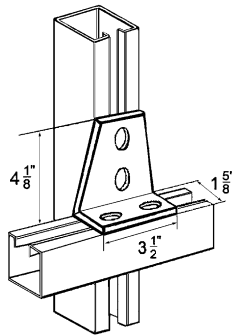
**3-HOLE SHELF  
GUSSET ANGLE  
1-5/8" X 2-1/4"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each Lbs.):</b>	.67

**9036CA**

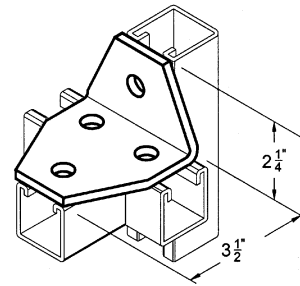
**4-HOLE SHELF  
GUSSET ANGLE  
1-5/8" X 4-1/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.02

**9037CA**

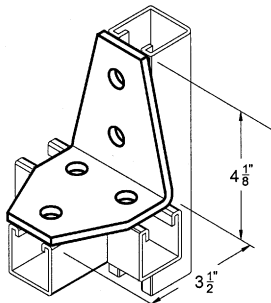
**4-HOLE SHELF GUSSET  
3-WAY ANGLE  
2-1/4" X 3-1/2"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.01

**9038CA**

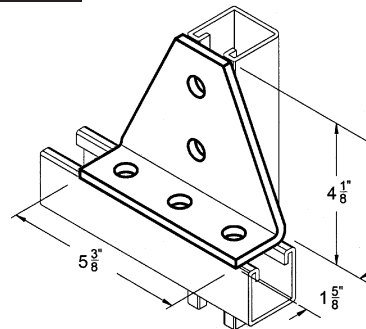
**5-HOLE SHELF GUSSET  
3-WAY ANGLE  
3-1/2" X 4-1/8"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.35

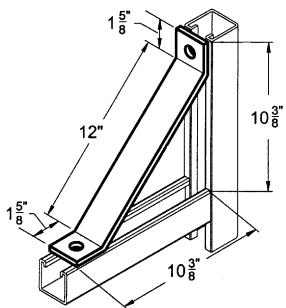
**9039CA**

**5-HOLE SHELF  
GUSSET ANGLE  
1-5/8" X 4-1/8"**



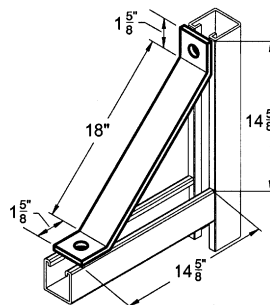
<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.41

**9040CA 2-HOLE 45° KNEE BRACE 12"**



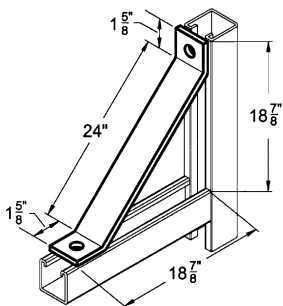
<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (Lbs.):</b>	1.65

**9042CA 2-HOLE 45° KNEE BRACE 18"**



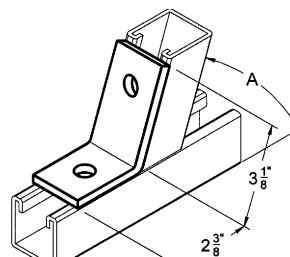
<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (Lbs.):</b>	2.34

**9043CA 2-HOLE 45° KNEE BRACE 24"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (Lbs.):</b>	3.03

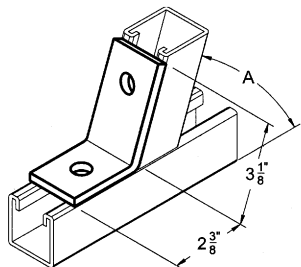
**9044AF 2-HOLE OPEN ANGLE 30°  
2-3/8" X 3-1/8"**



\*\*A\* is available in any angle up to 90°  
Dimensions shown may vary based on specified angle \*A\*

<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.59

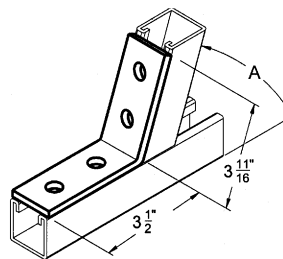
**9045AF 2-HOLE OPEN ANGLE 45°  
2-3/8" X 3-1/8"**



\*\*A\* is available in any angle up to 90°  
Dimensions shown may vary based on specified angle \*A\*

<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.59

**9046AF 4-HOLE OPEN ANGLE 45°  
3-1/2" X 3-11/16"**

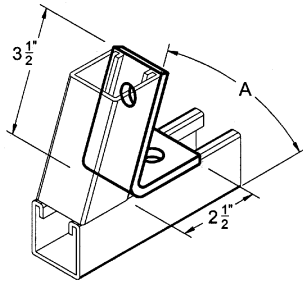


\*\*A\* is available in any angle up to 90°  
Dimensions shown may vary based on specified angle \*A\*

<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.78

**9047AF**

**2-HOLE CLOSED ANGLE 45°**  
**2-1/2" X 3-1/2"**

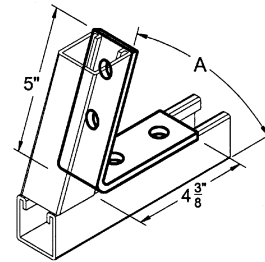


\*\*A\* is available in any angle up to 90°  
Dimensions shown may vary based on specified angle "A"

<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.56

**9048AF**

**4-HOLE CLOSED ANGLE 45°**  
**4-3/8" X 5"**

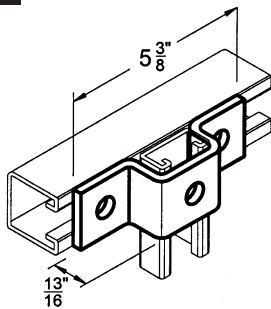


\*\*A\* is available in any angle up to 90°  
Dimensions shown may vary based on specified angle "A"

<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.95

**9049UF**

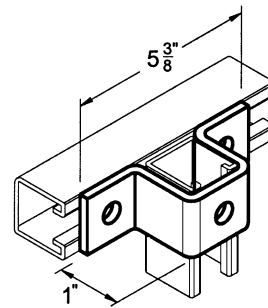
**3-HOLE "U" SUPPORT**  
**FOR 1-5/8" X 13/16" STRUT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.70

**9050UF**

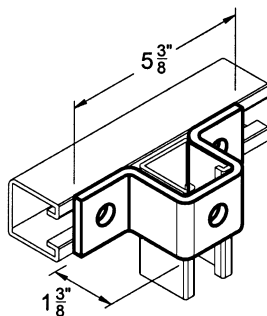
**3-HOLE "U" SUPPORT**  
**FOR 1-5/8" X 1" STRUT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.71

**9051UF**

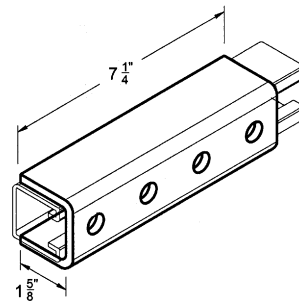
**3-HOLE "U" SUPPORT**  
**FOR 1-5/8" X 1-3/8" STRUT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.84

**9052UF**

**4-HOLE SPLICE CLEVIS**  
**FOR 1-5/8" X 1-5/8" STRUT**

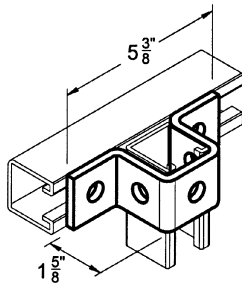


<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	2.33



**9053UF**

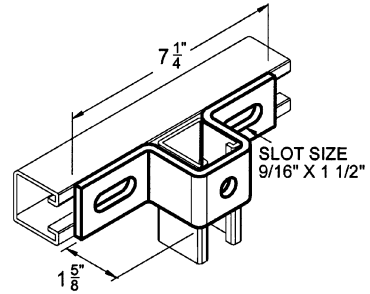
**5-HOLE "U" SUPPORT  
FOR 1-5/8" X 1-5/8" STRUT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.85

**9054UF**

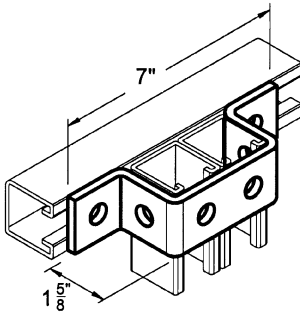
**ADJUSTABLE 1-HOLE, 2 SLOT  
"U" SUPPORT  
FOR 1-5/8" X 1-5/8" STRUT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.03

**9055UF**

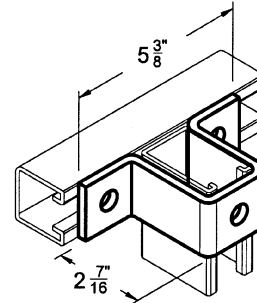
**6-HOLE "U" SUPPORT  
FOR 1-5/8" DOUBLE STRUT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.05

**9056UF**

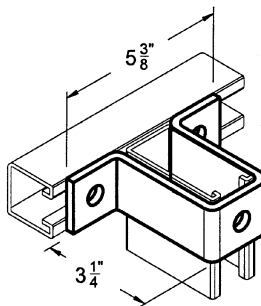
**3-HOLE "U" SUPPORT  
FOR 1-5/8" X 2-7/16" STRUT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.08

**9057UF**

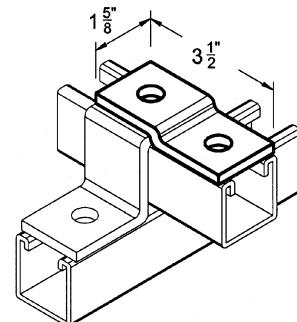
**3-HOLE "U" SUPPORT  
FOR 3-1/4" STRUT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.26

**9058ZF**

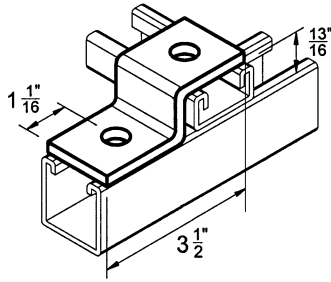
**2-HOLE OFFSET "Z" SUPPORT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.38

**9059ZF**

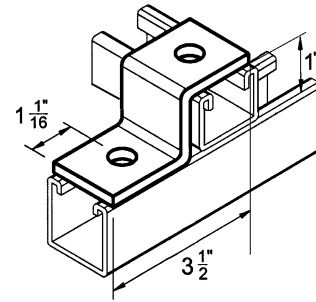
**2-HOLE "Z" SUPPORT  
FOR 1-5/8" X 13/16" STRUT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.43

**9060ZF**

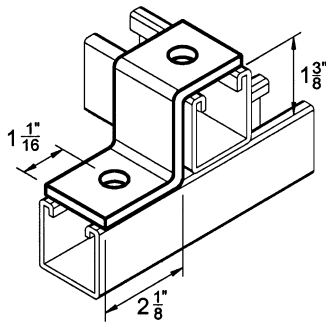
**2-HOLE "Z" SUPPORT  
FOR 1-5/8" X 1" STRUT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.44

**9061ZF**

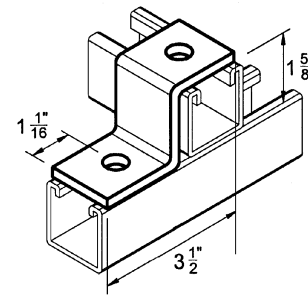
**2-HOLE "Z" SUPPORT  
FOR 1-5/8" X 1-3/8" STRUT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.51

**9062ZF**

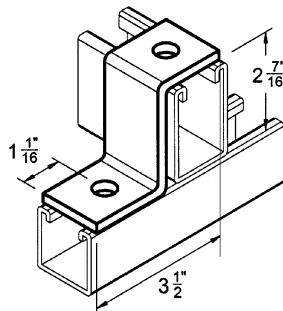
**2-HOLE "Z" SUPPORT  
FOR 1-5/8" X 1-5/8" STRUT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.52

**9063ZF**

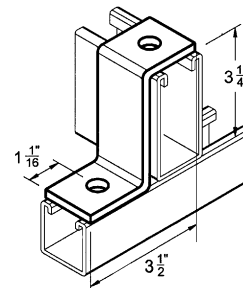
**2-HOLE "Z" SUPPORT  
FOR 1-5/8" X 2-7/16" STRUT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.64

**9064ZF**

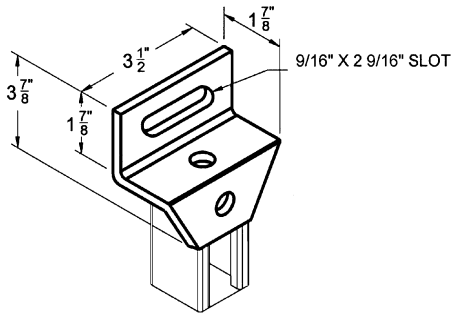
**2-HOLE "Z" SUPPORT  
FOR 1-5/8" X 3-1/4" STRUT  
OR STRUT COMBINATION**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.70

**9065ZF**

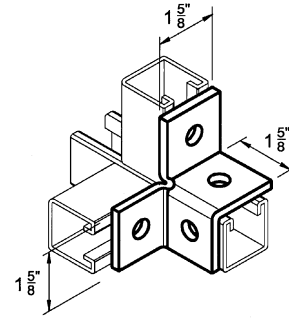
**ADJUSTABLE OFFSET  
GUSSETED "Z" SUPPORT**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.97

**9066WF**

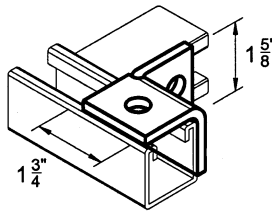
**4-HOLE DOUBLE CORNER  
CONNECTION**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.76

**9067WF**

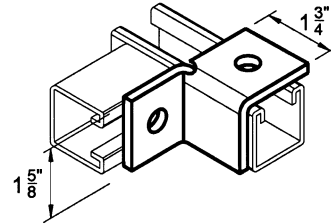
**2-HOLE SINGLE CORNER  
CONNECTION - RIGHT HAND**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.60

**9068WF**

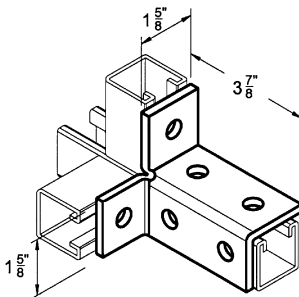
**2-HOLE SINGLE CORNER  
CONNECTION - LEFT HAND**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.60

**9069WF**

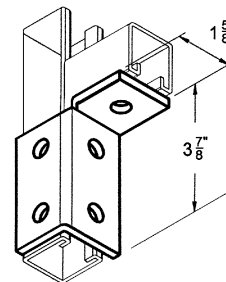
**6-HOLE DOUBLE CORNER  
CONNECTION**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.10

**9070WF**

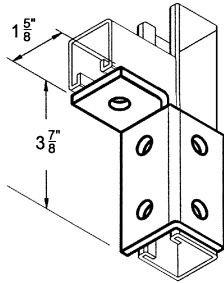
**5-HOLE SINGLE CORNER  
CONNECTION - RIGHT HAND**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.00

**9071WF**

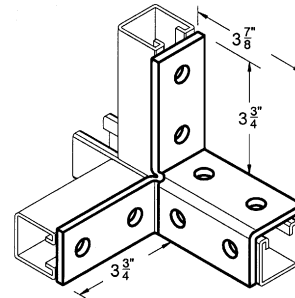
**5-HOLE SINGLE CORNER CONNECTION - LEFT HAND**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.00

**9072WF**

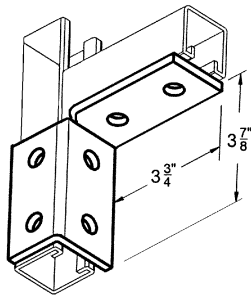
**8-HOLE DOUBLE CORNER CONNECTION**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.52

**9073WF**

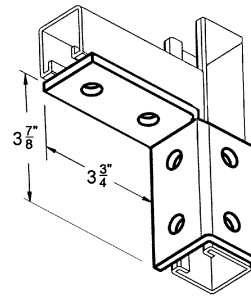
**6-HOLE SINGLE CORNER CONNECTION - RIGHT HAND**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.20

**9074WF**

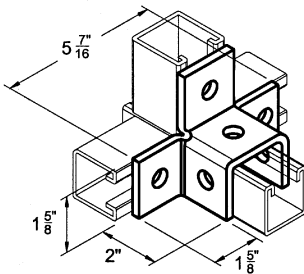
**6-HOLE SINGLE CORNER CONNECTION - LEFT HAND**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.20

**9075WF**

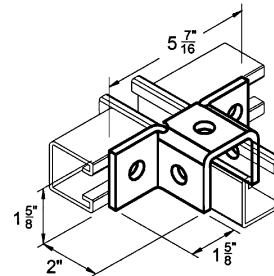
**6-HOLE TRIPLE WING CONNECTION**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.12

**9076WF**

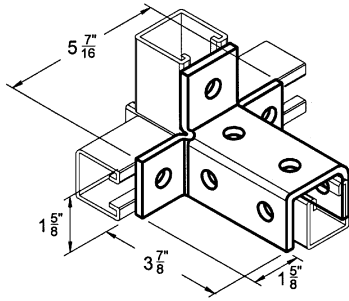
**5-HOLE DOUBLE WING CONNECTION**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.93

**9077WF**

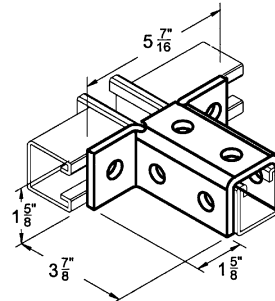
**9-HOLE TRIPLE WING CONNECTION**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.77

**9078WF**

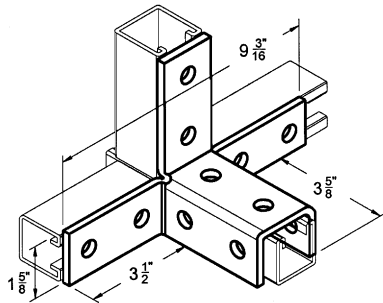
**8-HOLE DOUBLE WING CONNECTION**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.56

**9079WF**

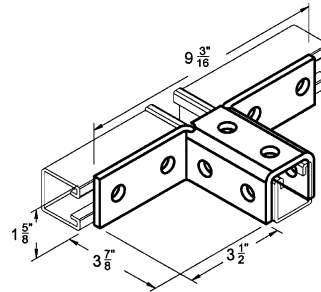
**12-HOLE TRIPLE WING CONNECTION**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	2.34

**9080WF**

**10-HOLE DOUBLE WING CONNECTION**

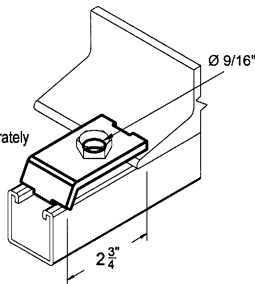


<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.93

**9081BC**

**STRUT BEAM CLAMP, NOTCHED**

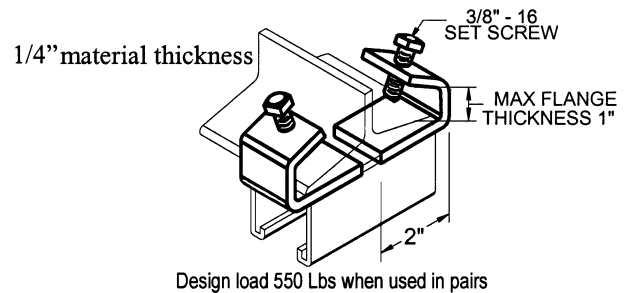
Material is 1-5/8" wide x 1/4" thick  
 amp requires 1/2"-13 HCS and 1/2" channel nut, order separately  
 Design load 1100 Lbs when used in pairs



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.28

**9082BC**

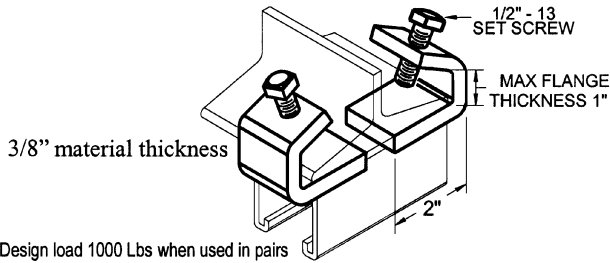
**STRUT BEAM CLAMP LIGHT DUTY 1/4" THICK**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.62

**9083BC**

**STRUT BEAM CLAMP  
HEAVY DUTY  
3/8" THICK**

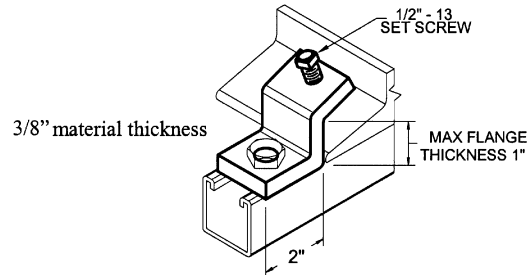


Design load 1000 Lbs when used in pairs

<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.93

**9084BC**

**STRUT "Z" BEAM CLAMP  
HEAVY DUTY**

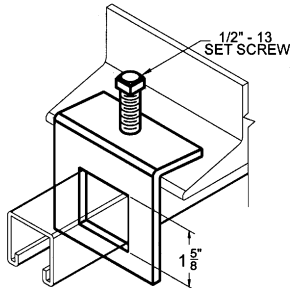


Design load 600 Lbs when used in pairs  
Clamp requires 1/2"-13 HCS and 1/2" channel nut, order separately

<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.64

**9085BC**

**STRUT BEAM CLAMP,  
WINDOW TYPE  
FOR 1-5/8" STRUT**

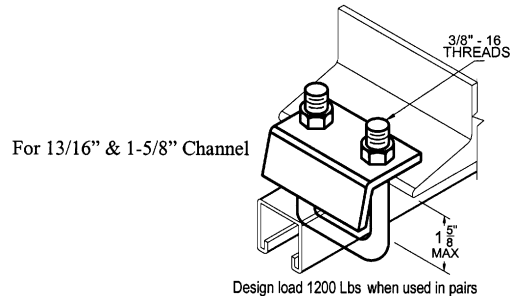


Design load 950 Lbs when used in pairs

<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	1.06

**9086BC**

**STRUT U-BOLT BEAM CLAMP  
FOR 13/16" AND 1-5/8" STRUT**

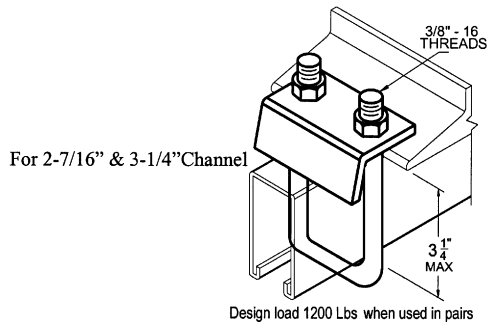


Design load 1200 Lbs when used in pairs

<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.84

**9087BC**

**STRUT U-BOLT BEAM CLAMP  
FOR 2-7/16" AND 3-1/4" STRUT**

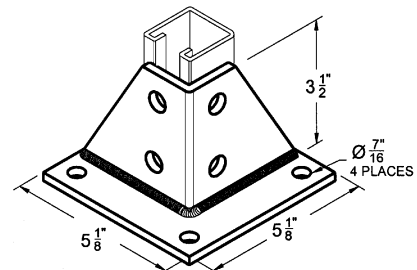


Design load 1200 Lbs when used in pairs

<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	.93

**9088PB**

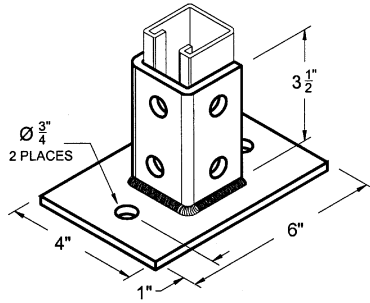
**POST BASE  
FOR 1-5/8" X 1-5/8" STRUT  
5-1/8" BASE**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	2.88

**9089PB**

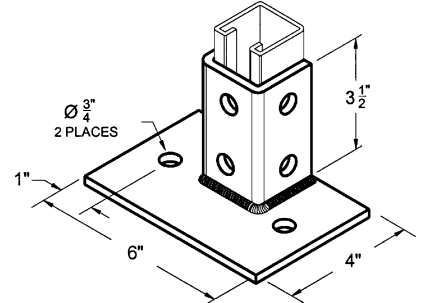
**POST BASE  
FOR 1-5/8" X 1-5/8" STRUT  
4" X 6" BASE**



Material:	1/4"
Finish:	Electro-Galvanized
Hole Dim:	9/16"
Wt. Each (lbs):	3.12

**9090PB**

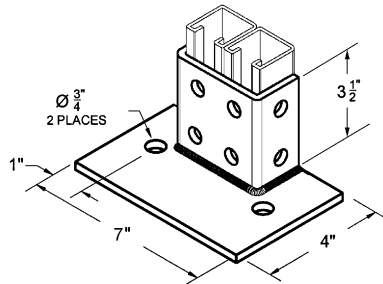
**POST BASE - FLUSH MOUNT  
FOR 1-5/8" X 1-5/8" STRUT  
4" X 6" BASE**



Material:	1/4"
Finish:	Electro-Galvanized
Hole Dim:	9/16"
Wt. Each (lbs):	3.12

**9091PB**

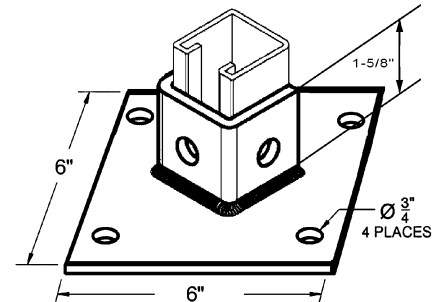
**POST BASE  
FOR 1-5/8" X 3-1/4" STRUT  
4" X 7" BASE**



Material:	1/4"
Finish:	Electro-Galvanized
Hole Dim:	9/16"
Wt. Each (lbs):	3.20

**9092PB**

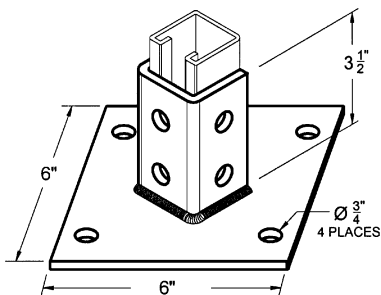
**POST BASE  
FOR 1-5/8" X 1-5/8" STRUT  
6" BASE**



Material:	1/4"
Finish:	Electro-Galvanized
Hole Dim:	9/16"
Wt. Each (lbs):	3.14

**9093PB**

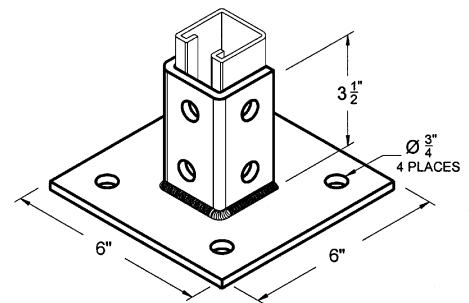
**POST BASE - DIAGONAL  
FOR 1-5/8" X 1-5/8" STRUT**



Material:	1/4"
Finish:	Electro-Galvanized
Hole Dim:	9/16"
Wt. Each (lbs):	3.92

**9094PB**

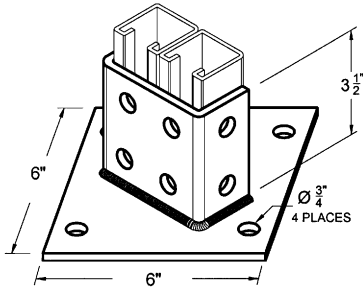
**POST BASE - SQUARE  
FOR 1-5/8" X 1-5/8" STRUT**



Material:	1/4"
Finish:	Electro-Galvanized
Hole Dim:	9/16"
Wt. Each (lbs):	3.92

**9095PB**

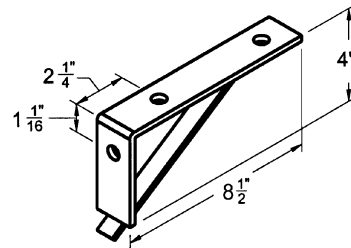
**POST BASE  
FOR 1-5/8" X 3-1/4" STRUT  
6" BASE**



Material:	1/4"
Finish:	Electro-Galvanized
Hole Dim:	9/16"
Wt. Each (lbs):	4.04

**9103BB**

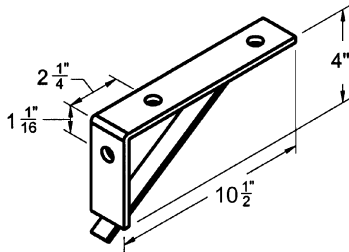
**HEAVY DUTY BRACKET  
8-1/2"**



Material:	1/4"
Finish:	Electro-Galvanized
Hole Dim:	9/16"
Wt. Each (lbs):	1.68

**9104BB**

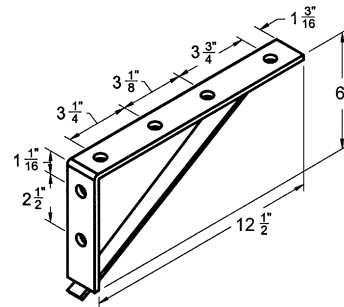
**HEAVY DUTY BRACKET  
10-1/2"**



Material:	1/4"
Finish:	Electro-Galvanized
Hole Dim:	9/16"
Wt. Each (lbs):	2.02

**9105BB**

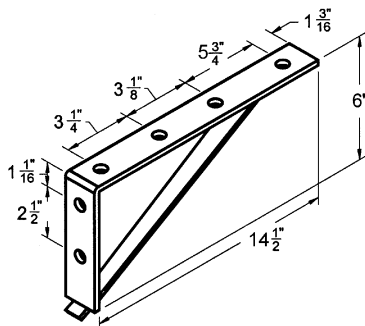
**HEAVY DUTY BRACKET  
12-1/2"**



Material:	1/4"
Finish:	Electro-Galvanized
Hole Dim:	9/16"
Wt. Each (lbs):	2.58

**9106BB**

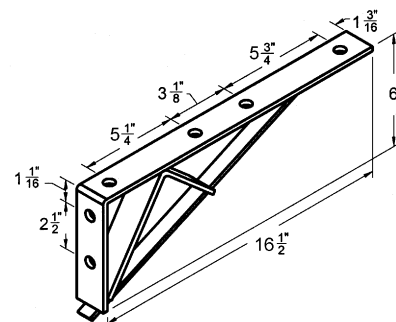
**HEAVY DUTY BRACKET  
14-1/2"**



Material:	1/4"
Finish:	Electro-Galvanized
Hole Dim:	9/16"
Wt. Each (lbs):	2.92

**9107BB**

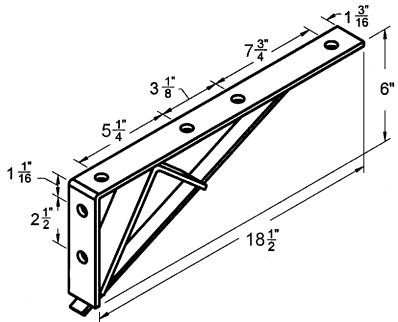
**HEAVY DUTY SHELF BRACKET  
16-1/2"**



Material:	1/4"
Finish:	Electro-Galvanized
Hole Dim:	9/16"
Wt. Each (lbs):	3.81

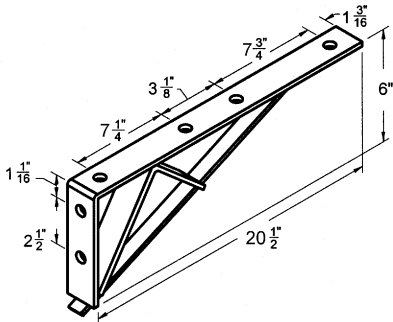


**9108BB HEAVY DUTY SHELF BRACKET 18-1/2"**



<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	4.16

**9109BB HEAVY DUTY SHELF BRACKET 20-1/2"**

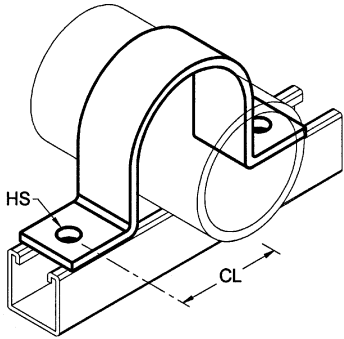


<b>Material:</b>	1/4"
<b>Finish:</b>	Electro-Galvanized
<b>Hole Dim:</b>	9/16"
<b>Wt. Each (lbs):</b>	4.61

**9110HD**

**TWO HOLE HOLD DOWN CLAMP**

**Material:**  
Electro-galvanized carbon steel.



Pipe Size	HS (in.)	CL (in.)	Weight Each (lbs)
1/2"	5/16"	15/16"	.23
3/4"	5/16"	1"	.26
1"	5/16"	1-1/8"	.31
1-1/4"	5/16"	1-5/16"	.35
1-1/2"	5/16"	1-7/16"	.39
2"	7/16"	2-1/8"	.94
2-1/2"	7/16"	2-3/8"	1.14
3"	7/16"	2-11/16"	1.33
3-1/2"	7/16"	2-15/16"	1.52
4"	9/16"	3-3/16"	1.76
5"	9/16"	3-3/4"	1.98
6"	9/16"	4-1/4"	2.25

## Catalog Cross Reference Listing

CHANNEL DENOTED BY GRAY SHADING

### COOPER B-LINE

COOPER B-LINE	EMPIRE	COOPER B-LINE	EMPIRE	COOPER B-LINE	EMPIRE
B11	7250	B140	9011FF	B333-1	9054UF
B11A	7251	B141	9006FF	B334	9021FF
B12	7230	B142	9015FF	B337	9013FF
B12A	7240	B143	9014FF	B340	9004FF
B12SH	7231	B155	9047AF	B341	9007FF
B12SHA	7241	B162	9044AF	B342	9008FF
B22	7000	B172	9052UF	B355	9081BC
B22A	7000A	B187 (9")	9103BB	B368	9048AF
B22SH	7001	B188 (12")	9105BB	B371	9025CA
B22SHA	7001A	B189 (15")	9106BB	B371-2	9029CA
B24	7100	B201	9001FF SERIES	B441-22	9086BC
B24SH	7101	B201D	9002FF SERIES	B441-22A	9087BC
B32I	7225	B202	9001FF SERIES	B515	9065ZF
B54	7200	B202-1	9001FF SERIES	B526	9058ZF
B54SH	7201	B202D	9002FF SERIES	B528	9005FF
B101	9023CA	B202-1D	9002FF SERIES	B532	9019FF
B102	9026CA	B202-2	9001FF SERIES	B533	9039CA
B103	9027CA	B202-2D	9002FF SERIES	B541	9104BB
B104	9030CA	B211	9084BC	B556	9020FF
B105	9062ZF	B212-1/4	9082BC	B844 (4" X 4")	9034CA
B106-12	9063ZF	B212-3/8	9083BC	B1999	8550
B106-52	9059ZF	B230	9022CA	B2007PA	8200 SERIES
B106-32	9061ZF	B231 (2-1/4" X 2-1/4")	9024CA	B2008PA	8200 SERIES
B106-42	9060ZF	B232	9028CA	B2008SS4PA	8200SS SERIES
B107	9053UF	B248	9046AF	B2009PA	8200 SERIES
B107-22A	9057UF	B261-12	9040CA	B2009SS4PA	8200SS SERIES
B110	9064ZF	B261-18	9042CA	B2010PA	8200 SERIES
B115 (3-3/4" X 3-15/16")	9031CA	B261-24	9043CA	B2010SS4PA	8200SS SERIES
B116-12	9056UF	B266	9055UF	B2011PA	8200 SERIES
B116-32	9051UF	B267L	9068WF	B2011SS4PA	8200SS SERIES
B116-42	9050UF	B267R	9067WF	B2012PA	8200 SERIES
B116-52	9049UF	B268L	9071WF	B2012SS4PA	8200SS SERIES
B118	9036CA	B268R	9070WF	B2013PA	8200 SERIES
B119	9066WF	B269L	9074WF	B2013PA (ZN)	8250 SERIES
B120	9069WF	B271	9076WF	B2013SS4PA	8200SS SERIES
B121	9072WF	B272	9078WF	B2014PA	8200 SERIES
B122	9075WF	B273	9080WF	B2014PA (ZN)	8250 SERIES
B123	9079WF	B278	9088PB	B2014SS4PA	8200SS SERIES
B124	9077WF	B279SQ	9092PB	B2015PA	8200 SERIES
B125	9035CA	B280	9093PB	B2015PA (ZN)	8250 SERIES
B126	9037CA	B280FL (3-1/8" X 8")	9090PB	B2015SS4PA	8200SS SERIES
B127	9038CA	B280SQ	9094PB	B2016PA	8200 SERIES
B129	9003FF	B281	9095PB	B2016PA (ZN)	8250 SERIES
B132	9017FF	B281FL (3-1/8" X 8")	9091PB	B2016SS4PA	8200SS SERIES
B133	9016FF	B290	9107BB	B2017PA	8200 SERIES
B135	9012FF	B291	9108BB	B2017PA (ZN)	8250 SERIES
B136	9018FF	B292	9109BB	B2017SS4PA	8200SS SERIES
B138 (1-5/8" X 4-5/8")	9009FF	B314	9085BC	B2018PA (ZN)	8250 SERIES
B139 (1-5/8" X 6-1/2")	9010FF	B269R	9073WF		

CONTINUED

## Catalog Cross Reference Listing

### COOPER B-LINE - *continued*

COOPER B-LINE	EMPIRE	COOPER B-LINE	EMPIRE	COOPER B-LINE	EMPIRE
B2019PA	8200 SERIES	B2062PA (ZN)	8250 SERIES	N223WO	8000 SERIES
B2019SS4PA	8200SS SERIES	B2063PA (ZN)	8250 SERIES	N224	8100 SERIES
B2020PA	8200 SERIES	B2064PA (ZN)	8250 SERIES	N224SS6	8100SX SERIES
B2020PA (ZN)	8250 SERIES	B2065PA (ZN)	8250 SERIES	N224WO	8000 SERIES
B2020SS4PA	8200SS SERIES	B2066PA (ZN)	8250 SERIES	N225	8100 SERIES
B2022PA	8200 SERIES	B2067PA (ZN)	8250 SERIES	N225SS6	8100SX SERIES
B2023PA (ZN)	8250 SERIES	B2068PA (ZN)	8250 SERIES	N225WO	8000 SERIES
B2024PA (ZN)	8250 SERIES	B2069PA (ZN)	8250 SERIES	N226	8100 SERIES
B2025PA (DCU)	8300CT/8300CTP SERIES	B2110PA (DCU)	8300CT/8300CTP SERIES	N226WO	8000 SERIES
B2025PA (ZN)	8250 SERIES	B2110PA (ZN)	8250 SERIES	N227	8100 SERIES
B2026PA (DCU)	8300CT/8300CTP SERIES	B2111PA (ZN)	8250 SERIES	N227WO	8000 SERIES
B2026PA (ZN)	8250 SERIES	B2112PA (ZN)	8250 SERIES	N228	8100 SERIES
B2027PA (ZN)	8250 SERIES	B2113PA (ZN)	8250 SERIES	N228SS6	8100SX SERIES
B2028PA (DCU)	8300CT/8300CTP SERIES	B2115PA (ZN)	8250 SERIES	N228WO	8000 SERIES
B2028PA (ZN)	8250 SERIES	B2116PA (ZN)	8250 SERIES	N255	8100 SERIES
B2029PA (ZN)	8250 SERIES	B2117PA (ZN)	8250 SERIES	N255SS6	8100SX SERIES
B2030PA (DCU)	8300CT/8300CTP SERIES	B2128PA (ZN)	8250 SERIES	N255WO	8000 SERIES
B2030PA (ZN)	8250 SERIES	B2130PA	8200 SERIES	N275	8100 SERIES
B2031PA (ZN)	8250 SERIES	B2132PA	8200 SERIES	N275WO	8000 SERIES
B2032PA (DCU)	8300CT/8300CTP SERIES	B2207PA	8350 SERIES	N278	8100 SERIES
B2032PA (ZN)	8250 SERIES	B2208PA	8350 SERIES	N278WO	8000 SERIES
B2033PA (ZN)	8250 SERIES	B2209PA	8350 SERIES	N521	8050 SERIES
B2034PA (DCU)	8300CT/8300CTP SERIES	B2210PA	8350 SERIES	N522	8050 SERIES
B2034PA (ZN)	8250 SERIES	B2211PA	8350 SERIES	N523	8050 SERIES
B2035PA (ZN)	8250 SERIES	B2212PA	8350 SERIES	N524	8050 SERIES
B2036PA (ZN)	8250 SERIES	B2213PA	8350 SERIES	N525	8050 SERIES
B2037PA (ZN)	8250 SERIES	B2400 SERIES	9110HD SERIES	N526	8050 SERIES
B2038PA (DCU)	8300CT/8300CTP SERIES	BVT025	8500 SERIES	N527	8050 SERIES
B2038PA (ZN)	8250 SERIES	BVT037	8500 SERIES	N528	8050 SERIES
B2039PA (ZN)	8250 SERIES	BVT050	8500 SERIES	N555	8050 SERIES
B2041PA (ZN)	8250 SERIES	BVT062	8500 SERIES	TN221	8150 SERIES *
B2042PA (DCU)	8300CT/8300CTP SERIES	BVT075	8500 SERIES	TN222	8150 SERIES *
B2042PA (ZN)	8250 SERIES	BVT087	8500 SERIES	TN223	8150 SERIES *
B2043PA (ZN)	8250 SERIES	BVT100	8500 SERIES	TN224	8150 SERIES *
B2045PA (ZN)	8250 SERIES	BVT112	8500 SERIES	TN225	8150 SERIES *
B2046PA (DCU)	8300CT/8300CTP SERIES	BVT125	8500 SERIES	TN227	8150 SERIES *
B2046PA (ZN)	8250 SERIES	BVT137	8500 SERIES	TN228	8150 SERIES *
B2047PA (ZN)	8250 SERIES	BVT150	8500 SERIES	TN525	8150 SERIES *
B2048PA (ZN)	8250 SERIES	BVT162	8500 SERIES		
B2050PA (DCU)	8300CT/8300CTP SERIES	BVT175	8500 SERIES		
B2050PA (ZN)	8250 SERIES	BVT187	8500 SERIES		
B2051PA (ZN)	8250 SERIES	BVT200	8500 SERIES		
B2052PA (ZN)	8250 SERIES	BVT212	8500 SERIES		
B2054PA (DCU)	8300CT/8300CTP SERIES	BVT262	8500 SERIES		
B2054PA (ZN)	8250 SERIES	BVT312	8500 SERIES		
B2055PA (ZN)	8250 SERIES	BVT412	8500 SERIES		
B2056PA (ZN)	8250 SERIES	N221	8100 SERIES		
B2058PA (ZN)	8250 SERIES	N221WO	8000 SERIES		
B2059PA (ZN)	8250 SERIES	N222	8100 SERIES		
B2060PA (ZN)	8250 SERIES	N222WO	8000 SERIES		
B2062PA (DCU)	8300CT/8300CTP SERIES	N223	8100 SERIES		

\*SIMILAR BUT NOT IDENTICAL

## Catalog Cross Reference Listing

### ERICO

CHANNEL DENOTED BY GRAY SHADING

ERICO	EMPIRE	ERICO	EMPIRE	ERICO	EMPIRE
A12	7000	L15	9025CA	W19	9075WF
A12A	7000A	L18 (EG)	9026CA	W20	9077WF
A12AHS	7001A	L19 (1-7/8" X 3-7/8")	9028CA	W21	9079WF
A12HS	7001	L20 (EG)	9027CA	Z17	9063ZF
A14	7100	L21	9029CA	Z14	9058ZF
A14HS	7101	L23 (EG)	9034CA	Z25	9065ZF
B1200NCT	7225	L32	9037CA	Z10C0000EG	9059ZF
C14	7200	L33	9038CA	Z10D0000EG	9063ZF
C14HS	7201	L34	9036CA	Z10M0000EG	9060ZF
D12	7230	L40	9039CA		
D12A	7240	L43	9035CA		
D12AHS	7241	L46 30 DEGREE	9044AF		
D12HS	7231	L46 45 DEGREE	9045AF		
E12	7250	L47 45 DEGREE	9047AF		
E12HS	7251	L100000EG	9023CA		
BC16A000EG	9085BC	L220000EG	9030CA		
BC17A000EG	9086BC	L441200EG	9040CA		
BC17D000EG	9087BC	L441800EG	9042CA		
BC21	9084BC	NUT SERIES	8000		
BC1800037EG	9083BC	OD SERIES	8250		
BC200000EG	9081BC	P09 (BASE = 3-1/2" X 6")	9089PB		
COPC	8300CT/8300CTP SERIES	P09F	9090PB		
F090000EG	9003FF	P10SQ	9092PB		
F11-F12 SERIES	9002FF SERIES	P11 SQ	9094PB		
F13-F18 (EG)	9001FF SERIES	P15	9088PB		
F20	9006FF	P110000EG	9093PB		
F21	9008FF	RIGD-EG	8200		
F22	9004FF	SPRA SERIES	8100		
F23	9007FF	SPRC SERIES	8050		
F25	9016FF	STR 2 SERIES	9110HD		
F26	9009FF	TCC SERIES	8500		
F27	9010FF	TSNT SERIES	8150		
F28	9017FF	U11C	9049UF		
F30	9013FF	U12D	9056UF		
F31	9018FF	U13 (7-1/4")	9054UF		
F32	9019FF	U24A	9052UF		
F33	9015FF	UNIV SERIES	8350 SERIES		
F34	9020FF	VS20	8550		
F35	9012FF	W12	9066WF		
F36	9011FF	W13	9069WF		
F37	9014FF	W14	9072WF		
F38	9021FF	W16	9076WF		
L08	9024CA	W17	9078WF		
L11 (1-7/8" X 2")	9022CA	W18	9080WF		

## Catalog Cross Reference Listing

### PHD

CHANNEL DENOTED BY GRAY SHADING

PHD	EMPIRE	PHD	EMPIRE	PHD	EMPIRE
1001	7000 (10')	5023	9010FF	5610	9070WF
1002	7000 (20')	5025	9011FF	5611	9071WF
1011	7001 (10')	5030	9014FF	5615	9073WF
1022	7001 (20')	5035	9016FF	5616	9074WF
1101	7100 (10')	5040	9017FF	5620	9066WF
1102	7100 (20')	5045	9012FF	5625	9069WF
1111	7101 (10')	5050	9015FF	5630	9072WF
1112	7101 (20')	5060	9020FF	5635	9076WF
1301	7200 (10')	5065	9013FF	5640	9078WF
1302	7200 (20')	5075	9018FF	5645	9080WF
1311	7201 (10')	5080	9019FF	5650	9075WF
1312	7201 (20')	5095	9021FF	5655	9079WF
1501	7250 (10')	5110 (1-5/8" X 2-1/4")	9023CA	5660	9077WF
1502	7250 (20')	5112	9022CA	5730	9052UF
1511	7251 (10')	5119	9024CA	6010	9092PB
1512	7251 (20')	5120 (2-5/16" X 3-1/2")	9026CA	6020	9093PB
1601	7230 (10')	5121 (1-5/8" X 4-3/16")	9027CA	6025	9094PB
1602	7230 (20')	5122	9028CA	6030 (3-1/8" X 8")	9090PB
1611	7231 (10')	5130 (3-1/2" X 4-3/16")	9030CA	6050	9095PB
1612	7231 (20')	5131 (3-13/16" X 3-7/8")	9031CA	6065 (BASE = 3-1/8" X 8")	9091PB
4000	7225	5165	9034CA	6095	9088PB
1001A	7000A (10')	5180	9035CA	6101	9103BB
1002A	7000A (20')	5185 (1-5/8" X 4-3/16")	9036CA	6102	9104BB
1011A	7001A (10')	5190	9039CA	6121	9105BB
1012A	7001A (20')	5200	9037CA	6122	9106BB
1601A	7240 (10')	5205	9038CA	6123	9107BB
1601A SH	7241 (10')	5221	9025CA	6124	9108BB
1602A	7240 (20')	5230	9029CA	6125	9109BB
1602A SH	7241 (20')	5304	9044AF	7011	9082BC
2001-2016	8200 SERIES	5315	9045AF	7012	9083BC
2001SS-2016SS	8200SS SERIES	5345	9046AF	7030	9084BC
2101-2107	8350 SERIES	5361	9047AF	7040	9081BC
2302-2314	8300CTP/83000CT SERIES	5371	9048AF	7060	9085BC
2401-2461	8250 SERIES	5410	9040CA	7070	9086BC
2501-2514	8500 SERIES	5412	9042CA	7075	9087BC
2600	8550	5501	9049UF	7251-7262	9110HD SERIES
3001-3011	8000 SERIES	5503	9053UF		
3101-3111	8100 SERIES	5505	9056UF		
3101SS-3111SS	8100SX SERIES	5507	9057UF		
3201-3209	8050 SERIES	5530	9054UF		
5000-5004	9001FF SERIES	5521	9055UF		
5005-5008	9002FF SERIES	5551	9059ZF		
5011	9005FF	5553	9063ZF		
5012	9004FF	5554	9062ZF		
5013	9006FF	5556	9058ZF		
5015	9007FF	5590	9065ZF		
5019	9008FF	5600	9067WF		
5020	9009FF	5601	9068WF		

## Catalog Cross Reference Listing

### POWERSTRUT

CHANNEL DENOTED BY GRAY SHADING

POWERSTRUT	EMPIRE	POWERSTRUT	EMPIRE	POWERSTRUT	EMPIRE
PS100	7250	PS 670	9077WF	PS 1100 SERIES	8200
PS100 EH	7251	PS 679	9057UF	PS 1100 SS SERIES	8200SS
PS150	7230	PS 685	9084BC	PS 1200 CPLT SERIES	8300CT/8300CTP SERIES
PS150 2T3	7240	PS 686	9081BC	PS 1200 EG SERIES	8250
PS150 2T3 EH	7241	PS 687-A (3 HOLES-2 SLOTS)	9054UF	PS 1300 SERIES	8350
PS150 EH	7231	PS 692	9065ZF	PS 1400 SERIES	8500
PS200	7000	PS 710	9051UF	PS 2112	9021FF
PS200 2T3	7000A	PS 711	9061ZF	PS 2128-L	9074WF
PS200 EH	7001	PS 712	9017FF	PS 2128-R	9073WF
PS200 EH 2T3	7001A	PS 714	9016FF	PS 2131-L	9071WF
PS210	7100	PS 718	9011FF	PS 2131-R	9070WF
PS210 EH	7101	PS 721	9055UF	PS 2190	9020FF
PS349 10' W/O	7225 (10')	PS 732-10	9104BB	PS 2504	9002FF
PS349 20' W/O	7225 (20')	PS 732-12	9105BB	PS 2545	9025CA
PS500	7200	PS 732-14	9106BB	PS 2601	9063ZF
PS500 EH	7201	PS 732-8	9103BB	PS 2648	9056UF
PS 601	9003FF	PS 744	9012FF	PS 2651-A	9086BC
PS 602	9006FF	PS 745	9028CA	PS 3033	9093PB
PS 603	9022CA	PS 746	9035CA	PS 3040	9088PB
PS 604	9023CA	PS 747	9018FF	PS 3049	9029CA
PS 605 (2-5/16" X 3-1/2")	9026CA	PS 748 (1-5/8" X 4-3/16")	9036CA	PS 3064	9095PB
PS 606 (1-5/8" X 4-3/16")	9027CA	PS 750	9015FF	PS 3126 SERIES	9110HD
PS 607 (3-1/2" X 4-3/16")	9030CA	PS 756 (1-5/8" X 3-1/2")	9064ZF	PS 3373 (4" X 4")	9034CA
PS 608-L	9033CA	PS 781-45 DEGREE	9046AF	PS 3792	8550
PS 608-R	9032CA	PS 793-45 DEGREE	9048AF	PS NS SERIES	8000
PS 611	9062ZF	PS 806	9024CA	PS NSS SERIES	8000
PS 612	9060ZF	PS 821	9078WF	PSRS SERIES	8100
PS 613	9053UF	PS 854	9019FF	PSSS SERIES	8050
PS 614	9037CA	PS 855-1	9085BC	PS TG SERIES	8150
PS 615	9038CA	PS 888	9007FF		
PS 616	9052UF	PS 907	9082BC		
PS 617	9010FF	PS 913	9080WF		
PS 618	9009FF	PS 922-L	9068WF		
PS 619 SERIES	9001FF	PS 922-R	9067WF		
PS 620	9004FF	PS 923	9076WF		
PS 624-45 DEGREE	9047AF	PS 925	9013FF		
PS 633-30 DEGREE	9044AF	PS 926-12	9040CA		
PS 633-45 DEGREE	9045AF	PS 926-18	9042CA		
PS 660 (3-13/16" X 3-7/8")	9031CA	PS 926-24	9043CA		
PS 665	9066WF	PS 927	9039CA		
PS 666	9069WF	PS 928	9059ZF		
PS 667	9072WF	PS 929	9049UF		
PS 668	9075WF	PS 978	9050UF		
PS 669	9079WF	PS 998	9083BC		

## Catalog Cross Reference Listing SUPERSTRUT

CHANNEL DENOTED BY GRAY SHADING

SUPERSTRUT	EMPIRE	SUPERSTRUT	EMPIRE	SUPERSTRUT	EMPIRE
A-1200	7000	AB-255	9012FF	X-207	9007FF
A-1200HS	7001	AB-257	9015FF	X-208	9008FF
A-1202	7000A	AB-261	9019FF	X-299	9025CA
A-1202HS	7001A	AB-263	9020FF	512	9081BC
A-1400	7100	AB-265	9018FF	701 SERIES	8250 SERIES
A-1400HS	7101	AB-274 (1-5/8" X 2-1/4")	9035CA	702 SERIES	8200 SERIES
B-1400	7200	AB-299	9024CA	702SS	8200SS SERIES
B-1400HS	7201	AP-232	9093PB	703 SERIES	8350 SERIES
C-302	7225	AP-232-SQ	9094PB		
E-1200	7230	AP-235	9095PB		
E-1200HS	7231	AW-204	9066WF		
E-1202	7240	AW-205-L	9068WF		
E-1202HS	7241	AW-205-R	9067WF		
H-1200	7250	AW-214	9069WF		
H-1200HS	7251	AW-219	9080WF		
A-100	8100	AW-220	9076WF		
A-208	9052UF	AW-224	9078WF		
A-209	9062ZF	AW-226	9075WF		
A-210	9053UF	AW-228	9079WF		
A-211	9057UF	B-100 SERIES	8050		
A-212	9055UF	B-209	9059ZF		
A-217	9072WF	B-210	9049UF		
A-218	9077WF	C-209	9061ZF		
A-597	9085BC	C-210	9051UF		
A-716 SERIES	8500	C-708-U SERIES	9110HD		
AB-100 SERIES	8000	CM-100	8150 *		
AB-201 (1-5/8" X 2-1/4")	9023CA	CT-701	8300CTP/83000CT SERIES		
AB-202 (1-7/8" X 2")	9022CA	CZ-209	9064ZF		
AB-203	9027CA	E-210	9056UF		
AB-204	9026CA	EZ-209	9063ZF		
AB-206	9003FF	N-205	9031CA		
AB-207	9006FF	S-204	9103BB		
AB-213	9032CA	S-205	9104BB		
AB-214	9033CA	S-217	9105BB		
AB-216 (3-1/2" X 4-1/8")	9038CA	S-218	9106BB		
AB-219	9011FF	S-222	9107BB		
AB-220	9016FF	S-226	9108BB		
AB-225	9047AF	S-236	9109BB		
AB-227	9045AF	S-716	8550		
AB-239-2 (17")	9042CA	U-501	9086BC		
AB239-3 (25-1/2")	9043CA	U-502	9087BC		
AB-240 (7")	9010FF	U-510	9084BC		
AB-241 SERIES	9001FF SERIES	U-514	9082BC		
AB-253	9017FF	U-514-A	9083BC		

\* SPECS DIFFER BUT PART IS FUNCTIONALLY EQUIVALENT

## Catalog Cross Reference Listing

### TOLCO

CHANNEL DENOTED BY GRAY SHADING

TOLCO	EMPIRE	TOLCO	EMPIRE	TOLCO	EMPIRE
A12	7000	F36	9011FF	U24	9052UF
A12A	7000A	F37	9014FF	UNIV SERIES	8350
A12AHS	7001A	F38	9021FF	W10 (R)	9067WF
A12HS	7001	L08	9024CA	W10(L)	9068WF
A14	7100	L10 (1-5/8" X 2-1/4")	9023CA	W11 (L)	9074WF
A14HS	7101	L11	9022CA	W11 (R)	9073WF
B12 INSERT	7225	L15	9025CA	W12	9066WF
C14	7200	L18	9026CA	W13	9069WF
C14HS	7201	L19 (1-7/8" X 3-7/8")	9028CA	W14	9072WF
D12	7230	L20	9027CA	W16	9076WF
D12A	7240	L21	9029CA	W17	9078WF
D12AHS	7241	L22	9030CA	W18	9080WF
D12HS	7231	L23L	9033CA	W19	9075WF
E12	7250	L23R	9032CA	W20	9077WF
E12HS	7251	L23U (ONLY 6 HOLES)	9034CA	W21	9079WF
BC16 (A)	9085BC	L32	9037CA	2 STR SERIES	9110HD
BC17 (A)	9086BC	L33 (3-1/2" X 4-1/8")	9038CA	Z25	9065ZF
BC17 (E)	9087BC	L34	9036CA	Z10 (B)	9061ZF
BC18 (3/8")	9082BC	L40	9039CA	Z10 (C)	9059ZF
BC18 (1/2")	9083BC	L43 (1-5/8" X 2-1/4")	9035CA	Z10 (D)	9063ZF
BC20	9081BC	L44 (12")	9040CA		
BC21	9084BC	L44 (18")	9042CA		
BR11 (8-1/2")	9103BB	L45-30 DEGREE	9044AF		
BR11 (10-1/2")	9104BB	L45-45 DEGREE	9045AF		
BR11 (12-1/2")	9105BB	L46-45 DEGREE	9046AF		
BR11 (14-1/2")	9106BB	L47-45 DEGREE	9047AF		
BR12	9107BB	L48-45 DEGREE	9048AF		
CUSH CLAMP SERIES	8500	NUT SERIES	8000		
F09	9003FF	OD SERIES	8250		
F11-F12	9002FF	P10SQ	9092PB		
F14-F18	9001FF	P11	9093PB		
F20	9006FF	P11F	9090PB		
F22	9004FF	P11SQ	9094PB		
F23	9007FF	P13F (3-1/8" X 8" BASE)	9091PB		
F25	9016FF	P13	9095PB		
F26	9009FF	P15	9088PB		
F27	9010FF	RIGD SERIES	8200		
F28	9017FF	SPRA SERIES	8100		
F30	9013FF	SPRC SERIES	8050		
F31	9018FF	TSN SERIES	8150		
F32	9019FF	U11	9049UF		
F33	9015FF	U12	9056UF		
F34	9020FF	U13 (7-1/4")	9054UF		
F35	9012FF	U16	9057UF		



## Catalog Cross Reference Listing

### UNISTRUT

CHANNEL DENOTED BY GRAY SHADING

UNISTRUT	EMPIRE	UNISTRUT	EMPIRE	UNISTRUT	EMPIRE
P1000	7000	P1068 (1-5/8" X 2-1/4")	9023CA	P2027CC	8300CTP/8300CT SERIES
P1000T	7001	P1109- P1126	8200	P2029CC	8300CTP/8300CT SERIES
P1001	7000A	P1109SS-P1126ASS	8200SS	P2031CC	8300CTP/8300CT SERIES
P1001T	7001A	P1117CC	8300CTP/8300CT SERIES	P2033CC	8300CTP/8300CT SERIES
P1100	7100	P1117E-P1120E	8250 SERIES	P2035CC	8300CTP/8300CT SERIES
P1100T	7101	P1118CC	8300CTP/8300CT SERIES	P2039CC	8300CTP/8300CT SERIES
P3265 (10 FT)	7225	P1186	9047AF	P2043CC	8300CTP/8300CT SERIES
P3270 (20 FT)	7225	P1211	8350 SERIES	P2047CC	8300CTP/8300CT SERIES
P4100	7200	P1212	8350 SERIES	P2051CC	8300CTP/8300CT SERIES
P4100T	7201	P1213	8350 SERIES	P2055CC	8300CTP/8300CT SERIES
P5000	7250	P1214	8350 SERIES	P2063CC	8300CTP/8300CT SERIES
P5000T	7251	P1215	8350 SERIES	P2070-61CC	8300CTP/8300CT SERIES
P5500	7230	P1217	8350 SERIES	P2070-83	8250 SERIES
P5500T	7231	P1272S	9082BC	P2072A	9093PB
P5501	7240	P1325	9030CA	P2073A	9095PB
P5501T	7241	P1326	9027CA	P2101	9044AF
004T008	8500 SERIES	P1334	9012FF	P2223	9066WF
006T010	8500 SERIES	P1346	9028CA	P2224	9069WF
008T012	8500 SERIES	P1356	9013FF	P2225	9072WF
010T014	8500 SERIES	P1357 (1-5/8" X 2-1/4")	9035CA	P2227	9075WF
012T016	8500 SERIES	P1358	9018FF	P2228	9077WF
014T018	8500 SERIES	P1359	9036CA	P2229	9079WF
016T020	8500 SERIES	P1377	9052UF	P2235 (3-1/2" X 4-1/8")	9038CA
018T022	8500 SERIES	P1379S	9084BC	P2324	9010FF
020T024	8500 SERIES	P1380	9015FF	P2325	9009FF
022T026	8500 SERIES	P1380 A	9014FF	P2341 L	9068WF
024N028	8500 SERIES	P1386	9081BC	P2341 R	9067WF
026N030	8500 SERIES	P1430E	8250 SERIES	P2343-L	9074WF
028N032	8500 SERIES	P1453	9064ZF	P2343-R	9073WF
030N034	8500 SERIES	P1454	9058ZF	P2345	9076WF
032N036	8500 SERIES	P1458	9026CA	P2346	9078WF
034N040	8500 SERIES	P1546	9045AF	P2347	9080WF
038N044	8500 SERIES	P1579	9037CA	P2471 (3/4")	9001FF SERIES
042N048	8500 SERIES	P1726	9019FF	P2484 (4" X 4")	9032CA
050N056	8500 SERIES	P1728	9039CA	P2484W (4" X 4")	9033CA
066N074	8500 SERIES	P1737	9057UF	P2490 (7/8")	9001FF SERIES
P1006-P1024	8100	P1747	9029CA	P2558 SERIES	9110HD
P1012	8000 SERIES	P1750	9025CA	P2600	8550
P1023	8000 SERIES	P1769	9103BB	P2626 (2-1/8" X 2-1/8")	9024CA
P1024	8000 SERIES	P1771	9104BB	P2785	9086BC
P1026 (1-7/8" X 2")	9022CA	P1773	9105BB	P2786	9087BC
P1028	9017FF	P1775	9106BB	P2863 (3/8")	9002FF SERIES
P1031	9016FF	P1777	9107BB	P2864 (1/2")	9002FF SERIES
P1036	9011FF	P1796S	9085BC	P3006-P3010	8000 SERIES
P1043A	9055UF	P1873	9020FF	P3045	9061ZF
P1045	9062ZF	P1887	9088PB	P3047	9051UF
P1047	9053UF	P1924	9004FF	P4006-P4010	8050 SERIES
P1048	9054UF	P1941	9008FF	P4012S	8050 SERIES
P1063 (3/8")	9001FF SERIES	P1950	9021FF	P4045	9059ZF
P1064 (1/2")	9001FF SERIES	P1964 (5/8")	9001FF SERIES	P4047	9049UF
P1065	9003FF	P1985S	9083BC	P5545	9063ZF
P1066	9006FF	P2024E-2070-70E	8250 SERIES	P5547	9056UF
P1067	9007FF	P2026CC	8300CTP/8300CT SERIES		

