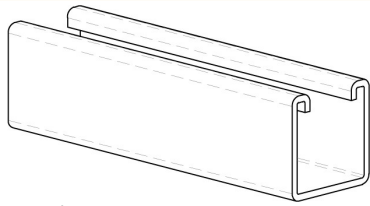




# CHANNEL STRUT

**FIG. 1001-1042**

**1 5/8" X 1 5/8" X 12 GAUGE**



**Material:**

Carbon steel (Aluminum and Type 304 or 316 Stainless Steel upon request)

**Finish:**

Plain, pre-galvanized, channel green, e-coat, or hot dipped galvanized

**Ordering:**

Specify figure number, material, finish, and number of feet.

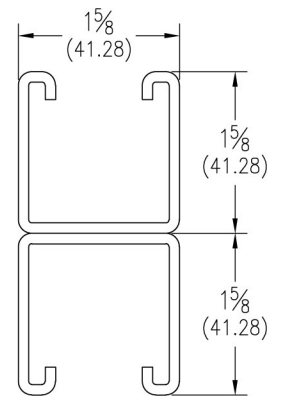
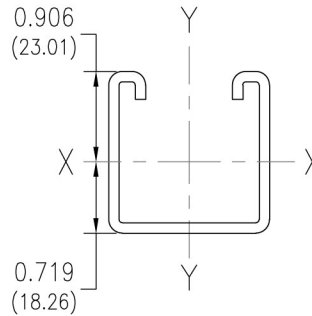
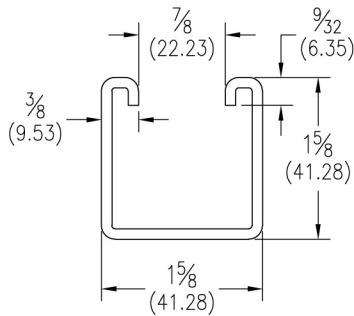
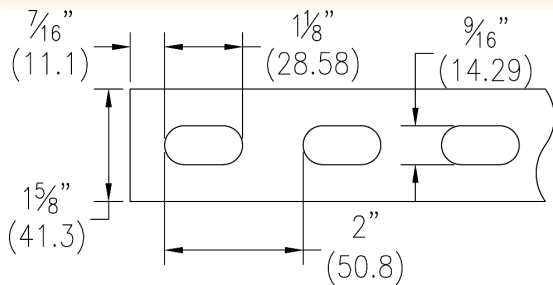
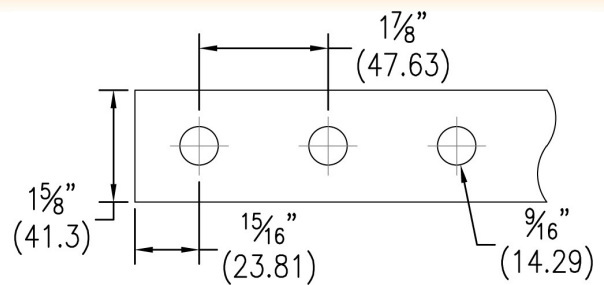


Fig. No.		Type - Description	Weight		Bundle Qty.			
10ft. (3.05m)	20ft. (6.1m)		lbs./ft.	kg/m	10ft.	3.05m	20ft.	6.1m
1001	1002	No Openings	1.77	(2.63)	500	(152.4)	500	(152.4)
1001A	1002A	Welded Back to Back	3.54	(5.27)	300	(91.4)	300	(91.4)
1011	1012	With 1 1/8" X 9/16" (28.58 X 14.29) slots on 2" (50.8) centers	1.70	(2.53)	500	(152.4)	500	(152.4)
1011A	1012A	Welded Back to Back	3.40	(5.06)	300	(91.4)	300	(91.4)
1021	1022	With 9/16" (14.29) dia. holes on 1 7/8" (47.63) centers	1.70	(2.53)	500	(152.4)	500	(152.4)
1021A	1022A	Welded Back to Back	3.40	(5.06)	300	(91.4)	300	(91.4)
1031	1032	With 3" (76.20) slots	1.68	(2.50)	500	(152.4)	500	(152.4)
1041	1042	With 7/8" (22.23) Knockouts on 6" (152.40) centers	1.77	(2.63)	500	(152.4)	500	(152.4)

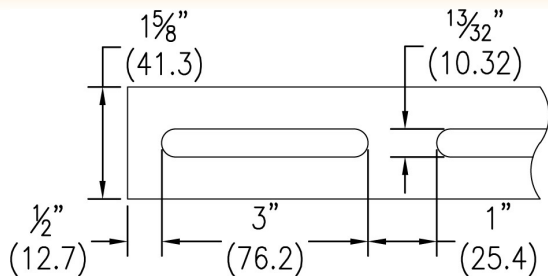
**1011-1012**



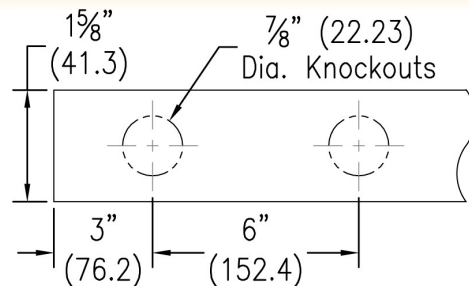
**1021-1022**



**1031-1032**



**1041-1042**



Unless otherwise specified, all dimensions on drawings and in charts are in inches and dimensions shown in parentheses are in millimeters.

# CHANNEL STRUT



1<sup>5</sup>/<sub>8</sub>" X 1<sup>5</sup>/<sub>8</sub>" X 12 GAUGE

FIG. 1001-1042

## Section Properties

Fig. No.	X-X Axis								Y-Y Axis					
	Area of Section		Moment Of Inertia		Section Modulus		Radius of Gyration		Moment Of Inertia		Section Modulus		Radius of Gyration	
	in. <sup>2</sup>	cm <sup>2</sup>	in. <sup>4</sup>	cm <sup>4</sup>	in. <sup>3</sup>	cm <sup>3</sup>	in.	cm	in. <sup>4</sup>	cm <sup>4</sup>	in. <sup>3</sup>	cm <sup>3</sup>	in.	cm
1001	0.562	(3.626)	0.1912	(7.961)	0.2125	(3.482)	0.583	(1.481)	0.2399	(9.988)	0.2953	(4.839)	0.653	(1.659)
1001A	1.124	(7.252)	0.9732	(40.519)	0.5989	(9.814)	0.931	(2.365)	0.4798	(19.977)	0.5905	(9.677)	0.653	(1.659)

Modules of Elasticity: 29,500,000 psi (203,395.3 mPa)

## Beam & Column Load Table

Fig. No.	Beam Span or Unbraced Column Height		Maximum Column Load		Uniform Load @25,000 psi		Deflection @25,000 psi		Uniform Load @1/240 Span	
			lbs.	kN	lbs.	kN			lbs.	kN
1001	12	(304.8)	10454	(46.50)	2610	(11.61)	0.01	(0.25)	2610	(11.61)
1001A			21625	(96.19)	2610*	(11.61)	0.01	(0.25)	2610*	(11.61)
1001	24	(609.6)	9311	(41.42)	1702	(7.57)	0.06	(1.52)	1702	(7.57)
1001A			21164	(94.14)	2610*	(11.61)	0.02	(0.51)	2610*	(11.61)
1001	36	(914.4)	7801	(34.70)	1135	(5.05)	0.13	(3.30)	1135	(5.05)
1001A			20397	(90.73)	2610*	(11.61)	0.06	(1.52)	2610*	(11.61)
1001	48	(1219.2)	6193	(27.55)	851	(3.79)	0.22	(5.59)	758	(3.37)
1001A			19322	(85.95)	2405	(10.70)	0.13	(3.30)	2405	(10.70)
1001	60	(1524.0)	4718	(20.99)	681	(3.03)	0.35	(8.89)	485	(2.16)
1001A			17940	(79.80)	1924	(8.56)	0.20	(5.08)	1924	(8.56)
1001	72	(1828.8)	3791	(16.86)	567	(2.52)	0.51	(12.95)	337	(1.50)
1001A			16251	(72.29)	1603	(7.13)	0.28	(7.11)	1603	(7.13)
1001	84	(2133.6)	3176	(14.13)	486	(2.16)	0.69	(17.53)	248	(1.10)
1001A			14255	(63.41)	1374	(6.11)	0.38	(9.65)	1255	(5.58)
1001	96	(2438.4)	2728	(12.13)	425	(1.89)	0.90	(22.86)	190	(0.85)
1001A			11951	(53.16)	1202	(5.35)	0.50	(12.70)	961	(4.27)
1001	108	(2743.2)	2381	(10.59)	378	(1.68)	1.13	(28.70)	150	(0.67)
1001A			9524	(42.36)	1069	(4.76)	0.63	(16.00)	759	(3.38)
1001	120	(3048.0)	2101	(9.35)	340	(1.51)	1.40	(35.56)	121	(0.54)
1001A			7715	(34.32)	962	(4.28)	0.78	(19.81)	615	(2.74)
1001	144	(3657.6)	1660	(7.38)	280	(1.25)	2.00	(50.80)	80	(0.36)
1001A			5040	(22.42)	800	(3.56)	1.14	(28.96)	420	(1.87)
1001	168	(4267.2)	-	-	240	(1.07)	2.72	(69.09)	60	(0.27)
1001A			-	-	680	(3.02)	1.53	(38.86)	310	(1.38)
1001	192	(4876.8)	-	-	210	(0.93)	3.55	(90.17)	50	(0.22)
1001A			-	-	600	(2.67)	2.02	(51.31)	240	(1.07)
1001	216	(5486.4)	-	-	190	(0.85)	4.58	(116.33)	40	(0.18)
1001A			-	-	530	(2.36)	2.54	(64.52)	190	(0.85)
1001	240	(6096.0)	-	-	170	(0.76)	5.62	(142.75)	-	-
1001A			-	-	480	(2.14)	3.16	(80.26)	150	(0.67)

For pierced Channels, reduce beam load values as follows:  
 1011 & 1012 = 15%  
 1021 & 1022 = 10%  
 1031 & 1032 = 30%  
 1041 & 1042 = 5%

### SPOT WELDING

Resistance welding of back to back strut channel is accomplished by way of an AC powered press type spot welder. This equipment produces a series of spot welds from 2" (50.8) to 4" (101.6) apart continuously down the length of the channel. Consistency is maintained by the use of a highly sophisticated constant current weld control. This processor is capable of maintaining weld sequence, duration and current control along with other variables. Any deviations in the programmed parameters will issue forth an alarm or shut down fault, which is then investigated. Weld quality is tested every 300-350 welds through the use of a destructive test method. Through the use of modern technology, destructive and non-destructive testing, the quality of strut can be maintained. Spot weld strut is fabricated in accordance with the R.W.M.A. guidelines for resistance welding.

**Beam Loads:** Published loads are given in total uniform load (lbs.) not uniform load (lbs./ft.). For loads concentrated at center of span multiply uniform load by 0.5 and multiply the deflection by 0.8 (refer to page 26 for reduction factors on other beam configurations.). When deflection is not a factor use stress of 25,000 PSI (172.37 mPa). When deflection is a factor use deflection of 1/240 span. \*Failure determined by weld shear.

**Column Loads:** Column loadings are for allowable axial loads for the unsupported heights listed and include a K value of .80. If eccentric, loads should be reduced according to standard practice.

CHANNEL  
 PIPE & CONDUIT SUPPORTS  
 STRUT NUTS & HARDWARE  
 CONCRETE INSERTS  
 END CAPS & CLOSURES  
 FLAT PLATE FITTINGS  
 90° ANGLE FITTINGS  
 ANGLE FITTINGS  
 "U" FITTINGS  
 "Z" FITTINGS  
 WING FITTINGS  
 SPECIALTY FITTINGS  
 TROLLEY ASSEMBLIES  
 POST BASES  
 BRACKETS & BRACE FITTINGS  
 BEAM CLAMPS  
 ROOFTOP SUPPORTS