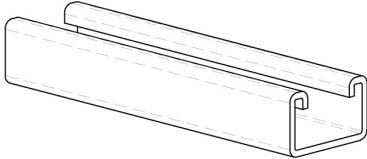




CHANNEL STRUT

FIG. 1401-1442

1 5/8" X 1" X 12 GAUGE



Material:
Carbon steel
Finish:
Plain, pre-galvanized, channel green, e-coat, or hot dipped galvanized
Ordering:
Specify figure number, finish, and number of feet.

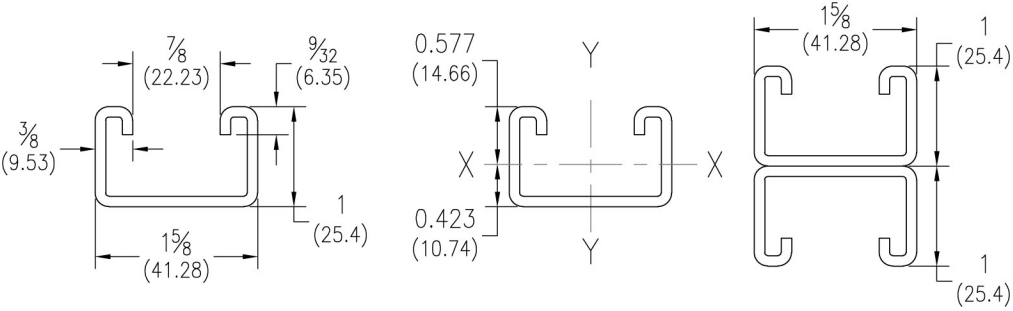
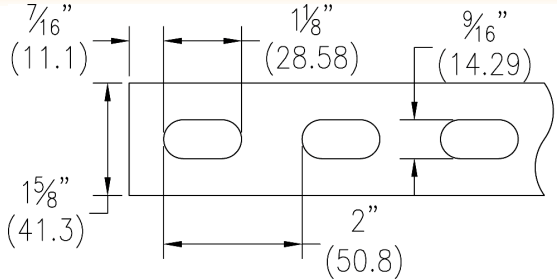
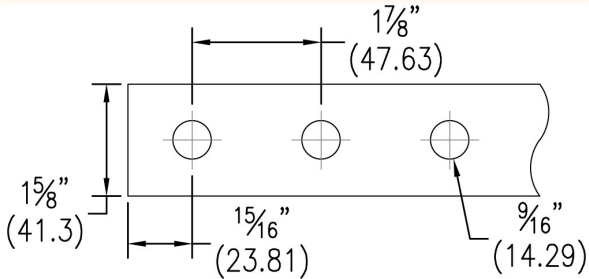


Fig. No.		Type - Description	Weight		Bundle Qty.			
10ft. (3.05m)	20ft. (6.1m)		lbs./ft.	kg/m	10ft.	3.05m	20ft.	6.1m
1401	1402	No Openings	1.38	(2.05)	500	(152.4)	1000	(304.8)
1401A	1402A	Welded Back to Back	2.88	(4.29)	500	(152.4)	400	(121.92)
1411	1412	With 1 1/8" X 9/16" (28.58 X 14.29) slots on 2" (50.8) centers	1.34	(1.99)	500	(152.4)	1000	(304.8)
1411A	1412A	Welded Back to Back	2.72	(4.05)	500	(152.4)	400	(121.92)
1421	1422	With 9/16" (14.29) dia. holes on 1 7/8" (47.63) centers	1.39	(2.07)	500	(152.4)	1000	(304.8)
1421A	1422A	Welded Back to Back	2.78	(4.14)	500	(152.4)	400	(121.92)
1431	1432	With 3" (76.20) slots	1.31	(1.95)	500	(152.4)	1000	(304.8)
1441	1442	With 7/8" (22.23) Knockouts on 6" (152.40) centers	1.38	(2.05)	500	(152.4)	1000	(304.8)

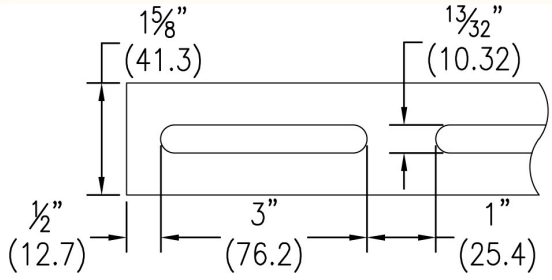
1411-1412



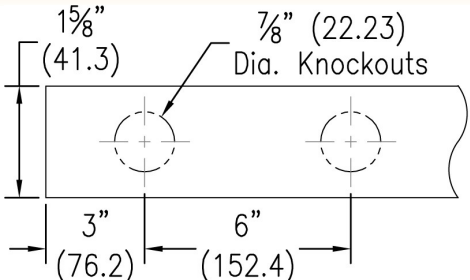
1421-1422



1431-1432



1441-1442



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

CHANNEL STRUT



1⁵/₈" X 1" X 12 GAUGE

FIG. 1401-1442

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. ²	cm ²	in. ⁴	cm ⁴	in. ³	cm ³	in.	cm	in. ⁴	cm ⁴	in. ³	cm ³	in.	cm
1401	0.43	(2.774)	0.055	(2.290)	0.095	(1.557)	0.357	(0.907)	0.163	(6.787)	0.201	(3.294)	0.616	(1.565)
1401A	0.86	(5.548)	0.263	(10.950)	0.263	(4.310)	0.553	(1.405)	0.327	(13.615)	0.402	(6.588)	0.616	(1.565)

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
1401	12	(304.8)	9138	(40.65)	1538	(6.84)	0.02	(0.51)	1538	(6.84)
1401A			21094	(93.83)	1590*	(7.07)	0.01	(0.25)	1590*	(7.07)
1401	24	(609.6)	8137	(36.20)	769	(3.42)	0.09	(2.29)	769	(3.42)
1401A			19757	(87.88)	1590*	(7.07)	0.04	(1.02)	1590*	(7.07)
1401	36	(914.4)	7050	(31.36)	513	(2.28)	0.20	(5.08)	388	(1.73)
1401A			18094	(80.49)	1428	(6.35)	0.11	(2.79)	1428	(6.35)
1401	48	(1219.2)	5405	(24.04)	384	(1.71)	0.35	(8.89)	218	(0.97)
1401A			16139	(71.79)	1071	(4.76)	0.20	(5.08)	1053	(4.68)
1401	60	(1524.0)	3512	(15.62)	308	(1.37)	0.55	(13.97)	140	(0.62)
1401A			13906	(61.86)	857	(3.81)	0.32	(8.13)	674	(3.00)
1401	72	(1828.8)	2439	(10.85)	256	(1.14)	0.79	(20.07)	97	(0.43)
1401A			11387	(50.65)	714	(3.18)	0.46	(11.68)	468	(2.08)
1401	84	(2133.6)	1792	(7.97)	220	(0.98)	1.07	(27.18)	71	(0.32)
1401A			8645	(38.45)	612	(2.72)	0.62	(15.75)	344	(1.53)
1401	96	(2438.4)	-	-	192	(0.85)	1.41	(35.81)	55	(0.24)
1401A			6619	(29.44)	535	(2.38)	0.81	(20.57)	263	(1.17)
1401	108	(2743.2)	-	-	171	(0.76)	1.78	(45.21)	43	(0.19)
1401A			5230	(23.26)	476	(2.12)	1.03	(26.16)	208	(0.93)
1401	120	(3048.0)	-	-	154	(0.69)	2.20	(55.88)	35	(0.16)
1401A			4236	(18.84)	428	(1.90)	1.27	(32.26)	168	(0.75)
1401	144	(3657.6)	-	-	130	(0.58)	3.22	(81.79)	20	(0.09)
1401A			-	-	360	(1.60)	1.86	(47.24)	120	(0.53)
1401	168	(4267.2)	-	-	-	-	-	-	-	-
1401A			-	-	310	(1.38)	2.54	(64.52)	90	(0.40)
1401	192	(4876.8)	-	-	-	-	-	-	-	-
1401A			-	-	270	(1.20)	3.31	(84.07)	70	(0.31)
1401	216	(5486.4)	-	-	-	-	-	-	-	-
1401A			-	-	240	(1.07)	4.19	(106.43)	-	-
1401	240	(6096.0)	-	-	-	-	-	-	-	-
1401A			-	-	210	(0.93)	5.03	(127.76)	-	-

For pierced Channels, reduce beam load values as follows:
 1411 & 1412 = 15%
 1421 & 1422 = 10%
 1431 & 1432 = 30%
 1441 & 1442 = 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