

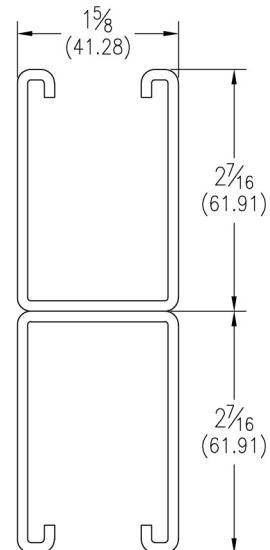
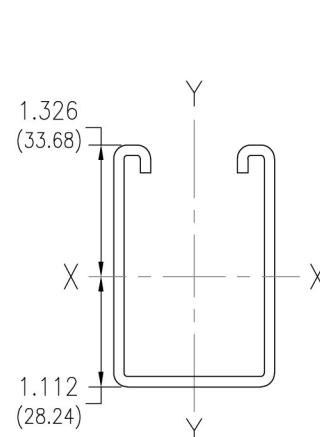
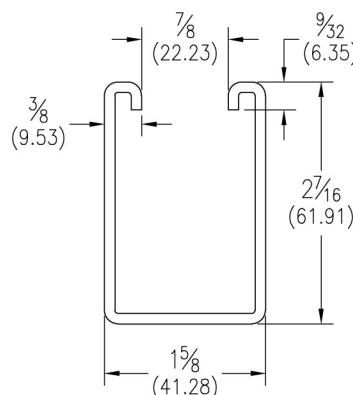
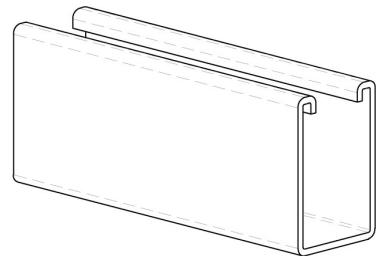


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CHANNEL STRUT

FIG. 1601-1642

1⁵/₈" X 2⁷/₁₆" X 12 GAUGE



Material:

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

Finish:

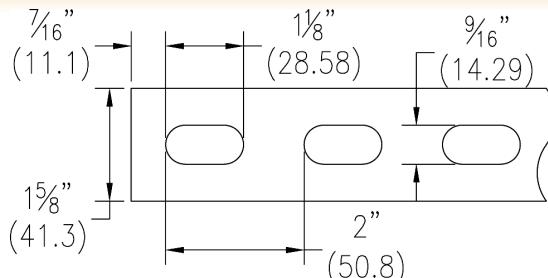
Plain, pre-galvanized, channel
green, e-coat, or hot dipped
galvanized

Ordering:

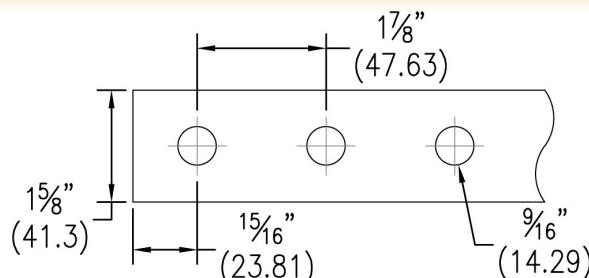
Specify figure number, material,
finish, and number of feet.

Fig. No.		Type - Description	Weight		Bundle Qty.			
10ft. (3.05m)	20ft. (6.1m)		lbs./ft.	kg/m	10ft.	3.05m	20ft.	6.1m
1601	1602	No Openings	2.30	(3.42)	300	(91.44)	400	(121.92)
1601A	1602A	Welded Back to Back	4.60	(6.85)	200	(60.96)	200	(60.96)
1611	1612	With 1 1/8" X 9/16" (28.58 X 14.29) slots on 2" (50.8) centers	2.23	(3.32)	300	(91.44)	400	(121.92)
1611A	1612A	Welded Back to Back	4.46	(6.64)	200	(60.96)	200	(60.96)
1621	1622	With 9/16" (14.29) dia. holes on 17/8" (47.63) centers	2.25	(3.35)	300	(91.44)	400	(121.92)
1621A	1622A	Welded Back to Back	4.86	(7.23)	200	(60.96)	200	(60.96)
1631	1632	With 3" (76.20) slots	2.21	(3.29)	300	(91.44)	400	(121.92)
1641	1642	With 7/8" (22.23) Knockouts on 6" (152.40) centers	2.30	(3.42)	300	(91.44)	400	(121.92)

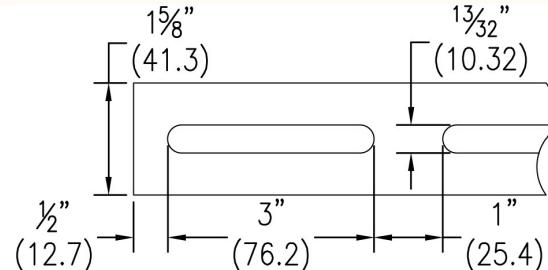
1611-1612



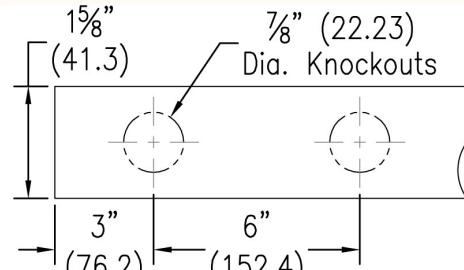
1621-1622



1631-1632



1641-1642



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

CHANNEL STRUT



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1⁵/₈" X 2⁷/₁₆" X 12 GAUGE

FIG. 1601-1642

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
1601	0.732	(4.723)	0.531	(22.108)	0.401	(6.571)	0.852	(2.164)	0.338	(14.073)	0.416	(6.817)	0.68	(1.727)
1601A	1.464	(9.445)	2.874	(119.659)	1.179	(19.320)	1.401	(3.559)	0.676	(28.145)	0.832	(13.634)	0.68	(1.727)

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		
		Ibs.	kN	Ibs.	kN			Ibs.	kN	
1601	12	(304.8)	10140	(45.10)	3880	(17.26)	0.01	(0.25)	3880	(17.26)
1601A			20820	(92.61)	3880*	(17.26)	0.01	(0.25)	3880*	(17.26)
1601	24	(609.6)	9244	(41.12)	3273	(14.56)	0.04	(1.02)	3273	(14.56)
1601A			20519	(91.27)	3880*	(17.26)	0.01	(0.25)	3880*	(17.26)
1601	36	(914.4)	7933	(35.29)	2182	(9.71)	0.09	(2.29)	2182	(9.71)
1601A			20017	(89.04)	3880*	(17.26)	0.03	(0.76)	3880*	(17.26)
1601	48	(1219.2)	6386	(28.41)	1636	(7.28)	0.15	(3.81)	1636	(7.28)
1601A			19315	(85.92)	3880*	(17.26)	0.07	(1.78)	3880*	(17.26)
1601	60	(1524.0)	4785	(21.28)	1309	(5.82)	0.24	(6.10)	1309	(5.82)
1601A			18412	(81.90)	3847	(17.11)	0.13	(3.30)	3847	(17.11)
1601	72	(1828.8)	3717	(16.53)	1091	(4.85)	0.35	(8.89)	947	(4.21)
1601A			17309	(76.99)	3206	(14.26)	0.19	(4.83)	3206	(14.26)
1601	84	(2133.6)	3052	(13.58)	935	(4.16)	0.47	(11.94)	696	(3.10)
1601A			16005	(71.19)	2748	(12.22)	0.26	(6.60)	2748	(12.22)
1601	96	(2438.4)	2600	(11.57)	818	(3.64)	0.62	(15.75)	533	(2.37)
1601A			14500	(64.50)	2404	(10.69)	0.33	(8.38)	2404	(10.69)
1601	108	(2743.2)	2271	(10.10)	727	(3.23)	0.77	(19.56)	421	(1.87)
1601A			12795	(56.92)	2137	(9.51)	0.42	(10.67)	2137	(9.51)
1601	120	(3048.0)	2019	(8.98)	655	(2.91)	0.96	(24.38)	341	(1.52)
1601A			10889	(48.44)	1924	(8.56)	0.52	(13.21)	1844	(8.20)
1601	144	(3657.6)	1650	(7.34)	550	(2.45)	1.39	(35.31)	240	(1.07)
1601A			7150	(31.80)	1610	(7.16)	0.75	(19.05)	1280	(5.69)
1601	168	(4267.2)	1380	(6.14)	470	(2.09)	1.88	(47.75)	170	(0.76)
1601A			5250	(23.35)	1380	(6.14)	1.03	(26.16)	940	(4.18)
1601	192	(4876.8)	-	-	410	(1.82)	2.45	(62.23)	130	(0.58)
1601A			-	-	1210	(5.38)	1.34	(34.04)	720	(3.20)
1601	216	(5486.4)	-	-	360	(1.60)	3.06	(77.72)	110	(0.49)
1601A			-	-	1070	(4.76)	1.69	(42.93)	570	(2.54)
1601	240	(6096.0)	-	-	330	(1.47)	3.85	(97.79)	90	(0.40)
1601A			-	-	970	(4.31)	2.11	(53.59)	460	(2.05)

For pierced Channels, reduce beam load values as follows:
 1611 & 1612 = 15%
 1621 & 1622 = 10%
 1631 & 1632 = 30%
 1641 & 1642 = 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.

