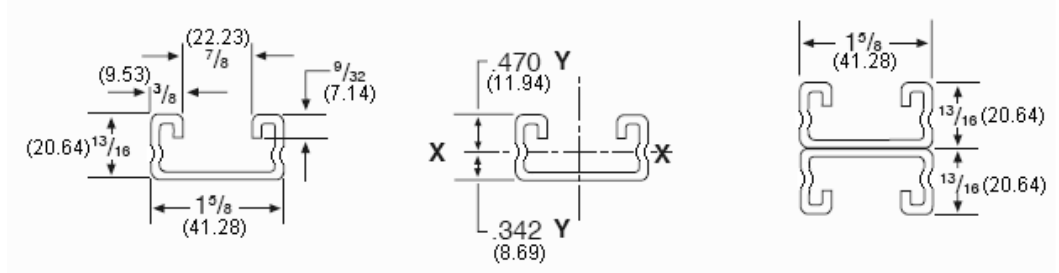
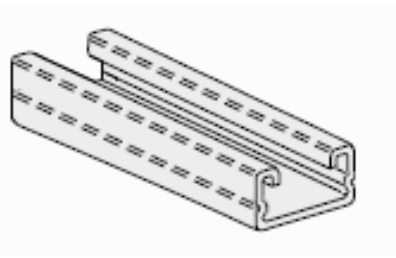




# CHANNEL

1801 - 1842

1<sup>5</sup>/<sub>8</sub>" X 1<sup>3</sup>/<sub>16</sub>" X 16 Gauge

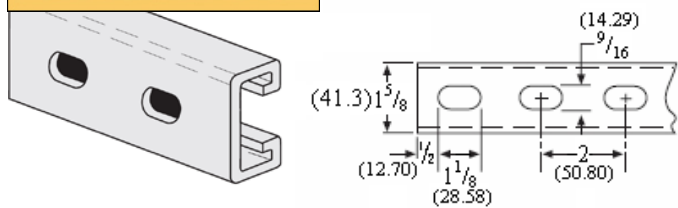


**ORDERING:**

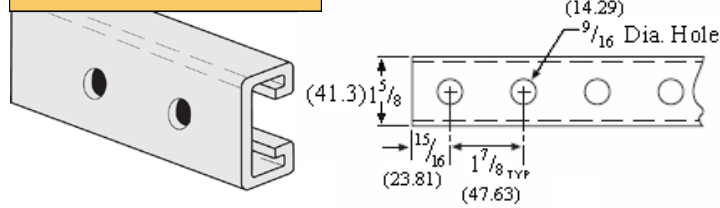
Specify Figure No., finish and number of feet.

Fig. Number				Type - Description	Weight		Bundle Qty.			
10ft.	3.05m	20ft.	6.10m		lbs./ft.	kg/m	10ft.	3.05m	20ft.	6.10m
1801		1802		No Openings	0.86	(1.28)	500	(152.4)	1000	(304.8)
1801A		1802A		Welded Back to Back	1.72	(2.56)	500	(152.4)	500	(152.4)
1811		1812		With 1 <sup>1</sup> / <sub>8</sub> " X 9/ <sub>16</sub> " (28.58 X 14.29) slots on 2" (50.8) centers	0.75	(1.12)	500	(152.4)	1000	(304.8)
1811A		1812A		Welded Back to Back	1.52	(2.26)	500	(152.4)	500	(152.4)
1821		1822		With 9/ <sub>16</sub> " (14.29) dia. holes on 1 <sup>7</sup> / <sub>8</sub> " (47.63) centers	0.77	(1.15)	500	(152.4)	1000	(304.8)
1821A		1822A		Welded Back to Back	1.56	(2.32)	500	(152.4)	500	(152.4)
1831		1832		With 3" (76.20) slots	0.75	(1.12)	500	(152.4)	1000	(304.8)
1841		1842		With 7/ <sub>8</sub> " (22.23) Knockouts on 6" (152.40) centers	0.86	(1.28)	500	(152.4)	1000	(304.8)

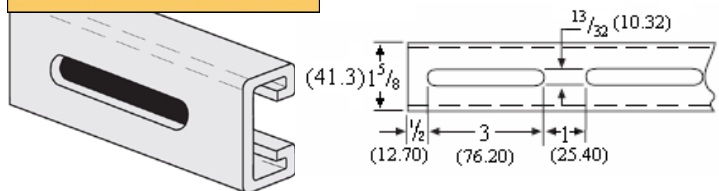
1811 - 1812



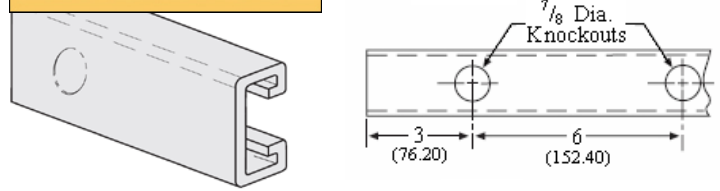
1821 - 1822



1831 - 1832



1841 - 1842



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

## Elements of Selection

1801 - 1842

Figure Number	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
1801	.252	(1.626)	.024	(0.999)	.051	(0.836)	.306	(0.777)	.094	(3.914)	.115	(1.885)	.612	(1.554)
1801A	.502	(3.239)	.111	(4.622)	.137	(2.245)	.469	(1.191)	.188	(7.827)	.231	(3.785)	.612	(1.554)

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

## Beam & Column Loads

Figure Number	Beam Span or Unbraced Column Height		Maximum Column Load		Uniform Load		Deflection		Uniform Load @ 1/240 Span	
			Lbs.	kN	Lbs.	kN	In.	mm	Lbs.	kN
1801	12	(304.80)	4968	(22.10)	610	(2.71)	0.027	(0.686)	610	(2.71)
1801A			10237	(45.54)	610*	(2.71)	0.004	(0.102)	610	(2.71)
1801	24	(609.60)	4329	(19.26)	408	(1.81)	0.110	(2.794)	371	(1.65)
1801A			9881	(43.95)	610*	(2.71)	0.043	(1.092)	610	(2.71)
1801	36	(914.40)	3441	(15.31)	270	(1.20)	0.243	(6.172)	168	(0.75)
1801A			8965	(39.88)	610*	(2.71)	0.131	(3.327)	610	(2.71)
1801	48	(1219.20)	2263	(10.07)	201	(0.89)	0.433	(10.998)	92	(0.41)
1801A			7670	(34.12)	535	(2.38)	0.250	(6.350)	427	(1.90)
1801	60	(1524.00)	1448	(6.44)	161	(0.72)	0.675	(17.145)	60	(0.27)
1801A			6172	(27.45)	427	(1.90)	0.396	(10.058)	271	(1.21)
1801	72	(1828.80)	1005	(4.47)	138	(0.61)	0.995	(25.273)	41	(0.18)
1801A			4586	(20.40)	357	(1.59)	0.567	(14.402)	189	(0.84)
1801	84	(2133.60)	--	--	118	(0.52)	1.357	(34.468)	30	(0.13)
1801A			3368	(14.98)	307	(1.37)	0.773	(19.634)	139	(0.62)
1801	96	(2438.40)	--	--	101	(0.45)	1.731	(43.967)	22	(0.10)
1801A			2581	(11.48)	268	(1.19)	1.011	(25.679)	108	(0.48)
1801	108	(2743.20)	--	--	90	(0.40)	2.203	(55.956)	19	(0.08)
1801A			2037	(9.06)	238	(1.06)	1.279	(32.487)	82	(0.36)
1801	120	(3048.00)	--	--	81	(0.36)	2.701	(68.605)	13	(0.06)
1801A			--	--	211	(0.94)	1.552	(39.421)	69	(0.31)

**Beam Loads:** Loads listed are uniformly distributed, for loads concentrated at center of span multiply uniform load by .5 and multiply the deflection by .8. 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.

For Fabricated Channels, reduce beam load values as follows:

1811 & 1812	15%
1821 & 1822	10%
1831 & 1832	30%
1841 & 1842	5%

### TECHNICAL DATA

#### 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.

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