TOPSUPPORTS

Innovative Strength

Technical Data Sheet

Model: *TS150*

TopSupports is a galvanized steel channel designed to simplify installation and seismic bracing for multiple applications, such as ventilation, electricity, plumbing, refrigeration and fire security.

MATERIAL

Material : High quality of pre-galvanized steel, zinc ***ASTM-G-90*** under control of ***ASTM-A653***. Yield strength is 33,000psi and E is 29(10^3) ksi.

Manufacturing method : Cold roll forming using a series of rolls according to ***AISI-S100-16*** and ***CSA-S136-16***.

Thickness : 18 Gauge (0.049 in / 1.27 mm)

	Wt./Ft.	Aera of Section	X-X Axis			Y-Y Axis		
	Lbs	Sq. in.	I in4	S in3	r in	I in4	S in3	r in
TS150	0.954	0.283	0.095	0.103	0.581	0.123	0.152	0.661

	Wt./Ft.	Aera of Section	X-X Axis			Y-Y Axis		
	kg/m	mm2	I mm4	S mm3	r mm	I mm4	S mm3	r mm
TS150	1.420	182.277	3.965E+04	1695.625	14.750	5.130E+04	2485.993	16.777

BEAM LOADS

Span	Allowable Uniform Load	Deflection	Uniform Load		
	18000		1/180	1/240	1/360
in	Lbs	in	Lbs	Lbs	Lbs
12	1242	0.01	**	**	**
18	828	0.02	**	**	**
24	621	0.04	**	**	**
30	497	0.06	**	**	**
36	414	0.09	**	**	**
42	355	0.12	**	**	334
48	310	0.16	**	**	256
60	248	0.25	**	246	164
72	207	0.36	**	171	114
84	177	0.50	167	125	84
96	155	0.65	128	96	64
108	138	0.82	101	76	51
120	124	1.01	82	61	41
180	83	2.28	36	27	18
240	62	4.04	20	15	10

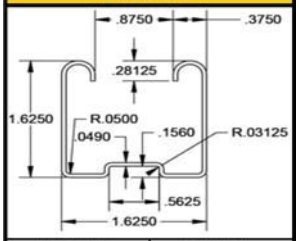
SIMPLE BEAM LOAD AND SUPPORTS CONDITIONS

	Load Factor	Deflection Factor
Uniform Load	1	1
Concentrated Load at Center	0.5	0.8

BEAM LOAD DATA

** Uniform beam capacity is lower than the 1/240 or 1/360 of beam capacity and is therefore the governing constraint

TS150



X-X Axis	Y-Y Axis
c in	c in
0.921	0.813
c mm	c mm
23.386	20.638

GENERAL NOTES

1. The beam capacies 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 uniformly loaded, simply supported beam.

3. Beam capacity, the allowable stress is based on 18, 000 psi. Means a safety factor of 1,83.

4. The load charts shows beam capacity for strut without holes. For strut with hole, multiply by 0.9.

TOPSUPPORTS

Innovative Strength

Technical Data Sheet

Model: *TS150*

TopSupports is a galvanized steel channel designed to simplify installation and seismic bracing for multiple applications, such as ventilation, electricity, plumbing, refrigeration and fire security.

MATERIAL

Material : High quality of pre-galvanized steel, zinc ***ASTM-G-90*** under control of ***ASTM-A653***. Yield strength is 33,000psi and E is 29(10^3) ksi.

Manufacturing method : Cold roll forming using a series of rolls according to ***AISI-S100-16*** and ***CSA-S136-16***.

Thickness : 18 Gauge (0.049 in / 1.27 mm)

	Wt./Ft.	Aera of Section	X-X Axis			Y-Y Axis		
	Lbs	Sq. in.	I in4	S in3	r in	I in4	S in3	r in
TS150	0.954	0.283	0.095	0.103	0.581	0.123	0.152	0.661

	Wt./Ft.	Aera of Section	X-X Axis			Y-Y Axis		
	kg/m	mm2	I mm4	S mm3	r mm	I mm4	S mm3	r mm
TS150	1.420	182.277	3.965E+04	1695.625	14.750	5.130E+04	2485.993	16.777

BEAM AND COLUMN LOADS

Span	Allowable Uniform Load	Deflection	Uniform Load			Max Load of Column loaded @ C.G.			
	18000		1/180	1/240	1/360	K=0.65	K=0.8	K=1	K=1.2
in	Lbs	in	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs	Lbs
12	1242	0.01	**	**	**	4152	4108	4039	3957
18	828	0.02	**	**	**	4048	3957	3815	3655
24	621	0.04	**	**	**	3912	3764	3541	3302
30	497	0.06	**	**	**	3750	3541	3241	2937
36	414	0.09	**	**	**	3570	3302	2937	2587
42	355	0.12	**	**	334	3377	3058	2644	2268
48	310	0.16	**	**	256	3180	2817	2371	1986
60	248	0.25	**	246	164	2788	2371	1900	1529
72	207	0.36	**	171	114	2423	1986	1529	1193
84	177	0.50	167	125	84	2099	1666	1242	947
96	155	0.65	128	96	64	1818	1405	1021	765
108	138	0.82	101	76	51	1578	1193	850	***
120	124	1.01	82	61	41	1376	1021	***	***
180	83	2.28	36	27	18	***	***	***	***
240	62	4.04	20	15	10	***	***	***	***

SIMPLE BEAM LOAD AND SUPPORTS CONDITIONS

	Load Factor	Deflection Factor
Uniform Load	1	1
Concentrated Load at Center	0.5	0.8

COLUMN LOAD DATA

*** Ratio KL/r is greater than 200.

BEAM LOAD DATA

** Uniform beam capacity is lower than the 1/240 or 1/360 of beam capacity and is therefore the governing constraint

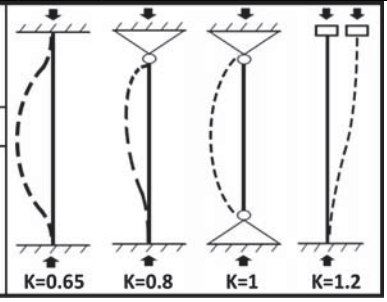
MAXIMUM HORIZONTAL LOADS FOR SWAY BRACES

Item	Area	Radius of Gyration (r)	Maximum length			Maximum Horizontal Load (lb) Brace Angle		
	(in.²)	(in.)	KL/r	ft	in.	30° to 44° Angle from Vertical	45° to 59° Angle from Vertical	60° to 90° Angle from Vertical
TS-150	0.283	0.581	100	4	10	770	1090	1334
			200	9	8	356	504	617
			300	14	6	182	258	316

1. The capacity of a colone is based on several factors. One of them is the method of fixing the extrimities which results in the factor **K**

Type of fastening at the ends:

- Fixed rotation, fixed translation
- Free rotation, fixed translation
- Fixed rotation,free translation



GENERAL NOTES

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

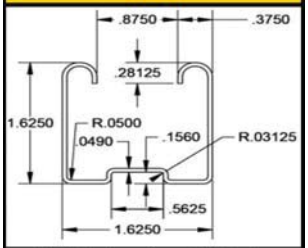
2. Allowable beam loads are based on a uniformly loaded, simply supported beam.

3. Beam capacity, the allowable stress is based on 18, 000 psi. Means a safety factor of 1,83.

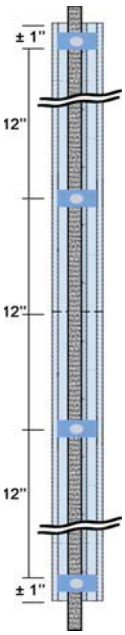
4. Column capacity, the allowable stress is based on 15, 000 psi. That's mean a safety factor of 2,20.

5. The load charts shows beam capacity for strut without holes. For strut with hole, multiply by 0.9.

TS150



X-X Axis	Y-Y Axis
c in	c in
0.921	0.813
c mm	c mm
23.386	20.638



To do a rod stiffener will need to have an accessories to hold down in the center your 3/8 or 1/ 2'' threaded rod *.

* *Check with your seismic engineer.*

1419 Michelin, Laval, Qc Canada H7L-4S2 Office : 450-975-0909 info@topsupports.com