TOPSUPPORTS

Innovative Strength

Technical Data Sheet

Model: *TS2-22*

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 : 22 Gauge (0.031 in / 0.794 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
TS2-22	0.445	0.132	0.009	0.017	0.254	0.086	0.081	0.809

	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
TS2-22	0.662	85.12	3.548E+03	277.11	6.46	3.598E+04	1320.18	20.56

BEAM LOADS

Span	Allowable Uniform Load	Deflection	Uniform Load		
	18000psi		1/180	1/240	1/360
in	Lbs	in	Lbs	Lbs	Lbs
12	203	0.018	**	**	**
18	135	0.042	**	**	**
24	101	0.074	**	**	92
30	81	0.115	**	**	59
36	68	0.166	**	61	41
42	58	0.226	**	45	30
48	51	0.296	46	34	23
60	41	0.462	29	22	15
72	34	0.665	20	15	10
84	29	0.905	15	11	7
96	25	1.182	11	9	6
108	23	1.496	9	7	5
120	20	1.847	7	5	4
180	14	4.156	3	2	2
240	10	7.388	2	1	1

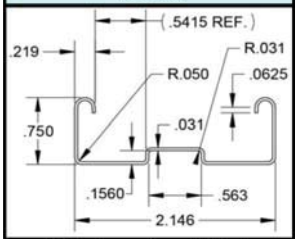
SIMPLE BEAM LOAD AND SUPPORTS CONDITIONS

	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

TS2-22



X-X Axis	Y-Y Axis
c in	c in
0.504	**1.073**
c mm	c mm
12.80	27.25

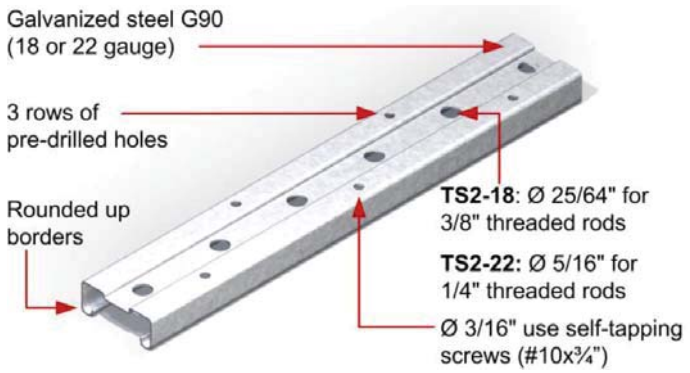
GENERAL NOTES

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. 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: *TS2-22B*

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.

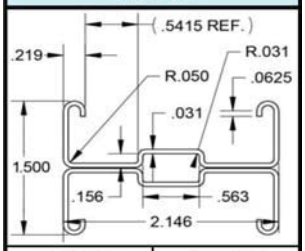
Manufacturing method : Cold roll forming using a series of rolls according to ***AISI-S100-16*** and ***CSA-S136-16***.

Thickness : 22 Gauge (0.031 in / 0.794 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
TS2-22B	0.890	0.264	0.033	0.044	0.354	0.173	0.161	0.809

	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
TS2-22B	1.324	170.245	1.374E+04	721.212	8.983	7.196E+04	2640.353	20.559

TS2-22B



X-X Axis	Y-Y Axis
c in	c in
0.750	1.073
c mm	c mm
19.050	27.254

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	528	0.01	**	**	**	3748	3648	3494	3323
18	352	0.03	**	**	**	3515	3323	3048	2768
24	264	0.05	**	**	**	3233	2954	2586	2243
30	211	0.08	**	**	**	2931	2586	2163	1804
36	176	0.11	**	**	158	2631	2243	1804	1455
42	151	0.15	**	**	116	2346	1940	1507	1185
48	132	0.20	**	**	89	2086	1678	1267	975
60	106	0.31	**	85	57	1648	1267	917	***
72	88	0.45	79	59	39	1311	975	***	***
84	75	0.61	58	43	29	1056	767	***	***
96	66	0.79	44	33	22	863	***	***	***
108	59	1.01	35	26	18	714	***	***	***
120	53	1.24	28	21	14	***	***	***	***
180	35	2.79	13	9	6	***	***	***	***
240	26	4.97	7	5	4	***	***	***	***

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	BEAM LOAD DATA
*** Ratio KL/r is greater than 200.	** Uniform beam capacity is lower than the 1/240 or 1/360 of beam capacity and is therefore the governing constraint

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. 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.

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