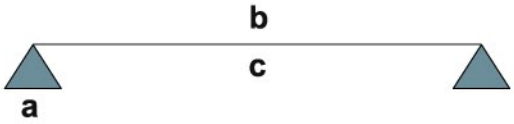
Rofo® Brand High Tensile Galvanized Steel Lipped Channel

Bending Moment; Reaction & Deflection Coefficient

Coefficients For Uniformly Loaded Sections	
Simple Span	0.01250 0.01302 0.5000 0.5000
Double Span	0.0700 -0.1250 0.0700 0.00541 0.00541 0.3750 1.2500 0.3750



R = Reaction = awLN
M = Moment = bwL ^{2}Nmm
D = Deflection = cwL ^{4}mm/EI

a = Reaction Coefficient
b = Bending Momnet Coefficient
c = Deflection Coefficient
w = Uniformly Distributed Load (N/mm)
L = Span (mm)
E = Modulus of Elasticity 2 x 10^{5} N/mm^{2}
L = Moment of Inertia of Section (mm^{4})

Symmetrical Equidistant Point Loads		
Loading Condition	Diagram	Conversion Formula
Single Load	P	w=2P/L
2 Loads	P P	w= 2.67P/L
3 Loads	P P P	w=4P/L
4 Loads	P P P P	w=4.8P/L
5 Loads	P P P P P	6P/L
6 Or More loads	P P P P P P	1.14NP/L

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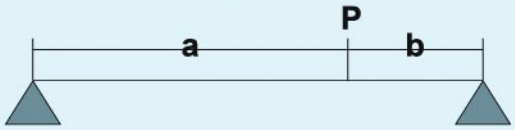
Symmetrical Equidistant Point Loads		
Loading Condition	Diagram	Conversion Formula
Single Essentric Point Load		$w = \frac{8abP}{L^3}$
Two Symmetrical Point Load		$w = \frac{8bP}{L^2}$

Symbols Used In Table For Conversion of Poing Loads:-

P = Single Point Load (kN)

L = Span (m)

a = Larger distance from support (m)

b = Smaller distance from support (m)

w = Equivalent uniform load (kN/m)

N = Number of point loads over one span (for 6 or more loads)

Limit State Capacity Load Table

Channel Span (mm)	RLC10016/C10016				RLC10020/C10020				RLC10025/C10025			
	Single Span		Double Span		Single Span		Double Span		Single Span		Double Span	
	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D
2100	7.07	5.09	7.07	12.24	9.01	6.31	9.01	15.19	11.36	7.79	11.36	18.74
2400	5.42	3.41	5.42	8.20	6.90	4.23	6.90	10.18	8.70	5.22	8.70	12.55
2700	4.28	2.39	4.28	5.76	5.45	2.97	5.45	7.15	6.87	3.66	6.87	8.82
3000	3.47	1.74	3.47	4.20	4.42	2.17	4.42	5.21	5.57	2.67	5.57	6.43
3300	2.86	1.31	2.86	3.15	3.65	1.63	3.65	3.91	4.60	2.01	4.60	4.83
3600	2.41	1.01	2.41	2.43	3.07	1.25	3.07	3.02	3.87	1.55	3.87	3.72
3900	2.05	0.80	2.05	1.91	2.61	0.99	2.61	2.37	3.29	1.22	3.29	2.93
4200	1.77	0.64	1.77	1.53	2.25	0.79	2.25	1.90	2.84	0.97	2.84	2.34
4500	1.54	0.52	1.54	1.24	1.96	0.64	1.96	1.54	2.47	0.79	2.47	1.90
4800	1.35	0.43	1.35	1.03	1.72	0.53	1.72	1.27	2.17	0.65	2.17	1.57
5100	1.20	0.36	1.20	0.85	1.53	0.44	1.53	1.06	1.93	0.54	1.93	1.31
5400	1.07	0.30	1.07	0.72	1.36	0.37	1.36	0.89	1.72	0.46	1.72	1.10
5700	0.96	0.25	0.96	0.61	1.22	0.32	1.22	0.76	1.54	0.39	1.54	0.94
6000	0.87	0.22	0.87	0.52	1.10	0.27	1.10	0.65	1.39	0.33	1.39	0.80

Limit State Capacity Load Table

Channel Span (mm)	RLC12516/C12516				RLC12520/C12520				RLC12525/C12525			
	Single Span		Double Span		Single Span		Double Span		Single Span		Double Span	
	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D
2100	9.55	8.86	9.55	21.31	12.29	11.02	12.29	26.52	15.63	13.63	15.63	32.80
2400	7.31	5.93	7.31	14.28	9.41	7.38	9.41	17.77	11.97	9.13	11.97	21.97
2700	5.78	4.17	5.78	10.03	7.43	5.19	7.43	12.48	9.46	6.41	9.46	15.43
3000	4.68	3.04	4.68	7.31	6.02	3.78	6.02	9.10	7.66	4.67	7.66	11.25
3300	3.87	2.28	3.87	5.49	4.98	2.84	4.98	6.84	6.33	3.51	6.33	8.45
3600	3.25	1.76	3.25	4.23	4.18	2.19	4.18	5.26	5.32	2.71	5.32	6.51
3900	2.77	1.38	2.77	3.33	3.56	1.72	3.56	4.14	4.53	2.13	4.53	5.12
4200	2.39	1.11	2.39	2.66	3.07	1.38	3.07	3.32	3.91	1.70	3.91	4.10
4500	2.08	0.90	2.08	2.17	2.68	1.12	2.68	2.70	3.40	1.39	3.40	3.33
4800	1.83	0.74	1.83	1.78	2.35	0.92	2.35	2.22	2.99	1.14	2.99	2.75
5100	1.62	0.62	1.62	1.49	2.08	0.77	2.08	1.85	2.65	0.95	2.65	2.29
5400	1.44	0.52	1.44	1.25	1.86	0.65	1.86	1.56	2.36	0.80	2.36	1.93
5700	1.30	0.44	1.30	1.07	1.67	0.55	1.67	1.33	2.12	0.68	2.12	1.64
6000	1.17	0.38	1.17	0.91	0.51	0.47	1.51	1.14	1.92	0.58	1.92	1.41
6300	1.06	0.33	1.06	0.79	1.37	0.41	1.37	0.98	1.74	0.50	1.74	1.21
6600	0.97	0.29	0.97	0.69	1.24	0.36	1.24	0.85	1.58	0.44	1.58	1.06
6900	0.88	0.25	0.88	0.60	1.14	0.31	1.14	0.75	1.45	0.38	1.45	0.92
7200	0.81	0.22	0.81	0.53	1.05	0.27	1.05	0.66	1.33	0.34	1.33	0.81

Note: The above datas are guideline only, any varies subject to individual Structural Engineer design.

Limit State Capacity Load Table

Channel Span (mm)	RLC15016/C15016				RLC15020/C15020				RLC15025/C15025			
	Single Span		Double Span		Single Span		Double Span		Single Span		Double Span	
	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D
3000	6.82	5.48	6.82	13.19	8.85	6.82	8.85	16.41	11.35	8.46	11.35	20.36
3300	5.63	4.12	5.63	9.91	7.32	5.12	7.32	12.33	9.38	6.35	9.38	15.29
3600	4.73	3.17	4.73	7.63	6.15	3.95	6.16	9.50	7.88	4.89	7.88	11.78
3900	4.03	2.49	4.03	6.00	5.24	3.10	5.24	7.47	6.72	3.85	6.72	9.27
4200	3.48	2.00	3.48	4.81	4.52	2.48	4.52	5.98	5.79	3.08	5.79	7.42
4500	3.03	1.62	3.03	3.91	3.94	2.02	3.94	4.86	5.04	2.51	5.04	6.03
4800	2.66	1.34	2.66	3.22	3.46	1.66	3.46	4.01	4.43	2.07	4.43	4.97
5100	2.36	1.12	2.36	2.68	3.06	1.39	3.06	3.34	3.93	1.72	3.93	4.14
5400	2.10	0.94	2.10	2.26	2.73	1.17	2.73	2.81	3.50	1.45	3.50	3.49
5700	1.89	0.80	1.89	1.92	2.45	0.99	2.45	2.39	3.14	1.23	3.14	2.97
6000	1.70	0.69	1.70	1.65	2.21	0.85	2.21	2.05	2.84	1.06	2.84	2.54
6300	1.55	0.59	1.55	1.42	2.01	0.74	2.01	1.77	2.57	0.91	2.57	2.20
6600	1.41	0.51	1.41	1.24	1.83	0.64	1.83	1.54	2.35	0.79	2.35	1.91
6900	1.29	0.45	1.29	1.08	1.67	0.56	1.67	1.35	2.15	0.70	2.15	1.67
7200	1.18	0.40	1.18	0.95	1.54	0.49	1.54	1.19	1.97	0.61	1.97	1.47
7500	1.09	0.35	1.09	0.84	1.42	0.44	1.42	1.05	1.82	0.54	1.82	1.30
7800	1.01	0.31	1.01	0.75	1.31	0.39	1.31	0.93	1.68	0.48	1.68	1.16
8100	0.94	0.28	0.94	0.67	1.21	0.35	1.21	0.83	1.56	0.43	1.56	1.03

Limit State Capacity Load Table

Channel Span (mm)	RLC20016/C20016				RLC20020/C20020				RLC20025/C20025			
	Single Span		Double Span		Single Span		Double Span		Single Span		Double Span	
	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D
3300	8.22	8.61	8.22	20.72	10.88	10.73	10.88	25.81	14.47	13.33	14.17	32.09
3600	6.90	6.63	6.90	15.96	9.15	8.26	9.15	19.88	11.91	10.27	11.91	24.72
3900	5.88	5.22	5.88	12.55	7.79	6.50	7.79	45.64	10.15	8.08	10.15	19.44
4200	5.07	4.18	5.07	10.05	6.72	5.20	6.72	12.52	8.75	6.47	8.75	15.57
4500	4.42	3.39	4.42	8.17	5.85	4.23	5.85	10.18	7.62	5.26	7.62	12.66
4800	3.88	2.80	3.88	6.73	5.14	3.49	5.14	8.39	6.70	4.33	6.70	10.43
5100	3.44	2.33	3.44	5.61	4.56	2.91	4.56	6.99	5.93	3.61	5.93	8.69
5400	3.07	1.96	3.07	4.73	4.06	2.45	4.06	5.89	5.29	3.04	5.29	7.32
5700	2.75	1.67	2.75	4.02	3.65	2.08	3.65	5.01	4.75	2.59	4.75	6.23
6000	2.49	1.43	2.49	3.45	3.29	1.78	3.29	4.29	4.29	2.22	4.29	5.34
6300	2.25	1.24	2.25	2.98	2.99	1.54	2.99	3.71	3.89	1.92	3.89	4.61
6600	2.05	1.08	2.05	2.59	2.72	1.34	2.72	3.23	3.54	1.67	3.54	4.01
6900	1.88	0.94	1.88	2.27	2.49	1.17	2.49	2.82	2.24	1.46	3.24	3.51
7200	1.73	0.83	1.73	1.99	2.29	1.03	2.29	2.49	2.98	1.28	2.98	3.09
7500	1.59	0.73	1.59	1.76	2.11	0.91	2.11	2.20	2.74	1.14	2.74	2.74
7800	1.47	0.65	1.47	1.57	1.95	0.81	1.95	1.95	2.54	1.01	2.54	2.43
8100	1.36	0.58	1.36	1.40	1.81	0.73	1.81	1.75	2.35	0.90	2.35	2.17
8400	1.27	0.52	1.27	1.26	1.68	0.65	1.68	1.57	2.19	0.81	2.19	1.95
8700	1.18	0.47	1.18	1.13	1.57	0.59	1.57	1.41	2.04	0.73	2.04	1.75
9000	1.10	0.42	1.10	1.02	1.46	0.53	1.46	1.27	1.91	0.66	1.91	1.58
9300	1.03	0.38	1.03	0.93	1.37	0.48	1.37	1.15	1.78	0.60	1.78	1.43
9600	0.97	0.35	0.97	0.84	1.29	0.44	1.29	1.05	1.67	0.54	1.67	1.30
9900	0.91	0.32	0.91	0.77	1.21	0.40	1.21	0.96	1.57	0.49	1.57	1.19
10200	0.86	0.29	0.86	0.70	1.14	0.36	1.14	0.87	1.48	0.45	1.48	1.09
10500	0.81	0.27	0.81	0.64	1.08	0.33	1.08	0.80	1.40	0.41	1.40	1.00
10800	0.77	0.25	0.77	0.59	1.02	0.31	1.02	0.74	1.32	0.38	1.32	0.92
11100	0.73	0.23	0.73	0.54	0.96	0.28	0.96	0.68	1.25	0.35	1.25	0.84
11400	0.69	0.21	0.69	0.50	0.91	0.26	0.91	0.63	1.19	0.32	1.19	0.78
11700	0.65	0.19	0.65	0.46	0.87	0.24	0.87	0.58	1.13	0.30	1.13	0.72
12000	0.62	0.18	0.62	0.43	0.82	0.22	0.82	0.54	1.07	0.28	1.07	0.67

Notes:

1. W_S = Inward Load
2. W_D = Deflection Load
3. All loads are assumed to be uniformly distributed in unit KN/m
4. Deflection load is produced from (Span/180). It is not a design limitation.
5. The above datas are guideline only, any varies subject to individual Structural Engineer design.

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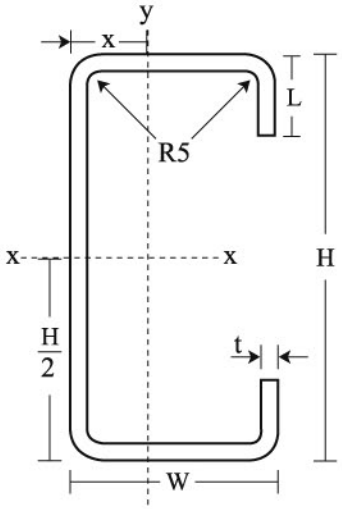
Limit State Capacity Load Table

Channel Span (mm)	RLC25016/C25016				RLC25020/C25020				RLC25025/C25025			
	Single Span		Double Span		Single Span		Double Span		Single Span		Double Span	
	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D	W_S	W_D
3300	10.63	15.08	10.63	36.30	14.39	18.81	14.39	45.27	19.05	23.41	19.05	56.34
3600	8.93	11.62	8.93	27.96	12.09	14.49	12.09	34.87	16.00	18.03	16.00	43.40
3900	7.61	9.14	7.61	21.99	10.30	11.40	10.30	27.42	13.64	14.18	13.64	34.13
4200	6.56	7.32	6.56	17.61	8.89	9.12	8.89	21.96	11.76	11.36	11.76	27.33
4500	5.72	5.95	5.72	14.31	7.74	7.42	7.74	17.85	10.24	9.23	10.24	22.22
4800	5.02	4.90	5.02	11.79	6.80	6.11	6.80	14.71	9.00	7.61	9.00	18.31
5100	4.45	4.09	4.45	9.83	6.03	5.10	6.03	12.26	8.09	6.35	8.09	15.27
5400	3.97	3.44	3.97	8.28	5.38	4.29	5.38	10.33	7.97	5.34	7.11	12.86
5700	3.56	2.93	3.56	7.04	4.82	3.65	4.82	8.78	6.38	4.54	6.38	10.93
6000	3.21	2.51	3.21	6.04	4.35	3.13	4.35	7.53	5.76	3.90	5.76	9.37
6300	2.92	2.17	2.92	5.22	3.95	2.70	3.95	6.51	5.23	3.36	5.23	8.10
6600	2.66	1.89	2.66	4.54	3.60	2.35	3.60	5.66	4.76	2.93	4.76	7.04
6900	2.43	1.65	2.43	3.97	3.29	2.06	3.29	4.95	4.36	2.56	4.36	6.16
7200	2.23	1.45	2.23	3.49	3.02	1.81	3.02	4.36	4.00	2.25	4.00	5.42
7500	2.06	1.28	2.06	3.09	2.79	1.60	2.79	3.86	3.69	1.99	3.69	4.80
7800	1.90	1.14	1.90	2.75	2.58	1.42	2.58	3.43	3.41	1.77	3.41	4.27
8100	1.76	1.02	1.76	2.45	2.39	1.27	2.39	3.06	3.16	1.58	3.16	3.81
8400	1.64	0.91	1.64	2.20	2.22	1.14	2.22	2.74	2.94	1.42	2.94	3.42
8700	1.53	0.82	1.53	1.98	2.07	1.03	2.07	2.47	2.74	1.28	2.74	3.07
9000	1.43	0.74	1.43	1.79	1.94	0.93	1.94	2.23	2.56	1.15	2.56	2.78
9300	1.34	0.67	1.34	1.62	1.81	0.84	1.81	2.02	2.40	1.05	2.40	2.52
9600	1.26	0.69	1.26	1.47	1.70	0.76	1.70	1.84	2.25	0.95	2.25	2.29
9900	1.18	0.56	1.18	1.34	1.60	0.70	1.60	1.68	2.12	0.87	2.12	2.09
10200	1.11	0.51	1.11	1.23	1.51	0.64	1.51	1.53	1.99	0.79	1.99	1.91
10500	1.05	0.47	1.05	1.13	1.42	0.58	1.42	1.41	1.88	0.73	1.88	1.75
10800	0.99	0.43	0.99	1.04	1.34	0.54	1.34	1.29	1.78	0.67	1.78	1.61
11100	0.94	0.40	0.94	0.95	1.27	0.49	1.27	1.19	1.68	0.62	1.68	1.48
11400	0.89	0.37	0.89	0.88	1.21	0.46	1.21	1.10	1.60	0.57	1.60	1.37
11700	0.85	0.34	0.85	0.81	1.14	0.42	1.14	1.05	1.52	0.53	1.52	1.26
12000	0.80	0.31	0.80	0.75	1.09	0.39	1.09	0.94	1.44	0.49	1.44	1.17

Notes:

1. W_S = Inward Load
2. W_D = Deflection Load
3. All loads are assumed to be uniformly distributed in unit KN/m
4. Deflection load is produced from (Span/180). It is not a design limitation.
5. The above datas are guideline only, any varies subject to individual Structural Engineer design.



Manufactured by:

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