

Shallow Channel Plain

- Steel with a Minimum yield strength 280 N/mm².
- Beams are assumed to be simply supported.
- Load and deflection are calculated using a safety factor of 1.6 and an allowable stress of 175 N/mm².
- Results given are for Pre-galvanised steel.
- Beam loads are calculated from the column face and effective length in BS5950.
- The tables show:
 1. The max safe working load,
 2. the load to give 1-200 deflection,
 3. load to give 1-360 deflection - the deflection used will depend on the installation designer.
- This also applies to Point and UDL loads.



Sectional Properties

CSA (mm ²)	I _{xx} (mm ⁴)	Z _{xx} (mm ³)	Weight (kg/m)	Yield (N/mm ²)
234.0	11743	956	1.84	280

□ = Select a Channel Length* ○ = Select a Finish

Finishes & Materials:



Safe Working Load Table

Span (m)	Uniformly Distributed Load				Point Load				Column Load
	Safe Working Load		Deflection Limit		Safe Working Load		Deflection Limit		Safe Axial Load (kg)
	Load (kg/m)	Def (mm)	Span/200 (kg)	Span/360 (kg)	Load (kg)	Def (mm)	Span/200 (kg)	Span/360 (kg)	
0.8	261.82	5.52	189.16	104.28	104.73	4.43	94.58	52.14	902.13
1	166.98	8.63	95.96	52.50	83.49	6.92	59.98	32.81	691.82
1.2	115.45	12.43	54.77	29.62	69.27	9.99	41.08	22.21	540.46
1.4	84.39	16.93	33.81	17.98	59.07	13.62	29.59	15.73	431.10
1.6	64.23	22.13	22.05	11.44	51.38	17.83	22.05	11.44	350.53
1.8	50.40	28.03	14.95	7.49	45.36	22.62	16.81	8.43	289.84
2	40.51	34.64	10.40	4.97	40.51	28.01	13.00	6.21	243.14
2.2	33.20	41.95	7.36	3.28	36.52	33.99	10.12	4.51	206.50
2.4	27.63	49.97	5.25	2.11	33.16	40.59	7.88	3.16	177.24
2.6	23.30	58.71	3.74	1.27	30.30	47.82	6.08	2.06	153.52
2.8	19.87	68.17	2.63	0.65	27.81	55.68	4.61	1.14	134.02
3	17.10	78.35	1.80	0.19	25.64	64.19	3.38	0.36	117.80