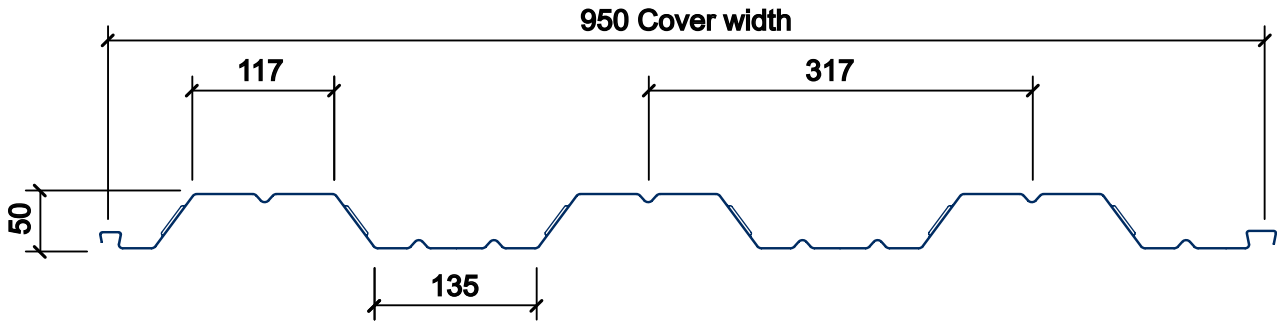


TR50™ Data Sheet

Permanent Shutter



Benefits

- Un-propped spans up to 2.5m
- Formwork for non-composite RCC floor and roof slabs
- Reduced concrete volume
- 120g/m² galvanised finish as standard, 275g/m² galvanised finish and colour-coat finish also available
- Optimised cover width for speed of installation
- Flexible side-lap detail for control of cover width
- Trough stiffener location designed to optimise stud position and avoid additional on-site checks


Section Properties




Nominal Thickness mm	Design Thickness (Bare Steel) mm	Grade N/mm ²	Depth of Profile mm	Weight of Profile	
				kg/m ²	kN/m ²
0.7	0.66	S250	50	6.82	0.07
0.8	0.76	S250	50	7.85	0.08
0.9	0.86	S250	50	8.88	0.09
1.0	0.96	S250	50	9.92	0.10
1.2	1.16	S250	50	11.98	0.12

Concrete Volume and Weight

Concrete	Overall Slab Depth (mm)											
	100	110	120	130	140	150	175	200	225	250	275	300
Volume (m ³ /m ²)	0.076	0.086	0.096	0.106	0.116	0.126	0.151	0.176	0.201	0.226	0.251	0.276
Weight (kN/m ²)	1.98	2.24	2.50	2.76	3.02	3.28	3.93	4.58	5.23	5.88	6.53	7.18

TR50™ Span Depth Table - Steel Grade S250

Span	Gauge (mm)	Maximum Overall Slab Depth (mm)																				
		Span (m)																				
		1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	3.00
 Single	0.7	319	286	260	237	210	178	152	130	112	-	-	-	-	-	-	-	-	-	-	-	-
	0.8	419	378	343	314	268	229	197	170	148	129	113	-	-	-	-	-	-	-	-	-	-
	0.9	530	478	435	390	331	284	245	213	186	163	143	127	112	-	-	-	-	-	-	-	-
	1.0	650	588	536	467	397	341	295	257	225	199	176	156	139	124	110	-	-	-	-	-	-
	1.2	920	833	746	630	538	464	403	352	310	275	244	218	195	175	158	142	129	114	-	-	-
 Double	0.7	233	203	178	157	139	124	111	100	-	-	-	-	-	-	-	-	-	-	-	-	
	0.8	306	268	236	209	186	167	150	135	123	111	101	-	-	-	-	-	-	-	-	-	-
	0.9	383	335	296	263	235	211	190	172	156	142	130	119	109	100	-	-	-	-	-	-	-
	1.0	462	404	357	317	284	255	230	209	190	173	158	145	133	123	113	104	-	-	-	-	-
	1.2	631	552	488	434	388	349	316	287	261	239	219	201	185	171	158	146	135	126	117	108	101
 Multiple	0.7	277	242	214	190	169	152	136	123	111	101	-	-	-	-	-	-	-	-	-	-	
	0.8	362	318	281	250	224	202	182	165	151	137	126	115	105	-	-	-	-	-	-	-	-
	0.9	452	397	352	314	281	254	230	209	191	174	160	147	135	125	115	107	-	-	-	-	-
	1.0	544	478	424	378	340	306	278	253	231	211	194	179	165	152	141	131	121	-	-	-	-
	1.2	744	653	579	516	464	419	380	346	316	290	267	246	227	211	195	182	169	158	147	137	127




Span	Gauge (mm)	Maximum Load (kg/m ²)																				
		Span (m)																				
		1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	3.00
 Single	0.7	741	674	617	570	529	494	463	436	394	354	319	290	264	241	222	204	189	175	163	152	139
	0.8	954	868	795	734	682	636	597	548	489	439	396	359	327	299	275	253	234	217	202	186	168
	0.9	1192	1084	994	917	852	795	745	662	590	530	478	434	395	361	332	306	283	262	244	220	198
	1.0	1453	1321	1211	1118	1038	969	882	782	697	626	565	512	467	427	392	361	334	310	282	254	230
	1.2	2039	1854	1700	1569	1457	1330	1169	1036	924	829	748	679	618	566	520	479	443	403	362	326	294
 Double	0.7	715	635	569	513	466	425	391	360	333	309	288	269	252	237	223	210	199	188	178	169	161
	0.8	910	807	722	651	591	540	495	456	422	392	365	341	319	299	282	265	251	237	225	213	203
	0.9	1113	987	882	795	721	657	602	554	512	475	442	413	386	362	341	321	303	286	271	257	245
	1.0	1323	1171	1045	941	852	776	710	653	603	559	519	484	453	424	398	375	354	334	316	300	285
	1.2	1774	1566	1394	1252	1131	1028	939	862	794	734	681	634	592	554	520	489	460	434	411	389	369
 Multiple	0.7	831	739	663	599	545	498	458	423	392	364	340	318	298	280	264	249	235	223	212	200	187
	0.8	1057	940	843	761	692	632	581	536	496	461	430	402	377	354	333	315	297	282	266	248	232
	0.9	1296	1150	1030	930	844	771	708	652	604	560	522	488	457	429	404	381	360	340	321	299	280
	1.0	1542	1367	1223	1102	999	912	836	769	711	660	614	573	536	503	473	446	421	398	377	353	330
	1.2	2073	1833	1635	1470	1331	1211	1108	1018	940	870	808	753	704	660	619	583	549	519	491	465	438

Design Table Limits – Criteria

- This table is based upon concrete poured to a constant thickness and does not take account of deflection of the decking or supporting beams – as a guide, to account for the deflection of the decking, a volume of span/250 should be added to the figures indicate in the Concrete Volume and Weight table
- Concrete weight indicated does not include the weight of the deck profile
- Concrete weight is based upon concrete density of 26kN/m³
- Overall slab depth includes deck profile
- Deflection limit = span/130
- Based upon unpropped construction
- Construction imposed load is taken as 1.5kN/m²
- Spans are centre to centre of 100mm supports
- 1.5 load factor included for self-weight of concrete in accordance with Eurocodes

TR50™ Span Depth Table - Steel Grade S350

Span	Gauge (mm)	Maximum Overall Slab Depth (mm)																				
		Span (m)																				
		1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	3.00
 Single	0.7	294	264	239	218	200	184	170	158	147	134	118	103	-	-	-	-	-	-	-	-	-
	0.8	389	351	318	291	268	247	230	214	200	185	163	135	113	-	-	-	-	-	-	-	-
	0.9	495	447	407	372	343	318	296	276	259	230	197	165	139	117	-	-	-	-	-	-	-
	1.0	611	552	503	461	426	395	368	344	311	275	233	196	166	141	119	101	-	-	-	-	-
	1.2	872	789	720	662	612	568	530	480	424	369	311	264	224	192	164	141	121	104	-	-	-
 Double	0.7	274	239	209	185	164	146	131	117	105	-	-	-	-	-	-	-	-	-	-	-	
	0.8	360	314	277	245	218	196	176	159	144	130	119	108	-	-	-	-	-	-	-	-	-
	0.9	455	398	351	312	279	251	226	205	186	170	155	142	130	120	110	102	-	-	-	-	-
	1.0	556	487	430	383	343	309	279	254	231	211	194	178	164	151	139	129	119	111	103	-	-
	1.2	772	677	599	533	478	432	391	356	325	298	274	252	233	215	200	185	173	161	150	140	131
 Multiple	0.7	326	285	251	222	198	178	160	144	131	119	108	-	-	-	-	-	-	-	-	-	
	0.8	426	373	330	293	263	236	214	194	176	161	147	135	124	114	105	-	-	-	-	-	-
	0.9	536	471	417	372	334	301	273	248	227	207	190	175	161	149	138	128	119	110	102	-	-
	1.0	655	575	510	456	409	370	336	306	280	257	236	218	201	186	173	161	149	139	127	111	-
	1.2	908	798	708	633	570	515	468	427	391	360	332	306	284	264	245	228	213	199	174	153	134

Span	Gauge (mm)	Maximum Load (kg/m ²)																				
		Span (m)																				
		1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	3.00
 Single	0.7	876	796	730	674	625	584	547	515	486	452	408	370	330	289	254	225	200	179	160	144	130
	0.8	1130	1027	942	869	807	753	706	665	628	588	528	456	397	347	306	270	240	215	192	173	156
	0.9	1411	1283	1176	1086	1008	941	882	830	784	708	621	537	467	409	360	318	283	253	226	204	184
	1.0	1719	1562	1432	1322	1228	1146	1074	1011	923	829	718	620	539	472	415	368	327	292	262	235	213
	1.2	2412	2193	2010	1855	1723	1608	1507	1374	1225	1081	927	800	696	609	536	474	422	377	338	304	275
 Double	0.7	824	729	651	586	530	483	442	407	375	348	323	301	282	264	248	234	220	208	197	187	177
	0.8	1052	930	830	747	676	616	563	518	478	443	412	384	359	336	316	297	280	265	250	237	225
	0.9	1304	1153	1029	925	838	763	698	641	592	548	509	475	444	416	390	367	346	327	310	294	279
	1.0	1573	1390	1240	1115	1009	918	840	772	712	659	612	571	533	499	469	441	416	393	372	352	334
	1.2	2147	1895	1688	1516	1370	1245	1138	1045	963	891	827	770	718	672	631	593	559	527	499	472	448
 Multiple	0.7	960	851	761	686	622	568	520	479	443	411	382	357	334	313	295	278	262	248	235	223	212
	0.8	1226	1087	971	875	794	724	663	611	564	523	487	454	425	399	375	353	333	315	299	283	261
	0.9	1520	1347	1204	1085	983	897	822	756	699	648	603	563	526	494	464	437	413	390	369	340	307
	1.0	1835	1625	1452	1307	1185	1080	989	910	841	780	725	676	633	593	558	525	495	468	436	392	355
	1.2	2508	2218	1979	1780	1611	1467	1343	1234	1139	1055	980	914	854	800	751	707	667	628	563	507	458

Design Table Limits – Criteria

- This table is based upon concrete poured to a constant thickness and does not take account of deflection of the decking or supporting beams – as a guide, to account for the deflection of the decking, a volume of span/250 should be added to the figures indicate in the Concrete Volume and Weight table
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