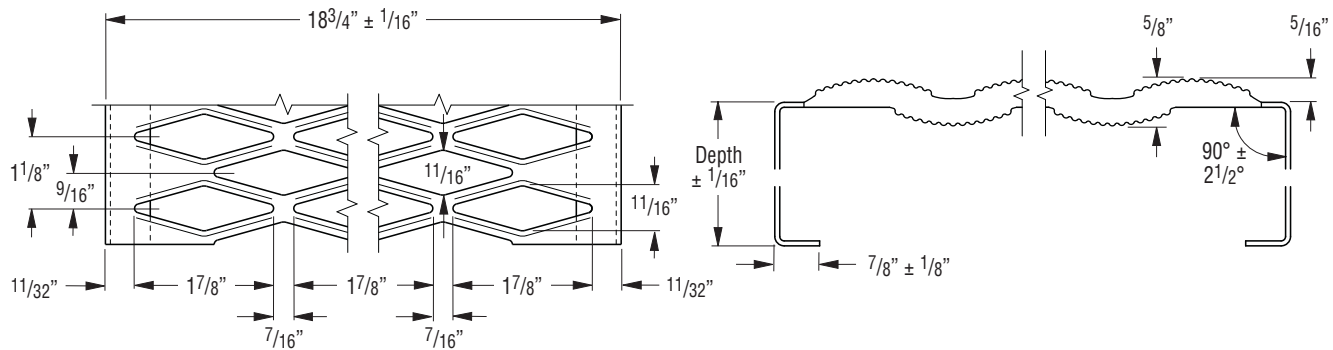


# Grip Strut® Safe Loading Tables



## 8-Diamond Plank — 18<sup>3</sup>/<sub>4</sub>" Width



### Product Selection/Design Tables

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																		
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"		
Steel 14 ga.	1 1/2" (38.1)	6.1 (9.1)	81514	U	337	217	151	112	86	69	56	47										
				D	.33	.27	.26	.29	.33	.38	.45	.55										
				C	263	211	178	153	135	121	110	101										
				D	.16	.15	.15	.16	.17	.19	.22	.25										
	2" (50.8)	6.3 (9.4)	82014	U	540	358	250	184	142	113	92	76	65	55	48	42						
				D	.48	.37	.34	.32	.34	.38	.43	.50	.58	.66	.77	.87						
				C	437	349	292	251	220	198	179	164	152	141	132	124						
				D	.24	.21	.20	.19	.20	.21	.23	.26	.29	.32	.36	.40						
	2 1/2" (63.5)	6.6 (9.8)	82514	U	540	411	286	211	162	129	105	87	74	63	56	48	43					
				D	.46	.39	.35	.28	.27	.28	.31	.35	.39	.44	.50	.57	.64					
				C	450	402	335	287	252	225	205	188	173	161	151	142	134					
				D	.24	.22	.20	.19	.19	.20	.21	.23	.26	.29	.32	.36	.40					
Steel 12 ga.	1 1/2" (38.1)	8.5 (12.6)	81512	U	446	287	201	148	115	91	75	63	53	46	40							
				D	.27	.22	.22	.26	.32	.39	.47	.56	.67	.80	.92							
				C	359	280	235	203	179	161	146	135	125	117	110							
				D	.12	.12	.12	.14	.16	.19	.22	.26	.30	.35	.40							
	2" (50.8)	8.9 (13.2)	82012	U	710	456	318	235	181	144	117	98	83	71	62	54	48					
				D	.31	.25	.23	.25	.28	.31	.37	.44	.51	.60	.68	.79	.90					
				C	554	444	371	319	282	253	229	210	194	181	169	160	151					
				D	.17	.15	.14	.15	.16	.17	.19	.22	.25	.28	.32	.36	.40					
	2 1/2" (63.5)	9.2 (13.7)	82512	U	810	680	473	348	267	212	172	143	120	103	89	78	69	55	45			
				D	.33	.31	.27	.26	.27	.29	.32	.37	.42	.49	.55	.63	.72	.90	1.12			
				C	800	663	553	475	416	371	334	307	282	262	244	229	216	194	177			
				D	.23	.20	.18	.18	.18	.18	.19	.21	.23	.25	.28	.31	.34	.41	.50			
2 1/2" (63.5)	9.6 (14.3)	83012	U	810	810	598	440	337	267	217	180	152	130	112	98	87	69	57	47	40		
			D	.32	.35	.30	.27	.26	.28	.31	.34	.39	.43	.49	.56	.62	.78	.96	1.17	1.40		
			C	800	800	699	600	526	468	422	385	353	327	307	288	271	243	221	203	189		
			D	.22	.23	.22	.20	.20	.20	.20	.21	.22	.24	.26	.28	.31	.37	.44	.52	.61		



# Grip Strut® Safe Loading Tables

## 8-Diamond Plank — 18<sup>3</sup>/<sub>4</sub>" Width cont.

### Product Selection/Design Tables

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																		
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"		
Alum. Alloy 5052 .080"	1 1/2"* (38.1)	2.11 (3.13)	81512-A	U	253	162	112	83														
				D	.49	.40	.39	.44														
				C	198	158	132	113														
				D	.24	.22	.22	.24														
	2" (50.8)	2.20 (3.27)	82012-A	U	308	237	165	121	93	73	59	49										
				D	.54	.50	.44	.44	.47	.53	.61	.71										
				C	290	232	193	166	145	129	116	106										
				D	.32	.28	.27	.27	.28	.30	.32	.36										
	2 1/2"* (63.5)	2.29 (3.40)	82512-A	U	308	308	248	182	139	110	89	74	62	53								
				D	.51	.57	.54	.49	.50	.52	.57	.65	.73	.83								
				C	350	348	290	249	218	194	174	158	145	134								
				D	.37	.39	.35	.33	.33	.34	.35	.37	.40	.43								
3"* (76.2)	2.39 (3.55)	83012-A	U	308	308	308	223	171	135	109	90	76	65	56	49							
			D	.50	.54	.62	.54	.52	.52	.56	.61	.68	.76	.86	.96							
			C	350	350	350	306	268	238	214	195	178	165	153	143							
			D	.37	.38	.41	.38	.37	.37	.37	.39	.40	.43	.46	.50							
Alum. Alloy 5052 .100"	1 1/2"* (38.1)	2.68 (3.98)	81510-A	U	288	184	128	94	72	57												
				D	.41	.36	.36	.40	.47	.56												
				C	225	180	150	129	113	100												
				D	.18	.18	.19	.21	.23	.27												
	2" (50.8)	2.79 (4.15)	82010-A	U	457	332	231	170	130	103	83	69	58	49								
				D	.59	.51	.46	.47	.52	.57	.67	.78	.89	1.03								
				C	406	325	271	232	203	181	163	148	135	125								
				D	.29	.26	.25	.26	.28	.30	.33	.37	.42	.47								
	2 1/2"* (63.5)	2.91 (4.33)	82510-A	U	457	457	317	233	179	141	114	94	79	68	58	51	45					
				D	.55	.62	.51	.48	.48	.52	.58	.64	.73	.84	.94	1.07	1.20					
				C	550	447	372	319	279	248	223	203	186	172	160	149	140					
				D	.37	.32	.30	.29	.29	.30	.32	.35	.38	.41	.46	.52	.55					
3"* (76.2)	3.02 (4.50)	83010-A	U	457	457	410	301	231	182	148	122	102	87	75	66	58						
			D	.53	.57	.58	.51	.48	.48	.51	.56	.61	.69	.76	.85	.95						
			C	550	550	481	412	360	320	288	262	240	222	206	192	180						
			D	.37	.39	.37	.35	.34	.34	.36	.38	.41	.44	.48	.52	.57						

\* Available on special order.

### Engineering Data For Both Channels

Material Gauge	Channel Depth in.	Sx in. <sup>3</sup>	Ix in. <sup>4</sup>	EI lb. x in. <sup>2</sup>
Steel 14 ga.	1 1/2"	.174	.102	2.96 x 10 <sup>6</sup>
	2"	.270	.193	5.60 x 10 <sup>6</sup>
	2 1/2"	.307	.335	9.71 x 10 <sup>6</sup>
Steel 12 ga.	1 1/2"	.216	.125	3.62 x 10 <sup>6</sup>
	2"	.342	.264	7.66 x 10 <sup>6</sup>
	2 1/2"	.504	.488	14.09 x 10 <sup>6</sup>
	3"	.625	.722	20.94 x 10 <sup>6</sup>
Aluminum .080"	1 1/2"	.171	.137	1.40 x 10 <sup>6</sup>
	2"	.251	.246	2.51 x 10 <sup>6</sup>
	2 1/2"	.379	.441	4.50 x 10 <sup>6</sup>
	3"	.464	.602	6.14 x 10 <sup>6</sup>
Aluminum .100"	1 1/2"	.196	.156	1.59 x 10 <sup>6</sup>
	2"	.352	.309	3.15 x 10 <sup>6</sup>
	2 1/2"	.456	.544	5.55 x 10 <sup>6</sup>
	3"	.627	.911	9.29 x 10 <sup>6</sup>

### Strut Loading

Material Gauge	Type Loading**	Load	Deflection in.
Steel 14 ga.	U	540	.43
	Cs	422	.35
Steel 12 ga.	U	810	.30
	Cs	633	.24
Aluminum .080"	U	308	.48
	Cs	241	.39
Aluminum .100"	U	457	.51
	Cs	357	.41

\*\* U = Allowable Uniform Load (lb./ft.<sup>2</sup>)  
Cs = Allowable Concentrated Load per ft. of length at mid-width (lb./ft.)