

Diamond Grip Safety Grating

LOAD & DEFLECTION TABLES

Explanation of Load Type

U = uniform load (lb/ft²)

D = corresponding deflection (in) resulting from uniform load

C = concentrated load (lb)

D = corresponding deflection (in) resulting from concentrated load

Note:

- All UDL and concentrated loads include a safety factor of 1.67.
- Spans and loads to the right of the bold line, based on loads indicated, may exceed deflections of L/120.
- 2 1/2" channel not shown in tables. Available by special request only.

4 3/4 Inch Wide - 2 Diamond

PRODUCT DETAILS

Type	Depth Weight	Catalog Number	Ix IN.4 Sx IN.3		CLEAR SPAN ^{FT}																
					24"	30"	36"	42"	48"	54"	60"	66"	72"	78"	84"	90"	96"	108"	120"	132"	144"
Steel 14 GA	1-1/2"	D2154	.267	U	1516	970	674	495	379	299	243	200	168								
				D	0.09	0.13	0.19	0.25	0.32	0.41	0.51	0.61	0.73								
	2.3 lb/ft		.202	C	600	480	400	343	300	267	240	218	200								
				D	0.06	0.10	0.15	0.21	0.26	0.33	0.45	0.57	0.59								
	2"	D2204	.513	U	2236	1431	994	730	559	442	358	296	248	212	183	159	140	110	89		
				D	0.06	0.08	0.13	0.17	0.22	0.29	0.34	0.42	0.50	0.59	0.68	0.78	0.90	1.12	1.38		
2.5 lb/ft		.298	C	885	708	590	506	443	393	354	322	295	272	253	236	221	197	177			
			D	0.06	0.07	0.10	0.14	0.17	0.23	0.27	0.33	0.40	0.46	0.54	0.63	0.71	0.90	1.11			
Steel 12 GA	1-1/2"	D2152	.125	U	1790	1147	798	587	451	357	290	240	203	173	150	131	116				
				D	0.07	0.10	0.15	0.20	0.27	0.34	0.42	0.51	0.61	0.71	0.83	0.96	1.09				
	3.0 lb/ft		.278	C	708	568	474	407	357	318	287	262	241	223	208	195	184				
				D	0.05	0.08	0.12	0.16	0.21	0.27	0.33	0.41	0.48	0.57	0.66	0.77	0.88				
	2"	D2202	.263	U	2255	1445	1005	739	567	449	365	302	255	218	188	165	145	116	95	79	67
				D	0.05	0.07	0.10	0.14	0.19	0.24	0.29	0.35	0.42	0.50	0.58	0.67	0.76	0.98	1.22	1.49	1.79
3.3 lb/ft		.211	C	892	715	597	512	449	400	361	329	303	280	261	245	230	206	188	172	160	
			D	0.04	0.06	0.08	0.11	0.15	0.19	0.21	0.28	0.34	0.40	0.46	0.53	0.61	0.78	0.97	1.19	1.43	
Alum .080"	2"	D2202A	.223	U	1398	895	622	457	350	277	225	186	156	133	115	101	89				
				D	0.09	0.14	0.20	0.27	0.36	0.45	0.56	0.68	0.81	0.95	1.11	1.27	1.45				
				C	553	443	369	317	277	247	222	202	186	172	160	149	140				
Alum 0.1"	2"	D2200A	.278	U	1794	1148	797	586	448	354	287	237	199	170	146	128	112				
				D	0.09	0.14	0.21	0.28	0.37	0.46	0.57	0.69	0.83	0.97	1.12	1.29	1.47				
				C	710	568	473	406	355	316	284	258	237	218	203	189	178				
Stainless Steel 16 GA	2"	D2206S	.271	U	1794	1148	797	586	448	354	287	237	199	170	146	128	112				
				D	0.03	0.05	0.08	0.10	0.13	0.17	0.21	0.25	0.30	0.36	0.41	0.47	0.54				
				C	710	568	473	406	355	316	284	258	237	218	203	189	178				
Stainless Steel 14 GA	2"	D2204S	.339	U	1730	1109	772	568	436	346	281	233	196	168	146	127	113				
				D	0.05	0.07	0.10	0.14	0.18	0.23	0.29	0.35	0.42	0.49	0.57	0.66	0.76				
				C	685	549	458	394	345	308	278	254	233	216	202	189	178				
	2.5 lb/ft		.281	D	0.04	0.06	0.08	0.11	0.15	0.19	0.23	0.28	0.33	0.39	0.46	0.53	0.61				

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D = corresponding deflection (in) resulting from concentrated load

Note:

- All UDL and concentrated loads include a safety factor of 1.67.
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- 2 1/2" channel not shown in tables. Available by special request only.

7 Inch Wide - 3 Diamond

PRODUCT DETAILS

Type	Depth Weight	Catalog Number	Ix IN. 4 Sx IN. 3	CLEAR SPAN ^{FT}																	
				24"	30"	36"	42"	48"	54"	60"	66"	72"	78"	84"	90"	96"	108"	120"	132"	144"	
Steel 14 GA	1-1/2"	D3154	.115	U	766	492	343	253	194	154	126	105	92								
				D	0.06	0.09	0.13	0.18	0.24	0.30	0.37	0.45	0.55								
	2.9 lb/ft		.141	C	447	358	300	258	227	203	183	168	159								
				D	0.05	0.07	0.11	0.14	0.19	0.24	0.30	0.36	0.44								
	2"	D3204	.235	U	1374	881	613	451	347	275	223	185	156	134	116	101	90	72	59		
				D	0.05	0.08	0.11	0.15	0.20	0.25	0.31	0.38	0.46	0.54	0.63	0.72	0.83	1.06	1.32		
3.2 lb/ft		.186	C	802	642	536	461	404	361	326	297	273	254	237	222	209	188	172			
			D	0.04	0.06	0.09	0.12	0.16	0.20	0.25	0.31	0.36	0.43	0.50	0.58	0.66	0.85	1.06			
Steel 12 GA	1-1/2"	D3152	.154	U	1304	836	582	428	329	261	212	176	148	127	110	96	85				
				D	0.07	0.11	0.16	0.22	0.29	0.36	0.45	0.55	0.65	0.77	0.90	1.04	1.18				
	3.9 lb/ft		.194	C	761	609	509	437	384	342	309	282	259	240	224	210	198				
				D	0.06	0.09	0.13	0.17	0.23	0.29	0.36	0.44	0.52	0.62	0.72	0.83	0.95				
	2"	D3202	.313	U	1710	1096	762	561	430	341	277	230	194	165	143	125	111	88	72	60	51
				D	0.05	0.08	0.11	0.15	0.20	0.26	0.32	0.38	0.46	0.54	0.63	0.72	0.83	1.06	1.32	1.62	1.95
	4.4 lb/ft		.254	C	997	799	667	573	502	447	404	368	339	314	292	274	258	232	211	194	180
				D	0.04	0.06	0.09	0.12	0.16	0.20	0.25	0.31	0.37	0.43	0.50	0.58	0.66	0.85	1.06	1.29	1.56
	3"	D3302	1.263	U	3247	2080	1446	1063	815	645	523	433	365	309	267	233	205	163	133	111	94
				D	0.04	0.06	0.08	0.11	0.14	0.18	0.22	0.27	0.32	0.38	0.44	0.50	0.57	0.73	0.91	1.11	1.33
	5.1 lb/ft		.532	C	1894	1516	1265	1086	951	847	763	695	639	585	545	510	479	428	388	355	328
				D	0.03	0.04	0.06	0.09	0.11	0.14	0.18	0.22	0.26	0.30	0.35	0.40	0.46	0.58	0.73	0.89	1.06
Alum .080"	2"	D3202A	.266	U	975	624	434	319	244	193	157	130	109	93	81						
				D	0.10	0.16	0.23	0.31	0.40	0.51	0.63	0.76	0.91	1.07	1.24						
	1.2 lb/ft		.212	C	568	455	380	326	285	254	229	208	191	177	164						
Alum 0.1"	2"	D3200A	.3325	U	1169	748	520	382	292	231	187	155	130	111	95	83	73				
				D	0.08	0.12	0.17	0.23	0.30	0.37	0.46	0.56	0.67	0.78	0.90	1.04	1.18				
	1.5 lb/ft		.265	C	682	546	455	390	341	303	273	248	227	210	195	182	171				
Stainless Steel 16 GA	2"	D3206S	.306	U	1646	1053	731	537	411	325	263	218	183	156	134	117	103				
				D	0.04	0.06	0.09	0.12	0.16	0.20	0.25	0.30	0.36	0.43	0.49	0.57	0.64				
	2.56 lb/ft		.248	C	960	768	640	549	480	427	384	349	320	295	274	256	240				
Stainless Steel 14 GA	2"	D3204S	.383	U	1819	1166	811	597	458	363	295	244	206	176	153	133	118				
				D	0.08	0.13	0.18	0.25	0.33	0.41	0.51	0.62	0.74	0.88	1.02	1.18	1.35				
	3.2 lb/ft		.310	C	1061	850	710	609	534	476	430	392	361	334	311	292	275				
				D	0.06	0.10	0.15	0.20	0.26	0.33	0.41	0.50	0.60	0.70	0.82	0.94	1.08				

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Note:

- All UDL and concentrated loads include a safety factor of 1.67.
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- 2 1/2" channel not shown in tables. Available by special request only.

9 1/2 Inch Wide - 4 Diamond

PRODUCT DETAILS

Type	Depth Weight	Catalog Number	Ix IN.4 Sx IN.3	CLEAR SPAN ^{FT}																	
				24"	30"	36"	42"	48"	54"	60"	66"	72"	78"	84"	90"	96"	108"	120"	132"	144"	
Steel 14 GA	1-1/2"	D4154	.128	U	779	499	346	255	195	154	125	103	87								
				D	0.09	0.12	0.19	0.26	0.33	0.41	0.52	0.62	0.74								
	3.5 lb/ft			C	617	494	411	353	309	274	247	224	206								
				D	0.06	0.10	0.15	0.20	0.27	0.33	0.41	0.50	0.60								
	2"	D4204	.264	U	1063	681	474	349	268	213	173	144	121	104	90	79	70	56	46		
				D	0.05	0.08	0.12	0.16	0.21	0.26	0.33	0.40	0.47	0.56	0.65	0.75	0.86	1.10	1.38		
3.7 lb/ft			C	841	674	563	484	425	379	342	312	288	267	249	234	221	199	181			
			D	0.04	0.06	0.09	0.13	0.17	0.21	0.26	0.32	0.38	0.45	0.52	0.60	0.69	0.88	1.10			
Steel 12 GA	1-1/2"	D4152	.172	U	988	634	441	325	249	198	161	133	113	96	84	73	65				
				D	0.08	0.12	0.17	0.23	0.30	0.39	0.48	0.58	0.69	0.82	0.95	1.10	1.26				
	4.8 lb/ft			C	782	627	524	450	395	352	318	291	268	248	232	218	205				
				D	0.06	0.09	0.14	0.19	0.24	0.31	0.38	0.46	0.55	0.65	0.76	0.88	1.01				
	2"	D4202	.354	U	1382	886	616	453	348	276	224	186	157	134	116	101	90	72	59	49	42
				D	0.05	0.08	0.12	0.16	0.21	0.27	0.34	0.41	0.49	0.57	0.67	0.77	0.88	1.13	1.41	1.72	2.08
5.1 lb/ft			C	1094	876	732	628	551	491	443	404	372	345	321	301	284	255	232	213	198	
			D	0.04	0.07	0.10	0.13	0.17	0.22	0.27	0.33	0.39	0.46	0.54	0.62	0.71	0.89	1.13	1.38	1.66	
3"	D4302	1.363	U	2270	1453	1009	741	567	548	444	367	308	263	226	197	173	137	111	92	77	
			D	0.04	0.06	0.08	0.11	0.14	0.22	0.28	0.33	0.40	0.47	0.54	0.62	0.70	0.89	1.10	1.35	1.60	
5.8 lb/ft			C	1355	1355	1355	1255	1098	976	878	799	732	676	627	586	549	488	439	399	366	
			D	0.02	0.04	0.07	0.11	0.15	0.18	0.22	0.27	0.32	0.38	0.43	0.49	0.56	0.71	0.89	1.04	1.27	
Alum .080"	2"	D4202A	.300	U	800	512	356	261	200	158	128	106	89	76	65	57	50				
				D	0.12	0.19	0.27	0.37	0.50	0.62	0.76	0.94	1.12	1.30	1.49	1.73	1.97				
	1.4 lb/ft	.256	C	633	507	422	362	317	282	253	230	211	195	181	169	158					
Alum 0.1"	2"	D4200A	.375	U	897	574	399	293	224	177	143	119	100	85	73	64	56				
				D	0.07	0.11	0.15	0.21	0.27	0.35	0.43	0.52	0.61	0.72	0.84	0.96	1.09				
	1.75 lb/ft	.32	C	710	568	473	406	355	316	284	258	237	218	203	189	178					
Stainless Steel 16 GA	2"	D4206S	.143	U	750	480	330	240	186	147	120	99	82	70	58	47	39	27			
				D	0.06	0.09	0.13	0.18	0.24	0.30	0.37	0.45	0.53	0.63	0.70	0.75	0.80	0.90			
	3.2 lb/ft	.165	C	455	455	398	341	299	265	239	217	199	184	171	159	149	133				
Stainless Steel 14 GA	2"	D4204S	.401	U	1540	887	687	506	388	307	250	207	175	149	129	113	100	80			
				D	0.07	0.11	0.16	0.22	0.28	0.36	0.44	0.54	0.64	0.76	0.88	1.02	1.17	1.49			
	3.7 lb/ft	.287	C	915	915	816	700	614	548	494	451	415	384	358	336	316	284				
				D	0.04	0.08	0.13	0.17	0.23	0.29	0.36	0.43	0.52	0.61	0.71	0.82	0.93	1.19			

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11 3/4 Inch Wide - 5 Diamond

PRODUCT DETAILS

Type	Depth Weight	Catalog Number	Ix IN.4 Sx IN.3	CLEAR SPAN ^{FT}																
				24"	30"	36"	42"	48"	54"	60"	66"	72"	78"	84"	90"	96"	108"	120"	132"	144"
Steel 14 GA	1-1/2"	D5154	.146	U	543	349	243	179	138	110	89	74	63							
				D	0.06	0.10	0.15	0.20	0.26	0.33	0.41	0.50	0.60							
				C	493	427	357	307	270	242	219	201	185							
	4.1 lb/ft	D5204	.178	U	895	574	400	295	226	179	146	121	102	87	75	65	57	45		
				D	0.05	0.08	0.12	0.16	0.21	0.27	0.34	0.41	0.49	0.57	0.66	0.76	0.86	1.09		
				C	493	493	493	493	443	395	357	326	299	276	259	239	224	199		
2"	D5204	.247	U	895	574	400	295	226	179	146	121	102	87	75	65	57	45			
			D	0.05	0.08	0.12	0.16	0.21	0.27	0.34	0.41	0.49	0.57	0.66	0.76	0.86	1.09			
			C	493	493	493	493	443	395	357	326	299	276	259	239	224	199			
Steel 12 GA	1-1/2"	D5152	.195	U	842	540	376	276	212	168	137	113	95	82	71	62	55			
				D	0.08	0.13	0.18	0.25	0.32	0.41	0.51	0.62	0.73	0.87	1.01	1.16	1.33			
				C	815	661	552	474	415	370	334	305	280	260	242	227	214			
	5.7 lb/ft	D5202	.244	U	842	540	376	276	212	168	137	113	95	82	71	62	55			
				D	0.06	0.10	0.14	0.20	0.26	0.33	0.41	0.49	0.59	0.69	0.81	0.93	1.06			
				C	815	815	814	699	613	545	491	446	409	378	351	327	307	273	245	223
	2"	D5202	.419	U	1243	797	554	408	313	248	200	166	139	119	102	89	78	62	50	41
				D	0.06	0.09	0.13	0.18	0.23	0.29	0.36	0.44	0.52	0.61	0.72	0.82	0.92	1.19	1.44	1.75
				C	815	815	814	699	613	545	491	446	409	378	351	327	307	273	245	223
	6.1 lb/ft	D5302	.338	U	1243	797	554	408	313	248	200	166	139	119	102	89	78	62	50	41
				D	0.03	0.06	0.10	0.14	0.19	0.24	0.29	0.35	0.41	0.49	0.57	0.65	0.75	0.94	1.15	1.41
				C	815	815	815	815	815	815	815	758	695	642	596	556	521	463	417	379
3"	D5302	1.672	U	1666	1363	946	695	532	421	341	282	237	202	174	151	133	105	85	70	59
			D	0.03	0.07	0.10	0.13	0.18	0.23	0.28	0.34	0.40	0.47	0.55	0.63	0.71	0.90	1.13	1.34	1.60
			C	815	815	815	815	815	815	815	758	695	642	596	556	521	463	417	379	347
6.7 lb/ft	D5302	.702	U	1666	1363	946	695	532	421	341	282	237	202	174	151	133	105	85	70	59
			D	0.01	0.03	0.05	0.07	0.11	0.16	0.22	0.27	0.32	0.38	0.43	0.50	0.57	0.73	0.89	1.07	1.29
			C	815	815	815	815	815	815	815	758	695	642	596	556	521	463	417	379	347
Alum .080"	2"	D5202A	.355	U	715	457	319	233	179	141	114	94	79	68	58	51	45			
				D	0.15	0.23	0.33	0.45	0.58	0.74	0.90	1.10	1.32	1.54	1.77	2.07	2.38			
				C	362	362	362	362	350	311	280	254	233	215	200	187	175			
1.6 lb/ft	D5202A	.283	U	715	457	319	233	179	141	114	94	79	68	58	51	45				
			D	0.06	0.12	0.21	0.32	0.46	0.60	0.74	0.88	1.05	1.23	1.44	1.65	1.88				
			C	362	362	362	362	350	311	280	254	233	215	200	187	175				
Alum 0.1"	2"	D5200A	.443	U	725	464	322	237	181	143	116	96	81	69	59	52	45			
				D	0.06	0.09	0.13	0.18	0.23	0.29	0.36	0.44	0.52	0.61	0.71	0.81	0.92			
				C	710	568	473	406	355	316	284	258	237	218	203	189	178			
2.0 lb/ft	D5200A	.353	U	725	464	322	237	181	143	116	96	81	69	59	52	45				
			D	0.05	0.07	0.11	0.14	0.19	0.24	0.29	0.35	0.42	0.49	0.57	0.65	0.74				
			C	710	568	473	406	355	316	284	258	237	218	203	189	178				
Stainless Steel 16 GA	2"	D5206S	.143	U	606	426	296	218	167	132	107	88	74	63	54	48	41	29		
				D	0.05	0.08	0.11	0.16	0.21	0.26	0.32	0.38	0.46	0.53	0.63	0.73	0.80	0.90		
	3.7 lb/ft	D5206S	.165	U	606	426	296	218	167	132	107	88	74	63	54	48	41	29		
				D	0.02	0.04	0.07	0.10	0.16	0.21	0.25	0.31	0.37	0.43	0.50	0.57	0.65	0.82		
Stainless Steel 14 GA	2"	D5204S	.427	U	1276	812	565	416	319	253	206	171	144	123	107	93	82	66		
				D	0.09	0.14	0.20	0.27	0.36	0.46	0.56	0.69	0.82	0.97	1.13	1.30	1.48	1.90		
	4.5 lb/ft	D5204S	.313	U	1276	812	565	416	319	253	206	171	144	123	107	93	82	66		
				D	0.05	0.10	0.16	0.22	0.29	0.36	0.45	0.55	0.66	0.77	0.90	1.04	1.19	1.52		