Load & Span Tables

Molded and Pultruded FRP Grating - Allowable Loads at Clear Span

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This document consolidates the certified load and span data for ZeAllgrate molded and pultruded FRP grating. Load tables are reproduced from the ZeAllgrate Molded Grating Data Sheet and Pultruded Grating Data Sheet.

Safety factors: Molded grating = 5:1 on ultimate capacity; Pultruded grating = 2:1 to 3:1.
All gratings tested per ANSI standards for FRP composite grating and stair treads.
Maximum Recommended Load must not be exceeded at any given clear span.
For project-specific design, contact ZeAllgrate engineering for certified charts.

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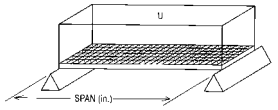
ZeAllgrate

MOLDED GRATING UNIFORM LOAD TABLES - DEFLECTION IN INCHES													
CLEAR SPAN (in)	STYLE		LOAD (psf)									MAX RECOM. LOAD (psf)	ULTIMATE CAPACITY (psf)
	DEPTH (in)	MESH (in x in)	50	65	100	150	200	300	500	1000	2000		
12	5/8	1 x 4	0.01	0.02	0.03	0.04	0.05	0.08	--	--	--	1540	7720
	3/4	1 x 4	<.01	<.01	0.01	0.01	0.02	0.02	0.04	0.08	0.15	1350	8130
	3/4	1-1/2 x 1-1/2	<.01	<.01	0.01	0.02	0.02	0.04	0.06	0.12	--	1000	6000
	1	3/4 x 3/4	<.01	<.01	<.01	<.01	0.01	0.02	0.03	0.06	0.12	1770	8880
	1	3/4 x 4	<.01	<.01	<.01	<.01	<.01	0.01	0.02	0.04	0.08	2800	14040
	1	1 x 4	<.01	<.01	<.01	<.01	<.01	0.01	0.02	0.05	0.09	2140	10700
	1	1-1/2 x 1-1/2	<.01	<.01	<.01	<.01	<.01	0.02	0.04	0.08	0.16	1420	7120
	1	2 x 2	<.01	0.01	0.02	0.03	0.04	0.06	--	--	--	1020	5140
	1-1/4	1-1/2 x 1-1/2	<.01	<.01	<.01	<.01	<.01	0.01	0.02	0.04	--	1110	6660
	1-1/2*	1-1/2 x 1-1/2	<.01	<.01	<.01	<.01	<.01	0.01	0.02	0.04	0.07	3200	16000
	2	2 x 2	<.01	<.01	<.01	<.01	<.01	<.01	0.01	0.02	0.04	3840	19240
18	5/8	1 x 4	0.05	0.07	0.11	0.16	0.22	--	--	--	--	680	3410
	3/4	1 x 4	0.02	0.02	0.04	0.06	0.08	0.11	0.19	--	--	600	3610
	3/4	1-1/2 x 1-1/2	0.03	0.04	0.06	0.09	0.12	0.18	0.30	--	--	440	2660
	1	3/4 x 3/4	0.01	0.02	0.03	0.04	0.06	0.08	0.14	0.28	--	780	3940
	1	3/4 x 4	0.01	0.01	0.02	0.03	0.04	0.06	0.10	0.20	0.40	1240	6200
	1	1 x 4	0.01	0.01	0.02	0.03	0.04	0.07	0.11	0.22	0.44	950	4750
	1	1-1/2 x 1-1/2	0.02	0.02	0.04	0.06	0.08	0.11	0.2	0.38	--	630	3170
	1	2 x 2	0.04	0.05	0.08	0.11	--	--	--	--	--	450	2290
	1-1/4	1-1/2 x 1-1/2	0.01	0.01	0.02	0.03	0.04	0.06	0.09	0.19	--	740	4440
	1-1/2*	1-1/2 x 1-1/2	<.01	<.01	0.01	0.02	0.03	0.04	0.07	0.14	0.28	1420	7100
	2	2 x 2	<.01	<.01	0.01	0.01	0.02	0.03	0.04	0.09	0.17	1850	9280
24	5/8	1 x 4	0.15	0.19	0.3	0.45	--	--	--	--	--	380	1920
	3/4	1 x 4	0.06	0.08	0.12	0.18	0.24	0.36	--	--	--	330	2030
	3/4	1-1/2 x 1-1/2	0.09	0.12	0.18	0.28	0.37	--	--	--	--	250	1500
	1	3/4 x 3/4	0.04	0.05	0.08	0.12	0.16	0.24	0.41	--	--	440	2220
	1	3/4 x 4	0.03	0.04	0.06	0.09	0.12	0.18	0.30	--	--	700	3500
	1	1 x 4	0.04	0.05	0.07	0.11	0.15	0.22	0.37	--	--	530	2670
	1	1-1/2 x 1-1/2	0.06	0.08	0.12	0.19	0.25	0.37	--	--	--	350	1780
	1	2 x 2	0.11	0.14	0.21	0.32	--	--	--	--	--	250	1280
	1-1/4	1-1/2 x 1-1/2	0.03	0.04	0.06	0.09	0.11	0.17	0.29	--	--	440	2660
	1-1/2*	1-1/2 x 1-1/2	0.02	0.03	0.04	0.06	0.08	0.12	0.21	0.42	--	800	4000
	2	2 x 2	0.01	0.01	0.02	0.03	0.04	0.06	0.10	0.20	--	1040	5220
30	5/8	1 x 4	0.32	0.41	--	--	--	--	--	--	--	240	1230
	3/4	1 x 4	0.13	0.17	0.26	0.40	--	--	--	--	--	210	1300
	3/4	1-1/2 x 1-1/2	0.17	0.23	0.35	--	--	--	--	--	--	160	960
	1	3/4 x 3/4	0.10	0.13	0.20	0.29	0.39	--	--	--	--	280	1400
	1	3/4 x 4	0.07	0.10	0.15	0.22	0.30	0.44	--	--	--	440	2200
	1	1 x 4	0.08	0.11	0.17	0.26	0.34	--	--	--	--	340	1710
	1	1-1/2 x 1-1/2	0.14	0.18	0.27	0.41	--	--	--	--	--	220	1140
	1	2 x 2	0.24	0.31	0.48	--	--	--	--	--	--	160	820
	1-1/4	1-1/2 x 1-1/2	0.08	0.10	0.15	0.23	0.30	0.46	--	--	--	280	1700
	1-1/2*	1-1/2 x 1-1/2	0.05	0.06	0.09	0.14	0.18	0.27	0.46	--	--	510	2560
	2	2 x 2	0.02	0.03	0.05	0.07	0.09	0.14	0.26	0.45	--	660	3340
36	3/4	1 x 4	0.25	0.33		--	--	--	--	--	--	150	900
	3/4	1-1/2 x 1-1/2	0.39	--	--	--	--	--	--	--	--	110	660
	1	3/4 x 3/4	0.20	0.26	0.40	--	--	--	--	--	--	190	990
	1	3/4 x 4	0.15	0.20	0.31	0.46	--	--	--	--	--	310	1500
	1	1 x 4	0.16	0.21	0.32	0.49	--	--	--	--	--	230	1180
	1	1-1/2 x 1-1/2	0.31	0.40	--	--	--	--	--	--	--	150	790
	1	2 x 2	0.46	--	--	--	--	--	--	--	--	110	570
	1-1/4	1-1/2 x 1-1/2	0.14	0.18	0.28	0.42	--	--	--	--	--	190	1180
	1-1/2*	1-1/2 x 1-1/2	0.1	0.13	0.20	0.30	0.40	--	--	--	--	350	1770
	2	2 x 2	0.04	0.06	0.09	0.13	0.18	0.26	0.44	--	--	460	2320
42	1	3/4 x 3/4	0.37	0.48	--	--	--	--	--	--	--	140	720
	1	3/4 x 4	0.28	0.37	--	--	--	--	--	--	--	220	1100
	1	1 x 4	0.33	0.43	--	--	--	--	--	--	--	170	870
	1	1-1/2 x 1-1/2	0.49	--	--	--	--	--	--	--	--	110	580
	1-1/4	1-1/2 x 1-1/2	0.26	0.34	--	--	--	--	--	--	--	140	870
	1-1/2*	1-1/2 x 1-1/2	0.17	0.22	0.34	--	--	--	--	--	--	260	1300
	2	2 x 2	0.08	0.10	0.16	0.24	0.32	0.47	--	--	--	340	1700
46	1	1 x 4	0.48	--	--	--	--	--	--	--	--	140	720
	1-1/4	1-1/2 x 1-1/2	0.37	0.49	--	--	--	--	--	--	--	120	720
48	1	3/4 x 4	0.48	--	--	--	--	--	--	--	--	170	800
	1-1/2*	1-1/2 x 1-1/2	0.28	0.37	--	--	--	--	--	--	--	200	1000
	2	2 x 2	0.14	0.18	0.28	0.42	--	--	--	--	--	260	1300
54	1-1/2*	1-1/2 x 1-1/2	0.42	--	--	--	--	--	--	--	--	150	790
	2	2 x 2	0.21	0.27	0.42	--	--	--	--	--	--	200	1030
60	2	2 x 2	0.37	0.47	--	--	--	--	--	--	--	160	830

') panel.



NOTES:

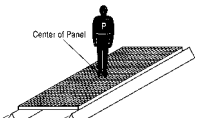
1. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.
2. Maximum Recommended Load represents a 5:1 factor of safety on Ultimate Capacity.
3. For covered grating use a multiplier of 0.5. This is limited to gratings of 1" - 2" depths. It is not recommended covering 3/4" or 1/2" gratings.
4. Max recommended and ultimate loads do not change as a result of adding a 1/8" deep covered plate.
5. Gratings in this table are not rated for motorized vehicle traffic. For these applications, please select appropriate High Load Capacity grating.

MOLDED GRATING CONCENTRATED POINT LOAD TABLES - DEFLECTION IN INCHES									
CLEAR SPAN (in)	STYLE		LOAD (lb)						
	DEPTH (in)	MESH (in x in)	50	100	200	300	500	1000	2000
18	5/8	1 x 4	0.08	0.16	0.32	0.48	--	--	--
	1	1 x 4	<.01	0.01	0.02	0.03	0.06	0.11	0.22
	1	1-1/2 x 1-1/2	<.01	0.01	0.03	0.04	0.07	0.14	0.27
	1	2 x 2	0.04	0.08	0.16	0.24	0.40	--	--
	1-1/2*	1-1/2 x 1-1/2	<.01	<.01	0.01	0.02	0.03	0.06	0.13
	2	2 x 2	<.01	<.01	0.01	0.02	0.03	0.05	0.1
24	5/8	1 x 4	0.19	0.38	--	--	--	--	--
	1	1 x 4	0.01	0.02	0.05	0.07	0.12	0.24	0.49
	1	1-1/2 x 1-1/2	0.01	0.03	0.05	0.08	0.13	0.26	--
	1	2 x 2	0.1	0.19	0.38	--	--	--	--
	1-1/4	1-1/2 x 1-1/2	<.01	0.01	0.03	0.04	0.07	--	--
	1-1/2*	1-1/2 x 1-1/2	<.01	0.01	0.02	0.03	0.06	0.12	0.23
	2	2 x 2	<.01	<.01	0.01	0.02	0.04	0.07	0.14
30	5/8	1 x 4	0.37	--	--	--	--	--	--
	1	1 x 4	0.02	0.05	0.09	0.14	0.23	0.45	--
	1	1-1/2 x 1-1/2	0.03	0.05	0.1	0.15	0.26	--	--
	1	2 x 2	0.19	0.37	--	--	--	--	--
	1-1/4	1-1/2 x 1-1/2	0.01	0.03	0.05	0.08	0.13	--	--
	1-1/2*	1-1/2 x 1-1/2	0.01	0.02	0.04	0.06	0.1	0.2	--
	2	2 x 2	<.01	0.01	0.02	0.03	0.06	0.12	0.23
36	1	1 x 4	0.04	0.07	0.14	0.21	0.35	--	--
	1	1-1/2 x 1-1/2	0.03	0.07	0.14	0.2	0.34	--	--
	1	2 x 2	0.32	--	--	--	--	--	--
	1-1/4	1-1/2 x 1-1/2	0.02	0.03	0.07	0.10	0.16	--	--
	1-1/2*	1-1/2 x 1-1/2	0.02	0.03	0.06	0.09	0.15	0.3	--
	2	2 x 2	<.01	0.01	0.03	0.04	0.07	0.15	0.29
42	1	1 x 4	0.05	0.11	0.21	0.32	--	--	--
	1	1-1/2 x 1-1/2	0.06	0.12	0.23	0.35	--	--	--
	1-1/4	1-1/2 x 1-1/2	0.03	0.06	0.11	0.17	0.28	--	--
	1-1/2*	1-1/2 x 1-1/2	0.02	0.04	0.09	0.13	0.22	0.44	--
	2	2 x 2	0.01	0.02	0.05	0.08	0.12	0.25	0.5
46	1	1 x 4	0.07	0.13	0.26	0.39	--	--	--
	1	1-1/2 x 1-1/2	0.07	0.14	0.28	0.42	--	--	--
	1-1/4	1-1/2 x 1-1/2	0.04	0.07	0.15	0.22	0.37	--	--
48	1-1/2*	1-1/2 x 1-1/2	0.03	0.06	0.12	0.18	0.29	--	--
	2	2 x 2	0.01	0.03	0.06	0.09	0.15	0.3	--
54	1-1/2*	1-1/2 x 1-1/2	0.04	0.07	0.15	0.22	0.37	--	--
58	1-1/2*	1-1/2 x 1-1/2	0.04	0.08	0.17	0.25	0.42	--	--

') panel.

NOTES:

1. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.
2. Maximum Recommended Load represents a 5:1 factor of safety on Ultimate Capacity.
3. For covered grating use a multiplier of 0.5. This is limited to gratings of 1" - 2" depths. It is not recommended covering 3/4" or 1/2" gratings.
4. Max recommended and ultimate loads do not change as a result of adding a 1/8" deep covered plate.
5. Gratings in this table are not rated for motorized vehicle traffic. For these applications, please select appropriate High Load Capacity grating.



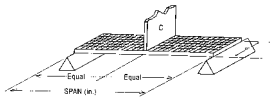
MOLDED GRATING CONCENTRATED LINE LOAD TABLES - DEFLECTION IN INCHES											
CLEAR SPAN (in)	STYLE		LOAD (lb/ft of width)							MAX RECOM. LOAD (lb/ft of width)	ULTIMATE CAPACITY (lb/ft of width)
	DEPTH (in)	MESH (in x in)	50	100	200	300	500	1000	2000		
12	5/8	1 x 4	0.02	0.04	0.09	0.13	--	--	--	770	3860
	3/4	1 x 4	<.01	.01	0.02	0.04	0.06	0.12	--	670	4060
	3/4	1-1/2 x 1-1/2	0.01	0.02	0.04	0.06	0.10	--	--	500	3000
	1	3/4 x 3/4	<.01	<.01	0.02	0.03	0.05	0.1	0.2	880	4440
	1	3/4 x 4	<.01	<.01	0.01	0.02	0.03	0.07	0.13	1400	7020
	1	1 x 4	<.01	0.01	0.02	0.02	0.04	0.08	--	1070	5350
	1	1-1/2 x 1-1/2	<.01	0.01	0.03	0.04	0.06	0.13	--	710	3560
	1	2 x 2	0.02	0.03	0.06	0.09	--	--	--	510	2570
	1-1/4	1-1/2 x 1-1/2	<.01	<.01	0.01	0.02	0.03	0.06	--	110	6660
	1-1/2*	1-1/2 x 1-1/2	<.01	<.01	0.01	0.02	0.03	0.05	0.11	1600	8000
	2	2 x 2	<.01	<.01	<.01	0.01	0.02	0.03	0.06	1920	9620
18	5/8	1 x 4	0.06	0.12	0.23	0.35	--	--	--	510	2560
	3/4	1 x 4	0.02	0.04	0.08	0.12	0.20	--	--	450	2710
	3/4	1-1/2 x 1-1/2	0.03	0.06	0.13	0.19	0.32	--	--	330	2000
	1	3/4 x 3/4	0.01	0.03	0.06	0.09	0.15	0.29	--	590	2960
	1	3/4 x 4	0.01	0.02	0.04	0.06	0.11	0.21	0.43	930	4680
	1	1 x 4	0.01	0.02	0.05	0.07	0.12	0.23	--	710	3560
	1	1-1/2 x 1-1/2	0.02	0.04	0.08	0.12	0.2	0.41	--	470	2370
	1	2 x 2	0.04	0.08	0.16	--	--	--	--	340	1710
	1-1/4	1-1/2 x 1-1/2	0.01	0.02	0.04	0.06	0.10	--	--	540	3240
	1-1/2*	1-1/2 x 1-1/2	0.01	0.02	0.03	0.05	0.08	0.15	0.3	1060	5330
	2	2 x 2	<.01	0.01	0.02	0.03	0.05	0.09	0.18	1390	6960
24	5/8	1 x 4	0.12	0.24	0.48	--	--	--	--	380	1920
	3/4	1 x 4	0.05	0.09	0.19	0.28	0.47	--	--	330	2030
	3/4	1-1/2 x 1-1/2	0.07	0.15	0.30	044	--	--	--	250	1500
	1	3/4 x 3/4	0.03	0.07	0.13	0.2	0.33	--	--	440	2220
	1	3/4 x 4	0.02	0.05	0.10	0.15	0.24	0.48	--	700	3510
	1	1 x 4	0.03	0.06	0.12	0.18	0.3	--	--	530	2670
	1	1-1/2 x 1-1/2	0.05	0.1	0.2	0.3	0.49	--	--	350	1780
	1	2 x 2	0.09	0.17	--	--	--	--	--	250	1280
	1-1/4	1-1/2 x 1-1/2	0.02	0.05	0.09	0.14	0.23	--	--	460	2760
	1-1/2*	1-1/2 x 1-1/2	0.02	0.03	0.07	0.1	0.17	0.33	--	800	4000
	2	2 x 2	0.01	0.02	0.03	0.05	0.08	0.16	--	1040	5220
30	5/8	1 x 4	0.2	0.41	--	--	--	--	--	300	1530
	3/4	1 x 4	0.08	0.17	0.34	--	--	--	--	270	1620
	3/4	1-1/2 x 1-1/2	0.11	0.22	0.45	--	--	--	--	200	1200
	1	3/4 x 3/4	0.06	0.13	0.25	0.38	--	--	--	350	1770
	1	3/4 x 4	0.05	0.09	0.19	0.28	0.47	--	--	560	2800
	1	1 x 4	0.05	0.11	0.22	0.32	--	--	--	420	2140
	1	1-1/2 x 1-1/2	0.09	0.18	0.35	--	--	--	--	280	1420
	1	2 x 2	0.15	0.31	--	--	--	--	--	200	1020
	1-1/4	1-1/2 x 1-1/2	0.05	0.10	0.19	0.29	0.49	--	--	350	2130
	1-1/2*	1-1/2 x 1-1/2	0.03	0.06	0.12	0.18	0.29	--	--	640	3200
	2	2 x 2	0.01	0.03	0.06	0.09	0.14	0.29	--	830	4180
36	5/8	1 x 4	0.32	--	--	--	--	--	--	250	1270
	3/4	1 x 4	0.13	0.27	--	--	--	--	--	220	1350
	3/4	1-1/2 x 1-1/2	0.21	0.42	--	--	--	--	--	160	1000
	1	3/4 x 3/4	0.11	0.21	0.42	--	--	--	--	290	1480
	1	3/4 x 4	0.08	0.16	0.33	0.49	--	--	--	460	2340
	1	1 x 4	0.09	0.17	0.34	--	--	--	--	350	1780
	1	1-1/2 x 1-1/2	0.16	0.33	--	--	--	--	--	230	1180
	1	2 x 2	0.25	0.49	--	--	--	--	--	170	850
	1-1/4	1-1/2 x 1-1/2	0.07	0.15	0.30	0.45	--	--	--	290	1770
	1-1/2*	1-1/2 x 1-1/2	0.05	0.11	0.21	0.32	--	--	--	530	2660
	2	2 x 2	0.02	0.05	0.09	0.14	0.23	0.47	--	690	3480
42	1	3/4 x 3/4	0.17	0.34	--	--	--	--	--	250	1260
	1	3/4 x 4	0.13	0.26	--	--	--	--	--	400	2000
	1	1 x 4	0.15	0.3	--	--	--	--	--	300	1520
	1	1-1/2 x 1-1/2	0.26	0.45	--	--	--	--	--	200	1010
	1	2 x 2	0.38	--	--	--	--	--	--	140	730
	1-1/4	1-1/2 x 1-1/2	0.12	0.24	0.48	--	--	--	--	250	1520
	1-1/2*	1-1/2 x 1-1/2	0.08	0.16	0.32	0.47	--	--	--	450	2280
	2	2 x 2	0.04	0.07	0.14	0.22	0.36	--	--	590	2980
46	1	1 x 4	0.20	0.40	--	--	--	--	--	270	1390
	1	1-1/2 x 1-1/2	0.32	--	--	--	--	--	--	180	900
	1-1/4	1-1/2 x 1-1/2	0.16	0.31	--	--	--	--	--	230	1390
48	1	3/4 x 3/4	0.25	--	--	--	--	--	--	220	1110
	1	3/4 x 4	0.19	0.39	--	--	--	--	--	350	1750
	1-1/2*	1-1/2 x 1-1/2	0.11	0.23	0.45	--	--	--	--	400	2000
	2	2 x 2	0.06	0.11	0.22	0.33	--	--	--	520	2610
54	1-1/2*	1-1/2 x 1-1/2	0.15	0.3	--	--	--	--	--	350	1770
	2	2 x 2	0.07	0.15	0.3	0.45	--	--	--	460	2320
60	2	2 x 2	0.12	0.23	0.47	--	--	--	--	410	2090

') panel.

NOTES:

1. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.
2. Maximum Recommended Load represents a 5:1 factor of safety on Ultimate Capacity.
3. For covered grating use a multiplier of 0.5. This is limited to gratings of 1" - 2" depths. It is not recommended covering 3/4" or 1/2" gratings.
4. Max recommended and ultimate loads do not change as a result of adding a 1/8" deep covered plate.

vehicle traffic. For these applications, please select appropriate High Load Capacity grating.



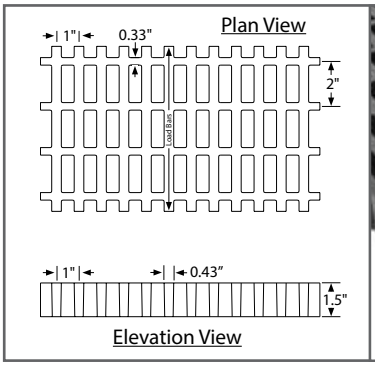
High Load Capacity Grating Details

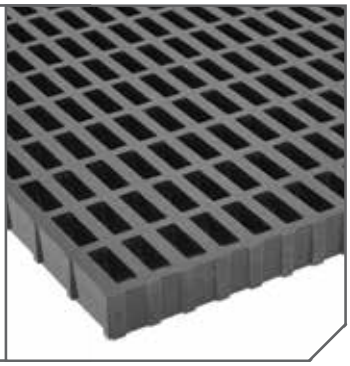
Molded High Load Capacity (HLC) grating is yet another product in the arsenal of engineered fiberglass reinforced ZeAllgrate most of the traditional benefits of molded grating products — high strength, corrosion resistance, fire retardancy, non conductivity and low maintenance — this specially manufactured molded FRP product has been engineered to carry forklift loads that traditional molded FRP grating products are unable to support.

ZeAllgrate grating is available in a 6' x 4' or 4' x 8' panel size with depths of 1-1/2" and 2". High load capacity molded grating is now ZeAllgrate systems (see resin details for color options). Surface options include either a smooth surface or an Aluminum Oxide ZeAllgrate ASTM E-84 flame spread rating of 25 or less and a Class 1 Fire Rating.

HLC 1-1/2" Deep x 1" x 2" Rectangular Mesh

# of Bars/ Ft of Width	Load Bar Width	Open Area	Load Bar Centers	Approximate Weight
12	0.43"	48%	1"	6.2 psf

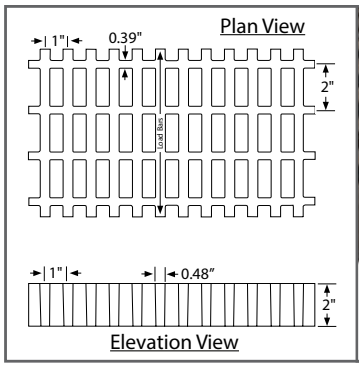




Section Properties per Ft of Width: A = 7.45 IN² I = 1.39 IN⁴ S= 1.80 IN³

HLC 2" Deep x 1" x 2" Rectangular Mesh

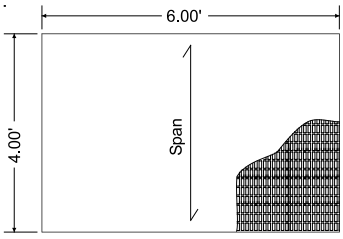
# of Bars/ Ft of Width	Load Bar Width	Open Area	Load Bar Centers	Approximate Weight
12	0.48"	48%	1"	8.4 psf





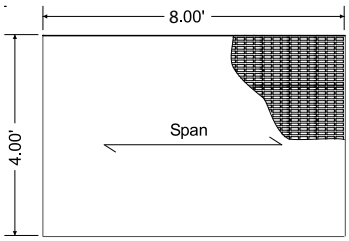
Section Properties per Ft of Width: A = 10.26 IN² I = 3.4 IN⁴ S= 3.27 IN³

6' x 4' Finished Panel Size



Note:
Load carrying bars are oriented across the narrow (4') dimension of the panel. Panels furnished with closed bars all sides.

4' x 8' Finished Panel Size



Note:
Load carrying bars are oriented across the long (8') dimension of the panel. Panels furnished with closed bars all sides.

Allowable Spans for Vehicular Loads

	Wheel Load (lb) - 1/2 Axle Load +30% Impact	Load Distribution		Allowable Span[2,3]	
		Parallel To Axle[1]	Perpendicular To Axle	1-1/2" Deep HLC Molded Grating	2" Deep HLC Molded Grating
AASHTO Standard Truck[4] / 32,000 lb Axle Load Dual Wheels(*formerly AASHTO H-20)	20,800	20" + 4"	8"	1' - 2"	1' - 5"
Automobile Traffic / 5,000 lb Vehicle 1,500 lb Load / 55% Drive Axle Load	2,200	8" + 4"	8"	2' - 2"	2' - 8"
5 ton Capacity Forklift / 14,400 lb Vehicle 24,400 lb Total Load / 85% Drive Axle Load	13,480	11" + 4"	11"	1' - 1"	1' - 5"
3 Ton Capacity Forklift / 9,800 lb Vehicle 15,800 lb Total Load / 85% Drive Axle Load	8,730	7" + 4"	7"	1' - 0"	1' - 4"
1 Ton Capacity Forklift / 4,200 lb Vehicle 6,200 lb Total Load / 85% Drive Axle Load	3,425	4" + 4"	4"	1' - 7"	2' - 1"

Notes:
1. Load is carried by the grating load bars immediate under wheel + four additional load bars adjacent to wheel.
2. Allowable Span is based on a 0.25" maximum deflection and a Factor of Safety of 2.5. Other criteria may be
3. **ALLOWABLE SPAN IS STRONGLY DEPENDENT ON WHEEL WIDTH AND VEHICLE WEIGHT/LOAD CAPACI** application assistance.
4. Load based on the AASHTO Standard Truck Load as defined in AASHTO LRFD Bridge Design Specifications, 2nd Ed. This does not imply that the allowable span meets the deflection requirements of this specification.

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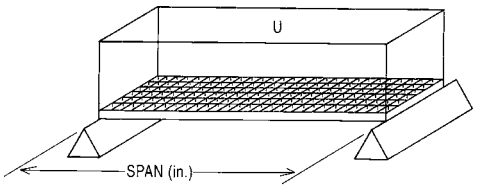
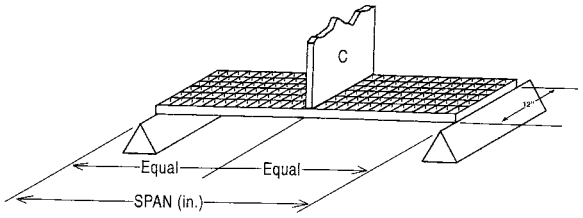
HLC Grating Load Charts



Uniform Load Table - Deflection in Inches

Span (in)	Style		UNIFORM LOAD (psf)										MAXIMUM RECOMMENDED LOAD (psf)	ULTIMATE CAPACITY (psf)
	Depth (in)	Mesh (in)	100	200	300	400	500	600	700	800	900	1000		
12	1-1/2	1 x 2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	28000	70000
	2	1 x 2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	31200	78000
18	1-1/2	1 x 2	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	12400	31000
	2	1 x 2	<0.01	<0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	14500	36200
24	1-1/2	1 x 2	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.11	6800	17000
	2	1 x 2	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.06	9000	22500
30	1-1/2	1 x 2	0.03	0.05	0.08	0.11	0.13	0.16	0.18	0.21	0.24	0.26	4300	10700
	2	1 x 2	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.11	0.13	0.14	5800	14500
36	1-1/2	1 x 2	0.05	0.10	0.16	0.21	0.26	0.31	0.37	0.42	0.47	--	3000	7500
	2	1 x 2	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27	0.30	4000	10000
42	1-1/2	1 x 2	0.10	0.19	0.29	0.39	0.48	--	--	--	--	--	2200	5500
	2	1 x 2	0.06	0.11	0.17	0.22	0.28	0.33	0.39	0.44	0.50	--	2900	7200



Concentrated Line Load Table - Deflection in Inches

Span (in)	Style		Concentrated Line LOAD (lb/ft of width)										MAXIMUM RECOMMENDED LOAD (lb/ft)	ULTIMATE CAPACITY (lb/ft)
	Depth (in)	Mesh (in)	100	200	300	500	1000	2000	3000	4000	5000	6000		
12	1-1/2	1 x 2	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.04	0.06	0.07	0.08	14000	35000
	2	1 x 2	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	0.04	0.05	15600	39000
18	1-1/2	1 x 2	<0.01	<0.01	0.01	0.02	0.04	0.07	0.11	0.15	0.18	0.22	9300	23200
	2	1 x 2	<0.01	<0.01	0.01	0.01	0.02	0.04	0.06	0.08	0.11	0.13	10800	27000
24	1-1/2	1 x 2	<0.01	0.02	0.03	0.04	0.09	0.17	0.26	0.34	0.43	--	6800	17000
	2	1 x 2	<0.01	0.01	0.01	0.02	0.05	0.09	0.14	0.19	0.24	0.28	9000	22500
30	1-1/2	1 x 2	0.02	0.03	0.05	0.08	0.17	0.34	--	--	--	--	5400	13500
	2	1 x 2	0.01	0.02	0.03	0.05	0.09	0.18	0.28	0.37	0.46	--	7200	18000
36	1-1/2	1 x 2	0.03	0.06	0.08	0.14	0.28	--	--	--	--	--	4500	11200
	2	1 x 2	0.02	0.03	0.05	0.08	0.16	0.32	0.48	--	--	--	6000	15000
42	1-1/2	1 x 2	0.04	0.09	0.13	0.22	0.44	--	--	--	--	--	3800	9500
	2	1 x 2	0.03	0.05	0.08	0.13	0.25	0.50	--	--	--	--	5100	12700

NOTES:
1. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
2. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the material and will also require higher safety factors to ensure acceptable performance. For applications at elevated

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4. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

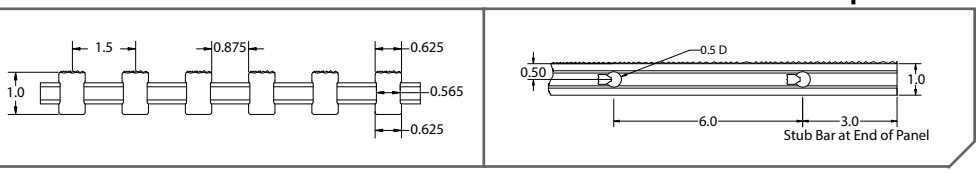
High Load Capacity Grating Details

Grating Details

HI58 Series

1" Deep HI5810

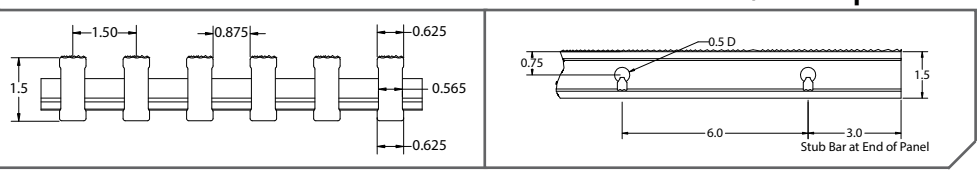
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
1"	58%	1.5"	4.3 lb/ft²



Section Properties per Ft of Width: A=4.72 IN² I=0.4 IN⁴/FT S=0.78 IN³/FT

1-1/2" Deep HI5815

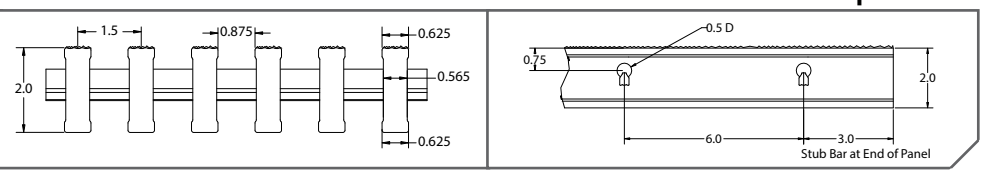
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
1-1/2"	58%	1.5"	6.5 lb/ft²



Section Properties per Ft of Width: A=6.96 IN² I=1.36 IN⁴/FT S=1.79 IN³/FT

2" Deep HI5820

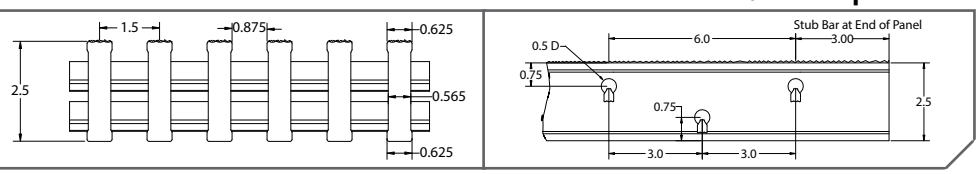
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
2"	58%	1.5"	8.7 lb/ft²



Section Properties per Ft of Width: A=9.2 IN² I=3.12 IN⁴/FT S=3.12 IN³/FT

2-1/2" Deep HI5825

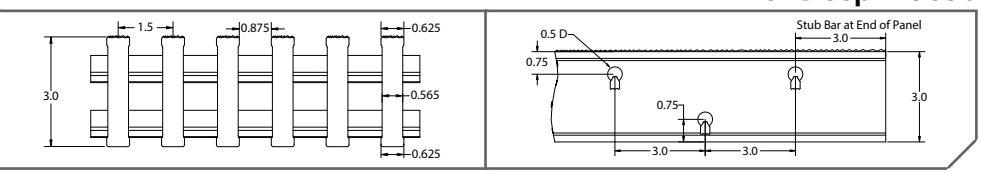
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
2-1/2"	58%	1.5"	10 lb/ft²



Section Properties per Ft of Width: A=11.5 IN² I=6.09 IN⁴/FT S=4.87 IN³/FT

3" Deep HI5830

Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
3"	58%	1.5"	12 lb/ft²

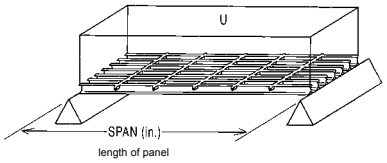


Section Properties per Ft of Width: A=13.73 IN² I=10.46 IN⁴/FT S=6.98 IN³/FT

NOTES:

1. All pultruded grating panels are assembled to size from stocked bar lengths of 20' and 24' to minimize waste and cost. Maximum panel widths (tie bar length) are 4' nominal.
2. Available panel sizes are dependent upon application requirements and individual panel weight considerations because this is a very heavy product.

Industrial Series Uniform Load Chart



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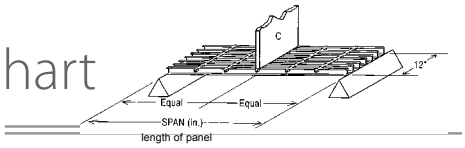
CLEAR SPAN (in)	STYLE	LOAD (psf) 50	100	200	300	500	1000	2000	MAXIMUM RECOMMENDED LOAD (psf)	ULTIMATE CAPACITY (psf)
12	I6010	<.01	<.01	<.01	<.01	0.01	0.02	0.04	7140	14280
	I6015	<.01	<.01	<.01	<.01	<.01	0.01	0.02	15240	30480
	I5010	<.01	<.01	<.01	<.01	<.01	0.01	0.03	8920	17840
	I5015	<.01	<.01	<.01	<.01	<.01	<.01	0.01	19050	38100
	T5020	<.01	<.01	<.01	<.01	<.01	<.01	0.01	15120	30240
	I4010	<.01	<.01	<.01	<.01	<.01	0.01	0.02	10700	21400
	I4015	<.01	<.01	<.01	<.01	<.01	<.01	0.01	22860	45720
	T3320	<.01	<.01	<.01	<.01	<.01	<.01	0.01	20160	40320
18	I6010	<.01	0.01	0.02	0.02	0.04	0.08	0.16	4520	9040
	I6015	<.01	<.01	<.01	0.01	0.02	0.03	0.06	9820	19650
	I5010	<.01	<.01	0.01	0.01	0.03	0.06	0.12	5640	11290
	I5015	<.01	<.01	<.01	<.01	0.01	0.02	0.04	12280	24560
	T5020	<.01	<.01	<.01	<.01	0.01	0.02	0.05	10080	20160
	I4010	<.01	<.01	0.01	0.02	0.03	0.05	0.11	6770	13540
	I4015	<.01	<.01	<.01	<.01	0.01	0.02	0.04	14740	29490
	T3320	<.01	<.01	<.01	<.01	0.01	0.02	0.04	13440	26880
24	I6010	0.01	0.02	0.05	0.07	0.12	0.24	—	2840	5680
	I6015	<.01	0.01	0.02	0.03	0.04	0.09	0.17	4880	9760
	I5010	<.01	0.01	0.04	0.05	0.09	0.19	—	3550	7100
	I5015	<.01	<.01	0.01	0.02	0.03	0.07	0.13	6100	12200
	T5020	<.01	<.01	<.01	0.02	0.03	0.05	0.11	5940	11880
	I4010	0.01	0.02	0.03	0.05	0.08	0.16	0.31	4260	8520
	I4015	<.01	<.01	0.01	0.02	0.03	0.06	0.11	7310	14620
	T3320	<.01	<.01	<.01	0.01	0.02	0.04	0.08	7920	15840
30	I6010	0.03	0.05	0.11	0.16	0.27	—	—	1840	3680
	I6015	0.01	0.02	0.04	0.06	0.10	0.20	0.41	3600	7200
	I5010	0.02	0.04	0.08	0.12	0.21	0.44	—	2300	4600
	I5015	<.01	0.01	0.03	0.04	0.08	0.16	0.32	4500	9000
	T5020	<.01	0.01	0.02	0.03	0.06	0.13	0.25	4160	8320
	I4010	0.02	0.04	0.07	0.11	0.18	0.36	—	2760	5520
	I4015	<.01	0.01	0.03	0.04	0.07	0.14	0.27	5400	10800
	T3320	<.01	0.01	0.02	0.03	0.05	0.09	0.19	5540	11080
36	I6010	0.05	0.10	0.21	0.31	—	—	—	1310	2620
	I6015	0.02	0.04	0.08	0.11	0.19	0.38	—	2500	5000
	I5010	0.04	0.08	0.16	0.24	—	—	—	1640	3280
	I5015	0.01	0.03	0.06	0.08	0.15	0.30	—	3120	6240
	T5020	0.01	0.02	0.05	0.07	0.12	0.23	0.47	2880	5760
	I4010	0.03	0.07	0.14	0.21	0.35	—	—	1960	3930
	I4015	0.01	0.03	0.05	0.08	0.13	0.25	0.50	3750	7500
	T3320	0.01	0.02	0.04	0.05	0.09	0.18	0.35	3840	7680
42	I6010	0.09	0.19	0.37	—	—	—	—	950	1900
	I6015	0.04	0.07	0.14	0.21	0.35	—	—	1840	3680
	I5010	0.07	0.15	0.29	0.44		—	—	1190	2380
	I5015	0.03	0.05	0.11	0.16	0.28	—	—	2300	4600
	T5020	0.02	0.05	0.09	0.14	0.23	0.45	—	2120	4240
	I4010	0.06	0.12	0.25	0.37	—	—	—	1430	2860
	I4015	0.02	0.05	0.09	0.14	0.23	0.47	—	2760	5520
	T3320	0.02	0.03	0.07	0.10	0.17	0.34	—	2820	5650
48	I6010	0.14	0.29	—	—	—	—	—	720	1440
	I6015	0.06	0.11	0.23	0.34	—	—	—	1410	2820
	I5010	0.11	0.23	0.45	—	—	—	—	900	1800
	I5015	0.04	0.08	0.18	0.27	0.45	—	—	1760	3520
	T5020	0.04	0.07	0.14	0.21	0.36	—	—	1620	3240
	I4010	0.10	0.19	0.38	—	—	—	—	1080	2160
	I4015	0.04	0.08	0.15	0.23	0.38	—	—	2110	4220
	T3320	0.03	0.05	0.11	0.16	0.27	—	—	2160	4320
54	I6010	0.25	—	—	—	—	—	—	570	1140
	I6015	0.10	0.19	0.39	—	—	—	—	1110	2220
	I5010	0.20	0.40	—	—	—	—	—	710	1420
	I5015	0.08	0.15	0.31	0.46	—	—	—	1380	2770
	T5020	0.06	0.12	0.24	0.36	—	—	—	1280	2560
	I4010	0.17	0.34	—	—	—	—	—	850	1700
	I4015	0.06	0.13	0.26	0.39	—	—	—	1670	3340
	T3320	0.04	0.09	0.18	0.27	0.45	—	—	1680	3360
60	I6010	0.42	—	—	—	—	—	—	460	920
	I6015	0.15	0.31	—	—	—	—	—	900	1800
	I5010	0.33	—	—	—	—	—	—	570	1150
	I5015	0.12	0.24	0.49	—	—	—	—	1120	2250
	T5020	0.09	0.18	0.36	—	—	—	—	1040	2080
	I4010	0.28	—	—	—	—	—	—	690	1380
	I4015	0.10	0.21	0.41	—	—	—	—	1350	2700
	T3320	0.07	0.14	0.27	0.41	—	—	—	1360	2720
72	I6015	0.34	—	—	—	—	—	—	630	1260
	I5015	0.27	—	—	—	—	—	—	780	1570
	T5020	0.18	0.35	—	—	—	—	—	720	1440
	I4015	0.23	0.45	—	—	—	—	—	940	1880
	T3320	0.13	0.26	—	—	—	—	—	950	1900

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 2:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. Walking loads, typically 50-65 PSF maximum are recommended for pedestrian traffic. Deflections for worker comfort are typically limited to the lesser of 3/8" or CLEAR SPAN divided by 125; for a firmer feel, limit deflection to the lesser of 1/4" or CLEAR SPAN divided by 200.
4. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact or dynamic conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the material and will also require higher safety factors to ensure acceptable performance. For applications at elevated temperatures, consult factory. The designer is further referenced to the ASCE Structural Plastics Design Manual.
5. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.
6. Gratings in this table are not rated for motorized vehicle traffic. For these applications, please select appropriate High Load Capacity grating.

Industrial Series Concentrated Line Load Chart



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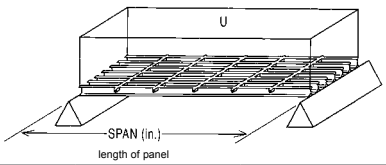
CLEAR SPAN (in)	STYLE	LOAD (LBS/FT of Width) 50	100	200	300	500	1000	2000	MAXIMUM RECOM. LOAD (lbs/ft)	ULTIMATE CAPACITY (lbs/ft)
12	I6010	<.01	<.01	<.01	<.01	0.01	0.03	0.06	3570	7140
	I6015	<.01	<.01	<.01	<.01	<.01	0.01	0.02	7620	15240
	I5010	<.01	<.01	<.01	<.01	0.01	0.02	0.05	4460	8920
	I5015	<.01	<.01	<.01	<.01	<.01	0.01	0.02	9520	19050
	T5020	<.01	<.01	<.01	<.01	<.01	0.01	0.02	7560	15120
	I4010	<.01	<.01	<.01	<.01	0.01	0.02	0.04	5350	10700
	I4015	<.01	<.01	<.01	<.01	<.01	0.01	0.02	11430	22860
	T3320	<.01	<.01	<.01	<.01	<.01	<.01	0.01	10080	20160
18	I6010	<.01	0.01	0.02	0.03	0.04	0.09	0.17	3390	6780
	I6015	<.01	<.01	<.01	0.01	0.02	0.03	0.06	7370	14740
	I5010	<.01	0.01	0.02	0.02	0.03	0.07	0.14	4230	8470
	I5015	<.01	<.01	<.01	0.01	0.02	0.02	0.05	9210	18420
	T5020	<.01	<.01	<.01	<.01	0.01	0.03	0.05	7560	15120
	I4010	<.01	<.01	0.01	0.02	0.03	0.06	0.12	5080	10160
	I4015	<.01	<.01	<.01	<.01	0.01	0.02	0.04	11060	22120
	T3320	<.01	<.01	<.01	<.01	0.01	0.02	0.04	10080	20160
24	I6010	0.01	0.02	0.04	0.06	0.09	0.19	0.38	2840	5680
	I6015	<.01	<.01	0.01	0.02	0.03	0.07	0.14	4880	9760
	I5010	0.01	0.02	0.03	0.05	0.07	0.15	0.30	3550	7100
	I5015	<.01	<.01	0.01	0.02	0.02	0.06	0.11	6100	12200
	T5020	<.01	<.01	<.01	0.01	0.02	0.04	0.08	5940	11880
	I4010	<.01	0.01	0.03	0.04	0.06	0.13	0.25	4260	8520
	I4015	<.01	<.01	<.01	0.01	0.02	0.05	0.10	7310	14620
	T3320	<.01	<.01	<.01	0.01	0.02	0.03	0.06	7920	15840
30	I6010	0.02	0.03	0.07	0.10	0.17	0.35	—	2300	4600
	I6015	<.01	0.01	0.03	0.04	0.06	0.13	0.26	4500	9000
	I5010	0.02	0.02	0.06	0.08	0.14	0.28	—	2870	5750
	I5015	<.01	0.01	0.02	0.03	0.05	0.10	0.21	5620	11250
	T5020	<.01	<.01	0.01	0.02	0.04	0.08	0.16	5200	10400
	I4010	0.01	0.02	0.05	0.07	0.12	0.23	0.47	3450	6900
	I4015	<.01	0.01	0.02	0.03	0.05	0.11	0.22	6750	13500
	T3320	<.01	<.01	0.01	0.02	0.03	0.06	0.12	6930	13860
36	I6010	0.03	0.06	0.11	0.17	0.28	—	—	1970	3940
	I6015	0.01	0.02	0.04	0.06	0.10	0.20	0.40	3750	7500
	I5010	0.02	0.05	0.09	0.14	0.22	0.44	—	2460	4920
	I5015	0.01	0.02	0.03	0.05	0.08	0.16	0.32	4680	9370
	T5020	<.01	0.01	0.02	0.04	0.06	0.12	0.25	4320	8640
	I4010	0.02	0.04	0.07	0.11	0.18	0.37	—	2950	5900
	I4015	<.01	0.01	0.03	0.04	0.07	0.13	0.26	5630	11260
	T3320	<.01	0.01	0.02	0.03	0.05	0.09	0.19	5760	11520
42	I6010	0.04	0.08	0.17	0.25	0.42	—	—	1670	3340
	I6015	0.02	0.03	0.06	0.10	0.16	0.32	—	3220	6440
	I5010	0.03	0.06	0.14	0.20	0.34	—	—	2080	4170
	I5015	0.02	0.02	0.05	0.08	0.13	0.26		4020	8050
	T5020	0.01	0.02	0.04	0.06	0.10	0.21	0.41	3710	7420
	I4010	0.03	0.06	0.11	0.17	0.28	—	—	2500	5000
	I4015	0.01	0.02	0.04	0.06	0.11	0.21	0.42	4820	9640
	T3320	0.01	0.02	0.03	0.05	0.08	0.16	0.31	4950	9900
48	I6010	0.06	0.11	0.23	0.34	—	—	—	1440	2880
	I6015	0.02	0.05	0.09	0.14	0.23	0.46	—	2810	5620
	I5010	0.05	0.09	0.18	0.27	0.46	—	—	1800	3600
	I5015	0.02	0.04	0.07	0.11	0.18	0.37	—	3510	7020
	T5020	0.01	0.03	0.06	0.09	0.15	0.29	—	3250	6500
	I4010	0.04	0.08	0.15	0.23	0.38		—	2160	4320
	I4015	0.02	0.03	0.06	0.09	0.15	0.30	—	4220	8440
	T3320	0.01	0.02	0.04	0.07	0.11	0.22	0.44	4330	8660
54	I6010	0.09	0.18	0.36	—	—	—	—	1280	2560
	I6015	0.03	0.07	0.14	0.21	0.35	—	—	2500	5000
	I5010	0.07	0.14	0.29	0.43	—	—	—	1600	3200
	I5015	0.02	0.06	0.11	0.17	0.28	—	—	3120	6250
	T5020	0.02	0.04	0.08	0.13	0.21	0.42	—	2890	5780
	I4010	0.06	0.12	0.24	0.36	—	—	—	1920	3840
	I4015	0.03	0.05	0.09	0.14	0.23	0.46	—	3750	7500
	T3320	0.02	0.03	0.06	0.10	0.16	0.32	—	3780	7560
60	I6010	0.13	0.27	—	—	—	—	—	1150	2300
	I6015	0.05	0.10	0.20	0.30	0.49	—	—	2250	4500
	I5010	0.10	0.22	0.43	—	—	—	—	1430	2870
	I5015	0.04	0.08	0.16	0.24	0.39	—	—	2810	5620
	T5020	0.03	0.06	0.12	0.17	0.29	—	—	2600	5200
	I4010	0.09	0.18	0.36	—	—	—	—	1730	3460
	I4015	0.04	0.07	0.13	0.20	0.33	—	—	3380	6760
	T3320	0.02	0.04	0.09	0.13	0.22	0.44	—	3400	6800
72	I6010	0.26	—	—	—	—	—	—	960	1920
	I6015	0.09	0.18	0.36	—	—	—	—	1880	3760
	I5010	0.21	0.41	—	—	—	—	—	1200	2400
	I5015	0.07	0.14	0.29	0.43	—	—	—	2350	4700
	T5020	0.05	0.09	0.19	0.28	0.47	—	—	2170	4340
	I4010	0.17	0.34	—	—	—	—	—	1440	2880
	I4015	0.06	0.12	0.24	0.36	—	—	—	2810	5620
	T3320	0.04	0.07	0.14	0.21	0.35	—	—	2830	5660

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 2:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. Walking loads, typically 50-65 PSF maximum are recommended for pedestrian traffic. Deflections for worker comfort are typically limited to the lesser of 3/8" or CLEAR SPAN divided by 125; for a firmer feel, limit deflection to the lesser of 1/4" or CLEAR SPAN divided by 200.
4. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact or dynamic conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the material and will also require higher safety factors to ensure acceptable performance. For applications at elevated temperatures, consult factory. The designer is further referenced to the ASCE Structural Plastics Design Manual.
5. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.
6. Gratings in this table are not rated for motorized vehicle traffic. For these applications, please select appropriate High Load Capacity grating.

HI37 Grating Uniform Load Chart



HI37 PULTRUDED SERIES UNIFORM LOAD TABLE - DEFLECTIONS IN INCHES

CLEAR SPAN (in)	STYLE	LOAD (psf) 100	200	300	400	500	600	700	800	900	1000	MAXIMUM RECOM. LOAD (psf)	ULTIMATE CAPACITY (psf)
12	HI3710	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	14800	44400
	HI3715	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	27600	82800
	HI3720	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	71300	214000
	HI3725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	73200	219800
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	94000	282000
18	HI3710	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	7000	21200
	HI3715	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	15300	45900
	HI3720	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	32500	97700
	HI3725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	35200	105700
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	44400	133400
24	HI3710	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	4200	12700
	HI3715	<0.01	<0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04	10300	30900
	HI3720	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.02	0.02	18800	56400
	HI3725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	21300	63900
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	26500	79600
30	HI3710	0.04	0.08	0.11	0.15	0.19	0.23	0.27	0.30	0.34	0.38	2700	8100
	HI3715	<0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.09	6600	19800
	HI3720	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04	0.04	12300	37100
	HI3725	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.02	14600	43800
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.01	17900	53800
36	HI3710	0.08	0.16	0.24	0.32	0.39	0.47	—	—	—	—	1800	5600
	HI3715	0.02	0.04	0.06	0.08	0.09	0.11	0.13	0.15	0.17	0.19	4500	13700
	HI3720	<0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08	0.09	8800	26400
	HI3725	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	10800	32400
	HI3730	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	13100	39400
42	HI3710	0.15	0.29	0.44	—	—	—	—	—	—	—	1300	4100
	HI3715	0.03	0.07	0.10	0.14	0.17	0.21	0.24	0.28	0.31	0.35	3300	10100
	HI3720	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.13	0.14	0.16	6400	19400
	HI3725	<0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07	0.08	8200	24600
	HI3730	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	10100	30400
48	HI3710	0.25	0.50	—	—	—	—	—	—	—	—	1000	3100
	HI3715	0.06	0.12	0.18	0.24	0.30	0.36	0.42	0.47	—	—	2500	7700
	HI3720	0.03	0.05	0.08	0.11	0.13	0.16	0.19	0.22	0.24	0.27	4900	14800
	HI3725	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13	0.14	6500	19500
	HI3730	<0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07	0.08	8100	24400
52	HI3710	0.34	—	—	—	—	—	—	—	—	—	900	2700
	HI3715	0.08	0.16	0.25	0.33	0.41	0.49	—	—	—	—	2100	6500
	HI3720	0.04	0.07	0.11	0.15	0.19	0.22	0.26	0.30	0.33	0.37	4200	12600
	HI3725	0.02	0.04	0.06	0.08	0.10	0.11	0.13	0.15	0.17	0.19	5500	16600
	HI3730	0.01	0.02	0.03	0.05	0.06	0.07	0.08	0.09	0.10	0.11	7000	21200
60	HI3715	0.14	0.29	0.43	—	—	—	—	—	—	—	1600	4900
	HI3720	0.07	0.13	0.20	0.26	0.33	0.40	0.46	—	—	—	3100	9500
	HI3725	0.03	0.07	0.10	0.14	0.17	0.20	0.24	0.27	0.31	0.34	4100	12500
	HI3730	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18	0.20	5400	16200
66	HI3715	0.21	0.42	—	—	—	—	—	—	—	—	1300	4000
	HI3720	0.10	0.19	0.29	0.39	0.48	—	—	—	—	—	2600	7800
	HI3725	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	3400	10300
	HI3730	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.23	0.26	0.29	4400	13400
72	HI3715	0.30	—	—	—	—	—	—	—	—	—	1100	3400
	HI3720	0.14	0.27	0.41	—	—	—	—	—	—	—	2200	6600
	HI3725	0.07	0.14	0.21	0.28	0.35	0.42	0.49	—	—	—	2800	8600
	HI3730	0.04	0.08	0.12	0.17	0.21	0.25	0.29	0.33	0.37	0.42	3700	11200
84	HI3720	0.25	—	—	—	—	—	—	—	—	—	1600	4800
	HI3725	0.13	0.26	0.39	—	—	—	—	—	—	—	2100	6300
	HI3730	0.08	0.15	0.23	0.31	0.38	0.46	—	—	—	—	2700	8200
96	HI3720	0.43	—	—	—	—	—	—	—	—	—	1200	3700
	HI3725	0.22	0.44	—	—	—	—	—	—	—	—	1600	4800
	HI3730	0.13	0.26	0.39	—	—	—	—	—	—	—	2100	6300

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 3:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the

lt factory. The designer is further referenced to ASCE Structural Plastics Design Manual.

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ired by certain construction codes. Check code requirements to determine design criteria.

6. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

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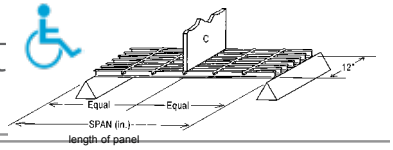
HI37 Grating Concentrated Line Load Chart



HI37 PULTRUDED SERIES LINE LOAD TABLE - DEFLECTIONS IN INCHES

CLEAR SPAN (in)	STYLE	LOAD (LBS/FT of Width)										MAXIMUM RECOM. LOAD (lbs/ft)	ULTIMATE CAPACITY (lbs/ft)
		100	200	300	500	1000	2000	3000	4000	5000	6000		
12	HI3710	<0.01	<0.01	<0.01	<0.01	0.02	0.04	0.05	0.07	0.09	0.11	7400	22200
	HI3715	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	13800	41400
	HI3720	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	35600	107000
	HI3725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	36600	109900
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	47000	141000
18	HI3710	<0.01	0.01	0.02	0.03	0.06	0.11	0.17	0.23	0.28	0.34	5300	15900
	HI3715	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.04	0.06	0.07	0.09	11400	34400
	HI3720	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.03	0.03	0.04	24400	73300
	HI3725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.02	26400	79200
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	33300	100000
24	HI3710	0.01	0.02	0.04	0.06	0.12	0.25	0.37	0.50	—	—	4200	12700
	HI3715	<0.01	<0.01	<0.01	0.01	0.03	0.06	0.09	0.12	0.15	0.18	10300	30900
	HI3720	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.04	0.06	0.07	0.09	18800	56400
	HI3725	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.03	0.04	0.05	21300	63900
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	26500	79600
30	HI3710	0.02	0.05	0.07	0.12	0.24	0.49	—	—	—	—	3400	10200
	HI3715	<0.01	0.01	0.02	0.03	0.06	0.12	0.17	0.23	0.29	0.35	8200	24700
	HI3720	<0.01	<0.01	<0.01	0.01	0.03	0.06	0.08	0.11	0.14	0.17	15400	46300
	HI3725	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.05	0.06	0.08	0.09	18200	54800
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.04	0.05	0.06	22400	67300
36	HI3710	0.04	0.08	0.13	0.21	0.42	—	—	—	—	—	2800	8500
	HI3715	0.01	0.02	0.03	0.05	0.10	0.20	0.30	0.40	—	—	6800	20600
	HI3720	<0.01	<0.01	0.01	0.02	0.05	0.09	0.14	0.18	0.23	0.27	13200	39600
	HI3725	<0.01	<0.01	<0.01	0.01	0.02	0.05	0.07	0.10	0.12	0.15	16200	48600
	HI3730	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.05	0.06	0.08	0.09	19700	59100
42	HI3710	0.07	0.13	0.20	0.33	—	—	—	—	—	—	2400	7300
	HI3715	0.02	0.03	0.05	0.08	0.16	0.32	0.48	—	—	—	5800	17600
	HI3720	<0.01	0.01	0.02	0.04	0.07	0.14	0.22	0.29	0.36	0.43	11300	33900
	HI3725	<0.01	<0.01	0.01	0.02	0.04	0.08	0.11	0.15	0.19	0.23	14400	43200
	HI3730	<0.01	<0.01	<0.01	0.01	0.02	0.05	0.07	0.09	0.12	0.14	17700	53300
48	HI3710	0.10	0.20	0.30	0.50	—	—	—	—	—	—	2100	6300
	HI3715	0.02	0.05	0.07	0.12	0.24	0.47	—	—	—	—	5100	15400
	HI3720	0.01	0.02	0.03	0.05	0.11	0.22	0.32	0.43	—	—	9900	29700
	HI3725	<0.01	0.01	0.02	0.03	0.06	0.11	0.17	0.22	0.28	0.33	13000	39100
	HI3730	<0.01	<0.01	<0.01	0.02	0.03	0.07	0.10	0.13	0.17	0.20	16300	48900
52	HI3710	0.13	0.25	0.38	—	—	—	—	—	—	—	1900	5900
	HI3715	0.03	0.06	0.09	0.15	0.30	—	—	—	—	—	4700	14200
	HI3720	0.01	0.03	0.04	0.07	0.14	0.27	0.41	—	—	—	9100	27400
	HI3725	<0.01	0.01	0.02	0.04	0.07	0.14	0.21	0.28	0.35	0.42	12000	36100
	HI3730	<0.01	<0.01	0.01	0.02	0.04	0.08	0.13	0.17	0.21	0.25	15300	46000
60	HI3710	0.19	0.39	—	—	—	—	—	—	—	—	1700	5100
	HI3715	0.05	0.09	0.14	0.23	0.46	—	—	—	—	—	4100	12300
	HI3720	0.02	0.04	0.06	0.11	0.21	0.42	—	—	—	—	7900	23700
	HI3725	0.01	0.02	0.03	0.05	0.11	0.22	0.33	0.43	—	—	10400	31200
	HI3730	<0.01	0.01	0.02	0.03	0.06	0.13	0.19	0.26	0.32	0.38	13500	40600
66	HI3710	0.26	—	—	—	—	—	—	—	—	—	1500	4600
	HI3715	0.06	0.12	0.19	0.31	—	—	—	—	—	—	3700	11200
	HI3720	0.03	0.06	0.08	0.14	0.28	—	—	—	—	—	7200	21600
	HI3725	0.01	0.03	0.04	0.07	0.14	0.29	0.43	—	—	—	9400	28400
	HI3730	<0.01	0.02	0.03	0.04	0.09	0.17	0.26	0.34	0.43	—	12300	36900
72	HI3710	0.34	—	—	—	—	—	—	—	—	—	1400	4200
	HI3715	0.08	0.16	0.24	0.40	—	—	—	—	—	—	3400	10300
	HI3720	0.04	0.07	0.11	0.18	0.36	—	—	—	—	—	6600	19800
	HI3725	0.02	0.04	0.06	0.09	0.19	0.38	—	—	—	—	8600	26000
	HI3730	0.01	0.02	0.03	0.06	0.11	0.22	0.33	0.44	—	—	11200	33800
84	HI3715	0.13	0.25	0.38	—	—	—	—	—	—	—	2900	8800
	HI3720	0.06	0.12	0.17	0.29	—	—	—	—	—	—	5600	16900
	HI3725	0.03	0.06	0.09	0.15	0.30	—	—	—	—	—	7400	22300
	HI3730	0.02	0.04	0.05	0.09	0.18	0.35	—	—	—	—	9600	29000
96	HI3715	0.19	0.38	—	—	—	—	—	—	—	—	2500	7700
	HI3720	0.09	0.17	0.26	0.43	—	—	—	—	—	—	4900	14800
	HI3725	0.04	0.09	0.13	0.22	0.44	—	—	—	—	—	6500	19500
	HI3730	0.03	0.05	0.08	0.13	0.26	—	—	—	—	—	8400	25300

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 3:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the

lt factory. The designer is further referenced to ASCE Structural Plastics Design Manual.

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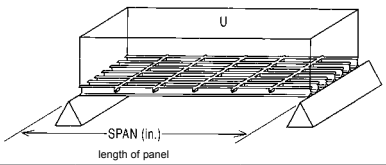
ired by certain construction codes. Check code requirements to determine design criteria.

6. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

HI47 Grating Uniform Load Chart



HI47 PULTRUDED SERIES UNIFORM LOAD TABLE - DEFLECTIONS IN INCHES

CLEAR SPAN (in)	STYLE	LOAD (psf) 100	200	300	400	500	600	700	800	900	1000	MAXIMUM RECOM. LOAD (psf)	ULTIMATE CAPACITY (psf)
12	HI4710	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	12400	37300
	HI4715	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	23200	69600
	HI4720	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	60100	180300
	HI4725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	61700	185100
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	79200	237600
18	HI4710	<0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.06	0.06	5900	17800
	HI4715	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.02	12800	38500
	HI4720	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	27400	82400
	HI4725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	29600	89000
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	37400	112400
24	HI4710	0.02	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.17	0.18	3500	10700
	HI4715	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.04	8600	26000
	HI4720	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.02	15800	47600
	HI4725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	17900	53900
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	22300	67000
30	HI4710	0.04	0.09	0.13	0.18	0.22	0.27	0.31	0.36	0.40	0.45	2200	6800
	HI4715	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.11	5500	16600
	HI4720	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	10400	31200
	HI4725	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	12300	36900
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.02	0.02	15100	45300
36	HI4710	0.09	0.19	0.28	0.37	0.46	—	—	—	—	—	1500	4700
	HI4715	0.02	0.04	0.07	0.09	0.11	0.13	0.16	0.18	0.20	0.22	3800	11500
	HI4720	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	7400	22200
	HI4725	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	9100	27300
	HI4730	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	11000	33200
42	HI4710	0.17	0.34	—	—	—	—	—	—	—	—	1100	3500
	HI4715	0.04	0.08	0.12	0.17	0.21	0.25	0.29	0.33	0.37	0.41	2800	8400
	HI4720	0.02	0.04	0.06	0.08	0.09	0.11	0.13	0.15	0.17	0.19	5400	16300
	HI4725	<0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	6900	20800
	HI4730	<0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.06	8500	25600
48	HI4710	0.29	—	—	—	—	—	—	—	—	—	800	2600
	HI4715	0.07	0.14	0.21	0.28	0.35	0.42	0.49	—	—	—	2100	6500
	HI4720	0.03	0.06	0.10	0.13	0.16	0.19	0.22	0.26	0.29	0.32	4100	12500
	HI4725	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15	0.16	5400	16400
	HI4730	<0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	6800	20600
52	HI4710	0.40	—	—	—	—	—	—	—	—	—	700	2200
	HI4715	0.10	0.19	0.29	0.39	0.48	—	—	—	—	—	1800	5500
	HI4720	0.04	0.09	0.13	0.18	0.22	0.26	0.31	0.35	0.40	0.44	3500	10600
	HI4725	0.02	0.05	0.07	0.09	0.11	0.14	0.16	0.18	0.20	0.23	4600	14000
	HI4730	0.01	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.12	0.13	5900	17800
60	HI4715	0.17	0.34	—	—	—	—	—	—	—	—	1300	4100
	HI4720	0.08	0.16	0.23	0.31	0.39	0.47	—	—	—	—	2600	8000
	HI4725	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40	3500	10500
	HI4730	0.02	0.05	0.07	0.10	0.12	0.14	0.17	0.19	0.21	0.24	4500	13600
66	HI4715	0.25	—	—	—	—	—	—	—	—	—	1100	3400
	HI4720	0.11	0.23	0.34	0.46	—	—	—	—	—	—	2200	6600
	HI4725	0.06	0.12	0.18	0.24	0.29	0.35	0.41	0.47	—	—	2900	8700
	HI4730	0.03	0.07	0.10	0.14	0.17	0.21	0.24	0.28	0.31	0.35	3700	11300
72	HI4715	0.36	—	—	—	—	—	—	—	—	—	900	2800
	HI4720	0.16	0.32	0.49	—	—	—	—	—	—	—	1800	5500
	HI4725	0.08	0.17	0.25	0.33	0.42	—	—	—	—	—	2400	7300
	HI4730	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.39	0.44	0.49	3100	9500
84	HI4720	0.30	—	—	—	—	—	—	—	—	—	1300	4000
	HI4725	0.15	0.31	0.46	—	—	—	—	—	—	—	1700	5300
	HI4730	0.09	0.18	0.27	0.37	0.46	—	—	—	—	—	2300	6900
96	HI4725	0.26	—	—	—	—	—	—	—	—	—	1300	4100
	HI4730	0.16	0.31	0.47	—	—	—	—	—	—	—	1700	5300

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 3:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the

lt factory. The designer is further referenced to ASCE Structural Plastics Design Manual.

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ired by certain construction codes. Check code requirements to determine design criteria.

6. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

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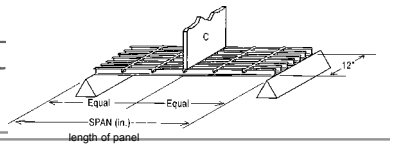
HI47 Grating Concentrated Line Load Chart



HI47 PULTRUDED SERIES LINE LOAD TABLE - DEFLECTIONS IN INCHES

CLEAR SPAN (in)	STYLE	LOAD (LBS/FT of Width)										MAXIMUM RECOM. LOAD (lbs/ft)	ULTIMATE CAPACITY (lbs/ft)
		100	200	300	500	1000	2000	3000	4000	5000	6000		
12	HI4710	<0.01	<0.01	<0.01	0.01	0.02	0.04	0.06	0.08	0.11	0.13	6200	18600
	HI4715	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	0.04	11600	34800
	HI4720	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	30000	90100
	HI4725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	30800	92500
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	39600	118800
18	HI4710	<0.01	0.01	0.02	0.03	0.07	0.13	0.20	0.27	0.33	0.40	4400	13300
	HI4715	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.05	0.07	0.09	0.10	9600	28900
	HI4720	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	0.03	0.04	0.05	20600	61800
	HI4725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	22200	66800
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.02	28100	84300
24	HI4710	0.01	0.03	0.04	0.07	0.15	0.29	0.44	—	—	—	3500	10700
	HI4715	<0.01	<0.01	0.01	0.02	0.04	0.07	0.11	0.14	0.18	0.21	8600	26000
	HI4720	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.05	0.07	0.09	0.10	15800	47600
	HI4725	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.04	0.05	0.06	17900	53900
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	0.04	22300	67000
30	HI4710	0.03	0.06	0.09	0.14	0.29	—	—	—	—	—	2800	8500
	HI4715	<0.01	0.01	0.02	0.03	0.07	0.14	0.21	0.27	0.34	0.41	6900	20800
	HI4720	<0.01	<0.01	<0.01	0.02	0.03	0.07	0.10	0.13	0.16	0.20	13000	39000
	HI4725	<0.01	<0.01	<0.01	<0.01	0.02	0.04	0.05	0.07	0.09	0.11	15300	46100
	HI4730	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.03	0.04	0.06	0.07	18900	56700
36	HI4710	0.05	0.10	0.15	0.25	0.50	—	—	—	—	—	2300	7100
	HI4715	0.01	0.02	0.04	0.06	0.12	0.24	0.36	0.48	—	—	5700	17300
	HI4720	<0.01	0.01	0.02	0.03	0.05	0.11	0.16	0.22	0.27	0.32	11100	33400
	HI4725	<0.01	<0.01	<0.01	0.01	0.03	0.06	0.09	0.12	0.15	0.17	13600	41000
	HI4730	<0.01	<0.01	<0.01	<0.01	0.02	0.04	0.06	0.07	0.09	0.11	16600	49800
42	HI4710	0.08	0.16	0.24	0.39	—	—	—	—	—	—	2000	6100
	HI4715	0.02	0.04	0.06	0.09	0.19	0.38	—	—	—	—	4900	14800
	HI4720	<0.01	0.02	0.03	0.04	0.09	0.17	0.26	0.34	0.43	—	9500	28600
	HI4725	<0.01	<0.01	0.01	0.02	0.05	0.09	0.14	0.18	0.23	0.27	12100	36400
	HI4730	<0.01	<0.01	<0.01	0.01	0.03	0.06	0.08	0.11	0.14	0.17	14900	44900
48	HI4710	0.12	0.24	0.35	—	—	—	—	—	—	—	1700	5300
	HI4715	0.03	0.06	0.08	0.14	0.28	—	—	—	—	—	4300	13000
	HI4720	0.01	0.03	0.04	0.06	0.13	0.26	0.38	—	—	—	8300	25000
	HI4725	<0.01	0.01	0.02	0.03	0.07	0.13	0.20	0.26	0.33	0.40	10900	32900
	HI4730	<0.01	<0.01	0.01	0.02	0.04	0.08	0.12	0.16	0.20	0.24	13700	41200
52	HI4710	0.15	0.30	0.45	—	—	—	—	—	—	—	1600	4900
	HI4715	0.04	0.07	0.11	0.18	0.36	—	—	—	—	—	4000	12000
	HI4720	0.02	0.03	0.05	0.08	0.16	0.33	0.49	—	—	—	7700	23100
	HI4725	<0.01	0.02	0.03	0.04	0.08	0.17	0.25	0.34	0.42	—	10100	30400
	HI4730	<0.01	<0.01	0.01	0.02	0.05	0.10	0.15	0.20	0.25	0.30	12900	38700
60	HI4710	0.23	0.46	—	—	—	—	—	—	—	—	1400	4200
	HI4715	0.05	0.11	0.16	0.27	—	—	—	—	—	—	3400	10400
	HI4720	0.03	0.05	0.08	0.13	0.25	—	—	—	—	—	6600	20000
	HI4725	0.01	0.03	0.04	0.06	0.13	0.26	0.39	—	—	—	8700	26300
	HI4730	<0.01	0.02	0.02	0.04	0.08	0.15	0.23	0.30	0.38	0.46	11400	34200
66	HI4710	0.31	—	—	—	—	—	—	—	—	—	1300	3900
	HI4715	0.07	0.15	0.22	0.37	—	—	—	—	—	—	3100	9400
	HI4720	0.03	0.07	0.10	0.17	0.33	—	—	—	—	—	6000	18200
	HI4725	0.02	0.03	0.05	0.09	0.17	0.34	—	—	—	—	7900	23900
	HI4730	0.01	0.02	0.03	0.05	0.10	0.20	0.30	0.41	—	—	10300	31100
72	HI4710	0.40	—	—	—	—	—	—	—	—	—	1100	3500
	HI4715	0.10	0.19	0.29	0.48	—	—	—	—	—	—	2800	8600
	HI4720	0.04	0.09	0.13	0.22	0.43	—	—	—	—	—	5500	16700
	HI4725	0.02	0.04	0.07	0.11	0.22	0.45	—	—	—	—	7300	21900
	HI4730	0.01	0.03	0.04	0.07	0.13	0.26	0.39	—	—	—	9500	28500
84	HI4715	0.15	0.30	0.45	—	—	—	—	—	—	—	2400	7400
	HI4720	0.07	0.14	0.21	0.34	—	—	—	—	—	—	4700	14300
	HI4725	0.04	0.07	0.11	0.18	0.35	—	—	—	—	—	6200	18800
	HI4730	0.02	0.04	0.06	0.10	0.21	0.42	—	—	—	—	8100	24400
96	HI4715	0.23	0.45	—	—	—	—	—	—	—	—	2100	6500
	HI4720	0.10	0.20	0.31	—	—	—	—	—	—	—	4100	12500
	HI4725	0.05	0.11	0.16	0.26	—	—	—	—	—	—	5400	16400
	HI4730	0.03	0.06	0.09	0.16	0.31	—	—	—	—	—	7100	21300

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 3:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the

lt factory. The designer is further referenced to ASCE Structural Plastics Design Manual.

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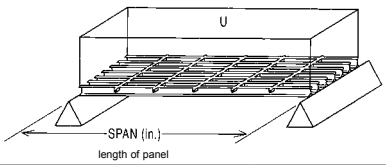
ired by certain construction codes. Check code requirements to determine design criteria.

6. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

HI58 Grating Uniform Load Chart



HI58 PULTRUDED SERIES UNIFORM LOAD TABLE - DEFLECTIONS IN INCHES

CLEAR SPAN (in)	STYLE	LOAD (psf) 100	200	300	400	500	600	700	800	900	1000	MAXIMUM RECOM. LOAD (psf)	ULTIMATE CAPACITY (psf)
12	HI5810	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.02	0.02	9800	29500
	HI5815	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	18300	55100
	HI5820	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	47600	142800
	HI5825	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	48800	146600
	HI5830	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	62700	188100
18	HI5810	<0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.06	0.07	0.08	4700	14100
	HI5815	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.02	0.02	0.02	10100	30500
	HI5820	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	21700	65200
	HI5825	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	23500	70500
	HI5830	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	29600	89000
24	HI5810	0.02	0.05	0.07	0.09	0.12	0.14	0.16	0.19	0.21	0.23	2800	8500
	HI5815	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.06	6800	20500
	HI5820	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.03	12500	37600
	HI5825	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.02	14200	42600
	HI5830	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	17700	53100
30	HI5810	0.06	0.11	0.17	0.23	0.28	0.34	0.40	0.45	—	—	1800	5400
	HI5815	0.01	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.12	0.14	4300	13100
	HI5820	<0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.06	8200	24700
	HI5825	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04	9700	29200
	HI5830	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.02	11900	35900
36	HI5810	0.12	0.23	0.35	0.47	—	—	—	—	—	—	1200	3700
	HI5815	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.22	0.25	0.28	3000	9100
	HI5820	0.01	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.13	5800	17600
	HI5825	<0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.06	0.07	7200	21600
	HI5830	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04	0.04	8700	26300
42	HI5810	0.22	0.44	—	—	—	—	—	—	—	—	900	2700
	HI5815	0.05	0.10	0.16	0.21	0.26	0.31	0.36	0.42	0.47	—	2200	6700
	HI5820	0.02	0.05	0.07	0.09	0.12	0.14	0.17	0.19	0.21	0.24	4300	12900
	HI5825	0.01	0.02	0.04	0.05	0.06	0.07	0.09	0.10	0.11	0.12	5400	16400
	HI5830	<0.01	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	6700	20300
48	HI5810	0.37	—	—	—	—	—	—	—	—	—	700	2100
	HI5815	0.09	0.18	0.27	0.36	0.44	—	—	—	—	—	1700	5100
	HI5820	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40	3300	9900
	HI5825	0.02	0.04	0.06	0.08	0.10	0.13	0.15	0.17	0.19	0.21	4300	13000
	HI5830	0.01	0.02	0.04	0.05	0.06	0.07	0.09	0.10	0.11	0.12	5400	16300
52	HI5815	0.12	0.24	0.37	0.49	—	—	—	—	—	—	1400	4300
	HI5820	0.06	0.11	0.17	0.22	0.28	0.33	0.39	0.45	—	—	2800	8400
	HI5825	0.03	0.06	0.09	0.11	0.14	0.17	0.20	0.23	0.26	0.29	3700	11100
	HI5830	0.02	0.03	0.05	0.07	0.09	0.10	0.12	0.14	0.15	0.17	4700	14100
60	HI5815	0.22	0.43	—	—	—	—	—	—	—	—	1000	3200
	HI5820	0.10	0.20	0.30	0.40	0.49	—	—	—	—	—	2100	6300
	HI5825	0.05	0.10	0.15	0.20	0.25	0.31	0.36	0.41	0.46	—	2700	8300
	HI5830	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27	0.30	3600	10800
66	HI5815	0.32	—	—	—	—	—	—	—	—	—	900	2700
	HI5820	0.14	0.29	0.43	—	—	—	—	—	—	—	1700	5200
	HI5825	0.07	0.15	0.22	0.30	0.37	0.45	—	—	—	—	2300	6900
	HI5830	0.04	0.09	0.13	0.18	0.22	0.26	0.31	0.35	0.40	0.44	2900	8900
72	HI5815	0.45	—	—	—	—	—	—	—	—	—	700	2200
	HI5820	0.20	0.41	—	—	—	—	—	—	—	—	1400	4400
	HI5825	0.11	0.21	0.32	0.42	—	—	—	—	—	—	1900	5700
	HI5830	0.06	0.12	0.19	0.25	0.31	0.37	0.44	0.50	—	—	2500	7500
84	HI5820	0.38	—	—	—	—	—	—	—	—	—	1000	3200
	HI5825	0.20	0.39	—	—	—	—	—	—	—	—	1400	4200
	HI5830	0.12	0.23	0.35	0.46	—	—	—	—	—	—	1800	5500
96	HI5825	0.33	—	—	—	—	—	—	—	—	—	1000	3200
	HI5830	0.20	0.39	—	—	—	—	—	—	—	—	1400	4200

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 3:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the

lt factory. The designer is further referenced to ASCE Structural Plastics Design Manual.

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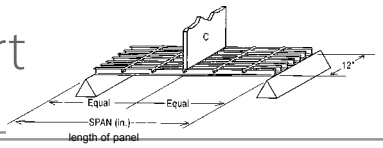
ired by certain construction codes. Check code requirements to determine design criteria.

6. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

HI58 Grating Concentrated Line Load Chart



HI58 PULTRUDED SERIES LINE LOAD TABLE - DEFLECTIONS IN INCHES

CLEAR SPAN (in)	STYLE	LOAD (LBS/FT of Width)										MAXIMUM RECOM. LOAD (lbs/ft)	ULTIMATE CAPACITY (lbs/ft)
		100	200	300	500	1000	2000	3000	4000	5000	6000		
12	HI5810	<0.01	<0.01	<0.01	0.01	0.03	0.05	0.08	0.11	0.13	0.16	4900	14700
	HI5815	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	0.03	0.04	0.05	9100	27500
	HI5820	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	23800	71400
	HI5825	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	24400	73300
	HI5830	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	31300	94000
18	HI5810	<0.01	0.02	0.03	0.04	0.08	0.17	0.25	0.34	0.42	—	3500	10600
	HI5815	<0.01	<0.01	<0.01	0.01	0.02	0.04	0.07	0.09	0.11	0.13	7600	22900
	HI5820	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.04	0.05	0.06	16300	48900
	HI5825	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	17600	52900
	HI5830	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	22200	66700
24	HI5810	0.02	0.04	0.06	0.09	0.19	0.37	—	—	—	—	2800	8500
	HI5815	<0.01	<0.01	0.01	0.02	0.04	0.09	0.13	0.18	0.22	0.27	6800	20500
	HI5820	<0.01	<0.01	<0.01	0.01	0.02	0.04	0.07	0.09	0.11	0.13	12500	37600
	HI5825	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.04	0.05	0.06	0.08	14200	42600
	HI5830	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	0.03	0.04	0.05	17700	53100
30	HI5810	0.04	0.07	0.11	0.18	0.36	—	—	—	—	—	2200	6800
	HI5815	<0.01	0.02	0.03	0.04	0.09	0.17	0.26	0.35	0.43	—	5400	16400
	HI5820	<0.01	<0.01	0.01	0.02	0.04	0.08	0.12	0.16	0.21	0.25	10300	30900
	HI5825	<0.01	<0.01	<0.01	0.01	0.02	0.05	0.07	0.09	0.11	0.14	12100	36500
	HI5830	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.04	0.06	0.07	0.08	14900	44900
36	HI5810	0.06	0.13	0.19	0.31	—	—	—	—	—	—	1800	5600
	HI5815	0.01	0.03	0.04	0.07	0.15	0.30	0.45	—	—	—	4500	13700
	HI5820	<0.01	0.01	0.02	0.03	0.07	0.14	0.20	0.27	0.34	0.41	8800	26400
	HI5825	<0.01	<0.01	0.01	0.02	0.04	0.07	0.11	0.15	0.18	0.22	10800	32400
	HI5830	<0.01	<0.01	<0.01	0.01	0.02	0.05	0.07	0.09	0.12	0.14	13100	39400
42	HI5810	0.10	0.20	0.30	0.50	—	—	—	—	—	—	1600	4800
	HI5815	0.02	0.05	0.07	0.12	0.24	0.48	—	—	—	—	3900	11700
	HI5820	0.01	0.02	0.03	0.05	0.11	0.22	0.33	0.43	—	—	7500	22600
	HI5825	<0.01	0.01	0.02	0.03	0.06	0.11	0.17	0.23	0.29	0.34	9600	28800
	HI5830	<0.01	<0.01	0.01	0.02	0.03	0.07	0.10	0.14	0.17	0.21	11800	35500
48	HI5810	0.15	0.30	0.45	—	—	—	—	—	—	—	1400	4200
	HI5815	0.04	0.07	0.11	0.18	0.36	—	—	—	—	—	3400	10200
	HI5820	0.02	0.03	0.05	0.08	0.16	0.32	0.49	—	—	—	6600	19800
	HI5825	<0.01	0.02	0.03	0.04	0.08	0.17	0.25	0.33	0.42	—	8600	26000
	HI5830	<0.01	<0.01	0.01	0.02	0.05	0.10	0.15	0.20	0.25	0.30	10800	32600
52	HI5810	0.19	0.38	—	—	—	—	—	—	—	—	1300	3900
	HI5815	0.05	0.09	0.14	0.23	0.45	—	—	—	—	—	3100	9500
	HI5820	0.02	0.04	0.06	0.10	0.21	0.41	—	—	—	—	6100	18300
	HI5825	0.01	0.02	0.03	0.05	0.11	0.21	0.32	0.42	—	—	8000	24000
	HI5830	<0.01	0.01	0.02	0.03	0.06	0.13	0.19	0.25	0.31	0.38	10200	30600
60	HI5810	0.29	—	—	—	—	—	—	—	—	—	1100	3400
	HI5815	0.07	0.14	0.21	0.35	—	—	—	—	—	—	2700	8200
	HI5820	0.03	0.06	0.09	0.16	0.32	—	—	—	—	—	5200	15800
	HI5825	0.02	0.03	0.05	0.08	0.16	0.33	0.49	—	—	—	6900	20800
	HI5830	<0.01	0.02	0.03	0.05	0.10	0.19	0.29	0.38	0.48	—	9000	27100
66	HI5810	0.39	—	—	—	—	—	—	—	—	—	1000	3000
	HI5815	0.09	0.18	0.28	0.46	—	—	—	—	—	—	2400	7400
	HI5820	0.04	0.08	0.13	0.21	0.42	—	—	—	—	—	4800	14400
	HI5825	0.02	0.04	0.07	0.11	0.22	0.43	—	—	—	—	6300	18900
	HI5830	0.01	0.03	0.04	0.06	0.13	0.26	0.38	—	—	—	8200	24600
72	HI5815	0.12	0.24	0.36	—	—	—	—	—	—	—	2200	6800
	HI5820	0.05	0.11	0.16	0.27	—	—	—	—	—	—	4400	13200
	HI5825	0.03	0.06	0.08	0.14	0.28	—	—	—	—	—	5700	17300
	HI5830	0.02	0.03	0.05	0.08	0.17	0.33	0.50	—	—	—	7500	22500
84	HI5815	0.19	0.38	—	—	—	—	—	—	—	—	1900	5800
	HI5820	0.09	0.17	0.26	0.43	—	—	—	—	—	—	3700	11300
	HI5825	0.04	0.09	0.13	0.22	0.45	—	—	—	—	—	4900	14900
	HI5830	0.03	0.05	0.08	0.13	0.26	—	—	—	—	—	6400	19300
96	HI5815	0.28	—	—	—	—	—	—	—	—	—	1700	5100
	HI5820	0.13	0.26	0.39	—	—	—	—	—	—	—	3300	9900
	HI5825	0.07	0.13	0.20	0.33	—	—	—	—	—	—	4300	13000
	HI5830	0.04	0.08	0.12	0.20	0.39	—	—	—	—	—	5600	16900

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 3:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the

lt factory. The designer is further referenced to ASCE Structural Plastics Design Manual.

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ired by certain construction codes. Check code requirements to determine design criteria.

6. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

ZeAllgrate

Designed specifically for pedestrian walkways, ZeAllgrate grating is ideal for applications where a slip resistant, corrosion resistant, durable, ZeAllgrate pedestrian pultruded grating is available in 1" and 1-1/2" depths and in several configurations ZeAllgrate pedestrian grating is designed for access areas and walkways where pedestrian traffic is the heaviest load. Pedestrian 1-1/2" deep grating is approximately three times stiffer than the 1" deep version and is used for applications where wider spans or lower deflection criteria are required.



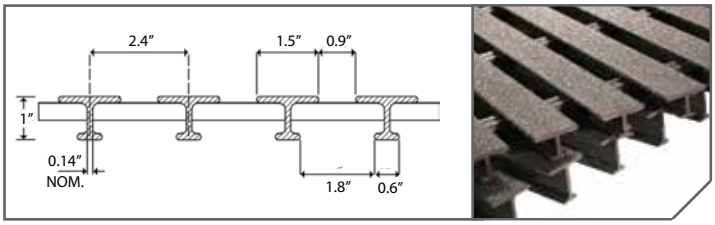
Pontoon Boardwalk in Portland, Oregon

Grating Details

Refer to chart on page 4 for Grating Selection.

1" Deep T3810

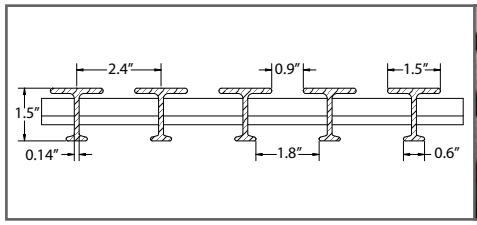
# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
5	1"	38%	2.4"	1.9 psf

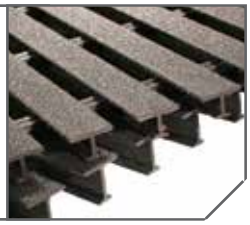


Section Properties per Ft of Width: A=1.76 IN² I=0.23 IN⁴ St=0.65 IN³ Sb=0.35 IN³
Average EI = 1,120,000 lb - in² (SPAN ≥ 24")

1-1/2" Deep T3815

# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
5	1-1/2"	38%	2.4"	2.7 psf

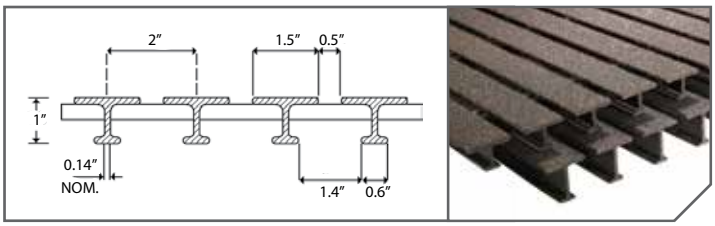




Section Properties per Ft of Width: A=2.28 IN² I=0.66 IN⁴ St=1.23 IN³ Sb=0.69 IN³
Average EI = 3,440,000 lb - in² (SPAN ≥ 24")

1" Deep T2510 (ADA Compliant)

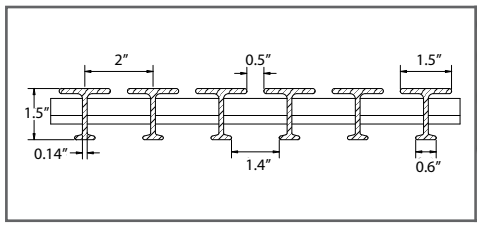
# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
6	1"	25%	2"	2.5 psf



Section Properties per Ft of Width: A=2.11 IN² I=0.27 IN⁴ St=0.79 IN³ Sb=0.42 IN³
Average EI = 1,340,000 lb - in² (SPAN ≥ 24")

1-1/2" Deep T2515 (ADA Compliant)

# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
6	1-1/2"	25%	2"	2.9 psf





Section Properties per Ft of Width: A=2.73 IN² I=0.8 IN⁴ St=1.47 IN³ Sb=0.83 IN³
Average EI = 4,130,000 lb - in² (SPAN ≥ 24")

ZeAllgrate

ZeAllgrate pedestrian grating is specifically engineered to withstand the corrosive conditions associated with recreational and general marine applications and to meet ADA guidelines. With its nominal 1/4" space between the 1-1/2" wide bearing bars, ZeAllgrate for bathers walking with bare feet — a must in ZeAllgrate grating has a unique combination of corrosion resistance and light weight which provides easy, inexpensive installations in such facilities as swimming pools, water parks, marinas and piers.



Boat dock on Horseshoe Lake in Haliburton, Ontario.

ZeAllgrate and widths, making it useful for a number of waterfront and recreational applications. The fine ZeAllgrate of slip resistance, yet at the same time offers a comfortable barefoot walking surface. Protection against long-term UV exposure is provided by a synthetic surfacing veil and UV inhibitors in the resin formulation. Whether subjected to chlorinated water in public and private pools or salt water environments found in marine and ZeAllgrate years of low cost, low maintenance service.



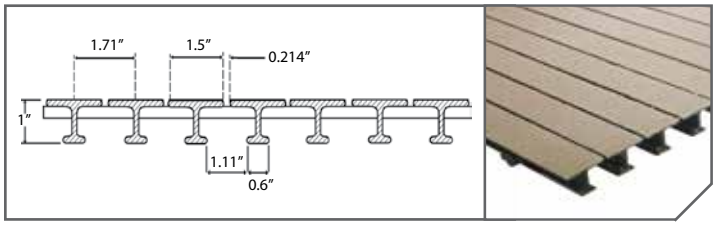
Corinthian Yacht Club Harbor in San Francisco, California.

Grating Details

Refer to chart on page 4 for Grating Selection.

1" Deep T1210 (ADA Compliant)

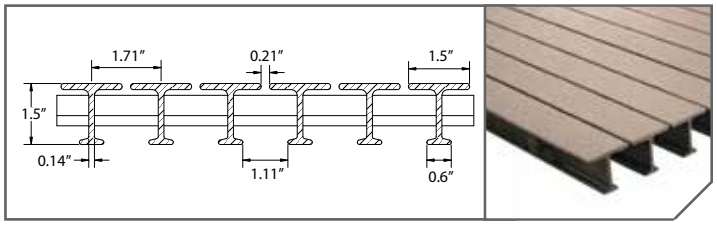
# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
7	1"	12%	1.714"	2.7 psf



Section Properties per Ft of Width: A=2.46 IN² I=0.32 IN⁴ St=0.94 IN³ Sb=0.49 IN³
Average EI = 1,568,000 lb - in² (SPAN ≥ 24")

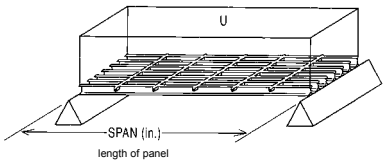
1-1/2" Deep T1215 (ADA Compliant)

# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
7	1-1/2"	12%	1.714"	3.2 psf



Section Properties per Ft of Width: A=3.19 IN² I=0.93 IN⁴ St=1.72 IN³ Sb=0.97 IN³
Average EI = 4,827,000 lb - in² (SPAN ≥ 24")

Pedestrian Series Uniform Load Chart



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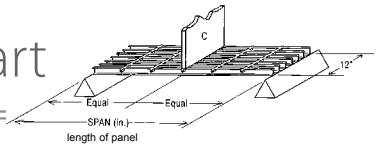
CLEAR SPAN (in)	STYLE	LOAD (psf)							MAXIMUM RECOMMENDED LOAD (psf)	ULTIMATE CAPACITY (psf)
		50	100	200	300	500	1,000	2,000		
12	T3810	<.01	<.01	<.01	<.01	0.01	0.03	0.06	2730	5460
	T3815	<.01	<.01	<.01	<.01	0.01	0.01	0.03	4220	8440
	T2510	<.01	<.01	<.01	<.01	0.01	0.02	0.05	3280	6560
	T2515	<.01	<.01	<.01	<.01	0.01	0.01	0.02	5060	10120
	T1210	<.01	<.01	<.01	<.01	0.01	0.02	0.04	4590	9180
	T1215	<.01	<.01	<.01	<.01	0.01	0.01	0.02	5060	10120
18	T3810	<.01	0.01	0.02	0.04	0.06	0.12	—	1820	3640
	T3815	<.01	<.01	0.01	0.01	0.02	0.05	0.10	2810	5620
	T2510	<.01	0.01	0.02	0.03	0.05	0.10	0.20	2180	4360
	T2515	<.01	<.01	0.01	0.01	0.02	0.04	0.08	3380	6760
	T1210	<.01	<.01	0.01	0.03	0.04	0.09	0.18	3060	6120
	T1215	<.01	<.01	0.01	0.01	0.02	0.04	0.07	3940	7880
24	T3810	0.02	0.03	0.07	0.10	0.17	034	—	1370	2740
	T3815	0.01	0.01	0.02	0.04	0.06	0.12	0.24	2110	4220
	T2510	0.01	0.03	0.06	0.08	0.14	0.28	—	1640	3280
	T2515	<.01	0.01	0.02	0.03	0.05	0.10	0.20	2530	5060
	T1210	0.01	0.02	0.05	0.07	0.12	0.24	0.48	2290	4580
	T1215	<.01	0.01	0.02	0.03	0.04	0.09	0.17	2950	5900
30	T3810	0.04	0.08	0.16	0.24	0.40	—	—	1090	2180
	T3815	0.01	0.03	0.06	0.08	0.14	0.28	—	1690	3380
	T2510	0.03	0.07	0.13	0.20	0.33	—	—	1310	2620
	T2515	0.01	0.02	0.05	0.07	0.12	0.23	0.47	2030	4060
	T1210	0.03	0.06	0.11	0.17	0.29	—	—	1840	3680
	T1215	0.01	0.02	0.04	0.06	0.10	0.20	0.40	2360	4720
36	T3810	0.08	0.16	0.32	0.49	—	—	—	860	1720
	T3815	0.03	0.06	0.11	0.17	0.28	—	—	1410	2820
	T2510	0.07	0.14	0.27	0.41	—	—	—	1040	2080
	T2515	0.02	0.05	0.09	0.14	0.23	046	—	1690	3380
	T1210	0.06	0.11	0.23	0.35	—	—	—	1450	2900
	T1215	0.02	0.04	0.08	0.12	0.20	0.40	—	1970	3940
42	T3810	0.15	0.30	—	—	—	—	—	630	1260
	T3815	0.05	0.10	0.20	0.30	—	—	—	1100	2200
	T2510	0.12	0.25	0.50	—	—	—	—	760	1520
	T2515	0.04	0.08	0.17	0.25	0.41	—	—	1320	2640
	T1210	0.11	0.21	0.43	—	—	—	—	1060	2120
	T1215	0.04	0.07	0.14	0.21	0.36	—	—	1540	3080
48	T3810	0.25	0.50	—	—	—	—	—	490	980
	T3815	0.08	0.17	0.33	—	—	—	—	840	1680
	T2510	0.21	0.42	—	—	—	—	—	580	1160
	T2515	0.07	0.14	0.28	0.42	—	—	—	1010	2020
	T1210	0.18	0.36	—	—	—	—	—	820	1640
	T1215	0.06	0.12	0.24	0.36	—	—	—	1180	2360
54	T3815	0.13	0.26	—	—	—	—	—	670	1340
	T2515	0.11	0.22	0.44	—	—	—	—	800	1600
	T1215	0.09	0.19	0.38	—	—	—	—	930	1860
60	T3815	0.20	0.40	—	—	—	—	—	540	1080
	T2515	0.16	0.33	—	—	—	—	—	650	1300
	T1215	0.14	0.28	—	—	—	—	—	760	1520
66	T3815	0.29	—	—	—	—	—	—	450	900
	T2515	0.24	0.48	—	—	—	—	—	540	1080
	T1215	0.21	0.41	—	—	—	—	—	620	1240
72	T3815	0.41	—	—	—	—	—	—	370	740
	T2515	0.34	—	—	—	—	—	—	450	900
	T1215	0.29	—	—	—	—	—	—	520	1040

IMPORTANT: I ZeAllgrate *rds may occur.*

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 2:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. Walking loads, typically 50-65 PSF maximum are recommended for pedestrian traffic. Deflections for worker comfort are typically limited to the lesser of 3/8" or CLEAR SPAN divided by 125; for a firmer feel, limit deflection to the lesser of 1/4" or CLEAR SPAN divided by 200.
4. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact or dynamic conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the material and will also equire higher safety factors to ensure acceptable performance. For applications at elevated temperatures, consult factory. The designer is further referenced to the ASCE Structural Plastics Design Manual.
5. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.
6. Gratings in this table are not rated for motorized vehicle traffic. For these applications, please select appropriate High Load Capacity grating.

Pedestrian Series Concentrated Line Load Chart



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CLEAR SPAN (in)	STYLE	LOAD (LBS/FT of Width) 50	100	200	300	500	1,000	2,000	MAXIMUM RECOMMENDED LOAD (lbs/ft)	ULTIMATE CAPACITY (lbs/ft)
12	T3810	<.01	<.01	<.01	0.01	0.02	0.05	0.09	2730	5460
	T3815	<.01	<.01	<.01	0.01	0.01	0.02	0.04	4220	8440
	T2510	<.01	<.01	<.01	0.01	0.02	0.04	0.08	3280	6560
	T2515	<.01	<.01	<.01	0.01	0.01	0.02	0.04	5060	10120
	T1210	<.01	<.01	<.01	<.01	0.01	0.04	0.06	4590	9180
	T1215	<.01	<.01	<.01	<.01	0.01	0.02	0.03	5900	11800
18	T3810	<.01	0.01	0.03	0.04	0.07	0.13	0.26	2590	5180
	T3815	<.01	0.01	0.01	0.02	0.03	0.05	0.10	4220	8440
	T2510	<.01	0.01	0.02	0.03	0.05	0.11	0.22	3100	6200
	T2515	<.01	<.01	0.01	0.01	0.02	0.04	0.09	5060	10120
	T1210	<.01	0.01	0.02	0.03	0.05	0.09	0.19	4350	8700
	T1215	<.01	<.01	0.01	0.01	0.02	0.04	0.07	5900	11800
24	T3810	0.01	0.03	0.05	0.08	0.13	0.27	—	1940	3880
	T3815	<.01	0.01	0.02	0.03	0.05	0.09	0.19	3370	6740
	T2510	0.01	0.02	0.04	0.07	0.11	0.22	0.45	2330	4660
	T2515	<.01	0.01	0.02	0.02	0.04	0.08	0.16	4040	8080
	T1210	0.01	0.02	0.04	0.06	0.09	0.19	0.38	3260	6520
	T1215	<.01	<.01	0.01	0.02	0.03	0.07	0.14	4720	9440
30	T3810	0.03	0.05	0.10	0.15	0.26	—	—	1550	3100
	T3815	0.01	0.03	0.04	0.05	0.09	0.18	0.36	2700	5400
	T2510	0.02	0.04	0.09	0.13	0.21	0.43		1860	3720
	T2515	0.01	0.01	0.03	0.04	0.07	0.15	0.30	3230	6460
	T1210	0.02	0.04	0.07	0.11	0.19	0.36	—	2610	5220
	T1215	0.01	0.01	0.03	0.04	0.06	0.13	0.25	3770	7540
36	T3810	0.04	0.09	0.17	0.26	0.43	—	—	1290	2580
	T3815	0.01	0.03	0.06	0.09	0.15	0.30	—	2250	4500
	T2510	0.04	0.07	0.14	0.22	0.36	—	—	1550	3100
	T2515	0.01	0.02	0.05	0.07	0.12	0.25	0.49	2700	5400
	T1210	0.03	0.06	0.12	0.19	0.31	—	—	2170	4340
	T1215	0.01	0.02	0.04	0.06	0.11	0.21	0.42	31470	6280
42	T3810	0.07	0.14	0.27	0.41	—	—	—	1110	2220
	T3815	0.02	0.09	0.09	0.14	0.23	0.45	—	1930	3860
	T2510	0.06	0.11	0.23	0.34	—	—	—	1330	2660
	T2515	0.02	0.04	0.08	0.11	0.19	0.38	—	2310	4620
	T1210	0.05	0.10	0.19	0.29	0.49	—	—	1860	3720
	T1215	0.02	0.03	0.06	0.10	0.16	0.32	—	2700	5400
48	T3810	0.10	0.20	0.40	—	—	—	—	970	1940
	T3815	0.03	0.07	0.13	0.20	0.33	—	—	1680	3360
	T2510	0.08	0.17	0.33	0.50	—	—	—	1160	2320
	T2515	0.03	0.06	0.11	0.17	0.28	—	—	2020	4040
	T1210	0.07	0.14	0.29	0.43	—	—	—	1630	3260
	T1215	0.02	0.05	0.10	0.14	0.24	0.48	—	2360	4720
54	T3815	0.05	0.09	0.19	0.28	0.47	—	—	1500	3000
	T2515	0.04	0.08	0.16	0.23	0.39	—	—	1800	3600
	T1215	0.03	0.07	0.13	0.20	0.33	—	—	2100	4200
60	T3815	0.06	0.13	0.25	0.38	—	—	—	1350	2700
	T2515	0.05	0.10	0.21	0.31	—	—	—	1620	3240
	T1215	0.04	0.09	0.18	0.27	0.45	—	—	1890	3780
66	T3815	0.08	0.17	0.33	—	—	—	—	1230	2460
	T2515	0.07	0.14	0.28	0.42	—	—	—	1470	2940
	T1215	0.06	0.12	0.24	0.36	—	—	—	1720	3440
72	T3815	0.11	0.22	0.43	—	—	—	—	1120	2240
	T2515	0.09	0.18	0.36	—	—	—	—	1350	2700
	T1215	0.08	0.15	0.31	0.46	—	—	—	1500	3140

IMPORTANT: I *rds may occur.*

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NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 2:1 factor of safety on ULTIMATE CAPACITY.
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6. Gratings in this table are not rated for motorized vehicle traffic. For these applications, please select appropriate High Load Capacity grating.

Custom Pultruded Gratings

ZeAllgrate
requirements brought to us by our customers. These grating solutions were developed in partnerships with

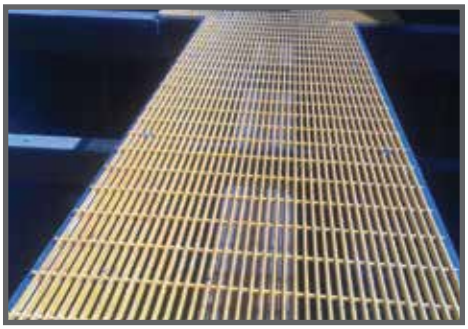
ZeAllgrate
daily basis to provide the products required for new applications, so please call us about your project today!

For more information about all our custom pultruded gratings with unique depths and open areas, including details and load charts vi ZeAllgrate
Gratings. Two of our more popular custom gratings include our SI and WT series pultruded products.

SI Pultruded Series



HVAC Screening



Walkway Grating



Dock & Marine Gangway

The SI Series of grating is available in open areas of 60%, 73% and 83%, providing excellent airflow and light transmission. The profile of the SI Series has an appearance similar to metal grating. It is useful in areas where a close match to a steel or an aluminum profile for an existing installation is needed. SI sections with bonded rod crossbars are suitable for use in low pedestrian traffic areas.

WT Pultruded Series



WT1815 Grating (18% open area with 1-1/2" of depth)

The WT Pedestrian Series is offered in a variety of sizes with open areas including 35%, 18% or even 0% and depths of 1" or 1-1/2". The T-shaped top of the load bar provides maximum surface area underfoot, thus the most comfortable walking surface and a smoother surface for two-wheel moving equipment. These designs are excellent for areas with high traffic and light hand trucks or wheeled carts. WT00 provides a cost effective solid deck surface.

ZeAllgrate

ZeAllgrate

S ZeAllgrate offer the same level of safety, strength and corrosion resistance as other ZeAllgrate where wider support spans are required, Safe-T-Span pultruded stair treads for industrial and pedestrian applications are available in 1", 1-1/2" and 2" depths in the ISOFR and VEFR resin ZeAllgrate treads are also available in the phenolic resin system.



Industrial Stair Tread



Load and Deflection Information

TREAD TYPE	Load (lbs.)	SPAN (in.)	18	24	30	36	42	48
		SPAN/150	.12	.16	.20	.24	.28	.32
1" Deep, I6010 (60% Open)	250		.03	.08	.14	.22	.34	.46
	500		.07	.15	.28	.44	.68	.92
1-1/2" Deep, I6015 (60% Open)	250		.01	.02	.04	.06	.09	.13
	500		.02	.04	.08	.11	.18	.26
2" Deep T5020 (50% Open)	250		.01	.02	.03	.04	.06	.09
	500		.02	.04	.06	.09	.12	.18
1" Deep I4010 (40% Open)	250		.02	.05	.10	.16	.24	.33
	500		.05	.11	.20	.32	.49	.65
1-1/2" Deep, I4015 (40% Open)	250		.01	.01	.03	.04	.06	.09
	500		.02	.03	.05	.07	.12	.17
2" Deep, T3320 (33% Open)	250		.01	.01	.02	.03	.05	.07
	500		.02	.03	.04	.06	.09	.14
1” Deep, T1210 (12% Open)	250		.06	.13	.19	.26	.37	.47
	500		.10	.22	.34	.46	—	—
1-1/2” Deep, T1215 (12% Open)	250		.05	.07	.07	.11	.15	.18
	500		.08	.12	.16	.20	.28	.36
1” Deep, T2510 (25% Open)	250		.05	.13	.20	.27	.39	.50
	500		.09	.23	.37	.50	—	—
1-1/2” Deep, T2515 (25% Open)	250		.03	.06	.09	.12	.15	.18
	500		.05	.11	.16	.21	.28	.35
1” Deep, T3810 (38% Open)	250		.06	.15	.23	.32	.47	—
	500		.09	.25	.41	—	—	—
1-1/2” T3815 (38% Open)	250		.03	.06	.09	.12	.18	.23
	500		.05	.11	.17	.23	.34	.45

NOTES:

1. It is suggested that stair tread deflection be limited to SPAN/150. Deflections based on this ratio are provided at the top of the table.
2. Deflection in the body of the table are for concentrated loads of both 250 lbs. and 500 lbs. A concentrated load is applied at the center of the tread, over a width of 4" and a length of 6", starting at the nosing edge to simulate the landing of a foot.
3. Deflections are not appreciably different due to stair tread depth. Actual depth will vary depending on stair tread configuration.