

ALUMINUM DOVETAIL

LOAD & DEFLECTION TABLE

15-ADT-4 & 15-ADT-2

Bearing Bar Size	Ped. Span inches	Approx. Weight lbs/sqft	Sec. Prop. S _x * (in ³)	I _x * (in ⁴)	Clear Span (Direction of Bearing Bars)											
					2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"
1" x 3/16"	46	3.06	0.400	U	800	512	356	261	200	U = Safe uniform load (psf) C = Safe concentrated load (lbs/ft width) D = Deflection (inches) E = Modulus of Elasticity, 10,000,000 psi F = Allowable Fiber Stress, 12,000 psi Material: ASTM B221, 6063-T6 Finish: Mill finish unless otherwise specified.						
				Du	0.144	0.225	0.324	0.441	0.576							
			0.200	C	800	640	533	457	400							
				Dc	0.115	0.180	0.259	0.353	0.461							
1-1/4" x 3/16"	55	3.75	0.625	U	1250	800	556	408	313	247	200	Loads and deflections shown are theoretical and based on static loading. * Based on 12.8 bars/ft of grating width. Bearing bar spacing of 15/16" c.c. Add 0.3 lbs/sqft for 15-ADT-2. Deflection: Spans and loads to the right of the bold line exceed 1/4" deflection for uniform load of 100 psf which provides safe pedestrian comfort. This can be exceeded for other types of loads with the Engineer's approval. Serrated Bars: For serrated grating, the depth of grating required for a specified load is 1/4" deeper than that shown in table.				
				Du	0.115	0.180	0.259	0.353	0.461	0.583	0.720					
			0.391	C	1250	1000	833	714	625	556	500					
				Dc	0.092	0.144	0.207	0.282	0.368	0.467	0.576					
1-1/2" x 3/16"	63	4.45	0.900	U	1800	1152	800	588	450	356	288	238				
				Du	0.096	0.150	0.216	0.294	0.384	0.487	0.599	0.726				
			0.675	C	1800	1440	1200	1029	900	800	720	655				
				Dc	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581				
1-3/4" x 3/16"	70	5.16	1.225	U	2450	1568	1089	800	613	484	392	324	272			
				Du	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.623	0.741			
			1.072	C	2450	1960	1633	1400	1225	1089	980	891	817			
				Dc	0.066	0.103	0.148	0.202	0.263	0.333	0.412	0.498	0.593			
2" x 3/16"	78	5.87	1.600	U	3200	2048	1422	1045	800	632	512	423	356	303	261	
				Du	0.072	0.113	0.162	0.221	0.288	0.364	0.450	0.544	0.649	0.760	0.881	
			1.600	C	3200	2560	2133	1829	1600	1422	1280	1164	1067	985	914	
				Dc	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.705	
2-1/4" x 3/16"	85	6.57	2.025	U	4050	2592	1800	1322	1013	800	648	536	450	383	331	253
				Du	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.023
			2.278	C	4050	3240	2700	2314	2025	1800	1620	1473	1350	1246	1157	1013
				Dc	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.628	0.820
2-1/2" x 3/16"	92	7.27	2.500	U	5000	3200	2222	1633	1250	988	800	661	556	473	408	313
				Du	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.519	0.609	0.705	0.923
			3.125	C	5000	4000	3333	2857	2500	2222	2000	1818	1667	1538	1429	1250
				Dc	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.565	0.737

Panel Width Chart (in.) - 15-ADT-4 & 15-ADT-2

Dimensions are Out-to-Out of Bearing Bars**

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3/16" Flange	1 ¹ / ₈	2 ¹ / ₁₆	3	3 ¹⁵ / ₁₆	4 ⁷ / ₈	5 ¹³ / ₁₆	6 ³ / ₄	7 ¹¹ / ₁₆	8 ⁵ / ₈	9 ⁹ / ₁₆	10 ¹ / ₂	11 ⁷ / ₁₆	12 ³ / ₈	13 ⁵ / ₁₆	14 ¹ / ₄
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
3/16" Flange	15 ³ / ₁₆	16 ¹ / ₈	17 ¹ / ₁₆	18	18 ¹⁵ / ₁₆	19 ⁷ / ₈	20 ¹³ / ₁₆	21 ³ / ₄	22 ¹¹ / ₁₆	23 ⁵ / ₈	24 ⁹ / ₁₆	25 ¹ / ₂	26 ⁷ / ₁₆	27 ³ / ₈	28 ⁵ / ₁₆
No. of Bars	32	33	34	35	36	37	38	39							
3/16" Flange	29 ¹ / ₄	30 ³ / ₁₆	31 ¹ / ₈	32 ¹ / ₁₆	33	33 ¹⁵ / ₁₆	34 ⁷ / ₈	35 ¹³ / ₁₆							

** Add 1/4" for extended crossbars. Standard panel width indicated in "maroon".