



BAR GRATING - ALUMINUM

IMPERIAL - Type 19-4 Spacing

19-4

19/16"

TABLE OF SAFE LOADS

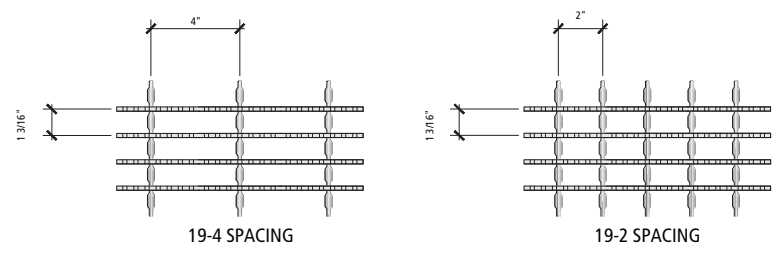
- U - Safe Uniform Load, in lbs. per sq. ft.
- C - Safe Concentrated Load, in lbs. per foot of grating width
- D - Deflection in inches

Note: Spans to the right of heavy line not recommended. Deflections shown based on tabulated loadings. For lesser design loads reduce deflection in direct proportion. For serrated surface increase depth by one size.

For serrated surface, increase depth by 1/4" for load rate.

GENERAL

Loads and deflections are theoretical and based on static loading.



ALUMINUM TYPE 19-4

SIZE OF BEARING BAR	APPROX. WT/LBS/SQ.FT		SPAN IN INCHES																SEC. MOD. PER FEET OF WIDTH	
	TYPE 19-4	TYPE 19-2	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"				
3/4" x 1/8"	1.40	1.60	U	948	421	237	152	105	77										0.118	
			D	0.048	0.108	0.192	0.300	0.432	0.588											
			C	474	316	237	189	158	135											
			D	0.042	0.088	0.154	0.240	0.346	0.470											
3/4" x 3/16"	1.90	2.10	U	1420	631	355	227	158	116										0.178	
			D	0.048	0.108	0.192	0.300	0.432	0.586											
			C	710	473	355	284	237	203											
			D	0.042	0.088	0.154	0.240	0.346	0.470											
1" x 1/8"	1.71	1.90	U	1684	748	421	269	187	137	105									0.216	
			D	0.036	0.081	0.144	0.225	0.324	0.439	0.576										
			C	842	561	421	337	281	241	211										
			D	0.027	0.064	0.115	0.180	0.259	0.353	0.461										
1" x 3/16"	2.46	2.70	U	2528	1124	632	404	281	206	158	125								0.325	
			D	0.036	0.081	0.144	0.225	0.324	0.441	0.576	0.729									
			C	1264	843	632	505	421	361	316	281									
			D	0.027	0.064	0.115	0.180	0.259	0.353	0.461	0.583									
1 1/4" x 1/8"	2.08	2.30	U	2632	1170	658	421	292	215	164	130								0.339	
			D	0.027	0.064	0.115	0.180	0.259	0.353	0.461	0.583									
			C	1316	877	658	526	439	376	329	292									
			D	0.024	0.052	0.092	0.144	0.208	0.282	0.369	0.467									
1 1/4" x 3/16"	3.01	3.30	U	3948	1755	987	632	439	322	247	195	158							0.507	
			D	0.027	0.064	0.115	0.180	0.259	0.353	0.461	0.583	0.720								
			C	1974	1316	987	789	658	564	493	439	395								
			D	0.021	0.051	0.092	0.144	0.207	0.282	0.369	0.467	0.576								
1 1/2" x 1/8"	2.46	2.70	U	3788	1684	947	606	421	309	237	187	152							0.488	
			D	0.024	0.054	0.096	0.150	0.216	0.294	0.384	0.486	0.600								
			C	1894	1263	947	758	632	541	474	421	379								
			D	0.021	0.044	0.077	0.120	0.173	0.235	0.307	0.389	0.480								
1 1/2" x 3/16"	3.56	3.90	U	5684	2526	1421	909	632	464	355	281	227	188						0.730	
			D	0.024	0.054	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726							
			C	2842	1895	1421	1137	947	812	711	632	568	517							
			D	0.021	0.044	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581							
1 3/4" x 3/16"	4.12	4.40	U	7736	3438	1934	1238	860	632	484	382	309	256	215	183				0.994	
			D	0.015	0.044	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869					
			C	3868	2579	1934	1547	1289	1105	967	860	774	703	645	595					
			D	0.016	0.037	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695					
2" x 3/16"	4.68	5.00	U	10104	4491	2526	1617	1123	825	632	499	404	334	281	239	206			1.299	
			D	0.014	0.039	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882				
			C	5052	3368	2526	2021	1684	1444	1263	1123	1011	919	842	777	722				
			D	0.018	0.034	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706				
2 1/4" x 3/16"	5.24	5.80	U	12788	5684	3197	2046	1421	1044	799	632	512	423	355	303	261	200		1.644	
			D	0.016	0.036	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024			
			C	6394	4263	3197	2558	2132	1827	1599	1421	1279	1163	1066	984	914	799			
			D	0.011	0.028	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.624	0.819			
2 1/2" x 3/16"	5.79	6.10	U	15788	7017	3947	2526	1454	1289	987	780	632	522	439	374	322	247		2.029	
			D	0.018	0.034	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922			
			C	7894	5263	3947	3158	2632	2256	1974	1754	1579	1435	1316	1215	1128	987			
			D	0.012	0.026	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737			

Maximum allowable fiber stress of 18,000 P.S.I





BAR GRATING - ALUMINUM

METRIC - Type 30-102 Spacing

30-102

30mm

1
BAR
GRATING

TABLE OF SAFE LOADS

U - Safe Uniform Load, in kPa

C - Safe Concentrated Load, in kN per meter

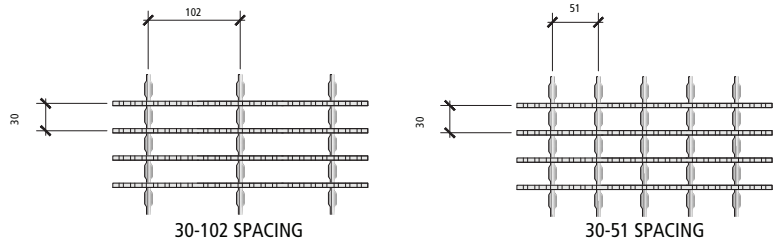
D - Deflection in millimeters

Note: Spans to the right of heavy line not recommended. Deflections shown based on tabulated loadings. For lesser design loads reduce deflection in direct proportion. For serrated surface increase depth by one size.

For serrated surface, increase depth by 7mm for load rate.

GENERAL

Loads and deflections are theoretical and based on static loading.



ALUMINUM TYPE 30-102																			
SIZE OF BEARING BAR	APPROX. WT/KG/M2			SPAN IN MILLIMETER												SEC. MOD. PER 305mm OF WIDTH			
	TYPE 30-102	TYPE 30-51		305	458	610	762	915	1067	1219	1372	1524	1676	1829	1981		2133	2438	
19 x 3.2	6.84	7.81	U	45.41	20.14	11.35	7.28	5.03	3.69									1.94	
			D	1.2	2.7	4.9	7.6	11.0	14.9										
			C	6.92	4.61	3.46	2.76	2.31	1.97										
			D	1.1	2.2	3.9	6.1	8.8	11.9										
19 x 4.8	9.28	10.25	U	68.02	30.16	17.00	10.87	7.57	5.56									2.92	
			D	1.2	2.7	4.9	7.6	11.0	14.9										
			C	10.36	6.90	5.18	4.14	3.46	2.96										
			D	1.1	2.2	3.9	6.1	8.8	11.9										
25 x 3.2	8.35	9.28	U	80.66	35.77	20.17	12.89	8.96	6.56	5.03								3.54	
			D	0.9	2.1	3.7	5.7	8.2	11.2	14.6									
			C	12.28	8.18	6.14	4.92	4.10	3.52	3.08									
			D	0.7	1.6	2.9	4.6	6.6	9.0	11.7									
25 x 4.8	12.01	13.18	U	121.09	53.70	30.27	19.35	13.46	9.87	7.57	5.99							5.33	
			D	0.9	2.1	3.7	5.7	8.2	11.2	14.6	18.5								
			C	18.44	12.28	9.22	7.37	6.14	5.27	4.61	4.10								
			D	0.7	1.6	2.9	4.6	6.6	9.0	11.7	14.8								
32 x 3.2	10.16	11.23	U	126.07	55.91	31.52	20.17	13.99	10.30	7.86	6.23							5.56	
			D	0.7	1.6	2.9	4.6	6.6	9.0	11.7	14.8								
			C	19.20	12.79	9.60	7.67	6.41	5.49	4.80	4.26								
			D	0.6	1.3	2.3	3.7	5.3	7.2	9.4	11.9								
32 x 4.8	14.70	16.11	U	189.11	83.87	47.28	30.27	21.03	15.42	11.83	9.34	7.57						8.31	
			D	0.7	1.6	2.9	4.6	6.6	9.0	11.7	14.8	18.3							
			C	28.80	19.18	14.40	11.51	9.60	8.23	7.19	6.41	5.76							
			D	0.5	1.3	2.3	3.7	5.3	7.2	9.4	11.9	14.6							
38 x 3.2	12.01	13.18	U	181.45	80.47	45.36	29.03	20.17	14.80	11.35	8.96	7.28						8.00	
			D	0.6	1.4	2.4	3.8	5.5	7.5	9.8	12.3	15.2							
			C	27.63	18.40	13.82	11.06	9.22	7.89	6.92	6.14	5.53							
			D	0.5	1.1	2.0	3.0	4.4	6.0	7.8	9.9	12.2							
38 x 4.8	17.38	19.04	U	272.26	120.74	68.07	43.54	30.27	22.23	17.00	13.46	10.87	9.01					11.97	
			D	0.6	1.4	2.4	3.8	5.5	7.5	9.8	12.3	15.2	18.4						
			C	41.46	27.61	20.73	16.59	13.82	11.85	10.37	9.22	8.29	7.54						
			D	0.5	1.1	2.0	3.0	4.4	6.0	7.8	9.9	12.2	14.8						
45 x 4.8	20.12	21.48	U	370.55	164.33	92.64	59.30	41.19	30.27	23.18	18.30	14.80	12.26	10.30	8.77			16.30	
			D	0.4	1.1	2.1	3.3	4.7	6.4	8.4	10.6	13.1	15.8	18.8	22.1				
			C	56.43	37.58	28.22	22.57	18.81	16.12	14.11	12.55	11.29	10.26	9.41	8.68				
			D	0.4	0.9	1.7	2.6	3.8	5.1	6.7	8.5	10.4	12.6	15.0	17.7				
51 x 4.8	22.85	24.41	U	483.98	214.63	121.00	77.45	53.79	39.52	30.27	23.90	19.35	16.00	13.46	11.45	9.87		21.30	
			D	0.4	1.0	1.8	2.9	4.1	5.6	7.3	9.3	11.4	13.8	16.5	19.3	22.4			
			C	73.71	49.09	36.85	29.49	24.57	21.07	18.43	16.38	14.75	13.41	12.28	11.34	10.53			
			D	0.5	0.9	1.5	2.3	3.3	4.5	5.8	7.4	9.1	11.1	13.2	15.4	17.9			
57 x 4.8	25.58	28.32	U	612.55	271.65	153.14	98.00	68.07	50.01	38.27	30.27	24.52	20.26	17.00	14.51	12.50	9.58	26.96	
			D	0.4	0.9	1.6	2.5	3.7	5.0	6.5	8.2	10.2	12.3	14.6	17.2	19.9	26.0		
			C	93.29	62.12	46.64	37.32	31.11	26.66	23.33	20.73	18.66	16.97	15.55	14.36	13.34	11.66		
			D	0.3	0.7	1.3	2.0	2.9	4.0	5.2	6.6	8.1	9.8	11.7	13.7	15.8	20.8		
64 x 4.8	28.27	29.78	U	756.25	335.38	189.06	121.00	69.65	61.74	47.28	37.36	30.27	25.00	21.03	17.91	15.42	11.83	33.28	
			D	0.5	0.9	1.5	2.3	3.3	4.5	5.8	7.4	9.1	11.1	13.2	15.4	17.9	23.4		
			C	115.17	76.70	57.59	46.08	38.40	32.92	28.80	25.59	23.04	20.94	19.20	17.73	16.46	14.40		
			D	0.3	0.7	1.2	1.8	2.6	3.6	4.7	5.9	7.3	8.8	10.5	12.4	14.3	18.7		

Maximum allowable fiber stress of 124 K.P.A





BAR GRATING - ALUMINUM

IMPERIAL - Type 15-4 Spacing

15-4

15/16"

TABLE OF SAFE LOADS

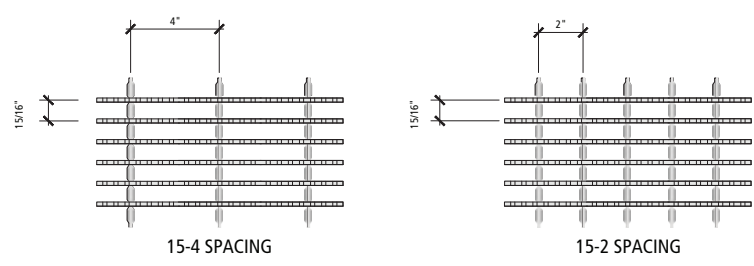
- U** - Safe Uniform Load, in lbs. per sq. ft.
- C** - Safe Concentrated Load, in lbs. per foot of grating width
- D** - Deflection in inches

Note: Spans to the right of heavy line not recommended. Deflections shown based on tabulated loadings. For lesser design loads reduce deflection in direct proportion. For serrated surface increase depth by one size.

For serrated surface, increase depth by 1/4" for load rate.

GENERAL

Loads and deflections are theoretical and based on static loading.



ALUMINUM TYPE 15-4																		
SIZE OF BEARING BAR	APPROX. WT/LBS/SQ.FT		SPAN IN INCHES											SEC. MOD. PER FEET OF WIDTH				
	TYPE 15-4	TYPE 15-2	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"		6'-6"	7'-0"	8'-0"	
3/4" X 1/8"	1.70	1.90	U	1200	533	300	192	133	98									0.150
			D	0.048	0.108	0.192	0.300	0.432	0.588	0.768								
			C	600	400	300	240	200	171									
			D	0.042	0.088	0.154	0.240	0.346	0.470									
3/4" X 3/16"	2.30	2.80	U	1800	800	450	288	200	147	113								0.225
			D	0.048	0.108	0.192	0.300	0.432	0.588	0.768								
			C	900	600	450	360	300	257	225								
			D	0.042	0.088	0.154	0.240	0.346	0.470	0.614								
1" X 1/8"	2.10	2.40	U	2132	948	533	341	237	174	133								0.267
			D	0.036	0.081	0.144	0.225	0.324	0.441	0.576								
			C	1066	711	533	427	356	305	267								
			D	0.027	0.064	0.115	0.180	0.259	0.353	0.461								
1" X 3/16"	3.06	3.30	U	3200	1422	800	512	356	261	200	158							0.400
			D	0.036	0.081	0.144	0.225	0.324	0.441	0.576	0.729							
			C	1600	1067	800	640	533	457	400	356							
			D	0.027	0.064	0.115	0.180	0.259	0.353	0.461	0.583							
1-1/4" X 1/8"	2.60	2.80	U	3332	1481	833	533	370	272	208	165	133						0.417
			D	0.027	0.064	0.115	0.180	0.259	0.353	0.461	0.583	0.720						
			C	1666	1111	833	667	556	476	417	370	333						
			D	0.021	0.051	0.092	0.144	0.207	0.282	0.369	0.467	0.576						
1 1/4" X 3/16"	3.75	4.00	U	5000	2222	1250	800	556	408	313	247	200	165					0.625
			D	0.027	0.064	0.115	0.180	0.259	0.353	0.462	0.583	0.720	0.871					
			C	2500	1667	1250	1000	833	714	625	556	500	455					
			D	0.021	0.051	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697					
1-1/2" X 1/8"	3.10	3.30	U	4800	2133	1200	768	533	392	300	237	192	159					0.600
			D	0.024	0.054	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726					
			C	2400	1600	1200	960	800	686	600	533	480	436					
			D	0.021	0.044	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581					
1 1/2" X 3/16"	4.45	4.80	U	7200	3200	1800	1152	800	588	450	356	288	238	200				0.900
			D	0.024	0.054	0.096	0.150	0.216	0.294	0.384	0.487	0.600	0.726	0.864				
			C	3600	2400	1800	1440	1200	1029	900	800	720	655	600				
			D	0.021	0.044	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691				
1 3/4" X 3/16"	5.16	5.50	U	9800	4356	2450	1568	1089	800	613	484	392	324	272	232			1.225
			D	0.015	0.044	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.740	0.869			
			C	4900	3267	2450	1960	1633	1400	1225	1089	980	891	817	754			
			D	0.016	0.037	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.593	0.965			
2" X 3/16"	5.87	6.20	U	12800	5689	3200	2048	1422	1045	800	632	512	423	356	303	261		1.600
			D	0.014	0.039	0.072	0.113	0.162	0.221	0.288	0.364	0.450	0.544	0.649	0.761	0.881		
			C	6400	4267	3200	2560	2133	1829	1600	1422	1280	1164	1067	985	914		
			D	0.018	0.034	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.519	0.609	0.705		
2 1/4" X 3/16"	6.57	6.90	U	16200	7200	4050	2592	1800	1322	1013	800	648	536	450	383	331	253	2.025
			D	0.016	0.036	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.675	0.785	1.023	
			C	8100	5400	4050	3240	2700	2314	2025	1800	1620	1473	1350	1246	1157	1013	
			D	0.011	0.028	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.820	
2 1/2" X 3/16"	7.27	7.80	U	20000	8889	5000	3200	2222	1633	1250	988	800	661	556	473	408	313	2.500
			D	0.018	0.034	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.435	0.519	0.608	0.705	0.923	
			C	10000	6667	5000	4000	3333	2857	2500	2222	2000	1818	1667	1538	1429	1250	
			D	0.012	0.026	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.565	0.737	

Maximum allowable fiber stress of 18,000 P.S.I.





BAR GRATING - ALUMINUM

METRIC - Type 24-102 Spacing

24-102

24mm

1
BAR
GRATING

TABLE OF SAFE LOADS

U - Safe Uniform Load, in kPa

C - Safe Concentrated Load, in kN per meter

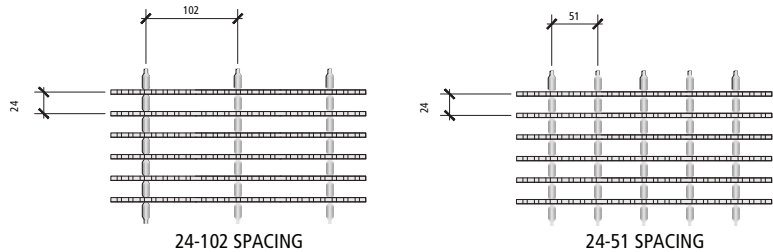
D - Deflection in millimeters

Note: Spans to the right of heavy line not recommended. Deflections shown based on tabulated loadings. For lesser design loads reduce deflection in direct proportion. For serrated surface increase depth by one size.

For serrated surface, increase depth by 7mm for load rate.

GENERAL

Loads and deflections are theoretical and based on static loading.



ALUMINUM TYPE 24-102																			
SIZE OF BEARING BAR	APPROX. WT/KG/M2		SPAN IN MILLIMETER											SEC. MOD. PER 305mm OF WIDTH					
	TYPE 24-102	TYPE 24-51	305	458	610	762	915	1067	1219	1372	1524	1676	1829		1981	2133	2438		
19 x 3.2	8.30	9.28	U	57.48	25.49	14.37	9.20	6.37	4.69									2.460	
			D	1.2	2.7	4.9	7.6	11.0	14.9										
			C	8.75	5.83	4.38	3.50	2.92	2.49										
			D	1.1	2.2	3.9	6.1	8.8	11.9										
19 x 4.8	11.23	13.67	U	86.22	38.24	21.56	13.80	9.58	7.04	5.41								3.690	
			D	1.2	2.7	4.9	7.6	11.0	14.9	19.5									
			C	13.13	8.74	6.57	5.25	4.38	3.75	3.28									
			D	1.1	2.2	3.9	6.1	8.8	11.9	15.6									
25 x 3.2	10.25	11.72	U	102.12	45.29	25.53	16.33	11.35	8.33	6.37								4.379	
			D	0.9	2.1	3.7	5.7	8.2	11.2	14.6									
			C	15.55	10.36	7.78	6.23	5.19	4.45	3.90									
			D	0.7	1.6	2.9	4.6	6.6	9.0	11.7									
25 x 4.8	14.94	16.11	U	153.28	67.98	38.32	24.52	17.05	12.50	9.58	7.57							6.560	
			D	0.9	2.1	3.7	5.7	8.2	11.2	14.6	18.5								
			C	23.34	15.55	11.67	9.34	7.78	6.67	5.84	5.19								
			D	0.7	1.6	2.9	4.6	6.6	9.0	11.7	14.8								
32 x 3.2	12.69	13.67	U	159.60	70.78	39.90	25.53	17.72	13.03	9.96	7.90	6.37						6.839	
			D	0.7	1.6	2.9	4.6	6.6	9.0	11.7	14.8	18.3							
			C	24.31	16.19	12.15	9.73	8.11	6.94	6.08	5.40	4.86							
			D	0.5	1.3	2.3	3.7	5.3	7.2	9.4	11.9	14.6							
32 x 4.8	18.31	19.53	U	239.50	106.21	59.88	38.32	26.63	19.54	14.99	11.83	9.58	7.90					10.250	
			D	0.7	1.6	2.9	4.6	6.6	9.0	11.7	14.8	18.3	22.1						
			C	36.48	24.29	18.24	14.59	12.15	10.42	9.12	8.11	7.30	6.64						
			D	0.5	1.3	2.3	3.7	5.3	7.2	9.4	11.9	14.6	17.7						
38 x 3.2	15.14	16.11	U	229.92	101.96	57.48	36.79	25.53	18.78	14.37	11.35	9.20	7.62					9.840	
			D	0.6	1.4	2.4	3.8	5.5	7.5	9.8	12.3	15.2	18.4						
			C	35.02	23.32	17.51	14.01	11.67	10.01	8.75	7.78	7.00	6.36						
			D	0.5	1.1	2.0	3.0	4.4	6.0	7.8	9.9	12.2	14.8						
38 x 4.8	21.73	23.44	U	344.88	152.95	86.22	55.18	38.32	28.17	21.56	17.05	13.80	11.40	9.58				14.760	
			D	0.6	1.4	2.4	3.8	5.5	7.5	9.8	12.4	15.2	18.4	21.9					
			C	52.52	34.98	26.26	21.01	17.51	15.01	13.13	11.67	10.50	9.56	8.75					
			D	0.5	1.1	2.0	3.0	4.4	6.0	7.8	9.9	12.2	14.8	17.6					
45 x 4.8	25.19	26.85	U	469.42	208.18	117.36	75.11	52.16	38.32	29.36	23.18	18.78	15.52	13.03	11.11			20.090	
			D	0.4	1.1	2.1	3.3	4.7	6.4	8.4	10.6	13.1	15.8	18.8	22.1				
			C	71.49	47.61	35.75	28.60	23.83	20.43	17.87	15.89	14.30	13.00	11.92	11.00				
			D	0.4	0.9	1.7	2.6	3.8	5.1	6.7	8.5	10.4	12.6	15.1	17.9				
51 x 4.8	28.66	30.27	U	613.12	271.90	153.28	98.10	68.11	50.06	38.32	30.27	24.52	20.26	17.05	14.51	12.50		26.240	
			D	0.4	1.0	1.8	2.9	4.1	5.6	7.3	9.2	11.4	13.8	16.5	19.3	22.4			
			C	93.38	62.18	46.69	37.35	31.12	26.69	23.34	20.75	18.68	16.98	15.57	14.37	13.34			
			D	0.5	0.9	1.5	2.3	3.3	4.5	5.8	7.4	9.1	11.1	13.2	15.5	17.9			
57 x 4.8	32.08	33.69	U	775.98	344.13	194.00	124.16	86.22	63.32	48.52	38.32	31.04	25.67	21.56	18.35	15.85	12.12	33.210	
			D	0.4	0.9	1.6	2.5	3.7	5.0	6.5	8.2	10.2	12.3	14.6	17.1	19.9	26.0		
			C	118.18	78.70	59.09	47.27	39.39	33.76	29.54	26.26	23.64	21.49	19.70	18.18	16.88	14.78		
			D	0.3	0.7	1.3	2.0	2.9	4.0	5.2	6.6	8.1	9.8	11.7	13.7	15.9	20.8		
64 x 4.8	35.50	38.08	U	958.00	424.85	239.50	153.28	106.43	78.22	59.88	47.33	38.32	31.66	26.63	22.66	19.54	14.99	41.000	
			D	0.5	0.9	1.5	2.3	3.3	4.5	5.8	7.4	9.1	11.0	13.2	15.4	17.9	23.4		
			C	145.90	97.16	72.95	58.36	48.63	41.68	36.48	32.42	29.18	26.52	24.32	22.44	20.85	18.24		
			D	0.3	0.7	1.2	1.8	2.6	3.6	4.7	5.9	7.3	8.8	10.5	12.4	14.4	18.7		

Maximum allowable fiber stress of 124 K.P.A





BAR GRATING - ALUMINUM

IMPERIAL - Type 11-4 Spacing

11-4

11/16"

TABLE OF SAFE LOADS

U - Safe Uniform Load, in lbs. per sq. ft.

C - Safe Concentrated Load, in lbs. per foot of grating width

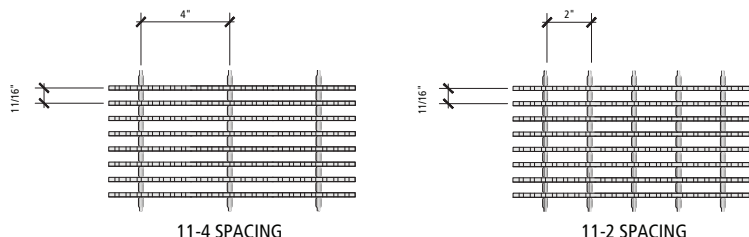
D - Deflection in inches

Note: Spans to the right of heavy line not recommended. Deflections shown based on tabulated loadings. For lesser design loads reduce deflection in direct proportion. For serrated surface increase depth by one size.

For serrated surface, increase depth by 1/4" for load rate.

GENERAL

Loads and deflections are theoretical and based on static loading.



ALUMINUM TYPE 11-4																		
SIZE OF BEARING BAR	APPROX. WT/LBS/SQ.FT		SPAN IN INCHES														SEC. MOD. PER FEET OF WIDTH	
	TYPE 11-4	TYPE 11-2	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"		
3/4" X 1/8"	2.10	2.40	U	1636	727	409	262	182	134	102								0.205
			D	0.048	0.108	0.192	0.300	0.432	0.588	0.768								
			C	818	545	409	327	273	234	205								
			D	0.042	0.088	0.154	0.240	0.346	0.470	0.614								
3/4" X 3/16"	3.10	3.40	U	2456	1092	614	393	273	200	153								0.307
			D	0.048	0.108	0.192	0.300	0.432	0.588	0.768								
			C	1228	819	614	491	409	351	307								
			D	0.042	0.088	0.154	0.240	0.346	0.470	0.614								
1" X 1/8"	2.80	3.10	U	2908	1292	727	465	323	237	182	144							0.364
			D	0.036	0.081	0.144	0.225	0.324	0.441	0.576	0.729							
			C	1454	969	727	582	485	416	364	323							
			D	0.027	0.064	0.115	0.180	0.259	0.353	0.461	0.583							
1" X 3/16"	4.10	4.30	U	4364	1940	1091	698	485	356	273	215	175						0.545
			D	0.036	0.081	0.144	0.225	0.324	0.441	0.577	0.727	0.900						
			C	2182	1455	1091	873	727	623	545	485	436						
			D	0.027	0.064	0.115	0.180	0.259	0.353	0.460	0.583	0.720						
1-1/4" X 1/8"	3.50	3.70	U	4544	2020	1136	727	505	371	284	224	182						0.568
			D	0.027	0.064	0.115	0.180	0.259	0.353	0.461	0.583	0.720						
			C	2272	1515	1136	909	758	649	568	505	455						
			D	0.021	0.051	0.092	0.144	0.207	0.282	0.369	0.467	0.576						
1 1/4" X 3/16"	5.10	5.30	U	6820	3031	1705	1091	758	557	426	337	273	225					0.852
			D	0.027	0.064	0.115	0.180	0.259	0.353	0.461	0.584	0.721	0.871					
			C	3410	2273	1705	1364	1136	974	852	758	682	620					
			D	0.021	0.051	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697					
1-1/2" X 1/8"	4.10	4.30	U	6544	2908	1636	1047	727	534	409	323	262	216	182				0.818
			D	0.024	0.054	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864				
			C	3272	2181	1636	1309	1091	935	818	727	655	595	545				
			D	0.021	0.044	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691				
1 1/2" X 3/16"	6.10	6.30	U	9820	4364	2455	1571	1091	802	614	485	393	325	273	232			1.227
			D	0.024	0.054	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.727	0.865	1.014			
			C	4910	3273	2455	1964	1636	1403	1227	1091	982	893	818	755			
			D	0.021	0.044	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811			
1 3/4" X 3/16"	7.10	7.30	U	13364	5940	3341	2138	1485	1091	835	660	535	442	371	316	273		1.670
			D	0.015	0.044	0.082	0.129	0.185	0.252	0.329	0.417	0.515	0.623	0.740	0.868	1.008		
			C	6682	4455	3341	2673	2227	1909	1670	1485	1336	1215	1114	1028	955		
			D	0.016	0.037	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.593	0.695	0.806		
2" X 3/16"	8.00	8.20	U	17456	7758	4364	2793	1939	1425	1091	862	698	577	485	413	356	273	2.182
			D	0.014	0.039	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.544	0.648	0.760	0.881	1.153	
			C	8728	5819	4364	3491	2909	2494	2182	1939	1746	1587	1455	1343	1247	1091	
			D	0.018	0.034	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.519	0.609	0.706	0.922	
2 1/4" X 3/16"	9.00	9.20	U	22092	9819	5523	3535	2455	1803	1381	1091	884	730	614	523	451	345	2.761
			D	0.016	0.036	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.023	
			C	11046	7364	5523	4418	3682	3156	2761	2455	2209	2008	1841	1699	1578	1381	
			D	0.011	0.028	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819	
2 1/2" X 3/16"	10.00	10.20	U	27272	12121	6818	4364	3030	2226	1705	1347	1091	902	758	646	557	426	3.409
			D	0.018	0.034	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.519	0.609	0.706	0.921	
			C	13636	9091	6818	5455	4546	3896	3409	3030	2727	2479	2273	2098	1948	1705	
			D	0.012	0.026	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737	

Maximum allowable fiber stress of 18,000 P.S.I





BAR GRATING - ALUMINUM

METRIC - Type 17-102 Spacing

17-102

17mm

1
BAR
GRATING

TABLE OF SAFE LOADS

U - Safe Uniform Load, in kPa

C - Safe Concentrated Load, in kN per meter

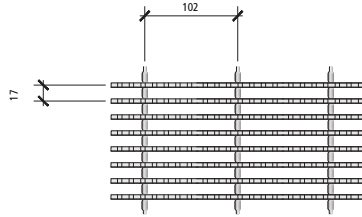
D - Deflection in millimeters

Note: Spans to the right of heavy line not recommended. Deflections shown based on tabulated loadings. For lesser design loads reduce deflection in direct proportion. For serrated surface increase depth by one size.

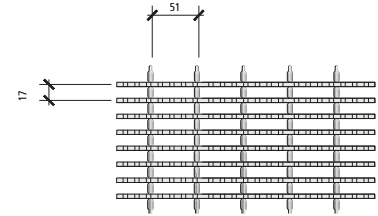
For serrated surface, increase depth by 7mm for load rate.

GENERAL

Loads and deflections are theoretical and based on static loading.



17-102 SPACING



17-51 SPACING

ALUMINUM TYPE 17-102																		
SIZE OF BEARING BAR	APPROX. WT/KG/M2			SPAN IN MILLIMETER												SEC. MOD. PER 305mm OF WIDTH		
	TYPE 17.5-102	TYPE 17.5-51		305	458	610	762	915	1067	1219	1372	1524	1676	1829	1981		2133	2438
19 x 3.2	10.25	11.72	U	78.36	34.75	19.59	12.55	8.72	6.42	4.89								3.362
			D	1.2	2.7	4.9	7.6	11.0	14.9	19.5								
			C	11.93	7.95	5.97	4.77	3.98	3.41	2.99								
			D	1.1	2.2	3.9	6.1	8.8	11.9	15.6								
19 x 4.8	15.14	16.60	U	117.64	52.17	29.41	18.82	13.08	9.58	7.33								5.035
			D	1.2	2.7	4.9	7.6	11.0	14.9	19.5								
			C	17.92	11.93	8.96	7.16	5.97	5.12	4.48								
			D	1.1	2.2	3.9	6.1	8.8	11.9	15.6								
25 x 3.2	13.67	15.14	U	139.29	61.77	34.82	22.27	15.47	11.35	8.72	6.90							5.970
			D	0.9	2.1	3.7	5.7	8.2	11.2	14.6	18.5							
			C	21.21	14.13	10.61	8.49	7.08	6.07	5.31	4.71							
			D	0.7	1.6	2.9	4.6	6.6	9.0	11.7	14.8							
25 x 4.8	20.02	20.99	U	209.04	92.70	52.26	33.43	23.23	17.05	13.08	10.30	8.38						8.938
			D	0.9	2.1	3.7	5.7	8.2	11.2	14.7	18.5	22.9						
			C	31.84	21.20	15.92	12.74	10.61	9.09	7.95	7.08	6.36						
			D	0.7	1.6	2.9	4.6	6.6	9.0	11.7	14.8	18.3						
32 x 3.2	17.09	18.06	U	217.66	96.53	54.41	34.82	24.19	17.77	13.60	10.73	8.72						9.315
			D	0.7	1.6	2.9	4.6	6.6	9.0	11.7	14.8	18.3						
			C	33.15	22.07	16.57	13.26	11.06	9.47	8.29	7.37	6.64						
			D	0.5	1.3	2.3	3.7	5.3	7.2	9.4	11.9	14.6						
32 x 4.8	24.90	25.88	U	326.68	144.87	81.67	52.26	36.31	26.68	20.41	16.14	13.08	10.78					13.973
			D	0.7	1.6	2.9	4.6	6.6	9.0	11.7	14.8	18.3	22.1					
			C	49.75	33.13	24.88	19.90	16.57	14.21	12.43	11.06	9.95	9.05					
			D	0.5	1.3	2.3	3.7	5.3	7.2	9.4	11.9	14.6	17.7					
38 x 3.2	20.02	20.99	U	313.46	139.01	78.36	50.15	34.82	25.58	19.59	15.47	12.55	10.35	8.72				13.415
			D	0.6	1.4	2.4	3.8	5.5	7.5	9.8	12.3	15.2	18.4	21.9				
			C	47.74	31.79	23.87	19.10	15.92	13.64	11.93	10.61	9.56	8.68	7.95				
			D	0.5	1.1	2.0	3.0	4.4	6.0	7.8	9.9	12.2	14.8	17.6				
38 x 4.8	29.78	30.76	U	470.38	208.60	117.59	75.25	52.26	38.42	29.41	23.23	18.82	15.57	13.08	11.11			20.123
			D	0.6	1.4	2.4	3.8	5.5	7.5	9.8	12.3	15.2	18.5	22.0	25.8			
			C	71.64	47.71	35.82	28.65	23.87	20.47	17.90	15.92	14.33	13.03	11.93	11.02			
			D	0.5	1.1	2.0	3.0	4.4	6.0	7.8	9.9	12.2	14.8	17.6	20.6			
45 x 4.8	34.67	35.64	U	640.14	283.88	160.03	102.41	71.13	52.26	40.00	31.61	25.63	21.17	17.77	15.14	13.08		27.388
			D	0.4	1.1	2.1	3.3	4.7	6.4	8.4	10.6	13.1	15.8	18.8	22.0	25.6		
			C	97.49	64.92	48.75	39.00	32.49	27.85	24.37	21.67	19.49	17.73	16.25	15.00	13.93		
			D	0.4	0.9	1.7	2.6	3.8	5.1	6.7	8.5	10.4	12.6	15.1	17.7	20.5		
51 x 4.8	39.06	40.04	U	836.14	370.81	209.04	133.78	92.88	68.26	52.26	41.29	33.43	27.64	23.23	19.78	17.05	13.08	35.785
			D	0.4	1.0	1.8	2.9	4.1	5.6	7.3	9.3	11.4	13.8	16.5	19.3	22.4	29.3	
			C	127.34	84.80	63.67	50.93	42.44	36.39	31.84	28.29	25.47	23.15	21.23	19.59	18.19	15.92	
			D	0.5	0.9	1.5	2.3	3.3	4.5	5.8	7.4	9.1	11.1	13.2	15.5	17.9	23.4	
57 x 4.8	43.94	44.92	U	1058.21	469.29	264.55	169.33	117.59	86.36	66.15	52.26	42.34	34.97	29.41	25.05	21.60	16.53	45.280
			D	0.4	0.9	1.6	2.5	3.7	5.0	6.5	8.2	10.2	12.3	14.6	17.2	19.9	26.0	
			C	161.16	107.32	80.58	64.46	53.72	46.05	40.28	35.82	32.23	29.30	26.86	24.79	23.02	20.15	
			D	0.3	0.7	1.3	2.0	2.9	4.0	5.2	6.6	8.1	9.8	11.7	13.7	15.9	20.8	
64 x 4.8	48.82	49.80	U	1306.33	579.32	326.58	209.04	145.14	106.63	81.67	64.52	52.26	43.21	36.31	30.94	26.68	20.41	55.908
			D	0.5	0.9	1.5	2.3	3.3	4.5	5.8	7.4	9.1	11.1	13.2	15.5	17.9	23.4	
			C	198.95	132.49	99.47	79.59	66.33	56.84	49.74	44.21	39.79	36.17	33.16	30.61	28.42	24.88	
			D	0.3	0.7	1.2	1.8	2.6	3.6	4.7	5.9	7.3	8.8	10.5	12.4	14.3	18.7	

Maximum allowable fiber stress of 124 K.P.A





BAR GRATING - ALUMINUM

IMPERIAL - Type 7-4 Spacing

7-4

7/16"

TABLE OF SAFE LOADS - IMPERIAL

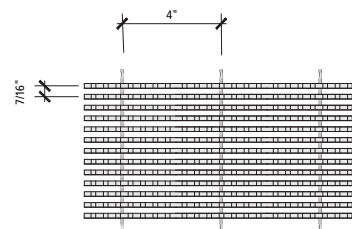
- U - Safe Uniform Load, in lbs. per sq. ft
- C - Safe Concentrated Load, in lbs. per foot of grating width
- D - Deflection in inches

Note: Spans to the right of heavy line not recommended. Deflections shown based on tabulated loadings. For lesser design loads reduce deflection in direct proportion. For serrated surface increase depth by one size.

For serrated surface, increase depth by 1/4" for load rate

GENERAL

Loads and deflections are theoretical and based on static loading.



7-4 SPACING

		ALUMINUM TYPE 7-4																	
SIZE OF BEARING BAR	APPROX. WT/LBS/SQ.FT TYPE 7-4	SPAN IN INCHES													SEC. MOD. PER FEET OF WIDTH				
		1'-0"	1'-6"	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"	6.3	U	6856	3047	1714	1097	762	560	429	339	274								0.857
		D	0.036	0.081	0.144	0.225	0.324	0.441	0.577	0.730	0.899								
		C	3428	2285	1714	1371	1143	980	857	762	686								
		D	0.027	0.064	0.115	0.180	0.259	0.353	0.461	0.583	0.72								
1 1/4" X 3/16"	7.78	U	10716	4763	2679	1714	1190	875	670	529	429	354	298						1.339
		D	0.027	0.064	0.115	0.180	0.259	0.353	0.461	0.583	0.721	0.871	1.038						
		C	5358	3572	2679	2143	1786	1531	1339	1190	1071	974	893						
		D	0.021	0.051	0.092	0.144	0.207	0.282	0.369	0.466	0.576	0.697	0.83						
1 1/2" X 3/16"	9.28	U	15428	6857	3857	2469	1714	1259	964	762	617	510	429	365					1.929
		D	0.024	0.054	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.865	1.014					
		C	7714	5143	3857	3086	2571	2204	1929	1714	1543	1403	1286	1187					
		D	0.021	0.044	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811					
1 3/4" X 3/16"	10.8	U	21000	9333	5250	3360	2333	1714	1313	1037	840	694	583	497	429	328			2.625
		D	0.015	0.044	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.740	0.869	1.009	1.316			
		C	10500	7000	5250	4200	3500	3000	2625	2333	2100	1909	1750	1615	1500	1313			
		D	0.016	0.037	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.054			
2" X 3/16"	12.32	U	27428	12190	6857	4389	3048	2239	1714	1355	1097	907	762	649	560	429			3.429
		D	0.014	0.039	0.072	0.113	0.162	0.220	0.288	0.365	0.450	0.545	0.648	0.760	0.882	1.153			
		C	13714	9143	6857	5486	4572	3918	3429	3048	2743	2494	2286	2110	1959	1714			
		D	0.018	0.034	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.921			
2 1/4" X 3/16"	13.83	U	34716	15429	8679	5554	3857	2834	2170	1714	1389	1148	964	822	708	542			4.339
		D	0.016	0.036	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.783	1.023			
		C	17358	11572	8679	6943	5786	4959	4339	3857	3471	3156	2893	2670	2480	2170			
		D	0.017	0.030	0.051	0.080	0.117	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819			
2 1/2" X 3/16"	15.33	U	42856	19047	10714	6857	4762	3499	2679	2116	1714	1417	1190	1014	875	670			5.357
		D	0.018	0.034	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922			
		C	21428	14285	10714	8572	7143	6123	5357	4762	4286	3896	3571	3297	3061	2679			
		D	0.012	0.026	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737			

Maximum allowable fiber stress of 18,000 P.S.I.





BAR GRATING - ALUMINUM

METRIC - Type 11-102 Spacing

11-102

11mm

1
BAR
GRATING

TABLE OF SAFE LOADS - METRIC

U - Safe Uniform Load, in kPa

C - Safe Concentrated Load, in kN per meter

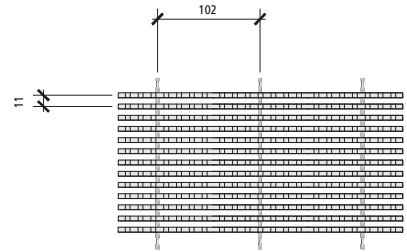
D - Deflection in millimeters

For serrated surface, increase depth by 7mm for load rate.

GENERAL

Loads and deflections are theoretical and based on static loading.

Note: Spans to the right of heavy line not recommended. Deflections shown based on tabulated loadings. For lesser design loads reduce deflection in direct proportion. For serrated surface increase depth by one size.



11-102 SPACING

ALUMINUM TYPE 11-102																	
SIZE OF BEARING BAR	APPROX. WT/KG/M2 TYPE 11-102	SPAN IN MILLIMETER													SEC. MOD. PER 305mm OF WIDTH		
		305	458	610	762	915	1067	1219	1372	1524	1676	1829	1981	2133		2438	
25 X 4.8	30.76	U	227.26	128.11	82.10	52.55	36.50	26.82	20.55	16.24	13.12						14.055
		D	0.9	2.1	3.7	5.7	8.2	11.2	14.7	18.5	22.8						
		C	41.61	31.24	25.01	20.00	16.68	14.30	12.50	11.12	10.01						
		D	0.7	1.6	2.9	4.6	6.6	9.0	11.7	14.8	18.3						
32 X 4.8	37.99	U	355.21	200.24	128.32	82.10	57.00	41.91	32.09	25.34	20.55	16.96	14.27				21.960
		D	0.7	1.6	2.9	4.6	6.6	9.0	11.7	14.8	18.3	22.1	26.4				
		C	65.03	48.83	39.09	31.27	26.06	22.34	19.54	17.36	15.63	14.21	13.03				
		D	0.5	1.3	2.3	3.7	5.3	7.2	9.4	11.8	14.6	17.7	21.1				
38 X 4.8	45.31	U	511.40	288.29	184.75	118.27	82.10	60.31	46.18	36.50	29.55	24.43	20.55	17.48			31.636
		D	0.6	1.4	2.4	3.8	5.5	7.5	9.8	12.3	15.2	18.4	22.0	25.8			
		C	93.63	70.30	56.27	45.02	37.51	32.16	28.14	25.01	22.51	20.47	18.76	17.32			
		D	0.5	1.1	2.0	3.0	4.4	6.0	7.8	9.9	12.2	14.8	17.6	20.6			
45 X 4.8	52.73	U	696.10	392.41	251.48	160.94	111.75	82.10	62.89	49.67	40.24	33.24	27.93	23.81	20.55	15.71	43.050
		D	0.4	1.1	2.1	3.3	4.7	6.4	8.4	10.6	13.1	15.8	18.8	22.1	25.6	33.4	
		C	127.44	95.68	76.60	61.28	51.07	43.77	38.30	34.04	30.64	27.85	25.53	23.56	21.89	19.16	
		D	0.4	0.9	1.7	2.6	3.8	5.1	6.7	8.5	10.4	12.6	15.0	17.7	20.5	26.8	
51 X 4.8	60.15	U	909.18	512.53	328.45	210.23	146.00	107.25	82.10	64.90	52.55	43.45	36.50	31.09	26.82	20.55	56.236
		D	0.4	1.0	1.8	2.9	4.1	5.6	7.3	9.3	11.4	13.8	16.5	19.3	22.4	29.3	
		C	166.45	124.97	100.04	80.04	66.71	57.16	50.03	44.47	40.02	36.39	33.35	30.78	28.58	25.01	
		D	0.5	0.9	1.5	2.3	3.3	4.5	5.8	7.4	9.1	11.1	13.2	15.4	17.9	23.4	
57 X 4.8	67.52	U	1150.76	648.72	415.72	266.04	184.75	135.75	103.94	82.10	66.53	54.99	46.18	39.37	33.91	25.96	71.160
		D	0.4	0.9	1.6	2.5	3.7	5.0	6.5	8.2	10.2	12.3	14.6	17.2	19.9	26.0	
		C	210.68	158.18	126.63	101.30	84.42	72.35	63.31	56.27	50.64	46.05	42.21	38.96	36.18	31.66	
		D	0.4	0.8	1.3	2.0	3.0	4.0	5.2	6.6	8.1	9.8	11.7	13.7	15.9	20.8	
64 X 4.8	74.85	U	1420.58	800.82	513.20	328.45	228.10	167.60	128.32	101.36	82.10	67.87	57.00	48.57	41.91	32.09	87.855
		D	0.5	0.9	1.5	2.3	3.3	4.5	5.8	7.4	9.1	11.1	13.2	15.4	17.9	23.4	
		C	260.07	195.27	156.32	125.07	104.22	89.33	78.16	69.48	62.53	56.84	52.10	48.10	44.66	39.09	
		D	0.3	0.7	1.2	1.8	2.6	3.6	4.7	5.9	7.3	8.8	10.5	12.4	14.3	18.7	

Maximum allowable fiber stress of 124 K.PA

