

Expanded Metal Grating

LOAD & DEFLECTION TABLE

Deflections shown in shaded areas can be safely used at the discretion of the engineer: however, these deflections exceed 1/4".

Grating Style	Load Cond.	Clear Span	Load in Pounds							Deflection in Inches		
			50	100	150	200	250	300	350	400	450	500
2.0# CARBON STEEL	c	18"	.052	.105	.158	.211	.264	.317	.367			
		24"	.125	.250	.175	.500						
		30"	.244	.489								
		36"	.422									
	u	18"	.049	.099	.147	.196	.245	.294	.343			
		24"	.156	.313	.468							
		30"	.382									
		36"	.791									
3.0# CARBON STEEL	c	24"	.068	.132	.197	.263	.329	.395	.462			
		30"	.116	.228	.345	.460						
		36"	.192	.380	.570							
		42"	.280	.561								
	u	24"	.073	.146	.220	.293	.366	.440				
		30"	.155	.311	.463							
		36"	.330	.660								
		42"	.527									
3.14# CARBON STEEL	c	24"	.049	.094	.140	.187	.234	.280	.326	.372	.420	.465
		30"	.099	.198	.297	.395						
		36"	.180	.357	.535							
		42"	.225	.455	.684							
	u	24"	.057	.115	.173	.230	.288	.346	.404	.462		
		30"	.129	.259	.388	.517						
		36"	.315	.626								
		42"	.449									
4.0# CARBON STEEL	c	24"	.031	.064	.096	.128	.160	.192	.224	.256	.288	.320
		30"	.060	.120	.180	.240	.300	.360	.420	.480		
		36"	.101	.205	.310	.402	.505	.605				
		42"	.158	.315	.473	.630						
	u	24"	.037	.073	.111	.147	.184	.222	.259	.296	.333	.370
		30"	.068	.135	.205	.274	.340	.410	.477	.545		
		36"	.180	.358	.536							
		42"	.283	.565								
4.27# CARBON STEEL	c	24"	.038	.078	.116	.156	.196	.235	.275	.315	.355	.395
		30"	.081	.163	.245	.327	.409	.491				
		36"	.124	.250	.379	.505						
		42"	.199	.399	.598							
	u	24"	.038	.079	.120	.160	.200	.240	.280	.320	.360	.400
		30"	.078	.156	.235	.312	.390	.470				
		36"	.186	.373	.560							
		42"	.379									
5.0# CARBON STEEL	c	24"	.023	.047	.070	.093	.116	.140	.164	.186	.210	.234
		30"	.033	.087	.130	.174	.217	.261	.304	.348	.391	.433
		36"	.078	.154	.230	.305	.383	.458	.535			
		42"	.103	.206	.310	.414	.515	.617				
	u	24"	.025	.050	.075	.100	.125	.150	.175	.200	.225	.250
		30"	.061	.123	.184	.246	.307	.369	.430	.491	.552	
		36"	.133	.265	.395	.526						
		42"	.200	.400	.600							
5.0# CARBON STEEL	u	48"	.355	.708								
		54"	.605									

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			50	100	150	200	250	300	350	400	450	500
6.25# CARBON STEEL	c	24"	.015	.030	.045	.060	.075	.090	.105	.120	.135	.150
		30"	.035	.069	.103	.137	.171	.206	.240	.274	.308	.342
		36"	.054	.108	.161	.216	.269	.324	.377	.431	.484	.537
		42"	.084	.166	.247	.329	.412	.492	.575			
		48"	.117	.236	.355	.474	.593					
		54"	.167	.336	.506	.670						
		60"	.225	.452	.683							
	72"	.456	.912									
	u	24"	.017	.035	.054	.072	.090	.110	.127	.145	.164	.181
		30"	.045	.091	.135	.180	.226	.270	.316	.360	.405	.450
		36"	.092	.184	.276	.368	.460	.552				
		42"	.150	.302	.451	.602						
		48"	.285	.576								
		54"	.457									
60"		.606										
7.0# CARBON STEEL	c	30"	.030	.061	.090	.121	.152	.182	.212	.242	.273	.303
		36"	.051	.101	.151	.201	.251	.301	.351	.401	.451	.501
		42"	.065	.130	.195	.259	.323	.389	.452	.515	.580	
		48"	.095	.190	.282	.376	.470	.565				
		54"	.143	.283	.423	.564						
		60"	.203	.405	.610							
		72"	.355	.708								
	u	30"	.039	.079	.118	.157	.196	.236	.274	.314	.353	.392
		36"	.085	.170	.252	.336	.420	.504	.587			
		42"	.126	.255	.385	.512	.642					
		48"	.210	.420	.628							
		54"	.365	.731								
		60"	.555									
		72"	1.080									
2.0# ALUMINUM	c	18"	.019	.039	.059	.079	.099	.119	.139	.159		
		24"	.046	.092	.138	.184	.230	.277				
		30"	.092	.181	.269	.360						
		36"	.125	.255	.385	.465						
		42"	.170	.340	.510	.620						
	u	18"	.017	.034	.051	.068	.085	.103	.121	.139	.157	
		24"	.047	.094	.141	.189	.236	.283				
		30"	.108	.216	.322							
		36"	.213	.430								
		42"	.283									

CONCENTRATED LOAD: A load that is concentrated over a small area. Example, a pedestrian load, or light equipment load. Concentrated loads are shown in lbs per ft. of grating width measured perpendicular to span. (ie, in SWD Direction)

DEFLECTION: The deviation in inches from the original plane when the grating is placed under a load.

UNIFORM LOAD: A load that is equally distributed over all of the clear span. Measured in lbs per sq. ft. (i.e., inventories stacked on shelving.)

CLEAR SPAN: The distance between supporting members measured from the inside bearing point of one supporting member to the inside bearing point of the next supporting member.

AMICO GRATING APPLICATION GUIDE

This table is a convenient means of selecting grating for typical walk-way installations. If the distance between supports, and the load to be carried are known, the most economical type of grating to be used may be selected from the table below. Expanded metal grating has its greatest resistance to bending in the direction of the long way of the diamond. The LWD should always be placed across the span for best results.

Concentrated Load Lbs. Per Foot of Width	LOAD IN POUNDS	CLEAR SPAN						
		24"	30"	36"	42"	48"	54"	60"
Occasional Pedest. Load (Window Washers)	50#	3.0#	3.0#	3.0#	4.0#	4.0#	5.0#	6.25#
		3.14#*	3.14#*	3.14#*	4.27#**	4.27#**		
Normal Pedest. Load	100#	3.0#	3.0#	4.0#	5.0#	6.25#		
		3.14#*	3.14#*	4.27#**				
Heavy Pedest. (With Light Equip.)	150#	3.0#	4.0#	5.0#	6.25#			
		3.14#*	4.27#**					
	200#	3.14#	4.0#	6.25#	7.0#			
		4.0#	4.27#**					
	250#	4.0#	5.0#					
		4.27#**						
	300#	4.0#	6.25#					
		4.27#**						
	350#	4.0#	6.25#					
		4.27#**						
	400#	4.0#	6.25#					
		4.27#**						

*3.14# grating in lieu of 3# if the application requires a grating having a larger diamond. Example: Outside catwalk in ice and snow.

**4.27# grating may be used in lieu of 4# if the application requires a smaller diamond to afford protection from dropped tools and other objects.

