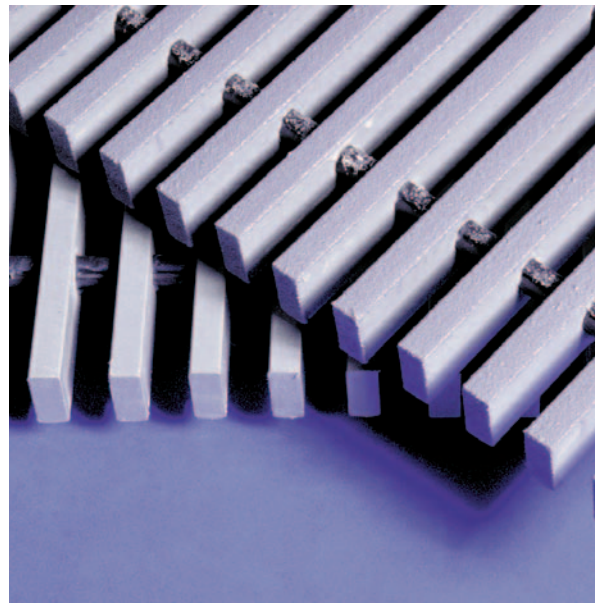
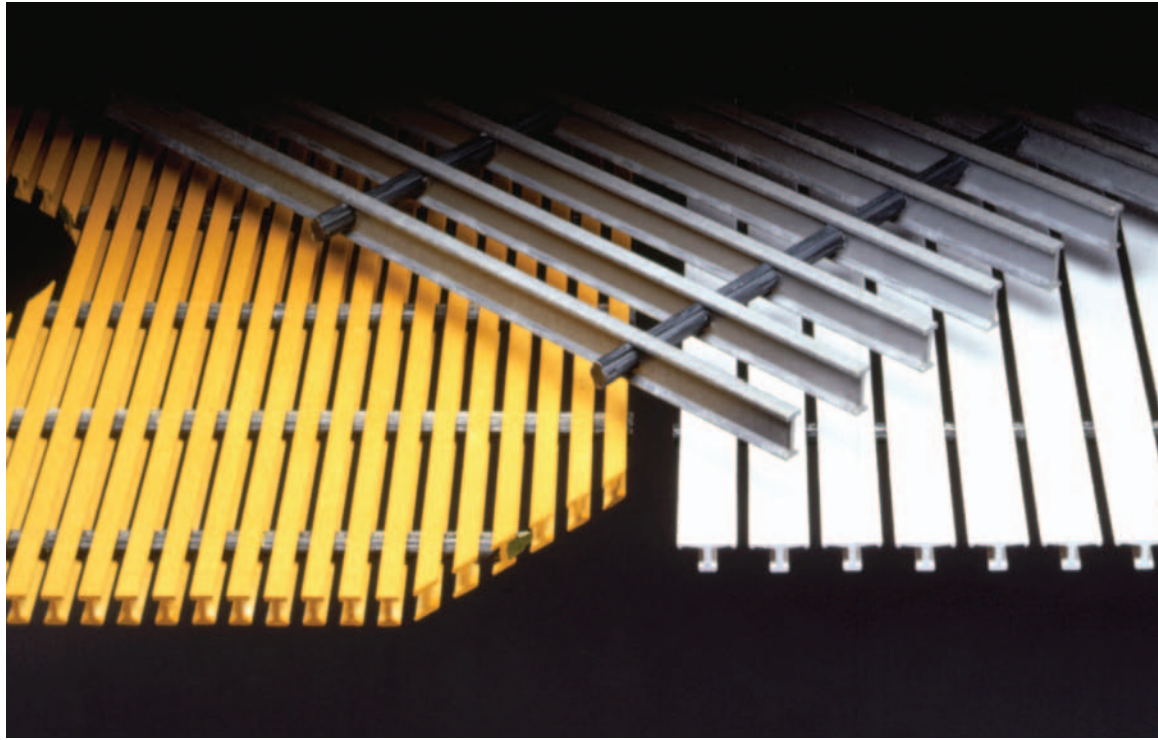




GEF Incorporated
Innovative Solutions in Fiberglass

FIBERGLASS GRATING

DURADEK® and DURAGRID® PULTRUDED GRATING





High Strength Pultruded Fiberglass Grating



Top: DURADEK® and DURAGRID® fiberglass grating provide safe, corrosion resistant walkways and work platforms in a broad range of markets and industries.

Left: Manufactured with unique cross bar construction, DURADEK® and DURAGRID® fiberglass grating can be cut to any size like a solid sheet.

What is DURADEK® and DURAGRID® ?

DURADEK® and **DURAGRID®** are high strength pultruded bar type gratings that can be designed and used like traditional metal grates but have the inherent benefits of fiberglass. These problem solving products are ideal replacements for steel or aluminum gratings in corrosive environments or anywhere frequent grating and walkway replacement costs are unacceptable.

DURADEK® is a standard product stocked by distributors nationwide. It is available with individual bearing bars in either 1" or 1-1/2" "I" shapes or a 2" "T" shape. **DURADEK®** is a flame retardant product utilizing a polyester or vinyl ester resin. The bearing bars are assembled into 12 panel sizes: 3-, 4-, and 5- foot widths in each of 8-, 10-, 12- and 20-foot lengths. Standard panels come with cross-rod spacings of 6" or optional 12" on center.

DURAGRID® custom grid or grating systems are designed to accommodate specific applications that cannot effectively be met by a standard fiberglass grating. **DURAGRID®** offers the customer options such as selection of open space, bar shape, cross-rod placement, custom fabrication, custom resin or color.

Why Use DURADEK® or DURAGRID® Grating?

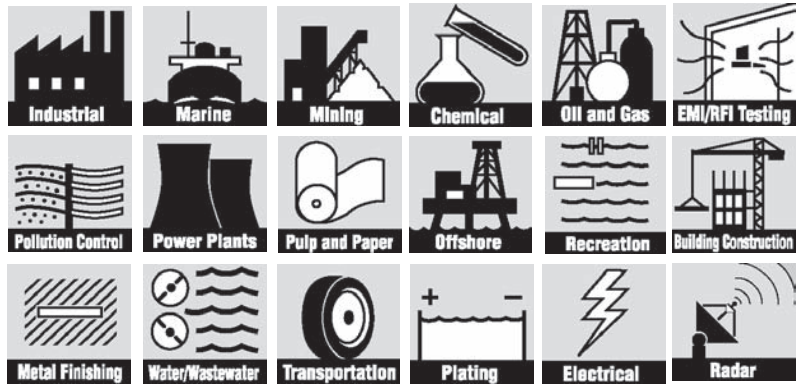
DURADEK® and **DURAGRID®** are lightweight, which saves on freight and makes installation easier. The unique cross-bar construction of **DURADEK®** and **DURAGRID®** allows the grating panels to be easily cut and modified to fit almost any plant requirement. A full listing of features are shown below.

Features

- Corrosion Resistant
- Structurally Strong
- High Impact and Fatigue Strength
- Lightweight
- Easy to Fabricate and Install
- Low Maintenance
- Low Conductivity
- Resistant to Chipping and Cracking
- Aesthetically Pleasing Appearance
- Skid Resistant
- Rigid
- Low Thermal Conductivity
- Non-Sparking



Materials of Construction



DURADEK® and DURAGRID® fiberglass gratings are a composite of fiberglass reinforcements (fibers and mat) and a thermosetting resin system, produced by the pultrusion process. The pultrusion manufacturing process produces many of the outstanding characteristics of the product.

The bearing bars use both longitudinal (glass roving) and

Unidirectionally aligned glass fibers bonded with resin

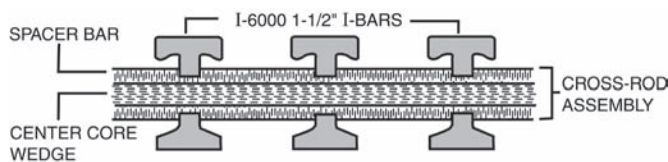


multidirectional (glass mat) reinforcements as well as a synthetic surfacing veil to provide unequal strength and corrosion resistance. The densely packed core of continuous glass rovings gives the bar strength and stiffness in the longitudinal direction while the continuous glass mat provides strength in the transverse direction and prevents chipping, cracking and lineal fracturing. The synthetic surfacing veil provides a 100% pure resin surface for added corrosion resistance and UV protection.

Three-Piece Cross-Rod Assembly

The patented 3-piece cross-rod assembly used in DURADEK® and DURAGRID® grating forms a strong, unified panel that can be cut and fabricated like a solid sheet.

This unique system consists of two continuous, pultruded



spacer bars and a center core wedge. The spacers are notched at each bearing bar so that the bars are both mechanically locked and chemically bonded to the web of each bearing bar. This separates and affixes bearing bars firmly in position and distributes concentrated loads to adjacent bars. The resulting panel can be easily fabricated with standard carpenters' tools with abrasive cutting edges. Ask for the detailed *Grating Field Fabrication Guide* for further details.

Bar Profiles and Grating Series

A wide variety of bearing bar shapes along with various bearing bar and cross-rod spacings are available depending on the design requirements. Refer to the load/deflection tables in this catalog for selection.

The traditional "I" bar shape provides maximum flexibility in design. It is available in 1", 1-1/4", and 1-1/2" depths.

The "T" bar shape provides a more solid walking surface and prevents catching high heels and other objects between the bars. It is available in 1", 1-1/2" and 2" depths. The Economy series offers a lighter weight bearing bar.

Strongwell's DURAGRID® Heavy Duty (HD) solid bar grating has been designed to take heavy wheel traffic such as forklifts, tow motors and truck traffic. Because of the variety of wheel types and loading, please contact Strongwell's engineering department to determine the series of heavy duty grating to use. It is available in 1", 1-1/4", 1-1/2", 1-3/4", 2", 2-1/4" and 2-1/2" depths.

Panel Sizes and Shape

Panels can be made to exact sizes to eliminate waste and fabrication costs in the field. The maximum panel weight is 500 lbs. and the maximum panel size is 60" x 240".

UV Coatings

Bearing bars can be UV coated for added protection and color stability for outdoor applications.

Color

The two standard colors are gray and yellow. Other colors can be quoted upon request. A small inventory is also maintained of 1" "I" and "T" bars in white non-fire retardant polyester resin.

Resin Selection

The standard polyester resin used in DURADEK® is fire retardant and meets the requirements for a Class 1 flame rating of 25 or less per ASTM E-84 and meets the self-extinguishing requirements of ASTM D-635. The resin also contains a UV inhibitor.

DURAGRID® offers a wide selection of resin options including polyester, vinyl ester, phenolic, modar, etc. Other choices include fire retardant, UV inhibitors, colors and specialized additives.

Surface Texture

Grids can be ordered with or without an anti-skid grit surface. A variety of grit material and textures can be ordered.



Applications

DURADEK® and DURAGRID® grating systems are designed to accommodate a wide variety of applications, such as:

- General Industry
- Marine/Offshore
- Mining/Processing
- Plating Operations
- Transportation
- Chemical Plants
- Electrical
- Power Plants
- Consumer/Recreation
- Cellular Communications
- Food and Beverage Operations
- Water/Wastewater Treatment
- Agricultural
- Pulp and Paper Plants
- Railroad - AAR Approval
- Fire Equipment



DURAGRID® I-4000 1" and 1-1/2" panels in a special Desert Sand color provide catch pool and spillway covers at a water theme park in Florida.



DURAGRID® I-7000 1-1/2" provided lightweight (70% open space) platforms for the Fedex 747 hanger at the Anchorage, Alaska Airport.



Manhole covers on Boston's historic Longfellow Bridge use DURAGRID® T-5800 grating bonded to SAFPLATE® gritted plate for a strong solid walking surface.



DURAGRID® Economy 5000 provides a strong economical grating for docks while providing the 50% light penetration required to allow for vegetation growth in shallow water.



Applications



Chicago Transit maintenance walkways alongside elevated train tracks constitute one of the largest fiberglass grating installations in history. This project used DURAGRID® T-5000 2" with a custom polyester resin.



DURAGRID® Phenolic grating was used on Shell's Mars offshore platform for fire integrity, weight savings and low maintenance. DURAGRID® Phenolic is U.S. Coast Guard approved.



Swimming pool trough covers of white polyester DURAGRID® T-1800 1" grating have narrow spacings that allow water to flow through while still being safe to walk on with bare feet.



Copper processing facilities such as the Ammonia Leach/Solvent Extraction/Electrowinning plant for Minera Escondida Limitada in Chile found DURADEK® I-6000 1-1/2" to be the perfect solution.



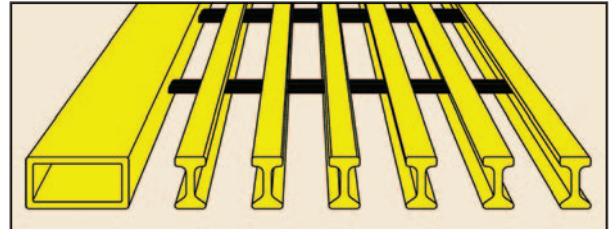
Low maintenance fiberglass grating provides trouble free operations for the covers and walkways in the Lakewood, Colorado Wastewater Treatment Plant Headworks. DURADEK® I-6000 1-1/2" was used.



Accessories

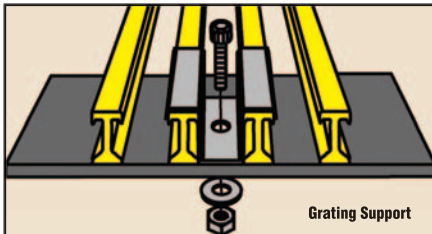
Nosings for Stair Treads and Landings

Stair treads and landings are produced by attaching a 2" deep nosing to the leading edge. This gives added strength and rigidity to the area that takes the most impact and abuse. In addition, the nosing provides more surface area for skid resistance, wear and better visibility. Gray stair treads with yellow nosing are available at additional cost.



TREAD WIDTH & COLOR	STAIR TREAD SERIES	MAXIMUM SPAN FOR 300 LBS. AT MIDSPAN	
		1/8" OR LESS DEFLECTION	1/4" OR LESS DEFLECTION
11" Gray or Yellow	I-6000 1"	29"	37"
11" Gray or Yellow	I-6000 1-1/2"	40"	52"
12" Gray or Yellow	T-5000 2"	47"	59"

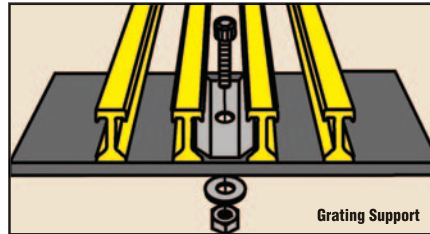
Panel Hold Downs



Grating Support

Weldable 316L stainless steel saddle clips are available for all grating series except T-1800 and T-3500.

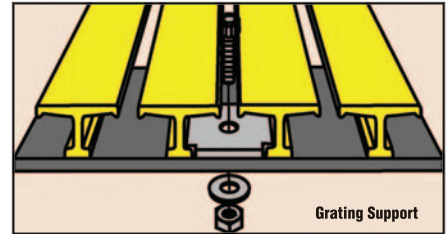
**Bolts are priced separately from the saddle clips.*



Grating Support

Weldable 316L stainless steel insert clips are available for all grating series except T-1800 and T-3500.

**Bolts are priced separately from the hold-down.*



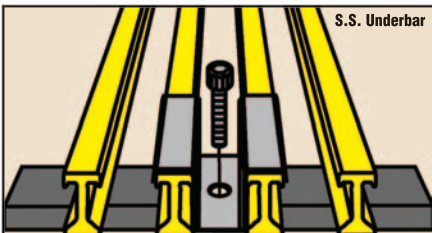
Grating Support

Weldable 316L stainless steel insert clips are available for series T-1800 and T-3500 only.

**Bolts are priced separately from the hold-down. (All bolts are 1/4-20 x 1-1/4", cap head, 316L stainless steel.)*

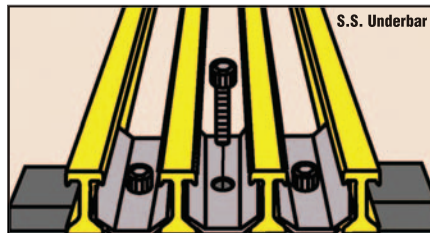
Panel Connectors

Panel Connectors are generally only used at midspan to assist in transferring load from section to section.



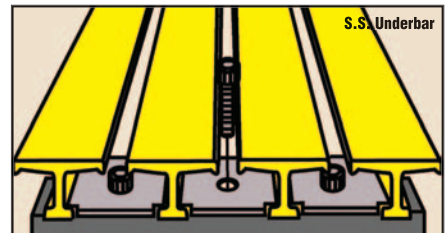
S.S. Underbar

316L stainless steel saddle clips are available as panel connectors for "I" and "HD" bar grating and T-bar grating except T-1800 and T-3500.



S.S. Underbar

Insert clip hold-downs are available for I-bar grating and T-bar grating except for T-1800 and T-3500.



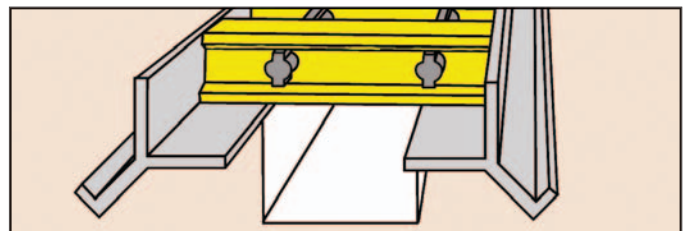
S.S. Underbar

Insert clip hold-downs are available for T-1800 and T-3500 grating.

(All bolts are 1/4-20 x 1-1/4", cap head, 316L stainless)

Curb Angle

Fiberglass Curb Angle provides a strong, firm base for bearing bars and is pultruded from the same material and in the same manner as other DURADEK® and DURAGRID® products. Corrosion resistant Fiberglass Curb Angles are available in four sizes in gray fire retardant vinyl ester.





Using The Load/Deflection Tables

Typical Bearing Bar Spacings

Strongwell manufactures virtually any non-standard and non-stocked custom grid and grating. However, the following load tables are for the most popular bearing bar configurations. The physical properties are shown for the section.

To determine loading or physical properties for other bar spacings, use the multiplier shown on the tables.

Series Designation

The series designation indicates the bar size and shape and the percent of open area. For example: T-1800 1" means 1" T-bar spaced to give an 18% open area.

Cross Rod Spacings

Cross rod spacings must be 2", 4", 6", 8", 10", etc. Our standard spacings are 6", 12" and 18" on center.

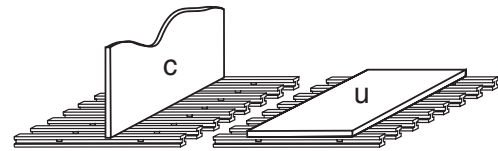
Load Table Values

All tables show typical values.

Load Data

Deflection and safe load data were calculated by the Strongwell Test Lab. All tables show typical values.

- c** is Concentrated Load LBS/FT of width
- Δc** is Deflection under Concentrated Load
- u** is Uniform Load LBS/FT²
- Δu** is Deflection under Uniform Load



The modulus of elasticity will vary with span length due to the non-homogeneous make-up of composite material.

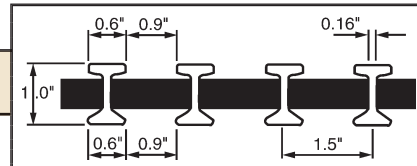
DURADEK® High Strength Fiberglass Grating

The following load tables are for standard DURADEK® fiberglass grating panels stocked by distributors: DURADEK® I-6000 1", I-6000 1-1/2", and T-5000 2". Standard panels come with cross-rod spacings of 6" or optional 12" on center.

DURADEK® I-6000 1" Bearing Bars Spaced 1-1/2" On Center

A = 2.496 IN²/FT OF WIDTH S = 0.656 IN²/FT OF WIDTH I = 0.328 IN⁴/FT OF WIDTH
60% OPEN AREA APPROX. WT. = 2.4 LBS/SQ FT

SPAN INCHES		50	100	150	200	250	300	400	LOAD						SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI	
									500	750	1000	2000	3000	4000				5000
12	Δu	0.001	0.002	0.003	0.004	0.005	0.005	0.007	0.009	0.014	0.018	0.036	0.054	0.073	0.091	10401	0.189	3.78
	Δc	0.001	0.003	0.004	0.006	0.007	0.009	0.012	0.015	0.022	0.029	0.058	0.087	0.116	0.145			
18	Δu	0.004	0.008	0.013	0.017	0.021	0.025	0.033	0.042	0.063	0.084	0.167	0.251	0.335	0.418	4954	0.415	4.15
	Δc	0.004	0.009	0.013	0.018	0.022	0.027	0.036	0.045	0.067	0.089	0.179	0.268	0.357	0.446			
24	Δu	0.012	0.025	0.037	0.050	0.062	0.075	0.100	0.124	0.187	0.249	0.498				2900	0.722	4.41
	Δc	0.010	0.020	0.030	0.040	0.050	0.060	0.080	0.100	0.149	0.199	0.398	0.597					
30	Δu	0.029	0.058	0.087	0.116	0.145	0.174	0.231	0.289	0.434	0.579				1856	1.074	4.63	
	Δc	0.019	0.037	0.056	0.074	0.093	0.111	0.148	0.185	0.278	0.370							2320
36	Δu	0.058	0.115	0.173	0.230	0.288	0.345	0.460	0.575						1289	1.483	4.83	
	Δc	0.031	0.061	0.092	0.123	0.153	0.184	0.245	0.307	0.460	0.614							1933
42	Δu	0.105	0.211	0.316	0.422	0.527	0.633								943	1.989	4.88	
	Δc	0.048	0.096	0.145	0.193	0.241	0.289	0.386	0.482									1649
48	Δu	0.176	0.353	0.529	0.705										719	2.534	4.98	
	Δc	0.071	0.141	0.212	0.282	0.353	0.423	0.564										1437
54	Δu	0.281	0.563												566	3.184	5.00	
	Δc	0.100	0.200	0.300	0.400	0.500	0.600											1274

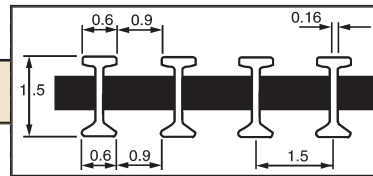


NOTE: When a 100 pounds per square foot uniform load is placed upon a 43" simple span, it will produce a deflection of 1/4" at midspan.

DURADEK® I-6000 1-1/2" Bearing Bars Spaced 1-1/2" On Center

A = 3.136 IN²/FT OF WIDTH S₁ = 1.240 IN²/FT OF WIDTH I = 0.928 IN⁴/FT OF WIDTH
60% OPEN AREA APPROX. WT. = 2.92 LBS/SQ FT

SPAN INCHES		LOAD																SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI
		50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000	7000			
12	Δu	0.000	0.001	0.001	0.001	0.002	0.002	0.003	0.003	0.005	0.006	0.013	0.019	0.026	0.032	0.038	0.045	17601 8800	0.113 0.090	3.79
	Δc	0.001	0.001	0.002	0.002	0.003	0.003	0.004	0.005	0.008	0.010	0.020	0.031	0.041	0.051	0.061	0.072			
18	Δu	0.002	0.003	0.005	0.006	0.008	0.009	0.012	0.015	0.023	0.030	0.061	0.091	0.121	0.152	0.182	0.212	7823 5867	0.237 0.190	4.05
	Δc	0.002	0.003	0.005	0.006	0.008	0.010	0.013	0.016	0.024	0.032	0.065	0.097	0.129	0.162	0.194	0.226			
24	Δu	0.005	0.009	0.014	0.018	0.023	0.027	0.037	0.046	0.069	0.091	0.183	0.274	0.366	0.457	0.549	0.640	4400 4400	0.403 0.322	4.24
	Δc	0.004	0.007	0.011	0.015	0.018	0.022	0.029	0.037	0.055	0.073	0.146	0.220	0.293	0.366	0.439	0.512			
30	Δu	0.011	0.022	0.032	0.043	0.054	0.065	0.086	0.108	0.161	0.215	0.430	0.646	2773 3467	0.597 0.478	4.40				
	Δc	0.007	0.014	0.021	0.028	0.034	0.041	0.055	0.069	0.103	0.138	0.276	0.413				0.551			
36	Δu	0.022	0.044	0.065	0.087	0.109	0.131	0.175	0.218	0.327	0.436	1896 2845	0.827 0.662	4.50						
	Δc	0.012	0.023	0.035	0.047	0.058	0.070	0.093	0.116	0.175	0.233				0.466					
42	Δu	0.040	0.079	0.119	0.159	0.198	0.238	0.317	0.396	0.595	1361 2381	1.079 0.863	4.59							
	Δc	0.018	0.036	0.054	0.072	0.091	0.109	0.145	0.181	0.272				0.362						
48	Δu	0.067	0.133	0.200	0.266	0.333	0.400	0.533	0.666	1017 2033	1.354 1.083	4.66								
	Δc	0.027	0.053	0.080	0.107	0.133	0.160	0.213	0.266				0.400	0.533						
54	Δu	0.106	0.211	0.317	0.422	0.528	0.633	777 1748	1.640 1.312	4.71										
	Δc	0.038	0.075	0.113	0.150	0.188	0.225				0.300	0.375	0.563							
60	Δu	0.160	0.320	0.480	0.639	608 1520	1.944 1.555	4.74												
	Δc	0.051	0.102	0.153	0.205				0.256	0.307	0.409	0.512								
66	Δu	0.233	0.466	485 1333	2.259 1.808	4.76														
	Δc	0.068	0.136				0.203	0.271	0.339	0.407	0.542	0.678								

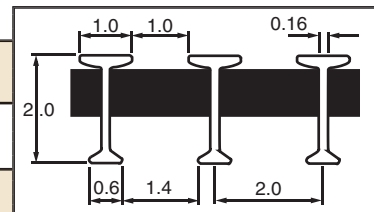


NOTE: When a 100 pounds per square foot uniform load is placed upon a 56" simple span, it will produce a deflection of 1/4" at midspan.

DURADEK® T-5000 2" Bearing Bars Spaced 2" On Center

A = 3.252 IN²/FT OF WIDTH S₁ = 1.906 IN²/FT OF WIDTH S₂ = 1.495 IN²/FT OF WIDTH I = 1.676 IN⁴/FT OF WIDTH
50% OPEN AREA APPROX. WT. = 3.0 LBS/SQ FT

SPAN INCHES		LOAD																SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI	
		50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000	7000				8000
12	Δu	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.004	0.007	0.011	0.014	0.018	0.021	0.025	0.028	11333 5666	0.040 0.032	3.80
	Δc	0.000	0.001	0.001	0.001	0.001	0.002	0.002	0.003	0.004	0.006	0.011	0.017	0.023	0.028	0.034	0.040	0.045			
18	Δu	0.001	0.002	0.003	0.003	0.004	0.005	0.007	0.009	0.013	0.017	0.035	0.052	0.070	0.087	0.104	0.122	0.139	7536 5666	0.131 0.105	3.91
	Δc	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.009	0.014	0.019	0.037	0.056	0.074	0.093	0.111	0.130	0.148			
24	Δu	0.003	0.005	0.008	0.011	0.013	0.016	0.021	0.027	0.040	0.054	0.107	0.161	0.214	0.268	0.321	0.375	0.429	5666 5666	0.304 0.243	4.01
	Δc	0.002	0.004	0.006	0.009	0.011	0.013	0.017	0.021	0.032	0.043	0.086	0.129	0.171	0.214	0.257	0.300	0.343			
30	Δu	0.006	0.013	0.019	0.026	0.032	0.038	0.051	0.064	0.096	0.128	0.256	0.384	0.512	0.640	3626 4534	0.464 0.371	4.10			
	Δc	0.004	0.008	0.012	0.016	0.020	0.025	0.033	0.041	0.061	0.082	0.164	0.246	0.327	0.409				0.491	0.573	0.655
36	Δu	0.013	0.026	0.039	0.052	0.065	0.078	0.104	0.130	0.195	0.260	0.520	2519 3778	0.655 0.524	4.18						
	Δc	0.007	0.014	0.021	0.028	0.035	0.042	0.055	0.069	0.104	0.139	0.277				0.416	0.555	0.694			
42	Δu	0.024	0.047	0.071	0.095	0.119	0.142	0.190	0.237	0.356	0.474	1850 3238	0.877 0.702	4.25							
	Δc	0.011	0.022	0.033	0.043	0.054	0.065	0.087	0.108	0.163	0.217				0.433	0.650					
48	Δu	0.040	0.079	0.119	0.158	0.198	0.238	0.317	0.396	0.594	1417 2834	1.122 0.898	4.34								
	Δc	0.016	0.032	0.048	0.063	0.079	0.095	0.127	0.158	0.238				0.317	0.634						
54	Δu	0.062	0.125	0.187	0.250	0.312	0.374	0.499	0.624	1120 2519	1.398 1.118	4.41									
	Δc	0.022	0.044	0.067	0.089	0.111	0.133	0.178	0.222				0.333	0.444							
60	Δu	0.094	0.188	0.282	0.375	0.469	0.563	0.751	907 2267	1.702 1.361	4.47										
	Δc	0.030	0.060	0.090	0.120	0.150	0.180	0.240				0.300	0.450	0.601							
66	Δu	0.136	0.272	0.408	0.544	0.679	749 2060	2.036 1.629	4.52												
	Δc	0.040	0.079	0.119	0.158	0.198				0.237	0.316	0.395	0.593								
72	Δu	0.190	0.380	0.570	629 1889	2.390 1.914	4.58														
	Δc	0.051	0.101	0.152				0.203	0.253	0.304	0.405	0.507									
78	Δu	0.260	0.520	536 1744	2.788 2.231	4.61															
	Δc	0.064	0.128				0.192	0.256	0.320	0.384	0.512	0.640									
84	Δu	0.347	0.693	463 1619	3.208 2.566	4.65															
	Δc	0.079	0.158				0.238	0.317	0.396	0.475	0.634										



NOTE: When a 100 pounds per square foot uniform load is placed upon a 64" simple span, it will produce a deflection of 1/4" at midspan.

DURAGRID® I-4000 1" I Bearing Bars Spaced 1" On Center

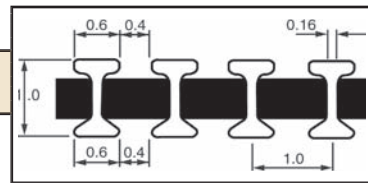
OTHER COMMON SERIES AND SPACING (X):

SERIES	(X)	(M)*
I-3000	0.850"	1.17
I-5000	1.200"	0.84
I-7000	2.000"	0.50
I-8000	3.000"	0.33

OR MULTIPLES OF ABOVE

1" I BEARING BARS: VALUES FOR 12 BARS PER FT OF WIDTH
 A = 3.744 IN²/FT OF WIDTH S = 0.984 IN²/FT OF WIDTH I = 0.492 IN⁴/FT OF WIDTH
 WEIGHT/FOOT = .253 LBS/FT OF BAR WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD
 APPROX. WEIGHT = 3.4 LBS/SQ. FT.

SPAN INCH-		LOAD																SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI
		50	100	150	200	250	300	400	500	750	1000	2000	2500	3000	4000	5000	6000			
12	Δu	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.006	0.009	0.012	0.024	0.030	0.036	0.048	0.060	0.073	15600 7800	0.189 0.151	3.78
	Δc	0.001	0.002	0.003	0.004	0.005	0.006	0.008	0.010	0.015	0.019	0.039	0.048	0.058	0.077	0.097	0.116			
18	Δu	0.003	0.006	0.008	0.011	0.014	0.017	0.022	0.028	0.042	0.056	0.112	0.139	0.167	0.223	0.279	0.335	7431 5573	0.415 0.332	4.15
	Δc	0.003	0.006	0.009	0.012	0.015	0.018	0.024	0.030	0.045	0.060	0.119	0.149	0.179	0.238	0.298	0.357			
24	Δu	0.008	0.017	0.025	0.033	0.041	0.050	0.066	0.083	0.124	0.166	0.332	0.415	0.498	0.664			4350 4350	0.722 0.577	4.41
	Δc	0.007	0.013	0.020	0.027	0.033	0.040	0.053	0.066	0.100	0.133	0.265	0.332	0.398	0.531	0.664				
30	Δu	0.019	0.039	0.058	0.077	0.096	0.116	0.154	0.193	0.289	0.386							2784 3480	1.074 0.859	4.63
	Δc	0.012	0.025	0.037	0.049	0.062	0.074	0.099	0.123	0.185	0.247	0.494	0.617							
36	Δu	0.038	0.077	0.115	0.153	0.192	0.230	0.307	0.383	0.575								1933 2900	1.482 1.186	4.83
	Δc	0.020	0.041	0.061	0.082	0.102	0.123	0.164	0.205	0.307	0.409									
42	Δu	0.070	0.141	0.211	0.281	0.352	0.422	0.563	0.703									1414 2474	1.988 1.590	4.88
	Δc	0.032	0.064	0.096	0.129	0.161	0.193	0.257	0.321	0.482	0.643									
48	Δu	0.118	0.235	0.353	0.470	0.588	0.705											1078 2155	2.534 2.026	4.98
	Δc	0.047	0.094	0.141	0.188	0.235	0.282	0.376	0.470											



*(M) - Multiplier for load table loads

DURAGRID® I-4000 1-1/4" I Bearing Bars Spaced 1" On Center

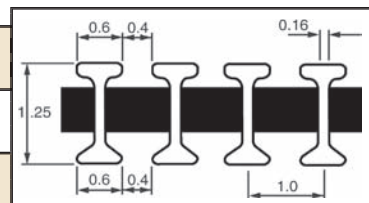
OTHER COMMON SERIES AND SPACING (X):

SERIES	(X)	(M)*
I-3000	0.850"	1.17
I-5000	1.200"	0.84
I-6000	1.500"	0.67
I-7000	2.000"	0.50

OR MULTIPLES OF ABOVE

1-1/4" I BEARING BARS: VALUES FOR 12 BARS PER FT OF WIDTH
 A = 4.224 IN²/FT OF WIDTH S = 1.306 IN²/FT OF WIDTH I = 0.816 IN⁴/FT OF WIDTH
 WEIGHT/FOOT = .290 LBS/FT OF BAR WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD
 APPROX. WEIGHT = 3.85 LBS/SQ. FT.

SPAN INCH-		LOAD																SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI
		50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000	7000			
12	Δu	0.000	0.001	0.001	0.002	0.002	0.002	0.003	0.004	0.006	0.008	0.016	0.023	0.031	0.039	0.047	0.054	21000 10500	0.163 0.130	3.55
	Δc	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.006	0.009	0.012	0.025	0.037	0.050	0.062	0.075	0.087			
18	Δu	0.002	0.004	0.005	0.007	0.009	0.011	0.015	0.018	0.027	0.037	0.073	0.110	0.146	0.183	0.219	0.256	9582 7187	0.350 0.280	3.82
	Δc	0.002	0.004	0.006	0.008	0.010	0.012	0.016	0.019	0.029	0.039	0.078	0.117	0.156	0.195	0.234	0.273			
24	Δu	0.005	0.011	0.016	0.022	0.027	0.033	0.044	0.054	0.082	0.109	0.218	0.327	0.436	0.545	0.654		5475 5475	0.596 0.477	4.05
	Δc	0.004	0.009	0.013	0.017	0.022	0.026	0.035	0.044	0.065	0.087	0.174	0.261	0.349	0.436	0.523	0.610			
30	Δu	0.013	0.026	0.038	0.051	0.064	0.077	0.102	0.128	0.192	0.256	0.512						3472 4340	0.888 0.711	4.21
	Δc	0.008	0.016	0.025	0.033	0.041	0.049	0.065	0.082	0.123	0.164	0.327	0.491	0.655						
36	Δu	0.026	0.051	0.077	0.103	0.128	0.154	0.205	0.257	0.385	0.513							2388 3583	1.226 0.981	4.35
	Δc	0.014	0.027	0.041	0.055	0.068	0.082	0.110	0.137	0.205	0.274	0.548								
42	Δu	0.046	0.093	0.139	0.186	0.232	0.279	0.372	0.465	0.697								1727 3023	1.606 1.285	4.45
	Δc	0.021	0.043	0.064	0.085	0.106	0.128	0.170	0.213	0.319	0.425									
48	Δu	0.078	0.155	0.233	0.310	0.388	0.465	0.621										1302 2603	2.020 1.615	4.55
	Δc	0.031	0.062	0.093	0.124	0.155	0.186	0.248	0.310	0.465	0.621									
54	Δu	0.123	0.245	0.368	0.491	0.613	0.736											1007 2267	2.470 1.977	4.61
	Δc	0.044	0.087	0.131	0.174	0.218	0.262	0.349	0.436	0.654										
60	Δu	0.185	0.370	0.555	0.740													796 1990	2.944 2.355	4.66
	Δc	0.059	0.118	0.178	0.237	0.296	0.355	0.473	0.592											



*(M) - Multiplier for load table loads

DURAGRID® I-4000 1-1/2" I Bearing Bars Spaced 1" On Center

OTHER COMMON SERIES AND SPACING (X):

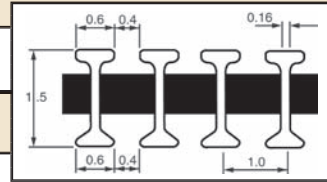
SERIES	(X)	(M)*
I-3000	0.850"	1.17
I-5000	1.200"	0.84
I-7000	2.000"	0.50
I-8000	3.000"	0.33

OR MULTIPLES OF ABOVE

1-1/2" I BEARING BARS: VALUES FOR 12 BARS PER FT OF WIDTH

A = 4.704 IN²/FT OF WIDTH S = 1.860 IN³/FT OF WIDTH I = 1.392 IN⁴/FT OF WIDTH
 WEIGHT/FOOT = .319 LBS/FT OF BAR WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD
 APPROX. WEIGHT = 4.2 LBS/SQ. FT.

SPAN INCH-		LOAD																	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI	
		50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000	7000	8000				9000
12	Δu	0.000	0.000	0.001	0.001	0.001	0.001	0.002	0.002	0.003	0.004	0.009	0.013	0.017	0.021	0.026	0.030	0.034	0.038	26400	0.113	3.79
	Δc	0.000	0.001	0.001	0.001	0.002	0.002	0.003	0.003	0.005	0.007	0.014	0.020	0.027	0.034	0.041	0.048	0.055	0.061			
18	Δu	0.001	0.002	0.003	0.004	0.005	0.006	0.008	0.010	0.015	0.020	0.040	0.061	0.081	0.101	0.121	0.141	0.162	0.182	11734	0.237	4.05
	Δc	0.001	0.002	0.003	0.004	0.005	0.006	0.009	0.011	0.016	0.022	0.043	0.065	0.086	0.108	0.129	0.151	0.172	0.194			
24	Δu	0.003	0.006	0.009	0.012	0.015	0.018	0.024	0.030	0.046	0.061	0.122	0.183	0.244	0.305	0.366	0.427	0.488	0.549	6600	0.403	4.24
	Δc	0.002	0.005	0.007	0.010	0.012	0.015	0.020	0.024	0.037	0.049	0.098	0.146	0.195	0.244	0.293	0.342	0.390	0.439			
30	Δu	0.007	0.014	0.022	0.029	0.036	0.043	0.057	0.072	0.108	0.143	0.287	0.430	0.574	0.717					4160	0.597	4.40
	Δc	0.005	0.009	0.014	0.018	0.023	0.028	0.037	0.046	0.069	0.092	0.184	0.276	0.367	0.459	0.551	0.643					
36	Δu	0.015	0.029	0.044	0.058	0.073	0.087	0.116	0.145	0.218	0.291	0.582								2844	0.827	4.50
	Δc	0.008	0.016	0.023	0.031	0.039	0.047	0.062	0.078	0.116	0.155	0.310	0.466	0.621								
42	Δu	0.026	0.053	0.079	0.106	0.132	0.159	0.211	0.264	0.396	0.528									2041	1.079	4.59
	Δc	0.012	0.024	0.036	0.048	0.060	0.072	0.097	0.121	0.181	0.242	0.483	0.725									
48	Δu	0.044	0.089	0.133	0.178	0.222	0.266	0.355	0.444	0.666										1525	1.354	4.66
	Δc	0.018	0.036	0.053	0.071	0.089	0.107	0.142	0.178	0.266	0.355											
54	Δu	0.070	0.141	0.211	0.281	0.352	0.422	0.563	0.704											1165	1.639	4.71
	Δc	0.025	0.050	0.075	0.100	0.125	0.150	0.200	0.250	0.375	0.500											
60	Δu	0.107	0.213	0.320	0.426	0.533	0.639													912	1.944	4.74
	Δc	0.034	0.068	0.102	0.136	0.171	0.205	0.273	0.341	0.512	0.682											
66	Δu	0.155	0.311	0.466	0.621															727	2.259	4.76
	Δc	0.045	0.090	0.136	0.181	0.226	0.271	0.362	0.452	0.678												



*(M) - Multiplier for load table loads

DURAGRID® T-1800 1" T Bearing Bars Spaced 2" On Center

OTHER COMMON SERIES AND SPACING (X):

SERIES	(X)	(M)*
T-0000	1.625"	1.23
T-1000	1.800"	1.11
T-1200	1.850"	1.08
T-2500	2.120"	0.94
T-3500	2.400"	0.83
T-3800	2.620"	0.76

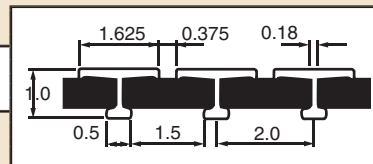
OR MULTIPLES OF ABOVE

1" T BEARING BARS: VALUES FOR 6 BARS PER FT OF WIDTH

A = 2.850 IN²/FT OF WIDTH S_y = 0.903 IN³/FT OF WIDTH
 I = 0.306 IN⁴/FT OF WIDTH S_b = 0.464 IN³/FT OF WIDTH
 WEIGHT/FOOT = .373 LBS/FT OF BAR WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD
 APPROX. WEIGHT = 2.61 LBS/SQ. FT.

Now available 1.5" T bar. Call for details.

SPAN INCH-		LOAD														SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI
		50	100	150	200	250	300	400	500	750	1000	2000	2500	3000	4000			
12	Δu	0.001	0.002	0.003	0.004	0.006	0.007	0.009	0.011	0.017	0.022	0.045	0.056	0.067	0.090	10680	0.240	3.27
	Δc	0.002	0.004	0.005	0.007	0.009	0.011	0.014	0.018	0.027	0.036	0.072	0.090	0.108	0.144			
18	Δu	0.005	0.010	0.016	0.021	0.026	0.031	0.041	0.052	0.078	0.104	0.207	0.259	0.311	0.415	4746	0.492	3.59
	Δc	0.006	0.011	0.017	0.022	0.028	0.033	0.044	0.055	0.083	0.111	0.221	0.277	0.332	0.442			
24	Δu	0.015	0.031	0.046	0.062	0.077	0.093	0.124	0.155	0.232	0.310	0.619				2670	0.827	3.80
	Δc	0.012	0.025	0.037	0.050	0.062	0.074	0.099	0.124	0.186	0.248	0.495	0.619					
30	Δu	0.036	0.072	0.108	0.144	0.180	0.215	0.287	0.359	0.539	0.718					1693	1.216	4.00
	Δc	0.023	0.046	0.069	0.092	0.115	0.138	0.184	0.230	0.345	0.460							
36	Δu	0.072	0.145	0.217	0.289	0.361	0.434	0.578	0.723							1157	1.673	4.12
	Δc	0.039	0.077	0.116	0.154	0.193	0.231	0.308	0.385	0.578								
42	Δu	0.129	0.257	0.386	0.514	0.643										833	2.143	4.29
	Δc	0.059	0.118	0.176	0.235	0.294	0.353	0.470	0.588									
48	Δu	0.215	0.431	0.646												625	2.692	4.37
	Δc	0.086	0.172	0.258	0.345	0.431	0.517	0.689										



*(M) - Multiplier for load table loads

DURAGRID® T-3300 2" T Bearing Bars Spaced 1-1/2" On Center

OTHER COMMON SERIES AND SPACING (X):

SERIES	(X)	(M)*
T-1700	1.200"	1.25
OR MULTIPLES OF ABOVE		

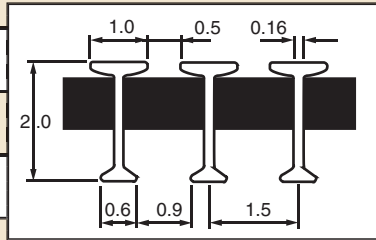
2" T BEARING BARS: VALUES FOR 8 BARS PER FT OF WIDTH

A = 4.338 IN²/FT OF WIDTH S_y = 2.541 IN³/FT OF WIDTH

I = 2.234 IN⁴/FT OF WIDTH S_x = 1.994 IN³/FT OF WIDTH

WEIGHT/FOOT = .446 LBS/FT OF BAR WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD
APPROX. WEIGHT = 3.94 LBS/SQ. FT.

SPAN INCH-		LOAD																SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI		
		50	100	150	200	250	300	400	500	750	1000	2000	2500	3000	4000	5000	6000				7000	8000
12	Δu	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.002	0.003	0.005	0.007	0.008	0.011	0.013	0.016	0.019	0.021	15110	0.040	3.80
	Δc	0.000	0.000	0.001	0.001	0.001	0.001	0.002	0.002	0.003	0.004	0.008	0.011	0.013	0.017	0.021	0.025	0.030	0.034			
18	Δu	0.001	0.001	0.002	0.003	0.003	0.004	0.005	0.007	0.010	0.013	0.026	0.033	0.039	0.052	0.065	0.078	0.091	0.104	10048	0.131	3.91
	Δc	0.001	0.001	0.002	0.003	0.003	0.004	0.006	0.007	0.010	0.014	0.028	0.035	0.042	0.056	0.070	0.083	0.097	0.111			
24	Δu	0.002	0.004	0.006	0.008	0.010	0.012	0.016	0.020	0.030	0.040	0.080	0.100	0.121	0.161	0.201	0.241	0.281	0.321	7555	0.304	4.01
	Δc	0.002	0.003	0.005	0.006	0.008	0.010	0.013	0.016	0.024	0.032	0.064	0.080	0.096	0.129	0.161	0.193	0.225	0.257			
30	Δu	0.005	0.010	0.014	0.019	0.024	0.029	0.038	0.048	0.072	0.096	0.192	0.240	0.288	0.384	0.480	0.576	0.672		4835	0.464	4.10
	Δc	0.003	0.006	0.009	0.012	0.015	0.018	0.025	0.031	0.046	0.061	0.123	0.154	0.184	0.246	0.307	0.368	0.430	0.491			
36	Δu	0.010	0.020	0.029	0.039	0.049	0.059	0.078	0.098	0.146	0.195	0.390	0.488	0.586						3358	0.655	4.18
	Δc	0.005	0.010	0.016	0.021	0.026	0.031	0.042	0.052	0.078	0.104	0.208	0.260	0.312	0.416	0.520	0.625					
42	Δu	0.018	0.036	0.053	0.071	0.089	0.107	0.142	0.178	0.267	0.356									2467	0.877	4.25
	Δc	0.008	0.016	0.024	0.033	0.041	0.049	0.065	0.081	0.122	0.163	0.325	0.406	0.488	0.650							
48	Δu	0.030	0.059	0.089	0.119	0.149	0.178	0.238	0.297	0.446	0.594									1889	1.122	4.34
	Δc	0.012	0.024	0.036	0.048	0.059	0.071	0.095	0.119	0.178	0.238	0.475	0.594									
54	Δu	0.047	0.094	0.140	0.187	0.234	0.281	0.375	0.468											1493	1.398	4.41
	Δc	0.017	0.033	0.050	0.067	0.083	0.100	0.133	0.166	0.250	0.333	0.666										
60	Δu	0.070	0.141	0.211	0.282	0.352	0.422	0.563												1209	1.703	4.47
	Δc	0.023	0.045	0.068	0.090	0.113	0.135	0.180	0.225	0.338	0.451											
66	Δu	0.102	0.204	0.306	0.408	0.510	0.612													999	2.037	4.52
	Δc	0.030	0.059	0.089	0.119	0.148	0.178	0.237	0.297	0.445	0.593											
72	Δu	0.142	0.285	0.427	0.570															839	2.391	4.58
	Δc	0.038	0.076	0.114	0.152	0.190	0.228	0.304	0.380	0.570												
78	Δu	0.195	0.390	0.585																715	2.788	4.61
	Δc	0.048	0.096	0.144	0.192	0.240	0.288	0.384	0.480													
84	Δu	0.260	0.520																	617	3.209	4.65
	Δc	0.059	0.119	0.178	0.238	0.297	0.357	0.475	0.594													



*(M) - Multiplier for load table loads

DURAGRID® ECONOMY 5000 1" T Bearing Bars Spaced 2" On Center

OTHER COMMON SERIES AND SPACING (X):

SERIES	(X)	(M)*
ECONOMY 3300	1.500"	1.33
OR MULTIPLES OF ABOVE		

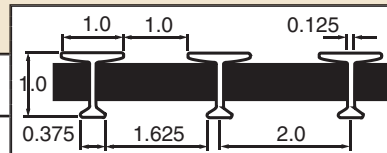
1" T BEARING BAR: VALUES FOR 6 BARS PER FT OF WIDTH

A = 1.596 IN²/FT OF WIDTH S_y = 0.530 IN³/FT OF WIDTH

I = 0.197 IN⁴/FT OF WIDTH S_x = 0.314 IN³/FT OF WIDTH

WEIGHT/FOOT = .207 LBS/FT OF BAR WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD
APPROX. WEIGHT = 1.62 LBS/SQ. FT.

SPAN INCH-		LOAD										SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI				
		50	100	150	200	250	300	400	500	750	1000				2000			
12	Δu	0.002	0.004	0.006	0.008	0.010	0.011	0.015	0.019	0.029	0.038	0.076				4766	0.182	2.99
	Δc	0.003	0.006	0.009	0.012	0.015	0.018	0.024	0.031	0.046	0.061	0.122						
18	Δu	0.009	0.019	0.028	0.037	0.047	0.056	0.075	0.094	0.140	0.187	0.374				2144	0.401	3.09
	Δc	0.010	0.020	0.030	0.040	0.050	0.060	0.080	0.100	0.150	0.200	0.399						
24	Δu	0.029	0.057	0.086	0.114	0.143	0.171	0.228	0.286	0.428	0.571					1221	0.697	3.20
	Δc	0.023	0.046	0.069	0.091	0.114	0.137	0.183	0.228	0.343	0.457							
30	Δu	0.068	0.135	0.203	0.270	0.338	0.406	0.541	0.676							791	1.069	3.30
	Δc	0.043	0.087	0.130	0.173	0.216	0.260	0.346	0.433	0.649								
36	Δu	0.136	0.272	0.408	0.544	0.680										556	1.513	3.40
	Δc	0.073	0.145	0.218	0.290	0.363	0.435	0.580	0.726									
42	Δu	0.244	0.488	0.732												413	2.017	3.51
	Δc	0.112	0.223	0.335	0.446	0.558	0.670											



*(M) - Multiplier for load table loads

DURAGRID® ECONOMY 5000 1-1/2" T Bearing Bars Spaced 2" On Center

OTHER COMMON SERIES AND SPACING (X):

SERIES	(X)	(M)*
ECONOMY 3300	1.500"	1.33

OR MULTIPLES OF ABOVE

1-1/2" T BEARING BAR: VALUES FOR 6 BARS PER FT OF WIDTH

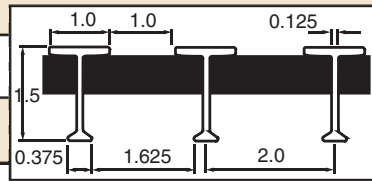
A = 1.968 IN²/FT OF WIDTH S_x = 0.950 IN³/FT OF WIDTH

I = 0.557 IN⁴/FT OF WIDTH S_y = 0.609 IN³/FT OF WIDTH

WEIGHT/FOOT = .250 LBS./FT OF BAR WEIGHT/FOOT = .186 LBS./FT OF CROSS ROD

APPROX. WEIGHT = 1.9 LBS/SQ. FT.

SPAN INCH-		LOAD															SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI
		50	100	150	200	250	300	400	500	750	1000	2000	2500	3000	4000	5000			
12	Δu	0.001	0.001	0.002	0.003	0.003	0.004	0.006	0.007	0.010	0.014	0.028	0.034	0.041	0.055	0.069	10322	0.142	2.93
	Δc	0.001	0.002	0.003	0.004	0.006	0.007	0.009	0.011	0.017	0.022	0.044	0.055	0.066	0.088	0.110			
18	Δu	0.003	0.007	0.010	0.014	0.017	0.020	0.027	0.034	0.051	0.068	0.136	0.170	0.204	0.273	0.341	4643	0.316	3.00
	Δc	0.004	0.007	0.011	0.015	0.018	0.022	0.029	0.036	0.055	0.073	0.145	0.182	0.218	0.291	0.364			
24	Δu	0.011	0.021	0.032	0.042	0.053	0.063	0.084	0.105	0.158	0.211	0.421	0.526	0.632			2643	0.556	3.07
	Δc	0.008	0.017	0.025	0.034	0.042	0.051	0.067	0.084	0.126	0.168	0.337	0.421	0.505	0.674	2643			
30	Δu	0.025	0.050	0.076	0.101	0.126	0.151	0.202	0.252	0.378	0.504						1712	0.863	3.13
	Δc	0.016	0.032	0.048	0.065	0.081	0.097	0.129	0.161	0.242	0.323	0.645							
36	Δu	0.051	0.102	0.153	0.204	0.256	0.307	0.409	0.511	0.767							1202	1.229	3.20
	Δc	0.027	0.055	0.082	0.109	0.136	0.164	0.218	0.273	0.409	0.545								
42	Δu	0.093	0.185	0.278	0.371	0.463	0.556	0.742									894	1.657	3.27
	Δc	0.042	0.085	0.127	0.169	0.212	0.254	0.339	0.424	0.636									
48	Δu	0.155	0.310	0.464	0.619												692	2.143	3.34
	Δc	0.062	0.124	0.186	0.248	0.310	0.372	0.495	0.619										



*(M) - Multiplier for load table loads

DURAGRID® Heavy Duty Grating

The following load tables are for the solid bar heavy duty grating designed to take heavy wheel traffic such as forklifts, tow motors and truck traffic. Because of the variety of wheel types and loading, it is recommended that you contact Strongwell to determine the series of heavy duty grating needed for your application.

All load table values meet the flexural properties with a factor of safety of 2.5 and meet the shear properties with a factor of safety of 3.0.

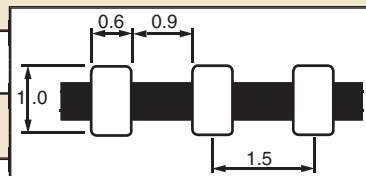
Ultimate Coupon Properties for Heavy Duty Grating Load Tables

Properties	Test Method	Value
Flexural Strength	ASTM D-790	100 ksi
Flexural Modulus	ASTM D-790	5,200 ksi
Short Beam Shear	ASTM D-2344	7.5 ksi

DURAGRID® HD-6000 1" Bearing Bar

A = 4.8 in² I = 0.40 in⁴ S = 0.80 in³

SPAN INCH-		LOAD												SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI
		100	200	300	500	1000	2000	3000	4000	5000	6000	7000	8000			
12	Δu	0.001	0.002	0.003	0.005	0.011	0.021	0.032	0.042	0.053	0.063	0.074	0.085	9000	0.095	5.32
	Δc	0.002	0.003	0.005	0.008	0.017	0.034	0.051	0.068	0.085	0.102	0.118	0.135			
18	Δu	0.005	0.010	0.015	0.025	0.051	0.101	0.152	0.203	0.253	0.304	0.355	0.405	6000	0.304	5.62
	Δc	0.005	0.011	0.016	0.027	0.054	0.108	0.162	0.216	0.270	0.324	0.378	0.432			
24	Δu	0.016	0.031	0.047	0.078	0.156	0.313	0.469	0.625					3962	0.619	5.76
	Δc	0.013	0.025	0.038	0.063	0.125	0.250	0.375	0.500	0.625						
30	Δu	0.037	0.075	0.112	0.187	0.374								2535	0.949	5.87
	Δc	0.024	0.048	0.072	0.120	0.240	0.479									
36	Δu	0.077	0.154	0.231	0.385	0.410								1760	1.355	5.92
	Δc	0.041	0.082	0.123	0.205	0.410										
42	Δu	0.142	0.283	0.425										1294	1.833	5.96
	Δc	0.065	0.129	0.194	0.324	0.647										
48	Δu	0.241	0.482											990	2.384	5.98
	Δc	0.096	0.193	0.289	0.482											
54	Δu	0.383												782	2.996	6.02
	Δc	0.136	0.272	0.409	0.681											



Series	Bar Width	Open Space	% Open Area	Approx. Wt.	I-in ² /ft. of Width	S-in ³ /ft. of Width
HD 6000	.60	.90	60	4.9	0.40	0.80
HD 5000	.60	.60	50	5.9	0.50	1.00
HD 4000	.60	.40	40	7.0	0.60	1.20

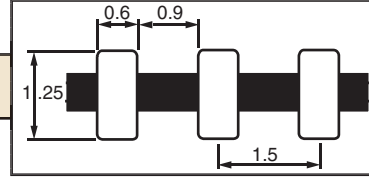
Multipliers for Series Other Than HD-6000

HD 5000 - Multiply Load Table Deflection by 0.80
HD 4000 - Multiply Load Table Deflection by 0.67

DURAGRID® HD-6000 1-1/4" Bearing Bar

$A = 6.0 \text{ in}^2 \quad I = 0.781 \text{ in}^4 \quad S = 1.24 \text{ in}^3$

SPAN INCH-		LOAD												SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI
		100	200	300	500	1000	2000	3000	4000	5000	6000	7000	8000			
12	Δu	0.001	0.001	0.002	0.003	0.006	0.012	0.018	0.024	0.030	0.035	0.041	0.047	15000 14000	0.089 0.132	4.88
	Δc	0.001	0.002	0.003	0.005	0.009	0.019	0.028	0.038	0.047	0.057	0.066	0.076			
18	Δu	0.003	0.005	0.008	0.013	0.026	0.053	0.079	0.105	0.131	0.158	0.184	0.210	10000 9370	0.263 0.263	5.55
	Δc	0.003	0.006	0.008	0.014	0.028	0.056	0.084	0.112	0.140	0.168	0.196	0.224			
24	Δu	0.008	0.016	0.024	0.040	0.081	0.161	0.242	0.322	0.403	0.484	0.564	0.645	7032 7032	0.567 0.453	5.72
	Δc	0.006	0.013	0.019	0.032	0.064	0.129	0.193	0.258	0.322	0.387	0.451	0.516			
30	Δu	0.020	0.039	0.059	0.098	0.195	0.390	0.585						4500 5620	0.878 0.702	5.77
	Δc	0.012	0.025	0.037	0.062	0.125	0.250	0.374	0.499	0.624						
36	Δu	0.040	0.080	0.121	0.201	0.402								3125 4680	1.257 1.004	5.80
	Δc	0.021	0.043	0.064	0.107	0.215	0.429	0.644								
42	Δu	0.074	0.148	0.222	0.371									2296 4018	1.703 1.362	5.83
	Δc	0.034	0.068	0.102	0.169	0.339	0.678									
48	Δu	0.125	0.251	0.376	0.627									1758 3516	2.205 1.764	5.88
	Δc	0.050	0.100	0.151	0.251	0.502										
54	Δu	0.200	0.399	0.599										1389 3126	2.772 2.218	5.92
	Δc	0.071	0.142	0.213	0.355											
60	Δu	0.302	0.604											1125 2813	3.399 2.719	5.96
	Δc	0.097	0.193	0.290	0.483											



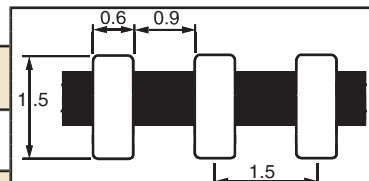
Series	Bar Width	Open Space	% Open Area	Approx. Wt.	I-in ² /ft. of Width	S-in ³ /ft. of Width
HD 6000	.60	.90	60	5.9	.781	1.25
HD 5000	.60	.60	50	7.2	.977	1.56

Multipliers for Series Other Than HD-6000
 HD 5000 - Multiply Load Table Deflection by 0.80
 HD 4000 - Multiply Load Table Deflection by 0.67

DURAGRID® HD-6000 1-1/2" Bearing Bar

$A = 7.2 \text{ in}^2 \quad I = 1.35 \text{ in}^4 \quad S = 1.80 \text{ in}^3$

SPAN INCH-		LOAD												SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI
		100	200	300	500	1000	2000	3000	4000	5000	6000	7000	8000			
12	Δu	0.000	0.001	0.001	0.002	0.004	0.008	0.011	0.015	0.019	0.023	0.027	0.030	21000 21000	0.080 0.128	4.38
	Δc	0.001	0.001	0.002	0.003	0.006	0.012	0.018	0.024	0.030	0.037	0.043	0.049			
18	Δu	0.002	0.003	0.005	0.008	0.016	0.031	0.047	0.063	0.079	0.094	0.110	0.126	14000 14045	0.220 0.235	5.37
	Δc	0.002	0.003	0.005	0.008	0.017	0.034	0.050	0.067	0.084	0.101	0.117	0.134			
24	Δu	0.005	0.009	0.014	0.024	0.047	0.094	0.142	0.189	0.236	0.283	0.330	0.378	10500 10500	0.496 0.396	5.65
	Δc	0.004	0.008	0.011	0.019	0.038	0.076	0.113	0.151	0.189	0.227	0.264	0.302			
30	Δu	0.011	0.023	0.034	0.057	0.113	0.226	0.340	0.453	0.566	0.679			6742 8427	0.763 0.611	5.75
	Δc	0.007	0.014	0.022	0.036	0.072	0.145	0.217	0.290	0.362	0.435	0.507	0.580			
36	Δu	0.023	0.046	0.070	0.116	0.232	0.465	0.697						4682 7023	1.088 0.870	5.81
	Δc	0.012	0.025	0.037	0.062	0.124	0.248	0.372	0.496	0.620						
42	Δu	0.043	0.086	0.128	0.214	0.428								3440 6019	1.471 1.176	5.85
	Δc	0.020	0.039	0.059	0.098	0.195	0.391	0.586								
48	Δu	0.073	0.145	0.218	0.363									2634 5267	1.911 1.529	5.88
	Δc	0.029	0.058	0.087	0.145	0.290	0.580									
54	Δu	0.115	0.231	0.346	0.577									2080 4682	2.401 1.922	5.92
	Δc	0.041	0.082	0.123	0.205	0.410										
60	Δu	0.175	0.350	0.525										1685 4214	2.950 2.361	5.95
	Δc	0.056	0.112	0.168	0.280	0.560										
66	Δu	0.255	0.510											1393 3830	3.553 2.842	5.98
	Δc	0.074	0.148	0.223	0.371											
72	Δu	0.359	0.719											1170 3511	4.205 3.365	6.01
	Δc	0.096	0.192	0.288	0.479											



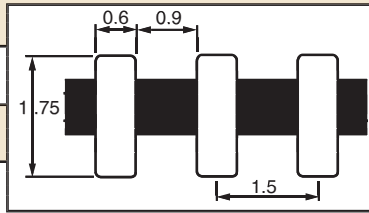
Series	Bar Width	Open Space	% Open Area	Approx. Wt.	I-in ² /ft. of Width	S-in ³ /ft. of Width
HD 6000	.60	.90	60	7.0	1.35	1.80
HD 5000	.60	.60	50	8.5	1.69	2.25
HD 4000	.60	.40	40	10.1	2.02	2.70

Multipliers for Series Other Than HD-6000
 HD 5000 - Multiply Load Table Deflection by 0.80
 HD 4000 - Multiply Load Table Deflection by 0.67

DURAGRID® HD-6000 1-3/4" Bearing Bar

$$A = 8.4 \text{ in}^2 \quad I = 2.14 \text{ in}^4 \quad S = 2.45 \text{ in}^3$$

SPAN INCH-		LOAD												SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI
		100	200	300	500	1000	2000	3000	4000	5000	6000	7000	8000			
12	Δu	0.000	0.000	0.001	0.001	0.002	0.004	0.007	0.009	0.011	0.013	0.015	0.018	42000 32668	0.092 0.114	4.80
	Δc	0.000	0.001	0.001	0.002	0.004	0.007	0.011	0.014	0.018	0.021	0.025	0.028			
18	Δu	0.001	0.002	0.003	0.005	0.011	0.021	0.032	0.043	0.053	0.064	0.075	0.085	28000 21800	0.299 0.248	4.99
	Δc	0.001	0.002	0.003	0.006	0.011	0.023	0.034	0.046	0.057	0.068	0.080	0.091			
24	Δu	0.003	0.006	0.010	0.016	0.032	0.064	0.096	0.128	0.160	0.192	0.224	0.256	16334 16334	0.523 0.419	5.25
	Δc	0.003	0.005	0.008	0.013	0.026	0.051	0.077	0.103	0.128	0.154	0.179	0.205			
30	Δu	0.008	0.015	0.023	0.038	0.076	0.152	0.228	0.304	0.380	0.455	0.531	0.607	10454 13067	0.794 0.635	5.41
	Δc	0.005	0.010	0.015	0.024	0.049	0.097	0.146	0.194	0.243	0.292	0.340	0.389			
36	Δu	0.015	0.030	0.045	0.075	0.151	0.302	0.453	0.604	0.755	0.906	1.057	1.208	7260 10889	1.096 0.877	5.64
	Δc	0.008	0.016	0.024	0.040	0.081	0.161	0.242	0.322	0.403	0.483	0.564	0.644			
42	Δu	0.028	0.055	0.083	0.138	0.275	0.551							5334 9334	1.469 1.175	5.73
	Δc	0.013	0.025	0.038	0.063	0.126	0.252	0.378	0.503	0.629						
48	Δu	0.046	0.093	0.139	0.232	0.465								4084 8167	1.899 1.519	5.79
	Δc	0.019	0.037	0.056	0.093	0.186	0.372	0.558								
54	Δu	0.074	0.147	0.221	0.368	0.737								3226 7260	2.378 1.902	5.85
	Δc	0.026	0.052	0.079	0.131	0.262	0.524									
60	Δu	0.111	0.222	0.333	0.555									2613 6534	2.900 2.321	5.92
	Δc	0.036	0.071	0.107	0.178	0.355										
66	Δu	0.161	0.322	0.483										2160 5940	3.481 2.785	5.97
	Δc	0.047	0.094	0.141	0.234	0.469										
72	Δu	0.226	0.452	0.678										1815 5445	4.101 3.281	6.03
	Δc	0.060	0.121	0.181	0.301	0.603										
78	Δu	0.310	0.619											1546 5026	4.788 3.832	6.06
	Δc	0.076	0.152	0.229	0.381											



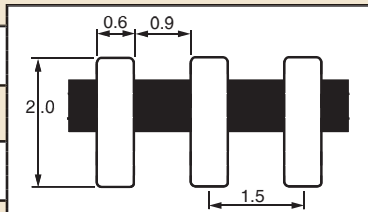
Series	Bar Width	Open Space	% Open Area	Approx. Wt.	I-in ² /ft. of Width	S-in ³ /ft. of Width
HD 6000	.60	.90	60	8.0	2.14	2.45
HD 5000	.60	.60	50	9.8	2.68	3.06
HD 4000	.60	.40	40	11.6	3.22	3.68

Multipliers for Series Other Than HD-6000
 HD 5000 - Multiply Load Table Deflection by 0.80
 HD 4000 - Multiply Load Table Deflection by 0.67

DURAGRID® HD-6000 2" Bearing Bar

$$A = 9.6 \text{ in}^2 \quad I = 3.20 \text{ in}^4 \quad S = 3.20 \text{ in}^3$$

SPAN INCH-		LOAD												SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10 ⁶ PSI
		100	200	300	500	1000	2000	3000	4000	5000	6000	7000	8000			
12	Δu	0.000	0.000	0.001	0.001	0.002	0.003	0.005	0.007	0.009	0.010	0.012	0.014	48000 42667	0.082 0.116	4.13
	Δc	0.000	0.001	0.001	0.001	0.003	0.005	0.008	0.011	0.014	0.016	0.019	0.022			
18	Δu	0.001	0.002	0.002	0.004	0.008	0.015	0.023	0.030	0.038	0.046	0.053	0.061	32000 28445	0.244 0.231	4.67
	Δc	0.001	0.002	0.002	0.004	0.008	0.016	0.024	0.033	0.041	0.049	0.057	0.065			
24	Δu	0.002	0.004	0.007	0.011	0.022	0.044	0.066	0.088	0.109	0.131	0.153	0.175	21334 21334	0.467 0.374	5.14
	Δc	0.002	0.004	0.005	0.009	0.018	0.035	0.053	0.070	0.088	0.105	0.123	0.140			
30	Δu	0.005	0.010	0.015	0.025	0.050	0.100	0.151	0.201	0.251	0.301	0.351	0.402	13654 17067	0.686 0.548	5.47
	Δc	0.003	0.006	0.010	0.016	0.032	0.064	0.096	0.129	0.161	0.193	0.225	0.257			
36	Δu	0.010	0.020	0.030	0.050	0.101	0.202	0.302	0.403	0.504	0.605	0.706		9482 14223	0.956 0.765	5.65
	Δc	0.005	0.011	0.016	0.027	0.054	0.108	0.161	0.215	0.269	0.323	0.376	0.430			
42	Δu	0.019	0.037	0.056	0.093	0.186	0.372	0.557	0.743					6966 12190	1.294 1.035	5.68
	Δc	0.008	0.017	0.025	0.042	0.085	0.170	0.255	0.340	0.425	0.510	0.594	0.679			
48	Δu	0.032	0.063	0.095	0.158	0.315	0.630							5333 10667	1.681 1.345	5.71
	Δc	0.013	0.025	0.038	0.063	0.126	0.252	0.378	0.504	0.630						
54	Δu	0.050	0.101	0.151	0.252	0.504								4214 9482	2.124 1.699	5.72
	Δc	0.018	0.036	0.054	0.090	0.179	0.358	0.538								
60	Δu	0.077	0.153	0.230	0.383									3413 8534	2.618 2.094	5.73
	Δc	0.025	0.049	0.074	0.123	0.245	0.491									
66	Δu	0.112	0.224	0.336	0.559									2821 7758	3.157 2.525	5.75
	Δc	0.033	0.065	0.098	0.163	0.326	0.651									
72	Δu	0.158	0.316	0.474	0.790									2370 7111	3.743 2.995	5.77
	Δc	0.042	0.084	0.126	0.211	0.421										
78	Δu	0.217	0.434	0.650										2020 6565	4.379 3.503	5.79
	Δc	0.053	0.107	0.160	0.267	0.534										
84	Δu	0.290	0.580											1742 6095	5.053 4.041	5.82
	Δc	0.066	0.133	0.199	0.332	0.663										



Series	Bar Width	Open Space	% Open Area	Approx. Wt.	I-in ² /ft. of Width	S-in ³ /ft. of Width
HD 6000	.60	.90	60	9.0	3.20	3.20
HD 5000	.60	.60	50	11.1	4.00	4.00
HD 4000	.60	.40	40	14.4	4.80	4.80

Multipliers for Series Other Than HD-6000
 HD 5000 - Multiply Load Table Deflection by 0.80
 HD 4000 - Multiply Load Table Deflection by 0.67

Specifications

How to Specify DURADEK® and DURAGRID®

Fiberglass grating shall be (select one):

DURADEK® Series (I-6000 1") (I-6000 1-1/2") (T-5000 2") as manufactured by Strongwell-Chatfield Division, Chatfield, Minnesota.

DURAGRID® as manufactured by Strongwell-Chatfield Division, Chatfield, Minnesota. Grating panels shall be made of (1") (1-1/4") (1-1/2") (2") deep pultruded (T) (I) bars.

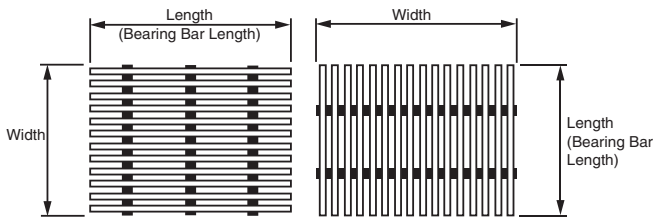
DURAGRID® Heavy Duty as manufactured by Strongwell-Chatfield Division, Chatfield, Minnesota. Grating panels shall be made of (1") (1-1/4") (1-1/2") (1-3/4") (2") (2-1/4") (2-1/2") deep pultruded (HD) bars.

The bearing bars shall be spaced at _____ inches on center. Resin shall be fire retardant (polyester) (vinyl ester) meeting the requirements of a Class 1 rating of 25 or less per ASTM E-84 and meets the self-extinguishing requirements of ASTM D-635. Color shall be (gray) (yellow). Resin shall be UV inhibited and the composite shall include a veil on all exposed surfaces. Panels shall be assembled into the sizes ordered using a 3-piece pultruded cross-rod system.

The cross-rods shall consist of a center core wedge and 2 spacer bars that are notched at each bearing bar so that each bearing bar is both mechanically locked and chemically bonded to the web of each bearing bar. The spacer bars shall be continually bonded to the center core wedge. The cross-rods shall be spaced a maximum of (6") (12") in the panel. The top of the panels (shall) (shall not) be covered with a bonded grit anti-skid surface.

NOTE: If special options are required that are not stated in the above specification, fill in your special requirement in the appropriate section.

How to Order



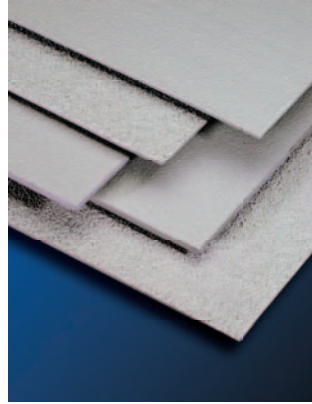
Panel Sizes Are Specified: Width x Length

When ordering DURADEK® or DURAGRID®, make sure the bearing bars in the panel are oriented in the correct direction for the application. Bearing bars should traverse from support to support. Cross-rods are not intended to be applied in the span direction. The adjacent drawing will help you specify the width and length of panels. NOTE: Width is the measurement from end to end of the cross-rods. Length is always the bearing bar length.

Options

Strongwell offers a broad range of fiberglass decking and flooring materials. A brief description of the other available flooring products in the Strongwell industrial product line is shown here. Full-color brochures are available for each individual product.

SAFPLANK®

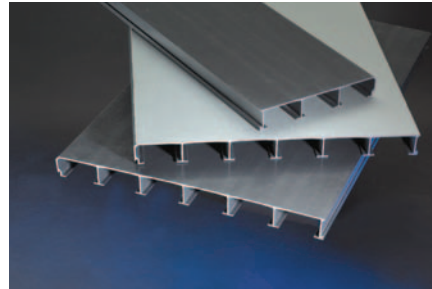


SAFPLATE®, a solid anti-skid flooring, helps reduce worker slips and falls in both wet and dry applications.

DURAGRATE®



DURAGRATE® molded grating has a concave profile on the upper surface for skid resistance. Grit tops are optional.



SAFPLANK®, a system of interlocking planks, provides easy installation and superior corrosion resistance for applications requiring a solid deck or floor.

COMPOSOLITE®



COMPOSOLITE® building panels are suitable for major load bearing structural applications and are particularly well-suited to outdoor use and corrosive environments.



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