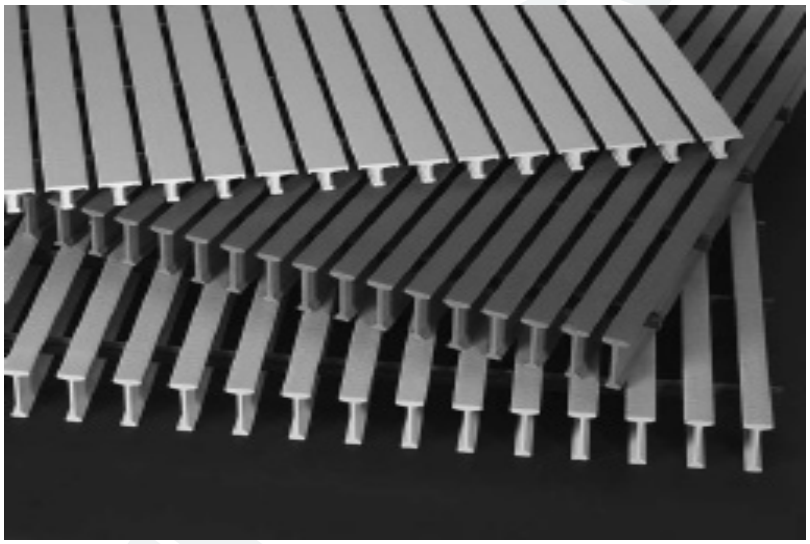
SECTION 12 - FIBERGLASS GRATING

Table of Contents

Load / Deflection Tables

SECTION 12

FIBERGLASS GRATING



DURADEK® FIBERGLASS GRATING

INTRODUCTION TO DURADEK®

DURADEK® fiberglass grating is a pultruded bar type grating manufactured by Strongwell-Chatfield Division. This grating can be designed and used like traditional metal grates. The individual bearing bars are either "I" bar or "T" bar shapes chosen for their economy and efficiency of design.

Two colors (yellow and gray) are the standard available colors.

DURADEK® fiberglass grating is produced in fire retardant polyester resin. This resin is a premium grade fire retardant polyester with antimony trioxide added. This system exceeds the requirements for Class 1 flame rating of 25 or less per ASTM E-84 and meets the self-extinguishing requirements of ASTM D-635. The bars with this resin have a surfacing veil and a U.V. inhibitor for U.V. protection. This resin is available in either yellow or gray and identified as YFRPE or GFRPE.

Also available as an option is a premium grade vinyl ester resin for severe corrosion applications. Vinyl ester has better resistance to caustic and certain acid environments than polyester resin. This resin also meets the ASTM E-84 Class 1 flame rating. The bars made with this resin have a surfacing veil and a U.V. inhibitor for U.V. protection. This resin is available in either yellow or gray and identified as YFRVE or GFRVE.

Strongwell has also formulated a special resin which has been used on many projects. This resin is a premium grade isophthalic polyester which is chemical resistant, but does not meet the ASTM E-84 Class 1 flame rating. This resin system is available in white only and identified as WISO. It is available on special request. Corrosion information for these resins is listed in Section 23 — **CORROSION RESISTANCE GUIDE**. Other special resin systems and colors will be considered upon request.

Each bearing bar is reinforced by a core of densely packed continuous glass fibers wrapped by a continuous glass mat plus a synthetic surfacing veil which provides a 100% pure resin surface for added corrosion resistance. The densely packed core makes the bars very rigid and strong in the longitudinal direction. The continuous glass mat gives the bar strength in the transverse direction to protect them from chipping, cracking and lineal fracturing along with giving each bar a resin-rich surface.

The bearing bars are assembled into panels of grating by a unique patented* cross-rod system. The cross-rod system consists of two continuous pultruded spacer bars and a center core wedge. The spacers are notched at each bearing bar so the bars are both mechanically locked and chemically bonded to the web of each bearing bar. The wedge is, in turn, bonded to the spacers to form a strong and rigid cross-rod support system that resists twist, prevents lateral movement of the bearing bars, and transfers load from one bar to the next.

The cross-rod support system allows **DURADEK®** grating to be cut and fabricated like a solid sheet. Just coat the cut end with a resin sealer and install. If more installation information is needed, ask for Strongwell's *Grating Field Fabrication Guide*.

The top of the **DURADEK®** grating is covered with a permanently bonded, grit-baked epoxy, anti-skid surface. This surface assures a safe, anti-skid walkway.

* U.S. Patent No. 4,522,009
Canadian Patent No. 1,211,270

DURAGRID® & DURAGRID® PHENOLIC FIBERGLASS GRATING

INTRODUCTION TO DURAGRID® AND DURAGRID® PHENOLIC

DURAGRID® Custom Fiberglass Grids and Grating

DURAGRID® is the registered product tradename for the non-standard, non-stocked pultruded grating manufactured by Strongwell. Strongwell can custom manufacture grid or grating systems to accommodate specific plant applications that cannot effectively be met by a standard line of fiberglass grating. **DURAGRID**® offers such options as selection of open space, bar shape, cross rod placement, custom fabrication, custom resin or color. Often a grid or grating system tailored to the demands of a specific application will not only do the job better, but also be more cost effective than trying to adapt standard grating to a specific situation.

Data on some of the more common custom gratings are included herein. Refer to the load/deflection tables for selection.

DURAGRID® Phenolic

DURAGRID® Phenolic is a fire resistant pultruded grating manufactured by Strongwell-Chatfield Division using phenolic resin, and continuous glass fibers wrapped by a continuous strand glass mat. **DURAGRID**® Phenolic grating generates much less smoke and toxic fumes when exposed to fire than traditional FRP products. **DURAGRID®** Phenolic grating meets or exceeds USA Fire Safety Standards. It is approved and acceptable for use in locations and applications in Coast Guard PFM 2-98 for fire retardant FRP grating meeting structural fire integrity Level 2.

DURAGRID® Phenolic Technical Data

ASTM D635-77	
Flammability Rate cm/min.	<1
ASTM E84	
Flame Spread Index	10
Smoke Index	10
UL-94	VO

EVOLUTION OF PULTRUDED GRATING

THE FRP GRATING MARKET

The pultrusion process has been responsible for the advancement and expansion of the Fiberglass Reinforced Plastic (FRP) grating market. This was not possible with other manufacturing processes. The basic needs of floor grating established the need for FRP grating. The evolution of the FRP grating market created a demand for pultruded grating. Grating made from pultruded components is able to provide the many options that the market demands.

THE FIRST GENERATION OF FRP GRATING

The first generation of FRP grating was by the hand lay-up method. It was composed of resin saturated rovings laid up in a criss-cross pattern to form a grating without the use of a mold. The advantages of this grating were that it was nonmetallic, corrosion-resistant and had a resin-rich surface. The lay-up method allowed versatility in size and strength. The disadvantages were that it was very labor intensive, it had rectangular bearing bars and low glass content which lead to high deflections and quality was poor with many voids and a rough appearance. The resin-rich surface at the corners, allowed fast surface wear and chipping. Ultraviolet deterioration was also a problem.

THE SECOND GENERATION OF FRP GRATING

The second generation of fiberglass grating is by the open mold method. The composite is composed of unidirectional glass fiber rovings and resin. This method is similar to the hand lay-up method but now a mold is used. It has the advantages of having a resin-rich surface, a better appearance and lower labor cost. The disadvantage is that a mold limits the versatility in size and strength. It has rectangular bearing bars and a low glass content which leads to high deflections and voids are a problem. It still has resin-rich surfaces at the corners which allow fast surface wear and chipping. A grit surface can be molded into the product for skid resistance but it can chip off easily. Ultraviolet deterioration can be improved only with a UV inhibitor.

THE THIRD GENERATION OF FRP GRATING

The third generation of FRP grating is by the compression molded method. This method is an improvement over the open mold method and gives a resin-rich surface. Because it is compression molded, it has a higher glass content which leads to less deflection than open molded grating. It has fewer and smaller voids and a better wearing surface. The top corners are molded and less susceptible to chipping. The disadvantage is that it is made in a mold and therefore does not offer the versatility in size and bar shape. Fiber content is not ideal and results in the need to use excessive amounts of material to achieve the desired strength and stiffness values. A skid-resistant surface must be applied as a secondary operation. Ultraviolet deterioration can be improved only with a UV inhibitor.

THE FOURTH GENERATION OF FRP GRATING

The fourth generation of FRP grating is made using pultruded components. The first pultruded FRP grating was made from an all unidirectional roving and resin composite. It had the advantages of using an engineered shape “I bar” for material savings. It had a much higher glass content (up to 70% glass) which made a much stronger part with less deflection. The pultrusion process eliminates the voids and improves quality. Because the bars can be cut to any length and located at any spacing, versatility in size and length is unlimited. The high strength of pultruded grating allows the use of the same depth as would be used with metal grating, and in most cases, without adding additional supports. The disadvantage of the first pultruded grating is that it had a less resin-rich surface and, therefore, lower corrosion resistance. Because it was made from all unidirectional rovings, it could split along the fibers. The method of assembling the bars did not provide good structural integrity, as the bars would loosen up and shift on the cross rods. The high glass content at the surface made ultraviolet deterioration a problem.

EVOLUTION OF PULTRUDED GRATING

THE FIFTH GENERATION OF FRP GRATING

Up to this point, some people believed that if you wanted a grating that had good corrosion resistance and was easy to fabricate, use molded grating. It you wanted a grating that required high strength, but lower corrosion resistance, use a pultruded grating. This line of reasoning is no longer true. Strongwell — Chatfield Division, has evolved the pultruded grating design and assembling process to the point that you can now have the best of both in a variety of pultruded grating.

Each bearing bar that Strongwell manufactures is reinforced by a core of densely packed, continuous glass fibers wrapped by a continuous glass mat, plus a synthetic surfacing veil. The core of continuous glass fibers gives the longitudinal strength and stiffness. The continuous glass mat gives the bars strength in the transverse direction to protect them from chipping, cracking and lineal fracturing. This mat allows you to optimize the cross-sectional design to achieve the best stiffness and strength from the least amount of material. The synthetic surfacing veil encapsulates the bar in a 100% resin surface, which provides excellent corrosion resistance and protection from UV exposure. The average resin to glass ratio of the composite is no longer a gauge of corrosion resistance. Location and placement of the glass and resin is the real gauge of corrosion resistance.

The bearing bars are assembled into panels of grating by a unique cross-rod system. The cross-rod support system consists of two continuous, pultruded spacer bars and a center core wedge. The spacers are notched at each bearing bar so the bars are both mechanically locked and chemically bonded to the web of each bearing bar. The wedge is, in turn, bonded to the spacers to form a strong and rigid cross-rod support system that resists twist, prevents lateral movement of the bearing bars, and transfers load from one bar to the next. The cross-rod system allows the grating panels to be cut and fabricated like a solid sheet. This cross-rod system also allows unlimited selection in spacing of bearing bars.

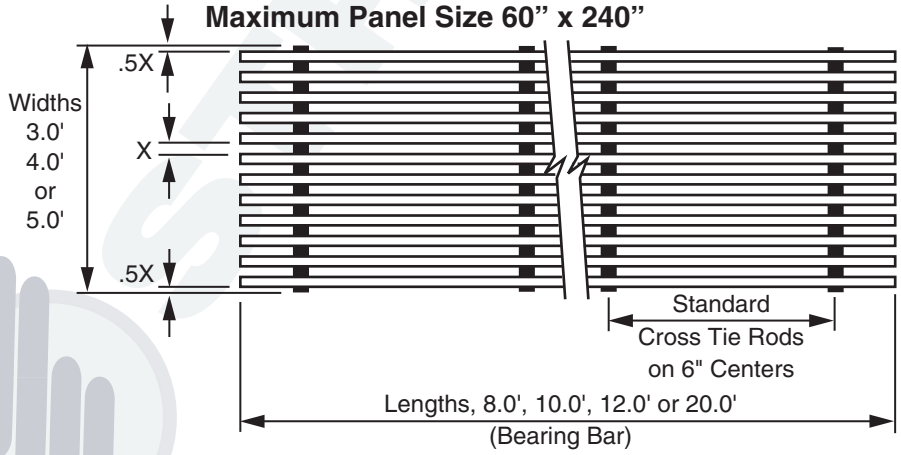
The variety of bearing bars, along with the engineered location and placement of the reinforcements, surfacing veil and resin, gives the end user the widest product choice available. No other manufacturing process can offer the corrosion resistance or product options as economically.

GRATING SERIES AND PANEL SIZES

The following table lists the standard **DURADEK®** grating series that are available along with some of the most common custom grating series. More detailed load/deflection tables are listed at the end of this section.

SERIES	WIDTH OF TOP FLANGE	WIDTH OF OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR	SPAN (See Note Below)
DURADEK®							
I-6000 1”	0.6”	0.9”	60%	2.4 lbs/sq.ft.	FRPE FRVE	Yellow or Gray	43”
I-6000 1-1/2”	0.6”	0.9”	60%	3.0 lbs/sq. ft.	FRPE FRVE	Yellow or Gray	56”
T-5000 2”	1.0”	1.0”	50%	3.1 lbs/sq. ft.	FRPE FRVE	Yellow or Gray	64”
DURAGRID® (most common series)							
T-3500 1”	1.625”	.775”	35%	2.3 lbs/sq.ft.	FRPE FRVE	Yellow or Gray	39”
T-1800 1”	1.625”	.375”	18%	2.6 lbs/sq.ft.	FRPE FRVE	Yellow or Gray	41”
T-4000 1”	0.6”	0.4”	40%	3.4 lbs/sq.ft.	FRPE FRVE	Yellow or Gray	48”
I-6000 1-1/4”	0.6”	0.9”	60%	2.7 lbs/sq.ft.	FRVE	Yellow or Gray	48”
I-4000 1-1/4”	0.6”	0.4”	40%	3.9 lbs/sq.ft.	FRVE	Yellow or Gray	54”
I-4000 1-1/2”	0.6”	0.4”	40%	4.2 lbs/sq. ft.	FRPE FRVE	Yellow or Gray	62”
T-3300 2”	1.0”	0.5”	33%	3.9 lbs/sq. ft.	FRPE FRVE	Yellow or Gray	69”

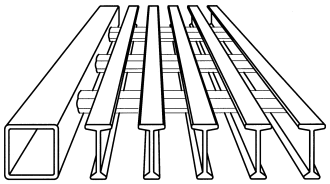
Note: When a 100 pounds per square foot uniform load is placed upon a simple span of this dimension, it will produce a deflection of 1/4” at midspan.



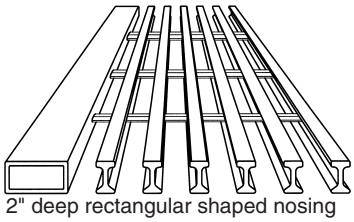
DURADEK® grating panels are built with bearing bars up to 240 inches in length and widths up to 60 inches. Standard panel sizes are listed above. These sizes are generally available in the three standard **DURADEK®** series to be shipped in 48 hours from various locations in the country. Custom grating sizes and series, other special bearing bar spacing, cross-rod spacings, oversized panels, other colors and resins will be considered upon request. Longer lead time will be required. UV coating is optional on all grating series.

DURADEK® STAIR TREADS AND LANDINGS

Stair treads and landings are produced by attaching a 2" rectangular or "box" shaped nosing to the leading edge of treads or landings. This gives added strength and rigidity to the area that takes impact and abuse. In addition, the nosing provides more surface area for skid-resistance, wear and better visibility. Exceeds O.S.H.A. Standard 1910-24.



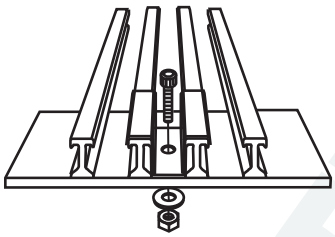
"Box" shaped nosing is used for grating with 2" depth.



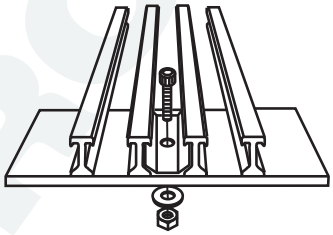
2" deep rectangular shaped nosing is used for all grating with depths of 1" and 1-1/2".

TREAD WIDTH AND COLOR AVAILABILITY	STAIR TREAD SERIES	MAXIMUM SPAN FOR 300 LBS AT MIDSPAN	
		1/8" LESS DEFLECTION	1/4" LESS DEFLECTION
8", 9.5", 11" Gray or Yellow	I-6000 1"	29"	37"
8", 9.5", 11" Gray or Yellow	I-6000 1-1/2"	40"	52"
8", 10", 12" Gray or Yellow	T-5000 2"	47"	59"
9.2", 11.6" Gray or Yellow	T-3500 1"	26"	33"
8", 10", 12" Gray or Yellow	T-1800 1"	27"	35"
8", 10", 12" Gray or Yellow	I-4000 1"	31"	40"
8", 10", 12" Gray or Yellow	I-4000 1-1/2"	44"	57"
8", 9.5", 11" Gray or Yellow	T-3300 2"	50"	64"

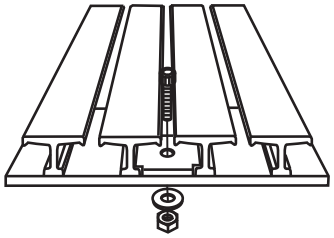
PANEL HOLD DOWNS



Weldable 316L stainless steel saddle clips are available for all grating series, except the T-1800 and T-3500 series.
*Bolts are priced separately from the saddle clips.



Weldable 316L stainless steel insert clips are available for all grating series, except the T-1800 and T-3500 series.
*Bolts are priced separately from the hold-down.

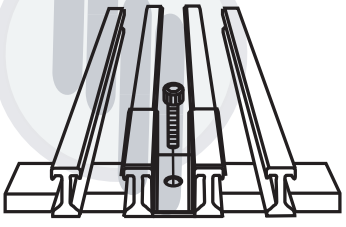


Weldable 316L stainless steel insert clips are available for series T-1800 and T-3500 only.
*Bolts are priced separately from the holddown.

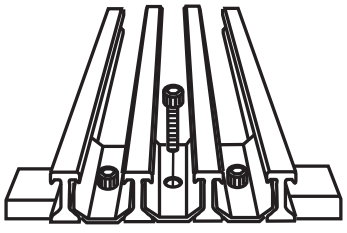
(All bolts are 1/4-20 x 1-1/4", cap head, 316 stainless steel.)

PANEL CONNECTORS

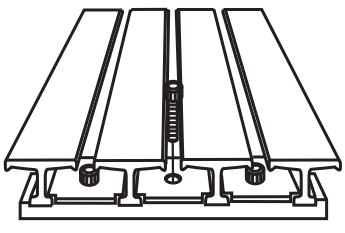
Panel Connectors are generally only used at midspan to assist in transferring load from section to section.



316L stainless steel saddle clips are available as panel connectors for I-bar grating and 2" T-bar grating.



Insert clip hold-downs are available I-bar grating and 2" T-bar grating.



Insert clip hold-downs are available I-bar grating and 2" T-bar grating.

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

HOW TO SPECIFY DURADEK® GRATING

Fiberglass grating shall be **DURADEK®** series-depth of grating _____ as manufactured by Strongwell - Chatfield Division. Resin shall be (YFRPE), (GFRPE), (YFRVE), (GFRVE). Grating shall be able to carry a uniform distributed load of 100 pounds per square foot on a simple span of _____ inches and not deflect more than .25 inches.*

NOTE: See Section 20 — **STRONGWELL SPECIFICATIONS FOR FIBERGLASS REINFORCED POLYMER PRODUCTS AND FABRICATIONS**.

* Complete load/deflection tables are listed at the end of this section.

TO ORDER DURADEK® GRATING, IT WILL BE NECESSARY TO SPECIFY:

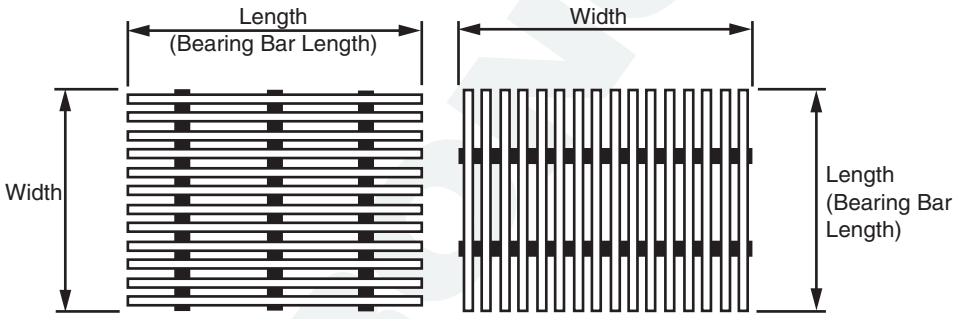
Series (I-6000, T-5000, etc.)

Depth of Grating (1", 1-1/2", 2")

Color and Resin (YFRPE, GFRPE, YFRVE, GFRVE)

Size (width x length) **

** Width is the measurement from end to end of the cross tie rods. Length is always the bearing bar length.



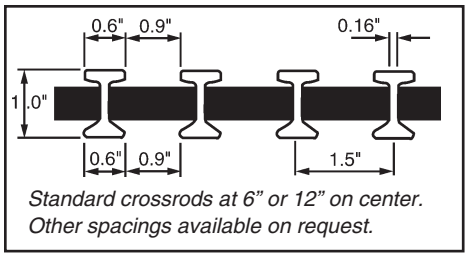
Panel Sizes Are Specified: Width x Length

SAMPLE PROBLEM

A 3 foot wide by 100 foot long walkway is to be designed using fiberglass grating. The design load will be a uniform distributed load of 100 pounds/square foot with a maximum deflection of .25 inches. The cross supports down the walkway are located every 43 inches. From the load/deflection tables, you choose I-6000-1". The grating will be inside a building for a waste water treatment plant with moderate corrosion conditions. You select the fire retardant polyester resin and select gray color.

DURADEK® I-6000 1”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
I-6000	1.000”	8	1.500”	.900”	60%	2.4 LBS PER SQ. FT.	FRPE OR FRVE	YELLOW OR GRAY



Standard crossrods at 6” or 12” on center.
Other spacings available on request.

$A = 2.496\ IN^2/FT\ OF\ WIDTH \quad S = 0.656\ IN^3/FT\ OF\ WIDTH$
$I = 0.328\ IN^4/FT\ OF\ WIDTH$

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

LOAD / DEFLECTION TABLE

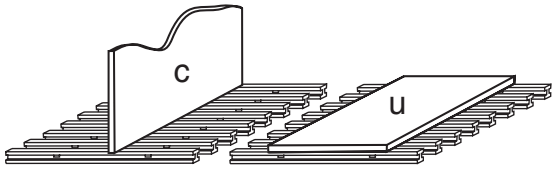
I-6000 1” BEARING BARS

SPAN INCHES		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^6 PSI
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	5200	0.151	
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	3716	0.332	
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			2900	0.577	
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	0.859	
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	1.186	
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	1.591	
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	2.027	
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	2.548	

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.

DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

c IS CONCENTRATED LOAD LBS/FT OF WIDTH
Δc IS DEFLECTION UNDER CONCENTRATED LOAD
u IS UNIFORM LOAD LBS/FT^2
Δu IS DEFLECTION UNDER UNIFORM LOAD

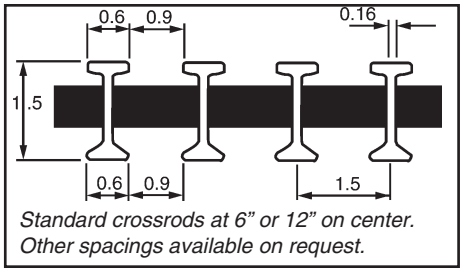


AVAILABLE WIDTHS (CENTERS 1.5”)

WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS
3”	2	13.5”	9	22.5”	15	33”	22	42”	28	52.5”	35
4.5”	3	15”	10	24”	16	34.5”	23	43.5”	29	54”	36
6”	4	16.5”	11	25.5”	17	36”	24	45”	30	55.5”	37
7.5”	5	18”	12	27”	18	37.5”	25	46.5”	31	57”	38
9”	6	19.5”	13	28.5”	19	39”	26	48”	32	58.5”	39
10.5”	7	21”	14	30”	20	40.5”	27	49.5”	33	60”	40
12”	8			31.5”	21			51”	34		

DURADEK® I-6000 1½”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
I-6000	1.500”	8	1.500”	.900”	60%	3.0 LBS PER SQ. FT.	FRPE OR FRVE	YELLOW OR GRAY



Standard crossrods at 6” or 12” on center.
Other spacings available on request.

A = 3.136 IN²/FT OF WIDTH S = 1.240 IN³/FT OF WIDTH
I = 0.928 IN⁴/FT OF WIDTH

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

LOAD / DEFLECTION TABLE

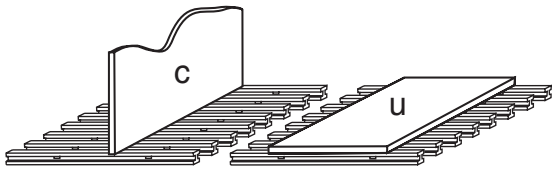
I-6000 1½” BEARING BARS

SPAN INCHES		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000	7000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10⁶ PSI
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	0.113	**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	8800	0.090	
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	0.237	**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	5867	0.190	
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	0.403	**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	4400	0.322	
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	0.597	**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				3467	0.478	
36	Δu	0.022	0.044	0.065	0.087	0.109	0.131	0.175	0.218	0.327	0.436							1896	0.827	**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						2845	0.662	
42	Δu	0.040	0.079	0.119	0.159	0.198	0.238	0.317	0.396	0.595								1361	1.079	**4.59**
	Δc	0.018	0.036	0.054	0.072	0.091	0.109	0.145	0.181	0.272	0.362							2381	0.863	
48	Δu	0.067	0.133	0.200	0.266	0.333	0.400	0.533	0.666									1017	1.354	**4.66**
	Δc	0.027	0.053	0.080	0.107	0.133	0.160	0.213	0.266	0.400	0.533							2033	1.083	
54	Δu	0.106	0.211	0.317	0.422	0.528	0.633											777	1.640	**4.71**
	Δc	0.038	0.075	0.113	0.150	0.188	0.225	0.300	0.375	0.563								1748	1.312	
60	Δu	0.160	0.320	0.480	0.639													608	1.944	**4.74**
	Δc	0.051	0.102	0.153	0.205	0.256	0.307	0.409	0.512									1520	1.555	
66	Δu	0.233	0.466															485	2.259	**4.76**
	Δc	0.068	0.136	0.203	0.271	0.339	0.407	0.542	0.678									1333	1.808	

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.

DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

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

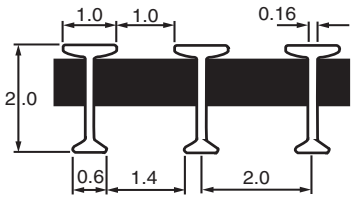


AVAILABLE WIDTHS (CENTERS 1.5”)

WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS
3”	2	13.5”	9	22.5”	15	33”	22	42”	28	52.5”	35
4.5”	3	15”	10	24”	16	34.5”	23	43.5”	29	54”	36
6”	4	16.5”	11	25.5”	17	36”	24	45”	30	55.5”	37
7.5”	5	18”	12	27”	18	37.5”	25	46.5”	31	57”	38
9”	6	19.5”	13	28.5”	19	39”	26	48”	32	58.5”	39
10.5”	7	21”	14	30”	20	40.5”	27	49.5”	33	60”	40
12”	8			31.5”	21			51”	34		

DURADEK® T-5000 2”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
T-5000	2.000”	6	2.000”	1.000”	50%	3.1 LBS PER SQ. FT.	FRPE OR FRVE	YELLOW OR GRAY



Standard crossrods at 6” on center.
Other spacings available on request.

A = 3.252 IN^2/FT OF WIDTH S_T = 1.906 IN^3/FT OF WIDTH
S_B = 1.495 IN^3/FT OF WIDTH I = 1.676 IN^4/FT OF WIDTH

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

LOAD / DEFLECTION TABLE

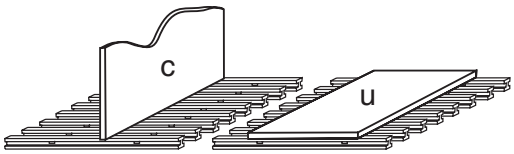
T-5000 2” BEARING BARS

SPAN INCHES		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000	7000	8000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^6 PSI
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	0.040	**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	5666	0.032	
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	0.131	**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	5666	0.105	
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	0.304	**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	5666	0.243	
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	0.464	**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	4534	0.371	
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	0.655	**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				3778	0.524	
42	Δu	0.024	0.047	0.071	0.095	0.119	0.142	0.190	0.237	0.356	0.474								1850	0.877	**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						3238	0.702	
48	Δu	0.040	0.079	0.119	0.158	0.198	0.238	0.317	0.396	0.594									1417	1.122	**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							2834	0.898	
54	Δu	0.062	0.125	0.187	0.250	0.312	0.374	0.499	0.624										1120	1.398	**4.41**
	Δc	0.022	0.044	0.067	0.089	0.111	0.133	0.178	0.222	0.333	0.444								2519	1.118	
60	Δu	0.094	0.188	0.282	0.375	0.469	0.563	0.751											907	1.702	**4.47**
	Δc	0.030	0.060	0.090	0.120	0.150	0.180	0.240	0.300	0.450	0.601								2267	1.361	
66	Δu	0.136	0.272	0.408	0.544	0.679													749	2.036	**4.52**
	Δc	0.040	0.079	0.119	0.158	0.198	0.237	0.316	0.395	0.593									2060	1.629	
72	Δu	0.190	0.380	0.570															629	2.390	**4.58**
	Δc	0.051	0.101	0.152	0.203	0.253	0.304	0.405	0.507										1889	1.914	
78	Δu	0.260	0.520																536	2.788	**4.61**
	Δc	0.064	0.128	0.192	0.256	0.320	0.384	0.512	0.640										1744	2.231	
84	Δu	0.347	0.693																463	3.208	**4.65**
	Δc	0.079	0.158	0.238	0.317	0.396	0.475	0.634											1619	2.566	

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.

DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

c IS CONCENTRATED LOAD LBS/FT OF WIDTH
Δc IS DEFLECTION UNDER CONCENTRATED LOAD
u IS UNIFORM LOAD LBS/FT^2
Δu IS DEFLECTION UNDER UNIFORM LOAD

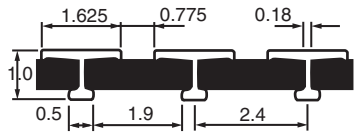


AVAILABLE WIDTHS (CENTERS 2.0”)

WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS
4”	2	14”	7	24”	12	34”	17	44”	22	54”	27
6”	3	16”	8	26”	13	36”	18	46”	23	56”	28
8”	4	18”	9	28”	14	38”	19	48”	24	58”	29
10”	5	20”	10	30”	15	40”	20	50”	25	60”	30
12”	6	22”	11	32”	16	42”	21	52”	26		

DURAGRID® T-3500 1”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
T-3500	1.000”	5	2.400”	.775”	35%	2.3 LBS PER SQ. FT.	FRPE OR FRVE	YELLOW OR GRAY



Standard crossrods at 6” or 12” on center.

$A = 2.375\ IN^2/FT\ OF\ WIDTH$ $S_T = 0.753\ IN^3/FT\ OF\ WIDTH$

$I = 0.255\ IN^4/FT\ OF\ WIDTH$ $S_B = 0.387\ IN^3/FT\ OF\ WIDTH$

WEIGHT/FOOT = .373 LBS/FT OF BAR

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

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

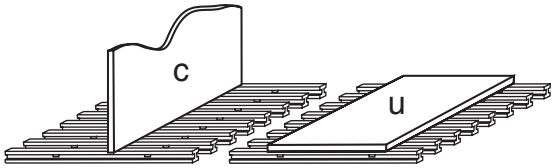
LOAD / DEFLECTION TABLE

T-3500 1” BEARING BARS

SPAN INCHES		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	2500	3000	4000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^6 PSI
12	Δu	0.001	0.003	0.004	0.005	0.007	0.008	0.011	0.013	0.020	0.027	0.054	0.067	0.081	0.108	8900	0.240	**3.27**
	Δc	0.002	0.004	0.006	0.009	0.011	0.013	0.017	0.022	0.032	0.043	0.086	0.108	0.130	0.173	4450	0.192	
18	Δu	0.006	0.012	0.019	0.025	0.031	0.037	0.050	0.062	0.093	0.124	0.249	0.311	0.373	0.498	3955	0.492	**3.59**
	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	2967	0.394	
24	Δu	0.019	0.037	0.056	0.074	0.093	0.111	0.149	0.186	0.279	0.372					2225	0.827	**3.80**
	Δc	0.015	0.030	0.045	0.059	0.074	0.089	0.119	0.149	0.223	0.297	0.594				2225	0.661	
30	Δu	0.043	0.086	0.129	0.172	0.215	0.259	0.345	0.431	0.646						1411	1.216	**4.00**
	Δc	0.028	0.055	0.083	0.110	0.138	0.165	0.221	0.276	0.414	0.551					1763	0.972	
36	Δu	0.087	0.173	0.260	0.347	0.434	0.520	0.694								964	1.672	**4.12**
	Δc	0.046	0.093	0.139	0.185	0.231	0.278	0.370	0.463							1447	1.338	
42	Δu	0.154	0.309	0.463	0.617											694	2.142	**4.29**
	Δc	0.071	0.141	0.212	0.282	0.353	0.423	0.564								1215	1.714	
48	Δu	0.258	0.517													521	2.692	**4.37**
	Δc	0.103	0.207	0.310	0.414	0.517	0.620									1042	2.154	

DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

c IS CONCENTRATED LOAD LBS/FT OF WIDTH
Δc IS DEFLECTION UNDER CONCENTRATED LOAD
u IS UNIFORM LOAD LBS/FT^2
Δu IS DEFLECTION UNDER UNIFORM LOAD

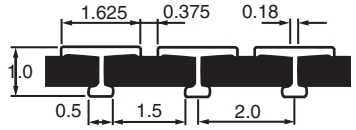


AVAILABLE WIDTHS (CENTERS 2.4”)

WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS
4.8”	2	14.4”	6	24”	10	33.6”	14	43.2”	18	52.8”	22
7.2”	3	16.8”	7	26.4”	11	36”	15	45.6”	19	55.2”	23
9.6”	4	19.2”	8	28.8”	12	38.4”	16	48”	20	57.6”	24
12”	5	21.6”	9	31.2”	13	40.8”	17	50.4”	21	60”	25

DURAGRID® T-1800 1”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
T-1800	1.000”	6	2.000”	.375”	18%	2.6 LBS PER SQ. FT.	FRPE OR FRVE	YELLOW OR GRAY



Standard crossrods at 6” or 12” on center.
Other spacings available on request.

A = 2.850 IN²/FT OF WIDTH S_T = 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

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

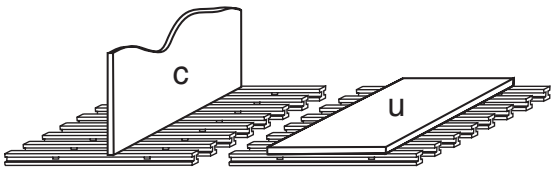
LOAD / DEFLECTION TABLE

T-1800 1” BEARING BARS

SPAN INCHES		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	2500	3000	4000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10⁶ PSI
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	5340	0.192	
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	3560	0.394	
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			2670	0.661	
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					2116	0.972	
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						1736	1.338	
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							1458	1.714	
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								1250	2.154	

DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

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

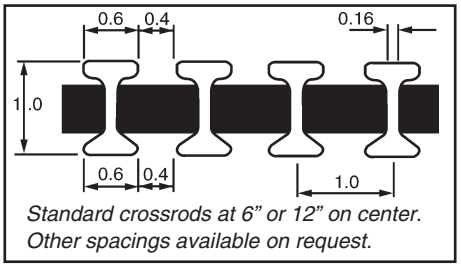


AVAILABLE WIDTHS (CENTERS 2.0”)

WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS
4”	2	14”	7	24”	12	34”	17	44”	22	54”	27
6”	3	16”	8	26”	13	36”	18	46”	23	56”	28
8”	4	18”	9	28”	14	38”	19	48”	24	58”	29
10”	5	20”	10	30”	15	40”	20	50”	25	60”	30
12”	6	22”	11	32”	16	42”	21	52”	26		

DURAGRID® I-4000 1”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
I-4000	1.000”	12	1.000”	.400”	40%	3.4 LBS PER SQ. FT.	FRPE OR FRVE	YELLOW OR GRAY



Standard crossrods at 6” or 12” on center.
Other spacings available on request.

A = 3.744 IN^2/FT OF WIDTH S = 0.984 IN^3/FT OF WIDTH

I = 0.492 IN^4/FT OF WIDTH

WEIGHT/FOOT = .253 LBS/FT OF BAR

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

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

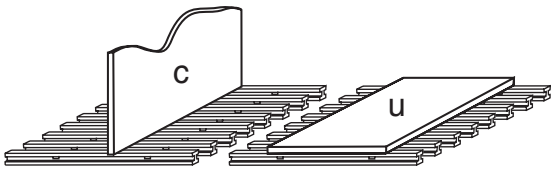
LOAD / DEFLECTION TABLE

I-4000 1” BEARING BARS

SPAN INCH-		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	2500	3000	4000	5000	6000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^6 PSI
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	0.189	**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	7800	0.151	
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	0.415	**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	5573	0.332	
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	0.722	**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		4350	0.577	
30	Δu	0.019	0.039	0.058	0.077	0.096	0.116	0.154	0.193	0.289	0.386							2784	1.074	**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					3480	0.859	
36	Δu	0.038	0.077	0.115	0.153	0.192	0.230	0.307	0.383	0.575								1933	1.482	**4.83**
	Δc	0.020	0.041	0.061	0.082	0.102	0.123	0.164	0.205	0.307	0.409							2900	1.186	
42	Δu	0.070	0.141	0.211	0.281	0.352	0.422	0.563	0.703									1414	1.988	**4.88**
	Δc	0.032	0.064	0.096	0.129	0.161	0.193	0.257	0.321	0.482	0.643							2474	1.590	
48	Δu	0.118	0.235	0.353	0.470	0.588	0.705											1078	2.534	**4.98**
	Δc	0.047	0.094	0.141	0.188	0.235	0.282	0.376	0.470									2155	2.026	

DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

c IS CONCENTRATED LOAD LBS/FT OF WIDTH
Δc IS DEFLECTION UNDER CONCENTRATED LOAD
u IS UNIFORM LOAD LBS/FT^2
Δu IS DEFLECTION UNDER UNIFORM LOAD

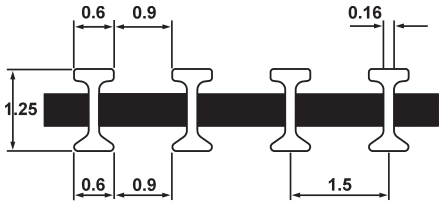


AVAILABLE WIDTHS (CENTERS 1”)

WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS
2”	2	11”	11	20”	20	29”	29	38”	38	47”	47	56”	56
3”	3	12”	12	21”	21	30”	30	39”	39	48”	48	57”	57
4”	4	13”	13	22”	22	31”	31	40”	40	49”	49	58”	58
5”	5	14”	14	23”	23	32”	32	41”	41	50”	50	59”	59
6”	6	15”	15	24”	24	33”	33	42”	42	51”	51	60”	60
7”	7	16”	16	25”	25	34”	34	43”	43	52”	52		
8”	8	17”	17	26”	26	35”	35	44”	44	53”	53		
9”	9	18”	18	27”	27	36”	36	45”	45	54”	54		
10”	10	19”	19	28”	28	37”	37	46”	46	55”	55		

DURAGRID® I-6000 1¼”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
I-6000	1.250”	8	1.500”	.900”	60%	2.7 LBS PER SQ. FT.	FRVE	YELLOW OR GRAY



Standard crossrods at 6” or 12” on center. Other spacings available on request.

A = 2.816 IN^2/FT OF WIDTH S = 0.870 IN^3/FT OF WIDTH

I = 0.544 IN^4/FT OF WIDTH

WEIGHT/FOOT = .290 LBS/FT OF BAR

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

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

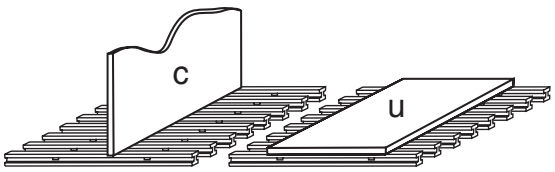
LOAD / DEFLECTION TABLE

I-6000 1¼” BEARING BARS

SPAN INCHES		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^6 PSI
12	Δu	0.001	0.001	0.002	0.002	0.003	0.003	0.005	0.006	0.009	0.012	0.023	0.035	0.047	0.058	14001	0.163	**3.55**
	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	0.075	0.093	7000	0.130	
18	Δu	0.003	0.005	0.008	0.011	0.014	0.016	0.022	0.027	0.041	0.055	0.110	0.164	0.219	0.274	6388	0.350	**3.82**
	Δc	0.003	0.006	0.009	0.012	0.015	0.018	0.023	0.029	0.044	0.058	0.117	0.175	0.234	0.292	4792	0.280	
24	Δu	0.008	0.016	0.025	0.033	0.041	0.049	0.065	0.082	0.123	0.163	0.327	0.490	0.654		3650	0.596	**4.05**
	Δc	0.007	0.013	0.020	0.026	0.033	0.039	0.052	0.065	0.098	0.131	0.261	0.392	0.523	0.654	3650	0.477	
30	Δu	0.019	0.038	0.058	0.077	0.096	0.115	0.154	0.192	0.288	0.384					2315	0.888	**4.21**
	Δc	0.012	0.025	0.037	0.049	0.061	0.074	0.098	0.123	0.184	0.246	0.491				2893	0.711	
36	Δu	0.039	0.077	0.116	0.154	0.193	0.231	0.308	0.385	0.578						1592	1.226	**4.35**
	Δc	0.021	0.041	0.062	0.082	0.103	0.123	0.164	0.205	0.308	0.411					2389	0.981	
42	Δu	0.070	0.139	0.209	0.279	0.349	0.418	0.558								1151	1.606	**4.45**
	Δc	0.032	0.064	0.096	0.128	0.159	0.191	0.255	0.319	0.478	0.638					2015	1.285	
48	Δu	0.116	0.233	0.349	0.465	0.582										868	2.020	**4.55**
	Δc	0.047	0.093	0.140	0.186	0.233	0.279	0.372	0.465							1735	1.615	
54	Δu	0.184	0.368	0.552												671	2.470	**4.61**
	Δc	0.065	0.131	0.196	0.262	0.327	0.392	0.523	0.654							1511	1.977	
60	Δu	0.277	0.555													531	2.944	**4.66**
	Δc	0.089	0.178	0.266	0.355	0.444	0.533									1327	2.355	

DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

c IS CONCENTRATED LOAD LBS/FT OF WIDTH
Δc IS DEFLECTION UNDER CONCENTRATED LOAD
u IS UNIFORM LOAD LBS/FT^2
Δu IS DEFLECTION UNDER UNIFORM LOAD

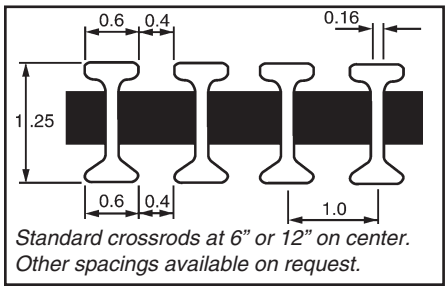


AVAILABLE WIDTHS (CENTERS 1.5”)

WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS
3”	2	13.5”	9	22.5”	15	33”	22	42”	28	52.5”	35
4.5”	3	15”	10	24”	16	34.5”	23	43.5”	29	54”	36
6”	4	16.5”	11	25.5”	17	36”	24	45”	30	55.5”	37
7.5”	5	18”	12	27”	18	37.5”	25	46.5”	31	57”	38
9”	6	19.5”	13	28.5”	19	39”	26	48”	32	58.5”	39
10.5”	7	21”	14	30”	20	40.5”	27	49.5”	33	60”	40
12”	8			31.5”	21			51”	34		

DURAGRID® I-4000 1¼”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
I-4000	1.250”	12	1.000”	.400”	40%	3.9 LBS PER SQ. FT.	FRVE	YELLOW OR GRAY



Standard crossrods at 6” or 12” on center.
Other spacings available on request.

A = 4.224 IN^2/FT OF WIDTH S = 1.306 IN^3/FT OF WIDTH

I = 0.816 IN^4/FT OF WIDTH

WEIGHT/FOOT = .290 LBS/FT OF BAR

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

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

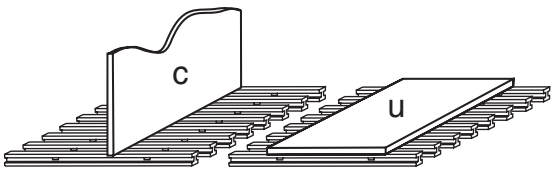
LOAD / DEFLECTION TABLE

I-4000 1¼” BEARING BARS

SPAN INCHES		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000	7000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^6 PSI
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	0.163	**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	10500	0.130	
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	0.350	**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	7187	0.280	
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	0.596	**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	5475	0.477	
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	0.888	**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				4340	0.711	
36	Δu	0.026	0.051	0.077	0.103	0.128	0.154	0.205	0.257	0.385	0.513							2388	1.226	**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						3583	0.981	
42	Δu	0.046	0.093	0.139	0.186	0.232	0.279	0.372	0.465	0.697								1727	1.606	**4.45**
	Δc	0.021	0.043	0.064	0.085	0.106	0.128	0.170	0.213	0.319	0.425							3023	1.285	
48	Δu	0.078	0.155	0.233	0.310	0.388	0.465	0.621										1302	2.020	**4.55**
	Δc	0.031	0.062	0.093	0.124	0.155	0.186	0.248	0.310	0.465	0.621							2603	1.615	
54	Δu	0.123	0.245	0.368	0.491	0.613	0.736											1007	2.470	**4.61**
	Δc	0.044	0.087	0.131	0.174	0.218	0.262	0.349	0.436	0.654								2267	1.977	
60	Δu	0.185	0.370	0.555	0.740													796	2.944	**4.66**
	Δc	0.059	0.118	0.178	0.237	0.296	0.355	0.473	0.592									1990	2.355	

DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

c IS CONCENTRATED LOAD LBS/FT OF WIDTH
Δc IS DEFLECTION UNDER CONCENTRATED LOAD
u IS UNIFORM LOAD LBS/FT^2
Δu IS DEFLECTION UNDER UNIFORM LOAD

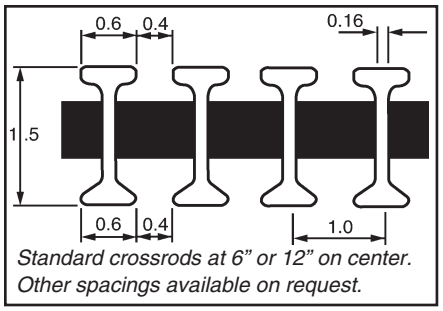


AVAILABLE WIDTHS (CENTERS 1”)

WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS
2”	2	11”	11	20”	20	29”	29	38”	38	47”	47	56”	56
3”	3	12”	12	21”	21	30”	30	39”	39	48”	48	57”	57
4”	4	13”	13	22”	22	31”	31	40”	40	49”	49	58”	58
5”	5	14”	14	23”	23	32”	32	41”	41	50”	50	59”	59
6”	6	15”	15	24”	24	33”	33	42”	42	51”	51	60”	60
7”	7	16”	16	25”	25	34”	34	43”	43	52”	52		
8”	8	17”	17	26”	26	35”	35	44”	44	53”	53		
9”	9	18”	18	27”	27	36”	36	45”	45	54”	54		
10”	10	19”	19	28”	28	37”	37	46”	46	55”	55		

DURAGRID® I-4000 1½”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
I-4000	1.500”	12	1.000”	.400”	40%	4.2 LBS PER SQ. FT.	FRPE OR FRVE	YELLOW OR GRAY



Standard crossrods at 6” or 12” on center.
Other spacings available on request.

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

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

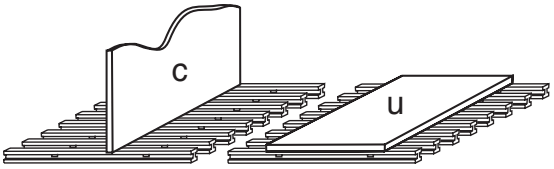
LOAD / DEFLECTION TABLE

I-4000 1½” BEARING BARS

SPAN INCHES		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000	7000	8000	9000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10⁶ PSI
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	13200	0.090	
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	8800	0.190	
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	6600	0.322	
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			5200	0.478	
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						4267	0.662	
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							3571	0.863	
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									3050	1.083	
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									2622	1.312	
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									2280	1.555	
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										2000	1.808	

DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

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

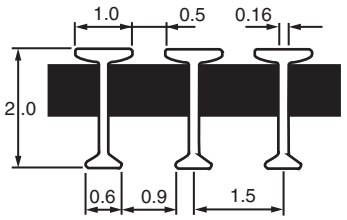


AVAILABLE WIDTHS (CENTERS 1”)

WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS
2”	2	11”	11	20”	20	29”	29	38”	38	47”	47	56”	56
3”	3	12”	12	21”	21	30”	30	39”	39	48”	48	57”	57
4”	4	13”	13	22”	22	31”	31	40”	40	49”	49	58”	58
5”	5	14”	14	23”	23	32”	32	41”	41	50”	50	59”	59
6”	6	15”	15	24”	24	33”	33	42”	42	51”	51	60”	60
7”	7	16”	16	25”	25	34”	34	43”	43	52”	52		
8”	8	17”	17	26”	26	35”	35	44”	44	53”	53		
9”	9	18”	18	27”	27	36”	36	45”	45	54”	54		
10”	10	19”	19	28”	28	37”	37	46”	46	55”	55		

DURAGRID® T-3300 2”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
T-3300	2.000”	8	1.500”	.500”	33%	3.9 LBS PER SQ. FT.	FRPE OR FRVE	YELLOW OR GRAY



Standard crossrods at 6” or 12” on center.
Other spacings available on request.

A = 4.338 IN^2/FT OF WIDTH S_T = 2.541 IN^3/FT OF WIDTH

I = 2.234 IN^4/FT OF WIDTH S_B = 1.994 IN^3/FT OF WIDTH

WEIGHT/FOOT = .446 LBS/FT OF BAR

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

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

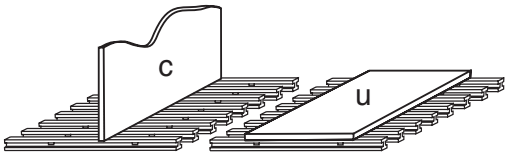
LOAD / DEFLECTION TABLE

T-3300 2” BEARING BARS

SPAN INCHES		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	2500	3000	4000	5000	6000	7000	8000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^6 PSI
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	7555	0.032	
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	7555	0.105	
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	7555	0.243	
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	6045	0.371	
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			5037	0.524	
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					4317	0.702	
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							3778	0.898	
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								3358	1.118	
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									3022	1.362	
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									2747	1.629	
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										2519	1.914	
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											2325	2.232	
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											2159	2.566	

DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

c IS CONCENTRATED LOAD LBS/FT OF WIDTH
Δc IS DEFLECTION UNDER CONCENTRATED LOAD
u IS UNIFORM LOAD LBS/FT^2
Δu IS DEFLECTION UNDER UNIFORM LOAD

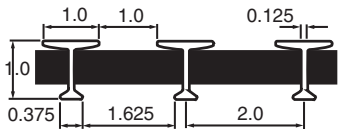


AVAILABLE WIDTHS (CENTERS 1.5”)

WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS
3”	2	13.5”	9	22.5”	15	33”	22	42”	28	52.5”	35
4.5”	3	15”	10	24”	16	34.5”	23	43.5”	29	54”	36
6”	4	16.5”	11	25.5”	17	36”	24	45”	30	55.5”	37
7.5”	5	18”	12	27”	18	37.5”	25	46.5”	31	57”	38
9”	6	19.5”	13	28.5”	19	39”	26	48”	32	58.5”	39
10.5”	7	21”	14	30”	20	40.5”	27	49.5”	33	60”	40
12”	8			31.5”	21			51”	34		

DURAGRID® ECONOMY 5000 1”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
ET-5000	1.000”	6	2.000”	1.00”	50%	1.6 LBS PER SQ. FT.	FRVE	GRAY



Standard crossrods at 6” on center.
Other spacings available on request.

A = 1.596 IN^2/FT OF WIDTH S_T = 0.530 IN^3/FT OF WIDTH
I = 0.197 IN^4/FT OF WIDTH S_B = 0.314 IN^3/FT OF WIDTH
WEIGHT/FOOT = .207 LBS/FT OF BAR
WEIGHT/FOOT = .186 LBS/FT OF CROSS ROD

The modulus of elasticity will vary with span length due to the non-homogeneous make-up of composite material (see table). Suggested max. span continuous 3’-0.

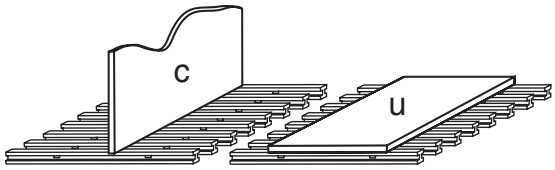
LOAD / DEFLECTION TABLE

ET-5000 1” BEARING BARS

SPAN INCHES		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^6 PSI
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	2383	0.146	
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	1609	0.321	
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		1221	0.558	
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			989	0.856	
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				834	1.210	
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						723	1.614	

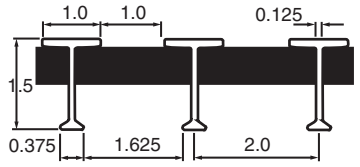
DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

c IS CONCENTRATED LOAD LBS/FT OF WIDTH
Δc IS DEFLECTION UNDER CONCENTRATED LOAD
u IS UNIFORM LOAD LBS/FT^2
Δu IS DEFLECTION UNDER UNIFORM LOAD



DURAGRID® ECONOMY 5000 1½”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
ET-5000	1.500”	6	2.000”	1.00”	50%	1.9 LBS PER SQ. FT.	FRVE	GRAY



Standard crossrods at 6” on center.
Other spacings available on request.

A = 1.968 IN^2/FT OF WIDTH S_T = 0.950 IN^3/FT OF WIDTH
I = 0.557 IN^4/FT OF WIDTH S_B = 0.609 IN^3/FT OF WIDTH
WEIGHT/FOOT = .250 LBS/FT OF BAR
WEIGHT/FOOT = .186 LBS./FT OF CROSS ROD

The modulus of elasticity will vary with span length due to the non-homogeneous make-up of composite material (see table). Suggested max. span continuous 4’-0.

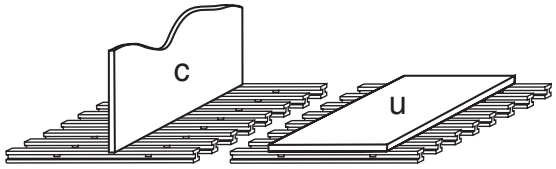
LOAD / DEFLECTION TABLE

ET-5000 1½” BEARING BARS

SPAN INCHES		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	2500	3000	4000	5000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^6 PSI
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	5161	0.114	
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	3482	0.253	
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	0.445	
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					2139	0.690	
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						1804	0.984	
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							1564	1.325	
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								1384	1.714	

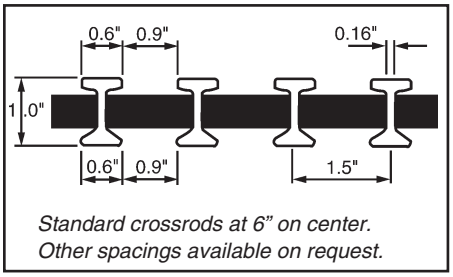
DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

c IS CONCENTRATED LOAD LBS/FT OF WIDTH
Δc IS DEFLECTION UNDER CONCENTRATED LOAD
u IS UNIFORM LOAD LBS/FT^2
Δu IS DEFLECTION UNDER UNIFORM LOAD



DURAGRID® PHENOLIC I-6000 1”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
I-6000	1.000”	8	1.500”	.900”	60%	2.5 LBS PER SQ. FT.	PHENOLIC	BROWN



Standard crossrods at 6” on center.
Other spacings available on request.

A = 2.472 IN²/FT OF WIDTH S = 0.620 IN³/FT OF WIDTH
I = 0.310 IN⁴/FT OF WIDTH

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

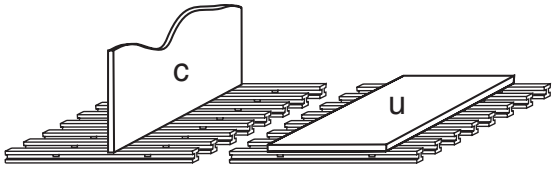
LOAD / DEFLECTION TABLE

PHENOLIC I-6000 1” BEARING BARS

SPAN INCHES		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000	7000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10⁶ PSI
12	Δu	0.001	0.002	0.002	0.003	0.004	0.005	0.007	0.008	0.012	0.016	0.033	0.049	0.066	0.082	0.099	0.115	10400	0.171	**4.41**
	Δc	0.001	0.003	0.004	0.005	0.007	0.008	0.011	0.013	0.020	0.026	0.053	0.079	0.105	0.132	0.158	0.184	5200	0.137	
18	Δu	0.004	0.008	0.011	0.015	0.019	0.023	0.030	0.038	0.057	0.076	0.152	0.228	0.304	0.380	0.456	0.531	4954	0.376	**4.84**
	Δc	0.004	0.008	0.012	0.016	0.020	0.024	0.032	0.040	0.061	0.081	0.162	0.243	0.324	0.405	0.486	0.567	3715	0.301	
24	Δu	0.011	0.023	0.034	0.045	0.056	0.068	0.090	0.113	0.169	0.226	0.452	0.678					2900	0.655	**5.14**
	Δc	0.009	0.018	0.027	0.036	0.045	0.054	0.072	0.090	0.136	0.181	0.361	0.542					2900	0.524	
30	Δu	0.026	0.053	0.079	0.105	0.131	0.158	0.210	0.263	0.394	0.525							1856	0.974	**5.40**
	Δc	0.017	0.034	0.050	0.067	0.084	0.101	0.134	0.168	0.252	0.336	0.672						2320	0.780	
36	Δu	0.052	0.104	0.157	0.209	0.261	0.313	0.418	0.522									1287	1.344	**5.63**
	Δc	0.028	0.056	0.084	0.111	0.139	0.167	0.223	0.278	0.418	0.557							1933	1.077	
42	Δu	0.096	0.191	0.287	0.383	0.479	0.574											942	1.803	**5.69**
	Δc	0.044	0.088	0.131	0.175	0.219	0.263	0.350	0.438	0.656								1649	1.443	
48	Δu	0.160	0.320	0.480	0.640													718	2.296	**5.81**
	Δc	0.064	0.128	0.192	0.256	0.320	0.384	0.512	0.640									1435	1.836	
54	Δu	0.255	0.511															566	2.889	**5.83**
	Δc	0.091	0.182	0.272	0.363	0.454	0.545											1274	2.312	
60	Δu	0.387																453	3.507	**5.86**
	Δc	0.124	0.248	0.372	0.495	0.619												1133	2.807	

DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

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

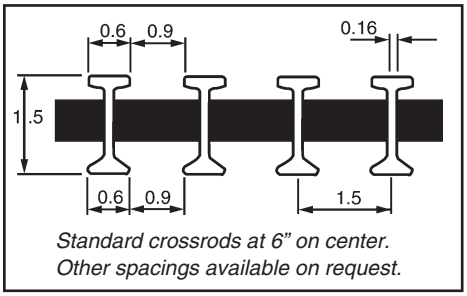


AVAILABLE WIDTHS (CENTERS 1.5”)

WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS
3”	2	13.5”	9	22.5”	15	33”	22	42”	28	52.5”	35
4.5”	3	15”	10	24”	16	34.5”	23	43.5”	29	54”	36
6”	4	16.5”	11	25.5”	17	36”	24	45”	30	55.5”	37
7.5”	5	18”	12	27”	18	37.5”	25	46.5”	31	57”	38
9”	6	19.5”	13	28.5”	19	39”	26	48”	32	58.5”	39
10.5”	7	21”	14	30”	20	40.5”	27	49.5”	33	60”	40
12”	8			31.5”	21			51”	34		

DURAGRID® PHENOLIC I-6000 1½”

SERIES	BEARING BAR THICKNESS	NO BARS FT. WIDTH	BEARING BAR CENTER	OPEN SPACE	% OPEN AREA	APPROX. WEIGHT	RESIN	COLOR
I-6000	1.500”	8	1.500”	.900”	60%	3.2 LBS PER SQ. FT.	PHENOLIC	BROWN



Standard crossrods at 6” on center.
Other spacings available on request.

A = 3.112 IN²/FT OF WIDTH S = 1.176 IN³/FT OF WIDTH
I = 0.882 IN⁴/FT OF WIDTH

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

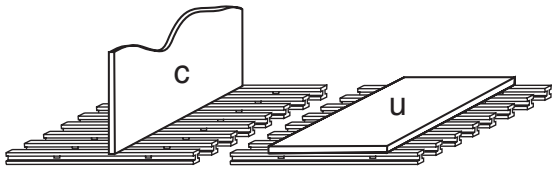
LOAD / DEFLECTION TABLE

PHENOLIC I-6000 1½” BEARING BARS

SPAN INCHES		LOAD 50	100	150	200	250	300	400	500	750	1000	2000	3000	4000	5000	6000	7000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10⁶ PSI
12	Δu	0.000	0.001	0.001	0.001	0.001	0.002	0.002	0.003	0.004	0.005	0.011	0.016	0.021	0.027	0.032	0.038	17601	0.095	**4.75**
	Δc	0.000	0.001	0.001	0.002	0.002	0.003	0.003	0.004	0.006	0.009	0.017	0.026	0.034	0.043	0.052	0.060	8800	0.076	
18	Δu	0.001	0.003	0.004	0.005	0.006	0.008	0.010	0.013	0.019	0.025	0.051	0.076	0.102	0.127	0.153	0.178	7823	0.199	**5.08**
	Δc	0.001	0.003	0.004	0.005	0.007	0.008	0.011	0.014	0.020	0.027	0.054	0.081	0.108	0.136	0.163	0.190	5867	0.159	
24	Δu	0.004	0.008	0.012	0.015	0.019	0.023	0.031	0.038	0.058	0.077	0.154	0.231	0.307	0.384	0.461	0.538	4400	0.338	**5.31**
	Δc	0.003	0.006	0.009	0.012	0.015	0.018	0.025	0.031	0.046	0.061	0.123	0.184	0.246	0.307	0.369	0.430	4400	0.271	
30	Δu	0.009	0.018	0.027	0.036	0.045	0.054	0.072	0.090	0.136	0.181	0.362	0.543					2773	0.502	**5.51**
	Δc	0.006	0.012	0.017	0.023	0.029	0.035	0.046	0.058	0.087	0.116	0.231	0.347	0.463	0.579			3467	0.401	
36	Δu	0.018	0.037	0.055	0.073	0.092	0.110	0.147	0.183	0.275	0.366							1896	0.695	**5.64**
	Δc	0.010	0.020	0.029	0.039	0.049	0.059	0.078	0.098	0.147	0.195	0.391	0.586					2845	0.556	
42	Δu	0.033	0.066	0.100	0.133	0.166	0.199	0.266	0.332	0.498								1361	0.904	**5.76**
	Δc	0.015	0.030	0.046	0.061	0.076	0.091	0.122	0.152	0.228	0.304	0.608						2381	0.723	
48	Δu	0.056	0.112	0.168	0.224	0.280	0.335	0.447	0.559									1017	1.137	**5.84**
	Δc	0.022	0.045	0.067	0.089	0.112	0.134	0.179	0.224	0.335	0.447							2033	0.910	
54	Δu	0.089	0.177	0.266	0.355	0.443	0.532											777	1.377	**5.90**
	Δc	0.032	0.063	0.095	0.126	0.158	0.189	0.252	0.315	0.473	0.630							1748	1.102	
60	Δu	0.134	0.268	0.403	0.537													608	1.632	**5.94**
	Δc	0.043	0.086	0.129	0.172	0.215	0.258	0.344	0.429	0.644								1520	1.306	
66	Δu	0.196	0.392	0.588														485	1.898	**5.96**
	Δc	0.057	0.114	0.171	0.228	0.285	0.342	0.456	0.570									1333	1.519	
72	Δu	0.276	0.552															390	2.153	**5.99**
	Δc	0.074	0.147	0.221	0.294	0.368	0.442	0.589										1171	1.724	

DEFLECTION AND SAFE LOAD DATA WAS CALCULATED FROM LAB TESTS CONDUCTED BY STRONGWELL - CHATFIELD DIVISION.

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



AVAILABLE WIDTHS (CENTERS 1.5”)

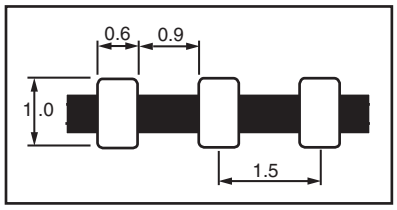
WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS	WIDTH	#BARS
3”	2	13.5”	9	22.5”	15	33”	22	42”	28	52.5”	35
4.5”	3	15”	10	24”	16	34.5”	23	43.5”	29	54”	36
6”	4	16.5”	11	25.5”	17	36”	24	45”	30	55.5”	37
7.5”	5	18”	12	27”	18	37.5”	25	46.5”	31	57”	38
9”	6	19.5”	13	28.5”	19	39”	26	48”	32	58.5”	39
10.5”	7	21”	14	30”	20	40.5”	27	49.5”	33	60”	40
12”	8			31.5”	21			51”	34		

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. Due to the variety of wheel types and loading, it is recommended that you contact Strongwell—Chatfield Division at (507) 867-3479 to determine the series of heavy duty grating needed for your application.

DURAGRID® HD-6000 1" Bearing Bar

A = 4.8 in^2/ft. of width I = 0.40 in^4/ft. of width S = 0.80 in^3/ft. of width



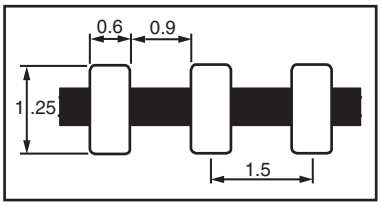
Multipliers for Series Other Than HD-6000
HD 5000 - Multiply Load Table Deflection by 0.80
HD 4000 - Multiply Load Table Deflection by 0.67

SPAN INCHES		LOAD 100	200	300	500	1000	2000	3000	4000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^6 PSI
12	Δu	0.001	0.002	0.003	0.006	0.011	0.022	0.033	0.044	4445	0.049	**5.08**
	Δc	0.002	0.004	0.005	0.009	0.018	0.035	0.053	0.071	4445	0.079	
18	Δu	0.005	0.010	0.015	0.025	0.050	0.099	0.149	0.199	4285	0.213	**5.73**
	Δc	0.005	0.011	0.016	0.027	0.053	0.106	0.159		3857	0.204	
24	Δu	0.015	0.031	0.046	0.077	0.154	0.309			2948	0.455	**5.83**
	Δc	0.012	0.025	0.037	0.062	0.123	0.247			2948	0.364	
30	Δu	0.037	0.074	0.111	0.185	0.369				1543	0.570	**5.95**
	Δc	0.024	0.047	0.071	0.118	0.236				1928	0.456	
36	Δu	0.076	0.152	0.228	0.380					1071	0.815	**5.99**
	Δc	0.041	0.081	0.122	0.203	0.406				1607	0.652	
42	Δu	0.140	0.280	0.421						787	1.104	**6.02**
	Δc	0.064	0.128	0.192	0.320	0.641				1377	0.883	
48	Δu	0.239	0.478							603	1.440	**6.03**
	Δc	0.096	0.191	0.287	0.478					1205	1.151	
54	Δu	0.380								476	1.809	**6.07**
	Δc	0.135	0.270	0.405	0.676					1071	1.447	

Series	Bar Width	Open Space	% Open Area	Approx Wt. (per sq. ft.)	I-in^4/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

DURAGRID® HD-6000 1-1/4" Bearing Bar

A = 6.0 in^2/ft. of width I = 0.781 in^4/ft. of width S = 1.24 in^3/ft. of width



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

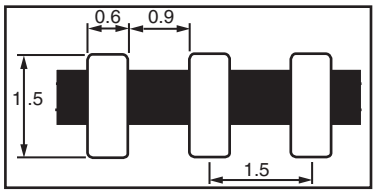
SPAN INCHES		LOAD 100	200	300	500	1000	2000	3000	4000	5000	6000	7000	8000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^6 PSI
12	Δu	0.001	0.001	0.002	0.003	0.006	0.013	0.019	0.025	0.032	0.038	0.044	0.051	13760	0.087	**4.56**
	Δc	0.001	0.002	0.003	0.005	0.010	0.020	0.030	0.040	0.051	0.061	0.071	0.081	13760	0.139	
18	Δu	0.003	0.005	0.008	0.013	0.027	0.053	0.080	0.107	0.134	0.160	0.187		7684	0.205	**5.46**
	Δc	0.003	0.006	0.009	0.014	0.028	0.057	0.085	0.114	0.142	0.171	0.199		7200	0.205	
24	Δu	0.008	0.016	0.024	0.040	0.080	0.161	0.241	0.322	0.402	0.483	0.563		7032	0.566	**5.73**
	Δc	0.006	0.013	0.019	0.032	0.064	0.129	0.193	0.257	0.322	0.386	0.450		7032	0.453	
30	Δu	0.019	0.038	0.057	0.095	0.190	0.381	0.571						4504	0.858	**5.91**
	Δc	0.012	0.024	0.037	0.061	0.122	0.244	0.366	0.487	0.609				5626	0.686	
36	Δu	0.039	0.078	0.117	0.196	0.392								3125	1.224	**5.96**
	Δc	0.021	0.042	0.063	0.104	0.209	0.418	0.626						4680	0.977	
42	Δu	0.072	0.144	0.216	0.360									2296	1.652	**6.01**
	Δc	0.033	0.066	0.099	0.164	0.329	0.658							4018	1.321	
48	Δu	0.122	0.243	0.365	0.609									1758	2.140	**6.06**
	Δc	0.049	0.097	0.146	0.243	0.487								3516	1.712	
54	Δu	0.195	0.390	0.585										1389	2.708	**6.06**
	Δc	0.069	0.139	0.208	0.347									3125	2.166	
60	Δu	0.296	0.591											1125	3.326	**6.09**
	Δc	0.095	0.189	0.284	0.473									2812	2.660	

Series	Bar Width	Open Space	% Open Area	Approx Wt.	I-in^4/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
HD 4000	.60	.40	40	8.5	1.172	1.88

STRONGWELL

DURAGRID® HD-6000 1-1/2" Bearing Bar

A = 7.2 in^2/ft. of width I = 1.35 in^4/ft. of width S = 1.80 in^3/ft. of width



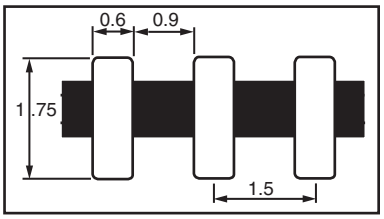
Multipliers for Series Other Than HD-6000
HD 5000 - Multiply Load Table Deflection by 0.80
HD 4000 - Multiply Load Table Deflection by 0.67

SPAN INCHES		LOAD 100	200	300	500	1000	2000	3000	4000	5000	6000	7000	8000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^6 PSI
12	Δu	0.000	0.001	0.001	0.002	0.005	0.009	0.014	0.019	0.023	0.028	0.033	0.037	18880	0.088	**3.58**
	Δc	0.001	0.001	0.002	0.004	0.007	0.015	0.022	0.030	0.037	0.045	0.052	0.060	18880	0.141	
18	Δu	0.002	0.004	0.005	0.009	0.018	0.035	0.053	0.070	0.088	0.106	0.123	0.141	9728	0.171	**4.79**
	Δc	0.002	0.004	0.006	0.009	0.019	0.038	0.056	0.075	0.094	0.113	0.132	0.150	9760	0.183	
24	Δu	0.005	0.010	0.015	0.026	0.051	0.103	0.154	0.205	0.256	0.308	0.359	0.410	9500	0.487	**5.20**
	Δc	0.004	0.008	0.012	0.021	0.041	0.082	0.123	0.164	0.205	0.246	0.287	0.328	9500	0.390	
30	Δu	0.012	0.024	0.036	0.060	0.120	0.240	0.360	0.480	0.599	0.719			6570	0.788	**5.43**
	Δc	0.008	0.015	0.023	0.038	0.077	0.153	0.230	0.307	0.384	0.460	0.537	0.614	8212	0.630	
36	Δu	0.025	0.049	0.074	0.123	0.246	0.492	0.783						4562	1.122	**5.49**
	Δc	0.013	0.026	0.039	0.066	0.131	0.262	0.393	0.525	0.656				6843	0.897	
42	Δu	0.045	0.090	0.135	0.225	0.449								3352	1.505	**5.57**
	Δc	0.021	0.041	0.062	0.103	0.205	0.411	0.616						5865	1.204	
48	Δu	0.076	0.152	0.228	0.380									2566	1.952	**5.61**
	Δc	0.030	0.061	0.091	0.152	0.304	0.608							5132	1.561	
54	Δu	0.121	0.242	0.364	0.606									2027	2.456	**5.64**
	Δc	0.043	0.086	0.129	0.215	0.431								4562	1.966	
60	Δu	0.185	0.369	0.554										1642	2.033	**5.64**
	Δc	0.059	0.118	0.177	0.296	0.591								4106	2.427	
66	Δu	0.269	0.537											1354	3.636	**5.68**
	Δc	0.078	0.156	0.234	0.391									3732	2.915	
72	Δu	0.380	0.761											1140	4.335	**5.68**
	Δc	0.101	0.203	0.304	0.507									3422	3.470	

Series	Bar Width	Open Space	% Open Area	Approx Wt.	I-in^4/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

DURAGRID® HD-6000 1-3/4" Bearing Bar

A = 8.4 in²/ft. of width I = 2.14 in⁴/ft. of width S = 2.45 in³/ft. of width



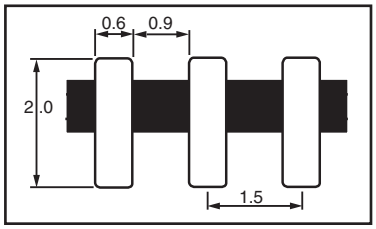
Multipliers for Series Other Than HD-6000
HD 5000 - Multiply Load Table Deflection by 0.80
HD 4000 - Multiply Load Table Deflection by 0.67

SPAN INCHES		LOAD 100	200	300	500	1000	2000	3000	4000	5000	6000	7000	8000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10⁶ PSI
12	Δu	0.000	0.001	0.001	0.002	0.004	0.007	0.011	0.014	0.018	0.021	0.025	0.029	19920	0.071	**2.95**
	Δc	0.000	0.001	0.002	0.003	0.006	0.011	0.017	0.023	0.029	0.034	0.040	0.046	19920	0.114	
18	Δu	0.001	0.002	0.004	0.006	0.012	0.023	0.035	0.047	0.059	0.070	0.082	0.094	15926	0.187	**4.53**
	Δc	0.001	0.003	0.004	0.006	0.013	0.025	0.038	0.050	0.063	0.075	0.088	0.100	12400	0.155	
24	Δu	0.003	0.007	0.010	0.016	0.033	0.065	0.098	0.131	0.164	0.196	0.229	0.262	12400	0.406	**5.14**
	Δc	0.003	0.005	0.008	0.013	0.026	0.052	0.079	0.105	0.131	0.157	0.183	0.209	12400	0.325	
30	Δu	0.007	0.015	0.022	0.037	0.075	0.149	0.224	0.298	0.373	0.447	0.522	0.596	9062	0.675	**5.51**
	Δc	0.005	0.010	0.014	0.024	0.048	0.095	0.143	0.191	0.239	0.286	0.334	0.382	11328	0.540	
36	Δu	0.015	0.030	0.045	0.076	0.151	0.303	0.454	0.605	0.756	0.908			6294	0.952	**5.63**
	Δc	0.008	0.016	0.024	0.040	0.081	0.161	0.242	0.323	0.403	0.484	0.565	0.645	9440	0.762	
42	Δu	0.027	0.055	0.082	0.137	0.275	0.550							4623	1.271	**5.74**
	Δc	0.013	0.025	0.038	0.063	0.126	0.251	0.377	0.503	0.628				8091	1.017	
48	Δu	0.046	0.093	0.139	0.232	0.464								3540	1.643	**5.80**
	Δc	0.019	0.037	0.056	0.093	0.186	0.371	0.557						7080	1.314	
54	Δu	0.074	0.148	0.221	0.369	0.738								2796	2.064	**5.84**
	Δc	0.026	0.052	0.079	0.131	0.262	0.525							6293	1.652	
60	Δu	0.113	0.225	0.338	0.563									2265	2.549	**5.84**
	Δc	0.036	0.072	0.108	0.180	0.360								5664	2.039	
66	Δu	0.164	0.327	0.491										1872	3.063	**5.88**
	Δc	0.048	0.095	0.143	0.238	0.476								5149	2.451	
72	Δu	0.231	0.463	0.694										1573	3.639	**5.89**
	Δc	0.062	0.123	0.185	0.308	0.617								4720	2.912	
78	Δu	0.313	0.626											1340	4.192	**6.00**
	Δc	0.077	0.154	0.231	0.385									4356	3.355	

Series	Bar Width	Open Space	% Open Area	Approx Wt.	I-in⁴/ft. of Width	S-in³/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

DURAGRID® HD-6000 2" Bearing Bar

A = 9.6 in²/ft. of width I = 3.20 in⁴/ft. of width S = 3.20 in³/ft. of width



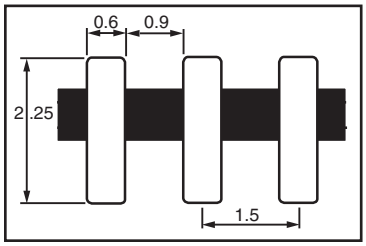
Multipliers for Series Other Than HD-6000
HD 5000 - Multiply Load Table Deflection by 0.80
HD 4000 - Multiply Load Table Deflection by 0.67

SPAN INCHES		LOAD 100	200	300	500	1000	2000	3000	4000	5000	6000	7000	8000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10⁶ PSI
12	Δu	0.000	0.001	0.001	0.002	0.003	0.006	0.009	0.012	0.015	0.018	0.021	0.024	15360	0.047	**2.32**
	Δc	0.000	0.001	0.001	0.002	0.005	0.010	0.015	0.019	0.024	0.029	0.034	0.039	15360	0.074	
18	Δu	0.001	0.002	0.003	0.005	0.009	0.018	0.028	0.037	0.046	0.055	0.064	0.074	13500	0.124	**3.87**
	Δc	0.001	0.002	0.003	0.005	0.010	0.020	0.029	0.039	0.049	0.059	0.069	0.078	13500	0.132	
24	Δu	0.002	0.005	0.007	0.012	0.024	0.049	0.073	0.098	0.122	0.146	0.171	0.195	13000	0.317	**4.61**
	Δc	0.002	0.004	0.006	0.010	0.020	0.039	0.059	0.078	0.098	0.117	0.137	0.156	13000	0.254	
30	Δu	0.005	0.011	0.016	0.027	0.054	0.108	0.162	0.215	0.269	0.323	0.377	0.431	9946	0.536	**5.10**
	Δc	0.003	0.007	0.010	0.017	0.034	0.069	0.103	0.138	0.172	0.207	0.241	0.276	12432	0.428	
36	Δu	0.011	0.022	0.032	0.054	0.108	0.216	0.324	0.431	0.539	0.647			6880	0.742	**5.28**
	Δc	0.006	0.012	0.017	0.029	0.058	0.115	0.173	0.230	0.288	0.345	0.403	0.460	10320	0.594	
42	Δu	0.019	0.039	0.058	0.097	0.194	0.387	0.581	0.774					5112	0.990	**5.45**
	Δc	0.009	0.018	0.027	0.044	0.089	0.177	0.266	0.354	0.443	0.531	0.620	0.708	8880	1.786	
48	Δu	0.033	0.066	0.099	0.164	0.328	0.657							3860	1.268	**5.48**
	Δc	0.013	0.026	0.039	0.066	0.131	0.263	0.394	0.526	0.657				7770	1.021	
54	Δu	0.052	0.104	0.156	0.259	0.519								3070	1.592	**5.56**
	Δc	0.018	0.037	0.055	0.092	0.184	0.369	0.553						6907	1.274	
60	Δu	0.079	0.158	0.236	0.394									2485	1.957	**5.58**
	Δc	0.025	0.050	0.076	0.126	0.252	0.504							6216	1.567	
66	Δu	0.114	0.228	0.342	0.570									2054	2.343	**5.64**
	Δc	0.033	0.066	0.100	0.166	0.332	0.664							5650	1.875	
72	Δu	0.161	0.323	0.484	0.806									1726	2.784	**5.65**
	Δc	0.043	0.086	0.129	0.215	0.430								5180	2.228	
78	Δu	0.221	0.443	0.664										1471	3.256	**5.67**
	Δc	0.054	0.109	0.163	0.272	0.545								4781	2.605	
84	Δu	0.296	0.592											1269	3.758	**5.70**
	Δc	0.068	0.135	0.203	0.338	0.677								4440	3.006	

Series	Bar Width	Open Space	% Open Area	Approx Wt.	I-in⁴/ft. of Width	S-in³/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

DURAGRID® HD-6000 2-1/4" Bearing Bar

A = 10.8 in²/ft. of width I = 4.56 in⁴/ft. of width S = 4.05 in³/ft. of width



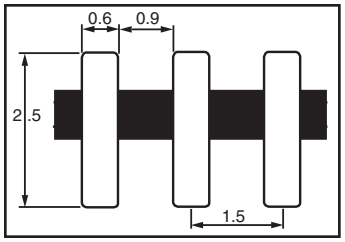
Multipliers for Series Other Than HD-6000
HD 5000 - Multiply Load Table Deflection by 0.80
HD 4000 - Multiply Load Table Deflection by 0.67

SPAN INCHES		LOAD 100	200	300	500	1000	2000	3000	4000	5000	6000	7000	8000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10⁶ PSI
12	Δu	0.000	0.000	0.001	0.001	0.002	0.005	0.007	0.010	0.012	0.015	0.017	0.019	20960	0.051	**2.03**
	Δc	0.000	0.001	0.001	0.002	0.004	0.008	0.012	0.016	0.019	0.023	0.027	0.031	20960	0.082	
18	Δu	0.001	0.001	0.002	0.004	0.007	0.014	0.021	0.028	0.035	0.042	0.050	0.057	16640	0.118	**3.53**
	Δc	0.001	0.002	0.002	0.004	0.008	0.015	0.023	0.030	0.038	0.045	0.053	0.060	16640	0.126	
24	Δu	0.002	0.003	0.005	0.009	0.017	0.035	0.052	0.070	0.087	0.105	0.122	0.139	16000	0.279	**4.53**
	Δc	0.001	0.003	0.004	0.007	0.014	0.028	0.042	0.056	0.070	0.084	0.098	0.112	16000	0.223	
30	Δu	0.004	0.008	0.011	0.019	0.038	0.076	0.114	0.152	0.190	0.228	0.266	0.304	12800	0.486	**5.08**
	Δc	0.002	0.005	0.007	0.012	0.024	0.049	0.073	0.097	0.121	0.146	0.170	0.194	16000	0.389	
36	Δu	0.007	0.015	0.022	0.037	0.075	0.149	0.224	0.299	0.374	0.448	0.523	0.598	10720	0.801	**5.35**
	Δc	0.004	0.008	0.012	0.020	0.040	0.080	0.120	0.159	0.199	0.239	0.279	0.319	16000	0.637	
42	Δu	0.013	0.027	0.040	0.067	0.134	0.268	0.402	0.536	0.669				7876	1.055	**5.53**
	Δc	0.006	0.012	0.018	0.031	0.061	0.122	0.184	0.245	0.306	0.367	0.428	0.490	13783	0.844	
48	Δu	0.022	0.045	0.067	0.112	0.224	0.447	0.671						6030	1.348	**5.65**
	Δc	0.009	0.018	0.027	0.045	0.089	0.179	0.268	0.358	0.447	0.537	0.626		12060	1.078	
54	Δu	0.035	0.070	0.106	0.176	0.352								4764	1.679	**5.74**
	Δc	0.013	0.025	0.038	0.063	0.125	0.251	0.376	0.501	0.627				10720	1.344	
60	Δu	0.053	0.107	0.160	0.267	0.534								3859	2.063	**5.77**
	Δc	0.017	0.034	0.051	0.086	0.171	0.342	0.513	0.684					9648	1.650	
66	Δu	0.078	0.155	0.233	0.388									3789	2.939	**5.82**
	Δc	0.023	0.045	0.068	0.113	0.226	0.451	0.677						8771	1.979	
72	Δu	0.109	0.219	0.328	0.547									2680	2.935	**5.84**
	Δc	0.029	0.058	0.088	0.146	0.292	0.584							8040	2.348	
78	Δu	0.151	0.301	0.452										2283	3.437	**5.85**
	Δc	0.037	0.074	0.111	0.185	0.371								7421	2.750	
84	Δu	0.201	0.403	0.604										1954	3.937	**5.88**
	Δc	0.046	0.092	0.138	0.230	0.461								6841	3.150	
90	Δu	0.265	0.529											1715	4.538	**5.90**
	Δc	0.056	0.113	0.169	0.282	0.565								6432	3.631	
96	Δu	0.341	0.683											1507	5.145	**5.92**
	Δc	0.068	0.137	0.205	0.341	0.683								6030	4.117	

Series	Bar Width	Open Space	% Open Area	Approx Wt.	I-in⁴/ft. of Width	S-in³/ft. of Width
HD 6000	.60	.90	60	10.1	4.56	4.05
HD 5000	.60	.60	50	12.4	5.70	5.06
HD 4000	.60	.40	40	14.7	6.83	6.07

DURAGRID® HD-6000 2-1/2" Bearing Bar

A = 12.0 in^2/ft. of width I = 6.25 in^4/ft. of width S = 5.00 in^3/ft. of width



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

SPAN INCHES		LOAD 100	200	300	500	1000	2000	3000	4000	5000	6000	7000	8000	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^6 PSI
12	Δu	0.000	0.000	0.001	0.001	0.002	0.004	0.007	0.009	0.011	0.013	0.016	0.018	22400	0.050	**1.61**
	Δc	0.000	0.001	0.001	0.002	0.004	0.007	0.011	0.014	0.018	0.021	0.025	0.029	22400	0.080	
18	Δu	0.001	0.001	0.002	0.003	0.006	0.012	0.018	0.023	0.029	0.035	0.041	0.047	17640	0.103	**3.11**
	Δc	0.001	0.001	0.002	0.003	0.006	0.013	0.019	0.025	0.031	0.038	0.044	0.050	19600	0.123	
24	Δu	0.001	0.003	0.004	0.007	0.014	0.029	0.043	0.057	0.071	0.086	0.100	0.114	13716	0.196	**4.03**
	Δc	0.001	0.002	0.003	0.006	0.011	0.023	0.034	0.046	0.057	0.069	0.080	0.091	15240	0.174	
30	Δu	0.003	0.006	0.009	0.015	0.030	0.060	0.091	0.121	0.151	0.181	0.211	0.241	11800	0.356	**4.66**
	Δc	0.002	0.004	0.006	0.010	0.019	0.039	0.058	0.077	0.097	0.116	0.135	0.155	14750	0.285	
36	Δu	0.006	0.012	0.017	0.029	0.058	0.117	0.175	0.233	0.292	0.350	0.408	0.467	9493	0.554	**5.00**
	Δc	0.003	0.006	0.009	0.016	0.031	0.062	0.093	0.124	0.156	0.187	0.218	0.249	14240	0.443	
42	Δu	0.010	0.021	0.031	0.051	0.103	0.206	0.309	0.412	0.515	0.617			6975	0.718	**5.25**
	Δc	0.005	0.009	0.014	0.024	0.047	0.094	0.141	0.188	0.235	0.282	0.329	0.376	12206	0.574	
48	Δu	0.017	0.034	0.052	0.086	0.172	0.344	0.516	0.688					5340	0.918	**5.36**
	Δc	0.007	0.014	0.021	0.034	0.069	0.138	0.206	0.275	0.344	0.413	0.481	0.550	10680	0.735	
54	Δu	0.027	0.054	0.081	0.135	0.270	0.541							4419	1.195	**5.46**
	Δc	0.010	0.019	0.029	0.048	0.096	0.192	0.288	0.385	0.481	0.577	0.673		9943	0.956	
60	Δu	0.041	0.082	0.123	0.204	0.408								3417	1.395	**5.51**
	Δc	0.013	0.026	0.039	0.065	0.131	0.261	0.392	0.523	0.653				8544	1.116	
66	Δu	0.059	0.119	0.178	0.297	0.594								2824	1.676	**5.55**
	Δc	0.017	0.035	0.052	0.086	0.173	0.345	0.518	0.691					7767	1.341	
72	Δu	0.084	0.168	0.252	0.420									2374	1.992	**5.56**
	Δc	0.022	0.045	0.067	0.112	0.224	0.448	0.671						7120	1.593	
78	Δu	0.115	0.230	0.345	0.575									2022	2.324	**5.59**
	Δc	0.028	0.057	0.085	0.141	0.283	0.566	0.849						6572	1.860	
84	Δu	0.154	0.308	0.461										1744	2.682	**5.62**
	Δc	0.035	0.070	0.105	0.176	0.352	0.703							6103	2.145	
90	Δu	0.202	0.404	0.606										1519	3.068	**5.64**
	Δc	0.043	0.086	0.129	0.215	0.431								5696	2.454	
96	Δu	0.260	0.520											1335	3.472	**5.67**
	Δc	0.052	0.104	0.156	0.260	0.520								5340	2.777	
102	Δu	0.330	0.659											1182	3.897	**5.70**
	Δc	0.062	0.124	0.186	0.310	0.621								5026	3.119	

Series	Bar Width	Open Space	% Open Area	Approx Wt.	I-in^4/ft. of Width	S-in^3/ft. of Width
HD 6000	.60	.90	60	11.1	6.25	5.00
HD 5000	.60	.60	50	13.7	7.81	6.25
HD 4000	.60	.40	40	16.3	9.38	7.50