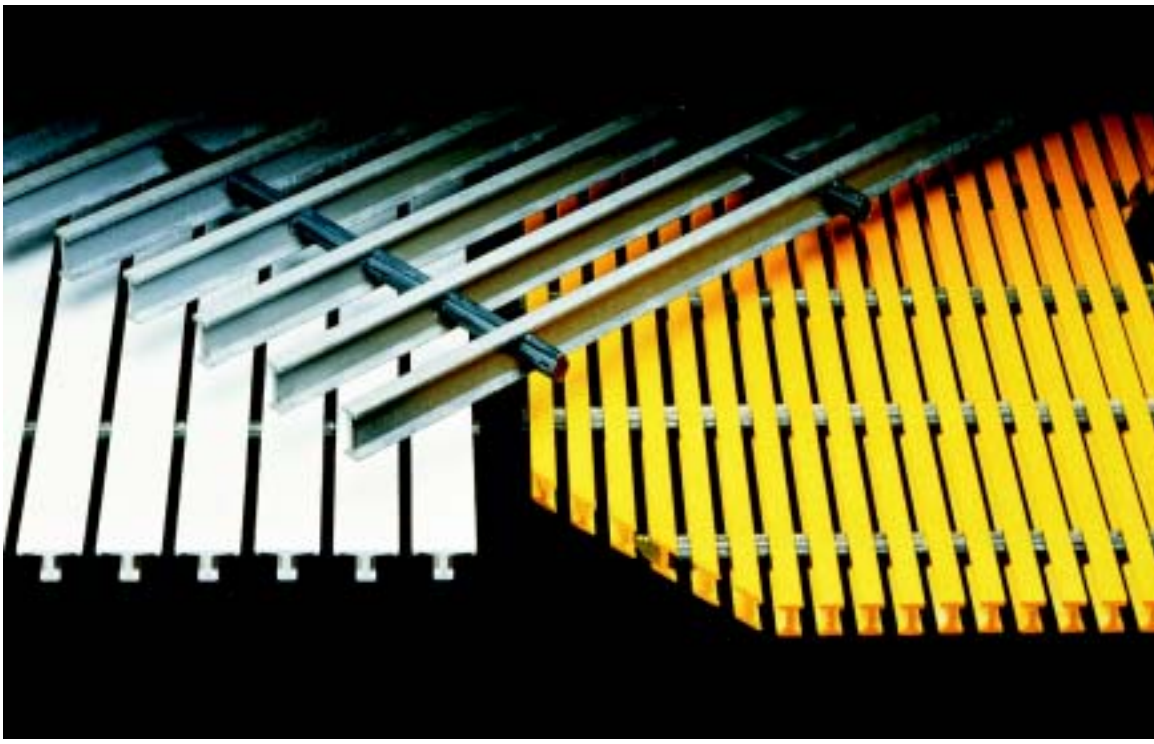
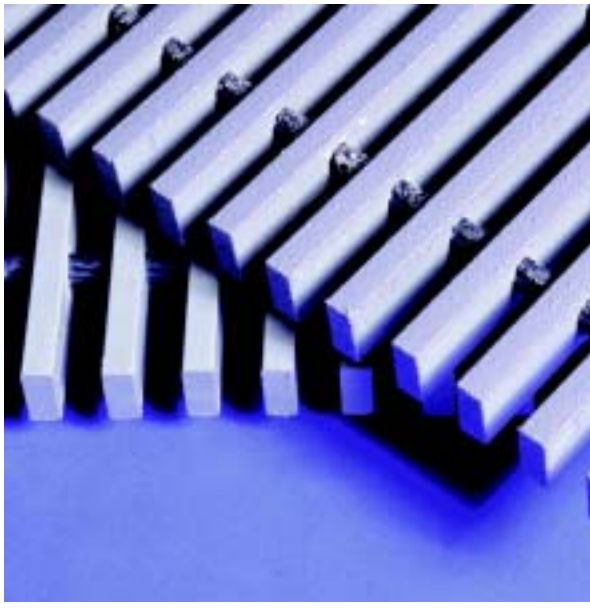
STRONGWELL

FIBERGLASS GRATING

DURA DEK® and DURA GRID® PULTRUDED GRATING





International Version

High Strength Pultruded Fiberglass Grating

Top: DURADEK® and DURAGRID® *fiberglass grating provide safe, corrosion-resistant walkways and work platforms around caustic chemical storage tanks 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 with 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 plant 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.

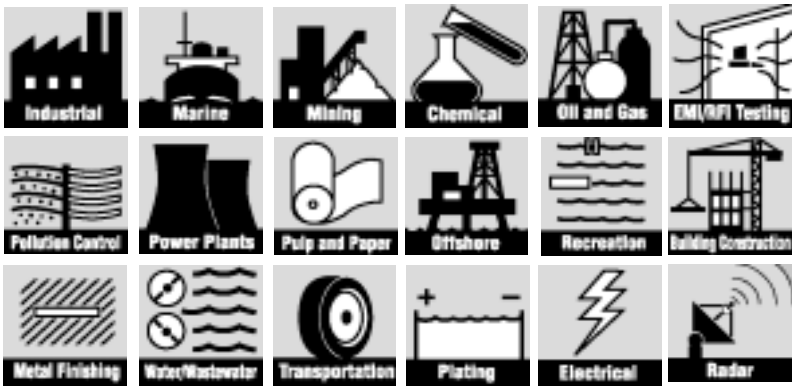
Why Use DURADEK® or DURAGRID® Grating?

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

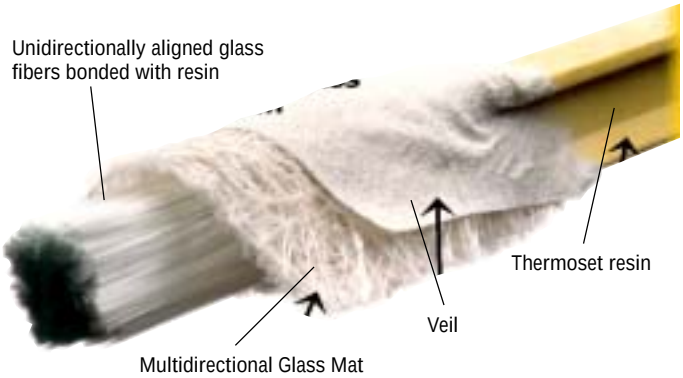
Features

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

Materials of Construction



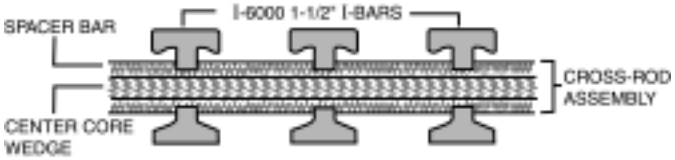
DURADEK® and DURAGRID® fiberglass grating are a composite of fiberglass reinforcements (fibers and mat) and a thermosetting resin system, produced by the pultrusion process. The pultrusion manufacturing process produces many of the outstanding characteristics of the product.



The bearing bars use both longitudinal (glass roving) and multidirectional (glass mat) reinforcements as well as a synthetic surfacing veil to provide unequaled 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 *Strongwell Grating Field Fabrication Guide.*

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 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. Due to 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 Class 1 flame rating of 25 or less per ASTM E-84 and meets the self-extinguishing requirements of ASTM D-635. It 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.

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

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

Above: 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.

Above: 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.

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

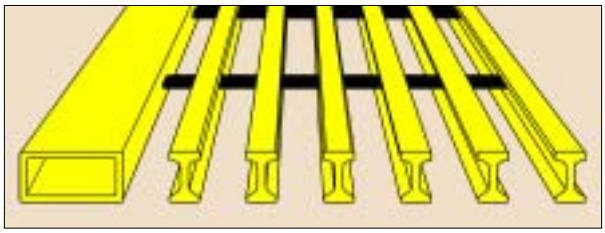
Swimming pool trough covers of white polyester DURAGRID® T-1800 1" grating have narrow spacings that allow water to flow through while still being safe to walk on with bare feet.

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

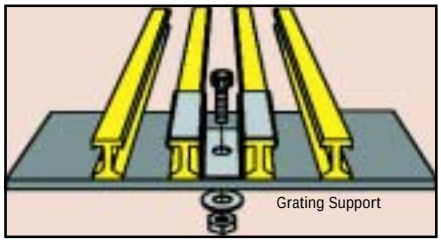
Nosings for Stair Treads and Landings

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 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.

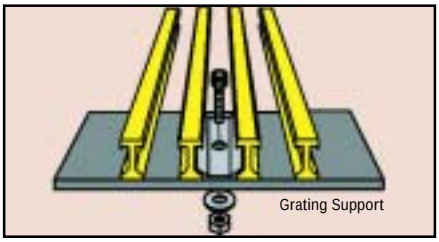


TREAD WIDTH & COLOR	STAIR TREAD SERIES	MAXIMUM SPAN FOR 300 LBS. AT MIDSPAN 1/8" OR LESS DEFLECTION	1/4" OR LESS DEFLECTION
11" Gray or Yellow	I-6000 1"	29"	37"
11" Gray or Yellow	I-6000 1-1/2"	40"	52"
12" Gray or Yellow	T-5000 2"	47"	59"

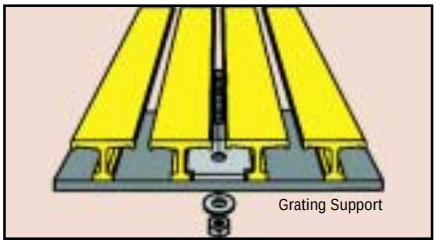
Panel Hold Downs



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.*



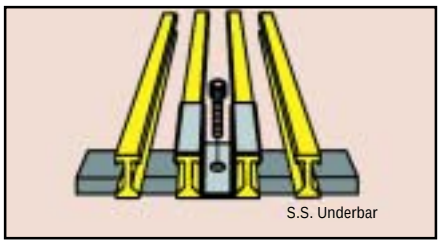
Weldable 316L stainless steel insert clips are available for all grating series, except the T-1800 and T-3500 series.
**Bolts are priced separately from the hold-down.*



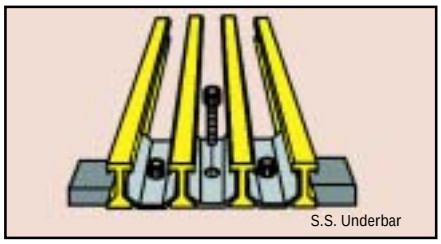
Weldable 316L stainless steel insert clips are available for series T-1800 and T-3500 only.
**Bolts are priced separately from the hold-down.*
(All bolts are 1/4-20 x 1-1/4", cap head, 316 stainless steel.)

Panel Connectors

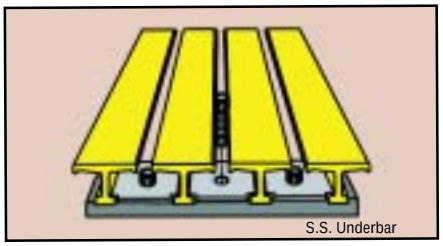
Panel Connectors are generally only used at midspan to assist in transferring load from section to section.



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



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

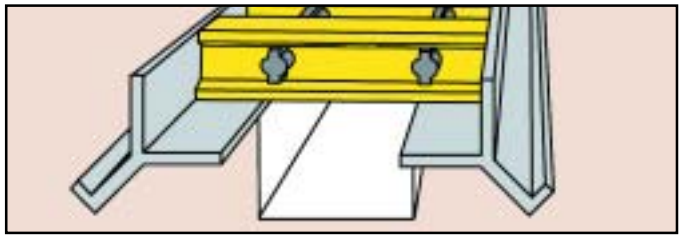


Insert clip hold-downs are available for T-1800 and T-3500 grating.

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

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, non-conducting 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 for the section shown.

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.

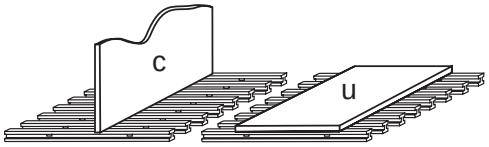
Load Table Values

All tables show typical values.

Load Data

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

c is Concentrated Load KN/m of width
Δc is Deflection under Concentrated Load
u is Uniform Load KN/m²
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.

NOTE: *Fiberglass grating is produced in English units, i.e. inches and feet. To assist design engineers, load and deflection data has been converted to metric units.*

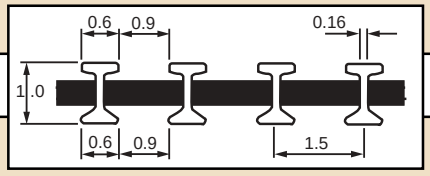
DURADEK® High Strength Fiberglass Grating

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 = 5.282 x 10^3 mm^2/m S = 3.526 x 10^4 mm^3/m I = 4.478 x 10^5 mm^4/m
60% OPEN AREA APPROX. WT. = 11.73 kg/m^2

SPAN mm		LOAD (u = KN/m² c = KN/m) 3	5	8	10	13	15	20	25	39	50	100	150	200	250	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m^2
400	Δu	0.08	0.14	0.22	0.27	0.35	0.41	0.54	0.68	1.06	1.35	2.71	4.06	5.41	6.77	289	7.81	**2.75**
	Δc	0.32	0.54	0.87	1.08	1.41	1.62	2.17	2.71	4.22	5.41	10.83				57	6.21	
600	Δu	0.37	0.62	0.99	1.24	1.61	1.86	2.48	3.10	4.83	6.20	12.40				139	17.19	**3.04**
	Δc	0.99	1.65	2.64	3.31	4.30	4.96	6.61	8.26	12.89						42	13.88	
800	Δu	1.11	1.84	2.95	3.69	4.79	5.53	7.37	9.22	14.38						80	29.50	**3.23**
	Δc	2.21	3.69	5.90	7.37	9.59	11.06	14.75								32	23.60	
1000	Δu	2.61	4.35	6.96	8.71	11.32	13.06									51	44.69	**3.34**
	Δc	4.18	6.96	11.14	13.93											25	35.29	
1200	Δu	5.29	8.82	14.10												34	59.95	**3.42**
	Δc	7.05	11.75													21	48.58	

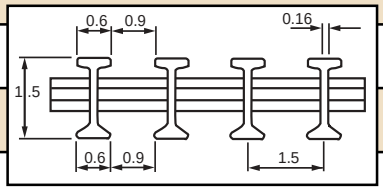


NOTE: When a 5 kilonewton per square meter uniform load is placed upon a 1080mm simple span, it will produce a deflection of 6mm at midspan.

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

A = 6.636 x 10^3 mm²/m S = 6.664 x 10^4 mm³/m I = 1.267 x 10^6 mm⁴/m
60% OPEN AREA APPROX. WT. = 14.27 kg/m²

SPAN mm		LOAD (u = KN/m² c = KN/m) 3	5	8	10	13	15	20	25	39	50	100	150	200	250	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m²
400	Δu	0.03	0.05	0.08	0.10	0.13	0.15	0.19	0.24	0.38	0.48	0.97	1.45	1.93	2.42	489	4.73	**2.72**
	Δc	0.12	0.19	0.31	0.39	0.50	0.58	0.77	0.97	1.51	1.93	3.87	5.80	7.74	9.67	97	3.77	
600	Δu	0.14	0.23	0.37	0.46	0.60	0.69	0.92	1.14	1.79	2.29	4.58	6.87	9.15	11.44	211	9.64	**2.91**
	Δc	0.37	0.61	0.98	1.22	1.59	1.83	2.44	3.05	4.76	6.10	12.21				64	7.81	
800	Δu	0.41	0.69	1.10	1.38	1.79	2.06	2.75	3.44	5.36	6.88	13.76				120	16.51	**3.06**
	Δc	0.83	1.38	2.20	2.75	3.58	4.13	5.50	6.88	10.73	13.76					48	13.21	
1000	Δu	0.99	1.64	2.63	3.28	4.27	4.93	6.57	8.21	12.81						75	24.74	**3.13**
	Δc	1.58	2.63	4.20	5.25	6.83	7.88	10.51	13.13							37	19.61	
1200	Δu	2.00	3.33	5.33	6.66	8.66	9.99	13.32								49	32.41	**3.20**
	Δc	2.66	4.44	7.10	8.88	11.54	13.32									29	26.05	
1400	Δu	3.64	6.07	9.72	12.15	15.79										35	42.92	**3.25**
	Δc	4.16	6.94	11.11	13.88											25	34.25	
1600	Δu	6.18	10.30													26	53.55	**3.27**
	Δc	6.18	10.30													21	42.57	
1800	Δu	9.84														20	65.59	**3.29**
	Δc	8.74	14.57													18	52.47	

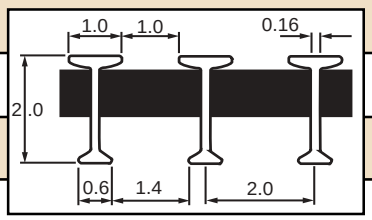


NOTE: When a 5 kilonewton per square meter uniform load is placed upon a 1390mm simple span, it will produce a deflection of 6mm at midspan.

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

A = 6.881 x 10^3 mm²/m S_T = 1.024 x 10^5 mm³/m S_B = 8.035 x 10^4 mm³/m I = 2.288 x 10^6 mm⁴/m
50%OPEN AREA APPROX. WT. = 14.65 kg/m²

SPAN mm		LOAD (u = KN/m² c = KN/m) 3	5	8	10	13	15	20	25	39	50	100	150	200	250		SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m²
600	Δu	0.08	0.14	0.22	0.27	0.35	0.41	0.54	0.68	1.05	1.35	2.70	4.05	5.40	6.75		271	7.32	**2.73**
	Δc	0.22	0.36	0.58	0.72	0.94	1.08	1.44	1.80	2.81	3.60	7.20	10.81	14.41			82	5.91	
800	Δu	0.25	0.41	0.65	0.82	1.06	1.23	1.64	2.04	3.19	4.09	8.18	12.27				157	12.84	**2.85**
	Δc	0.49	0.82	1.31	1.64	2.13	2.45	3.27	4.09	6.38	8.18						63	10.31	
1000	Δu	0.58	0.97	1.56	1.95	2.53	2.92	3.90	4.87	7.60	9.74						100	19.49	**2.92**
	Δc	0.94	1.56	2.49	3.12	4.05	4.68	6.24	7.80	12.16	15.59						50	15.59	
1200	Δu	1.19	1.98	3.17	3.96	5.15	5.94	7.92	9.90	15.44							67	26.53	**2.98**
	Δc	1.58	2.64	4.22	5.28	6.86	7.92	10.56	13.20								41	21.65	
1400	Δu	2.15	3.58	5.73	7.17	9.32	10.75	14.34									51	36.56	**3.05**
	Δc	2.46	4.10	6.55	8.19	10.65	12.29										36	29.49	
1600	Δu	3.61	6.02	9.62	12.03	15.64											39	46.92	**3.10**
	Δc	3.61	6.02	9.62	12.03	15.64											31	37.30	
1800	Δu	5.69	9.48	15.17													31	58.79	**3.15**
	Δc	5.06	8.43	13.49													27	45.52	
2000	Δu	8.54	14.23														25	71.14	**3.20**
	Δc	6.83	11.38														25	56.91	



NOTE: When a 5 kilonewton per square meter uniform load is placed upon a 1600mm simple span, it will produce a deflection of 6mm at midspan.

DURAGRID® - Custom grating systems are made to specific requirements. The following load tables are the most popular.

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

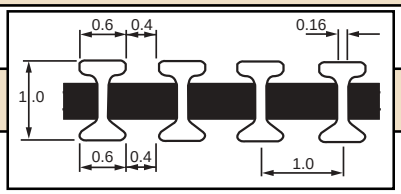
A = 7.922 x 10^3 mm^2/m S = 5.289 x 10^4 mm^3/m I = 6.717 x 10^5 mm^4/m

APPROX. WT. = 16.61 kg/m^2

WEIGHT/FOOT = .378 kg/m of bar

WEIGHT/FOOT = .278 kg/m of cross rod

SPAN mm		LOAD (u = KN/m^2 c = KN/m) 3	5	8	10	13	15	20	25	39	50	100	150	200	250	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m^2
400	Δu	0.05	0.09	0.14	0.18	0.23	0.27	0.36	0.45	0.70	0.90	1.80	2.71	3.61	4.51	433	7.81	**2.75**
	Δc	0.22	0.36	0.58	0.72	0.94	1.08	1.44	1.80	2.82	3.61	7.22	10.83	14.44		86	6.21	
600	Δu	0.25	0.41	0.66	0.83	1.07	1.24	1.65	2.07	3.22	4.13	8.26	12.40			208	17.19	**3.04**
	Δc	0.66	1.10	1.76	2.20	2.86	3.31	4.41	5.51	8.59	11.02					63	13.88	
800	Δu	0.74	1.23	1.97	2.46	3.20	3.69	4.92	6.15	9.59	12.29					120	29.50	**3.23**
	Δc	1.47	2.46	3.93	4.92	6.39	7.37	9.83	12.29							48	23.60	
1000	Δu	1.74	2.90	4.64	5.80	7.55	8.71	11.61	14.51							77	44.69	**3.34**
	Δc	2.79	4.64	7.43	9.29	12.07	13.93									38	35.29	
1200	Δu	3.53	5.88	9.40	11.75	15.28										51	59.94	**3.42**
	Δc	4.70	7.84	12.54	15.67											31	48.58	
1400	Δu	6.48	10.79													39	84.18	**3.45**
	Δc	7.40	12.33													27	66.61	



*(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

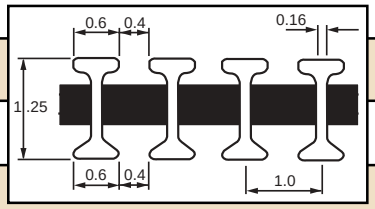
A = 8.938 x 10^3 mm^2/m S = 7.019 x 10^4 mm^3/m I = 1.114 x 10^6 mm^4/m

APPROX. WT. = 18.81 kg/m^2

WEIGHT/FOOT = .434 kg/m of bar

WEIGHT/FOOT = .278 kg/m of cross rod

SPAN mm		LOAD (u = KN/m^2 c = KN/m) 3	5	8	10	13	15	20	25	39	50	100	150	200	250	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m^2
400	Δu	0.04	0.06	0.09	0.12	0.15	0.18	0.23	0.29	0.46	0.58	1.17	1.75	2.34	2.92	583	6.81	**2.56**
	Δc	0.14	0.23	0.37	0.47	0.61	0.70	0.94	1.17	1.82	2.34	4.68	7.01	9.35	11.69	116	5.42	
600	Δu	0.16	0.27	0.44	0.55	0.71	0.82	1.09	1.37	2.13	2.73	5.47	8.20	10.94	13.67	262	14.33	**2.77**
	Δc	0.44	0.73	1.17	1.46	1.90	2.19	2.92	3.65	5.69	7.29	14.58				79	11.52	
800	Δu	0.49	0.82	1.31	1.63	2.12	2.45	3.27	4.08	6.37	8.17					150	24.51	**2.93**
	Δc	0.98	1.63	2.61	3.27	4.25	4.90	6.54	8.17	12.75						60	19.61	
1000	Δu	1.16	1.93	3.09	3.86	5.01	5.79	7.72	9.64	15.04						95	36.65	**3.03**
	Δc	1.85	3.09	4.94	6.17	8.02	9.26	12.34	15.43							47	29.01	
1200	Δu	2.32	3.87	6.19	7.74	10.07	11.62	15.49								62	48.01	**3.13**
	Δc	3.10	5.16	8.26	10.32	13.42	15.49									38	39.23	
1400	Δu	4.20	6.99	11.19	13.99											46	64.35	**3.21**
	Δc	4.80	7.99	12.79	15.99											32	51.16	
1600	Δu	7.14	11.89													34	80.88	**3.22**
	Δc	7.14	11.89													27	64.23	



*(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 = 9.954 x 10^3 mm^2/m S = 1.00 x 10^5 mm^3/m

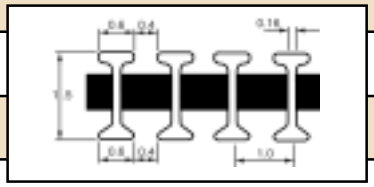
I = 1.9 x 10^6 mm^4/m

APPROX. WT. = 20.52 kg/m^2

WEIGHT/FOOT = .213 kg/m of bar

WEIGHT/FOOT = .278 kg/m of cross rod

SPAN mm		LOAD (u = KN/m² c = KN/m) 3	5	8	10	13	15	20	25	39	50	100	150	200	250	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m²
400	Δu	0.02	0.03	0.05	0.06	0.08	0.10	0.13	0.16	0.25	0.32	0.64	0.97	1.29	1.61	734	4.73	**2.72**
	Δc	0.08	0.13	0.21	0.26	0.34	0.39	0.52	0.64	1.01	1.29	2.58	3.87	5.16	6.45	146	3.77	
600	Δu	0.09	0.15	0.24	0.31	0.40	0.46	0.61	0.76	1.19	1.53	3.05	4.58	6.10	7.63	316	9.64	**2.91**
	Δc	0.24	0.41	0.65	0.81	1.06	1.22	1.63	2.03	3.17	4.07	8.14	12.21			96	7.81	
800	Δu	0.28	0.46	0.73	0.92	1.19	1.38	1.83	2.29	3.58	4.59	9.17	13.76			180	16.51	**3.06**
	Δc	0.55	0.92	1.47	1.83	2.39	2.75	3.67	4.59	7.16	9.17					72	13.21	
1000	Δu	0.66	1.09	1.75	2.19	2.85	3.28	4.38	5.47	8.54	10.95					113	24.74	**3.13**
	Δc	1.05	1.75	2.80	3.50	4.55	5.25	7.01	8.76	13.66						56	19.62	
1200	Δu	1.33	2.22	3.55	4.44	5.77	6.66	8.88	11.10							73	32.42	**3.20**
	Δc	1.78	2.96	4.74	5.92	7.70	8.88	11.84	14.80							44	26.05	
1400	Δu	2.43	4.05	6.48	8.10	10.53	12.15									53	42.93	**3.25**
	Δc	2.78	4.63	7.41	9.26	12.04	13.89									37	34.25	
1600	Δu	4.12	6.87	10.99	13.73											39	53.57	**3.27**
	Δc	4.12	6.87	10.99	13.73											31	42.58	
1800	Δu	6.56	10.93													30	65.60	**3.29**
	Δc	5.83	9.72	15.55												27	52.48	



*(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-3500	**2.400"**	**0.83**

OR MULTIPLES OF ABOVE

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

A = 6.031 x 10^3 mm^2/m I = 4.178 x 10^5 mm^4/m

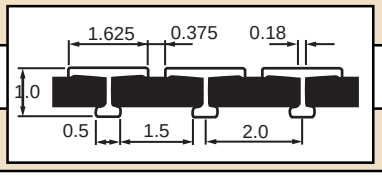
S_t = 4.853 x 10^4 mm^3/m S_b = 2.49 x 10^4 mm^3/m

APPROX. WT. = 12.75 kg/m^2

WEIGHT/FOOT = .558 kg/m of bar

WEIGHT/FOOT = .278 kg/m of cross rod

SPAN mm		LOAD (u = KN/m² c = KN/m) 3	5	8	10	13	15	20	25	39	50	100	150	200	250	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m²
400	Δu	0.10	0.17	0.27	0.33	0.43	0.50	0.67	0.83	1.30	1.67	3.34	5.01	6.68	8.35	296	9.88	**2.39**
	Δc	0.40	0.67	1.07	1.34	1.74	2.00	2.67	3.34	5.21	6.68	13.35				59	7.88	
600	Δu	0.46	0.77	1.24	1.55	2.01	2.32	3.10	3.87	6.04	7.74	15.48				127	19.65	**2.61**
	Δc	1.24	2.06	3.30	4.13	5.36	6.19	8.25	10.32							38	15.68	
800	Δu	1.38	2.30	3.67	4.59	5.97	6.89	9.18	11.48							73	33.52	**2.78**
	Δc	2.76	4.59	7.35	9.18	11.94	13.78									23	21.12	
1000	Δu	3.22	5.37	8.60	10.75	13.97										46	49.43	**2.90**
	Δc	5.16	8.60	13.76												23	39.55	
1200	Δu	6.44	10.73													29	62.26	**3.01**
	Δc	8.59	14.31													18	51.53	



*(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 = 9.179 x 10^3 mm^2/m I = 3.05 x 10^6 mm^4/m

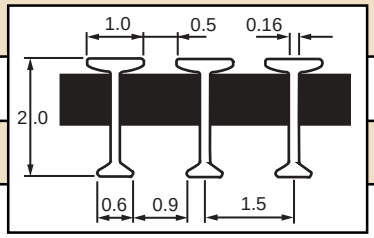
S_t = 1.366 x 10^4 mm^3/m S_b = 1.072 x 10^5 mm^3/m

APPROX. WT. = 19.25 kg/m^2

WEIGHT/FOOT = .667 kg/m of bar

WEIGHT/FOOT = .278 kg/m of cross rod

SPAN mm		LOAD (u = KN/m^2 c = KN/m) 3	5	8	10	13	15	20	25	39	50	100	150	200	250	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m^2
600	Δu	0.06	0.10	0.16	0.20	0.26	0.30	0.41	0.51	0.79	1.01	2.03	3.04	4.05	5.07	361	7.32	**2.73**
	Δc	0.16	0.27	0.43	0.54	0.70	0.81	1.08	1.35	2.11	2.70	5.40	8.11	10.81	13.51	109	5.91	
800	Δu	0.18	0.31	0.49	0.61	0.80	0.92	1.23	1.53	2.39	3.07	6.14	9.20	12.27	15.34	209	12.84	**2.85**
	Δc	0.37	0.61	0.98	1.23	1.60	1.84	2.45	3.07	4.79	6.14	12.27				84	10.31	
1000	Δu	0.44	0.73	1.17	1.46	1.90	2.19	2.92	3.66	5.70	7.31	14.62				133	19.49	**2.92**
	Δc	0.70	1.17	1.87	2.34	3.04	3.51	4.68	5.85	9.12	11.70					67	15.59	
1200	Δu	0.89	1.49	2.38	2.97	3.86	4.46	5.94	7.43	11.59	14.85					89	26.53	**2.98**
	Δc	1.19	1.98	3.17	3.96	5.15	5.94	7.92	9.90	15.45						55	21.65	
1400	Δu	1.61	2.69	4.30	5.38	6.99	8.07	10.75	13.44							68	36.56	**3.05**
	Δc	1.84	3.07	4.92	6.15	7.99	9.22	12.29	15.36							48	29.49	
1600	Δu	2.71	4.51	7.22	9.03	11.73	13.54									52	46.92	**3.10**
	Δc	2.71	4.51	7.22	9.03	11.73	13.54									41	37.29	
1800	Δu	4.27	7.11	11.38	14.23											41	58.79	**3.15**
	Δc	3.79	6.32	10.12	12.65											36	45.52	
2000	Δu	6.40	10.67													33	71.13	**3.20**
	Δc	5.12	8.54	13.66												33	56.91	



*(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 = 3.377 x 10^3 mm^2/m I = 2.69 x 10^5 mm^4/m

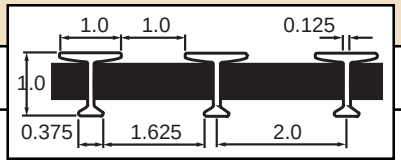
S_t = 2.848 x 10^4 mm^3/m S_b = 1.69 x 10^4 mm^3/m

APPROX. WT. = 7.92 kg/m^2

WEIGHT/FOOT = .310 kg/m of bar

WEIGHT/FOOT = .278 kg/m of cross rod

SPAN mm		LOAD (u = KN/m^2 c = KN/m) 3	5	8	10	13	15	20	25	39	50	100	150	200	250	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m^2
400	Δu	0.18	0.30	0.47	0.59	0.77	0.89	1.18	1.48	2.30	2.95	5.90	8.85	11.80	14.75	132	7.79	**2.10**
	Δc	0.71	1.18	1.89	2.36	3.07	3.54	4.72	5.90	9.21	11.80					26	6.14	
600	Δu	0.86	1.44	2.30	2.88	3.74	4.32	5.76	7.19	11.22	14.39					58	16.69	**2.18**
	Δc	2.30	3.84	6.14	7.67	9.98	11.51	15.35								17	13.05	
800	Δu	2.60	4.33	6.93	8.66	11.26	12.99									34	29.44	**2.29**
	Δc	5.19	8.66	13.85												13	22.51	
1000	Δu	6.10	10.17													22	44.74	**2.38**
	Δc	9.76														11	35.79	



*(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 = 4.164 x 10^3 mm^2/m I = 7.604 x 10^5 mm^4/m

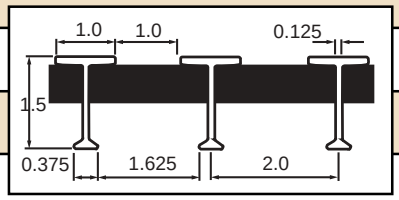
S_t = 5.106 x 10^4 mm^3/m S_b = 3.27 x 10^4 mm^3/m

APPROX. WT. = 9.28 kg/m^2

WEIGHT/FOOT = .374 kg/m of bar

WEIGHT/FOOT = .278 kg/m of cross rod

SPAN mm		LOAD (u = KN/m^2 c = KN/m) 3	5	8	10	13	15	20	25	39	50	100	150	200	250	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m^2
400	Δu	0.06	0.11	0.17	0.21	0.28	0.32	0.43	0.53	0.83	1.07	2.14	3.21	4.28	5.35	287	6.14	**2.05**
	Δc	0.26	0.43	0.68	0.86	1.11	1.28	1.71	2.14	3.34	4.28	8.55	12.83			57	4.88	
600	Δu	0.32	0.53	0.84	1.05	1.37	1.58	2.10	2.63	4.10	5.26	10.52	15.78			126	13.25	**2.11**
	Δc	0.84	1.40	2.24	2.80	3.65	4.21	5.61	7.01	10.94	14.02					38	10.66	
800	Δu	0.97	1.62	2.60	3.25	4.22	4.87	6.49	8.12	12.66						74	24.03	**2.16**
	Δc	1.95	3.25	5.20	6.49	8.44	9.74	12.99								29	18.83	
1000	Δu	2.30	3.84	6.14	7.68	9.98	11.52	15.36								48	36.86	**2.23**
	Δc	3.69	6.14	9.83	12.29	15.97										24	29.49	
1200	Δu	4.63	7.72	12.35	15.44											33	50.95	**2.30**
	Δc	6.18	10.29													20	41.17	
1400	Δu	8.33	13.88													25	69.39	**2.37**
	Δc	9.52	15.86													17	53.93	



*(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. 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.

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

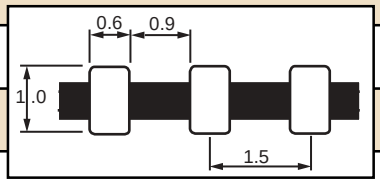
All load table values meet the flexural properties with a factor of safety of 2.5 and meet the shear properties with a factor of safety of 3.0.

DURAGRID® HD-6000 1" Bearing Bar

A = 1.016 x 10^4 mm^2/m I = 5.46 x 10^5 mm^4/m S = 4.3 x 10^4 mm^3/m

APPROX. WT. = 24 kg/m^2

SPAN mm		LOAD (u = KN/m^2 c = KN/m) 5	10	15	25	50	100	150	200	250	300	350	400	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m^2
400	Δu	0.08	0.16	0.24	0.40	0.80	1.61	2.41	3.21	4.02	4.82	5.62	6.43	250	4.02	**3.80**
	Δc	0.32	0.64	0.96	1.61	3.21	6.43	9.64	12.85					88	5.66	
600	Δu	0.39	0.78	1.17	1.95	3.90	7.80	11.71	15.61					189	14.75	**3.96**
	Δc	1.04	2.08	3.12	5.20	10.41								57	11.86	
800	Δu	1.20	2.41	3.61	6.01	12.03								110	26.47	**4.06**
	Δc	2.41	4.81	7.22	12.03									44	21.17	
1000	Δu	2.91	5.82	8.72	14.54									70	40.72	**4.10**
	Δc	4.65	9.31	13.96										35	32.57	
1200	Δu	6.00	12.00											47	56.41	**4.12**
	Δc	8.00	16.00											28	44.81	
1400	Δu	11.04												35	77.26	**4.15**
	Δc	12.61												25	63.07	



Series	Bar Width	Open Space	% Open Area	Approx Wt.	x10^5 mm^4/m of Width	x10^4 mm^3/m of Width
HD 6000	.60	.90	60	24	5.46	4.30
HD 5000	.60	.60	50	29	6.83	5.38
HD 4000	.60	.40	40	34	8.19	6.45

Multipliers for Series Other Than HD-6000

HD 5000 - Multiply Load Table Deflection by 0.80

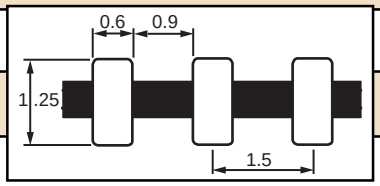
HD 4000 - Multiply Load Table Deflection by 0.67

DURAGRID® HD-6000 1-1/4" Bearing Bar

A = 1.27 x 10^4 mm^2/m I = 1.066 x 10^6 mm^4/m S = 6.66 x 10^4 mm^3/m

APPROX. WT. = 28.8 kg/m^2

SPAN mm		LOAD (u = KN/m^2 c = KN/m) 5	10	15	25	50	100	150	200	250	300	350	400	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m^2
400	Δu	0.04	0.09	0.13	0.21	0.43	0.86	1.29	1.71	2.14	2.57	3.00	3.43	417	3.57	**3.65**
	Δc	0.17	0.34	0.51	0.86	1.71	3.43	5.14	6.85	8.57	10.28	11.99	13.71	155	5.31	
600	Δu	0.20	0.40	0.60	1.00	2.01	4.02	6.03	8.04	10.04	12.05	14.06		336	13.50	**3.94**
	Δc	0.54	1.07	1.61	2.68	5.36	10.71							102	10.93	
800	Δu	0.63	1.26	1.89	3.14	6.29	12.57							195	24.51	**3.98**
	Δc	1.26	2.51	3.77	6.29	12.57								78	19.61	
1000	Δu	1.53	3.05	4.58	7.63	15.27								125	38.17	**4.00**
	Δc	2.44	4.89	7.33	12.21									57	27.85	
1200	Δu	3.13	6.25	9.38	15.63									84	52.53	**4.05**
	Δc	4.17	8.34	12.51										51	42.53	
1400	Δu	5.74	11.47											63	72.28	**4.09**
	Δc	6.56	13.11											44	57.69	
1600	Δu	9.71												48	93.26	**4.12**
	Δc	9.71												39	75.78	



Series	Bar Width	Open Space	% Open Area	Approx Wt.	x10^6 mm^4/m of Width	x10^4 mm^3/m of Width
HD 6000	.60	.90	60	29	1.066	6.66
HD 5000	.60	.60	50	35	1.33	8.33
HD 4000	.60	.40	40	42	1.60	9.99

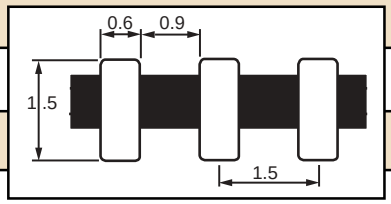
Multipliers for Series Other Than HD-6000
HD 5000 - Multiply Load Table Deflection by 0.80
HD 4000 - Multiply Load Table Deflection by 0.67

DURAGRID® HD-6000 1-1/2" Bearing Bar

A = 1.524 x 10^4 mm^2/m I = 1.843 x 10^6 mm^4/m S = 9.67 x 10^4 mm^3/m

APPROX. WT. = 34.2 kg/m^2

SPAN mm		LOAD (u = KN/m^2 c = KN/m) 5	10	15	25	50	100	150	200	250	300	350	400	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m^2
400	Δu	0.03	0.05	0.08	0.13	0.26	0.52	0.79	1.05	1.31	1.57	1.83	2.10	583	3.06	**3.45**
	Δc	0.10	0.21	0.31	0.52	1.05	2.10	3.15	4.19	5.24	6.29	7.34	8.39	233	4.89	
600	Δu	0.12	0.24	0.35	0.59	1.18	2.36	3.54	4.72	5.90	7.08	8.26	9.44	502	11.85	**3.88**
	Δc	0.31	0.63	0.94	1.57	3.15	6.29	9.44	12.59	15.73				153	9.63	
800	Δu	0.36	0.73	1.09	1.82	3.64	7.27	10.91	14.54					292	21.23	**3.98**
	Δc	0.73	1.45	2.18	3.64	7.27	14.54							117	17.01	
1000	Δu	0.88	1.76	2.64	4.39	8.79								187	32.86	**4.02**
	Δc	1.41	2.81	4.22	7.03	14.06								93	26.15	
1200	Δu	1.81	3.62	5.43	9.04									126	45.58	**4.05**
	Δc	2.41	4.82	7.23	12.06									76	36.66	
1400	Δu	3.33	6.65	9.98										95	63.20	**4.08**
	Δc	3.80	7.60	11.40										66	50.18	
1600	Δu	5.63	11.27											73	82.24	**4.11**
	Δc	5.63	11.27											58	65.34	
1800	Δu	8.96	17.91											57	102.11	**4.14**
	Δc	7.96	15.92											52	82.80	



Series	Bar Width	Open Space	% Open Area	Approx Wt.	x10^6 mm^4/m of Width	x10^4 mm^3/m of Width
HD 6000	.60	.90	60	34	1.843	9.67
HD 5000	.60	.60	50	42	2.304	12.09
HD 4000	.60	.40	40	49	2.765	14.51

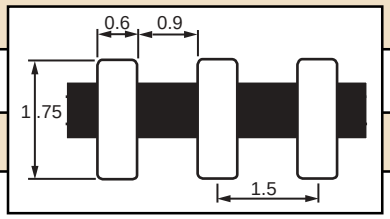
Multipliers for Series Other Than HD-6000
HD 5000 - Multiply Load Table Deflection by 0.80
HD 4000 - Multiply Load Table Deflection by 0.67

DURAGRID® HD-6000 1-3/4" Bearing Bar

A = 1.777 x 10^4 mm^2/m I = 2.922 x 10^6 mm^4/m S = 1.317 x 10^5 mm^3/m

APPROX. WT. = 39.1 kg/m^2

SPAN mm		LOAD (u = KN/m^2 c = KN/m) 5	10	15	25	50	100	150	200	250	300	350	400	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m^2
400	Δu	0.02	0.03	0.05	0.08	0.17	0.33	0.50	0.66	0.83	0.99	1.16	1.33	1167	3.87	**3.44**
	Δc	0.07	0.13	0.20	0.33	0.66	1.33	1.99	2.65	3.32	3.98	4.64	5.31	363	4.82	
600	Δu	0.08	0.16	0.24	0.40	0.80	1.60	2.41	3.21	4.01	4.81	5.61	6.42	782	12.54	**3.60**
	Δc	0.21	0.43	0.64	1.07	2.14	4.28	6.42	8.56	10.69	12.83	14.97		238	10.18	
800	Δu	0.24	0.48	0.73	1.21	2.42	4.84	7.26	9.68	12.10	14.52			454	21.98	**3.77**
	Δc	0.48	0.97	1.45	2.42	4.84	9.68	14.52						181	17.53	
1000	Δu	0.57	1.14	1.71	2.84	5.68	11.37							290	32.97	**3.92**
	Δc	0.91	1.82	2.73	4.55	9.09								145	26.37	
1200	Δu	1.16	2.32	3.48	5.80	11.61								195	45.27	**3.98**
	Δc	1.55	3.10	4.64	7.74	15.48								119	36.84	
1400	Δu	2.12	4.24	6.36	10.59									148	62.71	**4.04**
	Δc	2.42	4.84	7.26	12.11									103	49.88	
1600	Δu	3.56	7.12	10.68										113	80.49	**4.10**
	Δc	3.56	7.12	10.68										90	64.11	
1800	Δu	5.64	11.27											89	100.32	**4.15**
	Δc	5.01	10.02											80	80.16	
2000	Δu	8.53												74	126.22	**4.18**
	Δc	6.82	13.65											73	99.61	



Series	Bar Width	Open Space	% Open Area	Approx Wt.	x10^6 mm^4/m of Width	x10^5 mm^3/m of Width
HD 6000	.60	.90	60	39	2.922	1.317
HD 5000	.60	.60	50	48	3.653	1.646
HD 4000	.60	.40	40	57	4.383	1.976

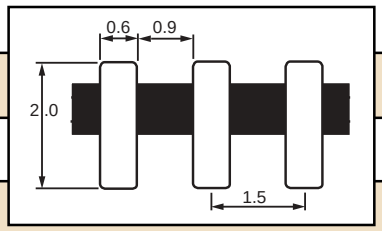
Multipliers for Series Other Than HD-6000
HD 5000 - Multiply Load Table Deflection by 0.80
HD 4000 - Multiply Load Table Deflection by 0.67

DURAGRID® HD-6000 2" Bearing Bar

A = 2.031 x 10^4 mm^2/m I = 4.369 x 10^6 mm^4/m S = 1.72 x 10^5 mm^3/m

APPROX. WT. = 44 kg/m^2

SPAN mm		LOAD (u = KN/m^2 c = KN/m) 5	10	15	25	50	100	150	200	250	300	350	400	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m^2
600	Δu	0.05	0.11	0.16	0.27	0.55	1.10	1.65	2.19	2.74	3.29	3.84	4.39	1021	11.20	**3.52**
	Δc	0.15	0.29	0.44	0.73	1.46	2.93	4.39	5.85	7.32	8.78	10.24	11.70	311	9.10	
800	Δu	0.16	0.32	0.48	0.80	1.61	3.21	4.82	6.42	8.03	9.64	11.24	12.85	593	19.05	**3.80**
	Δc	0.32	0.64	0.96	1.61	3.21	6.42	9.64	12.85					237	15.23	
1000	Δu	0.38	0.76	1.15	1.91	3.82	7.64	11.46	15.28					379	28.96	**3.90**
	Δc	0.61	1.22	1.83	3.06	6.11	12.23							189	23.11	
1200	Δu	0.79	1.57	2.36	3.93	7.86	15.72							255	40.10	**3.93**
	Δc	1.05	2.10	3.14	5.24	10.48								155	32.50	
1400	Δu	1.45	2.91	4.36	7.26	14.53								193	56.08	**3.94**
	Δc	1.66	3.32	4.98	8.30									135	44.83	
1600	Δu	2.47	4.93	7.40	12.33									148	73.00	**3.96**
	Δc	2.47	4.93	7.40	12.33									118	58.20	
1800	Δu	3.93	7.86	11.79										117	91.97	**3.98**
	Δc	3.49	6.99	10.48										105	73.37	
2000	Δu	5.98	11.95											96	114.73	**3.99**
	Δc	4.78	9.56	14.34										95	90.83	



Series	Bar Width	Open Space	% Open Area	Approx Wt.	x10^6 mm^4/m of Width	x10^5 mm^3/m of Width
HD 6000	.60	.90	60	44	4.369	1.72
HD 5000	.60	.60	50	54	5.461	2.15
HD 4000	.60	.40	40	70	6.554	2.58

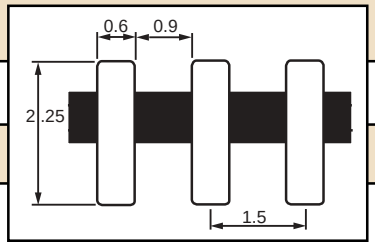
Multipliers for Series Other Than HD-6000
HD 5000 - Multiply Load Table Deflection by 0.80
HD 4000 - Multiply Load Table Deflection by 0.67

DURAGRID® HD-6000 2-1/4" Bearing Bar

A = 2.285 x 10^4 mm^2/m I = 6.225 x 10^6 mm^4/m S = 2.177 x 10^5 mm^3/m

APPROX. WT. = 49.3 kg/m^2

SPAN mm		LOAD (u = KN/m^2 c = KN/m) 5	10	15	25	50	100	150	200	250	300	350	400	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m^2
600	Δu	0.04	0.08	0.12	0.20	0.40	0.80	1.21	1.61	2.01	2.41	2.82	3.22	1293	10.40	**3.37**
	Δc	0.11	0.21	0.32	0.54	1.07	2.15	3.22	4.29	5.36	6.44	7.51	8.58	394	8.45	
800	Δu	0.12	0.23	0.35	0.58	1.15	2.30	3.45	4.61	5.76	6.91	8.06	9.21	750	17.27	**3.72**
	Δc	0.23	0.46	0.69	1.15	2.30	4.61	6.91	9.21	11.52	13.82			300	13.82	
1000	Δu	0.27	0.54	0.81	1.35	2.70	5.39	8.09	10.78	13.48				480	25.88	**3.88**
	Δc	0.43	0.86	1.29	2.16	4.31	8.63	12.94						240	20.70	
1200	Δu	0.55	1.10	1.65	2.75	5.50	11.01							323	35.56	**3.94**
	Δc	0.73	1.47	2.20	3.67	7.34	14.68							197	28.92	
1400	Δu	1.01	2.02	3.04	5.06	10.12								245	49.59	**3.97**
	Δc	1.16	2.31	3.47	5.78	11.57								171	39.56	
1600	Δu	1.72	3.44	5.15	8.59									187	64.25	**3.99**
	Δc	1.72	3.44	5.15	8.59									149	51.19	
1800	Δu	2.74	5.48	8.21	13.69									148	81.04	**4.01**
	Δc	2.43	4.87	7.30	12.17									133	64.74	
2000	Δu	4.15	8.30	12.46										122	101.32	**4.03**
	Δc	3.32	6.64	9.97										121	80.39	



Series	Bar Width	Open Space	% Open Area	Approx Wt.	x10^6 mm^4/m of Width	x10^5 mm^3/m of Width
HD 6000	.60	.90	60	49	6.775	2.177
HD 5000	.60	.60	50	61	7.781	2.721
HD 4000	.60	.40	40	72	9.338	3.266

Multipliers for Series Other Than HD-6000

HD 5000 - Multiply Load Table Deflection by 0.80

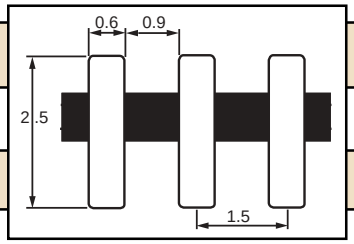
HD 4000 - Multiply Load Table Deflection by 0.67

DURAGRID® HD-6000 2-1/2" Bearing Bar

A = 2.539 x 10^4 mm^2/m I = 8.533 x 10^6 mm^4/m S = 2.687 x 10^5 mm^3/m

APPROX. WT. = 54.2 kg/m^2

SPAN mm		LOAD (u = KN/m^2 c = KN/m) 5	10	15	25	50	100	150	200	250	300	350	400	SAFE LOAD 2:1 SAFETY FACTOR	DEFLECTION	E x 10^{10} N/m^2
600	Δu	0.04	0.07	0.11	0.18	0.36	0.72	1.09	1.45	1.81	2.17	2.54	2.90	1437	10.41	**2.73**
	Δc	0.10	0.19	0.29	0.48	0.97	1.93	2.90	3.86	4.83	5.80	6.76	7.73	486	9.39	
800	Δu	0.11	0.22	0.33	0.55	1.10	2.19	3.29	4.39	5.48	6.58	7.68	8.77	926	20.31	**2.85**
	Δc	0.22	0.44	0.66	1.10	2.19	4.39	6.58	8.77	10.97	13.16	15.35		370	16.23	
1000	Δu	0.26	0.52	0.78	1.31	2.61	5.23	7.84	10.45	13.06	15.68			593	30.99	**2.92**
	Δc	0.42	0.84	1.25	2.09	4.18	8.36	12.54						296	24.75	
1200	Δu	0.53	1.06	1.59	2.65	5.31	10.62	15.93						399	42.37	**2.98**
	Δc	0.71	1.42	2.12	3.54	7.08	14.16							243	34.40	
1400	Δu	0.96	1.92	2.88	4.80	9.61								302	58.04	**3.05**
	Δc	1.10	2.20	3.29	5.49	10.98								211	46.35	
1600	Δu	1.61	3.23	4.84	8.06									231	74.52	**3.10**
	Δc	1.61	3.23	4.84	8.06									184	59.36	
1800	Δu	2.54	5.09	7.63	12.71									182	92.55	**3.15**
	Δc	2.26	4.52	6.78	11.30									164	74.13	
2000	Δu	3.81	7.63	11.44										151	115.21	**3.20**
	Δc	3.05	6.10	9.16	15.26									149	90.95	



Series	Bar Width	Open Space	% Open Area	Approx Wt.	x10^6 mm^4/m of Width	x10^5 mm^3/m of Width
HD 6000	.60	.90	60	54	8.533	2.687
HD 5000	.60	.60	50	67	10.666	3.359
HD 4000	.60	.40	40	80	12.800	4.031

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.

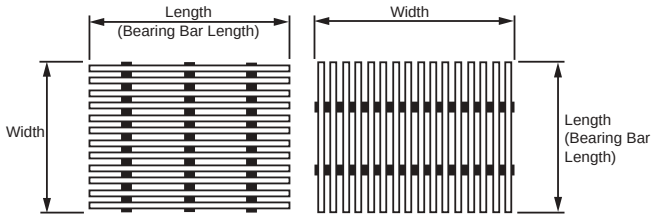
DURAGRID® Heavy Duty as manufactured by Strongwell–Chatfield Division, Chatfield, Minnesota. Grating panels shall be made of (1") (1-1/4") (1-1/2") (1-3/4") (2") (2-1/4") (2-1/2") deep pultruded (HD) bars.

The bearing bars shall be spaced at _____ inches on center. Resin shall be fire retardant (polyester) (vinyl ester) meeting the requirements of 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 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



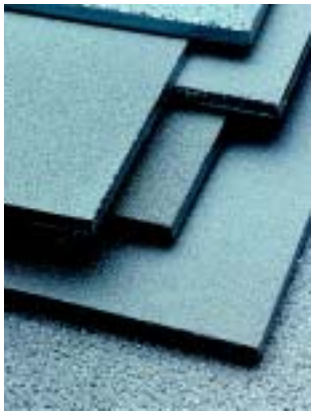
Panel Sizes Are Specified: Width x Length

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

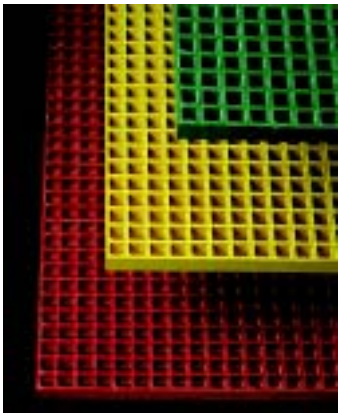
Strongwell offers a broad range of fiberglass decking and flooring materials. A brief description of the other available flooring products in the Strongwell industrial product line is shown here. Full-color brochures are available for each individual product.

SAFPLATE®



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®

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.

STRONGWELL

ISO-9001 Certified Manufacturing Plants

BRISTOL DIVISION
400 Commonwealth Ave., P.O. Box 580, Bristol, VA 24201-3820 USA
(276)645-8000 FAX (276)645-8132

CHATFIELD DIVISION*
1610 Highway 52 South, Chatfield, MN 55923-9799 USA
(507)867-3479 FAX (507)867-4031
**DURADEK®/DURAGRID®* manufacturing location*

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