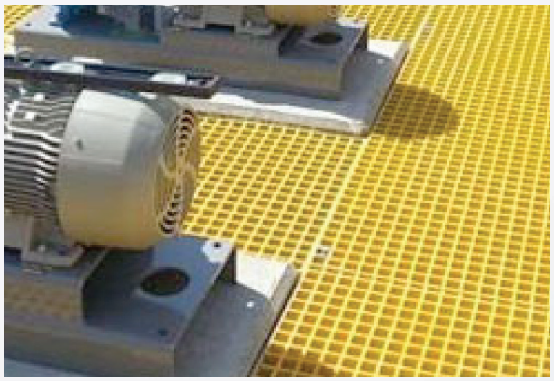
Liberty Pultrusions

Manufacturer of Engineered FRP Pultrusions

FIBERGLASS GRATING & STRUCTURAL SYSTEM SOLUTIONS









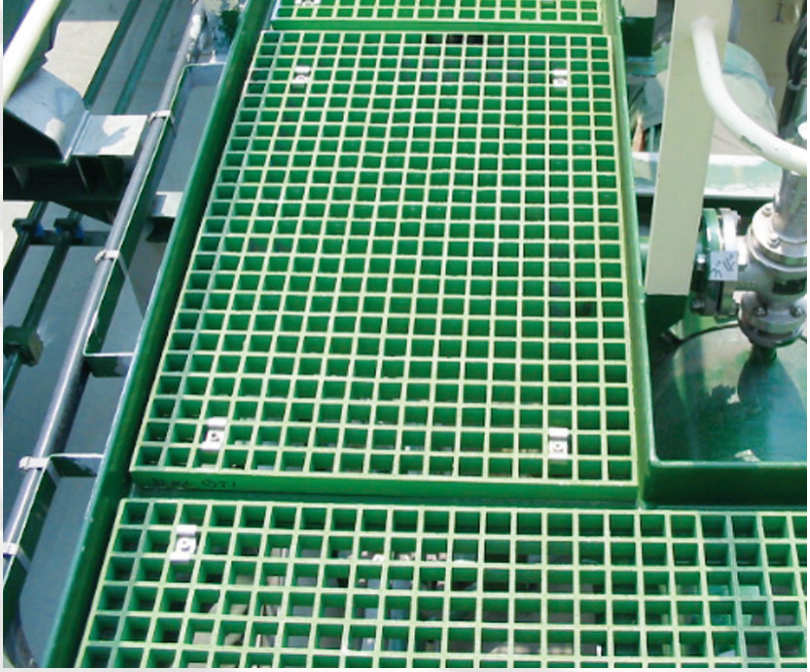




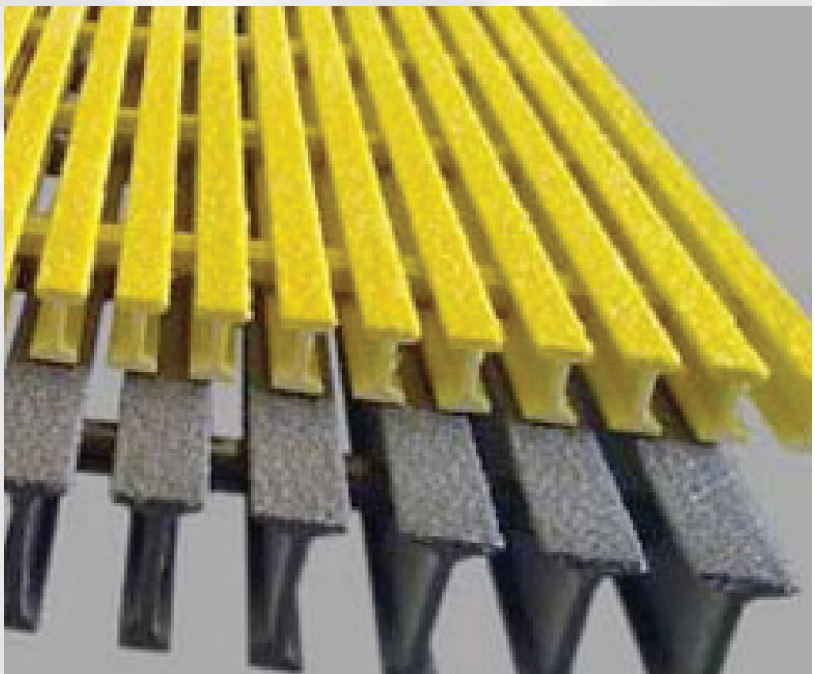
Liberty Pultrusions

Manufacturer of Engineered FRP Pultrusions

A Premier Fiberglass Grating & Structural System Manufacturer







Liberty Pultrusions

For more than 40 years Liberty Pultrusions has been a premier leader in the Fiberglass Reinforced Plastics (FRP) Pultrusion industry. We are a customer-focused business that provides quality, cost-effective solutions. Our aggressive pricing, precision, expertise, and superior product quality are the traits that sustain our business and keep our customers happy.

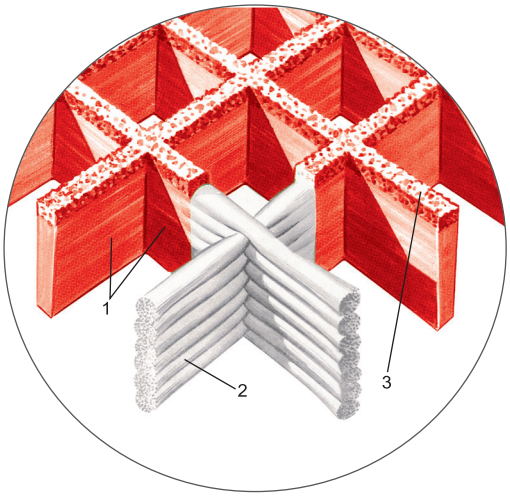
The pultrusion process allows us to provide high-quality products that are superior and longer lasting than other types of materials such as steel, aluminum or timber. FRP Pultrusions are corrosion resistant, non-conductive to electricity and heat and very lightweight. Please read the Benefits of FRP Pultrusion Over Other Materials page for more information.

A LEADER IN THE PULTRUSION INDUSTRY FOR OVER 40 YEARS

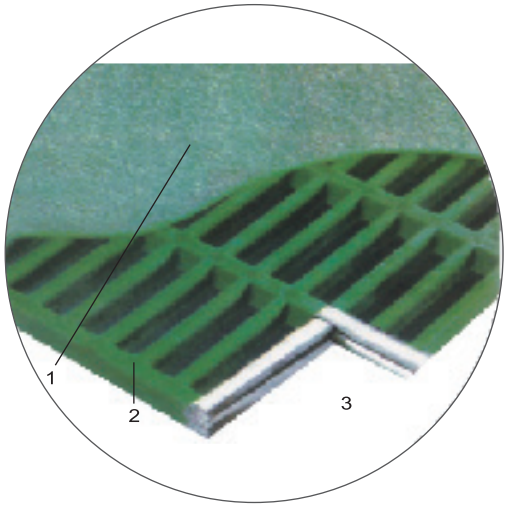
In addition to being a premier supplier of custom composites, we are also a major producer of FRP structural shapes for use in the corrosion, construction and electrical industries.

Our structural pultrusions, pultruded fiberglass electrical shapes and pultruded fiberglass rod are used in a wide range of applications from fiberglass cooling towers and structural supports to flagsticks and snow poles to ladder rail channels and transformer spacer sticks.

FIBERGLASS GRATING



1. Integral,one-piece construction distributes load to both bearing bars and cross bars.
2. Interwoven continuous fiberglass roving comes wetout with resin during production.
3. Slip-resistant top surface.



1. Anti-slip plate
2. Grating
3. Grating covered with anti-slip plate as an integral corrosion resistant construction.

Benefits of FRP Grating

Light Weight, Easy Installation

1/4 weight of steel grating makes installation easy and eliminates the need for heavy lifting equipment. Effortless Cutting.snow poles to ladder rail channels and transformer spacer sticks.

Long Service Life in Corrosive Environments.

Unparalleled performance in most harsh chemical environments, which could not be achieved by using traditional metal grating. No painting, and no maintenance is required. Please keep in mind, replacement costs

A Whole Spectrum of Colors for Choice

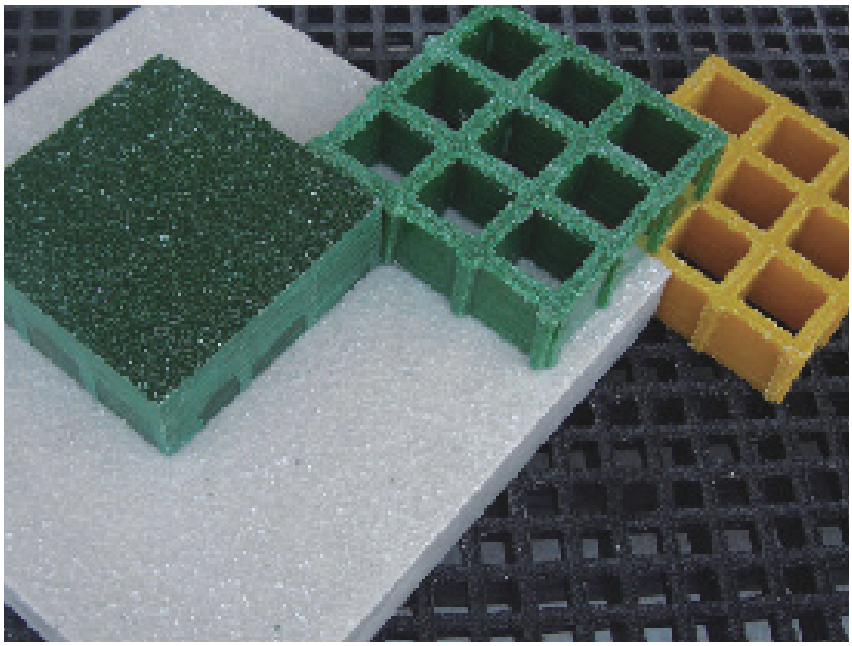
Select any color as you like without any extra charges.

Slip Resistance

Excellent test result (BS 7976-2) guarantees sure footing on both dry and wet working conditions.

Fire Retardance and Low Temperature Resisitance

Fire retardance meets standards of ASTM E 84 Class 1. And what is more,extra low temperature tests witness the good performance at -196 degrees Celsius. Ideal materials for most projects.



Type of Grating

- Concave surface: Anti-Skid surface.
- Plain surface: Flat top after sanding.
- Grit surface: Extra slip-resistance as per BS 7976-2
- Cover surface: Available in smooth top, check pattern top and grit top.
- Mini mesh type grating prevents small tools and other objects from dropping through.

Standard Resin Systems Available

Resin Type	Resin Base	Description	Corrosion Resistance	Flame Spread Rating ASTM E-84
VFR	Vinyl Easter	Superior Corrosion Resistance and Fire Retardant	Excellent	Class 1,25 or less
IFR	Isophthalic Polyester	Industrial Grade Corrosion Resistance and Fire Retardant	Very Good	Class 1,25 or less
PFR	Orthophthalic Polyester	Architectural Grade Corrosion Resistance and Fire Retardant	Very Good	Class 1,25 or less

Find Superior-class Grating here!

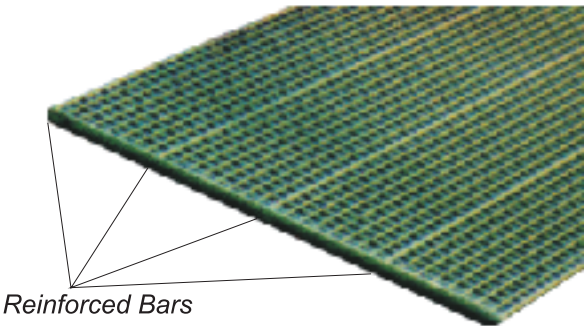
Made with Special Tooling

Completed Through Unique Process

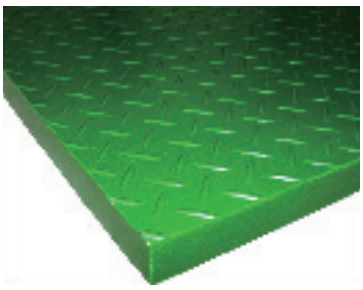
Treated in an Optional Non-filler Formula

Unparalleled in Chemical-resistance

Unsurpassed Mechanical Performance



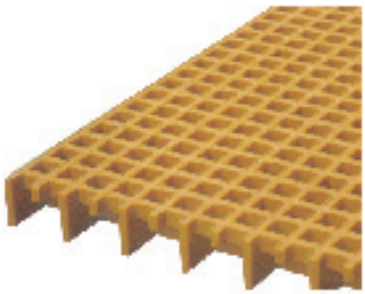
Reinforced Bars



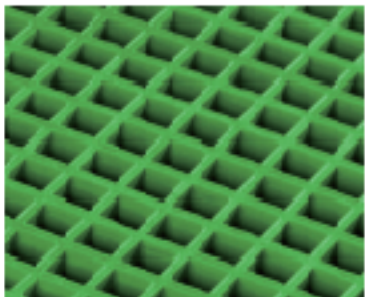
CHECK PLATE COVER



GRIT COVER



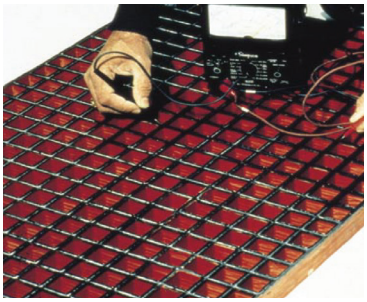
MICRO MESH



CONCAVE SURFACE



GRIT SURFACE



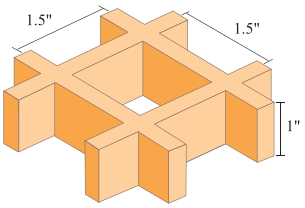
ANTI-STATIC GRATING

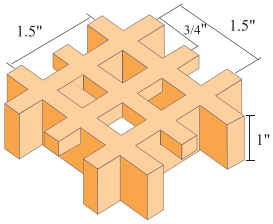
FIBERGLASS GRATING

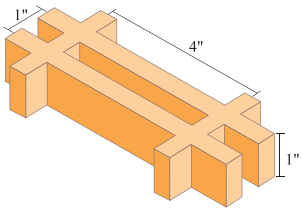
Molded Grating Specifications

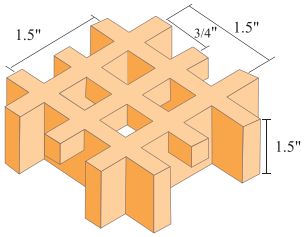
Type	Thickness	Mesh Size	Open Area	Weight/ Sq. Ft	Available Panel Size
Square	1/2″	1 1/2″ × 1 1/2″	69%	1.5	4′ × 8′ 4′ × 12′
Square	1/2″	2″ × 2″	76%	1.3	4′ × 8′ 4′ × 12′
Rectangular	1″	1″ × 4″	69%	2.7	4′ × 8′ 4′ × 12′
Square	1″	1 1/2″ × 1 1/2″	69%	2.6	3′ × 10′ 4′ × 8′ 4′ × 12′
Mini Mesh	1″	3/4″ × 3/4″	44%	3.1	4′ × 8′ 4′ × 12′
Square	1 1/4″	1 1/2″ × 1 1/2″	69%	3.2	4′ × 8′ 4′ × 12′
Square	1 1/2″	1 1/2″ × 1 1/2″	69%	4.0	3′ × 10′ 4′ × 8′ 4′ × 12′ 5′ × 10′
Mini Mesh	1 1/2″	3/4″ × 3/4″	44%	4.7	4′ × 8′ 4′ × 12′
Rectangular	1 1/2″	1 1/2″ × 4″	78%	3.0	4′ × 12′
Rectangular	1 1/2″	1″ × 6″	38%	4.7	4′ × 12′
Square	2″	2″ × 2″	72%	4.5	4′ × 8′ 4′ × 12′
Mini Mesh	2 3/8″	3/4″ × 3/4″	42%	7.3	4′ × 12′
High Load	2 1/2″	1 1/2″ × 1 1/2″ Square	47%	11	3′ × 10′ 4′ × 8′ 4′ × 12′ 5′ × 10′
High Load	1 1/2″	1″ × 2″ Rectangular	48%	6.2	4′ × 6′ 4′ × 8′
High Load	2″	1″ × 2″ Rectangular	48%	8.4	4′ × 6′ 4′ × 8′
Stair Tread	1 1/2″	1 1/2″ × 6″ Rectangular	62%	3.2	24 1/4″ × 12′ 4′ × 12′

Note: 1. Panel weight may vary according to type of resin used and top surface.
2. Mesh size : Spacing between bar centers.
3. Other thicknesses and sizes are available upon request.





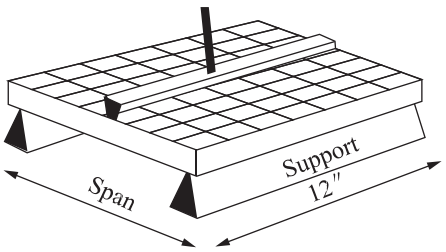




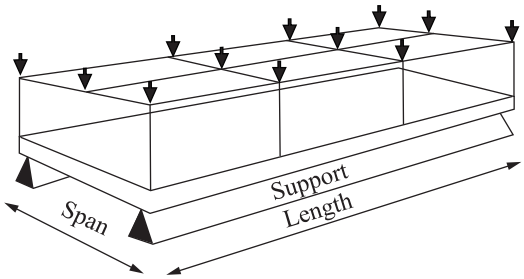


Molded Grating Load and Deflection Data

CONCENTRATED LOAD



UNIFORM LOAD

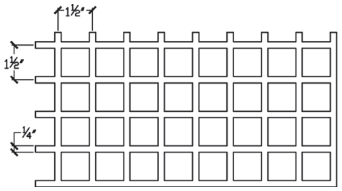


S05-15

0.5″ Thick 1.5″ x 1.5″ Square Mesh

72% Open Area
1.34 lbs./ft²

TOP VIEW



SIDE VIEW



Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50		150	200	300	500	1000	2000	
12	0.04		0.13	0.17	0.25	0.42			280
18	0.13		0.38	0.52	0.65				180
24	0.29								140

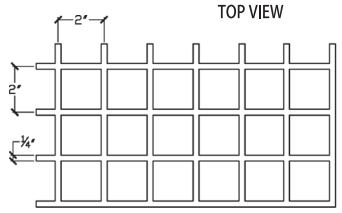
Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12	0.03	0.05	0.08	0.11	0.15	0.29	0.58		350
18	0.12	0.24	0.36	0.48					150
24	0.37								80

S05-20

0.5″ Thick 2.0″ x 2.0″ Square Mesh

78% Open Area
1.03 lbs./ft²

TOP VIEW



SIDE VIEW



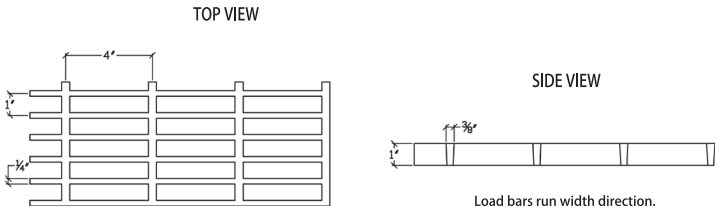
Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12	0.05	0.11	0.15	0.20	0.27	0.51			230
18	0.15	0.32	0.45	0.64					150
24	0.39	0.68							110

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12	0.03	0.06	0.10	0.13	0.18	0.35	0.63		300
18	0.14	0.28	0.45	0.58					130
24	0.41								70

FIBERGLASS GRATING

R10-1040
1″ Thick 1″ x 4″ Rectangular Mesh

68% Open Area
2.62 lbs./ft²

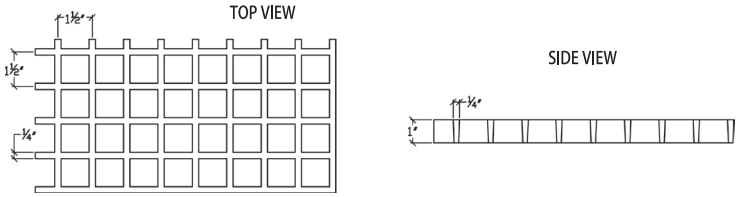


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12		0.01	0.01	0.02	0.03	0.04	0.08	0.17	1830
18	0.01	0.03	0.04	0.05	0.06	0.13	0.25	0.49	1415
24	0.03	0.06	0.09	0.12	0.14	0.28	0.56		960
30	0.05	0.11	0.16	0.23	0.27	0.54			765
36	0.09	0.18	0.27	0.37	0.45				640
42	0.14	0.28	0.43	0.55	0.69				545
46	0.18	0.36							481

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12		0.01	0.01	0.01	0.02	0.03	0.05	0.11	3655
18	0.01	0.02	0.04	0.05	0.06	0.12	0.23	0.46	1820
24	0.04	0.07	0.11	0.14	0.18	0.35	0.74		960
30	0.09	0.17	0.250	0.34	0.42				585
36	0.17	0.35	0.52	0.69					420
42	0.31	0.63							311
46	0.43								272

S10-15
1.0″ Thick 1.5″ x 1.5″ Square Mesh

69% Open Area
2.5 lbs./ft²

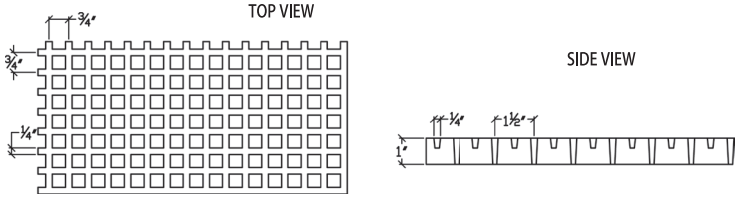


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12		0.01	0.02	0.03	0.04	0.06	0.14	0.23	1140
18	0.02	0.04	0.05	0.07	0.09	0.18	0.36		930
24	0.04	0.08	0.12	0.16	0.22	0.41			660
30	0.07	0.15	0.28	0.34	0.41				530
36	0.18	0.26	0.38	0.52	0.69				350

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12		0.0	0.01	0.02	0.03	0.04	0.07	0.14	2300
18	0.02	0.03	0.05	0.07	0.09	0.17	0.33	0.66	1200
24	0.05	0.10	0.150	0.21	0.29	0.498			660
30	0.12	0.27	0.36	0.47	0.63				420
36	0.24	0.48							210

S10-075
1.0″ Thick 0.75″ x 0.75″ Mini Mesh

44% Open Area
3.08 lbs./ft²



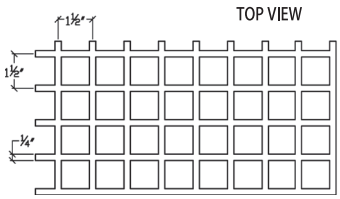
Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12			0.01	0.01	0.02	0.03	0.07	0.23	1520
18	0.01	0.02	0.03	0.04	0.06	0.10	0.25	0.42	960
24	0.03	0.06	0.09	0.11	0.17				680
30	0.06	0.11	0.18	0.22					550
36	0.10	0.20	0.28	0.39					400

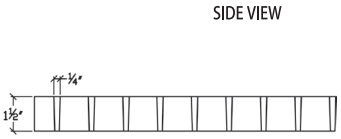
Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12				0.01	0.01	0.02	0.04	0.08	2510
18	0.01	0.02	0.04	0.05	0.07	0.12	0.23	0.47	1310
24	0.04	0.07	0.11	0.15	0.22	0.36	0.73		710
30	0.09	0.17	0.26	0.35	0.52	0.87			460
36	0.19	0.38							230

S15-15

1.5″ Thick 1.5″ x 1.5″ Square Mesh

68% Open Area
3.95 lbs./ft²





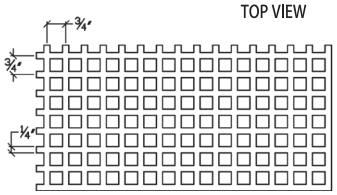
Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12				0.01	0.02	0.03	0.04	0.09	2010
18		0.01	0.02	0.03	0.04	0.06	0.11	0.22	1320
24	0.01	0.02	0.04	0.05	0.06	0.12	0.23	0.46	1010
30	0.02	0.04	0.06	0.09	0.17	0.24	0.48		810
36	0.04	0.07	0.11	0.14	0.18	0.36			640
42	0.06	0.13	0.19	0.25	0.28	0.56			530
48	0.08	0.17	0.25	0.34	0.48				490
54	0.12	0.28	0.37	0.48	0.59				430

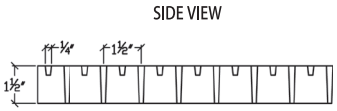
Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.0	0.02	0.03	0.06	4020
18		0.01	0.02	0.02	0.04	0.05	0.10	0.21	1810
24	0.01	0.03	0.04	0.06	0.07	0.15	0.32	0.58	920
30	0.03	0.07	0.10	0.14	0.17	0.34	0.68		630
36	0.07	0.15	0.20	0.27	0.37	0.67			430
42	0.13	0.26	0.37	0.49	0.66				310
48	0.21	0.47	0.66						215
54	0.34	0.69							185

S15-075

1.5″ Thick 0.75″ x 0.75″ Mini Mesh

44% Open Area
4.78 lbs./ft²





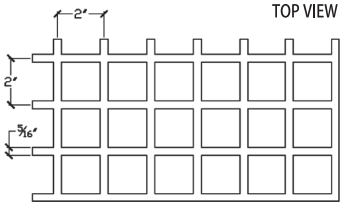
Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.02	0.03	0.06	3090
18		0.01	0.013	0.17	0.03	0.05	0.09	0.17	2060
24	0.01	0.02	0.03	0.04	0.05	0.09	0.18	0.35	1540
30	0.02	0.03	0.05	0.06	0.08	0.16	0.32	0.64	1230
36	0.03	0.05	0.08	0.11	0.15	0.27	0.53		1030
42	0.04	0.08	0.14	0.17	0.27	0.43			880
48	0.06	0.12	0.18	0.26	0.32	0.65			730
54	0.09	0.17	0.26	0.39	0.44				670
60	0.12	0.23	0.37	0.46	0.59				584

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.02	0.03	0.04	6010
18		0.01	0.01	0.02	0.03	0.04	0.08	0.19	2470
24	0.01	0.02	0.3	0.04	0.06	0.11	0.22	0.44	1450
30	0.03	0.05	0.08	0.10	0.15	0.25	0.52		928
36	0.05	0.10	0.17	0.21	0.29	0.49			670
42	0.09	0.18	0.27	0.36	0.45				485
48	0.15	0.32	0.45	0.65					360
54	0.29	0.48							305
60	0.37								215

S20-20

2.0″ Thick 2.0″ x 2.0″ Square Mesh

72% Open Area
4.38 lbs./ft²





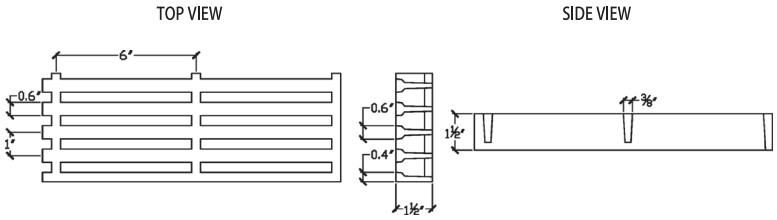
Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.02	0.04	4320
18			0.01	0.02	0.03	0.04	0.06	0.14	3080
24		0.01	0.02	0.03	0.04	0.06	0.12	0.24	2160
30	0.01	0.02	0.04	0.05	0.06	0.13	0.25	0.45	1530
36	0.02	0.04	0.07	0.08	0.11	0.19	0.38		1440
42	0.03	0.06	0.09	0.13	0.18	0.32	0.59		1230
48	0.04	0.09	0.13	0.18	0.27	0.45			1080
54	0.06	0.12	0.18	0.26	0.35	0.61			990
60	0.08	0.17	0.29	0.34	0.45				860

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.02	0.04	0.05	9240
18			0.01	0.02	0.03	0.04	0.05	0.11	4010
24	0.01	0.02	0.03	0.04	0.05	0.08	0.15	0.30	2160
30	0.02	0.03	0.05	0.07	0.09	0.16	0.35		1402
36	0.04	0.07	0.11	0.14	0.19	0.28			920
42	0.07	0.13	0.19	0.29	0.33	0.37			660
48	0.11	0.27	0.36	0.45	0.54	0.67			560
54	0.18	0.34	0.54	0.69					450
60	0.29	0.59							345

FIBERGLASS GRATING

R15-1060T

1.5″ Thick 1.0″ x 6.0″ Rectangular Mesh
(Pultrusion style)
38% Open Area
4.7 lbs./ft²



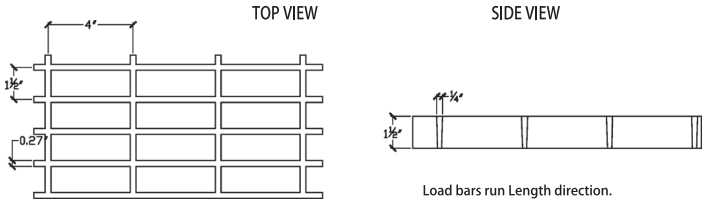
Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.02	0.03	0.05	3510
18			0.01	0.02	0.03	0.04	0.07	0.13	2610
24		0.01	0.02	0.03	0.03	0.06	0.13	0.26	2050
30	0.01	0.03	0.04	0.06	0.08	0.12	0.23	0.47	1480
36	0.02	0.04	0.06	0.09	0.12	0.19	0.39		1330
42	0.03	0.06	0.09	0.15	0.15	0.33	0.65		1020
48	0.05	0.09	0.14	0.23	0.23	0.46			1020
54	0.06	0.15	0.20	0.31	0.43	0.67			930
60	0.09	0.17	0.26	0.47	0.47				820

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.02	0.03	6520
18			0.01	0.02	0.03	0.04	0.06	0.14	3470
24	0.01	0.02	0.03	0.04	0.05	0.08	0.16	0.35	2050
30	0.02	0.04	0.06	0.07	0.09	0.18	0.36		1300
36	0.04	0.07	0.11	0.15	0.19	0.38			930
42	0.07	0.13	0.20	0.27	0.33	0.67			670
48	0.12	0.23	0.34	0.46	0.57				520
54	0.18	0.35	0.59						405
60	0.27	0.54							310

R15-1540

1.5″ Thick 1.5″ x 4.0″ Rectangular Mesh

77% Open Area
2.67 lbs./ft²



Load bars run Length direction.

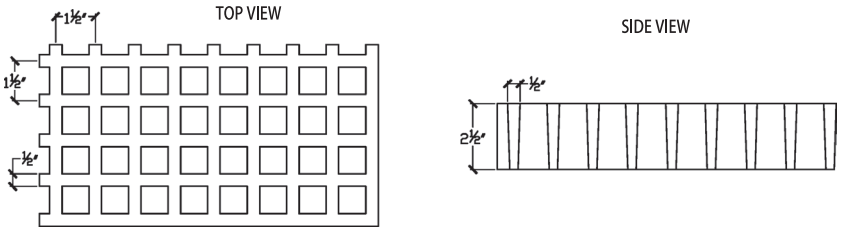
Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12		0.01	0.01	0.01	0.02	0.03	0.06	0.11	2010
18	0.01	0.02	0.03	0.04	0.06	0.10	0.20		1067
24	0.02	0.05	0.07	0.09	0.14	0.23			867
30	0.04	0.09	0.13	0.18	0.27				633
36	0.08	0.15	0.23	0.31					500
42	0.13	0.25	0.38						417
48	0.19	0.37							333

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.02	0.03	3040
18		0.01	0.01	0.02	0.03	0.04	0.07	0.14	1410
24	0.01	0.02	0.03	0.07	0.05	0.09	0.18	0.36	810
30	0.02	0.04	0.06	0.08	0.11	0.22	0.42		579
36	0.04	0.08	0.12	0.16	0.21	0.39			270
42	0.07	0.14	0.23	0.29	0.36				171
48	0.12	0.24	0.37	0.48	0.61				117

S25-15

2.5″ Thick 1.5″ x 1.5″ Square Mesh

47% Open Area
10.9 lbs./ft²



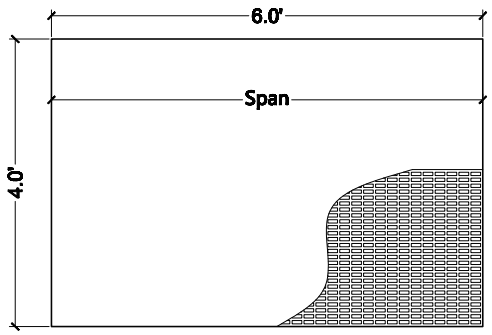
Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
24					0.01	0.01	0.03	0.06	16660
30				0.01	0.02	0.03	0.06	0.11	10660
36		0.01	0.01	0.02	0.03	0.05	0.10	0.20	7333
42	0.01	0.02	0.02	0.03	0.05	0.08	0.16	0.31	5600
48	0.01	0.02	0.03	0.05	0.07	0.12	0.23	0.47	4667
54	0.02	0.03	0.05	0.07	0.10	0.16	0.33	0.66	3733
60	0.02	0.05	0.07	0.09	0.14	0.23	0.46		2933
66	0.03	0.06	0.09	0.12	0.18	0.30	0.61		2400

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
24			0.01	0.01	0.01	0.02	0.04	0.07	13600
30		0.01	0.01	0.02	0.03	0.04	0.09	0.18	6400
36	0.01	0.02	0.03	0.04	0.06	0.10	0.19	0.38	3840
42	0.02	0.03	0.05	0.07	0.10	0.17	0.35		2600
48	0.03	0.06	0.09	0.12	0.18	0.30	0.59		1800
54	0.05	0.09	0.14	0.19	0.28	0.47			1280
60	0.07	0.15	0.22	0.29	0.44	0.73			880
66	0.11	0.21	0.32	0.43	0.64				680

High Load Capacity Molded Grating

Molded High Load Capacity grating is yet another product in the arsenal of engineered fiberglass reinforced plastic solutions. While capitalizing on most of the traditional benefits of molded grating products high strength, corrosion resistance, fire retardancy, non-conductivity and low maintenance, this specially manufactured molded FRP product has been engineered to carry forklift loads that traditional molded FRP grating products are unable to support.

With a 48% open surface area, Kentec molded HLC grating is available in a 4′ x6′ panel with depths of 1-1/2″ and 2″ is now available in Kentec ISO and VE Resin systems. Surface options include either a smooth surface or an grit surface. Kentec molded HLC grating merits an ASTM E-84 flame spread rating of 25 or less and a Class 1 Fire Rating.

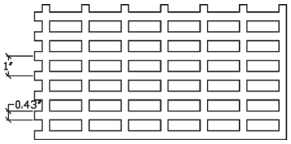


R15-1020

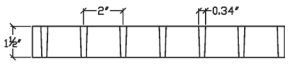
1.5″ Thick 1.0″ x 2.0″ Rectangular Mesh

48% Open Area
6.32 lbs/ft²

TOP VIEW



SIDE VIEW



Span (inch)	CONCENTRATED LOAD in lbs/ft of width							Max Load
	200	500	1000	2000	3000	4000	5000	
18		0.02	0.04	0.07	0.11	0.15	0.19	26,070
24	0.02	0.04	0.09	0.17	0.26	0.34	0.44	19,530
36	0.06	0.14	0.28					12,520
42	0.09	0.22	0.44					10,890

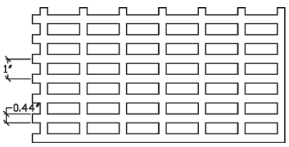
Span (inch)	UNIFORM LOAD in lbs/ft²						Max Load
	200	400	500	600	800	1000	
18		0.01	0.02	0.02	0.03	0.03	35,100
24	0.02	0.04	0.05	0.06	0.09	0.11	19,910
36	0.10	0.21	0.26	0.31	0.42		7,840
42	0.19	0.39	0.48				5,790

R20-1020

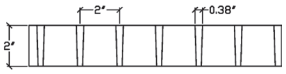
2.0″ Thick 1.0″ x 2.0″ Rectangular Mesh

48% Open Area
8.65 lbs/ft²

TOP VIEW



SIDE VIEW



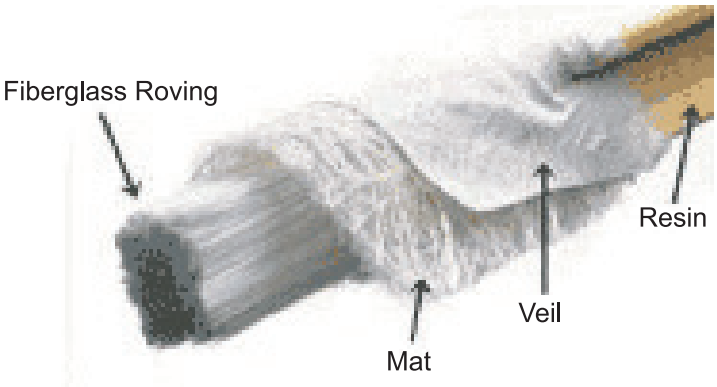
Span (inches)	CONCENTRATED LOAD in lbs/ft of width							Max Load
	200	500	1000	2000	3000	4000	5000	
18		0.01	0.03	0.05	0.07	0.10	0.13	31,510
24	0.02	0.03	0.06	0.11	0.17	0.22	0.27	25,450
36	0.04	0.09	0.17	0.34	0.51			17,320
42	0.05	0.13	0.26					14,520

Span (inch)	UNIFORM LOAD in lbs/ft²						Max Load
	200	400	500	600	800	1000	
18		0.01	0.01	0.01	0.02	0.02	43,440
24	0.01	0.02	0.03	0.04	0.05	0.06	27,150
36	0.06	0.12	0.15	0.18	0.24	0.30	8,550
42	0.11	0.22	0.28	0.33	0.44		7,390

Allowable Spans for Vehicular Loads

	Wheel Load (lb) (1/2 Axle Load + 30% impact)	Load Distribution		Allowable Span in Inches	
		Parallel to Axle	Perpendicualr to Axle	1.5 " Deep HLC Molded Grating	2 " Deep HLC Molded Grating
AASHTO Standard Truck 32,000 lb Axle Load - Dual Wheels	20,800	20″ + 4″	8″	1′-2″	1′-5″
Automobile Traffic 5,000 lb Vehicle - 1,500 lb Load 55% Drive Axle Load	2,220	8″ + 4″	8″	2′-2″	2′-8″
5 Ton Capacity Forklift 14,400 lb Vehicle - 24,400 lb Load 85% Drive Axle Load	13,480	11″ + 4″	11″	1′-1″	1′-5″
3 Ton Capacity Forklift 98,00 lb Vehicle - 15,800 lb Load 85% Drive Axle Load	8,730	7″ + 4″	7″	1′-0″	1′-4″
1 Ton Capacity Forklift 4,200 lb Vehicle - 6,200 lb Load 85% Drive Axle Load	3,425	4″ + 4″	4″	1′-7″	2′-1″

FIBERGLASS GRATING

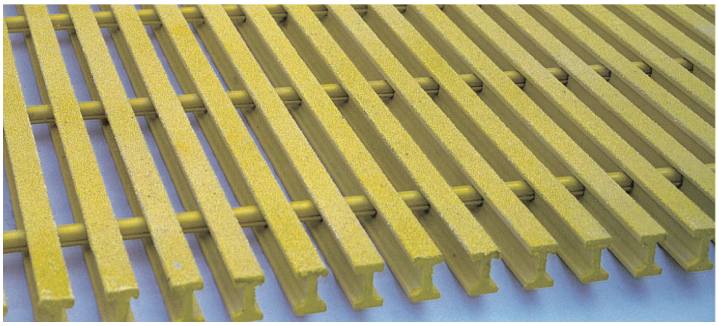


The raw materials for pultrusion include a liquid resin mixture (containing resin, fillers and specialized additives) and reinforcing fibers. To achieve the rein-forcement purpose, materials in continuous forms such as rolls of fiberglass mat and doffs of fiberglass roving are used. During the pultrusion process, the raw materials are pulled through a heated steel forming die.When the reinforcements are saturated with the resin mixture ("wet-out") in the resin bath and pulled through the die, the resin comes hardened due to the heat from the die and the cured profiles are thus formed in the same shape as the die.

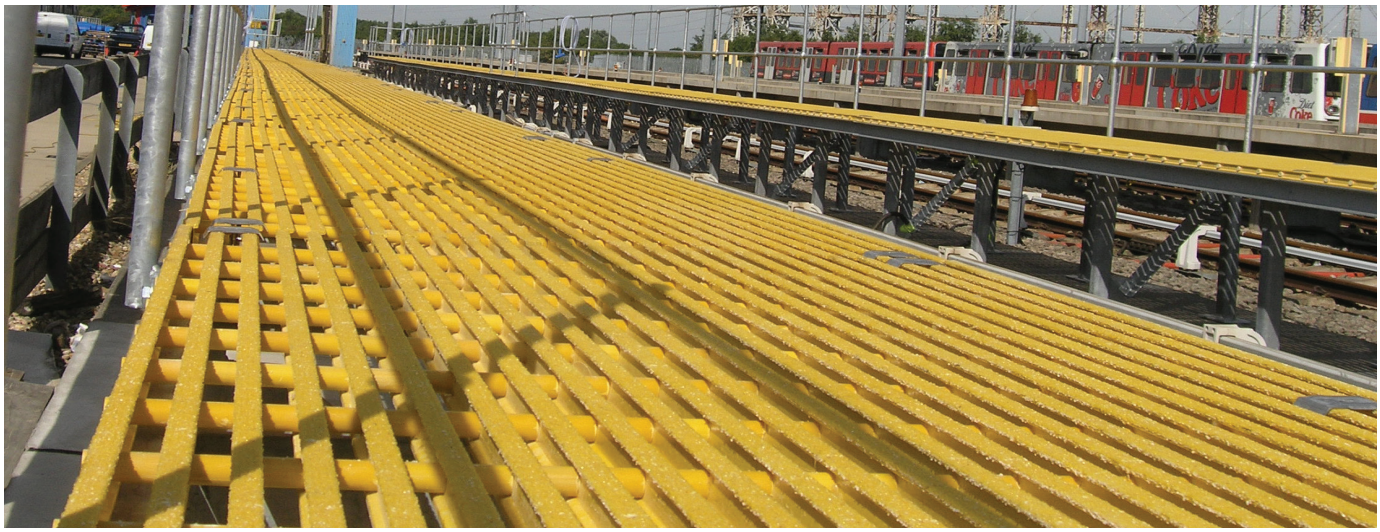
The advantages of pultruded FRP Sections

1. Corrosion resistant and anti-aging
2. Non-conductive and non magnetic
3. Light weight and great strength and impact strength
4. Long service life and maintenance-free
5. Bright color and good appearance
6. Easy of installation and dimensional stability
7. Water-proof, fire retardant

Pultruded Grating



- ◆ High Content of Fiberglass
- ◆ Extremely High Unidirectional Strength and Stiffness
- ◆ Where Long Spans and High Load Capacity Required
- ◆ Good Corrosion Resistance
- ◆ Long Life
- ◆ Low Maintenance & Installation Cost



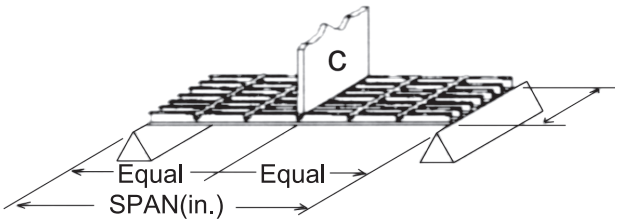
Pultruded Grating Specification

Series	Thickness	Load Bar Type & Spacing	Cross Rod Spacing	Open Area	Weight/ Sq. Ft	Available Panel Size
WT-1810	1.0″	T 2.0″	6″	18%	2.41	3′ × 20′ 4′ × 20′
WT-3510	1.0″	T 2.5″	6″	35%	2.03	3′ × 20′ 4′ × 20′
T-3310	1.0″	T 1.5″	6″	33%	2.28	3′ × 20′ 4′ × 20′
T-5010	1.0″	T 2.0″	6″	50%	1.82	3′ × 20′ 4′ × 20′
T-1715	1.5″	T 1.2″	6″	17%	3.42	3′ × 20′ 4′ × 20′
T-3315	1.5″	T 1.5″	6″	33%	2.83	3′ × 20′ 4′ × 20′
T-5015	1.5″	T 2.0″	6″	50%	2.25	3′ × 20′ 4′ × 20′
WT-4015	1.5″	T 2.5″	6″	40%	2.61	3′ × 20′ 4′ × 20′
WT-2515	1.5″	T 2.0″	6″	25%	3.22	3′ × 20′ 4′ × 20′
WT-1515	1.5″	T 1.75″	6″	15%	3.50	3′ × 20′ 4′ × 20′
T-3320	2.0″	T 1.5″	6″	33%	4.26	3′ × 20′ 4′ × 20′
T-5020	2.0″	T 2.0″	6″	50%	3.32	3′ × 20′ 4′ × 20′
I-4010	1.0″	I 1.0″	6″	40%	3.52	3′ × 20′ 4′ × 20′
I-5010	1.0″	I 1.2″	6″	50%	3.02	3′ × 20′ 4′ × 20′
I-6010	1.0″	I 1.5″	6″	60%	2.52	3′ × 20′ 4′ × 20′
I-4015	1.5″	I 1.0″	6″	40%	4.25	3′ × 20′ 4′ × 20′
I-5015	1.5″	I 1.2″	6″	50%	3.65	3′ × 20′ 4′ × 20′
I-6015	1.5″	I 1.5″	6″	60%	3.05	3′ × 20′ 4′ × 20′
I-4010 ADA	1.0″	I 0.52″	6″	40%	4.11	3′ × 20′ 4′ × 20′
I-5010 ADA	1.0″	I 0.63″	6″	50%	3.52	3′ × 20′ 4′ × 20′
I-6010 ADA	1.0″	I 0.78″	6″	60%	2.95	3′ × 20′ 4′ × 20′
I-4015 ADA	1.5″	I 0.52″	6″	40%	5.35	3′ × 20′ 4′ × 20′
I-5015 ADA	1.5″	I 0.63″	6″	50%	4.65	3′ × 20′ 4′ × 20′
I-6015 ADA	1.5″	I 0.78″	6″	60%	3.75	3′ × 20′ 4′ × 20′
HD-4015	1.5″	HD 1.0″	6″	40%	9.21	3′ × 20′ 4′ × 20′
HD-5015	1.5″	HD 1.2″	6″	50%	7.71	3′ × 20′ 4′ × 20′
HD-6015	1.5″	HD 1.5″	6″	60%	6.26	3′ × 20′ 4′ × 20′
HD-4020	2.0″	HD 1.0″	6″	40%	11.9	3′ × 20′ 4′ × 20′
HD-5020	2.0″	HD 1.2″	6″	50%	9.95	3′ × 20′ 4′ × 20′
HD-6020	2.0″	HD 1.5″	6″	60%	8.05	3′ × 20′ 4′ × 20′

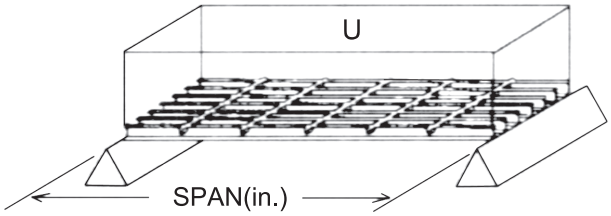
Note: 1. Panel weight may vary according to type of resin used and top surface.
2. Spacing between bar centers.
3. Other thicknesses and sizes are available upon request.

Pultruded Grating Load and Deflection Data

CONCENTRATED LOAD



UNIFORM LOAD

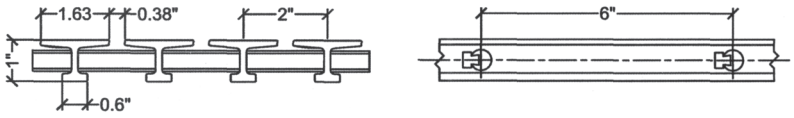


The designer should not exceed MAXIMUM-RECOMMENDED load at any time. MAXIMUM LOAD represents a 4：1factor of safety on ULTIMATE CAPACITY. ULTIMATE CAPACITY represents MAX LOAD observed at initial fracture.

Walking loads for maintenance traffic are typically a live load of 50 PSF. Deflections for worker comfort aretypically limited to 3/8 " or SPAN divided by 120 under full live load. For a firmer feel under full live load or a line load 250 lbs/ft of width, limit deflections to 1/4 " or SPAN divided by 200.

The loads represented are for STATIC LOAD CONDITIONS at ambient emperature. Deflections for impact loads or dynamic loads will MULTIPLY the deflections shown by 2. Long term loads will result in added deflection due to creep in the material and will require higher factors of safety to ensure acceptable performance.

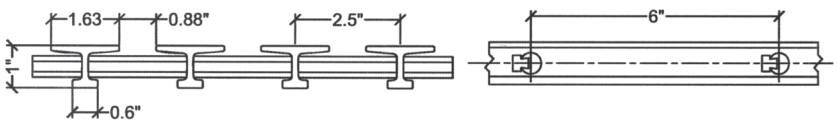
WT-1810
Wide T Bearing Bar
1″ Thick 18% Open Area
2.41 lbs/ft²



Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12				0.01	0.02	0.03	0.04	0.08	5110
18		0.01	0.02	0.02	0.03	0.05	0.10	0.20	2400
24	0.01	0.02	0.04	0.05	0.06	0.11	0.22	0.46	2550
30	0.02	0.04	0.06	0.08	0.11	0.21	0.44		2040
36	0.04	0.07	0.11	0.14	0.18	0.35			1710
42	0.06	0.11	0.17	0.22	0.28	0.55			1420
46	0.08	0.16	0.25	0.35	0.46				1240

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12				0.01	0.01	0.02	0.03	0.05	10310
18	0.01	0.01	0.02	0.03	0.04	0.05	0.10	0.19	4560
24	0.02	0.03	0.04	0.06	0.068	0.14	0.27	0.55	2540
30	0.03	0.07	0.10	0.13	0.162	0.33	0.66		1540
36	0.07	0.13	0.20	0.28	0.33	0.66			1130
42	0.12	0.24	0.36	0.48	0.63				810
46	0.21	0.41	0.62						625

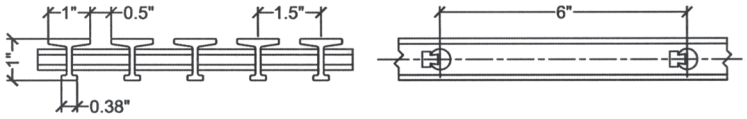
WT-3510
Wide T Bearing Bar
1 " Thick 35% Open Area
2.03 lbs/ft²



Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12			0.01	0.01	0.02	0.04	0.05	0.10	3590
18	0.01	0.01	0.02	0.03	0.04	0.07	0.13	0.26	2460
24	0.02	0.03	0.04	0.06	0.07	0.14	0.27	0.54	1810
30	0.03	0.05	0.08	0.10	0.13	0.27	0.51		1450
36	0.05	0.09	0.13	0.18	0.21	0.42			1230
42	0.07	0.14	0.20	0.27	0.33	0.66			1040
48	0.10	0.20	0.29	0.39	0.48				890

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12			0.01	0.01	0.02	0.02	0.03	0.06	7260
18	0.01	0.01	0.02	0.02	0.03	0.06	0.12	0.24	3130
24	0.02	0.04	0.05	0.07	0.09	0.18	0.35	0.67	1880
30	0.04	0.08	0.12	0.16	0.20	0.39			1020
36	0.09	0.17	0.25	0.34	0.42				810
42	0.15	0.29	0.43	0.58					560
48	0.24	0.48							450

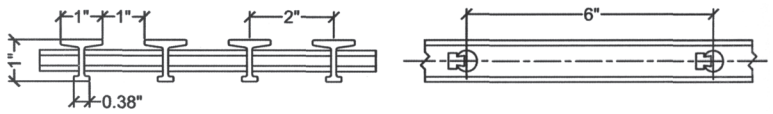
T-3310
T Bearing Bar
1 " Thick 33% Open Area
2.28 lbs/ft²



Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12		0.01	0.01	0.01	0.02	0.03	0.06	0.11	1860
18	0.01	0.02	0.03	0.03	0.04	0.08	0.15	0.27	1250
24	0.02	0.03	0.05	0.06	0.08	0.15	0.29	0.58	950
30	0.03	0.06	0.09	0.11	0.14	0.28	0.55		765
36	0.05	0.10	0.14	0.19	0.24	0.47			635
42	0.08	0.15	0.22	0.30	0.38				550
48	0.11	0.22	0.36	0.45	0.55				470

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12			0.01	0.01	0.02	0.02	0.03	0.07	7740
18	0.01	0.01	0.02	0.03	0.04	0.07	0.14	0.26	3310
24	0.02	0.04	0.06	0.08	0.09	0.18	0.36		1950
30	0.05	0.09	0.13	0.17	0.25	0.43			1250
36	0.09	0.18	0.27	0.35	0.48				830
42	0.16	0.33	0.49	0.64					650
48	0.28	0.55							490

T-5010
T Bearing Bar
1 " Thick 50% Open Area
1.82 lbs/ft²

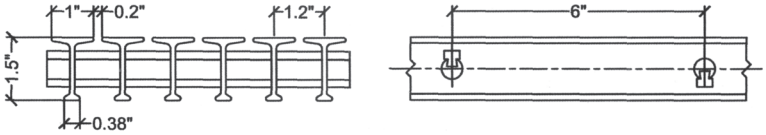


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12		0.01	0.01	0.02	0.03	0.04	0.08	0.16	1460
18	0.01	0.02	0.03	0.04	0.06	0.10	0.21	038	980
24	0.02	0.04	0.06	0.08	0.10	0.20	0.39		730
30	0.04	0.07	0.11	0.15	0.18	0.36			570
36	0.06	0.13	0.19	0.26	0.35	0.65			420
42	0.10	0.20	0.29	0.40	0.49				380
48	0.15	0.29	0.43	0.59					345

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12		0.01	0.01	0.01	0.02	0.03	0.04	0.10	5730
18	0.01	0.02	0.03	0.04	0.05	0.09	0.17	0.35	2920
24	0.03	0.06	0.07	0.10	0.12	0.25	0.51		1430
30	0.06	0.13	0.19	0.25	0.28	0.57			930
36	0.15	0.23	0.36	0.46	0.59				615
42	0.22	0.42	0.64						420
48	0.36								360

FIBERGLASS GRATING

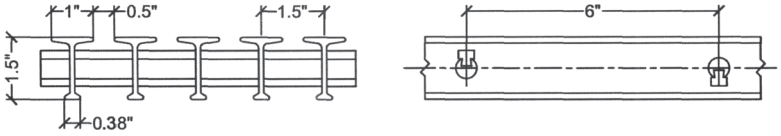
T-1715
T Bearing Bar
1.5 " Thick 17% Open Area
3.42 lbs/ft²



Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.01	0.02	0.04	10230
18			0.01	0.01	0.02	0.03	0.05	0.10	6490
24		0.01	0.02	0.02	0.03	0.05	0.09	0.18	5118
30	0.01	0.02	0.03	0.03	0.05	0.08	0.17	0.32	4194
36	0.02	0.03	0.04	0.06	0.07	0.14	0.28	0.55	3045
42	0.03	0.04	0.06	0.09	0.11	0.23	0.45		2853
48	0.04	0.06	0.09	0.13	0.16	0.32	0.64		2559
54	0.05	0.09	0.14	0.18	0.24	0.48			2230
60	0.06	0.13	0.19	0.25	0.32	0.62			2047
66	0.08	0.17	0.25	0.34	0.41				1790

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.02	0.04	12340
18			0.01	0.01	0.01	0.02	0.04	0.09	5880
24	0.01	0.01	0.02	0.02	0.03	0.06	0.13	0.25	3130
30	0.02	0.03	0.04	0.05	0.06	0.15	0.25	0.51	2110
36	0.03	0.05	0.08	0.10	0.13	0.26	0.52		1470
42	0.05	0.10	0.14	0.19	0.24	0.48			1080
48	0.08	0.18	0.24	0.32	0.41				820
54	0.13	0.25	0.38	0.54	0.63				645
60	0.20	0.38	0.57						510
66	0.28	0.56							435

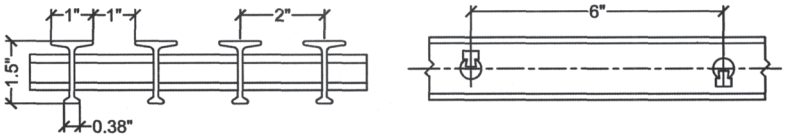
T-3315
T Bearing Bar
1.5 " Thick 33% Open Area
2.83 lbs/ft²



Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.01	0.02	0.04	8230
18			0.01	0.01	0.02	0.03	0.05	0.11	5490
24	0.01	0.01	0.02	0.02	0.03	0.05	0.11	0.22	4180
30	0.01	0.02	0.03	0.04	0.05	0.12	0.21	0.41	3290
36	0.02	0.04	0.05	0.07	0.09	0.17	0.38	0.69	2750
42	0.03	0.06	0.08	0.11	0.14	0.28	0.55		2330
48	0.04	0.08	0.12	0.16	0.21	0.43			2055
54	0.06	0.12	0.17	0.23	0.29	0.58			1830
60	0.08	0.16	0.23	0.31	0.41				1645
66	0.11	0.24	0.31	0.41	0.52				1475

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.01	0.02	0.03	10540
18		0.01	0.01	0.01	0.02	0.03	0.05	0.10	4685
24	0.01	0.02	0.02	0.03	0.04	0.08	0.14	0.27	2630
30	0.02	0.03	0.05	0.06	0.08	0.16	0.32	0.64	1675
36	0.03	0.07	0.10	0.13	0.16	0.37	0.65		1170
42	0.06	0.12	0.19	0.24	0.29	059			860
48	0.10	0.20	0.32	0.43	0.53				655
54	0.16	0.32	0.49	0.68					515
60	0.24	0.48							420
66	0.35								345

T-5015
T Bearing Bar
1.5 " Thick 50% Open Area
2.25 lbs/ft²



Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.01	0.02	0.04	8230
18		0.01	0.01	0.02	0.02	0.03	0.05	0.11	5475
24	0.01	0.02	0.02	0.03	0.04	0.05	0.11	0.22	4110
30	0.02	0.03	0.04	0.06	0.07	0.11	0.21	0.41	3245
36	0.03	0.05	0.07	0.10	0.13	0.17	0.38	0.71	274.
42	0.04	0.07	0.11	0.14	0.17	0.27	0.55		2335
48	0.05	0.10	0.15	0.21	0.26	0.43			2050
54	0.07	0.15	0.22	0.29	0.36	0.58			1830
60	0.10	0.20	0.29	0.39	0.49				1645
66	0.13	0.28	0.39	0.52	0.65				1475

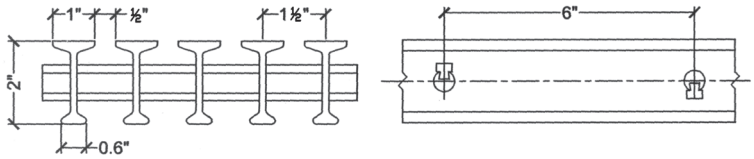
Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.02	0.03	6651
18		0.01	0.01	0.01	0.02	0.03	0.06	0.14	3445
24	0.01	0.02	0.03	0.04	0.05	0.09	0.19	0.37	1660
30	0.02	0.04	0.06	0.08	0.11	0.21	0.42		1065
36	0.04	0.08	0.13	0.17	0.21	0.42			715
42	0.08	0.15	0.23	0.31	0.38				545
48	0.13	0.26	0.38	0.51	0.67				410
54	0.22	0.41	0.61						325
60	0.31	0.61							265
66	0.45								210

T-3320

T Bearing Bar

2 " Thick 33% Open Area

4.26 lbs/ft²



Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.01	0.02	16210
18					0.01	0.01	0.02	0.04	10810
24			0.01	0.01	0.01	0.02	0.04	0.07	8105
30		0.01	0.01	0.01	0.02	0.03	0.06	0.12	6485
36	0.01	0.01	0.02	0.02	0.03	0.05	0.11	0.22	5405
42	0.01	0.02	0.03	0.03	0.04	0.07	0.16	0.31	4630
48	0.01	0.02	0.03	0.04	0.05	0.11	0.21	0.42	4040
54	0.02	0.03	0.05	0.06	0.07	0.16	0.29	0.59	3603
60	0.02	0.04	0.06	0.08	0.10	0.21	0.42		3240
66	0.03	0.06	0.08	0.11	0.13	0.26	0.53		2945
72	0.04	0.07	0.10	0.15	0.19	0.38	0.69		2653

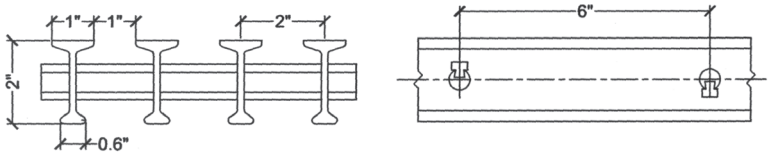
Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12							0.01	0.01	18265
18					0.01	0.01	0.02	0.04	11540
24		0.01	0.01	0.01	0.01	0.03	0.07	0.09	7380
30	0.01	0.01	0.02	0.02	0.03	0.05	0.10	0.19	5375
36	0.01	0.02	0.03	0.04	0.05	0.09	0.18	0.36	3262
42	0.02	0.03	0.05	0.07	0.08	0.19	0.32	0.67	2535
48	0.03	0.05	0.08	0.11	0.13	0.26	0.53		2030
54	0.04	0.08	0.13	0.17	0.21	0.41			1600
60	0.06	0.14	0.19	0.25	0.32	0.62			1295
66	0.09	0.18	0.29	0.39	0.45				1045
72	0.13	0.26	0.38	0.52	0.64				871

T-5020

T Bearing Bar

2 " Thick 50% Open Area

3.32 lbs/ft²



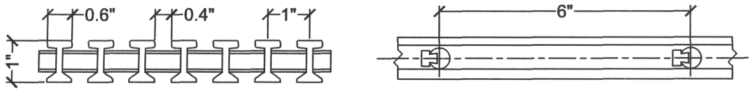
Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.02	0.04	13210
18				0.01	0.01	0.02	0.03	0.06	8865
24			0.01	0.01	0.02	0.03	0.09	0.09	6650
30		0.01	0.01	0.02	0.02	0.04	0.08	0.15	5320
36	0.01	0.01	0.02	0.03	0.03	0.06	0.12	0.25	4430
42	0.01	0.02	0.03	0.04	0.05	0.09	0.19	0.37	3810
48	0.02	0.03	0.04	0.06	0.07	0.15	0.28	0.54	3325
54	0.02	0.04	0.06	0.08	0.10	0.19	0.39		2951
60	0.03	0.05	0.08	0.11	0.13	0.27	0.54		2640
66	0.04	0.07	0.12	0.14	0.17	0.34	0.68		2412
72	0.05	0.09	0.14	0.18	0.23	0.45			2211

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.02	0.03	23430
18					0.01	0.02	0.03	0.06	8520
24		0.01	0.01	0.01	0.02	0.03	0.06	0.12	6360
30	0.01	0.01	0.02	0.03	0.04	0.06	0.12	0.24	4140
36	0.01	0.02	0.03	0.05	0.07	0.12	0.23	0.48	2840
42	0.02	0.04	0.06	0.08	0.12	0.21	0.41		2150
48	0.03	0.07	0.10	0.15	0.18	0.34	0.67		1670
54	0.05	0.11	0.16	0.23	0.27	0.54			1310
60	0.08	0.16	0.24	0.32	0.42				1060
66	0.12	0.24	0.35	0.49	0.59				870
72	0.17	0.33	0.49	0.66					720

FIBERGLASS GRATING

I-4010

I Bearing Bar
1.0 " Thick 40% Open Area
3.52 lbs/ft²

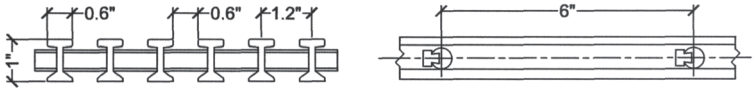


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.01	0.02	0.04	7850
18			0.01	0.01	0.02	0.03	0.06	0.12	5490
24	0.01	0.01	0.02	0.03	0.03	0.07	0.13	0.26	3850
30	0.01	0.02	0.04	0.05	0.06	0.12	0.24	0.48	3290
36	0.02	0.04	0.06	0.08	0.11	0.21	0.41		2650
42	0.03	0.06	0.10	0.13	0.17	0.32			2250
48	0.05	0.10	0.14	0.19	0.25				1980
54	0.07	0.14	0.20	0.27	0.34				1760
60	0.09	0.19	0.28	0.38	0.46				1560

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.02	0.03	17560
18			0.01	0.01	0.01	0.03	0.05	0.11	7960
24	0.01	0.02	0.02	0.03	0.04	0.08	0.16	0.32	3951
30	0.02	0.04	0.06	0.07	0.09	0.19	0.37		2540
36	0.04	0.08	0.11	0.15	0.19	0.38			1710
42	0.07	0.14	0.21	0.28	0.35	0.69			1245
48	0.12	0.24	0.24	0.47	0.59				1004
54	0.19	0.38	0.35						790
60	0.29	0.57	0.56						710

I-5010

I Bearing Bar
1.0 " Thick 50% Open Area
3.02 lbs/ft²

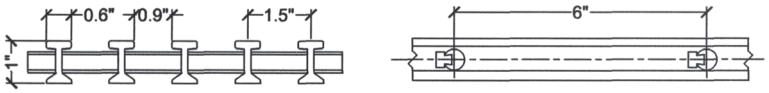


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.01	0.03	0.05	7285
18			0.01	0.02	0.02	0.04	0.07	0.15	4890
24	0.01	0.02	0.02	0.03	0.04	0.08	0.15	0.30	3650
30	0.02	0.03	0.04	0.06	0.07	0.14	0.28	0.57	2890
36	0.03	0.05	0.07	0.10	0.12	0.24	0.49		2450
42	0.04	0.08	0.11	0.15	0.19	0.38			2150
48	0.06	0.11	0.17	0.23	0.28				1850
54	0.08	0.16	0.24	0.32	0.40				1600
60	0.11	0.22	0.33	0.44	0.54				1450

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.02	0.03	11800
18			0.01	0.01	0.02	0.04	0.07	0.14	6350
24	0.01	0.02	0.03	0.04	0.05	0.10	0.20	0.40	3650
30	0.02	0.05	0.07	0.09	0.11	0.22	0.44		2350
36	0.05	0.09	0.14	0.18	0.23	0.45			1590
42	0.08	0.17	0.25	0.33	0.42				1170
48	0.14	0.28	0.42	0.56					910
54	0.22	0.45	0.67						720
60	0.34	0.68							640

I-6010

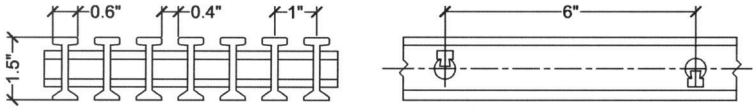
I Bearing Bar
1.0 " Thick 60% Open Area
2.52 lbs/ft²



Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12				0.01	0.01	0.02	0.03	0.06	5750
18		0.0	0.01	0.02	0.02	0.04	0.09	0.17	3850
24	0.01	0.02	0.03	0.04	0.05	0.10	0.19	0.38	2870
30	0.02	0.04	0.05	0.07	0.09	0.17	0.35	0.69	2310
36	0.03	0.06	0.09	0.12	0.12	0.29	0.59		1930
42	0.05	0.09	0.14	0.18	0.23	0.46			1650
48	0.07	0.14	0.20	0.27	0.34				1450
54	0.10	0.19	0.28	0.38	0.48				1280
60	0.13	0.26	0.39	0.52					1155

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.02	0.04	7950
18		0.01	0.01	0.02	0.02	0.04	0.08	0.16	5350
24	0.01	0.02	0.03	0.05	0.06	0.12	0.23	0.47	2950
30	0.03	0.05	0.08	0.11	0.13	0.27	0.54		1850
36	0.06	0.11	0.16	0.22	0.27	0.55			1280
42	0.10	0.20	0.30	0.40	0.50				940
48	0.17	0.34	0.51	0.68					720
54	0.27	0.54							570
60	0.40								510

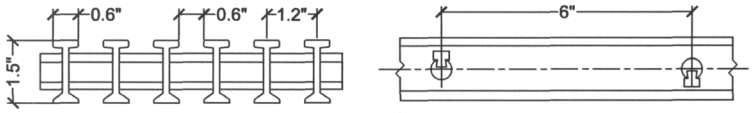
I-4015
I Bearing Bar
1.5 " Thick 40% Open Area
4.25 lbs/ft²



Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.01	0.02	14100
18					0.01	0.01	0.03	0.05	9450
24				0.01	0.01	0.02	0.05	0.10	7020
30		0.01	0.01	0.02	0.02	0.04	0.09	0.17	5600
36		0.02	0.02	0.03	0.04	0.07	0.15	0.29	4740
42	0.01	0.02	0.03	0.05	0.06	0.11	0.23	0.46	4120
48	0.02	0.03	0.05	0.07	0.08	0.17	0.34	0.68	3510
54	0.02	0.05	0.07	0.09	0.12	0.24	0.48		3120
60	0.03	0.07	0.10	0.13	0.16	0.33	0.66		2810
66	0.04	0.09	0.13	0.17	0.22	0.44			2550
72	0.06	0.11	0.17	0.23	0.28	0.57			2340

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12							0.01	0.02	21050
18					0.01	0.01	0.02	0.05	14650
24			0.01	0.01	0.02	0.03	0.06	0.12	7150
30	0.01	0.01	0.02	0.03	0.04	0.06	0.13	0.27	4400
36	0.02	0.03	0.04	0.05	0.07	0.14	0.27	0.55	3160
42	0.03	0.05	0.08	0.10	0.13	0.25	0.50		2290
48	0.04	0.08	0.13	0.17	0.21	0.42			1750
54	0.07	0.14	0.20	0.27	0.34	0.68			1380
60	0.10	0.20	0.31	0.41	0.51				1150
66	0.15	0.30	0.45	0.60					930
72	0.21	0.42	0.64						780

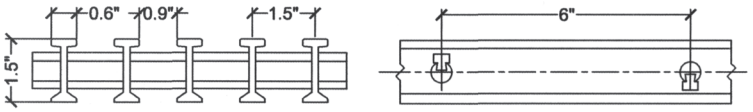
I-5015
I Bearing Bar
1.5 " Thick 50% Open Area
3.65 lbs/ft²



Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.02	0.03	0.05	11150
18			0.01	0.01	0.02	0.03	0.06	0.17	7370
24			0.01	0.02	0.03	0.06	0.19	0.31	5540
30		0.01	0.02	0.03	0.05	0.11	0.24	0.56	4420
36	0.01	0.02	0.04	0.05	0.09	0.18	0.36		3680
42	0.01	0.03	0.06	0.07	0.14	0.29	0.56		3150
48	0.02	0.04	0.08	0.10	0.21	0.43			2760
54	0.03	0.06	0.12	0.15	0.29	0.58			2450
60	0.04	0.08	0.16	0.20	0.40				2210
66	0.05	0.11	0.21	0.27	0.53				2010
72	0.07	0.14	0.28	0.35	0.69				1840

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12							0.01	0.02	14500
18					0.01	0.02	0.03	0.07	9350
24		0.01	0.01	0.02	0.02	0.04	0.07	0.19	5940
30	0.01	0.02	0.03	0.0.3	0.04	0.08	0.18	0.35	3520
36	0.02	0.03	0.05	0.07	0.08	0.17	0.34	0.68	2580
42	0.03	0.06	0.09	0.12	0.15	0.35	0.61		1800
48	0.05	0.10	0.16	0.21	0.26	0.56			1340
54	0.08	0.16	0.27	0.33	0.42				1120
60	0.13	0.25	0.37	0.50	0.66				880
66	0.18	0.37	0.58						750
72	0.29	0.52							620

I-6015
I Bearing Bar
1.5 " Thick 60% Open Area
3.05 lbs/ft²



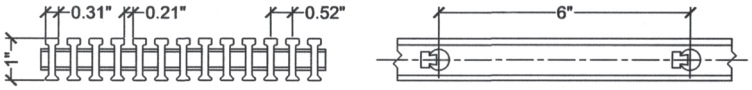
Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.01	0.02	0.04	8980
18				0.01	0.01	0.02	0.04	0.07	5950
24		0.01	0.01	0.02	0.02	0.04	0.07	0.15	4510
30	0.01	0.01	0.02	0.03	0.03	0.07	0.13	0.26	3850
36	0.01	0.02	0.03	0.04	0.06	0.11	0.22	0.44	2990
42	0.02	0.04	0.05	0.07	0.08	0.17	0.35	0.69	2610
48	0.03	0.05	0.08	0.10	0.13	0.26	0.51		2250
54	0.04	0.07	0.11	0.15	0.18	0.36			1990
60	0.05	0.10	0.19	0.19	0.26	0.49			1790
66	0.07	0.13	0.19	0.26	0.33	0.67			1650
72	0.09	0.17	0.26	0.34	0.47				1540

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12							0.01	0.02	10580
18				0.01	0.01	0.02	0.04	0.07	7050
24		0.01	0.01	0.02	0.02	0.06	0.09	0.18	4580
30	0.01	0.02	0.03	0.04	0.05	0.10	0.21	0.42	2830
36	0.02	0.04	0.06	0.08	0.11	0.27	0.41		2050
42	0.04	0.07	0.11	0.15	0.19	0.38			1450
48	0.06	0.13	0.19	0.25	0.39	0.64			1120
54	0.10	0.20	0.31	0.41	0.51				880
60	0.16	0.31	0.47	0.62					750
66	0.23	0.45	0.69						590
72	0.32	0.64							490

FIBERGLASS GRATING

I-4010 ADA

I Bearing Bar
1.0 " Thick 40% Open Area
4.11 lbs/ft²

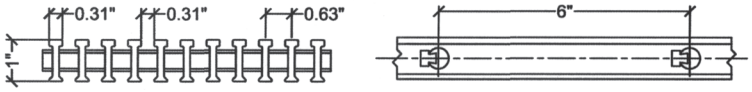


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.02	0.04	9050
18			0.01	0.01	0.02	0.03	0.07	0.12	6050
24		0.01	0.02	0.03	0.04	0.06	0.13	0.27	4500
30	0.01	0.03	0.04	0.05	0.06	0.12	0.29	0.49	3600
36	0.02	0.04	0.06	0.08	0.10	0.20	0.40		3050
42	0.03	0.06	0.10	0.16	0.18	0.35			2730
48	0.05	0.09	0.14	0.18	0.23	0.46			2250
54	0.07	0.13	0.19	0.26	0.33	0.66			2010
60	0.09	0.18	0.27	0.36	0.45				1850
66	0.12	0.24	0.39	0.49	0.59				1670
72	0.16	0.31	0.46	0.62					1500

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12							0.01	0.02	11500
18				0.01	0.01	0.03	0.05	0.11	5100
24	0.01	0.05	0.02	0.03	0.04	0.08	0.16	0.32	2800
30	0.02	0.04	0.06	0.07	0.09	0.18	0.37		1800
36	0.04	0.07	0.11	0.15	0.18	0.38			1280
42	0.07	0.14	0.21	0.27	0.35				900
48	0.12	0.23	0.35	0.46					710
54	0.19	0.37	0.58						560
60	0.28	0.56							460
66	0.42								380
72	0.58								300

I-5010 ADA

I Bearing Bar
1.0 " Thick 50% Open Area
3.52 lbs/ft²

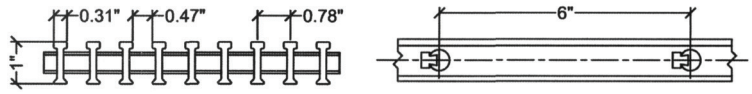


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.03	0.06	7320
18			0.01	0.02	0.02	0.04	0.07	0.14	4400
24	0.01	0.02	0.02	0.03	0.04	0.07	0.15	0.29	3650
30	0.01	0.03	0.04	0.07	0.09	0.14	0.28		2740
36	0.02	0.05	0.07	0.10	0.12	0.28	0.47		2450
42	0.04	0.08	0.12	0.15	0.19	0.37			2040
48	0.06	0.11	0.17	0.25	0.28				1770
54	0.08	0.16	0.27	0.32	0.39				1610
60	0.11	0.22	0.33	0.45	0.58				1420
66	0.14	0.29	0.48	0.57					1300
72	0.18	0.37	0.55						1150

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.02	0.04	9400
18			0.01	0.01	0.02	0.03	0.07	0.13	4120
24	0.01	0.02	0.03	0.04	0.04	0.09	0.19	0.37	2100
30	0.02	0.04	0.07	0.08	0.12	0.22	0.433		1500
36	0.05	0.09	0.13	0.19	0.22	0.47			1020
42	0.08	0.16	0.26	0.38	0.41				750
48	0.14	0.28	0.47						520
54	0.22	0.44	0.66						420
60	0.36	0.67							380
66	0.49								310
72	0.69								240

I-6010 ADA

I Bearing Bar
1.0 " Thick 60% Open Area
2.95 lbs/ft²

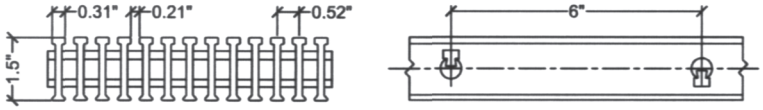


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.02	0.03	0.06	6050
18			0.01	0.02	0.02	0.04	0.08	0.16	4020
24	0.01	0.02	0.03	0.03	0.04	0.08	0.17	0.39	3010
30	0.02	0.03	0.05	0.06	0.08	0.16	0.37		2320
36	0.03	0.06	0.08	0.11	0.14	0.27			2010
42	0.04	0.08	0.13	0.17	0.21	0.49			1660
48	0.06	0.17	0.19	0.25	0.32				1500
54	0.09	0.18	0.27	0.37	0.44				1280
60	0.12	0.24	0.36	0.48	0.65				1150
66	0.16	0.32	0.48	0.64					1100
72	0.21	0.44	0.62						910

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.02	0.04	7012
18			0.01	0.01	0.02	0.04	0.08	0.15	3160
24	0.01	0.02	0.03	0.04	0.06	0.11	0.22	0.44	1790
30	0.03	0.05	0.08	0.10	0.14	0.27			1210
36	0.05	0.14	0.16	0.21	0.29				820
42	0.09	0.19	0.28	0.37					600
48	0.18	0.32	0.47	0.63					470
54	0.25	0.50							380
60	0.38								310
66	0.55								250
72	0.77								220

I-4015 ADA

I Bearing Bar
1.5 " Thick 40% Open Area
5.35 lbs/ft²

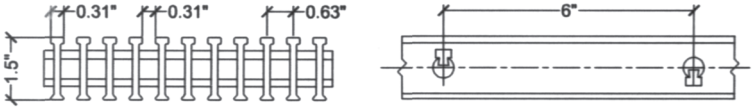


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12							0.01	0.02	14570
18						0.01	0.02	0.05	9380
24				0.01	0.01	0.02	0.05	0.09	6210
30			0.01	0.02	0.02	0.04	0.08	0.17	5720
36		0.01	0.02	0.03	0.04	0.07	0.14	0.29	4910
42	0.01	0.02	0.03	0.04	0.06	0.11	0.24	0.47	4020
48	0.02	0.03	0.05	0.06	0.08	0.16	0.37		3640
54	0.02	0.05	0.07	0.09	0.15	0.29	0.45		3300
60	0.03	0.06	0.09	0.13	0.17	0.31			3010
66	0.04	0.08	0.15	0.17	0.28	0.46			2380
72	0.05	0.11	0.16	0.25	0.29	0.59			2090

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12								0.01	19200
18						0.01	0.02	0.04	8500
24			0.01	0.01	0.02	0.03	0.06	0.12	4620
30	0.01	0.01	0.02	0.03	0.04	0.07	0.13	0.26	3004
36	0.01	0.03	0.04	0.05	0.07	0.14	0.29		2100
42	0.02	0.05	0.07	0.10	0.12	0.24			1510
48	0.04	0.08	0.13	0.16	0.24				1150
54	0.07	0.13	0.19	0.28	0.33				950
60	0.10	0.20	0.29	0.39	0.49				760
66	0.14	0.29	0.49						620
72	0.20	0.40							510

I-5015 ADA

I Bearing Bar
1.5 " Thick 50% Open Area
4.65 lbs/ft²

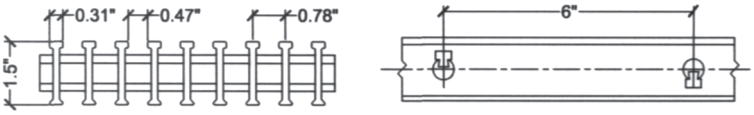


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12							0.01	0.02	10520
18						0.01	0.03	0.06	7350
24			0.01	0.01	0.02	0.03	0.08	0.12	5260
30		0.01	0.02	0.02	0.03	0.05	0.14	0.21	4520
36	0.01	0.02	0.03	0.04	0.05	0.09	0.17	0.36	3910
42	0.01	0.03	0.04	0.05	0.07	0.14	0.29		3400
48	0.02	0.04	0.06	0.09	0.11	0.20	0.39		2950
54	0.03	0.06	0.09	0.13	0.141	0.28			2680
60	0.04	0.08	0.12	0.15	0.19	0.38			2210
66	0.05	0.10	0.15	0.24	0.26	0.55			2010
72	0.07	0.13	0.19	0.26	0.33				1890

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12							0.01	0.01	14270
18					0.01	0.01	0.03	0.05	6560
24			0.01	0.02	0.02	0.04	0.07	0.14	3057
30	0.01	0.02	0.02	0.03	0.04	0.08	0.16	0.34	2410
36	0.02	0.03	0.05	0.06	0.08	0.16	0.34		1510
42	0.03	0.06	0.09	0.12	0.17	0.29			1250
48	0.05	0.10	0.15	0.21	0.25				960
54	0.08	0.19	0.28	0.37	0.39				750
60	0.12	0.24	0.36	0.48					610
66	0.18	0.35							490
72	0.28	0.49							410

I-6015 ADA

I Bearing Bar
1.5 " Thick 60% Open Area
3.75 lbs/ft²



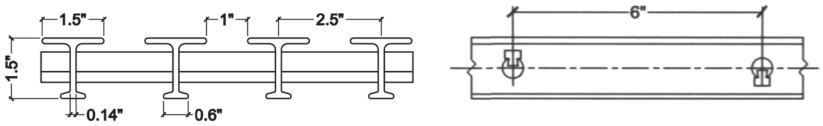
Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.01	0.03	9050
18				0.01	0.01	0.02	0.04	0.08	6570
24			0.01	0.01	0.02	0.04	0.09	0.19	5010
30		0.01	0.02	0.02	0.03	0.06	0.12	0.25	4010
36	0.01	0.02	0.03	0.04	0.05	0.11	0.22	0.42	3300
42	0.02	0.03	0.05	0.07	0.08	0.16	0.33		2780
48	0.03	0.05	0.07	0.10	0.14	0.24	0.49		2500
54	0.04	0.07	0.11	0.14	0.17	0.39			2130
60	0.05	0.10	0.14	0.19	0.28	0.47			1980
66	0.06	0.16	0.19	0.25	0.36				1820
72	0.08	0.16	0.25	0.37	0.48				1610

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12							0.01	0.02	11850
18					0.01	0.02	0.03	0.06	5110
24		0.01	0.01	0.02	0.02	0.04	0.09	0.17	3200
30	0.01	0.02	0.03	0.04	0.05	0.11	0.20	0.40	2050
36	0.02	0.04	0.06	0.08	0.11	0.22	0.41		1240
42	0.04	0.07	0.11	0.16	0.18	0.36			950
48	0.06	0.14	0.18	0.27	0.32				800
54	0.10	0.19	0.29	0.39	0.49				630
60	0.15	0.29	0.47						510
66	0.22	0.44							420
72	0.36	0.62							315

FIBERGLASS GRATING

WT-4015

Wide T Bearing Bar
1.5 " Thick 40% Open Area
2.61 lbs/ft²

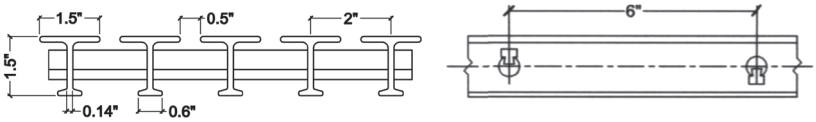


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.01	0.02	0.04	8900
18			0.01	0.01	0.02	0.03	0.05	0.12	8100
24		0.01	0.01	0.02	0.03	0.05	0.10	0.19	6400
30	0.01	0.02	0.03	0.04	0.05	0.09	0.18	0.38	5300
36	0.01	0.03	0.04	0.06	0.09	0.15	0.31		4500
42	0.02	0.06	0.09	0.10	0.14	0.23	0.47		3700
48	0.03	0.07	0.10	0.13	0.20	0.35			3200
54	0.05	0.09	0.12	0.18	0.27	0.47			3000
60	0.06	0.14	0.17	0.25	0.39				2600

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.01	0.03	8300
18				0.01	0.01	0.02	0.05	0.11	5600
24			0.01	0.02	0.04	0.06	0.12	0.25	4100
30	0.01	0.03	0.04	0.06	0.08	0.14	0.29		3200
36	0.03	0.06	0.08	0.11	0.17	0.29			2800
42	0.05	0.10	0.14	0.20	0.31				2200
48	0.08	0.17	0.20	0.35					1600
54	0.13	0.27	0.31						1300
60	0.20	0.41							1000

WT-2515

Wide T Bearing Bar
1.5 " Thick 25% Open Area
3.22 lbs/ft²

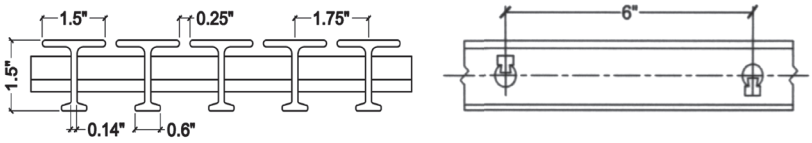


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.01	0.02	0.04	11000
18			0.01	0.01	0.01	0.02	0.04	0.09	10200
24		0.01	0.01	0.02	0.02	0.04	0.08	0.16	8000
30	0.01	0.01	0.02	0.03	0.04	0.07	0.15	0.29	6400
36	0.01	0.02	0.03	0.05	0.07	0.12	0.25	0.48	5300
42	0.02	0.04	0.06	0.08	0.11	0.19	0.37		4600
48	0.03	0.06	0.08	0.11	0.17	0.28			4020
54	0.04	0.08	0.10	0.16	0.23	0.38			3600
60	0.05	0.10	0.14	0.21	0.30				3200

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.01	0.02	10300
18				0.01	0.01	0.02	0.04	0.08	6700
24			0.01	0.02	0.03	0.05	0.10	0.21	5000
30	0.01	0.02	0.03	0.05	0.07	0.12	0.24	0.48	4100
36	0.02	0.05	0.07	0.09	0.14	0.24	0.47		3400
42	0.04	0.08	0.11	0.17	0.25	0.42			2600
48	0.07	0.14	0.18	0.28	0.43				2000
54	0.11	0.22	0.27	0.45					1600
60	0.16	0.35	0.41						1240

WT-1515

Wide T Bearing Bar
1.5 " Thick 15% Open Area
3.50 lbs/ft²

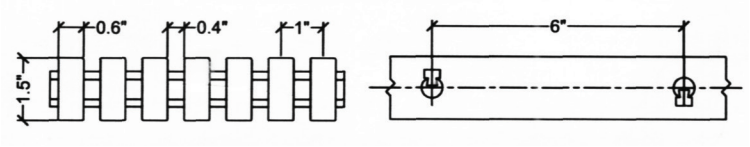


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
12					0.01	0.01	0.02	0.03	12200
18				0.01	0.01	0.02	0.04	0.08	11600
24		0.01	0.01	0.01	0.02	0.04	0.07	0.15	9200
30	0.01	0.01	0.02	0.03	0.04	0.07	0.14	0.26	7300
36	0.01	0.02	0.03	0.04	0.07	0.12	0.24	0.45	6100
42	0.02	0.04	0.06	0.08	0.11	0.19	0.37		5280
48	0.02	0.05	0.08	0.11	0.15	0.25	0.50		4600
54	0.03	0.07	0.09	0.14	0.21	0.34			4100
60	0.04	0.09	0.11	0.19	0.28	0.48			3700

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
12						0.01	0.01	0.02	10500
18				0.01	0.01	0.02	0.04	0.07	7700
24		0.01	0.01	0.02	0.03	0.04	0.10	0.19	5700
30	0.01	0.02	0.03	0.05	0.06	0.11	0.21	0.43	4500
36	0.02	0.04	0.06	0.09	0.13	0.21	0.42		3800
42	0.04	0.08	0.10	0.15	0.22	0.41			2900
48	0.06	0.13	0.14	0.25	0.38				2200
54	0.09	0.20	0.25	0.40					1700
60	0.15	0.30	0.37						1480

HD-4015

Heavy Duty Bearing Bar
1.5 " Thick 40% Open Area
9.21 lbs/ft²

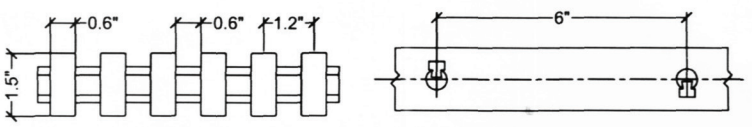


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
18						0.01	0.01	0.03	15110
24					0.01	0.02	0.03	0.06	12480
30			0.01	0.01	0.01	0.03	0.05	0.11	10270
36		0.01	0.01	0.02	0.02	0.04	0.09	0.18	8555
42		0.01	0.02	0.03	0.03	0.07	0.13	0.26	7320
48	0.01	0.02	0.03	0.04	0.05	0.10	0.19	0.38	6420
54	0.01	0.03	0.04	0.06	0.07	0.14	0.28	0.56	5710
60	0.02	0.04	0.06	0.07	0.09	0.18	0.36		5135
66	0.02	0.05	0.07	0.10	0.12	0.24	0.48		4624
72	0.03	0.06	0.10	0.14	0.16	0.31	0.62		4231

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
18						0.01	0.02	0.03	18350
24				0.01	0.01	0.02	0.04	0.08	14725
30		0.01	0.01	0.02	0.02	0.04	0.08	0.17	11808
36	0.01	0.02	0.03	0.04	0.04	0.09	0.17	0.36	8325
42	0.02	0.03	0.04	0.07	0.07	0.15	0.29	0.59	6021
48	0.03	0.05	0.07	0.10	0.12	0.25	0.48		4642
54	0.04	0.08	0.13	0.15	0.19	0.39			3628
60	0.06	0.12	0.17	0.23	0.28	0.58			2941
66	0.08	0.17	0.26	0.33	0.42				2452
72	0.12	0.24	0.35	0.47	0.59				2040

HD-5015

Heavy Duty Bearing Bar
1.5 " Thick 50% Open Area
7.71 lbs/ft²

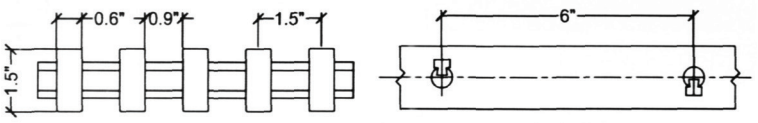


Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
18							0.02	0.04	14510
24						0.02	0.03	0.07	10880
30				0.01	0.02	0.03	0.06	0.12	8710
36			0.02	0.02	0.03	0.05	0.12	0.20	7250
42		0.02	0.03	0.04	0.05	0.09	0.15	0.32	6210
48	0.01	0.02	0.04	0.05	0.08	0.16	0.23	0.46	5420
54	0.02	0.03	0.05	0.07	0.08	0.162	0.35	0.69	4780
60	0.02	0.05	0.07	0.09	0.15	0.29	0.49		4350
66	0.03	0.06	0.09	0.12	0.15	0.29	0.58		3950
72	0.04	0.08	0.13	0.15	0.21	0.39			3590

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
18							0.02	0.04	15630
24						0.02	0.04	0.08	11720
30			0.02	0.03	0.04	0.05	0.10	0.20	9380
36		0.02	0.03	0.04	0.05	0.01	0.19	0.38	6510
42	0.02	0.04	0.06	0.07	0.09	0.17	0.38	0.69	4780
48	0.03	0.06	0.09	0.115	0.14	0.29	0.69		3660
54	0.05	0.10	0.14	0.19	0.28	0.46			2890
60	0.07	0.14	0.22	0.28	0.34	0.68			2340
66	0.10	0.20	0.30	0.40	0.51				1930
72	0.15	0.29	0.44	0.58					1620

HD-6015

Heavy Duty Bearing Bar
1.5 " Thick 60% Open Area
6.26 lbs/ft²



Span (inch)	CONCENTRATED LOAD in lbs/ft of width								Max Load
	50	100	150	200	300	500	1000	2000	
18						0.01	0.02	0.05	11810
24					0.01	0.02	0.04	0.08	8860
30				0.01	0.03	0.04	0.08	0.16	7080
36		0.02	0.02	0.03	0.04	0.06	0.14	0.27	5900
42		0.02	0.03	0.04	0.05	0.10	0.20	0.41	5030
48	0.02	0.03	0.05	0.06	0.08	0.15	0.29	0.59	4430
54	0.02	0.04	0.061	0.08	0.12	0.25	0.41		3930
60	0.03	0.06	0.09	0.12	0.14	0.29	0.55		3540
66	0.04	0.07	0.11	0.15	0.19	0.37			3220
72	0.05	0.10	0.15	0.190	0.24	0.48			2930

Span (inch)	UNIFORM LOAD in lbs/ft²								Max Load
	50	100	150	200	300	500	1000	2000	
18							0.02	0.04	12500
24					0.02	0.03	0.05	0.11	9380
30			0.02	0.03	0.04	0.06	0.12	0.25	7500
36		0.03	0.04	0.05	0.07	0.12	0.24	0.49	5210
42	0.02	0.05	0.07	0.09	0.11	0.22	0.48		3820
48	0.04	0.08	0.11	0.16	0.18	0.37			2930
54	0.06	0.12	0.18	0.23	0.29	0.58			2310
60	0.09	0.18	0.26	0.36	0.43				1870
66	0.13	0.26	0.38	0.54	0.63				1550
72	0.18	0.36	0.55	0.73					1300

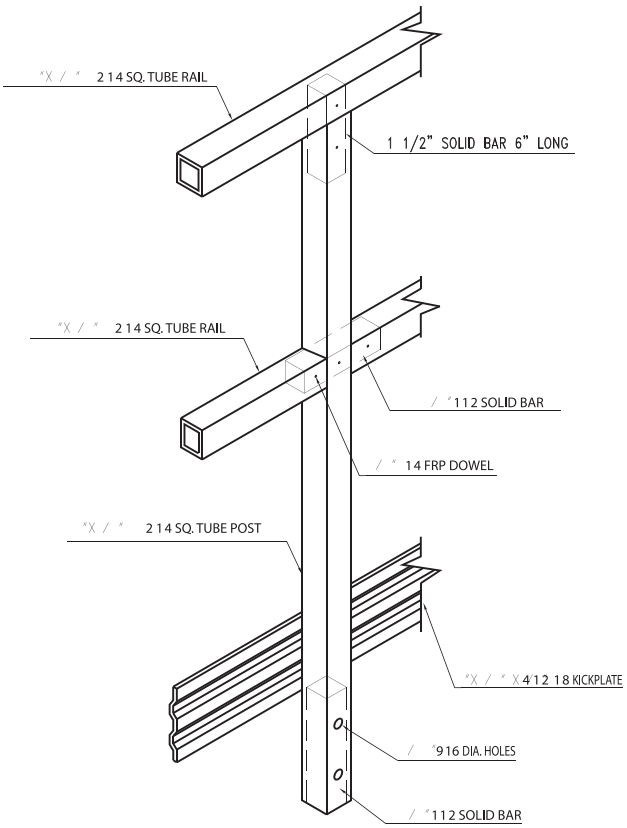
Fiberglass Handrail

Manufactured with the pultrusion process, the fiberglass reinforced polyester handrail shapes contain up to 70% glass fibers, guaranteeing extraordinary mechanical properties to the system.

The handrail system is composed of various standard elements: vertical posts, fixing bases, various sections of shapes.

The handrail system is rigorously selected for its chemical resistance to aggressive agents. No additives are used: pure resin possesses an inalterable resistance which ensures a long service life.

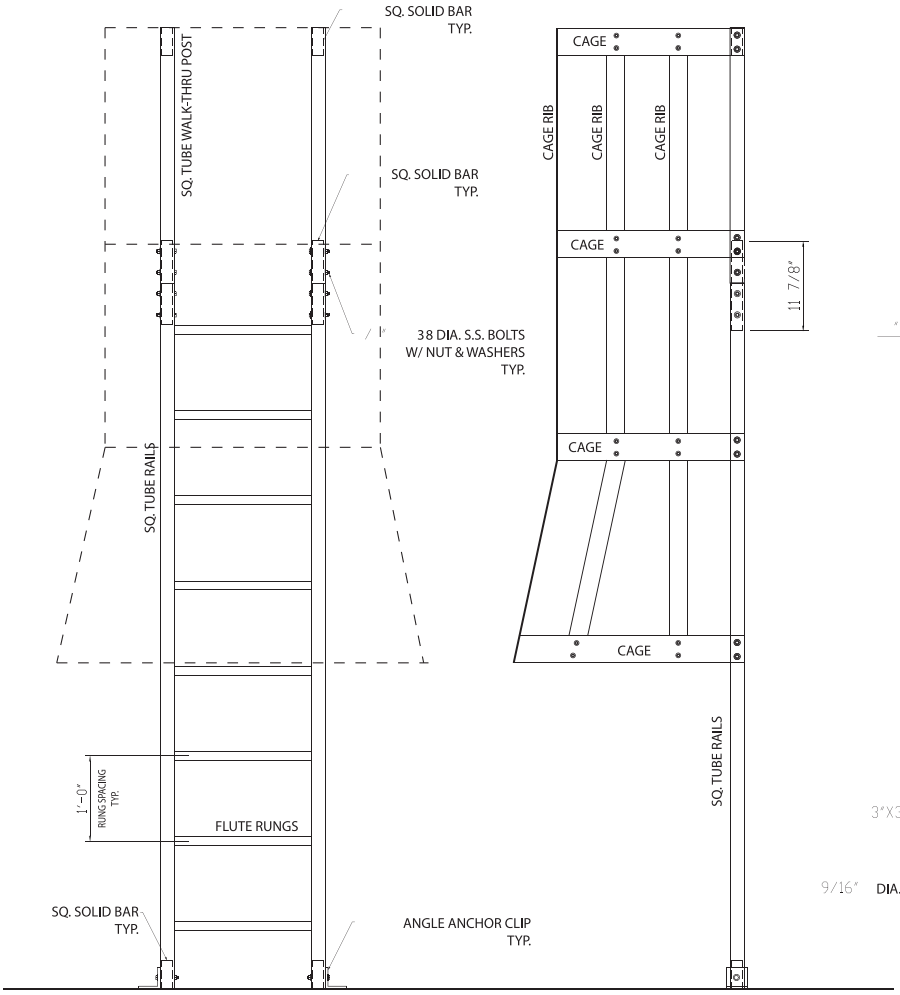
Chemical inertia is at maximum levels as the composite, which is rich in glass fibers, is protected by an additional synthetic surface veil, that further increases the chemical resistance thanks to the resin rich surface.



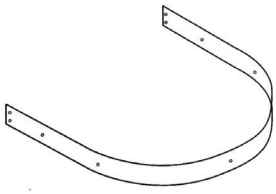




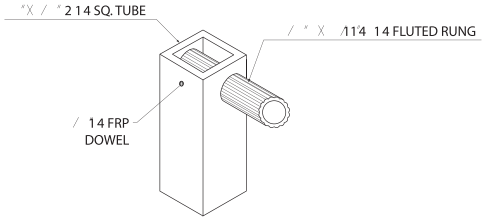
Fiberglass Ladder



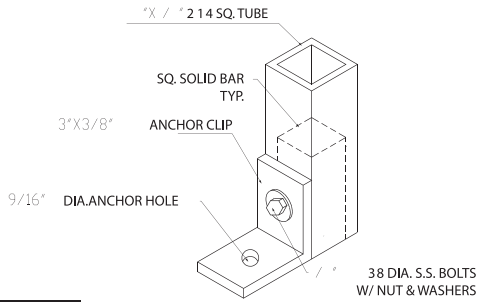
LADDER FRONT VIEW LADDER SIDE VIEW



CAGE VIEW



LADDER RUNG DETAIL



ANCHOR CLIP DETAIL

Corrosion proof ladders

Manufactured with pultruded profiles, vertical ladders are suitable for any application in corrosive environments.

Excellent mechanical resistance

The excellent mechanical resistance and the anti-slip rung profile, make the ladders ideal for intensive use.

Easy to use

Supplied in the requested length. Their lightweight structure further helps installation procedures.

Economical and durable

With a cost comparable to aluminum lad-ders vertical ladders are well known and appreciated for their distinctive features:

-- resistance to impact (no permanent deformation due to temporary overloading and impact)
-- electrical insulation
-- attractive appearance(maintenance free over the year, no paining required and no corrosion problems)



FIBERGLASS STAIR TREAD

Stair Tread & Tread Covers

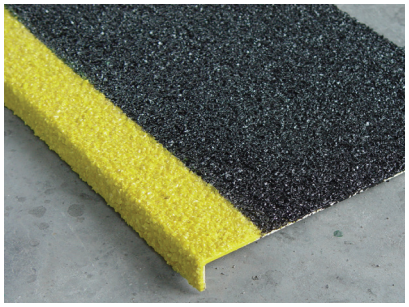


Stair Tread

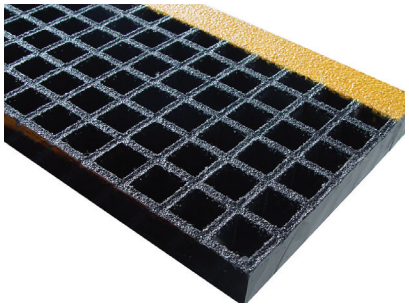
Manufactured with the same criteria as the gratings, with a reinforced nosing of a different color and integrated anti-slip surface, stair tread is a maximum safety product, its installation is advisable in all industrial environments.

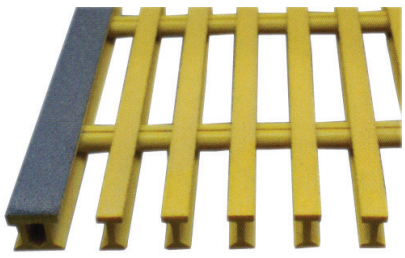
Stair Tread Covers

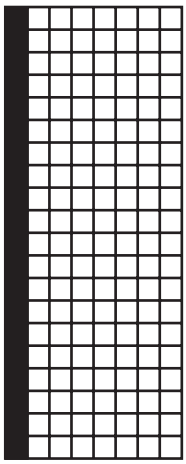
Stair cover represents the ideal solution to make stairways safer, both in civil and industrial environments. It can be installed on existing steps(made of wood, cement, steel, etc.)by simply fixing it with appropriate fixing clips. The special integration of the silica grains in the upper surface gives an excellent resitance to slip, even in the most extreme conditions(presence of water, ice, grease, oil, wax, etc.) Stair covers are supplied with a yellow integral nosing, emphasizing even more the safety features of the product.



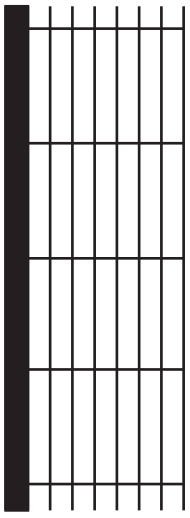
Stair Tread Cover



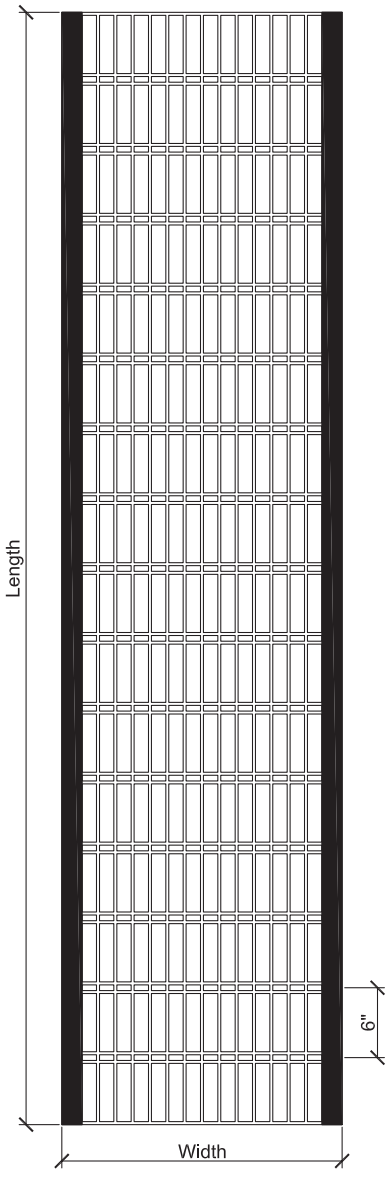




Molded Stair Tread



Pultruded Stair Tread

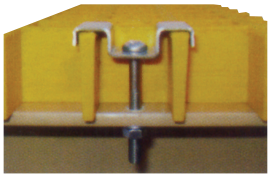


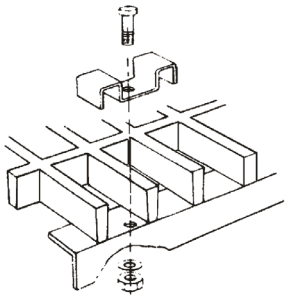
Grating Fasteners

Hold-down clips should be used with a minimum of 4 clips per panel. Different fasteners available on request.
All clips are made of SS316 stainless steel.

M Clips

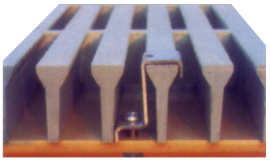
M clips are used to secure panels support using two adjacent grati bars for a secure fit.

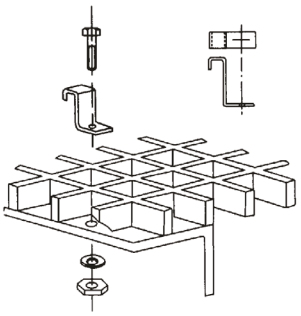




L Clips

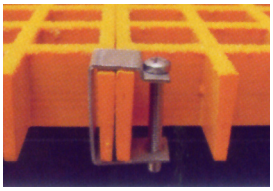
L clips are used to fasten gratin to a support bar for moderate loads.

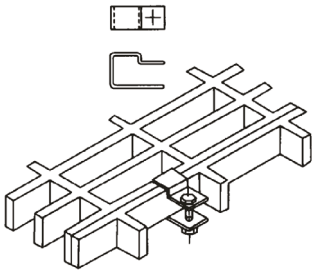




C Clips

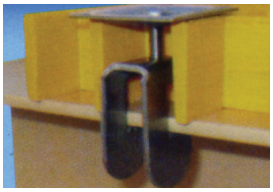
C clips are used to join two e molded grating together.

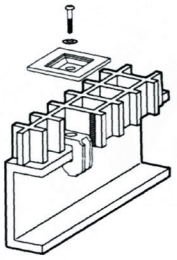




G Clips

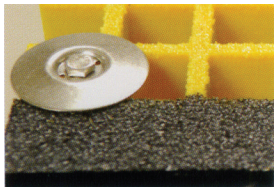
G clips are designed to attach grating to any structural.





Round Clips

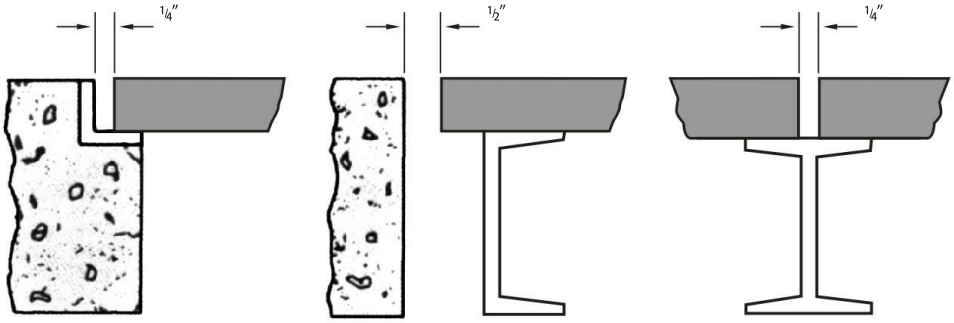
Round clips are made specifically for plate or grating with plate on top.





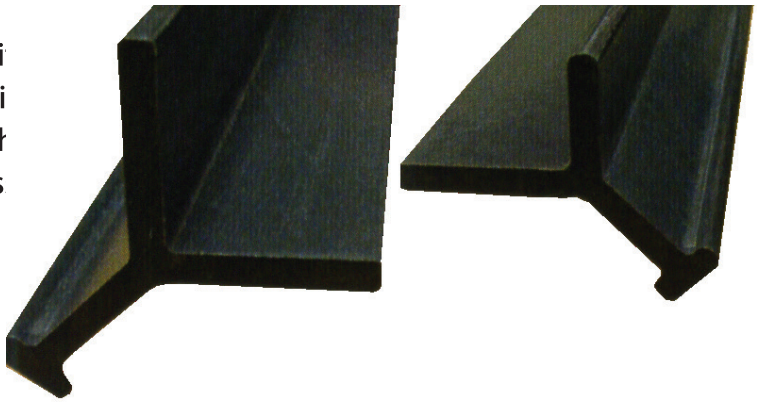
Standard Installation Clearances

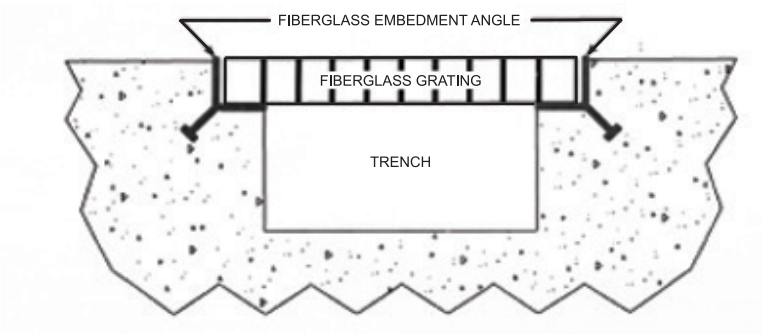
A minimum of 1½" bearing support should be provided under the edges of panels.



Fiberglass Embedment Angle

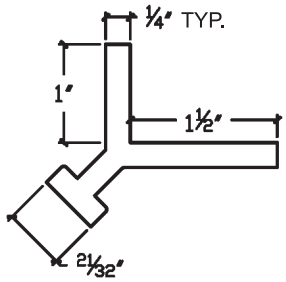
Fiberglass pultruded embedment angles, wi continuous integral anchors, provide corrosi resistant grating support in trenches and otl concrete openings. Available for all thicknes es of grating. All embedment angles are supplied in a vinylester resin system with a Class 1 flame spread rating.



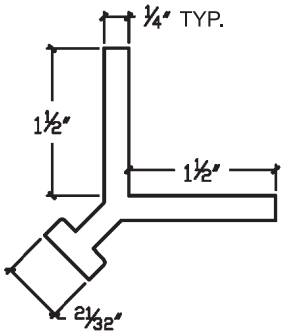


FEATURES

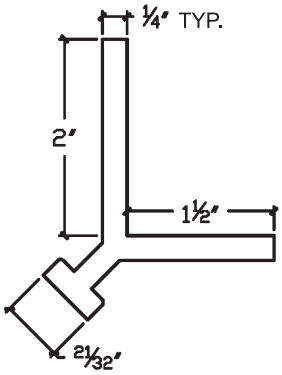
- Corrosion resistant
- Low conductivity
- UV stable
- Fire retardant
- High strength
- Easy to install



1" Embedment Angle



1½" Embedment Angle



2" Embedment Angle

Fiberglass Structural Shapes Guide

WF-BEAM

SIZE (inch)	Lbs./Ft.
4×4×1/4	2.33
6×6×3/8	5.28
8×8×3/8	7.10

I-BEAM

SIZE (inch)	Lbs./Ft.
8×4×3/8	4.43
10×5×1/2	8.02
12×6×1/2&1/4	7.39

ANGLE

SIZE (inch)	Lbs./Ft.
2×2×1/4	0.75
3×3×3/8	1.68
4×4×3/8	2.26
4×4×1/2	3.02

HANDRAIL CONNECTORS

SIZE (inch)	Lbs./Pc
1 1/2 90° fixed	1.32
1 1/2 adjustable	1.32

EMBEDMENT ANGLE

SIZE (inch)	Lbs./Ft.
1×1 1/2×1/4	0.78
1 1/2×1 1/2×1/4	0.89
2×1 1/2×1/4	0.99

CHANNEL

SIZE (inch)	Lbs./Ft.
1 3/4×1 5/16×1/8	0.42
4×1 1/8×1/4	1.15
4×2×5/16	1.90
4 3/4×1 7/16×1/4	1.40
5 5/16×1 3/16×1/4	1.37
6×1 11/16×3/8	2.64
6 5/16×1 7/8×5/16	2.43
7 7/8×2 3/8×3/8	3.81
8×2 3/16×3/8	3.44
10×2 3/4×1/2	5.85

ROUND ROD

SIZE (inch)	Lbs./Ft.
1/4	0.04
3/8	0.10
3/4	0.38
1	0.68
1 1/2	1.53
2	2.56

LADDER RUNG

SIZE (inch)	Lbs./Ft.
1 1/4×0.16	0.49
1 3/8×0.18	0.52

STAIR TREAD COVER

SIZE (inch)	Lbs./Ft.
1×6×1/8	0.76
1×9×1/8	1.08
1×12×1/8	1.42
1.5×9×1/8	1.10

SQUARE TUBE

SIZE (inch)	Lbs./Ft.
1×1×1/8	0.35
1 1/2×1 1/2×1/8	0.53
1 1/2×1 1/2×1/4	0.97
2×2×1/8	0.72
2×2×1/4	1.36
5×5×3/8	5.51
2×1 1/4×1/4	1.01

ROUND TUBE

SIZE (inch)	Lbs./Ft
1×1/8	0.31
1 1/2×1/8	0.48
1 1/2×1/4	0.79
2×1/8	0.77
2×1/4	1.43

TOE PLATE

SIZE (inch)	Lbs./Ft.
4×1 1/2×1/8	0.49
6×1 1/2×1/8	0.74

FLAT SHEET

SIZE (inch)	Lbs./Ft.
4×1/8	0.39
4×1/4	0.76
4×3/8	1.15
4×1/2	1.53
6×1/4	1.24
6×1/2	2.25
9×1/4	1.86
10×1/4	2.02
11×1/4	2.26
12×1/4	4.01
24×1/4	4.87
36×1/4	7.49
48×1/8	1.30
48×3/16	1.88
48×1/4	2.49
48×3/8	3.51
48×1/2	4.87
48×5/8	5.86
48×3/4	6.72
48×1	8.65

SQUARE BAR

SIZE (inch)	Lbs./Ft.
1×1	0.81
1 1/2×1 1/2	1.87
2×2	3.32

Note: Other sizes are avilable on request.



Fiberglass Structural Typical Coupon Properties

The following table shows test results for typical coupon properties and Structural fiberglass profiles (Standard, Fire Retardant and Vinylester shapes). Properties are derived per the ASTM test method shown. Synthetic surfacing veil and ultraviolet inhibitors are standard.

		ENGLISH		METRIC	
MECHANICAL PROPERTIES	ASTM	Value	Units	Value	Units
Tensile Stress, LW	D-638	41,000	psi	286.0	MPa
Tensile Stress, CW	D-638	7,400	psi	51.0	MPa
Tensile Modulus, LW	D-638	5.1	10^6 psi	35.2	GPa
Tensile Modulus, CW	D-638	1.1	10^6 psi	7.4	GPa
Compressive Stress , LW	D-695	33,000	psi	227.8	MPa
Compressive Stress , CW	D-695	16,000	psi	110.0	MPa
Compressive Modulus, LW	D-695	3.4	10^6 psi	23.5	GPa
Compressive Modulus, CW	D-695	1.5	10^6 psi	11.3	GPa
Flexural Stress, LW	D-790	55,000	psi	381.0	MPa
Flexural Stress, CW	D-790	11,000	psi	80.4	MPa
Flexural Modulus, LW	D-790	3.0	10^6 psi	20.7	GPa
Flexural Modulus, CW	D-790	1.4	10^6 psi	9.5	GPa
Modulus of Elasticity,E	Full Section	2.7	10^6 psi	19.3	GPa
Shear Modulus	——	0.5	10^6 psi	3.1	GPa
Short Beam Shear	D-2344	4350	psi	30.0	MPa
Punch Shear	D-732	11,000	psi	91.7	MPa
Notched Izod Impact, LW	D-256	39	ft.-lbs./in	3.12	J/mm
Notched Izod Impact, CW	D-256	6	ft.-lbs./in	0.32	J/mm
PHYSICAL PROPERTIES	ASTM	Value	Units	Value	Units
Barcol Hardness	D-2533	55	——	55	——
24 Hour Water Absorbtion	D-570	0.3	% max	0.3	% max
Density	D-792	0.063-0.07	lbs./in.^{3}	1.74-1.95	g/cc
Coefficient of Thermal Expansion,LW	D-696	4.9	10^{-6}in./in./°F	8.4	10^{-6}mm/mm/°C
ELECTRICAL PROPERTIES	ASTM	Value	Units	Value	Units
Arc Resisitance,LW	D-495	132	seconds	132	seconds
Dielectric Strength,LW	D-149	35	kv./in	11.8	kv./mm
Dielectric Strength,PF	D-149	217	volts/mil.	217	volts/mil.
Dielectric Constant,PF	D-150	5	@60hz	5	@60hz
FLAMMABILITY PROPERTIES	ASTM		Units		Value
Tunnel Test	E-84		Flame Spread		15 max.
Flammalility	D-635		——		Nonburing
UL	94				V0
NBS Smoke Chamber	E-662		Smoke Density		600-700

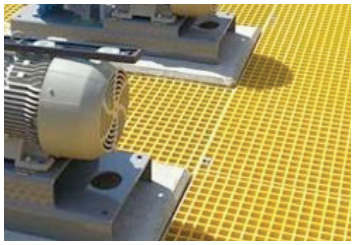
LW = Lengthwise CW = Crosswise PF = Perpendicular to Laminate Face

Chemical Resistance Guide

Chemical Environment	Concentration %	Temp °F	Molded Grating			Pultruded Grating & Structural Shapes	
			VFR	IFR	GP	VFR	IFR
Acetic Acid	50	MAX	C	C	S	C	C
Aluminum Hydroxide	ALL	MAX	C	C	C	C	C
Ammonium Chloride	ALL	120	C	C	C	C	C
Ammonium Bicarbonate	15	120	C	C	S	C	S
Ammonium Bicarbonate	50	120	C	C	S	S	I
Aluminum Hydroxide	20	80	S	N	N	I	N
Ammonium Sulfate	ALL	120	C	C	C	C	S
Calcium Carbonate	ALL	MAX	C	C	S	C	C
Calcium Niterate	ALL	MAX	C	C	C	C	C
Carbon Tetrachloride	100	80	I	N	N	I	N
Chlorine,Dry Gas	ALL	MAX	C	C	S	C	S
Chlorine Water	SAT	120	C	I	N	I	N
Chromic Acid	50	150	I	N	N	I	N
Copper Chloride	ALL	MAX	C	C	C	C	C
Copper Cyanide	ALL	140	C	S	I	S	I
Copper Nitrate	ALL	MAX	C	C	C	C	C
Ethanol	10	120	C	S	S	C	S
Ethanol	50	120	C	I	I	C	I
Ethylene Glycol	ALL	ISO	C	C	S	C	S
Ferric Chloride	100	MAX	C	C	C	C	C
Forrous Chloride	ALL	MAX	C	C	C	C	C
Formaldehyde 0-50%	50	120	S	I	I	S	I
Gasoline	ALL	120	C	C	S	C	S
Glucose	ALL	120	C	C	C	C	C
Glycerin	100	MAX	C	C	S	C	S
Hydrobromic Acid	50	MAX	S	S	I	I	N
Hydrobromic Acid	10	MAX	C	S	S	S	S
Hydrobromic Acid	37	MAX	I	S	I	I	I
Hydrogen Peroxide	30	80	C	N	N	S	N
Nickel Sulfate	ALL	MAX	C	C	C	C	C
Nitric Acid	20	120	S	S	I	I	I
Oxalic Acid	ALL	150	C	C	S	C	S
Perchloric Acid	30	90	S	I	I	I	I
Phosphoric Acid	80	MAX	C	C	C	C	S
Potassium Chloride	ALL	MAX	C	C	C	C	C
Potassium Dichromate	ALL	MAX	C	C	C	C	C
Potassium Nitrate	ALL	MAX	C	C	C	C	C
Potassium Sulfate	ALL	MAX	C	C	C	C	C
Propylene Glycol	ALL	MAX	C	C	S	C	S
Sodium Acetate	ALL	MAX	C	C	C	C	C
Sodium Bisulfate	ALL	80	S	S	I	C	I
Sodium Bromide	ALL	80	C	C	C	C	C
Sodium Cyanide	ALL	80	C	I	I	S	I
Sodium Hydroxide	10	MAX	C	I	N	I	N
Sodium Hydroxide	50	MAX	S	N	N	N	N
Sodium Nitrate	ALL	MAX	C	C	C	C	C
Sodium Sulfate	ALL	MAX	C	C	C	C	C
Tartaric Acid	ALL	MAX	C	C	S	C	S
Vinegar	ALL	MAX	C	C	S	C	S
Water, Distilled	ALL	MAX	C	C	C	C	C

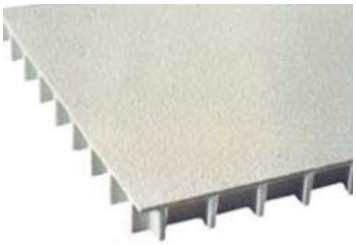
C = Continuous exposure of the grating to the chemical environment listed at the temperature listed.
S = Frequent exposure of the grating to splashes and spills from the chemical enviroment listed with that environment at the temperature listed.
I = Infrequent exposure of the gratin to splashes and spills from the chemical environment listed with that environment at the temperature listed and the spill immediately cleaned up or washed from the grating.
N = Not recommended for the concentrations and temperatures listed.

OUR PRODUCTS



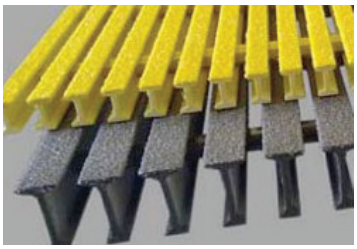
Molded Grating

Integrally molded construction with Bi-directional load carrying capability. High resin content provides higher chemical corrosion resistance and fire retardancy.



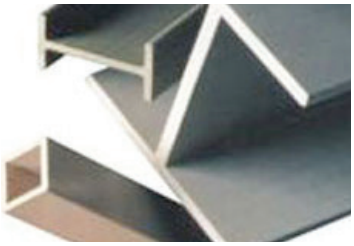
Covered Grating

Offers the same characteristics as std. grating with the benefits of a solid surface, which eliminates items from falling thru the panel grid. Slip resistant surface added for safety.



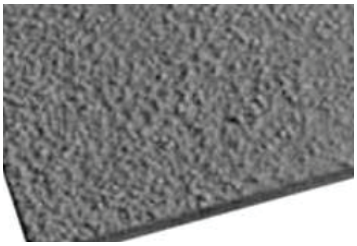
Pultruded Grating

High strength unidirectionl rovings allow for greater load carrying capability on larger spans. Fire resistant and Chemical resistant.



Structural Shapes

Standard Structural shapes include angles, I-beams, wide flange beams, channels and tube. Custom profile capabilities are available.



Floor Plate

The anti-slip surface is ideal for slip/fall areas, where water, oil and hazardous liquids are present.



Stair Treads

Molded and Pultruded stairtreads are available in two resin systems, polyester and vinylester. Standard and custom sizes available.



Handrail

Constructed to OSHA standards using pultruded shapes. Safety rails guard slip/fall areas in the workplace.



Caged Ladders

Stands up to rugged use in various environments. Design offers easy gripping and slip resistant traction.

Liberty Pultrusions

Manufacturer of Engineered FRP Pultrusions

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Pittsburgh, PA 15122

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Saturday & Sunday: Closed

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