



DeltaSpan

Pultruded Grating



AIMS Composites is a world leader in offshore vortex induced vibration (VIV) suppression, engineered fiberglass structural systems, and platform dock fendering systems. Since 1982, AIMS has been the leader in supplying, engineering, and fabricating fiberglass grating and structural systems. AIMS supplies a full line of platforms, dock fenders, fiberglass signs, vortex breakers, VIV suppression products, blast panels, and mudmats. In addition, we are a leading supplier of fiberglass handrail and stair systems, as well as and other specialty fiberglass products.

AIMS prides itself on its ability to take the customer project from the initial design and engineering phase to the implementation and installation of the finished product.

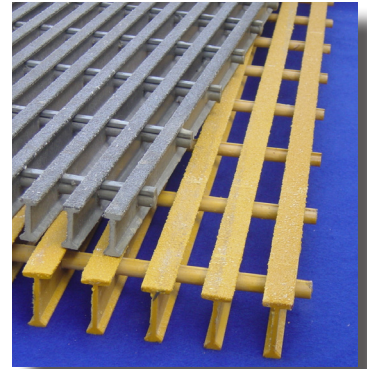
In an effort to continually improve services, AIMS actively seeks expansion opportunities within the United States and in overseas markets. In 1993, we purchased Teledyne Monarch Rubber's platform fender product line, moved the product tooling to Houston, and began manufacturing and marketing a platform fender product line, i.e., energy cells, rubstrips, and barge bumpers. In 2017, AIMS began fabricating aluminum structures and handrails.

To market our products and services around the world, AIMS forms partnerships with local companies in various countries, including Malaysia, Australia, Korea, Singapore, India, United Arab Emirates, Nigeria, Brazil, and Mexico. Everywhere there is offshore oil and gas, you will find AIMS International.



Manufacturing

AIMS fiberglass products are guaranteed and manufactured in an ISO 9001:2008 Certified, world-class facility that meets a high standard of excellence. Our products incorporate only the highest quality resins and glass, in addition to other proprietary manufacturing techniques. For example, DeltaSpan Pultruded Grating is manufactured with every panel of grating subjected to a sequence of quality assurance inspections ensuring complete sealing of all joints, full wet-out of the glass rovings, consistent resin-to-glass ratios, and consistent non-skid features. Complete traceability of resin batches and glass utilized in every panel is standard operating procedure.



AIMS gratings and other structural fiberglass products are offered in a variety of specially formulated resins, meeting our customers' specific service environments.

Engineering & In-House Capabilities

AIMS' engineering and drafting capabilities are unsurpassed in the structural fiberglass industry. We have developed a 3-dimensional, structural finite-element analysis computer design program—Allowable Stress Design (ASD)—incorporating the industry-accepted fiberglass formulas. Our Structural Engineers can perform 3-D structural analyses of any fiberglass structure, steel or aluminum structure, or even a concrete structure. This structural design program performs stress and deflection calculations, plots of deflections, forces, stresses, reactions, etc., as well as resizing over-stressed members. AIMS is committed to producing the most optimum structural design for all of its engineered systems.

Our in-house team of engineers and designers possess exceptional knowledge of fiberglass products and are capable of providing qualified solutions to our customers for their unique requirements.

DeltaSpan Pultruded Grating

DeltaSpan Pultruded Grating is lightweight, strong, chemical and UV resistant, and reduces costly maintenance. It is particularly well suited for highly corrosive environments and offers extended life, eliminating periodic maintenance and replacement costs, thus making DeltaSpan Pultruded Gratings the preferred alternative to conventional steel gratings.

Higher Stiffness

DeltaSpan possesses approximately 35% resin and 65% glass content by weight, giving it a very high strength to weight ratio. Load bearing bar capacity can be tailored to the application by modifying the glass content, fiber orientation, and combination of mat and roving reinforcement.

Chemical Resistance

DeltaSpan gratings offer superb chemical resistance to a variety of acids and caustics. DeltaSpan is offered in an array of corrosion resistant resins designed for any environment, from light or moderately corrosive environments to extremely corrosive applications. DeltaSpan is offered in either premium isophthalic polyester, vinyl ester, or phenolic resins.

Lightweight

Weighing much less than comparable steel gratings, DeltaSpan offers as much as 50% - 75% weight savings, depending on the bearing bar configuration. For weight sensitive structures, such as a tension-leg platform (TLP) for an offshore deepwater facility, the use of DeltaSpan pultruded grating offers significant weight savings, thereby reducing the overall cost of the project.



Ultraviolet Resistance

All Delta-Span Pultruded Gratings are manufactured with resins containing UV inhibitors. UV resistance is enhanced with the use of synthetic surfacing veil, creating a “resin-rich” surface and further strengthening resistance to ultraviolet attack. For optimum UV resistance, DeltaSpan can be coated for custom orders.

Fire Retardancy

All DeltaSpan Pultruded Gratings are designed to exhibit a Flame Spread Rating of 25 or less when tested in accordance with ASTM E-84 Tunnel Test, comparable to UL 723, ANSI/NFPA No. 255 and UBC No. 8-1, and meet the self-extinguishing requirements of ASTM D-685. A variety of resins are available, offering an array of flame spread ratings and smoke densities from as low as a flame spread of 4.

Non-Skid for Safety

All DeltaSpan Pultruded Gratings are equipped with a durable and permanent gritted surface on the topside of all bearing bars, thus providing superior slip resistance as compared to traditional steel grated walking surfaces. There is nothing worse than steel treads on a wet day.

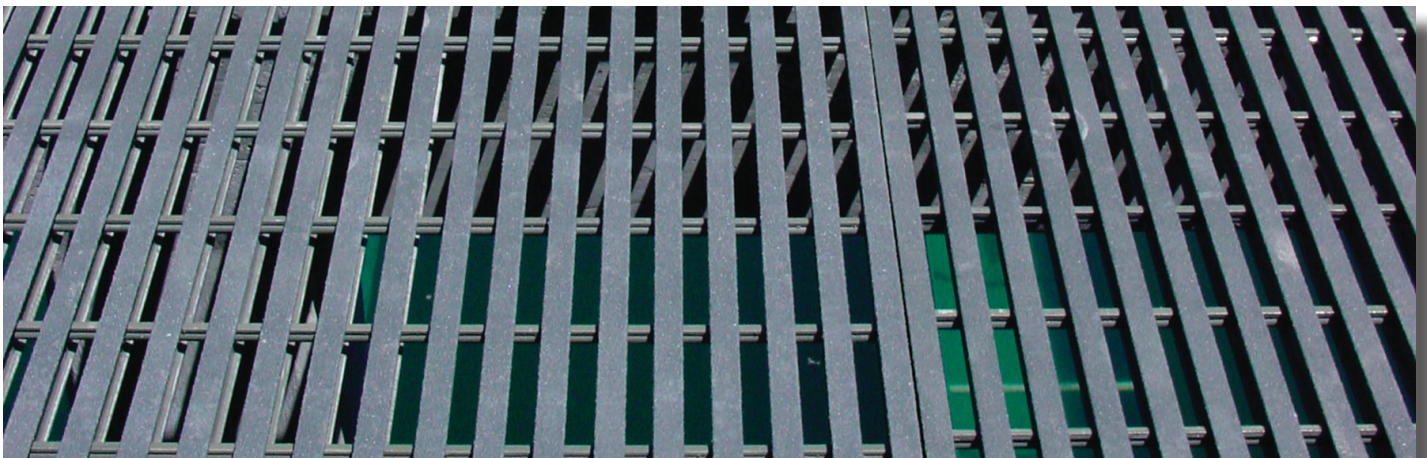
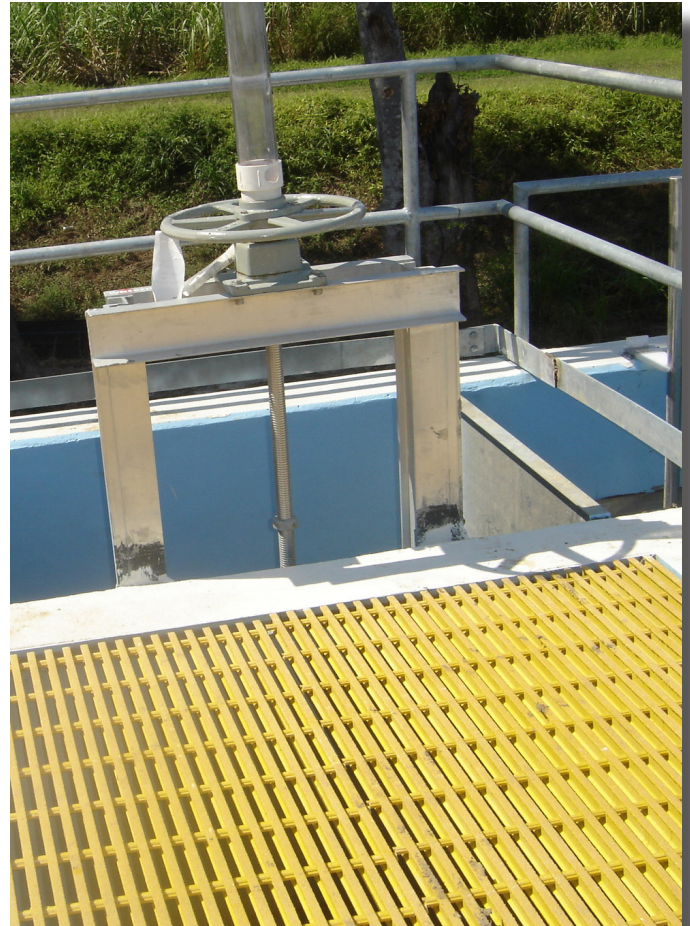
Thermally and Electrically Non-Conductivity

DeltaSpan is both thermally and electrically non-conductive – two features that make it a desirable product in many applications, such as those involving electrical and fire hazards. The thermal non-conductivity feature of DeltaSpan protects individuals from the heat radiation that occurs on traditional steel gratings during fires. Therefore, personnel can evacuate more efficiently as evacuation routes remain open for longer periods of time.



Low Maintenance

With resin and pigment blended throughout DeltaSpan Pultruded Grating, you never need to coat or paint the product – it simply does not rust. Coupled with our 316 stainless steel attachment systems, DeltaSpan products are virtually maintenance free.



Grating Selection

AIMS offers both molded and pultruded gratings. The following table provides assistance in selecting the best grating for the application.

For any application requiring pultruded fiberglass gratings, please refer to our DeltaSpan Pultruded Grating brochure for additional information.

DeltaGrate HS Molded Grating vs. DeltaSpan Pultruded Grating		
Characteristic/Application	DeltaGrate HS Square Mesh Molded Grating	DeltaSpan Pultruded Grating
Chemical Resistance	Excellent	Good
Bidirectional Strength	Excellent	Not Recommended
Unidirectional Strength	Very Good	Excellent
Impact Resistance	Excellent	Average
Weight Savings vs. Metal	Excellent	Excellent
Open Area (airflow, light penetration)	Excellent (70% to 80%)	Good (40% to 60%)
Panel Sizes Available	Excellent	Excellent
Pipe Penetrations	Excellent	Average
Safety	Excellent	Excellent

DeltaSpan Pultruded Grating Sizes and Specifications					
Grating Thickness	Mesh Description	Bars/Ft	Panel Sizes Available	Weight (psf)	% Open Area
1"	1" I-Beam, 14010	12	3', 4', 5'* - widths 8', 10', 12', 20' - lengths	3.5	40%
1"	1" I-Beam, 15010	10	3', 4', 5'* - widths 8', 10', 12', 20' - lengths	2.9	50%
1"	1" I-Beam, 16010	8	3', 4', 5'* - widths 8', 10', 12', 20' - lengths	2.3	60%
1-1/2"	1-1/2" I-Beam, 14015	12	3', 4', 5'* - widths 8', 10', 12', 20' - lengths	4.5	40%
1-1/2"	1-1/2" I-Beam, 15015	10	3', 4', 5'* - widths 8', 10', 12', 20' - lengths	3.9	50%
1-1/2"	1-1/2" I-Beam, 16015	8	3', 4', 5'* - widths 8', 10', 12', 20' - lengths	3.3	60%
1"	1" T-Beam, T1810	6	3', 4', 5'* - widths 8', 10', 12', 20' - lengths	2.5	18%
1"	1" T-Beam, T3510	5	3', 4', 5'* - widths 8', 10', 12', 20' - lengths	2.0	35%
2"	2" T-Beam, T3320	8	3', 4', 5'* - widths 8', 10', 12', 20' - lengths	4.0	33%
2"	2" T-Beam, T5020	6	3', 4', 5'* - widths 8', 10', 12', 20' - lengths	3.1	50%

*Note - 5' widths are non-stocked items. Please consult AIMS for delivery.

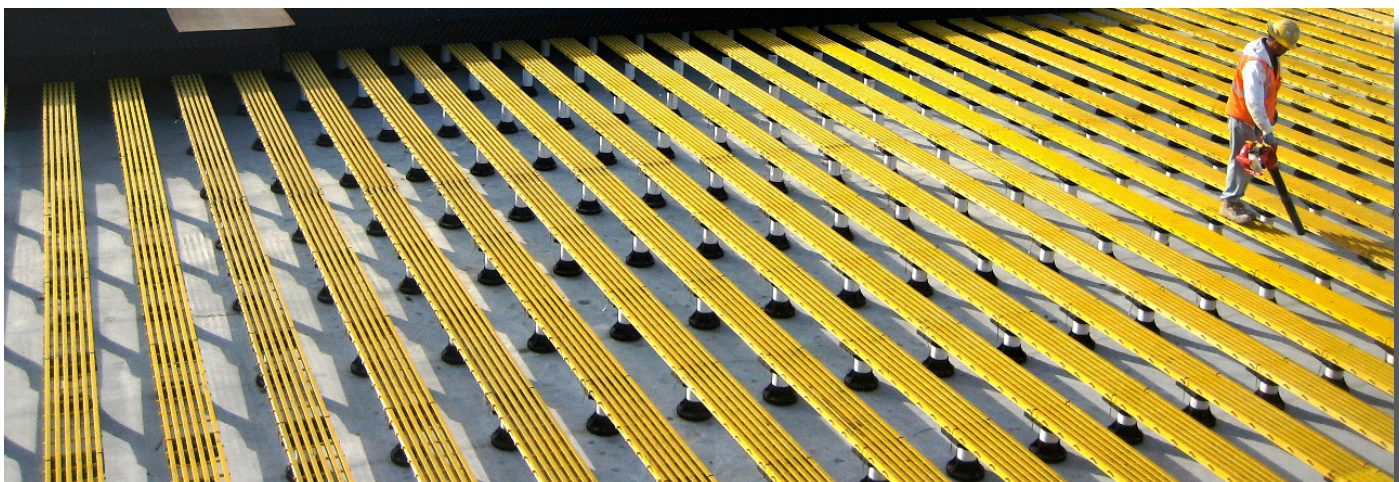
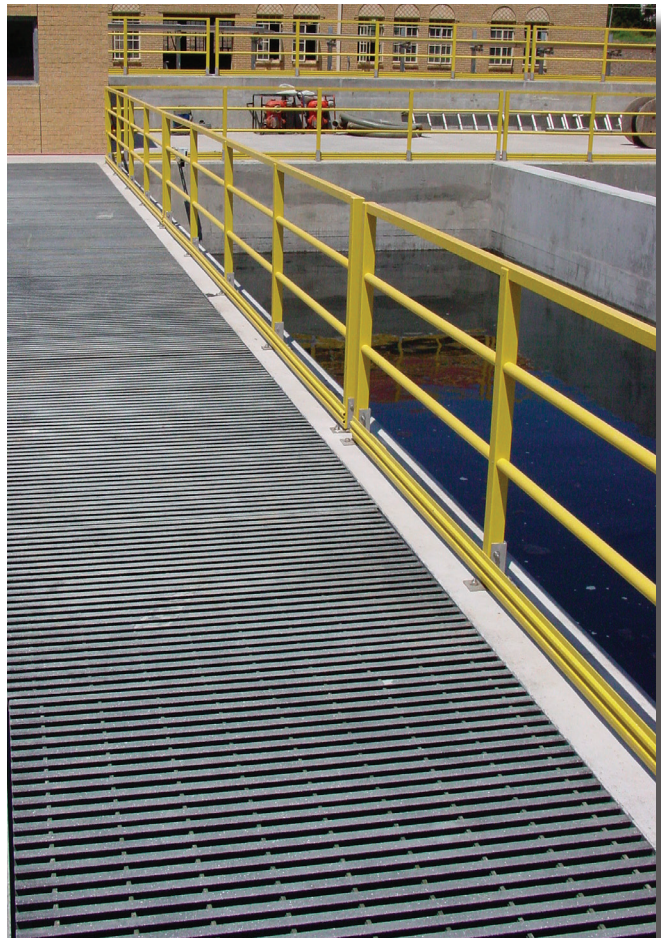
Resin Selection

AIMS Composites manufactures molded grating with a variety of resins, each with unique performance characteristics. Resin selection is paramount in determining the corrosion resistance of the finished product. Please consult the Chemical Resistance Guide for assistance in selecting the proper resin for your application, or call toll-free at 800-495-5997 for technical assistance.

AIMS' resin designations are comprised of two components—resin type and ASTM E-84 Flame Spread Rating.

DeltaSpan VEFR-25 is a premium vinyl ester resin with a flame spread rating of 25 or less. DeltaSpan VEFR-25 pultruded grating is our most chemical resistant resin. Designed to withstand the harshest chemical environments over a broad range of acids and caustics, it is primarily used in petrochemical, waste water, mining, and plating applications where the grating is subject to frequent and direct contact with harsh chemicals. The standard color is yellow, but it is also available in dark gray.

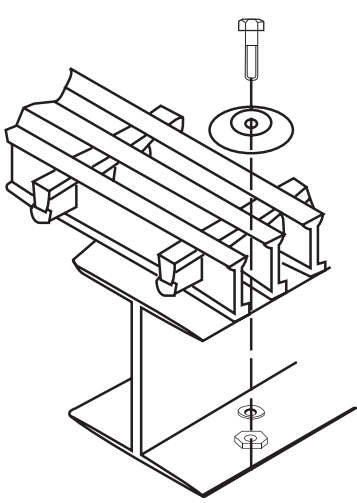
DeltaSpan IFR-25 is a premium isophthalic polyester resin with a flame spread rating of 25 or less. DeltaSpan IFR-25 pultruded grating provides an intermediate level of chemical resistance and is the correct resin choice for grating subjected to splash and spill contact with harsh chemicals. It is a very good general purpose resin at a reduced cost, compared to the premium vinyl ester resin. The standard color is yellow, but is also available in dark gray.



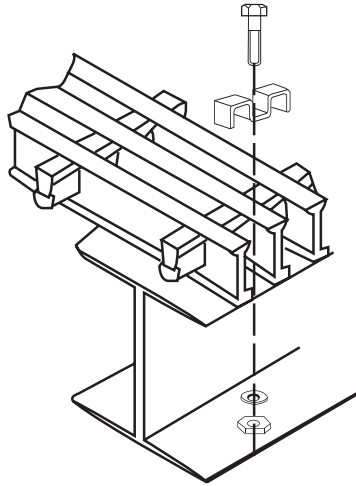
Installation Accessories

INSTALLATION - Whenever possible, provide for a minimum of 1-1/2" of bearing support at all grating support points. Hold-down clips should be used at the rate of one clip for every 6 ft² of grating minimum, or at least four clips for any square or rectangular piece, or at least three for a triangular piece.

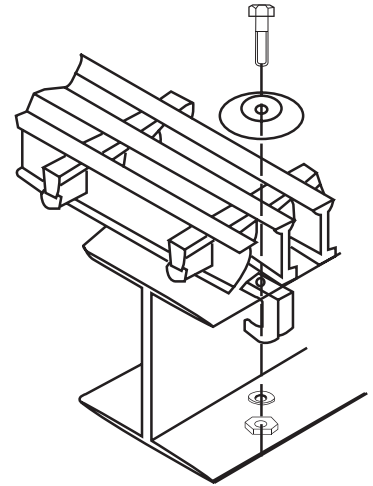
Grating Hold-Down Clips for Pultruded Products



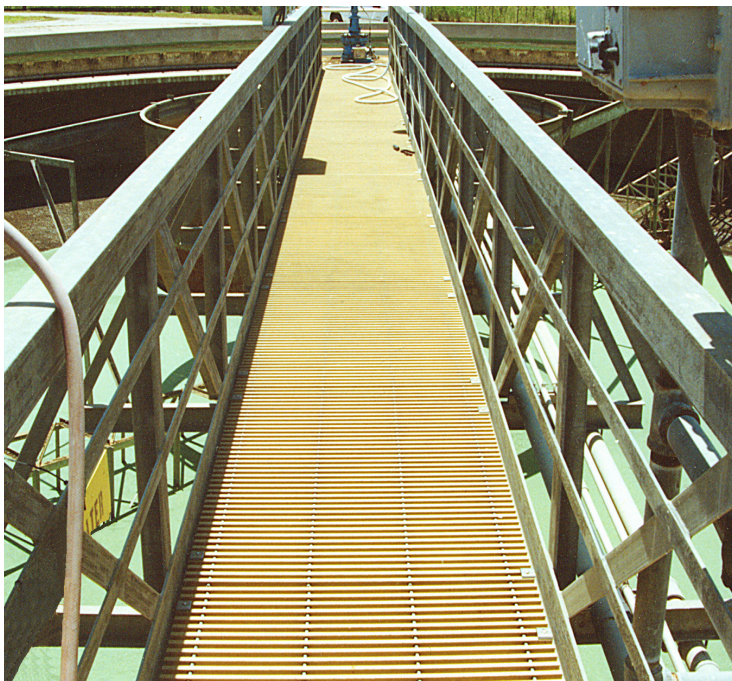
Type WP



Type MP



Type GP



Load Tables

DeltaSpan Pultruded Grating – 1" I-Beam

I-4010 Technical Information	
Bearing Bar Type	I-Bar
Open Area	40%
Thickness	1.0"
Bearing Bar Centers	1.0"
Resin Systems	IFR & VEFR
Tie-bar Spacings	6" or 12"

I-4010 Engineering Properties (per foot of width)	
Area, A =	3.96 in ²
Inertia, I =	0.49 in ⁴
Section, S =	0.95 in ³
Modulus, E =	4.85 x 10 ⁶ psi (for spans > 24")
Weight =	3.52 psf for 6" tie-bar spacing

I-4010 Concentrated Line Load Table – Deflection in Inches								
Span Inches	Concentrated Load – lbs/ft of Width							Ult. Load lbs
	50	100	200	300	500	1000	2000	
12	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.04	10,860
18	<0.01	<0.01	0.01	0.02	0.03	0.06	0.12	10,060
24	<0.01	0.01	0.03	0.04	0.06	0.13	0.25	8,350
30	0.01	0.02	0.05	0.07	0.12	0.23	0.47	6,970
36	0.02	0.04	0.07	0.11	0.18	0.38	0.75	6,020
42	0.03	0.06	0.11	0.17	0.27	0.56	1.11	4,900
48	0.04	0.08	0.15	0.23	0.38	0.75	1.51	4,280
54	0.06	0.12	0.24	0.37	0.61	1.22	–	3,920
60	0.09	0.18	0.37	0.55	0.91	1.82	–	3,510
66	0.13	0.27	0.53	0.80	1.34	2.66	–	3,210
72	0.17	0.34	0.68	1.02	1.70	3.41	–	2,850

I-4010 Uniform Load Table – Deflection in Inches								
Span Inches	Uniform Load – lbs/ft ²							Ult. Load psf
	50	100	200	300	500	1000	2000	
12	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	21,830
18	<0.01	<0.01	0.01	0.02	0.03	0.05	0.11	13,270
24	0.01	0.02	0.03	0.05	0.08	0.16	0.32	8,730
30	0.02	0.04	0.07	0.11	0.18	0.37	0.75	5,660
36	0.03	0.07	0.14	0.21	0.36	0.70	1.41	4,010
42	0.06	0.12	0.26	0.38	0.64	1.28	–	2,950
48	0.10	0.19	0.38	0.56	0.94	1.89	–	2,140
54	0.17	0.34	0.69	1.03	1.71	–	–	1,720
60	0.29	0.57	1.14	1.71	2.86	–	–	1,410
66	0.45	0.90	1.81	2.71	4.53	–	–	1,120
72	0.65	1.32	2.62	3.94	–	–	–	980

I-6010 Technical Information	
Bearing Bar Type	I-Bar
Open Area	60%
Thickness	1.0"
Bearing Bar Centers	1.5"
Resin Systems	IFR & VEFR
Tie-bar Spacings	6" or 12"

I-6010 Engineering Properties (per foot of width)	
Area, A =	2.489 in ²
Inertia, I =	0.33 in ⁴
Section, S =	0.66 in ³
Modulus, E =	4.86 x 10 ⁶ psi (for spans > 24")
Weight =	2.64 psf for 6" tie-bar spacing

I-6010 Concentrated Line Load Table – Deflection in Inches								
Span Inches	Concentrated Load – lbs/ft of Width							Ult. Load lbs
	50	100	200	300	500	1000	2000	
12	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.06	7,250
18	<0.01	0.01	0.02	0.03	0.04	0.09	0.17	6,710
24	0.01	0.02	0.04	0.06	0.09	0.19	0.37	5,570
30	0.02	0.03	0.07	0.10	0.17	0.35	0.71	4,650
36	0.03	0.06	0.11	0.17	0.29	0.56	–	4,020
42	0.04	0.08	0.17	0.25	0.41	0.83	–	3,270
48	0.06	0.11	0.23	0.34	0.56	1.14	–	2,850
54	0.09	0.18	0.37	0.55	0.92	1.85	–	2,610
60	0.13	0.27	0.55	0.82	1.36	2.73	–	2,330
66	0.20	0.40	0.80	1.20	2.00	–	–	2,130
72	0.25	0.50	1.01	1.51	2.52	–	–	1,800

I-6010 Uniform Load Table – Deflection in Inches								
Span Inches	Uniform Load – lbs/ft ²							Ult. Load psf
	50	100	200	300	500	1000	2000	
12	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.04	14,570
18	<0.01	0.01	0.02	0.02	0.04	0.08	0.16	8,860
24	0.01	0.02	0.05	0.07	0.12	0.25	0.49	5,820
30	0.03	0.05	0.11	0.16	0.28	0.56	1.13	3,770
36	0.05	0.10	0.21	0.32	0.53	1.05	2.10	2,670
42	0.09	0.20	0.38	0.58	0.96	1.92	–	1,960
48	0.14	0.28	0.56	0.84	1.39	2.79	–	1,400
54	0.26	0.52	1.04	1.55	2.59	–	–	1,160
60	0.43	0.86	1.71	2.57	–	–	–	940
66	0.68	1.35	2.71	4.07	–	–	–	750
72	0.98	1.97	3.94	5.91	–	–	–	650

Load Tables

DeltaSpan Pultruded Grating – 1.5” I-Beam

I-4015 Technical Information	
Bearing Bar Type	I-Bar
Open Area	40%
Thickness	1.5”
Bearing Bar Centers	1.0”
Resin Systems	IFR & VEFR
Tie-bar Spacings	6” or 12”

I-4015 Engineering Properties (per foot of width)	
Area, A =	4.82 in ²
Inertia, I =	1.42 in ⁴
Section, S =	1.80 in ³
Modulus, E =	4.65 x 10 ⁶ psi (for spans > 24”)
Weight =	4.14 psf for 6” tie-bar spacing

I-4015 Concentrated Line Load Table – Deflection in Inches								
Span Inches	Concentrated Load – lbs/ft of Width							Ult. Load lbs
	50	100	200	300	500	1000	2000	
12	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	23,200
18	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.04	21,900
24	<0.01	<0.01	<0.01	0.01	0.02	0.05	0.10	14,330
30	<0.01	0.01	0.02	0.03	0.05	0.11	0.22	13,640
36	<0.01	0.01	0.03	0.04	0.07	0.13	0.27	11,490
42	0.01	0.02	0.04	0.06	0.11	0.21	0.41	9,450
48	0.02	0.03	0.06	0.09	0.15	0.30	0.59	8,360
54	0.03	0.05	0.09	0.14	0.23	0.47	0.94	7,650
60	0.04	0.07	0.13	0.20	0.33	0.67	1.34	6,860
66	0.05	0.09	0.19	0.29	0.48	0.95	1.90	6,270
72	0.06	0.12	0.24	0.36	0.59	1.19	2.38	5,560

I-4015 Uniform Load Table – Deflection in Inches								
Span Inches	Uniform Load – lbs/ft ²							Ult. Load psf
	50	100	200	300	500	1000	2000	
12	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	46,630
18	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.04	28,900
24	<0.01	<0.01	0.01	0.02	0.03	0.06	0.11	14,990
30	<0.01	0.01	0.03	0.04	0.07	0.14	0.28	11,070
36	0.01	0.03	0.05	0.08	0.13	0.26	0.51	7,650
42	0.02	0.05	0.09	0.14	0.24	0.48	0.97	5,690
48	0.04	0.08	0.15	0.23	0.38	0.75	1.50	4,180
54	0.06	0.13	0.26	0.39	0.66	1.30	–	3,370
60	0.10	0.21	0.42	0.63	1.05	2.10	–	2,750
66	0.16	0.32	0.65	0.97	1.61	3.22	–	2,190
72	0.23	0.46	0.92	1.39	2.31	–	–	1,920

I-6015 Technical Information	
Bearing Bar Type	I-Bar
Open Area	60%
Thickness	1.5”
Bearing Bar Centers	1.5”
Resin Systems	IFR & VEFR
Tie-bar Spacings	6” or 12”

I-6015 Engineering Properties (per foot of width)	
Area, A =	3.21 in ²
Inertia, I =	0.95 in ⁴
Section, S =	1.21 in ³
Modulus, E =	4.60 x 10 ⁶ psi (for spans > 24”)
Weight =	2.85 psf for 6” tie-bar spacing

I-6015 Concentrated Line Load Table – Deflection in Inches								
Span Inches	Concentrated Load – lbs/ft of Width							Ult. Load lbs IFR/ VEFR
	50	100	200	300	500	1000	2000	
12	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	15,010
18	<0.01	<0.01	<0.01	0.01	0.02	0.03	0.06	14,590
24	<0.01	<0.01	0.01	0.02	0.03	0.07	0.14	9,560
30	<0.01	0.01	0.03	0.04	0.06	0.13	0.26	9,090
36	0.01	0.02	0.04	0.06	0.10	0.20	0.41	7,650
42	0.02	0.03	0.06	0.10	0.16	0.31	0.63	6,310
48	0.02	0.05	0.09	0.14	0.23	0.46	0.90	5,560
54	0.03	0.07	0.14	0.21	0.36	0.70	1.41	5,100
60	0.05	0.10	0.20	0.30	0.50	1.00	2.01	4,570
66	0.07	0.14	0.29	0.43	0.71	1.43	2.86	4,170
72	0.09	0.18	0.35	0.53	0.88	1.77	–	3,680

I-6015 Uniform Line Load Table – Deflection in Inches								
Span Inches	Concentrated Load – lbs/ft ²							Ult. Load lbs IFR/ VEFR
	50	100	200	300	500	1000	2000	
12	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	31,090
18	<0.01	<0.01	<0.01	0.01	0.02	0.03	0.06	19,260
24	<0.01	0.01	0.02	0.03	0.04	0.09	0.17	10,000
30	0.01	0.02	0.04	0.06	0.10	0.21	0.42	7,380
36	0.02	0.04	0.08	0.11	0.19	0.39	0.77	5,100
42	0.04	0.07	0.14	0.22	0.36	0.72	–	3,790
48	0.06	0.11	0.22	0.33	0.56	1.11	–	2,750
54	0.10	0.19	0.40	0.59	0.99	–	–	2,260
60	0.15	0.32	0.63	0.95	1.57	–	–	1,840
66	0.25	0.48	0.97	1.45	2.42	–	–	1,460
72	0.35	0.69	1.39	2.07	3.46	–	–	1,290

Load Tables

DeltaSpan Pultruded Grating – 2" T-Beam

T-3320 Technical Information

Bearing Bar Type	T-Bar
Open Area	33%
Thickness	2.0"
Bearing Bar Centers	1.5"
Resin Systems	IFR & VEFR
Tie-bar Spacings	6" or 12"

T-3320 Engineering Properties (per foot of width)

Area, A =	4.30 in ²
Inertia, I =	2.25 in ⁴
Section, S =	2.62 in ³ (top), 1.97 in ³ (bottom)
Modulus, E =	4.35 x 10 ⁶ psi (for spans > 30")
Weight =	4.05 psf for 6" tie-bar spacing

T-3320 Concentrated Line Load Table – Deflection in Inches

Span Inches	Concentrated Load – lbs/ft of Width							Ult. Load lbs
	50	100	200	300	500	1000	2000	
12	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	19,960
18	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.04	19,860
24	<0.01	<0.01	<0.01	0.01	0.02	0.03	0.06	15,520
30	<0.01	<0.01	0.01	0.02	0.03	0.06	0.12	14,000
36	<0.01	0.01	0.02	0.03	0.05	0.09	0.19	11,750
42	0.01	0.02	0.03	0.05	0.08	0.16	0.30	9,700
48	0.01	0.02	0.04	0.07	0.11	0.22	0.44	8,570
54	0.02	0.03	0.06	0.10	0.16	0.33	0.64	7,710
60	0.02	0.04	0.09	0.13	0.22	0.45	0.89	6,900
66	0.03	0.06	0.12	0.17	0.30	0.58	1.16	6,310
72	0.04	0.07	0.14	0.21	0.34	0.69	1.38	5,550

T-3320 Uniform Load Table – Deflection in Inches

Span Inches	Uniform Load – lbs/ft ²							Ult. Load psf
	50	100	200	300	500	1000	2000	
12	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	41,130
18	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.04	26,340
24	<0.01	<0.01	<0.01	0.01	0.02	0.04	0.08	16,240
30	<0.01	0.01	0.02	0.03	0.05	0.09	0.19	11,360
36	0.01	0.02	0.04	0.05	0.09	0.18	0.36	7,830
42	0.02	0.03	0.07	0.10	0.18	0.35	0.70	5,820
48	0.03	0.05	0.11	0.16	0.26	0.54	1.06	4,210
54	0.04	0.09	0.18	0.28	0.46	0.91	–	3,430
60	0.07	0.14	0.28	0.42	0.69	1.40	–	2,770
66	0.10	0.20	0.39	0.59	0.98	1.96	–	2,200
72	0.13	0.27	0.54	0.81	1.35	–	–	1,940

T-5020 Technical Information

Bearing Bar Type	T-Bar
Open Area	50%
Thickness	2.0%
Bearing Bar Centers	2.0"
Resin Systems	IFR & VEFR
Tie-bar Spacings	6" or 12"

T-5020 Engineering Properties (per foot of width)

Area, A =	3.21 in ²
Inertia, I =	1.67 in ⁴
Section, S =	2.96 in ³ (top), 1.48 in ³ (bottom)
Modulus, E =	4.65 x 10 ⁶ psi (for spans > 30")
Weight =	3.12 psf for 6" tie-bar spacing

T-5020 Concentrated Line Load Table – Deflection in Inches

Span Inches	Concentrated Load – lbs/ft of Width							Ult. Load lbs
	50	100	200	300	500	1000	2000	
12	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	14,970
18	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.05	14,890
24	<0.01	<0.01	<0.01	0.01	0.02	0.04	0.08	11,640
30	<0.01	<0.01	0.01	0.02	0.04	0.08	0.16	10,500
36	<0.01	0.01	0.02	0.04	0.06	0.12	0.26	8,810
42	0.01	0.02	0.04	0.06	0.10	0.21	0.40	7,270
48	0.01	0.03	0.06	0.09	0.15	0.29	0.57	6,440
54	0.02	0.04	0.08	0.13	0.21	0.43	0.86	5,900
60	0.03	0.06	0.12	0.17	0.29	0.59	1.19	5,280
66	0.04	0.08	0.15	0.23	0.39	0.78	1.55	4,820
72	0.05	0.09	0.19	0.27	0.46	0.92	1.84	4,250

T-5020 Uniform Load Table – Deflection in Inches

Span Inches	Uniform Load – lbs/ft ²							Ult. Load psf
	50	100	200	300	500	1000	2000	
12	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	30,840
18	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.05	19,760
24	<0.01	<0.01	<0.01	0.02	0.03	0.05	0.11	12,180
30	<0.01	0.01	0.02	0.03	0.06	0.13	0.26	8,530
36	0.01	0.02	0.05	0.07	0.12	0.23	0.48	5,880
42	0.02	0.05	0.09	0.14	0.24	0.46	–	4,370
48	0.04	0.07	0.14	0.20	0.35	0.71	–	3,160
54	0.06	0.12	0.24	0.37	0.60	1.21	–	2,610
60	0.09	0.18	0.37	0.55	0.93	1.86	–	2,120
66	0.13	0.26	0.53	0.79	1.31	–	–	1,690
72	0.18	0.36	0.71	1.07	1.80	–	–	1,470

Chemical Resistance Guide

CHEMICAL ENVIRONMENT	TYPE VEFR-20		TYPE IFR-25	
	% Concentration	Max. Oper. Temp. F/C	% Concentration	Max. Oper. Temp. F/C
Acetic Acid	50	180/82	50	125/52
Aluminum Hydroxide	100	180/82	100	160/71
Ammonium Chloride	All	210/99	All	170/77
Ammonium Hydroxide	28	100/38	28	N/R
Ammonium Bicarbonate	50	160/70	15	125/52
Ammonium Sulfate	ALL	210/99	ALL	170/77
Benzene	N/R	N/R	N/R	N/R
Benzoic Acid	SAT	210/99	SAT	150/66
Borax	SAT	210/99	SAT	170/77
Calcium Carbonate	ALL	180/82	ALL	170/77
Calcium Nitrate	ALL	210/99	ALL	180/82
Carbon Tetrachloride	100	150/65	N/R	N/R
Chlorine, Dry Gas	—	210/99	—	140/60
Chlorine Water	SAT	200/93	SAT	80/27
Chromic Acid	10	150/65	5	70/21
Citric Acid	ALL	210/99	ALL	170/77
Copper Chloride	ALL	210/99	ALL	170/77
Copper Cyanide	ALL	210/99	ALL	170/77
Copper Nitrate	ALL	210/99	ALL	170/77
Ethanol	50	100/38	50	75/24
Ethylene Glycol	100	200/93	100	90/32
Ferric Chloride	ALL	210/99	ALL	170/77
Ferrous Chloride	ALL	210/99	ALL	170/77
Formaldehyde	ALL	150/65	50	75/24
Gasoline	100	180/82	100	80/27
Glucose	100	210/99	100	170/77
Glycerine	100	210/99	100	150/66
Hydrobromic Acid	50	150/65	50	120/49
Hydrochloric Acid	37	150/65	37	75/24
Hydrogen Peroxide	30	150/65	5	100/38
Lactic Acid	ALL	210/99	ALL	170/77
Lithium Chloride	SAT	210/99	SAT	150/66
Magnesium Chloride	ALL	210/99	ALL	170/77
Magnesium Nitrate	ALL	210/99	ALL	140/60
Magnesium Sulfate	ALL	210/99	ALL	170/77
Mercuric Chloride	100	210/99	100	150/66
Mercurous Chloride	ALL	210/99	ALL	140/60
Nickel Chloride	ALL	210/99	ALL	170/77
Nickel Sulfate	ALL	210/99	ALL	170/77
Nitrate Acid	20	120/49	20	70/21
Oxalic Acid	ALL	210/99	ALL	75/24
Perchloric Acid	30	100/38	N/R	N/R
Phosphoric Acid	100	210/99	100	120/49
Potassium Chloride	ALL	210/99	ALL	170/77
Potassium Dichromate	ALL	210/99	ALL	170/77
Potassium Nitrate	ALL	210/99	ALL	170/77
Potassium Sulfate	ALL	210/99	ALL	170/77
Propylene Glycol	ALL	210/99	ALL	170/77
Sodium Acetate	ALL	210/99	ALL	160/71
Sodium Bisulfate	ALL	210/99	ALL	170/77
Sodium Bromide	ALL	210/99	ALL	170/77
Sodium Cyanide	ALL	210/99	ALL	170/77
Sodium Hydroxide	25	180/82	N/R	N/R
Sodium Nitrate	ALL	210/99	ALL	170/77
Sodium Sulfate	ALL	210/99	ALL	170/77
Stannic Chloride	ALL	210/99	ALL	160/71
Sulfuric Acid	75	100/38	25	75/24
Tartaric Acid	ALL	210/99	ALL	170/77
Vinegar	100	210/99	100	170/77
Water, Distilled	100	180/82	100	170/77
Zinc Nitrate	ALL	210/99	ALL	170/77
Zinc Sulfate	ALL	210/99	ALL	170/77

ALL: All Concentrations SAT: Saturated Solution N/R: Not Recommended “—”: No Information Available

The corrosion resistance data listed above is for general information only. Resin manufacturers have provided test data, which indicates that the specific resin can withstand the corrosion conditions listed above. AIMS International, LLC believes the data to be true and accurate, but no guarantee is expressed or implied as to specific performance. Testing for specific environments is recommended. Our responsibility for claims arising from breach of warranty, negligence, or otherwise is limited to the purchase price of the material sold by AIMS International, LLC.

Field Fabrication and Installation of DeltaSpan Grating

Safety Precautions

When cutting DeltaSpan Grating, always wear safety glasses or goggles to protect your eyes and always wear a dust mask to reduce dust inhalation. Always wear gloves, and it is recommended that a shop coat with neck and tapered sleeves be worn to prevent skin irritation. Work in well-lit and ventilated areas. Always read the MSDS (Material Safety Data Sheet) before cutting and sealing DeltaSpan. Always provide firm support of the grating panels to prevent shifting, and the use of sawhorses and other supports will help to prevent common back injuries. Cutting DeltaSpan Pultruded Grating will produce dust. This dust is non-carcinogenic, but may cause some skin irritation.

Cutting Grating

Depending on the amount (linear feet) of grating to be cut, and the type of cutting required (i.e., straight cuts or circular cuts), a variety of field and shop tools can be used, such as an abrasive coated metal blade, standard bimetal blade, or hacksaw with a blade of a similar tooth pattern as the bimetal blade.

For making straight cuts, the following equipment is recommended:

- Panel saw*
- Circular saw*
- Table saw*
- Radial arm saw*
- Reciprocating saw (6" long abrasive coated or a bimetal blade, 12-14 teeth, min.)
- Hand-held hack saw (for small quantities or emergencies)

**The blade should be an abrasive continuous rim cut-off normally used on masonry or ceramic products (silica gritted or diamond coated blades).*

For making small radius circular cuts, a reciprocating saw with the same blade specifications listed above is recommended. For making larger radius circular cuts, a circular saw can be used, also with these same blade specifications.

Remember that the saw blades will “eat-up” about 1/8" of grating with each cut, so be sure to allow for this when measuring and laying out your marks on the grating panel.

Always use sandpaper or a sanding wheel to smooth out all cut edges before sealing—ALL CUT EDGES MUST BE SEALED. Therefore, we recommend using a premium grade exterior polyurethane enamel to effectively seal cut surfaces of fiberglass products and protect the glass fibers from environmental attack.



Market Applications

AIMS' products and services have been successfully used in various applications in many different industries. Wherever there is value placed on safety, eliminating maintenance expenditures, ease of installation, and long service life, AIMS should be consulted. The following are industries and locations where our products are found:

OFFSHORE DRILLING & PRODUCTION FACILITIES

wellhead access platforms around wells & vessels, stair towers, grating systems, electrical cable trays, mudmats

PETROCHEMICAL PLANTS & REFINERIES

walkways & platforms around vessels and equipment, stair towers, trench grating

INDUSTRIAL & MUNICIPAL WASTEWATER FACILITIES

walkways & catwalks in and around clarifiers, settling basins, and platforms used as storage areas

PULP & PAPER MILLS

walkways & catwalks in and around their waste water plants, including bleaching and washing areas

METAL PLATING & MINING FACILITIES

platforms in processing areas, catwalks, stair towers, and storage areas

COMMERCIAL WAREHOUSES

grating systems for additional storage areas and mezzanines

BEVERAGE & FOOD PROCESSING PLANTS

grating systems & platforms in and around wash-down areas, access platforms, and storage areas

HI-TECH COMPUTER INDUSTRY FACILITIES

grating systems in clean rooms and etching areas

WATER PARK & RECREATIONAL FACILITIES

trench grating in and around pools, structural systems for flowing streams

COOLING TOWER INDUSTRY

access walkways & towers, de-misters

FEDERAL & STATE PARKS

bridges & erosion control

Valuable features of AIMS' products for these and other industries include:

- Excellent corrosion resistance and elimination of maintenance
- Lightweight and ease of installation
- High strength-to-weight ratio
- Excellent non-skid characteristics, safety, and ergonomics
- Fire resistance
- Electrical and thermal non-conductivity
- Durability and long service life
- Great return on investment



AIMS Composites

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