

INTERSTATE GRATINGS

PRODUCTS & SERVICES

Welcome

INTERSTATE GRATINGS

Manufacturing and Fabricating Excellence



About Us

At Interstate Gratings, we care about our clients, our employees, and our quality craftsmanship.

Founded in 2007, we sought to bridge the gap between corporate necessity and the realities of the work itself. With that guiding principle, we've built an employee-centered, full-service grating company that's driven by strong client connections and high-quality products.

At Interstate Gratings, we're committed to manufacturing and fabricating high-caliber products and providing clients with an exceptional customer experience. Staffed by grating experts, our team has years of experience working on the front lines of manufacturing. Our knowledgeable sales staff has first-hand experience in grating manufacturing and fabrication and they're ready to answer any question you may have.

We're prepared to take on projects of any scope or schedule. Our team of experts works directly with manufacturers to build specially designed machinery and equipment utilizing the latest technology and best practices. Our in-house detailing team specializes in value engineering and cost saving design services, and their expert CAD knowledge allows for easy-to-read shop and erection drawings, and loading calculations for grating capabilities. With our focus on quality, our inspections include: in-house raw material testing and traceability, galvanizing testing, paint testing, cross rod strength testing, job specification conformances, and more.

By utilizing advanced software programs, we provide live project management for clients, and have created a sustainable workplace. Our digital environment links sales, engineering, production planning, shop floor, shipping, and quality control without generating a single piece of paper. Not only does this help us remain environmentally conscious and responsible, but this technology allows us to better track project progress, eliminate mistakes, and meet project deadlines.

As a proud American manufacturer located in the hub of the West, we're committed to doing business according to our higher standards. Interstate Gratings began in an attempt to connect the two sides of our business, and we've continued to create connection between our company, our employees, and our clients. We happily invite you to contact our team of experts for any of your grating needs.

Capabilities

Our innovative, state-of-the-art manufacturing and fabrication facility allows us to produce a complete range of products. We merge the latest technology with advanced material handling techniques to assure consistent and quality production.

We maintain significant raw material inventories, which are processed in-house into finished product. This allows for rapid response to requests for cost saving custom-sized panels.

The unparalleled flexibility of our manufacturing equipment eliminates the need for extended production schedules and allows us to produce a full range of products in a timely and cost-effective manner.

Combining these assets with an experienced team dedicated to manufacturing and fabricating excellence, we stand prepared to partner with each customer for the prompt completion of projects of any scope or schedule.

Sales/Estimating

- Complete takeoff / proposal capabilities
- Value engineering and design assistance
- Quick turnaround time for proposals
- Assist with product design and problem solving

Detailing/Project Management

- Custom detailing software using the AutoCAD platform*
- All projects are reviewed for value engineering opportunities
- Accurate and easy-to-read drawings
- Live project management
- 3D DXF layouts for model importation

Manufacturing

- Specially-designed forge welders
- Full line of press-lock gratings
- Extensive line of heavy-duty products
- Large inventory of high-end prime material
- Wide band coil to fabricated & finished product, all processed in-house
- Custom nesting software for cost savings and reduction of waste
- Domestic material sourced
- 300 Ton per week capacity

Fabrication:

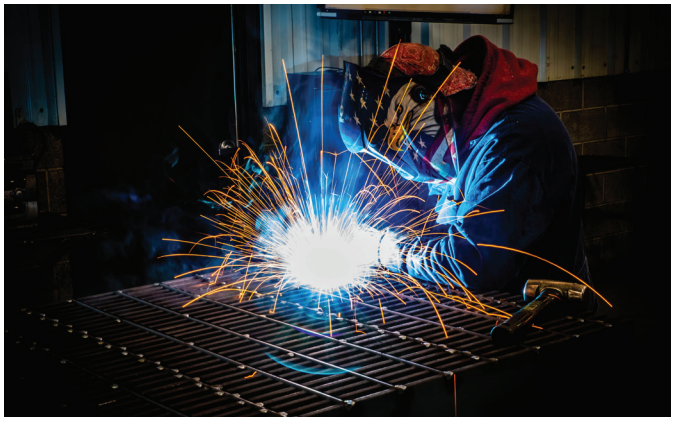
- Multiple burn-tables with custom software cutting solutions
- Live tracking of all projects
- Paperless shop environment
- Architectural division for Press-Lock, Hand-Made, and Custom designs
- Full fabrication of Carbon Steel, Stainless Steel, and Aluminum Grating
- Multiple machine presses and tooling for Heavy Duty / Grizzly Grating

Quality Control:

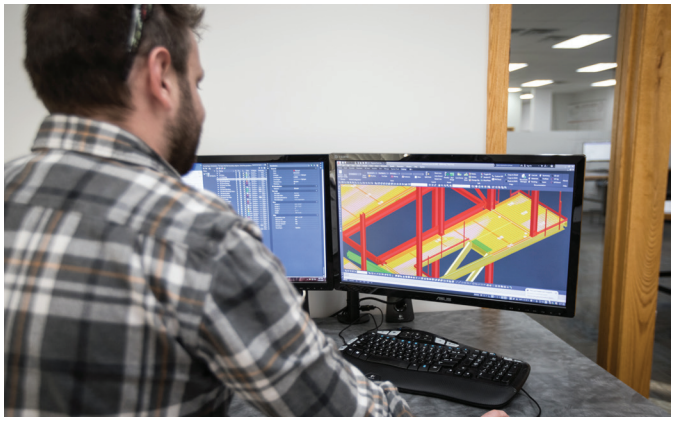
- Dedicated quality control division
- Quality control manual and written procedures
- All manufactured and fabricated products built to NAAMM standards
- In-house raw material testing and traceability
- Job specification conformances

Table of Contents









Introduction	2
Product Specification	3
Steel Bar Grating	4-5
Steel Grating Load Tables	6-11
Steel Stair Treads	12
Aluminum Bar Grating	13-14
Aluminum Grating Load Tables	15-20
Aluminum Stair Treads	21
Stainless Steel Bar Grating	22-23
Stainless Steel Grating Load Tables	24-28
Stainless Steel Stair Treads	29
Heavy Duty Steel Grating	30-31
Heavy Duty Steel Grating Load Tables	32-36
Architectural Products	37-38
Banding & Panel Layout	39
Grating Attachment	40
Manufacturing & Installation	41
Glossary	42
Contact Page	43

NAAMM

NAAMM – The National Association of Architectural Metal Manufacturers consists of five operating divisions, each focused on specific metal products for building and related applications. Each division develops and maintains technical standards for its products and actively promotes their use by design professionals.

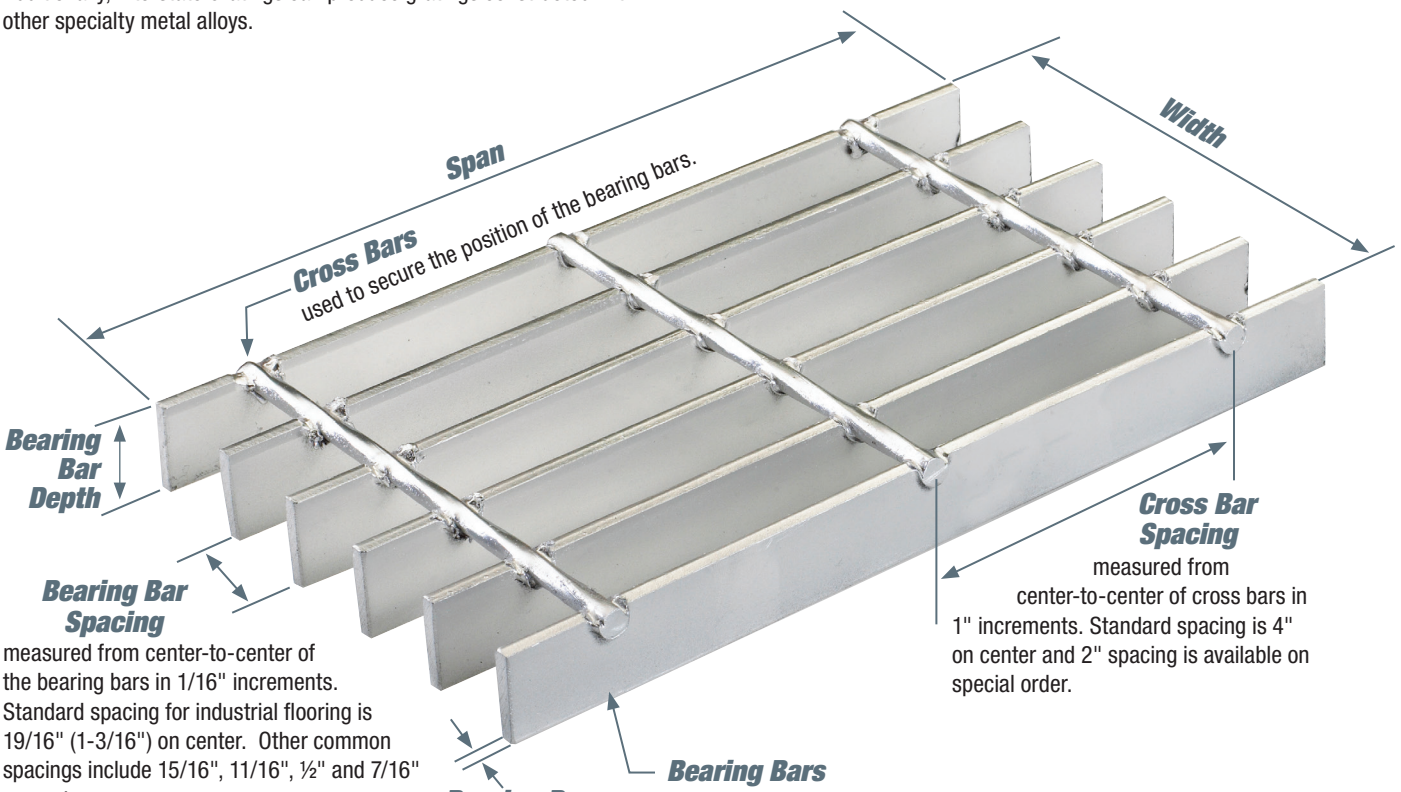
The Metal Bar Grating Division of NAAMM publishes the only manuals for standard and heavy duty gratings which are recognized by ANSI, the American National Standards Institute. These ANSI/NAAMM standards are your guide in assuring that your grating needs are satisfied by products of consistent quality and availability.

Interstate Gratings, LLC, an active NAAMM member in good standing, designs, manufactures and fabricates bar grating in strict accordance with published NAAMM standards. Supporting engineering documentation is available upon request.

Introduction

Metal Bar Grating is the workhorse of the industrial flooring market and has served industry for decades. Strong and durable with an exceptional strength-to-weight ratio, metal bar grating can be easily fabricated to nearly any configuration. The high percentage of open area makes bar grating nearly maintenance free and all products are fully recyclable.

Manufactured by assembling a series of equally spaced metal bars to connecting cross members, bar grating is available in three popular materials; mild carbon steel, 6000 series aluminum and 300 series stainless steels. Additionally, Interstate Gratings can produce gratings constructed with other specialty metal alloys.



Manufacturing Methods



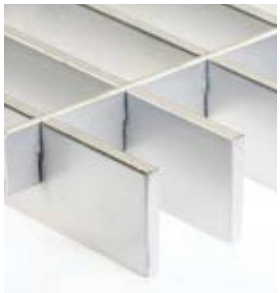
Welded Grating

Economical design ideal for most industrial applications. Manufactured by welding the bearing bar/cross bar intersection, typically with automated forge welding equipment. Available in carbon steel and stainless steel.



Heavy Duty Grating

Designed to service applications subject to heavy rolling and static loads such as highways, plant floors, loading docks, inlet covers and airports. Available in carbon steel and stainless steel.



Dovetail Pressure Locked Grating

Assembled by inserting pre-punched bearing and cross bars into an interlocking configuration and deforming the cross bars under intense hydraulic pressure. Available in all materials and ideal for many architectural and ornamental applications.



Swage Locked Grating

Cross bars are inserted into pre-punched holes in the bearing bars and then hydraulically deformed to lock the bars in place. Available in all materials.

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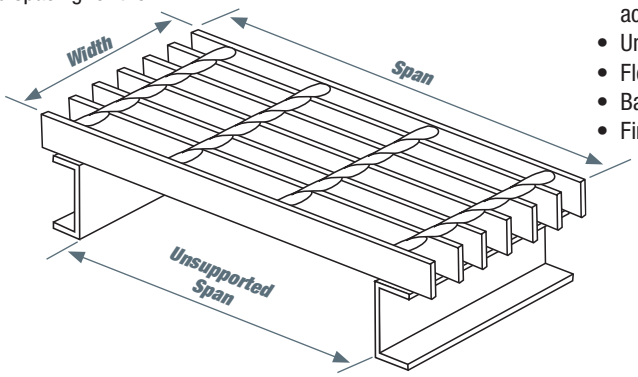
Service Loads

The load tables on the pages within this catalog provide load/deflection criteria for most common applications. These tables provide a concise reference allowing the specifying authority to select the appropriate bearing bar size and spacing for the intended application.

Pedestrian loads are commonly analyzed with uniform and concentrated loads. For pedestrian comfort, deflection is typically limited to ¼".

Heavy duty and vehicular load tables are presented for specific load conditions. Heavy duty load tables are presented with deflection limited to the lesser of 1/8" or L/400.

If your application is not addressed by the load tables found in this catalog, please contact Interstate Gratings. We will gladly discuss the merits of our diverse products and assist in selecting the product most appropriate for your application.



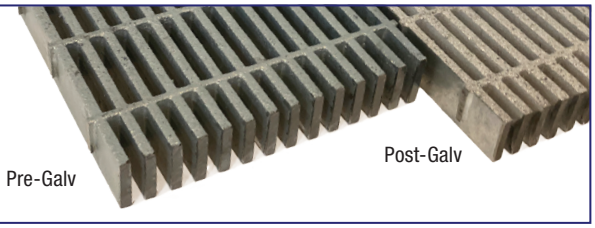
Load/Deflection Criteria

When specifying metal bar grating it is important to consider the following factors:

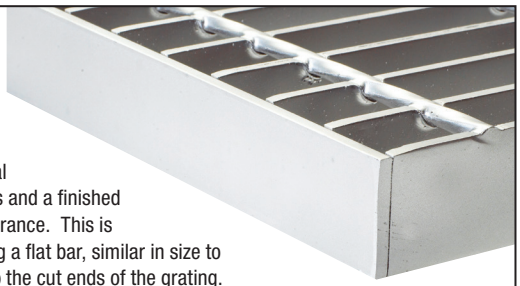
- Service load required and acceptable deflection
- Unsupported clear span
- Flooring surface
- Banding and trim
- Finish

IG GritWeld™

IG GritWeld™ utilizes processes developed for thermal sprayed hard surfacing and incorporates anti-skid ingredients to the super hard substrate. IG GritWeld™ offers the ultimate in traction and longevity for extreme environments. It is usually applied after galvanizing but can be applied prior to the coating process as well.



Banding

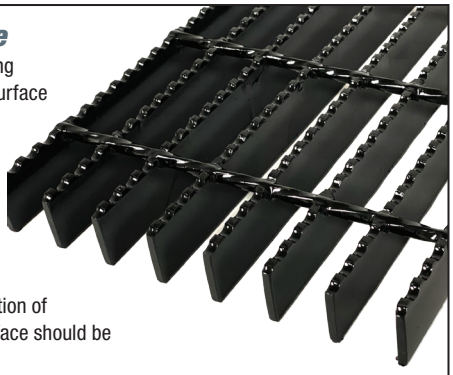


The open ends of the grating panels can be banded to provide additional transverse stiffness and a finished architectural appearance. This is achieved by welding a flat bar, similar in size to the bearing bars, to the cut ends of the grating.

Trim banding should always be specified when gratings are designed to be removable. Banding can reduce impact stresses by transferring loads to adjacent bearing bars and should always be specified when the grating is subject to vehicular loads.

Further banding descriptions and details can be found on page 39 of this catalog.

Serrated Surface



The excellent self-cleaning characteristics of plain surface grating make it suitable for the majority of applications. In the presence of fluids or materials that could cause the top surface of the grating to become wet or slippery, specification of the optional serrated surface should be considered.

When serrated grating is specified, the bearing bar depth must be ¼" greater than the sizes shown on the load tables to provide the equivalent strength of non-serrated gratings.

Finishes

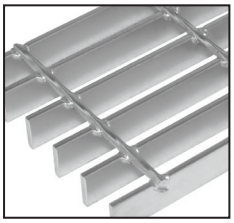
Steel grating is usually provided with bare steel (no finish), painted with one coat of IG EcoCoat™ or other special paint finishes, or hot dip galvanized in accordance with ASTM A-123.



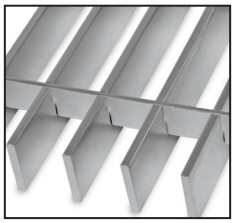
IG EcoCoat™ Standard Black



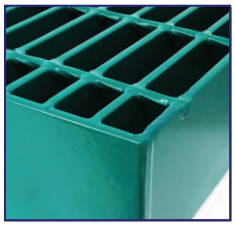
Mill Finished & Anodized Aluminum



Galvanized Steel



IG EcoClean™ Stainless Steel



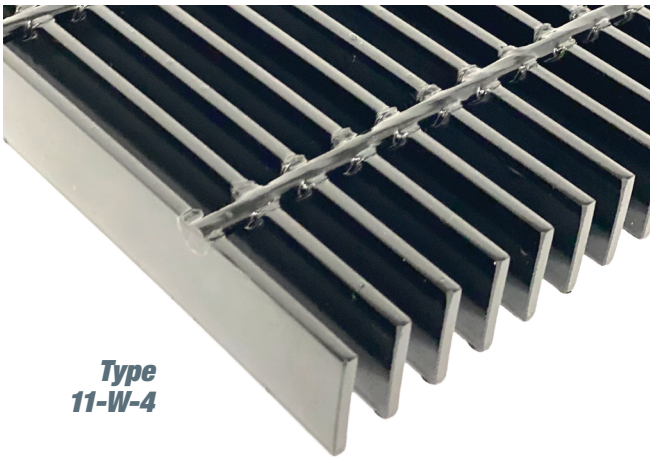
Powder Coated Steel

Aluminum products are commonly supplied mill finish but they are also available with optional chemically cleaned or anodized finishes.

Due to discoloration that occurs during welding and fabrication, **Stainless Steel** products typically require secondary cleaning. IG EcoClean™, abrasive blasting, and passivation provide a uniform and clean surface.

All grating products can be provided with specialty finishes including enamel or epoxy paints or powder coating. When considering specialty finishes, consultation with the coating manufacturer is essential.

Steel Bar Grating

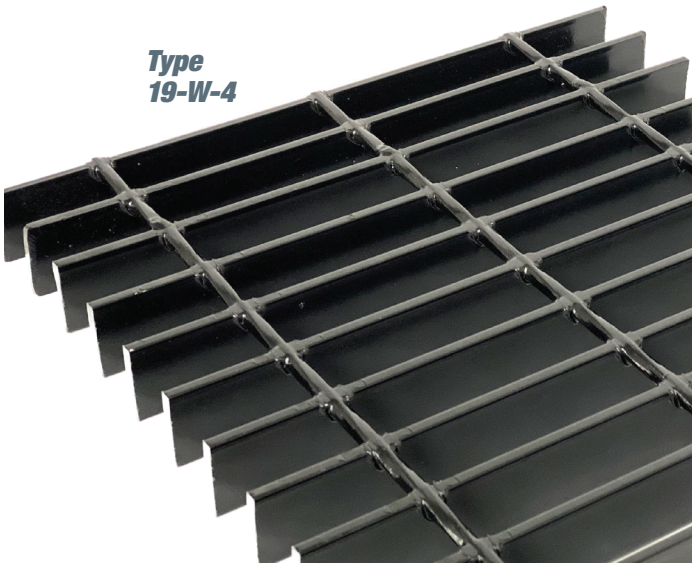


Type
11-W-4

Steel Bar Grating is manufactured from ASTM A 1011/A 1011M Commercial Steel (Type B) and is available in three distinct products, type **"W"** Welded Bar Grating, type **"DT"** Dovetail Pressure Locked Grating, and type **"SL"** Swage Locked Grating. All three products are available with bearing bar spacing ranging from 19/16" (1-3/16") to 7/16" on center and with cross bars
at either 4" or 2" on center.

Each product is available with the standard plain or optional serrated surface, and each product is available with a bare steel, painted or galvanized finish. The load tables on pages 6-11 provide detailed product specification information related to all three products.

Type
19-W-4

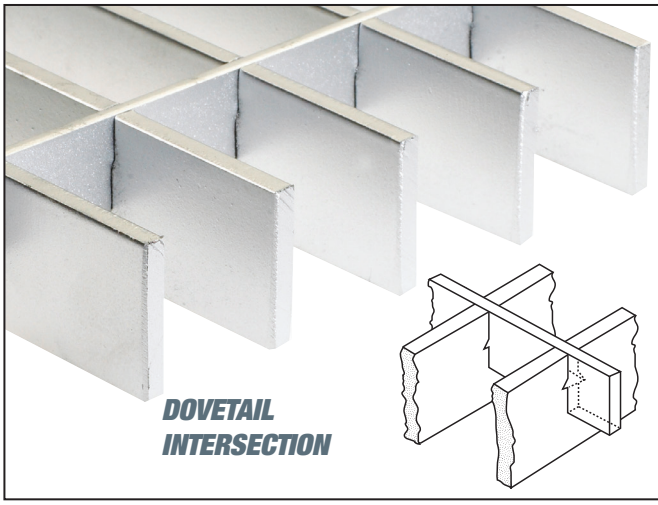


Type "W" Welded Steel Grating

Our most economical steel grating products, type **"W"** Welded Steel Gratings are manufactured by forge welding rectangular bearing bars and drawn cross bars. This welding process provides a positive fused connection providing years of service under the most demanding conditions.

Type 19-W-4 steel grating is our most popular product and is recommended for nearly all industrial flooring applications. With nearly 80% open area, 19-W-4 allows for the easy passage of dirt, debris, snow and liquids and is essentially self-cleaning.

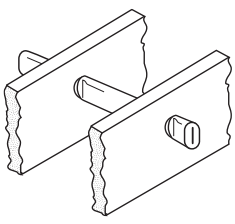
Type **"W"** gratings are available in close mesh ADA conforming spacings 11-W-4 (IGtru™) and 7-W-4 which are commonly used in public areas. When specifying type 11-W-4 (IGtru™) for ADA applications, 3/16" thick bearing bars must be specified.



DOVETAIL
INTERSECTION

Type "DT" Dovetail Pressure Locked Steel Grating

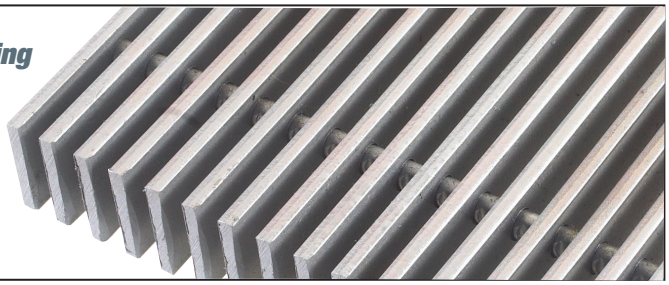
Type **"DT"** steel gratings have rectangular cross bars that are slotted to fit into pre-punched bearing bars which are assembled and permanently connected under intense hydraulic pressure. In addition to being one of the most aesthetically appealing floor gratings with its clean uniform lines, the interlocking design provides excellent lateral stability and axial load distribution. The multiple combinations of bearing bar / cross bar sizes and spacing on type **"DT"** gratings make them popular for architectural applications such as sun shades, fencing and infill panels with a deeper cross bar serving as a distinct architectural accent. Type **"DT"** gratings are available in close mesh ADA conforming spacings. Type 7-DT-4 with 3/16" thick bearing bars provides a net ¼" clear opening between the bearing bars. This narrow opening is often preferred in public areas where concerns of drainage and the presence of high heeled shoes converge.



SWAGED
INTERSECTION

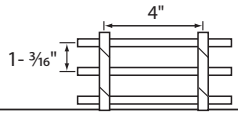
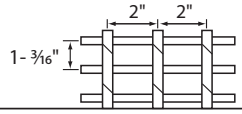
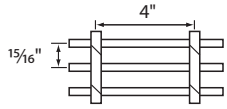
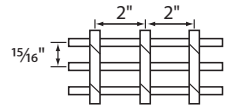
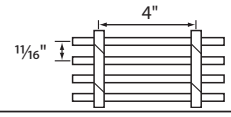
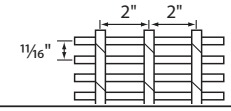
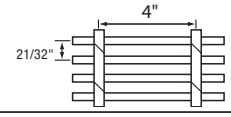
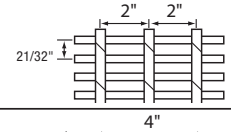
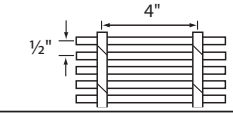
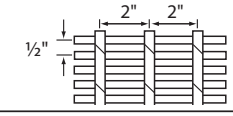
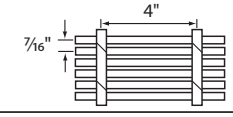
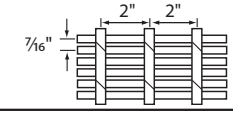
Type "SL" Swage Locked Steel Grating

Type **"SL"** rectangular bar provides clean, crisp lines and the cross bar is fully locked within the bearing bar, slightly below the top surface.



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Steel Grating Table of Spacings

Part No.	Spacing	Open Area*	
19-W-4 19-DT-4 19-SL-4		78%	Bearing bars spaced at 1-3/16" on center and cross bars at 4" on center. The workhorse of industrial flooring popular for platforms, catwalks, mezzanines and stairways.
19-W-2 19-DT-2 19-SL-2		73%	Bearing bars spaced at 1-3/16" on center and cross bars at 2" on center. Excellent for short spans and applications where small wheeled carts continuously cross the grating surface.
15-W-4 15-DT-4 15-SL-4		75%	Bearing bars spaced at 15/16" on center and cross bars at 4" on center. More than 26% stronger than similar “19” spaced gratings and provides additional flooring surface.
15-W-2 15-DT-2 15-SL-2		69%	Bearing bars spaced at 15/16" on center and close spaced cross bars at 2" on center. Provides the advantage of closer spaced bearing bars and cross bars.
11-W-4 11-DT-4 11-SL-4		68%	Due to NAAMM allowable material and manufacturing tolerances, Interstate Gratings offers IGtru™ with bearing bars spaced at 21/32" on center, with 3/16" thick bearing bars to ensure compliance with the spacing requirements of the Americans with Disabilities Act. For ADA installations, specify that the bearing bars span perpendicular to the normal flow of traffic.
11-W-2 11-DT-2 11-SL-2		63%	
IGtru™ 11-W-4 11-DT-4		66%	
IGtru™ 11-W-2 11-DT-2		61%	
8-W-4 8-DT-4 8-SL-4		58%	The bar spacings on 8-4 and 8-2 gratings comply with ADA spacing requirements. In addition to pedestrian applications, these products are popular for material handling platforms and mezzanines subject to continuous cart and dolly traffic.
8-W-2 8-DT-2 8-SL-2		54%	
7-W-4 7-DT-4 7-SL-4		53%	The bar spacings on 7-4 and 7-2 gratings comply with ADA spacing requirements and are popular for applications in the public way. When specified with 3/16” thick bearing bars, 7-4 and 7-2 gratings have a net ¼” clear opening between the bearing bars and often reject intrusion by high-heeled shoes.
7-W-2 7-DT-2 7-SL-2		49%	

* Percentage of open area is based upon 3/16" thick bearing bars and .275 cross bars. Contact Interstate Gratings if exact open area calculation is required for alternative bearing bar thicknesses or cross bar sizes.

How to Specify Steel Bar Grating

1. Select type of grating
   - **“W”** for Welded Steel Grating
   - **“DT”** for Dovetail Pressure Locked Grating
   - **“SL”** for Swage Locked Grating
2. Select bar spacing from table above
3. Select bearing bar size (consult load tables on pages 6-11 considering service loads and clear spans)
4. Specify Plain or Serrated surface
5. Specify banding or additional trim required
6. Specify finish
   - Bare steel (no finish)
   - IG EcoCoat™ - Standard Black Paint
   - Hot Dip Galvanized (per ASTM A-123)
   - Other
7. Specify fasteners (if required) – see page 40

19 Space Load Table

Use this table when evaluating spans and loads for the following types of steel grating:

19-W-4, 19-W-2, 19-DT-4, 19-DT-2, 19-SL-4 and 19-SL-2

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 1/8	3.9	3'-5"	U	355	227	158	116	89	70							
			D	0.099	0.155	0.223	0.304	0.397	0.503							
			C	355	284	237	203	178	158							
			D	0.079	0.124	0.179	0.243	0.318	0.402							
3/4 x 3/16	5.6	3'-10"	U	533	341	237	174	133	105	85						
			D	0.099	0.155	0.223	0.304	0.397	0.503	0.621						
			C	533	426	355	305	266	237	213						
			D	0.079	0.124	0.179	0.243	0.318	0.402	0.497						
1 x 1/8	5.0	4'-3"	U	632	404	281	206	158	125	101	84					
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563					
			C	632	505	421	361	316	281	253	230					
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451					
1 x 3/16	7.2	4'-9"	U	947	606	421	309	237	187	152	125	105				
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670				
			C	947	758	632	541	474	421	379	345	316				
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536				
1-1/4 x 1/8	6.1	5'-1"	U	987	632	439	322	247	195	158	131	110	93			
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629			
			C	987	790	658	564	493	439	395	359	329	304			
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504			
1-1/4 x 3/16	8.9	5'-7"	U	1,480	947	658	483	370	292	237	196	165	140	121		
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730		
			C	1,480	1,184	987	846	740	658	592	538	493	456	423		
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584		
1-1/2 x 1/8	7.2	5'-10"	U	1,421	910	632	464	355	281	227	188	158	135	116		
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608		
			C	1,421	1,137	947	812	711	632	568	517	474	437	406		
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487		
1-1/2 x 3/16	10.7	6'-5"	U	2,132	1,364	947	696	533	421	341	282	237	202	174	133	
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	
			C	2,132	1,705	1,421	1,218	1,066	947	853	775	711	656	609	533	
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	
1-3/4 x 1/8	8.5	6'-6"	U	1,934	1,238	860	632	484	382	310	256	215	183	158	121	96
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
			C	1,934	1,547	1,290	1,105	967	860	774	703	645	595	553	484	430
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
1-3/4 x 3/16	12.3	7'-3"	U	2,901	1,857	1,290	947	725	573	464	384	322	275	237	181	143
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
			C	2,901	2,321	1,934	1,658	1,451	1,290	1,161	1,055	967	893	829	725	645
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
2 x 1/8	9.6	7'-4"	U	2,526	1,617	1,123	825	632	499	404	334	281	239	206	158	125
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
			C	2,526	2,021	1,684	1,444	1,263	1,123	1,011	919	842	777	722	632	561
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
2 x 3/16	13.9	8'-0"	U	3,790	2,425	1,684	1,237	947	749	606	501	421	359	309	237	187
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
			C	3,790	3,032	2,526	2,165	1,895	1,684	1,516	1,378	1,263	1,166	1,083	947	842
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
2-1/4 x 3/16	15.6	8'-9"	U	4,796	3,070	2,132	1,566	1,199	947	767	634	533	454	392	300	237
			D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.530	0.670
			C	4,796	3,837	3,197	2,741	2,398	2,132	1,918	1,744	1,599	1,476	1,370	1,199	1,066
			D	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.424	0.536
2-1/2 x 3/16	17.2	9'-5"	U	5,921	3,790	2,632	1,933	1,480	1,170	947	783	658	561	483	370	292
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
			C	5,921	4,737	3,947	3,384	2,961	2,632	2,368	2,153	1,974	1,822	1,692	1,480	1,316
			D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.381	0.483

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 18,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. foot
C = Concentrated Load in pounds/ft. of grating width
D = Deflection in inches

* Weight per square foot based upon 19-W-4 grating. Add .60 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24", 36" and 48" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	1-3/8"	2-9/16"	3-3/4"	4-15/16"	6-1/8"	7-5/16"	8-1/2"	9-11/16"	10-7/8"	12-1/16"	13-1/4"	14-7/16"	15-5/8"	16-13/16"	18"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	19-3/16"	20-3/8"	21-9/16"	22-3/4"	23-15/16"	25-1/8"	26-5/16"	27-1/2"	28-11/16"	29-7/8"	31-1/16"	32-1/4"	33-7/16"	34-5/8"	35-13/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41					
Panel Width	37	38.1875	39.375	40.5625	41.75	42.9375	44.125	45.3125	46.5	47.6875					

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values. ☐ Indicates stock panel widths.

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15 Space Load Table

Use this table when evaluating spans and loads for the following types of steel grating:

15-W-4, 15-W-2, 15-DT-4, 15-DT-2, 15-SL-4 and 15-SL-2

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 3/16	6.9	4'-0"	U	675	432	300	220	169	133	108						
			D	0.099	0.155	0.223	0.304	0.397	0.503	0.621						
			C	675	540	450	386	338	300	270						
			D	0.079	0.124	0.179	0.243	0.318	0.402	0.497						
1 x 1/8	6.2	4'-6"	U	800	512	356	261	200	158	128						
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466						
			C	800	640	533	457	400	356	320						
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372						
1 x 3/16	8.9	5'-0"	U	1,200	768	533	392	300	237	192	159	133				
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670				
			C	1,200	960	800	686	600	533	480	436	400				
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536				
1-1/4 x 1/8	7.5	5'-4"	U	1,250	800	556	408	313	247	200	165	139	118			
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629			
			C	1,250	1,000	833	714	625	556	500	455	417	385			
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504			
1-1/4 x 3/16	11.0	5'-11"	U	1,875	1,200	833	612	469	370	300	248	208	178	153		
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730		
			C	1,875	1,500	1,250	1,071	938	833	750	682	625	577	536		
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584		
1-1/2 x 1/8	8.9	6'-2"	U	1,800	1,152	800	588	450	356	288	238	200	170	147	113	
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	
			C	1,800	1,440	1,200	1,029	900	800	720	655	600	554	514	450	
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	
1-1/2 x 3/16	13.2	6'-10"	U	2,700	1,728	1,200	882	675	533	432	357	300	256	220	169	133
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006
			C	2,700	2,160	1,800	1,543	1,350	1,200	1,080	982	900	831	771	675	600
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804
1-3/4 x 1/8	10.4	6'-11"	U	2,450	1,568	1,089	800	613	484	392	324	272	232	200	153	121
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
			C	2,450	1,960	1,633	1,400	1,225	1,089	980	891	817	754	700	613	544
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
1-3/4 x 3/16	15.3	7'-8"	U	3,675	2,352	1,633	1,200	919	726	588	486	408	348	300	230	182
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
			C	3,675	2,940	2,450	2,100	1,838	1,633	1,470	1,336	1,225	1,131	1,050	919	817
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
2 x 1/8	11.8	7'-7"	U	3,200	2,048	1,422	1,045	800	632	512	423	356	303	261	200	158
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
			C	3,200	2,560	2,133	1,829	1,600	1,422	1,280	1,164	1,067	985	914	800	711
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
2 x 3/16	17.3	8'-6"	U	4,800	3,072	2,133	1,567	1,200	948	768	635	533	454	392	300	237
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
			C	4,800	3,840	3,200	2,743	2,400	2,133	1,920	1,746	1,600	1,477	1,371	1,200	1,067
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
2-1/4 x 3/16	19.4	9'-3"	U	6,075	3,888	2,700	1,984	1,519	1,200	972	803	675	575	496	380	300
			D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.530	0.670
			C	6,075	4,860	4,050	3,471	3,038	2,700	2,430	2,209	2,025	1,869	1,736	1,519	1,350
			D	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.424	0.536
2-1/2 x 3/16	21.5	10'-0"	U	7,500	4,800	3,333	2,449	1,875	1,482	1,200	992	833	710	612	469	370
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
			C	7,500	6,000	5,000	4,286	3,750	3,333	3,000	2,727	2,500	2,308	2,143	1,875	1,667
			D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.381	0.483

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 18,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. ft.
C = Concentrated Load in pounds/ft. of grating width
D = Deflection in inches

* Weight per square foot based upon 15-W-4 grating. Add .60 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	1-1/8"	2-1/16"	3"	3-15/16"	4-7/8"	5-13/16"	6-3/4"	7-11/16"	8-5/8"	9-9/16"	10-1/2"	11-7/16"	12-3/8"	13-5/16"	14-1/4"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	15-3/16"	16-1/8"	17-1/16"	18"	18-15/16"	19-7/8"	20-13/16"	21-3/4"	22-11/16"	23-5/8"	24-9/16"	25-1/2"	26-7/16"	27-3/8"	28-5/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39							
Panel Width	29-1/4"	30-3/16"	31-1/8"	32-1/16"	33"	33-15/16"	34-7/8"	35-13/16"							

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

Indicates stock panel widths.

Steel Bar Grating

11 Space Load Table

Use this table when evaluating spans and loads for the following types of steel grating:

11-SL-4 and 11-SL-2

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 3/16	9.1	4'-4"	U	921	589	409	301	230	182	147						
			D	0.099	0.155	0.223	0.304	0.397	0.503	0.621						
			C	921	736	614	526	460	409	368						
			D	0.079	0.124	0.179	0.243	0.318	0.402	0.497						
1 x 1/8	8.1	4'-11"	U	1,091	698	485	356	273	216	175	144					
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563					
			C	1,091	873	727	623	546	485	436	397					
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451					
1 x 3/16	11.9	5'-5"	U	1,636	1,047	727	534	409	323	262	216	182				
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670				
			C	1,636	1,309	1,091	935	818	727	655	595	546				
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536				
1-1/4 x 1/8	10.0	5'-9"	U	1,705	1,091	758	557	426	337	273	225	189	161			
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629			
			C	1,705	1,364	1,136	974	852	758	682	620	568	525			
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504			
1-1/4 x 3/16	14.7	6'-5"	U	2,557	1,636	1,136	835	639	505	409	338	284	242	209		
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730		
			C	2,557	2,046	1,705	1,461	1,278	1,136	1,023	930	852	787	731		
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584		
1-1/2 x 1/8	11.9	6'-8"	U	2,455	1,571	1,091	802	614	485	393	325	273	232	200	153	
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	
			C	2,455	1,964	1,636	1,403	1,227	1,091	982	893	818	755	701	614	
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	
1-1/2 x 3/16	17.7	7'-4"	U	3,682	2,356	1,636	1,202	921	727	589	487	409	349	301	230	182
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006
			C	3,682	2,946	2,455	2,104	1,841	1,636	1,473	1,339	1,227	1,133	1,052	921	818
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804
1-3/4 x 1/8	13.9	7'-5"	U	3,341	2,138	1,485	1,091	835	660	535	442	371	316	273	209	165
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
			C	3,341	2,673	2,227	1,909	1,671	1,485	1,336	1,215	1,114	1,028	955	835	742
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
1-3/4 x 3/16	20.5	8'-3"	U	5,011	3,207	2,227	1,636	1,253	990	802	663	557	474	409	313	248
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
			C	5,011	4,009	3,341	2,864	2,506	2,227	2,005	1,822	1,671	1,542	1,432	1,253	1,114
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
2 x 1/8	15.8	8'-3"	U	4,364	2,793	1,939	1,425	1,091	862	698	577	485	413	356	273	216
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
			C	4,364	3,491	2,909	2,494	2,182	1,939	1,746	1,587	1,455	1,343	1,247	1,091	970
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
2 x 3/16	23.3	9'-1"	U	6,546	4,189	2,909	2,137	1,636	1,293	1,047	866	727	620	534	409	323
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
			C	6,546	5,236	4,364	3,740	3,273	2,909	2,618	2,380	2,182	2,014	1,870	1,636	1,455
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
2-1/4 x 3/16	26.1	10'-0"	U	8,284	5,302	3,682	2,705	2,071	1,636	1,326	1,095	921	784	676	518	409
			D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.530	0.670
			C	8,284	6,627	5,523	4,734	4,142	3,682	3,314	3,012	2,761	2,549	2,367	2,071	1,841
			D	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.424	0.536
2-1/2 x 3/16	28.9	10'-9"	U	10,227	6,546	4,546	3,340	2,557	2,020	1,636	1,352	1,136	968	835	639	505
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
			C	10,227	8,182	6,818	5,844	5,114	4,546	4,091	3,719	3,409	3,147	2,922	2,557	2,273
			D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.381	0.483

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 18,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. ft.
C = Concentrated Load in pounds/ft. of grating width
D = Deflection in inches

* Weight per square foot based upon 11-W-4 grating. Add .60 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	7/8"	1-9/16"	2-1/4"	2-15/16"	3-5/8"	4-5/16"	5"	5-11/16"	6-3/8"	7-1/16"	7-3/4"	8-7/16"	9-1/8"	9-13/16"	10-1/2"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	11-3/16"	11-7/8"	12-9/16"	13-1/4"	13-15/16"	14-5/8"	15-5/16"	16"	16-11/16"	17-3/8"	18-1/16"	18-3/4"	19-7/16"	20-1/8"	20-13/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	21-1/2"	22-3/16"	22-7/8"	23-9/16"	24-1/4"	24-15/16"	25-5/8"	26-5/16"	27"	27-11/16"	28-3/8"	29-1/16"	29-3/4"	30-7/16"	31-1/8"
Number of Bearing Bars	47	48	49	50	51	52	53								
Panel Width	31-13/16"	32-1/2"	33-3/16"	33-7/8"	34-9/16"	35-1/4"	35-15/16"								

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

Indicates stock panel widths.

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IGtru™ Load Table

Use this table when evaluating spans and loads for the following types of steel grating:

11-W-4, 11-W-2, 11-DT-4, 11-DT-2

IGtru™ is manufactured to NAAMM standards and is fully ADA compliant with a minimum 3/16" bearing bar thickness

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 3/16	9.3	4'-4"	U	964	617	429	315	241	190	154	128					
			D	0.099	0.155	0.223	0.304	0.397	0.503	0.621	0.751					
			C	964	771	643	551	482	429	386	351					
			D	0.079	0.124	0.179	0.243	0.318	0.402	0.497	0.601					
1 x 1/8	8.4	4'-11"	U	1,143	731	508	373	286	226	183	151					
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563					
			C	1,143	914	762	653	571	508	457	416					
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451					
1 x 3/16	12.3	5'-5"	U	1,714	1,097	762	560	429	339	274	227	190				
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670				
			C	1,714	1,371	1,143	980	857	762	686	623	571				
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536				
1-1/4 x 1/8	10.3	5'-9"	U	1,786	1,143	794	583	446	353	286	236	198	169	146		
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730		
			C	1,786	1,429	1,190	1,020	893	794	714	649	595	549	510		
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584		
1-1/4 x 3/16	15.2	6'-5"	U	2,679	1,714	1,190	875	670	529	429	354	298	254	219	167	
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730	0.953	
			C	2,679	2,143	1,786	1,531	1,339	1,190	1,071	974	893	824	765	670	
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584	0.763	
1-1/2 x 1/8	12.3	6'-8"	U	2,571	1,646	1,143	840	643	508	411	340	286	243	210	161	127
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006
			C	2,571	2,057	1,714	1,469	1,286	1,143	1,029	935	857	791	735	643	571
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804
1-1/2 x 3/16	18.3	7'-4"	U	3,857	2,469	1,714	1,259	964	762	617	510	429	365	315	241	190
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006
			C	3,857	3,086	2,571	2,204	1,929	1,714	1,543	1,403	1,286	1,187	1,102	964	857
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804
1-3/4 x 1/8	14.4	7'-5"	U	3,500	2,240	1,556	1,143	875	691	560	463	389	331	286	219	173
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
			C	3,500	2,800	2,333	2,000	1,750	1,556	1,400	1,273	1,167	1,077	1,000	875	778
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
1-3/4 x 3/16	21.2	8'-1"	U	5,250	3,360	2,333	1,714	1,313	1,037	840	694	583	497	429	328	259
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
			C	5,250	4,200	3,500	3,000	2,625	2,333	2,100	1,909	1,750	1,615	1,500	1,313	1,167
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
2 x 1/8	16.3	8'-3"	U	4,571	2,926	2,032	1,493	1,143	903	731	604	508	433	373	286	226
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
			C	4,571	3,657	3,048	2,612	2,286	2,032	1,829	1,662	1,524	1,407	1,306	1,143	1,016
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
2 x 3/16	24.1	9'-1"	U	6,857	4,389	3,048	2,239	1,714	1,354	1,097	907	762	649	560	429	339
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
			C	6,857	5,486	4,571	3,918	3,429	3,048	2,743	2,494	2,286	2,110	1,959	1,714	1,524
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
2-1/4 x 3/16	27.0	10'-0"	U	8,679	5,554	3,857	2,834	2,170	1,714	1,389	1,148	964	822	708	542	429
			D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.530	0.670
			C	8,679	6,943	5,786	4,959	4,339	3,857	3,471	3,156	2,893	2,670	2,480	2,170	1,929
			D	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.424	0.536
2-1/2 x 3/16	29.9	10'-9"	U	10,714	6,857	4,762	3,499	2,679	2,116	1,714	1,417	1,190	1,014	875	670	529
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
			C	10,714	8,571	7,143	6,122	5,357	4,762	4,286	3,896	3,571	3,297	3,061	2,679	2,381
			D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.381	0.483

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 18,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

U = Safe Uniform Load in pounds/sq. ft.
C = Concentrated Load in pounds/ft. of grating width
D = Deflection in inches

For pedestrian comfort, deflection in excess of .250 inches in not recommended.

* Weight per square foot based upon IGtru™ 11-W-4 grating. Add .60 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel. Spacing is based on 21/32.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	7/8"	1-1/2"	2-3/16"	2-13/16"	3-1/2"	4-1/8"	4-13/16"	5-7/16"	6-1/8"	6-3/4"	7-7/16"	8-1/16"	8-3/4"	9-3/8"	10-1/16"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	10-11/16"	11-3/8"	12"	12-11/16"	13-5/16"	14"	14-5/8"	15-5/16"	15-15/16"	16-5/8"	17-1/4"	17-15/16"	18-9/16"	19-1/4"	19-7/8"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	20-9/16"	21-3/16"	21-7/8"	22-1/2"	23-3/16"	23-13/16"	24-1/2"	25-1/8"	25-13/16"	26-7/16"	27-1/8"	27-3/4"	28-7/16"	29-1/16"	29-3/4"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56					
Panel Width	30-3/8"	31-1/16"	31-11/16"	32-3/8"	33"	33-11/16"	34-5/16"	35"	35-5/8"	36-5/16"					

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

Indicates stock panel widths.

Steel Bar Grating

8 Space Load Table

Use this table when evaluating spans and loads for the following types of steel grating:

8-W-4, 8-W-2, 8-DT-4, 8-DT-2, 8-SL-4 and 8-SL-2

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span 2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 3/16	12.3	4'-9"	U	1,266	810	563	413	316	250	203	167					
			D	0.099	0.155	0.223	0.304	0.397	0.503	0.621	0.751					
			C	1,266	1,013	844	723	633	563	506	460					
			D	0.079	0.124	0.179	0.243	0.318	0.402	0.497	0.601					
1 x 1/8	11.0	5'-3"	U	1,500	960	667	490	375	296	240	198	167				
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670				
			C	1,500	1,200	1,000	857	750	667	600	546	500				
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536				
1 x 3/16	16.2	5'-10"	U	2,250	1,440	1,000	735	563	444	360	298	250	213			
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670	0.787			
			C	2,250	1,800	1,500	1,286	1,125	1,000	900	818	750	692			
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629			
1-1/4 x 1/8	13.6	6'-3"	U	2,344	1,500	1,042	765	586	463	375	310	260	222	191		
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730		
			C	2,344	1,875	1,563	1,339	1,172	1,042	938	852	781	721	670		
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584		
1-1/4 x 3/16	20.0	6'-11"	U	3,516	2,250	1,563	1,148	879	694	563	465	391	333	287	220	
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730	0.953	
			C	3,516	2,813	2,344	2,009	1,758	1,563	1,406	1,278	1,172	1,082	1,005	879	
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584	0.763	
1-1/2 x 1/8	16.2	7'-2"	U	3,375	2,160	1,500	1,102	844	667	540	446	375	320	276	211	
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	
			C	3,375	2,700	2,250	1,929	1,688	1,500	1,350	1,227	1,125	1,039	964	844	
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	
1-1/2 x 3/16	24.0	7'-11"	U	5,063	3,240	2,250	1,653	1,266	1,000	810	669	563	479	413	316	250
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006
			C	5,063	4,050	3,375	2,893	2,531	2,250	2,025	1,841	1,688	1,558	1,446	1,266	1,125
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804
1-3/4 x 1/8	18.9	8'-1"	U	4,594	2,940	2,042	1,500	1,148	907	735	607	510	435	375	287	227
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
			C	4,594	3,675	3,063	2,625	2,297	2,042	1,838	1,671	1,531	1,414	1,313	1,148	1,021
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
1-3/4 x 3/16	27.9	8'-11"	U	6,891	4,410	3,063	2,250	1,723	1,361	1,103	911	766	652	563	431	340
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
			C	6,891	5,513	4,594	3,938	3,445	3,063	2,756	2,506	2,297	2,120	1,969	1,723	1,531
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
2 x 1/8	21.5	8'-11"	U	6,000	3,840	2,667	1,959	1,500	1,185	960	793	667	568	490	375	296
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
			C	6,000	4,800	4,000	3,429	3,000	2,667	2,400	2,182	2,000	1,846	1,714	1,500	1,333
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
2 x 3/16	31.8	9'-11"	U	9,000	5,760	4,000	2,939	2,250	1,778	1,440	1,190	1,000	852	735	563	444
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
			C	9,000	7,200	6,000	5,143	4,500	4,000	3,600	3,273	3,000	2,769	2,571	2,250	2,000
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
2-1/4 x 3/16	35.7	10'-10"	U	11,391	7,290	5,063	3,719	2,848	2,250	1,823	1,506	1,266	1,078	930	712	563
			D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.530	0.670
			C	11,391	9,113	7,594	6,509	5,695	5,063	4,556	4,142	3,797	3,505	3,255	2,848	2,531
			D	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.424	0.536
2-1/2 x 3/16	39.6	11'-8"	U	14,063	9,000	6,250	4,592	3,516	2,778	2,250	1,860	1,563	1,331	1,148	879	694
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
			C	14,063	11,250	9,375	8,036	7,031	6,250	5,625	5,114	4,688	4,327	4,018	3,516	3,125
			D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.381	0.483

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 18,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. ft.
C = Concentrated Load pounds/ft. of grating width
D = Deflection in inches

* Weight per square foot based upon 8-W-4 grating. Add .60 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Welded grating types 8-W-4 and 8-W-2 are available in bearing bar depths from 3/4" to 2", and panels are available from stock in nominal 24" widths (24" max for type "W").

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths (24" max for type "W"). When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	11/16"	1-3/16"	1-11/16"	2-3/16"	2-11/16"	3-3/16"	3-11/16"	4-3/16"	4-11/16"	5-3/16"	5-11/16"	6-3/16"	6-11/16"	7-3/16"	7-11/16"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	8-3/16"	8-11/16"	9-3/16"	9-11/16"	10-3/16"	10-11/16"	11-3/16"	11-11/16"	12-3/16"	12-11/16"	13-3/16"	13-11/16"	14-3/16"	14-11/16"	15-3/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	15-11/16"	16-3/16"	16-11/16"	17-3/16"	17-11/16"	18-3/16"	18-11/16"	19-3/16"	19-11/16"	20-3/16"	20-11/16"	21-3/16"	21-11/16"	22-3/16"	22-11/16"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Panel Width	23-3/16"	23-11/16"	24-3/16"	24-11/16"	25-3/16"	25-11/16"	26-3/16"	26-11/16"	27-3/16"	27-11/16"	28-3/16"	28-11/16"	29-3/16"	29-11/16"	30-3/16"
Number of Bearing Bars	62	63	64	65	66	67	68	69	70	71	72				
Panel Width	30-11/16"	31-3/16"	31-11/16"	32-3/16"	32-11/16"	33-3/16"	33-11/16"	34-3/16"	34-11/16"	35-3/16"	35-11/16"				

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

Indicates stock panel widths for types "DT" and "SL". Indicates stock panel widths for type "W". (24" max)

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7 Space Load Table

Use this table when evaluating spans and loads for the following types of steel grating:

7-W-4, 7-W-2, 7-DT-4, 7-DT-2, 7-SL-4 and 7-SL-2

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 3/16	13.9	4'-10"	U	1,446	926	643	472	362	286	231	191					
			D	0.099	0.155	0.223	0.304	0.397	0.503	0.621	0.751					
			C	1,446	1,157	964	827	723	643	579	526					
			D	0.079	0.124	0.179	0.243	0.318	0.402	0.497	0.601					
1 x 1/8	12.4	5'-6"	U	1,714	1,097	762	560	429	339	274	227	191				
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670				
			C	1,714	1,371	1,143	980	857	762	686	623	571				
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536				
1 x 3/16	18.3	6'-1"	U	2,571	1,646	1,143	840	643	508	411	340	286	243			
			D	0.074	0.116	0.168	0.228	0.298	0.377	0.466	0.563	0.670	0.787			
			C	2,571	2,057	1,714	1,469	1,286	1,143	1,029	935	857	791			
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629			
1-1/4 x 1/8	15.3	6'-6"	U	2,679	1,714	1,191	875	670	529	429	354	298	254	219		
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730		
			C	2,679	2,143	1,786	1,531	1,339	1,191	1,071	974	893	824	765		
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584		
1-1/4 x 3/16	22.7	7'-2"	U	4,018	2,571	1,786	1,312	1,005	794	643	531	446	380	328	251	
			D	0.060	0.093	0.134	0.182	0.238	0.302	0.372	0.451	0.536	0.629	0.730	0.953	
			C	4,018	3,214	2,679	2,296	2,009	1,786	1,607	1,461	1,339	1,236	1,148	1,005	
			D	0.048	0.074	0.107	0.146	0.191	0.241	0.298	0.360	0.429	0.504	0.584	0.763	
1-1/2 x 1/8	18.3	7'-5"	U	3,857	2,469	1,714	1,260	964	762	617	510	429	365	315	241	
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	
			C	3,857	3,086	2,571	2,204	1,929	1,714	1,543	1,403	1,286	1,187	1,102	964	
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	
1-1/2 x 3/16	27.2	8'-3"	U	5,786	3,703	2,571	1,889	1,446	1,143	926	765	643	548	472	362	286
			D	0.050	0.078	0.112	0.152	0.199	0.251	0.310	0.376	0.447	0.524	0.608	0.794	1.006
			C	5,786	4,629	3,857	3,306	2,893	2,571	2,314	2,104	1,929	1,780	1,653	1,446	1,286
			D	0.040	0.062	0.089	0.122	0.159	0.201	0.248	0.300	0.358	0.420	0.487	0.636	0.804
1-3/4 x 1/8	21.3	8'-4"	U	5,250	3,360	2,333	1,714	1,313	1,037	840	694	583	497	429	328	259
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
			C	5,250	4,200	3,500	3,000	2,625	2,333	2,100	1,909	1,750	1,615	1,500	1,313	1,167
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
1-3/4 x 3/16	31.6	9'-3"	U	7,875	5,040	3,500	2,571	1,969	1,556	1,260	1,041	875	746	643	492	389
			D	0.043	0.067	0.096	0.130	0.170	0.215	0.266	0.322	0.383	0.450	0.521	0.681	0.862
			C	7,875	6,300	5,250	4,500	3,938	3,500	3,150	2,864	2,625	2,423	2,250	1,969	1,750
			D	0.034	0.053	0.077	0.104	0.136	0.172	0.213	0.257	0.306	0.360	0.417	0.545	0.689
2 x 1/8	24.3	9'-3"	U	6,857	4,389	3,048	2,239	1,714	1,355	1,097	907	762	649	560	429	339
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
			C	6,857	5,486	4,571	3,918	3,429	3,048	2,743	2,494	2,286	2,110	1,959	1,714	1,524
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
2 x 3/16	36.0	10'-3"	U	10,286	6,583	4,571	3,359	2,571	2,032	1,646	1,360	1,143	974	840	643	508
			D	0.037	0.058	0.084	0.114	0.149	0.189	0.233	0.282	0.335	0.393	0.456	0.596	0.754
			C	10,286	8,229	6,857	5,878	5,143	4,571	4,114	3,740	3,429	3,165	2,939	2,571	2,286
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
2-1/4 x 3/16	40.5	11'-2"	U	13,018	8,331	5,786	4,251	3,255	2,571	2,083	1,721	1,446	1,233	1,063	814	643
			D	0.033	0.052	0.074	0.101	0.132	0.168	0.207	0.250	0.298	0.350	0.406	0.530	0.670
			C	13,018	10,414	8,679	7,439	6,509	5,786	5,207	4,734	4,339	4,006	3,719	3,255	2,893
			D	0.026	0.041	0.060	0.081	0.106	0.134	0.166	0.200	0.238	0.280	0.324	0.424	0.536
2-1/2 x 3/16	44.9	12'-1"	U	16,071	10,286	7,143	5,248	4,018	3,175	2,571	2,125	1,786	1,522	1,312	1,005	794
			D	0.030	0.047	0.067	0.091	0.119	0.151	0.186	0.225	0.268	0.315	0.365	0.477	0.603
			C	16,071	12,857	10,714	9,184	8,036	7,143	6,429	5,844	5,357	4,945	4,592	4,018	3,571
			D	0.024	0.037	0.054	0.073	0.095	0.121	0.149	0.180	0.215	0.252	0.292	0.381	0.483

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 18,000 psi.
The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. ft.
C = Concentrated Load in pounds/ft. of grating width
D = Deflection in inches

* Weight per square foot based upon 7-W-4 grating. Add .60 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Welded grating types 7-W-4 and 7-W-2 are available in bearing bar depths from 3/4" to 2", and panels are available from stock in nominal 24" widths. (24" max for type "W") (24" max for type "W")

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths (24" max for type "W"). When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel. (24" max for type "W")

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	5/8"	1-1/16"	1-1/2"	1-15/16"	2-3/8"	2-13/16"	3-1/4"	3-11/16"	4-1/8"	4-9/16"	5"	5-7/16"	5-7/8"	6-5/16"	6-3/4"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	7-3/16"	7-5/8"	8-1/16"	8-1/2"	8-15/16"	9-3/8"	9-13/16"	10-1/4"	10-11/16"	11-1/8"	11-9/16"	12"	12-7/16"	12-7/8"	13-5/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	13-3/4"	14-3/16"	14-5/8"	15-1/16"	15-1/2"	15-15/16"	16-3/8"	16-13/16"	17-1/4"	17-11/16"	18-1/8"	18-9/16"	19"	19-7/16"	19-7/8"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Panel Width	20-5/16"	20-3/4"	21-3/16"	21-5/8"	22-1/16"	22-1/2"	22-15/16"	23-3/8"	23-13/16"	24-1/4"	24-11/16"	25-1/8"	25-9/16"	26"	26-7/16"
Number of Bearing Bars	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
Panel Width	26-7/8"	27-5/16"	27-3/4"	28-3/16"	28-5/8"	29-1/16"	29-1/2"	29-15/16"	30-3/8"	30-13/16"	31-1/4"	31-11/16"	32-1/8"	32-9/16"	33"
Number of Bearing Bars	77	78	79	80	81	82	83								
Panel Width	33-7/16"	33-7/8"	34-5/16"	34-3/4"	35-3/16"	35-5/8"	36-1/16"								

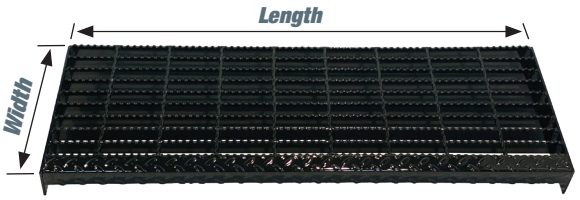
Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

Indicates stock panel widths for types "DT" and "SL". Indicates stock panel widths for type "W". (24" max)

Steel Stair Treads

Steel Stair Treads

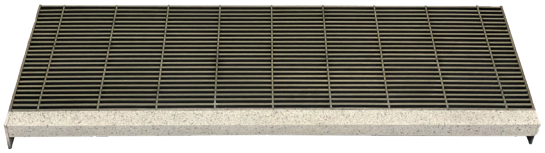
Steel grating stair treads are available fabricated to any size in type **"W"** welded, type **"DT"** dovetail pressure locked or type **"SL"** swage locked construction. Treads are manufactured with a defined visible nosing and pre-punched end carrier plates or angles, ready for bolting to the stair stringers.



Type 19-W-4 Serrated with Checker Plate Nosing



Type 19-W-4 with Cast Abrasive Nosing

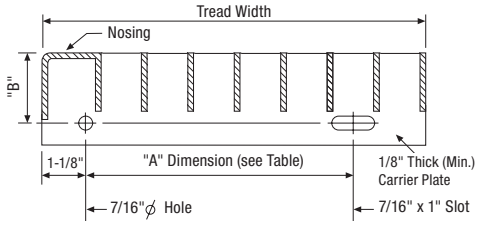


Type 7-DT-4 with IG GritWeld™ Nosing

Steel Carrier Plates & Angles

Steel Carrier Plates

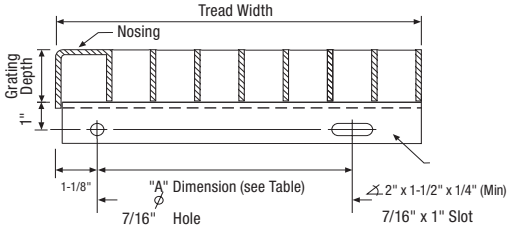
Recommended for use with 19, 15 and 11 spaced gratings



"B" Dimension
1-¾" for ¾" thru 1-¼" Bearing Bars
2-¼" for 1-½" and 1-¾ Bearing Bars.
Consult manufacturer for 2" and above

Steel Carrier Angles

Recommended for use with 8 and 7 spaced gratings



Nosing Options



Checker Plate Nosing welded to grating and carrier plates/angles.



Cast Abrasive Nosing mechanically fastened to welded mounting angle.



GritWeld™ Nosing welded to grating and carrier plates with thermally applied GritWeld™ surface.

Table of Stair Tread Widths

19 Space			15 Space			IGtru™ / 11 Space			8 Space			7 Space		
Bearing Bars @ 1-3/16" O.C.			Bearing Bars @ 15/16" O.C.			Bearing Bars @ 21/32" O.C.*			Bearing Bars @ 1/2" O.C.			Bearing Bars @ 7/16" O.C.		
Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension
6-3/16"	5	2-1/2"	6-1/8"	6	2-1/2"	6-1/16"	8	2-1/2"	6-7/16	11	2-1/2"	5-13/16	11	2-1/2"
7-3/8"	6	4-1/2"	7-1/16"	7	4-1/2"	6-11/16"	9	4-1/2"	7-7/16	13	4-1/2"	6-11/16	13	2-1/2"
8-9/16"	7	4-1/2"	8"	8	4-1/2"	7-3/8"	10	4-1/2"	8-7/16	15	4-1/2"	7-9/16	15	4-1/2"
9-3/4"	8	7"	8-15/16"	9	4-1/2"	8	11	4-1/2"	8-15/16	16	4-1/2"	8-7/16	17	4-1/2"
10-15/16"	9	7"	9-7/8"	10	7"	8-11/16"	12	4-1/2"	9-7/16	17	7"	9-5/16	19	7"
12-1/8"	10	7"	10-3/16"	11	7"	9-5/16"	13	7"	9-15/16	18	7"	10-3/16	21	7"
			11-3/4"	12	7"	10	14	7"	10-7/16	19	7"	10-5/8	22	7"
			12-11/16"	13	7"	10-5/8"	15	7"	10-15/16	20	7"	11-1/16	23	7"
						11-5/16"	16	7"	11-7/16	21	7"	11-1/2	24	7"
						11-15/16"	17	7"	11-15/16	22	7"	11-15/16	25	7"

* Swage-Lock will be 11/16" O.C.

Recommended Maximum Steel Stair Tread Lengths**

Bearing Bar Size	19 Space		15 Space		IGtru™ / 11 Space		8 Space		7 Space	
	1-3/16" O.C.		15/16" O.C.		11/16" O.C.		1/2" O.C.		7/16" O.C.	
	Plain	Serrated	Plain	Serrated	Plain	Serrated	Plain	Serrated	Plain	Serrated
3/4" x 3/16"	2'-4"	--	2'-8"	--	3'-1"	--	3'-7"	--	3'-10"	--
1" x 3/16"	3'-5"	2'-10"	4'-0"	3'-4"	4'-3"	3'-9"	4'-9"	4'-1"	5'-2"	4'-5"
1-1/4" x 3/16"	4'-8"	4'-2"	5'-1"	4'-6"	5'-6"	4'-10"	5'-6"	5'-5"	5'-6"	5'-6"
1-1/2" x 3/16"	5'-6"	5'-3"	5'-6"	5'-6	5'-6"	5'-6"	6'-0"	5'-6"	6'-4"	5'-8"

** For treads up to 5'-6", maximum tread lengths are based upon 300 lb. concentrated load on the front 5 inches of the tread, at the center of the tread length. When treads exceed 5'-6" in length, design allows for 300 lb. concentrated loads at 1/3 points of tread length. Deflection is limited to 1/240 of tread length in all cases.

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Aluminum Bar Grating is lightweight, corrosion resistant, non-sparking and has an unmatched strength-to-weight ratio. Manufactured from ASTM B221, 6063 or 6061 alloy, aluminum grating is available in three distinct products, type "**ADT**" Dovetail Pressure Locked, type "**SG**" Swaged Rectangular Bar, and type "**SGI**" Swaged "I" Bar. All three products are available with bearing bar spacing ranging from 19/16" (1-3/16") to 7/16" on center and with cross bars at either 4" or 2" on center.

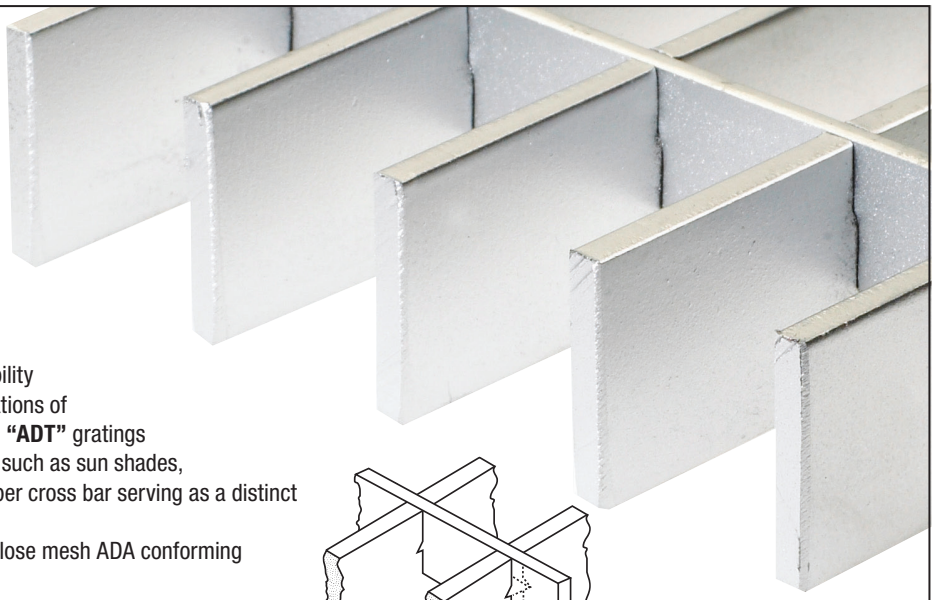
Rectangular bar products are manufactured with standard plain or optional serrated walking surfaces and "I" bar products are manufactured with a standard skid-resistant striated walking surface. Aluminum products are typically shipped "mill finish" with no additional treatment. For architectural applications or highly corrosive environments, supplemental anodizing, chemical cleaning or powder coat finishes are available.
The load tables on pages 15-20 provide detailed specification information relating to all three aluminum products.

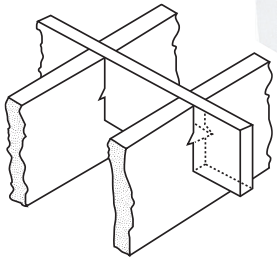
Type "ADT" Aluminum Dovetail Pressure Locked Grating

Type **"ADT"** aluminum gratings have rectangular cross bars that are slotted to fit into pre-punched bearing bars which are assembled and permanently connected under intense hydraulic pressure. In addition to being one of the most aesthetically appealing floor gratings with its clean uniform lines, the interlocking design provides excellent lateral stability and axial load distribution. The multiple combinations of bearing bar / cross bar sizes and spacing on type **"ADT"** gratings make them popular for architectural applications such as sun shades, grills, soffits, fencing and infill panels with a deeper cross bar serving as a distinct architectural accent.

Type **"ADT"** gratings are available in close mesh ADA conforming spacings.

Type 7-ADT-4 with 3/16" thick bearing bars provides a net ¼" clear opening between the bearing bars. This narrow opening is often preferred in public areas where concerns of drainage and the presence of high heeled shoes converge.





Dovetail Intersection

Type "SG" Aluminum Grating

The most widely used and economical aluminum grating, type **"SG"** rectangular bar provides clean, crisp lines and the cross bar is fully locked within the bearing bar, slightly below the top surface. Type 19-SG-4 aluminum grating is the industry recognized standard for industrial and architectural uses.



Type 19-SG-4

Type "SGI" Aluminum Grating

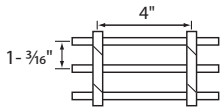
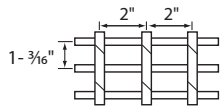
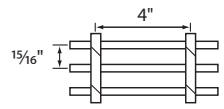
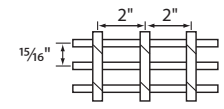
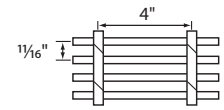
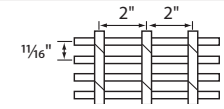
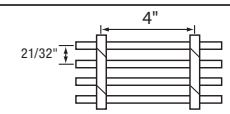
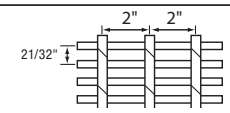
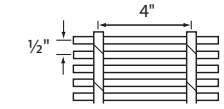
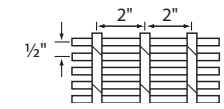
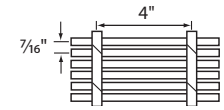
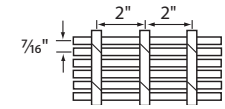
Manufactured with a lighter "I" shaped extruded bearing bar, type **"SGI"** aluminum grating carries the same load as 3/16" thick rectangular bar type **"SG"** aluminum grating, but weighs slightly less per square foot. Additionally, the striated top and bottom flanges of the "I" bar provide enhanced skid resistance without the cost of serration.



Type 19-SGI-4

Aluminum Bar Grating

Aluminum Grating Table of Spacings

Part No.	Spacing	Open Area*	
19-ADT-4 19-SG-4 19-SGI-4		78%	Bearing bars spaced at 1-3/16" on center and cross bars at 4" on center. The workhorse of industrial flooring popular for platforms, catwalks, mezzanines and stairways.
19-ADT-2 19-SG-2 19-SGI-2		73%	Bearing bars spaced at 1-3/16" on center and cross bars at 2" on center. Excellent for short spans and applications where additional lateral stability is desired.
15-ADT-4 15-SG-4 15-SGI-4		75%	Bearing bars spaced at 15/16" on center and cross bars at 4" on center. More than 26% stronger than similar “19” spaced gratings and provides additional flooring surface.
15-ADT-2 15-SG-2 15-SGI-2		69%	Bearing bars spaced at 15/16" on center and close spaced cross bars at 2" on center. Provides the advantage of closer spaced bearing bars and cross bars.
11-ADT-4 11-SG-4 11-SGI-4		68%	Due to NAAMM allowable material and manufacturing tolerances, Interstate Gratings offers IGtru™ with bearing bars spaced at 21/32” on center, with 3/16” thick bearing bars to ensure compliance with the spacing requirements of the Americans with Disabilities Act. For ADA installations, specify that the bearing bars span perpendicular to the normal flow of traffic.
11-ADT-2 11-SG-2 11-SGI-2		63%	
IGtru™ 11-ADT-4		66%	
IGtru™ 11-ADT-4		61%	
8-ADT-4 8-SG-4 8-SGI-4		58%	The bar spacings on 8-4 and 8-2 gratings comply with ADA spacing requirements. In addition to pedestrian applications, these products are popular for material handling platforms and mezzanines subject to continuous cart and dolly traffic.
8-ADT-2 8-SG-2 8-SGI-2		54%	
7-ADT-4 7-SG-4 7-SGI-4		53%	The bar spacings on 7-4 and 7-2 gratings comply with ADA spacing requirements and are popular for applications in the public way. When specified with 3/16" thick bearing bars, 7-4 and 7-2 gratings have a net ¼" clear opening between the bearing bars and often reject intrusion by high-heeled shoes.
7-ADT-2 7-SG-2 7-SGI-2		49%	

* Percentage of open area is based upon 3/16" thick bearing bars and .275 cross bars. Contact Interstate Gratings if exact open area calculation is required for alternative bearing bar thicknesses or cross bar sizes.

How to Specify Aluminum Bar Grating

1. Select type of grating
   - **“ADT”** for Aluminum Dovetail Pressure Locked Grating
   - **“SG”** for Swaged Rectangular Bar Grating
   - **“SGI”** for Swaged “I-Bar” Grating
2. Select bar spacing from table above
3. Select bearing bar size (consult load tables on pages 15-20 considering service loads and clear spans anticipated)
4. Specify Plain or Serrated surface
5. Specify banding or additional trim required
6. Specify finish
   - Mill finish (no finish)
   - Anodized (clear, bronze, other)
   - Powder coating
   - Other
7. Specify fasteners (if required) – see page 40

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Use this table when evaluating spans and loads for the following types of aluminum grating:
19-ADT-4 and 19-ADT-2, 19-SG-4, 19-SG-2, 19-SGI-4, 19-SGI-2

19 Space Load Table

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span											
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0
3/4 x 3/16	1.9	2'-11"	U	355	227	158	116								
			D	0.192	0.300	0.432	0.588								
3/4" I-Bar	1.7		C	355	284	237	203								
			D	0.154	0.240	0.346	0.470								
1 x 1/8	1.7	3'-3"	U	421	270	187	138	105							
			D	0.144	0.225	0.324	0.441	0.576							
			C	421	337	281	241	211							
			D	0.115	0.180	0.259	0.353	0.461							
1 x 3/16	2.5	3'-8"	U	632	404	281	206	158	125						
			D	0.144	0.225	0.324	0.441	0.576	0.729						
1" I-Bar	2.0		C	632	505	421	361	316	281						
			D	0.115	0.180	0.259	0.353	0.461	0.583						
1-1/4 x 1/8	2.1	3'-11"	U	658	421	292	215	165	130						
			D	0.115	0.180	0.259	0.353	0.461	0.583						
			C	658	526	439	376	329	292						
			D	0.092	0.144	0.207	0.282	0.369	0.467						
1-1/4 x 3/16	3.1	4'-4"	U	987	632	439	322	247	195	158	131	110			
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037			
1-1/4" I-Bar	2.4		C	987	790	658	564	493	439	395	359	329			
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829			
1-1/2 x 1/8	2.5	4'-5"	U	947	606	421	309	237	187	152	125	105	90	77	59
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
			C	947	758	632	541	474	421	379	345	316	292	271	237
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-1/2 x 3/16	3.7	4'-11"	U	1,421	910	632	464	355	281	227	188	158	135	116	89
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
1-1/2" I-Bar	2.7		C	1,421	1,137	947	812	711	632	568	517	474	437	406	355
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-3/4 x 1/8	2.9	5'-0"	U	1,290	825	573	421	322	255	206	171	143	122	105	81
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
			C	1,290	1,032	860	737	645	573	516	469	430	397	368	322
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
1-3/4 x 3/16	4.2	5'-6"	U	1,934	1,238	860	632	484	382	310	256	215	183	158	121
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
1-3/4" I-Bar	3.1		C	1,934	1,547	1,290	1,105	967	860	774	703	645	595	553	484
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
2 x 1/8	3.3	5'-6"	U	1,684	1,078	749	550	421	333	270	223	187	160	138	105
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
			C	1,684	1,347	1,123	962	842	749	674	612	561	518	481	421
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2 x 3/16	4.8	6'-1"	U	2,526	1,617	1,123	825	632	499	404	334	281	239	206	158
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
2" I-Bar	3.5		C	2,526	2,021	1,684	1,444	1,263	1,123	1,011	919	842	777	722	632
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/4 x 3/16	5.4	6'-8"	U	3,197	2,046	1,421	1,044	799	632	512	423	355	303	261	200
			D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024
2-1/4" I-Bar	3.8		C	3,197	2,558	2,132	1,827	1,599	1,421	1,279	1,163	1,066	984	914	799
			D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819
2-1/2 x 3/16	5.9	7'-3"	U	3,947	2,526	1,754	1,289	987	780	632	522	439	374	322	247
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/2" I-Bar	4.2		C	3,947	3,158	2,632	2,256	1,974	1,754	1,579	1,435	1,316	1,215	1,128	987
			D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 12,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. foot
C = Concentrated Load in pounds/foot of grating width
D = Deflection in inches

* Weight per square foot based upon 19-SG-4 grating. Add .30 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	1-3/8"	2-9/16"	3-3/4"	4-15/16"	6-1/8"	7-5/16"	8-1/2"	9-11/16"	10-7/8"	12-1/16"	13-1/4"	14-7/16"	15-5/8"	16-13/16"	18"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	19-3/16"	20-3/8"	21-9/16"	22-3/4"	23-15/16"	25-1/8"	26-5/16"	27-1/2"	28-11/16"	29-7/8"	31-1/16"	32-1/4"	33-7/16"	34-5/8"	35-13/16"

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values. For 1/4" I-bar add 1/16" to stated values. Add 1/4" to all dimensions for extended cross bars on all aluminum products.

Indicates stock panel widths.

Aluminum Bar Grating

15 Space Load Table

Use this table when evaluating spans and loads for the following types of aluminum grating:
15-ADT-4 and 15-ADT-2, 15-SG-4, 15-SG-2, 15-SGI-4, 15-SGI-2

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span											
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0
3/4 x 3/16	2.4	3'-1"	U	450	288	200	147	113							
			D	0.192	0.300	0.432	0.588	0.768							
3/4" I-Bar	2.0		C	450	360	300	257	225							
			D	0.154	0.240	0.346	0.470	0.614							
1 x 1/8	2.1	3'-6"	U	533	341	237	174	133	105						
			D	0.144	0.225	0.324	0.441	0.576	0.729						
			C	533	427	356	305	267	237						
			D	0.115	0.180	0.259	0.353	0.461	0.583						
1 x 3/16	3.1	3'-10"	U	800	512	356	261	200	158						
			D	0.144	0.225	0.324	0.441	0.576	0.729						
1" I-Bar	2.5		C	800	640	533	457	400	356						
			D	0.115	0.180	0.259	0.353	0.461	0.583						
1-1/4 x 1/8	2.6	4'-1"	U	833	533	370	272	208	165	133					
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720					
			C	833	667	556	476	417	370	333					
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576					
1-1/4 x 3/16	3.8	4'-7"	U	1,250	800	556	408	313	247	200	165	139			
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037			
1-1/4" I-Bar	2.9		C	1,250	1,000	833	714	625	556	500	455	417			
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829			
1-1/2 x 1/8	3.1	4'-8"	U	1,200	768	533	392	300	237	192	159	133	114	98	75
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
			C	1,200	960	800	686	600	533	480	436	400	369	343	300
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-1/2 x 3/16	4.5	5'-3"	U	1,800	1,152	800	588	450	356	288	238	200	170	147	113
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
1-1/2" I-Bar	3.4		C	1,800	1,440	1,200	1,029	900	800	720	655	600	554	514	450
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-3/4 x 1/8	3.6	5'-4"	U	1,633	1,045	726	533	408	323	261	216	182	155	133	102
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
			C	1,633	1,307	1,089	933	817	726	653	594	544	503	467	408
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
1-3/4 x 3/16	5.3	5'-10"	U	2,450	1,568	1,089	800	613	484	392	324	272	232	200	153
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
1-3/4" I-Bar	3.8		C	2,450	1,960	1,633	1,400	1,225	1,089	980	891	817	754	700	613
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
2 x 1/8	4.1	5'-10"	U	2,133	1,365	948	697	533	421	341	282	237	202	174	133
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
			C	2,133	1,707	1,422	1,219	1,067	948	853	776	711	656	610	533
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2 x 3/16	6.0	6'-6"	U	3,200	2,048	1,422	1,045	800	632	512	423	356	303	261	200
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
2" I-Bar	4.3		C	3,200	2,560	2,133	1,829	1,600	1,422	1,280	1,164	1,067	985	914	800
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/4 x 3/16	6.7	7'-1"	U	4,050	2,592	1,800	1,322	1,013	800	648	536	450	383	331	253
			D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024
2-1/4" I-Bar	4.7		C	4,050	3,240	2,700	2,314	2,025	1,800	1,620	1,473	1,350	1,246	1,157	1,013
			D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819
2-1/2 x 3/16	7.4	7'-8"	U	5,000	3,200	2,222	1,633	1,250	988	800	661	556	473	408	313
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/2" I-Bar	5.2		C	5,000	4,000	3,333	2,857	2,500	2,222	2,000	1,818	1,667	1,539	1,429	1,250
			D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 12,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. foot
C = Concentrated Load in pounds/foot of grating width
D = Deflection in inches

* Weight per square foot based upon 15-SG-4 grating. Add .30 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	1-1/8"	2-1/16"	3"	3-15/16"	4-7/8"	5-13/16"	6-3/4"	7-11/16"	8-5/8"	9-9/16"	10-1/2"	11-7/16"	12-3/8"	13-5/16"	14-1/4"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	15-3/16"	16-1/8"	17-1/16"	18"	18-15/16"	19-7/8"	20-13/16"	21-3/4"	22-11/16"	23-5/8"	24-9/16"	25-1/2"	26-7/16"	27-3/8"	28-5/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39							
Panel Width	29-1/4"	30-3/16"	31-1/8"	32-1/16"	33"	33-15/16"	34-7/8"	35-13/16"							

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values. For 1/4" I-bar add 1/16" to stated values. Add 1/4" to all dimensions for extended cross bars on all aluminum products. ☐ Indicates stock panel widths.

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Use this table when evaluating spans and loads for the following types of aluminum grating:

11-SG-4, 11-SG-2, 11-SGI-4, 11-SGI-2

11 Space Load Table

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span											
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0
3/4 x 3/16	3.2	3'-4"	U	614	393	273	200	153							
			D	0.192	0.300	0.432	0.588	0.768							
3/4" I-Bar	2.7		C	614	491	409	351	307							
			D	0.154	0.240	0.346	0.470	0.614							
1 x 1/8	2.8	3'-9"	U	727	466	323	238	182	144						
			D	0.144	0.225	0.324	0.441	0.576	0.729						
			C	727	582	485	416	364	323						
			D	0.115	0.180	0.259	0.353	0.461	0.583						
1 x 3/16	4.1	4'-2"	U	1,091	698	485	356	273	216	175					
			D	0.144	0.225	0.324	0.441	0.576	0.729	0.900					
1" I-Bar	3.2		C	1,091	873	727	623	546	485	436					
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720					
1-1/4 x 1/8	3.5	4'-5"	U	1,136	727	505	371	284	225	182					
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720					
			C	1,136	909	758	649	568	505	455					
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576					
1-1/4 x 3/16	5.1	4'-11"	U	1,705	1,091	758	557	426	337	273	225	189			
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037			
1-1/4" I-Bar	3.8		C	1,705	1,364	1,136	974	852	758	682	620	568			
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829			
1-1/2 x 1/8	4.1	5'-1"	U	1,636	1,047	727	534	409	323	262	216	182	155	134	102
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
			C	1,636	1,309	1,091	935	818	727	655	595	546	504	468	409
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-1/2 x 3/16	6.1	5'-8"	U	2,455	1,571	1,091	802	614	485	393	325	273	232	200	153
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
1-1/2" I-Bar	4.4		C	2,455	1,964	1,636	1,403	1,227	1,091	982	893	818	755	701	614
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-3/4 x 1/8	4.8	5'-9"	U	2,227	1,426	990	727	557	440	356	295	248	211	182	139
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
			C	2,227	1,782	1,485	1,273	1,114	990	891	810	742	685	636	557
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
1-3/4 x 3/16	7.1	6'-4"	U	3,341	2,138	1,485	1,091	835	660	535	442	371	316	273	209
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
1-3/4" I-Bar	5.1		C	3,341	2,673	2,227	1,909	1,671	1,485	1,336	1,215	1,114	1,028	955	835
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
2 x 1/8	5.4	6'-4"	U	2,909	1,862	1,293	950	727	575	466	385	323	275	238	182
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
			C	2,909	2,327	1,939	1,662	1,455	1,293	1,164	1,058	970	895	831	727
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2 x 3/16	8.0	7'-0"	U	4,364	2,793	1,939	1,425	1,091	862	698	577	485	413	356	273
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
2" I-Bar	5.7		C	4,364	3,491	2,909	2,494	2,182	1,939	1,746	1,587	1,455	1,343	1,247	1,091
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/4 x 3/16	9.0	7'-8"	U	5,523	3,535	2,455	1,803	1,381	1,091	884	730	614	523	451	345
			D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024
2-1/4" I-Bar	6.3		C	5,523	4,418	3,682	3,156	2,761	2,455	2,209	2,008	1,841	1,699	1,578	1,381
			D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819
2-1/2 x 3/16	10.0	8'-4"	U	6,818	4,364	3,030	2,226	1,705	1,347	1,091	902	758	646	557	426
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/2" I-Bar	6.9		C	6,818	5,455	4,546	3,896	3,409	3,030	2,727	2,479	2,273	2,098	1,948	1,705
			D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 12,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. foot
C = Concentrated Load in pounds/ft. of grating width
D = Deflection in inches

* Weight per square foot based upon 11-SG-4 grating. Add .30 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	7/8"	1-9/16"	2-1/4"	2-15/16"	3-5/8"	4-5/16"	5"	5-11/16"	6-3/8"	7-1/16"	7-3/4"	8-7/16"	9-1/8"	9-13/16"	10-1/2"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	11-3/16"	11-7/8"	12-9/16"	13-1/4"	13-15/16"	14-5/8"	15-5/16"	16"	16-11/16"	17-3/8"	18-1/16"	18-3/4"	19-7/16"	20-1/8"	20-13/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	21-1/2"	22-3/16"	22-7/8"	23-9/16"	24-1/4"	24-15/16"	25-5/8"	26-5/16"	27"	27-11/16"	28-3/8"	29-1/16"	29-3/4"	30-7/16"	31-1/8"
Number of Bearing Bars	47	48	49	50	51	52	53								
Panel Width	31-13/16"	32-1/2"	33-3/16"	33-7/8"	34-9/16"	35-1/4"	35-15/16"								

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values. For 1/4" I-bar add 1/16" to stated values. Add 1/4" to all dimensions for extended cross bars on all aluminum products. ☐ Indicates stock panel widths.

Aluminum Bar Grating

IGtru™ Load Table

Use this table when evaluating spans and loads for the following types of aluminum grating:

11-ADT-4 and 11-ADT-2

IGtru™ is manufactured to NAAMM standards and is fully ADA compliant with a minimum 3/16" bearing bar thickness

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 3/16	3.2	3'-4"	U	614	393	273	200	153								
			D	0.192	0.300	0.432	0.588	0.768								
			C	614	491	409	351	307								
			D	0.154	0.240	0.346	0.470	0.614								
1 x 1/8	2.8	3'-9"	U	727	465	323	237	182	144							
			D	0.144	0.225	0.324	0.441	0.576	0.729							
			C	727	582	485	416	364	323							
			D	0.115	0.180	0.259	0.353	0.461	0.583							
1 x 3/16	4.1	4'-2"	U	1,091	698	485	356	273	215	175						
			D	0.144	0.225	0.324	0.441	0.576	0.729	0.900						
			C	1,091	873	727	623	545	485	436						
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720						
1-1/4 x 1/8	3.5	4'-5"	U	1,136	727	505	371	284	224	182						
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720						
			C	1,136	909	758	649	568	505	455						
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576						
1-1/4 x 3/16	5.1	4'-11"	U	1,705	1,091	758	557	426	337	273	225	189				
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037				
			C	1,705	1,364	1,136	974	852	758	682	620	568				
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829				
1-1/2 x 1/8	4.1	5'-1"	U	1,636	1,047	727	534	409	323	262	216	182	155	134	102	81
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536	1.944
			C	1,636	1,309	1,091	935	818	727	655	595	545	503	468	409	364
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229	1.555
1-1/2 x 3/16	6.1	5'-8"	U	2,455	1,571	1,091	801	614	485	393	325	273	232	200	153	121
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536	1.944
			C	2,455	1,964	1,636	1,403	1,227	1,091	982	893	818	755	701	614	545
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229	1.555
1-3/4 x 1/8	4.8	5'-9"	U	2,227	1,425	990	727	557	440	356	295	247	211	182	139	110
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317	1.666
			C	2,227	1,782	1,485	1,273	1,114	990	891	810	742	685	636	557	495
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053	1.333
1-3/4 x 3/16	7.1	6'-4"	U	3,341	2,138	1,485	1,091	835	660	535	442	371	316	273	209	165
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317	1.666
			C	3,341	2,673	2,227	1,909	1,670	1,485	1,336	1,215	1,114	1,028	955	835	742
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053	1.333
2 x 1/8	5.4	6'-4"	U	2,909	1,862	1,293	950	727	575	465	385	323	275	237	182	144
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152	1.458
			C	2,909	2,327	1,939	1,662	1,455	1,293	1,164	1,058	970	895	831	727	646
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922	1.166
2 x 3/16	8.0	7'-0"	U	4,364	2,793	1,939	1,425	1,091	862	698	577	485	413	356	273	215
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152	1.458
			C	4,364	3,491	2,909	2,494	2,182	1,939	1,745	1,587	1,455	1,343	1,247	1,091	970
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922	1.166
2-1/4 x 3/16	9.0	7'-8"	U	5,523	3,535	2,455	1,803	1,381	1,091	884	730	614	523	451	345	273
			D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024	1.296
			C	5,523	4,418	3,682	3,156	2,761	2,455	2,209	2,008	1,841	1,699	1,578	1,381	1,227
			D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819	1.037
2-1/2 x 3/16	10.0	8'-4"	U	6,818	4,364	3,030	2,226	1,705	1,347	1,091	902	758	646	557	426	337
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922	1.166
			C	6,818	5,455	4,545	3,896	3,409	3,030	2,727	2,479	2,273	2,098	1,948	1,705	1,515
			D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737	0.933

All loads and deflections are theorhetical and based upon the gross sections of the bearing bars, using a fiber stress of 12,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. foot
C = Concentrated Load in pounds/ft.
D = Deflection in inches

* Weight per square foot based upon IGtru™ 11-W-4 grating. Add .60 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	7/8"	1-1/2"	2-3/16"	2-13/16"	3-1/2"	4-1/8"	4-13/16"	5-7/16"	6-1/8"	6-3/4"	7-7/16"	8-1/16"	8-3/4"	9-3/8"	10-1/16"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	10-11/16"	11-3/8"	12"	12-11/16"	13-5/16"	14"	14-5/8"	15-5/16"	15-15/16"	16-5/8"	17-1/4"	17-15/16"	18-9/16"	19-1/4"	19-7/8"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	20-9/16"	21-3/16"	21-7/8"	22-1/2"	23-3/16"	23-13/16"	24-1/2"	25-1/8"	25-13/16"	26-7/16"	27-1/8"	27-3/4"	28-7/16"	29-1/16"	29-3/4"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56					
Panel Width	30-3/8"	31-1/16"	31-11/16"	32-3/8"	33"	33-11/16"	34-5/16"	35"	35-5/8"	36-5/16"					

Panels widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

Indicates stock panel widths.

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Use this table when evaluating spans and loads for the following types of aluminum grating:

8-ADT-4 and 8-ADT-2, 8-SG-4, 8-SG-2, 8-SGI-4, 8-SGI-2

8 Space Load Table

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span 2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0
3/4 x 3/16	4.3	3'-7"	U	844	540	375	276	211	167						
			D	0.192	0.300	0.432	0.588	0.768	0.972						
3/4" I-Bar	3.4		C	844	675	563	482	422	375						
			D	0.154	0.240	0.346	0.470	0.614	0.778						
1 x 1/8	3.8	4'-1"	U	1,000	640	444	327	250	198	160					
			D	0.144	0.225	0.324	0.441	0.576	0.729	0.900					
			C	1,000	800	667	571	500	444	400					
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720					
1 x 3/16	5.6	4'-6"	U	1,500	960	667	490	375	296	240	198				
			D	0.144	0.225	0.324	0.441	0.576	0.729	0.900	1.089				
1" I-Bar	4.3		C	1,500	1,200	1,000	857	750	667	600	546				
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871				
1-1/4 x 1/8	4.7	4'-10"	U	1,563	1,000	694	510	391	309	250	207				
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871				
			C	1,563	1,250	1,042	893	781	694	625	568				
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697				
1-1/4 x 3/16	7.0	5'-4"	U	2,344	1,500	1,042	765	586	463	375	310	260	222		
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037	1.217		
1-1/4" I-Bar	5.2		C	2,344	1,875	1,563	1,339	1,172	1,042	938	852	781	721		
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829	0.973		
1-1/2 x 1/8	5.6	5'-6"	U	2,250	1,440	1,000	735	563	444	360	298	250	213	184	141
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
			C	2,250	1,800	1,500	1,286	1,125	1,000	900	818	750	692	643	563
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-1/2 x 3/16	8.3	6'-1"	U	3,375	2,160	1,500	1,102	844	667	540	446	375	320	276	211
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
1-1/2" I-Bar	6.0		C	3,375	2,700	2,250	1,929	1,688	1,500	1,350	1,227	1,125	1,039	964	844
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-3/4 x 1/8	6.5	6'-2"	U	3,063	1,960	1,361	1,000	766	605	490	405	340	290	250	191
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
			C	3,063	2,450	2,042	1,750	1,531	1,361	1,225	1,114	1,021	942	875	766
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
1-3/4 x 3/16	9.6	6'-10"	U	4,594	2,940	2,042	1,500	1,148	907	735	607	510	435	375	287
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
1-3/4" I-Bar	6.8		C	4,594	3,675	3,063	2,625	2,297	2,042	1,838	1,671	1,531	1,414	1,313	1,148
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
2 x 1/8	7.4	6'-10"	U	4,000	2,560	1,778	1,306	1,000	790	640	529	444	379	327	250
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
			C	4,000	3,200	2,667	2,286	2,000	1,778	1,600	1,455	1,333	1,231	1,143	1,000
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2 x 3/16	11.0	7'-7"	U	6,000	3,840	2,667	1,959	1,500	1,185	960	793	667	568	490	375
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
2" I-Bar	7.7		C	6,000	4,800	4,000	3,429	3,000	2,667	2,400	2,182	2,000	1,846	1,714	1,500
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/4 x 3/16	12.3	8'-4"	U	7,594	4,860	3,375	2,480	1,898	1,500	1,215	1,004	844	719	620	475
			D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024
2-1/4" I-Bar	8.5		C	7,594	6,075	5,063	4,339	3,797	3,375	3,038	2,761	2,531	2,337	2,170	1,898
			D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819
2-1/2 x 3/16	13.7	9'-0"	U	9,375	6,000	4,167	3,061	2,344	1,852	1,500	1,240	1,042	888	765	586
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/2" I-Bar	9.5		C	9,375	7,500	6,250	5,357	4,688	4,167	3,750	3,409	3,125	2,885	2,679	2,344
			D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 12,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. foot
C = Concentrated Load in pounds/ft. of grating width
D = Deflection in inches

* Weight per square foot based upon 8-SG-4 grating. Add .30 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	11/16"	1-3/16"	1-11/16"	2-3/16"	2-11/16"	3-3/16"	3-11/16"	4-3/16"	4-11/16"	5-3/16"	5-11/16"	6-3/16"	6-11/16"	7-3/16"	7-11/16"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	8-3/16"	8-11/16"	9-3/16"	9-11/16"	10-3/16"	10-11/16"	11-3/16"	11-11/16"	12-3/16"	12-11/16"	13-3/16"	13-11/16"	14-3/16"	14-11/16"	15-3/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	15-11/16"	16-3/16"	16-11/16"	17-3/16"	17-11/16"	18-3/16"	18-11/16"	19-3/16"	19-11/16"	20-3/16"	20-11/16"	21-3/16"	21-11/16"	22-3/16"	22-11/16"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Panel Width	23-3/16"	23-11/16"	24-3/16"	24-11/16"	25-3/16"	25-11/16"	26-3/16"	26-11/16"	27-3/16"	27-11/16"	28-3/16"	28-11/16"	29-3/16"	29-11/16"	30-3/16"
Number of Bearing Bars	62	63	64	65	66	67	68	69	70	71	72				
Panel Width	30-11/16"	31-3/16"	31-11/16"	32-3/16"	32-11/16"	33-3/16"	33-11/16"	34-3/16"	34-11/16"	35-3/16"	35-11/16"				

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values. For 1/4" I-bar add 1/16" to stated values. Add 1/4" to all dimensions for extended cross bars on all aluminum products. Indicates stock panel widths.

Aluminum Bar Grating

7 Space Load Table

Use this table when evaluating spans and loads for the following types of aluminum grating:

7-SG-4, 7-SG-2, 7-SGI-4, 7-SGI-2, 7-ADT-4 and 7-ADT-2

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span											
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0
3/4 x 3/16	4.8	3'-9"	U	964	617	429	315	241	191						
			D	0.192	0.300	0.432	0.588	0.768	0.972						
3/4" I-Bar	3.8		C	964	771	643	551	482	429						
			D	0.154	0.240	0.346	0.470	0.614	0.778						
1 x 1/8	4.3	4'-2"	U	1,143	731	508	373	286	226	183					
			D	0.144	0.225	0.324	0.441	0.576	0.729	0.900					
			C	1,143	914	762	653	571	508	457					
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720					
1 x 3/16	6.3	4'-8"	U	1,714	1,097	762	560	429	339	274	227				
			D	0.144	0.225	0.324	0.441	0.576	0.729	0.900	1.089				
1" I-Bar	4.8		C	1,714	1,371	1,143	980	857	762	686	623				
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871				
1-1/4 x 1/8	5.3	4'-11"	U	1,786	1,143	794	583	446	353	286	236				
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871				
			C	1,786	1,429	1,191	1,020	893	794	714	649				
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697				
1-1/4 x 3/16	7.9	5'-6"	U	2,679	1,714	1,191	875	670	529	429	354	298	254		
			D	0.115	0.180	0.259	0.353	0.461	0.583	0.720	0.871	1.037	1.217		
1-1/4" I-Bar	5.8		C	2,679	2,143	1,786	1,531	1,339	1,191	1,071	974	893	824		
			D	0.092	0.144	0.207	0.282	0.369	0.467	0.576	0.697	0.829	0.973		
1-1/2 x 1/8	6.3	5'-8"	U	2,571	1,646	1,143	840	643	508	411	340	286	243	210	161
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
			C	2,571	2,057	1,714	1,469	1,286	1,143	1,029	935	857	791	735	643
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-1/2 x 3/16	9.4	6'-4"	U	3,857	2,469	1,714	1,260	964	762	617	510	429	365	315	241
			D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.864	1.014	1.176	1.536
1-1/2" I-Bar	6.8		C	3,857	3,086	2,571	2,204	1,929	1,714	1,543	1,403	1,286	1,187	1,102	964
			D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811	0.941	1.229
1-3/4 x 1/8	7.4	6'-5"	U	3,500	2,240	1,556	1,143	875	691	560	463	389	331	286	219
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
			C	3,500	2,800	2,333	2,000	1,750	1,556	1,400	1,273	1,167	1,077	1,000	875
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
1-3/4 x 3/16	10.9	7'-1"	U	5,250	3,360	2,333	1,714	1,313	1,037	840	694	583	497	429	328
			D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.741	0.869	1.008	1.317
1-3/4" I-Bar	7.7		C	5,250	4,200	3,500	3,000	2,625	2,333	2,100	1,909	1,750	1,615	1,500	1,313
			D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.053
2 x 1/8	8.4	7'-1"	U	4,571	2,926	2,032	1,493	1,143	903	731	605	508	433	373	286
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
			C	4,571	3,657	3,048	2,612	2,286	2,032	1,829	1,662	1,524	1,407	1,306	1,143
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2 x 3/16	12.5	7'-10"	U	6,857	4,389	3,048	2,239	1,714	1,355	1,097	907	762	649	560	429
			D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.545	0.648	0.761	0.882	1.152
2" I-Bar	8.7		C	6,857	5,486	4,571	3,918	3,429	3,048	2,743	2,494	2,286	2,110	1,959	1,714
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/4 x 3/16	14.0	8'-7"	U	8,679	5,554	3,857	2,834	2,170	1,714	1,389	1,148	964	822	709	542
			D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.784	1.024
2-1/4" I-Bar	9.6		C	8,679	6,943	5,786	4,959	4,339	3,857	3,471	3,156	2,893	2,670	2,480	2,170
			D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.819
2-1/2 x 3/16	15.5	9'-3"	U	10,714	6,857	4,762	3,499	2,679	2,116	1,714	1,417	1,191	1,014	875	670
			D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.922
2-1/2" I-Bar	10.7		C	10,714	8,571	7,143	6,122	5,357	4,762	4,286	3,896	3,571	3,297	3,061	2,679
			D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.564	0.737

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 12,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. foot
C = Concentrated Load in pounds/ft. of grating width
D = Deflection in inches

* Weight per square foot based upon 7-SG-4 grating. Add .30 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

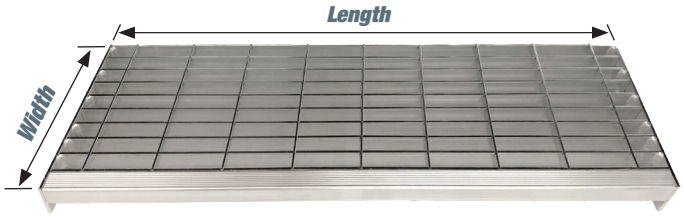
Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	5/8"	1-1/16"	1-1/2"	1-15/16"	2-3/8"	2-13/16"	3-1/4"	3-11/16"	4-1/8"	4-9/16"	5"	5-7/16"	5-7/8"	6-5/16"	6-3/4"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	7-3/16"	7-5/8"	8-1/16"	8-1/2"	8-15/16"	9-3/8"	9-13/16"	10-1/4"	10-11/16"	11-1/8"	11-9/16"	12"	12-7/16"	12-7/8"	13-5/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	13-3/4"	14-3/16"	14-5/8"	15-1/16"	15-1/2"	15-15/16"	16-3/8"	16-13/16"	17-1/4"	17-11/16"	18-1/8"	18-9/16"	19"	19-7/16"	19-7/8"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Panel Width	20-5/16"	20-3/4"	21-3/16"	21-5/8"	22-1/16"	22-1/2"	22-15/16"	23-3/8"	23-13/16"	24-1/4"	24-11/16"	25-1/8"	25-9/16"	26"	26-7/16"
Number of Bearing Bars	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
Panel Width	26-7/8"	27-5/16"	27-3/4"	28-3/16"	28-5/8"	29-1/16"	29-1/2"	29-15/16"	30-3/8"	30-13/16"	31-1/4"	31-11/16"	32-1/8"	32-9/16"	33"
Number of Bearing Bars	77	78	79	80	81	82	83								
Panel Width	33-7/16"	33-7/8"	34-5/16"	34-3/4"	35-3/16"	35-5/8"	36-1/16"								

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values. For 1/4" I-bar add 1/16" to stated values. Add 1/4" to all dimensions for extended cross bars on all aluminum products. Indicates stock panel widths.

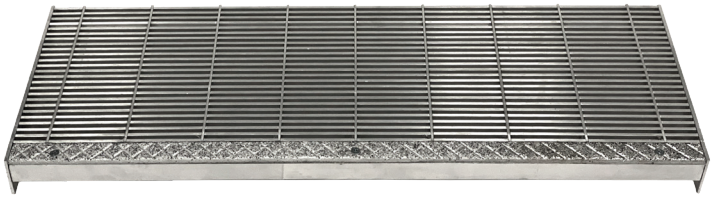
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Aluminum Stair Treads

Aluminum grating stair treads are available fabricated to any size in type "ADT" aluminum dovetail pressure locked and types "SG" and "SGI" swage locked. Treads are manufactured with a defined visible nosing and pre-punched end carrier plates or angles, ready for bolting to the stair stringers.



Type 19-ADT-4 with Corrugated Aluminum Nosing

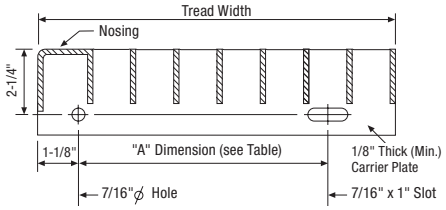


Type 7-ADT-4 with Cast Abrasive Nosing

Aluminum Carrier Plates & Angles

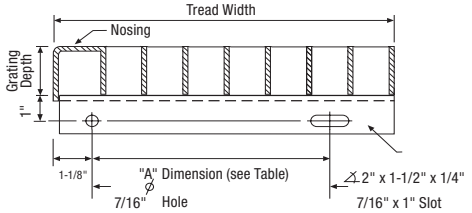
Aluminum Carrier Plates

Recommended for use with 19, 15 and 11 spaced gratings



Aluminum Carrier Angles

Recommended for use with 8 and 7 spaced gratings



Nosing Options



Corrugated Aluminum Nosing welded to grating and carrier plates/angles.



Cast Abrasive Nosing mechanically fastened to welded mounting angle.

Table of Stair Tread Widths

19 Space			15 Space			IGtru™ / 11 Space			8 Space			7 Space		
Bearing Bars @ 1-3/16" O.C.			Bearing Bars @ 15/16" O.C.			Bearing Bars @ 21/32" O.C.*			Bearing Bars @ 1/2" O.C.			Bearing Bars @ 7/16" O.C.		
Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension
6-3/16"	5	2-1/2"	6-1/8"	6	2-1/2"	6-1/16"	8	2-1/2"	6-7/16"	11	2-1/2"	5-13/16"	11	2-1/2"
7-3/8"	6	4-1/2"	7-1/16"	7	4-1/2"	6-11/16"	9	4-1/2"	7-7/16"	13	4-1/2"	6-11/16"	13	2-1/2"
8-9/16"	7	4-1/2"	8"	8	4-1/2"	7-3/8"	10	4-1/2"	8-7/16"	15	4-1/2"	7-9/16"	15	4-1/2"
9-3/4"	8	7"	8-15/16"	9	4-1/2"	8"	11	4-1/2"	8-15/16"	16	4-1/2"	8-7/16"	17	4-1/2"
10-15/16"	9	7"	9-7/8"	10	7"	8-11/16"	12	4-1/2"	9-7/16"	17	7"	9-5/16"	19	7"
12-1/8"	10	7"	10-13/16"	11	7"	9-5/16"	13	7"	9-15/16"	18	7"	10-3/16"	21	7"
			11-3/4"	12	7"	10"	14	7"	10-7/16"	19	7"	10-5/8"	22	7"
			12-11/16	13	7"	10-5/8"	15	7"	10-15/16"	20	7"	11-1/16"	23	7"
						11-5/16"	16	7"	11-7/16"	21	7"	11-1/2"	24	7"
						11-15/16"	17	7"	11-15/16"	22	7"	11-15/16"	25	7"

*Swage-Lock will be 11/16" O.C.

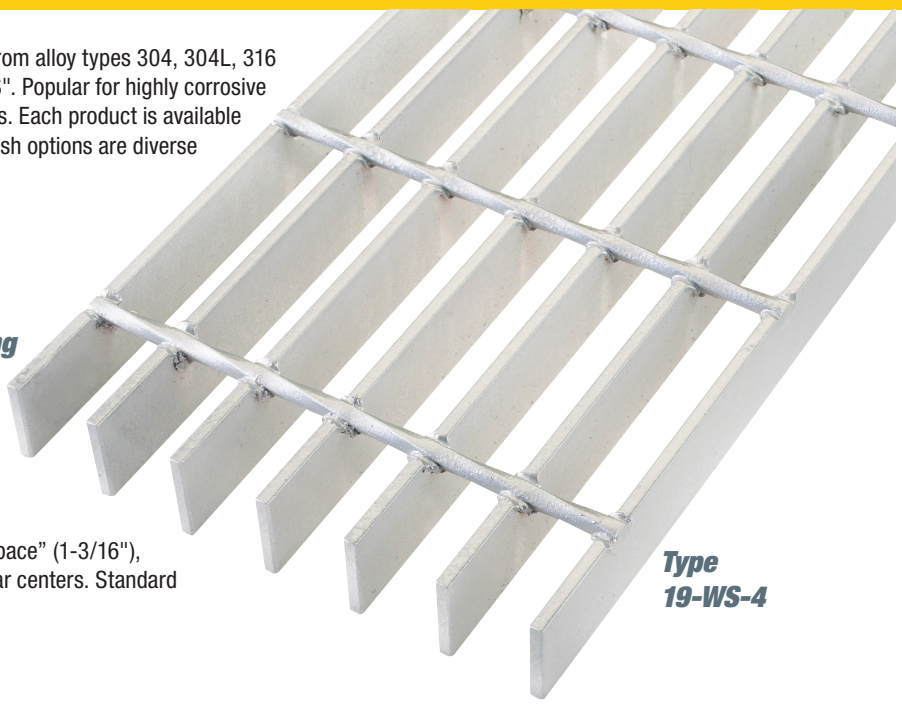
Recommended Maximum Aluminum Stair Tread Lengths*

Bearing Bar Size	19 Space		15 Space		IGtru™ / 11 Space		8 Space		7 Space	
	1-3/16" O.C.		15/16" O.C.		11/16" O.C.		1/2" O.C.		7/16" O.C.	
	Plain	Serrated	Plain	Serrated	Plain	Serrated	Plain	Serrated	Plain	Serrated
1" x 3/16" or 1" I-Bar	2'-4"	2'-2"	2'-6"	2'-3"	2'-8"	2'-4"	3'-0"	2'-8"	3'-2"	2'-9"
1-1/4" x 3/16" or 1-1/4" I-Bar	2'-10"	2'-7"	3'-1"	2'-9"	3'-4"	3'-0"	3'-11"	3'-5"	4'-1"	3'-7"
1-1/2" x 3/16" or 1-1/2" I-Bar	3'-6"	3'-2"	3'-10"	3'-5"	4'-2"	3'-9"	4'-11"	4'-5"	5'-2"	4'-7"
1-3/4" x 3/16" or 1-3/4" I-Bar	4'-3"	3'-10"	4'-8"	4'-3"	5'-1"	4'-7"	5'-6"	5'-6"	5'-6"	5'-6"
2" x 3/16" or 2" I-Bar	5'-1"	4'-8"	5'-6"	5'-1"	5'-6"	5'-6"	5'-6"	5'-6"	5'-8"	5'-6"

* For treads up to 5'-6", maximum tread lengths are based upon 300 lb. concentrated load on the front 5 inches of the tread, at the center of the tread length. When treads exceed 5'-6" in length, design allows for 300 lb. concentrated loads at 1/3 points of tread length. Deflection is limited to 1/240 of tread length in all cases.

Stainless Steel Bar Grating

Stainless Steel Bar Grating is manufactured from alloy types 304, 304L, 316 and 316L and available in grating types "WS" and "DTS". Popular for highly corrosive environments and long-lasting architectural applications. Each product is available with standard plain or optional serrated surface and finish options are diverse and should be closely considered.

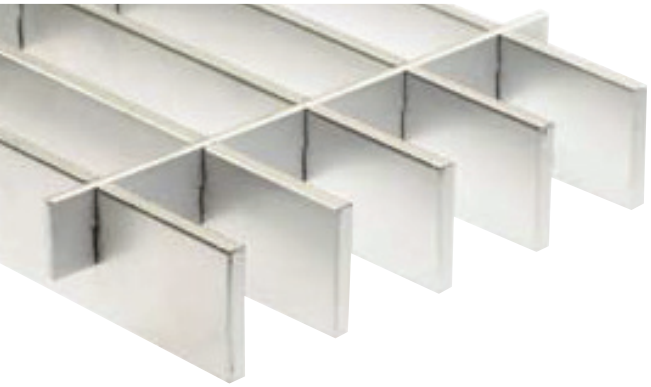


Type 19-WS-4

Type "WS" Welded Stainless Steel Grating

Our strongest and most economical stainless product, type **"WS"** gratings are manufactured by forge welding rectangular bearing bars and drawn cross bars. This welding process provides a positive fused intersection providing years of service under the most demanding conditions.

Type **"WS"** stainless gratings are available in "19 space" (1-3/16"), "15 space" (15/16") and "11 space" (11/16") bearing bar centers. Standard cross bar spacing is 4" on center.



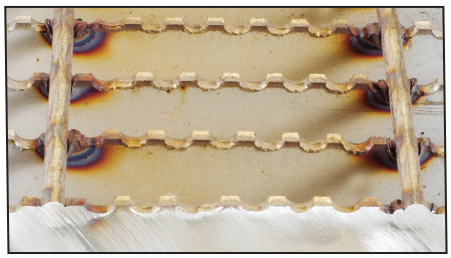
Type "DTS" Dovetail Pressure Locked Stainless

Type "DTS" stainless gratings have rectangular cross bars that are slotted to fit into pre-punched bearing bars which are assembled and permanently connected under intense hydraulic pressure. In addition to being one of the most aesthetically appealing floor gratings with its clean uniform lines, the interlocking design provides excellent lateral stability and axial load distribution. The multiple combinations of bearing bar / cross bar sizes and spacing on type "DTS" gratings make them popular for architectural applications with a deeper cross bar serving as a distinct architectural accent.

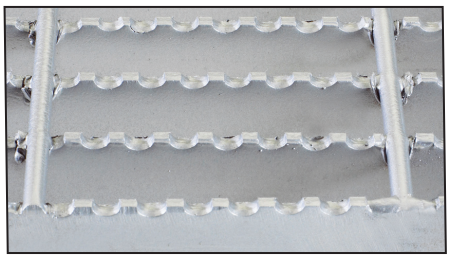
Type "DTS" gratings are available in close mesh ADA conforming spacings. Type 7-DTS-4 with 3/16" thick bearing bars provides a net ¼" clear opening between the bearing bars. This narrow opening is often preferred in public areas where concerns of drainage and the presence of high heeled shoes converge.

Stainless Steel Finishes

As produced, stainless steel products typically display discoloration caused by the introduction of heat during welding, cutting or grinding processes. If appearance is important to your application, consideration should be given to IG EcoClean™.



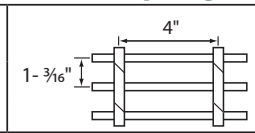
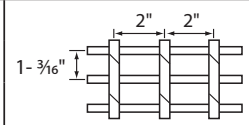
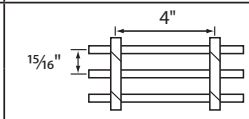
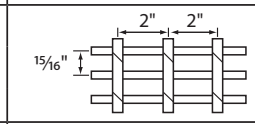
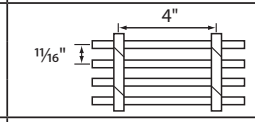
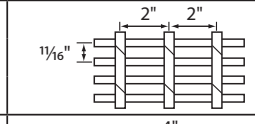
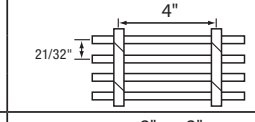
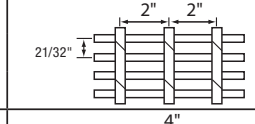
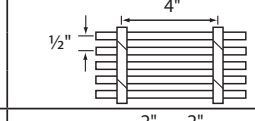
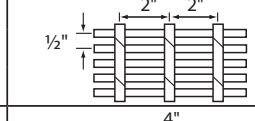
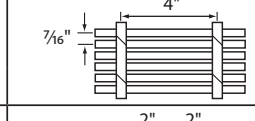
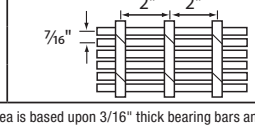
Mill Finish – Products will display discoloration from welding, cutting and grinding. Satisfactory for industrial or process applications where appearance is not a consideration.



IG EcoClean™ – A uniform and clean finish is achieved by abrasive blasting followed by passivation to remove manufacturing contaminants.

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Stainless Steel Grating Table of Spacings

Part No.	Spacing	Open Area*	
19-WS-4 19-DTS-4		78%	Bearing bars spaced at 1-3/16" on center and cross bars at 4" on center. The workhorse of industrial flooring popular for platforms, catwalks, mezzanines and stairways.
19-DTS-2		73%	Bearing bars spaced at 1-3/16" on center and cross bars at 2" on center. Excellent for short spans and applications where small wheeled carts continuously cross the grating surface.
15-WS-4 15-DTS-4		75%	Bearing bars spaced at 15/16" on center and cross bars at 4" on center. More than 26% stronger than similar "19" spaced gratings and provides additional flooring surface.
15-DTS-2		69%	Bearing bars spaced at 15/16" on center and close spaced cross bars at 2" on center. Provides the advantage of closer spaced bearing bars and cross bars.
11-WS-4 11-DTS-4		68%	Due to NAAMM allowable material and manufacturing tolerances, Interstate Gratings offers IGtru™ with bearing bars spaced at 21/32" on center, with 3/16" thick bearing bars to ensure compliance with the spacing requirements of the Americans with Disabilities Act. For ADA installations, specify that the bearing bars span perpendicular to the normal flow of traffic.
11-DTS-2		63%	
IGtru™ 11-WS-4 11-DTS-4		66%	
IGtru™ 11-DTS-2		61%	
8-DTS-4		58%	The bar spacings on 8-4 and 8-2 gratings comply with ADA spacing requirements. In addition to pedestrian applications, these products are popular for material handling platforms and mezzanines subject to continuous cart and dolly traffic.
8-DTS-2		54%	
7-DTS-4		53%	The bar spacings on 7-4 and 7-2 gratings comply with ADA spacing requirements and are popular for applications in the public way. When specified with 3/16" thick bearing bars, 7-4 and 7-2 gratings have a net ¼" clear opening between the bearing bars and often reject intrusion by high-heeled shoes.
7-DTS-2		49%	

* Percentage of open area is based upon 3/16" thick bearing bars and .275 cross bars. Contact Interstate Gratings if exact open area calculation is required for alternative bearing bar thicknesses or cross bar sizes.

How to Specify Stainless Steel Bar Grating

1. Select type of grating
   - **"WS"** for Welded Stainless Steel Grating
   - **"DTS"** for Dovetail Pressure Locked Stainless Steel Grating
2. Select bar spacing from table above
3. Select bearing bar size (consult load tables on pages 26-31 considering service loads and clear spans)
4. Specify Plain or Serrated surface
5. Specify banding or additional trim required
6. Specify finish
   - Mill Finish
   - IG EcoClean™
7. Specify fasteners (if required) – see page 40

19 Space Load Table

Use this table when evaluating spans and loads for the following types of stainless steel grating:

19-WS-4, 19-DTS-4, 19-DTS-2

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 1/8	3.9	3'-5"	U	395	253	175	129	99	78							
			D	0.114	0.179	0.257	0.350	0.457	0.579							
			C	395	316	263	226	197	175							
			D	0.091	0.143	0.206	0.280	0.366	0.463							
3/4 x 3/16	5.6	3'-9"	U	592	379	263	193	148	117	95						
			D	0.114	0.179	0.257	0.350	0.457	0.579	0.714						
			C	592	474	395	338	296	263	237						
			D	0.091	0.143	0.206	0.280	0.366	0.463	0.571						
1 x 1/8	5.0	4'-3"	U	702	449	312	229	175	139	112	93					
			D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648					
			C	702	561	468	401	351	312	281	255					
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519					
1 x 3/16	7.2	4'-8"	U	1,053	674	468	344	263	208	168	139	117				
			D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648	0.771				
			C	1,053	842	702	602	526	468	421	383	351				
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617				
1-1/4 x 1/8	6.1	5'-0"	U	1,097	702	487	358	274	217	175	145	122	104			
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724			
			C	1,097	877	731	627	548	487	439	399	366	337			
			D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579			
1-1/4 x 3/16	8.9	5'-6"	U	1,645	1,053	731	537	411	325	263	218	183	156	134		
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840		
			C	1,645	1,316	1,097	940	822	731	658	598	548	506	470		
			D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672		
1-1/2 x 1/8	7.2	5'-9"	U	1,579	1,011	702	516	395	312	253	209	175	150	129		
			D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700		
			C	1,579	1,263	1,053	902	790	702	632	574	526	486	451		
			D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560		
1-1/2 x 3/16	10.7	6'-4"	U	2,368	1,516	1,053	773	592	468	379	313	263	224	193	148	
			D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	
			C	2,368	1,895	1,579	1,353	1,184	1,053	947	861	790	729	677	592	
			D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	
1-3/4 x 1/8	8.5	6'-5"	U	2,149	1,375	955	702	537	425	344	284	239	204	175	134	106
			D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
			C	2,149	1,719	1,433	1,228	1,075	955	860	782	716	661	614	537	478
			D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
1-3/4 x 3/16	12.3	7'-2"	U	3,224	2,063	1,433	1,053	806	637	516	426	358	305	263	202	159
			D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
			C	3,224	2,579	2,149	1,842	1,612	1,433	1,290	1,172	1,075	992	921	806	716
			D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
2 x 1/8	9.6	7'-1"	U	2,807	1,797	1,248	917	702	555	449	371	312	266	229	175	139
			D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
			C	2,807	2,246	1,871	1,604	1,404	1,248	1,123	1,021	936	864	802	702	624
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2 x 3/16	13.9	7'-11"	U	4,211	2,695	1,871	1,375	1,053	832	674	557	468	399	344	263	208
			D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
			C	4,211	3,368	2,807	2,406	2,105	1,871	1,684	1,531	1,404	1,296	1,203	1,053	936
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2-1/4 x 3/16	15.6	8'-8"	U	5,329	3,411	2,368	1,740	1,332	1,053	853	705	592	505	435	333	263
			D	0.038	0.060	0.086	0.117	0.152	0.193	0.238	0.288	0.343	0.402	0.467	0.610	0.771
			C	5,329	4,263	3,553	3,045	2,665	2,368	2,132	1,938	1,776	1,640	1,523	1,332	1,184
			D	0.030	0.048	0.069	0.093	0.122	0.154	0.190	0.230	0.274	0.322	0.373	0.488	0.617
2-1/2 x 3/16	17.2	9'-4"	U	6,579	4,211	2,924	2,148	1,645	1,300	1,053	870	731	623	537	411	325
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
			C	6,579	5,263	4,386	3,759	3,290	2,924	2,632	2,392	2,193	2,024	1,880	1,645	1,462
			D	0.027	0.043	0.062	0.084	0.110	0.139	0.171	0.207	0.247	0.290	0.336	0.439	0.555

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 20,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. ft.
C = Concentrated Load in pounds/ft. of grating width
D = Deflection in inches

* Weight per square foot based upon 19-WS-4 grating. Add .60 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	1-3/8"	2-9/16"	3-3/4"	4-15/16"	6-1/8"	7-5/16"	8-1/2"	9-11/16"	10-7/8"	12-1/16"	13-1/4"	14-7/16"	15-5/8"	16-13/16"	18"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	19-3/16"	20-3/8"	21-9/16"	22-3/4"	23-15/16"	25-1/8"	26-5/16"	27-1/2"	28-11/16"	29-7/8"	31-1/16"	32-1/4"	33-7/16"	34-5/8"	35-13/16"

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

Indicates stock panel widths.

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Stainless Steel Bar Grating

15 Space Load Table

Use this table when evaluating spans and loads for the following types of stainless steel grating:

15-WS-4, 15-DTS-4, 15-DTS-2

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 3/16	6.9	4'-0"	U	750	480	333	245	188	148	120						
			D	0.114	0.179	0.257	0.350	0.457	0.579	0.714						
			C	750	600	500	429	375	333	300						
			D	0.091	0.143	0.206	0.280	0.366	0.463	0.571						
1 x 1/8	6.2	4'-6"	U	889	569	395	290	222	176	142						
			D	0.086	0.134	0.193	0.263	0.343	0.434	0.536						
			C	889	711	593	508	444	395	356						
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429						
1 x 3/16	8.9	4'-11"	U	1,333	853	593	435	333	263	213	176	148				
			D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648	0.771				
			C	1,333	1,067	889	762	667	593	533	485	444				
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617				
1-1/4 x 1/8	7.5	5'-4"	U	1,389	889	617	454	347	274	222	184	154	132			
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724			
			C	1,389	1,111	926	794	694	617	556	505	463	427			
			D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579			
1-1/4 x 3/16	11.0	5'-10"	U	2,083	1,333	926	680	521	412	333	276	232	197	170		
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840		
			C	2,083	1,667	1,389	1,191	1,042	926	833	758	694	641	595		
			D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672		
1-1/2 x 1/8	8.9	6'-1"	U	2,000	1,280	889	653	500	395	320	265	222	189	163	125	
			D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	
			C	2,000	1,600	1,333	1,143	1,000	889	800	727	667	615	571	500	
			D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	
1-1/2 x 3/16	13.2	6'-9"	U	3,000	1,920	1,333	980	750	593	480	397	333	284	245	188	148
			D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	1.157
			C	3,000	2,400	2,000	1,714	1,500	1,333	1,200	1,091	1,000	923	857	750	667
			D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	0.926
1-3/4 x 1/8	10.4	6'-10"	U	2,722	1,742	1,210	889	681	538	436	360	303	258	222	170	134
			D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
			C	2,722	2,178	1,815	1,556	1,361	1,210	1,089	990	907	838	778	681	605
			D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
1-3/4 x 3/16	15.3	7'-7"	U	4,083	2,613	1,815	1,333	1,021	807	653	540	454	387	333	255	202
			D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
			C	4,083	3,267	2,722	2,333	2,042	1,815	1,633	1,485	1,361	1,256	1,167	1,021	907
			D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
2 x 1/8	11.8	7'-7"	U	3,556	2,276	1,580	1,161	889	702	569	470	395	337	290	222	176
			D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
			C	3,556	2,844	2,370	2,032	1,778	1,580	1,422	1,293	1,185	1,094	1,016	889	790
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2 x 3/16	17.3	8'-4"	U	5,333	3,413	2,370	1,742	1,333	1,054	853	705	593	505	435	333	263
			D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
			C	5,333	4,267	3,556	3,048	2,667	2,370	2,133	1,939	1,778	1,641	1,524	1,333	1,185
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2-1/4 x 3/16	19.4	9'-2"	U	6,750	4,320	3,000	2,204	1,688	1,333	1,080	893	750	639	551	422	333
			D	0.038	0.060	0.086	0.117	0.152	0.193	0.238	0.288	0.343	0.402	0.467	0.610	0.771
			C	6,750	5,400	4,500	3,857	3,375	3,000	2,700	2,455	2,250	2,077	1,929	1,688	1,500
			D	0.030	0.048	0.069	0.093	0.122	0.154	0.190	0.230	0.274	0.322	0.373	0.488	0.617
2-1/2 x 3/16	21.5	9'-11"	U	8,333	5,333	3,704	2,721	2,083	1,646	1,333	1,102	926	789	680	521	412
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
			C	8,333	6,667	5,556	4,762	4,167	3,704	3,333	3,030	2,778	2,564	2,381	2,083	1,852
			D	0.027	0.043	0.062	0.084	0.110	0.139	0.171	0.207	0.247	0.290	0.336	0.439	0.555

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 20,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. ft.
C = Concentrated Load in pounds/ft. of grating width
D = Deflection in inches

* Weight per square foot based upon 15-WS-4 grating. Add .60 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	1-1/8"	2-1/16"	3"	3-15/16"	4-7/8"	5-13/16"	6-3/4"	7-11/16"	8-5/8"	9-9/16"	10-1/2"	11-7/16"	12-3/8"	13-5/16"	14-1/4"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	15-3/16"	16-1/8"	17-1/16"	18"	18-15/16"	19-7/8"	20-13/16"	21-3/4"	22-11/16"	23-5/8"	24-9/16"	25-1/2"	26-7/16"	27-3/8"	28-5/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39							
Panel Width	29-1/4"	30-3/16"	31-1/8"	32-1/16"	33"	33-15/16"	34-7/8"	35-13/16"							

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

Indicates stock panel widths.

Stainless Steel Bar Grating

Use this table when evaluating spans and loads for the following types of stainless steel grating:

11-WS-4, 11-DTS-4, 11-DTS-2

IGtru™ is manufactured to NAAMM standards and is fully ADA compliant with a minimum 3/16" bearing bar thickness

IGtru™ Load Table

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 3/16	8.9	4'-4"	U	1,023	655	455	334	256	202	164	135					
			D	0.114	0.179	0.257	0.350	0.457	0.579	0.714	0.864					
			C	1,023	818	682	584	511	455	409	372					
			D	0.091	0.143	0.206	0.280	0.366	0.463	0.571	0.691					
1 x 1/8	8.0	4'-10"	U	1,212	776	539	396	303	239	194	160	135				
			D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648	0.771				
			C	1,212	970	808	693	606	539	485	441	404				
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617				
1 x 3/16	11.7	5'-4"	U	1,818	1,164	808	594	455	359	291	240	202	172			
			D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648	0.771	0.905			
			C	1,818	1,455	1,212	1,039	909	808	727	661	606	559			
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724			
1-1/4 x 1/8	9.9	5'-9"	U	1,894	1,212	842	618	473	374	303	250	210	179	155		
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840		
			C	1,894	1,515	1,263	1,082	947	842	758	689	631	583	541		
			D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672		
1-1/4 x 3/16	14.5	6'-4"	U	2,841	1,818	1,263	928	710	561	455	376	316	269	232	178	
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840	1.097	
			C	2,841	2,273	1,894	1,623	1,420	1,263	1,136	1,033	947	874	812	710	
			D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672	0.878	
1-1/2 x 1/8	11.7	6'-7"	U	2,727	1,745	1,212	891	682	539	436	361	303	258	223	170	135
			D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	1.157
			C	2,727	2,182	1,818	1,558	1,364	1,212	1,091	992	909	839	779	682	606
			D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	0.926
1-1/2 x 3/16	17.5	7'-3"	U	4,091	2,618	1,818	1,336	1,023	808	655	541	455	387	334	256	202
			D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	1.157
			C	4,091	3,273	2,727	2,338	2,045	1,818	1,636	1,488	1,364	1,259	1,169	1,023	909
			D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	0.926
1-3/4 x 1/8	13.8	7'-5"	U	3,712	2,376	1,650	1,212	928	733	594	491	412	351	303	232	183
			D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
			C	3,712	2,970	2,475	2,121	1,856	1,650	1,485	1,350	1,237	1,142	1,061	928	825
			D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
1-3/4 x 3/16	20.3	8'-0"	U	5,568	3,564	2,475	1,818	1,392	1,100	891	736	619	527	455	348	275
			D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
			C	5,568	4,455	3,712	3,182	2,784	2,475	2,227	2,025	1,856	1,713	1,591	1,392	1,237
			D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
2 x 1/8	15.6	8'-2"	U	4,848	3,103	2,155	1,583	1,212	958	776	641	539	459	396	303	239
			D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
			C	4,848	3,879	3,232	2,771	2,424	2,155	1,939	1,763	1,616	1,492	1,385	1,212	1,077
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2 x 3/16	23.1	9'-0"	U	7,273	4,655	3,232	2,375	1,818	1,437	1,164	962	808	689	594	455	359
			D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
			C	7,273	5,818	4,848	4,156	3,636	3,232	2,909	2,645	2,424	2,238	2,078	1,818	1,616
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2-1/4 x 3/16	25.8	9'-10"	U	9,205	5,891	4,091	3,006	2,301	1,818	1,473	1,217	1,023	871	751	575	455
			D	0.038	0.060	0.086	0.117	0.152	0.193	0.238	0.288	0.343	0.402	0.467	0.610	0.771
			C	9,205	7,364	6,136	5,260	4,602	4,091	3,682	3,347	3,068	2,832	2,630	2,301	2,045
			D	0.030	0.048	0.069	0.093	0.122	0.154	0.190	0.230	0.274	0.322	0.373	0.488	0.617
2-1/2 x 3/16	28.6	10'-8"	U	11,364	7,273	5,051	3,711	2,841	2,245	1,818	1,503	1,263	1,076	928	710	561
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
			C	11,364	9,091	7,576	6,494	5,682	5,051	4,545	4,132	3,788	3,497	3,247	2,841	2,525
			D	0.027	0.043	0.062	0.084	0.110	0.139	0.171	0.207	0.247	0.290	0.336	0.439	0.555

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 20,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. ft.
C = Concentrated Load in pounds/ft. of grating width
D = Deflection in inches

* Weight per square foot based upon IGtru™ 11-W-4 grating. Add .60 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths (24" max for type "WS"). When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	7/8"	1-1/2"	2-3/16"	2-13/16"	3-1/2"	4-1/8"	4-13/16"	5-7/16"	6-1/8"	6-3/4"	7-7/16"	8-1/16"	8-3/4"	9-3/8"	10-1/16"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	10-11/16"	11-3/8"	12"	12-11/16"	13-5/16"	14"	14-5/8"	15-5/16"	15-15/16"	16-5/8"	17-1/4"	17-15/16"	18-9/16"	19-1/4"	19-7/8"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	20-9/16"	21-3/16"	21-7/8"	22-1/2"	23-3/16"	23-13/16"	24-1/2"	25-1/8"	25-13/16"	26-7/16"	27-1/8"	27-3/4"	28-7/16"	29-1/16"	29-3/4"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56					
Panel Width	30-3/8"	31-1/16"	31-11/16"	32-3/8"	33"	33-11/16"	34-5/16"	35"	35-5/8"	36-5/16"					

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

Indicates stock panel widths for type "DTS". Indicates stock panel widths for type "WS" (24" max).

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8 Space Load Table

Use this table when evaluating spans and loads for the following types of stainless steel grating:

8-DTS-4, 8-DTS-2

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 3/16	12.3	4'-8"	U	1,406	900	625	459	352	278	225						
			D	0.114	0.179	0.257	0.350	0.457	0.579	0.714						
			C	1,406	1,125	938	804	703	625	563						
			D	0.091	0.143	0.206	0.280	0.366	0.463	0.571						
1 x 1/8	11.0	5'-3"	U	1,667	1,067	741	544	417	329	267	220					
			D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648					
			C	1,667	1,333	1,111	952	833	741	667	606					
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519					
1 x 3/16	16.2	5'-10"	U	2,500	1,600	1,111	816	625	494	400	331	278				
			D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648	0.771				
			C	2,500	2,000	1,667	1,429	1,250	1,111	1,000	909	833				
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617				
1-1/4 x 1/8	13.6	6'-2"	U	2,604	1,667	1,157	850	651	514	417	344	289	247			
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724			
			C	2,604	2,083	1,736	1,488	1,302	1,157	1,042	947	868	801			
			D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579			
1-1/4 x 3/16	20.0	6'-10"	U	3,906	2,500	1,736	1,276	977	772	625	517	434	370	319	244	
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840	1.097	
			C	3,906	3,125	2,604	2,232	1,953	1,736	1,563	1,421	1,302	1,202	1,116	977	
			D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672	0.878	
1-1/2 x 1/8	16.2	7'-1"	U	3,750	2,400	1,667	1,225	938	741	600	496	417	355	306	234	
			D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	
			C	3,750	3,000	2,500	2,143	1,875	1,667	1,500	1,364	1,250	1,154	1,071	938	
			D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	
1-1/2 x 3/16	24.0	7'-11"	U	5,625	3,600	2,500	1,837	1,406	1,111	900	744	625	533	459	352	278
			D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	1.157
			C	5,625	4,500	3,750	3,214	2,813	2,500	2,250	2,046	1,875	1,731	1,607	1,406	1,250
			D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	0.926
1-3/4 x 1/8	18.9	8'-0"	U	5,104	3,267	2,269	1,667	1,276	1,008	817	675	567	483	417	319	252
			D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
			C	5,104	4,083	3,403	2,917	2,552	2,269	2,042	1,856	1,701	1,571	1,458	1,276	1,134
			D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
1-3/4 x 3/16	27.9	8'-10"	U	7,656	4,900	3,403	2,500	1,914	1,512	1,225	1,012	851	725	625	479	378
			D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
			C	7,656	6,125	5,104	4,375	3,828	3,403	3,063	2,784	2,552	2,356	2,188	1,914	1,701
			D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
2 x 1/8	21.5	8'-10"	U	6,667	4,267	2,963	2,177	1,667	1,317	1,067	882	741	631	544	417	329
			D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
			C	6,667	5,333	4,444	3,810	3,333	2,963	2,667	2,424	2,222	2,051	1,905	1,667	1,482
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2 x 3/16	31.8	9'-9"	U	10,000	6,400	4,444	3,265	2,500	1,975	1,600	1,322	1,111	947	816	625	494
			D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
			C	10,000	8,000	6,667	5,714	5,000	4,444	4,000	3,636	3,333	3,077	2,857	2,500	2,222
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2-1/4 x 3/16	35.7	10'-8"	U	12,656	8,100	5,625	4,133	3,164	2,500	2,025	1,674	1,406	1,198	1,033	791	625
			D	0.038	0.060	0.086	0.117	0.152	0.193	0.238	0.288	0.343	0.402	0.467	0.610	0.771
			C	12,656	10,125	8,438	7,232	6,328	5,625	5,063	4,602	4,219	3,894	3,616	3,164	2,813
			D	0.030	0.048	0.069	0.093	0.122	0.154	0.190	0.230	0.274	0.322	0.373	0.488	0.617
2-1/2 x 3/16	39.6	11'-7"	U	15,625	10,000	6,944	5,102	3,906	3,086	2,500	2,066	1,736	1,479	1,276	977	772
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
			C	15,625	12,500	10,417	8,929	7,813	6,944	6,250	5,682	5,208	4,808	4,464	3,906	3,472
			D	0.027	0.043	0.062	0.084	0.110	0.139	0.171	0.207	0.247	0.290	0.336	0.439	0.555

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 20,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. ft.
C = Concentrated Load in pounds/ft. of grating width
D = Deflection in inches

* Weight per square foot based upon 8-SLS-4 grating. Add .30 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch. The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	11/16"	1-3/16"	1-11/16"	2-3/16"	2-11/16"	3-3/16"	3-11/16"	4-3/16"	4-11/16"	5-3/16"	5-11/16"	6-3/16"	6-11/16"	7-3/16"	7-11/16"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	8-3/16"	8-11/16"	9-3/16"	9-11/16"	10-3/16"	10-11/16"	11-3/16"	11-11/16"	12-3/16"	12-11/16"	13-3/16"	13-11/16"	14-3/16"	14-11/16"	15-3/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	15-11/16"	16-3/16"	16-11/16"	17-3/16"	17-11/16"	18-3/16"	18-11/16"	19-3/16"	19-11/16"	20-3/16"	20-11/16"	21-3/16"	21-11/16"	22-3/16"	22-11/16"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Panel Width	23-3/16"	23-11/16"	24-3/16"	24-11/16"	25-3/16"	25-11/16"	26-3/16"	26-11/16"	27-3/16"	27-11/16"	28-3/16"	28-11/16"	29-3/16"	29-11/16"	30-3/16"
Number of Bearing Bars	62	63	64	65	66	67	68	69	70	71	72				
Panel Width	30-11/16"	31-3/16"	31-11/16"	32-3/16"	32-11/16"	33-3/16"	33-11/16"	34-3/16"	34-11/16"	35-3/16"	35-11/16"				

Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

Indicates stock panel widths.

Stainless Steel Bar Grating

7 Space Load Table

Use this table when evaluating spans and loads for the following types of stainless steel grating:

7-DTS-4, 7-DTS-2

Bearing Bar Size	Approx. Weight psf *	Maximum Pedestrian Span**		Unsupported Span												
				2'-0	2'-6	3'-0	3'-6	4'-0	4'-6	5'-0	5'-6	6'-0	6'-6	7'-0	8'-0	9'-0
3/4 x 3/16	13.9	4'-10"	U	1,607	1,029	714	525	402	318	257						
			D	0.114	0.179	0.257	0.350	0.457	0.579	0.714						
			C	1,607	1,286	1,071	918	804	714	643						
			D	0.091	0.143	0.206	0.280	0.366	0.463	0.571						
1 x 1/8	12.4	5'-5"	U	1,905	1,219	847	622	476	376	305	252					
			D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648					
			C	1,905	1,524	1,270	1,088	952	847	762	693					
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519					
1 x 3/16	18.3	6'-0"	U	2,857	1,829	1,270	933	714	564	457	378	318	271			
			D	0.086	0.134	0.193	0.263	0.343	0.434	0.536	0.648	0.771	0.905			
			C	2,857	2,286	1,905	1,633	1,429	1,270	1,143	1,039	952	879			
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724			
1-1/4 x 1/8	15.3	6'-5"	U	2,976	1,905	1,323	972	744	588	476	394	331	282			
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724			
			C	2,976	2,381	1,984	1,701	1,488	1,323	1,191	1,082	992	916			
			D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579			
1-1/4 x 3/16	22.7	7'-1"	U	4,464	2,857	1,984	1,458	1,116	882	714	590	496	423	364	279	
			D	0.069	0.107	0.154	0.210	0.274	0.347	0.429	0.519	0.617	0.724	0.840	1.097	
			C	4,464	3,571	2,976	2,551	2,232	1,984	1,786	1,623	1,488	1,374	1,276	1,116	
			D	0.055	0.086	0.123	0.168	0.219	0.278	0.343	0.415	0.494	0.579	0.672	0.878	
1-1/2 x 1/8	18.3	7'-4"	U	4,286	2,743	1,905	1,399	1,071	847	686	567	476	406	350	268	212
			D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	1.157
			C	4,286	3,429	2,857	2,449	2,143	1,905	1,714	1,558	1,429	1,319	1,225	1,071	952
			D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	0.926
1-1/2 x 3/16	27.2	8'-2"	U	6,429	4,114	2,857	2,099	1,607	1,270	1,029	850	714	609	525	402	318
			D	0.057	0.089	0.129	0.175	0.229	0.289	0.357	0.432	0.514	0.604	0.700	0.914	1.157
			C	6,429	5,143	4,286	3,674	3,214	2,857	2,571	2,338	2,143	1,978	1,837	1,607	1,429
			D	0.046	0.071	0.103	0.140	0.183	0.231	0.286	0.346	0.411	0.483	0.560	0.731	0.926
1-3/4 x 1/8	21.3	8'-3"	U	5,833	3,733	2,593	1,905	1,458	1,152	933	771	648	552	476	365	288
			D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
			C	5,833	4,667	3,889	3,333	2,917	2,593	2,333	2,121	1,944	1,795	1,667	1,458	1,296
			D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
1-3/4 x 3/16	31.6	9'-2"	U	8,750	5,600	3,889	2,857	2,188	1,728	1,400	1,157	972	828	714	547	432
			D	0.049	0.077	0.110	0.150	0.196	0.248	0.306	0.370	0.441	0.517	0.600	0.784	0.992
			C	8,750	7,000	5,833	5,000	4,375	3,889	3,500	3,182	2,917	2,692	2,500	2,188	1,944
			D	0.039	0.061	0.088	0.120	0.157	0.198	0.245	0.296	0.353	0.414	0.480	0.627	0.793
2 x 1/8	24.3	9'-2"	U	7,619	4,876	3,386	2,488	1,905	1,505	1,219	1,008	847	721	622	476	376
			D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
			C	7,619	6,095	5,079	4,354	3,810	3,386	3,048	2,771	2,540	2,344	2,177	1,905	1,693
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2 x 3/16	36.0	10'-1"	U	11,429	7,314	5,079	3,732	2,857	2,258	1,829	1,511	1,270	1,082	933	714	564
			D	0.043	0.067	0.096	0.131	0.171	0.217	0.268	0.324	0.386	0.453	0.525	0.686	0.868
			C	11,429	9,143	7,619	6,531	5,714	5,079	4,571	4,156	3,810	3,517	3,265	2,857	2,540
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
2-1/4 x 3/16	40.5	11'-1"	U	14,464	9,257	6,429	4,723	3,616	2,857	2,314	1,913	1,607	1,369	1,181	904	714
			D	0.038	0.060	0.086	0.117	0.152	0.193	0.238	0.288	0.343	0.402	0.467	0.610	0.771
			C	14,464	11,571	9,643	8,265	7,232	6,429	5,786	5,260	4,821	4,451	4,133	3,616	3,214
			D	0.030	0.048	0.069	0.093	0.122	0.154	0.190	0.230	0.274	0.322	0.373	0.488	0.617
2-1/2 x 3/16	44.9	12'-0"	U	17,857	11,429	7,937	5,831	4,464	3,527	2,857	2,361	1,984	1,691	1,458	1,116	882
			D	0.034	0.054	0.077	0.105	0.137	0.174	0.214	0.259	0.309	0.362	0.420	0.549	0.694
			C	17,857	14,286	11,905	10,204	8,929	7,937	7,143	6,494	5,952	5,495	5,102	4,464	3,968
			D	0.027	0.043	0.062	0.084	0.110	0.139	0.171	0.207	0.247	0.290	0.336	0.439	0.555

All loads and deflections are theoretical and based upon the gross sections of the bearing bars, using a fiber stress of 20,000 psi.

The values are not intended to be absolute since the actual load capacity will be affected by the slight variations in mill and manufacturing tolerances.

Grating for spans to the left of the heavy line have a deflection ≤ 1/4" for uniform loads of 100 psf.

U = Safe Uniform Load in pounds/sq. ft.
C = Concentrated Load in pounds/ft. of grating width
D = Deflection in inches

* Weight per square foot based upon 7-SLS-4 grating. Add .30 psf for 2" on center cross bars.

** Maximum pedestrian load is defined as a 100# Uniform Load with deflection ≤ 1/4 inch.
The 1/4" maximum deflection criteria is considered consistent with pedestrian comfort, but may be exceeded for other loading conditions at the discretion of the specifying authority.

Note: When gratings with serrated surface are specified, the depth of the grating required for a specific load will be ¼" greater than that shown in these tables.

Panel Widths

Grating panels are available from stock in nominal 24" and 36" widths. When considering alternative widths, consult this table to select widths that will maintain uniform "out-to-out" spacing of the bearing bars. Specified widths deviating from this table will be fabricated to size with side banding and the bar spacing on one side of the finished panel will deviate from the spacing throughout the remainder of the panel.

Number of Bearing Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Panel Width	5/8"	1-1/16"	1-1/2"	1-15/16"	2-3/8"	2-13/16"	3-1/4"	3-11/16"	4-1/8"	4-9/16"	5"	5-7/16"	5-7/8"	6-5/16"	6-3/4"
Number of Bearing Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Panel Width	7-3/16"	7-5/8"	8-1/16"	8-1/2"	8-15/16"	9-3/8"	9-13/16"	10-1/4"	10-11/16"	11-1/8"	11-9/16"	12"	12-7/16"	12-7/8"	13-5/16"
Number of Bearing Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Panel Width	13-3/4"	14-3/16"	14-5/8"	15-1/16"	15-1/2"	15-15/16"	16-3/8"	16-13/16"	17-1/4"	17-11/16"	18-1/8"	18-9/16"	19"	19-7/16"	19-7/8"
Number of Bearing Bars	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
Panel Width	20-5/16"	20-3/4"	21-3/16"	21-5/8"	22-1/16"	22-1/2"	22-15/16"	23-3/8"	23-13/16"	24-1/4"	24-11/16"	25-1/8"	25-9/16"	26"	26-7/16"
Number of Bearing Bars	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
Panel Width	26-7/8"	27-5/16"	27-3/4"	28-3/16"	28-5/8"	29-1/16"	29-1/2"	29-15/16"	30-3/8"	30-13/16"	31-1/4"	31-11/16"	32-1/8"	32-9/16"	33"
Number of Bearing Bars	77	78	79	80	81	82	83								
Panel Width	33-7/16"	33-7/8"	34-5/16"	34-3/4"	35-3/16"	35-5/8"	36-1/16"								

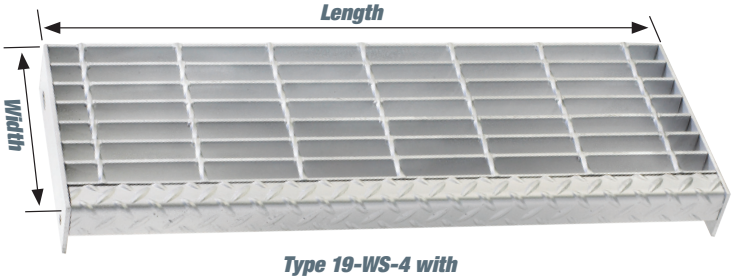
Panel widths indicated are for gratings with 3/16" thick bearing bars. For 1/8" thick bearing bars deduct 1/16" from the stated values.

Indicates stock panel widths.

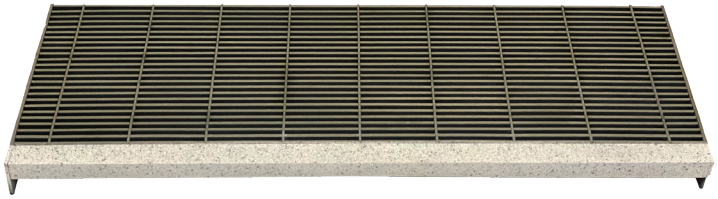
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Stainless Steel Stair Treads

Stainless steel grating stair treads are available fabricated to any size in type **"WS"** welded and type **"DTS"** dovetail pressure locked. Treads are manufactured with a defined visible nosing and pre-punched end carrier plates or angles, ready for bolting to the stair stringers.



Type 19-WS-4 with Checker Plate Nosing

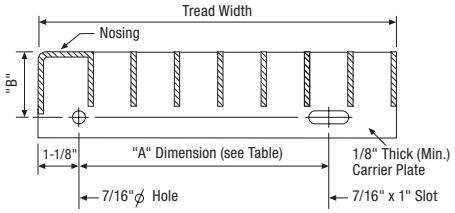


Type 7-DTS-4 with GritWeld™ Nosing

Stainless Steel Carrier Plates & Angles

Stainless Steel Carrier Plates

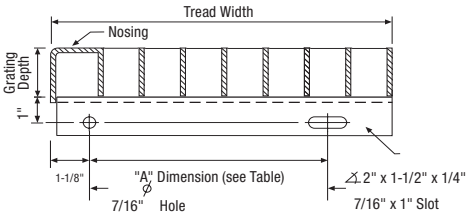
Recommended for use with 19, 15 and 11 spaced gratings



"B" Dimension
1-¾" for ¾" thru 1-¼" Bearing Bars
2-¼" for 1-½" thru 2" Bearing Bars

Stainless Steel Carrier Angles

Recommended for use with 8 and 7 spaced gratings



Nosing Options



Checker Plate Nosing welded to grating and carrier plates/ angles.



GritWeld™ Nosing welded to grating and carrier plates with thermally applied GritWeld™ surface.

Table of Stair Tread Widths

19 Space			15 Space			IGtru™ / 11 Space			8 Space			7 Space		
Bearing Bars @ 1-3/16" O.C.			Bearing Bars @ 15/16" O.C.			Bearing Bars @ 21/32" O.C.*			Bearing Bars @ 1/2" O.C.			Bearing Bars @ 7/16" O.C.		
Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension	Nominal Tread Width	Number of Bearing Bars	Standard "A" Dimension
6-3/16"	5	2-1/2"	6-1/8"	6	2-1/2"	6-1/16"	8	2-1/2"	6-7/16"	11	2-1/2"	5-13/16"	11	2-1/2"
7-3/8"	6	4-1/2"	7-1/16"	7	4-1/2"	6-11/16"	9	4-1/2"	7-7/16"	13	4-1/2"	6-11/16"	13	2-1/2"
8-9/16"	7	4-1/2"	8"	8	4-1/2"	7-3/8"	10	4-1/2"	8-7/16"	15	4-1/2"	7-9/16"	15	4-1/2"
9-3/4"	8	7"	8-15/16"	9	4-1/2"	8"	11	4-1/2"	8-15/16"	16	4-1/2"	8-7/16"	17	4-1/2"
10-15/16"	9	7"	9-7/8"	10	7"	8-11/16"	12	4-1/2"	9-7/16"	17	7"	9-5/16"	19	7"
12-1/8"	10	7"	10-13/16"	11	7"	9-5/16"	13	7"	9-15/16"	18	7"	10-3/16"	21	7"
			11-3/4"	12	7"	10"	14	7"	10-7/16"	19	7"	10-5/8"	22	7"
			12-11/16	13	7"	10-5/8"	15	7"	10-15/16"	20	7"	11-1/16"	23	7"
						11-5/16"	16	7"	11-7/16"	21	7"	11-1/2"	24	7"
						11-15/16"	17	7"	11-15/16"	22	7"	11-15/16"	25	7"

*Swage-Lock will be 11/16" O.C.

Recommended Maximum Stainless Steel Stair Tread Lengths*

Bearing Bar Size	19 Space 1-3/16" O.C.		15 Space 15/16" O.C.		IGtru™ / 11 Space 11/16" O.C.		8 Space 1/2" O.C.		7 Space 7/16" O.C.	
	Plain	Serrated	Plain	Serrated	Plain	Serrated	Plain	Serrated	Plain	Serrated
3/4" x 3/16"	2'-7"	--	3'-0"	--	3'-3"	--	3'-7"	--	3'-9"	--
1" x 3/16"	3'-8"	3'-2"	3'-11"	3'-6"	4'-2"	3'-8"	4'-10"	4'-2"	5'-1"	4'-4"
1-1/4" x 3/16"	4'-7"	4'-1"	5'-2"	4'-5"	5'-5"	4'-9"	5'-6"	5'-6"	5'-6"	5'-6"
1-1/2" x 3/16"	5'-6"	5'-2"	5'-6"	5'-6	5'-6"	5'-6"	5'-11"	5'-6"	6'-3"	5'-6"

* For treads up to 5'-6", maximum tread lengths are based upon 300 lb. concentrated load on the front 5 inches of the tread, at the center of the tread length. When treads exceed 5'-6" in length, design allows for 300 lb. concentrated loads at 1/3 points of tread length. Deflection is limited to 1/240 of tread length in all cases.

Heavy Duty Grating



Welded Heavy Duty Gratings are designed to service applications subject to heavy rolling and static loads such as highways, plant floors, loading docks, inlet covers and airports. Since these conditions can range from light-duty forklifts to heavy-duty truck or aircraft traffic, heavy duty gratings are manufactured in a wide range of bar sizes and spacings. Our most popular products are described on the following pages.

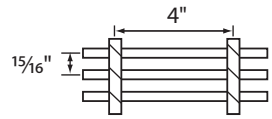
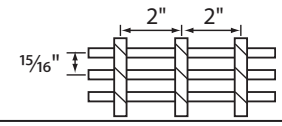
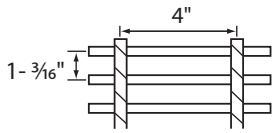
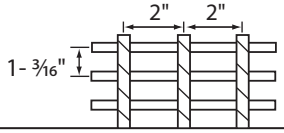
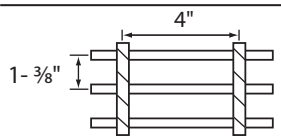
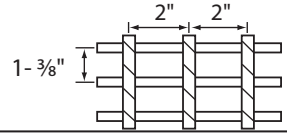
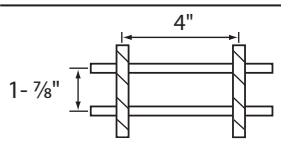
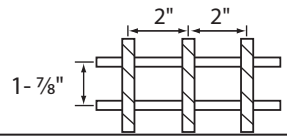
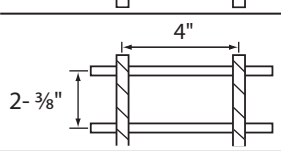
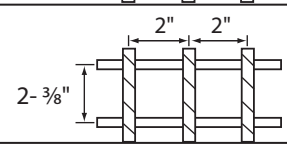


Vehicular loads are designed in conformance with current AASHTO specifications for classifications H-15 through H-25. Automobile and forklift loads are similarly evaluated with loads calculated and distributed in accordance with the "Maximum Traffic Conditions" presented on page 31. If your application is not adequately addressed by these load conditions, please contact our engineering department and we will gladly assist in the selection of a heavy duty grating to satisfy your specific needs.

Materials & Finishes

Heavy duty gratings are manufactured in carbon steel and 300 series stainless steels. Carbon steel products are available bare (no finish), painted with IG EcoCoat - Standard Black paint, or hot dip galvanized. Stainless steel products are available mill finish or IG EcoClean™. (see page 22)

Table of Spacings

15-W-4		Bearing Bars at 15/16" O.C. Cross Bars at 4" O.C.	**15-W-2**		Bearing Bars at 15/16" O.C. Cross Bars at 2" O.C.
19-W-4		Bearing Bars at 1-3/16" O.C. Cross Bars at 4" O.C.	**19-W-2**		Bearing Bars at 1-3/16" O.C. Cross Bars at 2" O.C.
22-W-4		Bearing Bars at 1-3/8" O.C. Cross Bars at 4" O.C.	**22-W-2**		Bearing Bars at 1-3/8" O.C. Cross Bars at 2" O.C.
30-W-4		Bearing Bars at 1-7/8" O.C. Cross Bars at 4" O.C.	**30-W-2**		Bearing Bars at 1-7/8" O.C. Cross Bars at 2" O.C.
38-W-4		Bearing Bars at 2-3/8" O.C. Cross Bars at 4" O.C.	**38-W-2**		Bearing Bars at 2-3/8" O.C. Cross Bars at 2" O.C.

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Maximum Traffic Conditions	Wheel Load (lbs) (1/2 axle load + 30% Impact)	Load Distribution	
		Parallel with Axle	Perpendicular to Axle
H-25  Truck Traffic • 40,000 lb. Axle Load Dual Wheels • Modified AASHTO H-25	26,000	2 (C)* + 25"	25"
H-20  Truck Traffic • 32,000 lb. Axle Load Dual Wheels • Modified AASHTO H-20	20,800	2 (C)* + 20"	20"
H-15  Truck Traffic • 24,000 lb. Axle Load Single Wheels • Modified AASHTO H-15	15,600	2 (C)* + 15"	15"
Automobile  Automobile Traffic • 6,322 lb. Vehicle 3,578 lb. Load • 60% Drive Axle Load	3,861	2 (C)* + 9"	9"
5 Ton Forklift  10,000 lb. Cap. Lift Truck • 14,000 lb. Vehicle 24,000 lb. Total Load • 85% Drive Axle Load	13,480	2 (C)* +11"	11"
3 Ton Forklift  6,000 lb. Cap. Lift Truck • 9,000 lb. Vehicle 15,800 lb. Total Load • 85% Drive Axle Load	8,730	2 (C)* +7"	7"
1 Ton Forklift  2,000 lb. Cap. Lift Truck • 4,200 lb. Vehicle 6,200 lb. Total Load • 85% Drive Axle Load	3,425	2 (C)* +4"	4"

*C = Center-to-center spacing of bearing bars.

Allowable stress – 20,000 psi
Modulus of Elascity – 29,000,000 psi

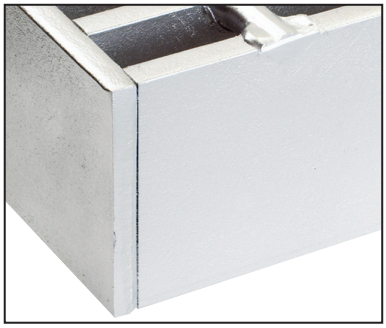
Heavy Duty Grating Cross Bars

Bearing Bars			Cross Bars
Thickness	Depth	Center to Center	
1/4"	5" or less	all spacings	5/16" Ardox
1/4"	over 5"	all spacings	3/8" Round
3/8"	1-1/4" or less	all spacings	5/16" Ardox
3/8"	1-1/4" - 5"	all spacings	3/8" Round
3/8"	over 5"	all spacings	1/2" Round

The sizes shown above are listed as minimums. Ardox and round cross bars are typically interchangeable and, unless otherwise specified, may be substituted at the discretion of the manufacturer. In substitution, the cross sectional area of the alternative cross bar shall equal or exceed that of the minimum size listed.

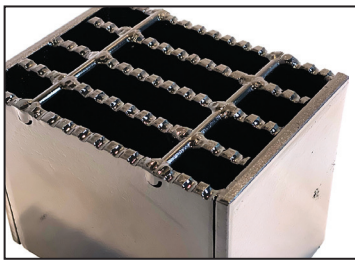
Banding

Heavy duty gratings are commonly subjected to shock and impact loads and it is highly recommended that all open ends be banded. The welded band bar helps distribute impact loads and minimizes distortion when subjected to repetitive traffic patterns. Banding details can be found on page 39.



Serrated Surface

Optional serrated bearing bars enhance skid resistance. Consider this surface for applications subject to the accumulation of liquids or lubricants or inclined grating installations.



How to Specify Heavy Duty Bar Grating

1. Select type of grating
   - **"W"** for Welded Steel Grating
   - **"WS"** for Welded Stainless Steel Grating
2. Select bar spacing from table on page 30
3. Select bearing bar size from tables on pages 32-36
4. Specify Plain or Serrated surface
5. Specify banding and any additional trim required
6. Specify finish
   - Bare steel (no finish)
   - IG EcoCoat™ - Standard Black Paint
   - Hot Dip Galvanized (per ASTM A-123)
   - Other
7. Specify fasteners (if required) – see page 40

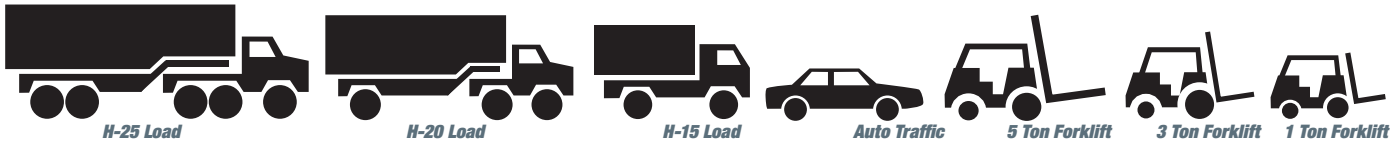


Heavy Duty Grating

Use this table when evaluating spans & loads for the following types of Heavy Duty steel grating:

15-W-4 and 15-W-2

15 Space Load Table



				Maximum Safe Span						
Bearing Bar Size	Section Modulus psf	Moment of Inertia psf	Approx. Weight psf	H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1 x 1/4	0.533	0.267	12.0	1'-1"	1'-0"	0'-10"	1'-2"	0'-8"	0'-7"	0'-8"
1 x 5/16	0.667	0.333	14.7	1'-3"	1'-2"	1'-0"	1'-5"	0'-9"	0'-8"	0'-9"
1 x 3/8	0.800	0.400	17.4	1'-4"	1'-3"	1'-1"	1'-7"	0'-10"	0'-8"	0'-11"
1-1/4 x 1/4	0.833	0.521	14.7	1'-4"	1'-3"	1'-1"	1'-8"	0'-10"	0'-9"	0'-11"
1-1/4 x 5/16	1.042	0.651	18.1	1'-6"	1'-5"	1'-3"	1'-11"	1'-0"	0'-10"	1'-1"
1-1/4 x 3/8	1.250	0.781	21.5	1'-8"	1'-6"	1'-4"	2'-1"	1'-1"	0'-11"	1'-4"
1-1/2 x 1/4	1.200	0.900	17.4	1'-8"	1'-6"	1'-4"	2'-3"	1'-1"	0'-11"	1'-3"
1-1/2 x 5/16	1.500	1.125	21.5	1'-10"	1'-8"	1'-6"	2'-6"	1'-3"	1'-1"	1'-7"
1-1/2 x 3/8	1.800	1.350	25.6	2'-0"	1'-10"	1'-8"	2'-9"	1'-4"	1'-3"	1'-10"
1-3/4 x 1/4	1.633	1.429	20.2	1'-11"	1'-9"	1'-7"	2'-10"	1'-3"	1'-2"	1'-8"
1-3/4 x 5/16	2.042	1.786	24.9	2'-2"	2'-0"	1'-10"	3'-2"	1'-6"	1'-5"	2'-1"
1-3/4 x 3/8	2.450	2.144	29.7	2'-5"	2'-3"	2'-1"	3'-6"	1'-9"	1'-8"	2'-6"
2 x 1/4	2.133	2.133	22.9	2'-3"	2'-0"	1'-10"	3'-6"	1'-7"	1'-5"	2'-2"
2 x 5/16	2.667	2.667	28.3	2'-6"	2'-4"	2'-2"	3'-11"	1'-10"	1'-9"	2'-8"
2 x 3/8	3.200	3.200	33.8	2'-10"	2'-8"	2'-6"	4'-3"	2'-1"	2'-1"	3'-2"
2-1/4 x 1/4	2.700	3.038	25.6	2'-7"	2'-4"	2'-2"	4'-2"	1'-10"	1'-9"	2'-8"
2-1/4 x 5/16	3.375	3.797	31.7	2'-11"	2'-9"	2'-7"	4'-5"	2'-2"	2'-2"	3'-4"
2-1/4 x 3/8	4.050	4.556	37.8	3'-4"	3'-2"	3'-0"	4'-9"	2'-7"	2'-6"	3'-11"
2-1/2 x 1/4	3.333	4.167	28.3	2'-11"	2'-9"	2'-7"	4'-7"	2'-2"	2'-2"	3'-4"
2-1/2 x 5/16	4.167	5.208	35.1	3'-5"	3'-3"	3'-1"	4'-11"	2'-8"	2'-7"	4'-1"
2-1/2 x 3/8	5.000	6.250	41.9	3'-10"	3'-9"	3'-7"	5'-3"	3'-1"	3'-1"	4'-5"
3 x 1/4	4.800	7.200	33.8	3'-9"	3'-7"	3'-6"	5'-6"	3'-0"	3'-0"	4'-8"
3 x 5/16	6.000	9.000	41.9	4'-5"	4'-4"	4'-2"	5'-11"	3'-7"	3'-8"	5'-0"
3 x 3/8	7.200	10.800	50.1	4'-8"	4'-7"	4'-7"	6'-4"	4'-3"	4'-4"	5'-4"
3-1/2 x 1/4	6.533	11.433	39.2	4'-9"	4'-7"	4'-6"	6'-5"	3'-11"	3'-11"	5'-5"
3-1/2 x 5/16	8.167	14.292	48.7	5'-1"	5'-1"	5'-1"	6'-11"	4'-9"	4'-10"	5'-10"
3-1/2 x 3/8	9.800	17.150	58.2	5'-5"	5'-4"	5'-5"	7'-4"	5'-2"	5'-3"	6'-3"
4 x 1/4	8.533	17.067	44.6	5'-4"	5'-4"	5'-4"	7'-4"	4'-11"	5'-1"	6'-3"
4 x 5/16	10.667	21.333	55.5	5'-9"	5'-9"	5'-9"	7'-11"	5'-6"	5'-8"	6'-8"
4 x 3/8	12.800	25.600	66.4	6'-1"	6'-1"	6'-2"	8'-5"	5'-11"	6'-0"	7'-2"
4-1/2 x 1/4	10.800	24.300	50.1	6'-0"	6'-0"	6'-0"	8'-3"	5'-9"	5'-11"	7'-0"
4-1/2 x 5/16	13.500	30.375	62.3	6'-6"	6'-6"	6'-6"	8'-11"	6'-3"	6'-4"	7'-7"
4-1/2 x 3/8	16.200	36.450	74.6	6'-10"	6'-10"	6'-11"	9'-6"	6'-7"	6'-9"	8'-0"
5 x 1/4	13.333	33.333	55.5	6'-8"	6'-8"	6'-9"	9'-2"	6'-5"	6'-7"	7'-9"
5 x 3/8	20.000	50.000	82.7	7'-7"	7'-8"	7'-8"	10'-6"	7'-4"	7'-6"	8'-11"
5 x 1/2	26.667	66.667	109.9	8'-4"	8'-5"	8'-5"	11'-7"	8'-1"	8'-3"	9'-10"
6 x 1/4	19.200	57.600	66.4	8'-0"	8'-0"	8'-1"	11'-1"	7'-8"	7'-10"	9'-4"
6 x 3/8	28.800	86.400	99.0	9'-1"	9'-2"	9'-2"	12'-8"	8'-10"	9'-0"	10'-9"
6 x 1/2	38.400	115.200	131.7	10'-0"	10'-1"	10'-2"	13'-11"	9'-9"	9'-11"	11'-10"
7 x 1/4	26.133	91.467	77.3	9'-3"	9'-4"	9'-5"	12'-11"	9'-0"	9'-2"	10'-11"
7 x 3/8	39.200	137.200	115.4	10'-7"	10'-8"	10'-9"	14'-9"	10'-4"	10'-6"	12'-6"
7 x 1/2	52.267	182.933	153.4	11'-8"	11'-9"	11'-10"	16'-3"	11'-4"	11'-7"	13'-9"

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19 Space
Load Table

Use this table when evaluating spans & loads for the following types of Heavy Duty steel grating:

19-W-4 and 19-W-2



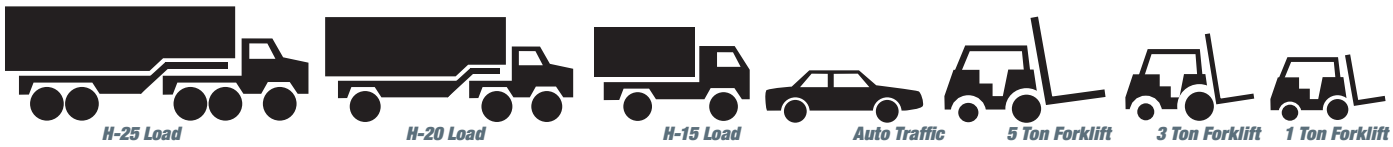
				Maximum Safe Span						
Bearing Bar Size	Section Modulus psf	Moment of Inertia psf	Approx. Weight psf	H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1 x 1/4	0.421	0.211	9.7	1'-0"	0'-10"	0'-9"	1'-0"	0'-7"	0'-6"	0'-7"
1 x 5/16	0.526	0.263	11.9	1'-1"	1'-0"	0'-10"	1'-2"	0'-8"	0'-7"	0'-8"
1 x 3/8	0.632	0.316	14.0	1'-2"	1'-1"	0'-11"	1'-4"	0'-9"	0'-8"	0'-9"
1-1/4 x 1/4	0.658	0.411	11.9	1'-3"	1'-1"	1'-0"	1'-5"	0'-9"	0'-8"	0'-10"
1-1/4 x 5/16	0.822	0.514	14.5	1'-4"	1'-3"	1'-1"	1'-8"	0'-10"	0'-9"	1'-0"
1-1/4 x 3/8	0.987	0.617	17.2	1'-6"	1'-4"	1'-2"	1'-11"	1'-0"	0'-10"	1'-2"
1-1/2 x 1/4	0.947	0.711	14.0	1'-6"	1'-4"	1'-2"	1'-11"	0'-11"	0'-10"	1'-1"
1-1/2 x 5/16	1.184	0.888	17.2	1'-8"	1'-6"	1'-4"	2'-3"	1'-1"	0'-11"	1'-4"
1-1/2 x 3/8	1.421	1.066	20.4	1'-10"	1'-8"	1'-6"	2'-6"	1'-2"	1'-1"	1'-7"
1-3/4 x 1/4	1.289	1.128	16.2	1'-9"	1'-7"	1'-5"	2'-5"	1'-2"	1'-0"	1'-5"
1-3/4 x 5/16	1.612	1.410	19.9	1'-11"	1'-9"	1'-7"	2'-11"	1'-4"	1'-3"	1'-9"
1-3/4 x 3/8	1.934	1.692	23.7	2'-2"	1'-11"	1'-9"	3'-2"	1'-6"	1'-5"	2'-1"
2 x 1/4	1.684	1.684	18.3	2'-0"	1'-10"	1'-8"	3'-1"	1'-4"	1'-3"	1'-10"
2 x 5/16	2.105	2.105	22.6	2'-3"	2'-1"	1'-11"	3'-6"	1'-7"	1'-6"	2'-4"
2 x 3/8	2.526	2.526	26.9	2'-6"	2'-4"	2'-2"	3'-10"	1'-10"	1'-9"	2'-9"
2-1/4 x 1/4	2.132	2.398	20.4	2'-3"	2'-1"	1'-11"	3'-9"	1'-7"	1'-6"	2'-4"
2-1/4 x 5/16	2.664	2.998	25.3	2'-7"	2'-5"	2'-3"	4'-2"	1'-11"	1'-10"	2'-11"
2-1/4 x 3/8	3.197	3.597	30.1	2'-10"	2'-8"	2'-7"	4'-5"	2'-2"	2'-2"	3'-5"
2-1/2 x 1/4	2.632	3.289	22.6	2'-6"	2'-4"	2'-3"	4'-4"	1'-10"	1'-10"	2'-10"
2-1/2 x 5/16	3.289	4.112	28.0	2'-11"	2'-9"	2'-7"	4'-8"	2'-3"	2'-3"	3'-6"
2-1/2 x 3/8	3.947	4.934	33.3	3'-4"	3'-2"	3'-0"	4'-11"	2'-7"	2'-7"	4'-2"
3 x 1/4	3.789	5.684	26.9	3'-3"	3'-1"	2'-11"	5'-2"	2'-6"	2'-6"	4'-1"
3 x 5/16	4.737	7.105	33.3	3'-9"	3'-7"	3'-6"	5'-7"	3'-0"	3'-1"	4'-9"
3 x 3/8	5.684	8.526	39.8	4'-4"	4'-2"	4'-1"	5'-11"	3'-7"	3'-8"	5'-1"
3-1/2 x 1/4	5.158	9.026	31.2	4'-0"	3'-10"	3'-9"	6'-0"	3'-3"	3'-4"	5'-2"
3-1/2 x 5/16	6.447	11.283	38.7	4'-9"	4'-8"	4'-7"	6'-6"	4'-0"	4'-1"	5'-7"
3-1/2 x 3/8	7.737	13.539	46.2	5'-0"	5'-0"	5'-0"	6'-11"	4'-8"	4'-10"	5'-11"
4 x 1/4	6.737	13.474	35.5	4'-11"	4'-10"	4'-9"	6'-11"	4'-2"	4'-3"	5'-11"
4 x 5/16	8.421	16.842	44.1	5'-5"	5'-5"	5'-5"	7'-5"	5'-1"	5'-3"	6'-4"
4 x 3/8	10.105	20.211	52.7	5'-8"	5'-8"	5'-9"	7'-11"	5'-6"	5'-8"	6'-9"
4-1/2 x 1/4	8.526	19.184	39.8	5'-7"	5'-7"	5'-8"	7'-9"	5'-1"	5'-4"	6'-8"
4-1/2 x 5/16	10.658	23.980	49.4	6'-0"	6'-0"	6'-1"	8'-4"	5'-10"	6'-0"	7'-2"
4-1/2 x 3/8	12.789	28.776	59.1	6'-5"	6'-5"	6'-5"	8'-11"	6'-2"	6'-4"	7'-7"
5 x 1/4	10.526	26.316	44.1	6'-3"	6'-3"	6'-3"	8'-8"	6'-0"	6'-2"	7'-5"
5 x 3/8	15.789	39.474	65.5	7'-1"	7'-1"	7'-2"	9'-11"	6'-11"	7'-1"	8'-6"
5 x 1/2	21.053	52.632	87.0	7'-10"	7'-10"	7'-11"	10'-11"	7'-7"	7'-9"	9'-4"
6 x 1/4	15.158	45.474	52.7	7'-5"	7'-5"	7'-6"	10'-4"	7'-3"	7'-5"	8'-11"
6 x 3/8	22.737	68.211	78.4	8'-6"	8'-6"	8'-7"	11'-10"	8'-3"	8'-6"	10'-2"
6 x 1/2	30.316	90.947	104.2	9'-4"	9'-4"	9'-5"	13'-1"	9'-1"	9'-4"	11'-2"
7 x 1/4	20.632	72.211	61.2	8'-8"	8'-8"	8'-9"	12'-1"	8'-5"	8'-8"	10'-4"
7 x 3/8	30.947	108.316	91.3	9'-11"	9'-11"	10'-0"	13'-10"	9'-8"	9'-11"	11'-10"
7 x 1/2	41.263	144.421	121.4	10'-10"	10'-11"	11'-0"	15'-3"	10'-7"	10'-11"	13'-1"

Heavy Duty Grating

Use this table when evaluating spans & loads for the following types of Heavy Duty steel grating:

22-W-4 and 22-W-2

22 Space Load Table



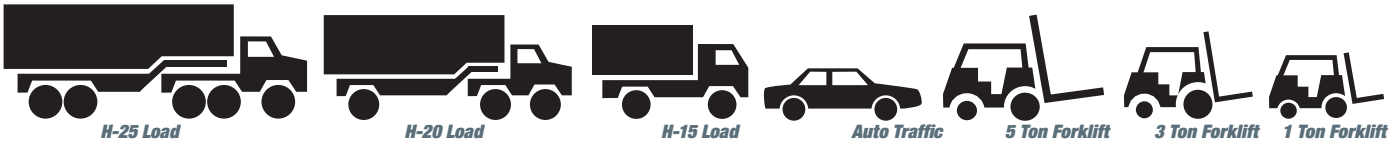
				Maximum Safe Span						
Bearing Bar Size	Section Modulus psf	Moment of Inertia psf	Approx. Weight psf	H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1 x 1/4	0.364	0.182	8.5	0'-11"	0'-10"	0'-9"	0'-11"	0'-7"	0'-6"	0'-6"
1 x 5/16	0.455	0.227	10.4	1'-0"	0'-11"	0'-10"	1'-1"	0'-8"	0'-6"	0'-7"
1 x 3/8	0.545	0.273	12.2	1'-1"	1'-0"	0'-11"	1'-3"	0'-9"	0'-7"	0'-9"
1-1/4 x 1/4	0.568	0.355	10.4	1'-2"	1'-0"	0'-11"	1'-4"	0'-9"	0'-7"	0'-9"
1-1/4 x 5/16	0.710	0.444	12.7	1'-3"	1'-2"	1'-0"	1'-6"	0'-10"	0'-8"	0'-11"
1-1/4 x 3/8	0.852	0.533	15.0	1'-5"	1'-3"	1'-1"	1'-9"	0'-11"	0'-9"	1'-1"
1-1/2 x 1/4	0.818	0.614	12.2	1'-5"	1'-3"	1'-1"	1'-9"	0'-11"	0'-9"	1'-0"
1-1/2 x 5/16	1.023	0.767	15.0	1'-7"	1'-5"	1'-3"	2'-1"	1'-0"	0'-11"	1'-3"
1-1/2 x 3/8	1.227	0.920	17.8	1'-8"	1'-6"	1'-4"	2'-5"	1'-1"	1'-0"	1'-6"
1-3/4 x 1/4	1.114	0.974	14.1	1'-8"	1'-6"	1'-3"	2'-3"	1'-1"	0'-11"	1'-4"
1-3/4 x 5/16	1.392	1.218	17.3	1'-10"	1'-8"	1'-6"	2'-8"	1'-2"	1'-1"	1'-8"
1-3/4 x 3/8	1.670	1.462	20.6	2'-0"	1'-10"	1'-8"	3'-0"	1'-4"	1'-3"	1'-11"
2 x 1/4	1.455	1.455	16.0	1'-10"	1'-8"	1'-6"	2'-10"	1'-3"	1'-2"	1'-9"
2 x 5/16	1.818	1.818	19.7	2'-1"	1'-11"	1'-9"	3'-4"	1'-5"	1'-5"	2'-1"
2 x 3/8	2.182	2.182	23.4	2'-4"	2'-1"	2'-0"	3'-8"	1'-8"	1'-7"	2'-6"
2-1/4 x 1/4	1.841	2.071	17.8	2'-1"	1'-11"	1'-9"	3'-5"	1'-6"	1'-5"	2'-2"
2-1/4 x 5/16	2.301	2.589	22.0	2'-4"	2'-2"	2'-0"	4'-0"	1'-9"	1'-8"	2'-8"
2-1/4 x 3/8	2.761	3.107	26.2	2'-8"	2'-6"	2'-4"	4'-3"	2'-0"	2'-0"	3'-2"
2-1/2 x 1/4	2.273	2.841	19.7	2'-4"	2'-2"	2'-0"	4'-2"	1'-8"	1'-8"	2'-7"
2-1/2 x 5/16	2.841	3.551	24.3	2'-8"	2'-6"	2'-5"	4'-6"	2'-0"	2'-0"	3'-3"
2-1/2 x 3/8	3.409	4.261	28.9	3'-0"	2'-10"	2'-9"	4'-9"	2'-4"	2'-4"	3'-10"
3 x 1/4	3.273	4.909	23.4	2'-11"	2'-9"	2'-8"	5'-0"	2'-3"	2'-3"	3'-8"
3 x 5/16	4.091	6.136	28.9	3'-5"	3'-3"	3'-2"	5'-4"	2'-9"	2'-9"	4'-7"
3 x 3/8	4.909	7.364	34.5	3'-11"	3'-9"	3'-8"	5'-8"	3'-2"	3'-4"	4'-11"
3-1/2 x 1/4	4.455	7.795	27.1	3'-8"	3'-6"	3'-5"	5'-10"	2'-11"	3'-0"	5'-0"
3-1/2 x 5/16	5.568	9.744	33.6	4'-4"	4'-2"	4'-1"	6'-3"	3'-7"	3'-8"	5'-5"
3-1/2 x 3/8	6.682	11.693	40.1	4'-10"	4'-10"	4'-10"	6'-8"	4'-2"	4'-5"	5'-9"
4 x 1/4	5.818	11.636	30.8	4'-5"	4'-4"	4'-3"	6'-8"	3'-9"	3'-10"	5'-9"
4 x 5/16	7.273	14.545	38.2	5'-2"	5'-2"	5'-2"	7'-2"	4'-6"	4'-9"	6'-2"
4 x 3/8	8.727	17.455	45.6	5'-6"	5'-6"	5'-6"	7'-7"	5'-3"	5'-5"	6'-7"
4-1/2 x 1/4	7.364	16.568	34.5	5'-4"	5'-3"	5'-3"	7'-6"	4'-7"	4'-10"	6'-5"
4-1/2 x 5/16	9.205	20.710	42.8	5'-9"	5'-9"	5'-10"	8'-1"	5'-7"	5'-9"	6'-11"
4-1/2 x 3/8	11.045	24.852	51.2	6'-2"	6'-2"	6'-2"	8'-7"	5'-11"	6'-1"	7'-5"
5 x 1/4	9.091	22.727	38.2	5'-11"	6'-0"	6'-0"	8'-4"	5'-7"	5'-11"	7'-2"
5 x 3/8	13.636	34.091	56.8	6'-9"	6'-10"	6'-10"	9'-6"	6'-7"	6'-10"	8'-3"
5 x 1/2	18.182	45.455	75.3	7'-6"	7'-6"	7'-7"	10'-6"	7'-3"	7'-6"	9'-1"
6 x 1/4	13.091	39.273	45.6	7'-1"	7'-2"	7'-2"	10'-0"	6'-11"	7'-2"	8'-7"
6 x 3/8	19.636	58.909	67.9	8'-1"	8'-2"	8'-3"	11'-5"	7'-11"	8'-2"	9'-10"
6 x 1/2	26.182	78.545	90.1	8'-11"	9'-0"	9'-1"	12'-7"	8'-9"	9'-0"	10'-10"
7 x 1/4	17.818	62.364	53.1	8'-3"	8'-4"	8'-5"	11'-8"	8'-1"	8'-4"	10'-1"
7 x 3/8	26.727	93.545	79.0	9'-5"	9'-6"	9'-7"	13'-4"	9'-3"	9'-6"	11'-6"
7 x 1/2	35.636	124.727	105.0	10'-5"	10'-6"	10'-7"	14'-8"	10'-2"	10'-6"	12'-8"

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30 Space
Load Table

Use this table when evaluating spans & loads for the following types of Heavy Duty steel grating:

30-W-4 and 30-W-2



				Maximum Safe Span						
Bearing Bar Size	Section Modulus psf	Moment of Inertia psf	Approx. Weight psf	H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1 x 1/4	0.267	0.133	6.6	0'-9"	0'-9"	0'-8"	0'-10"	0'-6"	0'-5"	0'-6"
1 x 5/16	0.333	0.167	7.9	0'-11"	0'-10"	0'-8"	0'-11"	0'-7"	0'-6"	0'-7"
1 x 3/8	0.400	0.200	9.3	1'-0"	0'-11"	0'-9"	1'-1"	0'-8"	0'-6"	0'-8"
1-1/4 x 1/4	0.417	0.260	7.9	1'-0"	0'-11"	0'-10"	1'-1"	0'-8"	0'-6"	0'-8"
1-1/4 x 5/16	0.521	0.326	9.6	1'-1"	1'-0"	0'-11"	1'-3"	0'-9"	0'-7"	0'-9"
1-1/4 x 3/8	0.625	0.391	11.3	1'-3"	1'-1"	1'-0"	1'-6"	0'-10"	0'-8"	0'-11"
1-1/2 x 1/4	0.600	0.450	9.3	1'-2"	1'-1"	1'-0"	1'-5"	0'-9"	0'-8"	0'-11"
1-1/2 x 5/16	0.750	0.563	11.3	1'-4"	1'-3"	1'-1"	1'-9"	0'-10"	0'-9"	1'-1"
1-1/2 x 3/8	0.900	0.675	13.4	1'-6"	1'-4"	1'-2"	2'-0"	1'-0"	0'-10"	1'-3"
1-3/4 x 1/4	0.817	0.715	10.6	1'-5"	1'-3"	1'-2"	1'-10"	0'-11"	0'-10"	1'-2"
1-3/4 x 5/16	1.021	0.893	13.0	1'-7"	1'-5"	1'-3"	2'-2"	1'-0"	0'-11"	1'-5"
1-3/4 x 3/8	1.225	1.072	15.4	1'-9"	1'-7"	1'-5"	2'-7"	1'-2"	1'-1"	1'-8"
2 x 1/4	1.067	1.067	12.0	1'-7"	1'-6"	1'-4"	2'-3"	1'-1"	1'-0"	1'-6"
2 x 5/16	1.333	1.333	14.7	1'-10"	1'-8"	1'-6"	2'-9"	1'-3"	1'-2"	1'-10"
2 x 3/8	1.600	1.600	17.4	2'-0"	1'-10"	1'-8"	3'-3"	1'-5"	1'-4"	2'-2"
2-1/4 x 1/4	1.350	1.519	13.4	1'-10"	1'-8"	1'-6"	2'-10"	1'-3"	1'-2"	1'-10"
2-1/4 x 5/16	1.688	1.898	16.4	2'-0"	1'-10"	1'-9"	3'-5"	1'-5"	1'-5"	2'-3"
2-1/4 x 3/8	2.025	2.278	19.5	2'-3"	2'-1"	1'-11"	3'-11"	1'-8"	1'-8"	2'-8"
2-1/2 x 1/4	1.667	2.083	14.7	2'-0"	1'-10"	1'-8"	3'-5"	1'-5"	1'-5"	2'-3"
2-1/2 x 5/16	2.083	2.604	18.1	2'-3"	2'-1"	2'-0"	4'-2"	1'-8"	1'-8"	2'-9"
2-1/2 x 3/8	2.500	3.125	21.5	2'-6"	2'-5"	2'-3"	4'-5"	1'-11"	2'-0"	3'-3"
3 x 1/4	2.400	3.600	17.4	2'-6"	2'-4"	2'-2"	4'-7"	1'-11"	1'-11"	3'-2"
3 x 5/16	3.000	4.500	21.5	2'-10"	2'-8"	2'-7"	5'-0"	2'-3"	2'-4"	3'-11"
3 x 3/8	3.600	5.400	25.6	3'-3"	3'-1"	3'-0"	5'-3"	2'-7"	2'-9"	4'-8"
3-1/2 x 1/4	3.267	5.717	20.2	3'-0"	2'-10"	2'-9"	5'-5"	2'-5"	2'-6"	4'-3"
3-1/2 x 5/16	4.083	7.146	24.9	3'-6"	3'-5"	3'-4"	5'-10"	2'-11"	3'-1"	5'-1"
3-1/2 x 3/8	4.900	8.575	29.7	4'-0"	3'-11"	3'-10"	6'-2"	3'-5"	3'-7"	5'-5"
4 x 1/4	4.267	8.533	22.9	3'-7"	3'-6"	3'-7"	6'-2"	3'-0"	3'-2"	5'-5"
4 x 5/16	5.333	10.667	28.3	4'-1"	4'-2"	4'-2"	6'-8"	3'-8"	3'-11"	5'-10"
4 x 3/8	6.400	12.800	33.8	4'-11"	4'-10"	4'-10"	7'-1"	4'-4"	4'-8"	6'-2"
4-1/2 x 1/4	5.400	12.150	25.6	4'-4"	4'-3"	4'-2"	6'-11"	3'-8"	3'-11"	6'-1"
4-1/2 x 5/16	6.750	15.188	31.7	5'-2"	5'-1"	5'-1"	7'-6"	4'-6"	4'-10"	6'-7"
4-1/2 x 3/8	8.100	18.225	37.8	5'-7"	5'-7"	5'-8"	7'-11"	5'-4"	5'-8"	7'-0"
5 x 1/4	6.667	16.667	28.3	5'-1"	5'-0"	5'-0"	7'-8"	4'-6"	4'-10"	6'-9"
5 x 3/8	10.000	25.000	41.9	6'-3"	6'-3"	6'-4"	8'-10"	6'-1"	6'-4"	7'-9"
5 x 1/2	13.333	33.333	55.5	6'-10"	6'-10"	6'-11"	9'-8"	6'-9"	7'-0"	8'-7"
6 x 1/4	9.600	28.800	33.8	6'-6"	6'-6"	6'-7"	9'-3"	6'-3"	6'-8"	8'-2"
6 x 3/8	14.400	43.200	50.1	7'-5"	7'-6"	7'-7"	10'-7"	7'-4"	7'-7"	9'-4"
6 x 1/2	19.200	57.600	66.4	8'-2"	8'-3"	8'-4"	11'-8"	8'-1"	8'-5"	10'-3"
7 x 1/4	13.067	45.733	39.2	7'-7"	7'-7"	7'-9"	10'-9"	7'-6"	7'-9"	9'-6"
7 x 3/8	19.600	68.600	58.2	8'-8"	8'-8"	8'-10"	12'-4"	8'-7"	8'-11"	10'-11"
7 x 1/2	26.133	91.467	77.3	9'-6"	9'-7"	9'-9"	13'-7"	9'-5"	9'-9"	12'-0"

Heavy Duty Grating

Use this table when evaluating spans & loads for the following types of Heavy Duty steel grating:

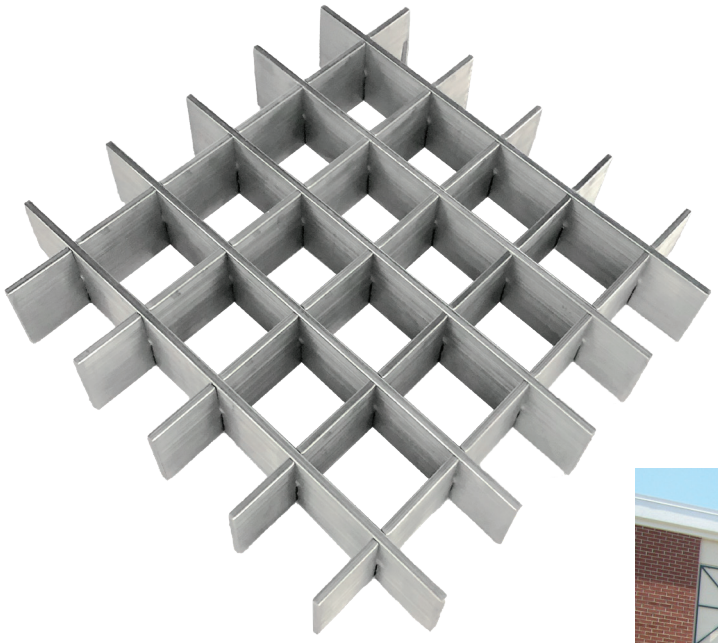
38-W-4 and 38-W-2

38 Space Load Table



				Maximum Safe Span						
Bearing Bar Size	Section Modulus psf	Moment of Inertia psf	Approx. Weight psf	H-25 Load	H-20 Load	H-15 Load	Auto Traffic	5 Ton Forklift	3 Ton Forklift	1 Ton Forklift
1 x 1/4	0.211	0.105	5.4	0'-8"	0'-8"	0'-7"	0'-9"	0'-6"	0'-5"	0'-5"
1 x 5/16	0.263	0.132	6.5	0'-10"	0'-9"	0'-8"	0'-10"	0'-6"	0'-5"	0'-6"
1 x 3/8	0.316	0.158	7.6	0'-10"	0'-10"	0'-8"	0'-11"	0'-7"	0'-6"	0'-7"
1-1/4 x 1/4	0.329	0.206	6.5	0'-11"	0'-10"	0'-9"	1'-0"	0'-8"	0'-6"	0'-7"
1-1/4 x 5/16	0.411	0.257	7.8	1'-0"	0'-11"	0'-10"	1'-2"	0'-8"	0'-7"	0'-9"
1-1/4 x 3/8	0.493	0.308	9.2	1'-1"	1'-0"	0'-11"	1'-4"	0'-9"	0'-7"	0'-10"
1-1/2 x 1/4	0.474	0.355	7.6	1'-1"	1'-0"	0'-10"	1'-3"	0'-9"	0'-7"	0'-10"
1-1/2 x 5/16	0.592	0.444	9.2	1'-3"	1'-1"	1'-0"	1'-6"	0'-10"	0'-8"	1'-0"
1-1/2 x 3/8	0.711	0.533	10.8	1'-4"	1'-3"	1'-1"	1'-9"	0'-11"	0'-9"	1'-2"
1-3/4 x 1/4	0.645	0.564	8.6	1'-4"	1'-2"	1'-0"	1'-7"	0'-10"	0'-9"	1'-0"
1-3/4 x 5/16	0.806	0.705	10.5	1'-5"	1'-3"	1'-2"	1'-11"	0'-11"	0'-10"	1'-3"
1-3/4 x 3/8	0.967	0.846	12.4	1'-7"	1'-5"	1'-3"	2'-3"	1'-1"	1'-0"	1'-6"
2 x 1/4	0.842	0.842	9.7	1'-5"	1'-4"	1'-2"	2'-0"	1'-0"	0'-11"	1'-4"
2 x 5/16	1.053	1.053	11.9	1'-8"	1'-6"	1'-4"	2'-5"	1'-1"	1'-0"	1'-7"
2 x 3/8	1.263	1.263	14.0	1'-9"	1'-8"	1'-6"	2'-10"	1'-3"	1'-2"	1'-11"
2-1/4 x 1/4	1.066	1.199	10.8	1'-8"	1'-6"	1'-4"	2'-5"	1'-1"	1'-1"	1'-8"
2-1/4 x 5/16	1.332	1.499	13.2	1'-10"	1'-8"	1'-6"	3'-0"	1'-3"	1'-3"	2'-0"
2-1/4 x 3/8	1.599	1.799	15.6	2'-0"	1'-10"	1'-8"	3'-6"	1'-5"	1'-5"	2'-5"
2-1/2 x 1/4	1.316	1.645	11.9	1'-10"	1'-8"	1'-6"	2'-11"	1'-3"	1'-3"	2'-0"
2-1/2 x 5/16	1.645	2.056	14.5	2'-1"	1'-11"	1'-9"	3'-7"	1'-6"	1'-6"	2'-6"
2-1/2 x 3/8	1.974	2.467	17.2	2'-3"	2'-1"	2'-0"	4'-2"	1'-8"	1'-9"	2'-11"
3 x 1/4	1.895	2.842	14.0	2'-2"	2'-1"	1'-11"	4'-1"	1'-8"	1'-8"	2'-10"
3 x 5/16	2.368	3.553	17.2	2'-6"	2'-4"	2'-3"	4'-9"	1'-11"	2'-0"	3'-6"
3 x 3/8	2.842	4.263	20.4	2'-10"	2'-8"	2'-7"	5'-0"	2'-3"	2'-5"	4'-2"
3-1/2 x 1/4	2.579	4.513	16.2	2'-8"	2'-6"	2'-5"	5'-1"	2'-1"	2'-2"	3'-9"
3-1/2 x 5/16	3.224	5.641	19.9	3'-1"	2'-11"	2'-10"	5'-6"	2'-6"	2'-8"	4'-8"
3-1/2 x 3/8	3.868	6.770	23.7	3'-6"	3'-4"	3'-4"	5'-10"	2'-11"	3'-2"	5'-3"
4 x 1/4	3.368	6.737	18.3	3'-2"	3'-0"	2'-11"	5'-10"	2'-7"	2'-9"	4'-11"
4 x 5/16	4.211	8.421	22.6	3'-8"	3'-7"	3'-7"	6'-3"	3'-2"	3'-5"	5'-7"
4 x 3/8	5.053	10.105	26.9	4'-3"	4'-2"	4'-2"	6'-8"	3'-8"	4'-0"	6'-0"
4-1/2 x 1/4	4.263	9.592	20.4	3'-9"	3'-7"	3'-7"	6'-7"	3'-2"	3'-5"	5'-10"
4-1/2 x 5/16	5.329	11.990	25.3	4'-5"	4'-4"	4'-4"	7'-1"	3'-11"	4'-3"	6'-4"
4-1/2 x 3/8	6.395	14.388	30.1	5'-1"	5'-0"	5'-1"	7'-6"	4'-7"	5'-0"	6'-9"
5 x 1/4	5.263	13.158	22.6	4'-4"	4'-3"	4'-3"	7'-4"	3'-10"	4'-2"	6'-6"
5 x 3/8	7.895	19.737	33.3	5'-10"	5'-10"	5'-11"	8'-4"	5'-6"	6'-0"	7'-6"
5 x 1/2	10.526	26.316	44.1	6'-5"	6'-5"	6'-6"	9'-2"	6'-4"	6'-8"	8'-3"
6 x 1/4	7.579	22.737	26.9	5'-10"	5'-10"	5'-11"	8'-9"	5'-4"	5'-11"	7'-10"
6 x 3/8	11.368	34.105	39.8	6'-11"	7'-0"	7'-1"	10'-0"	6'-11"	7'-3"	9'-0"
6 x 1/2	15.158	45.474	52.7	7'-8"	7'-8"	7'-10"	11'-1"	7'-7"	8'-0"	9'-11"
7 x 1/4	10.316	36.105	31.2	7'-1"	7'-2"	7'-3"	10'-3"	7'-1"	7'-5"	9'-2"
7 x 3/8	15.474	54.158	46.2	8'-1"	8'-2"	8'-4"	11'-8"	8'-1"	8'-5"	10'-6"
7 x 1/2	20.632	72.211	61.2	8'-11"	9'-0"	9'-2"	12'-11"	8'-11"	9'-4"	11'-6"

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Egg-Crate Grating

Egg-Crate Grating is a dove tail product with bearing bars and cross bars of equal depths. The spacing of the grating is equal in both bearing bar and cross bar directions and can be configured to any spacing needed for your application. Egg-Crate Grating is available in carbon steel, stainless steel and aluminum.

Architectural Products

Interstate Gratings' complete line of bar gratings and Architectural Products offer a distinct, contemporary design for architectural accents. Increased spacing between the bearing bars provides security and structural integrity without restricting sight lines and ventilation. The perfect merger of form and function, these products can be fully fabricated to complement design creativity.

- Security
- Ventilation
- Fencing
- Handrail Infill
- Sunscreens
- Architectural Accents



VisiShield panels placed horizontally provide solar protection at building entrance.





Architectural Products



Welded steel grating fence panels



Aluminum panels installed as radial accent



Ground floor security/ventilation screen



Handrail infill panels





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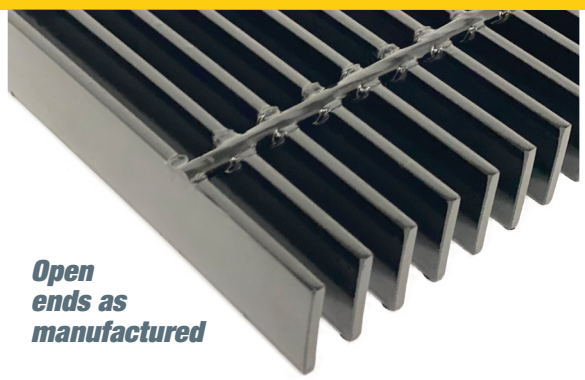
Banding

As manufactured, grating panels are provided with open ends. Optional trim banding, a metal flat bar welded to the open ends of the panel, provides additional transverse stiffness and a finished architectural appearance. Banding should be specified for all removable grating panels, the closed end of a banded panel providing additional worker safety during the removal and replacement process.

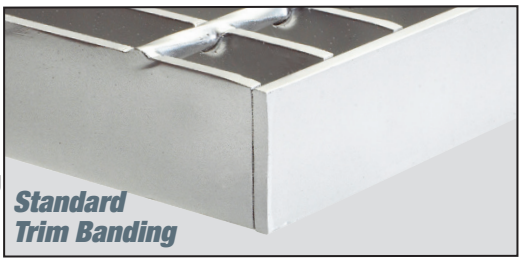
Gratings subject to vehicular loads should always be specified as banded. In these applications, the band bar helps reduce impact stresses by transferring loads to adjacent bearing bars and further resists deformation caused by repetitive traffic patterns on open end gratings.

Trench banding, where the band bar is elevated above the bottom of the bearing bars, is appropriate for drainage applications. The elevated band bar allows for efficient drainage and will not trap liquids between the band bar and the grating support.

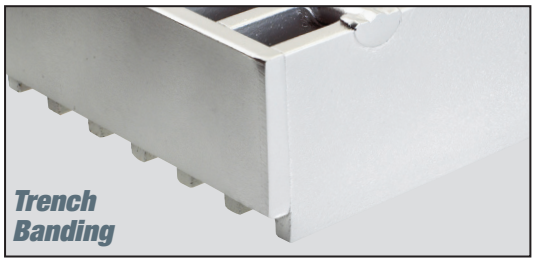
Load banding, where each bearing bar is welded to the band bar, helps distribute load throughout the grating panel. See Banding Weld Standards for specific welding practices.



Open ends as manufactured



Standard Trim Banding



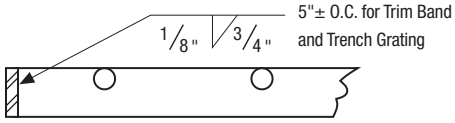
Trench Banding

Banding Weld Standards

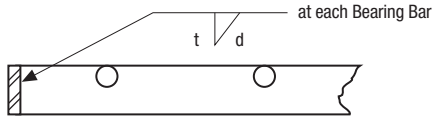
For grating with bearing bars less than 2-1/2" deep:

Standard Trim Banding

For grating with bearing bars less than 2-1/2" deep:

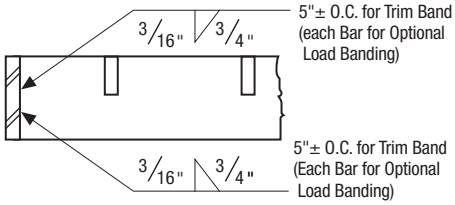


Load Banding (Optional)

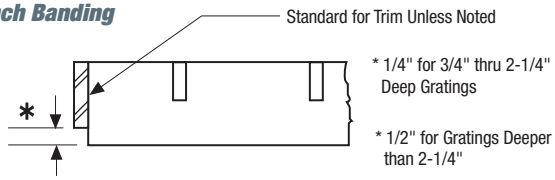


For grating with bearing bars 2-1/2" and deeper:

For grating with bearing bars 2-1/2" and deeper:



Trench Banding



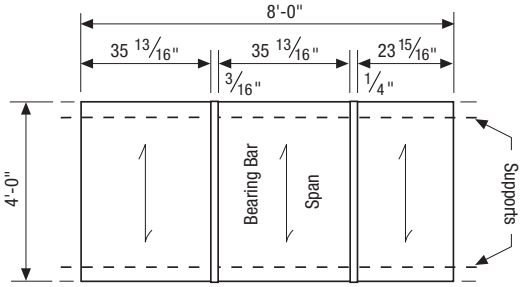
Panel Layout

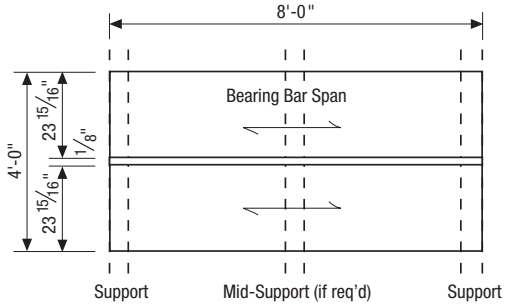
Stock grating panels are manufactured in nominal 24" and 36" wide panels. These sizes allow for efficient layout and waste minimization when fabricated to your exact specification.

Unlike competing grating products, individual grating panels do not require supports on all four sides of each cut piece. Bar grating panels only require support perpendicular to the bearing bar span. There is no need to place supports parallel to the bearing bars where adjacent panels are installed in succession.

The following diagrams illustrate proper layout and support of a simple bar grating platform.

Typical Panel Layouts





Grating Attachment

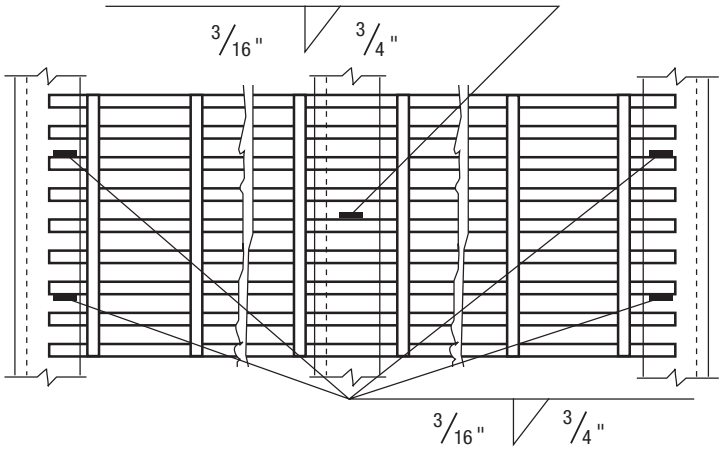
Welded Installation

All grating must be firmly fastened in place and welding panels to the supporting structure provides a superior, permanent installation. The diagram below indicates the recommended minimum weld size and spacing for pedestrian applications. This minimum spacing also applies to pedestrian applications where mechanical fasteners are specified.

Vehicular applications typically require additional welding, size and spacing as determined by the specifying authority.

Minimum Weld Pattern

One weld in middle of panel at each intermediate support

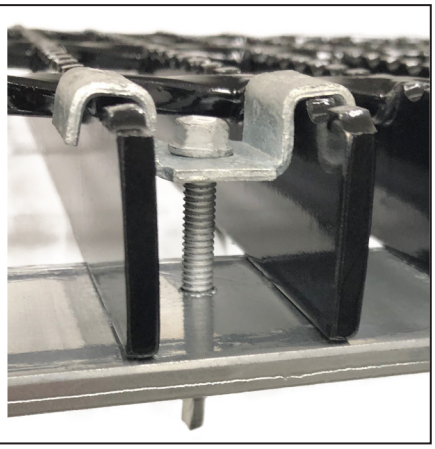


Welds at ends of bearing bar approximately 6 inches from each side of panel

Mechanical Fasteners

Saddle Clips

Bent clips bridging two bearing bars, available in galvanized steel, stainless steel or aluminum. Standard bolt holes are 5/16".

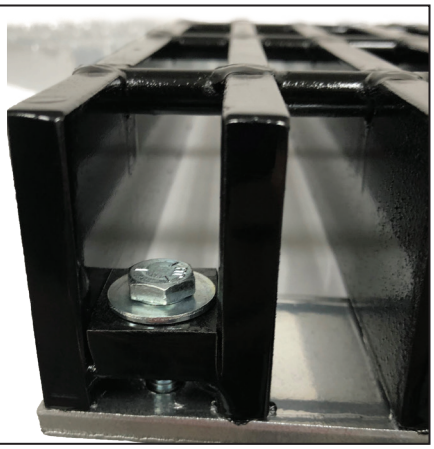


Tek Screws

Clima Seal or Stainless Steel Tek Screws are available to order upon request.

Weld Lugs

Plates punched with holes and shop welded between the bearing bars to facilitate bolting to the supporting structure. Bolts, screws or other connecting hardware shall be supplied by others.



"G" Clips

Mechanical fasteners that are installed on the top surface of the grating and create a friction connection with the flange supporting the panel. "G" Clips are easily installed without drilling or welding.



Counter Bore Anchor Tabs

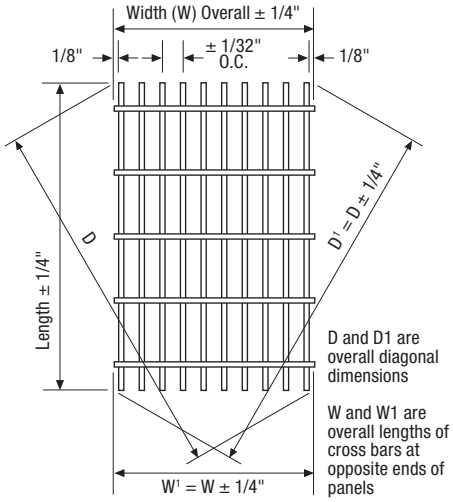
To be used with narrow spacing of close mesh gratings that require a solid fastener. Counter bore allows for the use of self-drilling fasteners which are recessed below the top surface.



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Manufacturing Tolerances

Overall Dimensions and Squareness

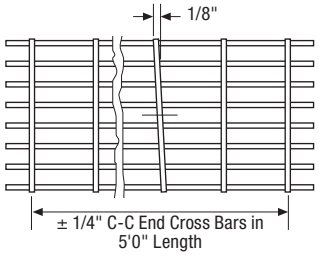


D and D1 are overall diagonal dimensions

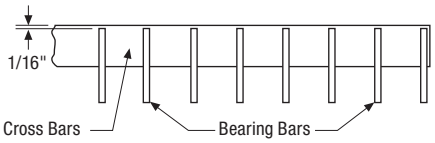
W and W1 are overall lengths of cross bars at opposite ends of panels

overall dimensions and squareness
Sweep 1/200 of Span

Cross Bar Alignment & Spacing

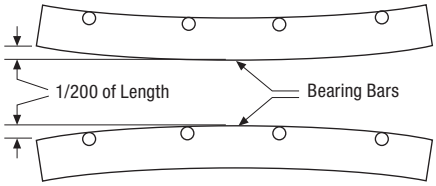


Cross Bar Location

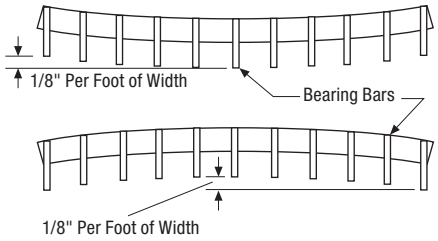


All Dimensions are Maximum Permissible

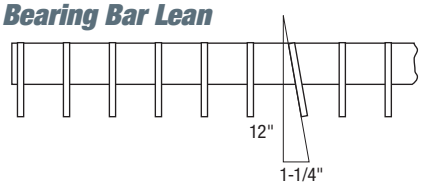
Longitudinal Bow



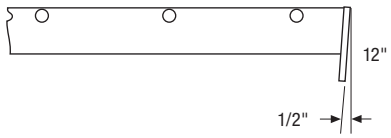
Transverse



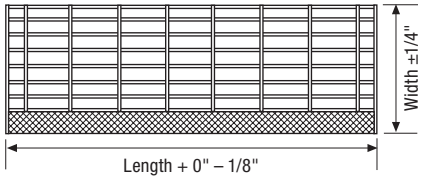
Bearing Bar Lean



Stair Tread Carrier Plate Lean

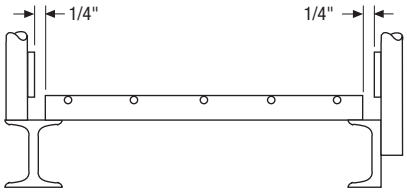


Stair Tread Tolerance

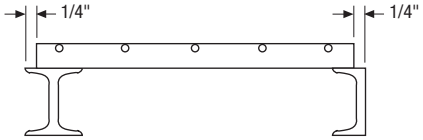


Installation Clearances

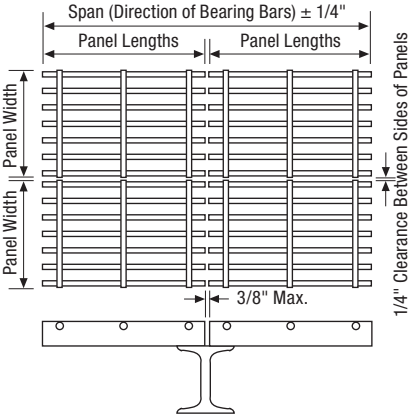
Handrail Posts & Toe Plate



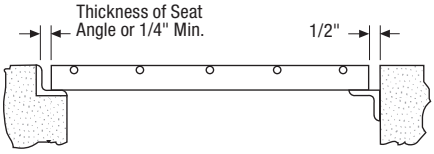
Beam & Channel



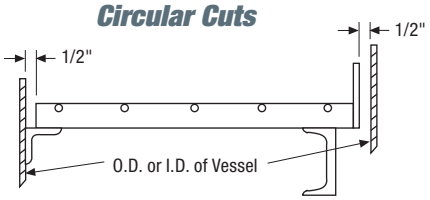
Panel Clearances



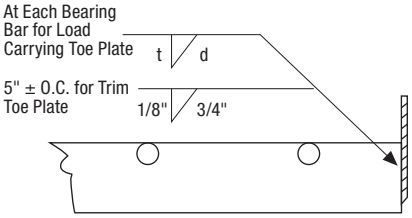
Angle Support in Concrete

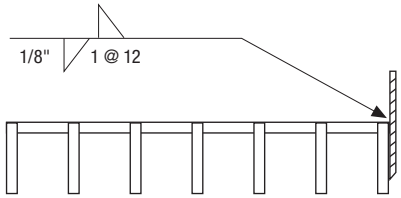


Circular Cuts

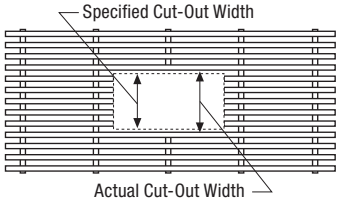


Toe Plate Weld Standards





Cut-Outs Made to Closest Adjacent Bearing Bars



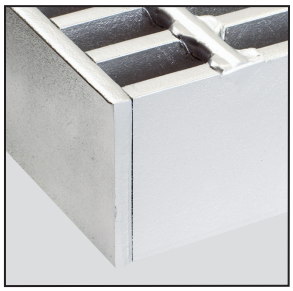
Glossary

Anchor – A device by which grating is attached to its supports.

Band – A flat bar welded to the end of a grating panel, or along the side of a cutout, and extending neither above nor below the bearing bars.

Load Carrying Band: A band used to transfer load between bearing bars.

Trim Band: A band which carries no load, used primarily for appearance and closing open ends.



Bearing Bars – Load-carrying main elements made from steel, aluminum or stainless steel, extending in the direction of the grating span.

Bearing Bar Centers – The distance center-to-center of the bearing bars.

Carriers – Flats or angles which are welded to the grating panel and nosing of a stair tread and are bolted to a stair stringer to support the tread.

Clear Opening – The distance between faces of bearing bars in rectangular gratings, or between a bent connecting bar and a bearing bar in a riveted grating.

Cross Bars – The connecting bars which extend across the bearing bars, usually perpendicular to them. They may be bent into a corrugated or sinuous pattern and, where they intersect the bearing bars, are welded, forged or mechanically locked to them.

Cross Bar Centers – The distance center-to-center of the cross bars.

Curved Cut – A cutout following a curved pattern.

Cutout – An area of grating removed to clear an obstruction or to permit pipes, ducts, columns, etc. to pass through the grating.

Electro-Forged – A process of combining hydraulic pressure and heat fusion to forge bearing bars and cross bars into a panel grid.

Finish – The coating, usually paint or galvanizing, which is applied to the grating.

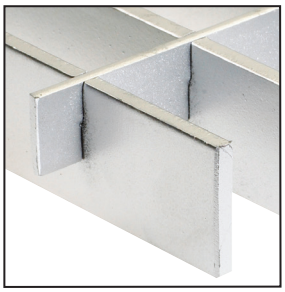
Grating – An open grid assembly of metal bars, in which the bearing bars, running in one direction, are spaced by rigid attachment to cross bars running perpendicular to them or by bent connecting bars extending between them.

Hinged Panel – Grating panels which are hinged to their supports or to other grating parts.

Length – Refer to Span of Grating

Load-Carrying Band – see Band

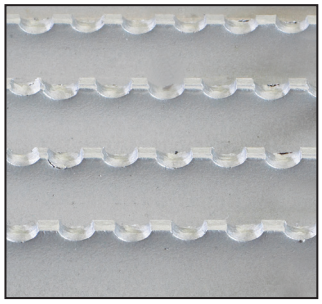
Nosing – A special "L" section member serving as the front or leading edge of a stair tread, or of grating at the head of a stair.



Pressure-Locked Grating – Pressure-locked means bearing bars are locked in position by cross bar deformation instead of riveting or welding. Several proven methods include:

- Expansion of an extruded or drawn tubular cross bar;
- Extruded cross bar deformed or swaged between bearing bars;
- Press assembly of rectangular cross bars into slotted bearing bars as pictured above.

Radially Cut Grating – Rectangular grating which is cut into panels shaped as annular segments, for use in circular or annular areas.



Serrated Grating – Grating which has the top surfaces of the bearing bars or cross bars, or both, notched.

Span of Grating – The distance between points of grating support, or the dimension of the bearing bars in this direction.

Straight Cut – That portion of the cut edge or cutout of a grating which follows a straight line.

Toe Plate – A flat bar attached against the outer edge of a grating or rear edge of a tread, and projecting above the top surface of the grating or tread to form a lip or curb.

Tread – A panel of grating having carriers and a nosing attached by welding, and designed specifically to serve as a stair tread.

Trim Band – see Band

Welded Grating – Grating in which the bearing bars and cross bars are joined at their intersections by either electro-forging or conventional hand welding.

Width – The overall dimension of a grating panel, measured perpendicular to the bearing bars, and in the same direction as the cross bars.

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