ALUMINUM FEATURES & BENEFITS

Aluminum Provides a Unique Combination of Properties

...which makes it one of the most versatile engineering and construction materials available today!!

As a natural resource, aluminum is our most abundant metallic element. Its light weight mass (about a third the weight of copper or steel), unmatched strength-to-weight ratio and excellent corrosion resistance under the majority of service conditions makes it an excellent material for the manufacturing of bar grating.

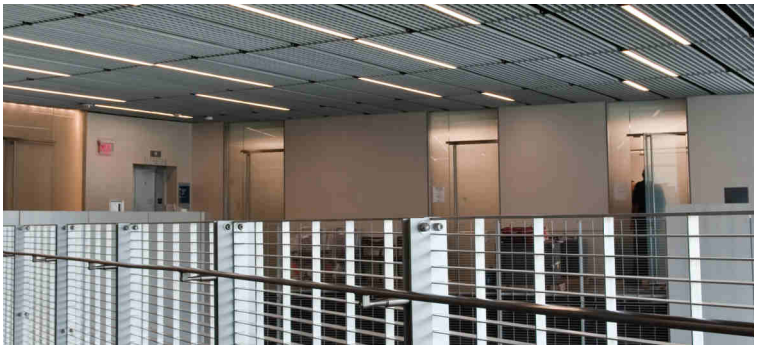
Aluminum can be recycled and as a result, makes it an environmentally friendly material unlike some other grating material. Aluminum is durable and will offer years of service without showing wear or decay. It is also non-toxic so it can be easily cleaned and does not absorb bacteria sustaining particles. As a result it is a good candidate for food processing facilities. The material is also resilient; it can deflect under loads and then spring back.

All these attributes make aluminum grating an ideal solution for many special grating applications such as: sewage and waste water treatment plants, off-shore drilling rigs, the chemical processing industry, the paper mill industry and marine superstructure applications. Because of its natural attractiveness, aluminum grating is also used in many architectural and commercial applications including sun screens, ceiling tiles, vent grilles, fencing, building facades, fountains, nature and wildlife walkways, and entranceways.

Aluminum is the *"Lightweight Champion"*

Reasons Why:

- Aluminum is Non-Toxic
- Aluminum is Light Weight
- Aluminum is Durable
- Aluminum is our Most Abundant Metallic Element
- Aluminum has Excellent Corrosion Resistance
- Aluminum is Resilient
- Aluminum has High Strength-to-Weight Ratio
- Aluminum can be Customized in the Field
- Aluminum can be Easily Recycled
- Aluminum is Naturally Attractive
- Aluminum is Versatile



ALUMINUM PRODUCTS

Aluminum Rectangular, I-Bar & LITEBAR

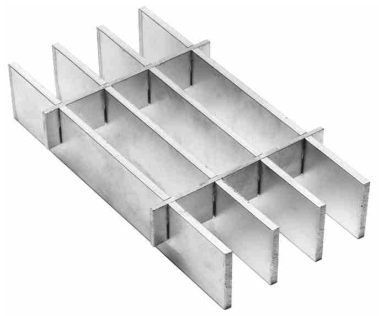
SG Series, SGI Series & SGLi Series

A type of pressure locked grating made by permanently attaching cross bars to bearing bars through a pressure applied swaging process. Bearing bars are either rectangular or "I" shaped and range in size from 1" through 2-1/2". Both Rectangular Bar and I-Bar are offered in 1-3/16" and 15/16" spacings, as well as ADA (Sept. 2010) compliant spacings. Cross bars are available on 4" and 2" centers. A serrated surface (rectangular bar) or striated surface (I-Bar) is available for skid resistance. OnGrip® Spray Traction Surface is also available.

Aluminum Flush Top

SGF Series

A type of pressure locked grating in which the cross bars are in the same plane relative to the top surface of the grating. Bearing bar sizes range from 1" x 1⁄8" through 2-1⁄2" x 3⁄16" in 1⁄4" increments. Bearing bar spacing of 1-3⁄16", 15⁄16", 11⁄16" and 7⁄16" c.c. and cross bar spacing of 4" or 2" are available. Where skid resistance is desired, a serrated surface can be provided. Aluminum Flush Top is available in spacings which provide a 1⁄4" or 1⁄2" opening in conformance with provisions of the ADA for grating products. OnGrip® Spray Traction Surface is also available.



Aluminum Dove Tail

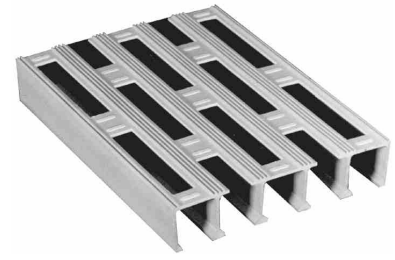
ADT Series

A type of pressure locked grating where bearing bars and cross bars are precision slotted, assembled in egg-crate fashion, and hydraulically pressed together to form a panel grid. Bearing bars range from 1" x 1/8" through 2-1/2" x 3/16" in 1/4" increments. Grating spacings for Aluminum Dove Tail include the standards, as well as the ADA (September 2010) compliant spacings. Many engineers prefer the bi-directional, rectilinear look and feel of Aluminum Dove Tail grating. OnGrip® Spray Traction Surface is also available.

Aluminum Riveted

AR Series

A type of aluminum grating which combines straight bearing bars and bent connecting bars riveted together at their contact points. Riveted grating, although being the oldest style of industrial footwalk, is still the choice of many engineers due to its reliability and durability. All popular sizes and spacings of riveted grating are supplied by Grating Systems with an emphasis on quality and service. OnGrip® Spray Traction Surface is also available.



Aluminum Plank

A type of aluminum grating which is available in 6" wide sections, and either plain sided or interlocking. Plank can be provided in sections up to 26' 0" in length, or fabricated per plans and specs. Plank grating is available unpunched as an economical and structurally superior substitute for aluminum checkerplate, or with a variety of punch/patterns. OnGrip® Spray Traction Surface is also available.

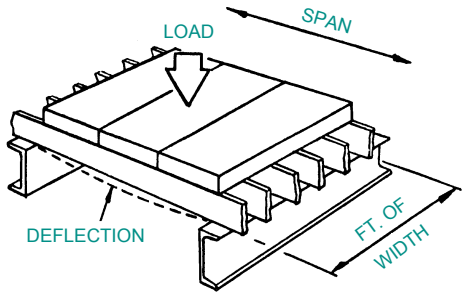
ALUMINUM DESIGN CRITERIA

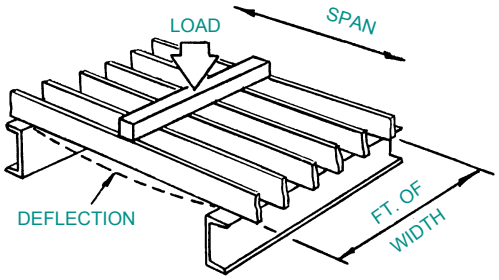
The tables of safe loads which follow have been computed using the following design parameters:

U = Uniform Load - lbs/ft^2
C = Concentrated Load - lbs/ft of grating width
S = Section Modulus - in^3/ft of grating width
I = Moment of Inertia - in^4/ft of grating width
L = Simple Clear Span - feet
D = Deflection - inches
E = Modulus of Elasticity (10,000,000 psi)
F = Allowable Bending Stress (12,000 psi)
See note below
M = Bending Moment

Design Service

Available at no charge to the specifying architect/ engineer or fabricator, is access to a computer program which provides uniform load and deflection (actual or fraction of span) analysis of grating products. Just call, write or fax your design criteria – loading, span, allowable deflection, or grating size desired – and we will provide you with the information you require.





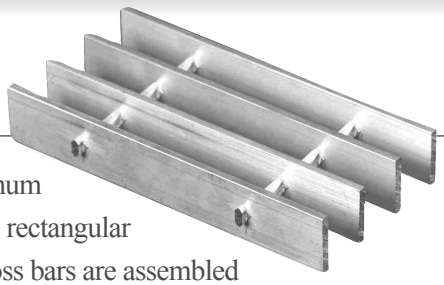
	Uniform Load	Concentrated Load
Step 1. Determine M:	$M = \frac{FS}{12}$	$M = \frac{FS}{12}$
Step 2. Determine U or C:	$U = \frac{8M}{L^2}$	$C = \frac{4M}{L}$
Step 3. Check D*:	$D = \frac{5UL\,(L \times 12)^3}{384\,EI}$	$D = \frac{C\,(L \times 12)^3}{48\,EI}$

**Deflection should be limited to 1/4" under 100# uniform load to afford pedestrian comfort.*

Aluminum Grating is best suited for use in conjunction with pedestrian traffic, and for very light, rubber pneumatic tired rolling traffic (carts, dollies and hand trucks). For other rolling loads (forklifts, cars, trucks, etc.) see the Heavy Duty Steel Grating section.

ALUMINUM RECTANGULAR BAR

SG SERIES



The most widely used aluminum pressure locked grating is the rectangular bar SG series. The square cross bars are assembled through punched diamond shaped holes in rectangular bearing bars and are permanently locked into place by a swaging process.

It provides clean crisp lines using recessed cross bar and eliminates the need for any type of welding to form the panels. By using the most modern technology available, swaged bar grating allows for a variety of spacings including those that conform to the "Americans with Disabilities Act". Because of its aesthetic appeal and the ability to meet tight tolerances, this product is often used for architectural applications. OnGrip® Spray Traction Surface is also available.

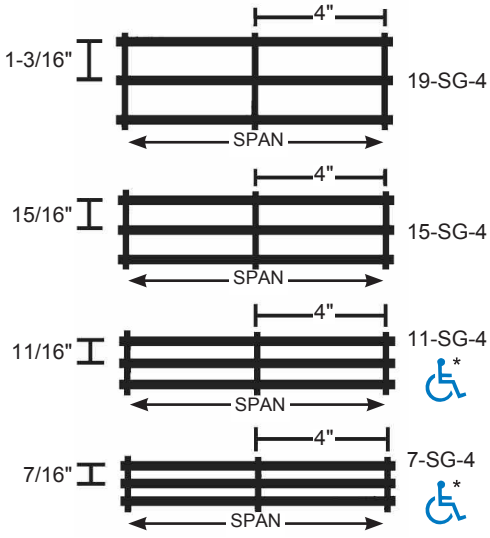
Serrated surface also available.

****8 Space available upon request.***

GRATING PROFILES AVAILABLE...

SG SERIES Aluminum Rectangular Bar

All profiles shown below are also available with 2" cross bar centers. Product numbers would be 19-SG-2, 15-SG-2, 11-SG-2 and 7-SG-2

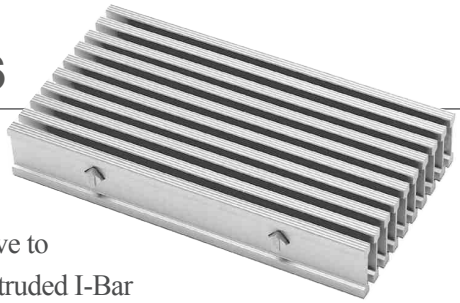


See load tables begining on page 12.

***Note:** Conforms with the spacing requirements of ADA (September 2010) when installed with the elongated opening perpendicular to the dominant direction of travel. See ADA Guidelines

ALUMINUM I-BAR

SGI SERIES

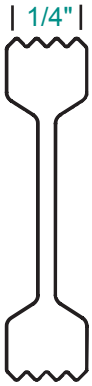


The I-Bar SGI Series offers a popular and reasonably priced alternative to rectangular bar grating. Extruded I-Bar sections have the same load carrying capacity with less weight per square foot than rectangular bars.

The striated top and bottom flanges provide a "built-in" skid resistance feature without the added cost of serration. On-Grip® Spray Traction Surface is also available.

Our closest mesh ▼

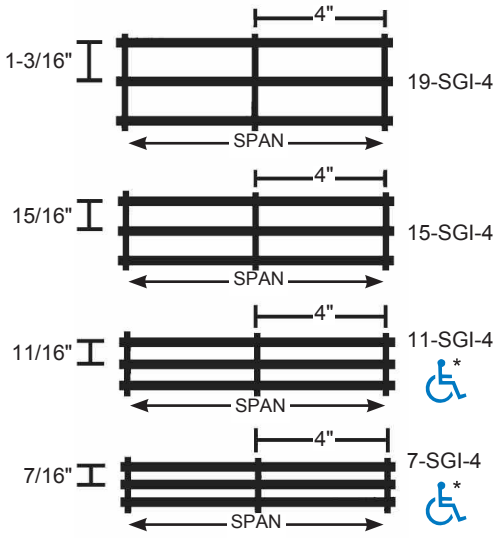
End view ▶



GRATING PROFILES AVAILABLE...

SGI SERIES Aluminum I-Bar

All profiles shown below are also available with 2" cross bar centers. Product numbers would be 19-SGI-2, 15-SGI-2, 11-SGI-2 and 7-SGI-2



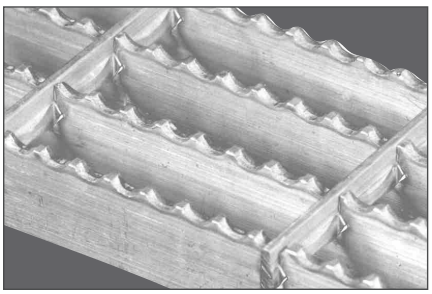
See load tables begining on page 12.

***Note:** Conforms with the spacing requirements of ADA (September 2010) when installed with the elongated opening perpendicular to the dominant direction of travel. See ADA Guidelines

ALUMINUM FLUSH TOP

SGF SERIES

Maximum walking surface, cosmetic appeal, economy of shop fabrication and ease of field alteration make the Aluminum Flush Top series the premier choice when pressure locked aluminum grating is being specified. This series offers a type of pressure locked grating in which the cross bars are in the same plane relative to the top surface of the grating. For those areas that receive a great deal of pedestrian traffic, our 1/4" opening 7-SGF-4 close space product is available which conforms with the provisions of the "Americans with Disabilities Act".



OnGrip® Spray Traction Surface is also available.

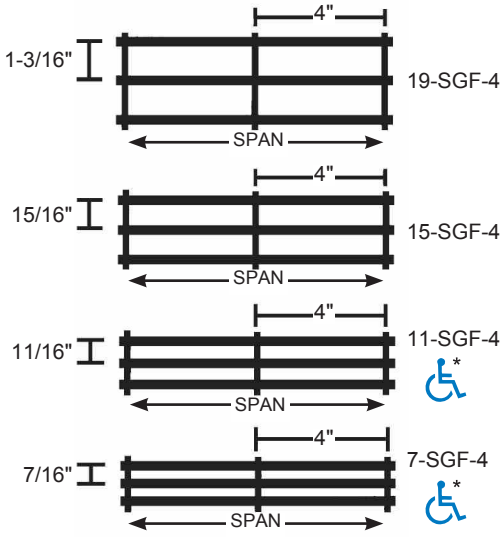
◀ ***Serrated surface also available***

8 Space available upon request.

GRATING PROFILES AVAILABLE...

SGF SERIES Aluminum Flush Top

All profiles shown below are also available with 2" cross bar centers. Product numbers would be 19-SGF-2, 15-SGF-2, 11-SGF-2 and 7-SGF-2



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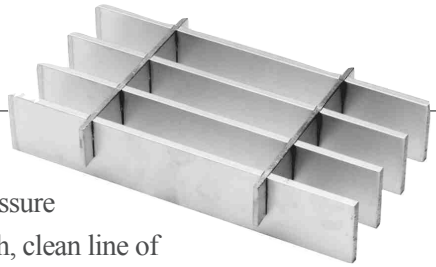
ALUMINUM DOVE TAIL

ADT SERIES



Traditionally designed, Aluminum Dove Tail slot pressure locked grating offers a smooth, clean line of a flush top rectangular cross bar. Bearing bars and cross bars are precision slotted, assembled in egg-crate fashion and hydraulically pressed together to form a tightly locked, rigidly stable panel grid. This grating is available in spacings, which provide a 1/4" or 1/2" opening in conformance with provisions for the "Americans with Disabilities Act" (v). These products are part of our Grater Access line and are available with cross bars on 2" or 4" centers. This is also a popular style in the architectural community because of the aesthetic eye appeal of the product and the ability to maintain tighter tolerances. OnGrip® Spray Traction Surface is also available.

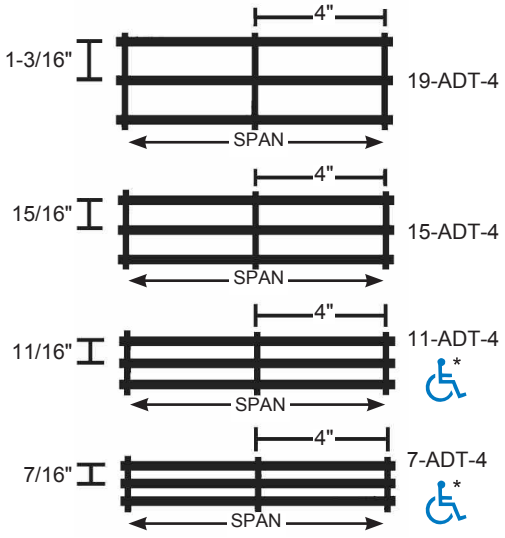
Serrated surface also available.

****8 Space available upon request.***

GRATING PROFILES AVAILABLE...

ADT SERIES Aluminum Dove Tail

All profiles shown below are also available with 2" cross bar centers. Product numbers would be 19-ADT-2, 15-ADT-2, 11-ADT-2 and 7-ADT-2

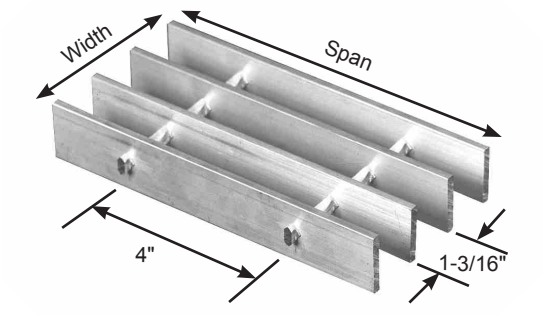


See load tables begining on page 12.

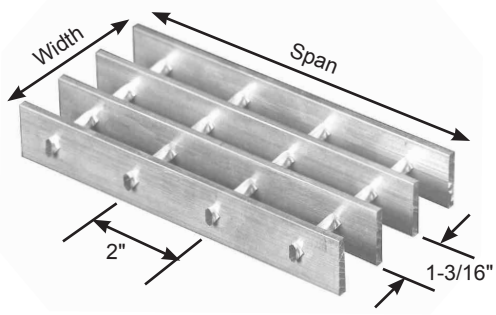
***Note:** Conforms with the spacing requirements of ADA (September 2010) when installed with the elongated opening perpendicular to the dominant direction of travel. See ADA Guidelines

19 SPACE PROFILES

ALUMINUM **RECTANGULAR BAR**



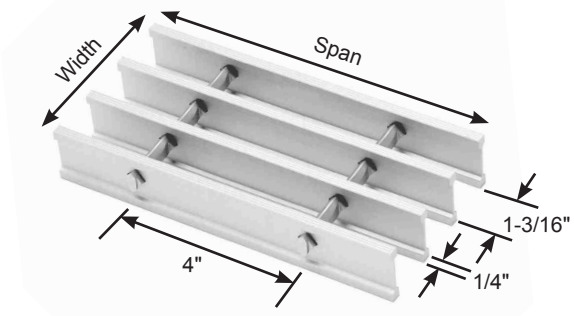
19-SG-4



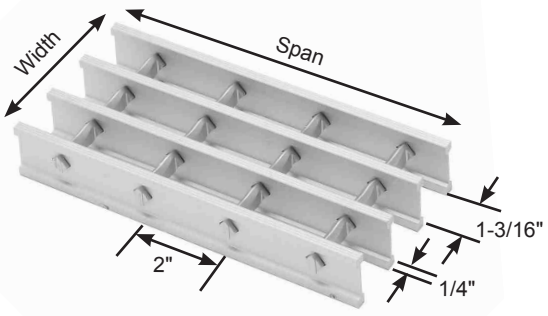
19-SG-2

% Open Area*		
Bars	1/8"	3/16"
4" cc	85%	80%
2" cc	81%	77%

ALUMINUM **I-BAR**



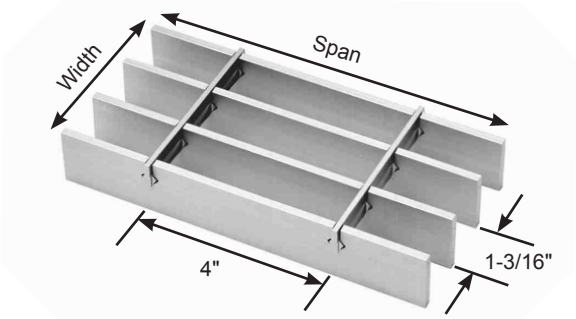
19-SGI-4



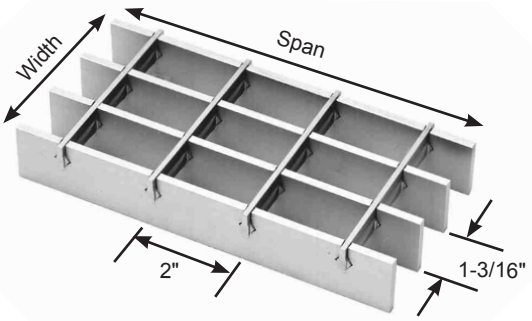
19-SGI-2

% Open Area*	
4" cc	73%
2" cc	67%

ALUMINUM **FLUSH TOP**



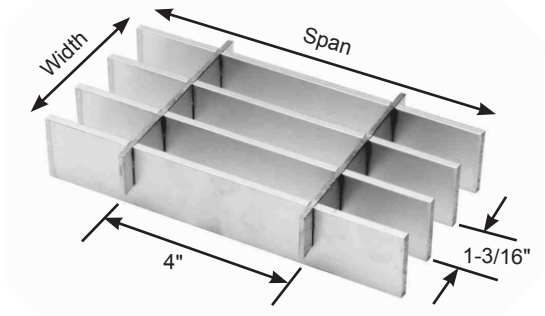
19-SGF-4



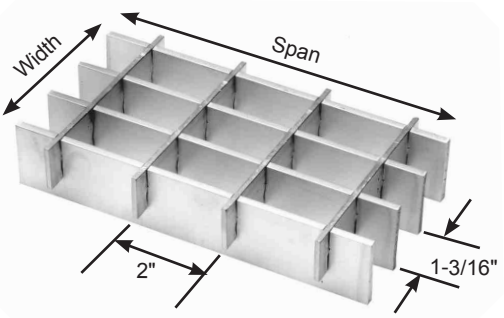
19-SGF-2

% Open Area*		
Bars	1/8"	3/16"
4" cc	85%	80%
2" cc	81%	77%

ALUMINUM **DOVE TAIL**



19-ADT-4



19-ADT-2

% Open Area*		
Bars	1/8"	3/16"
4" cc	86%	81%
2" cc	84%	79%

19 SPACE LOAD TABLES

Bar Size, Inches	Ped Span, Inches	Wt.* Lbs. Sq. Ft.	Sec. Prop Sx*, in³ / Ix*, in⁴		Clear 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"
1 x 1/8	39	1.71	0.211	U	421	269	187	137								
				D	0.144	0.225	0.324	0.439								
			0.105	C	421	337	281	241								
				D	0.115	0.180	0.259	0.353								
1 x 3/16	44	2.46	0.316	U	632	404	281	206	158							
				D	0.144	0.225	0.324	0.441	0.576							
I-Bar		1.99	0.158	C	632	505	421	361	316							
				D	0.115	0.180	0.259	0.353	0.461							
1-1/4 x 1/8	47	2.08	0.329	U	658	421	292	215	164							
				D	0.115	0.180	0.259	0.353	0.459							
			0.206	C	658	526	439	376	329							
				D	0.092	0.144	0.208	0.282	0.369							
1-1/4 x 3/16	52	3.01	0.493	U	987	632	439	322	247	195						
				D	0.115	0.180	0.259	0.353	0.461	0.583						
I-Bar		2.34	0.308	C	987	789	658	564	493	439						
				D	0.092	0.144	0.207	0.282	0.368	0.467						
1-1/2 x 1/8	53	2.46	0.474	U	947	606	421	309	237	187						
				D	0.096	0.150	0.216	0.294	0.384	0.486						
			0.355	C	947	758	632	541	474	421						
				D	0.077	0.120	0.173	0.235	0.307	0.389						
1-1/2 x 3/16	59	3.56	0.711	U	1421	909	632	464	355	281	227					
				D	0.096	0.150	0.216	0.294	0.384	0.487	0.599					
I-Bar		2.70	0.533	C	1421	1137	947	812	711	632	568					
				D	0.077	0.120	0.173	0.235	0.307	0.389	0.480					
1-3/4 x 3/16	66	4.12	0.967	U	1934	1238	860	632	484	382	309	256	215			
				D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.623	0.741			
I-Bar		3.06	0.846	C	1934	1547	1289	1105	967	860	774	703	645			
				D	0.066	0.103	0.148	0.202	0.263	0.333	0.412	0.498	0.593			
2 x 3/16	73	4.68	1.263	U	2526	1617	1123	825	632	499	404	334	281	239		
				D	0.072	0.113	0.162	0.221	0.288	0.364	0.450	0.544	0.649	0.760		
I-Bar		3.43	1.263	C	2526	2021	1684	1444	1263	1123	1011	919	842	777		
				D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608		
2-1/4 x 3/16	80	5.24	1.599	U	3197	2046	1421	1044	799	632	512	423	355	303	261	
				D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.677	0.784	
I-Bar		3.75	1.798	C	3197	2558	2132	1827	1599	1421	1279	1163	1066	984	914	
				D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.628	
2-1/2 x 3/16	87	5.79	1.974	U	3947	2526	1754	1289	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	0.519	0.609	0.705	0.923
I-Bar		4.15	2.467	C	3947	3158	2632	2256	1974	1754	1579	1435	1316	1215	1128	987
				D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.565	0.737

U - Safe uniform load in pounds/sq. ft.

C - Safe concentrated load in pounds/ft. grating width

D - Deflection in inches

Loads and deflections given in this table are theoretical, and are based on a unit stress of 12,000 psi.

*Based on 10.105 bars/ft. of grating width. Bearing bars 1-3/16" c.c. Add .3 lbs./sq. ft. for 19-SG-2. **Note:** Grating for spans to the left of the heavy line have a deflection less than 1/4" for uniform loads of 100 lbs./sq. ft. This is the maximum deflection to afford pedestrian comfort and can be exceeded for other types of load at the discretion of the engineer. The actual Ped (pedestrian) Span under this condition is shown above for each size of grating. When serrated grating is specified, the depth of grating required for a specific load will be 1/4" greater than that shown in these tables.

Panel Width Chart (in.) - 19-SG-4, 19-SG-2, 19-SGLi-4, 19-SGLi-2, 19-SGF-4, 19-SGF-2, 19-ADT-4 & 19-ADT-2
Dimensions Are Out-to-Out of Bearing Bars**

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3/16" Bars	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
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
3/16" Bars	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

**Add 1/4" for extended cross bars. Deduct 1/16" for 1/8"" bearing bars. Standard panel widths indicated in teal.

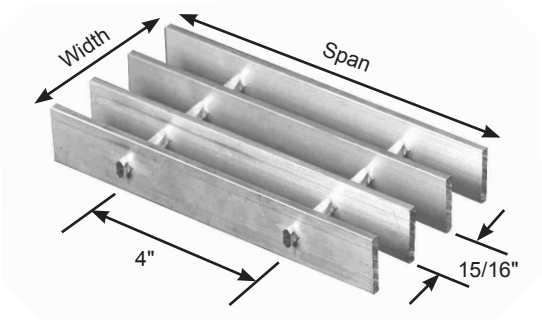
Panel Width Chart (in.) - 19-SGI-4 & 19-SGI-2
Dimensions Are Out-to-Out of Bearing Bars**

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1/4" Flange	1-7/16	2-5/8	3-13/16	5	6-3/16	7-3/8	8-9/16	9-3/4	10-15/16	12-1/8	13-5/16	14-1/2	15-11/16	16-7/8	18-1/16
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1/4" Flange	19-1/4	20-7/16	21-5/8	22-13/16	24	25-3/16	26-3/8	27-9/16	28-3/4	29-15/16	31-1/8	32-5/16	33-1/2	34-11/16	35-7/8

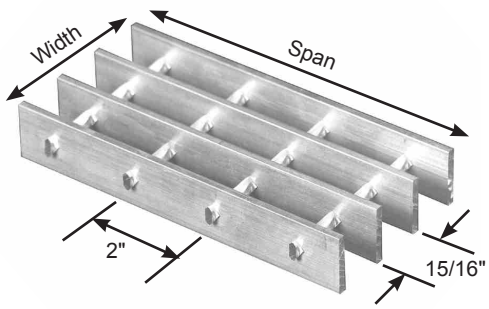
**Bar thickness is 1/4" at top and bottom. Add 1/4" for extended cross bars. Standard panel widths indicated in teal.

15 SPACE PROFILES

ALUMINUM **RECTANGULAR BAR**



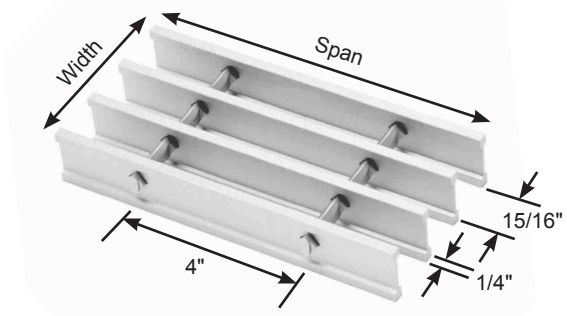
15-SG-4



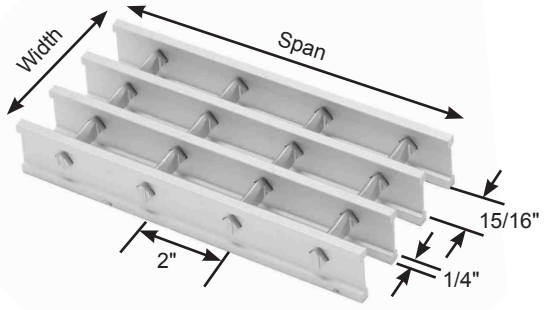
15-SG-2

% Open Area*	
4" cc	76%
2" cc	73%

ALUMINUM **I-BAR**



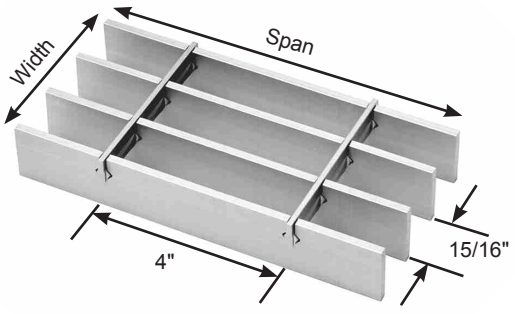
15-SGI-4



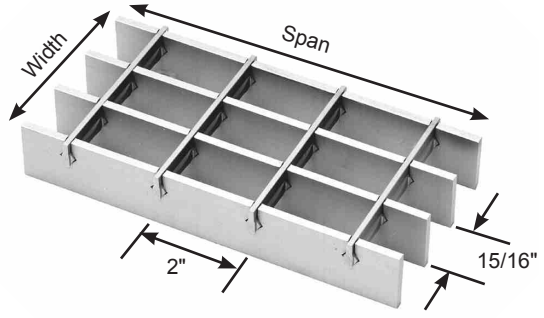
15-SGI-2

% Open Area*	
4" cc	68%
2" cc	62%

ALUMINUM **FLUSH TOP**



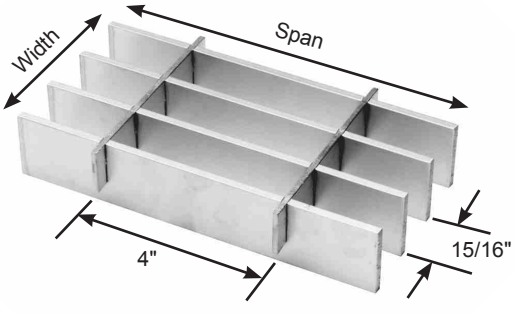
15-SGF-4



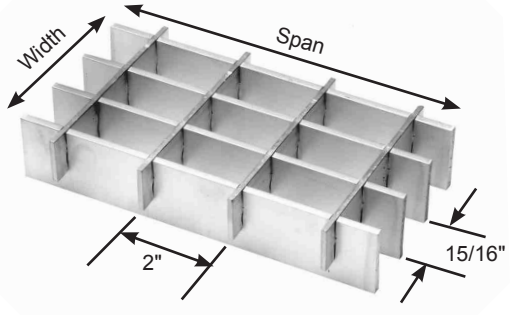
15-SGF-2

% Open Area*	
4" cc	76%
2" cc	73%

ALUMINUM **DOVE TAIL**



15-ADT-4



15-ADT-2

% Open Area*	
4" cc	77%
2" cc	75%

15 SPACE LOAD TABLES

Bar Size, Inches	Ped Span, Inches	Wt.* Lbs. Sq. Ft.	Sec. Prop Sx*, in³ Ix*, in⁴		ClearSpan 2'- 0"	2'- 6"	3'- 0"	3'- 6"	4'- 0"	4'- 6"	5'- 0"	5'- 6"	6'- 0"	6'- 6"	7'- 0"	8'- 0"
1 x 3/16	46	3.06	0.400	U	800	512	356	261	200							
				D	0.144	0.225	0.324	0.441	0.576							
I-Bar		2.42	0.200	C	800	640	533	457	400							
				D	0.115	0.180	0.259	0.353	0.461							
1-1/4 x 3/16	55	3.75	0.625	U	1250	800	556	408	313	247	200					
				D	0.115	0.180	0.259	0.353	0.462	0.583	0.720					
I-Bar		2.87	0.391	C	1250	1000	833	714	625	556	500					
				D	0.092	0.144	0.207	0.282	0.369	0.467	0.576					
1-1/2 x 3/16	63	4.45	0.900	U	1800	1152	800	588	450	356	288	238				
				D	0.096	0.150	0.216	0.294	0.384	0.487	0.600	0.726				
I-Bar		3.33	0.675	C	1800	1440	1200	1029	900	800	720	655				
				D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581				
1-3/4 x 3/16	70	5.16	1.225	U	2450	1568	1089	800	613	484	392	324	272			
				D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.740			
I-Bar		3.78	1.072	C	2450	1960	1633	1400	1225	1089	980	891	817			
				D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.593			
2 x 3/16	78	5.87	1.600	U	3200	2048	1422	1045	800	632	512	423	356	303	261	
				D	0.072	0.113	0.162	0.221	0.288	0.364	0.450	0.544	0.649	0.761	0.881	
I-Bar		4.25	1.600	C	3200	2560	2133	1829	1600	1422	1280	1164	1067	985	914	
				D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.519	0.609	0.705	
2-1/4 x 3/16	85	6.57	2.025	U	4050	2592	1800	1322	1013	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	0.675	0.785	1.023
I-Bar		4.66	2.278	C	4050	3240	2700	2314	2025	1800	1620	1473	1350	1246	1157	1013
				D	0.051	0.080	0.115	0.157	0.205	0.259	0.320	0.387	0.461	0.541	0.627	0.820
2-1/2 x 3/16	92	7.27	2.500	U	5000	3200	2222	1633	1250	988	800	661	556	473	408	313
				D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.435	0.519	0.608	0.705	0.923
I-Bar		5.16	3.125	C	5000	4000	3333	2857	2500	2222	2000	1818	1667	1538	1429	1250
				D	0.046	0.072	0.104	0.141	0.184	0.233	0.288	0.348	0.415	0.487	0.565	0.737

U - Safe uniform load in pounds/sq. ft.

C - Safe concentrated load in pounds/ft. grating width

D - Deflection in inches

Loads and deflections given in this table are theoretical, and are based on a unit stress of 12,000 psi.

*Based on 12.8 bars/ft. of grating width. Bearing bars 15/16" c.c. Add .3 lbs./sq. ft. for 15-SG-2. 1/8" bearing bars available by inquiry. **Note:** Grating for spans to the left of the heavy line have a deflection less than 1/4" for uniform loads of 100 lbs./sq. ft. This is the maximum deflection to afford pedestrian comfort and can be exceeded for other types of load at the discretion of the engineer. The actual Ped (pedestrian) Span under this condition is shown above for each size of grating. When serrated grating is specified, the depth of grating required for a specific load will be 1/4" greater than that shown in these tables.

Panel Width Chart (in.) - 15-SG-4, 15-SG-2, 15-SGLi-4, 15-SGLi-2, 15-SGF-4, 15-SGF-2, 15-ADT-4 & 15-ADT-2

Dimensions Are Out-to-Out of Bearing Bars**

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3/16" Bars	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
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
3/16" Bars	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
No. of Bars	32	33	34	35	36	37	38	39							
3/16" Bars	29-1/4	30-3/16	31-1/8	32-1/16	33	33-15/16	34-7/8	35-13/16							

**Add 1/4" for extended cross bars. Deduct 1/16" for 1/8" bearing bars. Standard panel widths indicated in teal.

Panel Width Chart (in.) - 15-SGI-4 & 15-SGI-2

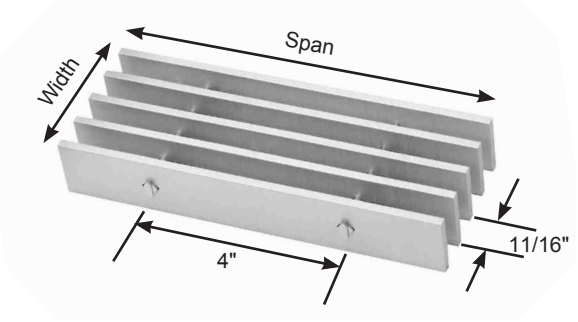
Dimensions Are Out-to-Out of Bearing Bars**

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1/4" Flange	1-3/16	2-1/8	3-1/16	4	4-15/16	5-7/8	6-13/16	7-3/4	8-11/16	9-5/8	10-9/16	11-1/2	12-7/16	13-3/8	14-5/16
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1/4" Flange	15-1/4	16-3/16	17-1/8	18-1/16	19	19-15/16	20-7/8	21-13/16	22-3/4	23-11/16	24-5/8	25-9/16	26-1/2	27-7/16	28-3/8
No. of Bars	32	33	34	35	36	37	38	39							
1/4" Flange	29-5/16	30-1/4	31-3/16	32-1/8	33-1/16	34	34-15/16	35-7/8							

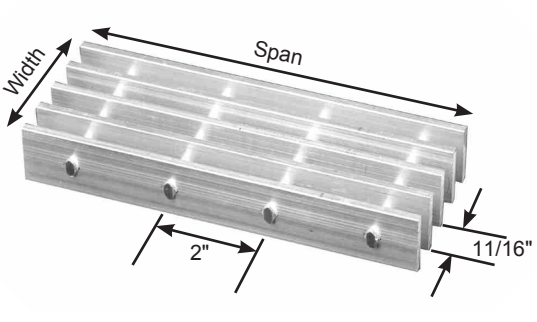
**Bar thickness is 1/4" at top and bottom. Add 1/4" for extended cross bars. Standard panel widths indicated in teal.

11 SPACE PROFILES *Products conform to ADA specifications*

ALUMINUM **RECTANGULAR BAR**



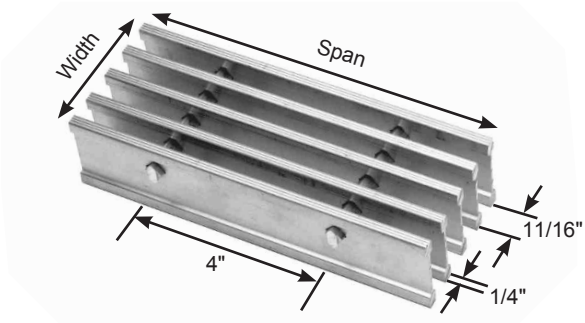
11-SG-4



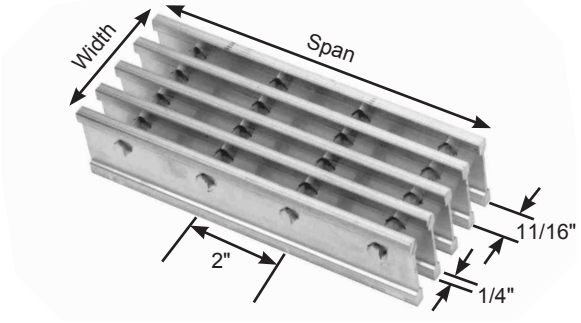
11-SG-2

% Open Area*	
4" cc	69%
2" cc	66%

ALUMINUM **I-BAR**



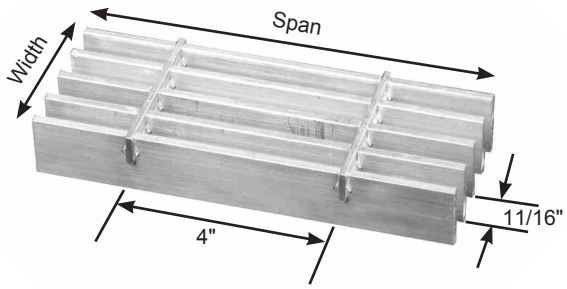
11-SGI-4



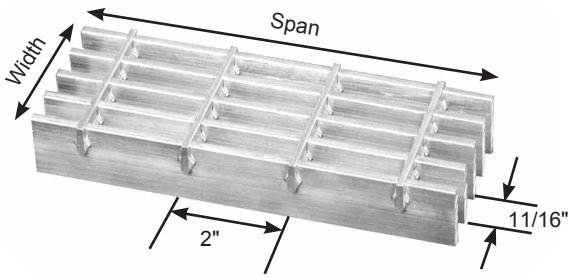
11-SGI-2

% Open Area*	
4" cc	59%
2" cc	55%

ALUMINUM **FLUSH TOP**



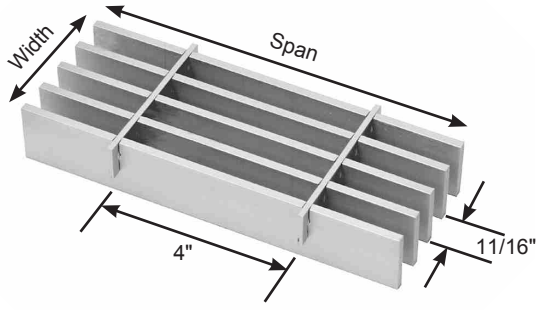
11-SGF-4



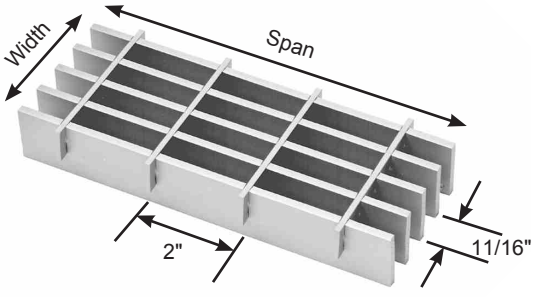
11-SGF-2

% Open Area*	
4" cc	69%
2" cc	66%

ALUMINUM **DOVE TAIL**



11-ADT-4



11-ADT-2

% Open Area*	
4" cc	70%
2" cc	68%

11 SPACE LOAD TABLES

Bar Size, Inches	Ped Span, Inches	Wt.* Lbs. Sq. Ft.	Sec. Prop Sx*, in³ Ix*, in⁴		Clear 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"
1 x 3/16	50	4.13	0.545	U	1091	698	485	356	273	215						
				D	0.144	0.225	0.324	0.441	0.577	0.727						
I-Bar		3.18	0.273	C	1091	873	727	623	545	485						
				D	0.115	0.180	0.259	0.353	0.460	0.583						
1-1/4 x 3/16	59	5.13	0.852	U	1705	1091	758	557	426	337	273					
				D	0.115	0.180	0.259	0.353	0.461	0.584	0.721					
I-Bar		3.79	0.533	C	1705	1364	1136	974	852	758	682					
				D	0.092	0.144	0.207	0.282	0.369	0.467	0.576					
1-1/2 x 3/16	68	6.21	1.227	U	2455	1571	1091	802	614	485	393	325	273			
				D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.727	0.865			
I-Bar		4.42	0.920	C	2455	1964	1636	1403	1227	1091	982	893	818			
				D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691			
1-3/4 x 3/16	76	7.18	1.670	U	3341	2138	1485	1091	835	660	535	442	371	316		
				D	0.082	0.129	0.185	0.252	0.329	0.417	0.515	0.623	0.740	0.868		
I-Bar		5.03	1.462	C	3341	2673	2227	1909	1670	1485	1336	1215	1114	1028		
				D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.593	0.695		
2 x 3/16	84	8.14	2.182	U	4364	2793	1939	1425	1091	862	698	577	485	413	356	273
				D	0.072	0.113	0.162	0.221	0.288	0.365	0.450	0.544	0.648	0.760	0.881	1.153
I-Bar		5.67	2.182	C	4364	3491	2909	2494	2182	1939	1746	1587	1455	1343	1247	1091
				D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.519	0.609	0.706	0.922
2-1/4 x 3/16	92	9.10	2.761	U	5523	3535	2455	1803	1381	1091	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	1.023
I-Bar		6.23	3.107	C	5523	4418	3682	3156	2761	2455	2209	2008	1841	1699	1578	1381
				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	100	10.06	3.409	U	6818	4364	3030	2226	1705	1347	1091	902	758	646	557	426
				D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.519	0.609	0.706	0.921
I-Bar		6.91	4.261	C	6818	5455	4546	3896	3409	3030	2727	2479	2273	2098	1948	1705
				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

U - Safe uniform load in pounds/sq. ft.

C - Safe concentrated load in pounds/ft. grating width

D - Deflection in inches

Loads and deflections given in this table are theoretical, and are based on a unit stress of 12,000 psi.

*Based on 17.455 bars/ft. of grating width. Bearing bars 11/16" c.c. Add .4 lbs./sq. ft. for 11-SGF-2. 1/8" bearing bars available by inquiry. **Note:** Grating for spans to the left of the heavy line have a deflection less than 1/4" for uniform loads of 100 lbs./sq. ft. This is the maximum deflection to afford pedestrian comfort and can be exceeded for other types of load at the discretion of the engineer. The actual Ped (pedestrian) Span under this condition is shown above for each size of grating. When serrated grating is specified, the depth of grating required for a specific load will be 1/4" greater than that shown in these tables.

Panel Width Chart (in.) - 11-SGF-4, 11-SGF-2, 11-SGLi-4, 11-SGLi-2, 11-SG-4, 11-SG-2, 11-ADT-4 & 11-ADT-2

Dimensions Are Out-to-Out of Bearing Bars**

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3/16" Bars	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
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
3/16" Bars	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
No. of Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
3/16" Bars	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
No. of Bars	47	48	49	50	51	52	53								
3/16" Bars	31-13/16	32-1/2	33-3/16	33-7/8	34-9/16	35-1/4	35-15/16								

**Add 1/4" for extended cross bars. Deduct 1/16" for 1/8" bearing bars. Standard panel widths indicated in teal.

Panel Width Chart (in.) - 11-SGI-4 & 11-SGI-2

Dimensions Are Out-to-Out of Bearing Bars**

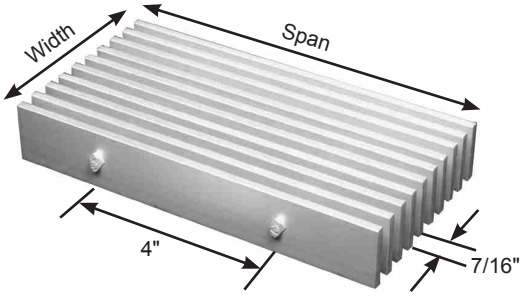
No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1/4" Flange	15/16	1-5/8	2-5/16	3	3-11/16	4-3/8	5-1/16	5-3/4	6-7/16	7-1/8	7-13/16	8-1/2	9-3/16	9-7/8	10-9/16
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1/4" Flange	11-1/4	11-15/16	12-5/8	13-5/16	14	14-11/16	15-3/8	16-1/16	16-3/4	17-7/16	18-1/8	18-13/16	19-1/2	20-3/16	20-7/8
No. of Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
1/4" Flange	21-9/16	22-1/4	22-15/16	23-5/8	24-5/16	25	25-11/16	26-3/8	27-1/16	27-3/4	28-7/16	29-1/8	29-13/16	30-1/2	31-3/16
No. of Bars	47	48	49	50	51	52	53								
1/4" Flange	31-7/8	32-9/16	33-1/4	33-15/16	34-5/8	35-5/16	36								

**Bar thickness is 1/4" at top and bottom. Add 1/4" for extended cross bars. Standard panel widths indicated in teal.

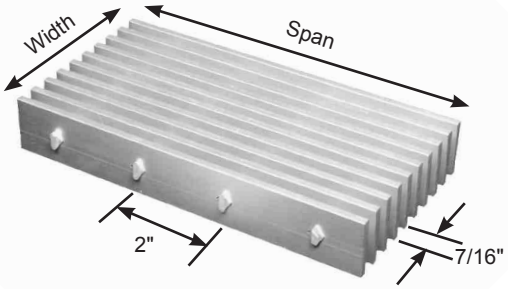
7 SPACE PROFILES

Products conform to ADA specifications

ALUMINUM **RECTANGULAR BAR**



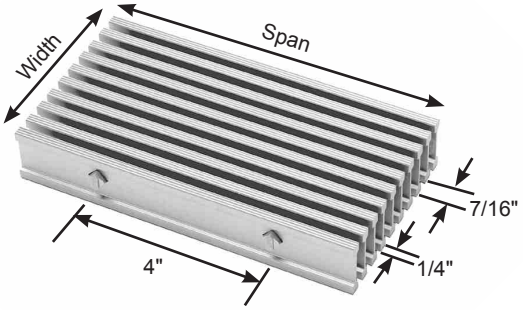
7-SG-4



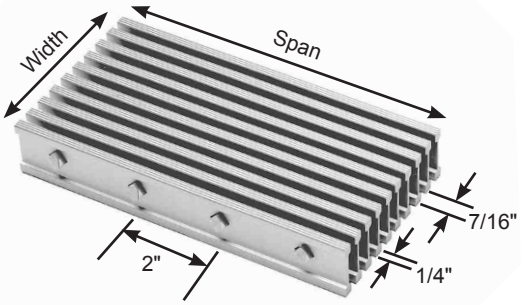
7-SG-2

% Open Area*	
4" cc	54%
2" cc	51%

ALUMINUM **I-BAR**



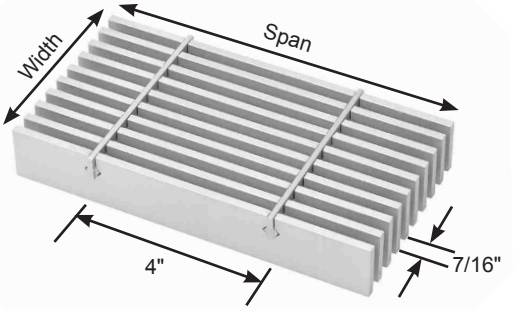
7-SGI-4



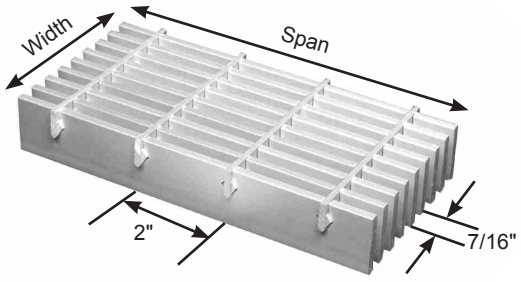
7-SGI-2

% Open Area*	
4" cc	39%
2" cc	36%

ALUMINUM **FLUSH TOP**



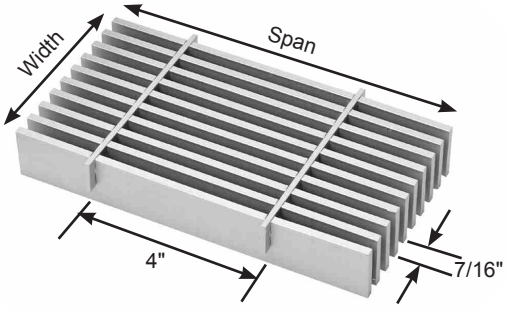
7-SGF-4



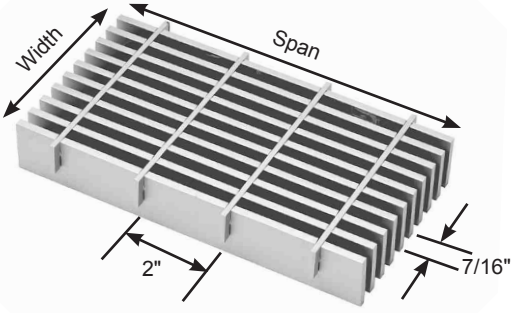
7-SGF-2

% Open Area*	
4" cc	54%
2" cc	51%

ALUMINUM **DOVE TAIL**



7-ADT-4



7-ADT-2

% Open Area*	
4" cc	55%
2" cc	53%

7 SPACE LOAD TABLES

Bar Size, Inches	Ped Span, Inches	Wt.* Lbs. Sq. Ft.	Sec. Prop Sx*, in³ / Ix*, in⁴		ClearSpan 2'- 0"	2'- 6"	3'- 0"	3'- 6"	4'- 0"	4'- 6"	5'- 0"	5'- 6"	6'- 0"	6'- 6"	7'- 0"	8'- 0"
1 x 3/16	56	6.30	0.857	U	1714	1097	762	560	429	339	274					
				D	0.144	0.225	0.324	0.441	0.577	0.730	0.899					
I-Bar		4.79	0.429	C	1714	1371	1143	980	857	762	686					
				D	0.115	0.180	0.259	0.353	0.461	0.583	0.720					
1-1/4 x 3/16	66	7.78	1.339	U	2679	1714	1190	875	670	529	429	354	298			
				D	0.115	0.180	0.259	0.353	0.461	0.583	0.721	0.871	1.038			
I-Bar		5.75	0.837	C	2679	2143	1786	1531	1339	1190	1071	974	893			
				D	0.092	0.144	0.207	0.282	0.369	0.466	0.576	0.697	0.830			
1-1/2 x 3/16	76	9.28	1.929	U	3857	2469	1714	1259	964	762	617	510	429	365		
				D	0.096	0.150	0.216	0.294	0.384	0.486	0.600	0.726	0.865	1.014		
I-Bar		6.74	1.446	C	3857	3086	2571	2204	1929	1714	1543	1403	1286	1187		
				D	0.077	0.120	0.173	0.235	0.307	0.389	0.480	0.581	0.691	0.811		
1-3/4 x 3/16	85	10.80	2.625	U	5250	3360	2333	1714	1313	1037	840	694	583	497	429	328
				D	0.082	0.129	0.185	0.252	0.329	0.417	0.514	0.622	0.740	0.869	1.009	1.316
I-Bar		7.70	2.297	C	5250	4200	3500	3000	2625	2333	2100	1909	1750	1615	1500	1313
				D	0.066	0.103	0.148	0.202	0.263	0.333	0.411	0.498	0.592	0.695	0.806	1.054
2 x 3/16	94	12.32	3.429	U	6857	4389	3048	2239	1714	1355	1097	907	762	649	560	429
				D	0.072	0.113	0.162	0.220	0.288	0.365	0.450	0.545	0.648	0.760	0.882	1.153
I-Bar		8.71	3.429	C	6857	5486	4572	3918	3429	3048	2743	2494	2286	2110	1959	1714
				D	0.058	0.090	0.130	0.176	0.230	0.292	0.360	0.436	0.518	0.608	0.706	0.921
2-1/4 x 3/16	103	13.83	4.339	U	8679	5554	3857	2834	2170	1714	1389	1148	964	822	708	542
				D	0.064	0.100	0.144	0.196	0.256	0.324	0.400	0.484	0.576	0.676	0.783	1.023
I-Bar		9.59	4.882	C	8679	6943	5786	4959	4339	3857	3471	3156	2893	2670	2480	2170
				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	111	15.33	5.357	U	10714	6857	4762	3499	2679	2116	1714	1417	1190	1014	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
I-Bar		10.66	6.697	C	10714	8572	7143	6123	5357	4762	4286	3896	3571	3297	3061	2679
				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

U - Safe uniform load in pounds/sq. ft.
C - Safe concentrated load in pounds/ft. grating width
D - Deflection in inches

Loads and deflections given in this table are theoretical, and are based on a unit stress of 12,000 psi.

*Based on 27.429 bars/ft. of grating width. Bearing bars 7/16" c.c. Add .3 lbs./sq. ft. for 7-SG-2. 1/8" bearing bars available by inquiry. **Note:** Grating for spans to the left of the heavy line have a deflection less than 1/4" for uniform loads of 100 lbs./sq. ft. This is the maximum deflection to afford pedestrian comfort and can be exceeded for other types of load at the discretion of the engineer. The actual Ped (pedestrian) Span under this condition is shown above for each size of grating. When serrated grating is specified, the depth of grating required for a specific load will be 1/4" greater than that shown in these tables.

Panel Width Chart (in.) - **7-SG-4, 7-SG-2, 7-SGLi-4, 7-SGLi-2, 7-SGF-4, 7-SGF-2, 7-ADT-4 & 7-ADT-2** Dimensions Are Out-to-Out of Bearing Bars**

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3/16" Bars	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
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
3/16" Bars	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
No. of Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
3/16" Bars	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
No. of Bars	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
3/16" Bars	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
No. of Bars	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
3/16" Bars	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
No. of Bars	77	78	79	80	81	82	83								
3/16" Bars	33-7/16	33-7/8	34-5/16	34-3/4	35-3/16	35-5/8	36-1/16								

**Add 1/4" for extended cross bars. Deduct 1/16" for 1/8" bearing bars. Standard panel widths indicated in teal.

Panel Width Chart (in.) - **7-SGI-4 & 7-SGI-2** Dimensions Are Out-to-Out of Bearing Bars**

No. of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1/4" Flange	11/16	1-1/8	1-9/16	2	2-7/16	2-7/8	3-5/16	3-3/4	4-3/16	4-5/8	5-1/16	5-1/2	5-15/16	6-3/8	6-13/16
No. of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1/4" Flange	7-1/4	7-11/16	8-1/8	8-9/16	9	9-7/16	9-7/8	10-5/16	10-3/4	11-3/16	11-5/8	12-1/16	12-1/2	12-15/16	13-3/8
No. of Bars	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
1/4" Flange	13-13/16	14-1/4	14-11/16	15-1/8	15-9/16	16	16-7/16	16-7/8	17-5/16	17-3/4	18-3/16	18-5/8	19-1/16	19-1/2	19-15/16
No. of Bars	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61
1/4" Flange	20-3/8	20-13/16	21-1/4	21-11/16	22-1/8	22-9/16	23	23-7/16	23-7/8	24-5/16	24-3/4	25-3/16	25-5/8	26-1/16	26-1/2
No. of Bars	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76
1/4" Flange	26-15/16	27-3/8	27-13/16	28-1/4	28-11/16	29-1/8	29-9/16	30	30-7/16	30-7/8	31-5/16	31-3/4	32-3/16	32-5/8	33-1/16
No. of Bars	77	78	79	80	81	82	83								
1/4" Flange	33-1/2	33-15/16	34-3/8	34-13/16	35-1/4	35-11/16	36-1/8								

**Bar thickness is 1/4" at top and bottom. Add 1/4" for extended cross bars. Standard panel widths indicated in teal.