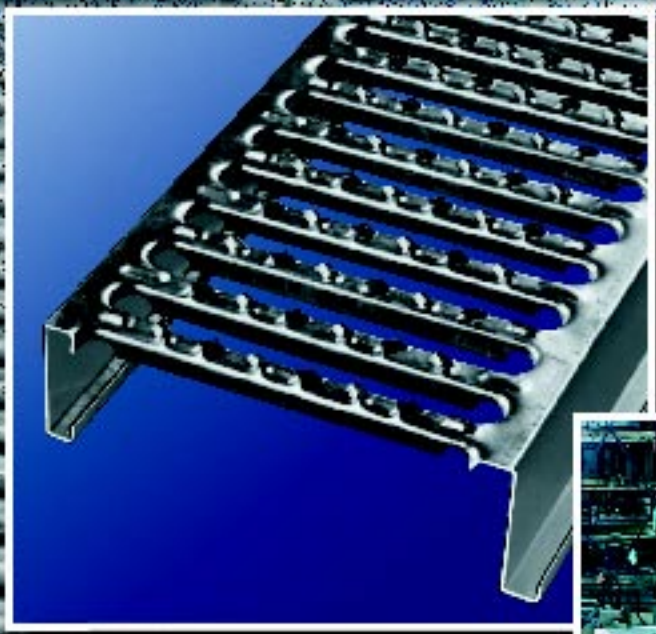
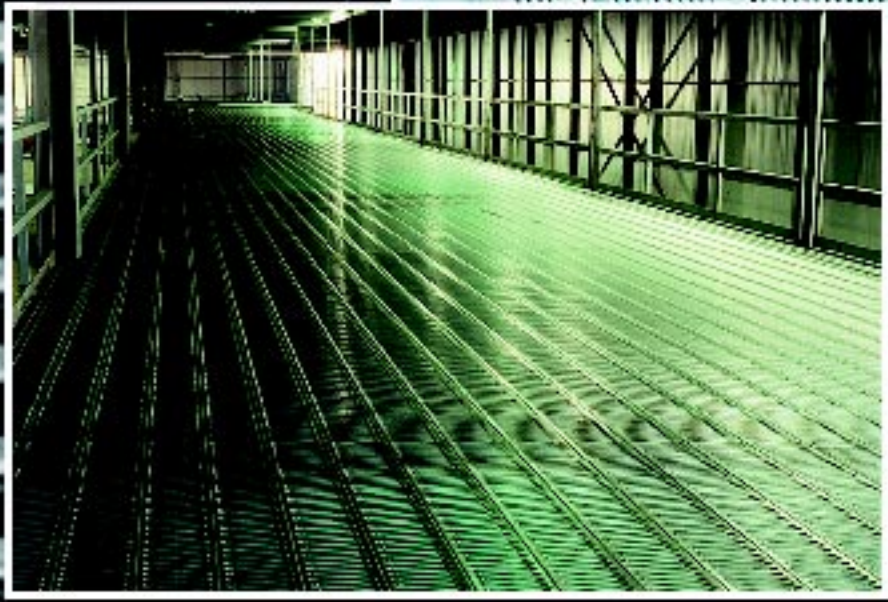
UNISTRUT®

United Interlock® Grating and Related Products





Introduction

United Interlock Plank Grating System from Unistrut fills a multitude of needs in all types of industries. This versatile product, commonly known as Interlock Grating, is used for flooring and walkways, mezzanines, stair treads, maintenance and staging platforms, scaffolding planks, architectural wall coverings and more. United Interlock Grating Systems meets your needs for strength, durability, safety and aesthetics.

Customers choose United Interlock Grating Systems for many reasons. One of the most compelling is the cost-effectiveness of such a long-lasting, easy-to-install product. Of course, others like the quality assurance that comes from extensive load testing; some appreciate our large inventories and fast delivery; and still others appreciate the strong design look our plank grating gives their project or work environment.

In addition to supplying the grating, Unistrut offers turnkey service for your project. This includes engineering, support structures, and installation.

Some of the many applications for United Interlock Grating Systems include:

- Architectural wall coverings
- Catwalks
- Maintenance and inspection walkways
- Mezzanines
- Mining and quarry tower decking
- Pedestrian ramps
- Pumping and drilling platforms
- Shelving
- Stairs
- Subflooring
- Ventilation covers for tanks and wells
- Waterplant walkways

Architectural Applications

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Interlock Grating provides a functional and aesthetically appealing look to all kinds of architectural applications. Our aluminum gratings resist corrosion to give walls, ceilings, ledges, trim, flooring, and specialty projects a clean, high-tech look that lasts.

Our interlocking plank grating works especially well in intensive-use areas. In addition to its durability, it is easy to clean and does not reflect sound like a solid surface.

Architects have often selected Interlock Grating because it protects lights, insulation support columns, wiring, and other fixtures. At the same time, the panels allow authorized personnel to access the fixtures as needed.

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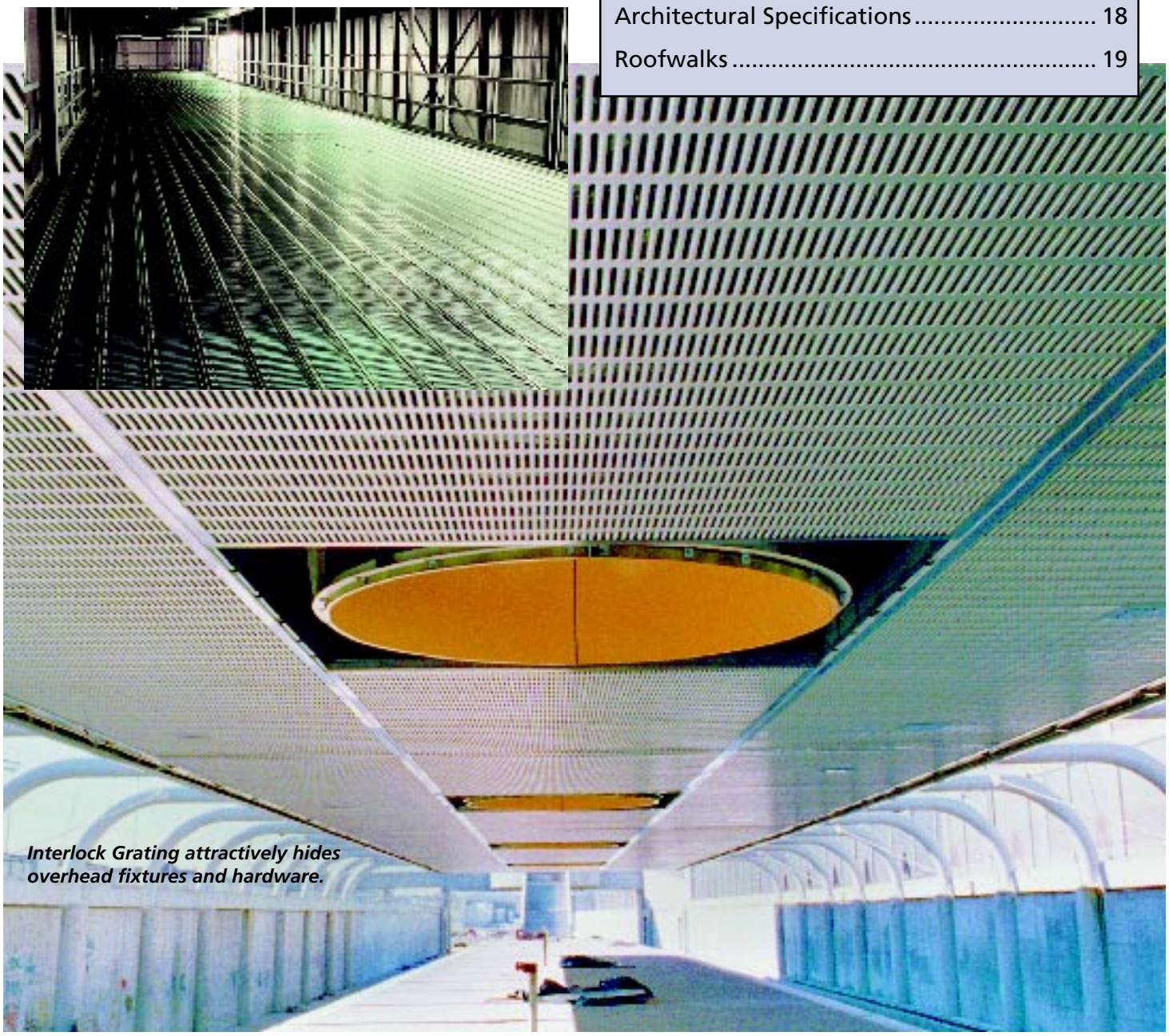

Interlock Grating attractively hides overhead fixtures and hardware.

Ease of Installation

Contractors have reported installed cost savings of up to 75% with Interlock Grating. Many factors combine to make installation quick and easy:

1) The lightweight grating is easy to handle. One person can carry a 24' plank.
2) Interlock Grating is easy to install with a minimal number of laborers.
3) Interlock Grating's light weight reduces shipping costs.
4) The planks interlock with positive friction, eliminating costly welding and bolting.
5) Field modifications are easy. Interlock Grating can be cut to size, shape, and angle at the jobsite.
6) Interlock Grating requires fewer support structures.

Project Services

United Interlock distribution network provides local support for complete project administration as desired or required by our customers. This includes engineering, design, and installation of all the United Interlock Grating Systems.

Our engineers can design a grating system which will safely span the area using existing supports at your facility, perform load and deflection tests for unusual loading conditions, advise you of the most economical placement of grating and supports, and provide fabrication and erection drawings.

We can complete your project by coordinating all aspects of installation. Our local distribution network can coordinate shipping and staging of materials, provide and supervise local installation crews, and arrange for special erection equipment services.

Plank Grating

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United Interlock Grating is engineered with a strength-to-weight ratio that allows it to withstand substantial loads while being easy to handle. The male-female legs of the roll-formed grating interlock securely, and double-male legs provide a safe finished edge for end planks.

Two standard surfaces are available: slotted-smooth and anti-skid. Anti-skid is the ideal choice when safe walking conditions are important. Die-formed teeth in the transverse ribs give you 360° of shoe-gripping traction even when the grating is wet, oily, muddy, or icy.

Punched Interlock Grating has an open area of 42% for 9" grating and 35% for 6" grating. This prevents dirt, debris, ice, and snow from building up on the surface and allows light and air to pass through. United Interlock steel grating is made from pre-galvanized steel which conforms to a G-90 thickness designation per ASTM A653. The aluminum grating is made from type 5052 aluminum with a thickness of 0.080".

Unpunched smooth surface grating is also available for special applications.

United Interlock Grating Systems are strong, economical, versatile, and easy to specify.

Variety of choices

- 6" and 9" standard-duty width
- 12" light-duty width
- 14 gauge and 18 gauge
- 1½", 2½", and 4" leg heights
- 20' and 24' stock lengths
- Anti-skid, slotted-smooth punched surfaces and solid unpunched surface
- Double male and male-female leg shapes
- Steel (6", 9" or 12") and aluminum (6"or 9")

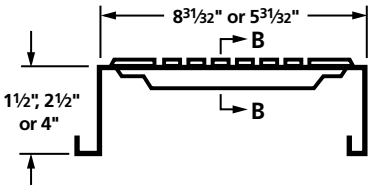
Interlock Grating Product Features

Maximizes performance and safety…

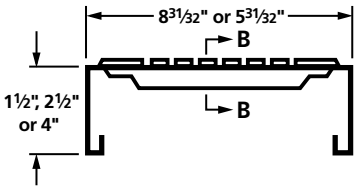
- Exclusive anti-skid surface provides 360° of slip resistance
- Superior ultimate-load performance tested in accordance with AISI standards
- All sections made from structural-grade steel
- Roll-formed design provides superior strength
- Optional heel-toe side and end plates
- Open design prevents build-up of water, grease, oil and small debris

And gives you complete project versatility.

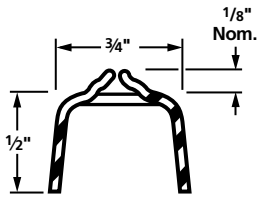
- 6", 9" and 12" plank widths allow design in 3" increments
- Standard lengths of 20' and 24', and special lengths up to 30', provide excellent design flexibility
- Choice of smooth punched, anti-skid punched or solid unpunched surfaces
- Three leg heights, and two material gauges meet a wide range of load, space and budget requirements



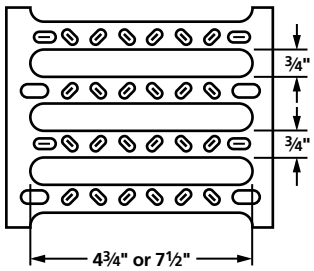
Standard Section
Male-Female Leg



Standard Section
Double-Male Leg



Section B-B
Anti-skid Rib
Cross Section



Anti-Skid Surface Shown
(Slotted-smooth
same without teeth)

United Interlock® Grating Systems—6" and 9"
Dimensions, Gauges, Surfaces and Finishes

9" Wide

Part No.	Gauge	Leg Height	Leg Shape	Finish	Surface
G 91141 G 92141	14	1½"	DM MF	PG	slotted
G 91241 G 92241	14	2½"	DM MF	PG	slotted
G 91221 G 92221	0.080"		DM MF	AL	
G 91341 G 92341	14	4"	DM MF	PG	slotted
G 91142 G 92142	14	1½"	DM MF	PG	anti-skid
G 91242 G 92242	14	2½"	DM MF	PG	anti-skid
G 91222 G 92222	0.080"		DM MF	AL	
G 91342 G 92342	14	4"	DM MF	PG	anti-skid
G 91181 G 92181	18	1½"	DM MF	PG	slotted
G 91281 G 92281	18	2½"	DM MF	PG	slotted
G 91381 G 92381	18	4"	DM MF	PG	slotted
G 91182 G 92182	18	1½"	DM MF	PG	anti-skid
G 91282 G 92282	18	2½"	DM MF	PG	anti-skid
G 91382 G 92382	18	4"	DM MF	PG	anti-skid

6" Wide

Part No.	Gauge	Leg Height	Leg Shape	Finish	Surface
G 61141 G 62141	14	1½"	DM MF	PG	slotted
G 61241 G 62241	14	2½"	DM MF	PG	slotted
G 61221 G 62221	0.080"		DM MF	AL	
G 61341 G 62341	14	4"	DM MF	PG	slotted
G 61142 G 62142	14	1½"	DM MF	PG	slotted
G 61242 G 62242	14	2½"	DM MF	PG	anti-skid
G 61222 G 62222	0.080"		DM MF	AL	
G 61342 G 62342	14	4"	DM MF	PG	anti-skid
G 61181 G 62181	18	1½"	DM MF	PG	slotted
G 61281 G 62281	18	2½"	DM MF	PG	slotted
G 61381 G 62381	18	4"	DM MF	PG	slotted
G 61182 G 62182	18	1½"	DM MF	PG	anti-skid
G 61282 G 62282	18	2½"	DM MF	PG	anti-skid
G 61382 G 62382	18	4"	DM MF	PG	anti-skid

Note: Standard grating lengths are 20' or 24'; DM–Double Male, MF–Male-Female
Unpunched smooth surface grating is also available for special applications. Contact Unistrut for more information.

Weight of Interlock Grating Galvanized Steel

		Wgt.-Lbs./ Lineal Foot		Wgt.-Lbs./ Square Foot	
Leg height	Gauge	9"	6"	9"	6"
1½"	14	3.5	2.7	4.7	5.4
	18	2.3	1.8	3.1	3.6
2½"	14	4	3.4	5.3	6.8
	18	2.7	2.2	3.6	4.4
4"	14	4.8	4.2	6.4	8.4
	18	3.2	2.8	4.3	5.6

Weight of Interlock Grating Aluminum (0.080)

		Wgt.-Lbs./ Lineal Foot		Wgt.-Lbs./ Square Foot	
Leg height	Gauge	9"	6"	9"	6"
2½"	14	1.5	1.2	2	2.3

12" Wide Planks

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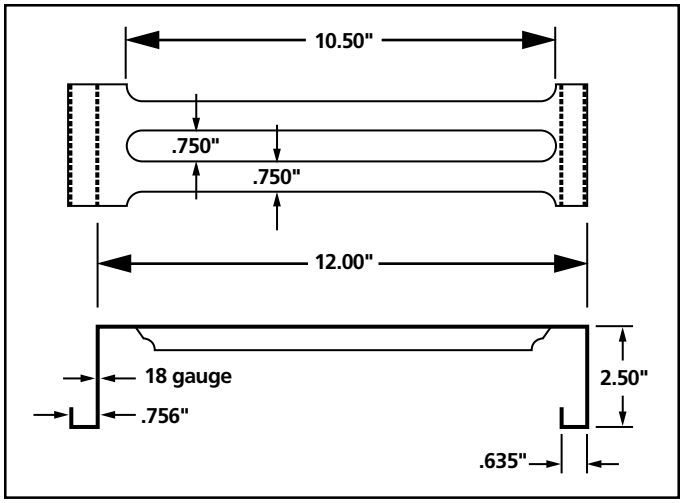
For Light Traffic Applications

Ideal for mezzanines and other large-area applications, extra-wide 12" interlocking plank grating is designed to simplify installation and reduce the cost of mezzanines, flooring, decking, staging platforms, Roofwalks® and similar applications. With a 43% open area, it allows water, light and air to pass through.

With its extra width, Unistrut 12" wide plank grating covers more area with fewer planks, lowering installation costs. Its high strength-to-weight ratio—18 gauge, 2½" leg height—makes it ideal for covering large, light-traffic areas. Its snap-together friction fit make it easy to install, with no welding or bolting required.

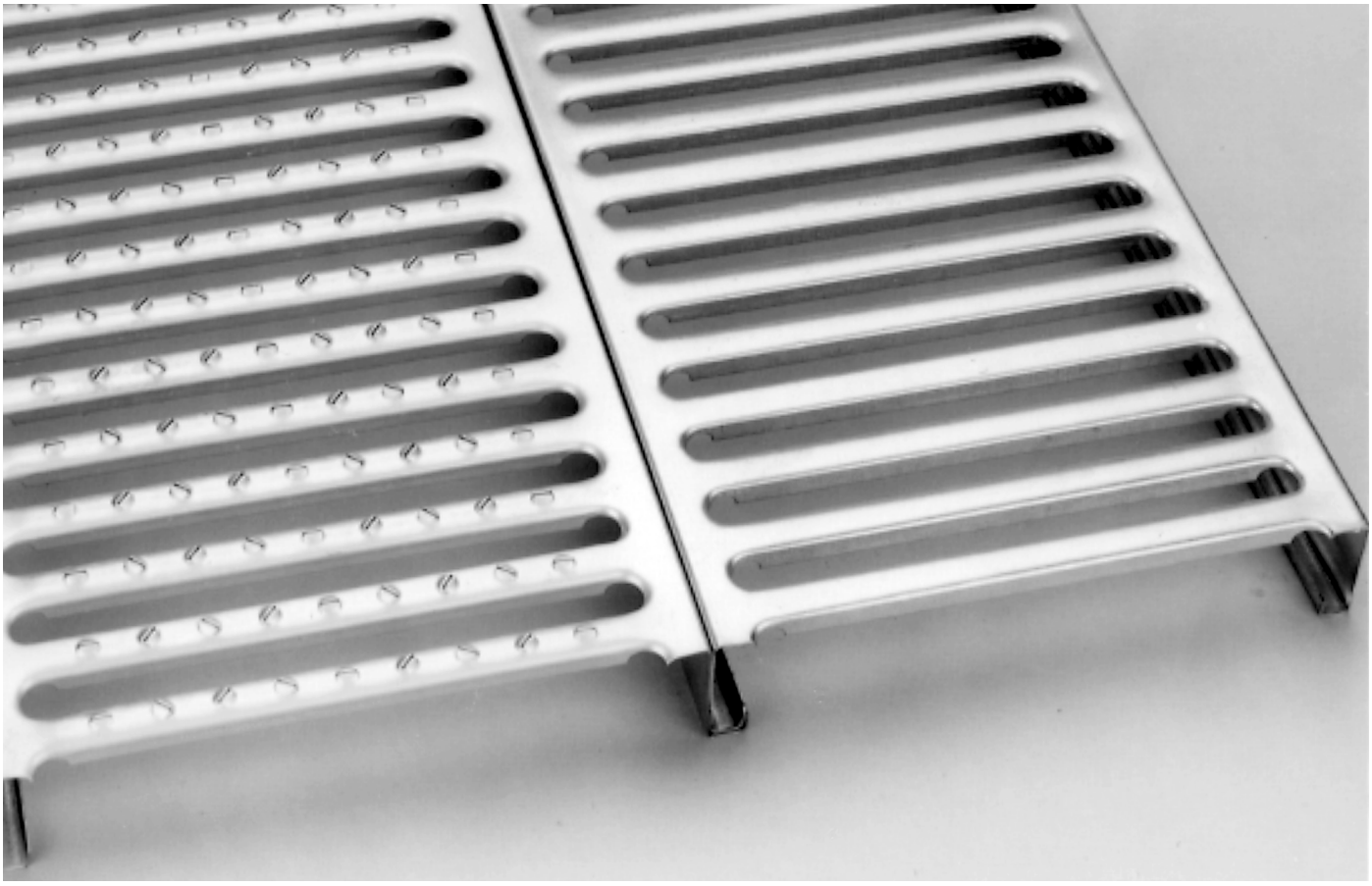
Made of pre-galvanized steel, it's maintenance-free and long lasting. Specifiers can choose a smooth or anti-skid surface to meet a wide variety of application needs.



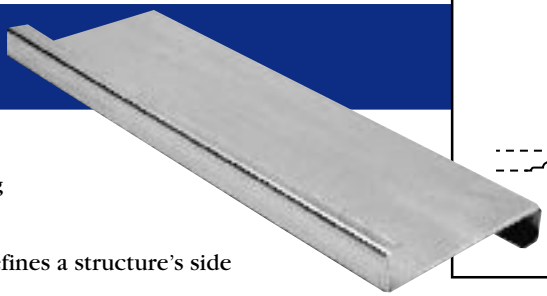
Ideal for mezzanines and other large-area applications.

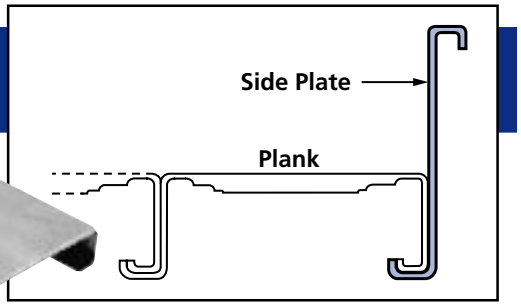
United Interlock® Grating Systems —12" Dimensions, Gauges, Surfaces and Finishes

12" Wide					
Part No.	Gauge	Leg Height	Leg Shape	Finish	Surface
G 11281 G 12281	18	2½"	DM MF	PG	slotted
G 11282 G 12282	18	2½"	DM MF	PG	anti-skid



Heel/Toe Side Plates
6½" and 8" heights

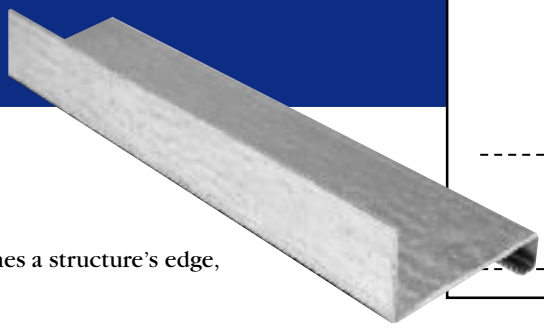


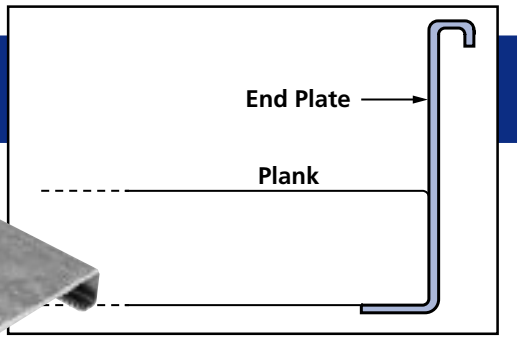


Part No.*	Description
G631 PG	14 ga. x 6½" high x 24' long
G621 PG	14 ga. x 8" high x 12' long

Forms a curb along grating length that defines a structure's side edge, and helps contain loose objects.

Heel/Toe End Plates
6½" and 8" heights

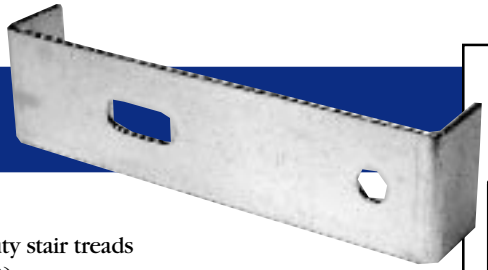


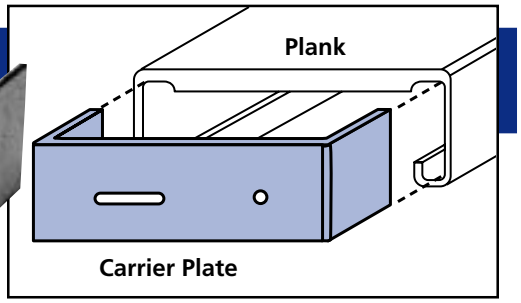


Part No.*	Description
G622 PG	14 ga. x 6½" high x 12' long
G623 PG	14 ga. x 8" high x 12' long

Forms a curb along grating ends that defines a structure's edge, and helps contains loose objects.

Carrier Plate

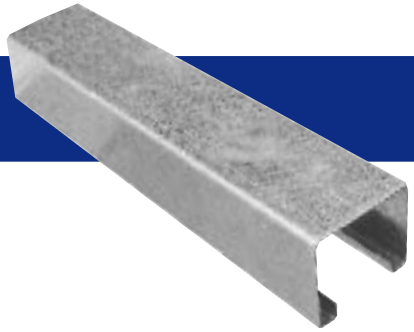


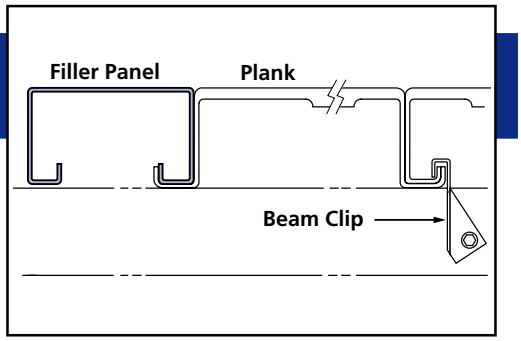


Part No.*	Description
G603 PG	10 ga.- for 9" wide heavy duty stair treads (9/16" hole and 1½" x 9/16" slot)
G618 PG	10 ga. for 10½" wide stair treads (9/16" hole and 1½" x 9/16" slot)
G642 PG	10 ga. for 11" wide stair treads (9/16" hole and 1½" x 9/16" slot)

Provides easy attachment of stair treads to support structures and stringers.

Filler Panel





Part No.*	Description
G31183 PG	3" Wide x 1½" Leg Height
G31283 PG	3" Wide x 2½" Leg Height
G31383 PG	3" Wide x 4" Leg Height

Provided in standard lengths of 10' and 12'.

*Part numbers shown are for galvanized. Most accessories are also available in aluminum.

Easy to Use Accessories

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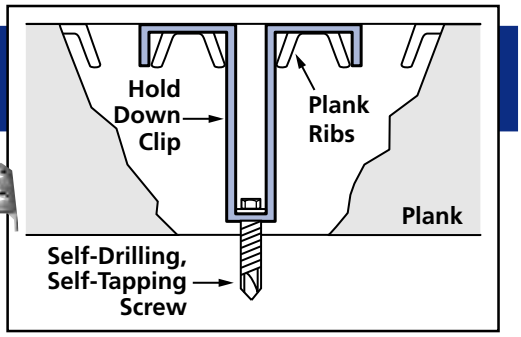
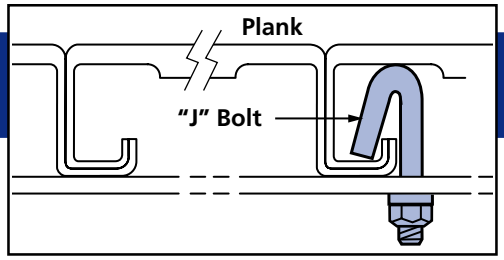
Hold Down Clip



Part No.*	Description
G639 PG	1½" leg height
G607 PG	2½" leg height
G620 PG	4" leg height

A 16 gauge attachment for fastening grating to support structure below. Attaches through top side of grating.

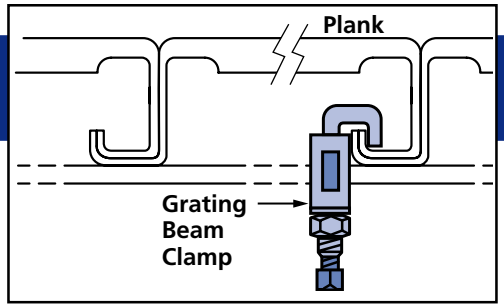
"J" Bolt/Nut Lock Washer



Part No.*	Description
G600 EG	5⁄16" x 2½"

Attachment for fastening panels to supporting members from underside of grating.

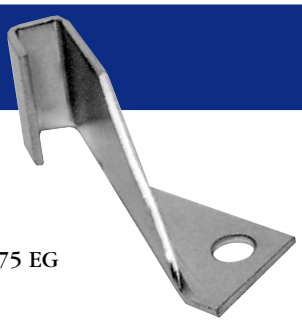
Grating Beam Clamp

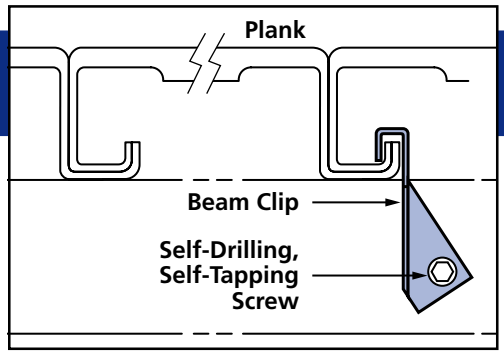


Part No.*	Description
G640 EG	Beam clamp

Attaches grating to structural I-beams. Requires no welding or drilling.

Light Gauge Beam Clip

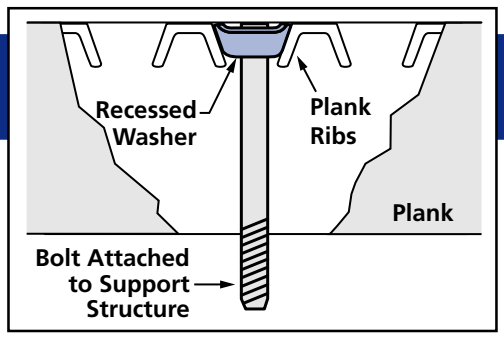




Part No.*	Description
G124 EG	Light Gauge Beam Clip

Quickly attaches grating to rack or shelving beams. Requires self-drilling, self-tapping screw—GHTS 012075 EG (not included).

Recessed Washer



Part No.*	Description
G714 EG	1⅛" x 1⅛" 12 gauge square washer

Holds down grating from above. Eliminates trip points.

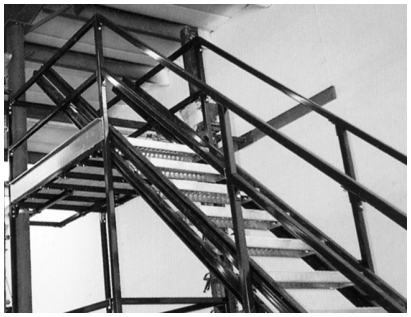
*Part numbers shown are for galvanized. Most accessories are also available in aluminum.

Heavy-Duty Stair Treads

Anyone who has slipped on a stairway can appreciate the safety of the anti-skid stair treads. Those who have tried to clean solid-surface stairs can appreciate our maintenance-free slotted design, which is both rust-resistant and self-cleaning.

United's stair treads make it easy for you to meet OSHA regulations. Factors to consider when selecting stair treads include loads, impact, frequency of use, and future use. Our 10½" and 11" tread features a checker-plate nosing that strengthens the tread and increases the width of the basic 9" tread.

The failure loading data shown below indicates ultimate failure in pounds at various spans. A 3½" diameter load was applied to the outer edge of a 9" wide stair tread at the center of the span. 6" wide stair treads are also available.



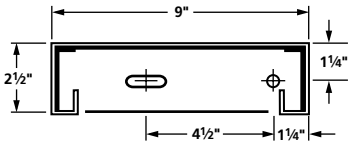
The stair treads can also be used with Unistrut Metal Framing as shown here to create a stair with guide rail

9" Stair Tread

14 gauge x 2½" x 9"
Completely galvanized, welded 10 gauge end plates

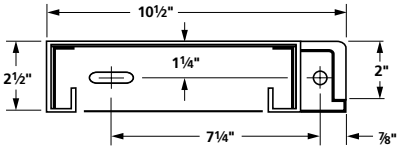
Part No.

G 900-24 PG	G 900-30 PG
G 900-36 PG	G 900-42 PG
G 900-48 PG	G 900-60 PG



10½" Stair Tread

14 gauge x 2½" x 10½"
Completely galvanized, welded 10 gauge end plates



Part No.

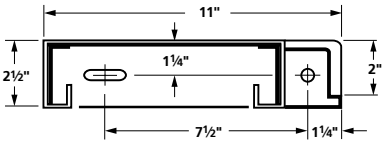
G 901-24 PG	G 901-30 PG
G 901-36 PG	G 901-42 PG
G 901-48 PG	G 901-60 PG

11" Stair Treads

14 gauge x 2½" x 11"
Completely galvanized, welded 10-gauge end plates

Part No.

G 904-24 PG	G 904-30 PG
G 904-36 PG	G 904-42 PG
G 904-48 PG	G 904-54 PG
G 904-60 PG	



Ultimate Failure Loading (pounds): Interlock Grating Stair Treads—Galvanized Steel—3 Widths

	Distance Between Supports (feet)								
Width	2	2.5	3	3.5	4	4.5	5	5.5	6
9"	2,200	2,050	1,900	1,750	1,600	1,450	1,300	1,150	1,000
10½"	4,325	3,900	3,400	2,950	2,550	2,200	1,950	1,800	1,700
11"	4,325	3,900	3,400	2,950	2,550	2,200	1,950	1,800	1,700

Note: This table represents failure loads, not design loads. Designers should apply their own safety factor to these values to determine maximum design loads.

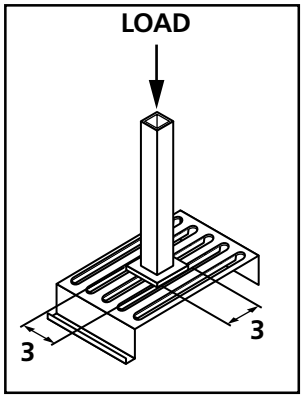
Design Considerations

Designers must consider both uniform and concentrated loads. Design considerations are most critical where loads are concentrated on a small area. As the area of the application gets larger, the reactions approach those of uniform loads.

Although a plank of grating may take a considerable allowable load, there may be more deflection than the designer feels is comfortable for foot traffic. We believe dividing the number of inches in the span length by 240 produces a reasonable deflection.

Designing for overloads and future usage is generally a wise investment considering the costs of future maintenance, obsolescence and replacement, as well as the danger of accidents.

Point (Concentrated) Loads



Point loads should be distributed over a minimum of two transverse ribs, regardless of what size or gauge plank grating is utilized.

Good design practice for point loading plank grating employs a "foot" plate at the load point with a minimum dimension of 3" x 3". This plate will assure that the point load has been distributed over the two transverse-rib minimum.

Maximum point load per rib on 12" x 18 ga. steel plank grating is 185 lbs. As a result, through the use of the required 3" x 3" "foot" plate, a maximum design load for the minimum-dimension foot plate is 370 lbs. Higher loads can be supported by the transverse ribs. However, larger "foot" plates will then be required to distribute the higher loads over additional ribs.

Light Traffic Areas

Floor areas immediately adjacent to racks, shelves, conveyors, etc., are generally loaded by light traffic. Ends of aisles, single aisles, etc. are further examples of light-traffic areas. These and similar areas are satisfactorily covered by economical 12" grating.

Floor area beneath package conveyors or other material-handling devices are typically subject to little or no loading. However, for safety reasons, these areas must be covered. The use of 12" plank grating in these areas provides an economical floor covering that can also be used as a load-bearing floor if requirements change.

12" Plank Grating is designed to provide an economical lightweight floor surface for light-traffic areas. Maintenance platforms, access ways and rooftop walkway applications are examples of areas where 12" grating is the best economical choice.

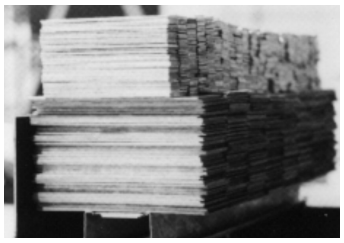
High-Traffic Areas

Mezzanines and aisles for stock storage are typical high-traffic zones. As a result, grating in these areas must have higher fatigue strengths. High fatigue strengths are available utilizing narrow, high-strength 6" or mid-range 9" width grating.

Within these high traffic areas are floor sections that receive little or no traffic, but must be covered for safety reasons. Innovative designers employ 12" grating in this situation. Combining 12" grating with other grating widths and gauges lowers overall installed costs for high-traffic applications.

Testing

Concentrated Load Testing


Uniform Load Testing

Unistrut is dedicated to the research, development and testing of all our manufactured products. The United Interlock Grating System has been tested in accordance with section 6 of the American Iron and Steel Institute's (AISI) Specifications for the Design of Cold Formed Steel Structural Members.

Tests for allowable loads were performed on product randomly selected from stock. These tests were run on simple spans with no end restrictions, over a 2" end bearing. Concentrated loads were applied across the plank with a 3" bearing, while uniform loads were applied by stacking narrow strips of sheet steel uniformly over the plank surface. Concentrated load tests for galvanized steel grating were run on all strength combinations for spans of 2', 3', 4', 5', 6', 7', 8', 10', 12', 14', 16' and 18'. Uniform load tests for galvanized steel were run on spans of 2', 3', 4', 6', 8' and 10'.

Concentrated load results are the same for 6" and 9" wide planks.

Allowable concentrated loads are found by reducing the ultimate load by 1½ times the weight of the grating and dividing the remaining load by two. This gives a safety factor of 2. Allowable uniform loads were calculated by standard formulas from the results found in the concentrated load tests.

Loads and Deflection – 6" Planks

6" x 14 Gauge

Leg Height		Distance Between Supports (Feet)															
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	8	9	10	12	14
1½"	UL	1,232	788	548	402	293	204	150	113	86	68	54	–	–	–	–	
	UD	0.05	0.08	0.12	0.16	0.20	0.22	0.25	0.27	0.30	0.32	0.35	–	–	–	–	–
	CL	616	493	411	352	308	274	234	193	162	138	119	–	–	–	–	–
	CD	0.04	0.06	0.10	0.13	0.17	0.21	0.25	0.27	0.30	0.32	0.35	–	–	–	–	–
2½"	UL	4,886	3,296	2,150	1,601	1,257	924	734	597	501	431	369	263	204	150	84	47
	UD	0.15	0.17	0.18	0.22	0.26	0.36	0.41	0.45	0.47	0.52	0.61	0.81	0.89	1.13	1.33	1.42
	CL	2,443	2,060	1,612	1,400	1,257	1,040	917	820	752	700	647	525	460	374	250	165
	CD	0.17	0.17	0.17	0.20	0.22	0.25	0.29	0.34	0.40	0.46	0.55	0.66	0.79	0.90	1.07	1.18
4"	UL	5,261	4,016	3,147	2,321	1,755	1,520	1,307	1,019	858	738	648	548	420	342	215	165
	UD	0.08	0.10	0.11	0.13	0.16	0.16	0.17	0.23	0.27	0.33	0.40	0.52	0.65	0.82	1.07	1.18
	CL	2,630	2,510	2,360	2,080	1,755	1,710	1,633	1,400	1,288	1,200	1,134	1,094	980	854	643	577
	CD	0.13	0.14	0.15	0.17	0.18	0.19	0.20	0.23	0.26	0.30	0.33	0.45	0.57	0.69	0.91	1.26

6" x 18 Gauge

Leg Height		Distance Between Supports (Feet)															
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	8	9	10	12	14
1½"	UL	858	548	380	281	204	144	104	78	60	48	38					
	UD	0.05	0.08	0.12	0.16	0.20	0.22	0.25	0.27	0.30	0.32	0.35					
	CL	429	343	286	245	214	190	163	135	113	96	83					
	CD	0.04	0.06	0.10	0.13	0.17	0.21	0.25	0.27	0.30	0.32	0.35					
2½"	UL	2,472	1,664	1,220	881	663	516	414	342	284	237	197	164	134	102	66	41
	UD	0.14	0.15	0.16	0.21	0.26	0.31	0.36	0.38	0.44	0.47	0.49	0.79	0.89	1.12	1.37	1.58
	CL	1,236	1,040	915	770	663	580	518	470	426	385	344	327	300	255	200	140
	CD	0.12	0.14	0.16	0.18	0.21	0.24	0.28	0.29	0.30	0.37	0.46	0.61	0.74	0.91	1.20	1.50
4"	UL	3,296	2,544	2,010	1,520	1,179	947	744	626	522	449	402	314	249	191	147	101
	UD	0.12	0.13	0.14	0.15	0.15	0.21	0.26	0.29	0.31	0.35	0.42	0.58	0.59	0.70	0.81	0.89
	CL	1,648	1,590	1,507	1,330	1,179	1,065	930	860	783	730	704	628	560	477	440	350
	CD	0.11	0.12	0.13	0.14	0.14	0.17	0.18	0.22	0.26	0.28	0.32	0.39	0.48	0.51	0.88	1.07

6" Aluminum (0.080)

Leg Height		Distance Between Supports (Feet)														
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	9	10
2½"	UL	2,676	1,590	1,065	840	706	600	517	412	313	277	255	210	177	–	–
	UD	0.20	0.30	0.35	0.40	0.47	0.55	0.63	0.78	1.01	1.09	1.20	1.4	1.66	–	–
	CL	1,338	925	825	755	706	630	575	515	469	435	410	385	355	–	–
	CD	0.16	0.20	0.25	0.31	0.36	0.45	0.54	0.67	0.81	0.90	0.99	1.12	1.27	–	–

Key:
UL = Uniform Load (pounds per square foot)
UD = Deflection under uniform load (Inches)
CL = Concentrated Load (pounds)
CD = Deflection under concentrated load (Inches)

Uniform Loads vs. Deflection – 6" Planks

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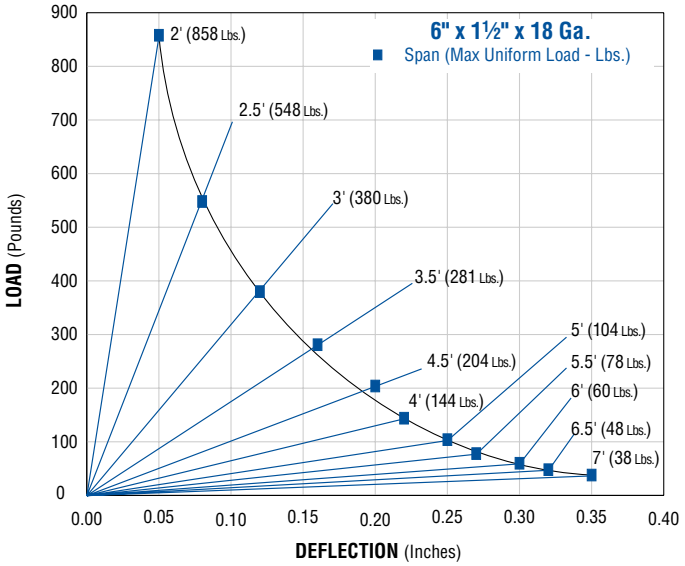

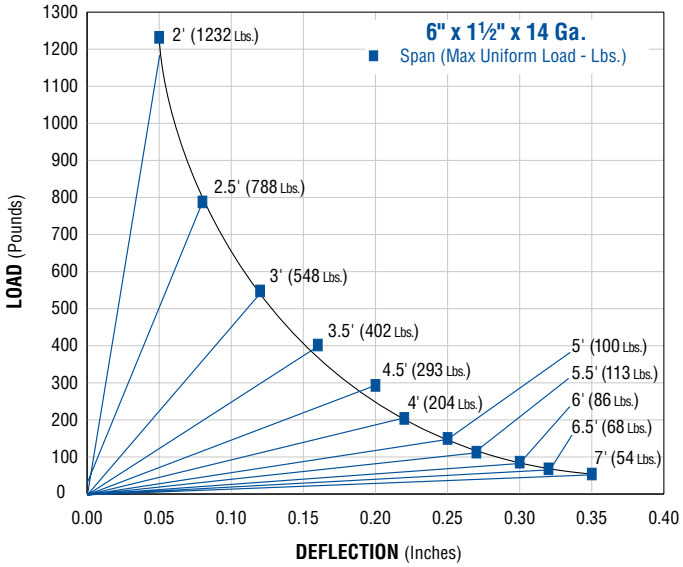

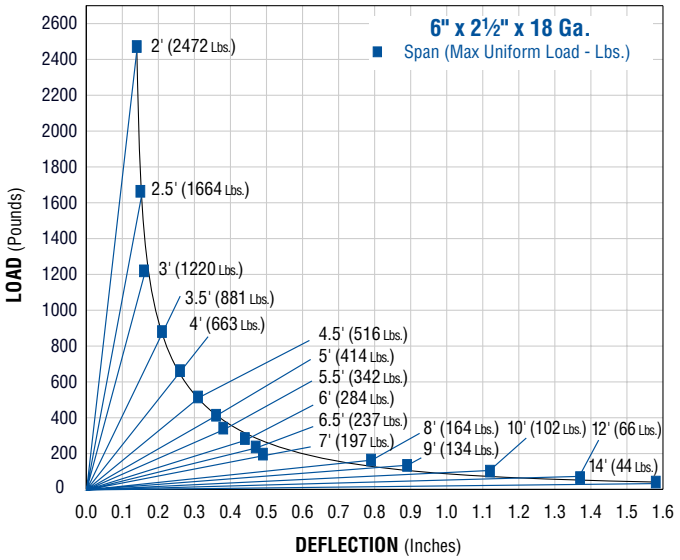

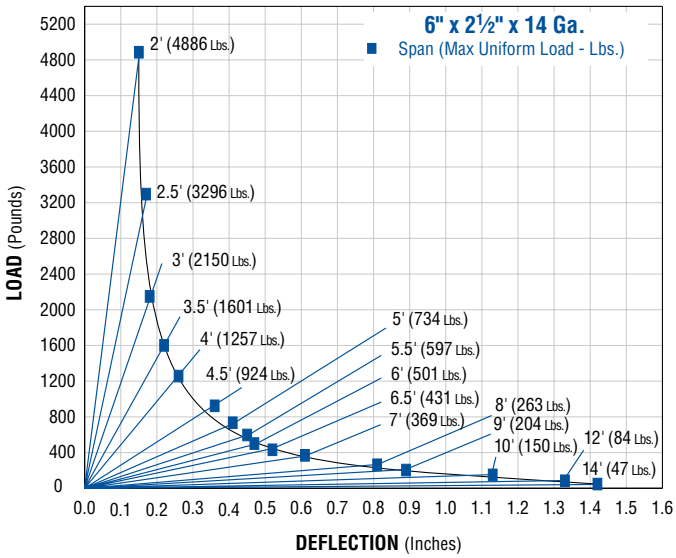

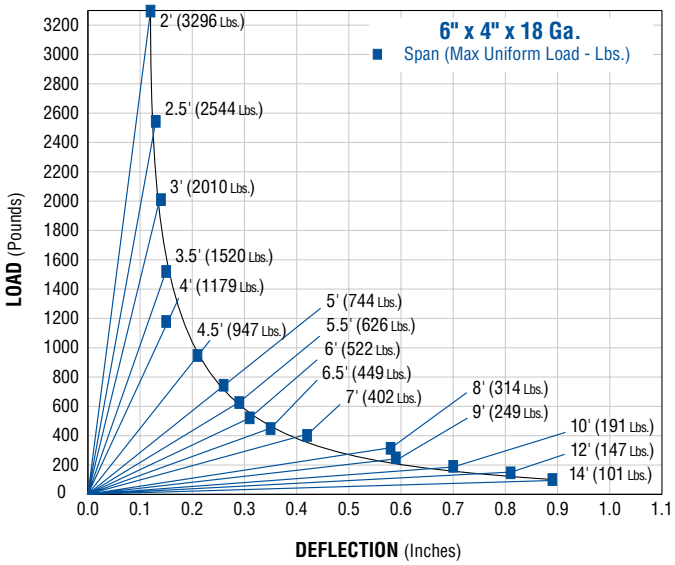

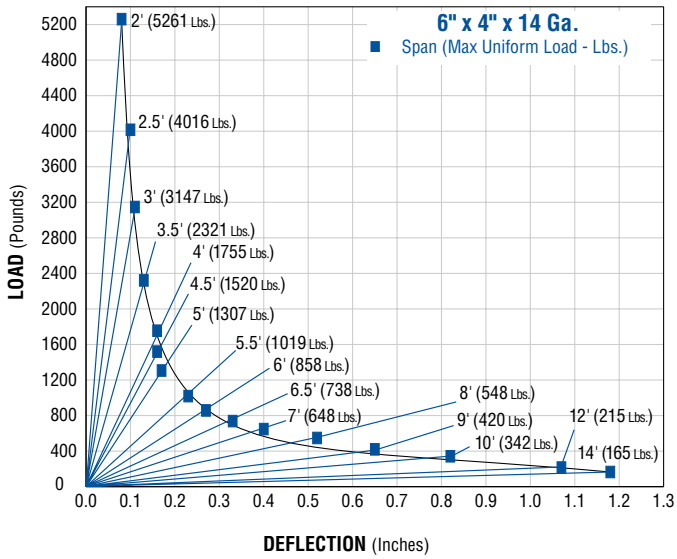

Loads and Deflection – 9" Planks

9" x 14 Gauge

Leg Height		Distance Between Supports (Feet)															
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	8	9	10	12	14
1½"	UL	821	525	365	268	195	136	100	75	57	45	36					
	UD	0.05	0.08	0.12	0.16	0.20	0.22	0.25	0.27	0.30	0.32	0.35					
	CL	616	493	411	352	308	274	234	193	162	138	119					
	CD	0.04	0.06	0.10	0.13	0.17	0.21	0.25	0.27	0.30	0.32	0.35					
2½"	UL	3,257	2,197	1,433	1,067	838	616	489	398	334	287	246	175	136	100	56	31
	UD	0.15	0.17	0.18	0.22	0.26	0.36	0.41	0.45	0.47	0.52	0.61	0.81	0.89	1.13	1.33	1.42
	CL	2,443	2,060	1,612	1,400	1,257	1,040	917	820	752	700	647	525	460	374	250	165
	CD	0.17	0.17	0.17	0.20	0.22	0.25	0.29	0.34	0.40	0.46	0.55	0.66	0.79	0.90	1.07	1.18
4"	UL	3,507	2,677	2,098	1,547	1,170	1,013	871	679	572	492	432	365	280	228	143	110
	UD	0.08	0.10	0.11	0.13	0.16	0.16	0.17	0.23	0.27	0.33	0.40	0.52	0.65	0.82	1.07	1.18
	CL	2,630	2,510	2,360	2,080	1,755	1,710	1,633	1,400	1,288	1,200	1,134	1,094	980	854	643	577
	CD	0.13	0.14	0.15	0.17	0.18	0.19	0.20	0.23	0.26	0.30	0.33	0.45	0.57	0.69	0.91	1.26

9" x 18 Gauge

Leg Height		Distance Between Supports (Feet)															
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	8	9	10	12	14
1½"	UL	572	365	253	187	136	96	69	52	40	32	25					
	UD	0.05	0.08	0.12	0.16	0.20	0.22	0.25	0.27	0.30	0.32	0.35					
	CL	429	343	286	245	214	190	163	135	113	96	83					
	CD	0.04	0.06	0.10	0.13	0.17	0.21	0.25	0.27	0.30	0.32	0.35					
2½"	UL	1,648	1,109	813	587	442	344	276	228	189	158	131	109	89	68	44	27
	UD	0.14	0.15	0.16	0.21	0.26	0.31	0.36	0.38	0.44	0.47	0.49	0.79	0.89	1.12	1.37	1.58
	CL	1,236	1,040	915	770	663	580	518	470	426	385	344	327	300	255	200	140
	CD	0.12	0.14	0.16	0.18	0.21	0.24	0.28	0.29	0.30	0.37	0.46	0.61	0.74	0.91	1.2	1.5
4"	UL	2,197	1,696	1,340	1,013	786	631	496	417	348	299	268	209	166	127	98	67
	UD	0.12	0.13	0.14	0.15	0.15	0.21	0.26	0.29	0.31	0.35	0.42	0.58	0.59	0.70	0.81	0.89
	CL	1,648	1,590	1,507	1,330	1,179	1,065	930	860	783	730	704	628	560	477	440	350
	CD	0.11	0.12	0.13	0.14	0.14	0.17	0.18	0.22	0.26	0.28	0.32	0.39	0.48	0.51	0.88	1.07

9" Aluminum (0.080)

Leg Height		Distance Between Supports (Feet)														
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	9	10
2½"	UL	1,784	1,060	710	560	471	400	345	275	209	185	170	140	118		
	UD	0.20	0.30	0.35	0.40	0.47	0.55	0.63	0.78	1.01	1.09	1.20	1.4	1.66		
	CL	1,338	925	825	755	706	630	575	515	469	435	410	385	355		
	CD	0.16	0.20	0.25	0.31	0.36	0.45	0.54	0.67	0.81	0.90	0.99	1.12	1.27		

Key:
UL = Uniform Load (pounds per square foot)
UD = Deflection under uniform load (Inches)
CL = Concentrated Load (pounds)
CD = Deflection under concentrated load (Inches)

Uniform Loads vs. Deflection – 9" Planks

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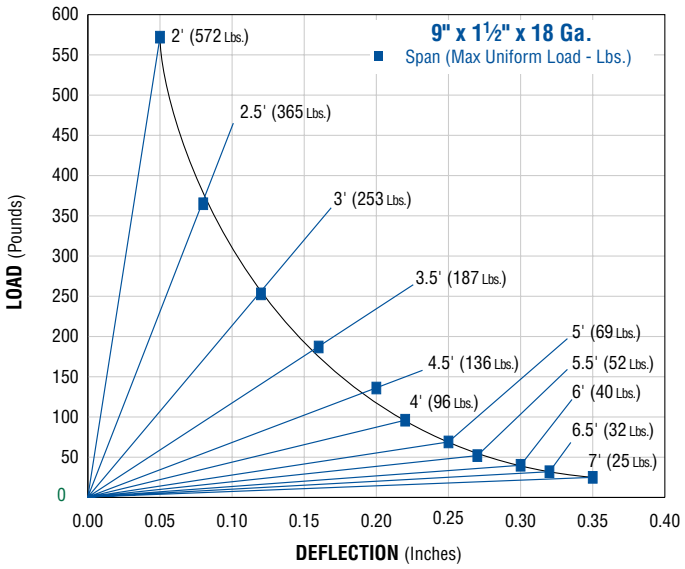
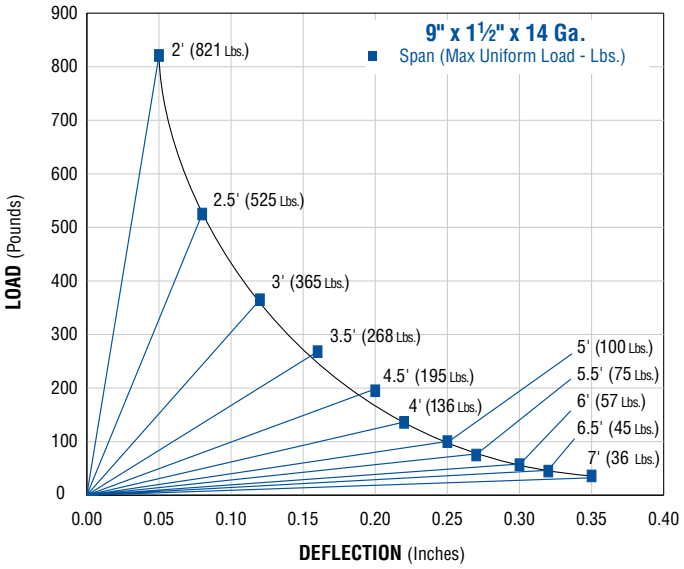
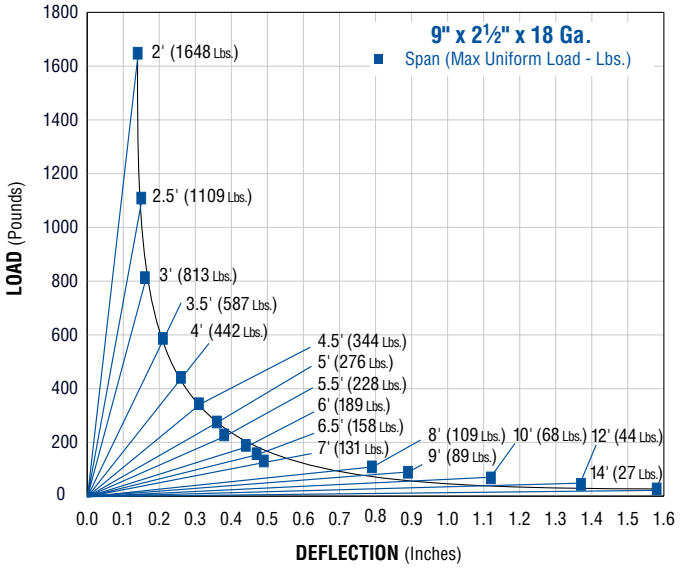
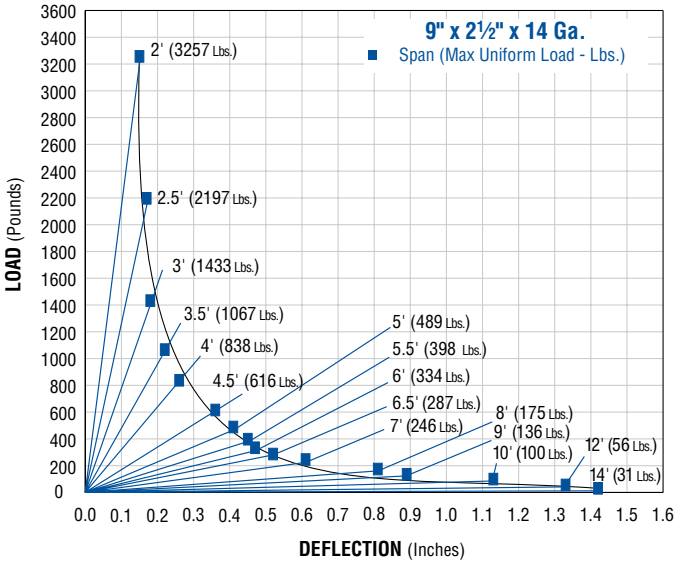
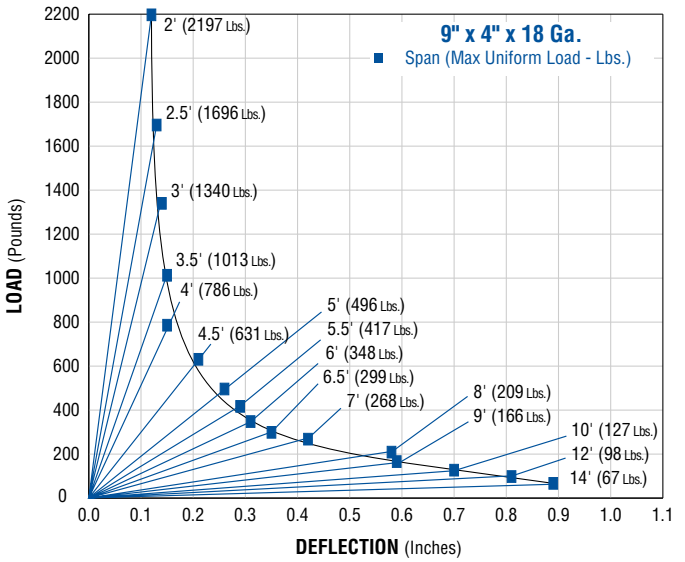
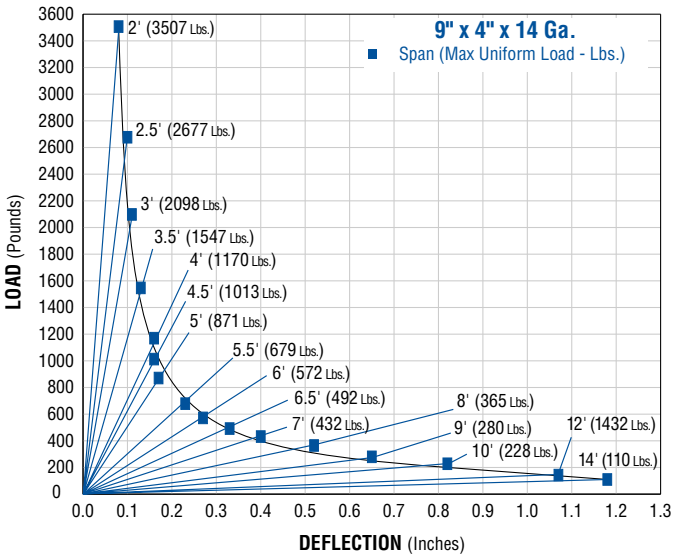




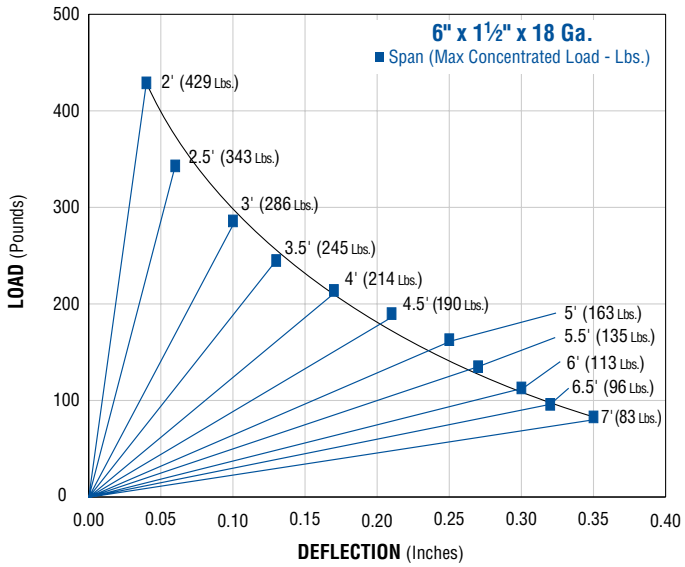


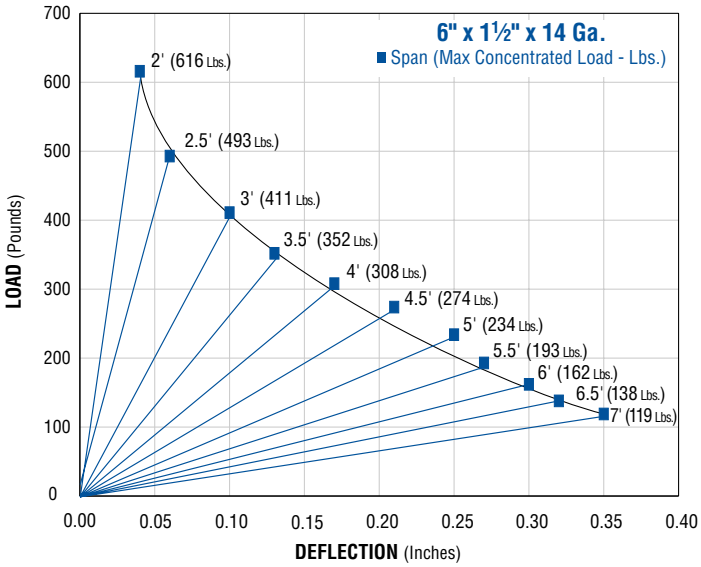


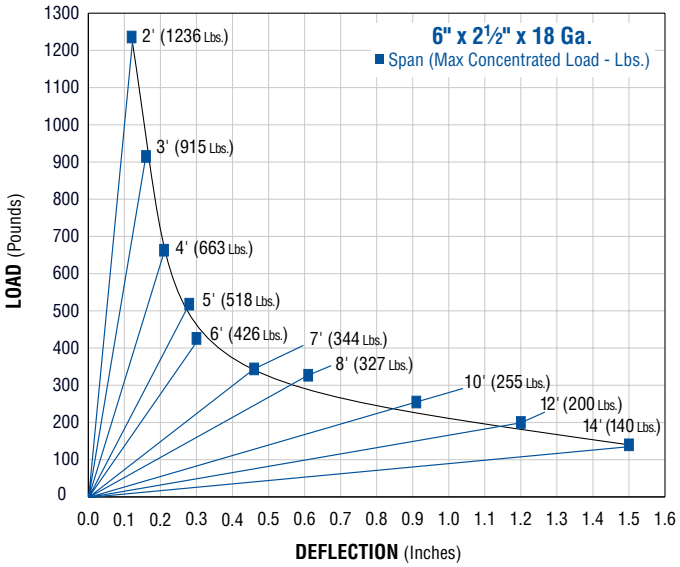


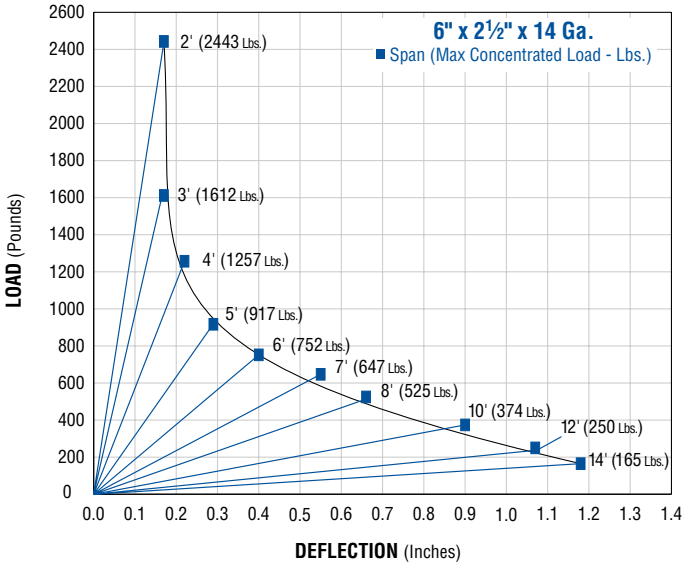


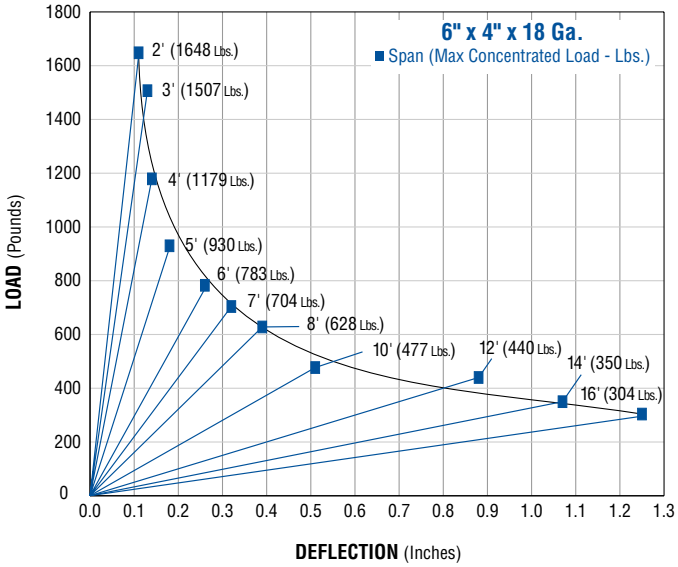
Concentrated Loads vs. Deflection – 6" & 9" Planks

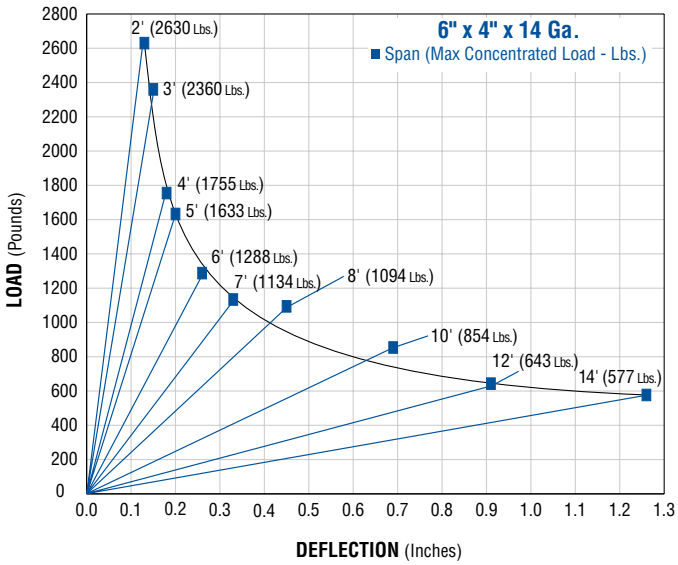












Loads and Deflection – 12" Planks

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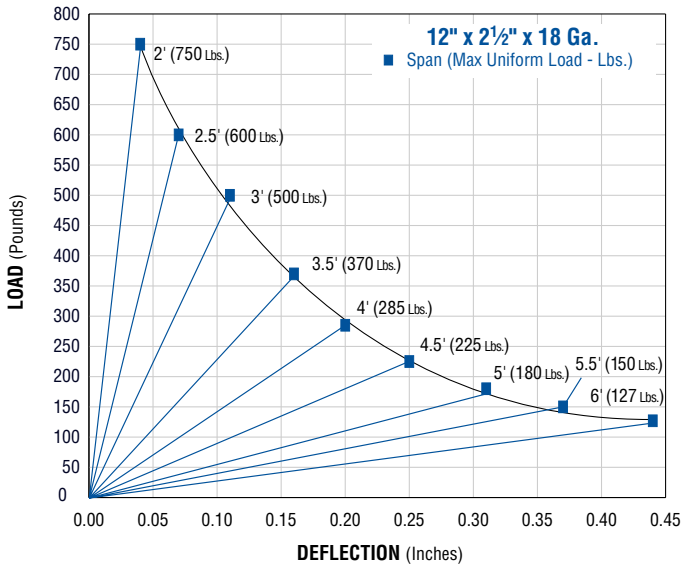
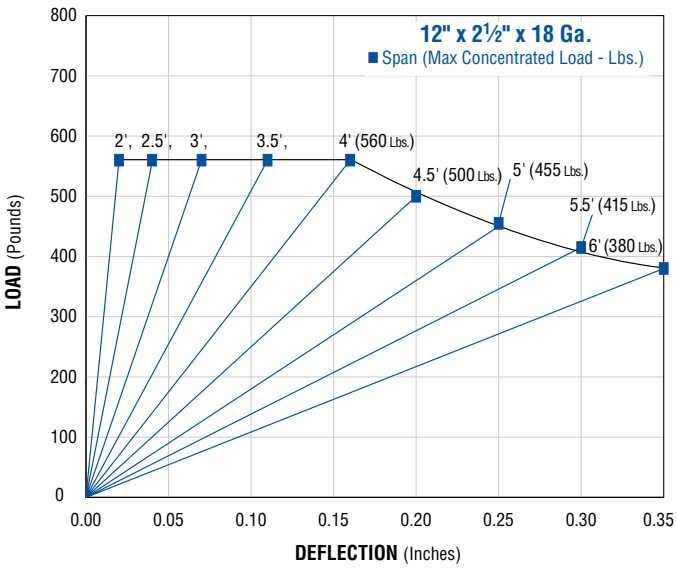
12" x 18 Gauge

Leg Height		Distance Between Supports (Feet)														
		2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	9	10
2½"	UL	750	600	500	370	285	225	180	150	127						
	UD	0.04	0.07	0.11	0.16	0.20	0.25	0.31	0.37	0.44						
	CL	560	560	560	560	560	500	455	415	380						
	CD	0.02	0.04	0.07	0.11	0.16	0.20	0.25	0.30	0.35						

Key:
UL = Uniform Load (pounds per square foot)
UD = Deflection under uniform load (inches)
CL = Concentrated Load (pounds applied to three rungs)
CD = Deflection under concentrated load (inches)





1. GENERAL

1.1 Scope of Work

A. Provide all material and labor required for the interlocking plank grating as indicated in the contract documents.

1.2 Related Work Specified Elsewhere

A. Structural Steel

B. Cold Formed Metal Framing

C. Metal Fabrications

1.3 Quality Assurance

A. Material shall be provided by a qualified contractor with at least five (5) years experience in the manufacture of interlock grating. Contractor shall demonstrate experience in projects of similar scope.

B. Anti-Skid surfaced grating shall conform to Federal Specification RR-G-1602A.

C. The Grating shall be designed to withstand the following load criteria:

1. Uniform Live Load _____ psf.
2. Concentrated Load _____ lbs.

D. Contractor shall certify that grating has been tested, indicating maximum allowable uniform and concentrated loads, with a factor of safety of 2, per AISC, Section 6.

E. If product is required in nuclear and/or safety related application, it shall be supplied under the requirements of nuclear specification 10CFR 50 appendix B.

1.4 Submittals

A. Contractor shall submit shop drawings showing grating layout, support structure and detailed sections depicting assembly.

2. PRODUCTS

2.1 Acceptable Manufacturer

A. In order to define the requirements for quality, function, sizes, gauges, surfaces, etc., these material specifications designate manufacturers, brands and other pertinent data that describe the minimum product standards of the products that conform to the project's requirements.

B. Products of other manufacturers may also be acceptable, provided that such products are equivalent to, or better than, those specified and, further, that use of such substitute products will not involve additional cost to owner due to possible required changes to accommodate them.

C. The alternate (substitute) product must be a proven equivalent to that specified by submitting technical data, test reports, samples, typical details, comparative layout and engineering calculations for evaluation.

D. The acceptance of an alternate (substitute) product is at the discretion of the owner or his agents, whose decision shall be final.

2.2 Products

A. Grating shall be United Interlock Plank Grating System, as manufactured by Unistrut Corporation, 35660 Clinton Street, Wayne, Michigan 48184 (U.S.A.), phone (800) 521-7730.

B. Materials shall conform to ASTM A653, Grade A with a Class G-90 coating.

C. Material shall be _____ gauge. With a leg height of _____inches.

D. The surface pattern shall provide a minimum of 35% but not more than 42% open area. Openings shall be a minimum of 4" long and a maximum of ¾" width. The surface shall be _____.

1. Anti-Skid surface shall provide 360° positive traction and be made of tapered self-cleaning teeth, approximately ⅛" high.
2. Anti-Skid surface teeth shall have slots approximately 1/16" wide by ⅜" long, uniformly spaced with a minimum of 60 and a maximum of 80 teeth per square foot.

3. INSTALLATION

3.1 Site Examination

A. Contractor shall examine the support structure, work area and conditions for the grating installation. If the supports, area or conditions are not satisfactory, installation shall not commence until satisfactory conditions are present.

3.2 Erection

A. Grating shall be installed as detailed on the approved shop drawings.

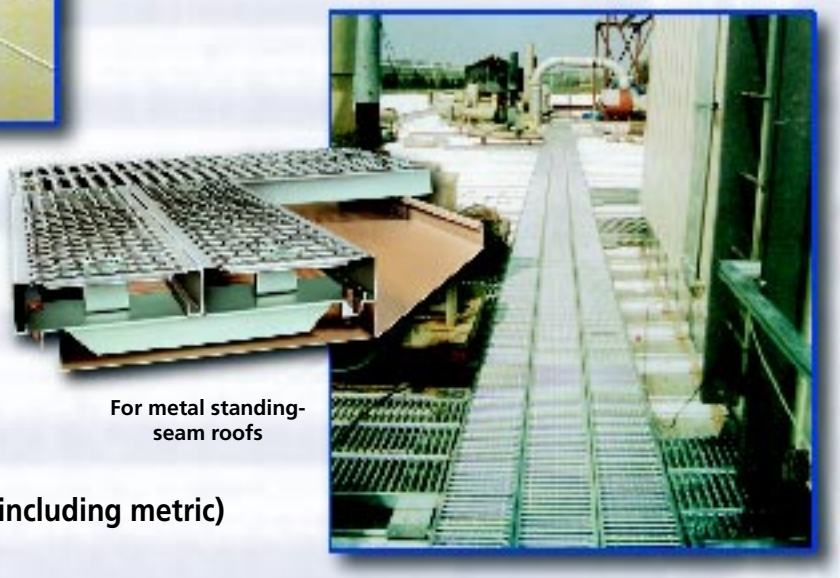
B. Grating shall be installed in single, unspliced sections for all requirements to 20' lengths.

C. Grating shall interlock, with male-female legs providing a lock prohibiting horizontal movement. The outside leg of all members shall be male.

D. Connections of grating to support elements shall be by bolting, clamping, screwing, welding or use of a manufacturers approved hold-down clip.

Protect Roofs From Bigfoot With Roofwalks® Rooftop Walkways

Roofwalks walkways are your low-cost solution to damage caused by rooftop foot traffic. On membrane, built-up, foam and coated roofs, they protect against puncture, abrasion and wear. On standing-seam metal roofs, workers of all sizes – even the Bigfoots of the world – can walk safely on the anti-skid surface without causing seam distortion, "dishing" or harmful stress to roof panels. Steel planks are strong yet lightweight, making installation quick and easy. Thanks to special system hardware, no roof penetration is required for anchoring. Roofwalks are versatile and adapt to any roofing system.



For metal standing-seam roofs

Roofwalks® Systems WILL...

- Provide a safe walkway for rooftop traffic
- Protect the roof from foot traffic
- Resist weather in either galvanized steel or aluminum finish
- Attach to all metal standing-seam roofs (including metric)

Roofwalks® Systems WILL NOT...

- Penetrate rooftop surface (except on rib roofs)
- Trap water ...like rubber pads will
- Curl causing trip hazards ...like rubber pads will
- Disappear in snow ...like rubber pads will
- Rot or disintegrate ...like wood or patio blocks will

For built-up, membrane, foam, and coated roofs

UNISTRUT®

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