

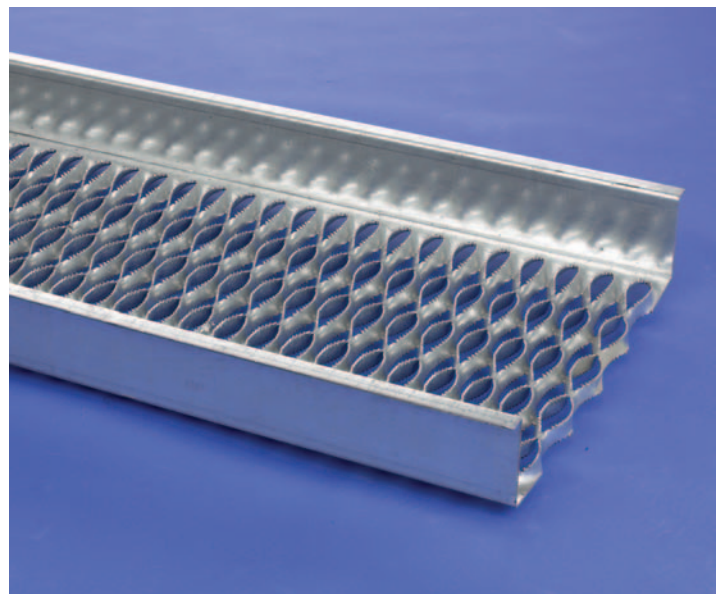


# Heavy Duty Grip Strut®

Long Span Walkways, Planks & Stair Treads

GSWPST-09

 **COOPER B-Line**





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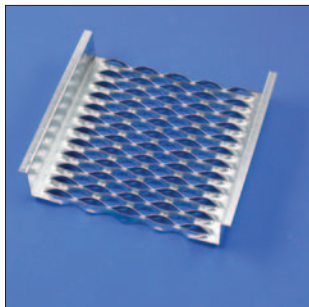
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## H-Series

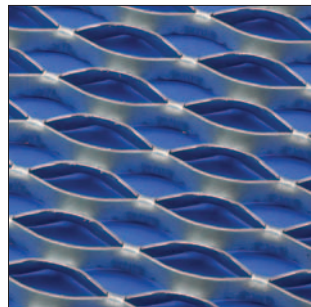
### Heavy-Duty Grip Strut®

#### Gratings for Greater Loads, Safer Walking

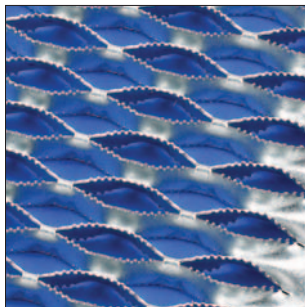
- High strength-to-weight ratio — efficient structural design means large-load capacity with low dead weight
- Slip resisting surface — scores of tiny teeth grip shoes tightly (exceeds Federal Specification RR-G-1602A slip-resistance requirements)
- Open design — sheds slip-causing stones, dirt and debris
- Slip-resisting serrated or less harsh non-serrated wearing surfaces tailor long life to diverse service conditions — sheds slip-causing stones, dirt and debris
- Complete line of products, design data, support services
- Handrail brackets available for maximum safety and meeting OSHA requirements
- Splice plates speed assembly without welding
- Integral, OSHA compliant toeboards. Canadian compliant OH&S designs available in some sizes.



Heavy Duty Grip Strut® Walkway  
Cooper B-Line is the walkway specialist



Heavy Duty Grip Strut® Pattern  
- No Teeth -  
The best labor saving alternative to bar grating



Heavy Duty Grip Strut® Pattern  
- Standard With Teeth -  
Safety, self cleaning and self draining all-in-one



Heavy Duty Grip Strut® Walkway  
-Reduced Opening -  
Limits items from falling through openings for safety below



# Advantages

Every year, falls cost industry millions of dollars in lost time/production. The safer walking-working surfaces of Heavy-Duty Grip Strut Grating products reduce accidents, and in doing so, frequently cut insurance costs. The secret is in the serrated surface and open design. The open diamond pattern allows fluids, mud, chips, ice and snow to fall through. The serrated surface provides high friction for maximum slip protection in all directions, and under practically all conditions. The resilience of Grip Strut Grating cushions the impact of walking, lessening worker fatigue and increasing efficiency.

Heavy-Duty Grip Strut Safety Grating products offer the advantage of regular Grip Strut Safety Grating (detailed in Catalog GSSGST-09), but are designed for applications of greater load and/or longer span. Basic design is the same, but diamond openings are larger and metal is thicker. Heavy-Duty Grating products are available in many of the same configurations, materials and finishes as regular Grip Strut Safety Grating. Heavy-Duty Grip Strut Grating products include: planks, walkways and stair treads; for specification see page 24. For specifications and information on regular Grip Strut Safety Gratings, see Grip Strut Safety Gratings & Stair Treads catalog GSSGST-09, available from your distributor or Cooper B-Line.

### High load capacity, long life

High strength-to-weight performance is achieved through section depth and integral side-channel design. Bridged struts form a rigid, strong plank surface that carries large loads with minimum deflection. There are no rivets, fabricated joints or pressure joints to loosen or break.

### Safety at all levels

Heavy-Duty Grip Strut Grating's serrated surfaces grip soles securely in all directions. These non-slip sheared edges are ideal for both indoor and outdoor locations — wherever mud, ice, snow, oil and detergents can create hazardous walking conditions.

### Minimal maintenance

Openings allow fluids, chips, stones and mud to quickly drop through. Ice easily shears off under normal foot pressure. Open design is easily cleaned with a brush, liquid or air spray.

### Application versatility

A variety of standard plank widths and channel heights can be

combined with numerous special-order items to meet almost any application requirement. Special sizes and fabricating services are available for unusual requirements. Heavy-Duty Grip Strut Grating products may be painted, hot-dip galvanized after fabrication, anodized, plated, plastic-coated or specially finished in other ways to fit service requirements. Finish coatings are economically applied since all surfaces are accessible to brush or spray.

### Compliance with regulatory codes / standards

Wherever maximum safety underfoot is critical, Grip Strut Grating is ideal, offering slip resistance exceeding Federal Specification RR-G-1602A requirements. Heavy-Duty Grip Strut Walkways meet OSHA toeboard requirements for elevated structures with standard upturned, 5 inch high integral side channels.

### Low life-cycle cost

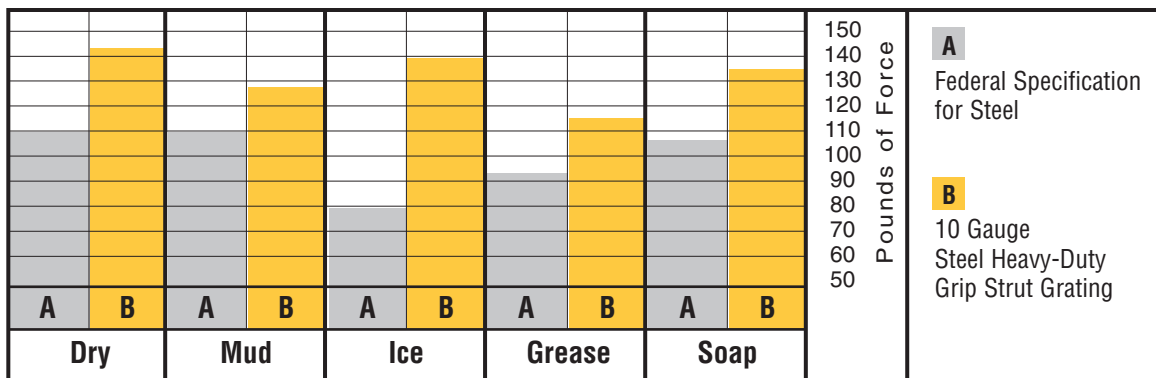
Material cost is low, erection cost nominal. Long-lasting, corrosion-resisting finishes provide long service life to all Grip Strut Gratings: steel or aluminum. Brawny but lightweight, these planks, walkways and stair treads permit substantial reduction in supporting structural materials. Self-cleaning open design is virtually maintenance-free.

### Fast, simple Installation

Grip Strut Grating is light and simply installed. Often, regular maintenance personnel can do the job. Sections are easily field-cut, at virtually any angle, and field-adapted; connections are rapidly made with bolts, clamps or welding. Disassembly, when needed, can be just as rapid.

### Tested performance

Statistics show falls as the second highest cause of lost-time injuries in industry. Yet tests prove that falls can be reduced by the safe surface of Heavy-Duty Grip Strut Safety Grating, Planks, Walkways and Stair Treads. And fewer accidents mean lower workmen's compensation insurance costs, to save the cost of Grip Strut Grating many times over. Independent laboratory tests prove that Heavy-Duty Grip Strut Grating exceeds Federal Specification RR-G-1602A requirements for slip resistance. Five shoe soles were tested, in longitudinal, transverse and diagonal directions; under five conditions: dry, greasy, muddy, soapy and icy. Heavy-Duty Grip Strut Safety Grating tested 32 to 230% more slip-resistant than other gratings (depending upon the condition).



(1) Value of force required to move 1 175 lb. load a distance of one inch across the grating surface of two Heavy-Duty Grip Strut serrated style gratings(B & C) compared with the respective Federal Specification RR-G-1602A standard (A). Letter coding is as follows:

\*A — standard established for steel grating with each type of condition, by Federal Specification RR-G-1602A.

\*B — average of tests on Heavy-Duty Grip Strut Gratings of 10 gauge steel.

Values were determined by test made in longitudinal, transverse and diagonal directions on each grating with five sole materials: leather, boot rubber, shoe rubber, Neolite and Hypaton



## Heavy-Duty Grip Strut Walkways, Planks and Stair Treads

### General Load Information

Heavy-Duty Grip Strut Grating Walkways and Planks are available in three thicknesses of steel, one of aluminum: walkways have one standard siderail height, planks have four. In each category, walkways come in three widths, planks in five. Begin sizing, for maximum economy, with widest practical grating for the job (shallowest siderails and thinnest gauge); if this does not meet required load capacity, first consider deeper siderails, then heavier gauge, and finally narrower grating width, if necessary.

Flexural load tables have been calculated according to design load limiting criteria, and if not illustrated in this catalog they can be obtained from Cooper B-Line technical services.

“Strut Load Tables” show flexural strength and deflection of individual grating surface struts relative to siderails. Since these are maximum values in the elastic range, lesser loads/deflections can be proportioned from them.

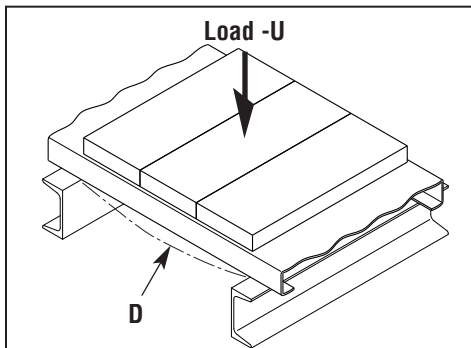
Design load assumptions differ according to load type: (1) uniform, (2) concentrated (see Figures 1, 2 and 3 below for explanation of load application). Concentrated load capacities generally vary with span, siderail height and material thickness, irrespective of grating width, although large differences in

grating width cause concentrated loads to be distributed somewhat differently into siderails.

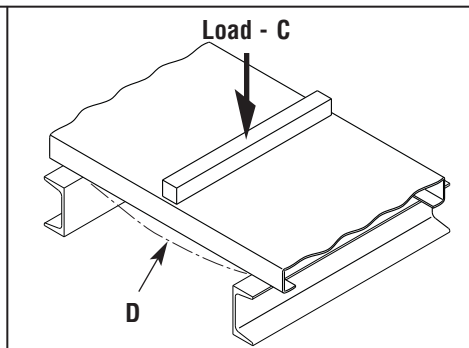
Siderail strength usually controls, but with shorter spans, deeper siderails, and/or wider grating surfaces, flexural strength of individual struts may control. In sizing walkways/planks with strength as a design criterion, be sure to check Heavy-Duty Grip Strut Grating for both: (1) strength of walkways/plank siderails, (2) strength of individual struts in grating surface. With deflection as a design criterion, loads may be limited by either: strength of individual surface struts, or total deflection of one siderail at midspan plus a surface strut at midwidth of walkway/plank (sum of siderail deflection plus strut deflection).

All load tables show maximum loads, based upon actual load tests performed at the Pinckneyville (IL) plant, and determined in accordance with AISI “Specification for the Design of Cold-Formed Steel Structural Members”, 1980 Edition, using minimum yield strength of 33 ksi for steel, 23 ksi for aluminum. Loads are designated:

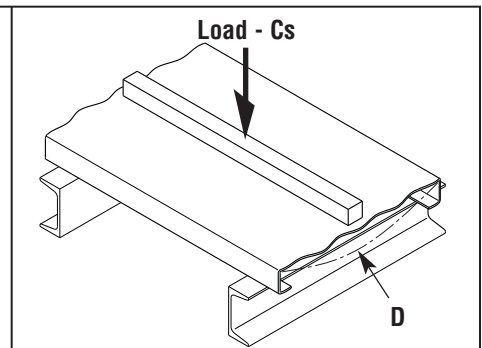
- 
- (U) for uniform, in./ft.<sup>2</sup>
  - (C) for concentrated, in./lb.
  - (D) for corresponding deflections, in inches
- 



**Figure 1**  
**Uniform Load (U)**  
**applications to all walkways/planks:** Maximum load (lb./ft.<sup>2</sup>) permitted by flexural stress in siderail or grating strut, whichever is lower, applied to entire grating area (full-width by clear-span) between supports.  
**Deflection (D) in all walkways/planks:** Deflection (in.) corresponding to maximum load (U) or (C) permitted by flexural stress in siderail or grating strut, whichever is lower, applied as defined in Figures 1 or 2, and 3.



**Figure 2**  
**Concentrated Load (C)**  
**applications to all walkways/planks:** Maximum load (lb.) permitted by flexural stress in siderail or grating strut, whichever is lower, applied transversely to total width of grating at midspan and assumed to be carried equally by both siderails.  
**Deflection (D) in all walkways/planks:** Deflection (in.) corresponding to maximum load (U) or (C) permitted by flexural stress in siderail or grating strut, whichever is lower, applied as defined in Figures 1 or 2, and 3.



**Figure 3**  
**Concentrated Load (Cs)**  
**applications to grating surface struts of all walkways/planks:** Maximum load (lb./ft.) permitted by flexural stress in grating strut, applied longitudinally to a 1 foot length of grating at midwidth.  
**Deflection (Ds) in all walkways/planks** Deflection (in.) corresponding to maximum concentrated strut load (Cs) permitted by flexural stress in grating strut, applied longitudinally to a 1 foot length of grating at midwidth.



# General Load Information

## Heavy-Duty GripStrut Walkways — The Safety Of OSHA-Required Toeboards, Built-In

### Availability of Heavy-Duty Grip Strut Walkways\*

Material	Thickness	Walkway Width		
		36"	30"	24"
Steel	11 ga.	✓	✓	✓
	10 ga.	✓	✓	✓
	9 ga.	✓	✓	✓
Aluminum	.125"	--	✓	✓

\* Standard toeboard depth of 5".

Heavy-Duty Grip Strut Safety Grating Walkways, like Heavy-Duty Planks, offer additional strength for walkway applications with greater load requirements. Grating surface design is identical. The walkway difference is in the side channels, which are turned up as 5 inch toeboards, exceeding OSHA requirements. Walkways offer all the slip-resistance and self-cleaning advantages of planks, and are available in the material/thickness combinations shown above.

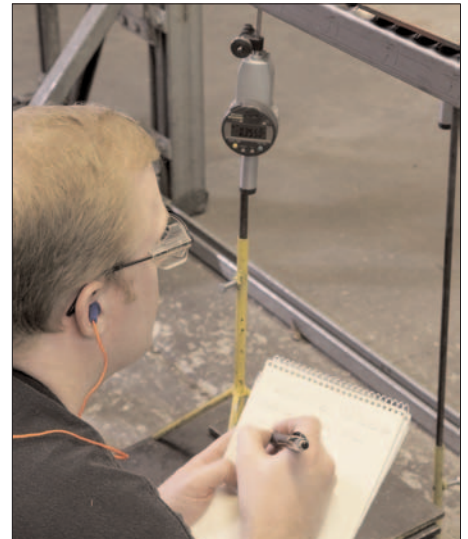
Heavy-Duty Grip Strut Grating Walkways are ideal for many types of applications. They are equally at home in process plants, refineries, grain elevators, conveyor walkways and large machines in paper mills. Allowable design load/deflection data are complete on pages 18 & 19.

They are combined with Grip Strut Stair Treads for a complete walkway design. For further information on stair treads, see page 20. The pre-formed, integral design of stair treads reduces the costs by saving not only material, but fabrication and detailing time as well.

Heavy-Duty Grip Strut Walkways incorporate 5 inch integral toeboards, complying with OSHA regulations (appropriate safety devices may also be necessary during use — consult applicable safety regulations). Canadian compliant (OH&S) designs are also available in some sizes.

Handrail Brackets are available for application on Heavy-Duty Grip Strut Steel Walkways. This is a valuable accessory for those projects where utilization of Heavy-Duty Grip Strut Steel Walkway is desirable for its superior long spanability. And handrailing with handrail post on maximum eight foot center is required per OSHA. The handrail bracket eliminates unnecessary and costly substructure to support handrail post.

Splice Plates (P-H-SP-U) are available for use with Heavy-Duty Grip Strut Steel Walkways. Splice Plates can help reduce costly material cuts and waste. The Splice Plates may be used at midspan conditions without reducing the load carrying capacity of the Heavy-Duty Grip Strut Walkway.



# General Load Information



## Heavy-Duty Grip Strut Planks — The Versatility of 9<sup>1</sup>/<sub>4</sub>" to 36" Widths for Single- or Multi-Width Platforms, to Fit Every Job Requirement — And Many O.E.M.

### Availability of Heavy-Duty Grip Strut Planks\*

Material	Thickness	Walkway Width				
		36"	27 <sup>3</sup> / <sub>4</sub> "	24"	13 <sup>3</sup> / <sub>4</sub> "	9 <sup>1</sup> / <sub>4</sub> "
Steel	11 ga.	✓	✓	✓	✓	✓
	10 ga.	✓	✓	✓	✓	✓
	9 ga.	✓	✓	✓	✓	✓
Aluminum	.125"	--	--	--	✓	✓

\* All in depths of 2", 2<sup>1</sup>/<sub>2</sub>", 3" and 4".

Heavy-Duty Grip Strut Safety Grating Planks are ideal for all types and sizes of platform applications with design load requirements beyond the capacities of regular Grip Strut Safety Grating (fully described in Grip Strut Gratings and Stair Treads catalog GSSGST-09). Four depths and five widths, each in steel and aluminum alloy 5052, provide versatility of load capacity for greatest economy: adequate strength without over design. Each width/side channel depth combination is available in material/thickness combinations as shown above.

All can be used for single-plank applications, or in multi-plank combinations for large-area platforms (see Multi-plank width chart, opposite page). One combination of width/depth/metal thickness is certain to meet your requirements with exceptional economy. For special job requirements, or the fine-tuned economies required by O.E.M. applications, other materials and many special fabricating services are available from Cooper B-Line (see page 22).





# Multi-Plank Width Comparison

**0" clearance between planks**

15'	(19) 14'-7 <sup>3</sup> / <sub>4</sub> "	(13) 14"-10 <sup>3</sup> / <sub>4</sub> "		
	(18) 13'-10 <sup>1</sup> / <sub>2</sub> "	(12) 13"-9"	(6) 13"-9 <sup>3</sup> / <sub>4</sub> "	(5) 15"-0"
	(17) 13'-1 <sup>1</sup> / <sub>4</sub> "			
12'	(16) 12'-4"	(11) 12"-7 <sup>1</sup> / <sub>4</sub> "		
	(15) 11'-6 <sup>3</sup> / <sub>4</sub> "	(10) 11"-5 <sup>1</sup> / <sub>2</sub> "	(5) 11"-6 <sup>1</sup> / <sub>8</sub> "	(4) 12"-0"
	(14) 10'-9 <sup>1</sup> / <sub>2</sub> "			
	(13) 10'-0 <sup>1</sup> / <sub>4</sub> "	(9) 10"-3 <sup>3</sup> / <sub>4</sub> "		
9'	(12) 9'-3"	(8) 9"-2"	(4) 9"-2 <sup>1</sup> / <sub>2</sub> "	(3) 9"-0"
	(11) 8'-5 <sup>5</sup> / <sub>4</sub> "			
	(10) 7'-8 <sup>1</sup> / <sub>2</sub> "	(7) 8"-0 <sup>1</sup> / <sub>4</sub> "		
	(9) 6'-11 <sup>1</sup> / <sub>4</sub> "	(6) 6"-10 <sup>1</sup> / <sub>2</sub> "	(3) 6"-10 <sup>7</sup> / <sub>8</sub> "	
6'	(8) 6'-2"			
	(7) 5'-4 <sup>3</sup> / <sub>4</sub> "	(5) 5"-8 <sup>3</sup> / <sub>4</sub> "		(2) 6"-0"
	(6) 4'-7 <sup>1</sup> / <sub>2</sub> "	(4) 4"-7"	(2) 4"-7 <sup>1</sup> / <sub>4</sub> "	
	(5) 3'-10 <sup>1</sup> / <sub>4</sub> "			
3'	(4) 3'-1"	(3) 3"-5 <sup>1</sup> / <sub>4</sub> "		
	(3) 2'-3 <sup>3</sup> / <sub>4</sub> "	(2) 2"-3 <sup>1</sup> / <sub>2</sub> "	(1) 2"-3 <sup>5</sup> / <sub>8</sub> "	(1) 3"-0"
	(2) 1'-6 <sup>1</sup> / <sub>2</sub> "			
0'	(1) 0'-9 <sup>1</sup> / <sub>4</sub> "	(1) 1"-1 <sup>3</sup> / <sub>4</sub> "		
	2-Diamond	3-Diamond	6-Diamond	8-Diamond

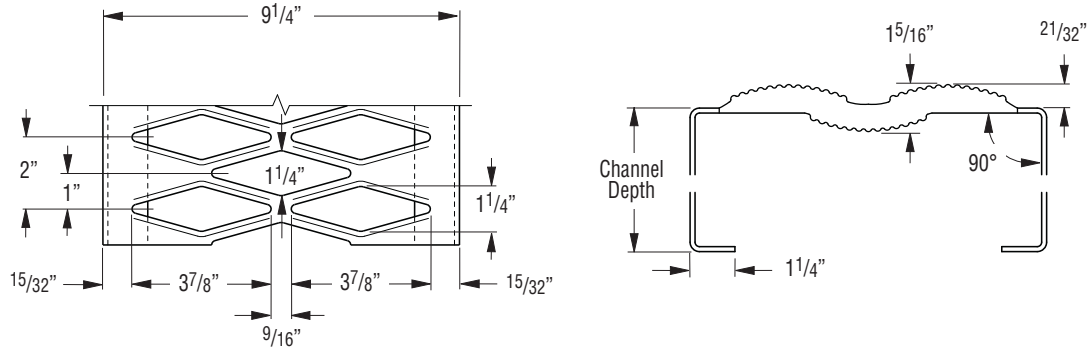
**1/8" clearance between planks**

15'	(19) 14'-10"	(13) 15'-0 <sup>1</sup> / <sub>4</sub> "		
	(18) 14'-0 <sup>5</sup> / <sub>8</sub> "	(12) 13'-10 <sup>3</sup> / <sub>8</sub> "	(6) 13'-10 <sup>3</sup> / <sub>8</sub> "	(5) 15'-0 <sup>1</sup> / <sub>2</sub> "
	(17) 13'-3 <sup>1</sup> / <sub>4</sub> "			
12'	(16) 12'-5 <sup>7</sup> / <sub>8</sub> "	(11) 12'-8 <sup>1</sup> / <sub>2</sub> "		
	(15) 11'-8 <sup>1</sup> / <sub>2</sub> "	(10) 11'-6 <sup>5</sup> / <sub>8</sub> "	(5) 11'-6 <sup>5</sup> / <sub>8</sub> "	(4) 12'-0 <sup>3</sup> / <sub>8</sub> "
	(14) 10'-10 <sup>1</sup> / <sub>8</sub> "			
	(13) 10'-1 <sup>3</sup> / <sub>4</sub> "	(9) 10'-4 <sup>3</sup> / <sub>4</sub> "		
9'	(12) 9'-4 <sup>3</sup> / <sub>8</sub> "	(8) 9'-2 <sup>7</sup> / <sub>8</sub> "	(4) 9'-2 <sup>7</sup> / <sub>8</sub> "	(3) 9'-0 <sup>1</sup> / <sub>4</sub> "
	(11) 8'-7"			
	(10) 7'-9 <sup>5</sup> / <sub>8</sub> "	(7) 8'-1"		
	(9) 7'-0 <sup>1</sup> / <sub>4</sub> "	(6) 6'-11 <sup>1</sup> / <sub>8</sub> "	(3) 6'-11 <sup>1</sup> / <sub>8</sub> "	
6'	(8) 6'-2 <sup>7</sup> / <sub>8</sub> "			
	(7) 5'-5 <sup>1</sup> / <sub>2</sub> "	(5) 4'-9 <sup>1</sup> / <sub>4</sub> "		(2) 6'-0 <sup>1</sup> / <sub>8</sub> "
	(6) 4'-8 <sup>1</sup> / <sub>8</sub> "	(4) 4'-7 <sup>3</sup> / <sub>8</sub> "	(2) 4'-7 <sup>3</sup> / <sub>8</sub> "	
	(5) 3'-10 <sup>3</sup> / <sub>4</sub> "			
3'	(4) 3'-1 <sup>3</sup> / <sub>8</sub> "	(3) 3'-5 <sup>1</sup> / <sub>2</sub> "		
	(3) 2'-4"	(2) 2'-3 <sup>5</sup> / <sub>8</sub> "	(1) 2'-3 <sup>5</sup> / <sub>8</sub> "	(1) 3'-0"
	(2) 1'-6 <sup>5</sup> / <sub>8</sub> "			
0'	(1) 0'-9 <sup>1</sup> / <sub>4</sub> "	(1) 1'-1 <sup>3</sup> / <sub>4</sub> "		
	2-Diamond	3-Diamond	6-Diamond	8-Diamond

# Grip Strut Plank - Safe Loading Tables



## 2-Diamond Plank — 9 1/4" Width — "H" Series



### Plank Selection & Design Loads/Deflections

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																	
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
Steel 11 ga.	2" (38.1)	6.6 (9.8)	H-22011	U	2413	1544	1027	788	629	476	385	319	270	228	196	172	150	119	98	81	67
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	1860	1488	1240	1063	930	827	744	677	620	572	531	496	465	413	372	338	310
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2 1/2" (63.5)	7.0 (10.4)	H-22511	U	3657	2340	1625	1194	914	722	585	483	406	347	298	259	228	182	147	122	102
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	2820	2256	1880	1611	1410	1254	1128	1025	940	868	806	752	705	626	564	513	470
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	7.5 (11.1)	H-23011	U	3892	2490	1731	1272	974	767	623	515	431	368	319	276	242	193	154	130	109
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3000	2400	2000	1715	1500	1333	1180	1091	1000	923	857	800	750	667	600	545	500
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
4" (101.6)	8.3 (12.3)	H-24011	U	6382	4084	2837	2084	1598	1261	1022	844	707	606	522	455	400	315	256	211	176	
			D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78	
			C	4920	3936	3280	2812	2460	2187	1968	1789	1640	1514	1406	1312	1230	1094	935	895	820	
			D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63	
Steel 10 ga.	2" (50.8)	7.4 (11.0)	H-22010	U	2681	1716	1141	876	699	529	428	354	300	253	218	191	167	132	109	90	74
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2067	1653	1378	1181	1033	919	827	752	689	636	590	551	517	459	413	376	344
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.96	1.16
	2 1/2" (63.5)	7.9 (11.7)	H-22510	U	4063	2600	1806	1327	1016	802	650	537	451	385	331	288	253	202	163	136	113
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3133	2507	2089	1790	1567	1393	1253	1139	1044	964	895	836	783	696	627	570	522
				D	.04	.06	.08	.12	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	8.4 (12.5)	H-23010	U	4324	2767	1923	1413	1082	852	692	572	479	409	354	307	269	214	171	144	121
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3333	2667	2222	1905	1667	1481	1311	1212	1111	1026	952	889	833	741	667	606	556
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
4" (101.6)	10.3 (15.3)	H-24010	U	7091	4538	3152	2316	1775	1401	1136	938	786	673	580	506	444	350	284	234	195	
			D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78	
			C	5467	4373	3644	3124	2733	2430	2187	1988	1822	1682	1562	1458	1367	1215	1039	994	911	
			D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63	





# Grip Strut Plank - Safe Loading Tables

## 2-Diamond Plank — 9 1/4" Width — "H" Series cont.

### Plank Selection & Design Loads/Deflections

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																	
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
Steel 9 ga.	2" (38.1)	8.3 (12.3)	H-22009	U	2949	1888	1255	964	769	582	471	389	330	278	240	210	184	145	120	96	81
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2274	1618	1516	1299	1136	1011	910	827	758	700	649	606	569	505	454	414	378
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2 1/2" (63.5)	8.8 (13.1)	H-22509	U	4469	2860	1987	1460	1118	882	715	591	496	424	364	317	278	222	179	150	124
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3446	2758	2298	1969	1724	1532	1378	1253	1148	1060	985	920	861	766	690	627	574
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	9.3 (13.8)	H-23009	U	4756	3044	2115	1554	1190	937	761	629	527	450	389	338	296	235	188	158	133
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3666	2934	2444	2096	1834	1629	1442	1333	1222	1129	1047	978	916	815	734	667	612
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4" (101.6)	10.3 (15.3)	H-24009	U	7800	4992	3467	2548	1953	1541	1250	1032	865	740	638	557	488	385	312	257	215
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	6014	4810	4008	3436	3006	2673	2406	2187	2004	1850	1718	1604	1504	1337	1143	1093	1002
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63

### Strut Concentrated - Loads/Deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated C <sub>s</sub> (lb./ft.)	
		Serrated	Non-Serrated
9 1/4"	11 ga. Steel	1741	1985
	10 ga. Steel	2004	2283
	9 ga. Steel	2281	2594
	Deflection (in.)	0.01	0.01

C<sub>s</sub> = Allowable Concentrated Load per ft. of length at mid-width (lb./ft.)

(2) See "General Load information", page 4, for explanation of design load deflection conditions.

### Strut Uniform - Loads/Deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated U (lb./ft. <sup>2</sup> )	
		Serrated	Non-Serrated
9 1/4"	11 ga. Steel	4516	5153
	10 ga. Steel	5201	5925
	9 ga. Steel	5917	6731
	Deflection (in.)	0.01	0.01

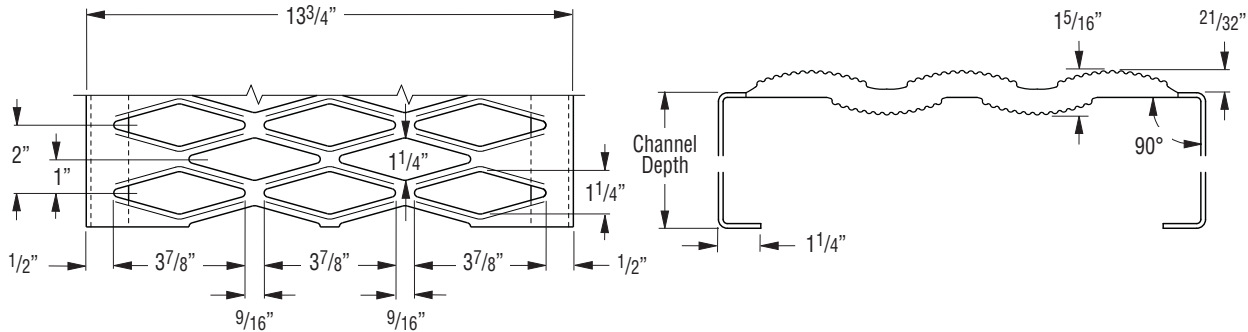
U = Allowable Uniform Load (lb./ft.<sup>2</sup>)

(2) See "General Load information", page 4, for explanation of design load deflection conditions.

# Grip Strut Plank - Safe Loading Tables



## 3-Diamond Plank — 13<sup>3</sup>/<sub>4</sub>" Width — "H" Series



### Plank Selection & Design Loads/Deflections

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																	
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
Steel 11 ga.	2" (38.1)	8.5 (12.6)	H-32011	U	1624	1039	721	530	405	320	259	214	182	153	132	115	102	80	66	54	45
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	1860	1488	1240	1063	930	827	744	677	620	572	531	496	465	413	372	338	310
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2 1/2" (63.5)	8.9 (13.2)	H-32511	U	2460	1615	1093	804	615	485	393	325	274	233	201	175	153	122	99	83	68
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	2820	2256	1880	1611	1410	1254	1128	1025	940	868	806	752	705	626	564	513	470
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	9.3 (13.8)	H-33011	U	2618	1676	1164	855	655	516	419	347	290	248	214	186	163	130	104	87	73
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3000	2400	2000	1715	1500	1333	1180	1091	1000	923	857	800	750	667	600	545	500
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
4" (101.6)	10.1 (15.0)	H-34011	U	4293	2748	1909	1402	1075	849	689	568	476	408	351	306	268	212	172	141	118	
			D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78	
			C	4920	3936	3280	2812	2460	2187	1968	1789	1640	1514	1406	1312	1230	1094	935	895	820	
			D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63	
Steel 10 ga.	2" (50.8)	9.5 (14.1)	H-32010	U	1804	1154	801	589	450	356	288	238	202	170	147	128	113	89	73	60	50
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2067	1653	1378	1181	1033	919	827	752	689	636	590	551	517	459	413	376	344
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2 1/2" (63.5)	10.0 (14.9)	H-32510	U	2733	1794	1214	893	683	539	437	361	304	259	223	194	170	136	110	92	76
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3133	2507	2089	1790	1567	1393	1253	1139	1044	964	895	836	783	696	627	570	522
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	10.5 (15.6)	H-33010	U	2909	1862	1293	950	728	573	466	385	322	275	238	207	181	144	115	97	81
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3333	2667	2222	1905	1667	1481	1311	1212	1111	1026	952	889	833	741	667	606	556
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.xx
	4" (101.6)	11.4 (16.9)	H-34010	U	4770	3053	2121	1558	1194	943	765	631	529	453	390	340	298	236	191	157	13x
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	5467	4373	3644	3124	2733	2430	2187	1988	1822	1682	1562	1458	1367	1215	1039	994	911
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.46	.53	.63



# Grip Strut Plank - Safe Loading Tables

## 3-Diamond Plank — 13<sup>3</sup>/<sub>4</sub>" Width — "H" Series cont.

### Plank Selection & Design Loads/Deflections

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																	
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
Steel 9 ga.	2" (38.1)	10.6 (15.8)	H-32009	U	1984	1269	881	648	495	392	317	262	222	187	162	141	124	98	80	66	55
				D	.05	.06	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2274	1818	1516	1299	1136	1011	910	827	758	700	649	606	569	505	454	414	378
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2 1/2" (63.5)	11.1 (16.5)	H-32509	U	3006	1973	1335	982	751	593	481	397	334	285	245	213	187	150	121	101	84
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3446	2758	2298	1969	1724	1532	1378	1253	1148	1060	985	920	861	766	690	627	574
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	11.6 (17.2)	H-33009	U	3200	2048	1422	1045	801	630	513	424	354	303	262	228	199	158	127	107	89
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3666	2934	2444	2096	1834	1629	1442	1333	1222	1129	1047	978	916	815	734	667	612
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
4" (101.6)	12.7 (18.9)	H-34009	U	5247	3358	2333	1714	1313	1037	842	694	582	498	429	374	328	260	210	173	144	
			D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78	
			C	6014	4810	4008	3436	3006	2673	2406	2187	2004	1850	1718	1604	1504	1337	1143	1093	1002	
			D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63	

### Strut Concentrated - Loads/Deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated C <sub>s</sub> (lb./ft.)	
		Serrated	Non-Serrated
13 <sup>3</sup> / <sub>4</sub> "	11 ga. Steel	1171	1336
	10 ga. Steel	1348	1536
	9 ga. Steel	1534	1745
	Deflection (in.)	0.02	0.02

C<sub>s</sub> = Allowable Concentrated Load per ft. of length at mid-width (lb./ft.)  
 (2) See "General Load information", page 4, for explanation of design load deflection conditions.

### Strut Uniform - Loads/Deflections<sup>(2)</sup>

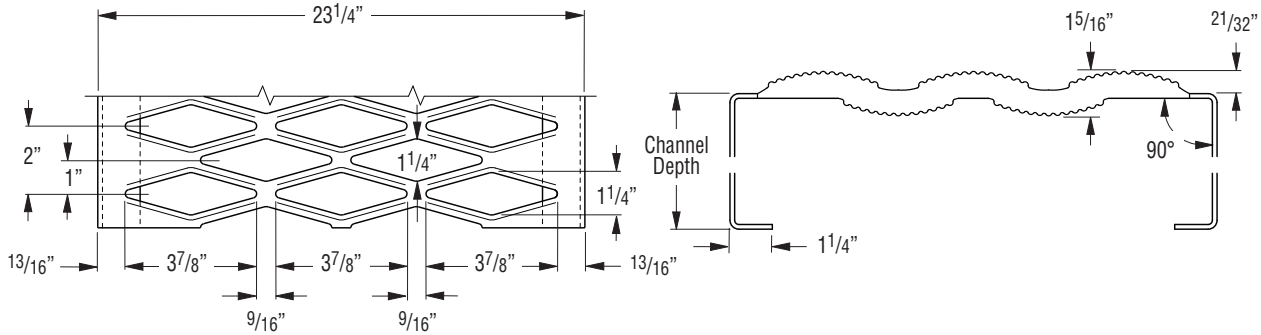
Plank Width	Thickness	Concentrated U (lb./ft. <sup>2</sup> )	
		Serrated	Non-Serrated
13 <sup>3</sup> / <sub>4</sub> "	11 ga. Steel	2044	2322
	10 ga. Steel	2354	2681
	9 ga. Steel	2678	3046
	Deflection (in.)	0.03	0.03

U = Allowable Uniform Load (lb./ft.<sup>2</sup>)  
 (2) See "General Load information", page 4, for explanation of design load deflection conditions.

# Grip Strut Plank - Safe Loading Tables



## 5-Diamond Plank — 23 1/4" Width — "H" Series



### Plank Selection & Design Loads/Deflections

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																	
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
Steel 11 ga.	2" (38.1)	12.7 (18.9)	H-52011	U	930	595	413	304	232	184	149	123	104	88	76	66	58	46	38	31	26
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
				C	1860	1488	1240	1063	930	827	744	677	620	572	531	496	465	413	372	338	310
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2 1/2" (63.5)	13.1 (19.5)	H-52511	U	1409	925	626	460	352	278	225	186	157	134	115	100	88	70	57	47	39
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
				C	2820	2256	1880	1611	1410	1254	1128	1025	940	868	806	752	705	626	564	513	470
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.06
	3" (76.2)	13.6 (20.2)	H-53011	U	1547	989	687	504	387	305	247	204	170	146	125	110	96	76	60	51	42
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3000	2400	2000	1715	1500	1333	1180	1091	1000	923	857	800	750	667	600	545	500
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
4" (101.6)	14.4 (21.4)	H-54011	U	2538	1624	1129	828	635	502	406	334	280	240	207	181	158	125	101	84	70	
			D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78	
			C	4920	3936	3280	2812	2460	2187	1968	1789	1640	1514	1406	1312	1230	1094	935	895	820	
			D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63	
Steel 10 ga.	2" (50.8)	14.4 (21.4)	H-52010	U	1034	661	459	337	258	204	165	136	116	97	84	73	65	51	42	34	29
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
				C	2067	1653	1378	1181	1033	919	827	752	689	636	590	551	517	459	413	376	344
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2 1/2" (63.5)	14.8 (22.0)	H-52510	U	1617	1034	718	528	404	319	259	214	180	153	132	115	101	81	65	54	45
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3133	2507	2089	1790	1567	1393	1253	1139	1044	964	895	836	783	696	627	570	522
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	15.4 (22.9)	H-53010	U	1720	1101	765	562	430	339	276	228	190	163	141	122	107	85	68	57	48
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3333	2667	2222	1905	1667	1481	1311	1212	1111	1026	952	889	833	741	667	606	556
				D	.03	.05	.07	.09	.11	.12	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4" (101.6)	16.4 (24.4)	H-54010	U	2821	1805	1254	921	706	557	452	373	312	268	231	201	177	139	113	93	77
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.76
				C	5467	4373	3644	3124	2733	2430	2187	1988	1822	1682	1562	1458	1367	1215	1039	994	911
				D	.03	.04	.05	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63



# Grip Strut Plank - Safe Loading Tables

## 5-Diamond Plank — 23<sup>1</sup>/<sub>4</sub>" Width — "H" Series cont.

### Plank Selection & Design Loads/Deflections

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																	
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
Steel 9 ga.	2" (38.1)	16.1 (23.9)	H-52009	U	1137	727	505	371	284	224	182	150	127	107	93	81	71	56	46	38	32
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
				C	2274	1818	1516	1299	1136	1011	910	827	758	700	649	606	569	505	454	414	378
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2 <sup>1</sup> / <sub>2</sub> " (63.5)	16.7 (24.8)	H-52509	U	1778	1137	790	581	444	359	283	234	197	167	144	125	110	88	71	59	48
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3446	2758	2298	1969	1724	1532	1378	1253	1148	1060	985	920	861	766	690	627	574
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	17.2 (25.6)	H-53009	U	1892	1211	841	618	472	372	302	249	209	178	155	133	116	93	74	62	53
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3666	2934	2444	2096	1834	1629	1442	1333	1222	1129	1047	978	916	815	734	667	612
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
	4" (101.6)	18.3 (27.2)	H-54009	U	3103	1985	1380	1013	775	613	497	410	344	294	252	221	194	153	124	102	85
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	6014	4810	4008	3436	3006	2673	2406	2187	2004	1850	1718	1604	1504	1337	1143	1093	1002
				D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63

### Strut Concentrated - Loads/Deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated C <sub>s</sub> (lb./ft.)	
		Serrated	Non-Serrated
23 <sup>1</sup> / <sub>4</sub> "	11 ga. Steel	823	939
	10 ga. Steel	941	1072
	9 ga. Steel	1059	1205
	Deflection (in.)	0.08	0.07

C<sub>s</sub> = Allowable Concentrated Load per ft. of length at mid-width (lb./ft.)  
 (2) See "General Load information", page 4, for explanation of design load deflection conditions.

### Strut Uniform - Loads/Deflections<sup>(2)</sup>

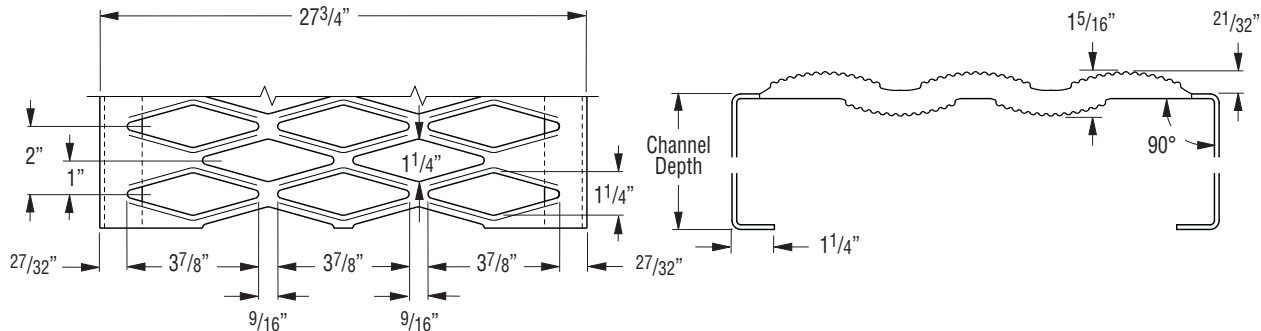
Plank Width	Thickness	Concentrated U (lb./ft. <sup>2</sup> )	
		Serrated	Non-Serrated
23 <sup>1</sup> / <sub>4</sub> "	11 ga. Steel	850	969
	10 ga. Steel	971	1106
	9 ga. Steel	1093	1244
	Deflection (in.)	0.10	0.09

U = Allowable Uniform Load (lb./ft.<sup>2</sup>)  
 (2) See "General Load information", page 4, for explanation of design load deflection conditions.

# Grip Strut Plank - Safe Loading Tables



## 6-Diamond Plank — 27<sup>3</sup>/<sub>4</sub>" Width — "H" Series



### Plank Selection & Design Loads/Deflections

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																	
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
Steel 11 ga.	2" (38.1)	14.3 (21.3)	H-62011	U	830	530	368	271	206	163	132	108	93	78	67	59	51	40	34	27	22
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	1860	1488	1240	1063	930	827	744	677	620	572	531	496	465	413	372	338	310
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2 1/2" (63.5)	14.7 (21.9)	H-62511	U	1258	805	559	410	313	247	201	166	139	119	102	88	78	61	49	42	35
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	2820	2256	1880	1611	1410	1254	1128	1025	940	868	806	752	705	626	564	513	470
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	15.2 (22.6)	H-63011	U	1338	855	594	436	335	264	214	176	147	126	108	95	83	66	52	44	36
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3000	2400	2000	1715	1500	1333	1180	1091	1000	923	857	800	750	667	600	545	500
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
4" (101.6)	16.0 (23.8)	H-64011	U	2234	1405	976	716	549	434	351	289	242	208	179	157	137	106	87	73	61	
			D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78	
			C	4920	3936	3280	2812	2460	2187	1968	1789	1640	1514	1406	1312	1230	1094	935	895	820	
			D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63	
Steel 10 ga.	2" (50.8)	16.2 (24.1)	H-62010	U	923	590	410	301	230	182	147	122	103	87	75	66	58	46	37	31	25
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2067	1653	1378	1181	1033	919	827	752	689	636	590	551	517	459	413	376	344
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2 1/2" (63.5)	16.7 (24.8)	H-62510	U	1398	894	621	457	349	276	224	185	156	132	114	99	87	70	56	47	39
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3133	2507	2089	1790	1567	1393	1253	1139	1044	964	895	836	783	696	627	570	522
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	17.2 (25.6)	H-63010	U	1488	952	662	486	372	293	239	197	164	141	122	106	93	74	59	49	42
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3333	2667	2222	1905	1667	1481	1311	1212	1111	1026	952	889	833	741	667	606	556
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
4" (101.6)	18.2 (27.1)	H-64010	U	2440	1561	1805	797	611	482	391	323	270	232	200	174	153	120	98	80	67	
			D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78	
			C	5467	4373	3644	3124	2733	2430	2187	1988	1822	1682	1562	1458	1367	1215	1039	994	911	
			D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63	



# Grip Strut Plank - Safe Loading Tables

## 6-Diamond Plank — 27<sup>3</sup>/<sub>4</sub>" Width — "H" Series cont.

### Plank Selection & Design Loads/Deflections

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																	
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
Steel 9 ga.	2" (38.1)	18.2 (27.1)	H-62009	U	1013	650	450	330	253	200	162	134	112	95	81	71	63	49	40	34	27
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2274	1818	1516	1299	1136	1011	910	827	758	700	649	606	569	505	454	414	378
	2 1/2" (63.5)	18.7 (27.8)	H-62509	U	1537	983	683	502	384	303	245	202	170	144	125	108	95	76	61	51	42
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3446	2758	2298	1969	1724	1532	1378	1253	1148	1060	985	920	861	766	690	627	574
	3" (76.2)	19.3 (28.7)	H-63009	U	1636	1047	727	534	408	322	261	215	181	154	134	115	100	80	64	54	46
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3666	2934	2444	2096	1834	1629	1442	1333	1222	1129	1047	978	916	815	734	667	612
	4" (101.6)	19.8 (29.4)	H-64009	U	2684	1717	1194	876	671	530	430	355	298	254	218	191	168	132	107	88	74
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	6014	4810	4008	3436	3006	2673	2406	2187	2004	1850	1718	1604	1505	1337	1143	1093	1002
			D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63	

### Strut Concentrated - Loads/Deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated C <sub>s</sub> (lb./ft.)	
		Serrated	Non-Serrated
23 <sup>1</sup> / <sub>4</sub> "	11 ga. Steel	690	793
	10 ga. Steel	788	906
	9 ga. Steel	887	1019
	Deflection (in.)	0.11	0.10

C<sub>s</sub> = Allowable Concentrated Load per ft. of length at mid-width (lb./ft.)  
 (2) See "General Load information", page 4, for explanation of design load deflection conditions.

### Strut Uniform - Loads/Deflections<sup>(2)</sup>

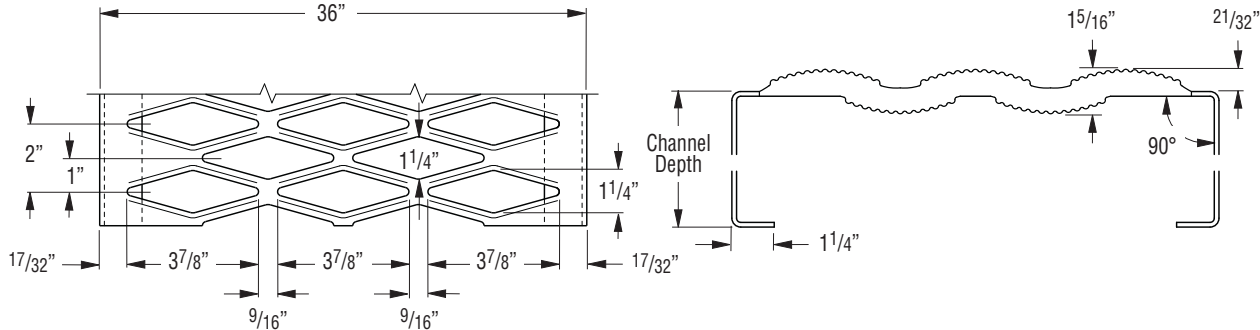
Plank Width	Thickness	Concentrated U (lb./ft. <sup>2</sup> )	
		Serrated	Non-Serrated
23 <sup>1</sup> / <sub>4</sub> "	11 ga. Steel	597	686
	10 ga. Steel	682	784
	9 ga. Steel	767	882
	Deflection (in.)	0.14	0.13

U = Allowable Uniform Load (lb./ft.<sup>2</sup>)  
 (2) See "General Load information", page 4, for explanation of design load deflection conditions.

# Grip Strut Plank - Safe Loading Tables



## 8-Diamond Plank — 36" Width — "H" Series



### Plank Selection & Design Loads/Deflections

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																	
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
Steel 11 ga.	2" (38.1)	18.0 (26.8)	H-82011	U	620	397	275	203	155	122	99	82	69	59	44	39	31	25	21	17	
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	1860	1488	1240	1063	930	827	744	677	620	572	531	496	465	413	372	338	310
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2 1/2" (63.5)	18.4 (27.4)	H-82511	U	950	601	418	307	235	185	150	124	104	89	77	67	59	47	38	32	26
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	2820	2256	1880	1611	1410	1254	1128	1025	940	868	806	752	705	626	564	513	470
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	18.9 (28.1)	H-83011	U	1000	640	445	327	250	197	160	132	111	95	82	71	62	50	40	33	28
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3000	2400	2000	1715	1500	1333	1180	1091	1000	923	857	800	750	667	600	545	500
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
4" (101.6)	19.7 (29.3)	H-84011	U	1640	1049	729	536	410	324	263	217	182	156	134	117	103	81	66	54	45	
			D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78	
			C	4920	3936	3280	2812	2460	2187	1968	1789	1640	1514	1406	1312	1230	1094	935	895	820	
			D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63	
Steel 10 ga.	2" (50.8)	19.9 (29.6)	H-82010	U	689	441	306	225	172	136	110	91	77	65	56	49	43	34	28	23	19
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2067	1653	1378	1181	1033	919	827	752	689	636	590	551	517	459	413	376	344
				D	.04	.06	.09	.12	.15	.19	.24	.28	.33	.38	.44	.49	.55	.68	.81	.98	1.16
	2 1/2" (63.5)	20.4 (30.3)	H-82510	U	1044	668	464	341	261	206	167	138	116	99	85	74	65	52	42	35	29
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3133	2507	2089	1790	1567	1393	1253	1139	1044	964	895	836	783	696	627	570	522
				D	.04	.06	.08	.11	.14	.18	.22	.25	.29	.34	.39	.44	.50	.63	.76	.91	1.08
	3" (76.2)	20.9 (31.1)	H-83010	U	1111	711	494	363	278	219	178	147	123	105	91	79	69	55	44	37	31
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3333	2667	2222	1905	1667	1481	1311	1212	1111	1026	952	889	833	741	667	606	556
				D	.03	.05	.07	.09	.12	.15	.17	.21	.24	.28	.31	.35	.39	.47	.55	.64	.76
4" (101.6)	21.8 (32.4)	H-84010	U	1822	1166	810	595	456	360	292	241	202	173	149	130	114	90	73	60	50	
			D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78	
			C	5467	4373	3644	3124	2733	2430	2187	1988	1822	1682	1562	1458	1367	1215	1039	994	911	
			D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63	





# Grip Strut Plank - Safe Loading Tables

## 8-Diamond Plank — 36" Width — "H" Series cont.

### Plank Selection & Design Loads/Deflections

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Material Gauge	Channel Depth in. (mm)	Weight lb./lin. ft. (kg/m)	Catalog Number	Span																	
				2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	
Steel 9 ga.	2" (38.1)	22.1 (32.9)	H-82009	U	758	485	337	248	189	150	121	100	85	72	62	54	47	37	31	25	21
				D	.05	.08	.11	.15	.19	.24	.30	.35	.41	.47	.54	.62	.69	.85	1.04	1.24	1.45
				C	2274	1818	1516	1299	1136	1011	910	827	758	700	649	606	569	505	454	414	378
	2 1/2" (63.5)	22.7 (33.8)	H-82509	U	1148	735	510	375	287	227	184	152	128	109	94	81	72	57	46	39	32
				D	.05	.07	.10	.14	.18	.23	.27	.32	.36	.42	.49	.55	.62	.79	.96	1.15	1.35
				C	3446	2758	2298	1969	1724	1532	1378	1253	1148	1060	985	920	861	766	690	627	574
	3" (76.2)	23.9 (35.5)	H-83009	U	1222	782	543	399	306	241	196	162	135	116	100	87	76	61	48	41	34
				D	.04	.06	.08	.11	.15	.18	.22	.26	.30	.34	.39	.44	.48	.58	.68	.80	.95
				C	3666	2934	2444	2096	1834	1629	1442	1333	1222	1129	1047	978	916	815	734	667	612
	4" (101.6)	24.2 (36.0)	H-84009	U	2004	1283	891	655	502	396	321	265	222	190	164	143	125	99	80	66	56
				D	.03	.05	.07	.09	.12	.14	.17	.20	.23	.27	.31	.35	.39	.47	.56	.66	.78
				C	6014	4810	4008	3436	3006	2673	2406	2187	2004	1850	1718	1604	1504	1337	1143	1093	1002
			D	.03	.04	.06	.07	.09	.11	.14	.16	.19	.22	.25	.28	.31	.38	.45	.53	.63	

### Strut Concentrated - Loads/Deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated C <sub>s</sub> (lb./ft.)	
		Serrated	Non-Serrated
36"	11 ga. Steel	447	510
	10 ga. Steel	515	587
	9 ga. Steel	586	667
	Deflection (in.)	0.16	0.15

C<sub>s</sub> = Allowable Concentrated Load per ft. of length at mid-width (lb./ft.)

(2) See "General Load information", page 4, for explanation of design load deflection conditions.

### Strut Uniform - Loads/Deflections<sup>(2)</sup>

Plank Width	Thickness	Concentrated U (lb./ft. <sup>2</sup> )	
		Serrated	Non-Serrated
36"	11 ga. Steel	298	340
	10 ga. Steel	343	391
	9 ga. Steel	391	444
	Deflection (in.)	0.20	0.19

U = Allowable Uniform Load (lb./ft.<sup>2</sup>)

(2) See "General Load information", page 4, for explanation of design load deflection conditions.

# Grip Strut Walkway - Safe Loading Tables



**5-Diamond Planks — 24” Width — 5” Deep — “H” Series**  
**6-Diamond Planks — 30” Width — 5” Deep — “H” Series**  
**8-Diamond Planks — 36” Width — 5” Deep — “H” Series**

## Steel Walkway Selection Design Loads/Deflections

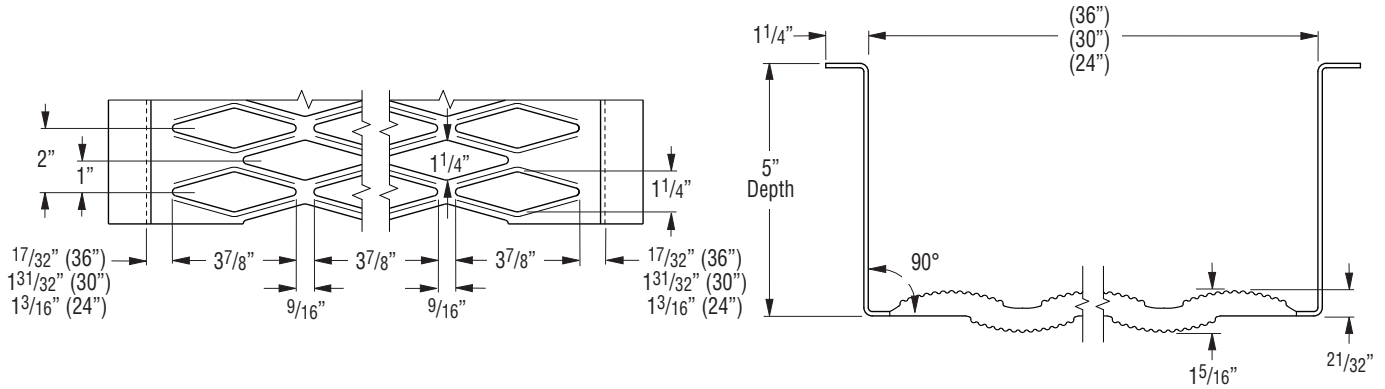
Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Steel Width Diamond	Material Gauge	Weight lb./in. ft. (kg/m)	Catalog Number	Span																	
				4'-0"	5'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	18'-0"	20'-0"	22'-0"	24'-0"	
24" 5-Dia	11 ga.	15.4 (22.9)	H-55011-W	U	750	480	334	245	187	148	120	99	83	71	62	54	47	37	30	25	21
				D	.34	.35	.38	.34	.34	.34	.35	.42	.50	.59	.69	.79	.91	1.13	1.43	1.70	2.03
				C	3000	2400	2000	1714	1500	1334	1200	1091	1000	922	857	800	750	666	600	546	500
				D	.27	.28	.31	.28	.28	.27	.28	.34	.41	.48	.56	.63	.72	.91	1.13	1.36	1.62
24" 5-Dia	10 ga.	17.5 (26.0)	H-55010-W	U	937	600	417	306	234	185	150	124	104	89	77	67	59	46	38	31	26
				D	.38	.39	.42	.38	.38	.38	.39	.47	.56	.66	.77	.88	1.01	1.26	1.59	1.89	2.25
				C	3750	3000	2500	2143	1875	1667	1500	1364	1250	1153	1071	1000	938	833	750	682	625
				D	.30	.31	.34	.31	.30	.30	.31	.36	.45	.53	.61	.70	.80	1.01	1.25	1.51	1.80
24" 5-Dia	9 ga.	19.6 (29.1)	H-55009-W	U	1031	660	459	337	257	204	165	136	114	98	85	74	65	51	42	34	29
				D	.38	.39	.42	.38	.38	.38	.39	.47	.56	.66	.77	.88	1.01	1.26	1.59	1.89	2.25
				C	4125	3300	2750	2357	2063	1834	1650	1500	1375	1268	1178	1100	1032	916	825	750	688
				D	.30	.31	.34	.31	.30	.30	.31	.36	.45	.53	.61	.70	.80	1.01	1.25	1.51	1.80
30" 6-Dia	11 ga.	17.7 (26.3)	H-65011-W	U	732	468	325	239	183	145	116	96	81	69	60	52	45	36	28	24	20
				D	.33	.39	.36	.36	.41	.38	.37	.37	.44	.51	.59	.68	.77	.98	1.20	1.46	1.73
				C	3667	2932	2444	2095	1832	1629	1467	1333	1222	1128	1047	977	916	815	732	667	610
				D	.27	.31	.29	.29	.33	.31	.30	.30	.35	.41	.48	.55	.62	.78	.97	1.17	1.40
30" 6-Dia	10 ga.	19.9 (29.6)	H-65010-W	U	916	586	407	299	229	182	146	121	102	87	75	65	57	45	36	30	25
				D	.37	.43	.40	.40	.46	.42	.41	.41	.49	.57	.66	.75	.86	1.09	1.33	1.62	1.92
				C	4584	3666	3056	2619	2291	2037	1834	1667	1528	1410	1309	1222	1146	1019	916	834	763
				D	.30	.34	.32	.32	.37	.34	.33	.33	.39	.45	.53	.61	.69	.87	1.08	1.30	1.55
30" 6-Dia	9 ga.	22.1 (32.9)	H-65009-W	U	1007	644	447	328	251	200	160	133	112	95	82	71	62	49	39	33	27
				D	.37	.43	.40	.40	.46	.42	.41	.41	.49	.57	.66	.75	.86	1.09	1.33	1.62	1.92
				C	5042	4032	3361	2880	2530	2240	2017	1833	1680	1551	1439	1344	1260	1120	1007	917	839
				D	.30	.34	.32	.32	.37	.34	.33	.33	.39	.45	.53	.61	.69	.87	1.08	1.30	1.55
36" 8-Dia	11 ga.	20.2 (30.0)	H-85011-W	U	444	284	197	144	111	88	71	58	49	42	36	31	28	21	17	14	12
				D	.35	.35	.30	.29	.30	.32	.35	.38	.46	.54	.62	.71	.82	1.04	1.26	1.50	1.78
				C	2664	2133	1777	1524	1333	1184	1066	969	888	820	761	711	666	592	533	484	444
				D	.28	.28	.23	.23	.23	.26	.28	.31	.37	.43	.50	.58	.65	.83	1.02	1.23	1.47
36" 8-Dia	10 ga.	22.7 (33.8)	H-85010-W	U	556	356	247	181	139	110	89	73	62	53	45	39	35	27	22	18	15
				D	.39	.39	.33	.32	.33	.36	.39	.42	.51	.60	.69	.79	.91	1.15	1.40	1.67	1.98
				C	3330	2667	2222	1905	1667	1481	1333	1212	1111	1026	952	889	833	741	667	606	556
				D	.31	.31	.26	.26	.26	.29	.31	.34	.41	.46	.55	.64	.72	.92	1.13	1.37	1.63
36" 8-Dia	9 ga.	25.3 (37.6)	H-85009-W	U	611	391	271	199	152	121	97	80	68	58	49	42	38	29	24	19	16
				D	.39	.39	.33	.32	.33	.36	.39	.42	.51	.60	.69	.79	.91	1.15	1.40	1.67	1.98
				C	3663	2933	2444	2095	1833	1629	1466	1333	1222	1128	1047	977	916	815	733	666	611
				D	.31	.31	.26	.26	.26	.29	.31	.34	.41	.46	.55	.64	.72	.92	1.13	1.37	1.63



# Grip Strut Walkway - Safe Loading Tables

**5-Diamond Planks — 24" Width — 5" Deep — "H" Series cont.**  
**6-Diamond Planks — 30" Width — 5" Deep — "H" Series cont.**  
**8-Diamond Planks — 36" Width — 5" Deep — "H" Series cont.**



**Strut Concentrated - Loads/Deflections<sup>(2)</sup>**

Walkway Width	Thickness - Material	Concentrated $C_s$ (lb./ft.)	
		Serrated	Non-Serrated
24" 5-Diamond	11 ga. - Steel	798	917
	10 ga. - Steel	912	1048
	9 ga. - Steel	1026	1179
	Deflection (in.)	0.08	0.07
30" 6-Diamond	11 ga. - Steel	537	612
	10 ga. - Steel	618	704
	9 ga. - Steel	703	800
	Deflection (in.)	0.11	0.10
36" 8-Diamond	11 ga. - Steel	447	510
	10 ga. - Steel	515	587
	9 ga. - Steel	586	667
	Deflection (in.)	0.16	0.15

$C_s$  = Allowable Concentrated Load per ft. of length at mid-width (lb./ft.)  
 (2) See "General Load information", page 4, for explanation of design load deflection conditions.

**Strut Uniform - Loads/Deflections<sup>(2)</sup>**

Walkway Width	Thickness - Material	Uniform $U$ (lb./ft. <sup>2</sup> )	
		Serrated	Non-Serrated
24" 5-Diamond	11 ga. - Steel	798	917
	10 ga. - Steel	912	1048
	9 ga. - Steel	1026	1179
	Deflection (in.)	0.11	0.10
30" 6-Diamond	11 ga. - Steel	429	490
	10 ga. - Steel	494	563
	9 ga. - Steel	563	640
	Deflection (in.)	0.14	0.13
36" 8-Diamond	11 ga. - Steel	298	340
	10 ga. - Steel	343	391
	9 ga. - Steel	391	444
	Deflection (in.)	0.20	0.19

$U$  = Allowable Uniform Load (lb./ft.<sup>2</sup>)  
 (2) See "General Load information", page 4, for explanation of design load deflection conditions.

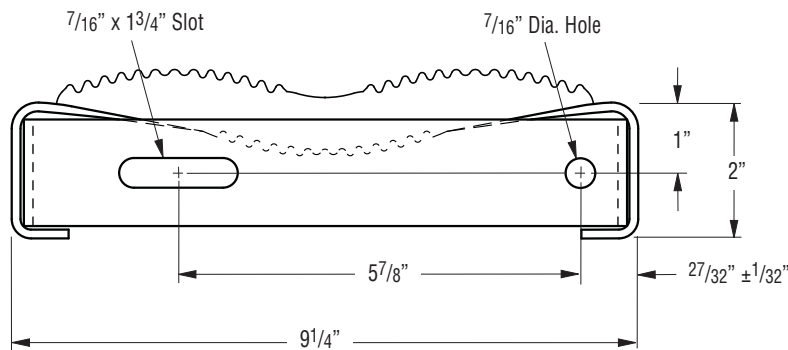


## A Step Ahead With Safety, Two Ways

No-where is sole-gripping design more critical than on stairs, where feet are more prone to slip, often with severe consequences. Heavy-Duty Grip Strut Stair Treads provide the sole-gripping qualities of Grip Strut Grating for extra safety in two ways: multi-directional scraping action of tiny-toothed surfaces keeps shoes clean; open design rids surface of debris. The open area also makes threads easy to see, and edges read

well from above. Heavy-Duty Grip Strut Stair Treads are available in standard nosing style only, both 10-gauge steel and .125" aluminum: one depth (2"), two widths (9<sup>1</sup>/<sub>4</sub>", 13<sup>3</sup>/<sub>4</sub>"), and four standard spans (24", 30", 36", 48"), with others available upon request. They are ideal for new construction, or easily attached to stringers for rehabilitation of existing stairs.

### Heavy-Duty Grip Strut — 2-Diamond Stair Tread Construction



### Stair Tread Selection & Design Loads <sup>(1)</sup>

Allowable Loads and Deflections: U=Uniform Load (lb./ft.<sup>2</sup>) C= Concentrated Load (lb.) D=Deflection (in.)

Material	Thickness	Depth in.	Weight lb./lin. ft. (kg/m)	Catalog Number	Load Type	Clear Span			
						2'-0"	2'-6"	3'-0"	4'-0"
Steel	10 ga.	2"	7.4 (11.0)	HT22010	U	2412	1544	1026	629
					C	1860	1487	1240	929

(1) See "General Load information", page 4, for explanation of design load deflection conditions.



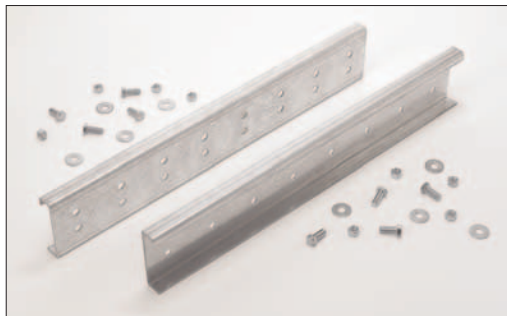


## Heavy-Duty Grip Strut Grating Accessories

**Heavy-Duty Grip Strut Hold-Down Clip** catalog number H-BC-10 (stainless steel; use with  $\frac{3}{8}$ " square-shank carriage bolts, nuts and washers obtained locally).

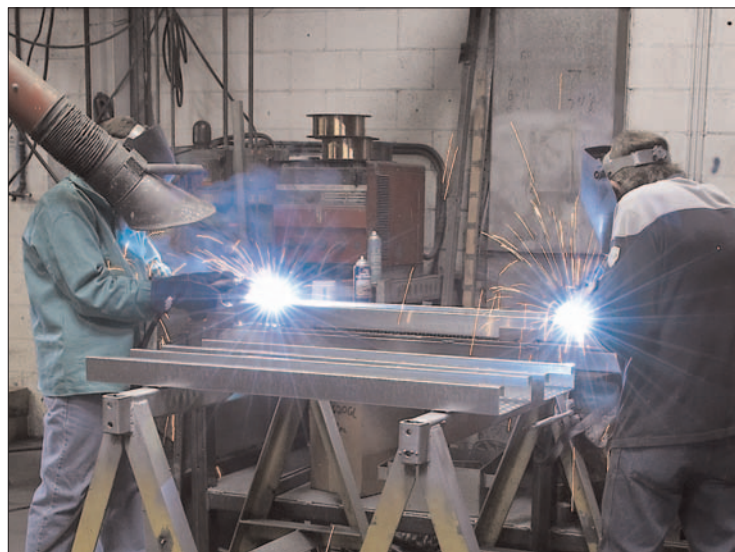


**Walkway Splice Plate**, catalog number P-H-SP-U, formed from 9 gauge mill-galvanized steel, prepunched and supplied with  $\frac{1}{2}$ " hex bolts, nuts and washers. Torque to 40 ft.-lbs.



## Fabricating Services

Cooper B-Line can quote large jobs on a lump-sum basis, including detailing and fabricating of special material, to your requirements. Submit plans and specifications through your Grip Strut Safety Grating distributor. After your order is received, a bill of materials and shop drawings will be prepared for your approval before fabrication is begun. A few of the fabricating services available include: special cutting, marking according to layout, banding and toe plates.





**Handrail Brackets** are available for application on Heavy-Duty Grip Strut Steel Walkways. This is a valuable accessory for those projects where utilization of Heavy-Duty Grip Strut Steel Walkway is desired for its superior long spanability. And handrailing with handrail post on maximum eight foot center is required per OSHA. The Handrail Brackets eliminate unnecessary and costly substructure to support handrail post.

The assembly of Heavy-Duty Grip Strut Steel Walkway with the Handrail Brackets has been tested as a proper moment connection for handrail post to standards as outlined in "OSHA" 1910.23.

Handrail Brackets come in two styles; (1) Universal Type (2) Clip Angle Type. And can be ordered to the following catalog system;

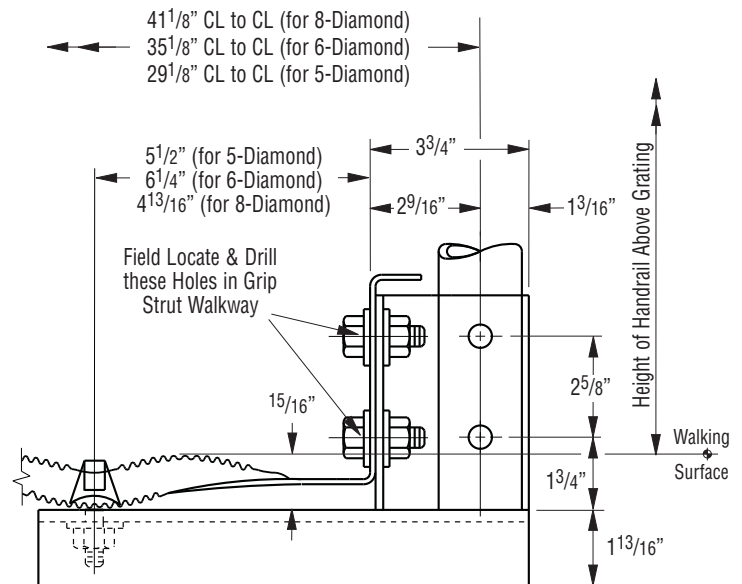


### Typical catalog number

HRB-Hand Rail Bracket  
5, 6, or 8 Diamond  
**HRB-A-5**  
A (Clip Angle Type)  
or  
UNIV\_HRB\_P (Universal Type)

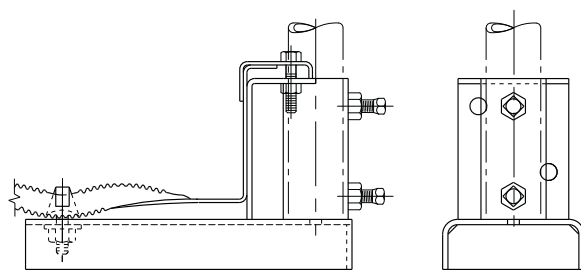
### Clip Angle/Handrail Bracket (HRB-A-\_)

is designed for use with all types of Handrail Post; Pipe, Angle, Tube etc. Handrail Post may be mounted to Handrail Bracket with two 1/2" bolts and nuts (not included) to holes conveniently located, or by welding. Handrail Brackets are sold in plain non-finished steel but may be ordered in a hot dipped galvanized after fabrication finish. All hardware for mounting Handrail Bracket to Heavy-Duty Steel Walkway is included.

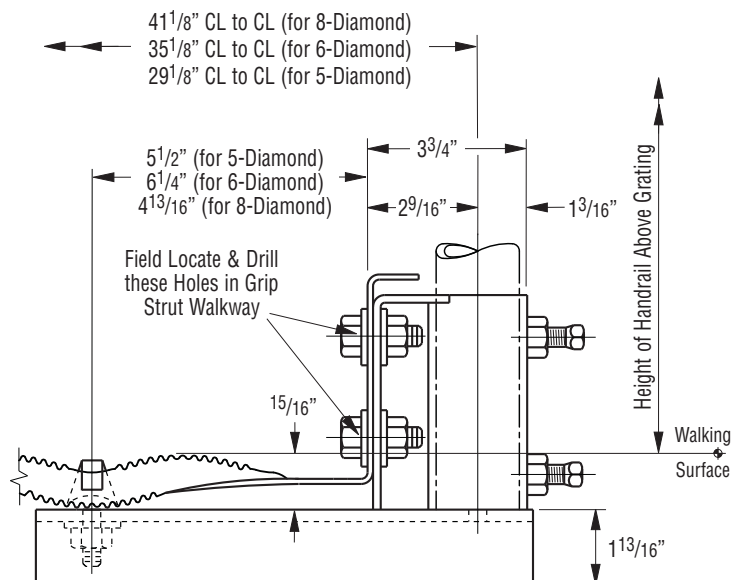


### Universal Handrail Bracket (UNIV\_HRB\_P)

is designed for use with pipe style handrail post (maximum 2" O.D.) which allows for simple installation of handrail post. Secure post by tightening two allen head set screws. Handrail Bracket is sold in plain non-finish steel but may be ordered in a hot dipped galvanized after fabrication finish. All hardware for mounting Handrail Bracket to Heavy-Duty Steel Walkway is included.



Universal Handrail Bracket permits attachment without drilling





## Notes to architect

1. These specifications are presented as a general guide to the architect or structural engineer in preparing project specifications. Allowable loads, spans, and other limiting conditions presented in this catalog are product data for use in design and construction. These products must not be used without prior structural design by a qualified engineer or architect.
2. Grip Strut Safety Gratings are intended for general purpose use in plants and process facilities by industry, commerce, and public utilities.  
Grip Strut Safety Grating Stair Treads are intended for utility stairs and fire escapes in commercial, industrial buildings where local code permits. They are not intended for staircases and other areas used regularly by the general public where flat closed surfaces are desired.
3. All supports should 1 1/2" minimum bearing surface free of burrs, bridging, welds and other irregularities. (Note: When using Butterfly Anchor Clips "H-BC-10" it is advisable to provide a minimum of 3" for bearing per support per grating).
4. Random-, diagonal- or circular-cut exposed edges should be reinforced with a bar of grating thickness (minimum 1/8") and width equal to overall grating depth, welded at contact points of the designer's discretion.
5. Bolted connections, except stair or ladder tread attachment to stringers, may be replaced by welded connections of equal or greater strength.

## Part 1: General

### 1.1 Scope

The contractor shall furnish and install Grip Strut Grating and Stair Treads, as specified, in all areas where shown on the drawings.

### 1.2 Qualifications

All Grip Strut Grating, Stair Tread and accessories, unless otherwise indicated, shall be manufactured by Cooper B-Line, and shall be installed in accordance with its current recommendations.

### 1.3 Submittals

The contractor shall furnish shop drawings of grating layout, framing and supports, unit dimensions and sections, fastener and weld types and locations.

### 1.4 storage and Handling

All materials shall be stored and handled to avoid damage. Damaged or deteriorated materials shall be removed from the premises.

## Part 2: Products

### 2.1 Gratings

- a. **Type:** Heavy-Duty Grip Strut Safety Grating (Plank) (Walkway).
- b. **Metal:** (carbon steel) (5052 H-32 aluminum alloy).
- c. **Finish:** mill-galvanized before fabrication, ASTM A525) plain, unpainted, and oiled (HRP&O); mill finish (aluminum).
- d. **Metal gauge:** 11-ga., 10-ga., 9-ga. (ASG steel); .125" (aluminum).
- e. **Section width:** 9 1/4", 13 3/4", 23 1/4", 27 3/4", 36" (plank); 24", 30", 36" (walkway).
- f. **Side channel height:** 2", 2 1/2", 3", 4" (plank); 5" (walkway), also Canadian OH & S compliant.
- g. **Standard lengths:** 10'-0", 12'-0", 24'-0" (walkway); 10'-0", 12'-0", special order (plank).
- h. **Opening diamond:** "H" Series, 3 7/8" x 1 1/4" wide (grating surface-projected dimensions).
- i. **Reticulated pattern:** 1 5/16" high, minimum of 500 teeth per square foot.
- j. **Slip resistance:** Complies with Federal Specification RR-G-1602A standards.
- k. **Surface texture:** Standard serrated, non-serrated, and reduced opening.





## 2.2 Stair Treads

- a. **Type:** Heavy-Duty Grip Strut Stair Tread, Standard Nosing.
- b. **Metal:** (carbon steel) (5052 H-32 aluminum alloy).
- c. **Finish:** mill-galvanized before fabrication, ASTM A525) plain, unpainted, and oiled (HRP&O); mill finish (aluminum).
- d. **Metal thickness:** 10-ga. (ASG, steel); .125" (aluminum).
- e. **Section width:** 9<sup>1</sup>/<sub>2</sub>".
- f. **Side channel height:** 2".
- g. **Standard lengths:** (2", 2<sup>1</sup>/<sub>2</sub>", 36", 4" (nominal and actual), ±1/8"
- h. **Opening diamond:** "H" Series, 3<sup>7</sup>/<sub>8</sub>" x 1<sup>1</sup>/<sub>4</sub>" wide (grating surface-projected dimensions).
- i. **Open area:** 52%.
- j. **Reticulated pattern:** 1<sup>5</sup>/<sub>16</sub>" high, minimum of 500 teeth per square foot.
- k. **Slip resistance:** Complies with Federal Specification RR-G-1602A standards.

## 2.3 Accessories

Heavy-Duty Grip Strut Hold-Down Clip, stainless steel, Catalog Number H-BC-10. (Use with 3/8" square-shank carriage bolts, nuts, and washers obtained locally).

Handrail Bracket - hardware to attach bracket to walkway is supplied. Optional hot dipped galvanized after fabrication is available per request.

Heavy-Duty Grip Strut Splice plate (P-H-Sp-U), 30", 9 gauge mill-galvanized steel splice plate with bolts, hex nuts, and washers.

## Part 3: Execution

### 3.1 Bearing surfaces

Prior to grating installation, inspect supports for correct size, layout and alignment, and verify that bearing surfaces are smooth and free of debris. Report in writing to the engineer or owner's agent and defects so they can be corrected before grating is installed.

### 3.2 Grating installation

Install grating in accordance with manufacturer's recommendations and shop drawings. Position grating sections flat and square with ends bearing min. 1<sup>1</sup>/<sub>2</sub>" on supporting structure; for sections over 12'-0" long, and when Heavy-Duty Grip Strut Hold-Down Clips are used, 3" minimum bearing surface is required. Bearing surface must be smooth, level, free of burrs, bridging, welds and other irregularities. Space grating sections a minimum 1/4" from vertical steel sections, and 1/2" from concrete walls. Allow maximum clearance between sections at joints of 1/4" at side channels, 3/8" at ends.

Band random-cut ends and diagonal or circular cut exposed edges with a bar of grating thickness (min. 1/8") and width equal to overall depth, welded at contact points of the designer's discretion.

### 3.3 Grating attachment

Attach grating to supports without warp or deflection as follows:

- a. **Single plank application:** Secure plank ends to supporting members at every point of contact. At each end, use Heavy-Duty Grip Strut Hold-Down Clips with 3/8" square shank carriage bolts and nuts, or secure each side channel to support by 1/8" x 1" long fillet welds.
- b. **Multiple plank application:** Secure perimeter plank to supporting members with 1/8" x 1" long fillet welds at every point of contact, intermediate grating sections with at least one attachment each end on alternate sides. When span exceeds 6'-0", attach side channels of adjacent planks together at mid-point of span for added rigidity. To joint adjacent planks together, weld them at 24" O.C. staggered top and bottom.

### 3.4 Stair Tread Installation

Fasten Grip Strut Stair Treads shown on the drawings, or as herein specified, to stair stringers with 3/8" x 1" machine bolts and nuts.

# How To Order



Heavy-Duty Grip Strut Safety Grating planks, walkways and stair treads are stocked at local Grip Strut Safety Grating distributors in all major market areas. For the finest in Safety Grating and Stair Treads, contact Cooper B-Line or look for your local Grip Strut distributor on the internet at [www.cooperblineline.com](http://www.cooperblineline.com). You will get skilled consulting service on your specific requirements.

All standard products are coded with a catalog number which should be used in ordering. For identification and ordering information on special products, consult your Grip Strut Safety Grating distributor or Cooper B-Line.

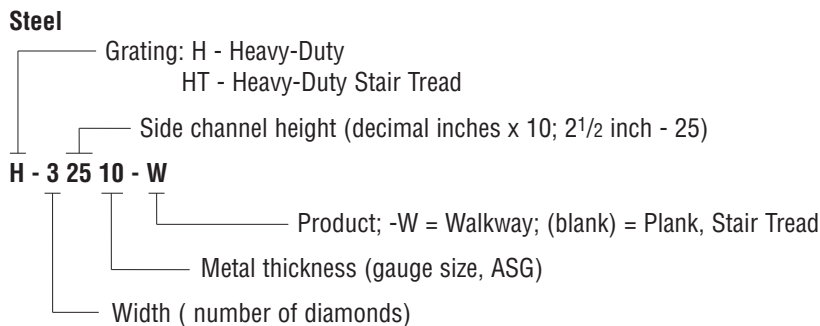
## Catalog number code

### Plank and walkway catalog numbers

denote product configuration as follows:

#### Steel —

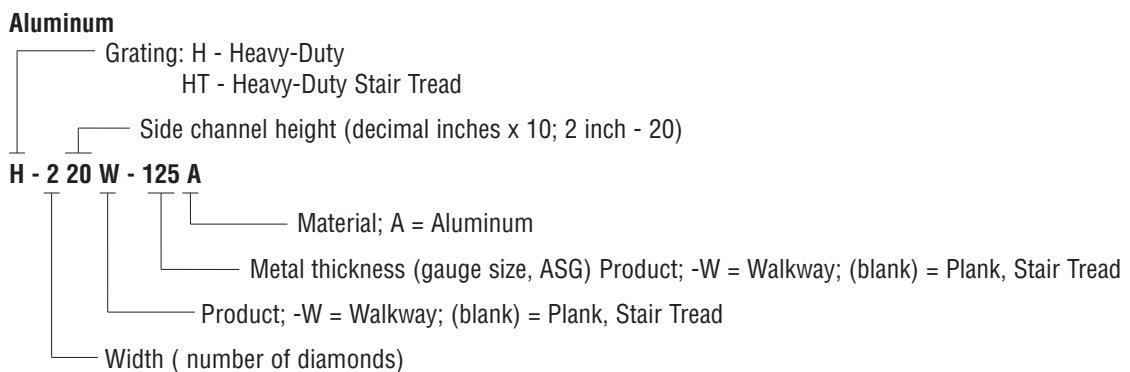
Standard material is mill-galvanized per ASTM A525. For plain, unpainted steel, "B" follows the five-digit catalog number coded below.



*Examples: Catalog Number H-82010 denotes a mill-galvanized, 10 gauge steel plank of 8-diamond (36") width and 2" high side channels; Catalog Number H-65009-WB denotes a plain, unpainted, 9 gauge steel walkway of 6-diamond (30") width and 5" high side channels.*

#### Aluminum (Special Order) —

Standard material is 5052-H32 alloy/temper, mill finish. Catalog number is identical in coding to the catalog number for steel, as described above, but followed by "A" to denote aluminum; also, aluminum thickness is given in inch-thickness.



*Example: Catalog Number H-230-125A denotes a 5052 alloy, mill finish, aluminum plank of 0.125 inch material thickness, 2-diamond (9 1/4") width and 3" high side channels.*

#### Stair Tread catalog numbers —

Use the above coding preceded by "HT" to denote stair tread.

*Example: Catalog Number HT-22010-B denotes a stair tread of plain, unpainted, 10 gauge steel, 2-diamond (9 1/4") width and 2" high deep side channels.*

