METELMEX

The Superior Grating

Grating

METELMEX

For over 40 years Metelmex has successfully provided products and services to a multitude of industries worldwide.
By offering superior quality products and services at competitive prices, we have achieved the prestige as one of the premier Mexican companies in its field, on both a national and international level.
Our primary expertise lies in the manufacturing and fabrication of metal bar grating and stair treads. However, due to increasing market demand of higher standards, continuous improvement expectations and our client's need to meet these challenges, we have grown our range of products and services, such as floor plate fabrication, to meet or exceed these demands. Thus, we are able to offer integrated products throughout our client's projects with the industry's highest quality and superior lead times.
Metelmex holds itself to the highest standards by following strict manufacturing/fabrication quality control processes and procedures required by our membership in NAAMM, AMEGAC and ASTM. Our dedication to excellence has allowed Metemex to achieve ISO-9001 certification, CFE-LAPEM certification for the electric industry, BI-CERT certification for export projects and AARM-1003 certification for the railroad industry.

OUR COMMITMENT

Our vast experience, customer centric culture and commitment to service and product knowledge creates a well-rounded technical staff ready to answer your questions and offer solutions to your project needs to provide you with the best customer experience. Our sales staff is ready to fill your standard orders or offer alternatives and solutions, when necessary, to meet the more challenging requirements. Customers are our life blood and there are no "small" clients. We are committed to offering you the right product at the right price with the best delivery schedule. From estimating to sales, and from detailing to fabrication, Metemex offers the kind of "vendor-to-customer" communication that is vital for successful project completion.

STEEL BAR GRATING

Metelmex's steel bar grating is manufactured utilizing the "Weldforge" process, which has been successfully used worldwide for decades, ensuring a superior product with high quality, uniformity and performance. Stock panel sizes are 2' & 3' wide x 20' & 24' long. 4' wide panels are also available upon request. Metelmex also provides full fabrication services including detailing, cut-to-size, galvanizing & shop coat paint. Our grating details will be sent to you for approval prior to fabrication. Once final approvals are received, fabrication is performed including cut-to-size, straight and/or circular cut outs and straight and/or circular band or toe plate. The grating is then galvanized, shop coat painted or left mill finish. Fabrication extras and finish is based on design drawing specifications and standards provided by the customer. Each piece of grating includes a "piece mark" tag welded to the grating to identify it for ease of installation. Erection drawings are also provided and show each piece mark and its location in the floor area.

SMOOTH OR CHECKERED PLATE CAN ALSO BE ATTACHED TO THE SURFACE OF THE GRATING CREATING A COMPOSITE PRODUCT.

WIDE VARIETY OF GRATING

- Steel Bar Grating
- Heavy Duty Steel Bar Grating
- Stainless Steel Bar Grating
- Aluminium Swaged Grating
- Fiberglass Reinforced Plastic Grating

Application of modular products. Stair treads and trench drains.

Advantages. Allows the passage of light, allows air circulation, prevents blockages or accumulation of trash, dust or liquid, provides good load-to-weight ratio and, as a walking surface, grating increases safety by providing additional friction to shoe soles helping to reduce slips and falls.

Common applications. Industrial and commercial plants, mining underground vents, catwalks, conveyors, flooring, machine rooms, marine platforms, heliports, industrial stair treads, trench and Storm Drains.

Stainless Steel Grating

Dimensions

- Standard Panel
  3' width x 20' length
- Maximum length: 24'

(Limited to specific types of grating and bearing bars)

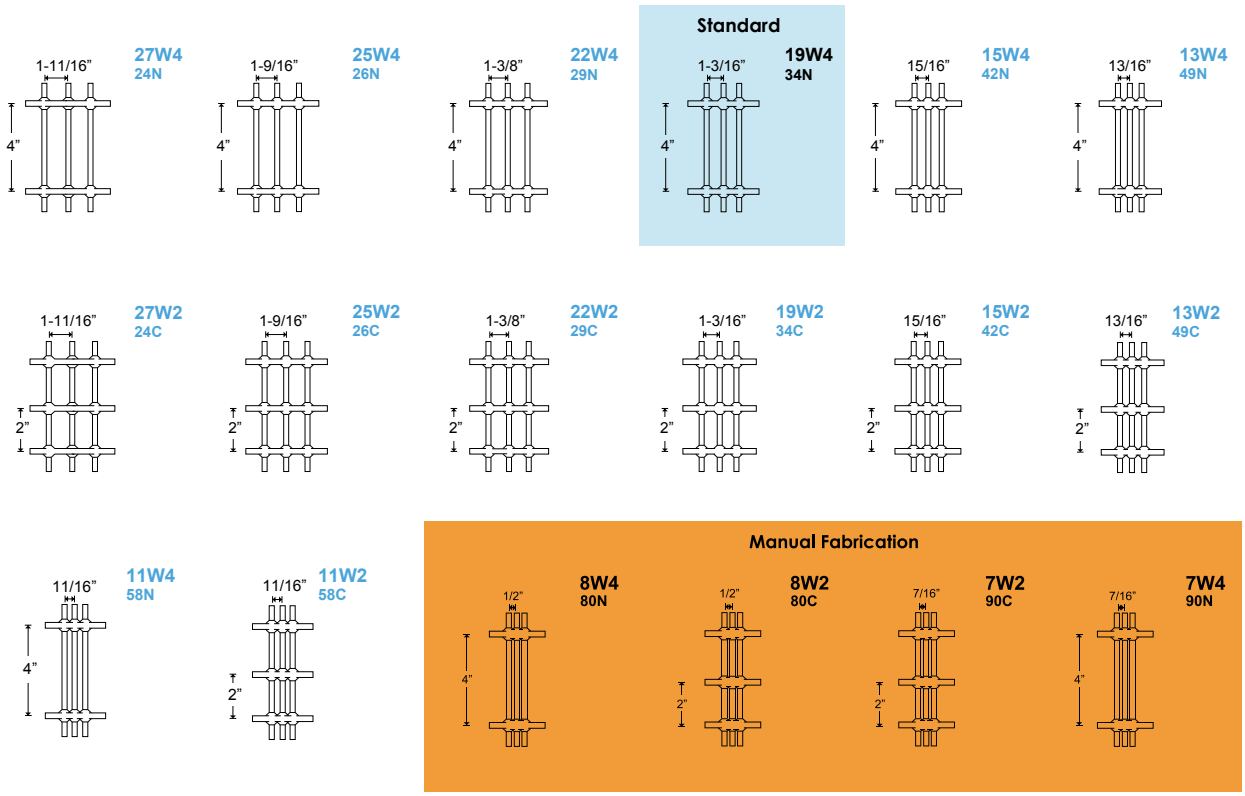
Surfaces

- Smooth
- Serrated

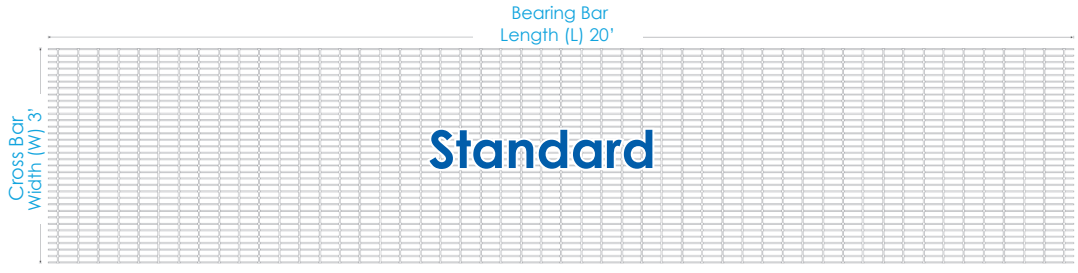
Metal finishes

- Mill
- Black paint
- Hot dip galvanized under ASTM-A-123 specifications
- Other colors available on special request.

TYPES OF STEEL BAR GRATING



NOTE: All types of Grating that are not Standard are fabricated as a special order and downpayment is required.



PANEL WIDTH CHART (IN.) 7MF4 & 7MF2

DIMENSIONS ARE OUT-TO-OUT OF BEARING BARS**

No.of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
3/16" Bars	5/8	1-1/16	1-1/2	1-15/16	2-3/8	2-13/16	3-1/4	3-11/16	4-1/8	4-9/16	5	5-7/16	5-7/8	6-5/16	6-3/4
No.of Bars	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**
3/16" Bars	7-3/16	7-5/8	8-1/16	8-1/2	8-15/16	9-3/8	9-13/16	10-1/4	10-11/16	11-1/8	11-9/16	12	12-7/16	12-7/8	13-5/16
No.of Bars	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**
3/16" Bars	13-3/4	14-3/16	14-5/8	15-1/16	15-1/2	15-15/216	16-3/8	16-13/16	17-1/4	17-11/16	18-1/8	18-9/16	19	19-7/16	19-7/8
No.of Bars	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**
3/16" Bars	20-5/16	20-3/4	21-3/16	21-5/8	22-1/16	22-1/2	22-15/16	23-3/8	23-13/16	24-1/4	24-11/16	25-1/8	25-9/16	26	26-7/16
No.of Bars	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**	**71**	**72**	**73**	**74**	**75**	**76**
3/16" Bars	26-7/8	27-5/16	27-3/4	28-3/16	28-5/8	29-1/16	29-1/2	29-15/16	30-3/8	30-13/16	31-1/4	31-11/16	32-1/8	32-9/16	33
No.of Bars	**77**	**78**	**79**	**80**	**81**	**82**	**83**								
3/16" Bars	33-7/16	33-7/8	34-5/16	34-3/4	35-3/16	35-5/8	36-1/16								

PANEL WIDTH CHART (IN.) 11W4 & 11W2

DIMENSIONS ARE OUT-TO-OUT OF BEARING BARS**

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

PANEL WIDTH CHART (IN.) 15W4 & 15W2

DIMENSIONS ARE OUT-TO-OUT OF BEARING BARS**

No.of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1/4" Bars	1-3/16	2-1/8	3-1/16	4	4-15/16	5-7/8	6-13/16	7-3/4	8-11/16	9-5/8	10-9/16	11-1/2	12-7/16	13-3/8	14-5/16
5/16" Bars	1-1/4	2-3/16	3-1/8	4-1/16	5	5-15/16	6-7/8	7-13/16	8-3/4	9-11/16	10-5/8	11-9/16	12-1/2	13-7/16	14-3/8
3/8" Bars	1-5/16	2-1/4	3-3/16	4-1/8	5-1/16	6	6-15/16	7-7/8	8-13/16	9-3/4	10-11/16	11-5/8	12-9/16	13-1/2	13-7/16

No.of Bars	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1/4" Bars	15-1/4	16-3/16	17-1/8	18-1/16	19	19-15/16	20-7/8	21-13/16	22-3/4	23-11/16	24-5/8	25-9/16	26-1/2	27-7/16	28-3/8
5/16" Bars	15-5/16	16-1/4	17-3/16	18-1/8	19-1/16	20	20-15/16	21-7/8	22-13/16	23-3/4	24-11/16	25-5/8	26-9/16	27-1/2	28-7/16
3/8" Bars	15-3/8	16-5/16	17-1/4	18-3/16	19-1/8	20-1/16	21	21-15/16	22-7/8	23-13/16	24-3/4	25-11/16	26-5/8	27-9/16	28-1/2

No.of Bars	32	33	34	35	36	37	38	39							
1/4" Bars	29-5/16	30-1/4	31-3/16	32-1/8	33-1/16	34	34-15/16	35-7/8							
5/16" Bars	29-3/8	30-5/16	31-1/4	32-3/16	33-1/8	34-1/16	35	35-15/16							
3/8" Bars	29-7/16	30-3/8	31-5/16	32-1/4	33-3/16	34-1/8	35-1/16	36							

PANEL WIDTH CHART (IN.) 19W4 & 19W2

DIMENSIONS ARE OUT-TO-OUT OF BEARING BARS**

No.of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1/4" Bars	1-7/16	2-5/8	3-13/16	5	6-3/16	7-3/8	8-9/16	9-3/4	10-15/16	12-1/8	13-5/16	14-1/2	15-11/16	16-7/8	18-1/16
5/16" Bars	1-1/2	2-11/16	3-7/8	5-1/16	6-1/4	7-7/16	8-5/8	9-13/16	11	12-3/16	13-3/8	14-9/16	15-3/4	16-15/16	18-1/8
3/8" Bars	1-9/16	2-3/4	3-15/16	5-1/8	6-5/16	7-1/2	8-11/16	9-7/8	11-1/16	12-1/4	13-7/16	14-5/8	15-13/16	17	18-3/16
1/2" Bars	1-11/16	2-7/8	4-1/16	5-1/4	6-7/16	7-5/8	8-13/16	10	11-3/16	12-3/8	13-9/16	14-3/4	15-15/16	17-1/8	18-5/16

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

PANEL WIDTH CHART (IN.) 22W4 & 22W2

DIMENSIONS ARE OUT-TO-OUT OF BEARING BARS**

No.of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1/4" Bars	1-5/8	3	4-3/8	5-3/4	7-1/8	8-1/2	9-7/8	11-1/4	12-5/8	14	15-3/8	16-3/4	18-1/8	19-1/2	20-7/8
5/16" Bars	1-11/16	3-1/16	4-7/16	5-13/16	7-3/16	8-9/16	9-15/16	11-5/16	12-11/16	14-1/16	15-7/16	16-13/16	18-3/16	19-9/16	20-15/16
3/8" Bars	1-3/4	3-1/8	4-1/2	5-7/8	7-1/4	8-5/8	10	11-3/8	12-3/4	14-1/8	15-1/2	16-7/8	18-1/4	19-5/8	21
1/2" Bars	1-7/8	3-1/4	4-5/8	6	7-3/8	8-3/4	10-1/8	11-1/2	12-7/8	14-1/4	15-3/8	17	18-3/8	19-3/4	21-1/8

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

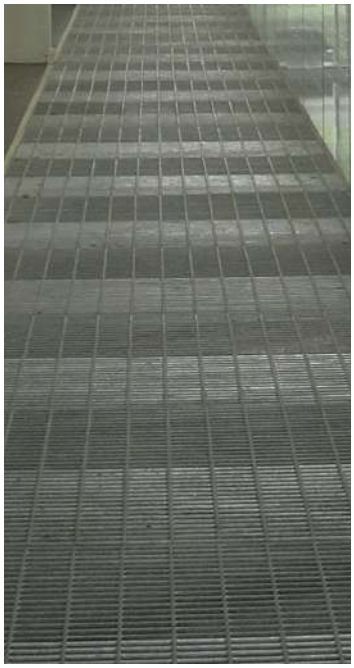
PANEL WIDTH CHART (IN.) 38W4 & 38W2

DIMENSIONS ARE OUT-TO-OUT OF BEARING BARS**

No.of Bars	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1/4" Bars	2-5/8	5	7-3/8	9-3/4	12-1/8	14-1/2	16-7/8	11-1/4	21-5/8	24	26-3/8	28-3/4	31-1/8	33-1/2	35-7/8
5/16" Bars	2-11/16	5-1/16	7-7/16	9-13/16	12-3/16	14-9/16	16-15/16	11-5/16	21-11/16	24-1/16	26-7/16	28-13/16	31-3/16	33-9/16	35-15/16
3/8" Bars	2-3/4	5-1/8	7-1/2	9-7/8	12-1/4	14-5/8	17	11-3/8	21-3/4	24-1/8	26-1/2	28-7/8	31-1/4	33-5/8	36
1/2" Bars	2-7/8	5-1/4	7-5/8	10	12-3/8	14-3/4	17-1/8	11-1/2	21-7/8	24-1/4	26-3/8	29	31-3/8	33-3/4	36-1/8

Aluminium Grating

Stainless Steel Grating



APPROXIMATE WEIGHT FOR STEEL BAR GRATING

	GRATING TYPE							
Bearing Bar	22		19		15		13	
in	W4	W2	W4	W2	W4	W2	W4	W2
1/8 x 1/2	2.44	2.94	2.70	3.20	3.28	3.78	3.67	4.17
1/8 x 3/4	3.41	3.91	3.80	4.30	4.67	5.17	5.26	5.76
3/16 x 3/4	4.87	5.37	5.45	5.95	6.76	7.26	7.64	8.14
1/8 x 1	4.38	4.88	4.90	5.40	6.07	6.57	6.84	7.34
3/16 x 1	6.32	6.82	7.10	7.60	8.85	9.35	10.01	10.51
1/8 x 1-1/4	5.35	5.85	6.00	6.50	7.46	7.96	8.43	8.93
3/16 x 1-1/4	7.78	8.28	8.75	9.25	10.94	11.44	12.39	12.89
1/8 x 1-1/2	6.32	6.82	7.10	7.60	8.85	9.35	10.01	10.51
3/16 x 1-1/2	9.52	10.30	10.68	11.46	13.30	14.09	15.05	15.83
3/16 x 1-3/4	10.97	11.76	12.33	13.11	15.39	16.17	17.43	18.21
3/16 x 2	12.43	13.21	13.98	14.77	17.48	18.26	19.79	20.59

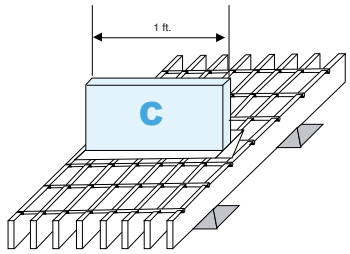
Consider 5% less when surface is serrated

NOTE: Data in pounds per square foot.

PERMISSIBLE LOADING CAPACITY FOR STEEL BAR GRATING

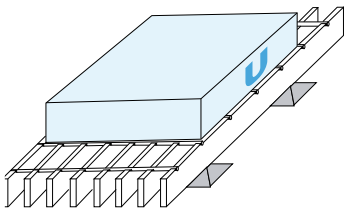
19W4- STANDARD GRATING TYPE

Concentrated Load



C= Concentrated Load (Lbs./ft)

Uniform Load



U= Uniform Load (Lbs./ft.)

BEARING BAR (in.)	Loading Type	DISTANCE BETWEEN SUPPORTS AND LOAD CAPACITY					
		18"	24"	30"	36"	42"	48"
1/8 x 1/2	U	281	158	101			
	C	211	158	126			
1/8 X 3/4	U	632	355	227	158		
	C	474	355	284	237		
3/16 X 3/4	U	947	533	341	237		
	C	711	533	426	355		
1/8 X 1	U	1123	632	404	281	206	
	C	842	632	505	421	361	
3/16 X 1	U	1684	947	606	421	309	
	C	1263	947	758	632	541	474
1/8 X 1-1/4	U	1754	987	632	439	322	247
	C	1316	987	789	658	564	493
3/16 X 1-1/4	U	2632	1480	947	658	483	370
	C	1974	1480	1184	987	846	740
1/8 X 1-1/2	U	2526	1421	909	632	464	355
	C	1895	1421	1137	947	812	711
3/16 X 1-1/2	U	3789	2132	1364	947	696	533
	C	2842	2132	1705	1421	1218	1066
3/16 X 1-3/4	U	5158	2901	1857	1289	947	725
	C	3868	2901	2321	1934	1658	1451
3/16 X 2	U	6737	3789	2425	1684	1237	947
	C	5053	3789	3032	2526	2165	1895
3/16 X 2-1/4	U	8526	4796	3069	2132	1566	1199
	C	6395	4796	3837	3197	2741	2398
3/16 X 2-1/2	U	10526	5921	3789	2632	1933	1480
	C	7895	5921	4737	3947	3383	2961

U= Uniform load, Psf
C= Concentrated load at (mid-span), LB per foot of grating width

NOTE: For serrated grating, the depth of grating required or a specified load is 1/4" greater than in the chart.

TYPE OF GRATING	ASSIGNED VALUE
27W4 and 27W2	0.70
25W4 and 25W2	0.76
22W4 and 22W2	0.86
15W4 and 15W2	1.27
13W4 and 13W2	1.46
11W4 and 11W2	1.73

In order to obtain the permissible loading capacity for each type of grating, multiply its assigned value times the value on the table.

PERMISSIBLE LOADING CAPACITY FOR HEAVY DUTY GRATING

19W4 - STANDARD GRATING TYPE

Section Module	Moment of Inertia	Aproximate Weight	Suggestes Bearing Bar	H20 (3 axle)		H15 (2 axle)		Vehicular Traffic 10 Ton		Lift truck 5 Ton Concentrated		Lift truck 3 Ton Concentrated		Lift truck 1 Ton Concentrated	
				in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
0.421	0.211	9.7	1/4X1	10	254	9	228.6	12	304.8	7	177.8	6	152.4	7	177.8
0.632	0.316	14	3/8X1	13	330.2	11	279.4	16	406.4	9	228.6	8	203.2	9	228.6
0.658	0.411	11.9	1/4 X 1-1/4	13	330.2	12	304.8	17	431.8	9	228.6	8	203.2	10	254
0.987	0.617	17.2	3/8 X 1-1/4	16	406.4	14	355.6	23	584.2	12	304.8	10	254	14	355.6
0.947	0.711	14	1/4 X 1-1/2	16	406.4	14	355.6	23	584.2	11	279.4	10	254	13	330.2
1.421	1.066	20.5	3/8 X 1-1/2	20	508	18	457.2	30	762	14	355.6	13	330.2	19	482.6
1.289	1.128	16.2	1/4 X 1-3/4	19	482.6	17	431.8	29	736.6	14	355.6	12	304.8	17	431.8
1.934	1.692	23.7	3/8 X 1-3/4	23	584.2	21	533.4	38	965.2	18	457.2	17	431.8	25	635
1.684	1.684	18.3	1/4X2	22	558.8	20	508	37	939.8	16	406.4	15	381	22	558.8
2.526	2.526	26.9	3/8X2	28	711.2	26	660.4	46	1168.4	22	558.8	21	533.4	33	838.2
2.132	2.398	20.5	1/4 X 2-1/4	25	635	23	584.2	45	1143	19	482.6	18	457.2	28	711.2
3.197	3.597	30.1	3/8 X 2-1/4	32	812.8	31	787.4	53	1346.2	26	660.4	26	660.4	41	1041.4
2.632	3.289	22.6	1/4 X 2-1/2	28	711.2	27	685.8	52	1320.8	22	558.8	22	558.8	34	863.6
3.947	4.934	33.3	3/8 X 2-1/2	38	965.2	36	914.4	59	1498.6	31	787.4	31	787.4	50	1270
3.789	5.684	26.9	1/4X3	37	939.8	35	889	62	1574.8	30	762	30	762	49	1244.6
5.684	8.526	39.8	3/8X3	50	1270	49	1244.6	71	1803.4	43	1092.2	44	1117.6	61	1549.4
5.158	9.026	31.2	1/4 X 3-1/2	46	1168.4	45	1143	72	1828.8	39	990.6	40	1016	62	1574.8
7.737	13.539	46.2	3/8 X 3-1/2	60	1524	60	1524	83	2108.2	56	1422.4	58	1473.2	71	1803.4
6.737	13.474	35.5	1/4X4	58	1473.2	57	1447.8	83	2108.2	50	1270	51	1295.4	71	1803.4
10.105	20.211	52.7	3/8X4	68	1727.2	69	1752.6	95	2413	66	1676.4	68	1727.2	81	2057.4
8.526	19.184	39.8	1/4 X 4-1/2	69	1752.6	70	1778	96	2438.4	61	1549.4	64	1625.6	82	2082.8
12.789	28.776	59.1	3/8 X 4-1/2	71	1803.4	72	1828.8	96	2438.4	69	1752.6	71	1803.4	84	2133.6

U= Uniform load, Psf, C= Concentrated load at (mid-span), LB per foot of grating width

NOTE:
If the analyzed grating has serrated surface, you must choose the next higher bearing bar to ensure loading capacity.
Length is limited to 96" to avoid a simultanous double axle load stress.
Highlighted area indicates that maximum open area is limited by the maximum permisible capacity or the minimum deflection between L/400 and 1/8".

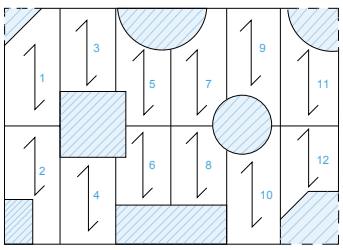
CUSTOM FABRICATED GRATING

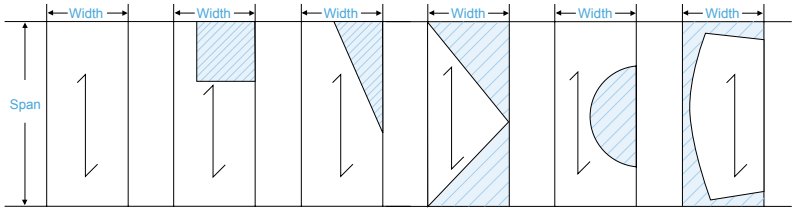
Metelmex can help our customers save time and money by providing fully fabricated, turnkey, ready to install grating complete with grating fasteners and erection drawings. Metelmex's Detailing Department will provide detailed grating drawings based on design and structural detail drawings provided by the customer.

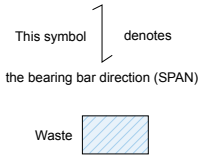
Each piece of custom fabricated grating has a piece mark tag welded to the grating for ease of identification and location of piece.

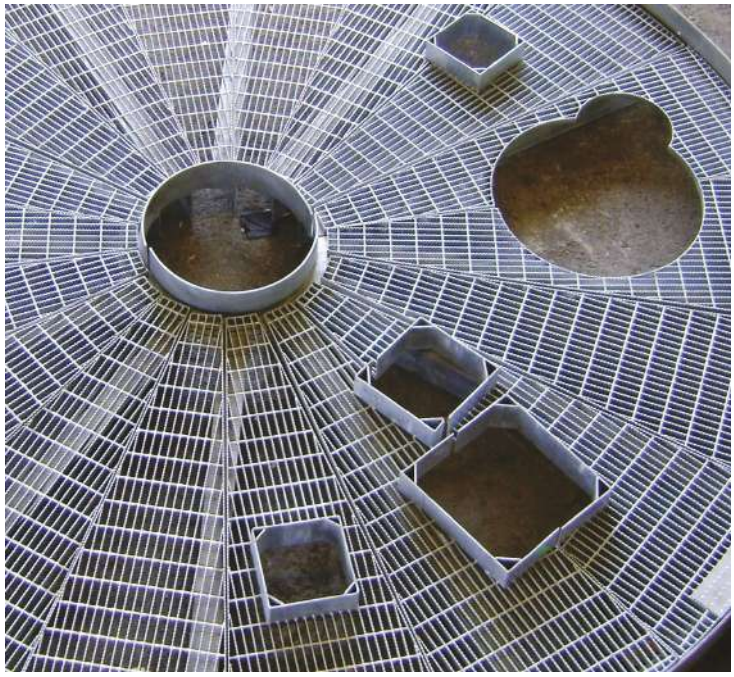
The net area is calculated based on the distances from center to center, to rectangular area (whichever is greater), without discounting tolerances.

In the Following Figures, Net Area and Waste are Illustrated.



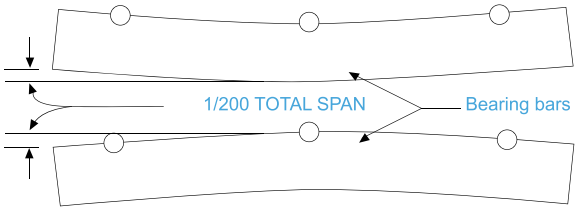




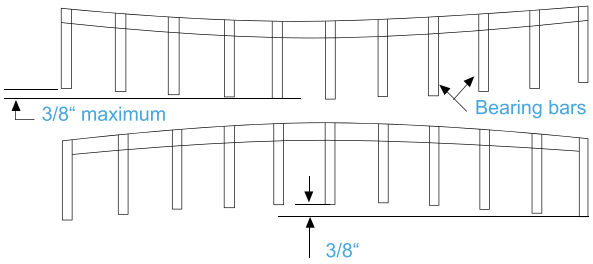


STEEL BAR GRATING FABRICATION TOLERANCES

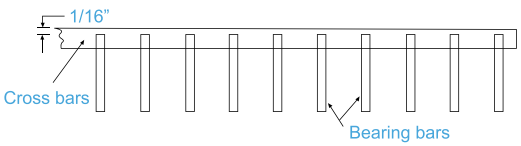
Longitudinal Bow



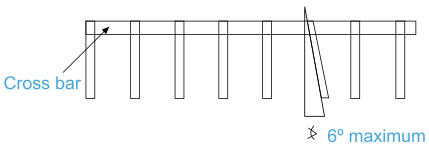
Transversal Bow (Before Fastening to Supports)



Cross Bar Location

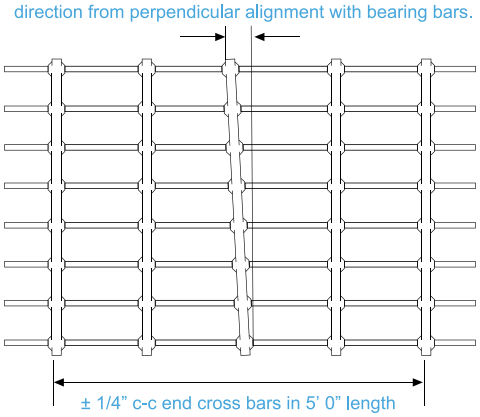


Bearing Bar Lean

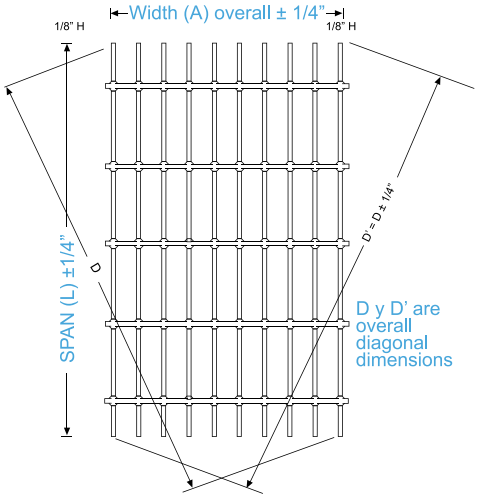


Cross Bar Alignment and Spacing

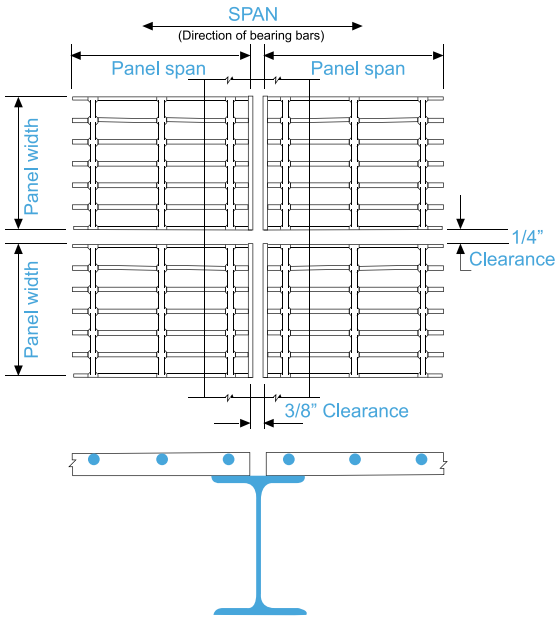
Cross bar shall not vary more than 1/8" in 12 in either direction from perpendicular alignment with bearing bars.



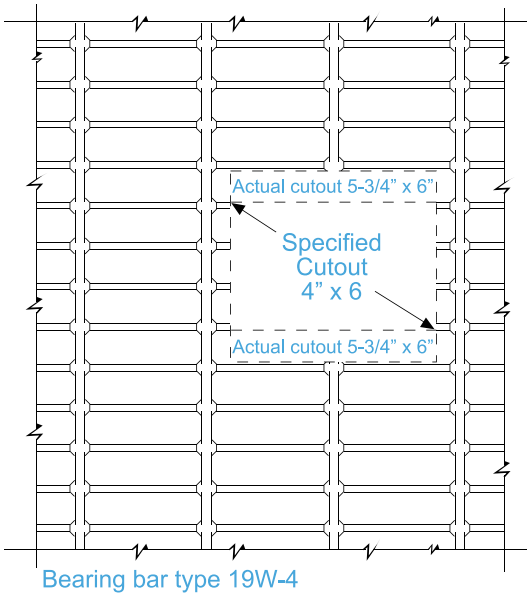
Overall Dimensions and Squareness



Installation Suggestions

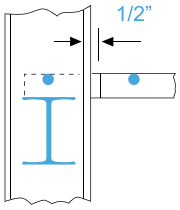


Cutouts

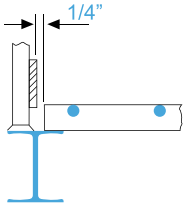


STANDARD INSTALLATION CLEARANCES

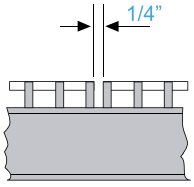
Clearance for column beam cutout



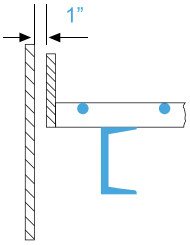
Clearance between handrail and grating



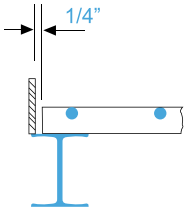
Clearance between adjacent gratings



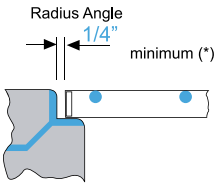
Clearances between circular cutouts



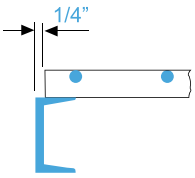
Clearance at kick plate



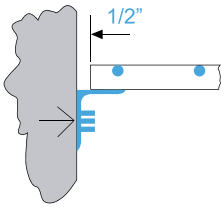
Clearance at trenches
(* Minimum clearance equal to support angle thickness)



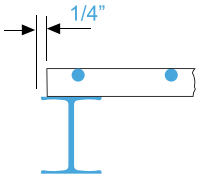
Common grating clearance at end of channel



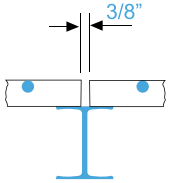
Clearance between concrete wall and grating



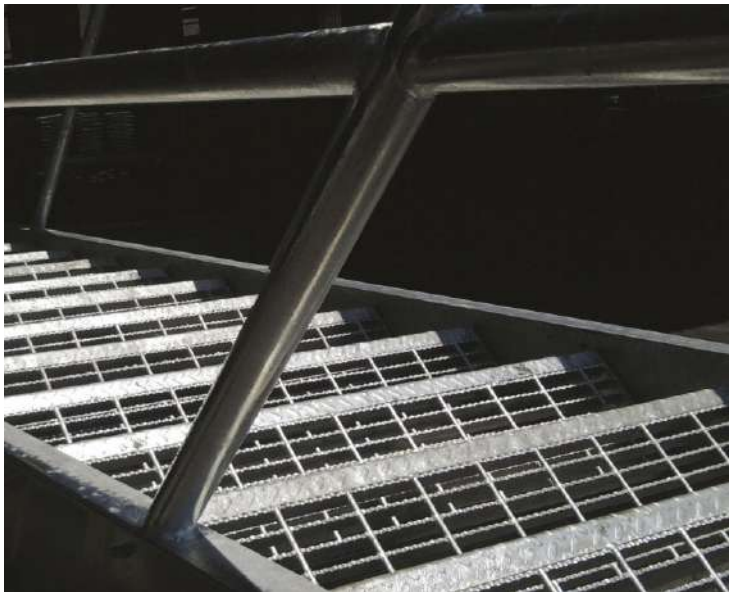
On top of beams: span between grating and edge of beam



Clearance between two gratings



Display for client of Custom Fabricated Gratings for Platform Pipeline



Galvanized Ladder with Galvanized Serrated Stair Treads

Serrated Stair Treads in Operation Platform

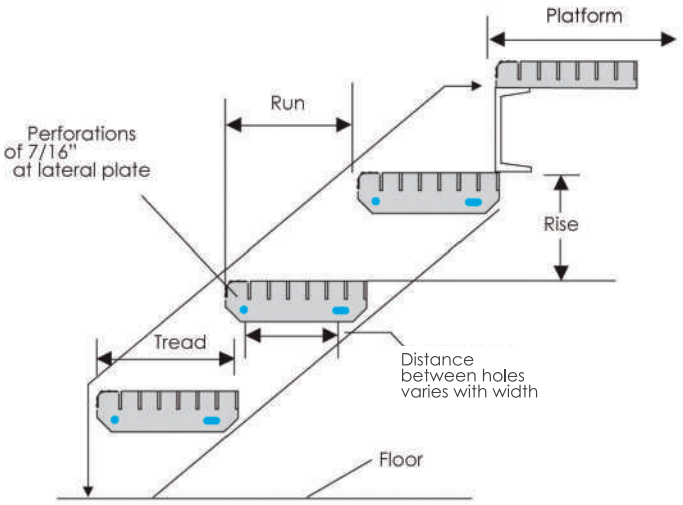
Black Painted Stair Tread

STAIR TREADS

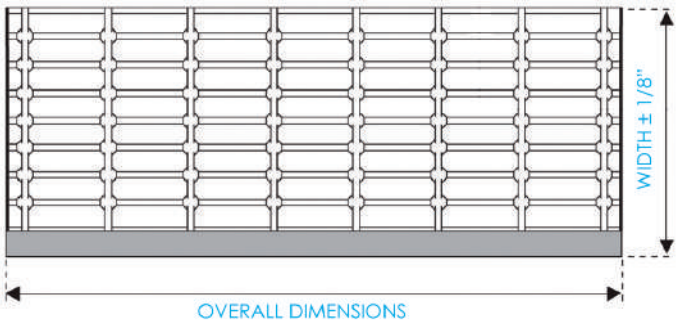
Stair treads can be ordered with either serrated or smooth surface. Treads can have End Plates on both ends with round front bolt hole and slotted back hole for ease of bolting in stringer. Other options can be banded ends, support angles or open ended treads. Typically nosing is also welded to the front of tread for skid resistance and for line-of-site safety precautions. The most common nosing types are Checkered Plate Nosing and Abrasive Nosing. The 3 most common sizes are 8-1/2", 9–3/4" and 10-15/16" deep while widths vary from 30", 36", 42" & 48".

WE CAN MANUFACTURE STAIR TREADS ON DIFFERENT DIMENSIONS ACCORDING TO OUR CLIENT'S REQUEST.

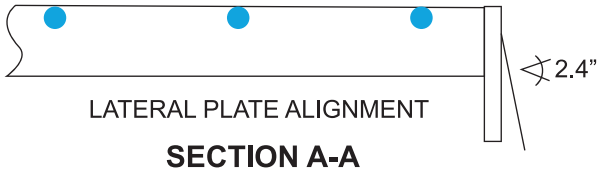
Stair Treads Typical Detail



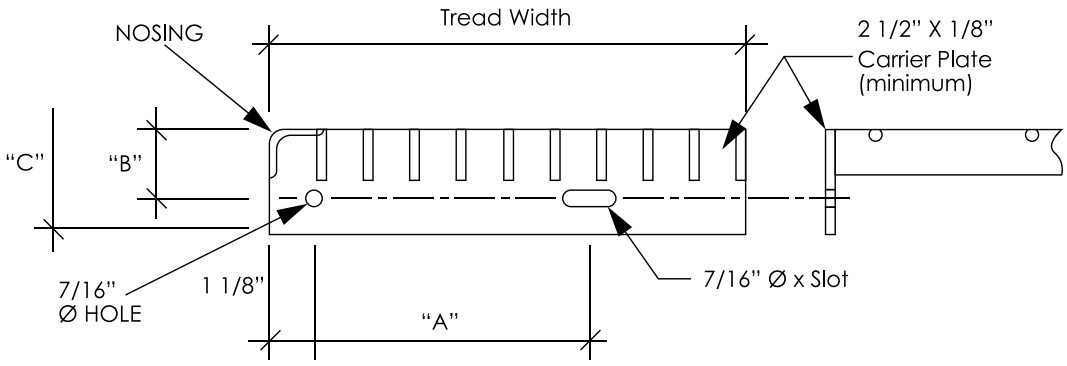
Manufacturing Tolerances for Metelmex Stair Treads



Alignment of Lateral Plate



19W4 Stair Tread



Grating Size	Width	Tread Weight - Length					Maximum Length		"A" Dim.	"B" Dim.	"C" Dim.
		2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	Smooth	Serrated			
3/4" X 3/16"	6-3/16"	9.87	11.91				2'-4"	2'-0"	2 1/2"	1-3/4"	2-1/2"
	7-3/8"	11.31	13.65						4-1/2"		
	8-9/16"	12.69	15.27						4-1/2"		
	9-3/4"	14.13	17.01						7"		
	10-15/16"	15.57	18.75						7"		
	12-1/8"	16.95	20.37						7"		

Grating Size	Width	Tread Weight - Length					Maximum Length		"A" Dim.	"B" Dim.	"C" Dim.
		2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	Smooth	Serrated			
1 X 3/16"	6-3/16"	14.49	13.95	16.41			3'-5"	2'-10"	2 1/2"	1-3/4"	2-1/2"
	7-3/8"	13.23	16.05	18.87					4-1/2"		
	8-9/16"	14.91	18.03	21.15					4-1/2"		
	9-3/4"	16.71	20.25	23.79					7"		
	10-15/16"	18.45	22.35	26.25					7"		
	12-1/8"	20.19	24.45	28.71					7"		

Grating Size	Width	Tread Weight - Length					Maximum Length		"A" Dim.	"B" Dim.	"C" Dim.
		2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	Smooth	Serrated			
1 - 1/4" X 3/16"	6-3/16"	13.11	15.99	18.87	21.75	24.63	4'-8"	4'-2"	2 1/2"	1-3/4"	2-1/2"
	7-3/8"	15.15	18.45	21.75	25.05	28.35			4-1/2"		
	8-9/16"	17.19	20.91	24.63	28.35	32.07			4-1/2"		
	9-3/4"	19.23	23.37	27.51	31.65	35.79			7"		
	10-15/16"	21.27	25.83	30.39	34.95	39.51			7"		
	12-1/8"	23.37	28.41	33.45	38.49	43.53			7"		

Grating Size	Width	Tread Weight - Length					Maximum Length		"A" Dim.	"B" Dim.	"C" Dim.
		2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	Smooth	Serrated			
1 - 1/2" X 3/16"	6-3/16"	14.44	17.08	19.72	22.36	25.00	5'-6"	5'-3"	2 1/2"	2-1/4"	3"
	7-3/8"	16.00	19.30	22.60	25.90	29.20			4-1/2"		
	8-9/16"	19.34	23.18	27.02	30.86	34.70			4-1/2"		
	9-3/4"	21.78	26.16	30.54	34.92	39.30			7"		
	10-15/16"	24.22	29.14	34.06	38.98	43.90			7"		
	12-1/8"	26.60	32.00	37.40	43.20	48.20			7"		

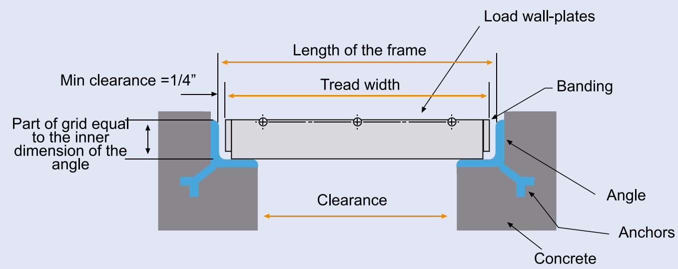
STORM AND TRENCH DRAINS

Our product is suitable to control the quantity and quality of the receiving waters from urban runoffs.

They create a sustainable environment for people and vehicle traffic during rainy seasons.

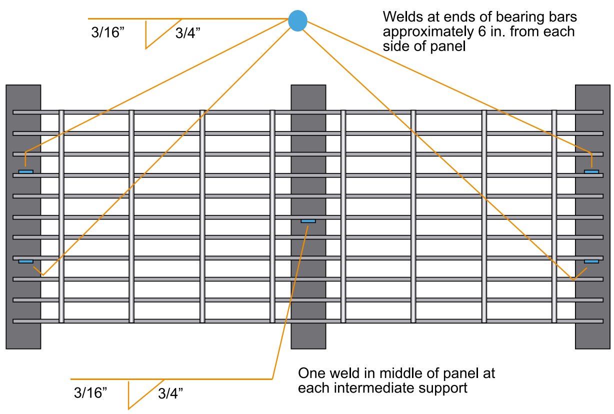
Benefits
- Prevents the accumulation of water and dirt
- Safe for pedestrians and heavy transit

Support and Banding of Trench Grating



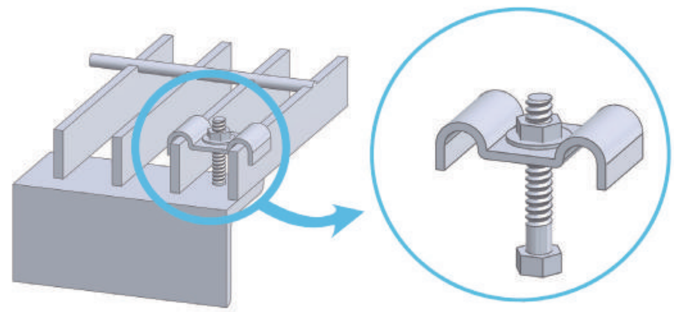
STORM AND TRENCH DRAINS

Welded Anchorage



For installations of permanent or sporadic placement.

Saddle Clips



Used for grating installations under constant relocation. Delivered galvanized, screws included.

TYPES OF CLIPS

Galvanized Saddle

Rake: 16 gauge steel sheet.
Saddle Clip: 14 gauge steel sheet.
Used in: Steel Grating
Finish: Galvanized

Galvanized Saddle

Rake: 16 gauge steel sheet.
Saddle Clip: 14 gauge steel sheet.
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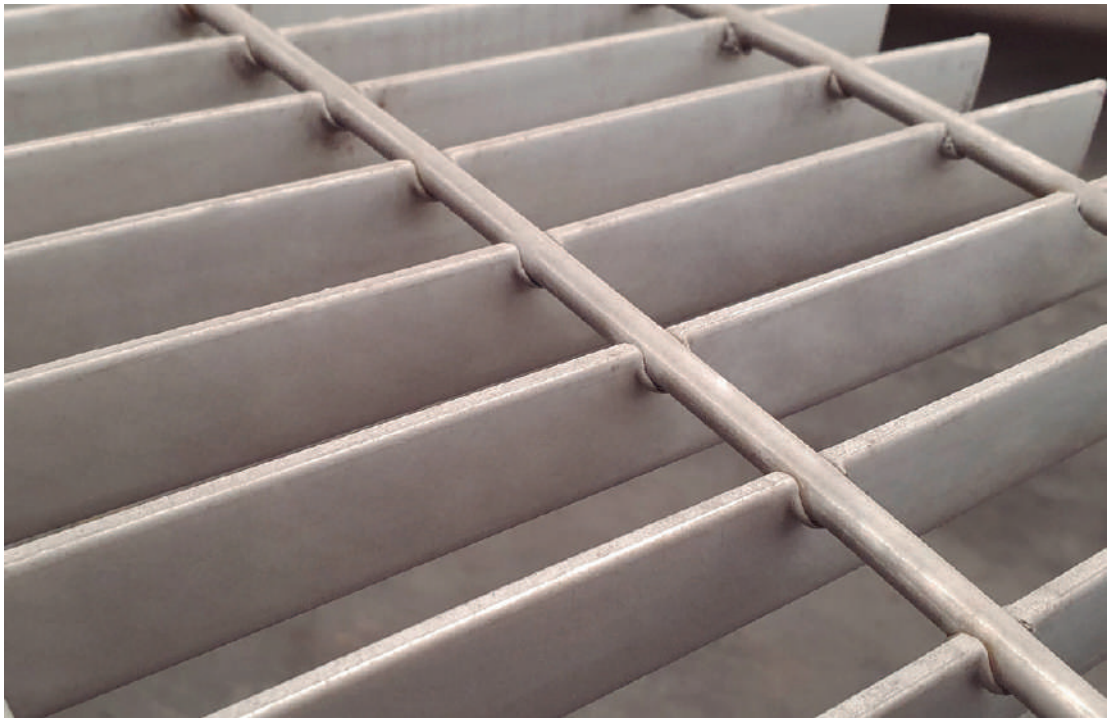
Used in: Steel Grating
Finish: Galvanized

Galvanized Saddle

Rake: 16 gauge steel sheet.
Saddle Clip: 14 gauge steel sheet.
Used in: Steel Grating
Finish: Galvanized

STAINLESS STEEL BAR GRATING

Our Stainless Steel grating is manufactured under the forged welding process. It is used for highly corrosive environments, such as: steam, acids, chemicals, or permanent water contact, but also when aesthetic is required.



PERMISSIBLE LOADING CAPACITY FOR STAINLESS STEEL BAR GRATING

19W4 - STANDARD GRATING TYPE

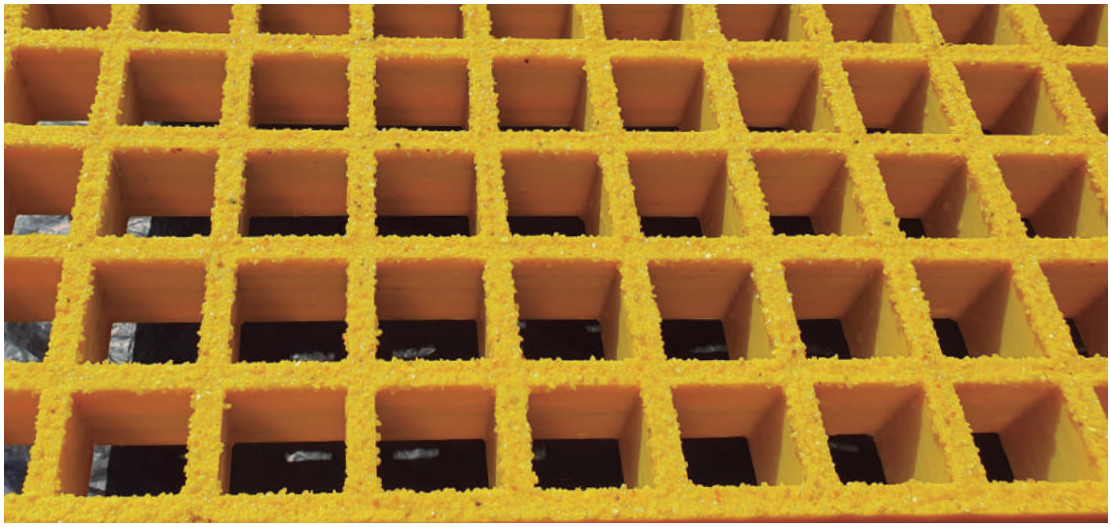
BEARING BAR (in.)	Loading Type	DISTANCE BETWEEN SUPPORTS AND LOAD CAPACITY					
		18"	24"	30"	36"	42"	48"
1/8 x 1/2	U	312	175				
	C	234	175	140			
1/8 X 3/4	U	702	395	253			
	C	526	395	316			
3/16 X 3/4	U	1,053	592	379			
	C	789	592	474			
1/8 X 1	U	1,248	702	449	312		
	C	936	702	561	468		
3/16 X 1	U	1,871	1,053	674	468		
	C	1,404	1,053	842	702		
1/8 X 1-1/4	U	1,949	1,096	702	487	358	
	C	1,462	1,096	877	731	627	
3/16 X 1-1/4	U	2,924	1,645	1,053	731	537	
	C	2,193	1,645	1,316	1,096	940	
1/8 X 1-1/2	U	2,807	1,579	1,011	702	516	395
	C	2,105	1,579	1,263	1,053	902	789
3/16 X 1-1/2	U	4,211	2,368	1,516	1,053	773	592
	C	3,158	2,368	1,895	1,579	1,353	1,184
3/16 X 1-3/4	U	5,731	3,224	2,063	1,433	1,053	806
	C	4,298	3,224	2,579	2,149	1,842	1,612
3/16 X 2	U	7,485	4,211	2,695	1,871	1,375	1,053
	C	5,614	4,211	3,368	2,807	2,406	2,105
3/16 X 2-1/4	U	9,474	5,329	3,411	2,368	1,740	1,332
	C	7,105	5,329	4,263	3,553	3,045	2,664
3/16 X 2-1/2	U	11,696	6,579	4,211	2,924	2,148	1,645
	C	8,772	6,579	5,263	4,386	3,759	3,289

U= Uniform load, Psf
C= Concentrated load at (mid-span), LB per foot of grating width

NOTE: For serrated grating, the depth of grating required or a specified load is 1/4" greater than in the chart.

FRP MOLDED GRATING

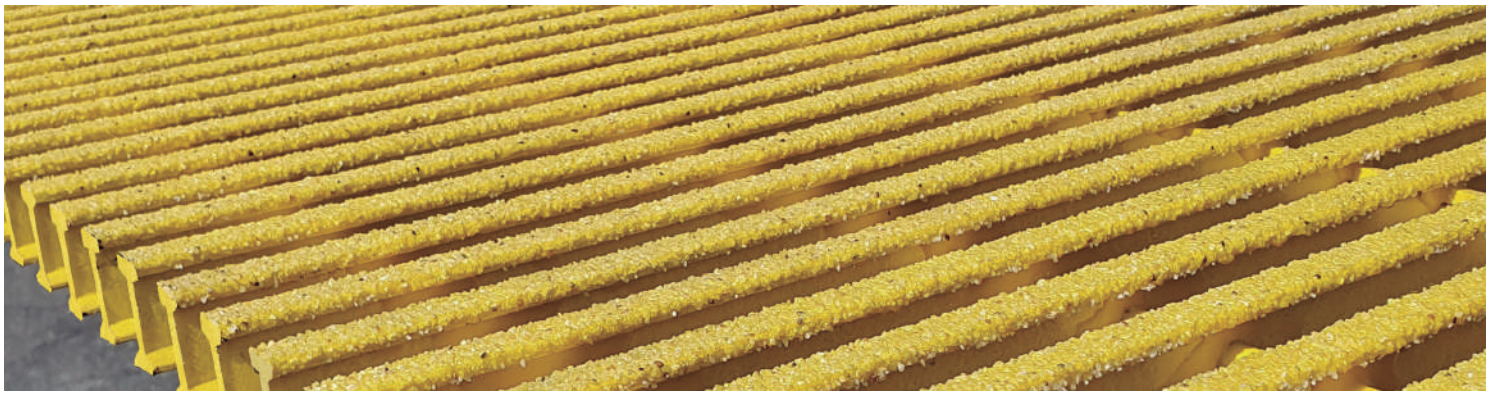
Our Molded Grating performance is outstanding for the most corrosive environments, such as: steam, acids or chemicals. Since its design offers a bidirectional loading capacity, it is easier to custom fabricate according to area drawings.



PERMISSIBLE LOADING CAPACITY FOR FPR MOLDED 1.5" X 1.5" GRATING

BEARING BAR DEPTH (In.)	Loading Type	DISTANCE BETWEEN SUPPORTS AND LOAD CAPACITY						
		12"	18"	24"	30"	36"	42"	48"
1"	U	1360	634	356	228	158		
	C	680	474	356	284	236	202	
1.5"	U	3120	1386	780	496	347	251	170
	C	1560	1040	780	620	520	440	340

U= Uniform load, Psf
C= Concentrated load at (mid-span), LB per foot of grating width



FRP PULTRUDED GRATING

Our Pultruded Grating is manufactured by pulling guided fiberglass rovings and mats into a resin bath which are then heated in a die to form the "i" bar shape. Crossrods are introduced through the bar and locked.
It's design considers a high percentage of fiberglass (70%), which offers durability and a higher loading capacity than the molded grating. Is ideal for applications where longer support spans are required. It is also outstanding for the most corrosive environments, such as: steam, acids or chemicals.

PERMISIBLE LOADING CAPACITY FOR FPR PULTRUDED 60% OPENING GRATING

BEARING BAR DEPTH (In.)	Loading Type	DISTANCE BETWEEN SUPPORTS AND LOAD CAPACITY						
		12"	18"	24"	30"	36"	42"	48"
"I" 1"	U	8,000	4,470	2,800	1,880	1,350	940	710
	C	4,000	3,350	2,800	2,350	2,020	1,650	1,420
"I" 1.5"	U	12,270	6,130	3,500	2,320	1,650	1,220	890
	C	6,130	4,600	3,500	2,900	2,480	2,140	1,780

U= Uniform load, Psf
C= Concentrated load at (mid-span), LB per foot of grating width

ALUMINIUM GRATING

Our Aluminium Grating is used when fine apperance and light weight is impor tant. Is manufactured under a swaging process wih 6063-T6 Aluminium Bearing Bars, and 6063-T1 Cross Rods.

Types of Aluminium Grating:
“i” bar and rectangular bar

Aluminium Grating

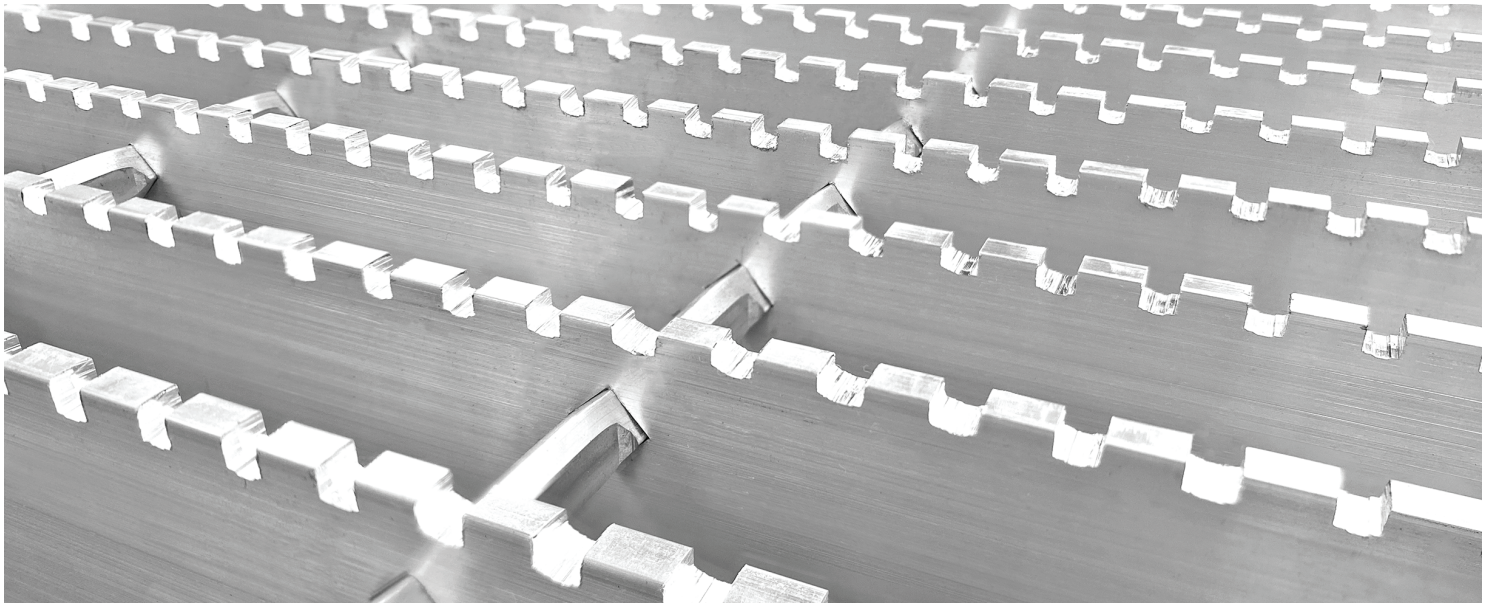
PERMISSIBLE LOADING CAPACITY FOR ALUMINIUM GRATING

19P4 - STANDARD GRATING TYPE

Bearing Bar (in.)	Loading Type	DISTANCE BETWEEN SUPPORTS AND LOAD CAPACITY							
		24"	30"	36"	42"	48"	54"	60"	66"
1/8 x 1	U	421	269	187	137	105	83		
	C	421	337	281	241	211	187		
3/16 x 1 or 1" I Bar	U	632	404	281	206	158	125		
	C	632	505	421	361	316	281		
1/8 x 1-1/4	U	658	421	292	215	164	130	105	87
	C	658	526	439	376	329	292	263	239
3/16 x 1-1/4 or 1-1/4" I Bar	U	987	632	439	322	247	195	158	130
	C	987	789	658	564	493	439	395	359
1/8 x 1-1/2	U	947	606	421	309	237	187	152	125
	C	947	758	632	541	474	421	379	344
3/16 x 1-1/2 or 1-1/2" I Bar	U	1,421	909	632	464	355	281	227	188
	C	1,421	1,137	947	812	711	632	568	517

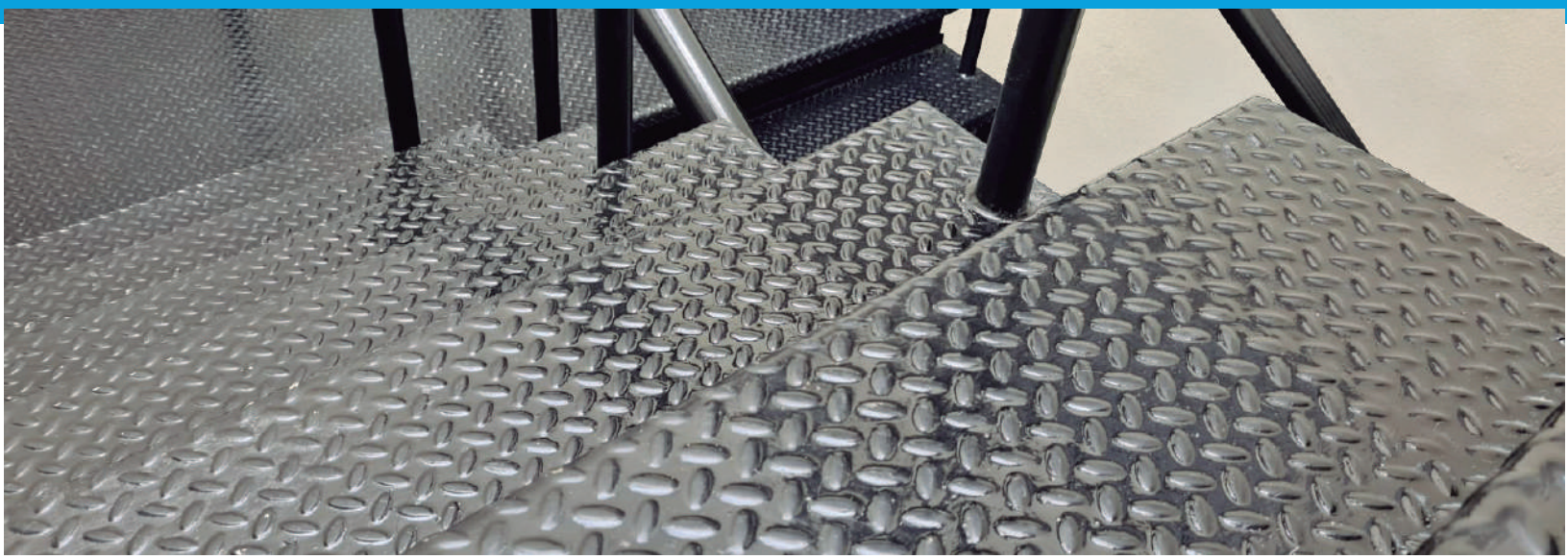
U= Uniform load, Psf
C= Concentrated load at (mid-span), LB per foot of grating width

NOTE: For serrated grating, the depth of grating required or a specified load is 1/4" greater than in the chart.



Now Fabricating

Checkered Plate



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