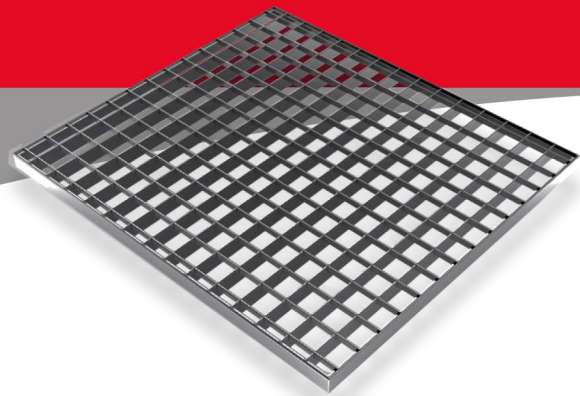




# Steel Grating



**CATALOG**



**TESCO**  
STEEL & ENGINEERING

# ORDER INFORMATION

Ordering steel grating can be a confusing task if one has not ordered before. Below is a check list that can help you making certain each dimension of the job is correct when placing an order.

#### Material

- › Carbon steel
- › Stainless steel

#### Type of grating

- › Welded
- › Press-locked

#### Bearing bar size

#### Cross bar size

#### Bearing bar pitch

#### Cross bar pitch

#### Span (bearing bar direction)

#### Finish

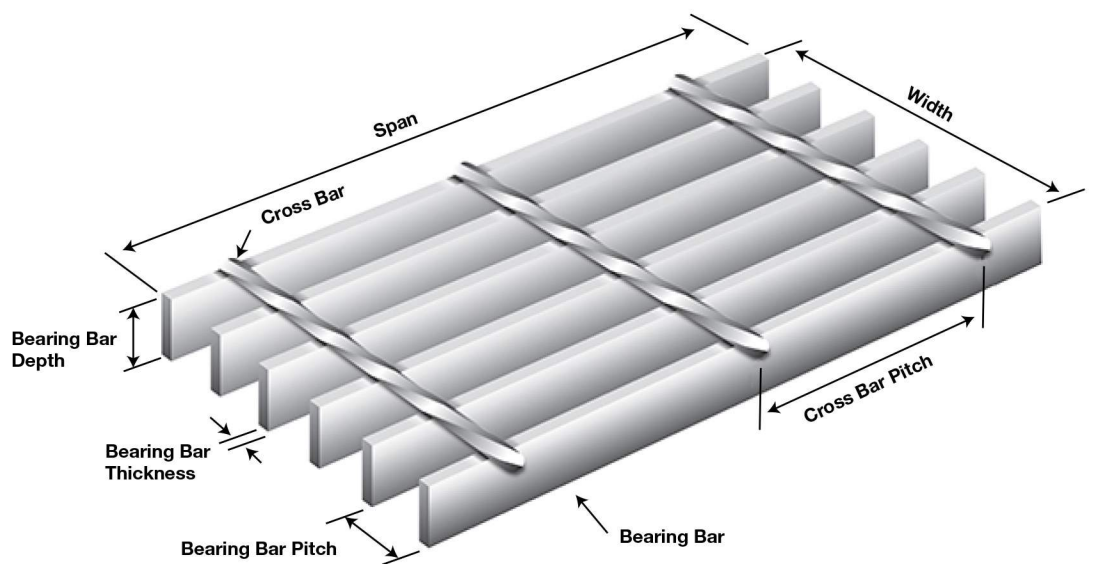
- › Painted
- › Galvanized
- › Untreated

#### Surface

- › Plain surface
- › Serrated surface

#### Type of anchorage

- › Welded
- › Saddle clip
- › G-clip
- › Grate fast clip



# QUALITY CONTROL

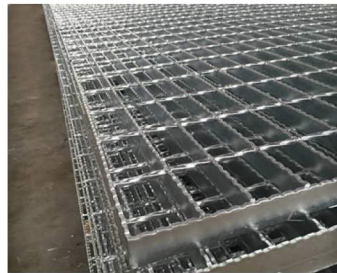


With the development of enterprise system, we set up a series of steel grating inspection for quality control during production. Additionally, we will re-inspect the products before delivery to ensure all the products are qualified and perfect in condition when our customers receive them. Inspection items are as follows:



## Appearance inspection.

All the steel grating will be inspected one by one to ensure the smooth and integrated surface and appearance. If there are some defects, they will be selected and replaced by qualified products.



Appearance inspection



Bearing bar size inspection

## Sizing inspection.

No matter the sheet thickness, bearing bar size and cross bar size or the whole size of width, length and height, they will be inspected with meter rulers, vernier caliper, micrometer and other professional measurement tools. All the sizes must accord with the tolerance of International Standards and customers' requirements.



Angle bar size inspection

## Performance inspection.

The steel grating will be sampling inspected about the load performance according to customers' requirements and International standards. And the test report will be delivered along with the steel bar goods.

## Package inspection.

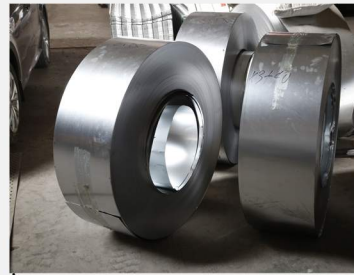
Steel grating is commonly packed in steel belt or it is packed in wooden or metal pallet. Quantity and weight of each package should be made according to specific conditions and customers' requirements. All the package should be firm and rigid to withstand the high impact during transportation.



Package inspection

# TESTING MACHINERY

Machine Name	Quantity	Number of Year(s) Used	Condition
Tape measure	5	1	Acceptable
Caliper	3	1	Acceptable
Coating Thickness Tester	4	1	Acceptable



## Step 1

Raw Material  
(plate)



## Step 3

Plate Cutting

Step 1

Step 2

Step 3

Step 4



## Step 2

Raw Material (wire)



## Step 4

Wire Straightening  
& Cutting

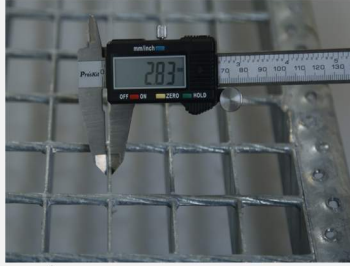


### Step 5

Steel Grating  
Welding

### Step 7

Standard Steel  
Grating Cutting



### Step 10

Inspection

### Step 11

Finished



Step 5

Step 6

Step 7

Step 8

Step 9

Step 10

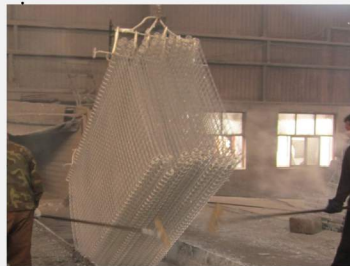
Step 11

Step 12



### Step 6

Edge Cutting

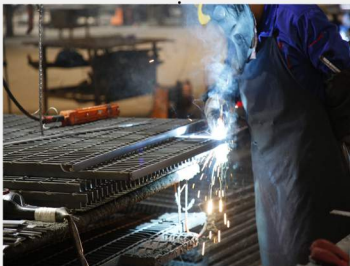
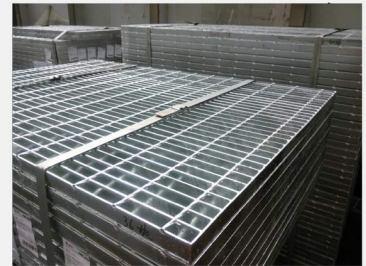


### Step 9

Surface Treatment  
(Galvanized)

### Step 12

Packaging &  
Storage

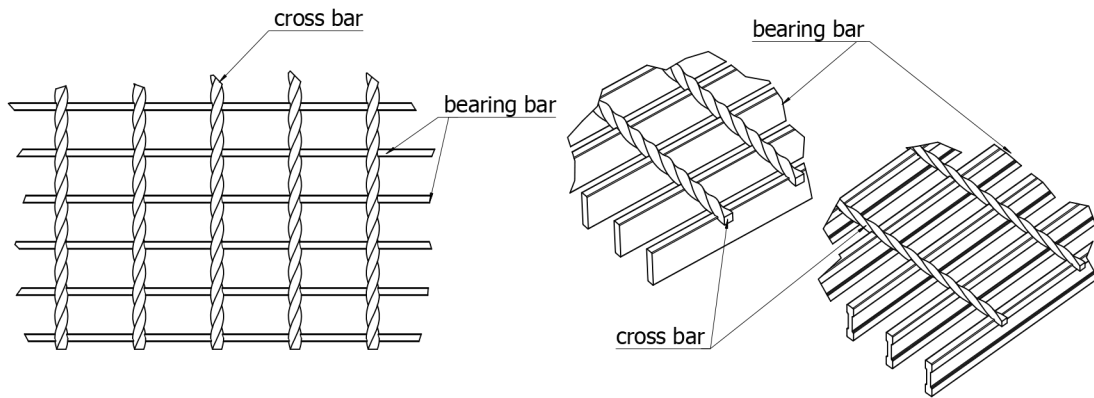


### Step 8

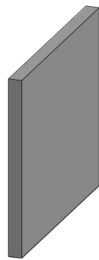
Edge Banding

# WELDED STEEL GRATING

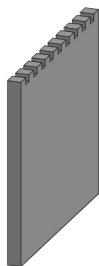
Welded steel grating is the most popular and versatile of all the industrial grating types. It consists of bearing bars that are automatically resistance-welded with the cross bars via the precise application of intense heat and pressure. This produces a rugged, one-piece panel with cross bars that are extremely rigid, yet smooth enough for easy, safe walking. This type of grating can be manufactured from stainless steel or low carbon steel. It has anti-slip surface, corrosion resistance, good drainage function, high strength and load capacity. Therefore, it is widely used in the form of walkways, safety barriers, drainage covers, platforms, ventilation grates and stair treads.



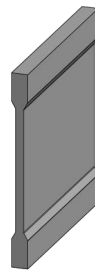
## BEARING BAR TYPE



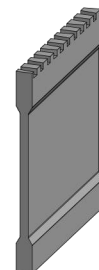
Flat Bar Type



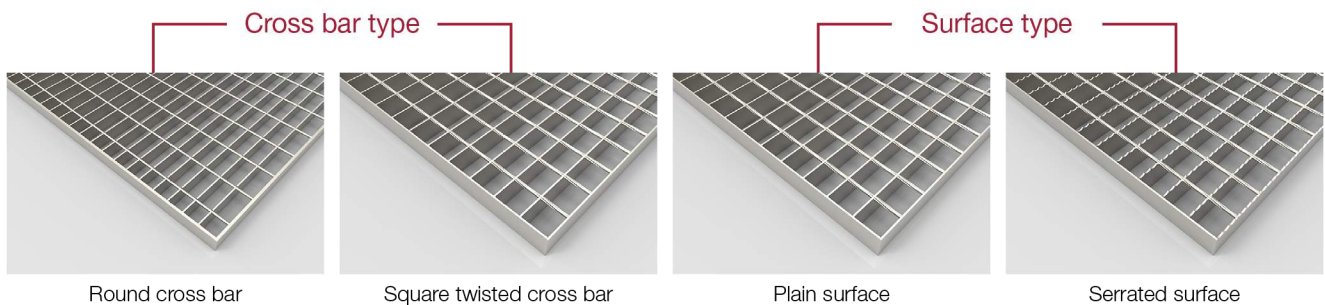
Serrated Type



I-Bar Type

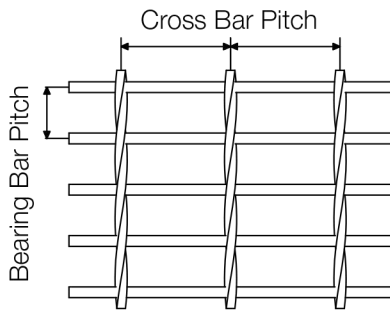


Serrated I-Bar Type



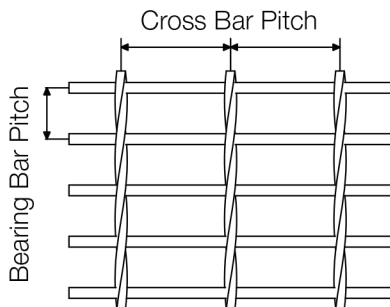
# WELDED STEEL GRATING

## SPECIFICATION OF **W-15** WELDED STEEL GRATING



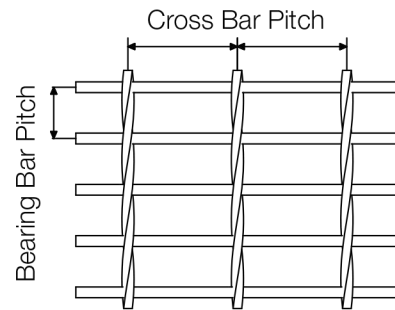
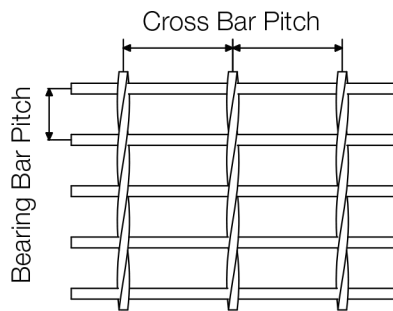
Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
SGW15-01	3/4" x 1/8"	15/16"	4"	4.8
			2"	4.8
SGW15-02	3/4" x 3/16"	15/16"	4"	6.9
			2"	7.0
SGW15-03	1" x 1/8"	15/16"	4"	6.2
			2"	6.4
SGW15-04	1" x 3/16"	15/16"	4"	9.0
			2"	9.3
SGW15-05	1-1/4" x 1/8"	15/16"	4"	7.5
			2"	7.9
SGW15-06	1-1/4" x 3/16"	15/16"	4"	11.1
			2"	11.3
SGW15-07	1-1/2" x 1/8"	15/16"	4"	9.0
			2"	9.5
SGW15-08	1-1/2" x 3/16"	15/16"	4"	13.1
			2"	13.7
SGW15-09	1-3/4" x 3/16"	15/16"	4"	15.2
			2"	15.8
SGW15-10	2" x 3/16"	15/16"	4"	17.3
			2"	17.9
SGW15-11	2-1/4" x 3/16"	15/16"	4"	19.2
			2"	20.3
SGW15-12	2-1/2" x 3/16"	15/16"	4"	21.3
			2"	22.1

## SPECIFICATION OF **W-11** WELDED STEEL GRATING



Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
SGW11-01	3/4" x 1/8"	11/16"	4"	6.1
			2"	6.6
SGW11-02	3/4" x 3/16"	11/16"	4"	9.1
			2"	9.0
SGW11-03	1" x 1/8"	11/16"	4"	8.0
			2"	8.5
SGW11-04	1" x 3/16"	11/16"	4"	11.9
			2"	11.9
SGW11-05	1-1/4" x 1/8"	11/16"	4"	9.9
			2"	10.3
SGW11-06	1-1/4" x 3/16"	11/16"	4"	14.9
			2"	14.8
SGW11-07	1-1/2" x 1/8"	11/16"	4"	11.8
			2"	12.6
SGW11-08	1-1/2" x 3/16"	11/16"	4"	17.0
			2"	17.8
SGW11-09	1-3/4" x 3/16"	11/16"	4"	20.4
			2"	20.8
SGW11-10	2" x 3/16"	11/16"	4"	23.2
			2"	23.8
SGW11-11	2-1/4" x 3/16"	11/16"	4"	25.9
			2"	26.5
SGW11-12	2-1/2" x 3/16"	11/16"	4"	28.7
			2"	29.3

# WELDED STEEL GRATING



## SPECIFICATION OF **W-19** WELDED STEEL GRATING (HD)

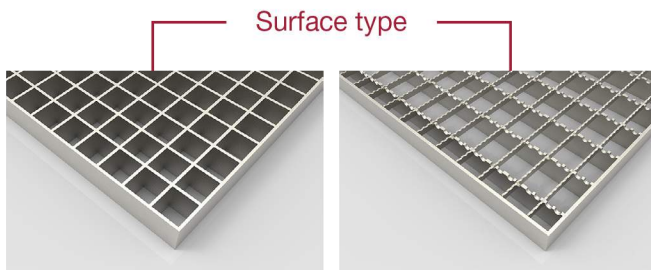
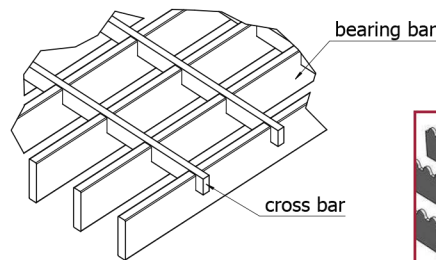
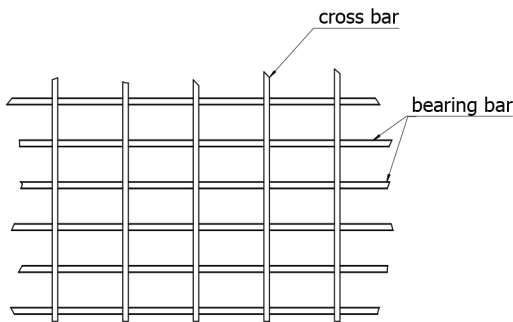
Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
HDSGW19-01	1" x 1/4"	1-3/16"	4"	9.5
			2"	10.1
HDSGW19-02	1" x 5/16"	1-3/16"	4"	12.1
			2"	13.3
HDSGW19-03	1-1/4" x 1/4"	1-3/16"	4"	11.7
			2"	12.3
HDSGW19-04	1-1/4" x 5/16"	1-3/16"	4"	14.3
			2"	16.0
HDSGW19-05	1-1/2" x 1/4"	1-3/16"	4"	13.9
			2"	14.5
HDSGW19-06	1-1/2" x 5/16"	1-3/16"	4"	17.8
			2"	18.8
HDSGW19-07	1-3/4" x 1/4"	1-3/16"	4"	16.1
			2"	16.7
HDSGW19-08	1-3/4" x 5/16"	1-3/16"	4"	20.4
			2"	21.5
HDSGW19-09	2" x 1/4"	1-3/16"	4"	18.3
			2"	18.9
HDSGW19-10	2" x 5/16"	1-3/16"	4"	23.1
			2"	24.6
HDSGW19-11	2-1/4" x 1/4"	1-3/16"	4"	20.5
			2"	21.1
HDSGW19-12	2-1/4" x 5/16"	1-3/16"	4"	25.9
			2"	27.0
HDSGW19-13	2-1/2" x 1/4"	1-3/16"	4"	22.7
			2"	23.3
HDSGW19-14	2-1/2" x 5/16"	1-3/16"	4"	28.6
			2"	29.8
HDSGW19-15	2-3/4" x 1/4"	1-3/16"	4"	24.9
			2"	25.6
HDSGW19-16	2-3/4" x 5/16"	1-3/16"	4"	31.8
			2"	33.3
HDSGW19-17	3" x 1/4"	1-3/16"	4"	27.8
			2"	28.7
HDSGW19-18	3" x 5/16"	1-3/16"	4"	34.5
			2"	36.1

## SPECIFICATION OF **W-22** WELDED STEEL GRATING (HD)

Item	Bearing Bar Size	Bearing Bar Pitch	Cross Bar Pitch	Weight (Lbs./S.F.)
HDSGW22-01	1" x 1/4"	1-3/8"	4"	8.3
			2"	9.0
HDSGW22-02	1" x 5/16"	1-3/8"	4"	10.7
			2"	11.8
HDSGW22-03	1-1/4" x 1/4"	1-3/8"	4"	10.2
			2"	10.9
HDSGW22-04	1-1/4" x 5/16"	1-3/8"	4"	13.1
			2"	14.2
HDSGW22-05	1-1/2" x 1/4"	1-3/8"	4"	12.1
			2"	12.8
HDSGW22-06	1-1/2" x 5/16"	1-3/8"	4"	15.4
			2"	16.8
HDSGW22-07	1-3/4" x 1/4"	1-3/8"	4"	14.0
			2"	14.7
HDSGW22-08	1-3/4" x 5/16"	1-3/8"	4"	17.8
			2"	19.0
HDSGW22-09	2" x 1/4"	1-3/8"	4"	16.0
			2"	16.6
HDSGW22-10	2" x 5/16"	1-3/8"	4"	20.2
			2"	21.3
HDSGW22-11	2-1/4" x 1/4"	1-3/8"	4"	17.9
			2"	18.5
HDSGW22-12	2-1/4" x 5/16"	1-3/8"	4"	22.6
			2"	23.7
HDSGW22-13	2-1/2" x 1/4"	1-3/8"	4"	19.8
			2"	20.4
HDSGW22-14	2-1/2" x 5/16"	1-3/8"	4"	25.0
			2"	26.1
HDSGW22-15	2-3/4" x 1/4"	1-3/8"	4"	21.7
			2"	22.3
HDSGW22-16	2-3/4" x 5/16"	1-3/8"	4"	27.8
			2"	29.3
HDSGW22-17	3" x 1/4"	1-3/8"	4"	24.1
			2"	25.2
HDSGW22-18	3" x 5/16"	1-3/8"	4"	30.2
			2"	31.7

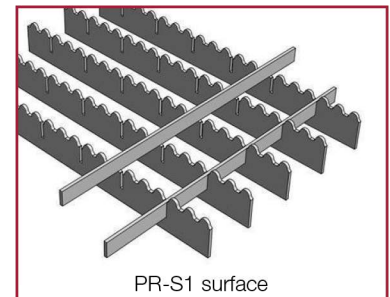
# PRESS-LOCKED STEEL GRATING

Press-locked steel grating features a system of interlocking perpendicular bars that offer the same degree of strength, durability and openness as welded bar grating. However, instead of welding the joints together, press-locked bar grating relies on the application of enormous hydraulic pressure that fuses the two close-tolerance slotted bars together. Permanent locking is achieved by forcing the deep cross bar into the notched bearing bar. This type of grating can be manufactured from stainless steel or low carbon steel. With the performance of high bearing capacity, non-slip, anti-corrosion and easy to install and remove, pressure locked grating is widely used for ceilings, platforms, floors, fence and all kinds of cover in the factories, civil and commercial buildings.

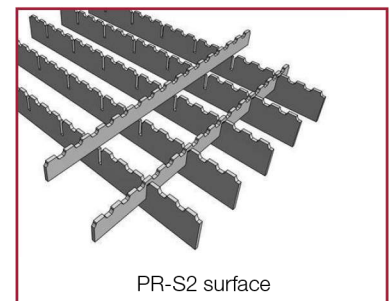


Plain surface

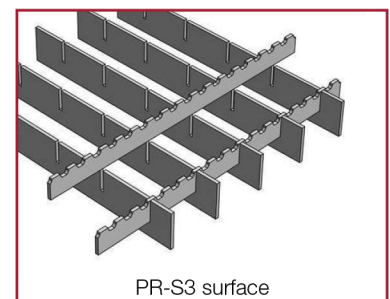
Serrated surface



PR-S1 surface



PR-S2 surface



PR-S3 surface

## SERRATED SURFACE TYPE

- › PR/S1: Trapezoidal teeth on the bearing bar.
- › PR/S2: Trapezoidal tooth both on the bearing bar and cross bar with the highest non-slip performance. It is the most popular types among the three types.
- › PR/S3: The non-slip tooth is applied to the connect components. It has the lowest non-slip performance.

# APPLICATION

“

Steel grating is popular with industrial and commercial areas and is widely used as mezzanines, stair treads, walkways, ceilings, floorings, drainage trench covers, sun shade panels, observation towers, bridge decks, and various platforms for temporary or permanent applications in daily life.

”



Steel grating platform



Steel grating platform walkways



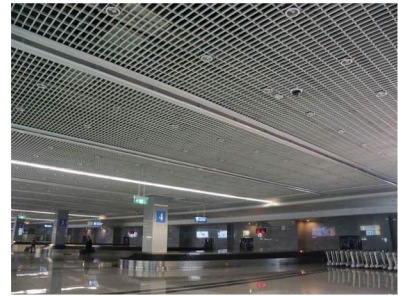
Steel grating trench covers



Steel grating platform mezzanine



Steel grating flooring



Steel grating ceiling



Steel grating stair treads



Steel grating bridge decks



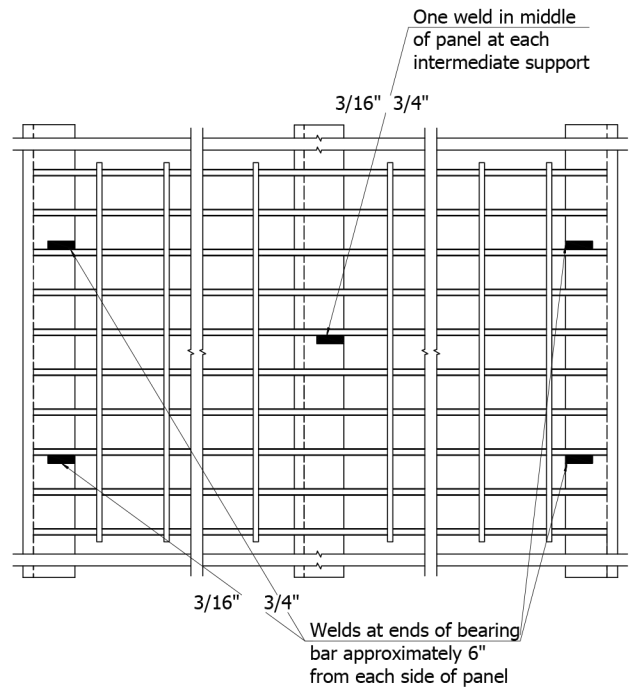
Steel grating sun shade panels

# INSTALLATION

“ Steel gratings can be installed in two ways: welded installation and grating fasteners. ”

## Welded Installation

When steel grating needs to be a permanent installation, welding is highly recommended to fasten steel grating in place by securing welding panels to the supporting structure. The diagram to the right shows the recommended minimum weld size and spacing for pedestrian applications.



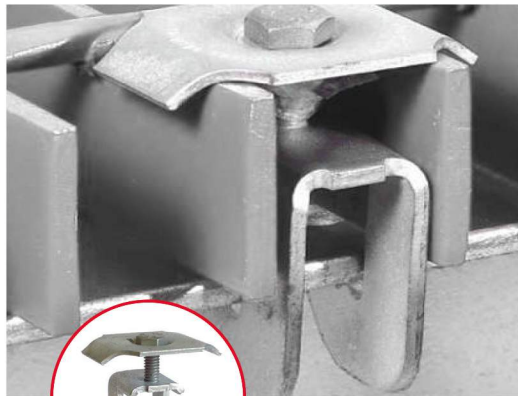
## Grating fasteners

When steel grating is designed to be removable or when welding is not practical, grating fasteners are highly recommended. The minimum fastener spacing for pedestrian application is equal to the minimum weld pattern illustrated above.



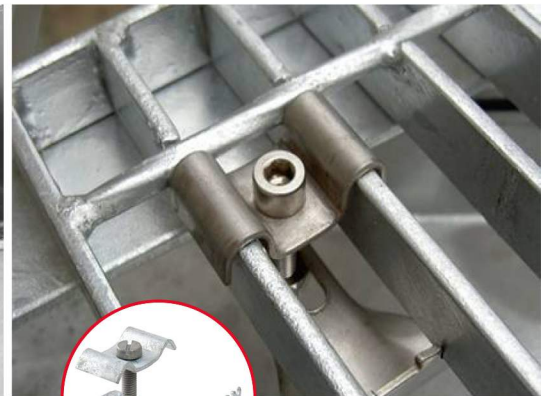
### Saddle Clips

The saddle clip bridges two bearing bars and is attached with self-tapping bolt, self-threader, weld stud or bolt and nut.



### G-Clips

This G-clip fastens grating to a horizontal-facing steel structural member edge.



### Grate Fast Clips

This grate fast clip enables rapid and secure connection of open grate flooring to steel sections.

## FEATURES

- › Do not damage the galvanized layer.
- › It can be demolished at any time, reused.
- › In the later stage, it is necessary to check regularly whether the bolts are loose and fasten them in time to avoid them falling off.
- › Easy to install.



# STEEL GRATING

Perfect Choice for Heavy Loads with Minimal Weight



## TESCO STEEL & ENGINEERING



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