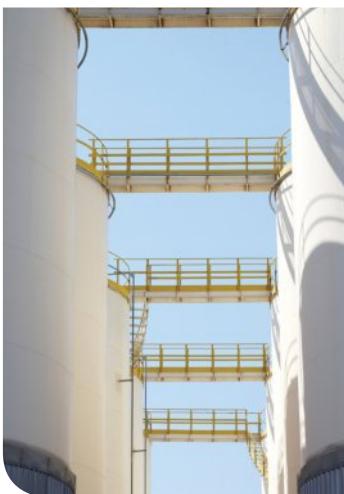




STRUCT-FAST®

FASTENING SYSTEMS





Storage Tanks



Ship Building

Marine Port Infrastructure



Waste Water Treatment

Power Generation



Petro-Chemical Industry



SUPERIOR

Struct-Fast® products replace labor intensive methods, and improve the engineering integrity of the fastening process while reducing labor costs.



Pulp & Paper Manufacturing





Innovative Fastening Systems

Your solution for fast, one-sided grate and floor plate fastening

- » One installer from above
- » NO welding or drilling
- » NO penetration of steel or coatings
- » As easy to remove as it is to install



Offshore Oil & Gas

VERSATILE

Struct-Fast® hardware is secure, adjustable, transferrable and removable. Galvanized or stainless options solve your environmental challenges, and our models fit all common sizes of beams and grating.



Communications

Gas & Oil Refining



Contents

- 3 **Grate-Fast**
- 5 **Grate-Fast FG**
- 7 **Grate-Fast GF11-W**
- 9 **Hollo-Grate-Fast**
- 11 **Floor-Fast**
- 13 **Plate-Grate-Fast**



Grate-Fast® Standard, 3D & 4D



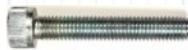
Grate-Fast Standard (#SFGF-1)

- » $\frac{3}{8}$ " socket head galvanized cap screw bolt
- » Uses $\frac{5}{16}$ " hex wrench
- » Profiled nose to fit on flat or sloping beam flanges
- » $\frac{3}{8}$ " thread engagement to enable full loading for vibration resistance
- » 13 gauge galvanized top-hat bracket designed to fit bearing bar gauges $\frac{1}{4}$ ", $\frac{3}{16}$ " and $\frac{1}{8}$ " fixed at $1\frac{3}{16}$ " centers
- » 2 $\frac{1}{4}$ " cap screw bolt length to accommodate a wide range of bearing bar depths
- » Stepped tail fits beam flanges from $\frac{1}{8}$ " to $\frac{3}{4}$ "
- » Galvanized cast malleable iron body

"Only required one person to fasten grating and saved 50% of the normal installation costs."



#SFGF-1 #SFGF-1-3D #SFGF-1-4D



For use with #SFGF-1



For use with #SFGF-1-3D



For use with #SFGF-1-4D

Grate-Fast 3D & 4D (#SFGF-1-3D/#SFGF-1-4D)

- » Grate-Fast 3D & 4D are available from stock with a $3\frac{1}{4}$ " OR $4\frac{1}{4}$ " long cap screw bolt for applications with greater grating depth. Bolts longer than $4\frac{1}{4}$ " are available on special order.

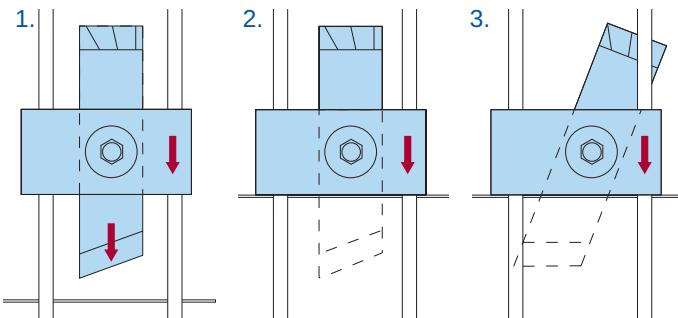
A high strength floor connection for rectangular open bar grating, providing superior clamping force due to a malleable iron cast body. Lloyd's Register Type Approval for resistance to shock and vibration.

Product Code	Bolt	Flange	Grating Bar Depth	Grating Bar Width	Bar Distance	Tightening Torque	Hex. Key / Socket
	Z	T	D	W	X	ft lb	mm
SFGF-1	M10 ($\frac{3}{8}$ ")	$\frac{1}{8}$ "- $\frac{3}{4}$ "-1"	$2\frac{1}{4}$ "	$\frac{1}{8}$ " - $\frac{1}{4}$ "	$1\frac{3}{16}$ "	12	$8\text{ (}\frac{5}{16}\text{")}$
SFGF-1-3D	M10 ($\frac{3}{8}$ ")	$\frac{1}{8}$ "- $\frac{3}{4}$ "-1"	$3\frac{1}{4}$ "	$\frac{1}{8}$ " - $\frac{1}{4}$ "	$1\frac{3}{16}$ "	12	$8\text{ (}\frac{5}{16}\text{")}$
SFGF-1-4D	M10 ($\frac{3}{8}$ ")	$\frac{1}{8}$ "- $\frac{3}{4}$ "-1"	$4\frac{1}{4}$ "	$\frac{1}{8}$ " - $\frac{1}{4}$ "	$1\frac{3}{16}$ "	12	$8\text{ (}\frac{5}{16}\text{")}$



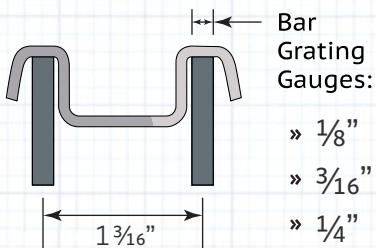
How to install...

1. Position pre-assembled Grate-Fast with the body between the grating bars and the nose pointing towards the steel. The arrows on the top hat bracket should also be point towards the supporting steel and the bracket itself resting on the bearing bars.
2. Slide the Grate-Fast towards the steel until the nose fits under the beam flange. Where necessary adjust the body / screw to the approximate flange thickness / grating depth.
3. Tighten the screw. The Grate-Fast body will automatically rotate until it locks under the bearing bar, with the nose under the flange. Tighten to the recommended torque.



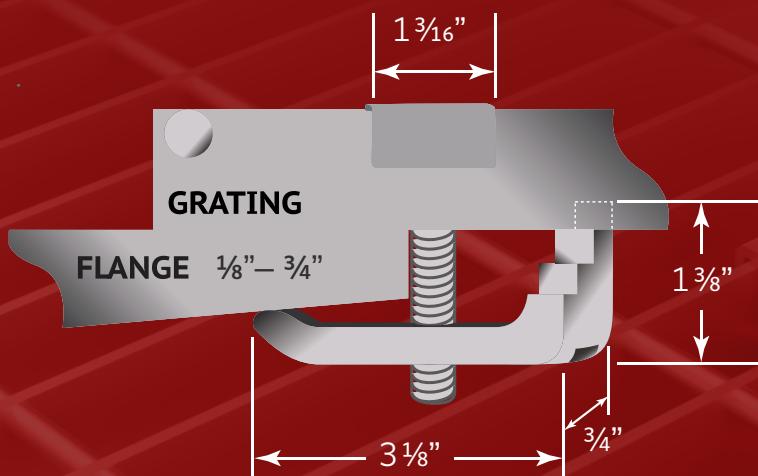
Top Hat Bracket (#TH-1)

» 13 gauge top-hat saddle clip available individually



Available in different Saddle Clips Sizes:

22-W
27-W
30-W
38-W



GRATE-FAST SPECIFICATIONS

Castings:

Malleable iron to DIN 1692, corresponding to ANSI/ASTM A47-84-32510

Minimum yield strength: 32,500 psi

Minimum tensile strength: 50,000 psi

Modulus of elasticity: 25,000,000 lbs.

Minimum elongation: 10% in 2"

BHN range: 110–130

Machinability: 120

Bracket: ASTM-A 446 76 Grade D

Socket head cap screw bolt: AISI C1008 galvanizing ASTM B695 Class 50

Weight per 100 units: 44 lbs.

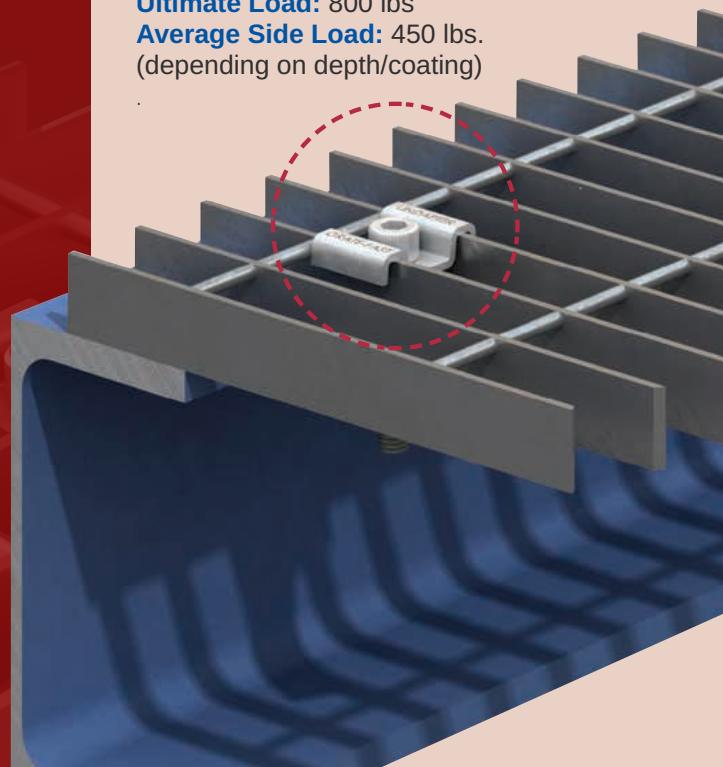
Torque recommendations: 12ft. lbs.

Grate-Fast: 12ft. lbs.

Ultimate Load: 800 lbs

Average Side Load: 450 lbs.

(depending on depth/coating)





Grate-Fast® FG

For fastening fiberglass, aluminum, stainless or bronze bar grating to steel beams

Your choice of fiberglass (or non-corrosive metal) grating presumes a hostile environment. In these applications, drilling the steel (and penetrating coatings) is inappropriate and counter-productive. Instead, fasten your grating with the suitable model of Grate-Fast Model FG.



#GF-FG-1 (304 Stainless)
#GF-FG-3 (316 Stainless)

#GF-FG-2 (304 Stainless)
#GF-FG-4 (316 Stainless)

Grate-Fast FG (#GF-FG-1—#GF-FG-4)

- » 300 Series stainless steel bracket, bolt and investment casting with reduced body width to fit spacing as close as $\frac{5}{8}$ "
- » $\frac{5}{16}$ " socket head cap screw bolt, 300 Series Stainless
- » Uses $\frac{1}{4}$ " hex wrench
- » Profiled nose to fit on flat or sloping beam flanges
- » $\frac{3}{8}$ " thread engagement for full loading and resistance to corrosion in thread area
- » 300 Series stainless steel investment casting body
- » 14 or 16 gauge, 300 Series stainless steel top-hat bracket with one offset wing or flat wings to fit spacing between bars of $\frac{5}{8}$ " to 2"
- » $2\frac{1}{4}$ " cap screw bolt length to accommodate up to 2" bearing bar depth*
- » Stepped tail fits beam flanges from $\frac{1}{8}$ " to $\frac{3}{4}$ "

* Longer cap screw bolts to accommodate applications using greater bearing-bar depths available on special order.

GRATE-FAST FG SPECIFICATIONS

Castings:

Malleable iron to DIN 1692, corresponding to ANSI/ASTM A47-84-32510
Minimum yield strength: 32,500 psi
Minimum tensile strength: 50,000 psi
Modulus of elasticity: 25,000,000 lbs.
Minimum elongation: 10% in 2"
BHN range: 110–130
Machinability: 120

Bracket: ASTM-A 300 series stainless

Socket head cap screw bolt: AISI C1008 300 series stainless

Weight per 100 units: 35 lbs.

Torque recommendations:

Grate-Fast FG: 3 1/2 ft. lbs

Ultimate Load: 800 lbs.

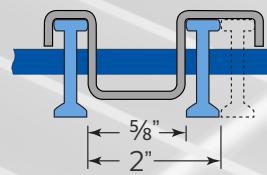
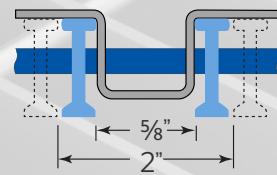
Average Side Load: 450 lbs.

(depending on depth/coating)

Top Hat Offset & Flat Brackets

(see chart for part #)

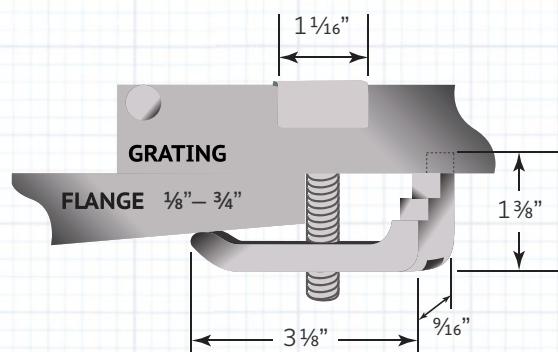
- » 14 or 16 gauge top-hat offset or flat wing brackets also available individually



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Grate-Fast® FG Installation



Step 1

Position the pre-assembled Grate-Fast FG with the body between the grating bars and the arrow on the nose pointing toward the steelwork with the top-hat bracket resting on the bearing bars. (Figure 1)

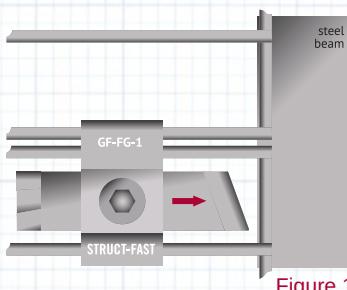


Figure 1

Step 2

Slide the Grate-Fast FG toward the steelwork until the nose fits under the beam flange. Where necessary, adjust the body/bolt to the approximate flange thickness/grating depth. (Figure 2)

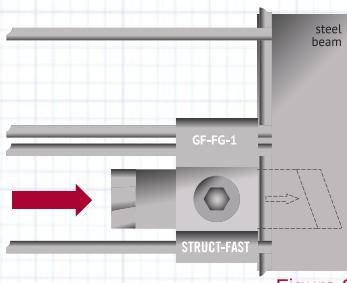


Figure 2

Step 3

Tighten the cap screw bolt using the hexagon key. The Grate-Fast FG body casting will automatically rotate until it locks under the bearing bar, with the nose under the flange. Continue tightening to the recommended torque. Grate-Fast FG is now securely in position. (Figure 3)

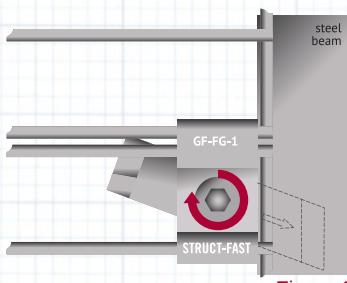


Figure 3

GRATE-FAST FG PART #	TO FIT SPACING BETWEEN BARS FROM 5/8" TO 1 3/8"						TO SIT FLUSH ON WIDE BAR GRATING UP TO 2"					
	TOP HAT BRACKET			STAINLESS INVESTMENT CASTING	CAP SCREW		TOP HAT BRACKET			STAINLESS INVESTMENT CASTING	CAP SCREW	
	steel	gauge	wing shape		steel	Max grating depth	steel	gauge	wing shape		steel	Max grating depth
GF-FG-1	304	14	offset	304	302	1 3/4"						
GF-FG-2							304	14	flat	304	302	1 3/4"
GF-FG-3	316	16	offset	316	316	2"						
GF-FG-4							316	16	flat	316	316	2"

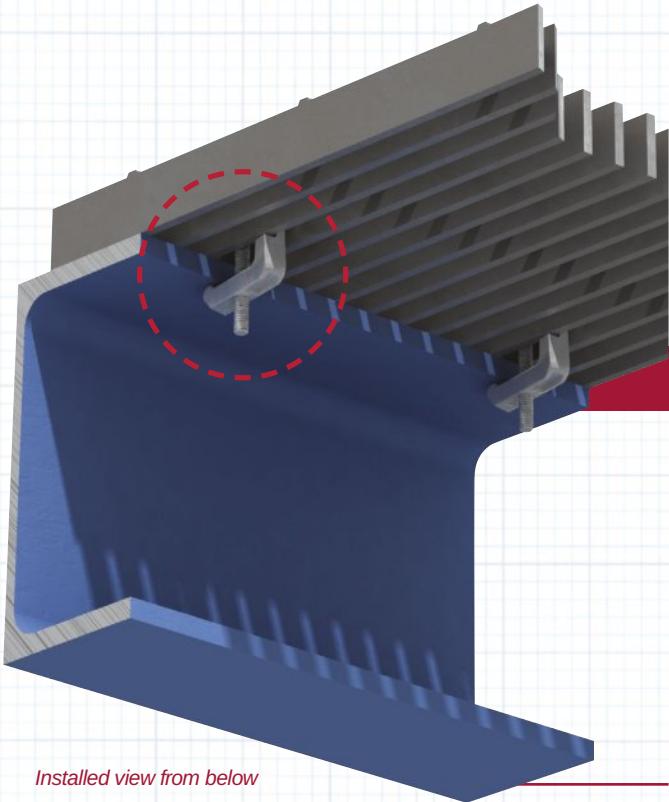


Grate-Fast® SFGF-1-11W

Grate-Fast secures the 11-W or 11-P series of close mesh bar grating to supporting steel without the need to drill or weld.

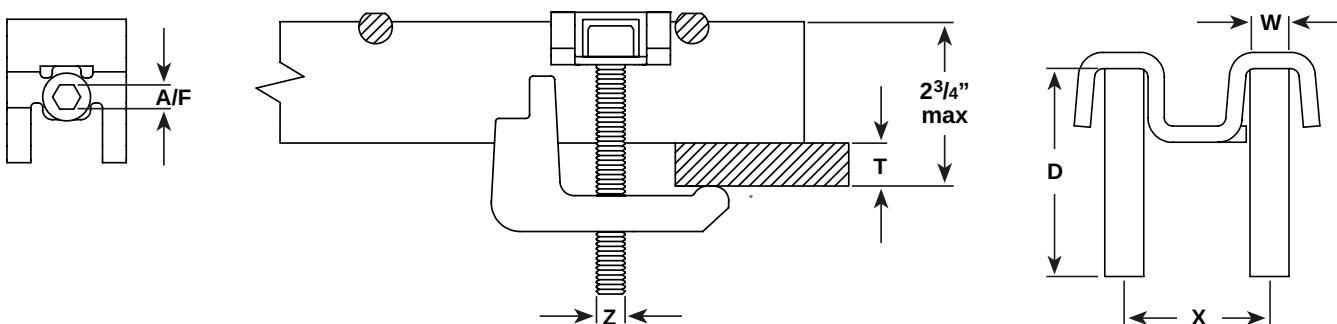
Access to the underside of the flooring is not required so steel grating can be quickly and easily installed by one person from above.

The product features a low-profile bracket that locates on the bearing bars of the grating. When the socket cap screw is tightened, the high strength cast body rotates and locks underneath both the bearing bar and the supporting steel to firmly secure the flooring.



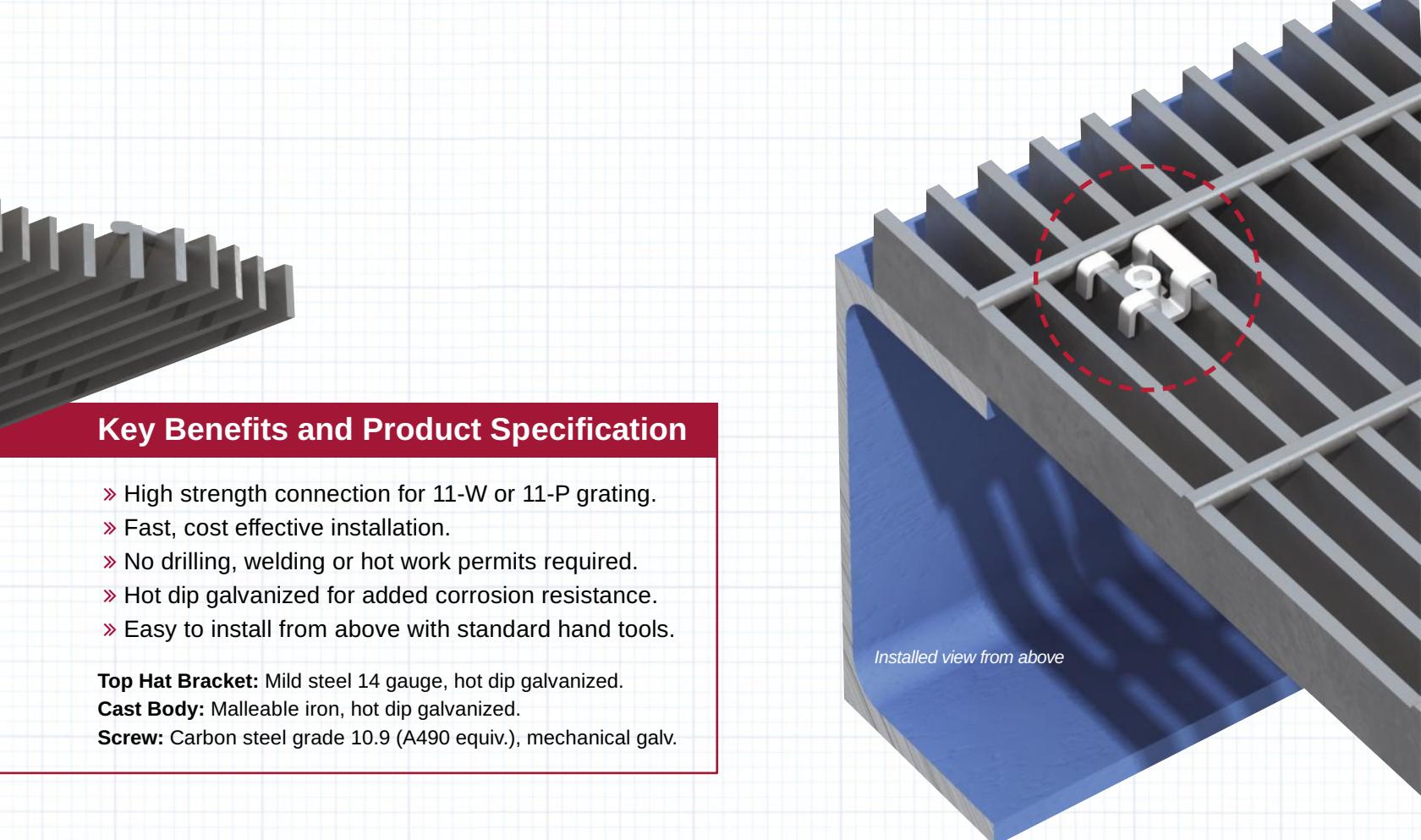
Installed view from below

Technical Data



Product Code	Bolt	Flange Thickness	Grating Bar Depth	Grating Bar Width	Grating Bar Centres	Hex. Wrench	Torque*
	Z	T	D	W	X	A/F mm	ft lb
SFGF-1-11W	M6	1/4" - 3/4"	1" - 2"	1/8" and 3/16"	11/16"	5 (3/16")	2

*Tightening torque subject to change and will be confirmed prior to product launch



Key Benefits and Product Specification

- » High strength connection for 11-W or 11-P grating.
- » Fast, cost effective installation.
- » No drilling, welding or hot work permits required.
- » Hot dip galvanized for added corrosion resistance.
- » Easy to install from above with standard hand tools.

Top Hat Bracket: Mild steel 14 gauge, hot dip galvanized.

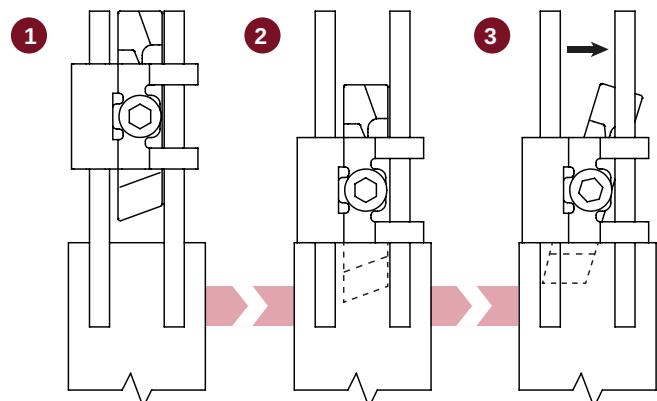
Cast Body: Malleable iron, hot dip galvanized.

Screw: Carbon steel grade 10.9 (A490 equiv.), mechanical galv.

Quick and easy to install

Note: Adjust the Grate-Fast® casting so the distance between the bracket and the body is approximately the same as the grating height and flange combined.

- 1) Position the pre-assembled Grate-Fast® with the body between the grating bars and the nose pointing towards the steel. The arrows on the casting should point towards the supporting steel and the bracket resting on the bearing bars.
- 2) Slide the Grate-Fast® towards the steel until the nose fits under the beam flange. Where necessary adjust the body or screw to the approximate flange thickness / grating depth.
- 3) Tighten the screw. The Grate-Fast® body will automatically rotate until it locks under the bearing bar, with the nose under the flange. Continue tightening to the recommended torque.



Watch the installation on StructFast.com



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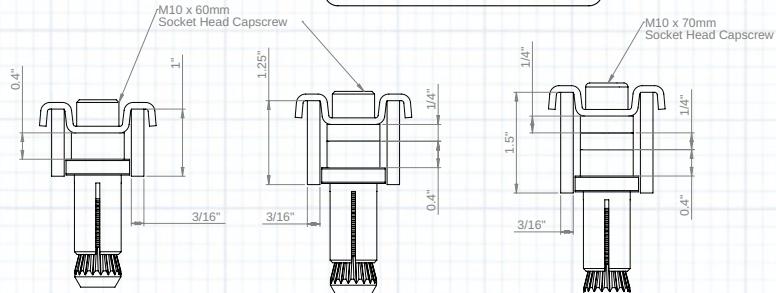
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Hollo-Grate-Fast®

SUMMARY OF KEY BENEFITS

- » High strength connection for 19-W grating to HSS
- » Fast, one-sided, cost-effective installation
- » No hot work permits required
- » Hot-dip galvanized corrosion resistance
- » Easy to install from above with standard hand tools



TECHNICAL DATA

HGF10-100#1HDG**HGF10-125#1HDG****HGF10-150#1HDG**

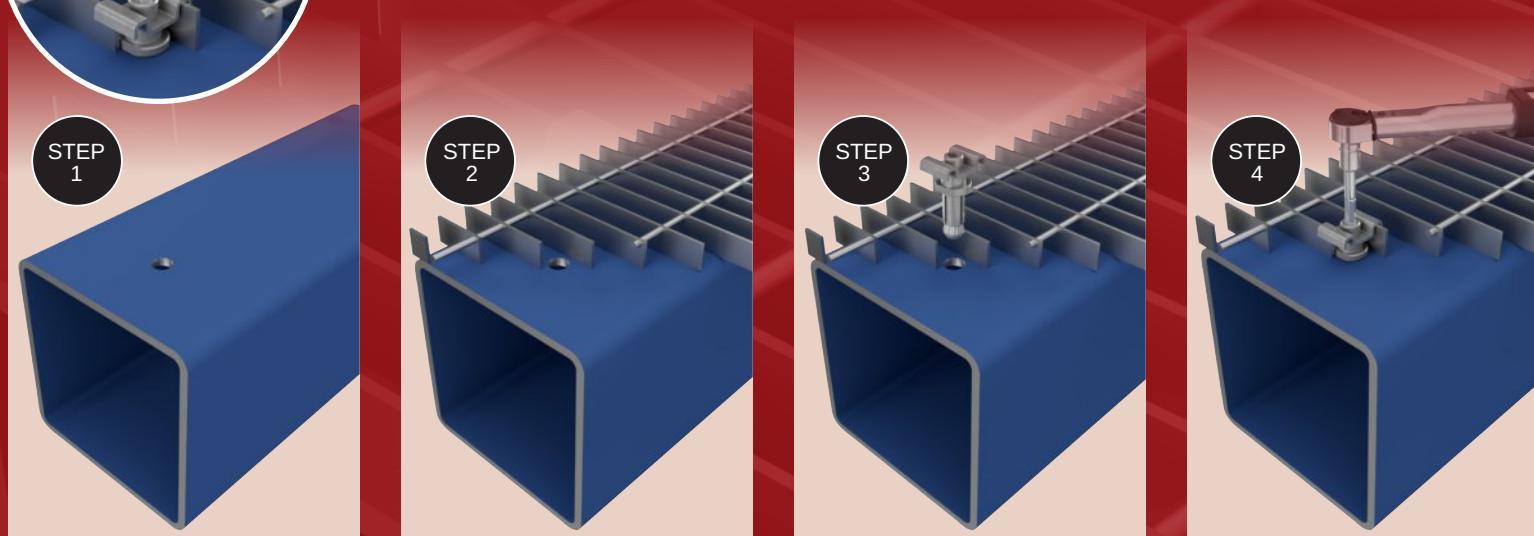
Product Code	Grating Bar Depth	Drill Hole Diameter Ø	HSS Wall Thickness	Bearing Bar Width	Bearing Bar Distance	Hexagon Key mm	Tightening Torque	Safe Working Loads (FoS 4:1)
								Tensile lbs
								Slip lbs
HGF10-100#1HDG	1"							
HGF10-125#1HDG	1.25"	3/4"	1/8" - 7/8"	Max. 3/16"	1 3/16"	8 (5/16")	33ft-lb / 45Nm	450
HGF10-150#1HDG	1.5"							67

Note: For thicker HSS, lengths #2 and #3 are available on request.



QUICK AND EASY TO INSTALL

STEP 1: Ensure drilled hole is free from burrs. Coordinate hole location with bar grating spacing.
 STEP 2: Position the grating onto the HSS so that the hole is centrally placed between two bars.
 STEP 3: Insert the Hollo-Grate-Fast down onto the grating bars and through the hole.
 STEP 4: Once the grating is in position, tighten the Hollo-Grate-Fast to the specified torque.



Leveraging the high strength of the legendary Hollo-Bolt and merging the ease and convenience of the Grate-Fast, Struct-Fast has developed the **Hollo-Grate-Fast** for quickly securing open bar grating to HSS (Hollow Structural Steel).

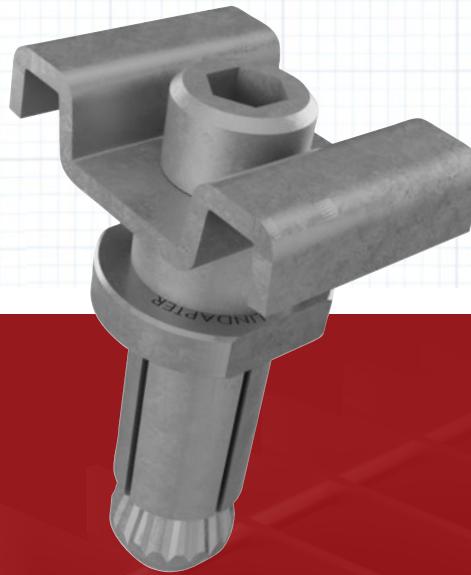
Developed specifically for the most common sized 19-W grating, our newest innovation allows grating to be connected to HSS without drilling, welding or powder actuated fastening in the field. Access to the underside of the grating or the inside of the HSS is not required, enabling contractors to easily install grating from above.

A fast installation is achieved by placing the Hollo-Grate-Fast over the bearing bars, inserting it into a pre-drilled hole in the HSS, and simply tightening the expansion bolt with a torque wrench. This cutting-edge fastener enables contractors to reduce construction time and labor costs, while maximizing safety and productivity.

HOLLO-GRAFE-FAST® SPECIFICATIONS

- » **Top Hat Bracket:** Mild steel 2.5mm (equivalent to 12 gauge), hot-dip galvanized
- » **Ferrule:** Mild steel, hot-dip galvanized
- » **Body:** Mild steel, hot-dip galvanized
- » **Cone:** Mild steel, hot-dip galvanized
- » **Capscrew:** Mild steel grade 8.8, mechanical galvanized

NEW



Installed view from below

REVOLUTIONIZING CONSTRUCTION

Maximize Efficiency

This engineered solution is typically specified at the design phase to utilize pre-drilled steel and ensures optimum efficiency from detailing to construction.

Demand Safety

Permitted hot work and its inherent danger can be avoided while operations, construction and maintenance can continue on a jobsite.

Build Smarter

This revolutionary product is simply inserted into a pre-drilled hole and tightened to secure grating to HSS.

Build Faster

Hollo-Grate-Fast installs in seconds.

Lower Costs

Using the Hollo-Grate-Fast is more cost-effective than powder actuated fasteners, welding, labor and scaffolding requirements.

Rely On Us

Struct-Fast has proven its expertise at designing and manufacturing high quality, durable steel connections. The Hollo-Grate-Fast continues that legacy.

Superior Corrosion Resistance

Galvanized coating is standard on the Hollo-Grate-Fast maximizing corrosion resistance.

Installed view from above

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Floor-Fast®

Floor-Fast is fast, versatile, and economical

- » Eliminates scaffolding, welding and drilling of structural steelwork
- » Requires no access equipment or special tools
- » Requires no hole alignment in plates and beams
- » One fastener universally fits beams, channel and angles
- » Floor-Fast is completely removable

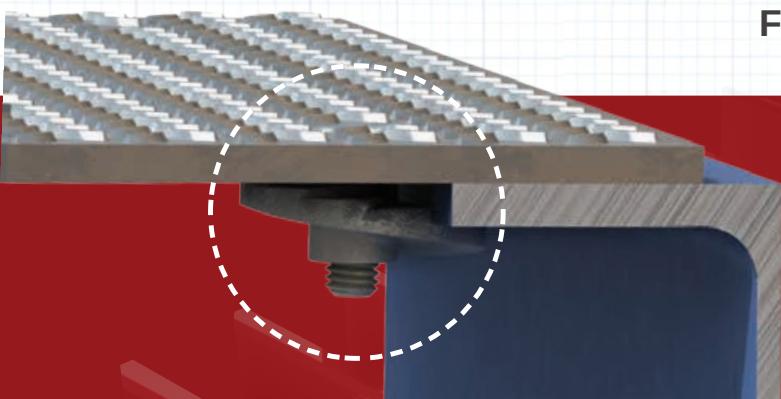
Floor-Fast

- » Counter-sunk flat socket cap screw bolt
- » Stepped surface fits flanges from $\frac{3}{16}$ " to $\frac{5}{8}$ "*
- » Bolts and castings available in both stainless and galvanized (zinc chromate) finishes
- » Two bolt sizes: $\frac{3}{8}$ " (10mm) and $\frac{1}{2}$ " (12mm)

*The standard Floor-Fast will fit steelwork flanges from $\frac{3}{16}$ " to $\frac{5}{8}$ " thickness. If working with thicker flanges, Struct-Fast can furnish longer cap screw bolts and additional packing washers on special order.



For fastening floor/checker plate to steel beams



FLOOR-FAST SPECIFICATIONS

Castings: Malleable iron to DIN 1692, corresponding to ANSI/ASTM A47-84-32510, tapped for a $\frac{1}{2}$ " countersunk flat socket cap bolt

Cap bolt: Corresponds to ANSI B18.3 1976 galvanizing to ASTM Specification B695 Class 50

Weight per 100 units: 34 lbs.

Torque recommendations: Floor-Fast: 16 ft. lbs

1/2" (12mm) Stainless Steel
(Galvanized not shown)

3/8" (10mm) Galvanized
(Stainless Steel not shown)



Galvanized or Stainless Steel Cap Screw Bolts

- » Available in two sizes: $\frac{3}{8}$ " (10mm) and $\frac{1}{2}$ " (12mm), galvanized (zinc chromate) or stainless steel finishes. Struct-Fast® can furnish longer screw bolts on special order.

- » Superior clamping force from the cast body.
- » Lloyd's Register Type Approval for resistance to shock and vibration.
- » Zero protrusion above the surface of the floor plate.
- » Easy to remove for maintenance access.
- » Available in malleable iron or stainless steel grade 316.

To Order Call Toll Free: (800) 327-6719

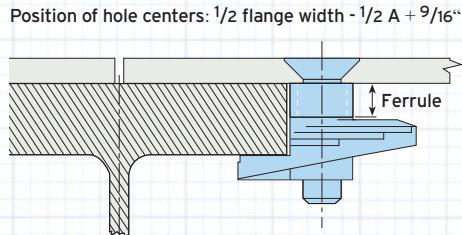
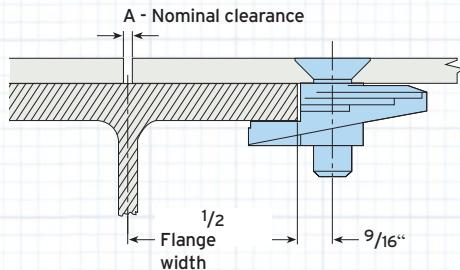
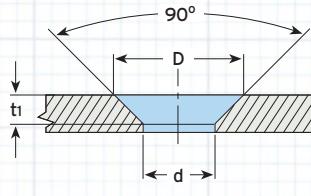
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Floor-Fast Installation

Use Floor-Fast to secure steel, aluminum, fiberglass or bronze floor/checker plate to the supporting steel or aluminum framework without field welding, drilling or tapping holes. Secure Floor-Fast to the bottom of the plate, position the plate in the floor opening and with a simple rotation of the socket head cap screw bolt, secure the plate. Simply reverse the installation process to remove the floor plate. No other system is faster to install.

"We budgeted 3 days for grating installation, we put it all down in an afternoon—went pretty slick."



Material: Malleable iron, zinc plated or hot dip galvanized. Also available in stainless steel grade 316.

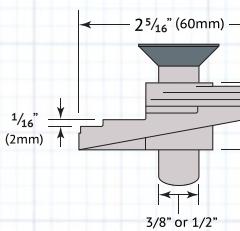


Figure 1

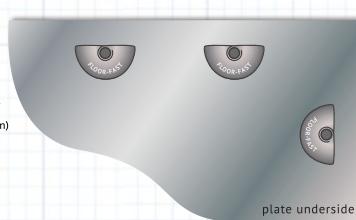


Figure 2

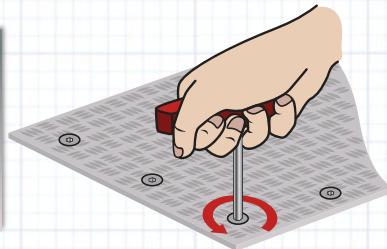


Figure 3

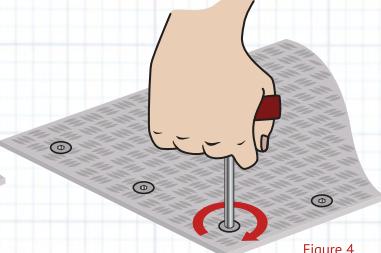
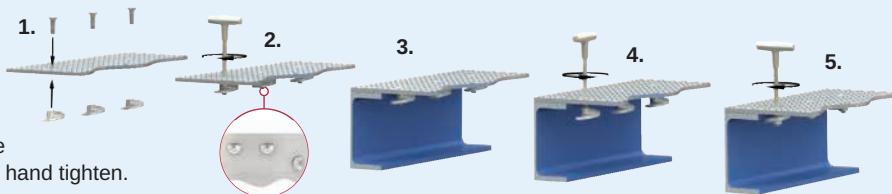


Figure 4



How to install...

1. Assemble bolt and FloorFast through the checker plate.
2. Align castings with the straight edge parallel to the edge of the plate and hand tighten.
3. Lay the floorplate into position.
4. Using a hexagon key release countersunk screw one full turn.
5. Tighten down the countersunk socket screw.



Removal: Using a hexagon key, give the FloorFast one full anti-clockwise turn to release the connection from the flange.

Product Code	Bolt ¹⁾ Z	Floorplate Thickness t	Floorfast	Flange Thickness			Hole Ø d	Dimensions				Tight. Torque ft lb	Hexagon Key mm			
				Floorfast with Ferrule ²⁾				Countersunk Ø for Bolt BZP D	Countersunk Depth for Bolt BZP t ₁	HDG t ₁						
				10mm (3/8")	20mm (13/16")	30mm (1 3/16")										
FF031	M8 (5/16")	3/16"- 1/2"	1/8"- 5/8"	1/2"- 1"	7/8"- 1 3/8"	1 5/16"-113/16"	3/8"	11/16"	-	3/16"	-	8	5 (3/16")			
FF037	M10 (3/8")	3/16"- 1/2"	1/8"- 5/8"	1/2"- 1"	7/8"- 1 3/8"	1 5/16"-113/16"	7/16"	13/16"	3/4"	3/16"	3/16"	16	6 (7/32")			
FF050	M12 (1/2")	1/4"- 1/2"	1/8"- 5/8"	1/2"- 1"	7/8"- 1 3/8"	1 5/16"-113/16"	9/16"	1"	15/16"	1/4"	3/16"	16	8 (5/16")			

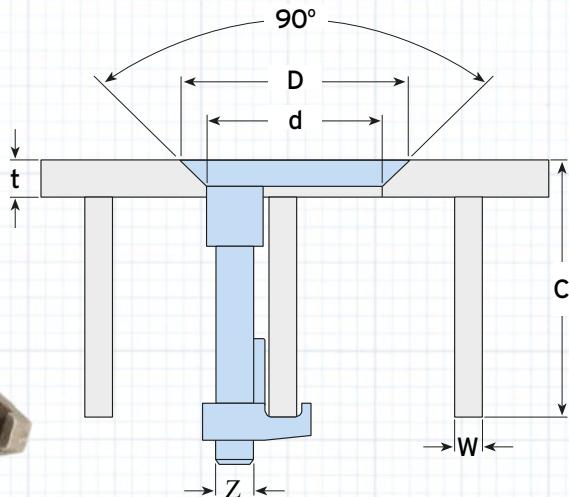
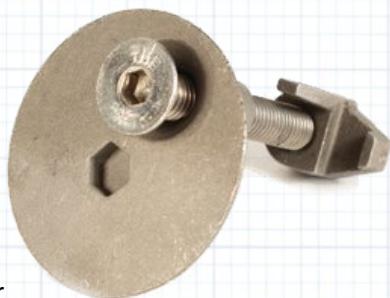
1) Hot dip galvanized M10 and M12 versions are supplied with a slotted countersunk screw. 2) To order FloorFast with a ferrule, simply add ferrule size to product code (eg. FF050 with 10mm (3/8") ferrule).

► **Safe Working Loads (FF031/FF037/FF050): Tensile = 450lbs/bolt (4:1 FoS) Slip = 112lbs/4 bolts (4:1 FoS)** ► **Designed for pedestrian walkways only.**



Plate-Grate-Fast

This unique solution enables solid plate flooring to be fitted to open-mesh or open-grid flooring using simple hand tools.



Material: Cast stainless steel, self color.

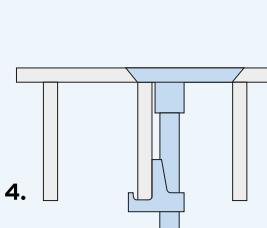
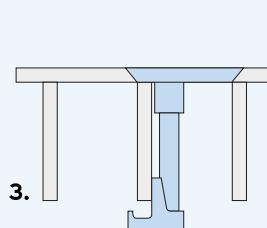
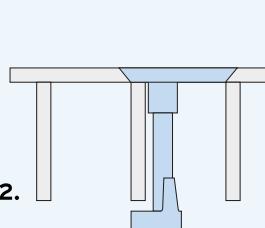
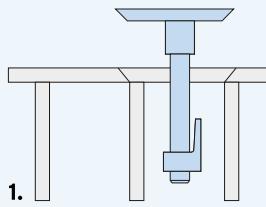
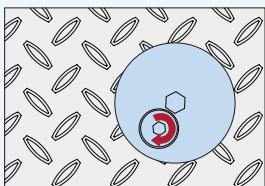
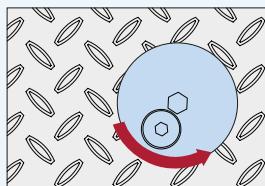
Product Code	A4-70 Bolt Z	Floorplate Thickness t	Clamping Range C	Grating Bar Width W	Hole Ø d	Csk Ø D	Setscrew Tight. Torque ft lb 8	Hexagon Key mm 5(3/16")
PGF1055	M8 (5/16")	min 1/4"	1 3/8" - 2 3/16"	1/8" - 5/16"	1 5/8"	2"		

► Designed for pedestrian walkways only.

► Longer bolts available on special order.

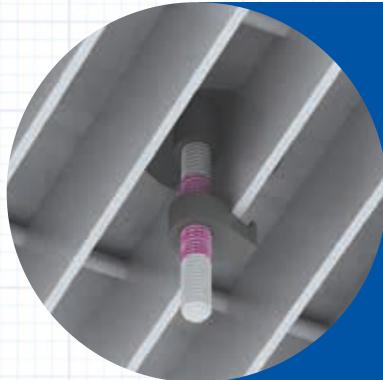


How to install...



- 1) Insert the pre-assembled Type 1055 into the countersunk hole between the grating bars.
- 2) Use an 5/16" hexagon key to rotate the plug counterclockwise until the underside of the plug locates against the grating bar.
- 3) Use a 3/16" hexagon key to rotate the countersunk setscrew clockwise until the grating lug makes contact with the grating bar.
- 4) Tighten the setscrew to 8ft lb; the grating lug will be drawn up the screw and will activate the thread locking adhesive.

Plate-Grate-Fast offers high corrosion protection and allows pre-drilled flooring plates to be placed at any orientation and fitted by a single person. Installation is completed efficiently from above without the need to access the underside of the open-grid grating. No drilling, welding, or cumbersome scaffolding is required.



- » Fast installation from above, no expensive scaffolding needed.
- » Stainless steel for high corrosion resistance.
- » Superior clamping force from high quality castings.
- » Safely retrofit without welding.

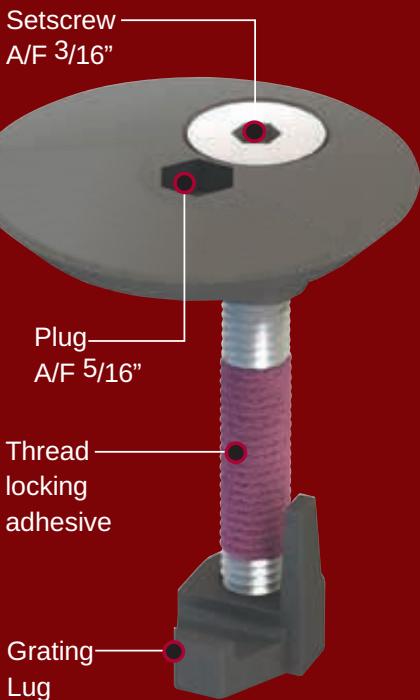
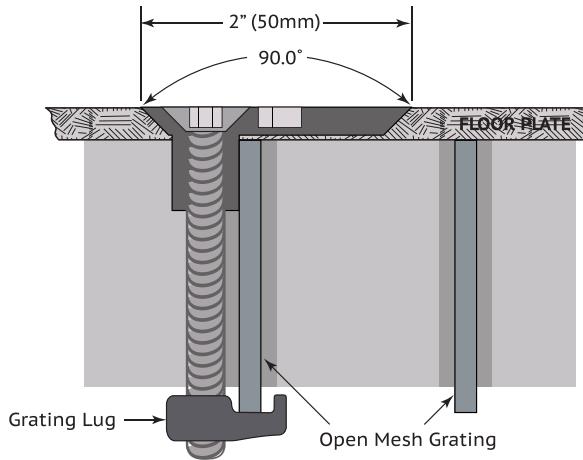


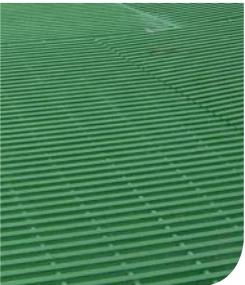
Plate-Grate-Fast

- » $5/16$ " (8mm) counter-sunk flat socket cap screw bolt
- » Accommodates floor plate thickness from $1/4$ " - $5/16$ " (6-8mm), and grating bar depth from $1 \frac{3}{8}$ " - 2 " (35-50mm) * Longer bolts available on special order
- » Bolt, casting and grating lug have stainless steel finish



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