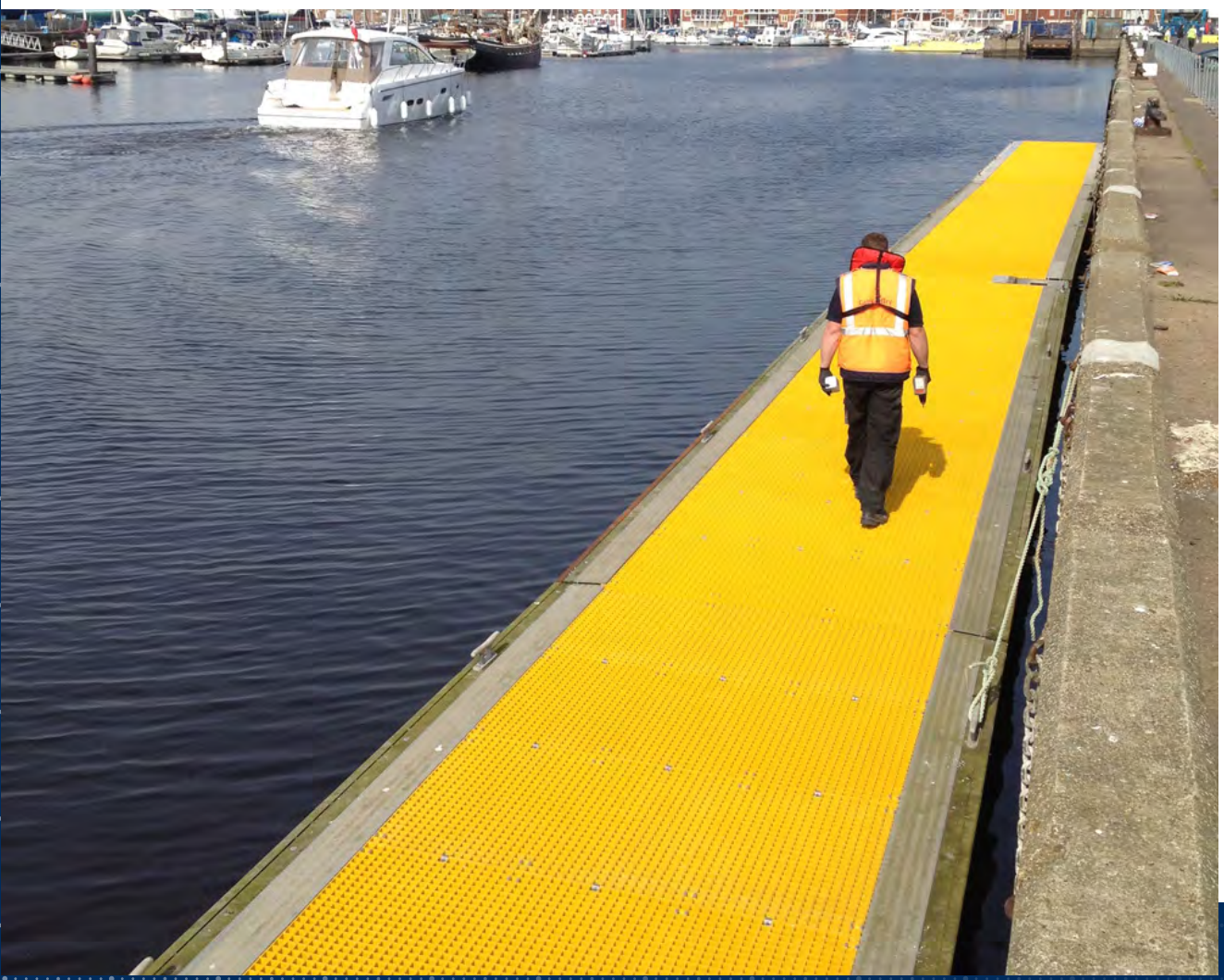
FibreGRATING

Heavy Duty GRP Embedded Grit Grating



DESIGN | SUPPLY | FABRICATE | INSTALL

FIBREGRID

FiBREGRID

FibreGRATING

Heavy Duty GRP Embedded Grit Grating

FibreGrid's Heavy Duty GRP Grit Top Grating is a high performance open mesh flooring system, made from high quality GRP (glass reinforced plastic).

Our Heavy Duty GRP Embedded Grit Grating is constructed using high grade chemical resistant Isopthalic Polyester resin (full chemical resistance chart available on request). The resin will include a UV inhibitor and be fire retardant according to BS 476: Part 7 Class 2 rating (certificate available on request). The gratings shall have an "embedded" grit top surface for superior hard wearing qualities.

If required, grating panels can be trimmed on site to suit using an industrial jigsaw and appropriate cutting blades (Bosch "T101-A1F" or similar are ideal).

CHARACTERISTICS

- Extremely durable
- Impact resistant
- Anti slip surface
- Fire retardant
- Corrosion resistant
- Chemical resistant
- Lightweight
- Maintenance free
- Non-conductive

SUITABLE APPLICATIONS

- ✓ **Walkways**
- ✓ **Gullies**
- ✓ **Trenches**
- ✓ **Cooling towers**
- ✓ **Overhead gantries**
- ✓ **Railway crossing points**

TECHNICAL DATA

Description	High performance composite grating system
Top finish:	Heavy duty embedded grit made from our ExtremeCore® grit
Stock colours:	Green, Grey or Yellow (any RAL or BS colour subject to extended lead time)
Stock depths:	25mm, 38mm and 50mm (other sizes are available subject to lead time)
Panel sizes:	See enclosed list
Mesh patterns:	See enclosed list
Chemical resistance:	Made from Iso resin as standard. Different chemical resistance available, please refer to the enclosed list.

TECHNICAL DATA

Tolerances (including cut):	+/- 7mm width, length and diagonal
Depth tolerances:	+/- 1.5mm
Service temperatures:	-50˚C to 105˚C
Load capabilities:	See enclosed list
Design life:	25+ years (subject to traffic analysis)
General use:	Standard pedestrian traffic
Standards: Fire:	Tested to BS 476: Part 7: 1997 Class 2

SLIP RESISTANCE VALUES

Measured using the Pendulum test method (WF rubber slider) - certificate available on request.

Top Surface	Dry Reading	Wet Reading
Standard Grit Top	71	56

To ensure that the above slip resistance levels are maintained, the grating panels should be kept clean.

The UK Slip Resistance Group guide to slip resistance of a floor for able bodied pedestrians:

Four S Pendulum Value	Potential for Slip
Above 65	Extremely Low
35 - 65	Low
25 - 35	Moderate
25 & Below	High

FABRICATION TIPS

A major advantage of FibreGrid GRP Grating is the ease of fabrication - sawing, grinding, drilling and machining is similar to working with wood, metals and plastics. If possible, perform fabrication "on-site" to increase accuracy. Be sure to allow for saw kerf (usually 4-6mm) when performing takeoffs and layouts. For a nice looking installation, cut panels so bars of adjoining panels are aligned and leave a solid bar on all sides.

Provide a minimum of 38mm support around all edges. Use M-Clips spaced a maximum of every 1220mm, with a minimum of four clips per panel. Support panel security to prevent flex or shift during cutting. Mark cuts clearly and carefully. Avoid splitting 6.4mm and 8mm bars. Moulded construction allows "stubs" to support weight. Cut from the smooth side (bottom) of a grit top panel. Use even, steady pressure when cutting. Excessive pressure may cause heat and/or ragged edges. Replace dull blades to prevent heat buildup. For best results, sand all edges with open-grit sandpaper using light, even pressure to prevent wavy, uneven surfaces. Cut edges are to be sealed using a polyurethane yacht varnish. This is to prevent corrosive chemicals from reaching exposed glass fibres.

UNIFORM LOAD TABLE

Moulded Grating Uniform Load Capacity (kg/m²)									
Type	Mesh Size	Grating Depth	300mm Span	450mm Span	600mm Span	750mm Span	900mm Span	1000mm Span	1200mm Span
FG02	100mm x 25mm (Rectangular)	25mm	10,415	2,105	747	567	415	300	375
FG03	38mm x 38mm (Square)	25mm	5,370	1,930	710	366	195	140	105
FG04	38mm x 38mm (Square)	38mm	23,132	6,790	2,825	1,404	859	605	390
FG05	50mm x 50mm (Square)	50mm	48,800	15,485	6,800	3,425	2,100	1,510	850
FG10	19mm x 19mm (Square)	25mm	7,286	2,228	880	445	260	195	110
FG11	19mm x 19mm (Square)	38mm	24,643	7,130	2,966	1,475	902	636	410
FG12	20mm x 20mm (Square)	30mm	11,854	3,507	1,475	906	447	369	215
FG14	38mm x 38mm (Square)	60mm	119,890	38,230	16,230	8,530	4,930	3,435	2,085
FG24	83mm x 83mm (Square)	40mm	8,823	3,058	2,105	985	539	420	208

Please note: these figures are based on a deflection length of 0.75% of the span (BS Standard). For example, 734kg on a 300mm span will deflect at 2.4mm - (300/125).

The load tables above show maximum clear spans for various loading example/requirements in accordance with BS 4592-2006. For pedestrian traffic, the deflection of a floor panel under the design load shall not exceed 10mm or 1/200 of the span - whichever is the lesser. The difference in level between a loaded and a neighbouring un-loaded panel shall not exceed 4mm.

Additionally, these figures cannot be guaranteed as they were taken in a test environment and cannot factor in other operational conditions.

CONCENTRATED LOAD TABLE

Moulded Grating Concentrated Load Capacity (kg)									
Type	Mesh Size	Grating Depth	300mm Span	450mm Span	600mm Span	750mm Span	900mm Span	1000mm Span	1200mm Span
FG02	100mm x 25mm (Rectangular)	25mm	734	502	376	245	192	151	114
FG03	38mm x 38mm (Square)	25mm	642	453	318	205	180	126	92
FG04	38mm x 38mm (Square)	38mm	1,455	1,020	725	521	430	317	275
FG05	50mm x 50mm (Square)	50mm	3,400	1,862	1,180	803	568	460	324
FG10	19mm x 19mm (Square)	25mm	674	476	334	215	189	132	97
FG11	19mm x 19mm (Square)	38mm	1,530	1,070	762	547	455	333	290
FG12	20mm x 20mm (Square)	30mm	856	580	448	316	213	184	143
FG14	38mm x 38mm (Square)	60mm	7,511	4,356	2,908	2,012	1,442	1,141	829
FG24	83mm x 83mm (Square)	40mm	849	578	441	309	205	182	139

Please note: these figures are based on a deflection length of 0.75% of the span (BS Standard). For example, 734kg on a 300mm span will deflect at 2.4mm - (300/125).

The load tables above show maximum clear spans for various loading example/requirements in accordance with BS 4592-2006. For pedestrian traffic, the deflection of a floor panel under the design load shall not exceed 10mm or 1/200 of the span - whichever is the lesser. The difference in level between a loaded and a neighbouring un-loaded panel shall not exceed 4mm.

Additionally, these figures cannot be guaranteed as they were taken in a test environment and cannot factor in other operational conditions.

CHEMICAL RESISTANCE TABLE

Chemical	Iso concentration (%)	Temperature F/°C	Vinyl Ester concentration (%)	Temperature F/°C
Acetic Acid	50	125/50	50	185/85
Acetone	N/R	N/R	100	75/25
Aluminium Salts	All	160/70	All	195/90
Ammonium Chloride	All	160/70	All	185/85
Ammonium Hydroxide	28	N/R	28	100/38
Ammonium Carbonate	N/R	N/R	All	150/65
Ammonium Bicarbinate	15	125/50	All	125/50
Ammonium Nitrate	All	160/70	All	185/85
Benzene	N/R	N/R	100	140/60
Benzene Sulfuric Acid	25	115/45	All	195/90
Benzoic Acid	All	150/65	All	195/90
Calcium Hydroxide	25	150/65	35	185/85
Calcium Hypochlorite	All	150/65	All	185/85
Calcium Salts	All	150/65	All	195/90
Calcium Nitrate	All	185/85	All	195/90
Carbonic Acid	All	125/50	All	185/85
Carbon Tetrachloride	100	75/25	100	140/60
Chlorine Dioxide	N/R	140/60	All	140/60
Chlorine Water	All	150/65	All	125/50
Chromic Acid	100	75/25	10	185/85
Citric Acid	All	N/R	All	185/85
Copper Salts	All	150/65	All	185/85
Ethanol	50	75/25	50	85/30
Ferric Chloride	100	150/65	100	185/85
Ferric Salt	All	150/65	All	185/85
Glycerine	100	150/65	100	195/90
Heptane	100	105	100	125/50
Hydrobeomic Acid	50	125/50	50	125/50
Hydrochloric Acid	37	75/25	37	95/35
Hydrocyanic Acid	All	150/65	All	185/85
Hydrogen Peroxide	10	75/25	30	125/50
Hypochlorides Acid	20	85/30	20	150/65
Lactic Acid	All	170/75	All	195/90
Lead Acetate	All	170/75	All	195/90
Lead Chloride	All	140/60	All	195/90
Lead Nitrate	All	150/65	All	195/90
Lime Slurry	All	150/65	All	185/85
Magnesium Salts	All	150/65	All	185/85
Maleic Acid	100	150/65	100	185/85
Mercury Chloride	100	150/65	100	185/85
Nickel Salts	All	170/75	All	195/90
Nitric Acid	20	75/25	20	105/40
Perchloric Acid	N/R	N/R	30	85/30
Phosphoric Acid	100	125/50	100	195/90
Potassium Salts	All	150/65	All	185/85
Opthalmic Acid	-	-	All	185/85
Silver Nitrate	100	150/65	100	185/85
Sodium Hypochlorite	N/R	N/R	10	150/65
Sodium Salts	All	75/25	All	105/40
Stannic Chloride	All	160/70	All	195/90

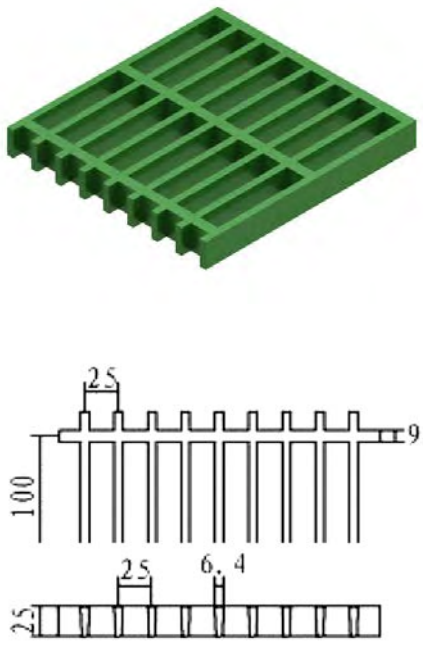
Chemical	Iso concentration (%)	Temperature F/°C	Vinyl Ester concentration (%)	Temperature F/°C
Sulfuric Acid	50	N/R	50	185/85
Sulfuric Acid	25	75/25	25	195/90
Tartaric Acid	All	170/75	All	195/90
Trisodium Phosphate	N/R	N/R	All	170/65
Urea	All	125/50	All	140/60
Vinegar	100	170/75	100	195/90
Water, Distilled	100	170/75	100	195/90
Water, Sea	All	170/75	All	195/90
Zinc Salts	100	150/65	100	185/85

ALL = All concentrations N/R = Not Recommended SAT = Saturated Solution

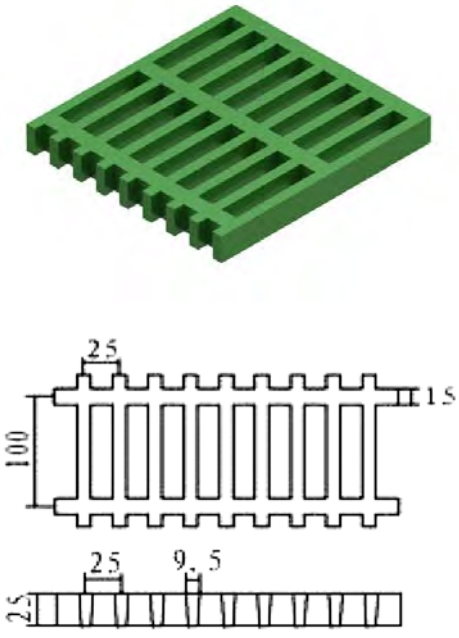
The corrosion resistance data listed above is for general information only. Resin manufacturers have provided test data which indicates that the specific resin can withstand the corrosion conditions listed above. FibreGrid Limited believes the data to be true and accurate but no guarantee is expressed or implied as to specific performance. Testing for specific environments is recommended. Our responsibility for claims arising from breach of warranty, negligence or otherwise is limited to the purchase price of the material sold by FibreGrid Limited.

SPECIAL ORDER GRATING TYPES AVAILABLE

Grating Name	**FG01**
Grid Size	25X100 RM
Panel Depth	25
Load Bar Thickness	6.4
Load Bar Centres	25
No. Bars per foot	12
Open Area	67%
Approx. Weight	13.9 kg's/sq.m
Panel Sizes (mm)	3660 x 1220, 2440 x 1220, 3050 x 915

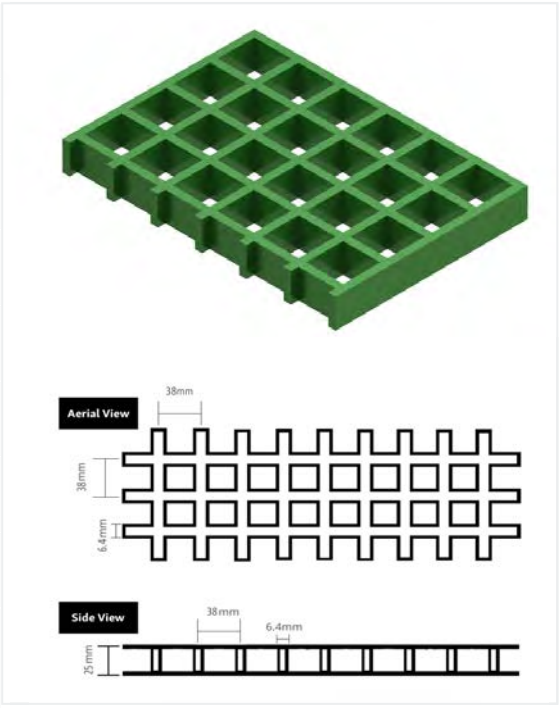


Grating Name	**FG02**
Grid Size	25x100 RM
Panel Depth	25
Load Bar Thickness	9.5
Load Bar Centres	25
No. Bars per foot	12
Open Area	52%
Approx. Weight	19.3 kg's/sq.m
Panel Sizes (mm)	3660 x 1220, 2440 x 1220, 3050 x 915

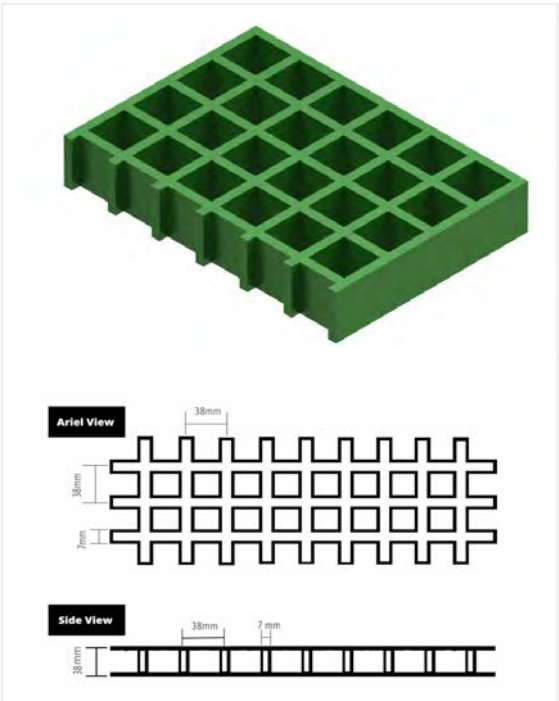


SPECIAL ORDER GRATING TYPES AVAILABLE

Grating Name	**FG03**
Grid Size	38X38 SM
Panel Depth	25
Load Bar Thickness	6.4
Load Bar Centres	38
No. Bars per foot	8
Open Area	70%
Approx. Weight	12 kg's/sq.m
Panel Sizes Available (mm)	3660 x 1220, 3016 x 996, 1988 x 996

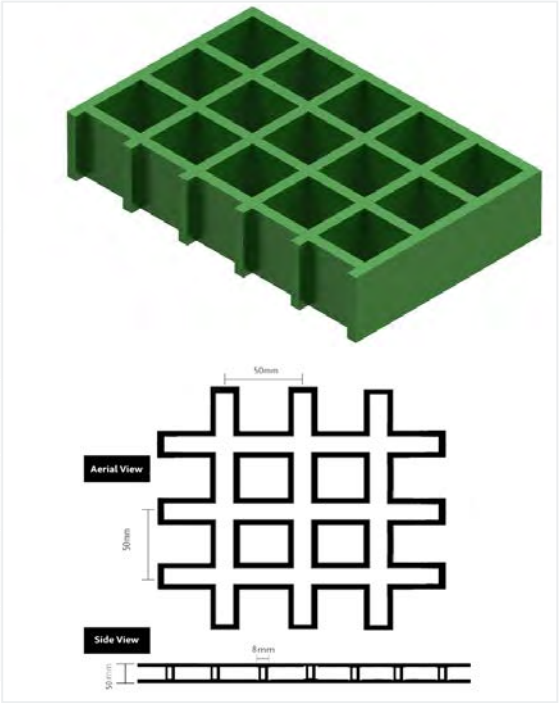


Grating Name	**FG04**
Grid Size	38X38 SM
Panel Depth	38
Load Bar Thickness	7
Load Bar Centres	38
No. Bars per foot	8
Open Area	68%
Approx. Weight	19.5 kg's/sq.m
Panel Sizes Available (mm)	3660 x 1220, 3016 x 996, 1988 x 996

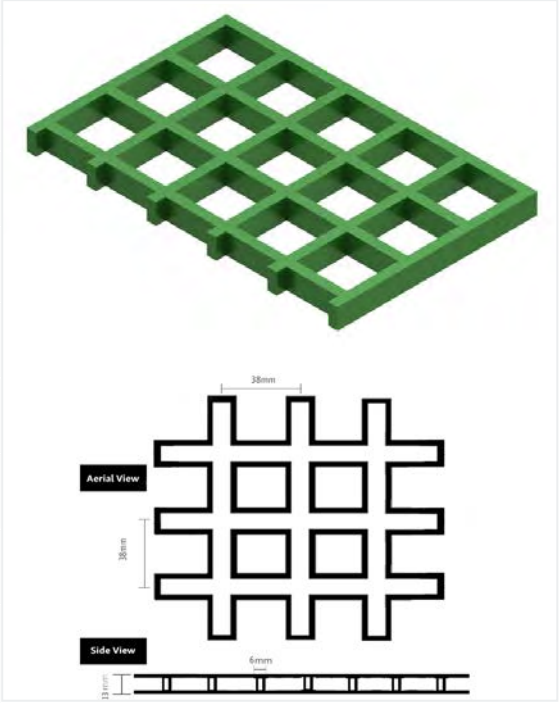


SPECIAL ORDER GRATING TYPES AVAILABLE

Grating Name	**FG05**
Grid Size	50x50 SM
Panel Depth	50
Load Bar Thickness	8
Load Bar Centres	50
No. Bars per foot	8
Open Area	71%
Approx. Weight	23.51 kg's/sq.m
Panel Sizes Available (mm)	3660 x 1220

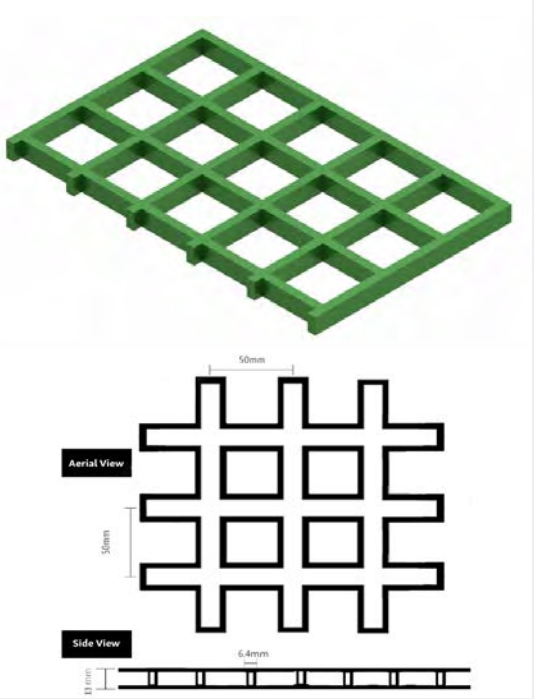


Grating Name	**FG06**
Grid Size	38X38 SM
Panel Depth	13
Load Bar Thickness	6
Load Bar Centres	38
No. Bars per foot	8
Open Area	78%
Approx. Weight	6 kg's/sq.m
Panel Sizes (mm)	3660 x 1220, 3016 x 996, 3050 x 915

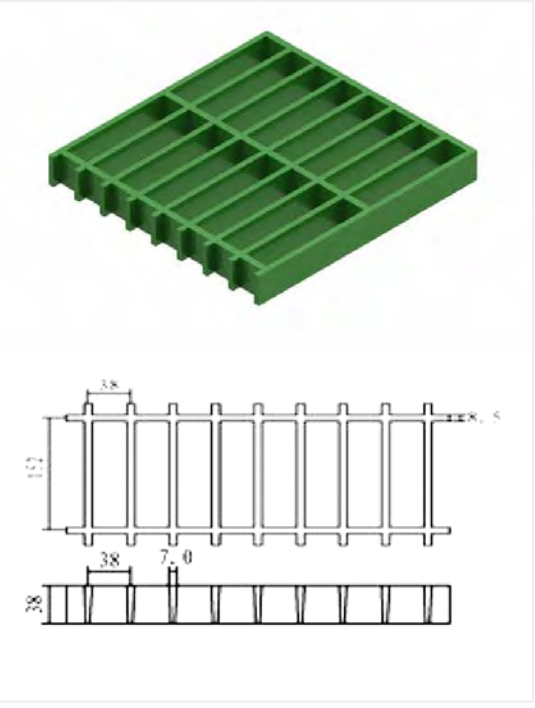


SPECIAL ORDER GRATING TYPES AVAILABLE

Grating Name	**FG07**
Grid Size	50X50 SM
Panel Depth	13
Load Bar Thickness	6.4
Load Bar Centres	50
No. Bars per foot	6
Open Area	82%
Approx. Weight	5.77 kg's/sq.m
Panel Sizes (mm)	3660 x 1220, 2440 x 1220, 3050 x 915

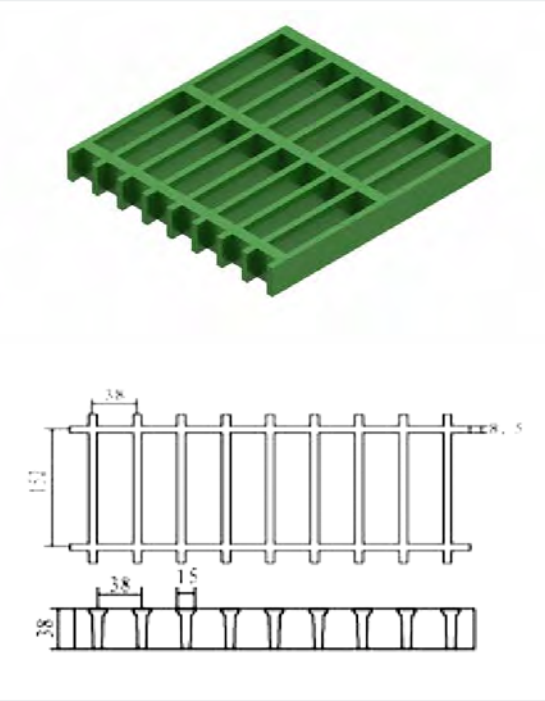


Grating Name	**FG08**
Grid Size	38X152 RM
Panel Depth	38
Load Bar Thickness	7
Load Bar Centres	38
No. Bars per foot	8
Open Area	67%
Approx. Weight	15.93 kg's/sq.m
Panel Sizes (mm)	3660 x 1220

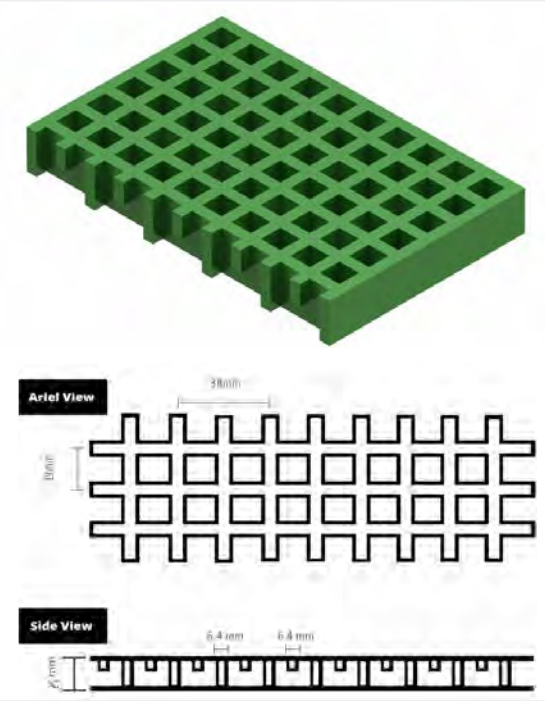


SPECIAL ORDER GRATING TYPES AVAILABLE

Grating Name	**FG09**
Grid Size	38X152 RM
Panel Depth	38
Load Bar Thickness	15
Load Bar Centres	38
No. Bars per foot	8
Open Area	67%
Approx. Weight	18.62 kg's/sq.m
Panel Sizes (mm)	3660 x 1220

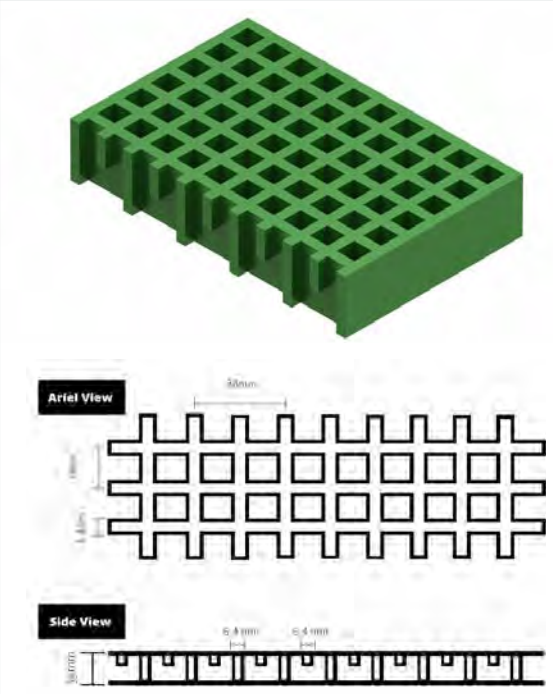


Grating Name	**FG10**
Grid Size	19X19 SM
Panel Depth	25
Load Bar Thickness	6.4
Load Bar Centres	19
No. Bars per foot	16
Open Area	42%
Approx. Weight	16.81 kg's/sq.m
Panel Sizes (mm)	4000 x 1220, 3660 x 1220, 2440 x 1220, 3050 x 915

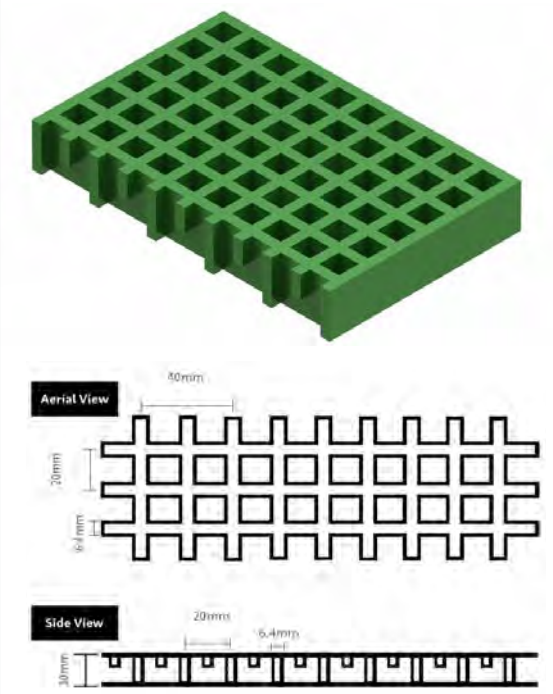


SPECIAL ORDER GRATING TYPES AVAILABLE

Grating Name	**FG11**
Grid Size	19X19 SM
Panel Depth	38
Load Bar Thickness	6.4
Load Bar Centres	19
No. Bars per foot	16
Open Area	42%
Approx. Weight	23.51 kg's/sq.m
Panel Sizes (mm)	4000 x 1220, 3660 x 1220, 2440 x 1220, 3050 x 915

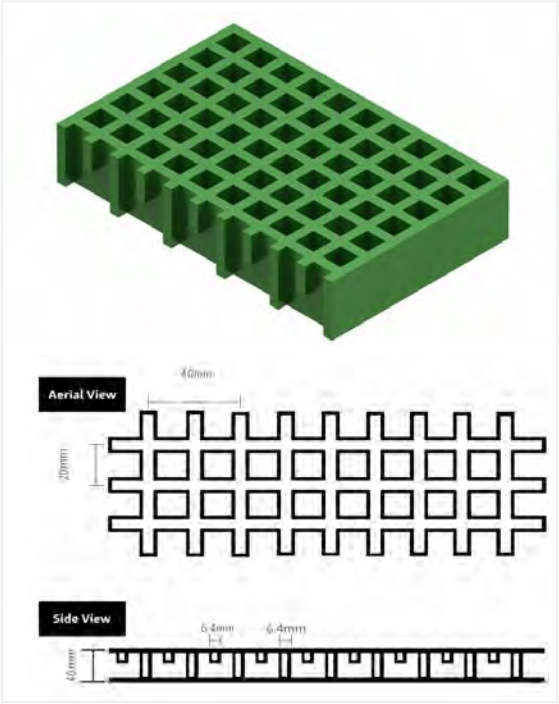


Grating Name	**FG12**
Grid Size	20X20 SM
Panel Depth	30
Load Bar Thickness	6.4
Load Bar Centres	20
No. Bars per foot	16
Open Area	42%
Approx. Weight	18.03 kg's/sq.m
Panel Sizes (mm)	3007 x 1007

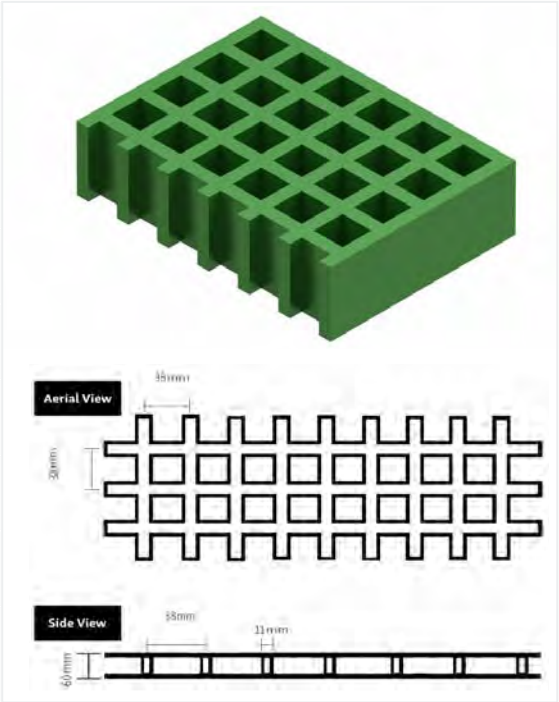


SPECIAL ORDER GRATING TYPES AVAILABLE

Grating Name	**FG13**
Grid Size	20X20 SM
Panel Depth	40
Load Bar Thickness	6.4
Load Bar Centres	20
No. Bars per foot	16
Open Area	42%
Approx. Weight	23.7 kg's/sq.m
Panel Sizes (mm)	4007 x 1007, 3007 x 1007

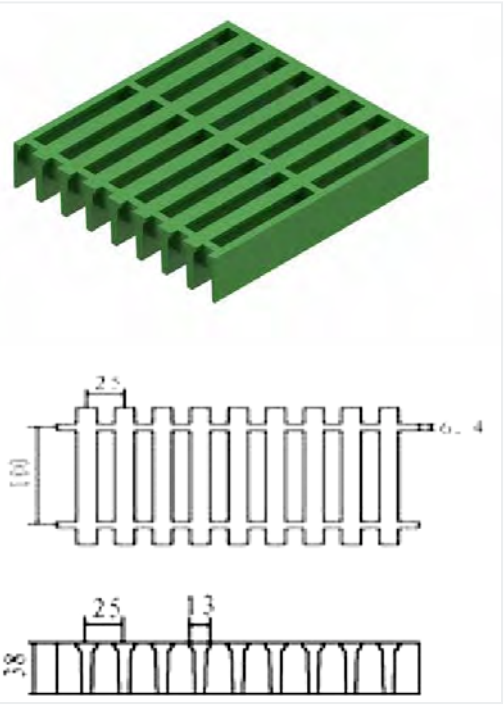


Grating Name	**FG14**
Grid Size	38X38 SM
Panel Depth	60
Load Bar Thickness	11
Load Bar Centres	38
No. Bars per foot	8
Open Area	57%
Approx. Weight	50.43 kg's/sq.m
Panel Sizes (mm)	4000 x 1220, 3660 x 1220, 2440 x 1220, 3050 x 915

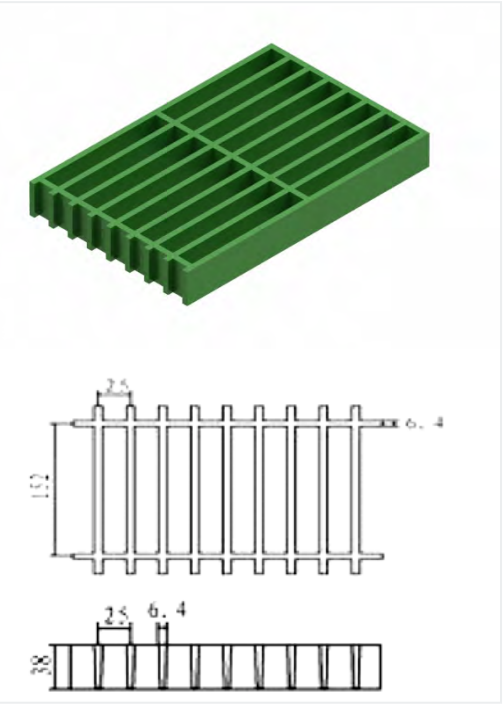


SPECIAL ORDER GRATING TYPES AVAILABLE

Grating Name	**FG15**
Grid Size	25X100 RM
Panel Depth	38
Load Bar Thickness	6.4
Load Bar Centres	25
No. Bars per foot	12
Open Area	46%
Approx. Weight	21.01 kg's/sq.m
Panel Sizes (mm)	3660 x 1220

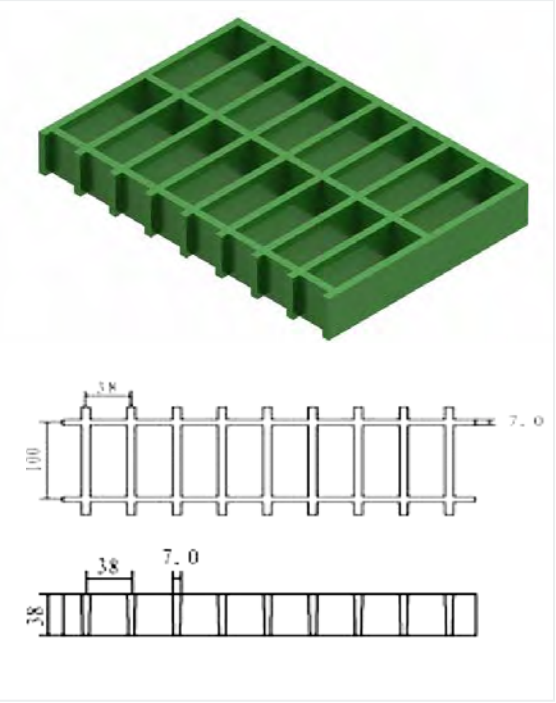


Grating Name	**FG16**
Grid Size	25X152 RM
Panel Depth	38
Load Bar Thickness	6.4
Load Bar Centres	25
No. Bars per foot	12
Open Area	56%
Approx. Weight	23.02 kg's/sq.m
Panel Sizes (mm)	3050 x 565

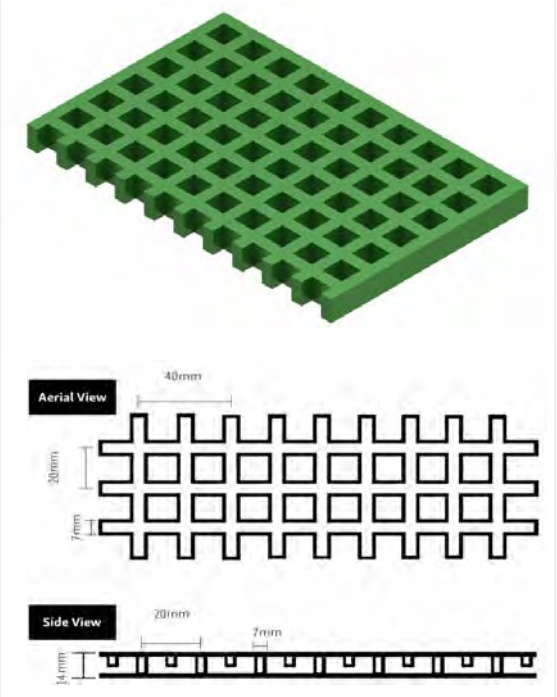


SPECIAL ORDER GRATING TYPES AVAILABLE

Grating Name	**FG17**
Grid Size	38X100 RM
Panel Depth	38
Load Bar Thickness	7
Load Bar Centres	38
No. Bars per foot	8
Open Area	62%
Approx. Weight	15.2 kg's/sq.m
Panel Sizes (mm)	3660 x 1220

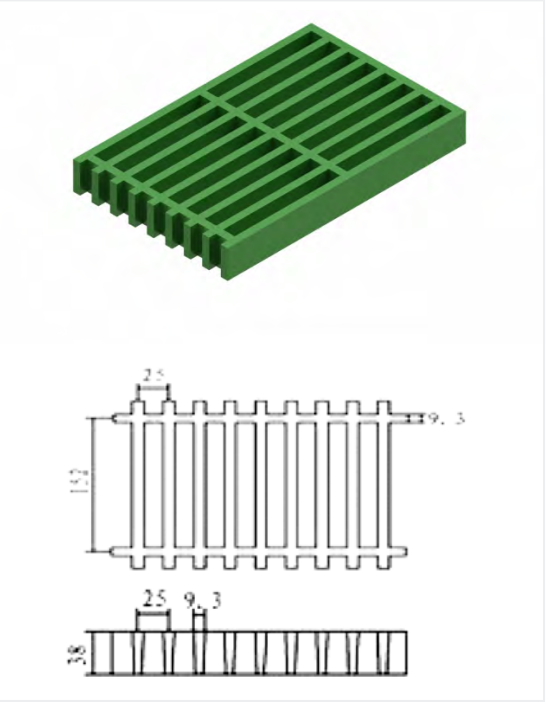


Grating Name	**FG18**
Grid Size	20X20 SM
Panel Depth	14
Load Bar Thickness	7
Load Bar Centres	20
No. Bars per foot	16
Open Area	42%
Approx. Weight	10 kg's/sq.m
Panel Sizes (mm)	4007 x 1007, 4047 x 1247

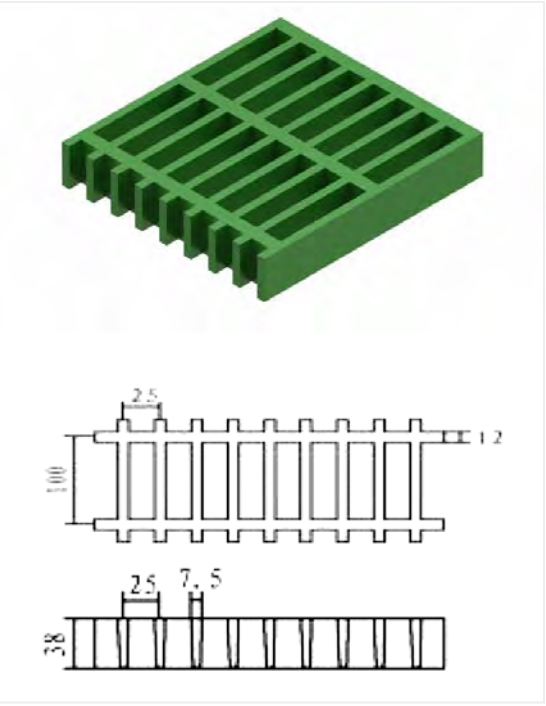


SPECIAL ORDER GRATING TYPES AVAILABLE

Grating Name	**FG19**
Grid Size	25X152 RM
Panel Depth	38
Load Bar Thickness	9.3
Load Bar Centres	25
No. Bars per foot	12
Open Area	56%
Approx. Weight	22.43 kg's/sq.m
Panel Sizes (mm)	3660 x 1220, 2440 x 1220, 3050 x 915

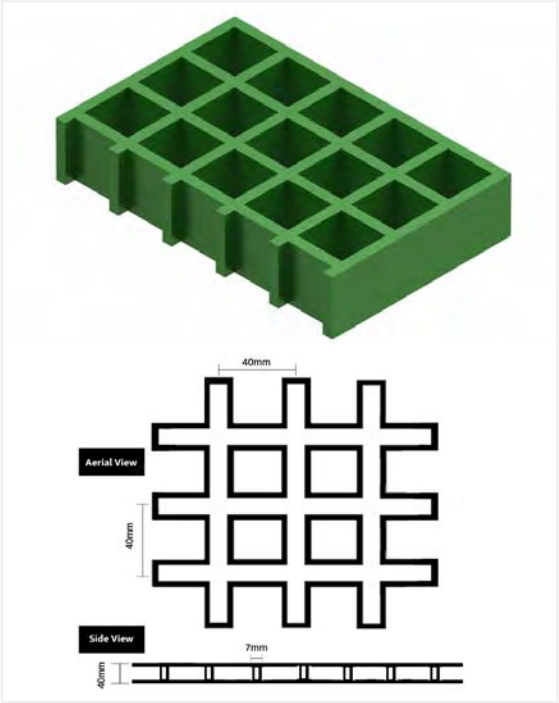


Grating Name	**FG20**
Grid Size	25X100 RM
Panel Depth	38
Load Bar Thickness	7.5
Load Bar Centres	25
No. Bars per foot	12
Open Area	68%
Approx. Weight	22.43 kg's/sq.m
Panel Sizes (mm)	3660 X 1220, 2440 X 1220, 3050 X 915

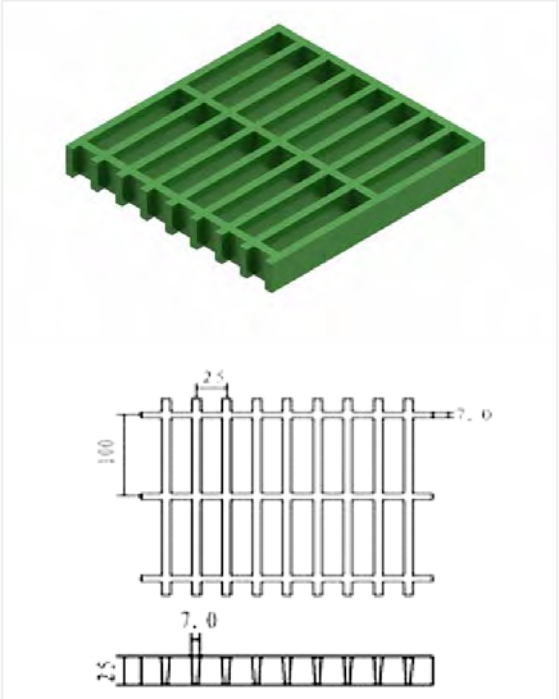


SPECIAL ORDER GRATING TYPES AVAILABLE

Grating Name	**FG21**
Grid Size	40X40 SM
Panel Depth	40
Load Bar Thickness	7
Load Bar Centres	40
Open Area	67%
Approx. Weight	19.2 kg's/sq.m
Panel Sizes (mm)	3007 x 1007

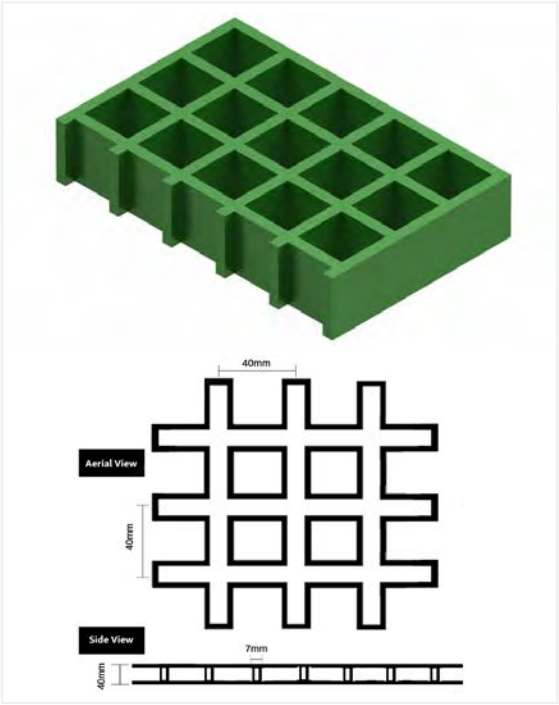


Grating Name	**FG22**
Grid Size	25X100 RM
Panel Depth	25
Load Bar Thickness	7
Load Bar Centres	40
Open Area	67%
Approx. Weight	19.2 kg's/sq.m
Panel Sizes (mm)	3007 x 1007

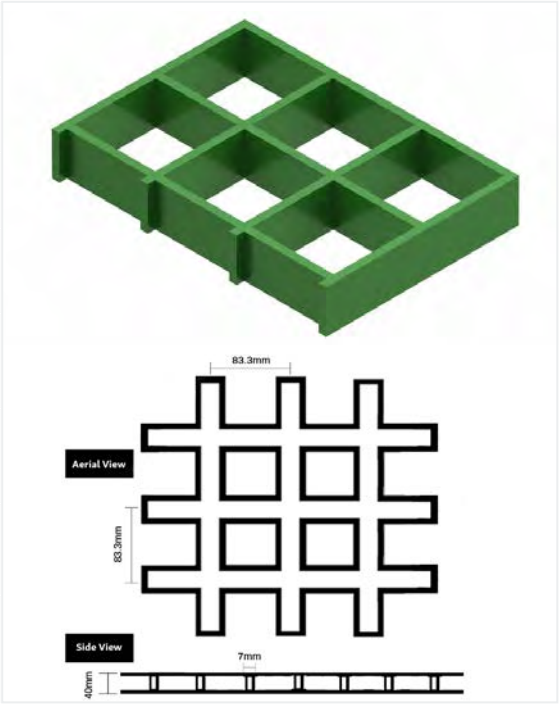


SPECIAL ORDER GRATING TYPES AVAILABLE

Grating Name	**FG23**
Grid Size	40X40 SM
Panel Depth	25
Load Bar Thickness	7
Load Bar Centres	40
Open Area	67%
Approx. Weight	12 kg's/sq.m
Panel Sizes (mm)	3007 x 1007

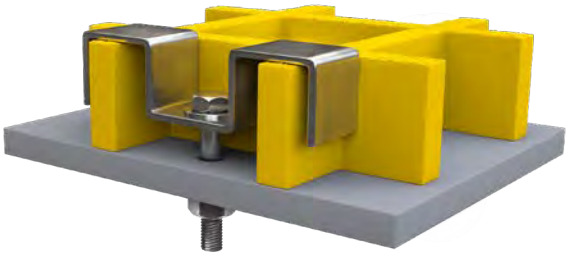


Grating Name	**FG24**
Grid Size	83.3X83.3 SM
Panel Depth	40
Load Bar Thickness	7
Load Bar Centres	83.3
Open Area	83%
Approx. Weight	9.5 kg's/sq.m
Panel Sizes (mm)	3007 x 1007



GRATING CLIPS

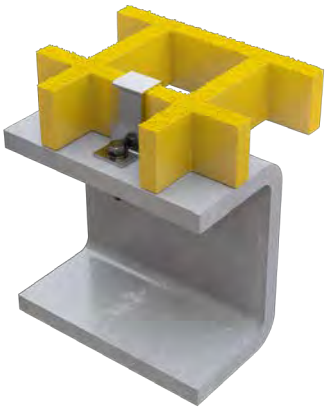
M-CLIP



Grating	Open Mesh	Pultruded
Depth	25mm / 38mm / 50mm	25mm / 38mm

- Direct fixing to support underneath
- M8 Bolt (length to suit grating depth
- Bolt recessed to prevent trip hazard
- Compatible with numerous bolt and screw types
- Stainless steel 316

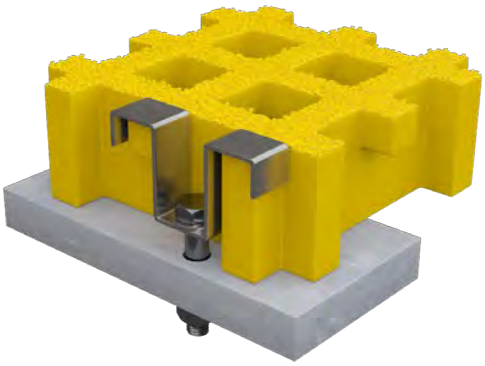
L-CLIP



Grating	Open Mesh
Depth	25mm / 38mm

- Direct fixing to support underneath
- M6 Bolt (length to suit grating depth
- Bolt sunken to prevent trip hazard
- Compatible with numerous bolt and screw types
- Stainless steel 316

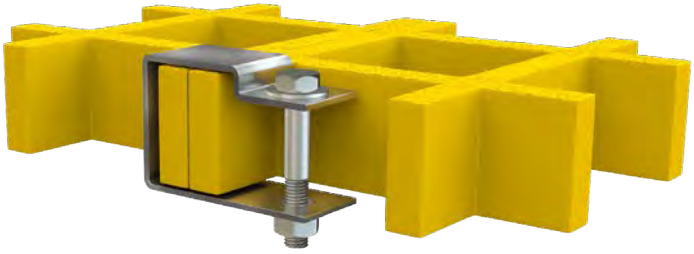
TWINGRID (MINI MESH) M-CLIP



Grating	TwinGrid / Mini Mesh
Depth	14mm / 30mm / 38mm

- Direct fixing to support underneath
- M6 Bolt (length to suit grating depth
- Bolt sunken to prevent trip hazard
- Compatible with numerous bolt and screw types
- Stainless steel 316

C-CLIP

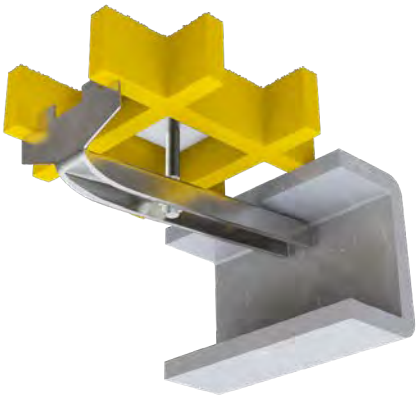


Grating	Open Mesh
Depth	25mm / 38mm / 50mm

- For joining bound edges of 2 panels together
- M6 Bolt with socket head
- Nut fixed in place for easy installation
- Stainless steel 316

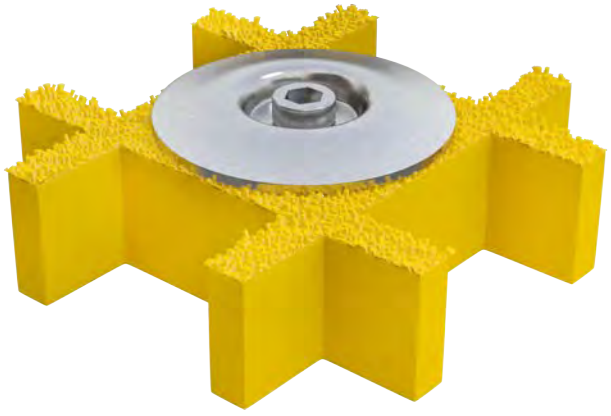
J CLAMP

Grating	Open Mesh	TwinGrid / Mini Mesh	Solid Top	Pultruded
Depth	25mm / 38mm / 50mm	14mm / 30mm / 38mm	28mm / 41mm / 54mm	25mm / 38mm / 50mm



- For clamping to the underside of supports
- Used where direct fixing through supports are not permitted
- Can be used with most grating top clips
- Does not require tightening from underneath
- M8 & M6 bolt compatible (hex nuts required)
- Stainless steel 316

GRATING DISC

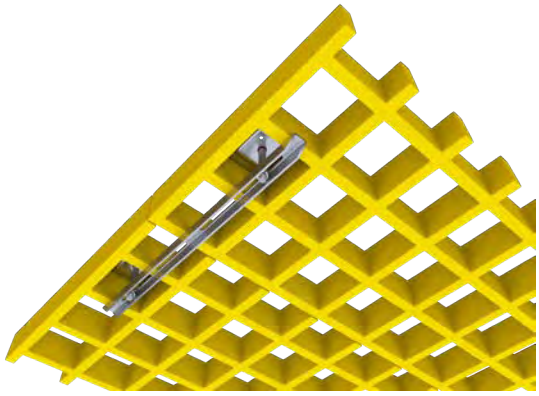


Grating	Open Mesh	Pultruded
Depth	25mm / 38mm	25mm / 38mm / 50mm

- Direct fixing to support underneath
- M6 Bolt (length to suit grating depth
- Bolt sunken to prevent trip hazard
- Compatible with numerous bolt and screw types
- Stainless steel 316

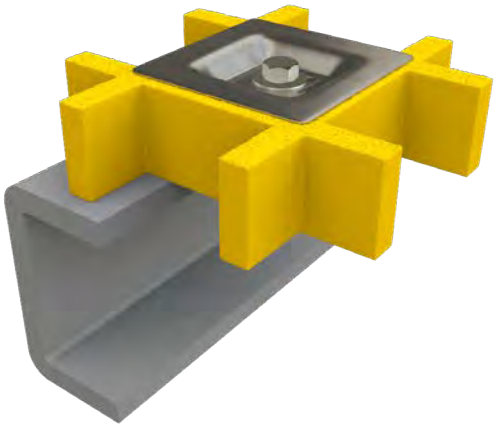
CHANNEL CLAMP

Grating	Open Mesh	TwinGrid / Mini Mesh	Solid Top	Pultruded
Depth	25mm / 38mm / 50mm	14mm / 30mm / 38mm	28mm / 41mm / 54mm	25mm / 38mm / 50mm



- For joining panels together without 2 bound edges
- Can be used with most grating top clips
- 2 of each clip required
- M8 Bolt (length to suit depth of grating)
- Does not require tightening from underneath
- Stainless steel 316

SQUARE RECESSED CLIP



Grating	Open Mesh
Depth	25mm / 38mm / 50mm

- Direct fixing to support underneath
- M8 Bolt (length to suit grating depth
- Bolt recessed to prevent trip hazard
- Compatible with numerous bolt and screw types
- Stainless steel 316

DOME FIXING (WLP)

Grating	TwinGrid / Mini Mesh	Solid Top
Depth	14mm / 30mm / 38mm	28mm / 41mm / 54mm

- Direct fixing to support underneath
- M6 Bolt (length to suit grating depth
- Bolt recessed to prevent trip hazard
- Compatible with numerous bolt and screw types
- Stainless steel 316 or Zinc

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