Yohan Enterprises

For Effective Results

Yohan Enterprises Pty Ltd

Tel: +61 421 916 379

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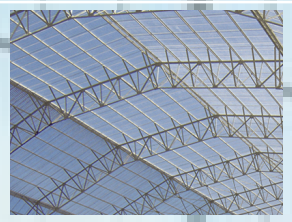
Web: www.yohanenterprises.com

* Roof, Wall, Cool Room, Skylight Panels
* Molded gratings
* Pultruded gratings
* Pultruded profiles
* Handrail systems
* Hand lay-up products

GENERAL FRP PRODUCTS CATALOGUE

YOHAN ENTERPRISES PTY LTD., AUSTRALIA is the exclusive supplier & distributor of the Polser brand of FRP Panels in the Asia-Pacific & Oceania regions

Our FRP sheets and panels offer ideal solutions for the construction industry, Cooling Tower Industry, Agriculture and Livestock Industry, Hygiene Industry, Food Industry, Automotive Industry, Highways / Advertising Industry



Construction Industry
Polser's FRP sheets and panels offer ideal solutions for the construction industry.

Cooling Tower Industry
Polser's FRP panels and pultrusion profiles offer ideal solutions for the construction industry.

Agriculture and Livestock Industry
Polser's FRP sheets and panels offer ideal solutions for the agriculture and livestock industry.

Hygiene Industry
Polser's FRP sheets and panels offer ideal solutions for the hygiene industry.

Food Industry
Polser's FRP sheets and panels offer ideal solutions for the food industry.

Automotive Industry
Polser's FRP cladding panels offer ideal solutions for the automotive industry.

Highways / Advertising Industry
Polser's FRP panels offer ideal solutions for the highways/advertising industry.

For more details on FRP roof, wall cladding panels & sheets please contact us

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WA 6112 | AUSTRALIA

Resin System

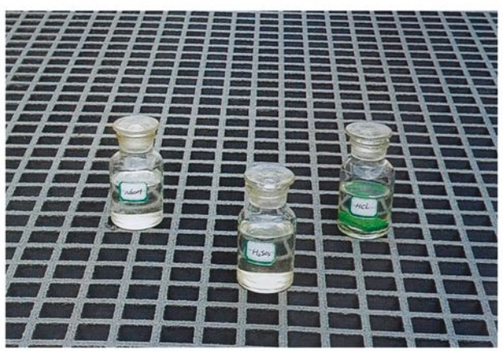
Resin base

Resin type	Resin base	Description	Corrosion resistance	Flame spread Rating ASTM E84	Colors available
VEFR-25	Vinyl ester	Supirior corrosion resistance and retardant	Excellent	Class 1, 25 or less	Dark gray, orange
VEFR-10	Vinyl ester	Supirior corrosion resistance and enhanced retardant	Excellent	Class 1, 10 or less	Dark gray
IFR-25	Isophthalic polyester	Industrial grade corrosion resistance and fire retardant	Very good	Class 1, 25 or less	Dark gray, Green
IFR-10	Isophthalic polyester	Industrial grade corrosion resistance and extra fire retardant	Very good	Class 1, 10 or less	custom
IFGR-30	Isophthalic polyester	Food grade corrosion resistance and fire retardant	Very good	Class 1, 25 or less	Light gray, light green
OFR-25	Ortho	Moderate corrosion resistance and fire retardant	Moderate	Class 1, 25 or less	Green, yellow light gray, dark gray
MP-5	Phenolic resin	Low smoke and superior fire resistance	Very good	Class 1, 5 or less	Reddish-brown, phenolic painting of the grating can be performed to obtain a gray or red finish
O-CR	Ortho	Moderate corrosion resistance	Moderate	No	Green, yellow light gray, dark gray

Fiberglass roving yarn

The fiberglass roving yarn in our company is bought from JUSHI GROUP with high quality. There are two kinds of fiberglass roving yarn in our company, which are C-Glass Assembled Rovings and E-Glass Direct Rovings.

E-Glass Direct Rovings for LFT are designed for reinforcing PP and PA resins.



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Molded gratings

Molded gratings is manufactured in an open, heated mold system. Continuous E-glass roving ' s are placed in the mold in alternating layers and completely wetted out with resin. This continuous process produces an integral, one piece construction which provides excellent corrosion resistance as well as bi-directional strength. There are a number of different molds available resulting in a extensive range of panel sizes, thickness and mesh patterns.

Industries

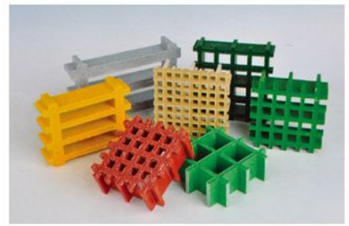
●Chemical plant and metal finishing;
●Construction engineering, traffic and transportation
●Petrochemical engineering, ocean survey, water engineering
●Food and beverage plants
●Textile printing and dyeing and electronic industry

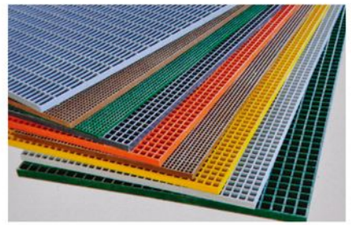
Functions:

●Anti-slip floor, stair tread, foot bridge
●Operation platform, trench cover
●Security and safety fence, handrail
●Off-shore oil rig, shipyard, shipping deck, ceiling
●Ramp ladder, scaffold, railway
●Decorative grid, man-made fountain pool grid
●Non-conductive and non-magnetic

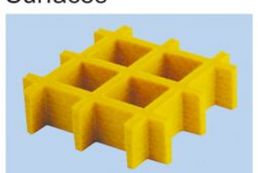
Advantages

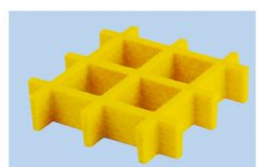
●Anti-fire
●Anti-conrrosion and anti-aging
●Anti-slippery
●Light but high loaded strength
●Long service life and maintenance free
●Non-conduction or magnetic
●Easy installation and rich colors
●Various sizes and colors available

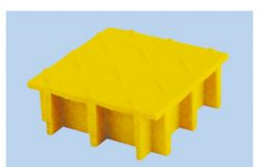


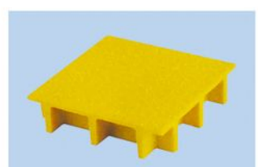


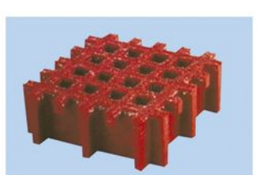
Surfaces

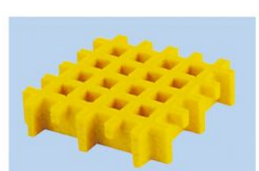

Concave Surface


Smooth Surface


Diamond Top Cover


Gritted top Cover


Gritted Surface


Mini mesh Surface


Micro mesh surface


Heavy duty

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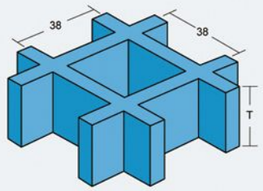
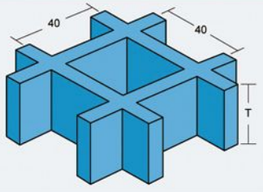
molded grating in details

(Thickness-T)

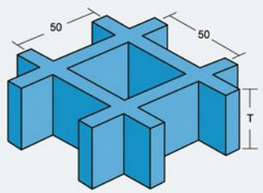
38×38

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	13	6.0/5.0	38×38	1220×3660,1220×4000,1220×2440, 921×3055,1264×4010	6.0	78
	14	6.0/5.0	38×38	1220×3660,1220×4000,1220×2440, 921×3055,1264×4010	6.5	78
	15	6.0/5.0	38×38	1220×3660,1220×4000,1220×2440, 921×3055,1264×4010	7.0	78
	20	6.0/5.0	38×38	1220×3660,1220×4000, 1524×4010,997×3012	9.8	65
	25	6.5/5.0	38×38	1220×3660,1226×4010,1530×4010, 921×3055,1524×4000,997×3012	12.3	68
	30	6.5/5.0	38×38	1220×3660,1220×4010 921×3055,1524×4010	14.6	68
	38	7.0/5.0	38×38	1220×3660,1220×4010, 2100×4240,998×4010,1220×2440, 921×3055,1530×4010,1530×3050, 1000×4000,1226×3665	19.5	68
	50	9.5/7.5 heavy duty	38×38	1220×4010,1220×3666,1230×4010, 1220×2440, 921×3055	42	56
	60	10.5/8.5 heavy duty	38×38	1230×4010	50.4	54
	70	11.0/9.0 heavy duty	38×38	1230×4010	58.8	49

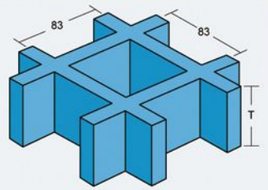
40×40

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	25	7.0/5.0	40×40	1007×3007,1007×4007, 1247×40471527×4047	12.3	67
	30	7.0/5.0	40×40	1527×4047,1007×3007,1247×4047	14.6	67
	38	7.0/5.0	40×40	1527×4047,1247×4047,1007×3007, 1007×4047	19.2	67
	40	7.0/5.0	40×40	1527×4047,1007×3007,1007×4047, 1247×4047	19.5	67

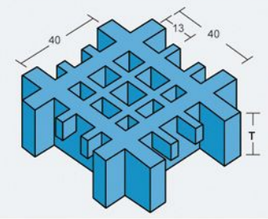
50×50

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	15	6.0/5.0	50×50	1228×4020,1220×3660,1220×2440	5.9	82
	40	6.8/5.0	50×50	1787×4530,1225×4530	17.5	80
	25	7.0/6.0	50×50	1220×3660,1226×4020 1220×2440,915×3050	11.5	78
	50	8.0/6.0	50×50	1524×4000,1220×3660,1220×2440, 1220×4000,915×3050,1532×4020	23.7	78

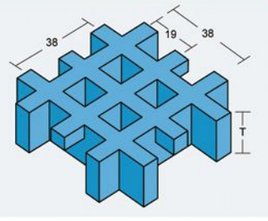
83×83

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	38	7.0/5.0	83×83	1007×4007,1007×3007,1007×4255	10.0	84
	40	7.0/5.0	83×83	1007×4007,1007×3007,1007×4255	11.0	84

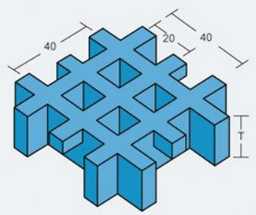
13×13/40×40 micro mesh

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	25	6.5/4.5/5.0	13×13 40×40	1247×4047,1007×3007, 1007×4047,1530×4047	17.8	30
	30	6.5/4.5/5.0	13×13 40×40	1527×4047,1247×4047, 1007×3007,1007×4047	19.1	30
	38	6.5/4.5/5.0	13×13 40×40	1527×4047,1247×4047, 1007×3007,1007×4047	23.8	30

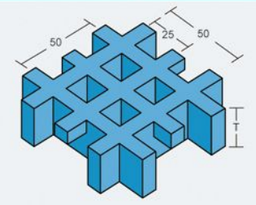
19×19/38×38 mini mesh

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	25	6.5/5.0	19×19 38×38	1220×3660,1220×2440,921×3055 1226×4007,1268×4007	16.8	30
	30	6.5/5.0	19×19 38×38	1220×3660,1220×2440,915×3050, 1220×4000,1530×4047	18.8	30
	38	6.5/5.0	19×19 38×38	1220×3660,1220×2440,915×3050, 1220×4000,1226×4010	23.5	30

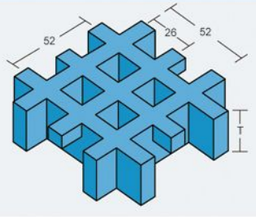
20×20/40×40 mini mesh

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	14	6.5/5.0	20×20 40×40	1247×4047,1007×3007	10.5	42
	22	6.5/5.0	20×20 40×40	1247×4047,1007×3007, 1527×4047	14.8	42
	25	6.5/5.0	20×20 40×40	1247×4047,1527×4047	16.8	42
	30	7.0/5.0	20×20 40×40	1007×4047,1007×3007,1247×4047, 1527×4047	18.3	42
	38	7.0/5.0	20×20 40×40	1007×4047,1007×3007,1247×4047, 1527×4047	23.2	42
	40	7.0/5.0	20×20 40×40	1007×4047,1007×3007,1247×4047 1527×4047	23.7	42

25×25/50×50 mini mesh

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	50	8.0/6.0	25×25 50×50	1530×4020	28.5	55

26×26/52×52 mini mesh

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	30	7.0/6.0	26×26 52×52	1530×4000,1532×4050	15.3	60
	38	6.0/5.0	26×26 52×52	1517×4015	19.5	60

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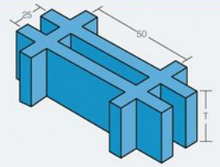
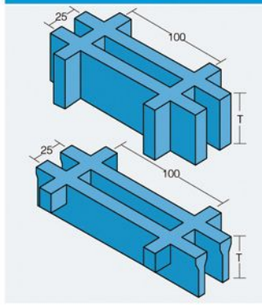
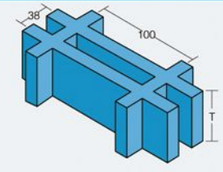
25×50

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	38	11.0/9.0 heavy duty	25×50	1220×1835	30.7	48
	50	12.0/9.0 heavy duty	25×50	1220×1835	41.8	48

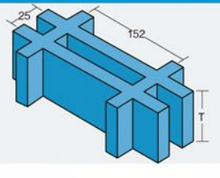
25×100/100×25

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	25	7.0/5.5	100×25	1007×3007,1007×4007,1500×4028	13.0	67
	25	7.0/5.0	25×100	1220×3660,915×3050	13.83	67
	25	9.5/8.0 heavy duty	100×25	1220×3660,1220×2440,915×3050	19.5	52
	30	7.0/5.5	100×25	1007×3007,1007×4007	15.6	67
	38	8.0/6.0 heavy duty	100×25	1220×3660	22.8	62
	38(T-shape)	15.0/5.0	25×100	1220×3660,1225×4170	21	62

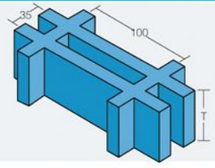
100×38

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	38	8.0/6.0	100×38	1226×3665,1530×4047,921×3050	16.4	65

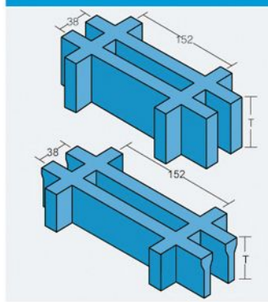
25×152

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	38	8.0/6.5	25×152	1220×3660,1220×2440, 1220×4124,921×3050	22.8	63

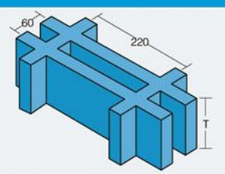
100×35

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	38	7.0/5.0	100×35	1407×4277,2407×2982	15	63

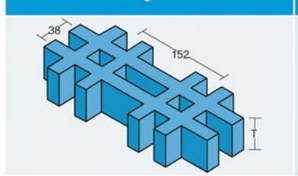
152×38

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	38	8.0/6.0	152×38	1220×3660,1220×2440,915×3050	15.92	67
	38(T-shape)	15.0/8.0	38×152	1500×3660	19	62

60×223

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	40	6.3/5.0	60×223	1788×2238,1788×4250	9.0	67

38×152

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	38stair treads	7.0/5.0	38×152	580×3660,580×4120	17	65

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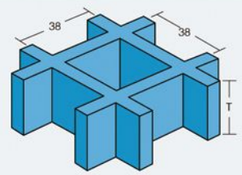
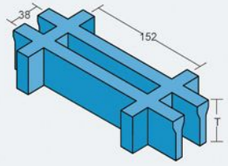
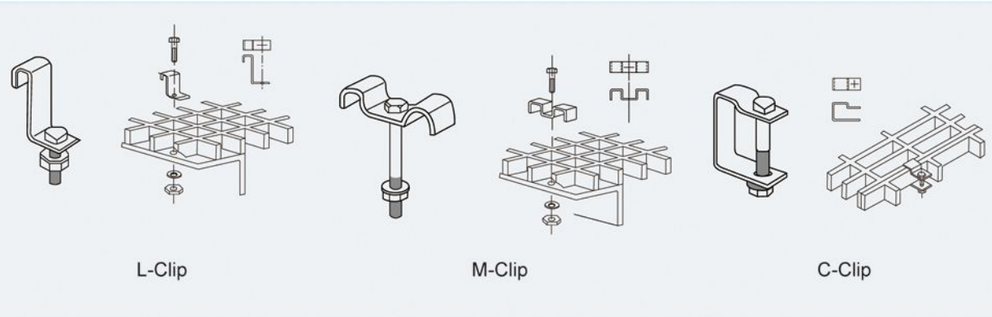
38×38 Phenolic grating

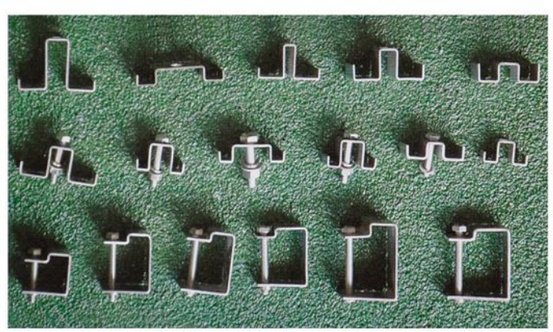
Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	38	7.0/5.0	38×38	1220×3660,1416×3660,1416×4010	19.5	68

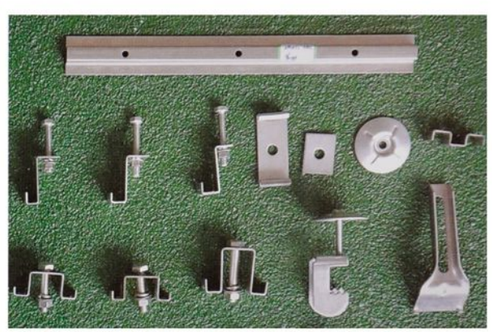
38×152 Phenolic grating

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m²)	Open Rate (%)
	38(T-shape)	15.0/8.0	38×152	1500×3660	19.0	62

Installation Fixing for Molded Gratings







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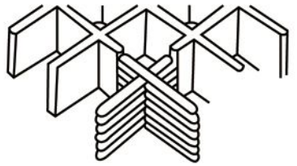
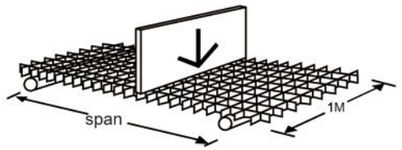
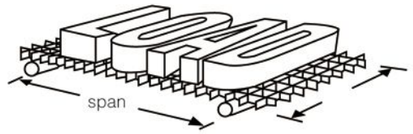
molded grating load deflection tables

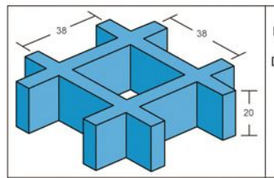




Concentrated line load-deflection in mm



Uniformed load-deflection in mm



Bar thickness (Top /Bottom)
6.0/5.0
Distance between centers of bearing bars
38
Open Area
65%
Weight per square meter
9.8 kg/m²

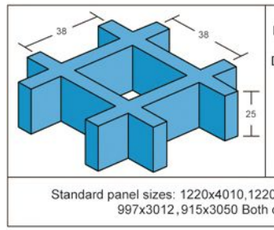
Standard panel sizes:1220x4000,1220x3660,1524x4010, 997x3012 Both directions

38×38×20

Span (mm) \ Deflection	Kg/m					Break Point
	75	150	300	450	750	
300	0.254	0.508	1.016	1.524	2.54	4470
450	0.762	1.524	3.302	4.826	8.128	2980
600	1.778	3.81	7.62	11.176	15.263	2235
750	2.794	5.588	11.43	17.658	21.134	1788
900	5.334	10.668	15.385	21.241	26.583	1490

38×38×20

Span (mm) \ Deflection	Kg/m						Break Point
	350	500	750	1000	1500	2500	
300	<0.254	0.254	0.508	0.508	1.016	1.524	29280
450	1.016	1.524	2.286	3.048	4.572	7.62	12980.8
600	3.084	4.572	7.112	9.398	12.283	14.103	7320
750	5.842	8.89	---	----	----	----	4084.8
900	7.158	---	---	---	---	---	3226.8



Bar thickness (Top /Bottom)
6.4/5.0
Distance between centers of bearing bars
38
Open Area
68%
Weight per square meter
12.3 kg/m²

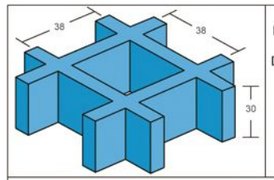
Standard panel sizes: 1220x4010,1220x3660,1524x4010, 997x3012,915x3050 Both directions

38×38×25

Span (mm) \ Deflection	Kg/m						Break Point
	75	150	300	450	600	750	
450	0.559	1.146	2.159	3.073	4.115	4.75	3910
600	0.864	1.702	3.505	5.156	6.706	8.179	2924
900	2.896	5.918	12.116	18.44	19.82	20.769	1948
1200	5.715	8.523	15.328	23.254	25.32	27.825	1461

38×38×25

Span (mm) \ Deflection	Kg/m							Break Point
	240	480	980	1450	2450	3650	4880	
450	0.66	1.092	1.93	2.769	4.47	6.579	---	
600	1.118	2.108	4.14	6.172	10.211	15.265	---	
750	2.667	5.387	10.82	16.28	21.738	29.962	---	
900	5.537	11.176	21.717	23.164	26.547	31.590	---	



Bar thickness (Top /Bottom)
6.5/5.0
Distance between centers of bearing bars
38
Open Area
68%
Weight per square meter
14.6 kg/m²

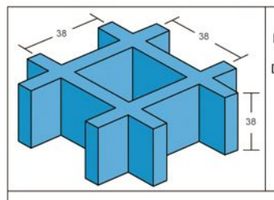
Standard panel sizes: 1220x4010,1220x3660,1524x4000,1524x4026, 915x3050 Both directions

38×38×30

Span (mm) \ Deflection	Kg/m						Break Point
	75	150	300	450	750	1500	
300	<0.254	<0.254	0.254	0.508	0.762	1.524	9923.4
450	0.254	0.508	1.016	1.524	2.54	3.92	4827.6
600	0.508	1.27	2.286	3.556	5.842	7.38	4112.4
750	1.27	2.54	4.826	7.366	12.446	15.983	3173.7
900	1.778	3.81	7.62	11.43	16.254	19.388	2637.3

38×38×30

Span (mm) \ Deflection	Kg/m						Break Point
	350	500	750	1000	1500	2500	
300	<0.254	<0.254	<0.254	<0.254	0.254	0.508	32500.8
450	0.254	0.508	0.762	1.016	1.524	2.286	21661.2
600	1.06	1.524	2.286	2.794	4.318	7.366	12980.8
750	2.54	3.81	5.842	7.62	11.684	13.105	8296
900	4.572	7.112	10.668	14.291	16.381	21.510	5758.4



Bar thickness (Top /Bottom)
7.0/5.0
Distance between centers of bearing bars
38
Open Area
68%
Weight per square meter
19.5 kg/m²

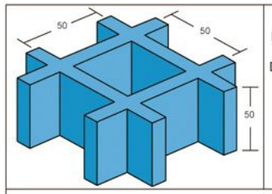
Standard panel sizes:1220x4000,1220x3660,1220x2440,915x3050, 1524x3050,1524x4000,1000x4000 Both directions

38×38×38

Span (mm) \ Deflection	Kg/m						Break Point
	75	150	300	450	600	750	
300	0.279	0.356	0.483	0.61	0.762	0.889	17116
600	0.356	0.66	1.245	1.85	2.464	3.073	8718
900	0.864	1.803	3.683	5.563	7.417	9.296	5817
1200	2.261	4.749	9.677	14.63	19.583	21.192	3755

38×38×38

Span (mm) \ Deflection	Kg/m							Break Point
	240	480	980	1450	2450	3650	4880	
300	0.254	0.305	0.381	0.457	0.635	0.838	---	
600	0.432	0.813	1.549	2.311	3.8354	5.74	---	
900	1.702	3.454	6.959	10.465	17.475	23.256	---	
1200	5.969	12.167	24.511	32.587	38.654	43.211	---	

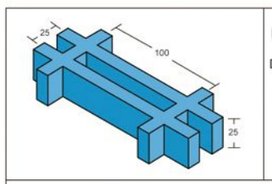


Bar thickness (Top /Bottom)
8.0/6.0
Distance between centers of bearing bars
50
Open Area
78%
Weight per square meter
23.7 kg/m^2

Standard panel sizes:1524x4000,1220x3660 Both directions

50×50×50

Span (mm) \ Deflection	Kg/m						Break Point
	75	150	300	450	600	750	
300	0.279	0.305	0.406	0.483	0.635	1.041	21727
600	0.356	0.508	0.813	1.128	1.753	3.327	11713
900	0.508	1.118	2.235	3.2	5.156	10.058	7780
1200	0.914	1.93	3.937	5.918	9.957	12.101	5834

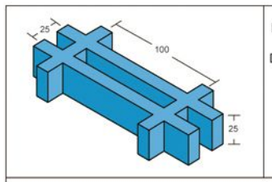


Bar thickness (Top /Bottom)
7.0/5.5
Distance between centers of bearing bars
25
Open Area
67%
Weight per square meter
13.0 kg/m^2

Standard panel sizes:1007x3007, 1007x4007
Width direction

25×100×25

Span (mm) \ Deflection	Kg/m						Break Point
	75	150	300	450	600	750	
300	0.33	0.483	0.737	0.991	1.27	1.52	9442
600	0.864	1.727	3.454	5.182	6.909	8.636	4305
750	1.397	2.718	5.105	7.163	9.55	11.938	3589
900	2.413	4.724	8.814	12.369	16.51	20.625	3216

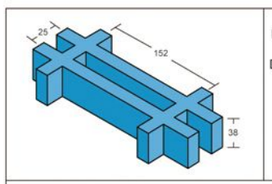


Bar thickness (Top /Bottom)
9.5/8.0
Distance between centers of bearing bars
25
Open Area
52%
Weight per square meter
19.5 kg/m^2

Standard panel sizes: 1220x3660, 1220x2440, 915x3050
Width direction

25×100×25

Span (mm) \ Deflection	Kg/m						Break Point
	75	150	300	450	750	1500	
300	<0.254	0.254	0.762	1.016	1.27	1.524	10057.5
450	0.508	0.762	1.778	2.54	3.302	4.318	7263.75
600	0.762	1.778	3.556	5.08	6.858	---	5773.75
750	1.524	3.048	6.096	9.144	11.938	---	4842.5
900	2.286	4.826	9.652	---	---	---	4172
1050	3.556	7.112	---	---	---	---	3687.75
1200	5.08	10.16	---	---	---	---	3501.50



Bar thickness (Top /Bottom)
8.0/6.0
Distance between centers of bearing bars
38
Open Area
67%
Weight per square meter
15.92 kg/m^2

Standard panel sizes:1220x3660, 1220x2440, 915x3050
Length direction,Width direction

38×152×38

Span (mm) \ Deflection	Kg/m						Break Point
	75	150	300	450	600	750	
300	<0.254	<0.254	0.254	0.508	0.508	0.762	12627.75
450	<0.254	0.254	0.762	1.016	1.524	1.778	9945.75
600	0.254	0.762	1.524	2.286	3.046	3.81	8232.85
750	0.762	1.27	2.794	4.064	5.334	6.604	7040.25
900	1.016	2.286	4.318	6.64	8.636	10.92	6146.25
1050	1.524	3.302	6.604	9.906	---	---	5438.5
1200	2.286	4.826	9.652	---	---	---	5140.5

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50×50×50

Span (mm) \ Deflection	Kg/m							
	240	480	980	1450	2450	3650	4880	
300	0.254	0.279	0.33	0.381	0.483	0.737	---	
600	0.381	0.584	0.965	1.372	2.134	4.115	---	
900	1.194	2.108	3.937	5.766	9.449	18.593	---	
1200	2.413	4.928	9.957	14.961	16.810	21.575	---	

25×100×25

Span (mm) \ Deflection	Kg/m							
	240	480	980	1450	2450	3650	4880	
300	0.279	0.381	0.533	0.711	1.041	---	1.905	
600	0.914	1.854	3.683	5.537	9.22	---	18.466	
900	3.632	6.6	12.573	18.542	---	---	---	
1050	8.007	14.884	---	---	---	---	---	

25×100×25

Span (mm) \ Deflection	Kg/m						Break Point
	250	350	300	750	1000	1500	
300	<0.254	<0.254	<0.254	0.254	0.508	0.508	32940
450	0.508	0.508	0.762	1.27	1.524	2.286	18910
600	1.016	1.27	2.032	3.302	4.318	6.35	15860
750	2.286	3.048	4.572	7.112	9.398	---	12688
900	4.572	5.842	8.89	---	---	---	9110.96
1050	7.874	10.16	---	---	---	---	6900.32
1200	12.7	---	---	---	---	---	5734

38×152×38

Span (mm) \ Deflection	Kg/m						Break Point
	350	450	750	1000	1500	2500	
300	<0.254	<0.254	<0.254	0.254	0.254	0.508	41358
450	<0.254	0.254	0.508	0.762	1.016	1.778	26962
600	0.508	1.016	1.27	1.778	2.794	4.572	21716
750	1.027	2.032	3.048	4.064	6.35	---	18446.4
900	2.54	4.064	6.096	8.128	12.192	---	13420
1050	4.572	7.112	10.668	---	---	---	10179.68
1200	7.874	11.938	---	---	---	---	8418

Chemical resistance chart of molded grating

Chemical	Max.Oper.Temp			
	%Conc.	Type'vinyl'	Type 'Iso'	Type 'Ortho'
Hydrochloric acid	30	82	65	N/R
Nitric acid	35	38	N/R	N/R
Sulphuric acid	25	82	65	N/R
Hydrofluoric acid	10	24	N/R	N/R
Lactic acid	100	82	65	60
Hypochlorous acid	SAT	60	N/R	N/R
Citric acid	ALL	49	N/R	N/R
Potassium hydroxide	10	49	N/R	N/R
Sodium hydroxide	10	82	N/R	N/R
Calcuim hydroxide	25	82	65	N/R
Calcium hypochloride	25	82	65	N/R
Ferric chloride	100	82	65	60
Aluminium chloride	ALL	82	65	60
Mercuric chloride	100	82	65	60
Silver nitrate	100	82	65	60
Sodium salt	ALL	24	N/R	N/R
Zinc chloride	ALL	24	24	N/R
Acetone	100	124	N/R	N/R
Chloroform	100	N/R	N/R	N/R
Fuel	All	38	38	38
Nantokite	ALL	82	65	60
Phenols	10	24	N/R	N/R
Ozone	ALL	38	38	38
Bleaching liquid	ALL	82	N/R	N/R
Ammonium hydroxide	30	24	N/R	N/R
Ammonium salt	ALL	24	N/R	N/R
Black sewage	ALL	82	N/R	N/R
Cupric oxide	ALL	52	52	N/R
Glycol	100	82	65	60
Sulfur dioxide	SAT	82	65	60
Sodium phosphate	50	82	N/R	N/R
Water	100	82	65	60
Alum	ALL	82	65	60
Chlorine water	SAT	49	N/R	N/R

ALL-concentrations; SAT-saturated solution; N/R- not recommended; …-no information available

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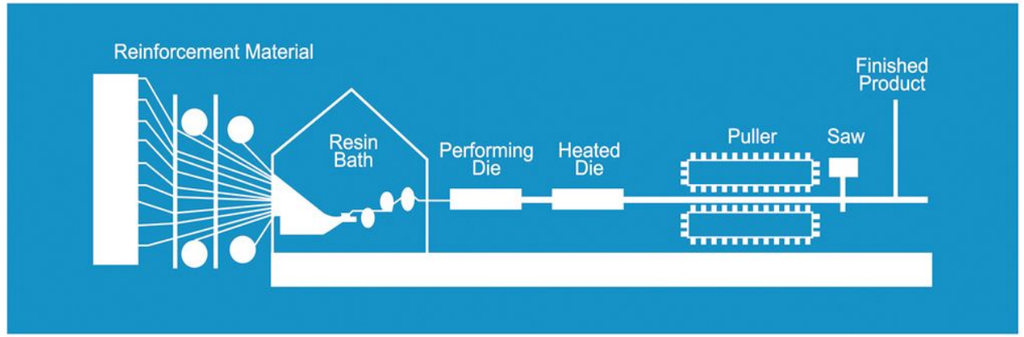
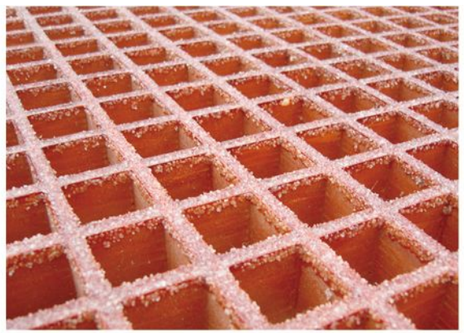
Pultruded gratings

pultruded gratings

pultruded gratings are panels with open space, assembled, through specially designed process, with" I" ;" T" and" HL" shaped bearing bars and interlocked with solid rods or tubes, which are all pultruded



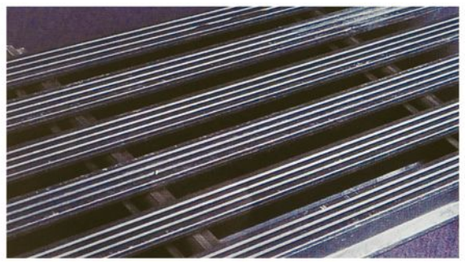
pultruded grating is light-weight, strong, anti-fire chemical and UV resistant, and reduces costly maintenance. Aulland pultruded grating is well suited for highly corrosive environments and offers extended life, eliminating periodic maintenance and extra cost, which is a good alternative compared to steel gratings.



Advantages of Phenolic grating:

- High anti-fire
- High anti-corrosion and anti-aging
- High anti-slippery
- Light but high loaded strength
- Long service life and maintenance free
- Non-conduction or magnetic
- Easy installation and rich colors
- Various sizes and colors available

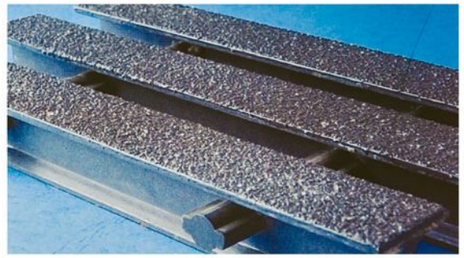
Surfaces



Corrugated Surface

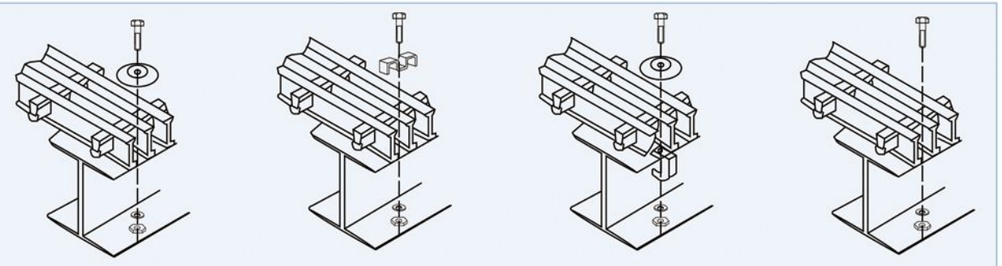
Smooth Surface

Gritted top cover



Gritted Surface

Installation Fixing for pultruded gratings



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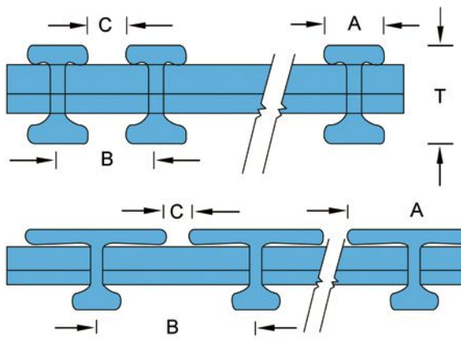
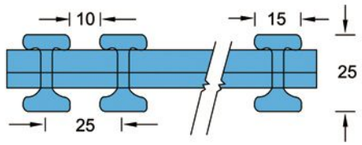


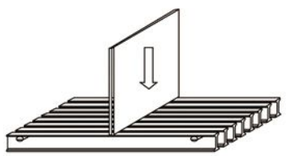
Type	Height Inch (mm)	Top edge width (mm)	Space between (mm)	Clearance width (mm)	Open area (%)	Estimated weight Kg/m^2
I-4010	25	15	25	10	40	17.8
I-5010	25	15	30	15	50	15.1
I-6010A	25	15	38	23	60	12.2
I-6010B	25	8	19.8	11.8	60	13.7
I-4015	38	15	25	10	40	22
I-5015	38	15	30	15	50	19.1
I-6015	38	15	38	23	60	16.2
I-4012	30	15	25	10	40	19.1
I-5012	30	15	30	15	50	16.1
I-6012	30	15	38	23	60	13.1
I-40125	32	15	25	10	40	19.8
I-50125	32	15	30	15	50	17.4
I-60125	32	15	38	23	60	13.5
I-4020	50	15	25	10	40	28.5
I-5020	50	15	30	15	50	24.2
I-6020	50	15	38	23	60	20.1
T-1210	25	38	43.4	5.4	12	17.9
T-1810	25	38	50.8	9.5	18	13.8
T-2510	25	38	50.8	12.7	25	13.6
T-3310	25	41.3	19.7	61	33	11.2
T-3810	25	38	61	23	38	11.8
T-1215	38	38	43.3	5.2	12	19.6
T-2515	38	38	50.8	12.7	25	16.7
T-3815	38	38	61	23	38	14.2
T-3320	50	25.4	38.1	12.7	33	21.7
T-5020	50	25.4	50.8	25.4	50	17.2
HL-4020	50	15	10	10	40	62.8
HL-5020	50	15	15	15	50	52.2
HL-6020	50	15	23	23	60	43.5

pultruded grating load deflection tables



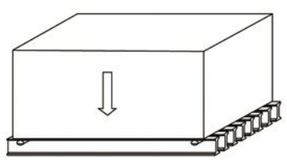
Thickness: 25mm
Open area: 40%
With 3 core interlocking rods: 17.8kg/m^2

I-4010



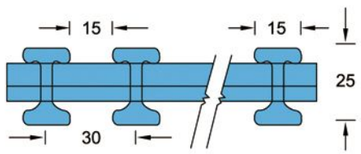
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	300	450	750	1500	3000	5950	
450	--	--	1.02	2.03	4.06	7.62	16593
600	--	--	2.54	4.57	8.89	17.53	12959
900	2.8	4.06	6.6	13.46	26.9	53.85	8639
1200	5.84	8.89	14.73	29.46	59.2	118.11	6420



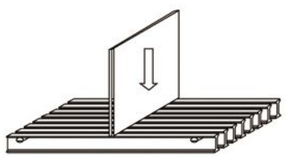
Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	1000	1900	3900	7000	9500	19500	
450	0.25	0.76	1.27	2.29	3.05	6.1	72325
600	1.01	1.27	3.56	6.86	8.89	--	42515
900	4.57	8.38	16.26	--	--	--	18863
1200	14.48	--	--	--	--	--	10507



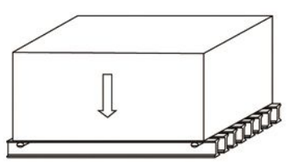
Thickness: 25mm
Open area: 50%
With 3 core interlocking rods: 15.1kg/m^2

I-5010



Concentrated line load-deflection in mm

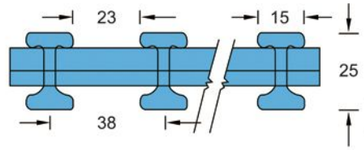
Span (mm)	Kg/m						Max load
	300	450	750	1500	3000	5950	
450	--	--	1.02	2.03	4.06	7.62	13808
600	--	--	2.54	4.83	9.4	18.8	10799
900	2.54	4.06	6.86	13.46	27.2	54.1	7194
1200	7.37	10.9	18.92	36.58	73.2	146.05	5362



Uniformed load-deflection in mm

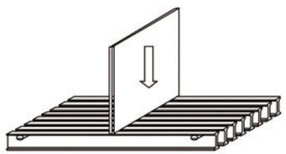
Span (mm)	Kg/m						Max load
	1000	1900	3900	7000	9500	19500	
450	0.51	0.76	1.27	2.54	3.302	6.6	60499
600	1.27	2.29	4.06	5.08	7.26	15.24	35429
900	4.83	8.89	17.27	--	--	--	15638
1200	16.51	--	--	--	--	--	8796

Yohan Enterprises
For Effective Results



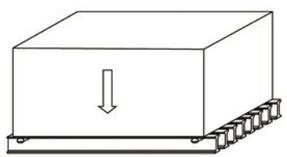
Thickness: 25mm
Open area: 60%
With 3 core interlocking rods: 12.2kg/m^2

I-6010



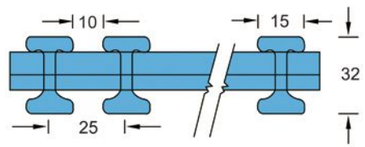
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	300	450	750	1500	3000	5950	
450	--	--	1.52	2.54	4.83	9.65	11067
600	--	--	3.05	5.59	11.2	22.1	8639
900	3.3	4.83	7.87	15.75	31.5	62.99	5750
1200	7.87	11.7	19.3	38.61	77.5	154.69	4275



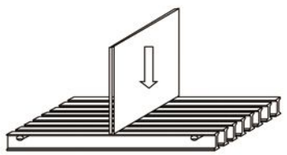
Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	1000	1900	3900	7000	9500	19500	
450	0.51	0.76	1.52	2.79	3.81	7.37	48380
600	1.27	2.29	4.57	8.38	11.18	--	28344
900	5.84	10.92	--	--	--	--	12559
1200	17.78	--	--	--	--	--	6988



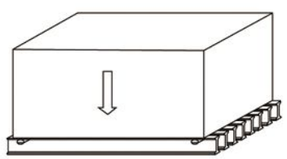
Thickness: 32mm
Open area: 40%
With 3 core interlocking rods: 19.83kg/m^2

I-40125



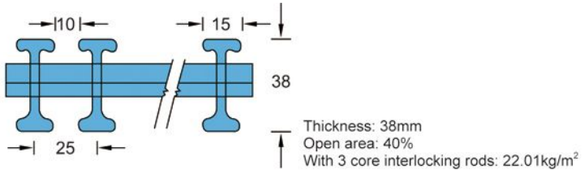
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	300	450	750	1500	3000	5950	
450	--	--	1.02	2.03	4.06	7.62	13808
600	--	--	2.54	4.83	9.4	18.8	10799
900	2.54	4.06	6.86	13.46	27.2	54.1	7194
1200	7.37	10.9	18.92	36.58	73.2	146.05	5362

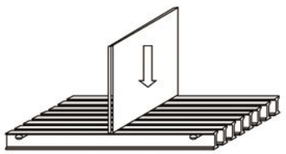


Uniformed load-deflection in mm

Span (mm)	Kg/m								
	300	500	1000	1500	2000	2500	5000	10000	15000
600	0.16	0.27	0.55	0.82	1.09	1.37	2.73	5.47	8.20
800	0.49	0.82	1.63	2.45	3.27	4.08	8.17	--	--
1000	1.16	1.93	3.86	5.79	7.72	9.64	--	--	--
1200	2.32	3.87	7.74	11.62	15.49	--	--	--	--

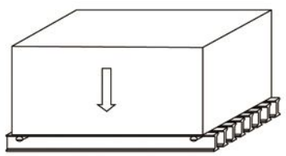


I-4015



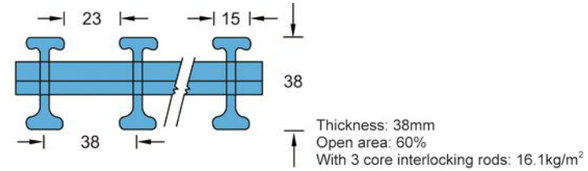
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	300	450	750	1500	3000	5950	
450	---	0.25	0.51	0.76	1.52	2.79	26215
600	0.51	0.51	1.02	1.78	3.05	5.84	19661
900	1.02	1.27	2.29	4.32	8.38	16.76	12705
1200	2.03	2.79	4.57	9.4	19.1	37.85	9086

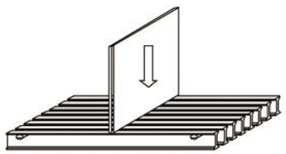


Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	1000	1900	3900	7000	9500	19500	
450	0.25	0.25	0.76	1.27	1.52	3.3	114645
600	0.51	0.76	1.52	2.79	3.81	7.62	64506
900	1.52	2.79	5.33	10.2	13.46	---	27757
1200	---	8.64	---	---	---	---	14905

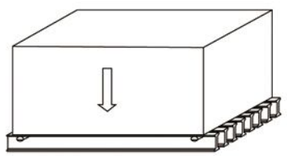


I-6015



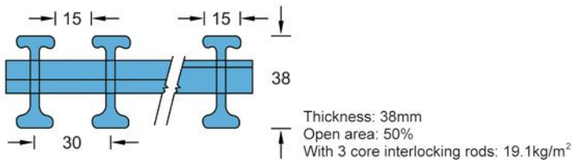
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	300	450	750	1500	3000	5950	
450	--	0.25	0.51	0.76	2.03	3.81	17472
600	0.51	0.76	1.02	2.29	4.32	8.38	13108
900	1.27	2.03	3.3	6.1	12.5	25.15	8460
1200	2.79	4.32	7.11	14.22	28.5	56.9	6047

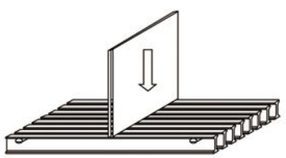


Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	1000	1900	3900	7000	9500	19500	
450	0.25	0.25	0.76	1.27	1.78	3.56	76430
600	0.51	1.02	1.789	3.3	4.57	8.89	43004
900	2.29	4.06	7.87	14.7	--	--	18570
1200	6.6	12.95	--	--	--	--	9920

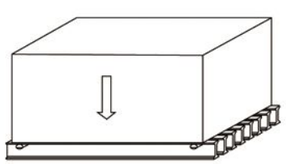


I-5015



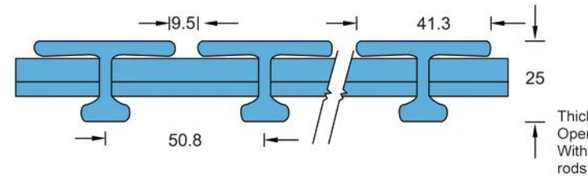
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	300	450	750	1500	3000	5950	
450	--	0.25	0.51	1.02	1.78	3.3	21836
600	0.51	0.51	1.02	1.78	3.56	6.86	16385
900	1.02	1.52	2.54	5.08	9.91	20.07	10576
1200	2.29	3.56	5.84	11.94	23.4	46.99	7567

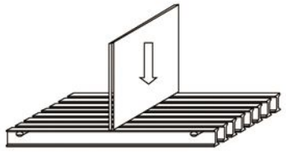


Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	1000	1900	3900	7000	9500	19500	
450	0.25	0.51	0.76	1.27	1.778	3.56	95537
600	0.51	0.76	1.52	3.05	4.06	8.13	53755
900	1.78	3.3	6.1	11.7	15.49	--	23164
1200	5.59	10.69	--	--	--	--	12422

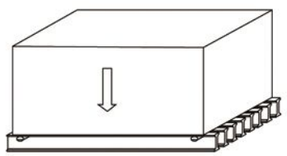


T-1810



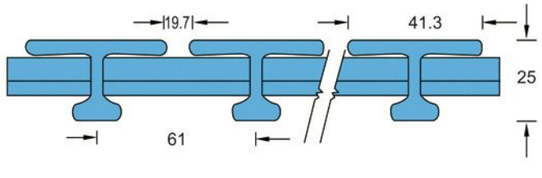
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	300	500	800	1500	2000	2500	
400	0.40	0.67	1.07	2.00	2.67	3.34	5900
600	1.24	2.06	3.30	8.25	--	--	2300
800	2.76	4.59	7.35	13.78	--	--	2300
1000	5.16	8.60	13.76	--	--	--	2200

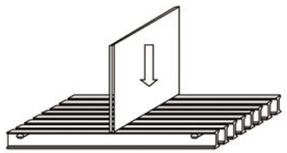


Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	300	500	800	1500	2000	2500	
400	0.10	0.17	0.27	0.50	0.67	0.83	29600
600	0.46	0.77	1.24	2.32	3.10	3.87	12700
800	1.38	2.30	3.67	6.89	9.18	11.48	7300
1000	3.22	5.37	8.60	--	--	--	4600

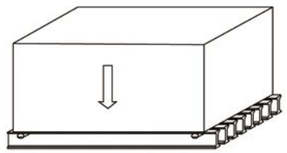


T-3310



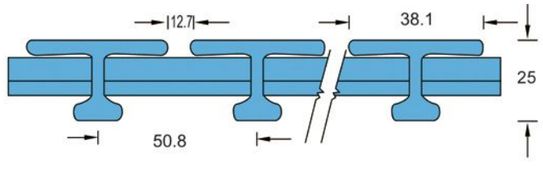
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	300	450	750	1500	3000	5950	
450	0.584	0.86	1.448	2.87	5.74	--	10309
600	1.27	1.93	3.226	6.452	--	--	7731
900	4.013	5.99	10.06	--	--	--	5024
1200	8.992	--	--	--	--	--	3620

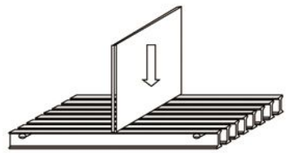


Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	1000	1900	3900	7000	9500	19500	
450	0.56	1.069	2.134	4.039	5.23	--	45076
600	1.63	3.226	6.542	12.12	--	--	25363
900	7.52	15.04	--	--	--	--	10971
1200	--	--	--	--	--	--	5938

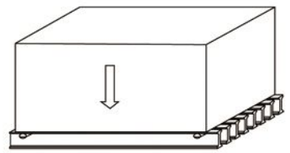


T-2510



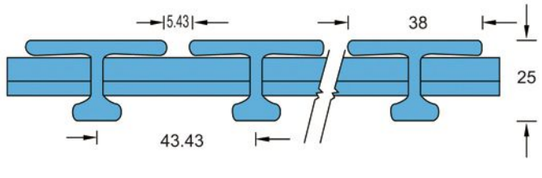
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	150	300	450	750	1500	3000	
450	0.254	0.508	0.762	1.27	2.794	5.588	4619
600	0.508	1.016	1.778	2.794	5.588	11.43	3471.7
900	1.778	3.556	5.588	9.144	--	--	2309.5
1200	2.032	4.318	8.382	12.7	--	--	1728.4

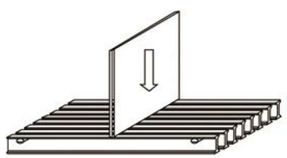


Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	450	950	1450	2400	4850	9500	
450	0.254	0.508	0762	1.27	2.54	5.08	10638.4
600	0.762	1.524	2.032	3.556	7.112	--	8003.2
900	3.556	6.858	10.414	--	--	--	5075.2
1200	10.668	--	--	--	--	--	2830.4

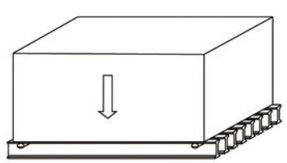


T-1210



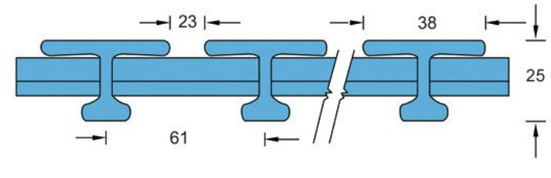
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	150	300	450	750	1500	3000	
450	0.254	0.508	0.762	1.27	2.286	4.826	6481.5
600	0.508	1.016	1.524	2.286	4.826	9.652	4857.4
900	1.524	3.048	4.826	7.874	--	--	3233.3
1200	3.556	7.366	10.922	--	--	--	2428.7

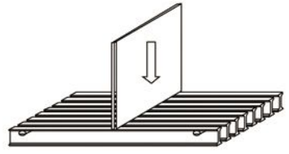


Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	450	950	1450	2400	4850	9500	
450	<0.254	0.254	0.762	1.016	2.286	4.572	14932.8
600	0.508	1.27	1.778	3.048	6.096	12.92	11175.2
900	2.794	5.842	8.89	--	--	--	7076
1200	9.144	--	--	--	--	--	3562.4

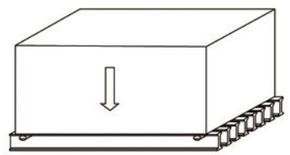


T-3810



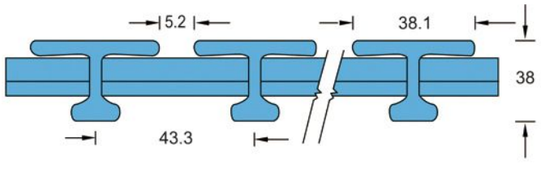
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	300	450	750	1500	3000	5950	
450	0.711	1.02	1.727	3.454	6.91	--	8600
600	1.549	2.34	3.886	7.747	--	--	6427
900	4.826	7.21	--	--	--	--	4180
1200	10.77	--	--	--	--	--	3018

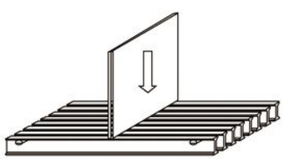


Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	1000	1900	3900	7000	9500	19500	
450	0.66	1.295	2.616	5.004	6.53	--	37624
600	1.96	3.886	7.772	--	--	--	21087
900	9.02	--	--	--	--	--	9158
1200	6.6	12.95	--	--	--	--	9920

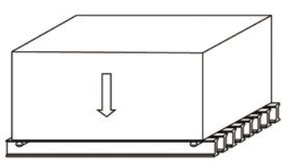


T-1215



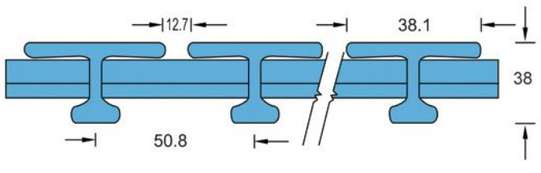
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	150	300	450	750	1500	3000	
450	<0.254	0.254	0.254	0.508	1.016	1.778	8791
600	<0.254	0.254	0.508	0.762	1.778	3.556	7032.8
900	0.508	1.016	1.524	2.794	5.334	10.668	4678.6
1200	1.27	2.54	3.555	6.096	12.192	--	3516.4

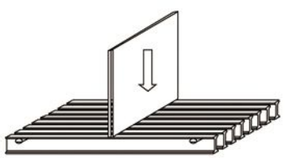


Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	450	950	1450	2400	4850	9500	
450	<0.254	0.254	0.254	0.508	1.016	1.778	19227.2
600	0.254	0.508	0.762	1.016	2.286	4.318	14396
900	1.016	2.032	3.048	5.08	10.16	--	9613.6
1200	3.048	6.096	9.144	--	--	--	5758.4

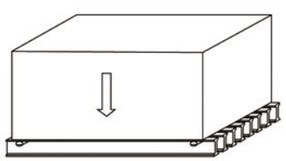


T-2515



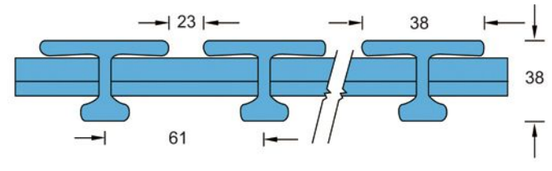
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	150	300	450	750	1500	3000	
450	<0.254	0.254	0.254	0.508	1.016	2.286	7539.4
600	0.254	0.508	0.508	1.016	2.032	4.064	6019.6
900	0.508	1.27	1.778	3.048	6.35	12.446	4023
1200	1.524	2.794	4.318	7.112	--	--	3009.8

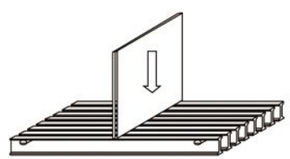


Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	450	950	1450	2400	4850	9500	
450	<0.254	0.254	0.254	0.508	1.016	2.032	16494.4
600	0.254	0.508	0.762	1.27	2.54	5.08	12346.4
900	1.27	2.286	3.556	5.842	11.684	--	8247.2
1200	3.556	7.112	10.668	--	--	--	4928.8

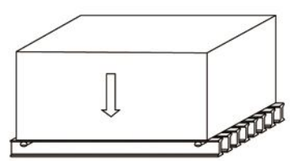


T-3815



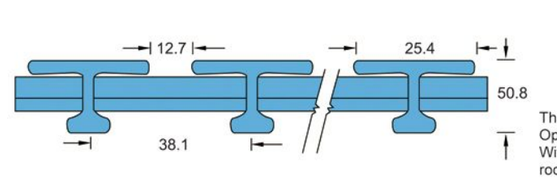
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	150	300	450	750	1500	3000	
450	0.254	0.254	0.508	0.762	1.27	2.54	6287.8
600	0.254	0.508	0.762	1.27	2.286	4.826	5021.3
900	0.762	1524	2.286	3.81	7.62	--	3352.5
1200	1.778	3.302	5.08	8.382	--	--	2503.2

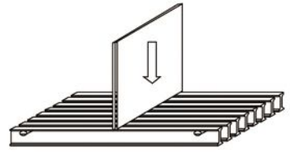


Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	450	950	1450	2400	4850	9500	
450	<0.254	0.254	0.254	0.508	1.27	2.54	13712.8
600	0.254	0.508	1.01	1.524	3.048	6.096	10296.8
900	1.524	2.794	4.318	7.112	--	--	6880.8
1200	4.318	8.382	12.7	--	--	--	4099.2

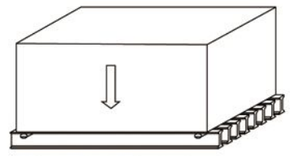


T-3320



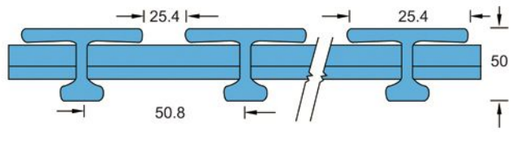
Concentrated line load-deflection in mm

Span (mm)	Kg/m						Max load
	300	450	750	1500	3000	5950	
600	--	0.25	0.51	1.02	1.78	3.3	16876
900	0.51	0.76	1.27	2.29	4.57	9.4	7492
1200	1.02	1.52	2.29	4.83	9.91	19.56	4215
1500	1.78	2.79	4.57	9.14	18.3	36.58	2696

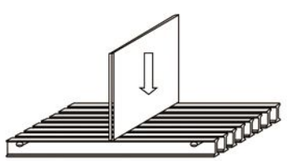


Uniformed load-deflection in mm

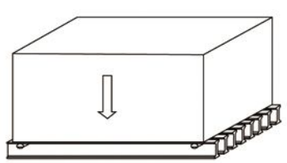
Span (mm)	Kg/m						Max load
	1000	1900	3900	7000	9500	19500	
600	0.25	0.51	0.76	1.52	2.03	4.06	55368
900	0.76	1.52	3.05	5.59	7.73	14.99	36895
1200	2.29	4.57	9.4	--	--	--	27659
1500	5.0	9.91	--	--	--	--	22137



T-5020



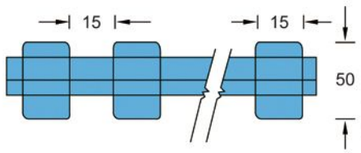
Concentrated line load-deflection in mm



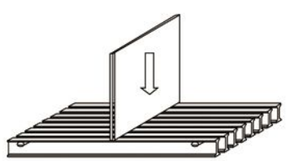
Uniformed load-deflection in mm

Span (mm)	Kg/m						Max load
	300	450	750	1500	3000	5950	
600	0.25	0.51	0.76	1.27	2.29	4.57	--
900	0.76	1.27	1.78	3.3	6.1	12.19	--
1200	1.52	2.29	3.56	6.6	13.5	27.18	--
1500	2.54	3.81	6.35	12.45	24.6	49.53	--

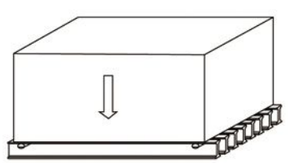
Span (mm)	Kg/m						Max load
	1000	1900	3900	7000	9500	19500	
600	0.51	0.76	1.27	2.29	3.05	6.35	--
900	1.02	2.03	3.81	6.86	9.4	--	--
1200	3.3	6.35	12.45	--	--	--	--
1500	6.86	13.46	--	--	--	--	--



HL-5020



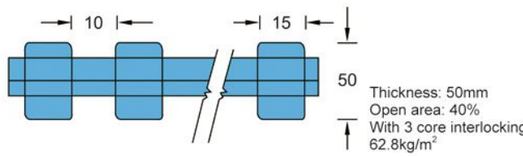
Concentrated line load-deflection in mm



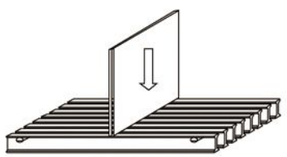
Uniformed load-deflection in mm

Span (mm)	Kg/m								
	150	300	450	750	1500	3000	4500	6000	7500
600	0.0406	0.0813	0.1016	0.1829	0.3658	0.7112	1.077	1.4225	1.7883
750	0.06096	0.1219	0.2032	0.3251	0.6502	1.3005	1.9507	2.6214	3.2716
900	0.1016	0.2235	0.32512	0.5486	1.0973	2.1946	3.2715	4.3689	5.4662
1200	0.2642	0.508	0.77216	1.2802	2.5603	5.1206	7.68096	10.2414	12.8017

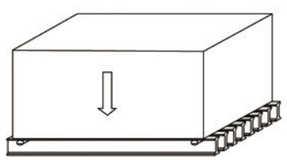
Span (mm)	Kg/m								
	450	950	1450	2450	4850	9800	14500	19500	24400
600	0.0406	0.0813	0.1422	0.2235	0.447	0.8942	1.3411	1.7881	2.2149
750	0.1016	0.2032	0.3048	0.508	1.016	2.033	3.0683	4.0843	5.1003
900	0.2032	0.4064	0.6096	1.016	2.0523	4.1047	6.1366	8.1889	10.2413
1200	0.6502	1.2802	1.9304	3.2106	6.4008	12.8017	--	--	--



HL-4020



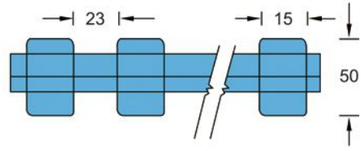
Concentrated line load-deflection in mm



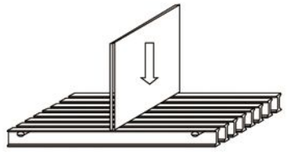
Uniformed load-deflection in mm

Span (mm)	Kg/m								
	150	300	450	750	1500	3000	4500	6000	7500
600	0.03404	0.06807	0.0851	0.1532	0.3063	0.5956	0.90195	1.1914	1.4977
750	0.0511	0.1021	0.1702	0.2723	0.5446	1.0892	1.6337	2.1954	2.7399
900	0.0851	0.1872	0.2723	0.4595	0.91897	1.8379	2.7399	3.6589	4.5779
1200	0.2212	0.4255	0.7722	1.0721	2.1443	4.2885	6.4328	8.5772	10.7214

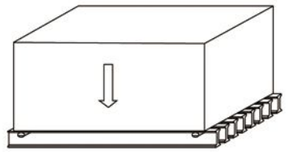
Span (mm)	Kg/m								
	450	950	1450	2450	4850	9800	14500	19500	24400
600	0.03404	0.0681	0.11913	0.1872	0.3744	0.7489	1.1232	1.4976	1.85496
750	0.0851	0.1702	0.2553	0.4255	0.8509	1.7019	2.5697	3.4206	4.2715
900	0.1702	0.3404	0.51054	0.8509	1.7188	3.4377	5.1394	6.8583	8.57707
1200	0.5446	1.07213	1.6167	2.6888	5.3607	10.7214	--	--	--



HL-6020



Concentrated line load-deflection in mm



Uniformed load-deflection in mm

Span (mm)	Kg/m								
	150	300	450	750	1500	3000	4500	6000	7500
600	0.0508	0.1016	0.127	0.2286	0.4572	0.889	1.3462	1.779	2.2353
750	0.0762	0.1524	0.254	0.4046	0.8128	1.6256	2.4384	3.2767	4.0895
900	0.127	0.2794	0.4064	0.6858	1.3716	2.7432	4.0894	5.462	6.8327
1200	0.3302	0.635	0.9652	1.6002	3.2004	6.4008	9.6012	12.8017	16.003

Span (mm)	Kg/m								
	450	950	1450	2450	4850	9800	14500	19500	24400
600	0.0508	0.1016	0.1778	0.2794	0.5588	1.1177	1.6764	2.2352	2.7686
750	0.127	0.254	0.381	0.635	1.27	2.55	3.8354	5.1054	6.3754
900	0.254	0.508	0.762	1.27	2.5654	5.1309	7.6708	10.2362	12.8016
1200	0.8128	1.6002	2.413	4.0132	8.001	16.003	--	--	--

Chemical resistance chart of Pultruded grating

Chemical	Type'vinyl'		Type 'Iso'	
	%Conc.	Max.Oper.Temp	%Conc.	Max.Oper.Temp
Acetic acid	50	180/82	50	125/52
Benzonic acid	SAT	200/93	SAT	150/66
Chromate	10	120/49	5	70/21
Citric acid	ALL	200/93	ALL	170/77
Hydrobromic acid	50	120/49	50	120/49
Hydrocihloric acid	37	100/38	37	75/24
Lactic acid	ALL	200/93	SAT	170/77
Nirate	20	100/38	20	70/21
Oxalic acid	ALL	120/96	ALL	75/24
Perchloric acid	30	80/27	N/R	N/R
Phosphate	100	200/93	100	120/49
Sulfuric acid	75	100/38	25	75/24
Tartaric acid	ALL	200/93	ALL	170/77
Vineger	100	200/93	100	170/77
Ammonium hydroxide	28	100/38	28	N/R
OH	100	170/77	100	160/71
borax	SAT	200/93	SAT	170/77
Ammonium oxidation	ALL	190/88	ALL	170/77
Ammonium bicarbonate	50	150/65	15	125/52
Ammonium sulfate	ALL	200/93	ALL	170/77
Calcium carbonate	ALL	180/82	SAT	170/77
Calcium nitrate	ALL	200/93	ALL	180/82
Copper chloride	ALL	200/93	ALL	170/77
Copper cyanide	ALL	200/93	ALL	170/77
Copper nitrate	ALL	200/93	ALL	170/77
Ferric chloride	ALL	200/93	ALL	170/77
Ferrous chloride	ALL	200/93	ALL	170/77
Lithium chloride	SAT	200/93	SAT	150/66
Magnesium chloride	ALL	200/93	ALL	170/77
Magnesium nitrate	ALL	180/82	ALL	150/66
Magnesium sulfate	ALL	190/88	ALL	170/77
Mercuric chloride	100	190/88	100	150/66
Calomel	ALL	180/82	ALL	140/60
Nickel chloride	ALL	200/93	ALL	170/77
Nickel sulfate	ALL	200/93	ALL	170/77
Potassium chloride	ALL	200/93	ALL	170/77
Potassium dichromate	ALL	200/93	ALL	170/77
Potassium nitrate	ALL	200/93	ALL	170/77
Potassium sulfate	ALL	200/93	ALL	170/77
Sodium acetate	ALL	200/93	ALL	160/71
Sodium bisulfate	ALL	200/93	ALL	170/77
Sodium bromide	ALL	200/93	ALL	170/77
Sodium chlorine	ALL	200/93	ALL	170/77
Sodium cyanide	25	150/66	N/R	N/R
Sodium nitrate	ALL	200/93	ALL	170/77
Sodium sulfate	ALL	200/93	ALL	170/77
Stannic chloride	ALL	200/93	ALL	170/77

Yohan Enterprises
For Effective Results

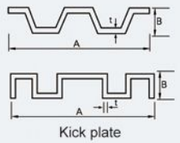
Zinc nitrate	ALL	190/88	ALL	160/71
Phenoxin	100	200/93	N/R	170/77
Chlorine	…	75/24	…	N/R
Chlorine water	SAT	170/77	SAT	140/60
Ethanol	50	180/82	50	80/27
Diethylene glycol	100	90/32	100	75/24
formaldehyde	ALL	200/93	50	90/32
gasoline	100	100/38	100	75/24
glucose	100	150/65	100	80/27
Glycerol	100	200/93	100	170/77
Peroxide	30	200/93	5	150/66
Diethylpropanediol	ALL	100/38	ALL	100/38
Distilled water	100	200/93	100	170/77
Benzene	N/R	180/82	N/R	170/77

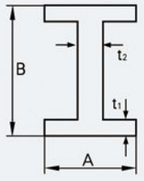
ALL-concentrations; SAT-saturated solution; N/R- not recommended; …-no information available

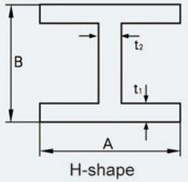
Pultruded profiles

Fiberglass pultruded profiles (structural shapes) are manufactured with the pultrusion process. Glass mat and roving are draw through resin bath and pulled through a heated die to form the desired shape.

pultruded profiles are available in a wide variety of shapes, including I beam, equal angle, channel, square tube, round tube, and so on. They are dimensionally stable and easy to install.

View/instance	Type	Dimension （mm）	Weight（kg/m）
 Kick plate 	Kick plate	A× B× T	
	M2	100×13×3.2 M-shape	1.10
	M3	100×16×5.0M-shape	1.30
	M4	148×12×3 M-shape	1.27
	W1	100×19×5.0W-shape	1.36
	W2	100×15×3.2 W-shape	1.10
	W3	150×15×3.2 W-shape	1.60

View/instance	Type	Dimension （mm）	Weight （kg/m）
 I-shape 	I-shape	A ×B× T1×T2	
	IB25	15×25×6.4×4.0	0.40
	IB32	15×32×6.4×4.0	0.44
	IB38A	15×38×4.0×6.4	0.51
	IB38B	30×38×3.0×3.0	0.53
	IB45A	45×180×12.0×9.0	5.20
	IB45B	45×180×12.7×12.7	6.00
	IB50A	50×102×6.4×6.4	2.40
	IB50B	50×102×8.0×8.0	3.00
	IB60B	60×180×6.4×6.4	3.60
	IB76A	76×152×6.4×6.4	3.59
	IB76B	76×152×9.5×9.5	5.32
	IB102A	102×203×9.5×9.5	7.20
	IB102B	102×203×12.7×12.7	9.50
	IB120	120×240×12×12	10.50
	IB127A	127×254×9.5×9.5	9.00
	IB127B	127×254×12.7×12.7	11.90
	IB127C	127×152×9.5×9.5	7.10
	IB127D	127×152×12.7×12.7	9.20
	IB152A	152×305×9.5×9.5	10.74
	IB152B	152×305×12.7×12.7	14.30

View/instance	Type	Dimension （mm）	Weight （kg/m）
 H-shape 	H-shape	A× B× T_1 ×T_2	
	HB76	76×76×6.4×6.4	2.67
	HB102A	102×102×6.4×6.4	3.59
	HB102B	102×102×8.0×8.0	4.50
	HB152A	152×152×6.4×6.4	5.43
	HB152B	152×152×9.5×9.5	8.10
	HB203A	203×203×9.5×9.5	10.80
	HB203B	203×203×12.7×12.7	14.36
	HB203C	203×203×6.4×6.4	7.50
	HB254A	254×254×9.5×9.5	13.60
	HB254B	254×254×12.7×12.7	18.04
	HB305	305×305×12.7×12.7	21.50

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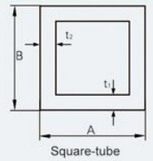
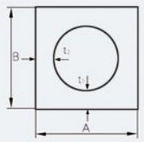
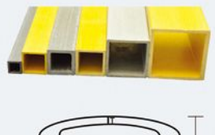
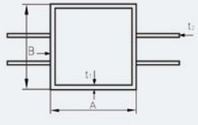
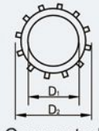
View/instance	Type	Dimension （mm）	Weight （kg/m）
 Square-tube    Handrail   STH50	Square-tube	A× B ×T×1T2	
	ST25A	25×25×2.8×2.8	0.50
	ST25B	25×25×3.2×3.2	0.53
	ST25C	25×25×6.4×6.4	0.90
	ST32	32×32×6.4×6.4	1.24
	ST38A	38×38×3.2×3.2	0.85
	ST38B	38×38×5.0×5.0	1.25
	ST38C	38×38×6.4×6.4	1.54
	ST44A	44×44×3.2×3.2	1.01
	ST44B	44×44×6.4×6.4	1.83
	ST50A	50×50×3.2×3.2	1.14
	ST50B	50×50×3.5×3.5	1.24
	ST50C	50×50×4.0×4.0	1.42
	ST50D	50×50×5.0×5.0	1.74
	ST50E	50×50×6.4×6.4	2.12
	ST54A	54×54×3.2×3.2	1.24
	ST54B	54×54×4.8×4.8	1.78
	ST60A	60×60×5.0×5.0	2.10
	ST64A	64×64×3.2×3.2	1.48
	ST64B	64×64×4.4×4.4	1.97
	ST64C	64×64×6.4×6.4	2.80
	ST76A	76×76×3.2×3.2	1.77
	ST76B	76×76×5.0×5.0	2.70
	ST76C	76×76×6.4×6.4	3.39
	ST101A	101×101×3.2×3.2	2.38
	ST101B	101×101×5.0×50	3.61
	ST101C	101×101×6.4×6.4	4.61
	ST152A	152×152×6.4×6.4	7.10
	ST152B	152×152×9.5×9.5	10.4
	ST152C	152×152×12.7×12.7	13.5
	STR25	25×25×3.175×3.175	0.7
	Handrail	A× B ×T	
	U-shape	62×59×4.5	1.50
	U-shape	62×60×5.0	1.70
	Square-tube(Handrail)	A× B ×T1×T2	
	STH50	50×50×6.4×5.0	3.0

View/instance	Type	Dimension （mm）	Weight （kg/m）
 Corrugated 	Corrugated Round Tube	D_1× D_2× T	
	CT32A	19×32×6.4	1.11
	CT34A	19×34×7.5	1.30
	CT32B	25×32×3.5	0.66
	CT42	29×42×6.4	1.35
	CT45A	28×45×8.5	1.86
	CT45B	32×45×6.4	1.10
	CT51	51×36×7.0	1.75
	CT90B	71×90×9.5	5.70

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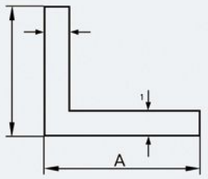
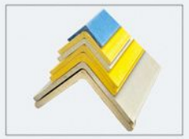
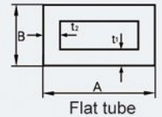
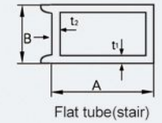
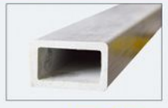
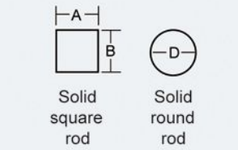
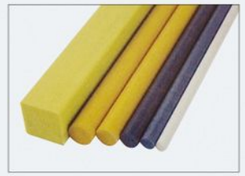
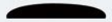
View/instance	Type	Dimension （mm）	Weight （kg/m）
 Equal angle	Equal angle	A× B× T_1×T_2	
	EL25A	25×25×3.2×3.2	0.33
	EL25B	25×25×6.4×6.4	0.56
	EL30A	30×30×4.0 （75°）	0.46
	EL30B	30×30×5.0×5.0	0.57
	EL32	32×32×4.0×4.0	0.42
	EL38A	38×38×5.0×5.0	0.68
	EL38B	38×38×6.4×6.4	0.85
	EL45	45×45×4.8×4.8	0.75
	EL50A	50.8×50.8×3.2×3.2	0.61
	EL50B	50×50×6.4×6.4	1.14
	EL60	60×60×9.0×9.0	1.90
	EL76C	76×76×6.4×6.4	1.77
	EL76D	76×76×9.5×9.5	2.57
 Equal angle	EL76E	76×76×12.7×12.7	3.40
	EL101A	101×101×6.4×6.4	2.50
	EL101B	101×101×8×8	2.95
	EL101C	101×101×9.5×9.5	3.48
	EL101D	101×101×12.7×12.7	4.57
	EL152A	152×152×6.4×6.4	3.62
	EL152B	152×152×9.5×9.5	5.42
 L-angle	EL152C	152×152×12.7×12.7	7.01
	L40	40×22×4.0×4.0	0.45
	L100	100×50×6.4×6.4	1.80
	L145	145×76×10×10	3.85
	L170	170×76×9.5×9.5	4.40
	L180	180×80×8.0×8.0	3.89
	L254	254×40×6.4×6.4	3.61
 L70(Special)	L70(Special)	70×70×24×6.0	3.75

View/instance	Type	Dimension （mm）	Weight （kg/m）
 Flat tube  Flat tube(stair)  	Flat tube	A× B× T1×T2	
	FT50A	51×25×3.0×3.0	0.79
	FT50B	51×25×6.4×6.4	1.54
	FT51A(stair)	51×25×4.0×4.0	1.01
	FT51B(stair)	51×38×4.0×4.0	1.22
	FT52(stair)	52×32×5.0×5.0	1.41
	FT80	80×60×5.0×5.0	2.5
	FT91A	91×38×4.0×4.0	1.78
	FT112A	112×91×6.4×6.4	4.46
	FT120	120×45×3.0×3.0	2.0
	FT175	175×50×9.0×9.0	7.0

View/instance	Type	Dimension （mm）	Weight （kg/m）
 Solid square rod Solid round rod 	Solid square rod	A×B	
	SSR25	25×25	1.23
	SSR32	32×32	2.00
	SSR38	38×38	2.80
	Solid round rod	D	
	SRR60	6.0	0.08
	SRR95	9.5	0.14
	SRR127	12.7	0.26
	SRR254	25.4	1.00
	SRR328	31.8	1.51
	SRR380	38.0	2.15
	SRR42	4.2	0.03
	SRR80	8.0	0.10
	SRR16	16	0.41
	SRR19	19	0.55
	SRR20	20	0.62
	SRR22	22	0.72

View/instance	Type	Dimension （mm）	Weight （kg/m）
Flat plate  Flat strip  Flat strip (chamfered edge)  	Flat plate	Thickness×width	
	FP32	3.2×1220	7.42
	FP64	6.4×1220	14.84
	FP95	9.5×1220	22.02
	FP127	12.7×1220	29.44
	FP152	15.2×1220	35.30
	FP190	19×1220	44.10
	Flat strip	Width×thickness	
	FS19	19×6.4	0.25
	FS30A	30×3.0	0.70
	FS30B	30×6.4	0.37
	FS35	35×8.0	0.54
	FS38	38×5.0	0.37
	FS40	40×8.0	0.62
	FS50B	50×4.0	0.38
	FS50C	50×8.0	0.76
	FS50D	50×15	1.43
	FS50E	50×17	1.70
	FS102	102×5.0	0.97
	FS152	152×20	5.90
	FS190	190×15	5.42
	FS280	280×10	5.32
	FS50A(chamfered edge)	50×3.2	0.29
	FS60A(chamfered edge)	60×3.2	0.36
	FS70(chamfered edge)	70×4.0	0.54
	FS90A(chamfered edge)	90×3.2	0.54
	FS100(chamfered edge)	100×3.2	0.60
	FS120(chamfered edge)	120×3.0	0.70

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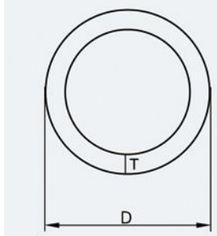
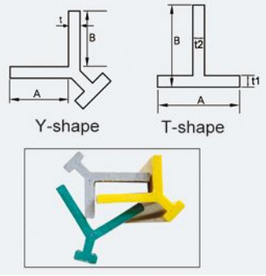
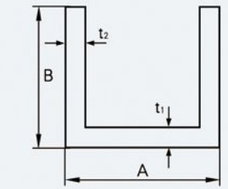
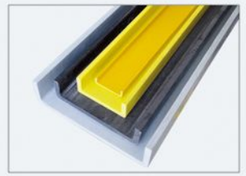
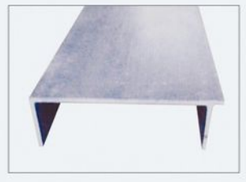
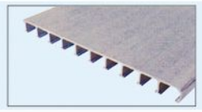
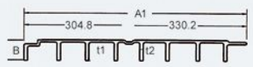
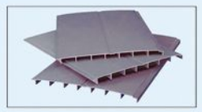
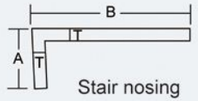
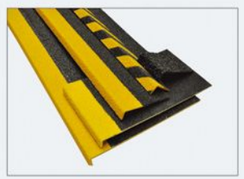
View/instance	Type	Dimension （mm）	Weight （kg/m）
	Round-tube	D×T	
	RT25	25×3.2	0.44
	RT26A	26×3.0	0.42
	RT26B	26×4.8	0.63
	RT32A	32×3.2	0.55
	RT32B	32×5.0	0.81
	RT32C	32×6.0	0.96
	RT38A	38×3.2	0.65
	RT38B	38×4.0	0.81
	RT38C	38×5.0	1.00
	RT38D	38×6.4	1.18
	RT41	41×4.5	0.98
	RT42A	42×3.2	0.70
	RT42B	42×5.0	1.11
	RT42C	42×6.4	1.45
	RT48	48×6.4	1.58
	RT50A	50×3.2	0.84
	RT50B	50×4.0	1.10
	RT50C	50×5.0	1.34
	RT50D	50×6.4	1.67
	RT50E	50×3.5	0.96
	RT50.8A	50.8×6.4	1.70
	RT50.8B	50.8×3.2	0.86
	RT64A	64×3.5	1.26
	RT64B	64×6.4	2.38
	RT75	75×4.2	1.80
	RT76	76×6.4	2.64
	RT89A	89×3.2	1.54
	RT89B	89×5.0	2.51
	RT89C	89×6.4	3.13
	RT99	99×5.0	2.81
	RT101	101×6.4	3.62
	RT114A	114×3.2	2.12
	RT114B	114×5.0	3.25
	RT114C	114×6.4	4.11
	RT114D	114×9.5	5.93
	RT150A	150×3.2	2.81
	RT150B	150×5.0	4.35
	RT150C	150×6.4	5.50
	RT150D	150×9.5	8.00

View/instance	Type	Dimension （mm）	Weight（kg/m）
	Y-shape	A× B× T	
		25×38×6.4	1.40
		38×38×6.4	1.60
		50×38×6.4	1.70
	T-shape	A×T1× B× T2	
		54×6.0×31×6.0	0.89
		54×5.0×45×6.0	1.03
		54×6.0×45×6.0	1.1
		60×6.0×46×6.0	1.30
		78×6.4×44.5×6.0	1.38

View/instance	Type	Dimension （mm）	Weight （kg/m）
 C-Channel	C-Channel	A× B× T_1×T_2	
	C25	25×14×3.0×3.0	0.28
	C26	26×17×3.2×3.2	0.30
	C31	31×25×4.0×4.0	0.65
	C32	32×13×3.0×3.0	0.25
	C33	33×29×4.0×4.0	0.65
	C40	40×24×3.2×3.2	0.50
	C45	45×28×4.0×6.4	0.92
	C50	50×14×3.2×3.2	0.44
	C52	52×50×6.0×6.0	1.63
	C70	70×30×4.5×4.5	0.95
	C75	75×35×5.0×5.0	1.30
	C76A	76×22×6.4×6.4	1.31
	C76C	76×38×6.4×6.4	1.70
	C90A	90×35×8.0×8.0	2.10
	C102A	102×27×3.2×3.2	0.91
	C102B	102×29×4.8×4.8	1.42
	C102E	102×44×4.8×4.8	1.65
	C102F	102×44×6.4×6.4	2.10
	C120A	120×25×5.0×5.0	1.52
	C120B	120×30×5.0×5.0	1.62
	C120C	120×30×5.0×5.0	1.72
	C120D	120×40×5.0×5.0	1.81
	C120E	120×40×5.0×5.0	1.90
	C145	145×25×5.0×5.0	1.80
	C150A	150×8×3.5×3.5	1.09
	C150B	150×100×6.4×6.4	4.10
	C152A	152×42×4.8×4.8	2.03
	C152B	152×42×6.4×6.4	2.72
	C152C	152×42×9.5×9.5	3.95
	C152D	152×50.8×9.5×9.5	4.35
	C160	160×48×8.0×8.0	3.70
	C203A	203×56×6.4×6.4	3.68
	C203B	203×56×9.5×9.5	5.34
	C203C	203×102×12.7×12.7	9.20
	C210A	210×55×5.0×5.0	2.95
	C210B	210×80×5.0×5.0	3.42
	C210C	210×85×5.0×5.0	3.52
	C240A	240×72×8.0×8.0	5.70
	C240B	240×115×5.0×5.0	4.40
	C254	254×70×12.7×12.7	8.90
	C292	292×70×12.7×12.7	9.60
	C310A	310×115×5.0×5.0	5.10
	C381	381×90×10.0×10.0	10.5
	C436	436×90×10.0×10.0	11.7
	C491	491×12×90×10.0	14.3
	C902	902×100×10.0×10.0	20.6
	C970	970×40×10.0×10.0	19.9
	strut channel	41.2×3.8×3.8	1.0

View/instance	Type	Dimension （mm）	Weight （kg/m）
 Deck	Deck	A×T1×B×T2	
		305×6.4×47.5×6.4	8.5
		500×5.0×48.5×6.4	12.0
		500×5.0×40×5.0	9.8
	Floor plate	A1×T1×A2×T2×B×T3	
 Safe deck		A×T1×B×T2	
		605×3.2×28.7×5.0	5.8

View/instance	Type	Dimension （mm）	Weight （kg/m）
 Stair nosing	Stair nosing	A×B×T	
		25×60×3.0	0.5
		25×50×3.0 (75°)	0.45
		30×70×4.0 (90°)	0.75
		30×70×3.2 (90°)	0.7
		55×55×3.2 (87°)	0.8
		55×70×3.2 (87°)	0.9
		30×76×3.0	0.6
		30×76×4.0	0.8
		50×90×3.2	0.9
		25×50×3.2 (90°)	0.45
		25×50×4.0 (90°)	0.51
		25×100×3.2 (87°)	0.75
	Round angle	30×100×3.2	0.8
	Square angle	30×100×3.2	0.85
		30×152×3.2	1.2
	Round angle	30×230×3.2	1.6
	Square angle	30×230×3.2	1.7
		55×300×4.0(90°)	2.8
		55×345×4.0(87°)	3.85
		30×381×3.2(87°)	2.7
		55×400×3.2	2.8

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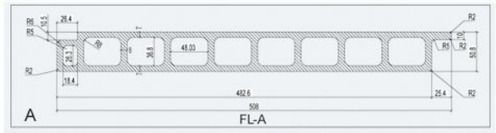
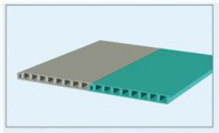
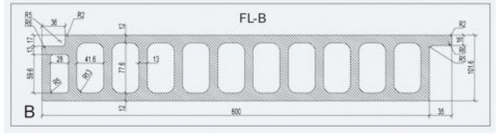
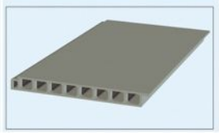
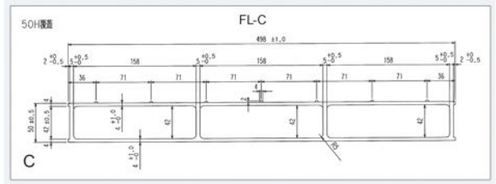
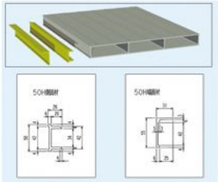
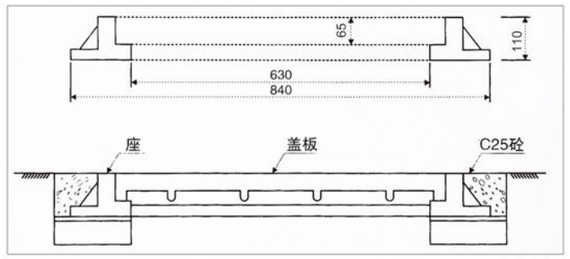
View/instance	Type	Dimension(mm)	Weight(kg/m)
 A FL-A		FL-A 508x7.0x50.8x8.0	19.7
 B FL-B		FL-B 635x12.0x101.6x13.0	54.6
 C FL-C		FL-C 498x4.0x50x4.0	9.4
		H-side 50x20x4.0x4.0	0.7
		H-top 55x31x3.0x3.0	0.6

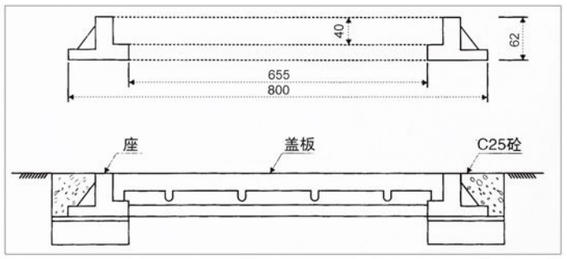
FRP composite manhole cover

FRP composite round manhole cover

Heavy Φ700X65

Light Φ700X40





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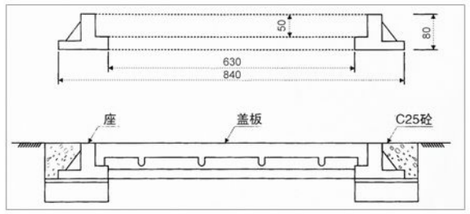
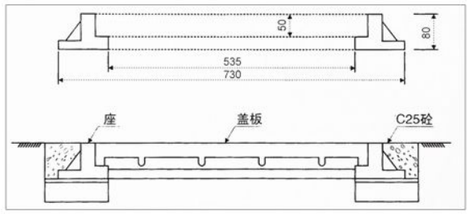
FRP composite round manhole cover

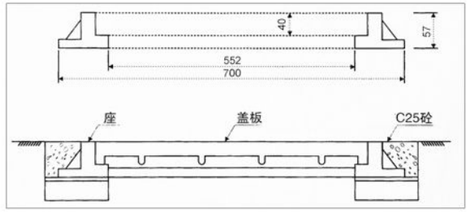
Normal Φ700X50



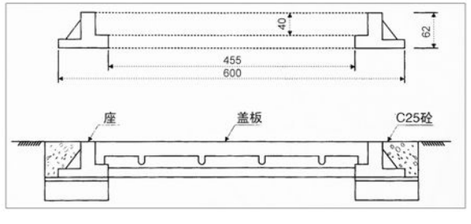
Heavy Φ600X50



Light Φ600X40

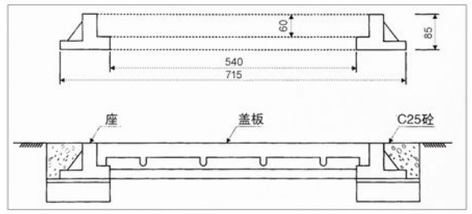


Normal Φ500X40

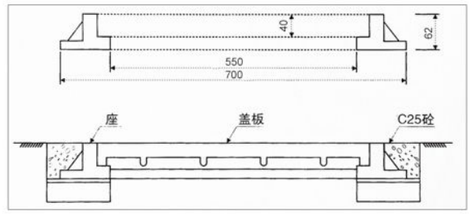


FRP composite square manhole cover

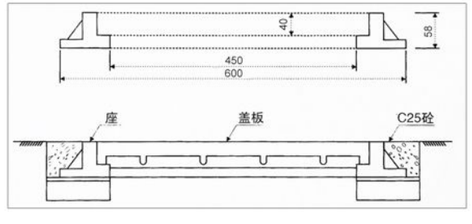
Heavy 600X600X60



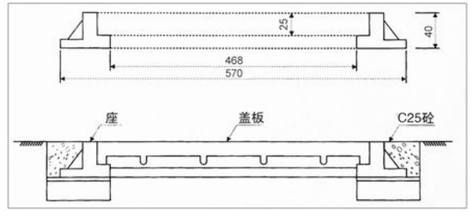
Light 600X600X40



Heavy 500X500X40



Light 500X500X25



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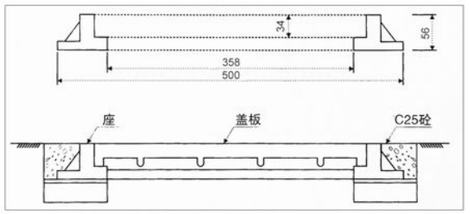
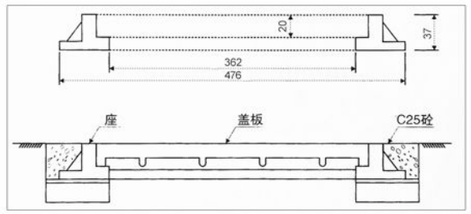
FRP composite square manhole cover

Heavy 400X400X34

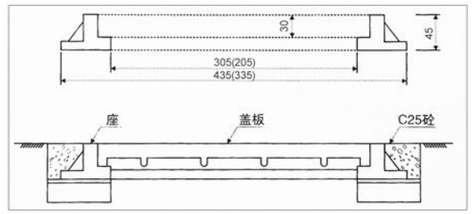


Light 400X400X20

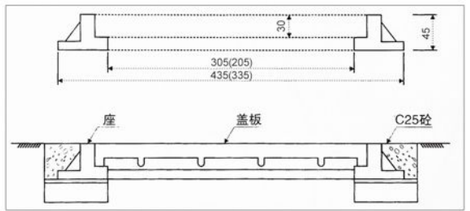


FRP composite water grating with frame

350X250X30

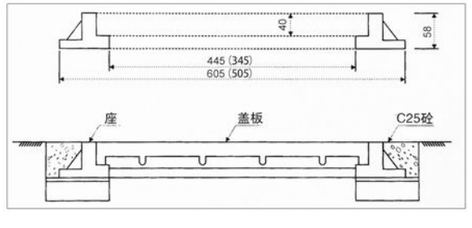


300X250X30

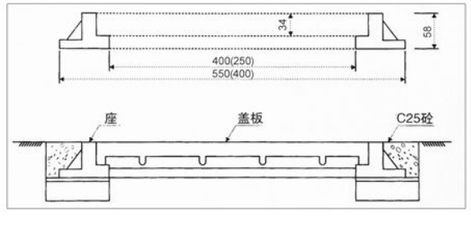


FRP composite water grating with frame

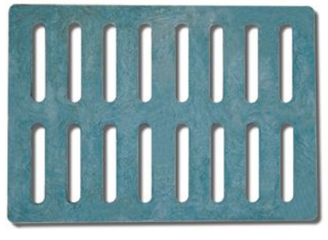
500X400X40



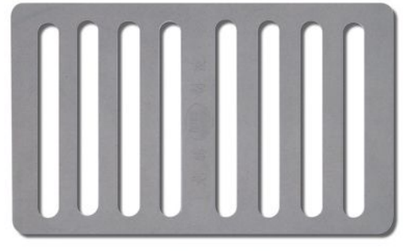
450X300X34



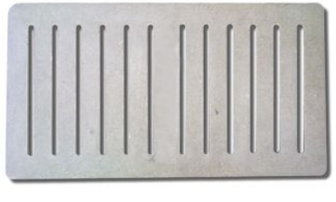
FRP composite water grating



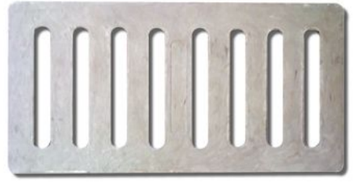
500X350X30



500X300X20



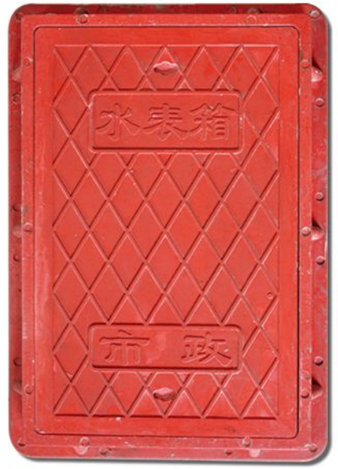
500X270X28



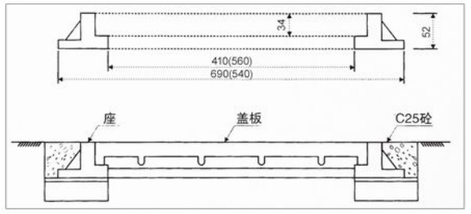
500X250X20

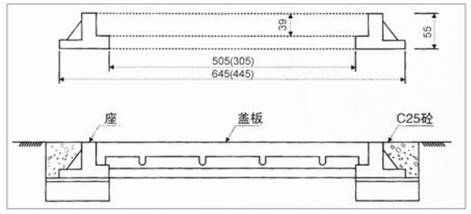
FRP composite water meter box

600X450X34



550X350X39





FRP composite manhole cover detail table

	top cover		base		total
FRP composite round manhole cover	size（mm）	weight（kg）	size（mm）	weight（kg）	weight(kg)
heavy Φ700	Φ700X65	39.5	Φ630XΦ840X110	22.7	62.2
light Φ700	Φ700X40	19.5	Φ655XΦ800X62	10.4	29.9
heavy Φ600	600X50	21.4	Φ535XΦ730X80	15	36.4
light Φ600	600X40	16.7	Φ552XΦ700X57	8.2	24.9
normalΦ500	500X40	12.4	Φ455XΦ600X62	7.9	20.3

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	top cover		base		total
FRP composite square manhole cover	size（mm）	weight（kg）	size（mm）	weight（kg）	weight(kg)
heavy 600	600X600X60	28.6	715X715X540X540X85	17.5	46.1
light 600	600X600X40	19.8	700X700X550X550X62	12	31.8
heavy 500	500X500X40	12.7	600X600X450X450X58	8.5	21.2
light 500	500X500X25	6.3	570X570X468X468X40	4.4	10.9
heavy 400	400X400X34	7.6	500X500X358X358X56	7.2	14.8
light 400	400X400X20	4.5	476X476X362X362X37	3.9	8.4

	top cover		base		total
FRP composite water grating with frame	size（mm）	weight（kg）	size（mm）	weight（kg）	weight(kg)
500X400	500X400X40	10.7	605X505X445X345X60	9.5	20.2
450X300	450X300X34	6.4	550X400X400X250X58	6.8	13.2
350X250	350X250X30	3.8	435X335X305X205X45	3.8	7.6
300X250	300X250X30	4	435X335X305X205X45	3.9	7.9

	top cover		base		total
FRP composite water grating	size（mm）	weight（kg）	size（mm）	weight（kg）	weight(kg)
350X500	500X350X30	8.3			8.3
300X500	500X300X20	3.6			3.6
270X500	500X270X28	6.1			6.1
250X500	500X250X20	3			3

	top cover		base		total
FRP composite water meter box	size（mm）	weight（kg）	size（mm）	weight（kg）	weight(kg)
600X450	600X450X34	10.3	690X540X560X410X52	7.1	17.4
550X350	550X350X39	7.3	645X445X505X305X55	7.6	14.9

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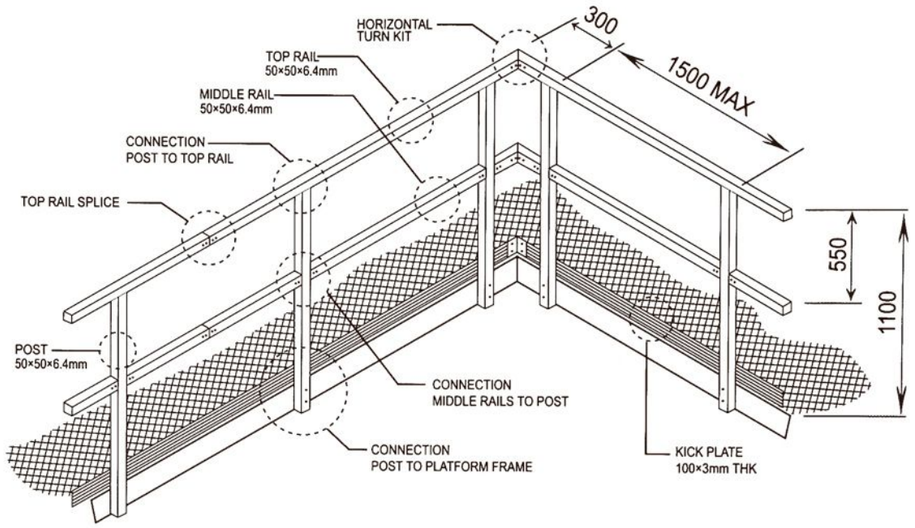
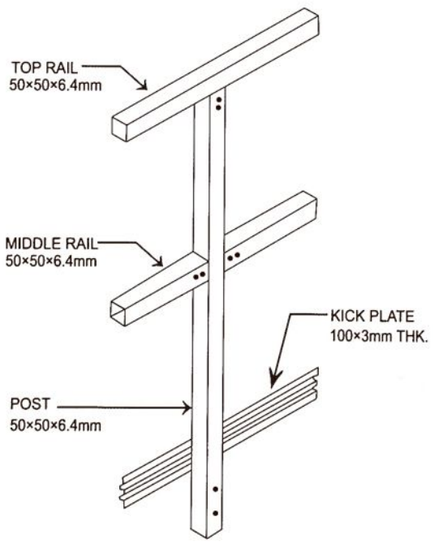
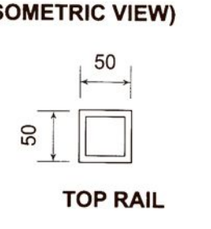
FIBERGLASS SQUARE HANDRAIL SYSTEM



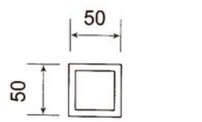
FRP HANDRAIL (ISOMETRIC VIEW)



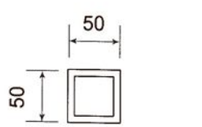
TYPICAL DETAIL



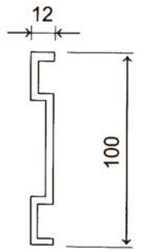
TOP RAIL



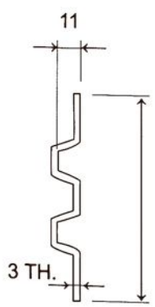
MID RAIL



HANDRAIL POST

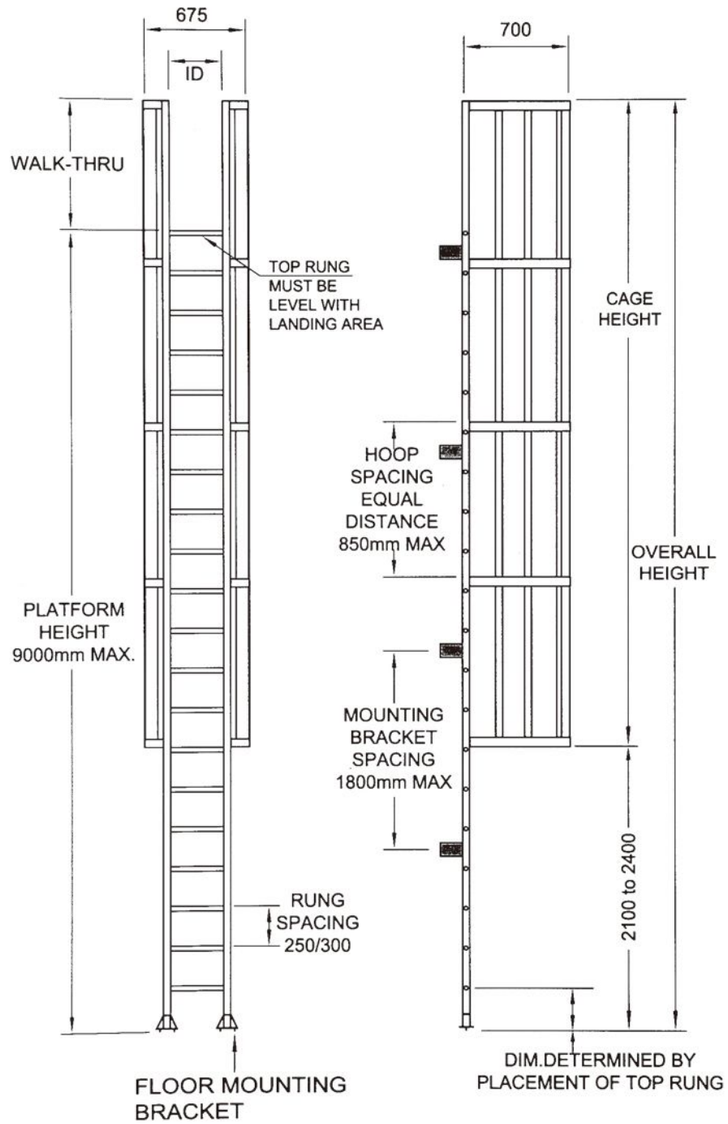


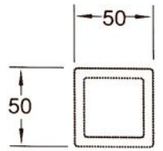
KICK PLATE M-SHAPE



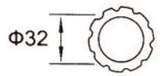
KICK PLATE W-SHAPE

FRP SAFETY LADDER

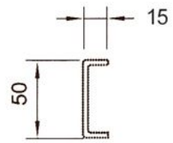




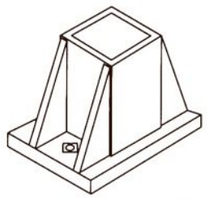
Side Rail



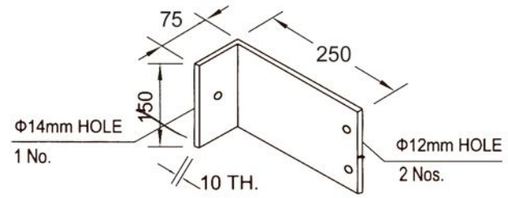
Fluted Tube (Rung)



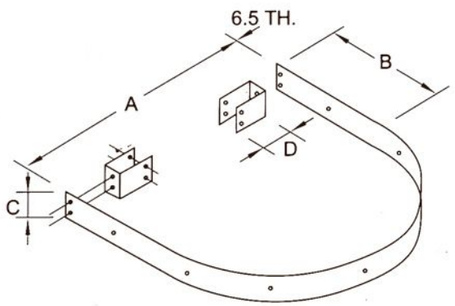
C-Channel (vertical Bar)

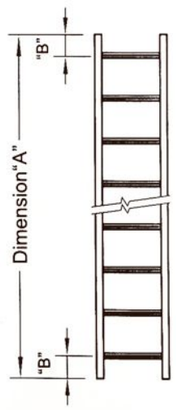


Floor Mounting Bracket



Wall Mounting Bracket





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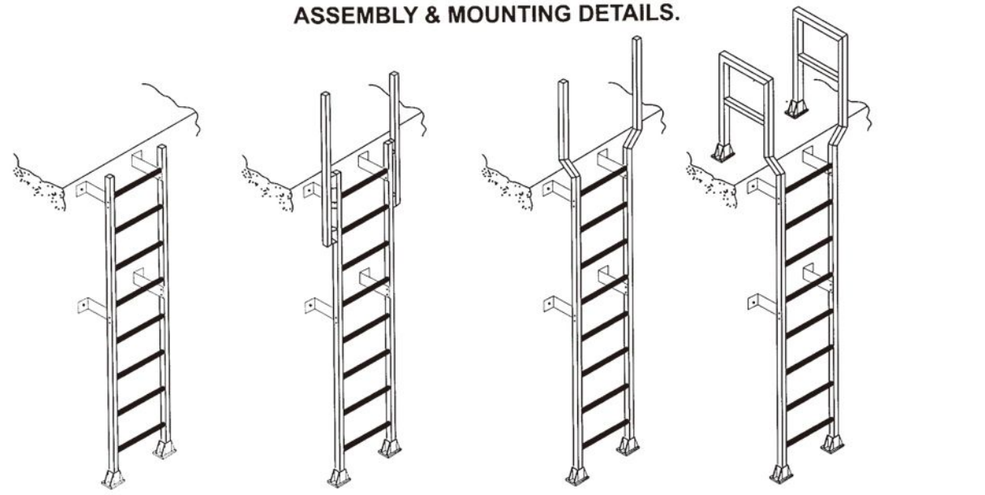
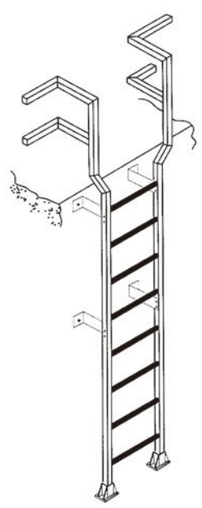
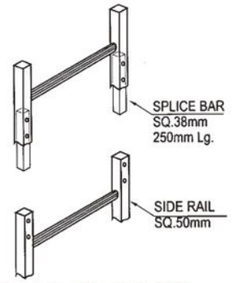
ASSEMBLY & MOUNTING DETAILS.



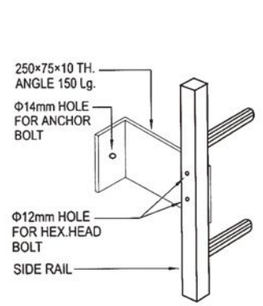
Ladder 400 mm | **Ladder with 600 mm Walk-thru** | **Ladder with 750 mm Walk-thru** | **Ladder with Walk-thru and Handrail connections to floor**



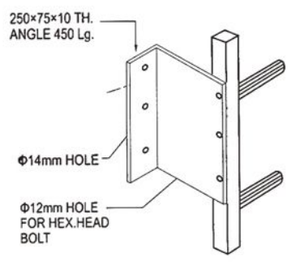
Ladder with Walk-thry and Handrail Connections



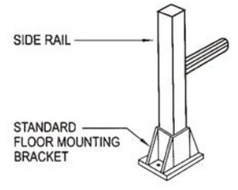
Ladder Splice Kit



Standard Wall Mount Kit

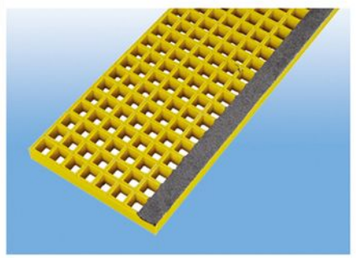


Bottom Wall Mount Kit

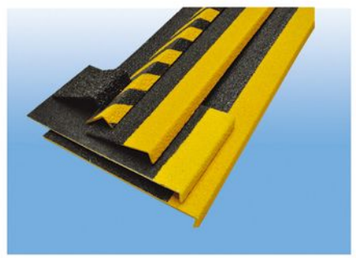


Floor Mount Kit

Other Products



Stair Tread



Stair Nosing

Fittings of Grating

Handrail Connectors(internal)

Handrail Connectors(external)

Handrail Mounting Bracket

Handrail(Round tube)

Cage Ladder

Ladder

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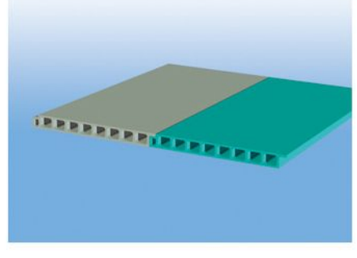
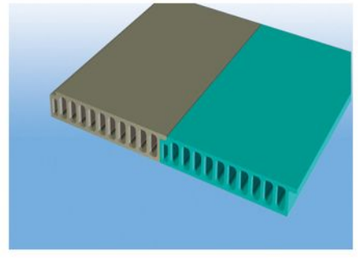
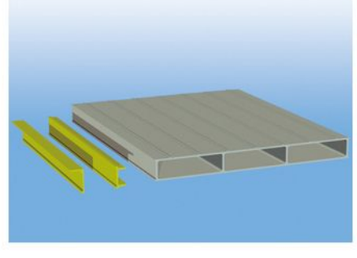
Other Products



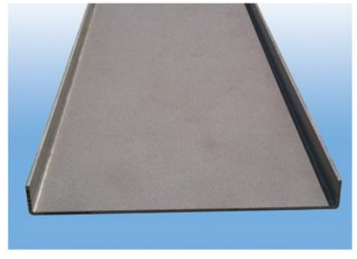
Floor Plate A



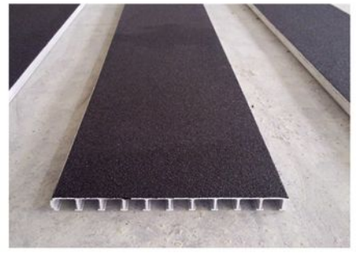
Floor Plate B



Floor Plate



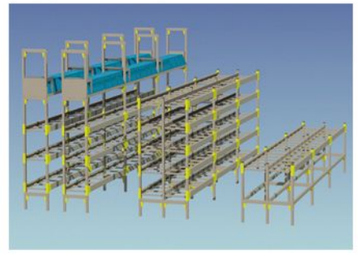
Wide C-channel



Deck

Blind Cover

cable cover



FRP Battery Rack

Fire sand box

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APPLICATION PICTURES