

NANTONGRATE



● Nantong Composite Material Co.Ltd.

Head Office:

66 Oujiang Road, Haimen ETDZ Nantong, Jiangsu, China 226100

Tel: 86 513 82187301

Fax: 86 513 82187114 / 82187302

<http://www.nantongrate.com>

Email: info@nantongrate.com

Canada Office:

43 Unicorn Avenue Toronto, Ontario M2K 2L3 CANADA

Tel: 1-416-223-2518

Fax: 1-416-222-1551

Email: sales@nantongrate.com



Nantong Composite Material Co.,Ltd.

www.nantongrate.com



Table of Content

Company Introduction	01
User Guidance	03
I NANTONGRATE® Molded Grating	
NANTONGRATE® Molded grating Process and Feature	05
List of NANTONGRATE® Molded grating	07
Specification of NANTONGRATE® Molded Grating	09
Loading Data of NANTONGRATE® Molded Grating	18
Chemical Resistance Guidance of NANTONGRATE® Molded Grating	22
Moulded Grating Application	23
II NANTONGRATE® Pultruded Gratings	
NANTONGRATE® Pultruded Grating Process and Feature	25
List of NANTONGRATE® Pultruded grating	26
Specification of NANTONGRATE® Pultruded Gratings	27
Pultruded Grating Application	33
Loading Data of NANTONGRATE® Pultruded Grating	34
Chemical Resistance Guidance of NANTONGRATE® Pultruded Grating	40
III Other FRP Products, Handrail and Profiles	43
IV Application	47



Nantong Composite Material Co. Ltd.

Nantong Composite Material Co. Ltd. is a leading manufacturer specializing in Fiber-glass Reinforced Plastic (FRP) products in China. Our products include FRP molded and pultruded grating, FRP handrail, FRP profile, and FRP hand laminated products.

Certificates we have:

- ※ ISO 9001 certificate
- ※ ASTM E-84 for molded grating
- ※ ABS certificate (American Bureau of Shipping)

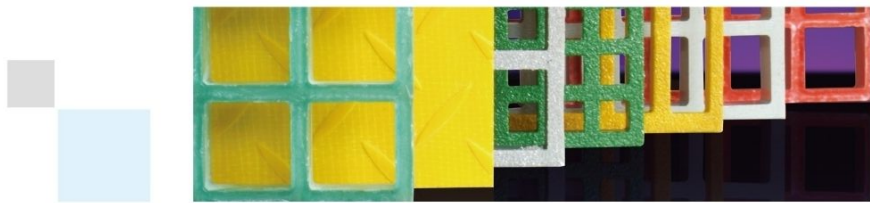
Service provided:

- ※ Involvement with customs at design stage
- ※ Selecting right products for the duty
- ※ Efficient Fabrication
- ※ Application in industrial, commercial and residential section

Our mission:

- ※ To meet your needs
- ※ To provide you with top quality products
- ※ To work with you towards your satisfaction





User Guidance



How to select grating

When selecting grating, we suggest you to consider the following:

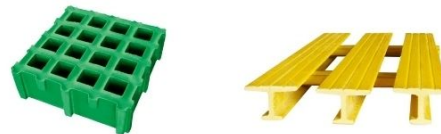
- ※ Environment
- ※ Loading
- ※ Impact

We have to consider the environment including corrosion level, temperature etc, in which grating is going to be applied. Then we can choose the right resin system for the product. We also have to look at the load requirement at different span.

Different resin system available:

- ※ Ortho / PFR: Flame spread = 20
- ※ ISO / IFR: flame spread = 15
- ※ Vinyl ester: Flame spread = 15
- ※ High Fire Retardand IFR: flame spread = 10
- ※ High Fire Retardand VFR: flame spread = 10
- ※ Phenolic: Flame spread = 0
- ※ Food grade
- ※ Translucent

Grating



Mesh



Square mesh

Rectangular Mesh

Mini Mesh

Micro Mesh

Surface



Concave top

Grit top

Smooth top

Covered grating



Smooth top

Grit top

Patterned top

Color available

Standard stock color:



Green

Yellow

Gray

Custom color is available upon request

FRP Molded Grating

Molded Grating Process

Molded grating is manufactured by laying continuous glass fibers in the mould in the direction of vertical and horizontal, and thoroughly wetted out with resin, layers by layers. When the weaving process is completed, the mould is heated to cure the panel.

After curing, the panel is ejected from the mould. The standard panel would have meniscus (concave) top surface. Any process such as post applied grit could be bonded after as a secondary operation.

This continuous process produces an integral, one-piece panel, which offers excellent corrosion resistance as well as bi-directional strength.



Feature

- ※ Corrosion Resistant
- ※ Fire Retardant
- ※ Slip Resistant
- ※ Impact Resistant
- ※ Non- Conductive
- ※ Light Weight
- ※ Easy Fabrication
- ※ Maintenance Free
- ※ Bidirectional Load Bearing
- ※ Aesthetically appealing

NANTONGRATE® Frp Molded Grating

Specification of Molded Grating (in mm)

ITEM	THICKNESS (mm)	MESH (mm)	MAX. PANEL SIZE (mm)	BAR THICKNESS (up/down)mm	WEIGHT (kg/m²)	OPEN AREA
1	13	50×50	1220×3660	7/5	5.5	76%
2	13	50×50 (DM)	1220×3660	10/9	7.46	68%
3	13	38×38	1220×3660	5.8/5	6	78%
4	14	40×40 (20×20)	1247×4047	7/5	9.3	42%
5	22	40×40 (20×20)	1527×4047	7/5	16	42%
6	22	40×40 (8×8)	1527×4047	6/4.8	16.5	36%
7	25	38×38	1220×3660	7/5	12.60	70%
8	25	25×100	1220×3660	9.5/5	13.05	68%
9	25	25×100(HD)	1220×3660	13/5	15.67	67%
10	25	38×38 (DM)	1220×3660	6/4.5	14.38	68%
11	30	38×38	1220×3660	7/5	15.90	68%
12	30	52×52(25×25)	1000×4049	7/5	16.42	83%
13	30	40×40 (20×20)	1527×4047	7/5	18.78	42%
14	30	40×40 (8×8)	1527×4047	6/5	19.58	36%
15	38	38×101.6	1220×3660	6.5&5	11.65	76%
16	38	38×152	1220×3660	7/5	15.13	74%
17	38	38×38	1525×3966	7/5	19.50	68%
18	38	25×101.6	1220×3745	13&5	21.70	46%
19	38	25×152	1220×3660	12.7/9.5	22	63%
20	38	40×40 (20×20)	1527×4047	7/5	24.60	42%
21	38	38×38(19×19)	1220×3660	7/5	25.50	40%
22	40	40×40	1527×4047	7/5	21.43	66%
23	50	50×50	1525×4000	7.5/5	23.43	71%
24	50	25×50(HD)	1220×1830	12&9.5	47	40%
25	38	38×152	571.5×3660 (stair treads)	7/5	17.23	78%

NANTONGRATE® Frp Molded Grating

Specification of Molded Grating (in inch)

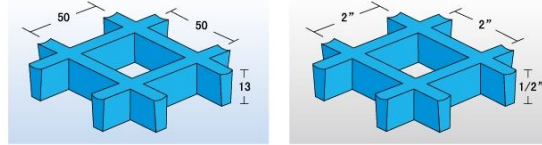
ITEM	THICKNESS (INCH)	MESH (INCH)	MAX. PANEL SIZE (INCH)	BAR THICKNESS	WEIGHT (lb/sqft)	OPEN AREA
1	1/2"	2"x2"	4'x12'	0.28"/0.20"	1.13	76%
2	1/2"	2"x2" (DM)	4'x12'	0.40"/0.35"	1.53	68%
3	1/2"	1 1/2"x1 1/2"	4'x12'	0.23"/0.20"	1.23	78%
7	1"	1 1/2"x1 1/2"	4'x12'	0.28"/0.20"	2.58	70%
8	1"	1"x4"	4'x12'	0.37"/0.20"	2.67	68%
9	1"	1"x4"(HD)	4'x12'	0.51"/0.20"	3.21	67%
10	1"	1 1/2"x1 1/2" (DM)	4'x12'	0.24"/0.19"	2.94	68%
15	1 1/2"	1 1/2"x4"	4'x12'	0.26"/0.20"	2.39	76%
16	1 1/2"	1 1/2" x 6"	4'x12'	0.28"/0.20"	3.10	74%
17	1 1/2"	1 1/2" x 1 1/2"	5'x13'	0.28"/0.20"	4.00	68%
18	1 1/2"	1"x4"	4'x12.3'	0.52"/0.20"	4.45	46%
19	1 1/2"	1" x 6"	4'x12'	0.5"/0.375"	4.5	63%
21	1 1/2"	1 1/2" x 1 1/2" (3/4"x3/4")	4'x12'	0.28"/0.20"	5.22	40%
23	2"	2"x2"	5'x13'	0.30"/0.20"	4.80	71%
24	2"	1"x2"(HD)	4'x6'	0.47"/0.37"	9.63	40%
25	1 1/2"	1 1/2" x 6"	22.5"×12' (stair treads)	0.28"/0.20"	3.53	78%

New Molded Grating Size

ITEM	THICKNESS (mm)	MESH (mm)	MAX. PANEL SIZE (mm)	BAR THICKNESS	WEIGHT (KG/SQM)	OPEN AREA
26	20	38x38	1220X4000	6/5	9.8	65%
27	25	40X40	1247X4047	7/5	12.3	67%
28	25	50X50	1220X4000	7.5/6	11.5	78%
29	30	40X40	1247X4047	7/5	14.6	67%
30	38	25X152	565X3050 (stair tread)	7/5	23.10	62%
31	40	40x40-20x20	1247x4047	7/5	23.7	42%
32	40	50x50	1220x4000	7/5	15.82	80%
33	60	38x38	1220x4000	11.5/9	50.4	54%

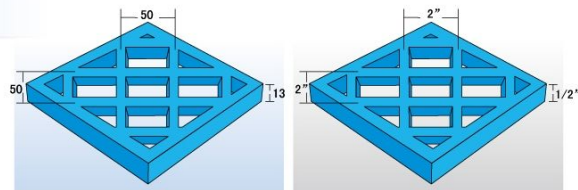
Molded Grating

* Item 1



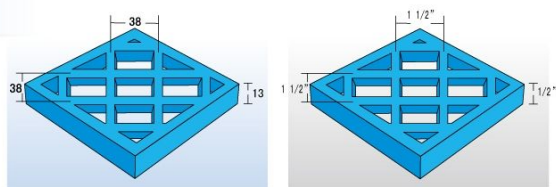
	13mm thick, 50x50mm mesh	1/2" thick, 2"x2" mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	76%	76%
Approx. weight	5.5	1.13

* Item 2



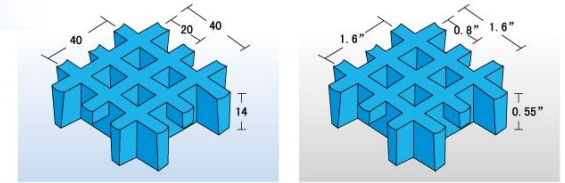
	13mm thick, 50x50(DM)mm mesh	1/2" thick, 2"x2"(DM) mesh
Load bar thickness	10/9	0.40"/0.35"
Open area	68%	68%
Approx. weight	7.46	1.53

* Item 3



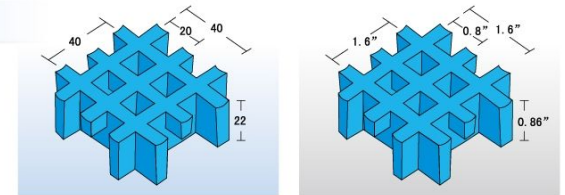
	13mm thick, 38x38(DM)mm mesh	1/2" thick, 1 1/2"x1 1/2"(DM) mesh
Load bar thickness	5.8/5	0.23"/0.2"
Open area	78%	78%
Approx. weight	6	1.23

* Item 4



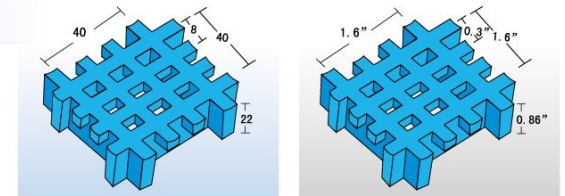
	14mm thick, 40x40(20x20)mm mesh	0.55" thick, 1.6"x1.6"(0.8"x0.8") mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	42%	42%
Approx. weight	9.3	1.90

* Item 5



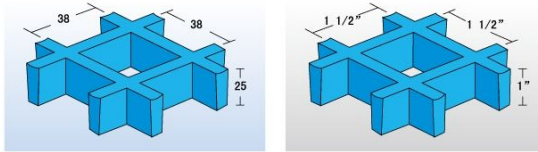
	22mm thick, 40x40(20x20)mm mesh	0.86" thick, 1.6"x1.6"(0.8"x0.8") mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	42%	42%
Approx. weight	16	3.28

* Item 6



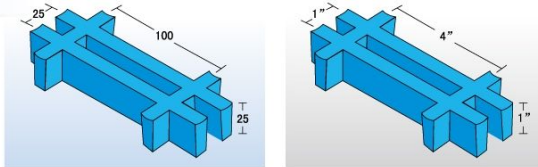
	22mm thick, 40x40(8x8)mm mesh	0.86" thick, 1.6"x1.6"(0.3"x0.3") mesh
Load bar thickness	6/4.8	0.24"/0.19"
Open area	36%	36%
Approx. weight	16.5	3.38

* Item 7



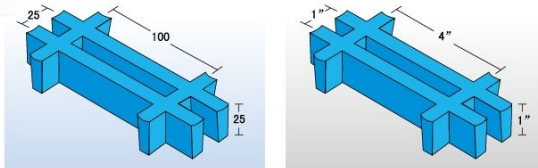
	25mm thick, 38x38mm mesh	1" thick, 1 1/2"x1 1/2" mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	70%	70%
Approx. weight	12.59	2.58

* Item 8



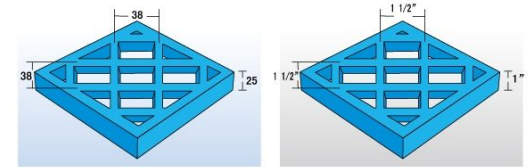
	25mm thick, 25x100mm mesh	1" thick, 1"x4" mesh
Load bar thickness	9.5/5	0.37"/0.20"
Open area	68%	68%
Approx. weight	13.05	2.67

* Item 9



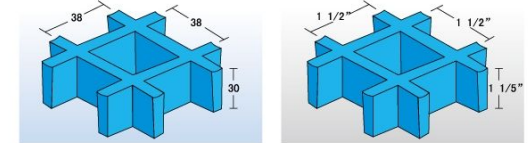
	25mm thick, 25x100(HD)mm mesh	1" thick, 1"x4"(HD) mesh
Load bar thickness	13/5	0.51"/0.20"
Open area	67%	67%
Approx. weight	15.67	3.21

* Item 10



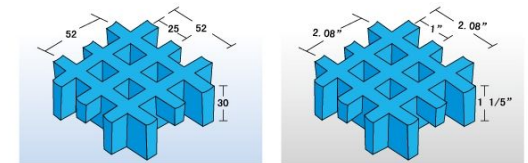
	25mm thick, 38x38(DM)mm mesh	1" thick, 1 1/2"x1 1/2" (DM) mesh
Load bar thickness	6/4.5	0.24"/0.19"
Open area	68%	68%
Approx. weight	14.38	2.94

* Item 11



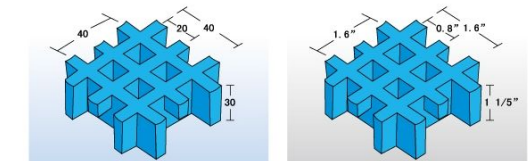
	30mm thick, 38x38mm mesh	1 1/5" thick, 1 1/2"x1 1/2" mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	68%	68%
Approx. weight	15.90	3.07

* Item 12



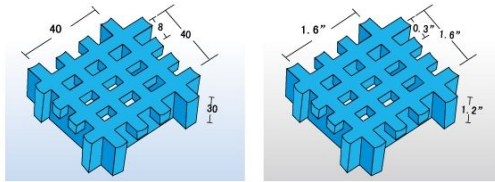
	30mm thick, 52x52(25x25)mm mesh	1 1/5" thick, 2.08"x2.08" (1"x1") mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	83%	83%
Approx. weight	16.42	3.36

* Item 13



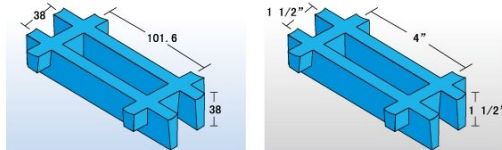
	30mm thick, 40x40(20x20)mm mesh	1 1/5" thick, 1.6"x1.6" (0.8"x0.8") mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	42%	42%
Approx. weight	18.78	3.85

* Item 14



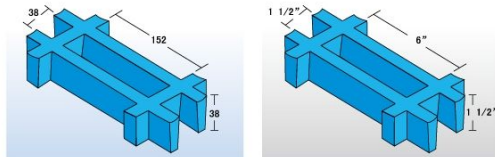
	30mm thick, 40x40(8x8)mm mesh	1.2" thick, 1.6" x 1.6"(0.3"x0.3") mesh
Load bar thickness	6/5	0.24"/0.20"
Open area	36%	36%
Approx. weight	19.58	4.01

* Item 15



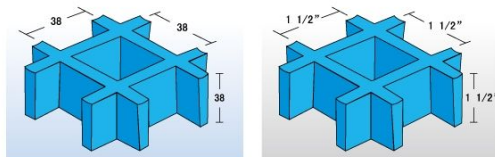
	38mm thick, 38x101.6mm mesh	1/2" thick, 1/2" x 4" mesh
Load bar thickness	6.5&5	0.26"/0.20"
Open area	76%	76%
Approx. weight	11.65	2.39

* Item 16



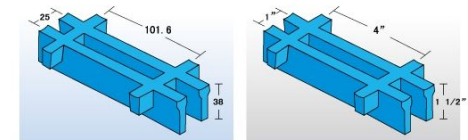
	38mm thick, 38x152mm mesh	1/2" thick, 1/2" x 6" mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	74%	74%
Approx. weight	15.13	3.10

* Item 17



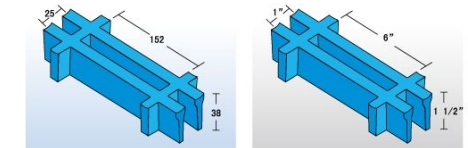
	38mm thick, 38x38mm mesh	1/2" thick, 1/2" x 1/2" (3/4"x3/4") mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	68%	68%
Approx. weight	19.50	3.91

* Item 18



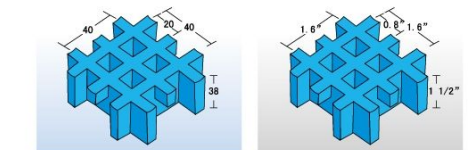
	38mm thick, 25x101.6mm mesh	1/2" thick, 1" x 4" mesh
Load bar thickness	13&5	0.52"/0.20"
Open area	46%	46%
Approx. weight	21.70	4.45

* Item 19



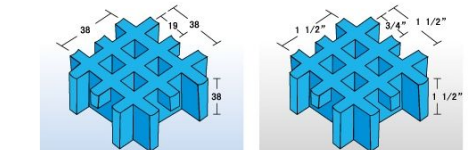
	38mm thick, 25x152mm mesh	1/2" thick, 1" x 6" mesh
Load bar thickness	12.7/9.5	0.5"/0.375"
Open area	63%	63%
Approx. weight	22	4.5

* Item 20



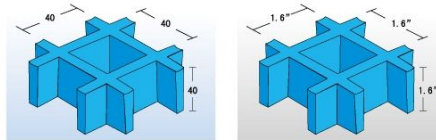
	38mm thick, 40x40(20x20)mm mesh	1/2" thick, 1.6" x 1.6"(0.8"x0.8") mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	42%	42%
Approx. weight	24.6	5.00

* Item 21



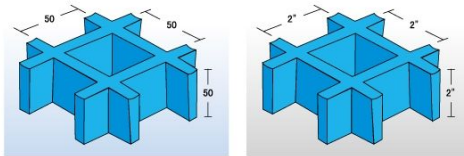
	38mm thick, 38x38(19x19)mm mesh	1/2" thick, 1/2" x 1/2" (3/4"x3/4") mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	40%	40%
Approx. weight	25.50	5.22

* Item 22



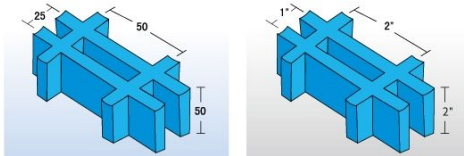
	40mm thick, 40x40mm mesh	1.6" thick, 1.6"x1.6" mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	66%	66%
Approx. weight	21.43	4.39

* Item 23



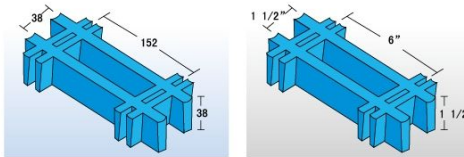
	50mm thick, 50x50mm mesh	2" thick, 2"x2" mesh
Load bar thickness	7.5/5	0.30"/0.20"
Open area	71%	71%
Approx. weight	23.43	4.80

* Item 24



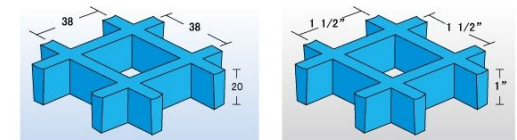
	50mm thick, 25x50(HD)mm mesh	2" thick, 1"x2"(HD) mesh
Load bar thickness	12&9.5	0.47"/0.37"
Open area	40%	40%
Approx. weight	47	9.63

* Item 25



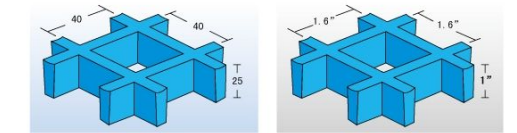
	38mm thick, 38x152mm mesh	1 1/2" thick, 1 1/2" x 6" mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	78%	78%
Approx. weight	17.23	3.53

* Item 26



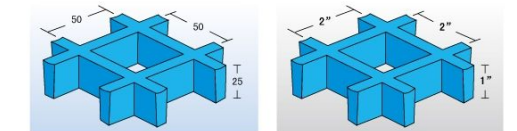
	20mm thick, 38x38mm mesh	1 1/2" thick, 1 1/2" x 4" mesh
Load bar thickness	6&5	0.26"/0.20"
Open area	65%	76%
Approx. weight	9.80	2.39

* Item 27



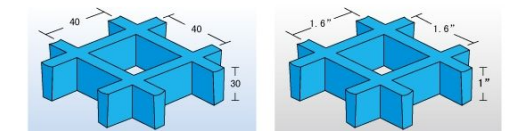
	25mm thick, 40x40mm mesh	1" thick, 1.6" x 1.6" mesh
Load bar thickness	7&5	0.28"/0.20"
Open area	67%	67%
Approx. weight	12.30	2.47

* Item 28



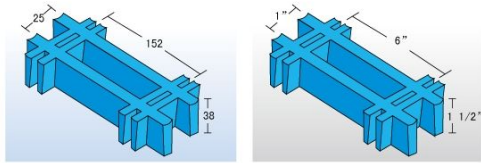
	25mm thick, 50x50mm mesh	1" thick, 2" x 2" mesh
Load bar thickness	7.5&6	0.3"/0.24"
Open area	78%	78%
Approx. weight	11.50	2.30

* Item 29



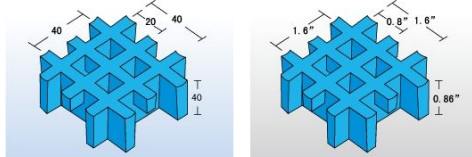
	30mm thick, 40x40mm mesh	1.18" thick, 1.6" x 1.6" mesh
Load bar thickness	7&5	0.20"
Open area	67%	67%
Approx. weight	14.60	2.93

*** Item 30**



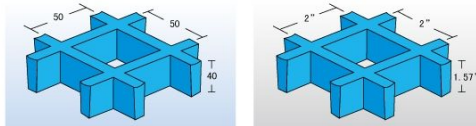
	38mm thick, 25x152mm mesh	1 1/2" thick, 1" x 6" mesh
Load bar thickness	7/5	0.28"/0.20"
Open area	62%	62%
Approx. weight	23.10	4.63

*** Item 31**



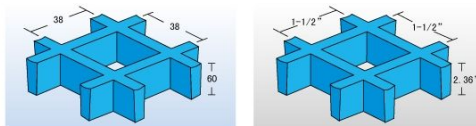
	40mm thick, 40x40-20x20mm mesh	1.57" thick, 1.57" x 1.57" (0.8"x0.8") mesh
Load bar thickness	7&5	0.28"/0.20"
Open area	42%	42%
Approx. weight	23.70	4.85

*** Item 32**



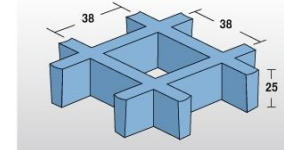
	40mm thick, 50x50mm mesh	1.57" thick, 2" x 2" mesh
Load bar thickness	6.8&5	0.27"/0.20"
Open area	80%	80%
Approx. weight	15.82	3.17

*** Item 33**

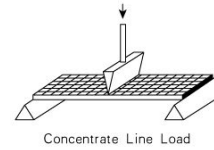


	60mm thick, 38x38mm mesh	2.36" thick, 1-1/2" x 1-1/2" mesh
Load bar thickness	11.5&9	0.45"/0.35"
Open area	54%	54%
Approx. weight	50.40	10.10

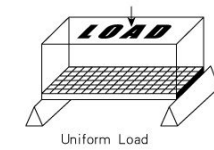
***H25 Mesh Size 38x38**



Panel Size (mm): 1220X3660
 Bar Thickness (Up/Down) mm: 7/5
 Weight (kg/m²): 12.60
 Open Area: 70%

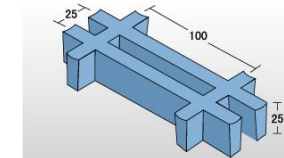


Deflection (mm) \ Span (mm) \ Loading (kg/m)	75	150	300	450	600	750	1% Deflection Load
450	0.442	0.884	1.768	2.652	3.536	4.42	763
600	0.108	2.096	4.191	---	---	---	429
750	2.046	4.093	---	---	---	---	274
900	3.536	7.072	---	---	---	---	190
1050	5.615	---	---	---	---	---	140

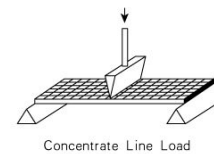


Deflection (mm) \ Span (mm) \ Loading (kg/m ²)	250	500	1000	1500	2000	2500	1% Deflection Load
450	0.414	0.829	1.658	2.486	3.315	4.144	2717
600	1.31	2.619	5.239	---	---	---	1145
750	3.918	6.395	---	---	---	---	586
900	6.63	---	---	---	---	---	339

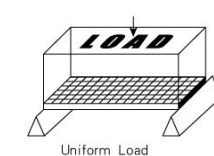
***H25 Mesh Size 25x100 HD**



Panel Size (mm): 1220X3660
 Bar Thickness (Up/Down) mm: 13/5
 Weight (kg/m²): 15.67
 Open Area: 67%

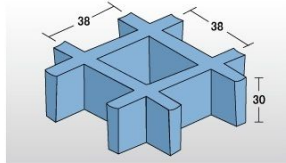


Deflection (mm) \ Span (mm) \ Loading (kg/m)	75	150	300	450	600	750	1% Deflection Load
600	0.47	0.943	1.886	2.829	3.772	4.715	955
750	0.92	1.842	3.684	5.525	7.367	---	610
900	1.591	3.183	6.365	---	---	---	424
1050	2.527	5.054	10.108	---	---	---	311
1200	3.772	7.554	---	---	---	---	238
1350	5.371	10.741	---	---	---	---	188

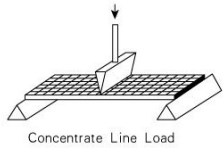


Deflection (mm) \ Span (mm) \ Loading (kg/m ²)	250	500	1000	1500	2000	2500	1% Deflection Load
600	0.589	1.179	2.357	3.536	4.715	5.894	2546
750	1.439	2.878	5.756	---	---	---	1302
900	2.984	5.967	---	---	---	---	754
1050	5.528	---	---	---	---	---	474
1200	9.43	---	---	---	---	---	318

***H30 Mesh Size 38×38**

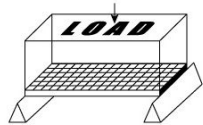


Panel Size(mm): 1220X3660
 Bar Thickness(Up/Down)mm: 7/5
 Weight (kg/m²): 15.9
 Open Area: 68%



Concentrate Line Load

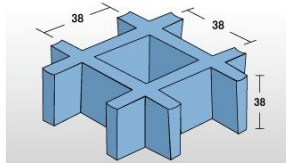
Deflection (mm) Span(mm)	Loading (kg/m)	75	150	300	450	600	750	1% Deflection Load
450	0.256	0.512	1.023	1.535	2.046	2.558	---	1318
600	0.606	1.213	2.425	3.638	4.851	---	---	742
750	1.184	2.369	4.737	7.106	---	---	---	475
900	2.046	4.093	8.186	---	---	---	---	329
1050	3.25	6.5	---	---	---	---	---	242



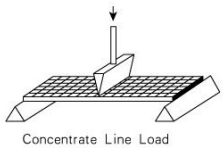
Uniform Load

Deflection (mm) Span(mm)	Loading (kg/m)	250	500	1000	1500	2000	2500	1% Deflection Load
450	0.24	0.48	0.959	1.439	1.919	2.398	---	4689
600	0.758	1.516	3.032	4.548	---	---	---	1978
750	1.85	3.701	7.402	---	---	---	---	1013
900	3.837	7.674	---	---	---	---	---	586
1050	7.109	---	---	---	---	---	---	368

***H38 Mesh Size 38×38**

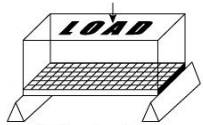


Panel Size(mm): 1525X3966
 Bar Thickness(Up/Down)mm: 7/5
 Weight (kg/m²): 19.5
 Open Area: 68%



Concentrate Line Load

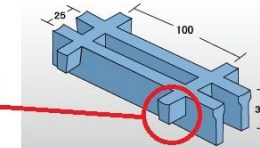
Deflection (mm) Span(mm)	Loading (kg/m)	75	150	300	450	600	750	1% Deflection Load
600	0.274	0.547	1.095	1.643	2.19	2.738	---	1643
750	0.535	1.07	2.139	3.209	4.278	5.348	---	1051
900	0.924	1.848	3.696	5.54	7.39	---	---	730
1050	1.468	2.935	5.87	8.804	---	---	---	536
1200	2.19	4.381	8.76	---	---	---	---	410
1500	4.278	8.556	---	---	---	---	---	262



Uniform Load

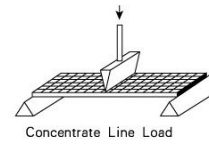
Deflection (mm) Span(mm)	Loading (kg/m)	250	500	1000	1500	2000	2500	1% Deflection Load
600	0.343	0.685	1.369	2.054	2.738	3.423	---	4382
750	0.836	1.671	3.343	5.014	6.685	---	---	2244
900	1.733	3.466	6.931	---	---	---	---	1298
1050	3.21	6.42	---	---	---	---	---	817
1200	5.476	10.952	---	---	---	---	---	548

***H38 Mesh Size 25×100**



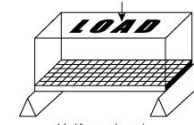
half, not to the bottom

Panel Size(mm): 1220X3660
 Bar Thickness(Up/Down)mm: 9/7
 Weight (kg/m²): 21.7
 Open Area: 68%



Concentrate Line Load

Deflection (mm) Span(mm)	Loading (kg/m)	75	150	300	600	750	1000	1% Deflection Load
600	0.152	0.304	0.607	1.215	1.518	2.025	---	2960
750	0.297	0.593	1.186	2.372	2.966	3.954	---	1893
900	0.512	1.025	2.05	4.1	5.125	6.833	---	1318
1050	0.814	1.628	3.255	6.51	8.138	---	---	967
1200	1.215	2.429	4.859	9.718	---	---	---	740
1500	2.372	4.745	9.49	---	---	---	---	474

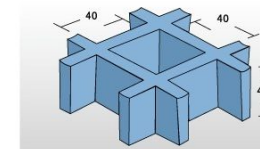


Uniform Load

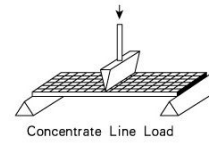
Deflection (mm) Span(mm)	Loading (kg/m)	250	500	750	1000	2000	2500	1% Deflection Load
600	0.19	0.38	0.569	0.759	1.518	1.898	---	7894
750	0.463	0.927	1.39	1.85	3.707	4.63	---	4049
900	0.961	1.922	2.88	3.84	7.687	---	---	2341
1050	1.78	3.56	5.34	7.12	---	---	---	1474
1200	3.037	6.073	9.11	---	---	---	---	987
1500	7.414	14.828	---	---	---	---	---	505

[100mm direction is the loading span]

***H40 Mesh Size 40×40**

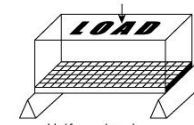


Panel Size(mm): 1527X4047
 Bar Thickness(Up/Down)mm: 7/5
 Weight (kg/m²): 21.43
 Open Area: 66%



Concentrate Line Load

Deflection (mm) Span(mm)	Loading (kg/m)	75	150	300	450	600	750	1% Deflection Load
600	0.276	0.55	1.105	1.658	2.2	2.76	---	1630
750	0.54	1.079	2.158	3.238	4.317	5.396	---	1041
900	0.93	1.865	3.73	5.594	7.459	---	---	724
1050	1.48	2.96	5.92	8.884	---	---	---	531
1200	2.21	4.42	8.84	---	---	---	---	407
1500	4.317	8.63	---	---	---	---	---	260

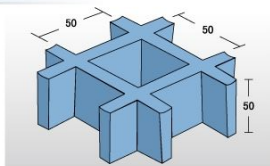


Uniform Load

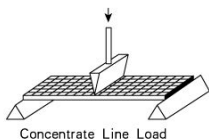
Deflection (mm) Span(mm)	Loading (kg/m)	250	500	1000	1500	2000	2500	1% Deflection Load
600	0.345	0.69	1.38	2.07	2.76	3.453	---	4347
750	0.84	1.686	3.37	5.059	6.745	---	---	2224
900	1.748	3.497	6.99	---	---	---	---	1287
1050	3.239	6.478	---	---	---	---	---	810
1200	5.525	11.5	---	---	---	---	---	542
1350	8.85	---	---	---	---	---	---	381

Chemical Resistance Guide for NANTONGRATE® FRP Molded Grating

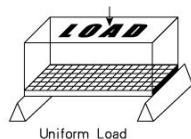
*H50 Mesh Size 50×50



Panel Size (mm): 1525X4000
 Bar Thickness (Up/Down)mm: 7.5/5
 Weight (kg/m²): 23.43
 Open Area: 71%

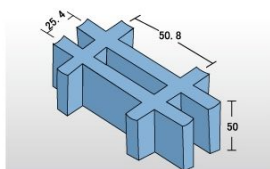


Deflection (mm) Span(mm)	Deflection (kg/m ²)	75	150	300	450	600	750	1% Deflection Load
900	0.597	1.19	2.387	3.58	4.77	5.967	7.16	1130
1200	1.414	2.829	5.658	8.487	11.316	14.145	17.0	636
1350	2.014	4.028	8.056	12.084	16.112	20.14	24.17	502
1500	2.76	5.525	11.05	16.575	22.1	27.6	33.1	407
1800	4.77	9.548	19.096	28.644	38.192	47.739	57.286	282

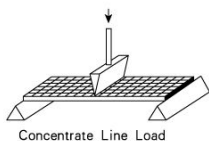


Deflection (mm) Span(mm)	Deflection (kg/m ²)	250	500	1000	1500	2000	1% Deflection Load
900	1.119	2.238	4.476	6.714	8.951	11.189	2010
1200	3.536	7.073	14.146	21.219	28.292	35.365	848
1350	5.665	11.329	22.658	33.987	45.316	56.645	595
1500	8.634	17.268	34.536	51.804	69.072	86.339	434
1800	17.903	35.806	71.612	107.418	143.224	179.03	251

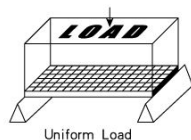
*H50 Mesh Size 25.4×50.8



Panel Size (mm): 1220X1830
 Bar Thickness (Up/Down)mm: 12&9.5/10&6
 Weight (kg/m²): 47.00
 Open Area: 48%



Deflection (mm) Span(mm)	Deflection (kg/m ²)	75	150	300	600	750	1500	1% Deflection Load
900	0.235	0.47	0.94	1.88	2.35	4.7	9.4	2872
1050	0.37	0.746	1.49	2.985	3.73	7.46	14.92	2111
1200	0.557	1.11	2.228	4.456	5.57	11.14	22.28	1615
1350	1.088	2.176	4.35	8.703	10.879	21.758	43.516	1034
1800	1.88	3.76	7.52	15.039	18.799	37.598	75.196	718



Deflection (mm) Span(mm)	Deflection (kg/m ²)	250	500	750	1000	2000	3000	1% Deflection Load
900	0.44	0.88	1.322	1.76	3.525	7.05	10.575	5102
1050	0.816	1.63	2.449	3.265	6.53	13.06	19.59	3216
1200	1.39	2.785	4.178	5.57	11.14	22.28	33.42	2153
1500	3.4	6.799	10.199	13.599	27.198	40.797	61.195	1102
1800	7.05	14	21	28	56	84	126	638

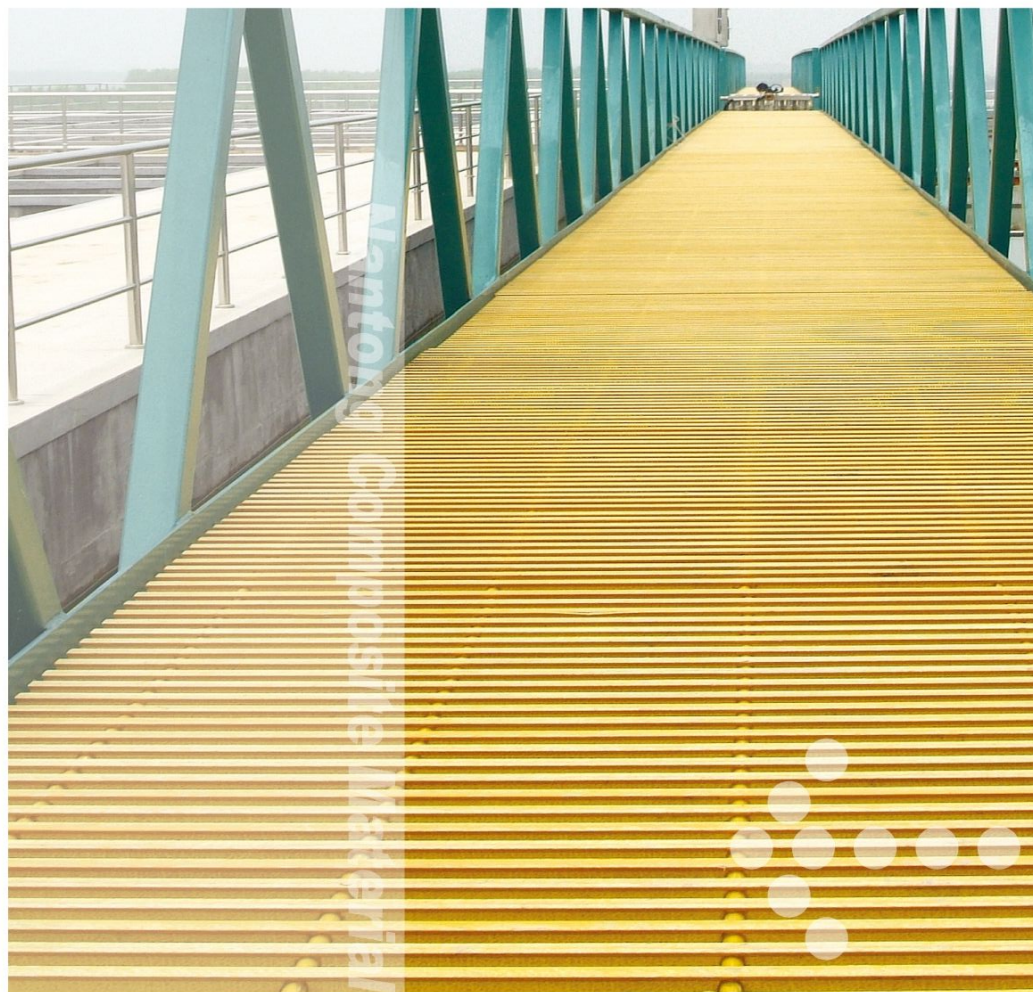
CHEMICAL	MAX. OPERATION TEMP (°C)					
	Concentration (%)	Ortho	Concentration (%)	Iso	Concentration (%)	Vinyl
Acetic Acid	7	77/25	50	125/52	50	180/82
Aluminum Hydroxide	ALL	--	100	160/71	100	180/82
Ammonium Chloride	ALL	--	ALL	170/77	ALL	210/99
Ammonium Bicarbonate	ALL	--	15	125/52	50	160/70
Ammonium Hydroxide	ALL	N/R	28	N/R	28	100/38
Ammonium Sulfate	ALL	--	ALL	170/77	ALL	210/99
Benzene	ALL	N/R	ALL	N/R	ALL	N/R
Benzoic Acid	ALL	77/25	SAT	150/66	SAT	210/99
Borax	ALL	--	SAT	170/77	SAT	210/99
Calcium Carbonate	ALL	--	ALL	170/77	ALL	180/82
Calcium Nitrate	ALL	--	ALL	180/82	ALL	210/99
Carbon Tetrachloride	100	N/R	1000	N/R	100	150/65
Chlorine Water	SAT	N/R	SAT	80/27	SAT	200/93
Citric Acid	ALL	77/25	ALL	170/77	ALL	210/99
Copper Chloride	ALL	104/40	ALL	170/77	ALL	210/99
Copper Cyanide	ALL	77/25	ALL	170/77	ALL	210/99
Copper Nitrate	ALL	--	ALL	170/77	ALL	210/99
Ferric Chloride	ALL	104/40	ALL	170/77	ALL	210/99
Ferrous Chloride	ALL	86/30	ALL	170/77	ALL	210/99
Formaldehyde	25	--	50	75/24	ALL	150/65
Gasoline	100	77/25	100	80/27	100	180/82
Glucose	ALL	--	100	170/77	100	210/99
Glycerin	100	--	100	150/66	100	210/99
Lithium Chloride	ALL	--	SAT	150/66	SAT	210/99
Magnesium Chloride	ALL	104/40	ALL	170/77	ALL	210/99
Magnesium Nitrate	ALL	86/30	ALL	140/60	ALL	210/99
Magnesium Sulfate	ALL	104/40	ALL	170/77	ALL	210/99
Mercuric Chloride	100	104/40	100	150/66	100	210/99
Mercurous Chloride	ALL	104/40	ALL	140/50	ALL	210/99
Nickel Chloride	ALL	104/40	ALL	170/77	ALL	210/99
Nickel Sulfate	ALL	104/40	ALL	170/77	ALL	210/99
Nitric Acid	20	N/R	20	70/21	20	120/49
Oxalic Acid	ALL	N/R	ALL	75/24	ALL	210/99
Potassium Chloride	ALL	104/40	ALL	170/77	ALL	210/99
Potassium Dichromate	ALL	77/25	ALL	170/77	ALL	210/99
Potassium Nitrate	ALL	104/40	ALL	170/77	ALL	210/99
Potassium Sulfate	ALL	104/40	ALL	170/77	ALL	210/99
Propylene Glycol	ALL	104/40	ALL	170/77	ALL	210/99
Sodium Cyanide	5	N/R	ALL	170/77	ALL	210/99
Sodium Nitrate	ALL	104/40	ALL	170/77	ALL	210/99
Sodium Chloride	ALL	104/44	ALL	160/71	ALL	210/99
Vinegar	ALL	--	100	170/77	100	210/99
Zinc Nitrate	ALL	104/40	ALL	170/77	ALL	210/99

Note : ALL---Concentrations ; SAT---Saturated Solution ;
 N/R---Not Recommended ; -- No Information Available.
 The above information is for reference only.

Molded Grating Application



Pultruded Grating

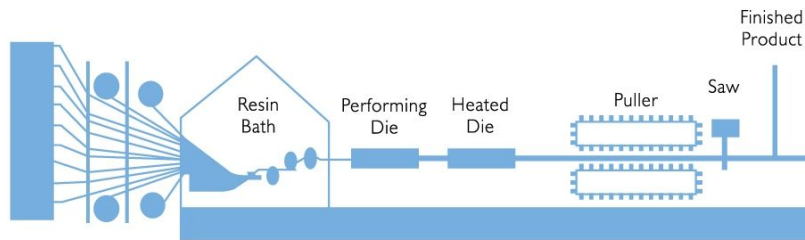


Pultruded Grating Process

Pultrusion is a continuous process using fiber reinforcements with thermosetting resin matrices.

Pre-selected reinforcement materials, such as fiberglass roving, mat, woven fabrics or stitched fabric, are drawn through a resin bath in which all material is thoroughly impregnated with a liquid thermosetting resin. Typical resins include polyesters, vinyl esters and phenolics.

The wet-out fiber is formed to the desired geometric shape and pulled into a heated steel die. Once inside the die, the resin cure is initiated by controlling precise elevated temperature. The laminate solidifies in the exact cavity shape of the die, as it is continuously pulled by the pultrusion machine. Most any constant cross-section part can be pultruded.



Feature

- ※ Superior Strength and Stiffness
- ※ Corrosion Resistant
- ※ Unidirectional Load Bearing
- ※ Easy to fabricate

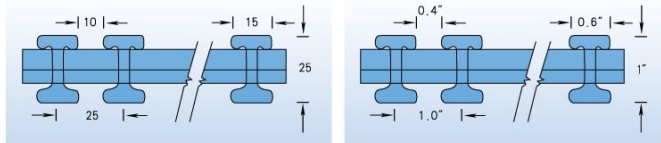
NANTONGRATE® FRP PULTRUDED GRATING

Specification of Pultruded Grating (in mm)

ITEM	Type	Height (mm)	Pultrusion Size (Top/Bottom)mm	WEIGHT (kg/m ²)	Open Area
1	I-4010	25	15/15	17.85	40%
2	I-5010	25	15/15	15.12	50%
3	I-6010	25	15/15	12.4	60%
4	I-40125	32	15/15	19.1	40%
5	I-50125	32	15/15	17.4	50%
6	I-60125	32	15/15	13.5	60%
7	I-4015	38	15/15	22.45	40%
8	I-5015	38	15/15	19.1	50%
9	I-6015	38	15/15	16.1	60%
10	T-1210	25	38/15	14.5	12%
11	T-1810	25	38/15	14	18%
12	T-3310	25	38/15	12.2	33%
13	T-3810	25	38/15	11.2	38%
14	T-3320	50	25/15	22.1	33%
15	T-5020	50	25/15	17.5	50%
16	I-40275	70	15/15	34	40%
17	I-50275	70	15/15	29	50%
18	I-60275	70	15/15	23.6	60%

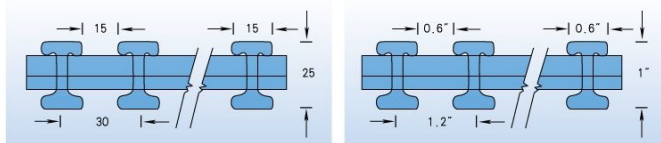
Pultruded Grating

* ITEM NO 1



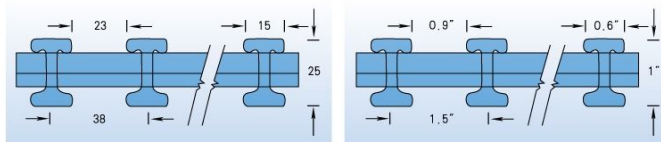
	14010	14010
# of bar / ft	12	12
Load bar	25mm	1"
Open area	40%	40%
Approx. weight	17.85 kg/sqm	3.65 lbs/sqft

* ITEM NO 2



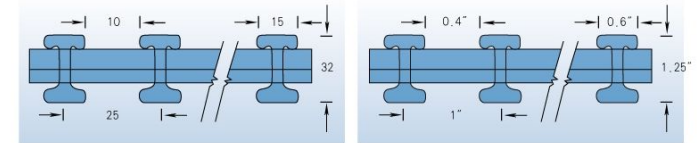
	15010	15010
# of bar / ft	10	10
Load bar	25mm	1"
Open area	50%	50%
Approx. weight	15.12 kg/sqm	3.09 lbs/sqft

* ITEM NO 3



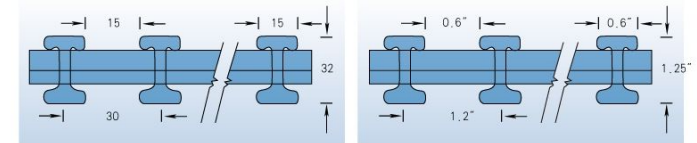
	16010	16010
# of bar / ft	8	8
Load bar	25mm	1"
Open area	60%	60%
Approx. weight	12.40 kg/sqm	2.53 lbs/sqft

* ITEM NO 4



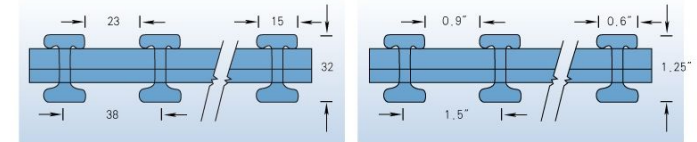
	140125	140125
# of bar / ft	12	8
Load bar	32mm	1.25"
Open area	40%	40%
Approx. weight	19.1 kg/sqm	3.9 lbs/sqft

* ITEM NO 5



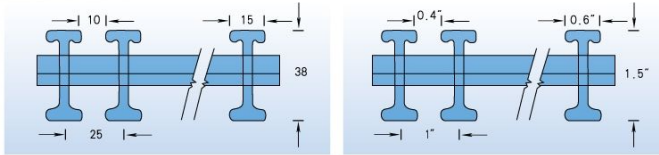
	50125	50125
# of bar / ft	10	10
Load bar	32mm	1.25"
Open area	50%	50%
Approx. weight	17.4 kg/sqm	3.58 lbs/sqft

* ITEM NO 6



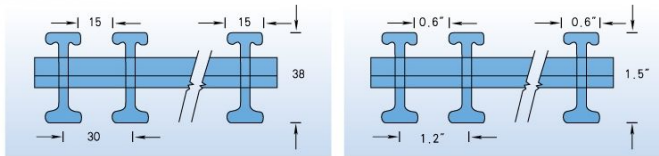
	60125	60125
# of bar / ft	8	8
Load bar	32mm	1.25"
Open area	60%	60%
Approx. weight	13.5 kg/sqm	2.78 lbs/sqft

* ITEM NO 7



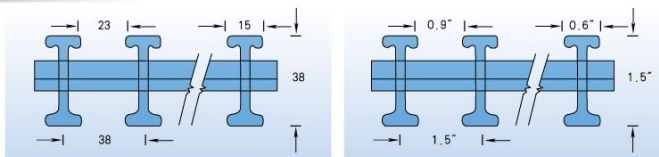
	I4015	I4015
# of bar / ft	12	12
Load bar	38mm	1.5"
Open area	40%	40%
Approx. weight	22.45 kg/sqm	4.59 lbs/sqft

* ITEM NO 8



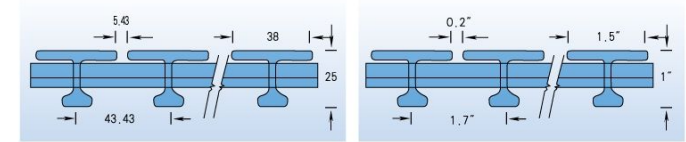
	I5015	I5015
# of bar / ft	10	10
Load bar	38mm	1.5"
Open area	50%	50%
Approx. weight	19.10 kg/sqm	3.90 lbs/sqft

* ITEM NO 9



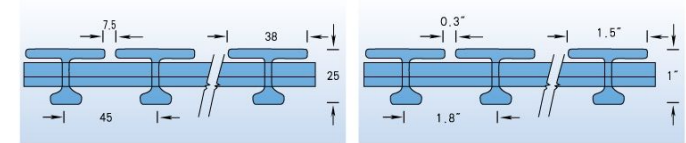
	I6015	I6015
# of bar / ft	8	8
Load bar	38mm	1.5"
Open area	60%	60%
Approx. weight	16.10 kg/sqm	3.29 lbs/sqft

* ITEM NO 10



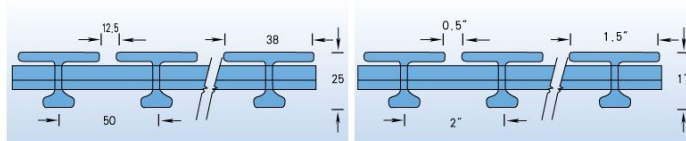
	T1210	T1210
# of bar / ft	7	7
Load bar	25mm	1"
Open area	12%	12%
Approx. weight	14.50 kg/sqm	2.96 lbs/sqft

* ITEM NO 11



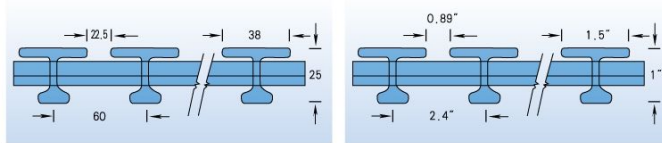
	T1810	T1810
# of bar / ft	6	6
Load bar	25mm	1"
Open area	18%	18%
Approx. weight	14.00 kg/sqm	2.86 lbs/sqft

* ITEM NO 12



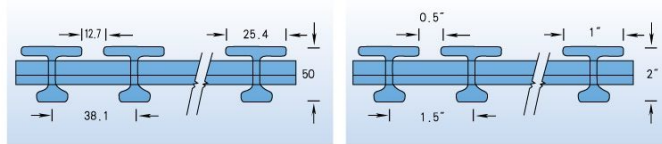
	T3310	T3310
# of bar / ft	5	5
Load bar	25mm	1"
Open area	33%	33%
Approx. weight	12.20 kg/sqm	2.49 lbs/sqft

* ITEM NO 13



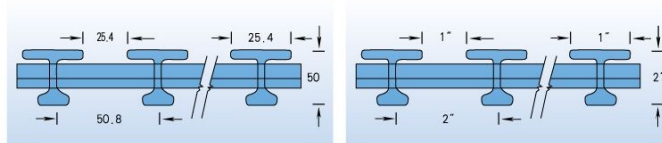
	T3810	T3810
# of bar / ft	5	5
Load bar	25mm	1"
Open area	38%	38%
Approx. weight	11.20 kg/sqm	2.30 lbs/sqft

* ITEM NO 14



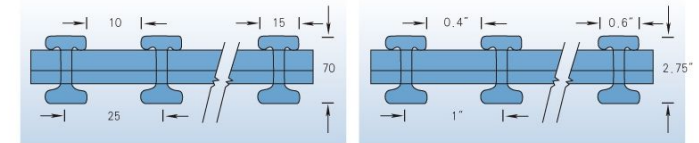
	T3320	T3320
# of bar / ft	8	8
Load bar	50mm	2"
Open area	33%	33%
Approx. weight	22.10 kg/sqm	4.51 lbs/sqft

* ITEM NO 15



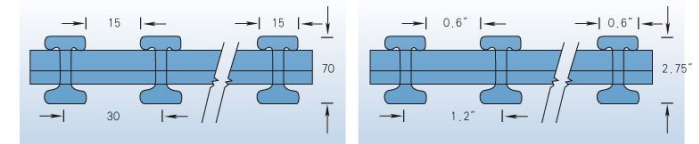
	T5020	T5020
# of bar / ft	6	6
Load bar	50mm	2"
Open area	50%	50%
Approx. weight	17.50 kg/sqm	3.58 lbs/sqft

* ITEM NO 16



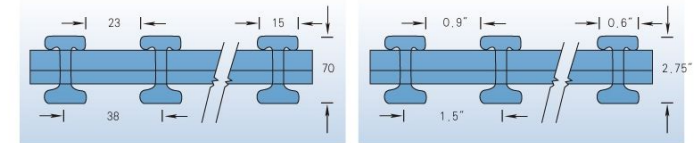
	I40275	I40275
# of bar / ft	12	12
Load bar	70mm	2.75"
Open area	40%	40%
Approx. weight	34kg/sqm	7.00 lbs/sqft

* ITEM NO 17



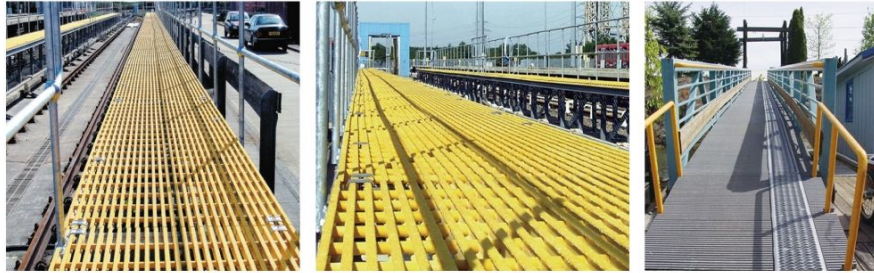
	I50275	I50275
# of bar / ft	10	10
Load bar	70mm	2.75"
Open area	50%	50%
Approx. weight	29 kg/sqm	5.98 lbs/sqft

* ITEM NO 18



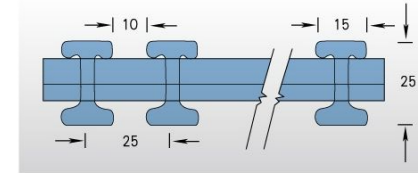
	I60275	I60275
# of bar / ft	8	8
Load bar	70mm	2.75"
Open area	60%	60%
Approx. weight	23.6 kg/sqm	4.78 lbs/sqft

Pultruded Grating Application

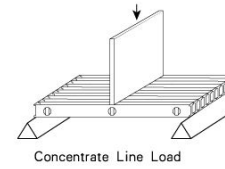


Pultruded Grating

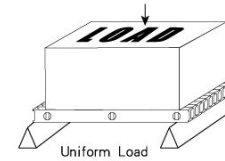
*|—4010



Thickness (mm): 25
Open Area: 40%
Weight (kg/m²): 17.85

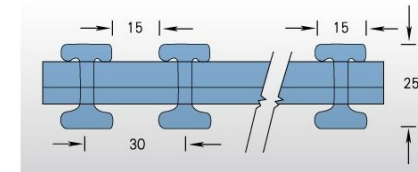


Deflection (mm) / Span (mm)	Loading (kg/m)	75	150	300	600	750	2000	1% Deflection Load
600	0.167	0.335	0.67	1.34	1.675	4.466	2694	
900	0.565	1.13	2.26	4.522	5.652	---	1194	
1200	1.34	2.68	5.369	10.718	---	---	671	
1500	2.617	5.233	10.467	---	---	---	429	

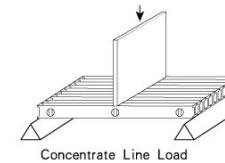


Deflection (mm) / Span (mm)	Loading (kg/m)	250	500	750	1000	1500	2000	1% Deflection Load
600	0.209	0.419	0.628	0.837	1.256	1.675	7177	
900	1.06	2.12	3.179	4.239	6.359	8.478	2122	
1200	3.349	6.699	10.048	---	---	---	895	
1500	8.117	---	---	---	---	---	458	

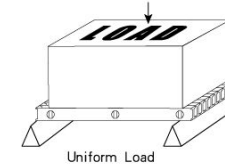
*|—5010



Thickness (mm): 25
Open Area: 50%
Weight (kg/m²): 15.12

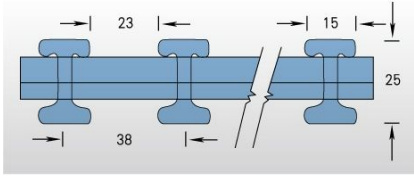


Deflection (mm) / Span (mm)	Loading (kg/m)	75	150	300	600	750	1000	1% Deflection Load
600	0.197	0.39	0.788	1.576	1.97	2.627	2284	
900	0.665	1.33	2.66	5.32	6.65	8.866	1015	
1200	1.576	3.15	6.305	---	---	---	571	
1500	3.079	6.157	12.314	---	---	---	365	

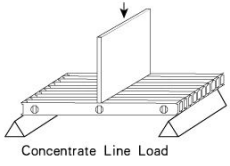


Deflection (mm) / Span (mm)	Loading (kg/m)	250	500	750	1000	1500	2000	1% Deflection Load
600	0.246	0.49	0.739	0.985	1.478	1.97	6097	
900	1.247	2.49	3.74	4.987	7.481	---	1804	
1200	3.94	7.88	11.822	---	---	---	761	
1500	9.62	---	---	---	---	---	389	

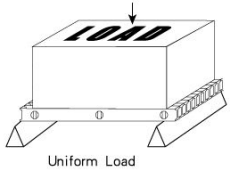
***I—6010**



Thickness (mm): 25
Open Area: 60%
Weight (kg/m²): 12.4

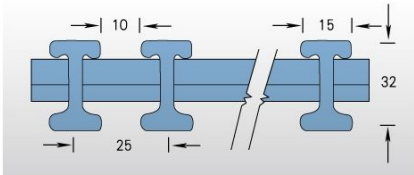


Deflection (mm) \ Span (mm) \ Loading (kg/m)	75	150	300	450	600	750	1% Deflection Load
600	0.248	0.496	0.99	1.489	1.985	2.48	1814
900	0.837	1.675	3.349	5.024	6.699	8.374	806
1200	1.985	3.97	7.939	11.909	---	---	453
1500	3.877	7.75	---	---	---	---	290

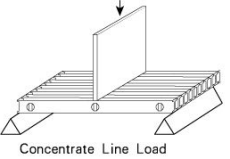


Deflection (mm) \ Span (mm) \ Loading (kg/m)	250	500	750	1000	1500	2000	1% Deflection Load
600	0.3	0.62	0.93	1.24	1.86	2.48	4838
900	1.57	3.14	4.71	6.28	---	---	1433
1200	4.96	9.924	---	---	---	---	604
1500	12.115	---	---	---	---	---	309

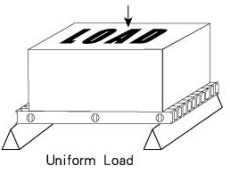
***I—40125**



Thickness (mm): 32
Open Area: 40%
Weight (kg/m²): 19.1

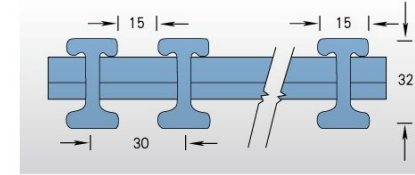


Deflection (mm) \ Span (mm) \ Loading (kg/m)	75	150	300	600	1000	2000	1% Deflection Load
600	0.088	0.175	0.35	0.701	1.168	2.336	5113
900	0.296	0.59	1.183	2.365	3.942	7.884	2280
1200	0.701	1.402	2.803	5.606	9.344	---	1283
1500	1.369	2.737	5.475	10.95	---	---	821

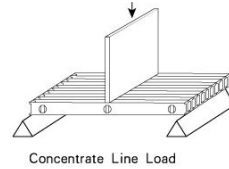


Deflection (mm) \ Span (mm) \ Loading (kg/m)	250	500	750	1000	1500	2000	1% Deflection Load
600	0.109	0.219	0.328	0.438	0.657	0.876	13761
900	0.554	1.109	1.66	2.217	3.326	4.435	4061
1200	1.752	3.504	5.256	7.008	10.512	---	1712
1500	4.277	8.544	12.83	---	---	---	876

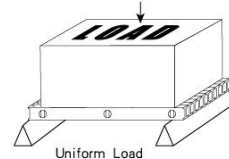
***I—50125**



Thickness (mm): 32
Open Area: 50%
Weight (kg/m²): 17.4

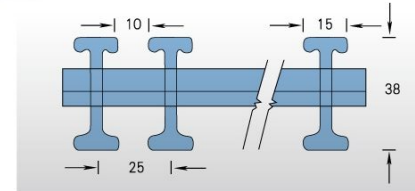


Deflection (mm) \ Span (mm) \ Loading (kg/m)	75	150	300	600	1000	1500	1% Deflection Load
600	0.103	0.206	0.412	0.82	1.374	2.06	4368
900	0.348	0.696	1.39	2.78	4.637	6.956	1939
1200	0.824	1.649	3.298	6.596	10.99	---	1092
1500	1.61	3.22	6.44	12.88	---	---	698

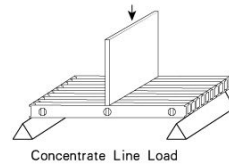


Deflection (mm) \ Span (mm) \ Loading (kg/m)	250	500	750	1000	1500	2000	1% Deflection Load
600	0.129	0.258	0.386	0.515	0.775	1.03	11627
900	0.652	1.304	1.956	2.609	3.913	5.217	3450
1200	2.06	4.122	6.183	8.244	---	---	1455
1500	5.03	10.064	---	---	---	---	745

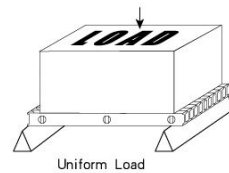
***I—4015**



Thickness (mm): 38
Open Area: 40%
Weight (kg/m²): 22.45

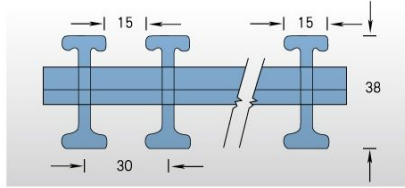


Deflection (mm) \ Span (mm) \ Loading (kg/m)	75	150	300	600	1000	1500	1% Deflection Load
900	0.197	0.393	0.786	1.57	2.62	3.93	3426
1200	0.466	0.93	1.863	3.726	6.21	9.316	1931
1500	0.91	1.819	3.639	7.278	12.13	---	1236
1800	1.57	3.14	6.289	12.576	---	---	858
2000	2.156	4.31	8.626	17.25	---	---	695

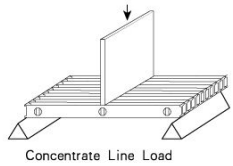


Deflection (mm) \ Span (mm) \ Loading (kg/m)	250	500	750	1000	1500	2000	1% Deflection Load
900	0.368	0.737	1.105	1.474	2.21	2.948	6114
1200	1.164	2.329	3.49	4.658	6.987	9.316	2577
1500	2.84	5.686	8.529	11.372	---	---	1319

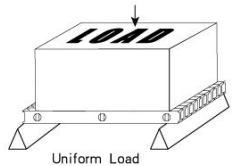
***I—5015**



Thickness(mm): 38
Open Area: 50%
Weight(kg/m²): 19.1



Concentrate Line Load

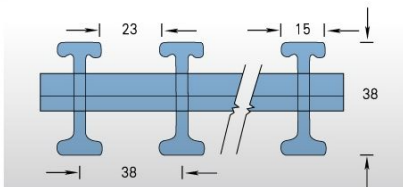


Uniform Load

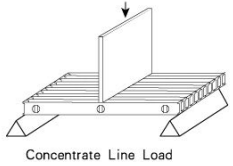
Deflection (mm) / Span(mm)	Loading (kg/m)	150	300	600	1000	1500	2500	1% Deflection Load
900		0.462	0.925	1.849	3.08	4.624	7.706	2922
1200		1.096	2.192	4.384	7.307	10.96	---	1642
1500		2.14	4.28	8.562	14.27	---	---	1051
1800		3.699	7.398	14.796	---	---	---	730

Deflection (mm) / Span(mm)	Loading (kg/m ²)	250	500	750	1000	1500	2000	1% Deflection Load
600		0.086	0.17	0.257	0.34	0.514	0.685	17441
900		0.433	0.867	1.3	1.734	2.601	3.468	5196
1200		1.37	2.74	4.11	5.48	8.22	10.96	2189
1500		3.345	6.689	10.03	13.379	---	---	1121

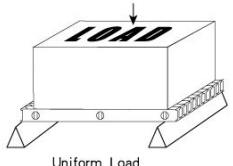
***I—6015**



Thickness(mm): 38
Open Area: 60%
Weight(kg/m²): 16.1



Concentrate Line Load

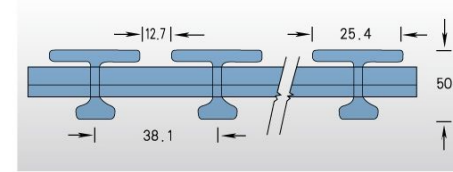


Uniform Load

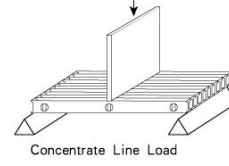
Deflection (mm) / Span(mm)	Loading (kg/m)	150	300	450	600	1000	2000	1% Deflection Load
600		0.173	0.345	0.518	0.69	1.15	0.86	5232
900		0.58	1.164	1.747	2.329	3.88	4.367	2319
1200		1.38	2.76	4.14	5.52	9.201	---	1304
1500		2.696	5.39	8.087	10.78	---	---	834
1800		4.658	9.316	13.97	---	---	---	579

Deflection (mm) / Span(mm)	Loading (kg/m ²)	250	500	750	1000	1500	2000	1% Deflection Load
600		0.108	0.216	0.32	0.43	0.647	0.86	13888
900		0.546	1.09	1.638	2.18	3.275	4.367	4120
1200		1.725	3.45	5.175	6.931	10.35	---	1739
1500		4.21	8.42	12.635	---	---	---	890

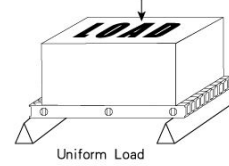
***T—3320**



Thickness(mm): 50
Open Area: 33%
Weight(kg/m²): 22.1



Concentrate Line Load

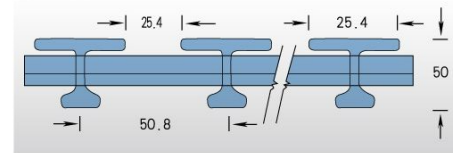


Uniform Load

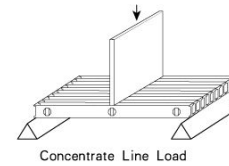
Deflection (mm) / Span(mm)	Loading (kg/m)	300	600	1000	1500	2000	2500	1% Deflection Load
900		0.485	0.97	1.617	2.425	3.234	4.04	5578
1200		1.15	2.3	3.833	5.749	7.665	9.58	3135
1500		2.246	4.49	7.486	11.229	14.97	---	2005
2000		5.32	10.646	17.74	---	---	---	1126
2500		10.397	20.79	---	---	---	---	721

Deflection (mm) / Span(mm)	Loading (kg/m ²)	250	500	1000	1500	2000	2500	1% Deflection Load
900		0.227	0.455	0.9	1.36	1.819	2.27	9911
1200		0.719	1.437	2.87	4.31	5.749	7.186	4172
1500		1.75	3.509	7.018	10.527	14.036	---	2137
2000		5.545	11.09	---	---	---	---	901

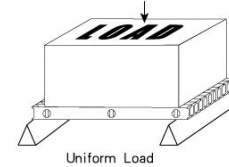
***T—5020**



Thickness(mm): 50
Open Area: 50%
Weight(kg/m²): 17.5



Concentrate Line Load



Uniform Load

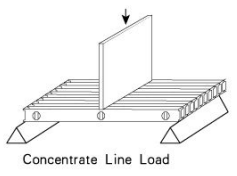
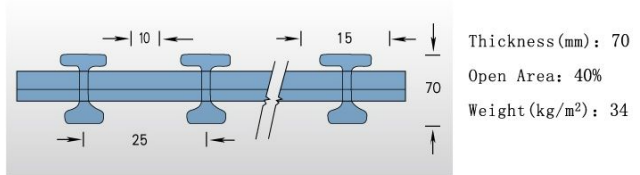
Deflection (mm) / Span(mm)	Loading (kg/m)	150	300	600	1000	1500	2000	1% Deflection Load
900		0.327	0.655	1.31	2.18	3.27	4.365	4115
1200		0.776	1.55	3.104	5.17	7.76	10.348	2319
1500		1.516	3.03	6.06	10.106	---	---	1484
1800		2.619	5.239	10.478	17.46	---	---	1030
2000		3.59	7.186	14.37	---	---	---	834

Deflection (mm) / Span(mm)	Loading (kg/m ²)	250	500	1000	1500	2000	2500	1% Deflection Load
900		0.307	0.614	1.228	1.84	2.456	3.07	7328
1200		0.97	1.94	3.88	5.82	7.76	9.701	3092
1500		2.369	4.737	9.47	14.21	---	---	1582
1800		4.91	9.82	---	---	---	---	916
2000		7.486	14.97	---	---	---	---	667

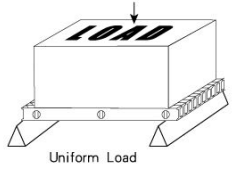
Chemical Resistance Guide

for NANTONGRATE® Pultruded Grating

***I—40275**

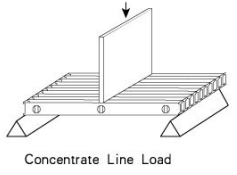
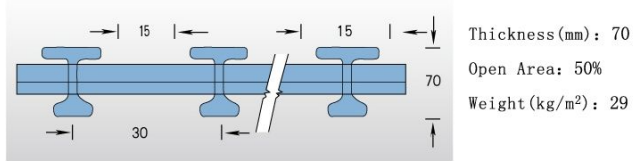


Deflection (mm) / Span (mm)	300	600	1000	1500	2500	3000	1% Deflection Load
1500	0.691	1.382	2.304	3.456	5.76	6.912	6502
2000	0.671	1.342	5.461	8.192	13.645	16.38	3658
2500	3.20	6.40	10.667	16.00	---	---	2343
3000	5.53	11.06	18.433	27.649	---	---	1628

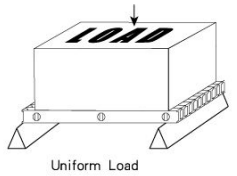


Deflection (mm) / Span (mm)	250	500	1000	1500	2000	3000	1% Deflection Load
1500	0.54	1.08	2.16	3.24	4.32	6.48	6944
2000	1.707	3.41	6.827	10.24	13.654	---	2929
2500	4.167	8.33	16.667	---	---	---	1499
3000	8.64	17.28	---	---	---	---	868
4000	27.3	---	---	---	---	---	366

***I—50275**



Deflection (mm) / Span (mm)	150	300	600	1500	2000	2500	1% Deflection Load
1200	0.208	0.416	0.833	2.082	2.776	3.47	8653
1500	0.407	0.813	1.626	4.066	5.421	6.777	5528
2000	0.967	1.928	3.855	9.638	12.85	16.063	3112
3000	3.253	6.506	13.01	---	---	---	1383



Deflection (mm) / Span (mm)	250	500	1000	1500	2000	3000	1% Deflection Load
1200	0.26	0.52	1.04	1.56	2.082	3.12	11538
1500	0.635	1.27	2.54	3.81	5.083	7.62	5905
1800	1.317	2.635	5.27	7.904	10.539	15.808	3416
2000	2.008	4.016	8.03	12.047	16.063	---	2490
3000	10.165	20.33	---	---	---	---	737

CHEMICAL	MAX. OPERATION TEMP (°C)					
	Concentration (%)	Ortho	Concentration (%)	Iso	Concentration (%)	Vinyl
Acetic Acid	5	77/25	50	125/52	50	180/82
Aluminum Hydroxide	ALL	--	100	160/71	100	180/82
Ammonium Chloride	ALL	--	ALL	170/77	ALL	210/99
Ammonium Bicarbonate	ALL	--	15	125/52	50	160/70
Methacrylic Acid	--	--	--	--	99	95/35
Ammonium Hydroxide	ALL	N/R	28	N/R	28	100/38
Ammonium Sulfate	ALL	--	ALL	170/77	ALL	210/99
Benzene	ALL	N/R	ALL	N/R	100	92/40
Benzoic Acid	ALL	77/25	SAT	150/66	SAT	210/99
Borax	SAT	113/45	SAT	170/77	SAT	210/99
Calcium Carbide	ALL	--	ALL	170/77	ALL	180/82
Calcium Nitrate	ALL	--	ALL	180/82	ALL	210/99
Carbon Tetrachloride	100	N/R	1000	N/R	100	92/40
Chlorine, Dry Gas	--	N/R	--	140/60	--	210/99
Chlorine Water	SAT	N/R	SAT	80/27	SAT	200/93
Chromic Acid	5	N/R	5	70/21	10	150/65
Citric Acid	ALL	77/25	ALL	170/77	ALL	210/99
Copper Chloride	ALL	104/40	ALL	170/77	ALL	210/99
Copper Cyanide	ALL	77/25	ALL	170/77	ALL	210/99
Copper Nitrate	ALL	--	ALL	170/77	ALL	210/99
Ethanol	10	77/25	50	75/24	50	90/32
Ethylene Glycol	100	75/24	100	90/32	100	200/93
Hydrofluoric Acid	--	--	--	--	10	149/65
Ferric Chloride	ALL	104/40	ALL	170/77	ALL	210/99
Ferrous Chloride	ALL	86/30	ALL	170/77	ALL	210/99
Formaldehyde	25	86/30	50	75/24	ALL	100/38
Gasoline	100	75/24	100	95/35	100	180/82
Glucose	ALL	--	100	170/77	100	210/99
Glycerine	100	--	100	150/66	100	210/99
Hydrobromic Acid	18	--	50	120/49	50	150/65
Hydrochloric Acid	10	86/30	37	75/24	37	150/65
Hydrogen Peroxide	5	N/R	5	100/38	30	150/65
Lactic Acid	ALL	77/25	ALL	170/77	ALL	210/99
Lithium Chloride	ALL	--	SAT	150/66	SAT	210/99

Chemical Resistance Guide

for NANTONGRATE® Pultruded Grating

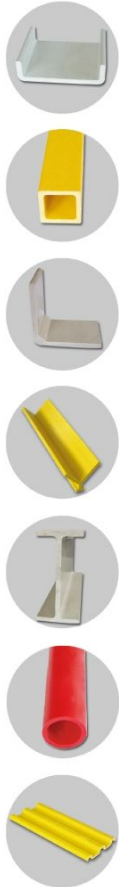
CHEMICAL	MAX. OPERATION TEMP (°C)					
	Concentration (%)	Ortho	Concentration (%)	Iso	Concentration (%)	Vinyl
Magnesium Chloride	ALL	104/40	ALL	170/77	ALL	210/99
Magnesium Nitrate	ALL	86/30	ALL	140/60	ALL	210/99
Magnesium Sulfate	ALL	104/40	ALL	170/77	ALL	210/99
Mercuric Chloride	100	104/40	100	150/66	100	210/99
Mercurous Chloride	ALL	104/40	ALL	140/60	ALL	210/99
Nickel Chloride	ALL	104/40	ALL	170/77	ALL	210/99
Nickel Sulfate	ALL	104/40	ALL	170/77	ALL	210/99
Nitric Acid	20	N/R	20	70/21	20	130/54
Oxalic Acid	ALL	N/R	ALL	75/24	ALL	210/99
Perchloric Acid	10	N/R	10	N/R	30	100/38
Phosphoric Acid	80	N/R	100	120/49	100	210/99
Potassium Chloride	ALL	104/40	ALL	170/77	ALL	210/99
Potassium Dichromate	ALL	77/25	ALL	170/77	ALL	210/99
Potassium Nitrate	ALL	104/40	ALL	170/77	ALL	210/99
Potassium Sulfate	ALL	104/40	ALL	170/77	ALL	210/99
Propylene Glycol	ALL	104/40	ALL	170/77	ALL	210/99
Sodium Acetate	ALL	104/40	ALL	160/71	ALL	210/99
Sodium Bisulfate	ALL	--	ALL	170/77	ALL	210/99
Sodium Bromide	5	--	ALL	170/77	ALL	210/99
Sodium Cyanide	5	N/R	ALL	170/77	ALL	210/99
Sodium Hydroxide	N/R	N/R	N/R	N/R	25	180/82
Sodium Nitrate	ALL	104/40	ALL	170/77	ALL	210/99
Sodium Sulfate	ALL	104/40	ALL	170/77	ALL	210/99
Sodium Chloride	ALL	104/44	ALL	160/71	ALL	210/99
Tartaric Acid	ALL	--	ALL	170/77	ALL	210/99
Vinegar	ALL	--	100	170/77	100	210/99
Methanol	N/R	N/R	N/R	N/R	10	183/84
Sea Water	ALL	113/45	ALL	158/70	ALL	210/99
Water, Distilled	ALL	86/30	100	170/77	100	180/82
Zinc Nitrate	ALL	104/40	ALL	170/77	ALL	210/99
Zinc Sulfate	ALL	104/40	ALL	170/77	ALL	210/99

Profiles



The frp profiles are made by the Pultrusion process in which the glass reinforcement fibre is impregnated with thermosetting resin and pulled through a heated die to produce a fully cured, high strength finished profile. They have the features of corrosion resistant, light weight and high strength, Lower maintenance, dimensional stable and environment friendly. FRP profiles include tubes, rod, channel, beams, angle, plate and custom made shapes. Products have also found widely application in various area such as platform, handrail system, structures etc.

Specification

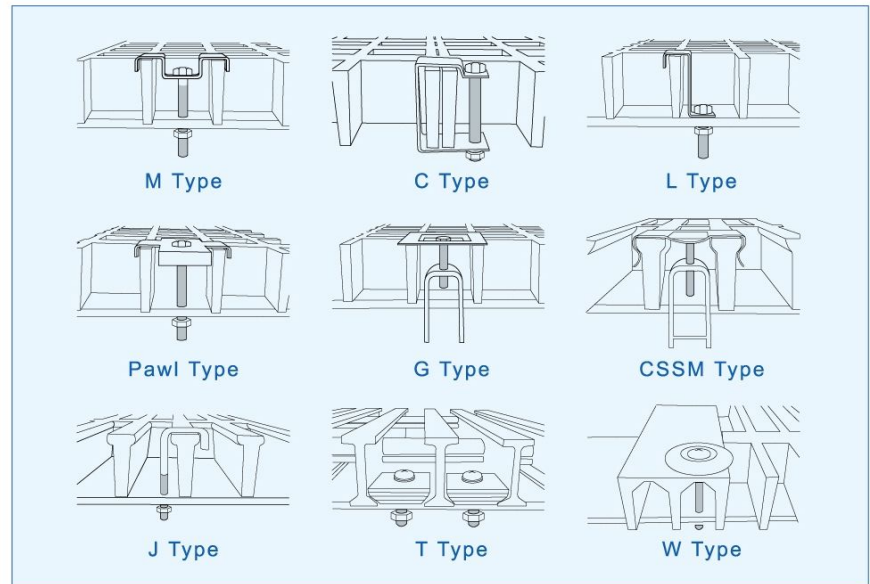


ITEM	SIZE(MM)	WEIGHT (kg/m)
CHANNEL	152×41.2×6.4	2.55
	203.2×55.6×9.5	4.98
SQUARE TUBE	42×4	1.12
	42×5	1.5
	50.8×4	1.4
	50.8×5	1.66
	76×4	2.13
	76×5	2.63
ANGLE	100×6	4.18
	50×50×6.4	1.2
	76.2×76.2×9.5	2.5
"Y"BAR	76.2×76.2×12.7	3.14
	38×25×6.35	1.33
I BEAM	38×50×6.35	1.63
	152×152×6.4	5.3
ROUND TUBE	254×127×12.7	11.33
	32×3	0.5
	32×4	0.65
	32×5	0.84
	50×3	0.8
	50×4	1.01
"Ω"	50×5	1.31
	76×3	1.26
KICKPLATE	76.2×50.8×5	1.34
	102×13.5×3	0.72

※ Other FRP Products



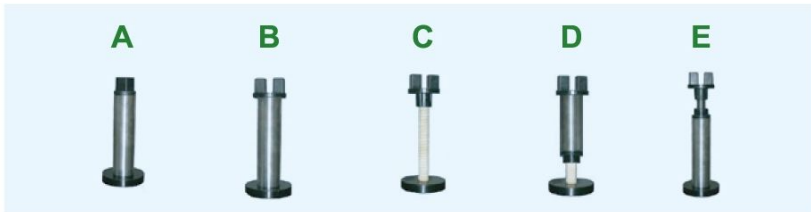
※ Clips



※ Pedestal



Specially designed legs for 1-1/2" deep, 1.5" x 1.5" square mesh molded grating are manufactured to provide sturdy support for elevated flooring. All fixed-height and adjustable legs support flooring for heights up to 60 inches. (Cross bracing is required for flooring elevated more than 24 inches.)



A: Fixed-height legs /single head - For supporting grating up to 60" above level concrete floor.

B: Fixed-height legs /double heads - For connecting adjoining panels.

C: Adjustable-height mini legs - For raising grating 2-3/4" to 9" above uneven concrete floor.

D: Adjustable-height legs /single head - For uneven floors designed to be screw-adjusted from atop the elevated floor.

E: Adjustable-height legs /double heads - For joining and supporting panels above non-level concrete floor.

※ Cutting / Fabrication

Safety: To ensure personal safety in cutting / sanding / fabrication at the same time to guarantee the quality.

Before cutting, to check all the cutting / sanding tools, to make sure they are safe to use;

To have proper protection facilities, such as gauges, mask, safety boots etc;

To have vacuum and ventilation system to get rid of the dusk while cutting / sanding, to clean up the surface after cutting / sanding as well;

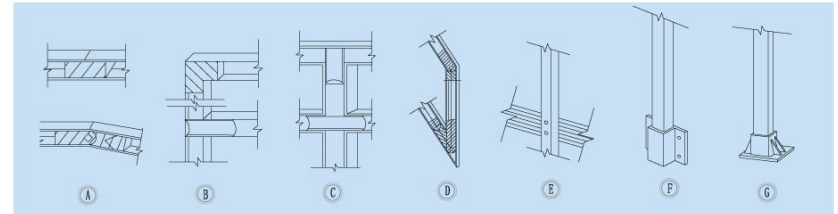
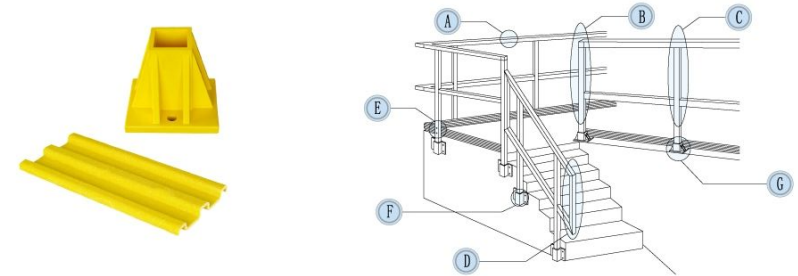
To ensure the variance is between $\pm 3\text{mm}$, or according to projects;

All cutting edges / sanding surfaces have to be seal with higher level resin.

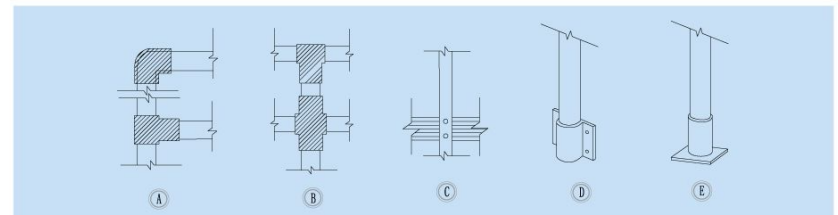
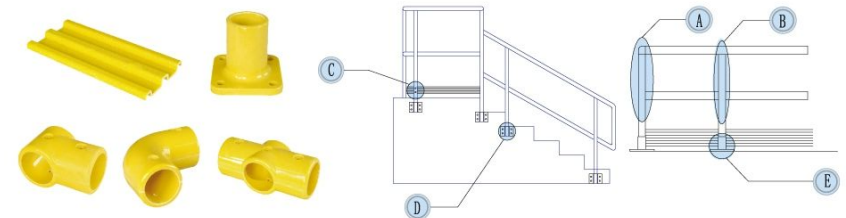
※ Handrail System

Handrail is used in walkways and platforms for safe, maintenance free worker access. Mostly common handrails are square tube and round tube.

SQUARE TUBE HANDRAIL:



ROUND TUBE HANDRAIL:



Handrail Application



Other Application

Industrial application

Nantongrate® grating have been widely used in various industrial section, including chemical plant, pharmaceutical plant, water / waste water treatment plant, offshore projects etc.



Commercial application

Nantongrate® grating have also been used in commercial area, such as water front walkway marina, gas station, aquarium, such and such.



Residential application

Residential application has also been seen. Attached is the award winning Chimney-pots Urban Housing Redevelopment Scheme, a leading urban renewal project in the North-west UK.

