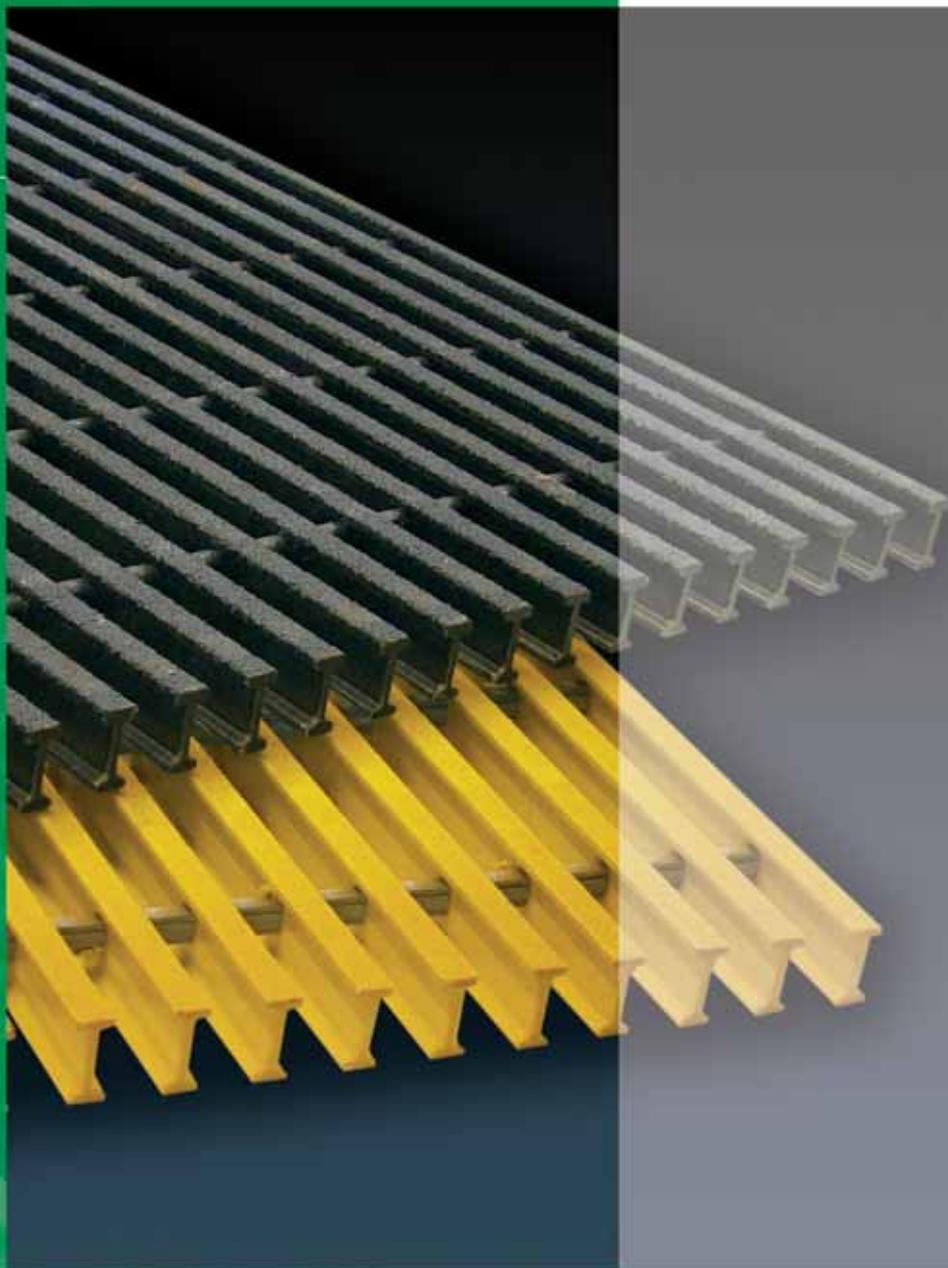


 EUROGRATE

GRATINGS

EUROGRATE®
FIBERGLASS
PULTRUDED
GRATINGS

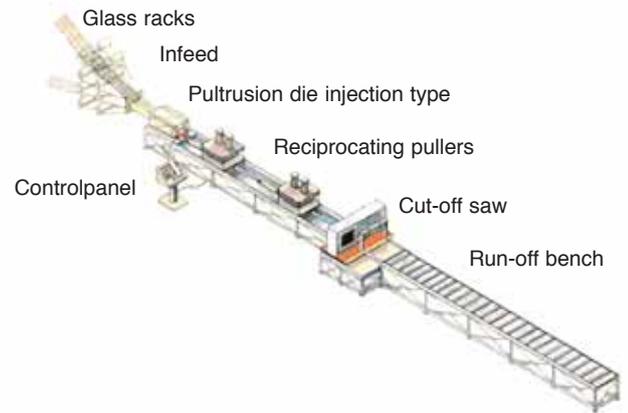


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&
PROMACO

FEATURES & BENEFITS

WHAT IS PULTRUSION

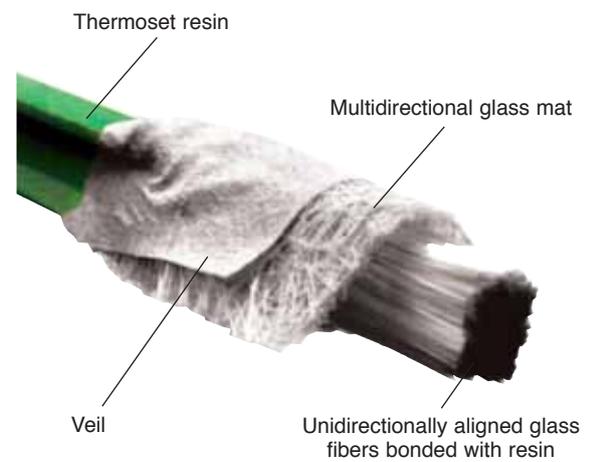
"Pultrusion" is a continuous molding process in which fiberglass longitudinal roving, multidirectional mat and a synthetic surfacing veil are passed through a thermosetting resin bath. The wetted fiberglass reinforcements are then "pulled" through a heated steel die where the composite hardens in the desired geometric shape.



WHAT IS A PULTRUDED GRATING

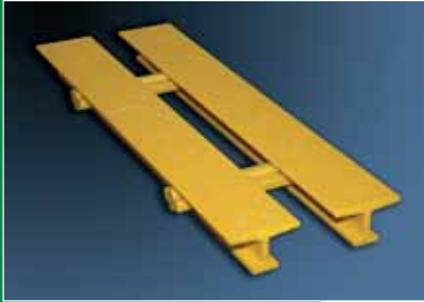
Eurograte® pultruded gratings are high strength pultruded bars mechanically assembled designed to be used as traditional metal gratings but with the inherent benefits of fiberglass.

These problem solving products are the best choice to substitute steel and aluminum gratings in corrosive environments.



MARKETS

- Automotive
- Chemical
- Desalination
- Electronics
- Marine
- Mass Transport
- Mining
- Off-shore
- Oil & Gas
- Petroleum Processing
- Pharmaceutical
- Plating
- Pulp & Paper
- Water Treatment



Corrosion resistance

Manufactured with premium isophthalic and vinyl ester resin systems with a synthetic surfacing veil, Eurograte® pultruded gratings offer superb chemical resistance.

Mechanical resistance

The high percentage of fiberglass in the load bearing bars provides high strength to weight ratio and extremely high unidirectional stiffness.

Lightweight

With less than one-half the weight of comparable steel gratings they are easy to handle without heavy equipment and weight savings can be realized.



Fire retardancy

Eurograte® pultruded gratings are designed with fire retardant resin systems which meet flame spread ratings of Class 1 (less than 25) according to ASTM E84 norm and self-extinguishing requirements of ASTM D635.

Maintenance free

Thanks to the inherent features of the material there is no need for scraping, sandblasting or painting. Eurograte® pultruded gratings offer “maintenance free” walkway systems.



Easily fabricated

Thanks to the lightweight, there is no need for lifting equipment to handle the gratings; cutting is very simple using standard circular or saber saws instead of gas torches.

UV protection

Eurograte® pultruded gratings are manufactured with UV inhibitors included in the resin system together with a synthetic surfacing veil and grit top surface for optimum Ultra-Violet resistance.

Safety

Eurograte® pultruded gratings are supplied with a durable and permanent gritted top surface to achieve a safe slip-resistant walking surface.



Electrically and thermally non-conductive

Additional worker safety is provided as Eurograte® pultruded gratings are both electrically and thermally non-conductive, two features that make them desirable products in many applications.

Electronically transparent

The features of the material do not affect electromagnetic or radio wave frequencies permitting installation in sensitive applications.



SELECTION & DESCRIPTION

CODE	BEARING BAR	BAR WIDTH	BAR SPACING	OPEN SPACE	WEIGHT KG/M2	OPEN AREA
GI-6010	"I" H=25,4	15,2 mm	38,1 mm	22,9 mm	11,0	60%
GT-3310	"T" H=25,4	38,1 mm	50,8 mm	12,7 mm	12,2	33%
GI-5015	"I" H=38,1	15,2 mm	30,5 mm	15,2 mm	19,1	50%
GI-6015	"I" H=38,1	15,2 mm	38,1 mm	22,9 mm	16,1	60%
GT-3320	"T" H=50,8	25,4 mm	38,1 mm	12,7 mm	19,5	33%
GT-5020	"T" H=50,8	25,4 mm	50,8 mm	25,4 mm	15,1	50%

Eurograte® pultruded gratings are available in two standard panel dimensions: 914x6096mm and 1220x6096mm. Other dimensions available on demand.

RESIN SELECTION

Eurograte® pultruded gratings are manufactured using two resin formulations that are suitable for most of the industrial applications. Both resin systems provide superior corrosion resistance compared to metal gratings.

ISOPHTHALIC RESIN SYSTEM

This resin formulation provides a flame spread rating of less than 25 according to ASTM E84 norm. Gratings in this resin formulation are designed to be used in moderate corrosive environments where splashes and spills of harsh chemicals are likely. Standard color is yellow.

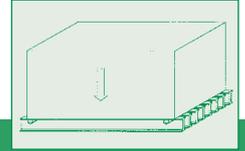
VINYL ESTER RESIN SYSTEM

This resin formulation provides a flame spread rating of less than 25 according to ASTM E84 norm. Gratings in this resin formulation are designed to be used in highly corrosive environments where the contact of harsh chemicals is frequent. Standard color is grey.



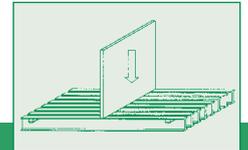
LOAD TABLES

25,4 MM THICKNESS GRATINGS



UNIFORMLY DISTRIBUTED LOAD (KG/M²) – DEFLECTION IN MM

SPAN	CODE	250	500	750	1000	1250	1500	2000	2500	3000
600	GI-6010	<1	<1	<1	1,2	1,5	1,8	2,4	3,0	3,6
	GT-3310	<1	<1	1,3	1,7	2,2	2,6	3,4	4,4	5,2
800	GI-6010	<1	1,8	2,7	3,6	4,5	5,4	7,2	9,0	10,8
	GT-3310	<1	2,5	3,7	5,0	6,2	7,4	10,0	12,4	
1000	GI-6010	2,4	4,8	7,2	9,6	12,0	14,4			
	GT-3310	3,2	6,5	9,7	13,0					
1200	GI-6010	4,2	8,5	12,7						
	GT-3310	5,6	11,2							



CONCENTRATED LINE LOAD (KG/M) – DEFLECTION IN MM

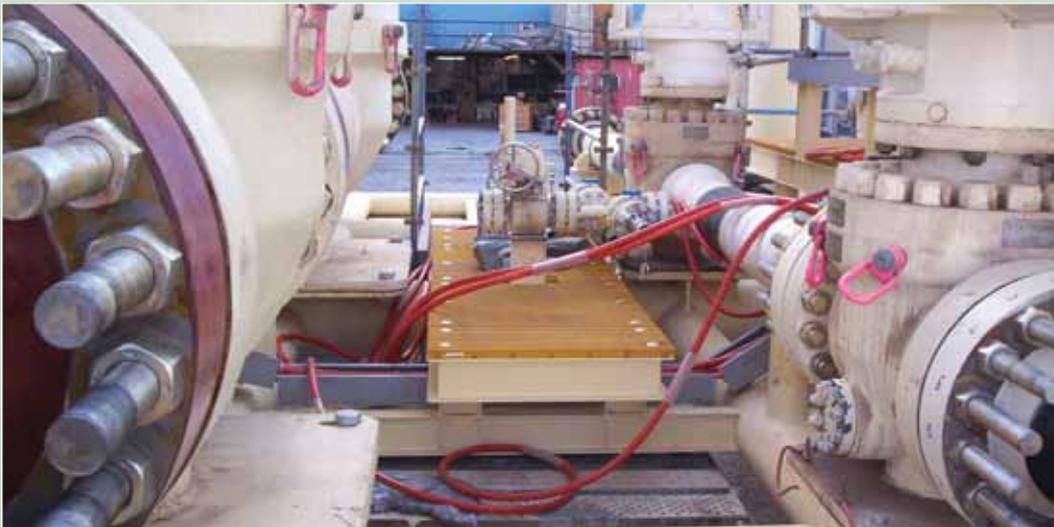
SPAN	CODE	150	300	450	600	750	900	1050	2100	4200
600	GI-6010	<1	1,3	1,9	2,6	3,2	3,8	4,5	8,9	
	GT-3310	<1	1,4	2,1	2,8	3,5	4,2	4,9	9,8	
800	GI-6010	1,8	3,6	5,3	7,2	9,0	10,6	12,6		
	GT-3310	2,0	4,0	5,9	8,0	10,0	11,8			
1000	GI-6010	2,8	5,6	8,4	11,2	14,0				
	GT-3310	3,1	6,2	9,3	12,4					
1200	GI-6010	4,1	8,2	12,3						
	GT-3310	4,5	9,0	13,5						
1400	GI-6010	5,8	11,6							
	GT-3310	6,4	12,8							

Load-deflection information

The load data indicated in the tables represent typical values calculated by our testing laboratory and are intended as a selection guide of the best suited grating. The load values could have a variation of +/- 10%.

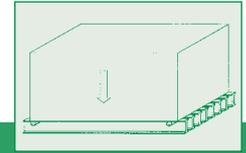
Loads

In case of pedestrian loads we suggest selecting a grating with deflection limited to the lesser of 10mm or span divided by 125. For a stiffer feeling, limit deflection to span divided by 200.



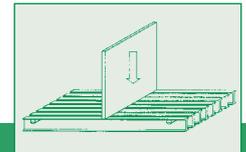
LOAD TABLES

38,1 MM THICKNESS GRATINGS



UNIFORMLY DISTRIBUTED LOAD (KG/M²) – DEFLECTION IN MM

SPAN	CODE	250	500	750	1000	1250	1500	2000	2500	3000
800	GI-5015	<1	<1	<1	<1	1,1	1,2	1,7	2,2	2,5
	GI-6015	<1	<1	<1	1,1	1,4	1,6	2,2	2,8	3,2
1000	GI-5015	<1	1,1	1,6	2,2	2,7	3,3	4,4	5,5	6,6
	GI-6015	<1	1,4	2,1	2,8	3,5	4,2	5,6	7,0	8,4
1200	GI-5015	1,2	2,4	3,5	4,7	5,9	7,1	9,5		
	GI-6015	1,5	3,0	4,5	6,0	7,5	9,0	12,0		
1400	GI-5015	2,1	4,3	6,5	8,7	10,8	12,9			
	GI-6015	2,7	5,5	8,2	11,0	13,7	16,4			
1600	GI-5015	4,0	8,0	12,0						
	GI-6015	5,1	10,2	15,3						
1800	GI-5015	6,7	13,5							
	GI-6015	8,5	17,0							



CONCENTRATED LINE LOAD (KG/M) – DEFLECTION IN MM

SPAN	CODE	150	300	450	600	750	900	1050	2100	4200
800	GI-5015	<1	<1	<1	<1	1,5	1,8	2,1	4,2	8,4
	GI-6015	<1	<1	<1	<1	1,9	2,3	2,7	5,4	10,8
1000	GI-5015	<1	1,2	1,8	2,4	3,0	3,6	4,1	8,2	
	GI-6015	<1	1,5	2,3	3,0	3,8	4,6	5,2	10,4	
1200	GI-5015	1,0	2,0	3,0	4,0	5,0	6,0	7,0	14,0	
	GI-6015	1,3	2,6	3,9	5,2	6,5	7,8	9,1		
1400	GI-5015	1,4	2,8	4,2	5,6	7,0	8,4	9,8		
	GI-6015	1,8	3,6	5,4	7,2	9,0	10,8	12,6		
1600	GI-5015	2,7	5,4	8,1	10,8	13,5				
	GI-6015	3,5	7,0	10,5	14,0					
1800	GI-5015	3,6	7,2	10,8	14,4					
	GI-6015	4,6	9,2	13,8						

Load-deflection information

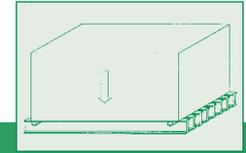
The load data indicated in the tables represent typical values calculated by our testing laboratory and are intended as a selection guide of the best suited grating. The load values could have a variation of +/- 10%.

Loads

In case of pedestrian loads we suggest selecting a grating with deflection limited to the lesser of 10mm or span divided by 125. For a stiffer feeling, limit deflection to span divided by 200.

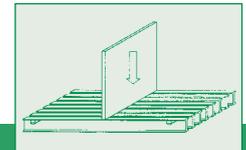
LOAD TABLES

50,8 MM THICKNESS GRATINGS



UNIFORMLY DISTRIBUTED LOAD (KG/M²) – DEFLECTION IN MM

SPAN	CODE	250	500	750	1000	1250	1500	2000	2500	3000
800	GT-3320	<1	<1	<1	<1	<1	<1	1,1	1,4	1,7
	GT-5020	<1	<1	<1	<1	<1	<1	1,4	1,7	2,1
1000	GT-3320	<1	<1	1,2	1,6	2,0	2,4	3,2	4,0	4,8
	GT-5020	<1	1,2	1,8	2,4	3,0	3,6	4,8	6,0	7,2
1200	GT-3320	<1	1,3	1,9	2,6	3,2	3,8	5,4	6,4	7,6
	GT-5020	<1	1,8	2,7	3,6	4,5	5,4	7,2	9,0	10,8
1400	GT-3320	1,2	2,4	3,6	4,8	6,0	7,2	9,6	12,0	14,4
	GT-5020	1,6	3,2	4,8	6,4	8,0	9,6	12,8	16,0	
1600	GT-3320	2,5	5,0	7,5	10,0	12,5	15,0			
	GT-5020	3,4	6,8	10,2	13,6	17,0				
1800	GT-3320	3,3	6,5	9,9	13,0	16,2				
	GT-5020	4,6	9,2	13,8	18,4					
2000	GT-3320	5,0	10,1	15,0						
	GT-5020	6,8	13,5							



CONCENTRATED LINE LOAD (KG/M) – DEFLECTION IN MM

SPAN	CODE	150	300	450	600	750	900	1050	2100	4200
800	GT-3320	<1	<1	<1	<1	<1	1,1	1,3	2,6	5,2
	GT-5020	<1	<1	<1	<1	1,2	1,4	1,7	3,4	6,8
1000	GT-3320	<1	<1	1,2	1,6	2,0	2,4	2,8	5,6	11,2
	GT-5020	<1	<1	1,6	2,1	2,6	3,2	3,7	7,4	14,8
1200	GT-3320	<1	1,1	1,7	2,2	2,7	3,4	3,9	7,8	15,6
	GT-5020	<1	1,6	2,4	3,2	4,0	4,8	5,6	11,2	
1400	GT-3320	<1	1,7	2,5	3,4	4,3	5,0	6,0	12,0	
	GT-5020	1,1	2,2	3,3	4,4	5,5	6,6	7,7	15,4	
1600	GT-3320	1,5	3,0	4,5	6,0	7,5	9,0	10,5		
	GT-5020	2,1	4,2	6,3	8,4	10,5	12,6	14,7		
1800	GT-3320	1,8	3,6	5,4	7,2	9,0	10,8	12,6		
	GT-5020	2,4	4,8	7,2	9,6	12,0	14,4	16,8		
2000	GT-3320	2,5	5,0	7,5	10,0	12,5	15,0			
	GT-5020	3,3	6,6	9,9	13,2	16,5				

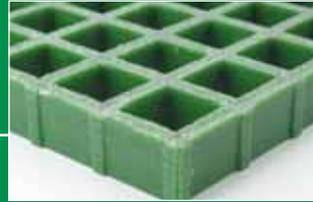
Load-deflection information

The load data indicated in the tables represent typical values calculated by our testing laboratory and are intended as a selection guide of the best suited grating. The load values could have a variation of +/- 10%.

Loads

In case of pedestrian loads we suggest selecting a grating with deflection limited to the lesser of 10mm or span divided by 125. For a stiffer feeling, limit deflection to span divided by 200.

GRATING SELECTION

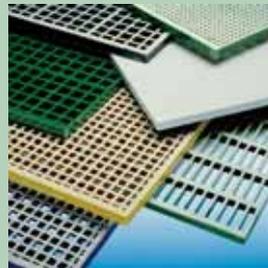


FEATURE/APPLICATION	MOLDED	PULTRUDED
Mechanical resistance	Good	Excellent
Chemical resistance	Excellent	Good
Impact resistance	Excellent	Average
Weight vs. mechanical resistance	Very Good	Excellent
Ease of installation	Excellent	Good
Bi-direction span	Excellent	Not Suitable
Undirection span	Good	Excellent
Lightweight vs. steel grating	Very Good	Excellent
Pipe penetrations	Excellent	Average
Open area (air flow, light penetration)	Excellent	Good
Safety	Excellent	Excellent

ACCESSORIES



OTHER PRODUCTS



MOLDED GRATINGS



GUARDRAILS



LADDERS



STRUCTURAL SHAPES

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