

Saudi Pultrusion Industry

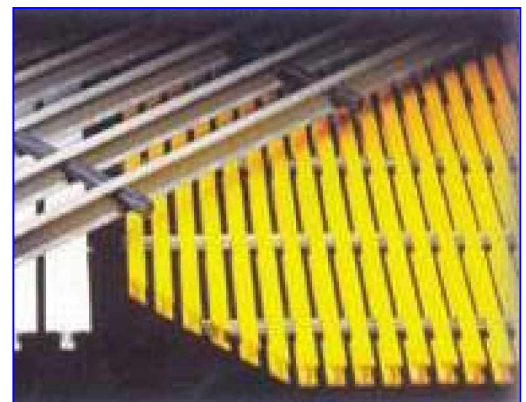
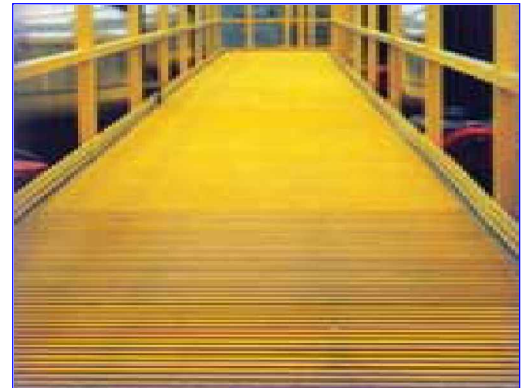
Technical Information and Typical Installation Procedure Pultruded Grating

SPI Grating Systems provide an efficient and cost effective solution for all flooring, walkways and decking areas requiring long term performance in aggressive and corrosive environments. Constructed from glass reinforced thermoset resins, SPI grating is designed and manufactured with a structural integrity commonly associated with steel and aluminium, but without their corrosion problems.

All pultruded profiles used in gratings were made of premium grade isophthalic polyester or vinyl ester resins and meet the fire retardancy requirements of **UL94 V-0**, **ASTM D-635** and **ASTM E-84**. It contain nominally 70% E glass reinforcement. The pultruded load bar will be of high strength I-Beam design. All loading members shall be mechanically locked to each other via two spacing bars and central locking rod. Where anti-skid is required, a tough epoxy-quartz coating is applied to the surface of all loading members.

FEATURE BENEFITS & CHARACTERISTICS

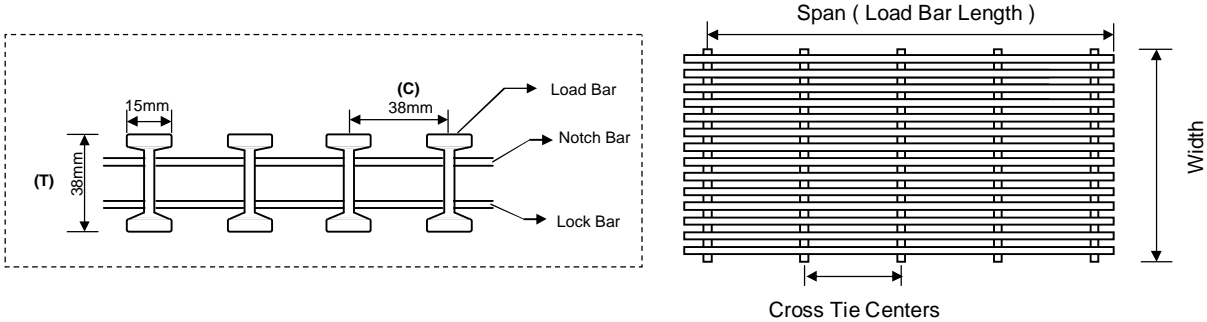
- **Chemical and Corrosion Resistance**
The use of premium grade resins containing UV inhibitors and an outer reinforcing continuous strand mat topped by a non glass surfacing tissue, optimum protection against corrosion and weathering can be achieved. It resists a wide range of aggressive acids, salts, alkalis and other chemical environments which can have disastrous effect on metallic grating systems.
- **High Strength to Weight Ratio**
Superior strength to weight ratio to steel or aluminium systems. It is highly resistant to fatigue, creep or permanent deformation.
- **Lightweight and Manageable**
The pultruded fibreglass used has a specific gravity of one-fourth that of steel and two-thirds that of aluminium which considerably simplifies installation and handling.
- **Transparent to Radio Frequencies**
Fibreglass composites do not interfere with electromagnetic and radio frequency transmissions. It can be safely applied in towers and other structures used in the transmission of such signals.
- **Non-Conductive**
Gratings can be used safely in electrical work areas. Special support conditions to prevent electrolytic corrosion are not required.
- **Stable**
Unlike many other fibreglass systems, the use of double mechanical lock system to locate and space the load bars makes the grating a permanently stable panel.
- **Non-Skid Surface**
Gratings has a tough, quartz epoxy finish that will ensure the maximum in skid resistance and safety even in wet environments.
- **Cost Performance**
Very favourable results have been demonstrated with pultruded gratings emphasizing low installation costs and long service life with minimum maintenance.



TECHNICAL SPECIFICATIONS

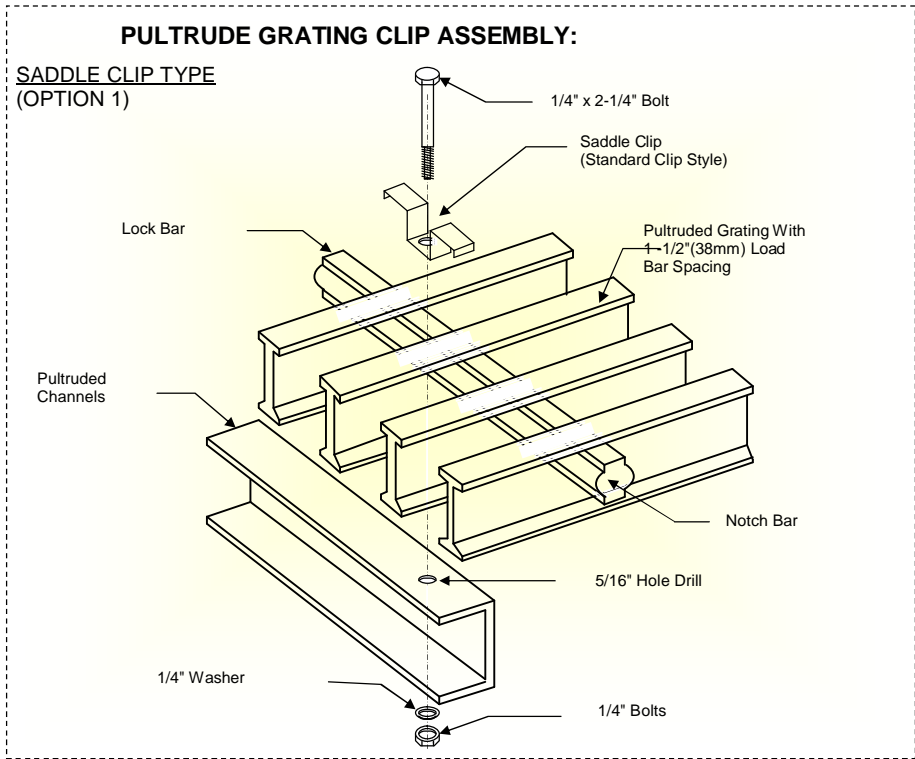
Standard panel size are nominal 914mm (36") or 1219mm (48") wide by 3048mm (120") span. Other sizes are available to order to a maximum of 1219mm (48") wide by 6096mm (240") spans. Panel weight must be considered when ordering large panels. Special shape panels can be cut from standard width stock panels.

Standard and fire retardant grating is made in Safety Yellow. Vinyl ester system for additional chemical resistance are beige in colour. Other colour can be made to order.

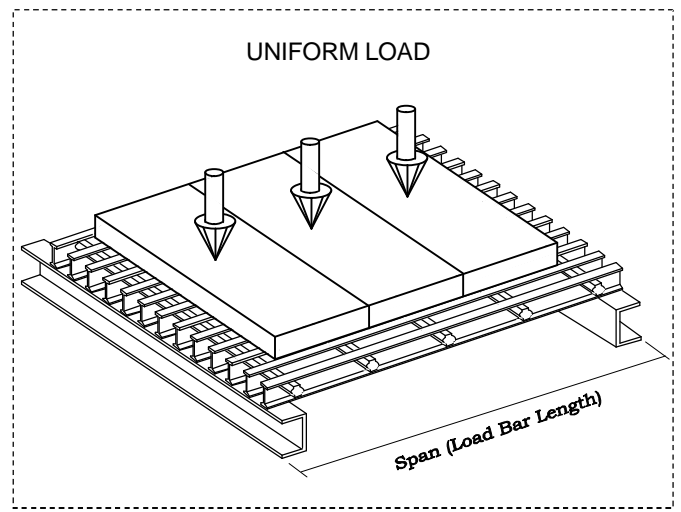
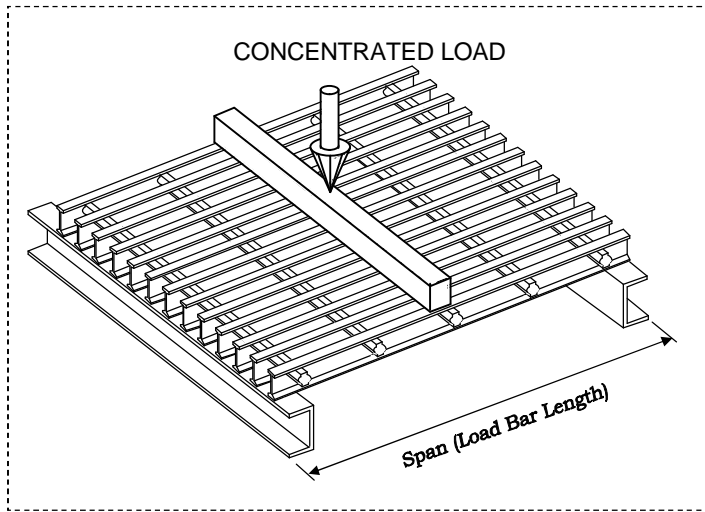


Series	Type	Grating Thickness (T)		Cross Tie Centres		Load Bars per 300mm of Width	Load Bar Centres (C)		% Open Area	kg/m ²	lb/ft ²
		mm	(in)	mm	(in)		mm	(in)			
400	400	38	1.5	305	12	12	25	1	40	24.0	4.9
	409	38	1.5	228	9	12	25	1	40	24.0	4.9
	406	38	1.5	152	6	12	25	1	40	25.0	5.1
	403	38	1.5	76	3	12	25	1	40	28.0	5.7
600	600	38	1.5	305	12	8	38	1.5	60	17.0	3.5
	609	38	1.5	228	9	8	38	1.5	60	17.0	3.5
	606	38	1.5	152	6	8	38	1.5	60	18.0	3.7
	603	38	1.5	76	3	8	38	1.5	60	21.0	4.3

TYPICAL INSTALLATION DETAILS



LOAD DEFLECTION TABLES



Series 600		CONCENTRATED LOAD						8 Load Bars/300 mm of Width	
Span (mm)	KiloNewtons							Load for Deflection	
	0.5	1	2	3	5	7	10	6.4mm	9.5mm
Deflection (mm)								KiloNewtons	
300	*	*	*	0.30	0.50	0.70	1.00	13.70+	20.30+
450	*	0.30	0.60	0.89	1.49	2.08	2.96	13.70+	20.30+
600	*	0.47	0.93	1.40	2.34	3.27	4.67	13.70	20.30
900	0.57	1.15	2.31	3.46	5.77	8.08	11.54	5.55	8.23

Series 600		UNIFORM LOAD						8 Load Bars/300 mm of Width	
Span (mm)	KiloPascals							Load for Deflection	
	2	3	4	5	7	9	12	6.4mm	9.5mm
Deflection (mm)								KiloPascals	
300	*	*	*	*	*	*	*	119.25+	177.00+
450	*	*	*	*	*	*	*	119.25+	177.00+
600	*	*	*	0.27	0.38	0.48	0.64	119.25	177.00
900	0.40	0.59	0.79	0.99	1.39	1.78	2.38	32.32	47.98

Series 400		CONCENTRATED LOAD						8 Load Bars/300 mm of Width	
Span (mm)	KiloNewtons							Load for Deflection	
	0.5	1	2	3	5	7	10	6.4mm	9.5mm
Deflection (mm)								KiloNewtons	
300	*	*	*	*	0.33	0.46	0.66	20.60+	30.50+
450	*	*	0.40	0.60	0.99	1.39	1.97	20.60+	30.50+
600	*	0.31	0.62	0.93	1.56	2.18	3.11	20.60	30.50
900	0.38	0.77	1.54	2.31	3.85	5.39	7.69	8.32	12.35

Series 400		UNIFORM LOAD						8 Load Bars/300 mm of Width	
Span (mm)	KiloPascals							Load for Deflection	
	2	3	4	5	7	9	12	6.4mm	9.5mm
Deflection (mm)								KiloPascals	
300	*	*	*	*	*	*	*	180.00+	267.00+
450	*	*	*	*	*	*	*	180.00+	267.00+
600	*	*	*	*	*	0.32	0.43	180.00	267.00
900	0.26	0.40	0.53	0.66	0.92	1.19	1.58	48.50	72.00

FOR FURTHER INFORMATION, PLEASE CONTACT

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