



日揚國際事業股份有限公司  
JD Auspice Co., Ltd.

## FRP / GRP PRODUCTS



**WALKWAY PLATFORMS**  
**HAND RAILS & FENCING**  
**CAGE LADDERS**  
**GRATINGS & PLANKS**



note: subject to change without any notice, JDA pay no responsibility



## GRP GRATINGS & HAND RAIL SYSTEM



FRP Gratings, Hand Rails, Support Structures & Cage Ladders are manufactured on a fully automatic Pultrusion Plant and are strong, corrosion resistant and elegant looking. These are safe and ideal for corrosive atmospheres having long maintenance free life.



### ★ Advantages

- Corrosion Resistant
- Fire Retardant
- Light Weight
- Anti Skid Surface
- Strong & Sturdy
- Easy Erection at site
- Low Maintenance
- U. V. Resistant
- Elegant Looks
- No Softening to heat
- Long life

### ★ Industries

- Off shore Oil Platforms
- Cooling Towers
- Chemicals Plants
- Refineries
- Electroplating Industry
- Effluent Treatment Plants
- Food & Drug Industries
- Power Plants
- Architectural Application
- Swimming Pools
- Paper Industry
- Tanneries

## HAND RAIL SECTIONS

FRP Hand Rails are designed for quick and easy assembly. The system can be prefabricated in large sections and shipped to the site or fabricated and installed on site with simple hand tools. All connections are very easy to make. Special adjustable angle connectors in GRP are available for installation on circular tanks. Complete accessories are available for installation and making joints at turns. Assembly details are shown below :



Industrial SM-40 (Side Mount shown)



Industrial SRH-50 (Top Mount)



Elegant RH-67 (Joint Assembly shown)

#### Industrial SM-40

Post	: Square 50 x 50
Top Rail	: Round 40
Mid Rail	: Round OD32/HAT-80
Kick Plate	: W-Shape 100 mm/HAT-80

#### Industrial TM-50

Post	: Square 50
Top Rail	: Square 50
Mid Rail	: Square 50
Kick Plate	: W-Shape 100 mm/HAT-80

#### Elegant

Post	: Square 50 x 50
Top Rail	: Curved - 67
Mid Rail	: Round OD32/Hat - 80
Kick Plate	: W-Shape 100 mm/HAT-80



## PULTRUDED GRP / FRP GRATINGS

### ★ Applications

- Walkways & Platforms • Trench Covers • Battery Racks
- Packing Support Grid for Scrubbers • Cooling Towers • Stair Treads
- Cross Overs • Electrical Insulating Grid

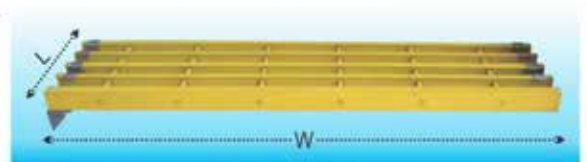
### ★ Load Deflection Table

Span L mm	Type of load	JDA-3850 Deflection		JDA-3840 Deflection		JDA-2540 & JDA-3040 Deflection		JDA-5050 Deflection		JDA-5040 Deflection		JDA-5060 Deflection	
		6.35mm	L/200	6.35 mm	L/200	6.35 mm	L/200	6.35 mm	L/200	6.35 mm	L/200	6.35 mm	L/200
600	C	1890	1416	2362	1771	997	580	7046	3576	8808	4470	5871	2980
	U	>5000	2306	>5000	2885	2283	1340	18578	10928	23223	13660	15481	9106
750	C	1627	1260	2034	1575	7058	393	4287	2652	5359	3315	3572	2209
	U	>2500	1690	>2500	2109	1590	864	9234	5678	11543	7098	7695	4731
915	C	1312	696	1640	870	367	277	2639	1922	3299	2403	2199	1602
	U	1540	1070	1924	1337	688	477	4527	3312	5659	4140	3772	2760
1220	C	590	576	738	721	213	203	1183	1153	1479	1441	986	961
	U	520	509	650	636	258	250	1806	1440	2258	1800	1505	1200
1375	C	420	460	525	575	157	183	805	897	1006	1121	671	747
	U	347	365	434	456	188	202	989	1015	1236	1269	824	846
1500	C	323	354	404	442	----	----	582	738	728	923	485	615
	U	267	281	334	351	----	----	621	805	776	1006	517	671
1675	C	----	----	----	----	----	----	480	619	600	774	400	516
	U	----	----	----	----	----	----	438	575	548	719	365	479
1830	C	----	----	----	----	----	----	360	554	450	693	300	462
	U	----	----	----	----	----	----	310	485	388	606	258	404
2130	C	----	----	----	----	----	----	264	412	330	515	220	343
	U	----	----	----	----	----	----	163	302	204	378	136	252
2290	C	----	----	----	----	----	----	200	334	250	418	167	278
	U	----	----	----	----	----	----	108	238	135	298	90	198
2440	C	----	----	----	----	----	----	170	302	231	378	142	252
	U	----	----	----	----	----	----	89	183	111	229	74	152

C = Concentrated Load Kg./m U = Uniform Load Kg./Sq.m.

### ★ Recommended Span for 500 Kg. / Sq.m UDL

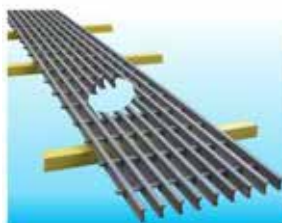
Code	Grating Height	I-Bar Spacing	Support Span
 EC-3840 EC-3850 EC-2540	38 mm	40 mm	1500 mm
	38 mm	50 mm	1220 mm
	25 mm	40 mm	915 mm
 EC-5040 EC-5050 EC-5060	50 mm	40 mm	2000 mm
	50 mm	50 mm	1800 mm
	50 mm	60 mm	1675 mm



Supports on both ends of I-Bars in necessary

### ★ Installation Instructions

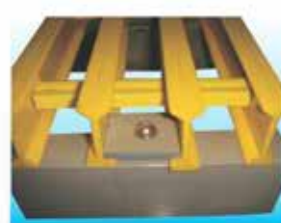
Note: The bearing bars in panel should traverse from support to support in the span direction as shown in above photo. Cross rods are not to be applied in the span direction.



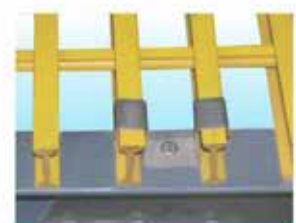
Supports below cutout on I-bars is essential



All cut edges of Grating to be sealed with Resin for best chemical resistance.



Hold down clamps insert type



Hold down clamps Saddle type

### ★ How to specify JDA Gratings

While ordering please specify Model No., Height, Support Span, Panel Size :

w= Length of I bars & L=Length of Cross rods.

Type of Resin : Isopolyester/Vinylester; Color : Grey / Yellow. Phenolic Colour : Brown; Other Colours on request



## JDA LADDERS & SAFETY CAGES

GRP Ladders offer exceptional strength whilst providing you the benefit of a light weight & Corrosion Resistant Product • Ladders made to any size

- All cleats, brackets and fixings are stainless steel or FRP
- Available in yellow and grey colours • Fire retardant resin available
- Walk-through tops made to order.

Ladder Dimensions	Side Rail Rungs	Safety Cage
450mm overall width 300mm rung spacing	FRP Square Tube / Channel FRP Fluted Tubes / Channel	FRP angles / Flat 1m.-1.5m. cage spacing

## JDA MOULDED GRATING

Model	Height	Mesh	Panel Size	Max. Span	
				Conc. 250Kg./Ft.	UDL-500Kg./m <sup>2</sup>
JMG-254040	25	40 x 40	1007 x 4007	600	900
JMG-383838	38	38 x 38	1220 x 3660	1000	1220
JMG-505050	50	50 x 50	1220 x 3660	1200	1500



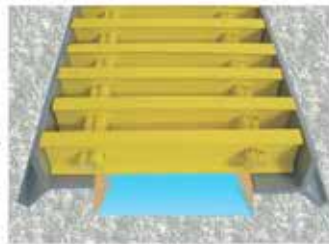
### ★ Chemicals Resistance

Isophthalic Polyester Resin	For most of the general applications
Vinylester Resin	Recommended For severe corrosive atmosphere
Phenolic Resin	Recommended mainly for fire Hazardous Area, Poor in Chemical Resistance

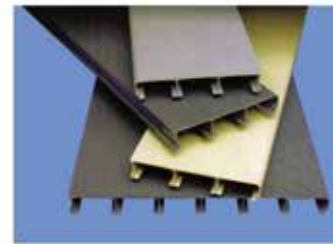
\* Detailed Chemical Resistance chart available



Trench Cover for Elec. Switch Rooms



Embedment Angle



Pultruded Planks

### ★ PLANK LOAD/DEFLECTION DATA FINAL FOR JDA

PLANK-608mm W with 98 mm C/C  
Model JDA-P-5095



SPAN in mm		(u=500)kg/M <sup>2</sup>	(u=1000)kg/M <sup>2</sup>	(u=1500)kg/M <sup>2</sup>	(u=2955)kg/M <sup>2</sup>	(u=4900)kg/M <sup>2</sup>
		(c=150)kg/M	(c=300)kg/M	(c=400)kg/M	(c=750)kg/M	(c=1500)kg/M
610 mm	Δu1	0.372	0.744	1.116	1.859	3.743
	Δc1	0.303	0.605	0.907	1.512	0.048
914 mm	Δu1	1.140	2.281	3.421	5.726	---
	Δc1	0.605	1.235	1.855	3.099	6.198
1219 mm	Δu1	3.297	6.569	9.866	---	---
	Δc1	1.335	2.670	4.007	6.677	0.000
1524 mm	Δu1	7.487	14.998	0.000	0.000	0.000
	Δc1	2.444	4.863	7.358	12.196	---
1829 mm	Δu1	15.544	---	---	---	---
	Δc1	4.208	8.542	12.623	---	---

PLANK-608mm W with 47 mm C/C  
Model JDA-P-5047



SPAN in mm		(u=500)kg/M <sup>2</sup>	(u=1000)kg/M <sup>2</sup>	(u=1500)kg/M <sup>2</sup>	(u=2955)kg/M <sup>2</sup>	(u=4900)kg/M <sup>2</sup>
		(c=150)kg/M	(c=300)kg/M	(c=400)kg/M	(c=750)kg/M	(c=1500)kg/M
610 mm	Δu1	0.186	0.372	0.558	0.930	1.871
	Δc1	0.151	0.303	0.453	0.756	1.524
914 mm	Δu1	0.570	1.140	1.710	2.863	---
	Δc1	0.303	0.618	0.928	1.550	3.099
1219 mm	Δu1	1.648	3.285	4.933	---	---
	Δc1	0.668	1.335	2.003	3.339	6.730
1524 mm	Δu1	3.743	7.499	---	0.000	---
	Δc1	1.222	2.431	3.679	6.098	---
1829 mm	Δu1	7.772	---	---	---	---
	Δc1	2.104	4.271	6.312	---	---

U=UDL C=Con C Δu=Def on UDL Δc=Def on Con



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