



Jindal  
Advanced Materials

World's premier provider of  
cutting-edge materials.



# COMPANY OVERVIEW



JINDAL SAW LTD.  
TOTAL PIPE SOLUTIONS



Under the able stewardship of:  
**Shri. Prithvi Raj Jindal**

Jindal Saw Ltd, has grown many fold and has diversified its product line by offering total pipe solutions to wide array of sectors; Energy, Water, Sewage transportation and Industrial applications.

**Turn over: \$ 2.1 billion**

Under the visionary leadership of:  
**Shri. Sajjan Jindal**

The JSW Group has grown to become one of the largest integrated Steel producer with an capacity of 14.3 MTPA. Today the group has expanded in other core sectors of the economy such as Power, Cement and Infrastructure.

**Turn Over: \$ 22 billion**

Under the futurist leadership of:  
**Shri. Rattan Jindal**

Jindal Stainless has grown to become the largest integrated stainless steel manufacturer in the country and amongst the top 10 in the world with a melting capacity of 1.8 MT

**Turn Over: \$ 5 billion**



Under the visionary leadership of:  
**Shri. Naveen Jindal**

JSPL produces economical & efficient steel & power through backward integration. JSPL sports the whole range of flat and long products to cater to the needs of steel market.

**Turn Over: \$ 7.1 billion**

# INTRODUCTION

**Jindal Advanced Materials**, is a leading manufacturer & supplier of Fiberglass (FRP/GRP) products, with the state of art technology and constant **Research & Development & back up capacity** to meet production requirements.

We have been dedicated to pushing the boundaries of construction materials, and our new line of GFRP products represents a significant leap forward in technology and performance.



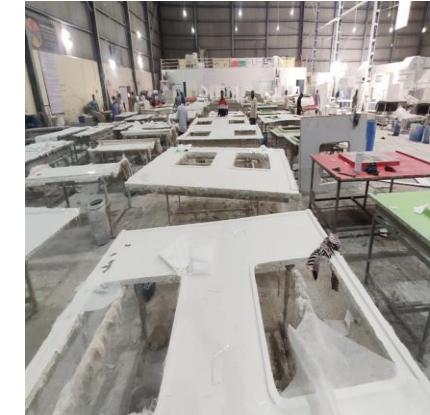
# MANUFACTURING PROCESSES



PULTRUSION



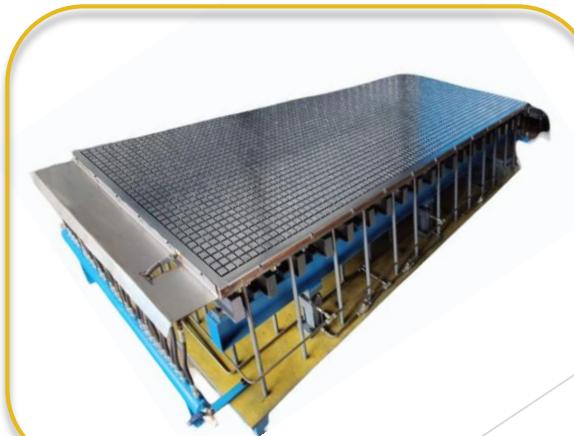
REBAR



HAND LAMINATION

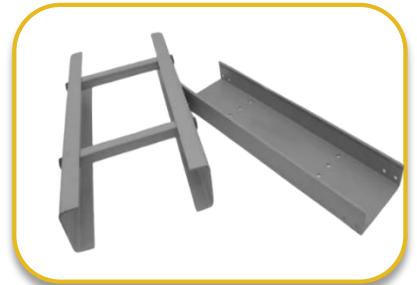


SHEET MOULDING COMPOSITE

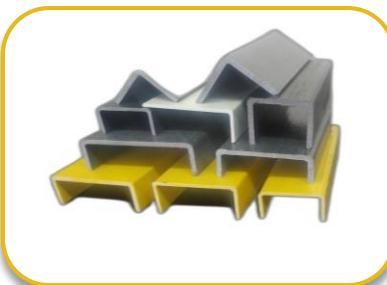


MOULDED GRATING

# PRODUCT PORTFOLIO



FRP Cable Trays



FRP Ladder Profiles



Cooling Tower Profiles



FRP Rebar Profiles



FRP Manhole Cover



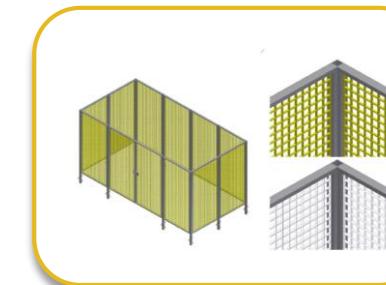
FRP Deck Panels



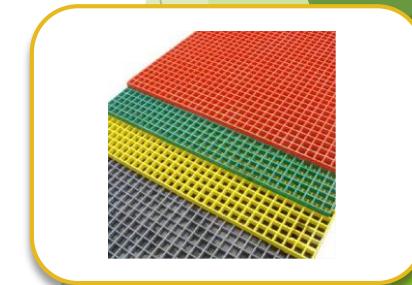
FRP Radome



FRP Planters



FRP Fencing



FRP Grating

# FRP REBARS

Excelling over steel in reinforcing concrete, GFRP offers corrosion resistance & remarkable durability

Manpower saving  
(easy to install & prefabricated)

Cost efficient versus other competitive materials

55% less carbon emission in comparison to TMT

Enhance civil structure longevity

Reduction in transportation costs

Possible to manufacture tailored bents and mesh designs

4x lighter & 2x stronger than steel & ideal for harsh chemical environments



High strength



Light weight

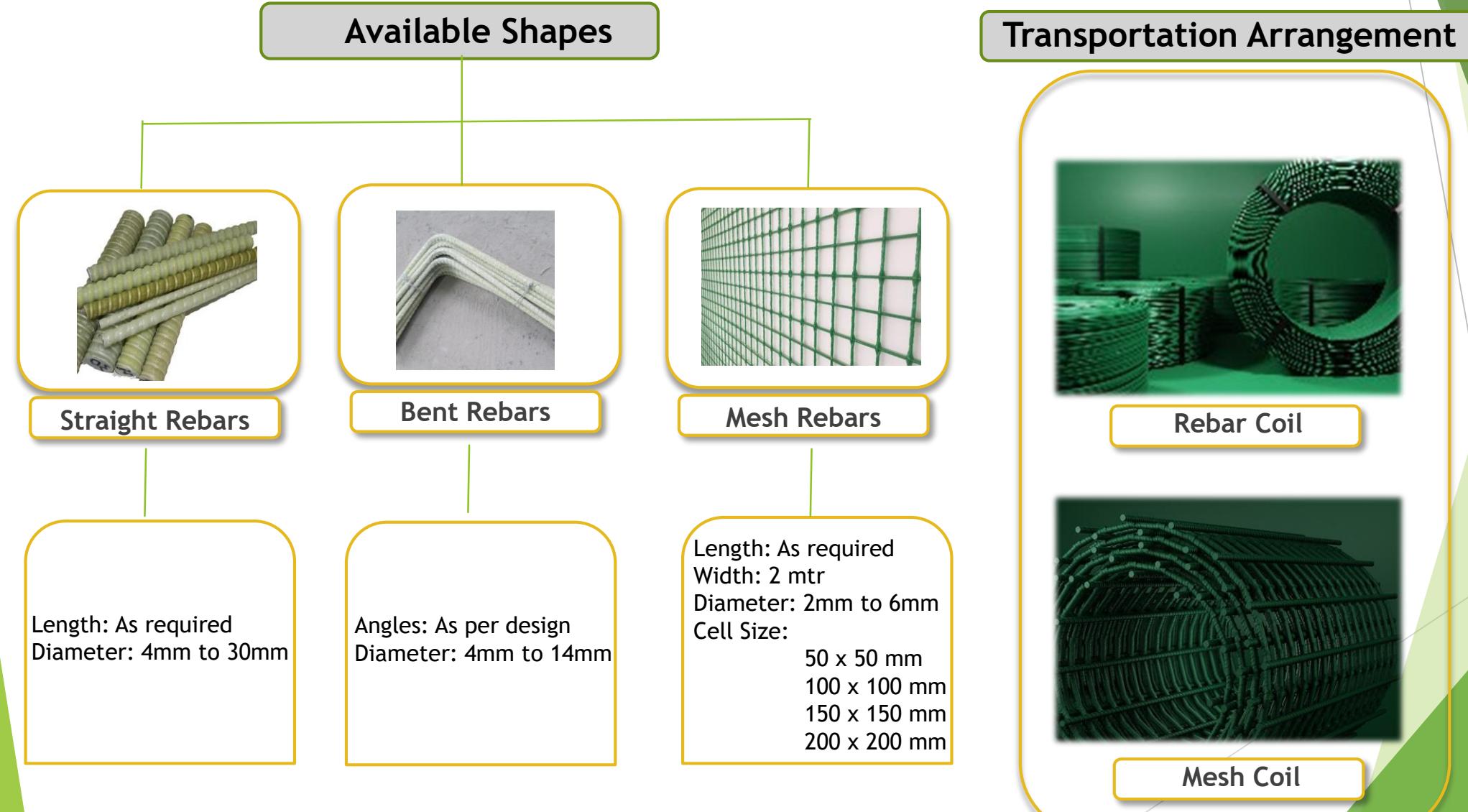


Low maintenance



Corrosion and Rust Free

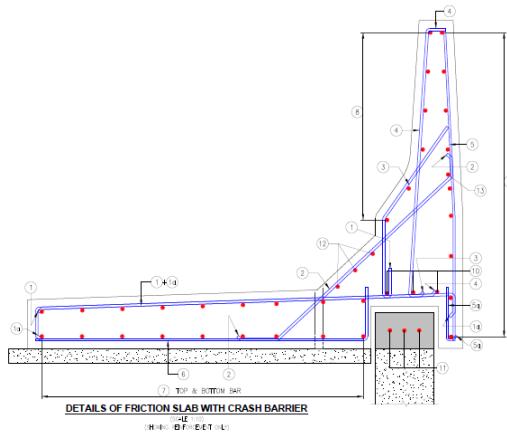
# FRP REBARS



# TECHNICAL BENEFITS OF FRP REBARS

Characteristics (for Ø 8 mm)	FRP Rebar	TMT Rebar
Tensile strength, MPa	900~1200	400-550
Modulus of elongation, %	2-2.3	14
Thermal conductivity coefficient, Watt, (m* 0C)	0.35	46
Elastic modulus , GPA	45-65	200
Density, g/Cm3	1.9-2.1	7.85
Length	As required	Bars 6-12m long
Corrison resistance to aggresive environment	Non Corrosive	Corrosive/Non Corrosive epoxy coated
Electrical conductivity	Non Conductive	Electrically Conductive
Heat conductivity	Non Heat Conductive	Heat Conductive
Minium operating temprature, °C	-50	-40
Durability (years)	120	As per building regulations

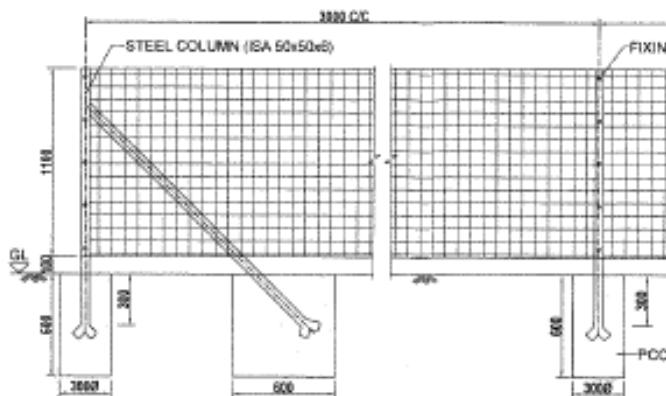
# **CASE STUDIES**



# GFRP Friction Slab Crash Barrier

Parameters	TMT Rebars	GFRP Rebars
Weight (Kg)/metre	72.18	18.08
20 MT Supply can make FSCB (in metres)	333.92	1106.04
Overall Cost Saving	<b>~20%</b>	

## STANDARD: AASHTO 2018



## GFRP Fencing

Parameters	TMT Fencing	GFRP Fencing
Weight (Kg)/metre	13.17	1.75
20 MT Supply can make Fencing (in metres)	1518	11428
Overall Cost Saving	~53%	

# STANDARDS & APPLICATIONS

## Applicable Standards for GFRP Designs

AASHTO (2018)

ACI 440.1R-15 (2015)

FDOT (2021)

IS : 18256 - 2023

CSA (2006)

Transport For NSW (2020)

## Ongoing R&D with top Academia in India

IIT Delhi

IIT Bombay

IIT Hyderabad

## Various Applications



Retaining Wall



Fencing



Friction slab CB



Warehouse Flooring



Drainages

# FRP CABLE TRAYS

## Cable Trays Types



**Perforated Type  
Cable Trays**



**Ladder Type  
Cable Trays**



**Cable Trays  
With Cover**

Perforated Cable Trays used for the small cables lying system. Available for 50mm to 500mm width

Ladder Type cable trays are used for the large cable trays lying systems. Available for 75mm to 1500mm width

## Applicable Standards

NEMA FG-1

BHEL

National  
Electrical  
Code

Properties	GI Cable Trays	FRP Cable Trays
<i>Corrosion Resistance</i>	✗	✓
<i>Non Conductive</i>	✗	✓
<i>Light Weight</i>	✗	✓
<i>Easy Installation</i>	✗	✓
<i>FR Grade</i>	✗	✓
<i>Zero Maintenance</i>	✗	✓
<i>Aesthetic Look</i>	✗	✓
<i>No Shock Risk</i>	✗	✓
<i>Non Magnetic</i>	✗	✓
<i>High Strength</i>	✓	✓
<i>High Performance in Extreme Weather</i>	✗	✓

# FRP CT/LADDER PROFILES



All the major cooling tower & ladder profiles tools available

Capability to produce profile with thickness range 3mm to 16mm

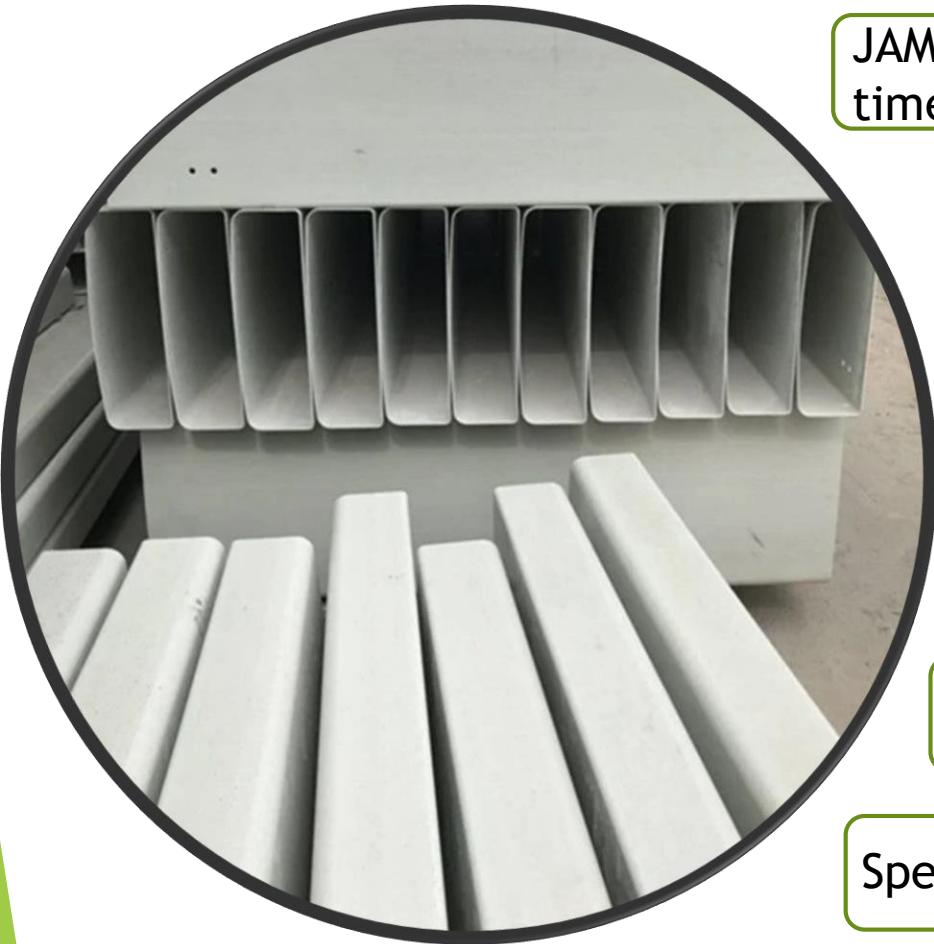
Trained staff for the production of critical profiles

Standards followed: CTI 137 & ANSI 14.1

Best in the industry Pultrusion machine available: Width: 1600mm



# FRP RADOME PROFILES



JAM has the capability to serve multiple designs of radome at one time

Special designed machine for fabrication of Radomes available

Computer Numerical Control (CNC) available for multiple radome fabrication

Capability to produce radomes with thickness less than 2mm

Capability to produce radomes with upto 700 mm

Specially trained staff for the production of Radomes

# FRP HANDRAILING & GRATINGS

**Fiberglass Reinforced Plastic (FRP) Handrail Systems** are safe, OSHA compliant, corrosion resistant, virtually maintenance-free, and easy to install.

Our standard industrial handrail is a 2-rail system with a kick plate fabricated from its high strength pultruded structural shapes with UV inhibitors manufactured into the resin and synthetic surfacing veils that allow a resin-rich surface.

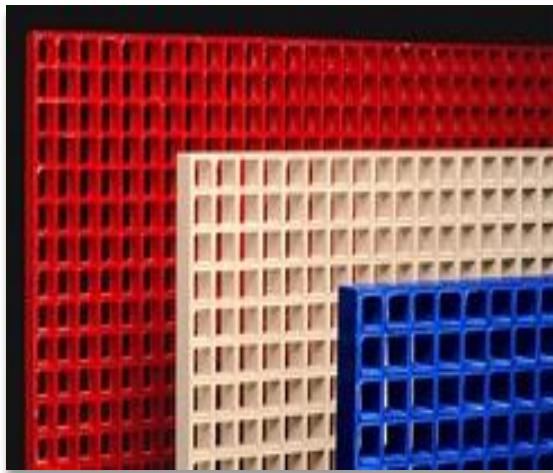
We manufactured both **FRP Pultruded** as well as **Moulded Gratings**.

Various grating sizes are as below.

- 38mm Pultruded Grating
- 38mm Moulded Grating
- 25mm Moulded Grating
- 50mm Moulded Grating

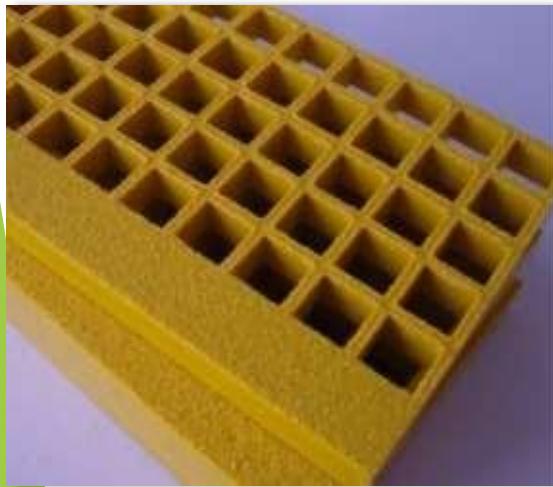


# TECHNICAL SPECIFICATIONS



Load  
table for  
38 mm  
Grating

Sr.no.	Clear Span(L) in mm	Height of Grating in mm	Mesh size in mm	Deflection as per L/200 in mm	Uniform Distribution Load(Kg/m <sup>2</sup> )	Maximum Recommended Load (Kg/m <sup>2</sup> )
1	300	38.1	38.1 X 38.1	1.5	8230	18715
2	400	38.1	38.1 X 38.1	2.0	3490	10480
3	500	38.1	38.1 X 38.1	2.5	2050	6160
4	600	38.1	38.1 X 38.1	3.0	1508	4525
5	700	38.1	38.1 X 38.1	3.5	930	2792
6	800	38.1	38.1 X 38.1	4.0	731	2198
7	900	38.1	38.1 X 38.1	4.5	550	1651
8	1000	38.1	38.1 X 38.1	5.0	405	1216



Load  
table for  
25 mm  
Grating

Sr.no.	Clear Span(L) in mm	Height of Grating in mm	Mesh size in mm	Deflection as per L/200 in mm	Uniform Distribution Load(Kg/m <sup>2</sup> )	Maximum Recommended Load (Kg/m <sup>2</sup> )
1	300	25	38.1 X 38.1	1.5	7066	16959
2	400	25	38.1 X 38.1	2.0	2650	7955
3	500	25	38.1 X 38.1	2.5	1110	3332
4	600	25	38.1 X 38.1	3.0	550	1651
5	700	25	38.1 X 38.1	3.5	425	1277
6	800	25	38.1 X 38.1	4.0	331	994
7	900	25	38.1 X 38.1	4.5	289	866
8	1000	25	38.1 X 38.1	5.0	240	721



# FRP MANHOLE COVERS

FRP Manhole Covers have several advantages over traditional materials like steel or aluminium.

FRP covers have a high strength-to-weight ratio meaning they can provide similar strength as metals but at a lower weight.

FRP covers are also corrosion-resistant, have excellent fatigue properties, and offer design flexibility.

Available from 3.5 T to 40T Load bearing capacity.



## Available Shapes

Square

Round

Rectangle

## Applicable Standards

BS EN 124-1994



# FRP PLANTERS



Rust proof & unbreakable

Great Value for money

Complement plants perfectly

Weather resistant to both extreme temperature & rainfall

Light Weight

Any Shape, Size & Color

Durable

## FIBERGLASS VS CONCRETE & PLASTIC

Properties	CONCRETE	PLASTIC	FRP
Appearance	✓	✗	✓
Durability	✗	✗	✓
Cost	✗	✓	✓
Plant Health	✓	✓	✓
Environmental Impact	✗	✗	✓

# WHY JAM

- *Renowned Brand*
- *Backed by highly technical team*
- *Can invest big in New Product Developments*
- *Collaboration with IIT's for R & D activities*
- *No quality compromise*
- *In house resin manufacturing facility*
- *In house lab facilities*
- *World's biggest Pultrusion Machines (In profile envelope)*
- *Rebar technology from Russia*



# FEW PICTURES OF OUR PLANT



TESTING LAB



PULTRUSION LINE



HAND LAMINATION



PAINT BOOTH



DUST COLLECTOR ROOM



# THANK YOU

**Corporate Office:**

Jindal Stainless Tower, Plot No 50, Institutional Area, Sector-32,  
Gurugram, Haryana-122001

**Manufacturing Facilities:**

1. Jindal Advance Materials Pvt Ltd, Village Pathredi, Bilaspur Tauru Road, Gurgaon -122413
2. JAM Infra Pvt. Ltd., O.P. Jindal Marg, Hisar, Haryana – 125005