

### Innovative Solutions

with Guaranteed

Results

Welcome to MPPL, a pioneer in manufacturing & fabrication of Storage Tanks, Vessels, Equipment as per process design, Fumes, Exhaust Systems, Hoods, Blowers, Pipes & Fittings, Ducting, Grating, Cable trays, etc in all plastics like PP, PPH, PPR, HDPE, PVC, CPVC, ABS, HIPS, PVDF, UHMW & other high end engineering plastics.

We have the agility to provide low-cost ideas and execution, quality, customer service, and exceptionally built environments that can be delivered in line with accelerated business requirements.

We take time to understand our client's needs. This gives us the ability to add value to a project by engineering a solution that can improve outcomes in terms of cost or completion time-or both.



### Index

Company Profile	04
Storage Tanks	08
Pressure Vessels	10
Exhaust System	12
Hoods & Covers	14
Electroplating & Pickling Plant	15
Pipes & Fittings	16
FRP	18
Gratings	20

### **COMPANY PROFILE**

Mandhana Polymers Pvt. Ltd. (MPPL) commenced its operations in India in the year, 1988. With state-of-art modern machinery and a dedicated team of Research & Development expert's ensure consistent, reliable, and highperformance products. Every step of the manufacturing process, right from the raw material to the dispatch are been carefully monitored by a team of dedicated professionals. The infrastructure and the process have always blended to maintain high-quality standards.



We design & manufacture Chemical Process Equipment & Piping Systems.

PP

PPH HDPE PVC CPVC PVDF FRP

**GRP** 

We also produce cost effective plastic products like Pipes & Fittings, Valves, Sheets, Blocks, Injection-Moulded Products, Profiles, etc.

### Company Objectives:

MPPL intends to manufacture high quality FRP products & also offer services in:

Detailed Engineering **Drawings** 

Manufacturing & Supply at site /store

**Erection & Commissioning** 



### **STORAGE TANKS**

### Vertical Cylindrical

## Flat Bottom with Dish Conical / Flanged Top D (mm) 600 - 6000 H (mm) 600 - 7000 Capacity (liters) 200 - 250000



# Conical / Dish Bottom with Lug Support Elevated Bottom D (mm) 600 - 3000 H (mm) 600 - 4000 Capacity (liters) 200 - 15000 Type of Support PIPE / SKIRT / LUGS / RINGS



### Rectangular

		Partition, Agitator
000x1000x2000		Baffle Plates
0000	Тор	Open Flanged
RP/Steel/Concrete		Flanged / Hinge /
		Sliding Cover
	0000	0000 Top



Horizontal Cylindrical	
D (mm)	600 - 3600
H (mm)	600 - 5000
Capacity (liters)	200 - 25000
End	Torispherical Dish
Support	Steel/Concrete
	Saddles





### PRESSURE VESSELS

### Vertical

Conical / Dish Bottom with Pipe Support



### Horizontal

D (mm)	600 - 2000
H (mm)	600 - 2000
Capacity (liters)	200 - 25000
Pressure	upto 10kg/cm <sup>2</sup>
Vacuum	Full-VE Pressure
	of 760mm Hg
Specification	Refer item no. 1





### Vacuum

Conical / Dish Bottom with Skirt Support



### Agitator's

Agitator Type	Pitch Blade, Flat Blade	
	/Curve Blade Turbine	
Internals	Baffle Plates	
Externals	Motor / Gearbox /	
	Stuffing Box / Bearing	
	& Housing / Agitator &	
	Shaft / Coupling	



### Reactor

Conical / Dish Bottom with Ring Support

D (mm)	200 - 3000
H (mm)	600 - 3000
Capacity (liters)	200 - 25000
Pressure	upto 2kg/cm2
Vacuum	Full-VE pressure
	of 760mm Hg

Specifications	S	
BS4994	IS875	ASTM
		D3299
IS10661	ASME	IS1872
	section- X	
PS15-69	ASTM D4097	BS5500

### Note:

- Agitator Assembly to be independently supported of vessel.
- Rectangular, Horizontal Vessels can be also be fitted with Agitator.

### **EXHAUST SYSTEM**

### Venturi Scrubber

D (mm)	200 - 1500
H (mm)	750 - 1500
Capacity (liters)	200 - 1500

### Type:

- · With or without base collection tank.
- With or without packed column in series, mounted on base collection tank for excellent scrubbing efficiency.



### Packed Bed Column Scrubber

D (mm)	300 - 3000
H (mm)	1000 - 6000
Capacity (CFM)	200 - 1500
Packing	MOC-PP / PVC / PVDF
Packing Type	Pall Ring / Rasching
	Ring / Intalox Saddles



### Note

- Blower Position can be before inlet or after outlet depending upon fumes to be scrubbed under head or vacuum.
- We also offer a complete Exhaust System solutions.

Centrifugal Column	Venturi (if required for extra scrubbing circulation pump.)	Base Collection Tank.	Chimney with Canopy	Hoods	Ducting	Piping
-----------------------	--	-----------------------------	---------------------------	-------	---------	--------

### **Centrifugal Blowers**

Impeller D (mm)	300 to 3000
Casting O (mm)	300x250x1550x1200
	or upto 1600
Capacity (CFM)	300 to 50000
Static Pressure	upto 20" water gauge
Motor	Belt Driven or Direct,
	1HP to 120HP
Fabrication	Hand-Lay-Up



Fan assembly consists of : • Casing• Impeller • Shaft (EN8/SS) • Bearing with Housing • MS Stand • Motor • Pulley • 'V' Belt • Electricals

### **Chimney Stack**

D (mm)	100 - 600
Н	upto 30 mtr
Туре	Self-supporting or
	supported with
	structure



### Note:

- Chimney/Stack will be made in segments and jointed by flange.
- Canopy can be provided at top (if required).
- Stock designed for static/dynamic wind load, earthquake load, oscillation, resonance, collapsible load.
- Specification Referred : BS 4994, IS 875, IS 6533, IS 1872
- It is recommended to make stack in Fire Retardant Resin to reduce risk of fire.

### **HOODS & COVERS**

W (mm)	300 - 6000
L (mm)	300 - 25000
H (mm)	300 - 2000

### Note

- Hoods can be made to take wind load, live load of person standing on hood & self weight load.
- MOC of hood: FRP- Lined/ Unlined, PVC, PP
- Hoods can be fitted with inspection door of Sliding / Hinge / Fixed Type



### **ELECTROPLATING & PICKLING**

### Automated / Semi-Automated

MPPL has supplied various Electrolyte Fumeless pickling plants for wire rod in India and overseas. These plants are manufactured as a continuous Line or Batch wise pickling plant. These plants are manufactured from high end Engineering Plastics. These pickling tanks are available in various shapes and sizes to suit the needs of industries such as wire, cr mills, sheet metal components and pipe mills.

### Process Equipment [customised]

Today at MPPL we have several options to select the material of construction. They are tailor-made, durable and cost effective as per customer need. Plain double welded self-supporting tanks of any shape & dimension and volume as desired can be adopted for Storage Electroplating Pickling and other Process requirements



### **PIPES & FITTINGS**

The variety of thermoplastic & thermosetting resins are available having endless application & suitability due to its unique combination of good physical properties & excellent chemical corrosion resistance. MANDHANA POLYMERS offers FRP Piping and equipment in wide range of material of construction.

### **THERMOPLASTIC**

### Polypropylene (PP)

Obtained through polymerization of propylene from polyolefinic resin. Sheets are made of homo or copolymers. Isostatic PP is mainly used for industrial application. Resistant to strong acids, alkalies & weak solvents but sensitive to strong oxidizing agents & halogens. Heat resistance  $90^{\circ}$  C

### Polypropylene Homopolymer (PPH)

Polypropylene Homopolymer (PPH) is the most used. It has a high strength/weight ratio and is more rigid than the copolymer. This, combined with good chemical resistance and weldability, means it is used in many corrosion resistant structures.

### High Density PolyEthylene (HDPE)

A polyolefinic resin polymerized to form HDPE having molecular form with medium to high density. Chemical resistance same as PP but heat resistance upto  $60^{\circ}$  C.

### Unplasticized Polyvinyl Chloride (UPVC)

UPVC belongs to category of vinyl resins where in its molecular structure, each monomer unit contains one chlorine atom. Resistant to acids & alkalies but sensitive to aromatic solvents. Heat resistance is  $60^{\circ}$  C.

### Chlorinated Polyvinyl Chloride (CPVC)

CPVC is made by chlorination reaction with homo polymer PVC, by increasing chlorine content in PVC to 70% max. Chemical resistance similar to PVC but heat resistance upto  $90^{\circ}$  C

### Polyvinylidene Flouride (PVDF)

These are fluorinated polymers having chain or thread like molecules. Resistant to acids, oxidants, solvents & halogens while sensitive to amines & alkalies. Heat resistance upto  $140^{\circ}$  C.

Material	Site Joint Method	Size / Range (mm)	
	Butt Fusion	15-500	
PP/PPH/ PPR / HDPE	Socket Fusion	15-200	
	Hot Air Welding	15-500	
	Solvent Cementing	15-315	
PVC / CPVC	Hot Air Welding	15-315	
	Union / Coupling Joint	15-160	
The second secon			
	(A) (N)		
		www.mandhanapolymers.com	

### **THERMOSETTING**

These resins are mixed with low alkali borosilicate E type glass when begin polymerized to form a matrix structure called as Fiber Glass Reinforced Plastic (FRP/GRP). All resin systems are also available in fire retardant grade.

### Isopthalic

This is an unsaturated polyester resin based on isopthalic acid. Resistant to weak organic/inorganic acids, minerals, alkalies, salts but sensitive to oxidizing acides, strong alkalies, halogens. Heat resistance upto  $60^{\circ}$  C.

### **Bisphenol**

This is modified bisphenol fumarate polyester resin having minimum ester linkages. Resistant to organic/inorganic acids, alkalies, salts & sensitive to solvent. Heat resistance upto  $95^{\circ}$  C.

### Vinylester (GP & Superior)

This is unsaturated polyester resin based on polymer having epoxy backbone for GP grade & epoxy phenolic backbone to superior grade. Resistant to oxidizing & other acids, alkalies, salts & solvents. Sensitive to aromatic hydrocarbons of alcohols. Heat resistance upto  $110^{\circ}$  C.

### **HET Acid or Chlorandic**

This is HET acid based unsaturated polyester resin. Resistant to oxidizing acids, chlorine, salt but sensitive to solvents & strong alkalies. Heat resistance upto  $120^{\circ}$  C with excellent fire retardant properties.

### NPG Isopthalic

These are neopentyl glycol isopthalic acid based unsaturated polyester resin. Chemical resistance same as isopthalic but heat resistance upto  $100^{\circ}$  C.

### Ероху

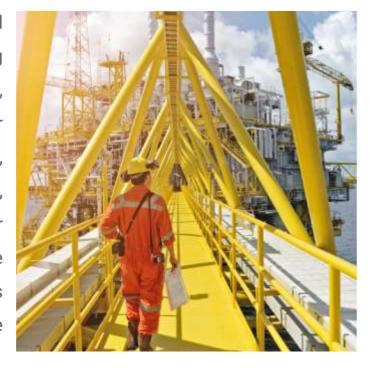
Resistant to weak acids, solvents, salts, bases but sensitive to alkalies, chlorine, strong acids. Heat resistance upto 100° C. This is hot cured process of lamination.

Material	Site Joint Method	Size / Range (mm)
FRP Unlined	Hand lay Up	25-5000
	Linear Butt / Socket	25-400
FRP LINED	Hot Air Welding	25-5000
	FRP Hand Lay Up	
	11	
	THE RESERVE TO THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW	
		1967
		www.mandhanapolymers.com

### **GRATINGS**

### FRP Gratings

Mandhana Polymers Pvt Ltd is an established name in composites and has been providing complete system of FRP gratings, Railings, cable trays, Structurals, Ladders, Motor covers for Walkways, Platforms, Stairs, Bridges, Grids as tower packing supports, Effluent trench cover, swimming pools & other allied usages of moulded and pultruded type gratings since a decade. Mandhana Polymers Pvt Ltd offers system flexibility to optimize cost.



### High Strength Fiber-glass Grating

FRP Grating is the ideal solution for corrosion problems faced in industrial environments. It forms the right replacement for steel or aluminium gratings used in highly corrosive atmosphere. FRP gratings often outlasts steel 20 to 1 times and it is a long term investment, where frequent grating and walkaway replacement cost are unacceptable.

FRP gratings are manufactured in two types

### Monolithic

FRP grating molded products have passed ABS certificates, ASTM E84 and D635 tests. The production, inspection, testing, installation and service are strictly managed and controlled under ISO9001:2000 quality systems.

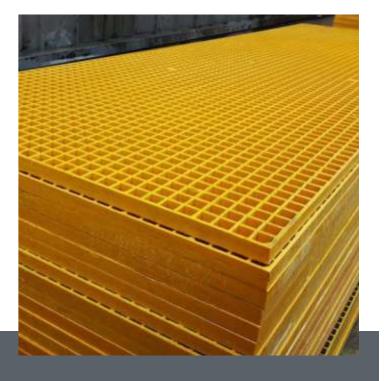
### FRP Pultruded Gratings

Pultruded Gratings are manufactured by assembly of Pultruded I Beams (Load Bearing members) & Pultruded Cross Rods (Cross Locking members). The distance between the I Beams is 40 mm, whereas the distance between the Cross Rod varies as per the Load requirement of the application.

Pultruded Fiberglass Grating is a fiberglass (FRP) structural shape that is produced by dipping fiberglass such as strand, mat and veil in a liquid resin bath and then pulling this combination through a heated die which shapes and cures the composite before it comes out the other end. It is a continuous and highly efficient method of producing a standard cross section.

### **Features**

- Fire retardant, resistant to almost all acids, alkalies, salts, halogens, alcohols, solvent etc.
- Anti Skid.
- · Electrically & thermally insulated.
- · Maintenance free.
- · Strong & Durable.



### Specification for Fire Retardancy

• IS 6746 • ASTM D 635 • UL94VO Retardancy • IS 6746 • ASTM D 635 • UL94VO

### **Applications**

• Walkway • Trench Cover • Grills • Pallets for material handling • Grid Plate



