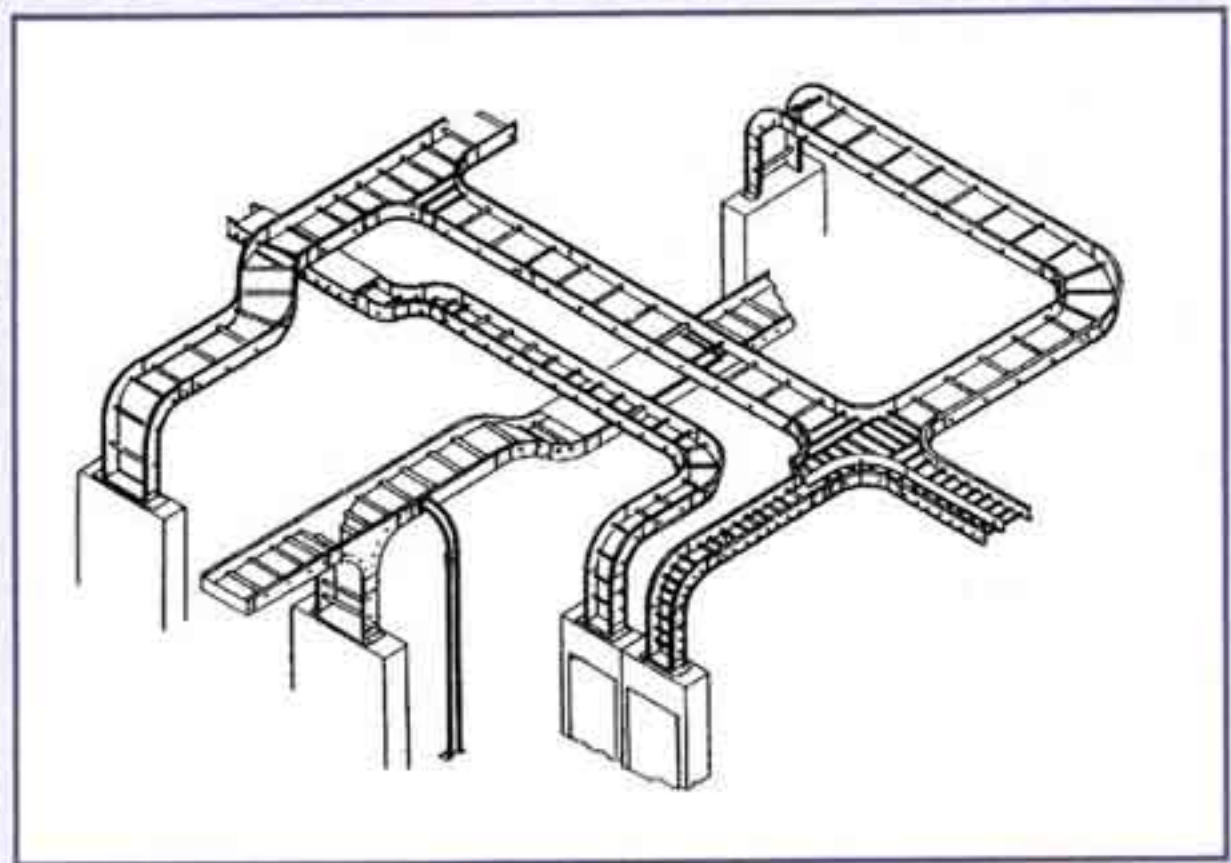




FRP CABLE TRAYS



For

General Industry

Chemical Plants

Petrochemical Plants

Fertilizer Plants

Railway

Pulp & Paper Plant

Water/Waste Water Treatment/ETP

Power Plants

Marine / Ships & Docks

Mining

Corrosive Environment

Coastal Areas

OFF- Shore Installations

The FRP Cable Support Systems is most suitable where the metallic Systems gets Corroded (Iron gets rusted and Aluminium develops White or Silver grey Patina)

THE CAUSES OF CORROSIVE ATTACK ARE :

- SIMPLE CHEMICAL ATTACK** - When the environment is loaded with Chemical vapours, the attack is severe.
- ELECTRO CHEMICAL CORROSION**
- CHLORINE CONTENTS** - in atmospheric air (Coastal / Sea)

In any event the METALLIC SYSTEM HAS LIMITED SERVICE LIFE/ EXPECTANCY (Regardless of how the end point is defined)

FRP CABLE TRAYS - designed to withstand corrosion and stresses.

THE MAIN FEATURES ARE:

- ◆ Corrosion Resistant Excellent Environmental Resistant
- ◆ Rigid & Structurally Strong
- ◆ High Impact strength
- ◆ Light Weight
- ◆ Non Conductive (Electrical & Thermal)
- ◆ Non Sparking
- ◆ Chemical Resistant
- ◆ Non Magnetic
- ◆ Resistant to Chipping and Cracking
- ◆ U.V. Stabilized
- ◆ No Water Absorption

Life Expectancy of FRP is more than 20 years whereas it is only 10 years (approximately) for GI/ GI PVC in Corrosive environment. The cost of FRP Cable Trays is higher in the initial stage, whereas it is only 15 to 25% of the total cost (during a time span of 20 years) due to maintenance such as **REPAINTING AND REPLACEMENT**.

MATERIAL OF CONSTRUCTION

Main Ingredients:

- Glass Fibres (Roving)
- Glass Mat
- Surface veil
- Resin (ISO PHATHALIC OR VINYLESTER)
- Additives

PROCESS

PULTRUSION

Pultrusion is a manufacturing process for producing continuous length of reinforced plastic structural shapes.

The process involves pulling of Continuous Glass Fibres, Continuous Glass Fibre Mat, Plastic fibre veil through a liquid resin bath. The glass fibre gets impregnated by the resin mixture and this impregnated fibre is pulled through a heated steel shaping die, where the resin gets **GEL** and the **SOLID CONTINUOUS PROFILE** comes out.

The continuous Glass Roving give the strength in the longitudinal direction, where as Glass Mat gives the strength in the transverse direction.

The type of Resin to be used depends upon the environment where the cable support System is to be used.

For General Environment

ISO PHATHALIC GRADE

For Severe Corrosive Environment

VINYLESTER

(Caustic and strong acidic)

The Resin is **FIRE RETARDANT & U.V. STABILISED**)

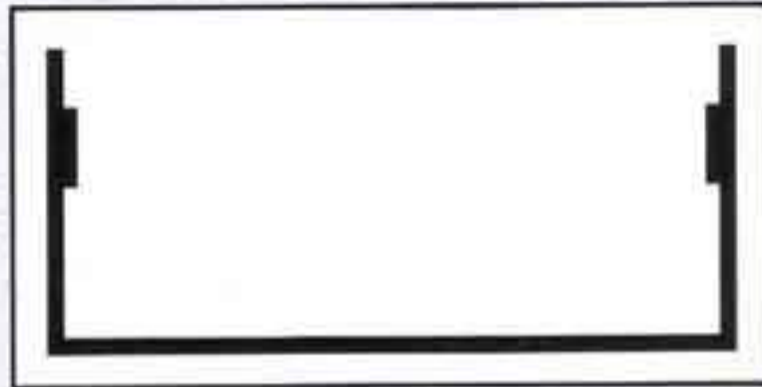
LOTUS FIBRE

TYPES OF CABLE TRAYS

LADDER TYPE

It is a structure Consisting of two LONGITUDINAL SIDE MEMBERS Connected by individual transverse members called Rung.

The Longitudinal Members are C-Channel with the extra rib on the fold of the channel.



The Rungs are specially designed to

- Withstand the load
- Allow the cable to dropout without contacting a sharp edge.
- Double inside fold is used to anchor the fastner head for clamping the Cables.



JOINING OF TRANSVERSE & LONGITUDINAL MEMBERS

To get the shape of the ladder Transverse & longitudinal members are joined together.

The strongest connections are made by using a combination of:

- Adhesive (high strength epoxy) The Two Members are locked by groove in the Rung and projection in the longitudinal member, Stopper is fixed for further locking of the two members.
- Mechanical Fastner (S.S. Rivet)

PERFORATED TYPE

It is a structure consisting of bottom (ventilated or solid) with the longitudinal siderails.

DIMENSIONS

LADDER TYPE

Standard Width (mm)	Height	Thickness	Rung Spacing
300	80	4.5	300
450	110	4.5	300
600	110	4.5	300
750	150	5	2 Rung together at 300 Spacing

PERFORATED TYPE

Sr. No.	Width	Height	Thickness
1	75	35	4
2	110	35	4.5
3	150	50	5
4	200	50	6

COLOUR

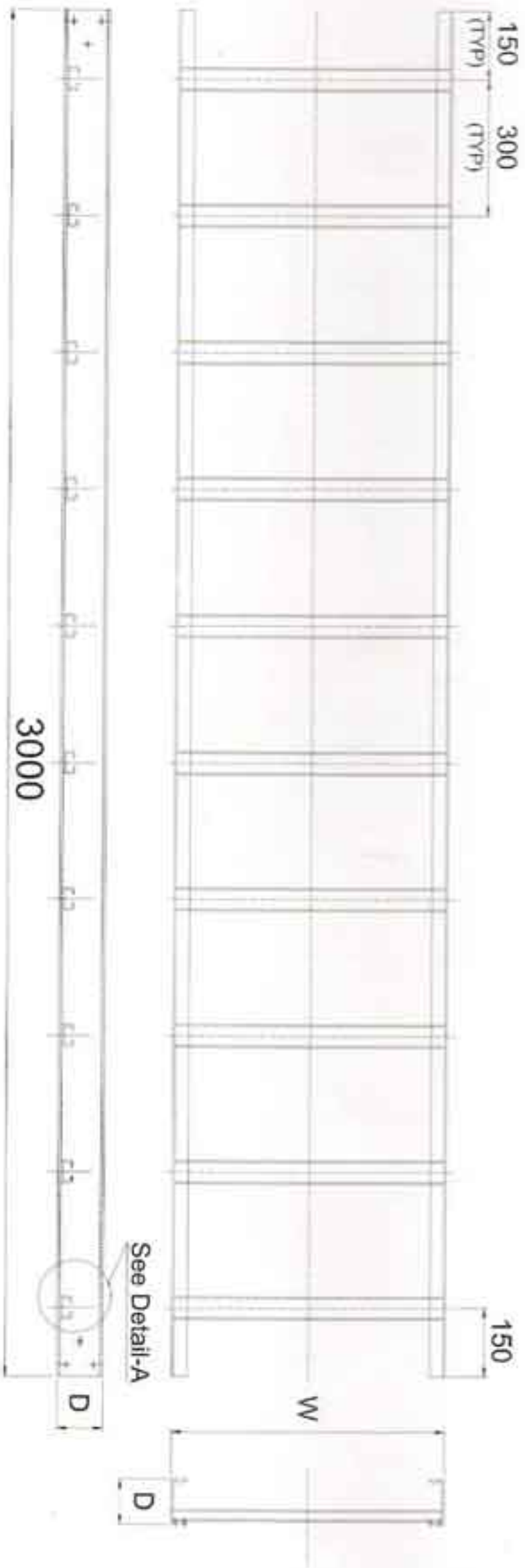
GREY

STANDARD LENGTH

3000mm

ALL CUT OR MACHINED EDGES, HOLES AND ABRASIONS MUST BE SEALED WITH THE RESIN

LOTUS FIBRE



LADDER TYPE

LONGITUDINAL SIDE RAIL

INTERNAL RUNGS

DOUBLE WASHER PLUS
S.S.-304 RIVET

Detail-A



PERFORATED TYPE

MAT			
UNIT			
APP.			
SCALE 1:1	DRN.		
DIM. m.m.	CKD.		
	QTY.		
	WT.		

LOTUS FIBRE
102, SWAGAT SAGAR PLAZA IND.
ESTATE, SATIVLI, VASAI (East)
THANE - 401208

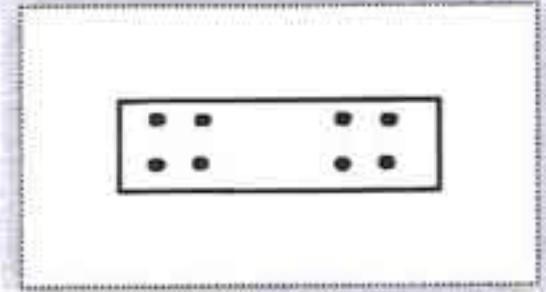
**FRP CABLE TRAY
LADDER / PERFORATED**

DRG #

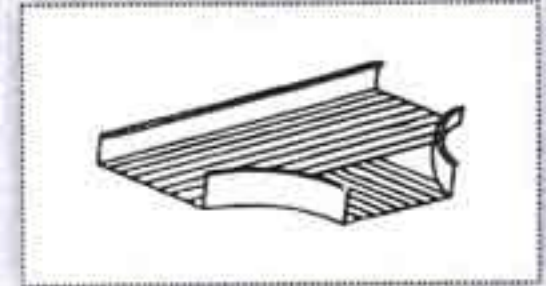
MATCHING ACCESSORIES

The Following accessories are generally used to complete the system:

COUPLERS (STRAIGHT & REDUCERS)



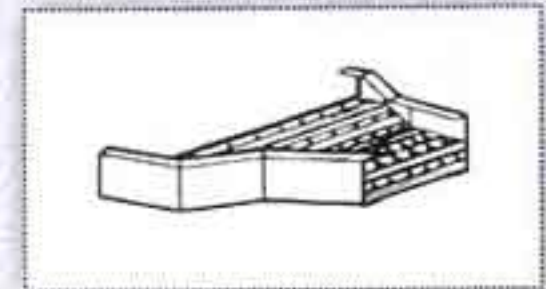
TEES (HORIZONTAL & VERTICAL)



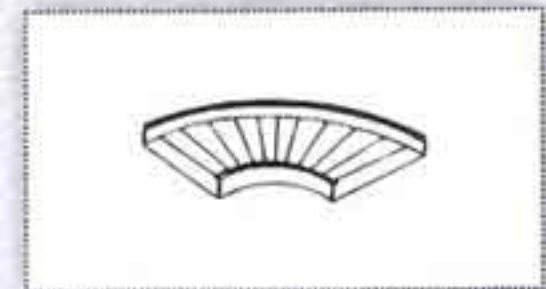
CROSSES



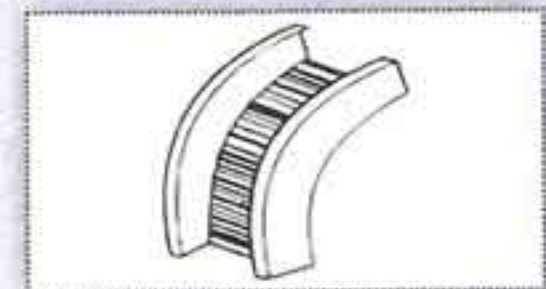
REDUCERS



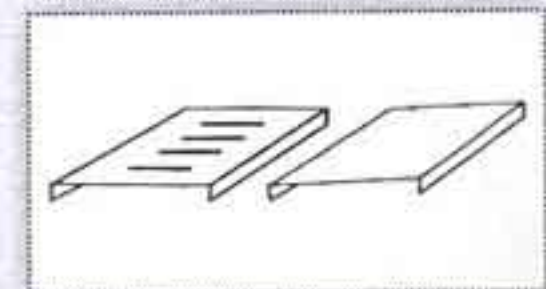
HORIZONTAL BENDS (RIGHT / LEFT)



VERTICAL BENDS (UP / DOWN-INSIDE / OUTSIDE)



COVERS (VENTILATED / SOLID)



LOTUS FIBRE

INSTALLATION

- General** The cable Trays and Accessories are bolted together and fixed to Supporting member. For the purpose of bolting together the side rails and all accessories have holes on each end for fixing Connector plates.
- Support Span** Recommended Support Span at installation site must not exceed 2000
- Cable Fill** Recommended cable fill should not normally be more than 80% of the inside area of the cable tray.

LOADING CAPACITY

The Working load capacity represents the ability of a cable tray to support the weight of the cable and the following guidelines should be Considered for loading the trays.

With the Support span not exceeding 2000 mm, the maximum designed loading is UDL + 70 kg. Concentrated Load at the Centre of the Span:

U.D.L. (Cable Load)	Width
30 kg/linear mtr	150 mm
60 kg/linear mtr	300 mm
90 kg/linear mtr	600 mm
120 kg/linear mtr	750 mm

LOTUS FIBRE™

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