



- Zero Theft Value
- High Load Capacity
- Weather Proof
- Durable
- Light Weight
- Innovative Designs & Colour

## FRP Manhole Covers

Fiber Reinforced Polymer

### FRP PRODUCTS

- | Manhole Cover with Frames | Water Gully Cover | Recess Manhole Cover
- | Molded Gratings | Water Tank Covers (OH / UG)
- | FRP Benches | Tree Guards



**About FRP:** The Modern Engineering Material FRP is composite material made of Epoxy Polymer (Vinylester Thermo setting plastic) Matrix which is reinforced with Glass Fibres. The raw material containing reinforced fibers are compressed & molded in Compression Molding at certain Pressure and Temperature to give desired Geometric Shapes, Pattern with precision engineering.

**The Advantages:** Glass reinforced polymers (FRP) are the strongest and most resistive to external deforming forces. Easy to handle and Install, Light yet Strong (High Strength to Weight Ratio). FRP is non re- processable hence Free from Theft Composite Cover has Zero Theft Value No Rusting or Chemical Reaction, High Service Life. Better Aesthetics Value due to Colour options. FRP Manhole Covers are Engineers First Choices compared to traditional CI/DI/Concrete covers. FRP Material is with 0% filler, Self Pigmented without any painting or coating. Hence no fading of Color.

*FRP Manhole Covers are Engineers First Choice as compared to traditional CI/DI/Concrete covers.*

Innovative Design, Colour Options, Embossing, Easy Handling, Cost effectivity are reason to make FRP users first Choice.

## Properties

- FRP as a material is resistant to Sunlight, Water, Chemical Water, Sewerage Water.
- UV Stabilizer is added to the raw material to impart UV resistance.
- Density of FRP Manhole Covers is 2 ton/m<sup>3</sup>.
- FRP has high impact resistance as it is flexible and not brittle.
- Strength to weight ratio in FRP is much higher than other materials.
- FRP during manufacturing, cures at a self exotherm temperature of 175°C.
- FRP is a suitable material under extreme hot and cold conditions.
- FRP can be destroyed by burning in incinerator.

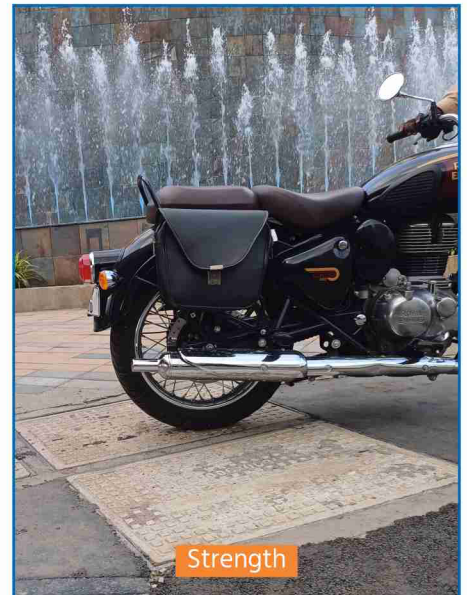
## Features

- Top 7 mm surface is a high abrasion surface.
- All covers are available with double seal arrangement. FRP Covers does not allow mosquito breeding in the chambers.
- FRP Covers are available in standard granite finish and are also available in any other colour specified by client. FRP covers are self pigmented.
- FRP covers are flexible and do not disintegrate into pieces due to excess load bearing imparted on the cover.
- Accidents on road are avoided as the Chambers are not left open even incase of cracking of cover.



### Provision of Keyholes:

- Lifting Keyholes are in Glass Filled Nylon, Socket Type to avoid wear & tear in lifting area.
- Keyholes have close bottom

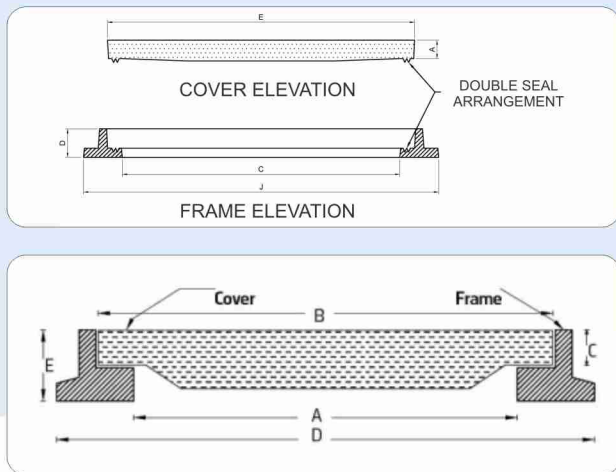


Strength



Water Gully Cover

## FRP Cover Drawing



### Molded Grating

Size 1000mm Length in Customised width, Load 350kg/m<sup>2</sup>  
Mesh Size 38x38, 50x50 Thickness 25-50mm

• Manhole Covers & Frames Confirming to EN124:1994 & IS 1726 : 1991 •

2.5 T, 5 T, 12.5 T, 25 T, 40 T, 60 T

<b>Circular</b>	Dia 530	Dia 560	Dia 600	Dia 750	Dia 900	
<b>Square</b>	300 x 300	450 x 450	600 x 600	750x750	900X900	1200X1200
<b>Rectangular</b>	450 x 600	450 x 900	500X600	600 x 900	900X1200	600X1200
<b>Water Gully Cover with Frame</b>	450 x 450	500 x 600	600 x 600	600x450	600 x 900	900x900
<b>Tank Cover (500kg)</b>	600 Dia	750 Dia	600x600	750x750	Higher Load Capacities Available	

### Load Bearing Capacity:

• Pedestrian Load 2.5 Ton | Light Vehicle 5 MT | 4 Wheeler Tempo Load B125 | Truck Trailer Load (C250) | Fire Engine Load (D400) | Industrial Load | Port Load (E600)

### Cross Section of Cover

#### Top Layer:

• This layer consists of a mixture of U.V. Stabilized resin, quartz and corundum crystals in specific proportion. It provide high abrasion resistance.

#### Reinforcement Layer:

• The layer consists of multiple layers of fiber glassre in for cement depending on the loading capacity of the cover. This sustains the tensile load applied on the cover.

#### Core:

The core of the product consists of a specially formulated mixture of resin and polymer concrete

## FRP/GRP/ Composite Manhole Covers:

- No Steel Content, No Resale Value, Hence No Theft
- High Strength to Weight Ratio
- Long Life (Over 20-30 Years)
- Light Weight & Easy to Handle
- Excellent Abrasion Resistance
- No Erosion Due to Rain Water & Moving Vehicles
- No Effect of Sewage Water & Chemical Water
- No Environmental Degradation high abrasion resistance.

## Advantages of ERP

Parameter	Parameter
Thermal Expansion	Almost Nil
Corrosion Resistance	High
Life Span	High
Strength/Weight Ratio	Very High
Cost	Comparable to CI
Scrap Value	Zero
Colour Range	Range Available
Finishing	Granite Finish
Logo Embossing	Possible
Custom Design	Possible
Locking System	Available
Handling	Easy



## FRP Benches

Size: 5 Feet Long

Capacity : 3 Adults

Strip Thickness 3.5 MM

Cast Iron Round Stand Pair 36kg-44kg

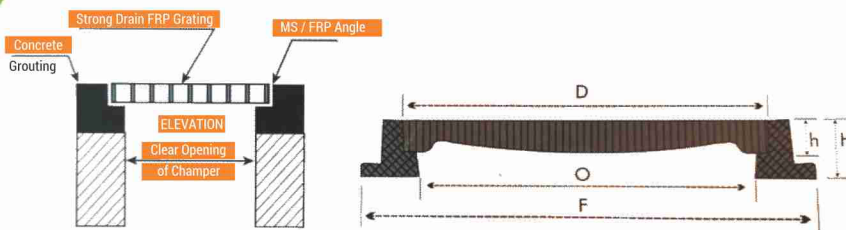
FRP C Chanel Wood Finish Patti

## Salient Features:

- Self Pigmented, No fading of Colour
- UV Stabilized, no effect of Sunlight
- Zero Filler, Long lasting & Attractive
- High Flexural Modules-non brittle



## Correct : Method of Installation



## FRP Vs Other

Parameter	RCC	CI	FRP
Durability	Low	Medium	Very High
Scrap Value	High	High	Zero* No Theft
Environment Effect	Moderate	High	Nil
Anti Corrosion	Low	Medium	High
Strength	Very Low	Moderate	High
Color Options	Grey	Metallic Black	Wide Range
Handling	Very Difficult	Difficult	Very Easy
Locking System	Not Available	Not Available	Available



## Tree Grating

Dia 450mm, 600mm / 1100x1100,  
1180x1180 Shape Round,  
Square Colours Grey,  
Brown, Black etc

Designed to meet and exceed  
A15/B125/C250/D400/E600/F900 loading  
rating, according to En 124:1994.

- Steel Fibers For SFRC Covers
- AR Glass Fibre For Cement Mixes
- Fibre Glass Mesh For Construction
- Advance Technology Solutions



121, Chiranjeev Nagar, Narendra Nagar, Nagpur-440015  
fibrofills@gmail.com | www.fibrofills.com 98230 87047 | 98222 32377