

NEW INTRODUCTION
DRAIN CHANNELS

**EASY TO HOLD
TOUGH TO BEAT**



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ABOUT US

THERMOSET POLY PRODUCTS (I) PVT. LTD. (ISO 9001 : 2008)

THERMOSET POLY PRODUCTS (I) PVT. LTD. (ISO 9001 : 2008) is a Design and Manufacturing Company located in Navi Mumbai, Maharashtra, India. The company is established in 1993 with industrial equipments being manufactured for the corrosive industry in India and abroad. Backed with a strong Design, R & D and technical team, we have successfully developed products like windmill nacelle covers in FRP for the wind power industry, THERMOWOOD manmade artificial wood with zero wooden ingredients (yet to be launched) and FRP/GRP/Composite THERMODRAIN solid top & recess Manhole covers, STP tank covers, Water gully covers, Water tank cover, Gratings, Chambers and Drain channels for the sewerage, storm water, electrical and telecom chambers.

With a strong technical team and in-house testing facility, we have been engaged in developing new products at regular intervals. Our R & D department has enabled us to develop technically superior and cost effective products. Our consistent and technically superior products has enabled us to export and establish our products in different countries. Our team strength of 250 people includes a well spread marketing team in India and abroad.

Our Manufacturing facility of 40,000 sq. ft. is spread over a factory area of 1,60,000 sq. ft. with an intent to manufacture quality products on consistent basis we have been stringently testing our products under third party agencies as per relevant testing standards like BS EN 124, 1994, IS 1726, BS 4994 and AASHTO.

PRODUCT LIST

- Solid Top Manhole Covers With Frame
- Recess Manhole Covers With Frame
- STP Tank Covers With Frame
- Overhead / U. G. Water Tank Covers With Frame (hinged Type)
- Drain Channels With Grating / Gully Cover
- Gratings
- Water Gully Covers With Frame
- FRP "L"Angles
- Chambers

FEATURES OF THERMODRAIN FRP/GRP/COMPOSITE MANHOLE COVERS

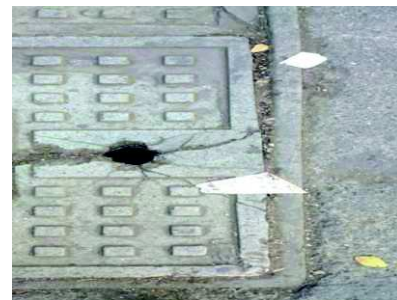
- Due to non presence of metal or any other reprocessable material in the cover, our covers are not prone to theft.
- Top 7mm surface is a high abrasion surface.
- All THERMODRAIN Covers are self pigmented and hence, does not require painting. However, if wanted they can be painted.
- All THERMODRAIN products are UV stabilized and hence, there is no effect of sunlight.
- Due to poor heat transfer properties of FRP, FRP Covers do not absorb heat and remains at normal temperature under sunlight. Hence, it is convenient to handle THERMODRAIN FRP Manhole Covers under extreme hot conditions.
- As the FRP Manhole Covers are flexible and do not disintegrate into pieces due to excess load bearing imparted on the cover , accidents on roads are avoided as the chambers are not left open even incase of cracking of cover.

SPECIAL FEATURES OF “THERMODRAIN” FRP/GRP/COMPOSITE MANHOLE COVERS

- **All lifting keyholes are bottom closed. This does not allow foul smell to emanate from the Chamber & does not allow foreign particles to enter the Chamber.**
- **All Manhole Covers are Double Seal type.**
- **All lifting key holes have high strength glass filled nylon sockets. This does not allow the FRP to get damaged around the key holes due to multiple lifting operations. Please find attached picture of the key hole showing the condition of the keyhole area without insert & condition of “THERMODRAIN” keyhole area with insert.**



Condition of the socket type keyhole lifting arrangement of THERMODRAIN FRP manhole covers



Condition of the Regular keyhole lifting arrangement of other make FRPmanhole covers

APPLICATIONS OF FRP/GRP/COMPOSITE MANHOLE COVERS

- Sewerage chambers
- Storm water drain chambers
- Cable Trench chambers
- Gas valve chambers
- Telecom chambers

Note: Applicable for Residential, Commercial, Road infrastructure, Airports and Industrial projects.

COMPARATIVE CHART

THERMODRAIN [®] FRP/GRP/COMPOSITE MANHOLE COVERS	CAST / DUCTILE IRON MANHOLE COVERS
<p>HIGH STRENGTH TO WEIGHT RATIO</p> <p>NO SCRAP VALUE HENCE NO THEFT</p> <p>LIGHT WEIGHT – EASY TO HANDLE</p> <p>CORROSION RESISTANT, NO EFFECT OF SEA/SEWAGE WATER</p> <p>HIGH AESTHETIC VALUE, AVAILABLE IN GRANITE FINISH OR ANY DESIRED COLOR</p> <p>SELF PIGMENTED. NO PAINTING REQUIRED</p> <p>LESSER FREIGHT & HANDLING COST DUE TO LESS WEIGHT</p> <p>NO EXTRA GRP PLATE IS REQUIRED TO PROTECT FROM CORROSION</p>	<p>LOW STRENGTH TO WEIGHT RATIO</p> <p>RISK OF THEFT DUE TO SCRAP VALUE</p> <p>HEAVY – NEEDS MORE MANPOWER</p> <p>GETS CORRODED DUE TO SEA/SEWAGE WATER</p> <p>STANDARD APPEARANCE</p> <p>PAINTING REQUIRED AT REGULAR INTERVALS</p> <p>HIGHER FREIGHT AND HANDLING COST DUE TO MORE WEIGHT</p> <p>EXTRA GRP PLATE IS REQUIRED BELOW THE COVER TO PROTECT FROM CORROSION</p>
THERMODRAIN FRP/GRP/COMPOSITE MANHOLE COVERS	CONCRETE MANHOLE COVERS
<p>NO STEEL CONTENT, NO RESALE VALUE HENCE NO THEFT</p> <p>HIGH STRENGTH TO WEIGHT RATIO</p> <p>LONG LIFE (20-30 YEARS)</p> <p>LIGHT WEIGHT – EASY TO HANDLE</p> <p>EXCELLENT ABRASION RESISTANCE NO EROSION DUE TO RAIN WATER AND MOVING VEHICLES</p> <p>NO EFFECT OF SEWAGE WATER & CHEMICAL WATER</p> <p>NO ENVIRONMENTAL DEGRADATION</p>	<p>THEFT HAPPENS DUE TO PRESENCE OF STEEL INTERNALLY</p> <p>LOW STRENGTH TO WEIGHT RATIO</p> <p>SHORT LIFE (2-3 YEARS)</p> <p>HEAVY - NEEDS MORE MANPOWER</p> <p>POOR ABRASION RESISTANCE GETS ERODED DUE TO RAIN WATER AND MOVING VEHICLES</p> <p>POOR RESISTANCE TO SEWAGE WATER AND CHEMICAL WATER.</p> <p>HIGH ENVIRONMENTAL DEGRADATION</p>

LOAD TESTING

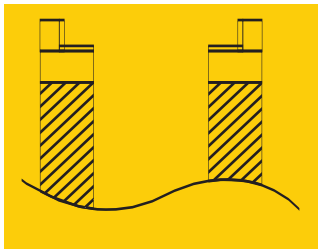
THERMODRAIN FRP/GRP/COMPOSITE Manhole Covers are tested for load bearing and permanent set as per BSEN124 :1991 and IS1726. BSEN124 is a testing code worldwide for Manhole Covers in cast iron, ductile iron and other materials also. Permanent Set is a multiple loading test to determine the permanent deformation in cover after multiple loading within a short time as specified in the code.



DO'S & DONT'S

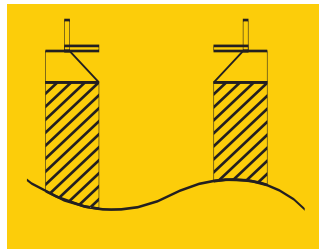
Installation

Do's



Correct installation of frame with complete civil support

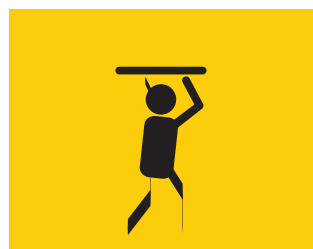
Don't



Load on the frame to be applied only after grouting is completed

Handling

Do's






Handle with care




Don't



Do not throw the material

APPLICABLE LOAD BEARING

GROUP	CLASS	LOAD	INSTALLATION AREAS	EXAMPLE
	F900	90 Ton (900kN)	Areas imposing high wheel loads	Airports
	E600	60 Ton (600kN)	Areas imposing high wheel loads	Sea ports
	D400	40 Ton (400kN)	Carriageway of roads (including pedestrian ways) and parking areas for all types of road vehicles	Roadways and vehicle traffic

GROUP	CLASS	LOAD	INSTALLATION AREAS	EXAMPLE
	C250	25 Ton (250kN)	Kerbside channels of roads	Kerbside parking areas
	B125	12,5 Ton (125kN)	Footways, pedestrian areas and areas with light duty.	Parking areas for cars only
	A15	1,5 Ton (15kN)	Areas which can only be used by pedestrian and pedal cyclists	Bicycle ways, pedestrian ways

DESCRIPTION OF FRP/GRP/COMPOSITE SOLID TOP / RECESS MANHOLE COVERS

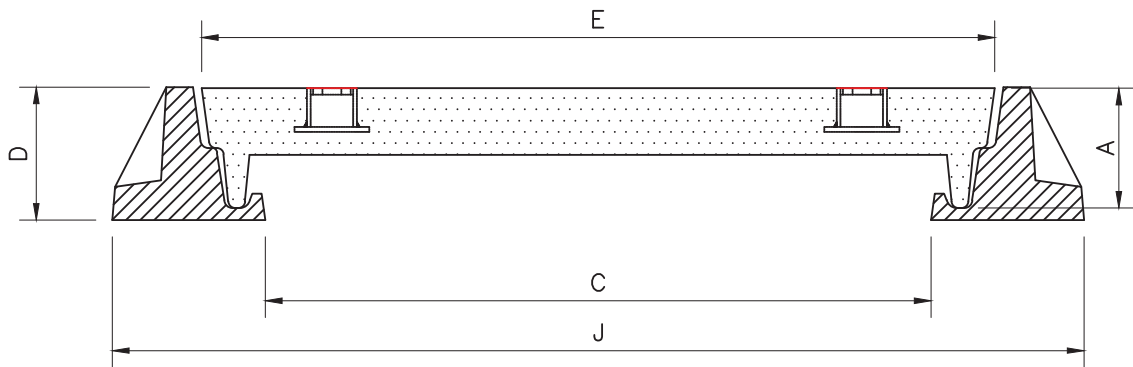
With a better performance than cast iron, ductile iron and RCC covers and being lighter and superior, this product is an industrial revolution. They have been thoroughly tested for load bearing & permanent set as per BSEN124 1994 & AASHTO M306 standards for drainage and utility services. Our covers meet all the requirements of the code. Our covers are available in all standard sizes with load bearing capacity from 2.5 tons To 60 tons (E600). They are circular, square, rectangular and double triangular in shape available with double sealed arrangements.

SALIENT FEATURES

- All covers are available with double seal.
- All lifting keyholes are in Glass Filled Nylon, socket type to avoid wear & tear in the lifting area.
- All keyholes have closed bottom (not thru & thru).
- If required the covers are made available with bolt locking arrangement.
- Permanent set is zero in all sizes & load bearing.
- Self pigmented/non painted.
- Non brittle.

THERMODRAIN FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER WITH FRAME	
SHAPE	FRAME CLEAR OPENING SIZE
	Available from 2.5 Tons to 60 Tons (E-600) load bearing
Circular	500 mm
	600 mm
	762 mm
	900 mm
	1000 mm
	1400 mm
Rectangular	600 mm x 450 mm
	900 mm x 450 mm
	900 mm x 600 mm
	990 mm x 1220 mm
	900 mm x 900 mm (2 covers with single frame)
Square	300 mm x 300 mm
	450 mm x 450 mm
	600 mm x 600 mm
	750 mm x 750 mm
	900 mm x 900 mm
	1000 mm x 1000 mm
	1200 mm x 1200 mm
	1500 mm x 1500 mm

500mm ROUND- FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



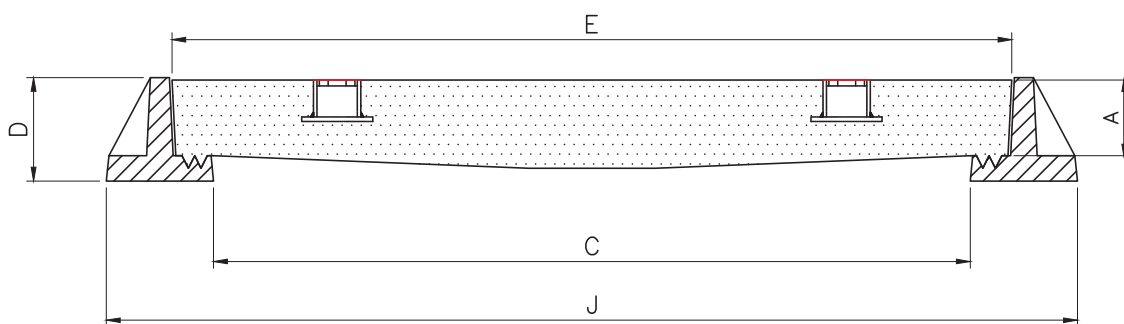
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 500 (M.C)	2.5 TONS	55	600
5 T 500 (M.C)	5 TONS	55	600
B 125 500 (M.C)	12.5 TONS (B 125)	55	600
C 250 500 (M.C)	25 TONS (C 250)	90	600
D400 500 (M.C)	40 TONS (D 400)	90	600

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 500 (M.C)	2.5 TONS	500	65	730
5 T 500 (M.C)	5 TONS	500	65	730
B 125 500 (M.C)	12.5 TONS (B 125)	500	65	730
C 250 500 (M.C)	25 TONS (C 250)	500	100	730
D400 500 (M.C)	40 TONS (D 400)	500	100	730

600mm ROUND-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



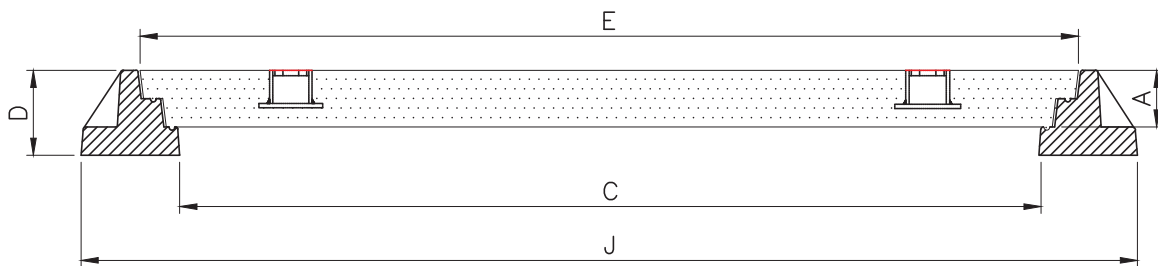
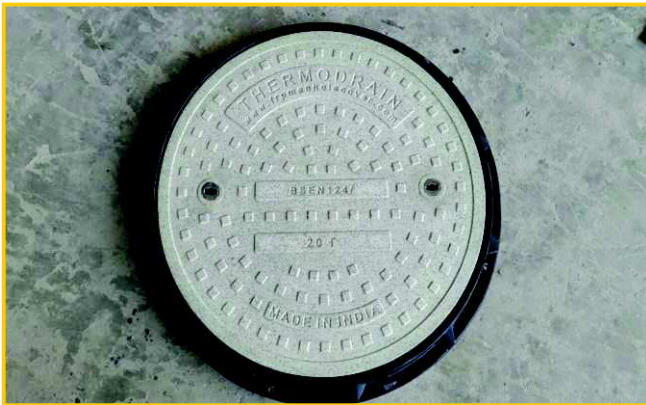
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 600 (M.C)	2.5 TONS	60	666
5 T 600 (M.C)	5 TONS	60	666
B 125 600 (M.C)	12.5 TONS (B 125)	60	666
C 250 600 (M.C)	25 TONS (C 250)	60	666
D400 600 (M.C)	40 TONS (D 400)	60	666

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 600 (M.C)	2.5 TONS	600	82	770
5 T 600 (M.C)	5 TONS	600	82	770
B 125 600 (M.C)	12.5 TONS (B 125)	600	82	770
C 250 600 (M.C)	25 TONS (C 250)	600	82	770
D400 600 (M.C)	40 TONS (D 400)	600	82	770

762mm ROUND-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



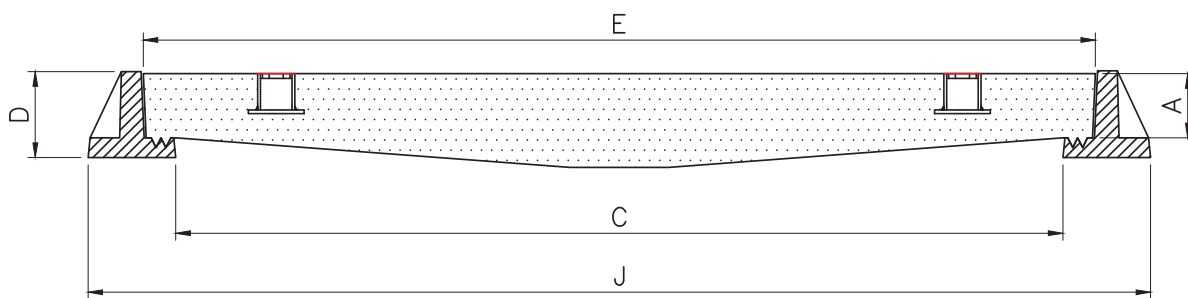
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 762 (M.C)	2.5 TONS	50	826
5 T 762 (M.C)	5 TONS	50	826
B 125 762 (M.C)	12.5 TONS (B 125)	50	826
C 250 762 (M.C)	25 TONS (C 250)	50	826
D400 762 (M.C)	40 TONS (D 400)	50	826

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 762 (M.C)	2.5 TONS	762	75	932
5 T 762 (M.C)	5 TONS	762	75	932
B 125 762 (M.C)	12.5 TONS (B 125)	762	75	932
C 250 762 (M.C)	25 TONS (C 250)	762	75	932
D400 762 (M.C)	40 TONS (D 400)	762	75	932

900mm ROUND-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER

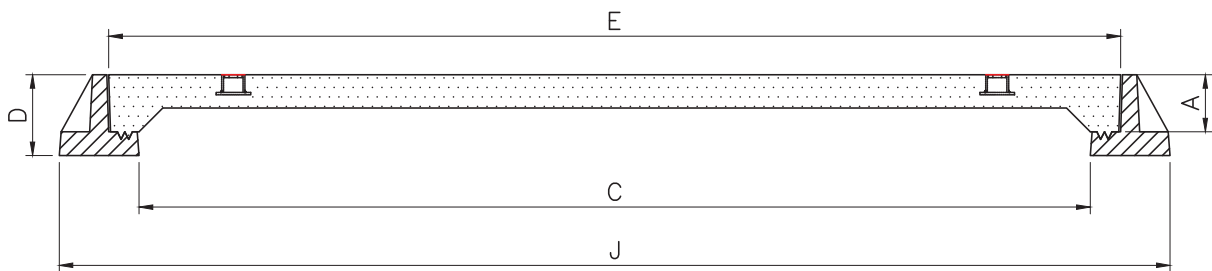
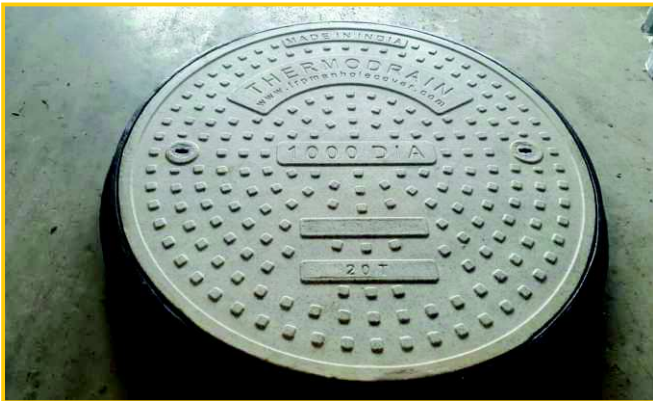


ELEVATION

Testing code: BSEN 124

COVER				FRAME				
MODEL NO.	LOAD BEARING	A	E	MODEL NO.	LOAD BEARING	C	D	J
2.5 T 900 (M.C)	2.5 TONS	60	966	2.5 T 900 (M.C)	2.5 TONS	900	82	1078
5 T 900 (M.C)	5 TONS	60	966	5 T 900 (M.C)	5 TONS	900	82	1078
B 125 900 (M.C)	12.5 TONS (B 125)	60	966	B 125 900 (M.C)	12.5 TONS (B 125)	900	82	1078
C 250 900 (M.C)	25 TONS (C 250)	60	966	C 250 900 (M.C)	25 TONS (C 250)	900	82	1078
D400 900 (M.C)	40 TONS (D 400)	60	966	D400 900 (M.C)	40 TONS (D 400)	900	82	1078

1000mm ROUND-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



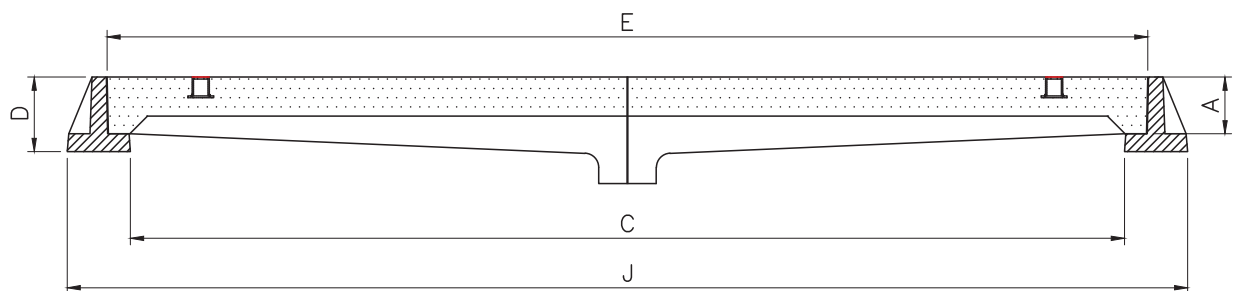
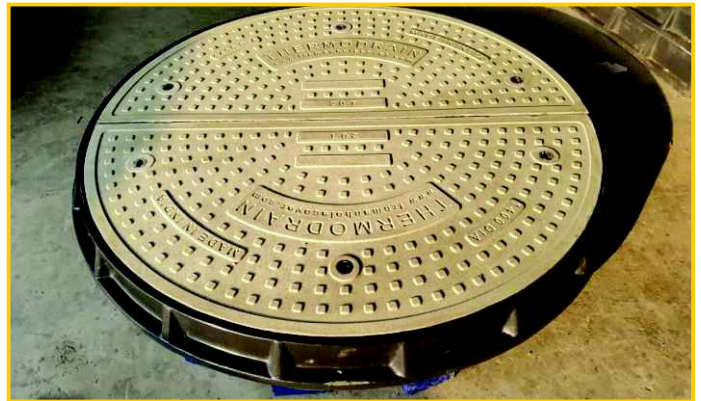
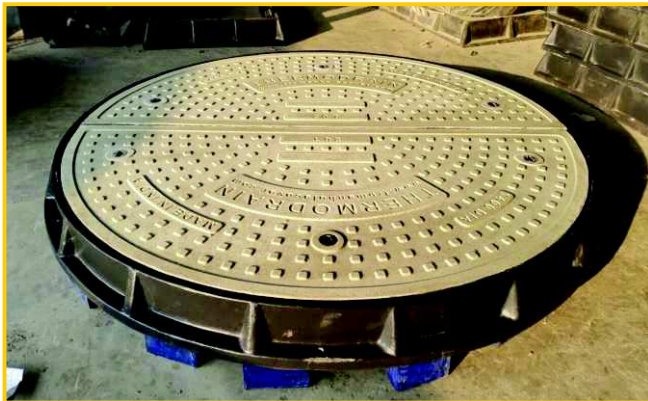
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 1000 (M.C)	2.5 TONS	60	1064
5 T 1000 (M.C)	5 TONS	60	1064
B 125 1000 (M.C)	12.5 TONS (B 125)	60	1064
C 250 1000 (M.C)	25 TONS (C 250)	60	1064
D400 1000 (M.C)	40 TONS (D 400)	60	1064

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 1000 (M.C)	2.5 TONS	1000	87	1168
5 T 1000 (M.C)	5 TONS	1000	87	1168
B 125 1000 (M.C)	12.5 TONS (B 125)	1000	87	1168
C 250 1000 (M.C)	25 TONS (C 250)	1000	87	1168
D400 1000 (M.C)	40 TONS (D 400)	1000	87	1168

1400mm ROUND-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



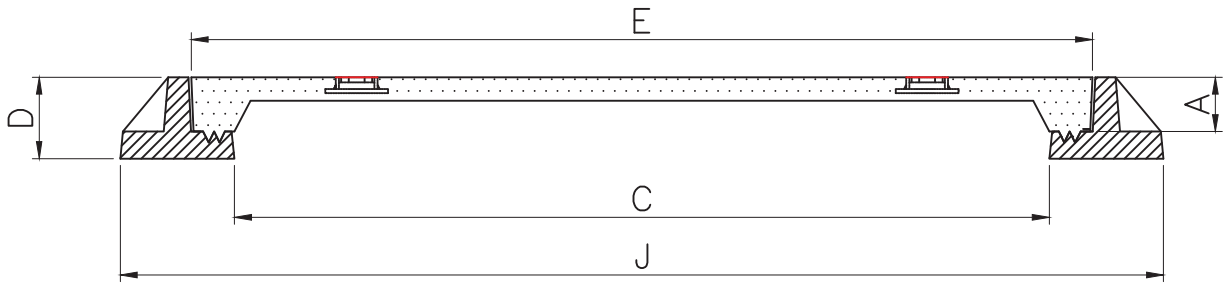
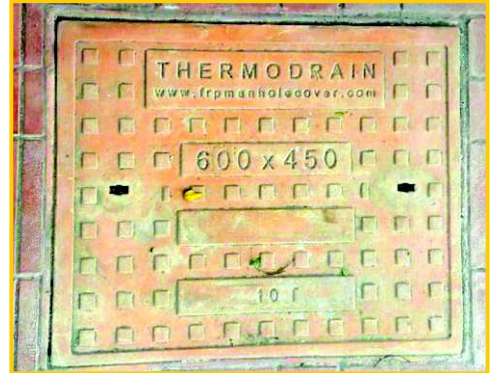
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 1400 (M.C)	2.5 TONS	80	1466
5 T 1400 (M.C)	5 TONS	80	1466
B 125 1400 (M.C)	12.5 TONS (B 125)	80	1466
C 250 1400 (M.C)	25 TONS (C 250)	80	1466
D400 1400 (M.C)	40 TONS (D 400)	80	1466

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 1400 (M.C)	2.5 TONS	1400	107	1578
5 T 1400 (M.C)	5 TONS	1400	107	1578
B 125 1400 (M.C)	12.5 TONS (B 125)	1400	107	1578
C 250 1400 (M.C)	25 TONS (C 250)	1400	107	1578
D400 1400 (M.C)	40 TONS (D 400)	1400	107	1578

600mm x 450mm RECTANGULAR-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



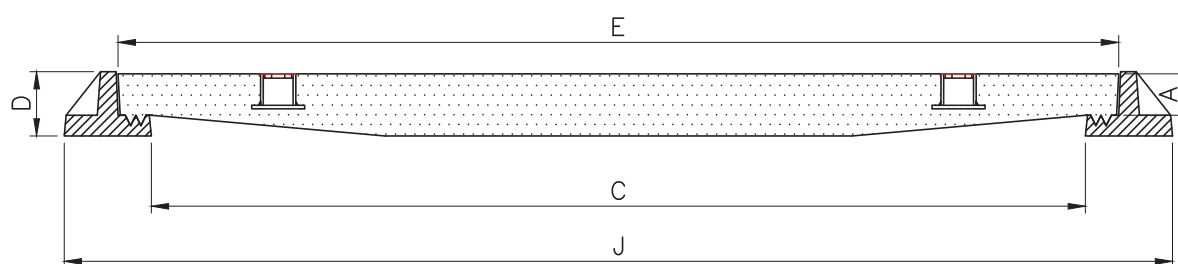
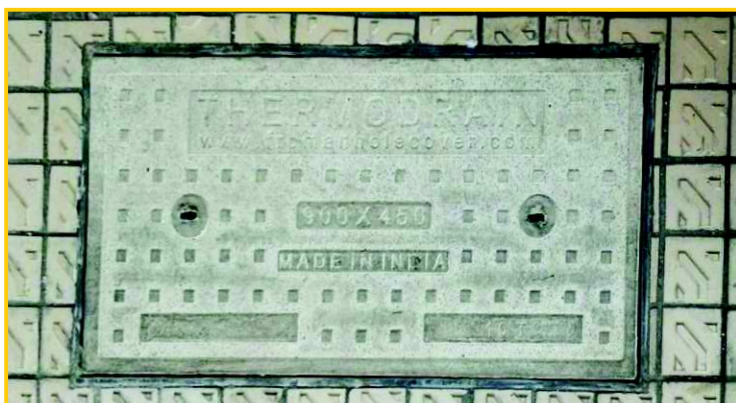
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 600.450 (M.C)	2.5 TONS	20	662 x 512
5 T 600.450 (M.C)	5 TONS	40	664 x 514
B 125 600.450 (M.C)	12.5 TONS (B 125)	40	664 x 514
C 250 600.450 (M.C)	25 TONS (C 250)	40	664 x 514
D400 600.450 (M.C)	40 TONS (D 400)	50	666 x 516

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 600.450 (M.C)	2.5 TONS	600 x 450	37	716 x 566
5 T 600.450 (M.C)	5 TONS	600 x 450	60	768 x 618
B 125 600.450 (M.C)	12.5 TONS (B 125)	600 x 450	60	768 x 618
C 250 600.450 (M.C)	25 TONS (C 250)	600 x 450	60	768 x 618
D400 600.450 (M.C)	40 TONS (D 400)	600 x 450	72	768 x 618

900mm x 450mm RECTANGULAR-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVERS



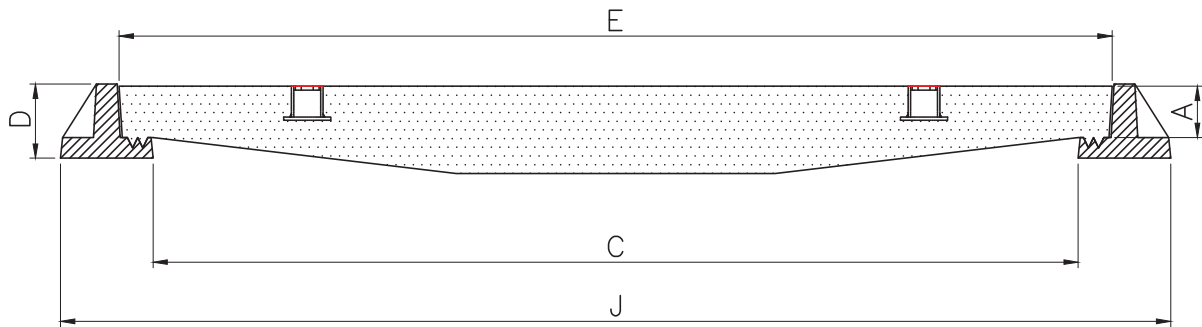
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 900.450 (M.C)	2.5 TONS	40	964 x 484
5 T 900.450 (M.C)	5 TONS	40	964 x 484
B 125 900.450 (M.C)	12.5 TONS (B 125)	40	964 x 484
C 250 900.450 (M.C)	25 TONS (C 250)	40	964 x 484
D400 900.450 (M.C)	40 TONS (D 400)	50	980 x 495

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 900.450 (M.C)	2.5 TONS	900 x 450	62	1044 x 586
5 T 900.450 (M.C)	5 TONS	900 x 450	62	1044 x 586
B 125 900.450 (M.C)	12.5 TONS (B 125)	900 x 450	62	1044 x 586
C 250 900.450 (M.C)	25 TONS (C 250)	900 x 450	62	1044 x 586
D400 900.450 (M.C)	40 TONS (D 400)	900 x 450	72	1083 x 598

900mm x 600mm RECTANGULAR-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVERS



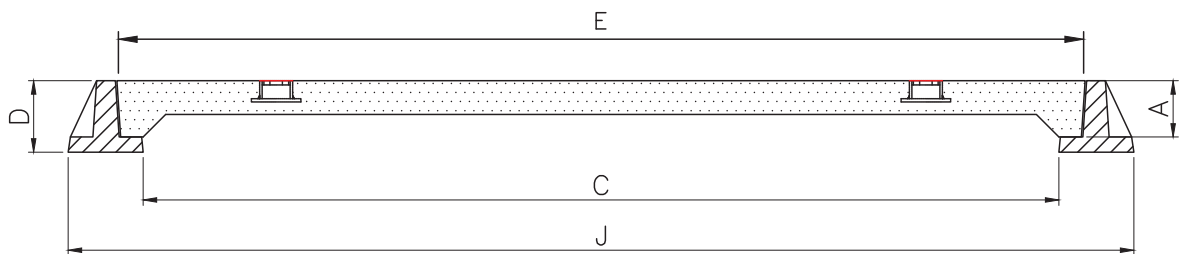
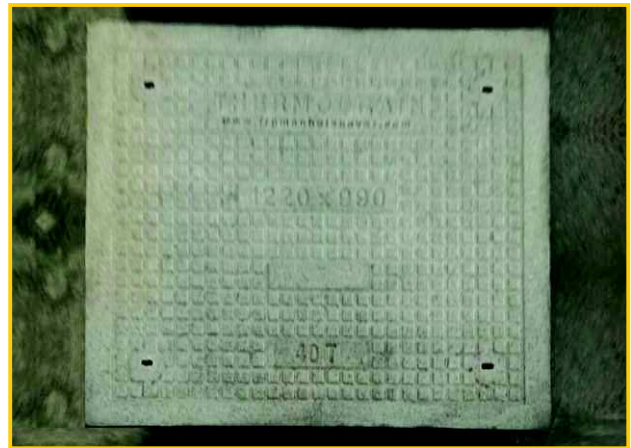
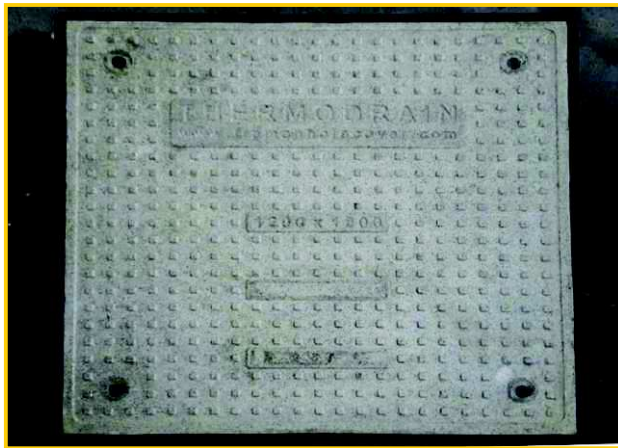
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 900.600 (M.C)	2.5 TONS	40	964 x 664
5 T 900.600 (M.C)	5 TONS	40	964 x 664
B 125 900.600 (M.C)	12.5 TONS (B 125)	40	964 x 664
C 250 900.600 (M.C)	25 TONS (C 250)	40	964 x 664
D400 900.600 (M.C)	40 TONS (D 400)	50	964 x 664

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 900.600 (M.C)	2.5 TONS	900 x 600	62	1070 x 770
5 T 900.600 (M.C)	5 TONS	900 x 600	62	1070 x 770
B 125 900.600 (M.C)	12.5 TONS (B 125)	900 x 600	62	1070 x 770
C 250 900.600 (M.C)	25 TONS (C 250)	900 x 600	62	1070 x 770
D400 900.600 (M.C)	40 TONS (D 400)	900 x 600	72	1080 x 780

990mm x 1220mm RECTANGULAR-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



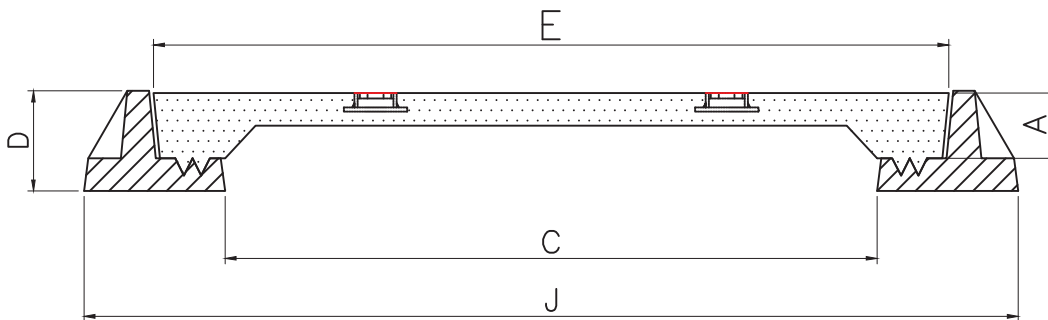
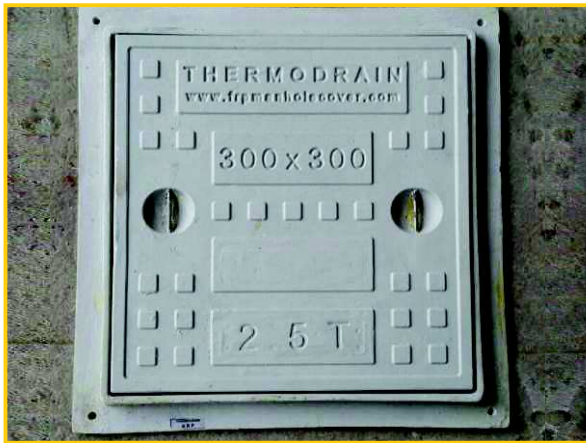
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 990.1220 (M.C)	2.5 TONS	75	1286 x 1056
5 T 990.1220 (M.C)	5 TONS	75	1286 x 1056
B 125 990.1220 (M.C)	12.5 TONS (B 125)	75	1286 x 1056
C 250 990.1220 (M.C)	25 TONS (C 250)	75	1286 x 1056
D400 990.1220 (M.C)	40 TONS (D 400)	75	1286 x 1056

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 990.1220 (M.C)	2.5 TONS	1220 x 995	95	1420 x 1190
5 T 990.1220 (M.C)	5 TONS	1220 x 995	95	1420 x 1190
B 125 990.1220 (M.C)	12.5 TONS (B 125)	1220 x 995	95	1420 x 1190
C 250 990.1220 (M.C)	25 TONS (C 250)	1220 x 995	95	1420 x 1190
D400 990.1220 (M.C)	40 TONS (D 400)	1220 x 995	95	1420 x 1190

300mm x 300mm SQUARE-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



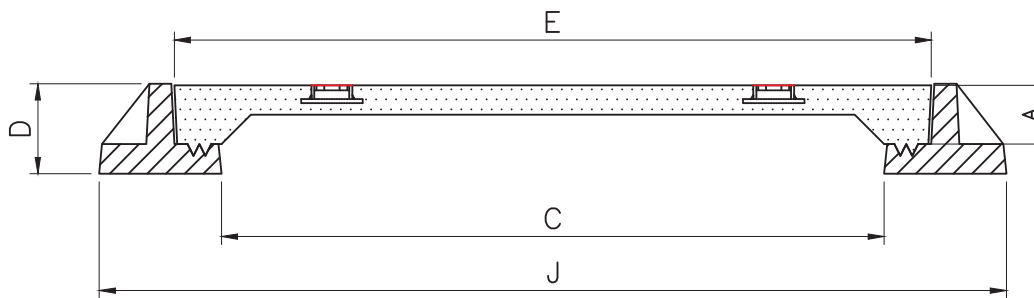
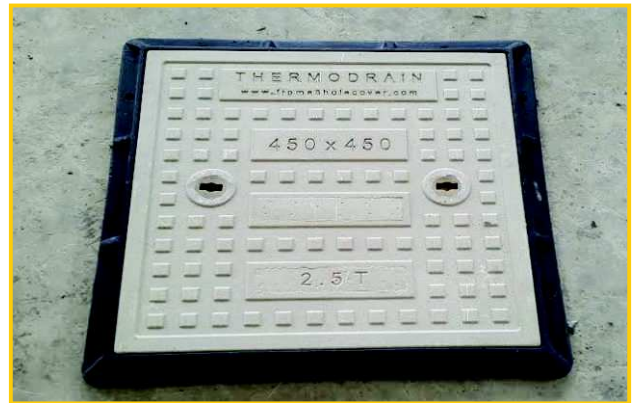
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
A 15 300.300 (M.C)	1.5 TONS (A 15)	18	364 x 364
2.5 T 300.300 (M.C)	2.5 TONS	18	364 x 364
5 T 300.300 (M.C)	5 TONS	18	364 x 364
B 125 300.300 (M.C)	12.5 TONS (B 125)	40	366 x 366
C 250 300.300 (M.C)	25 TONS (C 250)	40	366 x 366
D400 300.300 (M.C)	40 TONS (D 400)	40	366 x 366

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
A 15 300.300 (M.C)	1.5 TONS (A 15)	300 x 300	28	425 x 425
2.5 T 300.300 (M.C)	2.5 TONS	300 x 300	28	425 x 425
5 T 300.300 (M.C)	5 TONS	300 x 300	28	425 x 425
B 125 300.300 (M.C)	12.5 TONS (B 125)	300 x 300	62	474 x 474
C 250 300.300 (M.C)	25 TONS (C 250)	300 x 300	62	474 x 474
D400 300.300 (M.C)	40 TONS (D 400)	300 x 300	62	474 x 474

450mm x 450mm SQUARE-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



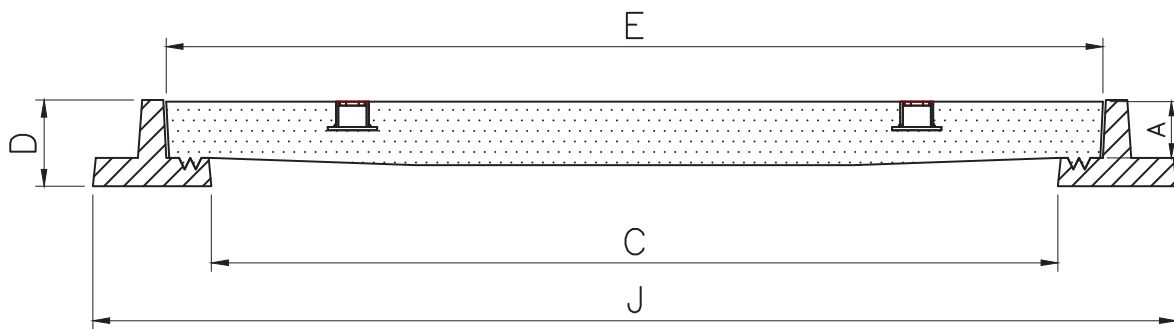
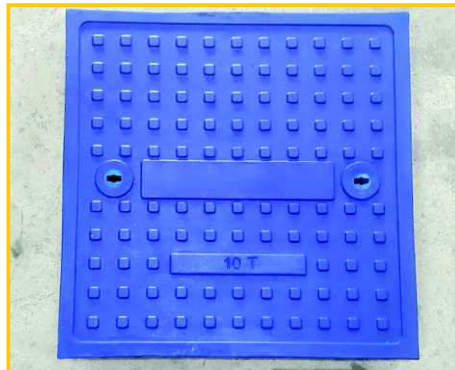
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 450.450 (M.C)	2.5 TONS	18	514 x 514
5 T 450.450 (M.C)	5 TONS	18	514 x 514
B 125 450.450 (M.C)	12.5 TONS (B 125)	40	514 x 514
C 250 450.450 (M.C)	25 TONS (C 250)	40	514 x 514
D400 450.450 (M.C)	40 TONS (D 400)	60	516 x 516

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 450.450 (M.C)	2.5 TONS	450 x 450	40	616 x 616
5 T 450.450 (M.C)	5 TONS	450 x 450	40	616 x 616
B 125 450.450 (M.C)	12.5 TONS (B 125)	450 x 450	60	616 x 616
C 250 450.450 (M.C)	25 TONS (C 250)	450 x 450	60	616 x 616
D400 450.450 (M.C)	40 TONS (D 400)	450 x 450	80	620 x 620

600mm x 600mm SQUARE-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



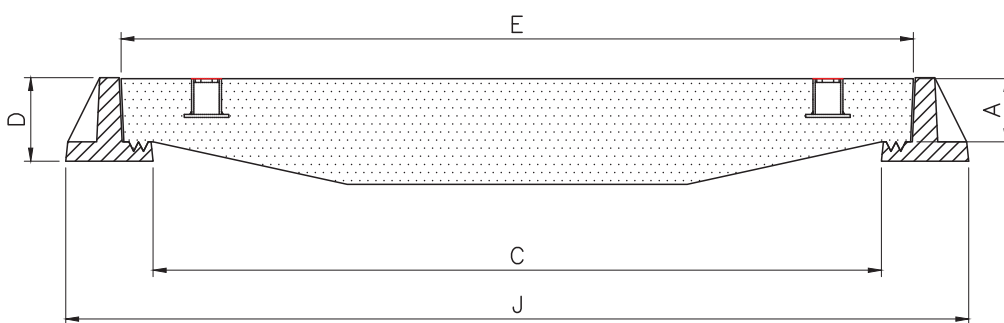
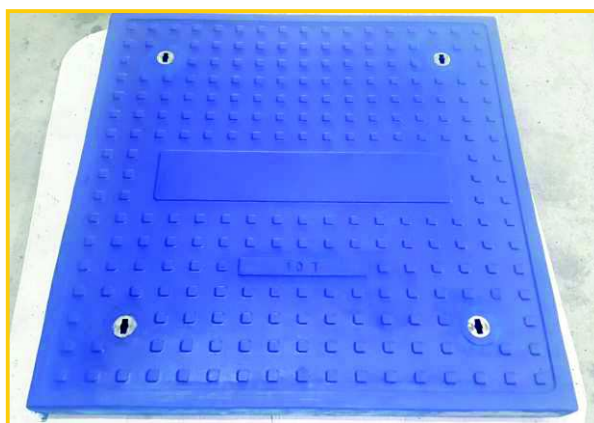
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 600.600 (M.C)	2.5 TONS	40	664 x 664
5 T 600.600 (M.C)	5 TONS	40	664 x 664
B 125 600.600 (M.C)	12.5 TONS (B 125)	40	664 x 664
C 250 600.600 (M.C)	25 TONS (C 250)	40	664 x 664
D400 600.600 (M.C)	40 TONS (D 400)	50	666 x 666

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 600.600 (M.C)	2.5 TONS	600 x 600	62	768 x 768
5 T 600.600 (M.C)	5 TONS	600 x 600	62	768 x 768
B 125 600.600 (M.C)	12.5 TONS (B 125)	600 x 600	62	768 x 768
C 250 600.600 (M.C)	25 TONS (C 250)	600 x 600	62	768 x 768
D400 600.600 (M.C)	40 TONS (D 400)	600 x 600	72	780 x 780

750mm x 750mm SQUARE-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



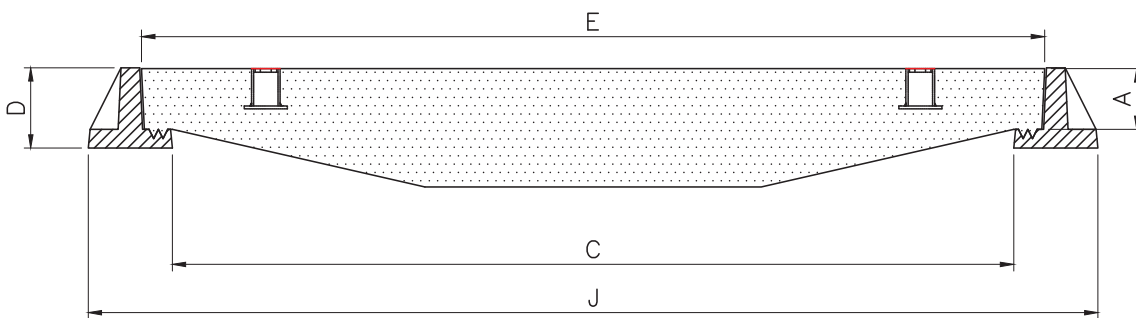
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 750.750 (M.C)	2.5 TONS	40	814 x 814
5 T 750.750 (M.C)	5 TONS	40	814 x 814
B 125 750.750 (M.C)	12.5 TONS (B 125)	40	816 x 816
C 250 750.750 (M.C)	25 TONS (C 250)	40	816 x 816
D400 750.750 (M.C)	40 TONS (D 400)	65	816 x 816

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 750.750 (M.C)	2.5 TONS	750 x 750	62	920 x 920
5 T 750.750 (M.C)	5 TONS	750 x 750	62	920 x 920
B 125 750.750 (M.C)	12.5 TONS (B 125)	750 x 750	62	920 x 920
C 250 750.750 (M.C)	25 TONS (C 250)	750 x 750	62	920 x 920
D400 750.750 (M.C)	40 TONS (D 400)	750 x 750	87	930 x 930

900mm x 900mm SQUARE-FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



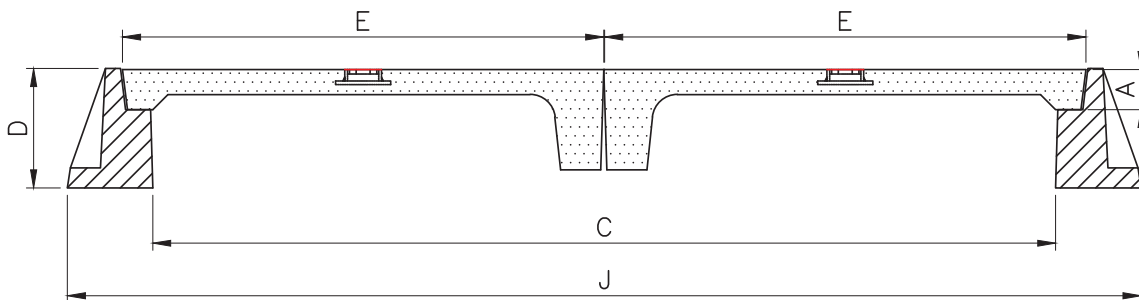
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 900.900 (M.C)	2.5 TONS	65	966 x 966
5 T 900.900 (M.C)	5 TONS	65	966 x 966
B 125 900.900 (M.C)	12.5 TONS (B 125)	65	966 x 966
C 250 900.900 (M.C)	25 TONS (C 250)	65	966 x 966
D400 900.900 (M.C)	40 TONS (D 400)	65	966 x 966

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 900.900 (M.C)	2.5 TONS	900 x 900	87	1080 x 1080
5 T 900.900 (M.C)	5 TONS	900 x 900	87	1080 x 1080
B 125 900.900 (M.C)	12.5 TONS (B 125)	900 x 900	87	1080 x 1080
C 250 900.900 (M.C)	25 TONS (C 250)	900 x 900	87	1080 x 1080
D400 900.900 (M.C)	40 TONS (D 400)	900 x 900	87	1080 x 1080

900mm x 900mm (2 COVERS WITH SINGLE FRAME) SQUARE FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



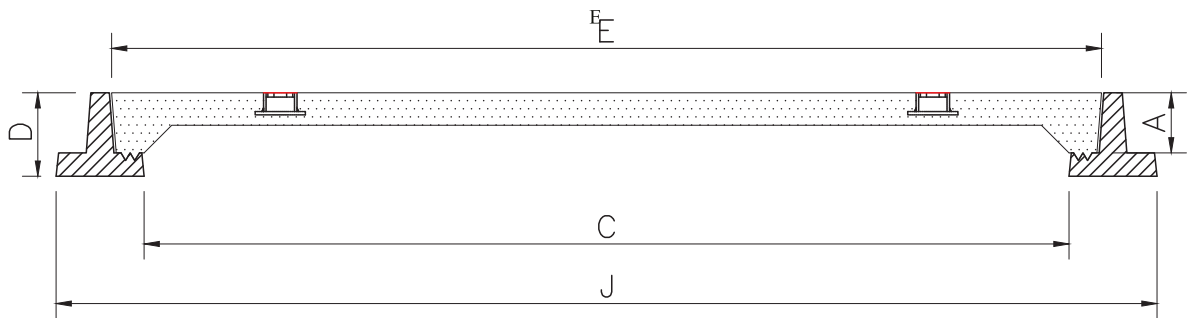
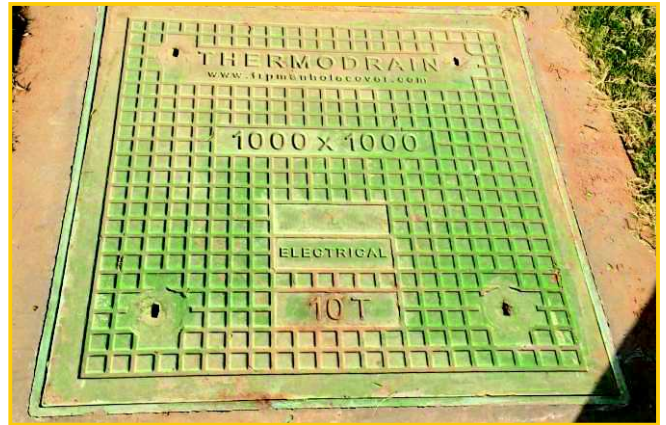
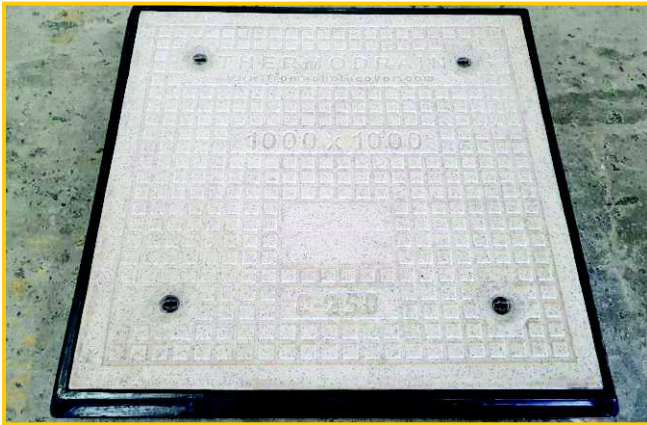
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 900.900 (M.C)	2.5 TONS	40	480 x 960

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 900.900 (M.C)	2.5 TONS	900 x 900	120	1070 x 1070

1000mm x 1000mm SQUARE - SOLID FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



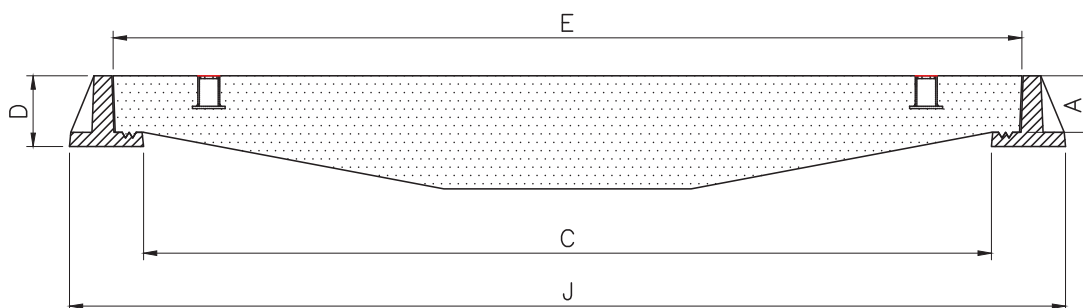
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 1000.1000 (M.C)	2.5 TONS	65	1070 x 1070
5 T 1000.1000 (M.C)	5 TONS	65	1070 x 1070
B 125 1000.1000 (M.C)	12.5 TONS (B 125)	65	1070 x 1070
C 250 1000.1000 (M.C)	25 TONS (C 250)	65	1070 x 1070
D400 1000.1000 (M.C)	40 TONS (D 400)	90	1070 x 1070

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 1000.1000 (M.C)	2.5 TONS	1000 x 1000	90	1190 x 1190
5 T 1000.1000 (M.C)	5 TONS	1000 x 1000	90	1190 x 1190
B 125 1000.1000 (M.C)	12.5 TONS (B 125)	1000 x 1000	90	1190 x 1190
C 250 1000.1000 (M.C)	25 TONS (C 250)	1000 x 1000	90	1190 x 1190
D400 1000.1000 (M.C)	40 TONS (D 400)	1000 x 1000	115	1190 x 1190

1200mm x 1200mm SQUARE- SOLID FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



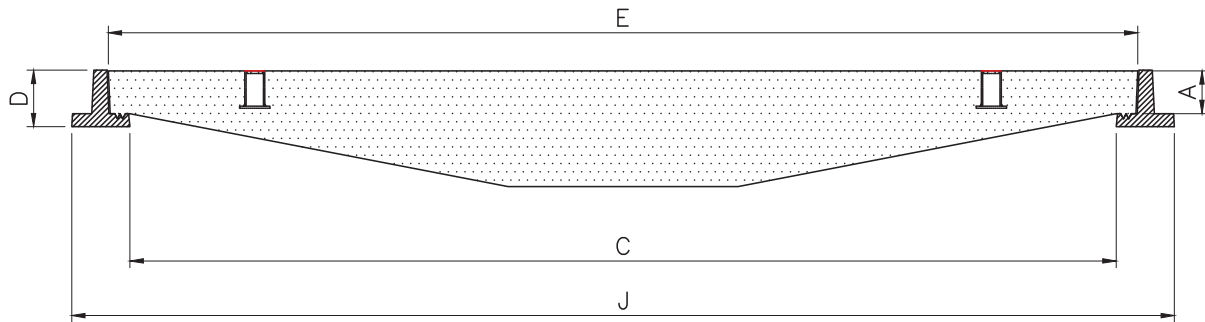
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 1200.1200 (M.C)	2.5 TONS	65	1266 x 1266
5 T 1200.1200 (M.C)	5 TONS	65	1266 x 1266
B 125 1200.1200 (M.C)	12.5 TONS (B 125)	65	1266 x 1266
C 250 1200.1200 (M.C)	25 TONS (C 250)	65	1266 x 1266
D400 1200.1200 (M.C)	40 TONS (D 400)	80	1286 x 1286

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 1200.1200 (M.C)	2.5 TONS	1200 x 1200	85	1386 x 1386
5 T 1200.1200 (M.C)	5 TONS	1200 x 1200	85	1386 x 1386
B 125 1200.1200 (M.C)	12.5 TONS (B 125)	1200 x 1200	85	1386 x 1386
C 250 1200.1200 (M.C)	25 TONS (C 250)	1200 x 1200	85	1386 x 1386
D400 1200.1200 (M.C)	40 TONS (D 400)	1200 x 1200	100	1410 x 1410

1500mm x 1500mm SQUARE- SOLID FRP/GRP/COMPOSITE SOLID TOP MANHOLE COVER



ELEVATION

Testing code: BSEN 124

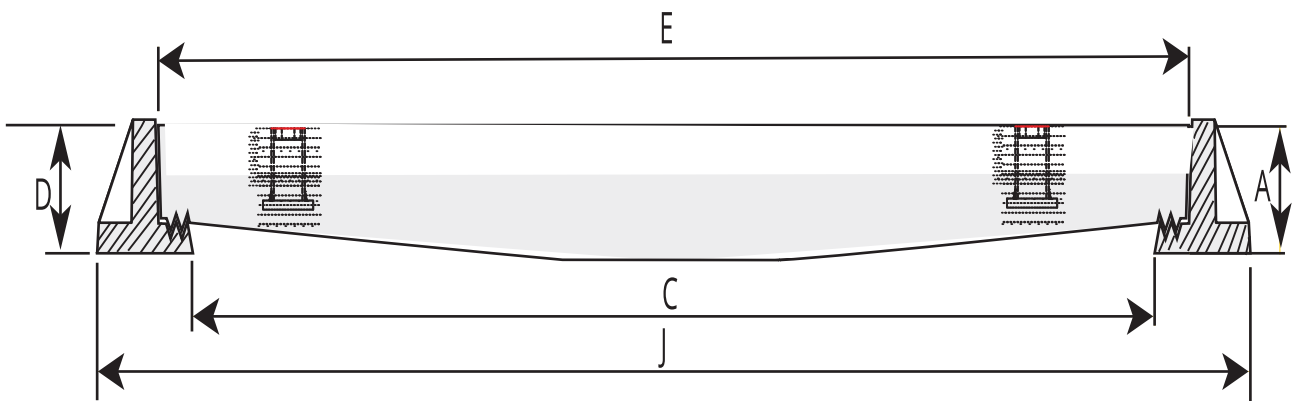
COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 1500.1500 (M.C)	2.5 TONS	65	1566 x 1566
5 T 1500.1500 (M.C)	5 TONS	65	1566 x 1566
B 125 1500.1500 (M.C)	12.5 TONS (B 125)	65	1566 x 1566
C 250 1500.1500 (M.C)	25 TONS (C 250)	65	1566 x 1566
D400 1500.1500 (M.C)	40 TONS (D 400)	65	1586 x 1586

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 1500.1500 (M.C)	2.5 TONS	1500 x 1500	87	1677 x 1677
5 T 1500.1500 (M.C)	5 TONS	1500 x 1500	87	1677 x 1677
B 125 1500.1500 (M.C)	12.5 TONS (B 125)	1500 x 1500	87	1677 x 1677
C 250 1500.1500 (M.C)	25 TONS (C 250)	1500 x 1500	87	1677 x 1677
D400 1500.1500 (M.C)	40 TONS (D 400)	1500 x 1500	87	1700 x 1700

SIZES OF FRP/GRP/COMPOSITE RECESS MANHOLE COVERS

THERMODRAIN FRP/GRP/COMPOSITE MANHOLE COVERS RECESS MANHOLE COVERS WITH FRAME	
SHAPE	FRAME CLEAR OPENING SIZE
	Available from 2.5 Tons to 60 Tons (E-600) load bearing
Circular	500 mm
	600 mm
	762 mm
	900 mm
	1000 mm
	1400 mm
Rectangular	600 mm x 450 mm
	900 mm x 450 mm
	900 mm x 600 mm
	990 mm x 1220 mm
Square	300 mm x 300 mm
	450 mm x 450 mm
	600 mm x 600 mm
	675 mm x 675 mm
	750 mm x 750 mm
	900 mm x 900 mm
	1000 mm x 1000 mm
	1200 mm x 1200 mm
1500 mm x 1500 mm	

DRAWING AND PICTURES OF FRP/GRP/COMPOSITE RECESS MANHOLE COVER



Note: Details can be provided on request.

PRODUCT DESCRIPTION OF GRATINGS

SPECIAL FEATURES OF "THERMODRAIN" GRATINGS

- "THERMODRAIN" Gratings are with ZERO FILLER CONTENT due to which it doesn't have air voids, hence doesn't require void filling & painting / coating.
- Due to Zero filler "THERMODRAIN" Gratings perform far superior under load bearing and weathering. They do not crack under open sunlight and have higher impact resistance than FRP Gratings with filler contents. Its high flexural strength doesn't allow permanent deformation due to load.
- "THERMODRAIN" Gratings are self pigmented, non painted.

RECOMMENDATION OF CORRECT LOAD APPLICATIONS OF GRATINGS :

M.O.C. of Gratings - FRP
M.O.C. of Angle frame - MS or FRP

<u>Channel width</u>	<u>Out to out grating size (30mm)</u>	<u>Load bearing</u>
250mm	303mm x 1006mm x 30mm	Light & heavy duty vehicles
350mm	414mm x 1006mm x 30mm	Light & medium duty vehicles
400mm	488mm x 1006mm x 30mm	Only light duty vehicles
450mm & above	525mm x 1006mm x 30mm	Only pedestrian movement

<u>Channel width</u>	<u>Out to out grating size (40mm)</u>	<u>Load bearing</u>
250mm	326mm x 1001mm x 40mm	Light & heavy vehicles
350mm	406mm x 1001mm x 40mm	Light & heavy vehicles
400mm	485mm x 1001mm x 40mm	Light & medium duty vehicles
450mm	525mm x 1001mm x 40mm	Only light duty vehicles
500mm & above	564mm x 1001mm x 40mm	Only pedestrian movement

For any channel width above 450mm, our product recommendation for vehicular movement will be water gully covers.

FRP "L" Angle for 30mm ht. Grating : 35mm x 35mm x 4mm thk.

FRP "L" Angle for 40mm ht. Grating : 45mm x 45mm x 4mm thk.

PICTURES OF INSTALLED GRATINGS



SIZES OF GRATINGS

30mm HEIGHT GRATING
44
81
118
155
192
229
266
303
340
377
414
451
488
525
562
599
636
673
710
747
784
821
852
895
932
969
1006

30mm HEIGHT GRATING
1043
1080
1117
1154
1191
1228
1265
1302
1339
1376
1413
1450
1487
1520
1561
1598
1635
1672
1709
1746
1783
1820
1857
1890
1927
1965
2002
2038

SIZES OF GRATINGS

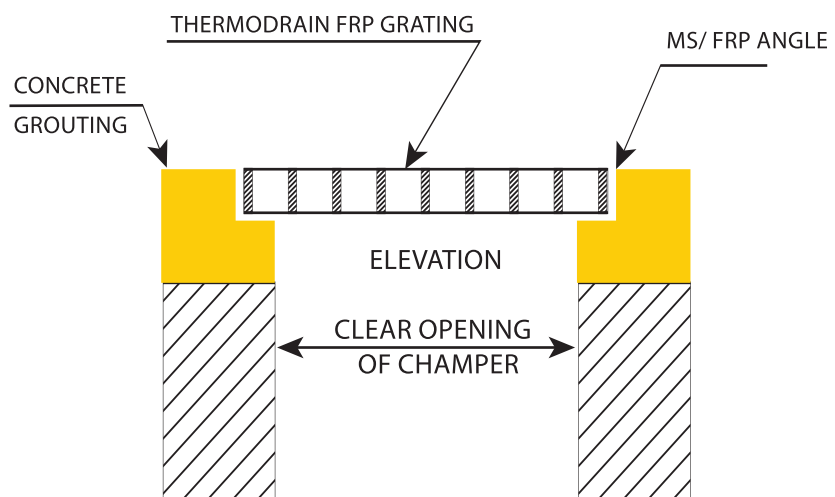
40mm HEIGHT GRATING
48
88
128
167
207
247
286
326
366
406
445
485
525
564
604
644
684
723
763
803
843
882
922
962

40mm HEIGHT GRATING
1001
1041
1081
1121
1160
1200
1240
1279
1319
1359
1399
1438
1478
1518
1557
1597
1637
1677
1716
1745
1782
1820
1856
1893
1930
1967
2005
2040
2172

PICTURES OF INSTALLED GRATINGS



STANDARD METHOD OF INSTALLATION OF GRATING



**PRODUCT DESCRIPTION OF FRP/GRP/COMPOSITE STP TANK COVERS
 (AIR & WATER TIGHT)**

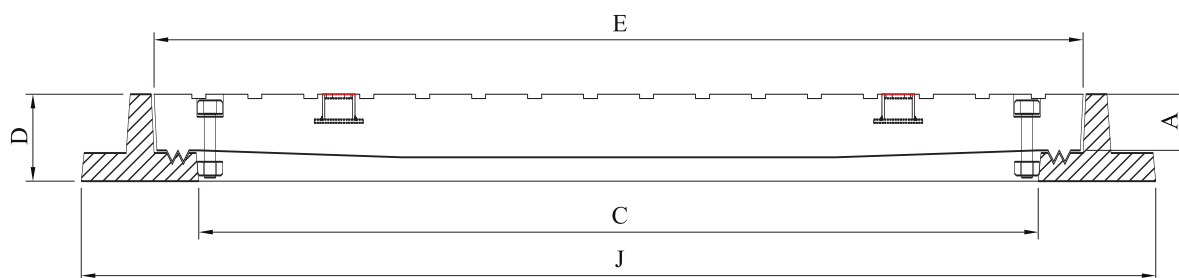
SALIENT FEATURES

- STP Tank covers are available with locking & gasket arrangement.
- The gasket can be replaced locally in the long run incase ever damaged.
- WATER & AIR TIGHT, hence no foul smell and water seepage.

SIZES OF FRP/GRP/COMPOSITE STP TANK COVERS (AIR & WATER TIGHT)

THERMODRAIN FRP/GRP/COMPOSITE SOLID TOP (AIR & WATER TIGHT) STP MANHOLE COVER WITH FRAME	
SHAPE	FRAME CLEAR OPENING SIZE
	Available from 2.5 Tons to 60 Tons (E-600) load bearing
Circular	500 mm
	600 mm
	762 mm
	900 mm
	1000 mm
	1400 mm
Rectangular	600 mm x 450 mm
	900 mm x 450 mm
	900 mm x 600 mm
	990 mm x 1220 mm
Square	300 mm x 300 mm
	450 mm x 450 mm
	600 mm x 600 mm
	750 mm x 750 mm
	900 mm x 900 mm
	900 mm x 900 mm (2 covers with single frame)
	1000 mm x 1000 mm
1200 mm x 1200 mm	
1500 mm x 1500 mm	

DRAWING & PICTURES OF FRP/GRP/COMPOSITE STP TANK COVERS



ELEVATION



DESCRIPTION OF FRP/GRP/COMPOSITE WATER GULLY COVERS

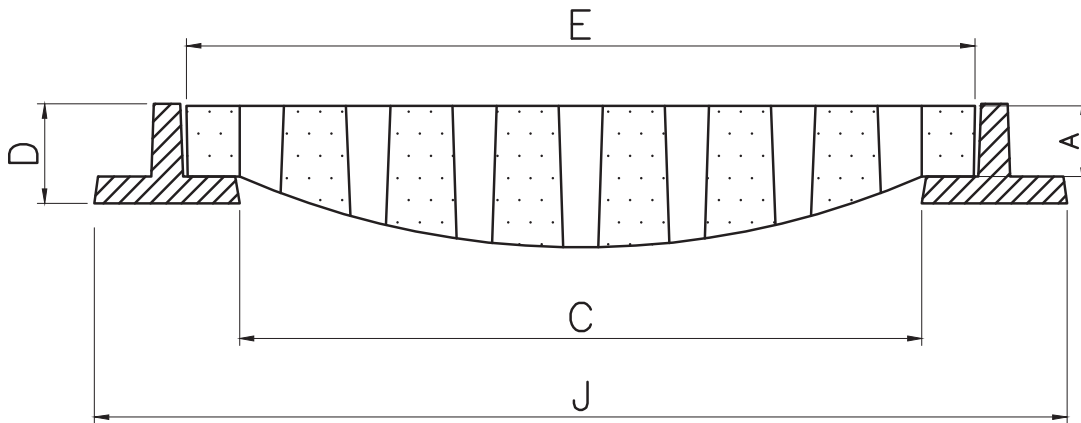
SALIENT FEATURES

- Minimum opening is more than 35% of the clear opening size for smooth flow of water.
- Permanent set is zero in all sizes & load bearing.
- Self pigmented / non painted.

SIZES OF FRP/GRP/COMPOSITE WATER GULLY COVERS

THERMODRAIN FRP/GRP/COMPOSITE WATER GULLY COVERS WITH/ WITHOUT FRAME	
SHAPE	FRAME CLEAR OPENING SIZE
	Available from 2.5 Tons to 60 Tons (E-600) load bearing
Square	450 mm X 450 mm
	600 mm x 600 mm
Rectangular	640 mm X 240 mm
	385mm x 317mm
	500mm x 600mm
	900mm x 600mm

385mm X 317mm RECTANGULAR- FRP/GRP/COMPOSITE WATER GULLY COVERS



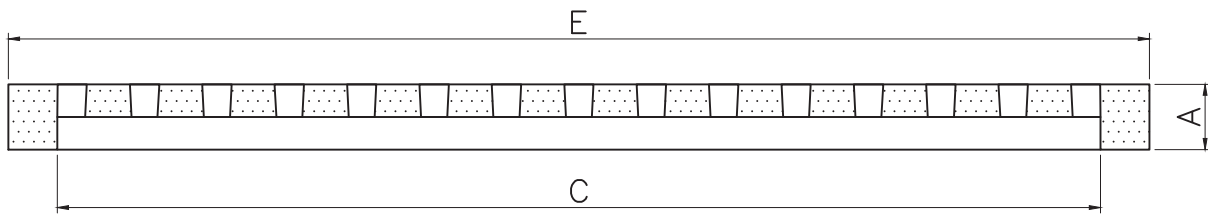
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 385.317 (G.C)	2.5 TONS	40	445 x 377
5 T 385.317 (G.C)	5 TONS	40	445 x 377
B 125 385.317 (G.C)	12.5 TONS (B 125)	40	445 x 377
C 250 385.317 (G.C)	25 TONS (C 250)	40	445 x 377
D400 385.317 (G.C)	40 TONS (D 400)	40	445 x 377

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 385.317 (G.C)	2.5 TONS	385 x 317	57	549 x 481
5 T 385.317 (G.C)	5 TONS	385 x 317	57	549 x 481
B 125 385.317 (G.C)	12.5 TONS (B 125)	385 x 317	57	549 x 481
C 250 385.317 (G.C)	25 TONS (C 250)	385 x 317	57	549 x 481
D400 385.317 (G.C)	40 TONS (D 400)	385 x 317	57	549 x 481

640mm X 240mm RECTANGULAR- FRP/GRP/COMPOSITE WATER GULLY COVERS

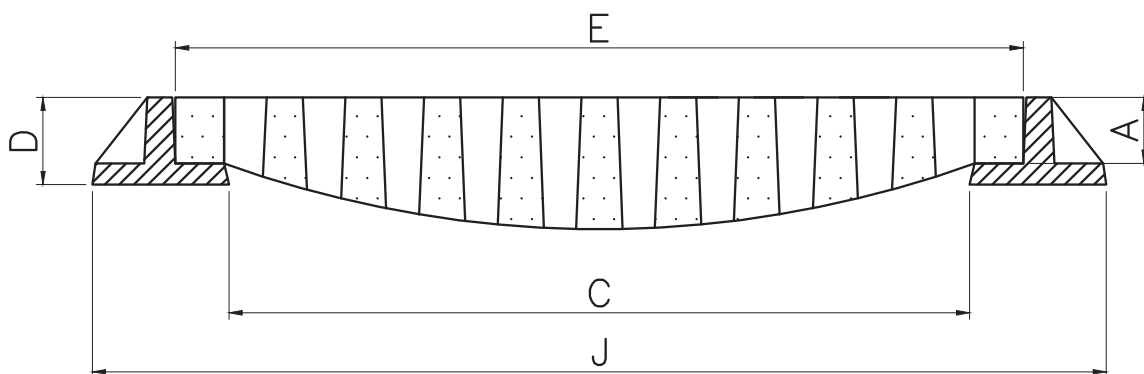


ELEVATION

Testing code: BSEN 124

COVER				
MODEL NO.	LOAD BEARING	A	C	E
2.5 T 700.300 (G.C)	2.5 TONS	40	640 x 240	700 x 300
5 T 700.300 (G.C)	5 TONS	40	640 x 240	700 x 300
B 125 700.300 (G.C)	12.5 TONS (B 125)	40	640 x 240	700 x 300
C 250 700.300 (G.C)	25 TONS (C 250)	40	640 x 240	700 x 300
D400 700.300 (G.C)	40 TONS (D 400)	40	640 x 240	700 x 300

450mm X 450mm SQUARE- FRP/GRP/COMPOSITE WATER GULLY COVERS



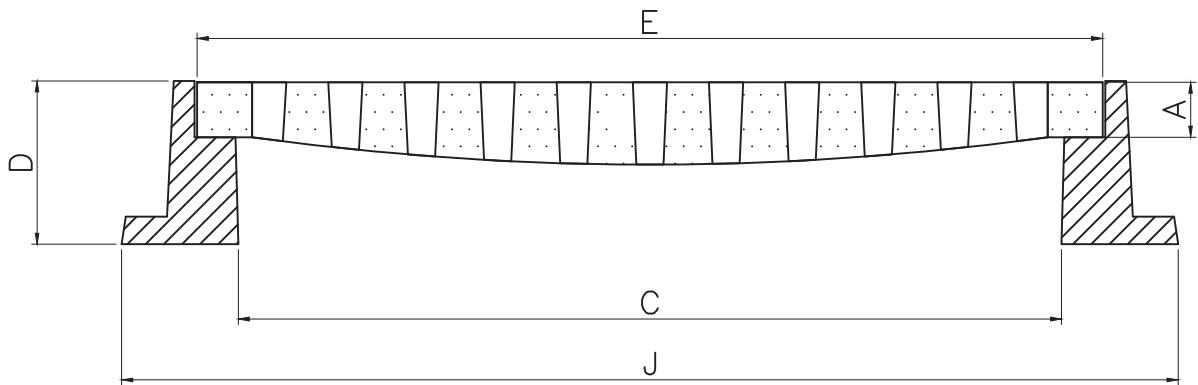
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 450.450 (G.C)	2.5 TONS	40	515 x 515
5 T 450.450 (G.C)	5 TONS	40	515 x 515
B 125 450.450 (G.C)	12.5 TONS (B 125)	40	550 x 550
C 250 450.450 (G.C)	25 TONS (C 250)	40	550 x 550
D400 450.450 (G.C)	40 TONS (D 400)	40	550 x 550

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 450.450 (G.C)	2.5 TONS	450 x 450	57	616 x 616
5 T 450.450 (G.C)	5 TONS	450 x 450	57	616 x 616
B 125 450.450 (G.C)	12.5 TONS (B 125)	450 x 450	57	646 x 646
C 250 450.450 (G.C)	25 TONS (C 250)	450 x 450	57	646 x 646
D400 450.450 (G.C)	40 TONS (D 400)	450 x 450	57	646 x 646

500mm X 600mm RECTANGULAR- FRP/GRP/COMPOSITE WATER GULLY COVERS



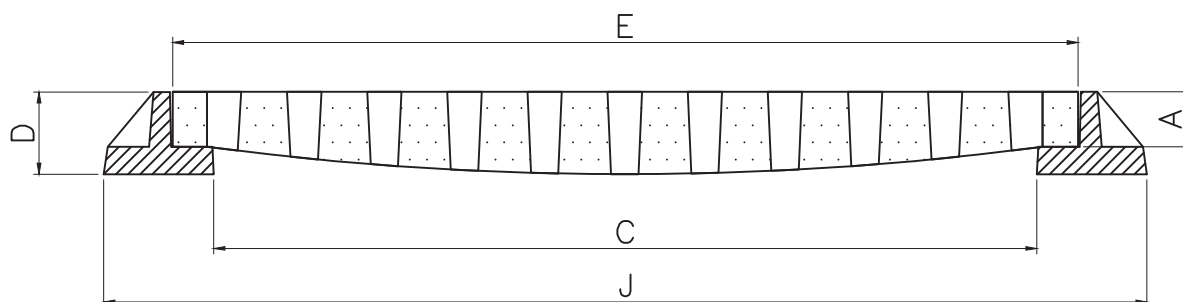
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 500.600 (G.C)	2.5 TONS	40	660 x 560
5 T 500.600 (G.C)	5 TONS	40	660 x 560
B 125 500.600 (G.C)	12.5 TONS (B 125)	40	660 x 560
C 250 500.600 (G.C)	25 TONS (C 250)	40	660 x 560
D400 500.600 (G.C)	40 TONS (D 400)	40	660 x 560

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 500.600 (G.C)	2.5 TONS	500 x 600	120	770 x 670
5 T 500.600 (G.C)	5 TONS	500 x 600	120	770 x 670
B 125 500.600 (G.C)	12.5 TONS (B 125)	500 x 600	120	770 x 670
C 250 500.600 (G.C)	25 TONS (C 250)	500 x 600	120	770 x 670
D400 500.600 (G.C)	40 TONS (D 400)	500 x 600	120	770 x 670

600mm X 600mm SQUARE-FRP/GRP/COMPOSITE WATER GULLY COVERS



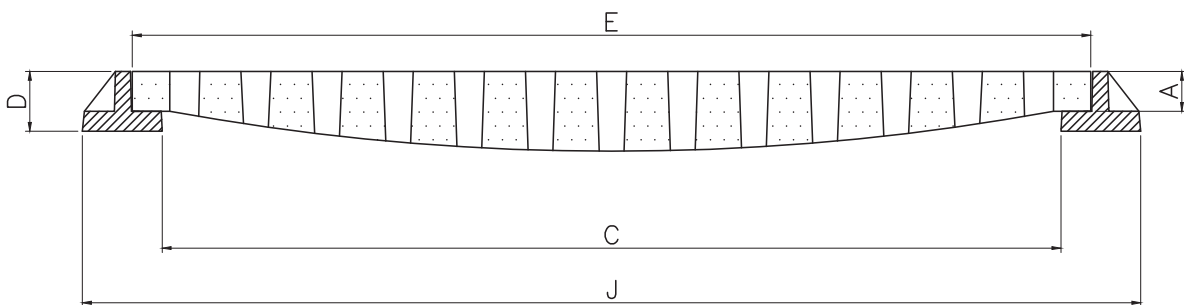
ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 600.600 (G.C)	2.5 TONS	40	660 x 660
5 T 600.600 (G.C)	5 TONS	40	660 x 660
B 125 600.600 (G.C)	12.5 TONS (B 125)	40	660 x 660
C 250 600.600 (G.C)	25 TONS (C 250)	40	660 x 660
D400 600.600 (G.C)	40 TONS (D 400)	40	660 x 660

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 600.600 (G.C)	2.5 TONS	600 x 600	60	760 x 760
5 T 600.600 (G.C)	5 TONS	600 x 600	60	760 x 760
B 125 600.600 (G.C)	12.5 TONS (B 125)	600 x 600	60	760 x 760
C 250 600.600 (G.C)	25 TONS (C 250)	600 x 600	60	760 x 760
D400 600.600 (G.C)	40 TONS (D 400)	600 x 600	60	760 x 760

900mm X 600mm RECTANGULAR-FRP/GRP/COMPOSITE WATER GULLY COVER



ELEVATION

Testing code: BSEN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 900.600 (G.C)	2.5 TONS	40	960 x 660
5 T 900.600 (G.C)	5 TONS	40	960 x 660
B 125 900.600 (G.C)	12.5 TONS (B 125)	40	960 x 660
C 250 900.600 (G.C)	25 TONS (C 250)	40	960 x 660
D400 900.600 (G.C)	40 TONS (D 400)	50	960 x 660

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 900.600 (G.C)	2.5 TONS	900 x 600	60	1060 x 760
5 T 900.600 (G.C)	5 TONS	900 x 600	60	1060 x 760
B 125 900.600 (G.C)	12.5 TONS (B 125)	900 x 600	60	1060 x 760
C 250 900.600 (G.C)	25 TONS (C 250)	900 x 600	60	1060 x 760
D400 900.600 (G.C)	40 TONS (D 400)	900 x 600	72	1060 x 760

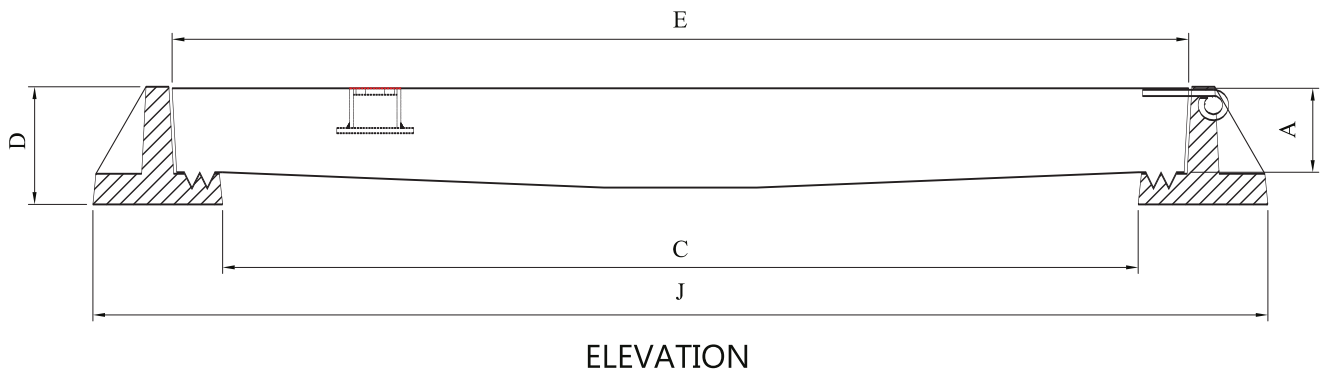
PRODUCT DESCRIPTION OF FRP/GRP OVERHEAD/ U.G WATER TANK COVERS

THERMODRAIN FRP/GRP/COMPOSITE Water Tank Covers serve a dual purpose. They are not only superior to conventional cast iron and ductile iron covers but are also light weight. They are tested as per BS EN 124 1994. Our covers are even immune to algae and rusting contaminants. They meet all the requirements of the code and are available with load bearing of 500kgs, 10 tons & 20 tons.

SIZES OF OF FRP/GRP/COMPOSITE OVERHEAD/UG WATER TANK COVERS

THERMODRAIN FRP/GRP/COMPOSITE WATER TANK COVERS WITH FRAME / U. G. TANK COVERS WITH FRAME	
	FRAME CLEAR OPENING SIZE
	Available in 500 Kgs, 10 Tons & 20 Tons load bearing
Circular	600 mm
Square	600 mm x 600 mm

DRAWING & PICTURES OF FRP/GRP UNDER GROUND WATER TANK COVER

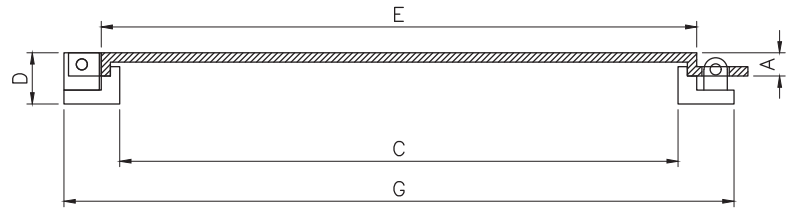


Testing code: BS EN 124

COVER			
MODEL NO.	LOAD BEARING	A	E
2.5 T 600 (W.T.C)	2.5 TONS	60	666
5 T 600 (W.T.C)	5 TONS	60	666
B 125 600 (W.T.C)	12.5 TONS (B 125)	60	666
C 250 600 (W.T.C)	25 TONS (C 250)	60	666
D 400 600 (W.T.C)	40 TONS (D 400)	60	666

FRAME				
MODEL NO.	LOAD BEARING	C	D	J
2.5 T 600 (W.T.C)	2.5 TONS	600	82	770
5 T 600 (W.T.C)	5 TONS	600	82	770
B 125 600 (W.T.C)	12.5 TONS (B 125)	600	82	770
C 250 600 (W.T.C)	25 TONS (C 250)	600	82	770
D 400 600 (W.T.C)	40 TONS (D 400)	600	82	770

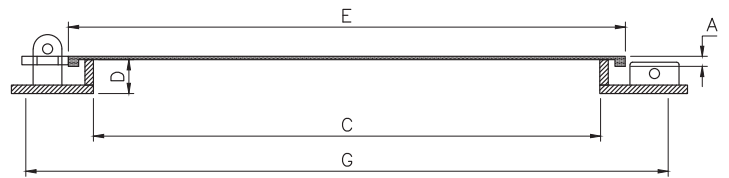
DRAWING & PICTURES OF SQUARE AND CIRCULAR OVERHEAD WATER TANK COVER



ELEVATION

Testing code: BSEN 124

COVER				FRAME				
MODEL NO.	LOAD BEARING	A	E	MODEL NO.	LOAD BEARING	C	D	G
0.5 T 600 x 600 (W.T.C)	0.5 TONS	25	640 x 640	0.5 T 600 x 600 (W.T.C)	0.5 TONS	600 x 600	55	720 x 720



ELEVATION

Testing code: BSEN 124

COVER				FRAME				
MODEL NO.	LOAD BEARING	A	E	MODEL NO.	LOAD BEARING	C	D	G
0.5 T 600 (W.T.C)	0.5 TONS	12	659	2.5 T 500 (M.C)	2.5 TONS	600	40	719

PRODUCT DESCRIPTION OF FRP/GRP CHAMBERS

Specifications:

- "THERMODRAIN" FRP Chambers are very strong made out of specially prepared Resins
- "THERMODRAIN" FRP Chambers are UV stabilized to protect from Sun radiation
- "THERMODRAIN" FRP Chambers Will take any type of Traffic Loads
- "THERMODRAIN" FRP Chambers are load tested up to 60 Tons, Can be increased if required
- It can withstand all type of earth vibrations due to Traffic movement
- As per ASTM D 3753 & IS 12592-2008 standards

Advantages of FRP Chambers.

- 100 % Corrosion Free
- Can be readily mounted by digging the earth Making the concrete at the bottom & fixing it
- Completely leak proof
- Will take all types of traffic loads
- All sizes are available
- THERMODRAIN chambers are Re-locatable
- Can Also be used as Inspection Chambers
- As per the ASTM D 3753 & IS 12592-2008 standards


PICTURES OF ONE PIECE CHAMBER



PICTURES OF DISMENTABLE CHAMBER



DRAIN CHANNELS WITH GRATING/GULLY COVER

 DRAIN CHANNELS	CEMENT / CONCRETE DRAIN CHANNELS
1. Blocks site space for minimum time	Site remains blocked due to larger preparation time of cement drains
2. Quick to install as the channel is only to be laid as per manual.	Long installation time as large amount of civil work is required.
3. Minimum manpower is required.	Huge manpower is require for civil work.
4. Very low labour cost is incurred for installation.	Very high labour cost is incurred for drain preparation.
5. Installation is fast and simple and not dependent on huge manpower availability.	Preparation of drain channel is slow as It is highly dependent on manpower availability.
6. No water proofing is required.	Water proofing is to be done.
7. Separate MS/FRP angles are not required for placement of Gratings/Gully covers	Separate MS/FRP angles are required for placements of Gratings/Gully covers.
8. No hidden cost during installation of channels.	There is hidden cost during making of drain channels as it is labour oriented.



DRAIN CHANNEL (2 PIECE TYPE) WITH PROVISION FOR SLOPE ADJUSTMENT



DRAIN CHANNEL (1 PIECE TYPE) WITH GRATING



DRAIN CHANNEL (1 PIECE TYPE) WITH GULLY COVER

DRAIN CHANNELS WITH GRATING/GULLY COVER

METHOD OF INSTALLATION OF THERMODRAIN (1 PIECE TYPE) FOR SURFACE DRAINAGE FOR EXTERIOR AND BASEMENTS (RECOMMENDED FOR SHORT LENGTH UPTO 30 MTRS)

STEP 1- Prepare a trench of 200 mm extra width than the drain channel width.

STEP 2 - Before laying the Drain channel, check the compactness of the soil and ensure that its compact enough and will not sink due to the load that will be eventually applied on the Grating (refer your civil or soil consultant). In case the soil is found to not take the load than you may create a concrete bed to resist the load with the slope of 1 mm/mtr. for water to flow by gravity.

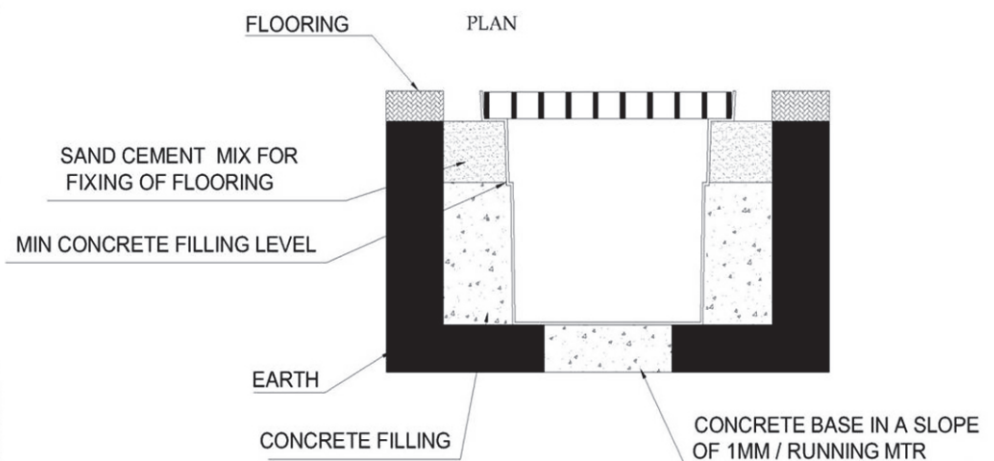
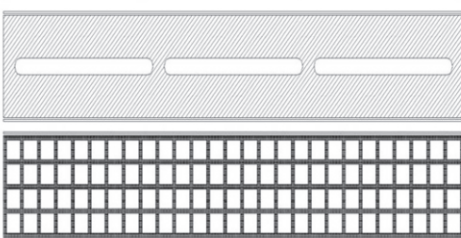
STEP 3 - Once the concrete/mud bed is ready, you may place the Drain channel in position. The channel installation is to begin from the starting point and proceed towards the exit point.

STEP 4 - You may apply the Silicone sealant on the step given in the channel for joining with the connecting channel or Bend or Tee or Four way Tee. On applying the sealant you may place the connecting piece on the step and continue to place the further connecting pieces in the same manner.

STEP 5 - The connectors like the 90 deg. Bend, Tee and Fourway Tee are to be used as and where required depending on the layout of your site.

STEP 6 - You may refill the empty space around the channel network with the concrete and soil (As shown in the drawing) and do the required compaction and bring it to the level of the installed grating. Once the filling is completed and cured you may clean the drain channel and you may place the gratings/ Gully covers on the channel network.

SIZE OF CHANNEL		
WIDTH	HEIGHT	LENGTH
A	B	
155	256	1000
286	464	1000
366	592	1000
445	720	1000
564	904	1000



FRP/GRP/COMPOSITE DRAIN CHANNEL (1 PIECE TYPE)

DRAIN CHANNELS WITH GRATING/GULLY COVER

METHOD OF INSTALLATION OF THERMODRAIN (2 PIECE TYPE) FOR SURFACE DRAINAGE FOR EXTERIOR AND BASEMENTS (RECOMMENDED FOR SHORT & LONG LENGTHS)

STEP 1- Prepare a trench of 200 mm extra width than the drain channel width.

STEP 2 - Before laying the Drain channel, check the compactness of the soil and ensure that its compact enough and will not sink due to the load that will be eventually applied on the Grating (refer your civil or soil consultant). In case the soil is found to not take the load than you may create a concrete bed to resist the load with the slope of 1 mm/mtr. for water to flow by gravity.

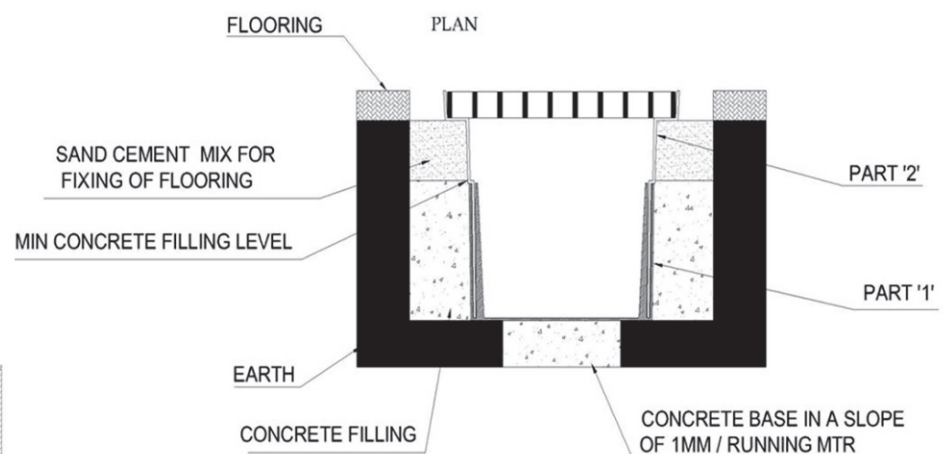
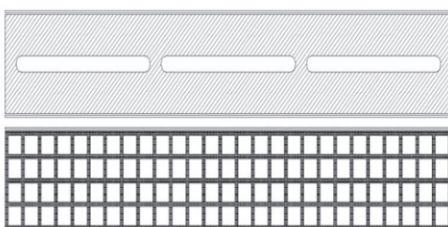
STEP 3 - Once the concrete/mud bed is ready, you may place the PART 1 of the Drain channel in position. The channel installation is to begin from the starting point and proceed towards the exit point. You may apply the Silicone sealant on the step given in the channel for joining with the connecting channel or Bend or Tee or Four way Tee. On applying the sealant you may place the connecting piece on the step and continue to place the further connecting pieces in the same manner.

STEP 4 - Once part 1 of the drain channel is laid than you may start placing the part 2 of the drain channel by maintaining the level of the flooring. You may keep adjusting the part 2 in order to maintain the flooring level.

STEP 5 - The connectors like the 90 deg. Bend, Tee and Fourway Tee are to be used as and where required depending on the layout of your site.

STEP 6 - You may refill the empty space around the channel network with the concrete and soil (As shown in the drawing) and do the required compaction and bring it to the level of the installed grating. Once the filling is completed and cured you may clean the drain channel and you may place the gratings/ Gully covers on the channel network.

SIZE OF CHANNEL		
WIDTH A	HEIGHT B	LENGTH
155	256	1000
286	464	1000
366	592	1000
445	720	1000
564	904	1000



**FRP/GRP/COMPOSITE DRAIN CHANNEL (2 PIECE TYPE)
WITH INTERNAL ARRANGEMENT FOR SLOPE ADJUSTMENT**

