

Wastewater treatment always calls for sense of responsibility towards the environment and public health. The "MST" Fibre Mechanical Septic Tank also known as Small Sewage Treatment System (SSTS) is the answer for sewage problems and solutions for expensive and constraint reserve area.

"MST" Fibre Mechanical Septic Tank are pre-fabricated units made from Fibre Reinforced Plastics (FRP) are developed to achieved "Standard A" effluent septic tank utilizing anaerobic treatment process supplemented with mechanized chamber aeration using diaphragm blower inducing air into the tank for aerobic process.

**Characteristics**

"MST" Fibre Mechanical Septic Tank consists of a lower settling and up chamber aeration zone in the first chamber of the tank and followed by a hybrid clarifier settler which provide both settling and clarifier action. The settling zone acts as sedimentation compartment where all settleable particles and suspended solids are collected and allowed to degrade aerobically at the bottom of the tank.

The up chamber aeration zone degrade the bio-degradable substrate aerobically. In this way both anaerobic and aerobic treatment process assists in intended "Standard A" treatment process and the result is an effluent which complied to "Standard A" discharge.

**Special Features And Advantages :**

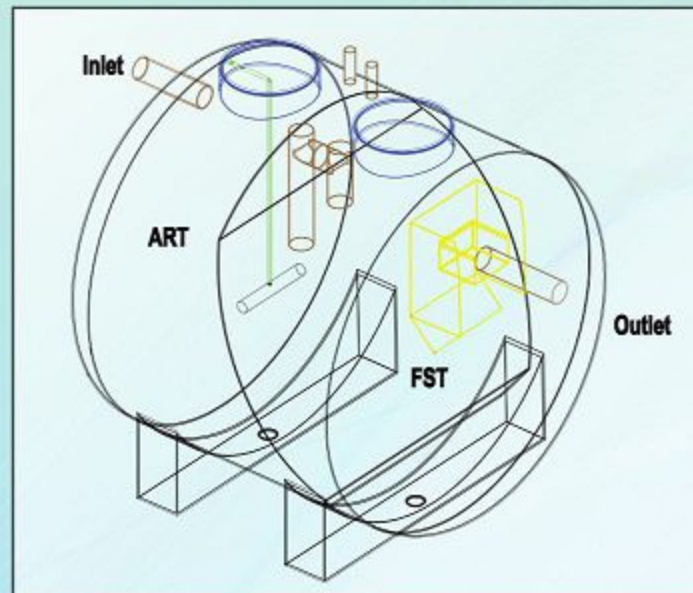
1. Treatment to satisfactory effluent standards as stipulated by Department of Environmental (DOE) under "Standard A" of the Environmental Quality ( Sewage and Industrial Effluents ) Regulations, 1979
2. Uniformity in strength and performance.
3. Corrosion resistance, water tightness and good temperature insulation.
4. Easy to handle, transport and install.
5. Minimum space required and flexibility to site conditions.
6. Operational simplicity and very low maintenance requirements.
7. Economical treatment system and cost effectiveness and Durability of Material.

**Quality Standard and Approval**

- All "MST" Fibre Mechanical Septic Tank are manufactured and complied to :
1. National Water Services Commission (SPAN)
  2. Manufacture accordance to MS 1228 : 1991 Code of Practice for Design and Installation.
  3. Product Certification by SIRIM QAS ( International ) Sdn. Bhd.
  4. Complied to MS 2441-2:2014

**Product Warranty**

All "MST" Fibre Mechanical Septic Tank are warranty strictly against manufacturing defects for a period of 5 years for FRP Series. Standard warranty covers only product workmanship. The manufacturer should not be held responsible if the installation guideline not followed and the warranty shall be void and null.



**ISOMETRIC VIEW**  
**PROCESS OF UP-FLOW ACTIVATED SLUDGE TREATMENT**



**FRP BIOFILTER BLOWER (SEPTIC TANK)**  
**SMALL SEWAGE TREATMENT SYSTEM**  
**(FROM 40 PE TO 150 PE MAXIMUM)**



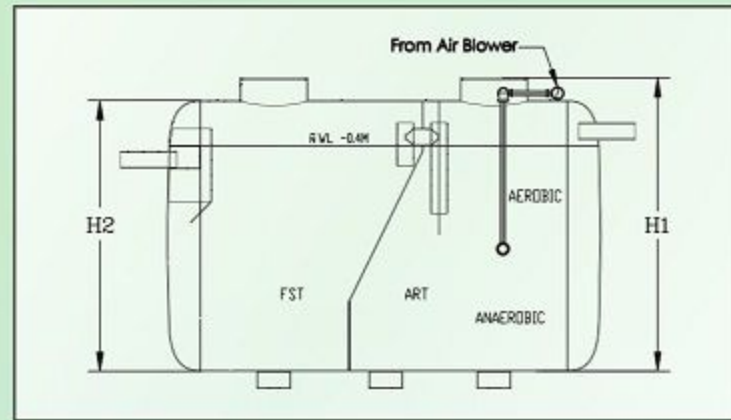
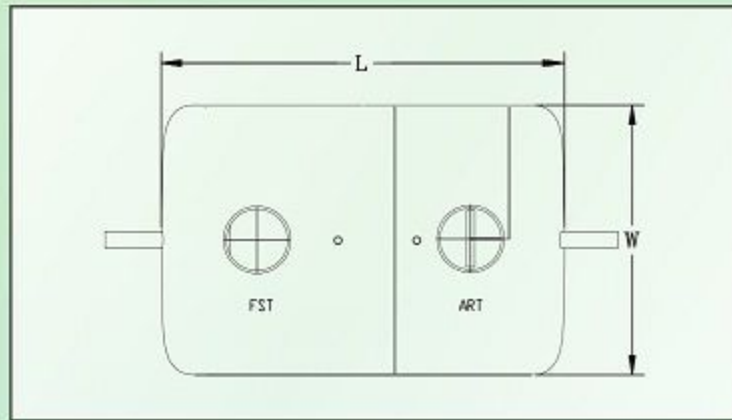
*Our Environment. Our Responsibility*

**YOUR SOLUTION TO**  
**HIGH QUALITY SEWAGE**





# FRP BIOFILTER BLOWER (SETPIC TANK) SMALL SEWAGE TREATMENT SYSTEM (FROM 40 PE TO 150 PE MAXIMUM)



Legend :  
1) ART : Aerobic Reactor Tank  
2) FST : Final Settlement Tank

TOP VIEW

SECTION VIEW

SPECIFICATIONS	MODEL									
	MST-40	MST-50	MST-60	MST-70	MST-80	MST-90	MST-100	MST-120	MST-140	MST-150
Type	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
Process	Anaerobic ST Supplemented With Activated Sludge									
Type of Waste	Domestic / Organic Waste									
BOD and SS Removal	EQA Standard A									
Desludging Internal (year)	Once in 1 Year									
Population Equivalent (PE)-Maximum	40	50	60	70	80	90	100	120	140	150
	TANK DIMENSION									
Overall Height (H1), - (mm)	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650
Water Level (H2) - (mm)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Width (W) - (mm)	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Tank Length, (L) - (mm)	1,660	2,100	2,650	3,150	3,620	4,150	5,030	5,660	6,700	7,200
Inlet & Outlet Pipe, UPVC (mmØ)	150	150	150	150	150	150	150	150	150	150

## Notes :

- Standard warranty covers only on product workmanship and does not include damage due to improper usage and installation not according to installation manual and guideline.
- Compulsory installation with blowers by the installer ( 1 Duty & 1 Standby ) and Air Diffuser supplied by Manufacture of the system.  
( Note 1 : 1,000 Liters = 1m<sup>3</sup> = 220 UK Gallons )

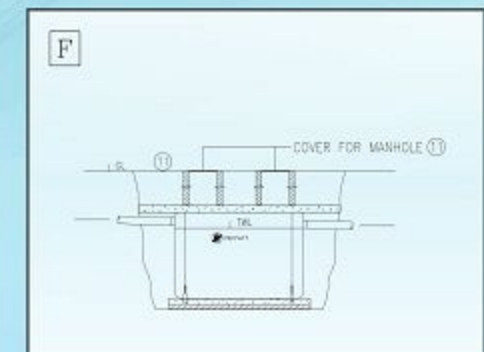
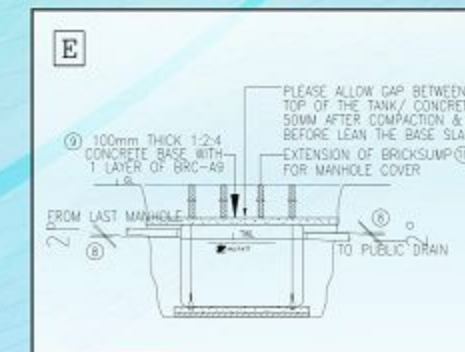
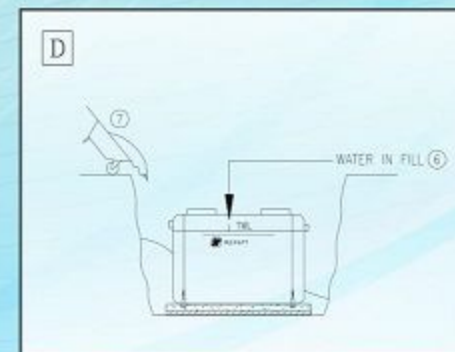
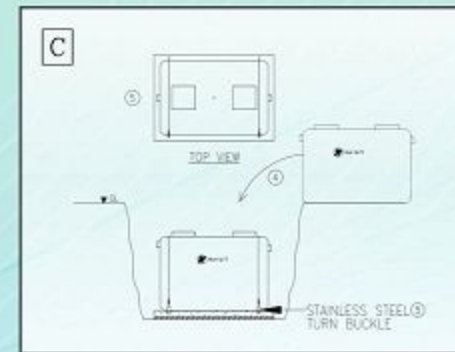
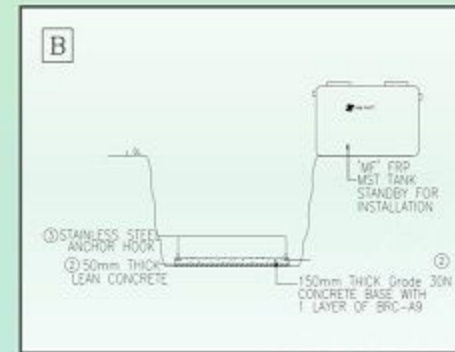
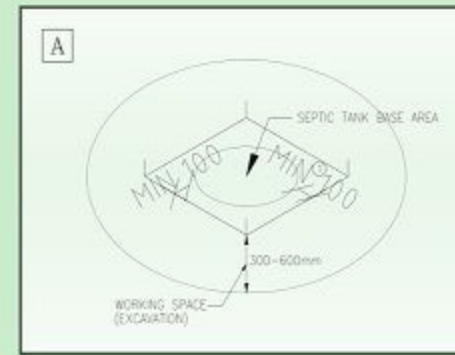
Specifications, terms and conditions subject to change without prior notice.  
All dimension is mm unless otherwise stated.

## Installation Instructions

- Allow for working space of 300mm to 600mm all around the FRP "Mechanical Septic Tank" (MST) Tank when excavating the pit.
- Construct a 150mm thick grade 30 N concrete base reinforced with one (1) layer of BRC-A9, wire mesh on top of a 50mm thick lean concrete.
- Four (4) nos. of stainless steel anchor hook Ø12mm coated in concrete base. (Refer Standard "MST" Standard Drawing)
- Unload the FRP "MST" Tank on a well leveled and cured 150mm thick Grade 30N Concrete base reinforced with one (1) layer of BRC-9 wire mesh.
- Tie the Ø20mm stainless steel (SS 304) anchor strap over FRP "MST" Tank and tighten using stainless steel turnbuckle.
- Fill FRP "MST" Tank with water up to top water level.
- Back fill the space around the "MST" Tank with sand compacted in 150mm layers, up to the opening lid/rim.
- Make sure the backfills at the inlet and outlet are well compacted and allow for a drop gradient of two (2) degrees for both the inlet and outlet pipes.
- Lay over the FRP "MST" Tank a 100mm thick slab, with manhole openings of 1:2:4 concrete reinforced with one layer of BRC-A9 wire mesh.
- Construct the manhole neck connections with bricks sump up to the specified design plat form level.
- Backfill with sand up to the designed platform level and install the manhole cover.
- Fill the FRP "MST" Tank with water to full capacity.
- Blower installation c/w weather proof cover (Blower Housing)

Note: Also do so everytime after desludging later on.

Please refer to the relevent drawings for the proper way of installation.



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