

**SINTEX RAIN WATER
HARVESTING SYSTEM
FOR
DRINKING WATER/ REUSE**



SINTEX RAIN WATER HARVESTING SYSTEM FOR DRINKING WATER

□ Sintex

Sintex Industries Limited has been in the forefront of innovations in the field of plastics for over 30 years. With 12 different processes under one roof we have the widest range of designing and manufacturing capabilities in the field of plastic. We have pioneered development of number of products in plastics such as water tanks, doors, windows, frames, partitions, false ceiling, wall panelling, prefabs etc. Inline with our innovative wonderful products which has brought benefits to nation and consumers we have come up with the Total Water Solution. Sintex Rain Water Harvesting System is a part of our Total Water Solution.



SINTEX RAIN WATER HARVESTING SYSTEM FOR DRINKING WATER

□ Introduction

- Our country with huge population and day by day increasing water demand it has become difficult for government to organize drinking water.
- Sintex Rain Water Harvesting System is the ultimate solution to meet the demand of drinking water.
- Due to various Environmental reasons, to build huge dam, catchment area is time consuming and high capital investment.



SINTEX RAIN WATER HARVESTING SYSTEM FOR DRINKING WATER

- ❑ **Advantages of Rain Water Harvesting System for drinking water**
 - To addresses the need of drinking water in urban areas, semi urban areas, remote areas, hilly areas almost all individual houses.
 - It does not require huge capital investment.
 - It does not involve deforestation, huge land etc for rain water harvesting.



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□ BENEFITS OF SINTEX RAIN WATER HARVESTING SYSTEM FOR DRINKING WATER:

- It meets the ever-increasing water demand easily.
- it mitigates the effects of drought.
- It reduces the runoff, which chokes the storm water drains.
- It reduces flooding of roads.
- It improves the quality of water.
- It reduces soil erosion.



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☐ UNIQUE FEATURES:

- Ensures pure drinking water
- Provides self-sufficiency
- Durable and Economical
- Easy to install
- Maintenance free
- Can be installed anywhere over/ under ground.
- Can be relocated



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□ Design Calculation:

➤ Catchment Area Calculation for Slope Surface:

- Water available from roof top in Ltrs. = $\frac{\text{Average annual rain fall in mm} \times \text{Roof area in Sq. Mtrs.} \times \text{Runoff Coefficient (0.60 to 0.90)}}{1000}$

➤ Catchment Area Calculation for Flat Surface:

- Water available from roof top in Ltrs. = $\frac{\text{Average annual rain fall in mm} \times \text{Roof area in Sq. Mtrs.} \times \text{Run off Coefficient (0.80 to 0.90)}}{1000}$

➤ Storage Tank Calculation:

- Capacity required in Ltrs. = $\frac{(\text{No. of family members} \times \text{Water requirements}) \times \text{No. of Dry Days.} + 20\% \text{ additional Volume}}{1000}$



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□ ELEMENTS OF THE SYSTEM:

1. **Rainwater Channel:** Rainwater Channel collects the water from roof and carry the water to down pipes.

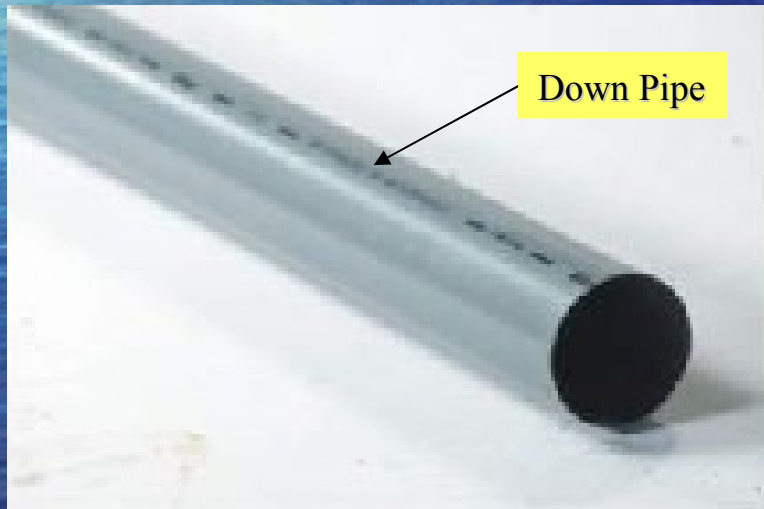


Material	Sizes
PVC	4 Inches
Note: 4 inch Channel with 4 inch down pipe can handle 1000 Sq.ft. of roof area. For larger areas roof can be divided in several guttered zones.	



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2. **Down Pipes:** Down pipes carries the water from Channel to the Filter and Storage Tank.

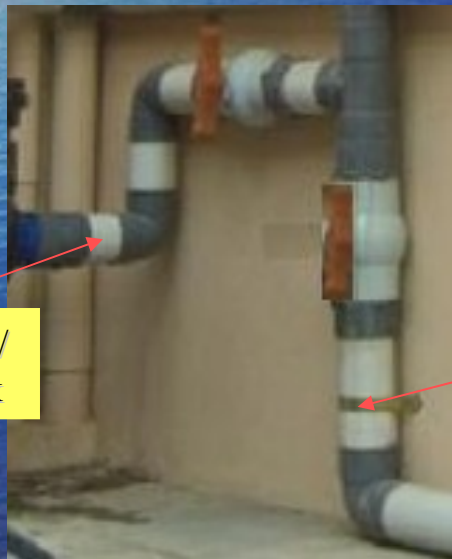


Material	Sizes
PVC	4 Inches
Note: 4 inch down pipe can handle 1000 Sq.ft. of roof area. For larger areas roof can be divided in several guttered zones.	

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3. First Flush System:

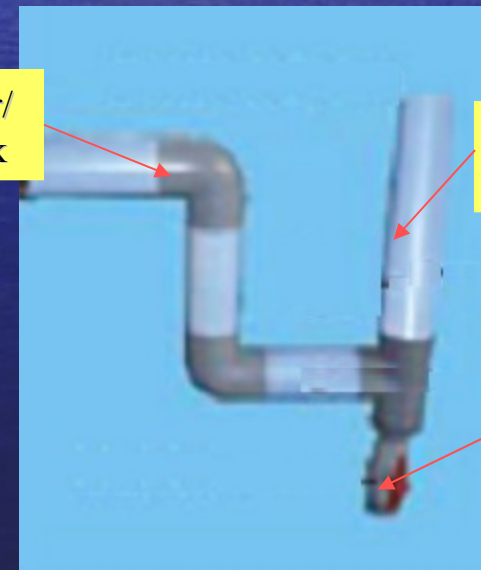
First Flush System drains the physical impurities and other impurities carried along with rain water from terrace. First Flush Pipe valve must be kept close after first rain to allow rain water in to storage tank.



Pipe to Filter/
Storage Tank

First Flush Pipe/
Drain

**First Flush System
for Hi-Flow Filter**



Pipe to Filter/
Storage Tank

Rainwater
Down pipe

First Flush
Pipe/ Drain

**First Flush System
for Lo-Flow Filter**

SINTEX RAIN WATER HARVESTING SYSTEM FOR DRINKING WATER



Above Ground Hi-flow Filter



Wall Mounted Lo-flow Filter

4. Filters: It traps the physical impurities like silt, leaves, other macro and micro pollutants. Its removable trash bag/ sleeve can be easily removed and cleaned as and when filled with silt, leaves and other impurities. It allows filtered water in to rainwater storage tank.

Type	Code	Inlet/ Outlet Size & MOC	Capacity
Wall mounted Lo-low filter	RWF 1.2-01	4" PVC	1.2 Ltrs./Sec.
Above ground Hi-flow filter	RWF 12-01	4", 6" PVC	12 Ltrs./Sec.



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☐ Rain Water Storage Tanks



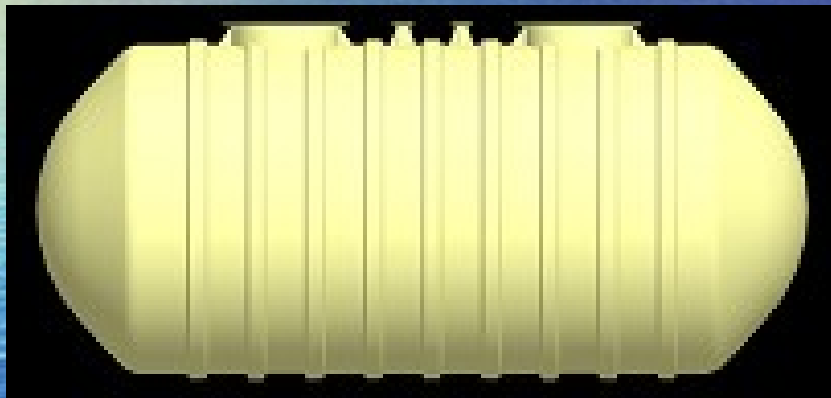
Vertical Under Ground Storage Tank (PE)

Capacity in Ltrs.	Specification in mm.	
	Dia.	Depth
1000	1200	1185
2000	1400	1650
3000	1650	1750
4000	1800	1950
5000	2000	2050
6000	2150	2100
7500	2300	2400
10000	2550	2625



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☐ Rain Water Storage Tanks

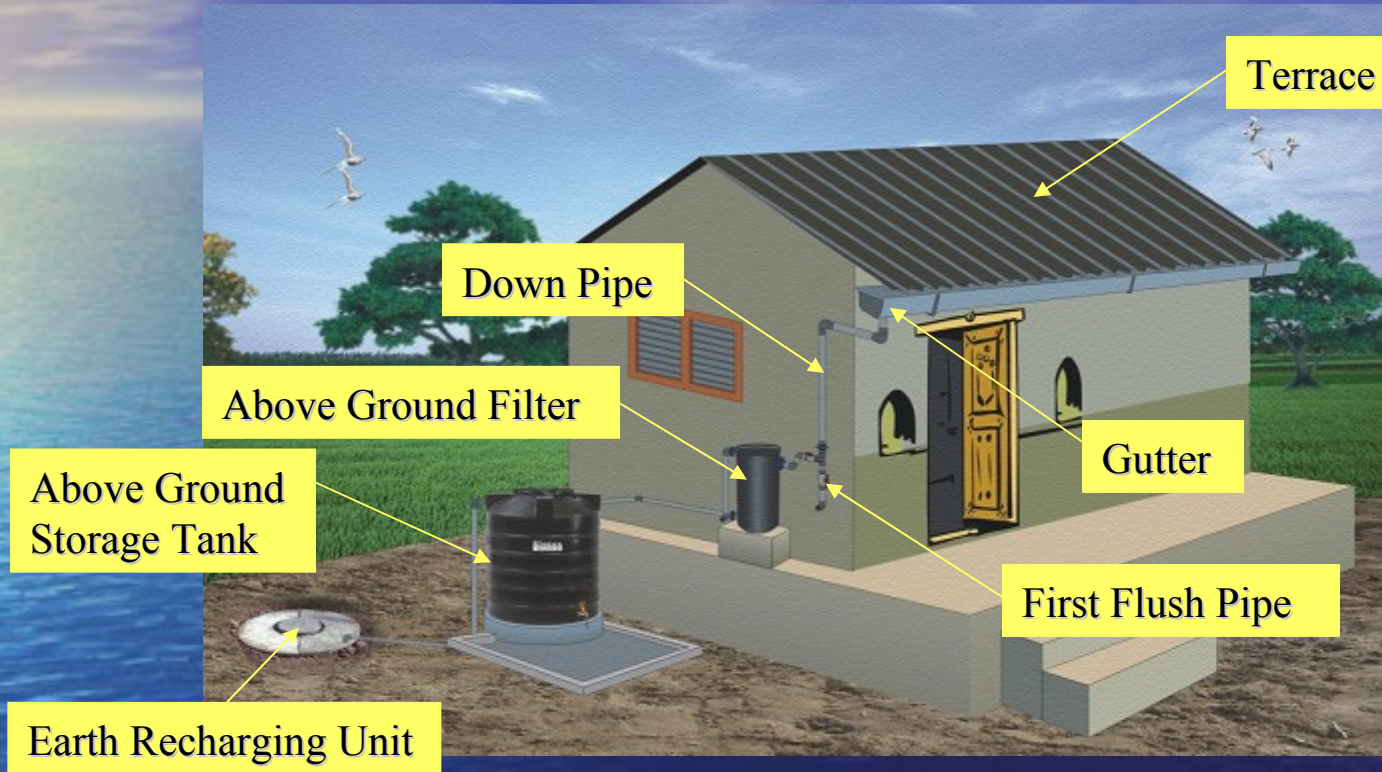


FRP Under Ground Storage Tank

Type	Capacity in Ltrs.	Specification in mm.	
		Dia.	Width
Horizontal	10000	1830	4310
Horizontal	15000	1830	6290
Horizontal	20000	2340	5520
Horizontal	25000	2340	6740
Horizontal	30000	2340	7950
Horizontal	40000	2340	10380
Horizontal	45000	2340	11590
Horizontal	50000	2340	12800



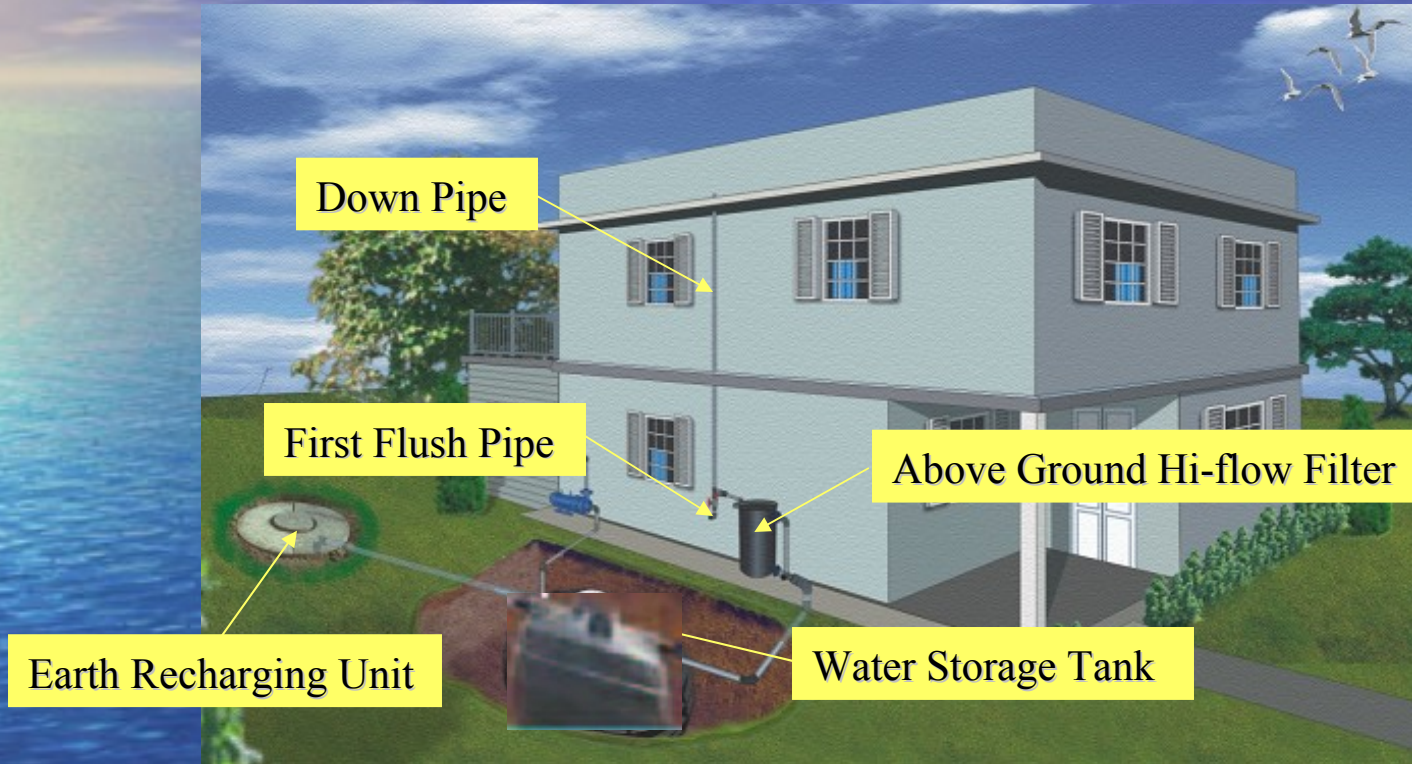
SINTEX RAIN WATER HARVESTING SYSTEM FOR DRINKING WATER



Rain Water harvesting system for drinking water in Rural areas.



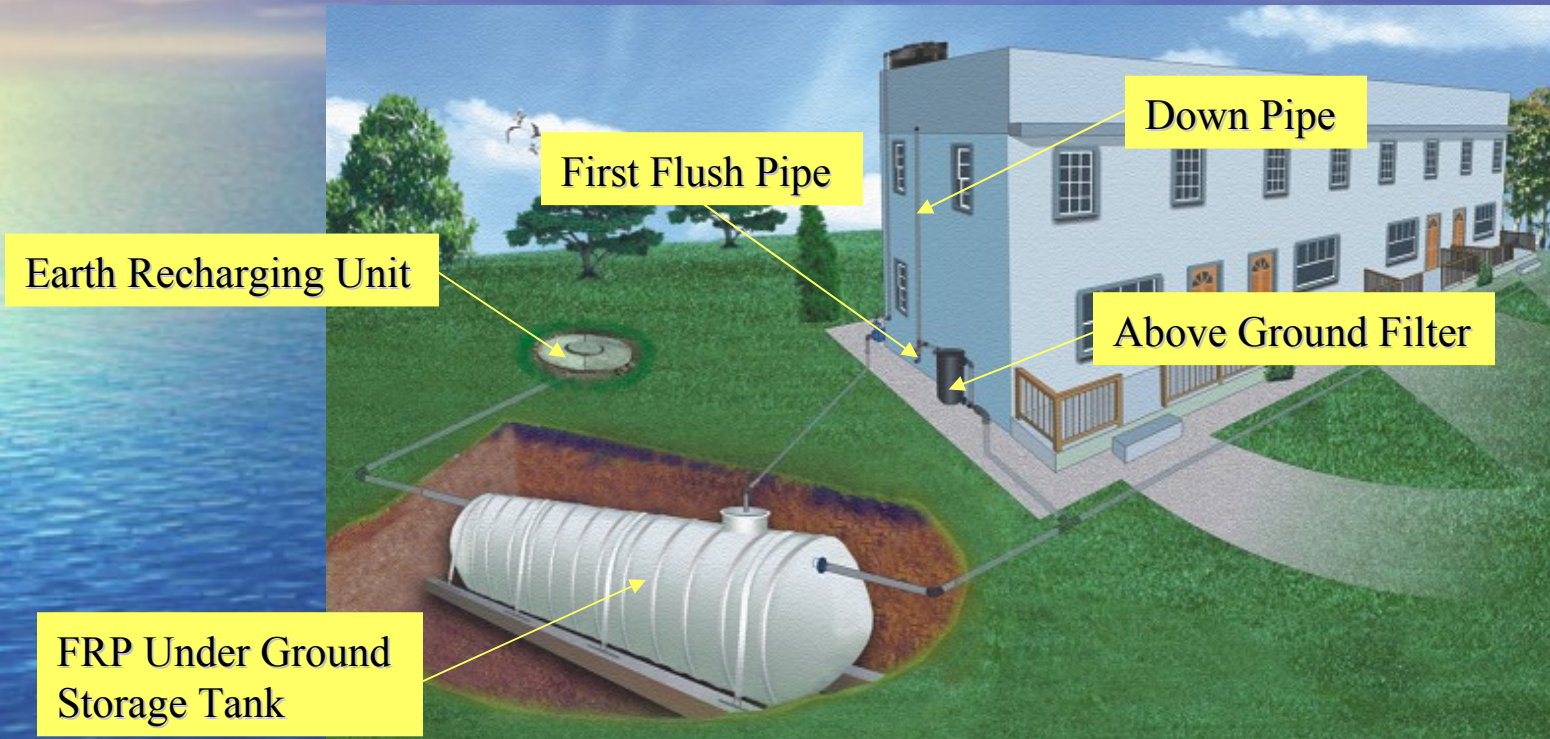
SINTEX RAIN WATER HARVESTING SYSTEM FOR DRINKING WATER



Sintex Rain Water Harvesting System for drinking water in individual bungalows.



SINTEX RAIN WATER HARVESTING SYSTEM FOR DRINKING WATER



Sintex Rain Water Harvesting System for drinking water in institutes.



SINTEX RAIN WATER HARVESTING SYSTEM FOR DRINKING WATER

☐ Do's & Don'ts

- Do install right size system with professional plumbers.
- Do provide Screens on channels to avoid big size leaves and other impurities.
- Do provide Screens at the overflow of the storage tank to avoid mouse and other animals entering back into storage tank.
- Do provide First Flush pipe with valve to flush dust and physical impurities diluted in first rain water.
- Do keep the valve to the system in close condition during first rain to avoid contamination of stored water.
- Do not install under ground tank in excessive high water table area and area near septic piping/ Soak pit, drainage system to avoid contamination.
- Do not install this plant across the path of heavy vehicles or heavy equipments in case of under ground storage tank.
- Do not install this system without earth recharge unit or overflow drain system.



Thank

you