



Rainwater Harvesting through
'RAINY' Dual Intensity Rainwater
Harvesting Filters and
Farmland 'V' Wire Technology
to store, reutilize and recharge the
Ground Water Source

New Invention



FL - 100



FL - 200



FL - 300



FL - 500

"Patent Pending"
"Design Regn No. 238711"



Farmland Rainwater Harvesting Systems

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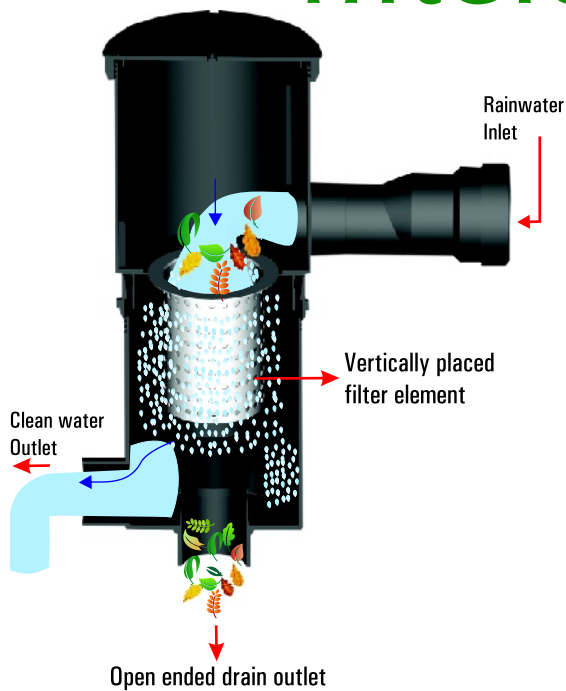
Winner of National Awards from
CII
As a 'Most Innovative Water Saving Product'
&
For 'Innovation for Climate Protection' from

JSW - THE TIMES OF INDIA

EARTH CARE AWARDS 2010

Awards for Excellence in Climate Change Mitigation & Adaptation

Cross section view of Innovative Dual Intensity Rainwater Harvesting filters™



Salient Features:

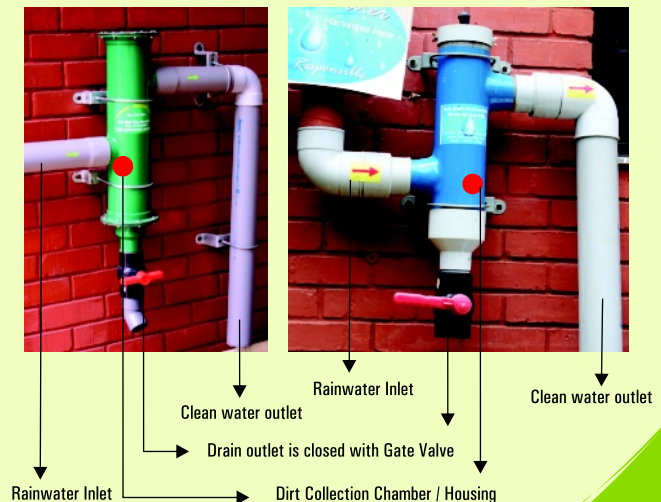
- Dual Intensity Filters works on the principle of cohesive & centrifugal force.
- The open ended design does not allow stagnation of water dirt particles.
- Works on Gravitational Force (No external energy required).
- Cost Effective and Affordable.
- Compact in size and Wall mounted.
- Inbuilt Self-Cleaning Mechanism
- Automatic flush out of dirt particles.
- No consumables required
- Flexibility in pipe connection to any angle and degree
- User Guide & Tool Kit provided.
- Provision of Bypass Valve

Why Conventional Filters Failed ??...

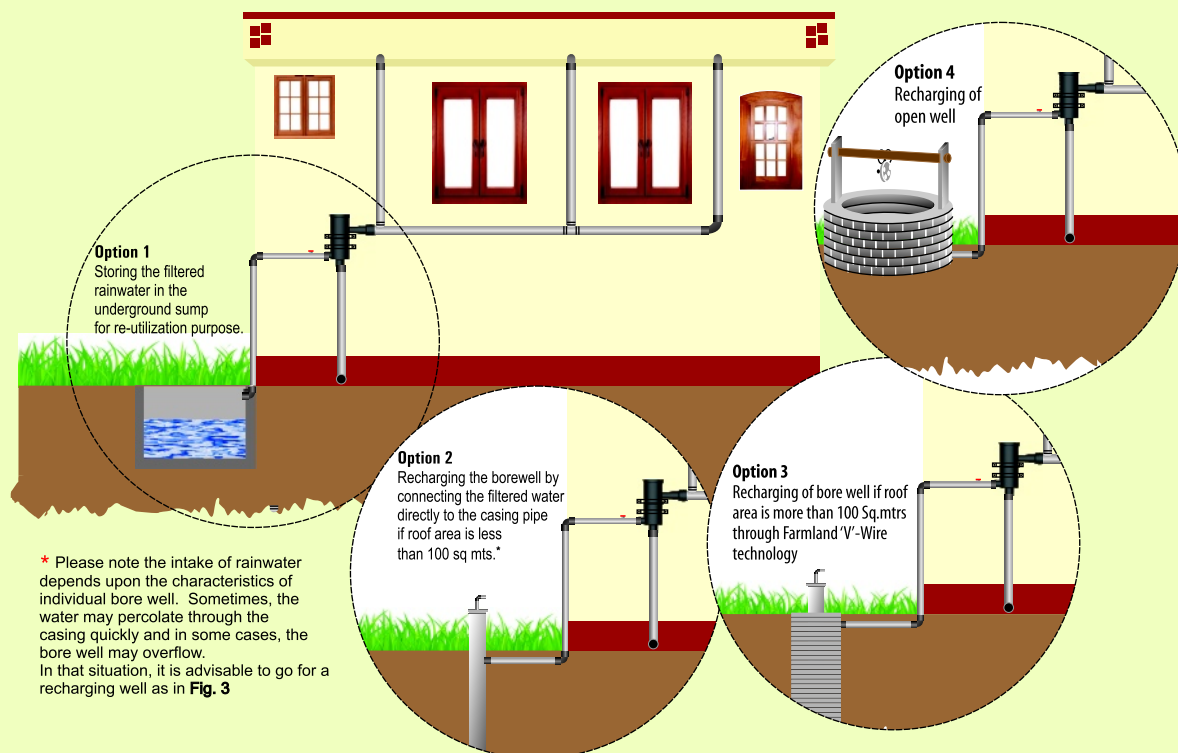
The mechanical filters are so designed with a gate valve system at drain side. When the dirt particles enter, the filter, the dirt and debris, collects inside the filter housing assembly. So at every Rain, the filter candle needs to be cleaned by opening the valve manually. The greatest drawback of these systems is the periodic maintenance from time to time.

This system has serious limitations because of the unpredictability of clogging and uncertainty of rain. This results in the debris clogging inside the filter and chances of decay and water contamination, and also the chances of overflow of water through the filter/terrace area, resulting in unsafe flow of water to the surrounding environment.

Conventional Filters



Various applications through 'Rainy' Filters



Rainy FL Series on site Installation (Model FI 500)

Technical Specifications & Parameters of various models of Rainy FL Series Dual Intensity RWH Filter				
	Rainy FL-100	Rainy FL-200	Rainy FL-300	Rainy FL-500
Suitable up to roof area:	110 SQMTRS	225 SQMTRS	350 SQMTRS	500 SQMTRS
Max: Intensity of Rainfall:	75 mm/hr	75 mm/hr	75 mm/hr	75 mm/hr
Working Principle:	Cohesive Force & Centrifugal force			
Operating Pressure:	Less Than 2 feet of head (0.060kg/cm ²)			
Capacity:	105 LPM	225 LPM	340 LPM	480 LPM
Filter Element:	SS-304 Screen	SS-304 Screen	SS-304 Screen	SS-304 Screen
Mesh Size:	250 Microns	250 Microns	250 Microns	250 Microns
Inlet:	90 MM	110 MM	110 MM	110 MM
Clean Water Outlet:	63 MM	75 MM	90 MM	90 MM
Drain Outlet:	90 MM	90 MM	90 MM	110 MM
Housing:	High Density Polyethylene			
Efficiency of Filter:	Above 90 %	Above 90%	Above 90 %	Above 90%
Source of power:	Gravity	Gravity	Gravity	Gravity

Suitable for:

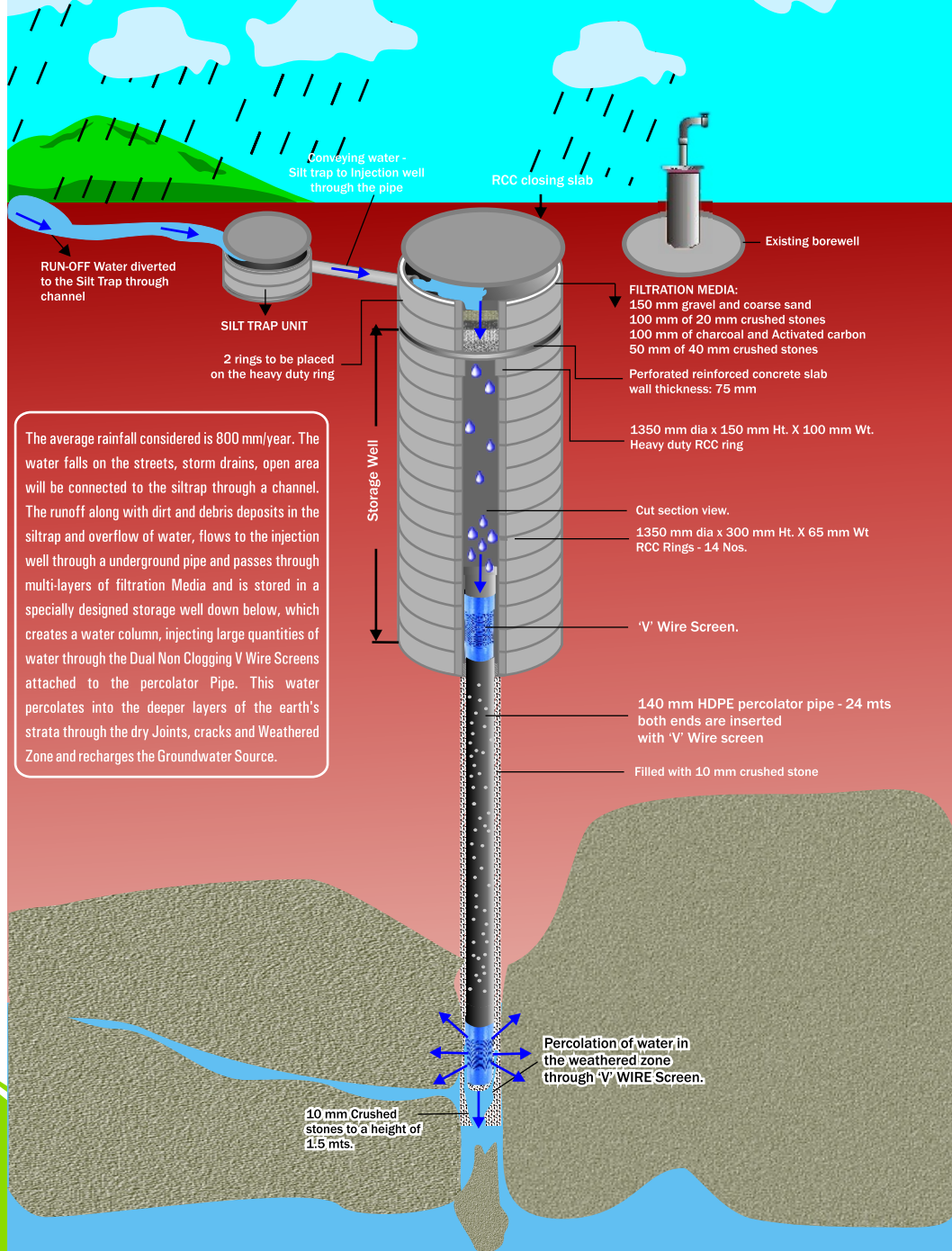
- Individual households
- Schools
- Apartments
- Institutions
- Commercial Buildings
- Industries



'V' Wire Injection Well

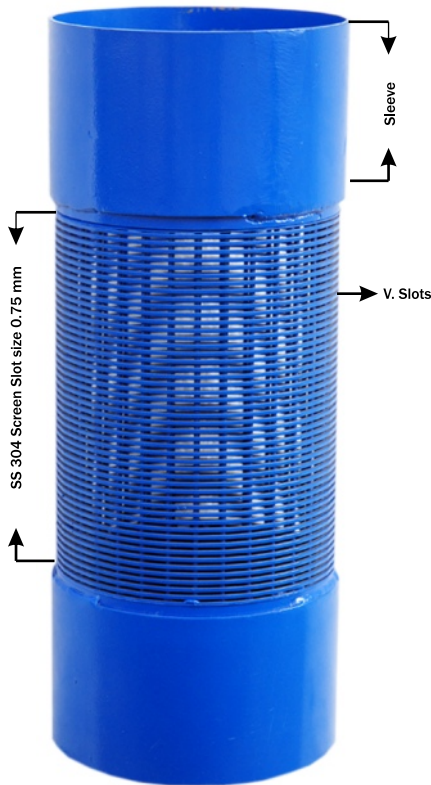
INJECTION WELL TO RECHARGE DRINKING WATER BOREWELLS THROUGH 'V' WIRE TECHNOLOGY

(Artificial Recharge and Aquifer Storage and Recovery)

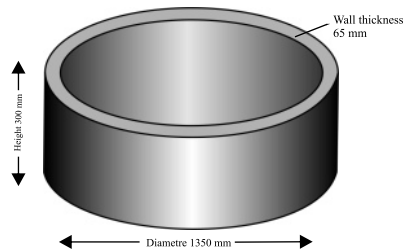


'V' Wire Screen

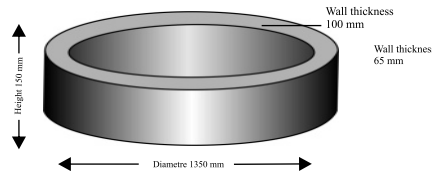
Various components required for 'V' Wire Technology:



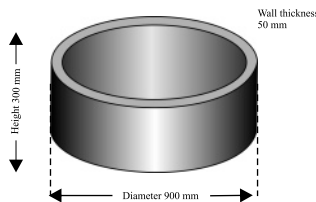
- The V wire screen is of stainless steel material, grade SS-304, Cage type trapezoidal wire wound screen.
- Screen is evenly distributed continuous slot opening of 0.75 MM, so that it has more open area for minimum turbulence and loss of energy.
- The trapezoidal V shape inwardly widening slots are non clogging, so that sediments have only point contact.
- The diameter of the V wire screen is 150 mm, length 0.5 Meter.



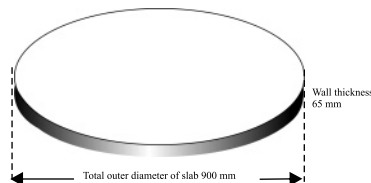
Top view of Reinforced concrete ring
(6 mm mild steel rod should be used for reinforcement)



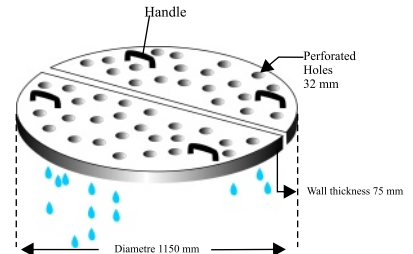
Heavy Duty Reinforced concrete ring
(6 mm mild steel rod should be used for reinforcement)



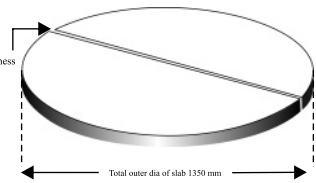
Top view of Reinforced concrete ring of Silt Trap
(6 mm mild steel rod should be used for reinforcement)



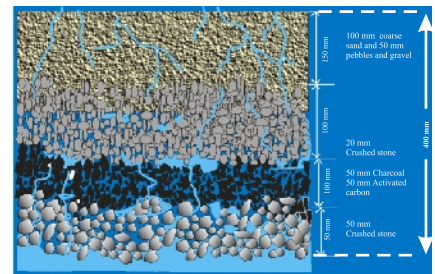
Reinforced concrete closing slab of Silt Trap
(8 mm mild steel rods should be used for reinforcement)



Top view of Reinforced concrete perforated slab
(8 and 10 mm mild steel rods should be used for reinforcement)



Top view of Reinforced concrete closing slab
(8 mm mild steel rods should be used for reinforcement)



DIFFERENT LAYERS OF FILTRATION MEDIA

Activated Carbon: (G carbon GS 800 Granule activated carbons (GAC) Removes dissolved organic contaminants and controls taste and odor problems.) **Charcoal** used is 25 mm to 32 mm Burnt in Foundries. To observe Color in the water and better filtration of rain water.



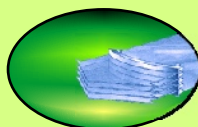
LONGITUDINAL SECTION OF HDPE PERCOLATOR PIPE

A specially designed high tensile strength 140 mm percolator high density poly ethylene pipe with 8 mm spirally perforated holes at 30 mm intervals, throughout the inner layer of the wall, provides an open area of 135 square centimeters / meter. This increased surface area allows for large quantities of water to be recharged at varied depths.

THE SALIENT FEATURES OF 'V' WIRE SCREEN

Continuous Slots

The special design gives continuous slot opening across the periphery and length of screen.



Non Clogging Slots

V-shape wire gives

Inwardly widening V-shape slots. This shape does not give space for any sand particle to get stuck inside the slot and hence these screens are non clogging.



Methodology of Injection Well



Installation Sites



■ Individual houses



■ Apartments & Commercial complexes



■ Schools & Govt. Establishments



■ Institutions & Factories



'Innovation for Climate Protection' Award from
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'Most Innovative Water Saving Product' Award from
CII



'Green Champions' Award by
Indian Green Building Council (IGBC)

Clientele:

Government sponsored projects like Suvarna Jala, NRDWP (National Rural Drinking Water Programme) under Sustainability, Nanjundappa Varadhi Scheme in several Districts with the help of Zilla panchayaths, Gram Panchayats, Municipalities, Corporations, Nirmithi Kendras, Schedule Tribe Corporation, KUWS&DB, (Karnataka urban water supply & Drainage Board), BWSSB (Bangalore Water Supply & Sewerage Board), Konkan Railways, KUIDFC (Karnataka urban Infrastructure Development & Finance Corporation, KRID Ltd. (Karnataka Rural Infrastructure Development Limited) Private and Public sectors Like IFFCO (Indian Farmers Fertilizer Co-Operative Limited) TERI, (Tata energy & Resource Institute) BHEL (Bharath Heavy electricals Limited), Rotary Bangalore Yelahanka, Mitra Academy, Mahindra & Mahindra Nasik, Creamline Dairy Products, Hyderabad, Indo American Hybrid Seeds (India) Pvt. Ltd. Wipro Infrastructure Engineering Limited, Bangalore, Indian Oil Corporation, Bangalore, Electrosteel Steels LTD, Jharkhand JSW Cement Ltd. Andhrapradesh UB spirits Limited, Bangalore, SKF India Ltd, Bangalore & Pune, T. John College of Nursing, Bangalore, Spandana Hospitals Pvt. Ltd, Bangalore, Berggruen Hotels, Bangalore. Manjushree Extrusions Ltd, Bangalore, Devaraj Urs Medical College, Kolar, Frank Anthony Public School Bangalore, in the area of individual housing, farms, hospitals, apartments, commercial buildings, Institutions, Lower and Higher primary schools and colleges, both in rural and urban areas.



Farmland Rainwater Harvesting Systems

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