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

Rainy™

NEW
INVENTION

FL-80 FL-150 FL - 200 FL - 300 FL - 500

REGISTERED;

Winner of National Awards from

CII

As a 'Most Innovative Water Saving Product'

&

JSW - THE TIMES OF INDIA

EARTH CARE AWARDS 2010 & 2014

Awards for Excellence in Climate Change Mitigation & Adaptation

Indian Green Building Council
MEMBER

Farmland

Farmland Rainwater
Harvesting Systems

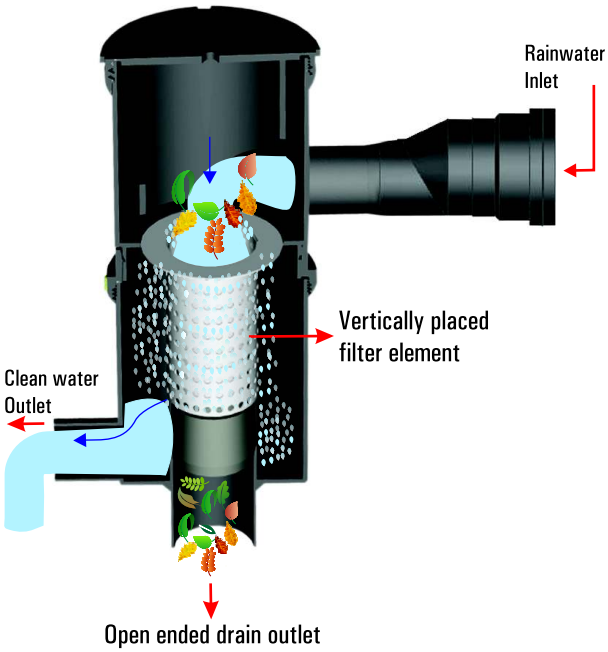
www.rainyfilters.com

E-mail: farmland_rhs@yahoo.co.in

Cross section view of Innovative

Dual Intensity
Rainwater Harvesting

filters™



Salient Features:

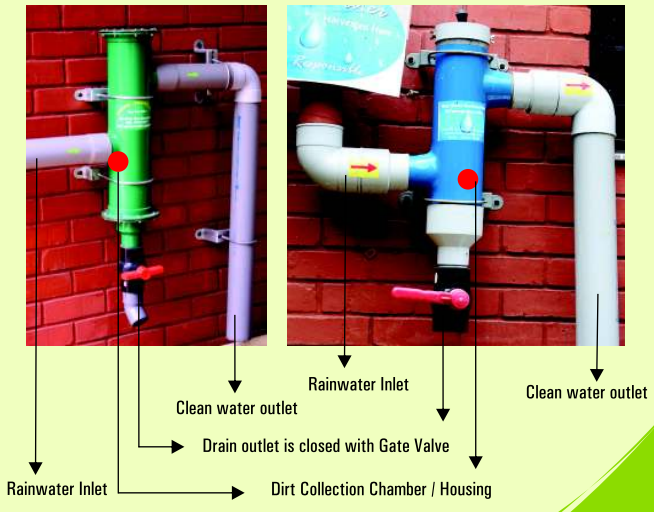
- Dual Intensity Filters works on the principle of cohesive & centrifugal force.
- The open ended design does not allow stagnation of water dirt particles.
- Works on Gravitational Force (No external energy required).
- Cost Effective and Affordable.
- Compact in size and Wall mounted.
- Inbuilt Self-Cleaning 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 ??...

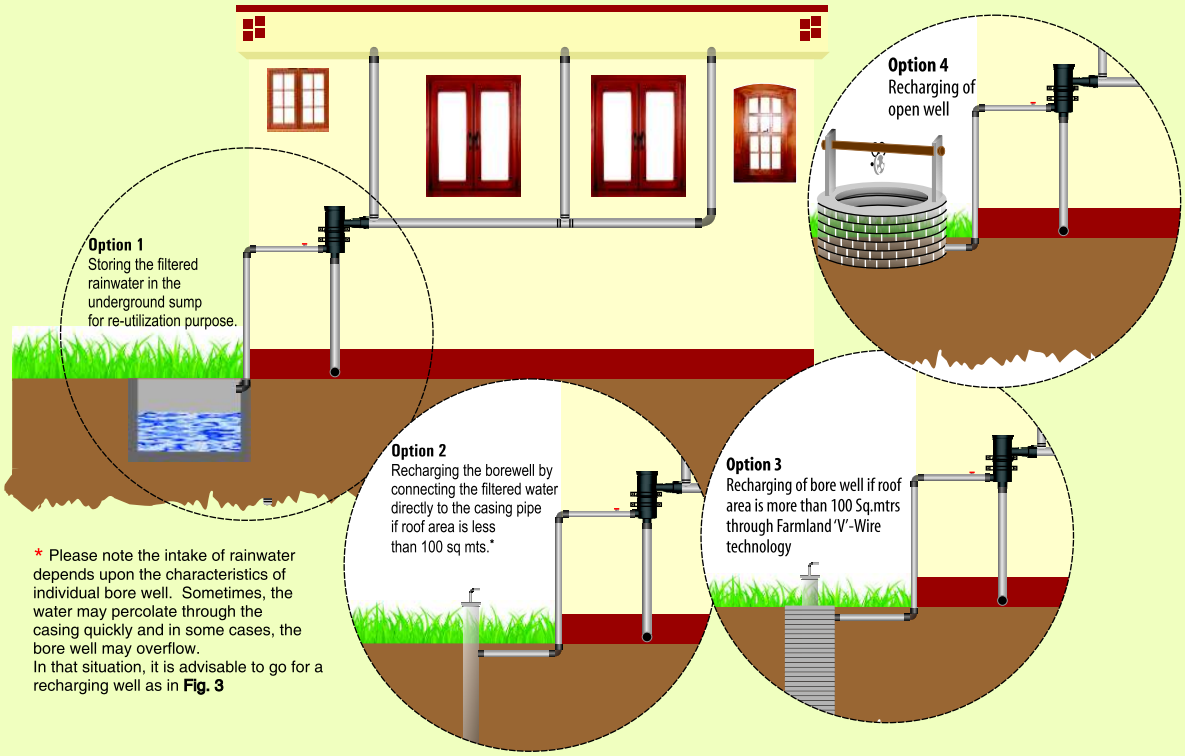
The mechanical filters are so designed with a gate valve system at drain side. When the dirt particles enter the filter, the dirt and debris, collects inside the filter housing assembly. So at every Rain, the filter candle needs to be cleaned by opening the valve manually. The greatest drawback of these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

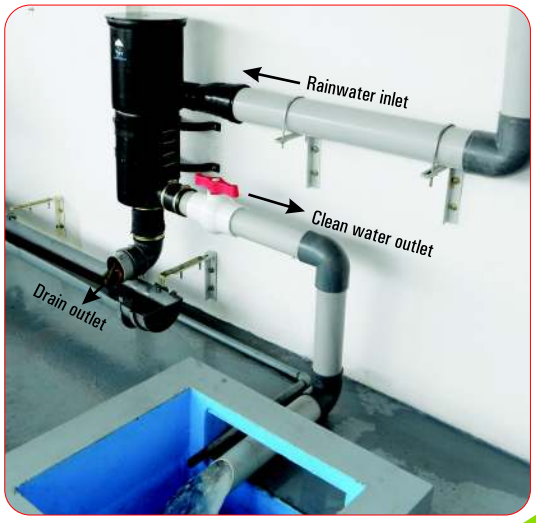


* Please note the intake of rainwater depends upon the characteristics of individual bore well. Sometimes, the water may percolate through the casing quickly and in some cases, the bore well may overflow.
In that situation, it is advisable to go for a recharging well as in **Fig. 3**

Technical Specifications & Parameters of various models of Rainy FL Series Dual Intensity RHW Filters

	Rainy FL-80	Rainy FL-150	Rainy FL-200	Rainy FL-300	Rainy FL-500
Suitable for Roof Area	Upto 120 Sqmtrs	Upto 180 Sqmtrs	Upto 225 Sqmtrs	Upto 350 Sqmtrs	Upto 500 Sqmtrs
Intensity of Rainfall	Upto 75 mm/hour	Upto 75 mm/hour	Upto 75 mm/hour	Upto 75 mm/hour	Upto 75 mm/hour
Filter Type	Open ended, Non Clog				
Working Principle	Cohesive Force & Centrifugal Force				
Operating Pressure	>1 foot of Gravity Head (0.060 kg/cm^2)				
Max Discharge at (CWO)	120 LPM	180 LPM	225 LPM	340 LPM	480 LPM
Filter Element	SS-304 Multi Surface Screen - Food Grade				
Mesh Size	250 Microns	250 Microns	250 Microns	250 Microns	250 Microns
Inlet Size	90 MM	90 MM	110 MM	110 MM	110 MM
Clean Water Outlet (CWO)	63 MM	75 MM	75 MM	110 MM	110 MM
Drain Outlet Size	90 MM	90 MM	90 MM	90 MM	110 MM
Filter Housing	UV treated High Density Polyethylene				
Filter Efficiency*	Above 90%	Above 90%	Above 90%	Above 90%	Above 90%
Source of Power	Gravity	Gravity	Gravity	Gravity	Gravity

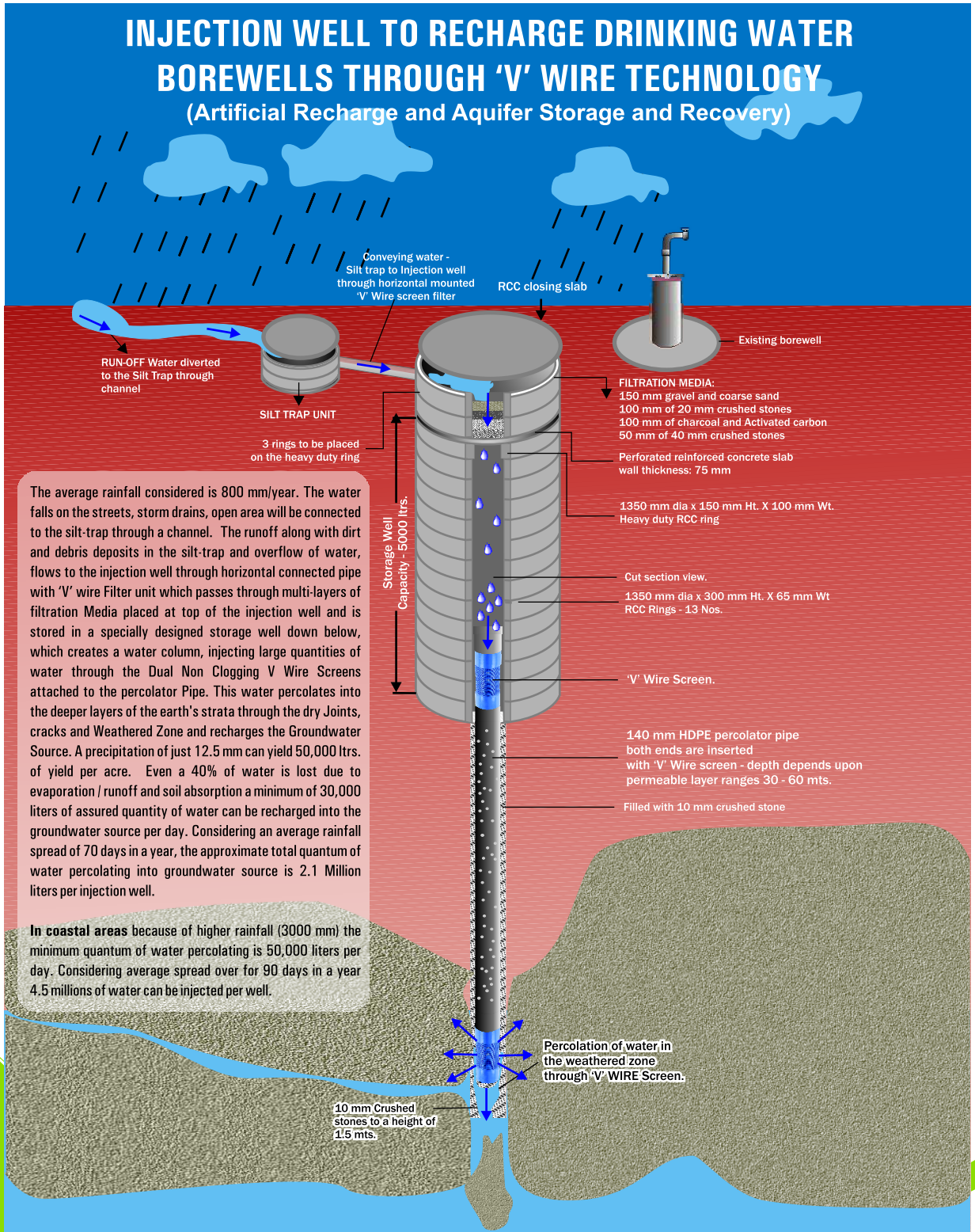
Rainy FL Series on site Installation (Model FL 500)



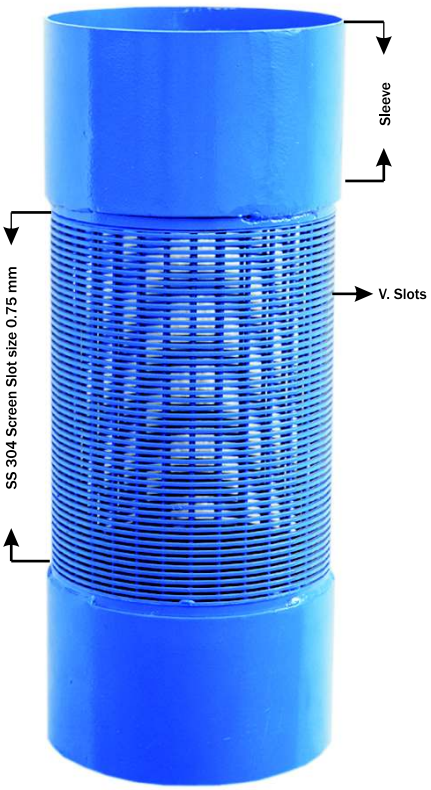
Suitable for:

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

'V' Wire Injection Well

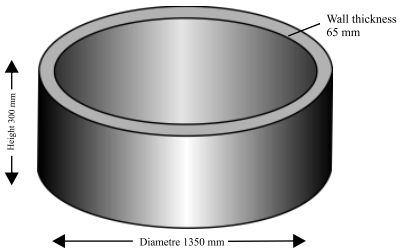


'V' Wire Screen

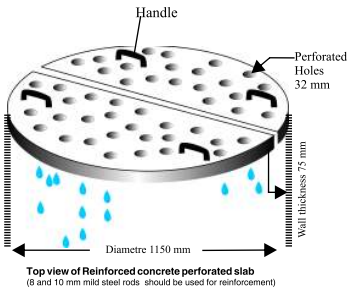


- The V wire screen is of stainless steel material, grade SS-304, Cage type trapezoidal wire wound screen.
- Screen is evenly distributed continuous slot opening of 0.75 MM, so that it has more open area for minimum turbulence and loss of energy.
- The trapezoidal V shape inwardly widening slots are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

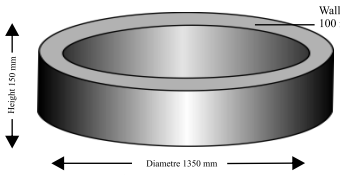
Various components required for 'V' Wire Technology:



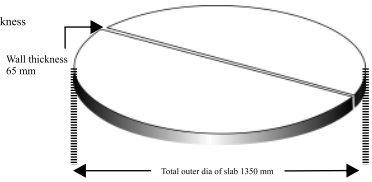
Top view of Reinforced concrete ring
(6 mm mild steel rod should be used for reinforcement)



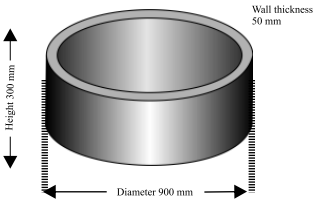
Top view of Reinforced concrete perforated slab
(8 and 10 mm mild steel rods should be used for reinforcement)



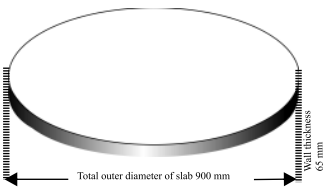
Heavy Duty Reinforced concrete ring
(6 mm mild steel rod should be used for reinforcement)



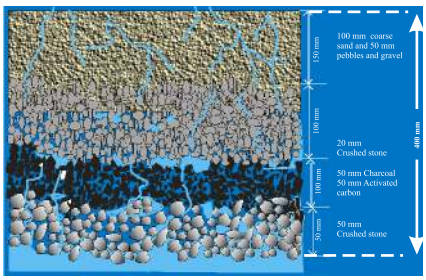
Top view of Reinforced concrete closing slab
(8 mm mild steel rods should be used for reinforcement)



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)



DIFFERENT LAYERS OF FILTRATION MEDIA

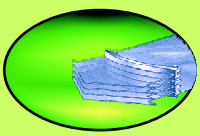
Activated Carbon: (G carbon GS 800 Granule activated carbons (GAC) Removes dissolved organic contaminates and controls taste and odor problems.) **Charcoal** used is 25 mm to 32 mm Burnt in Foundries: To observe Color in the water and better filtration of rain water.

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

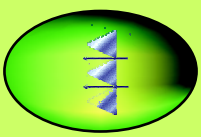
LONGITUDINAL SECTION OF HDPE PERCOLATOR PIPE

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 Establishments

Schools & Institutions

Industries

Awards and Recognition

National Award for Excellence in Water Management (2009), Awarded as 'Most Innovative Water Saving Product' by Confederation of Indian Industry (CII).

In the year 2010 International Award as "Earth Care Award for Innovation for Climate Protection" for the Invention of `Rainy' Self-cleaning Auto Flush out Filters.

Green Champions National Award (2011), by Indian Green Building Council (IGBC) for the Work done and Technologies developed in the field of Water Conservations.

In the year 2014 International award from JSW – The Times of India "Earth Care Awarded for the Innovative FL-V Wire Injection Well Technology in the Category of `Innovation for Climate Protection'.

In 2017 honoured with National award by Aqua Foundations as Aqua Foundation Excellence Award 2017 under the category of Industrial Excellence in Development of Technology in the Field of Rainwater Harvesting.

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, Scheduled Tribe Corporaton, KUWS&DB, (Karnataka Urban Water Supply & Drainage Board), BWSSB (Bangalore Water Supply & Sewerage Board), Konkan Railways, KUIDFC (Karnataka Urban Fertilizer Co-Operative Development 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 Nursing, Bangalore, Spandana Hospitals Pvt. Ltd. Bangalore, Manjushree Extrusions Ltd. Bangalore, Devaraj Urs Medical College, Kolar, Infosys Limited, Sobha Limited, Shriram Properties, Takenaka India Private Limited, Karnataka State Police Housing Corporation LTD., 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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