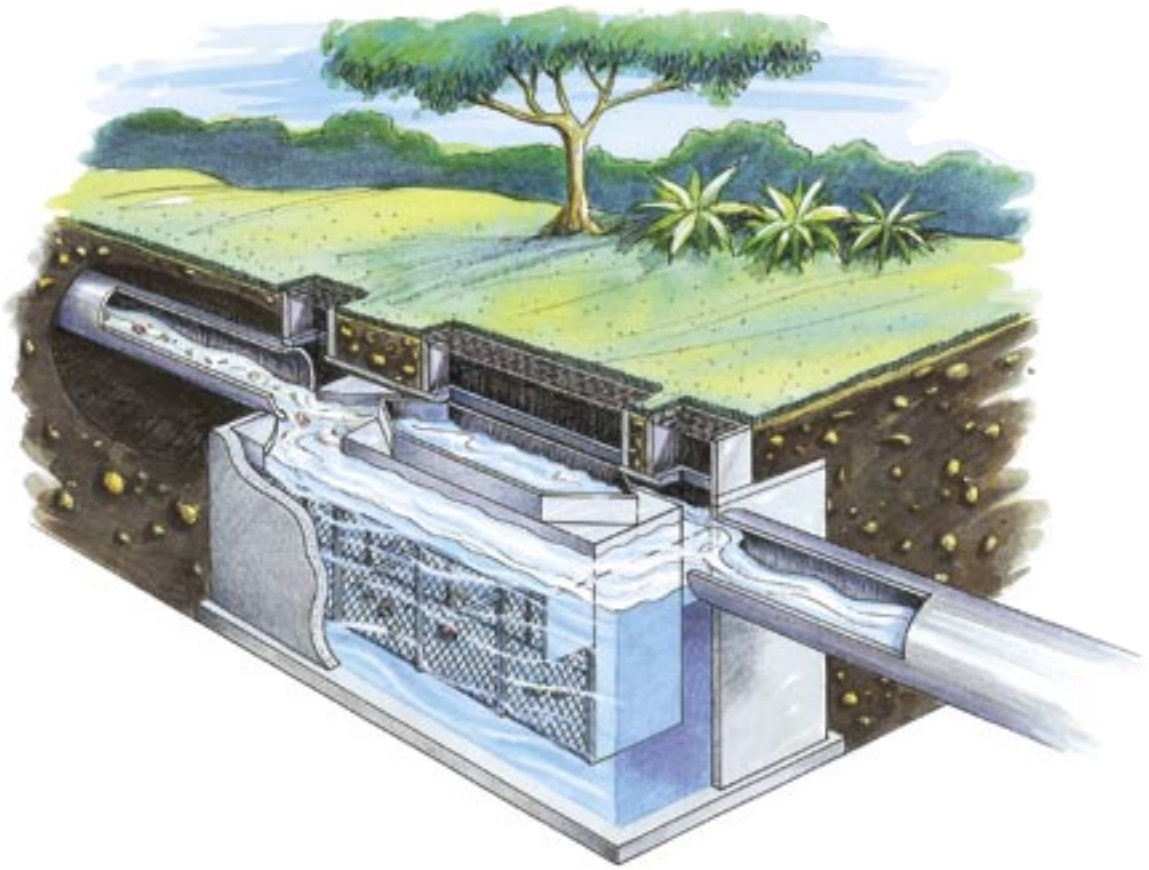
Ecosol™ RSF 4000

Solid Pollutant Filter/Oil and Grease Arrester



K E Y F E A T U R E S

Effective Pollutant and Litter Retention

- ☑ Captures more than 98% of solid pollutants > 211µm
- ☑ Captures 91% of total suspended solids
- ☑ Collects up to 97% free oils and grease at design flow
- ☑ No remobilisation or overtopping of captured pollutants
- ☑ Designed & managed hydraulics eliminates blockage risk
- ☑ Containment by design - small, medium, or large capacity

Tested and Proven Fail-Safe Overflow System

- ☑ Patented hydraulically-driven barrier
- ☑ Minimal head/hydraulic loss
- ☑ Unrestricted flow in extreme (flood) conditions
- ☑ Operates effectively in all flows and gradients
- ☑ Independently tested at a NATA-approved facility
- ☑ Meets international guidelines and standards

Cost-Effective Maintenance

- ☑ Easily cleaned by vacuum
- ☑ Easy access to capture silo for cleaning & maintenance
- ☑ Pollutants are not handled during cleaning
- ☑ No risk to public safety and health
- ☑ Maintenance procedures within OH&S guidelines
- ☑ Dewatering facility removes all solids during cleaning
- ☑ Reduced costs as only solids transported to waste facility

Cost-Effective Design and Installation

- ☑ Simple design with no moving parts
- ☑ Safe installation procedures minimise public risk
- ☑ Small surface footprint with minimal aesthetic impact
- ☑ Lockable lids prevent access by the public
- ☑ Utilises space already used by the existing stormwater pipe
- ☑ Compact design & shallow depth reduces installation costs
- ☑ Made from durable and corrosive-resistant materials

Ecosol™
WASTEWATER FILTRATION SYSTEMS

Ecosol™ RSF 4000

Solid Pollutant Filter/Oil and Grease Arrester

The Ecosol **RSF 4000** is designed for use in stormwater drains. Incoming flows enter the capture silo and pass through the filtration mesh located below invert level on both sides of the silo before entering the clean chamber and then exiting the unit.

The **RSF 4000** unit separates, collects, and retains more than 98% of solid pollutants greater than 211µm, 90% of solids greater than 152µm, and 91% of total suspended solids. It also collects 30% total phosphorous and 16% total nitrogen. Free oils and grease are retained in the outer channels below invert level by the use of two vertical baffles.

The key to the **RSF 4000** success is the design that forces a proportion of the filtered water back upstream along the by-pass channels and against the main directional flow. As this water meets the flows entering the inlet to the capture silo, a unique hydraulically-driven barrier is created, ensuring all flows up to the Treatable Flow Rate (TFR) are directed into the capture silo, thereby enhancing considerably the unit's capture efficiency.

As flows of greater magnitude enter the unit, the hydraulic barrier gradually breaks down and in major pipe discharges, allows the excess flows to by-pass, without remobilising captured pollutants. It is important to note that the unit continues to collect and filter flows at least equivalent to the TFR, even when the pipe is in full discharge and the unit is in by-pass. Most other GPTs are unable to operate in this manner.

When the capture silo is full, the water cannot pass through the mesh and the hydraulically-driven barrier can no longer be formed. Concurrently, the pollutants form a barrier across the mouth of the filtration unit, directing the incoming water into the two overflow by-pass channels, thereby effectively eliminating the risk of flooding.

PERFORMANCE SPECIFICATIONS

POLLUTANTS	POLLUTANT REMOVAL EFFICIENCY	DESCRIPTION
Gross Pollutants	98.0%	Anthropogenic materials such as cans, bottles, plastic bags, and packing materials (generally > 1.2mm in diameter)
Vegetation	98.0%	Organic material, such as leaves and grass clippings (generally >211µm)
Sediment	98.0%	Solid materials > 211µm, both mineral and organic
	90.0%	Solid materials > 152µm, both mineral and organic
	51.0%	Solid materials > 90µm, both mineral and organic
Total Suspended Solids (TSS)	91.0%	Fine inorganic solids suspended in water
Total Phosphorous (TP)	30.0%	Total phosphorous in suspended solids and organic materials
Total Nitrogen (TN)	13.0%	Total nitrogen in organic and inorganic forms
Hydrocarbons	up to 97.0%	Free floating oils that do not emulsify in aqueous solutions

Ecosol Unit Code	Inlet/Outlet Pipe Diameter[1]	Range of Treatable Flow Rates (TFRs)[2] (m^3/s)	Approximate External Dimensions (LxWxD from Invert)[3] (mm)	HOLDING CAPACITIES		
				Solid Pollutants	Free Oil and Grease	Water
				m^3	Litres	Litres
RSF 4200	Up to 375mm	**Up to 0.051**	2200 x 900 x 750	0.23	268	667
RSF 4300	150 to 600mm	**0.03 - 0.12**	2700 x 1350 x 750	0.32	469	1,181
RSF 4450	225 to 900mm	**0.04 - 0.26**	3600 x 1650 x 1050	1.03	1,347	3,348
RSF 4600	300 to 1200mm	**0.13 - 0.47**	4500 x 1950 x 1350	2.43	2,994	7,211
RSF 4750	450 to 1350mm	**0.24 - 0.73**	5600 x 2300 x 1650	4.83	5,711	13,608
RSF 4900	600 to 1650mm	**0.42 - 1.05**	6500 x 2600 x 1975	8.30	9,576	22,768
RSF 41050	750 to 1800mm	**0.66 - 1.43**	7450 x 2950 x 2300	13.11	14,850	35,262
RSF 41200	900 to 2100mm	**0.96 - 1.87**	8630 x 3300 x 2625	19.52	22,793	51,698
RSF 41350	1050 to 2400mm	**1.26 - 2.37**	9700 x 3700 x 2950	27.70	30,578	72,495
RSF 41500	1200 to 2400mm	**1.68 - 2.93**	10680 x 4000 x 3250	37.94	41,491	98,317
RSF 41800	1350 to 2400mm	**2.50 - 4.21**	12730 x 4700 x 3900	65.33	70,452	166,836

[1,2,3] For more details please refer to the product technical specification available from any Ecosol office or from our website

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