Ecologix Model Eco-Cycle 200 and Eco-Cycle 400
(Eco-Cycle 200 = 50 GPM Capacity & Eco-Cycle 400 = 105 GPM Capacity)

Description & Function of the Complete Recycling System

For installing an Eco-Cycle recycling system it is necessary that the capacity of your underground waste water tank or car wash pit (silt chamber) should have a minimum volume of 500 gallons. We recommend a volume of 1,000-2,000 gallons. The minimum recommended water depth is 4’ - 6”. If the gallon volume(s) can not be met with underground tanks, then an above ground silt chamber can be used, which draws from a sludge pump placed in the last underground tank.

Used wash water first flows over the car into a collection pit (or overflow trench). From where it flows through a sewer pipe into the underground tank(s). If a trench is used, this should be a positive flow trench, so no standing water accumulates. It then flows through a 6 inch (or 4 inch) drain into the underground tank where larger solids will settle. A float switch (B1) and a sludge pump encased in a pump protector, are installed in this underground tank(s).

This sump pump delivers the water through Pipe II “pressure pipe from sludge pump” to the recycling unit. There it passes through a cyclone and a high voltage electrode into the reactor tank of the Eco-Cycle recycling unit. Inside the reactor tank two float switches (B2 and B3) and a flotation membrane are installed. When the car wash machine demands water, recycled water is pumped by a pressure pump out of the reactor tank through the Hydro-Stabilizer, the fine filter (with an automatic back flush device) and the flow switch, to the car wash machine. This process is automatically controlled.

The filtered and degemred water is delivered under an average pressure 60 psi (4 bar), through Pipe I "recycled water to consumer", to the car wash for re-use. A water meter is installed in this pipe to monitor the amount of recycled water delivered for use in the car wash.

Recycled water can be used in the car wash for all pre-wash, main wash and high pressure wash requirements. The final rinse cycle, into which the drying agent or wax is added, should be carried out with fresh water from the local water supply. The car wash machine switches back and forth between recycled water and fresh water as needed by the different wash cycles independently of the recycling unit.

IMPORTANT:

When installing a car wash, ensure that it is equipped with two water inlet connections:
- One for recycled water
- Another for fresh water

We recommend installing a water meter in the fresh water pipe from the local water supply to the car wash to monitor the amount of fresh water which was used in the car wash.

When a wash cycle begins, the water pressure in Pipe I “recycled water to consumer” on the Eco-Cycle Recycling unit drops from 4,5 bar to 3,5 bar (76.5 - 52.6 psi).
Ecologix Model Eco-Cycle 200 & Eco-Cycle 400

Description & Function of the Complete Recycling System

(Continued)

If the minimum pressure is reached, the pressure switch on the Ecolit Recycling unit activates the pressure pump, which feeds recycled water through the fine filter to the car wash, at a pressure of approximately 4 bar (60 psi).

When the wash cycle ends the pressure switch on the Eco-Cycle Recycling unit will stop the pressure pump again once the maximum pressure of 4,5 bar (76.5 psi) is reached.

This process is repeated for each wash cycle

To prevent the sludge pump from running dry (at initial start-up or due to leaks), a float switch B1 is installed in the underground tank. This switch automatically stops the sludge pump if the water level in the underground tank drops below the allowed minimum level.

The electric cable for float switch B1 and the electric cable for the sludge pump runs through a PVC drain pipe (or separate 1” conduit depending on State Code) installed from the underground tank to the Eco-Cycle Recycling unit.

A compressed-air hose, which is installed between the pump protector and Pipe VI “compressed-air for reversible flow to pump protector” on the recycling unit, also passes through this PVC drain pipe. The compressed air hose is required for cleaning the pump protector during maintenance.

To prevent the pressure pump from running dry (at initial start-up) a float switch (B2) is installed in the reactor tank. This switch automatically deactivates this pressure pump if the water level inside the reactor tank falls below the allowed minimum water level.

The float switch B3, which is installed in the reactor tank, activates or deactivates the sludge pump in the underground tank.