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COMPACT CONE BOTTOM OIL-WATER-SOLIDS SEPARATOR

Pre-Treatment or Sewer Discharge

R4TE1:

Automated Solids Separator & Oil Skimmer System

- ◆ Maximize water clarity through flow controlled pre-separation.
- ◆ The quad, slant-bottom, tank system is automated with timed air actuated dump valves which remove solids.
- ◆ Hydrocarbons are automatically removed by skimming to a collection chamber.
- ◆ Biometric spheres allow for coalescing of oils and settling of solids prior to exiting the tanks.

This system can be used independently as a pre-stage separator for sewer discharge or as a first stage in any recycle system.



Features:

- ◆ 400 gallons (4 Tanks)
 - ◆ 120v, 10amp
 - ◆ Hydrocarbon skimmer & enhanced solids separation
 - ◆ Fully automated discharge pump
 - ◆ Automated purging - Four air controlled, programmable 2" dump valves
 - ◆ Self sufficient & maintenance free
 - ◆ Includes oil/water separator collection tank (AST00)
 - ◆ Dimensions: 61" x 44.5" x 86"
(2 scfm, 100 psi air required)
- Optional stainless steel frame upgrade available



AST00:

Oil/Water Separation Collection Tank

- ◆ Gravity flow separation system
- ◆ Concentrates oil and discharges trace water from oil skimmers
- ◆ Oil is trapped in the top half of the tank.
- ◆ Oil drain valve can be utilized to remove the oil as needed.
- ◆ Water discharges automatically to sump.
- ◆ Available for all systems and is included with the R4TE1.

Various other technologies are also available

System Comparison

Underground Separator vs. Above Ground Cone Bottom Separator

	Under Ground Separator	Above Ground Cone Bottom Separator
Effectiveness: No Solids build up	Removes solids by using gravity to separate solids and traps non-emulsified oils	Cone bottom shape enhances separation due to gravity, reducing separation time needed. Also traps non-emulsified oils.
Effectiveness: w/Solids build up (Usual State)	Since the separator is out of sight, it tends to completely fill with solids before it is cleaned out. Even partially filled, separation is severely limited. Both solids & oils can go through the system.	The above ground tanks are partially see through and readily cleaned, which makes them rarely filled enough to affect the separation abilities of the system.
Cleaning	Requires truck to pump out entire contents of separator. This means that customer must pay to dispose of solids and all water as hazardous waste.	Customer can decant tanks on a regular basis and let the solids dewater before disposal.
Required Space	Needs to be placed underground, requires access to manholes and periodic inspection.	Needs to be placed above ground. Actual space requirements will vary depending on size of unit. It is recommended to cover the tanks, to get maximum life of the system
Required Pumps	None needed, unless further treatment is needed.	Requires sump pump. A submerged sump pump generally lasts several years without any problems and requires very little electricity. Further treatment can be gravity fed or pumped as needed.
Available upgrades		Cone tanks can be aerated and circulated to make the environment conducive to using hydrocarbon consuming microbes. These microbes will consume oil so that it does not build up in the system. They will also consume emulsified oils.
Typical washpads and "pretreatment"	Washpads for this type of system generally have a "steep" slope to the middle and everything including a majority of the solids and all oil flow directly into the underground separator.	Washpads for this type of system have a "shallow" slope to one corner, where it is further treated by a solids collection trough before ending up in a sump to be pumped into the separator. In the sump a belt oil skimmer is used to remove free oil. This pretreatment removes most solids and oils before they reach the separator enhancing the effectiveness of the cone bottom separator and reducing the need for periodic cleaning and disposal.
Further Treatment / Recycling needed if requirements change	Difficult: Must dig system up to add plumbing and electrical	Easy: This separator works well as the first stage of many of our recycle systems. Electricity and plumbing as needed are much easier to provide.