



BALDWIN

WASTEWATER MANAGEMENT

OIL & SOLIDS SEPARATORS

LARGE DESIGNED SYSTEMS

Design Performance Guaranteed

System performance is simulated through the use of a proprietary computer program. This enables the effluent quality to be accurately predicted which means that we can meet discharge limits 100% of the time – GUARANTEED!



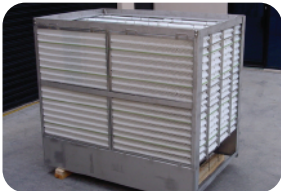
Above Ground Systems

- Pumped (or gravity flow)
- Stainless steel or painted mild steel
- Discharges to sewer, stormwater or recycle
- Standard designs or custom configurations
- Treatment rates from 1KI/hr to over 100 KI/hr



In Ground Systems

- Gravity Flow (or pumped)
- Concrete pits or G.R.F. Tanks
- Silt hoppers and oil skimmers
- Drive in sumps
- First Flush, storm by-pass arrangements



Retrofits

- Upgrading inefficient API Pits and Triple Interceptor Traps
- Very efficient and cost effective
- Modular cages for large installations
- Unlimited configurations and orientations

Maximum Efficiency

Baldwin 'V-Plate' Coalescing Plate Separators provide maximum efficiency at minimal cost. The system consists of series of polypropylene plates, stacked vertically and housed in a fabricated tank or concrete pit. There are no cartridges or filters that need replacing. The only maintenance requirement is a quick, easy, once-a-year cleaning of the plates with pressurised water.

$$V_R = \frac{(P_W - P_O)gd^2}{18\mu}$$

Stokes' Law

Under laminar flow conditions the oil droplets attach to the oleophilic (oil attractive) plates. Stokes' Law, the physical law governing the rise and fall rate of a droplet or particle in a fluid stream, can predict the settling time of solid particles and the rise time of oil droplets, which have specific gravities higher or lower than that of the main fluid.



BALDWIN
WASTEWATER MANAGEMENT

OIL & SOLIDS SEPARATORS LARGE DESIGNED SYSTEMS

Proven Performance

Baldwin separators effectively intercept oil droplets from a water/oil mixture, bringing droplets to the surface as a separated layer. Suspended solids are also intercepted, dropping to the bottom as sludge.

During recent testing programs we used a laser particle counter to accurately measure the size and number of oil droplets in various water mixtures. From this data we were able to produce a series of oil droplet distribution curves for:

- Gravity Flow
- Diaphragm Pump
- Progressive Cavity Pump
- Centrifugal Pump

Our tests confirmed the superior performance of the Baldwin "V-Plate" Coalescing Plate Separators in removing free oil droplets **as small as 20 microns** in diameter.

Effluent levels of 10ppm and below were easily achieved.



Key Benefits

- Each system is individually designed for each application based on proven design principles and is guaranteed to meet the stringent new discharge laws being imposed by local authorities.
- Modular construction ensures that retro fitting outdated triple interceptors and API systems are efficient and cost effective methods of upgrading.
- Baldwin 'V-Plates' are assembled in a vertical configuration, such that "clogging" or "silting up" is virtually eliminated.
- Unique proprietary design enables the corrugated plates to be uniformly spaced at either 6mm or 12mm
- Injection moulded Polypropylene Plates are highly "oleophilic" and extremely resistant to most chemicals.

Applications

Petroleum Industry:

- Refineries
- Terminals/Depots
- Service Stations
- Workshops

Mining:

- Heavy Vehicle Washpads
- Lube Bays
- Workshops

Power Stations:

- Storm Water Runoff
- Process Recycling
- Solids Settling
- API/TIT Upgrades

Baldwin specialises in the supply of oil and solids separators for a wide variety of industry. We attribute our continued success to the professional approach with which we design each system to meet the individual's particular needs.

