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Allied Pumps

Coalescing Plate Oily Water Separators

Coalescing plate separation to under 15 ppm free oil content

Allied Pumps Coalescing Plate Oily Water Separators combine a high efficiency coalescing plate pack with positive displacement diaphragm pumps and automatic controls. The patented plate construction removes oil droplets to 20 microns, reducing effluent free oil content to less than 15 ppm across a wide range of influent conditions.

Each separator is configured to suit the duty. The chamber is supplied in moulded polyethylene, fibreglass or stainless steel to suit the effluent and the installation, and pumps are matched to separator size to minimise emulsion of oil and water.

KEY FEATURES

- Patented Coalescing Plate Pack
- Removes Oil Droplets to 20 Microns
- Effluent Free Oil Content Below 15 ppm
- Positive Displacement Diaphragm Pumps Matched to Separator Size
- Safe Low Voltage 12 V Control
- Downstream Baffle or Oil Dam Prevents Oil Carryover
- Minimal Installation Cost
- Maintenance Can Be Carried Out In House

PRODUCT APPLICATIONS

- Workshop Wash Down Facilities
- Commercial Car Washes
- Service Stations
- Transport Depots
- Industrial Waste Treatment

PRODUCT SPECIFICATION

Model No.	Nominal Flow (L/h)	Height (mm)	Width (mm)	Depth (mm)	Pump Model	Voltage (V)	Motor (kW)	Solids (mm)
KCPS 15 FS	1,500	1,520	1,450	550	KDS 25	240	0.37	15
KCPS 15 FS EXE	1,500	1,520	1,450	550	KDT 25	415	0.37	15
KCPS 30/15 FS	1,500	1,520	1,700	870	KDS 25	240	0.37	15
KCPS 30 FS	3,000	1,520	1,700	870	KDS 32	240	0.37	20
KCPS 60 FS	6,000	1,550	2,160	840	KDS 38	240	0.75	25
KCPS 75 FS	7,500	1,850	2,160	840	KDS 50	240	1.10	40
KCPS 150 FS	15,000	1,950	2,905	1,190	KDS 76	240	1.50	50

PRODUCT SPECIFICATION (CONTROLLER)

Controller Model	Voltage (V)	Height (mm)	Width (mm)	Depth (mm)	Floats
KLC 1	240	200	200	150	2
KLC 2, EXE Rated	415	300	200	150	2





Stainless steel separator on a galvanised stand, with inlet pipework, diaphragm pump and waste oil containers. The controller is shown enlarged, mounted on the chamber wall

Polishing Filters

Allied Pumps Polishing Filters remove emulsified and dissolved oil and fuel from water, capturing what a conventional gravity separator cannot. The filter modules are hydrophobic, so clean water passes through unaffected and hydrocarbon bonds chemically and permanently to the filter. Filters work in conjunction with an Allied Pumps Coalescing Plate Separator to achieve optimum water quality.



PRODUCT SPECIFICATION

Model No.	Max Flow (L/min)
ACPF-15-C	1,500
ACPF-30-C	3,000
ACPF-60-C	6,000
ACPF-90-C	9,000



HOW IT WORKS

The filter modules are hydrophobic and have an indefinite shelf life. Clean water passes through without any effect, and the modules only become active when water contaminated with hydrocarbon comes into contact with the filter. The hydrocarbon then bonds chemically and permanently to the filter, so it cannot be released later. Because the modules remain inactive until hydrocarbon arrives, a filter can process storm water or clean bilge water without shortening its life, remaining as a sentinel awaiting contaminants.

KEY FEATURES

- Absorbs Up to Fifty Times Its Own Weight
- Hydrophobic, Rejects Water and Stays Light for Handling
- Will Not Desorb, Captured Oil Is Never Released
- Indefinite Shelf Life
- Only Becomes Active on Contact With Hydrocarbon
- Oil Response Products May Be Reused Until Saturated
- Made From Naturally Occurring Materials
- Very Small Carbon Footprint From Manufacture to Deployment

PRODUCT APPLICATIONS

- Locations Where Sewer Discharge Is Not an Option
- On-site Disposal Where Alternatives Are Required
- Wash Bay Reuse Systems
- Environmentally Sensitive Areas
- Storm Water and Clean Bilge Water Processing

Wash Bay Recycle Systems

Treats and recycles wash bay water to local authority discharge standards

Allied Pumps Wash Bay Recycle Systems treat water from vehicle wash bays to a standard compliant with local authority requirements, so it can be safely reused. That reduces water consumption and removes the need to dispose of trade waste off site.

Systems suit sites with no sewer connection, where trade waste would otherwise have to be trucked away. Each package is skid mounted, built around proven treatment technologies, and designed to meet local regulations and duty of care obligations.

Systems are configured to the site and the water being treated. Coagulant and flocculant dosing is available for high silt applications, along with settlement and silt handling chambers, remote and online hydrocarbon monitoring, additional storage and discharge pumping, and containerised or sheltered enclosures.

KEY FEATURES

- Skid Mounted for Installation
- Proven Treatment Technologies
- Coalescing Plate Separation and Multi Stage Filtration
- Automatic Backwashing on Glass Media and Carbon Filters
- pH, Turbidity and Chlorine Monitoring
- Automatic Chlorine Dosing
- PLC Controlled Operation
- Mains Water Backup
- Easy to Maintain

PRODUCT APPLICATIONS

- Industrial Sites and Warehouses
- Mining Camps
- Mining Light Vehicle Wash
- Train Wash
- Bus Depots

SYSTEM COMPONENTS



1. coalescing plate separator
2. Feed tank
3. 3 Backwash pump system
4. Filter feed pump system
5. Glass media auto backwash filter
6. Activated carbon auto backwash filter
7. Treated water holding tank
8. Tank level float switches
9. Polypropylene oil polishing cartridge filter
10. pH monitoring system
11. Automatic chlorinating analyser and dose system
12. Final discharge sediment cartridge filter strainer
13. Final discharge pressure system
14. Kwikstart PLC controller
15. Balance tank
16. Turbidity monitoring system
17. Mains water back up solenoid
18. Pipework, valves and fittings
19. Documentation and maintenance management plan



Wash bay recycle system under assembly at the Allied Pumps facility, showing the holding tanks, treatment skid, filter vessels, pressure system and control cabinet before delivery to site

Trade Waste Lint Filter Systems

Allied Pumps Trade Waste Lint Filter Systems remove lint and fibre from wastewater before discharge to sewer, using the A300 Bio-Filter. Each filter removes up to ninety per cent of solids, including everything above 0.79 mm, and reduces Biochemical Oxygen Demand (BOD). Systems are supplied as a complete package with pit, cover, internals, pipe connection and accessories.



LINT FILTER TEST REPORT

Measure	Without Filter (mg/L)	With Filter (mg/L)	Reduction
Total Suspended Solids	6,530	113	98.3%
Biochemical Oxygen Demand	2,130	780	63.4%



WHY IT MATTERS

Discharge of lint and fibre into sewers is a common problem for Water Corporation. Unchecked, it accumulates in the network, and companies that fail to maintain wastewater quality risk authority non-compliance along with expensive repairs to sewer lines, pump stations and treatment plants.

A lint filter addresses the problem at the source, before discharge leaves the site. Filtration to 0.79 mm removes the fibre that causes the blockages, and reduces the suspended solids and BOD load the network has to carry.

KEY FEATURES

- Water Corporation Approved
- Removes All Solids Above 0.79 mm
- Reduces Suspended Solids and BOD
- Independently Tested Performance
- Robust Non-corrosive Materials
- High Level Alarm
- Auto Shut Off Valve if Filter Removed
- Easy to Install and Service

PRODUCT APPLICATIONS

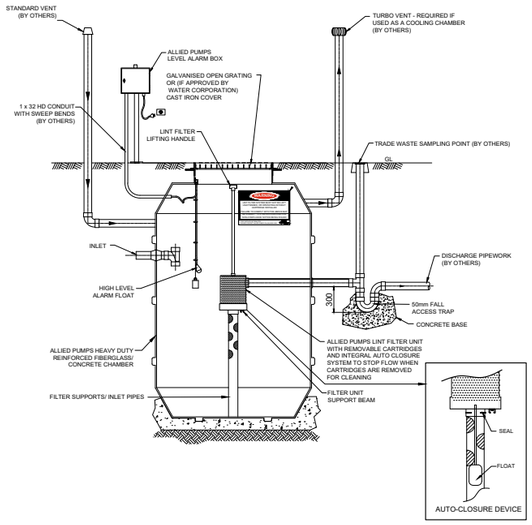
- Commercial Laundries
- Hotels and Accommodation
- Hospitals and Aged Care
- Industrial Laundry Facilities
- Sites Subject to Trade Waste Discharge Limits

PRODUCT SPECIFICATION

Trade Wate Lint Filter Systems

Model No.	Chamber Size	A300 Filters	Max. Peak Flow (L/min)	Max. Daily Flow (L)	Chamber Material
APLF-FD1600/2200-1L	1.0 m dia x 1.6 m x 2.2 m deep	1	28	13,000	Fibreglass
APLF-FS1500/3000-1L	1.2 m dia x 1.5 m x 3.0 m deep	1	28	13,000	Fibreglass
APLF-FS1500/3000-2L	1.2 m dia x 1.5 m x 3.0 m deep	2	56	26,000	Fibreglass
APLF-FM2000/6000-2L	1.8 m x 2.0 m x 6.0 m deep	2	56	26,000	Fibreglass
APLF-FM2000/6000-3L	1.8 m x 2.0 m x 6.0 m deep	3	84	39,000	Fibreglass
APLF-FL2000/6000-3L	2.2 m x 2.0 m x 6.0 m deep	3	84	39,000	Fibreglass
APLF-FL2000/6000-4L	2.2 m x 2.0 m x 6.0 m deep	4	112	52,000	Fibreglass
APLF-FG2000/6000-4L	3.0 m dia x 2.0 m x 6.0 m deep	4	112	52,000	Fibreglass
APLF-PM2000/10000-2L	1.8 m x 2.0 m x 10.0 m deep	2	56	26,000	Concrete
APLF-PM2000/10000-3L	1.8 m x 2.0 m x 10.0 m deep	3	84	39,000	Concrete
APLF-PL2000/10000-3L	1.8 m x 2.0 m x 10.0 m deep	3	84	39,000	Concrete
APLF-PL2000/10000-4L	2.2 m x 2.0 m x 10.0 m deep	4	112	52,000	Concrete
APLF-PG2000/10000-4L	3.2 m dia x 2.0 m x 10.0 m deep	4	112	52,000	Concrete







Trade Waste Monitor Systems

Continuous monitoring of waste streams to Trade Waste Authority requirements

Allied Pumps Trade Waste Monitor Systems provide continuous monitoring of waste streams to meet Trade Waste Authority requirements. Systems are supplied as integrated components or as complete packages, in compact above ground or remote below ground configurations. An automated closure valve isolates the line and a remote alarm signals any out of parameter condition.

KEY FEATURES

- Automated Closure Valve for Line Isolation in Alarm Conditions
- Remote Alarm, Audible and Visual With Mute Switch
- Chart Recorder for Continuous Recording of All Monitored Conditions
- Stainless Steel Enclosure
- Compact or Remote Configuration
- Below Ground Pit Package With Internal Pipework and Components
- Delivered to Site Ready for Installation

PRODUCT APPLICATIONS

- Commercial Kitchens
- Laundromats
- Aquatic and Leisure Centres
- Sewer Lines
- Sites Subject to Trade Waste Discharge Limits



PRODUCT SPECIFICATION

Model No.	Nominal Size (L/h)	Gravity Flow (L/s)		Type	Pit Ø (mm)	Pit Depth (mm)
		Min.	Max.			
APTW-M40-C	40	0.12	1.00	Compact	-	-
APTW-M50-C	50	0.19	1.60	Compact	-	-
APTW-M65-C	65	0.30	2.70	Compact	-	-
APTW-M80-C	80	0.50	3.30	Compact	-	-
APTW-M100-C	100	0.70	6.20	Compact	-	-
APTW-M150-C	150	1.70	14.00	Compact	-	-
APTW-FS1000/4000-M40R	40	0.12	1.00	Remote	1,200	1000 to 4000
APTW-FS1000/4000-M50R	50	0.19	1.60	Remote	1,200	1000 to 4000
APTW-FM1000/6000-M65R	65	0.30	2.70	Remote	1,800	1000 to 6000
APTW-FM1000/6000-M80R	80	0.50	3.30	Remote	1,800	1000 to 6000
APTW-FM1000/6000-M100R	100	0.70	6.20	Remote	1,800	1000 to 6000
APTW-FM1000/6000-M150R	150	1.70	14.00	Remote	1,800	1000 to 6000

Muffin Monster Grinders

Heavy duty grinding that protects downstream pumps and equipment

Muffin Monster grinders reduce the toughest wastewater solids before they reach pumps, valves and downstream equipment. Precision machined cutter stacks run at slow speed and high torque, shredding solids in two directions so material cannot reweave in the waste stream.

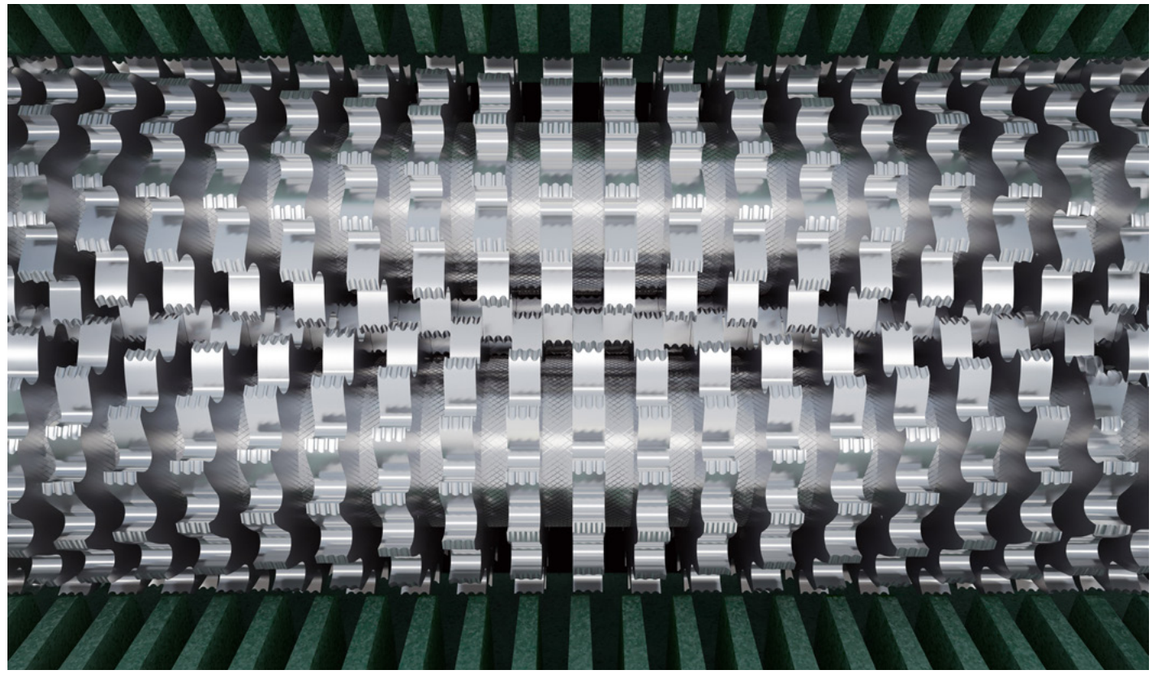
Select a channel or in-line version to suit the installation, with guiderail mounting available for inground applications. The 10K, 30K and 40K Series cover compact through to large sludge processing duties.

KEY FEATURES

- Slow Speed, High Torque Dual Shafted Grinding
- Two Dimensional Wipe Cutting to Prevent Reweaving
- Precision Machined Cutter Stack
- Optimised Cut Control with Tailored Cutter Rotation Speeds
- Compact Design for Confined Installations
- Automated Monitoring and Controls
- Protects Pumps and Downstream Equipment

PRODUCT APPLICATIONS

- Sewage Pumping Stations
- Sludge Processing
- Septage and Grease Receiving Stations
- Headworks Screenings Reduction
- Digestion and Biogas
- Food Waste Management
- Facilities Management



CHOOSING A SERIES

Every grinder in the range uses the same precision machined, slow speed and high torque cutting system, so the choice between series comes down to the duty and the space available rather than the cutting principle itself. Three series cover the full span of wastewater grinding, from compact units serving confined plant rooms through to heavy duty machines built for large sludge processing systems and demanding industrial sites.





SERIES SELECTION GUIDE

Series	Duty	Typical Installations
10K	Compact grinding of sludge and sewage where space is limited	Office buildings, apartment complexes, resorts, retail centres, package treatment plants, resource recovery facilities
30K	Slow speed, high torque reduction of solids that cause sewer blockages	Sewer networks and pumping stations
40K	Wet and dry grinding for large sludge processing and industrial duties	Fish and beef processing, petroleum, pulp and paper mills, chemical plants, recycling plants

Grease Muncher Model 800

The Grease Muncher Model 800 combines a conventional underflow grease arrestor with a biofilter that reduces grease content in the discharge through microbiological activity. The lightweight polyethylene tank installs above or below ground in new and existing developments, and suits sites where concrete arrestors are not practical. Units can be removed and relocated, making them suitable for temporary installations.



MATERIALS OF CONSTRUCTION

Units are manufactured from a combination of polyethylene and thermal plastics for long life and maximum corrosion resistance. The polyethylene tank simplifies cleaning and reduces odour, as fat and grease will not adhere to the surface. Tanks are UV stabilised for outdoor installation.

INSTALLATION

The compact, gas tight design allows the unit to be installed in a store room or plant room, and the UV stabilised tank suits outdoor or roof top installation. Below ground installation requires concrete backfill or a concrete liner. Light and heavy surface concrete cover slabs with gas tight cast iron covers are available.

PRODUCT OPTIONS

The Model 800 can be installed above or below ground to suit the site. Below ground installations can be fitted with a concrete cover slab and a gas tight cast iron cover, available in light and heavy surface ratings. A remote pump out line can be provided for servicing, and a pumping chamber is available where gravity drainage is not possible.

PERFORMANCE AND SIZING

The Model 800 is rated for small food service outlets with a total fixture rating of four plumbing fixture units, such as one kitchen sink and one hand wash basin.

- MAXIMUM DAILY FLOW: 13,259L
- PEAK INFLUENT FLOW RATE: 28L/min
- GREASE AND SUSPENDED SOLIDS REDUCTION: 50%-90%
- BOD REDUCTION: Up to 45%



KEY FEATURES

- Biofilter Reduces Grease Content Through Microbiological Activity
- Filter Screens Solids Down to 2 mm
- Polyethylene and Thermal Plastic Construction
- Lightweight and Compact
- Impact Resistant
- Reduces BOD Loadings
- Easily Removed and Relocated

PRODUCT APPLICATIONS

- Small Food Service Outlets
- New and Existing Developments
- Temporary Installations
- Sites Where Concrete Arrestors Are Not Practical
- Outdoor and Roof Top Installations

INDUSTRIAL WASTE AND OILY WATER TREATMENT

Case Study: Graylands Hospital

Mount Claremont, WA



The Project

Graylands Hospital is Western Australia's largest mental health facility. Its onsite sewer pump station was suffering repeated blockages, with foreign objects lodging in the grinder pumps and breaking pump blades. An engineering firm was engaged to investigate. Allied Pumps was invited to develop a solution that kept costs low and worked within the existing pit.

The Challenge

The facility has approximately 1,053 fixtures across toilets, basins, sinks, urinals, washing machines and showers, with peak flow reaching around 8,890 litres per hour. Syringes, small bottles, clothing and bed sheets were entering the pit and jamming the pumps. A primary screen installed at construction had been removed over safety concerns, leaving the pumps unprotected.

Our Approach

The hydraulic services consultant proposed a macerating system in the existing screening pit, with a bypass line keeping the station operational during maintenance. We investigated in-line and bypass arrangements. The in-line configuration accepts only a limited feed and runs dry, ruling it out. Original macerator and bypass dimensions were too large for the pit, and extending it was too costly.

The Solution

Working with the site contractor, we installed a channel grinder in the existing mechanical screening pit. Guiderails were designed in 316 stainless steel and built in-house to suit the existing concrete structure. A buffer plate on either side of the grinder directs flow into the cutters, and the channel configuration allows overflow without manual intervention. The grinder bolts directly to the concrete wall above the inflow pipe. Lifting points were fitted so servicing crews can retrieve the unit from above ground.

The Outcome

The system has been running for 24 months without incident. Peak flow is no longer affected by blockages. Solids are reduced to a slurry that passes to the sewer, and the pit continues to operate as a wet well. Lifting access removed the need for crews to enter the pit, resolving the safety concerns that had led to the original screen being removed.

Why it mattered?

- ✓ Retrofitting within the existing concrete pit avoided the cost and disruption of extending the structure on a live hospital site.
- ✓ Above ground servicing access removed the confined space risk that had caused the original screen to be taken out.

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