OIL WATER SEPARATOR (OWS)

PRODUCT BULLETIN

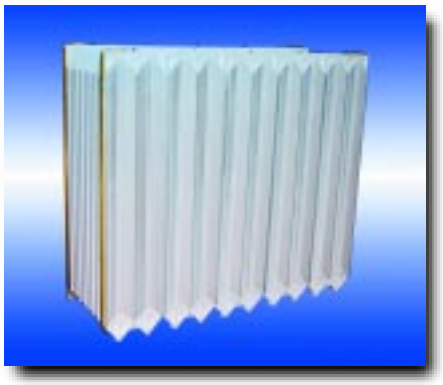
FILTRATION FT 237 WASTE DISPOSAL

TRAMP AND "FREE" OIL SEPARATION FROM AQUEOUS SOLUTIONS USING INCLINE PLATE SEPARATION

In many manufacturing processes, coolants, quenchants and other aqueous solutions become contaminated with tramp, lube and hydraulic oils which detrimentally affects the process. In addition, catch basins, storm sewers and retention ponds are often mixed with motor oil, gasoline and other hydrocarbons which prevent the safe discharge to surface waters.

To effectively remove these contaminants, Filtertech manufactures its Model OWS Oil Water Separator. The Model OWS uses uniquely-designed corrugated plate packs which separates and removes tramp oils and other hydrocarbon contaminants from the aqueous solution. The Model OWS is manufactured in a wide range of sizes to accommodate many applications. In addition, the OWS is available in various materials of construction and optional features.

Model OWS 5-4-2 Oil Water Separator



Polypropylene Coalescing Plate Packs

TYPICAL APPLICATIONS

- **Metal Working Coolants**
- **Process Cooling Water**
- **Catch Basins**
- **Compressor Blowdown**
- **Retention Ponds**
- **Wastewater Treatment**
- **Stormwater Runoff**

EQUIPMENT FEATURES

Standard

- Heavy-duty reinforced hot rolled steel vessel construction.
- Low velocity inlet header to minimize turbulence.
- Solids retention baffle with hot rolled steel construction.
- High-efficiency corrugated polypropylene plate packs with engineered plate spacing and lifting lugs for easy removal and cleaning.
- Sloped bottom reservoir design with drains for solids removal.
- Internal oil baffle in hot rolled steel construction.
- Oil decantation outlets with adjustable weirs.
- Clean outlet with adjustable weir.
- Hinged inspection hatches and full removable covers in hot rolled steel construction.
- Exterior oil drain piping with sch. 40 steel construction.

Optional

- COR-TEN® steel wetted surface construction.
- Stainless steel wetted surface construction.
- Pump away sump with transfer pump.
- Pre-filter chamber with replaceable filter bag elements.
- Corrugated polypropylene plate packs with variable plate spacing.
- Model DTOS Dual Tube Oil Skimmer (see Product Bulletin FT235).

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MODE OF OPERATION

The contaminated aqueous solution would drain by gravity or be pumped to the Model OWS Oil Water Separator. The aqueous solution enters the OWS through an inlet header which evenly distributes the solution along the total width of the separator while at the same time slowing down the solution velocity. This allows the heavier solids to fall to the bottom of the separator while the larger oil droplets rise to the liquid surface.

The aqueous solution then passes over the solids dam and flows through the coalescing plate packs which consist of a series of corrugated polypropylene plates which are closely spaced. As the solution travels the tortuous path through the plate packs, the oil droplets only need to rise a short distance to come into contact with the plate above. Since the polypropylene plates are oleophilic (oil attracting), the oil droplets readily adhere to the plate surface.

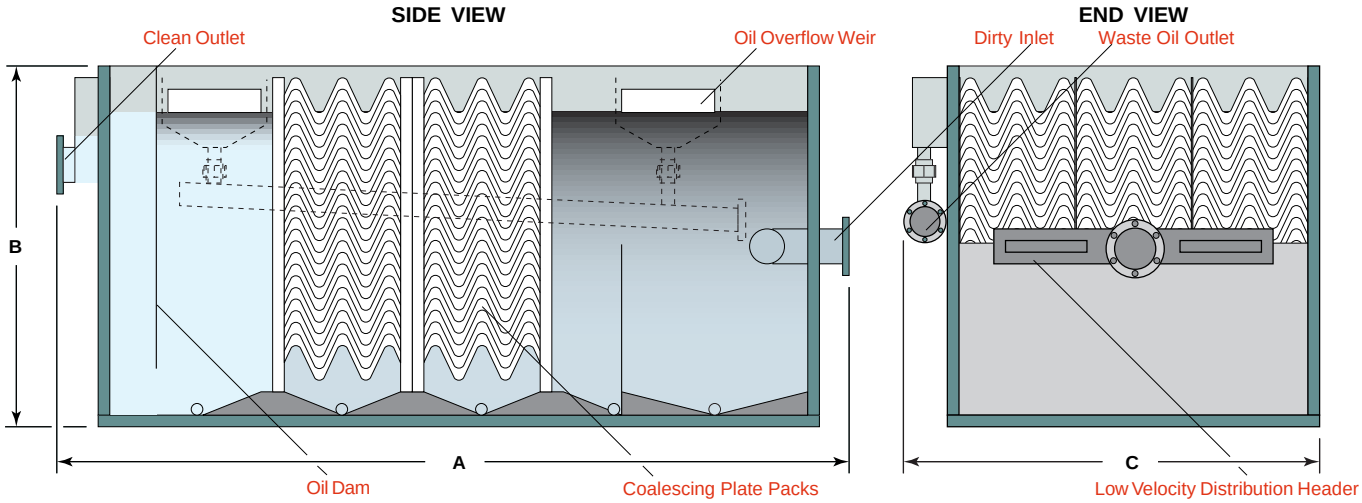
Over time the oil droplets which collect on the undersides of the plates will coalesce together to form larger droplets which make their way to weep holes in the plate. The large oil droplets are then released from the plates and float to the surface of the liquid. The accumulated oil layer on the surface of the liquid is then decanted through adjustable overflow weirs and directed to a waste oil tank for disposal.

Similar to the oil droplets, the smaller solids in solution will settle on top of the plates and eventually fall through weep holes to the bottom of the tank which is pyramid shaped to collect the solids. Discharge drains are located along the bottom of the tank for quick removal of the solids.

Installed Coalescing Plate Packs

The clean oil and dirt-free water exits the opposite end of the plate pack and passes under an oil dam and is then discharged through a final adjustable overflow weir and drains away from the separator by gravity.

An optional transfer sump compartment is also available if elevation does not permit a gravity drain.



SPECIFICATIONS

Model†	Dimensions ft-in (cm)					Est. Weight lbs. (kg)	
	A (X=1)	A (X=2)	A (X=3)	B	C	Dry	Wet
OWS 2-2-X	9'-0" (274)	11'-0" (335)	13'-0" (396)	4'-2" (127)	3'-8" (112)	2,000 (910)	4,400 (2,000)
OWS 3-2-X	9'-0" (274)	11'-0" (335)	13'-0" (396)	4'-2" (127)	4'-8" (142)	2,200 (1,000)	4,900 (2,230)
OWS 3-3-X	9'-0" (274)	11'-0" (335)	13'-0" (396)	5'-2" (157)	4'-8" (142)	2,400 (1,090)	5,400 (2,450)
OWS 4-3-X	9'-0" (274)	11'-0" (335)	13'-0" (396)	5'-2" (157)	5'-8" (173)	2,600 (1,180)	5,900 (2,680)
OWS 4-4-X	9'-0" (274)	11'-0" (335)	13'-0" (396)	6'-2" (188)	5'-8" (173)	2,800 (1,270)	6,400 (2,910)
OWS 5-4-X	9'-0" (274)	11'-0" (335)	13'-0" (396)	6'-2" (188)	6'-8" (203)	3,000 (1,360)	6,900 (3,140)
OWS 5-5-X	9'-0" (274)	11'-0" (335)	13'-0" (396)	7'-2" (218)	6'-8" (203)	3,200 (1,450)	7,400 (3,360)
OWS 6-5-X	9'-0" (274)	11'-0" (335)	13'-0" (396)	7'-2" (218)	7'-8" (234)	3,400 (1,550)	7,900 (3,590)
OWS 6-6-X	9'-0" (274)	11'-0" (335)	13'-0" (396)	8'-2" (249)	7'-8" (234)	3,600 (1,640)	8,400 (3,820)

† Other systems are available on a custom basis.
X Represents the rows of plate packs.

Specifications subject to change without notice.

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