

Oil / Water Separators and Interceptors



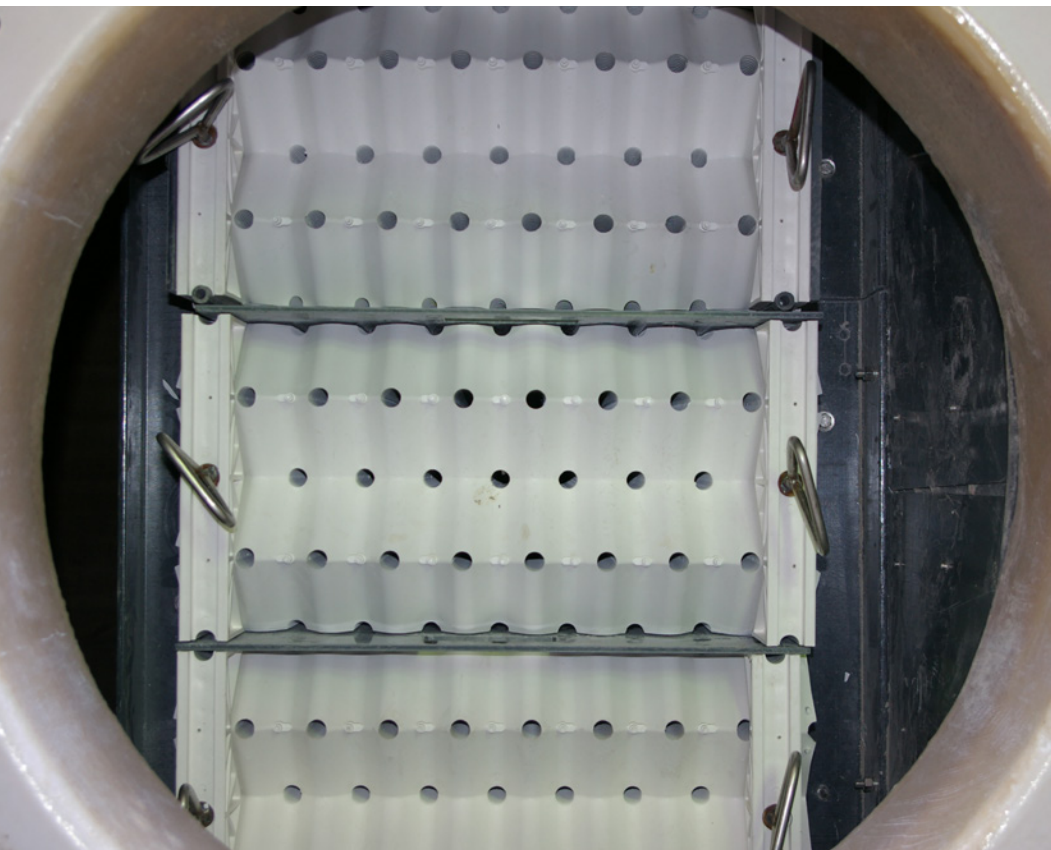
Fiber Glass Systems | **NOV**

Containment Solutions™ Underground Fiberglass Oil/Water Separators

Oil drippings and spills from parking lots, driveways, oil terminals and other vehicular traffic surfaces are being washed into our water supplies by rainwater, creating serious environmental concerns. Fiber Glass Systems LP (FGS) provides a full range of dependable products for the oil/water separator industry.

FGS separators are constructed to remove hydrocarbons with a specific gravity up to 0.95 through the use of an enhanced oleophilic coalescer pack system. Oil/water separator designs vary based on required effluent quality and flow rates. An effluent quality of 10 parts per million (10ppm) is typical but the difference between continuous flow and intermittent flow will drastically alter the coalescer pack sequence. Additionally, the concentrations and types of contaminants determines the allowable flow rate through the system. Since these detergents may adversely affect the performance of oil/water separators, quick break detergents must be used if applicable. For more information on various flow applications and applicable products, please contact your sales representative.

Our underground separators utilize the same fiberglass manufacturing technology the petroleum industry relies on for environmental protection. The inherently non-corrosive properties of fiberglass provide the most compatible option for your separator application, built by one of the most trusted brands in the world. Our fiberglass separators are buried and filled with water. Each separator includes a combination of baffles and coalescer packs, based on effluent requirements, to accelerate separation. Waste water enters through the inlet and gravity naturally settles heavier solids to the bottom of the tank as the oil floats to the top of the water level. The oily water then passes through the coalescing plates in a straight flow or cross flow direction depending on the tank model. The configuration of the packs efficiently coalesces or joins oil droplets together forming larger masses of oil that rise to the surface where it accumulates and can be removed. Gravity displacement discharges the effluent through the outlet at a lower point in the tank chamber. Separator systems can also be equipped with drop boxes, electronic monitoring with high oil level alarms and control panels, and oil stop valves.



Performance claims

- Fiberglass construction provides corrosion resistance without coatings or protection systems.
- Enhanced coalescer system is comprised of oleophilic plates to maximize separation and minimize maintenance.
- Removable plates simplifies routine cleaning.
- All tanks are built to the stringent performance requirements of UL 1316.
- Removes free floating oils and settleable solids for oil/water mixtures to achieve 10ppm effluent quality (or 15 ppm if specified).

Design and Sizing

Since each site is unique, the most effective approach is to analyze each situation and design the system accordingly. Our engineering staff can help determine the best fit for your technical considerations and site specific needs.

The major design parameters include:

- Inlet flow rates
- Inlet/outlet concentration
- Effluent quality
- Specific gravity of contaminants
- Oil spill capacity
- Oil storage capacity
- Temperature

Our UL 2215 separators are sized primarily on flow rates. A complete list of flow rate plate pack options are available, contact your sales representative for more information.

Performance	Models			
	UL 2215	CSI-10	CSI-15	Interceptor
Stokes' Law	●	●	●	●
UL 1316	●	●	●	●
API 1630	●	●	●	
API 421	●	●	●	
USCG 46CFR 162.050	●	●	●	
15ppm	●	●	●	
10ppm	●	●		
UL 2215	●			
Continuous Flow	●			

Interceptors

In addition to separators, interceptors are available in single, double, and triple compartment designs. Interceptors reduce sand, settleable materials, and oil or grease prior to sewer discharge. Our interceptors can be used as stand alone units or as the initial stage of a more efficient treatment system utilizing our oil/water separators.

Electronics / Accessories

Oil/Water Separator monitoring and control systems can be configured to satisfy a wide range of customer requirements. Control panels, sensors, probes and gauges are available for double-wall and single-wall oil/water separator systems as well as for single-tank or multiple-tank installations. We carry a full line of pump controls, inlet and outlet pumps, and waste oil pumps. Let us package the right model with the proper electronics so when the tank arrives the only thing left to do is connect the piping.



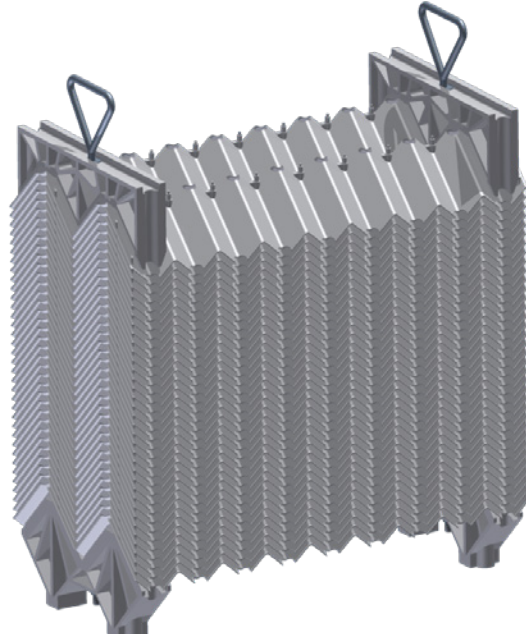
Application: Rainwater Runoff

Oil drippings and spills from parking lots, driveways, oil terminals and other vehicular traffic surfaces are being washed into our water supplies by rainwater, creating serious environmental concerns.

Our Oil/Water Separators are designed to meet EPA guidelines for rainwater runoff control.

Underground OWS Features

- A. Double-Wall Separator
- B. FRP Manway Extension
- C. Oil Draw Pipe
- D. Hydrostatic Reservoir
- E. Tank Sump
- F. Cross flow Baffle
- G. Coalescer Plate Packs
- H. Oil Stop Valve
- I. Anchor Straps
- J. Deadman Anchor System

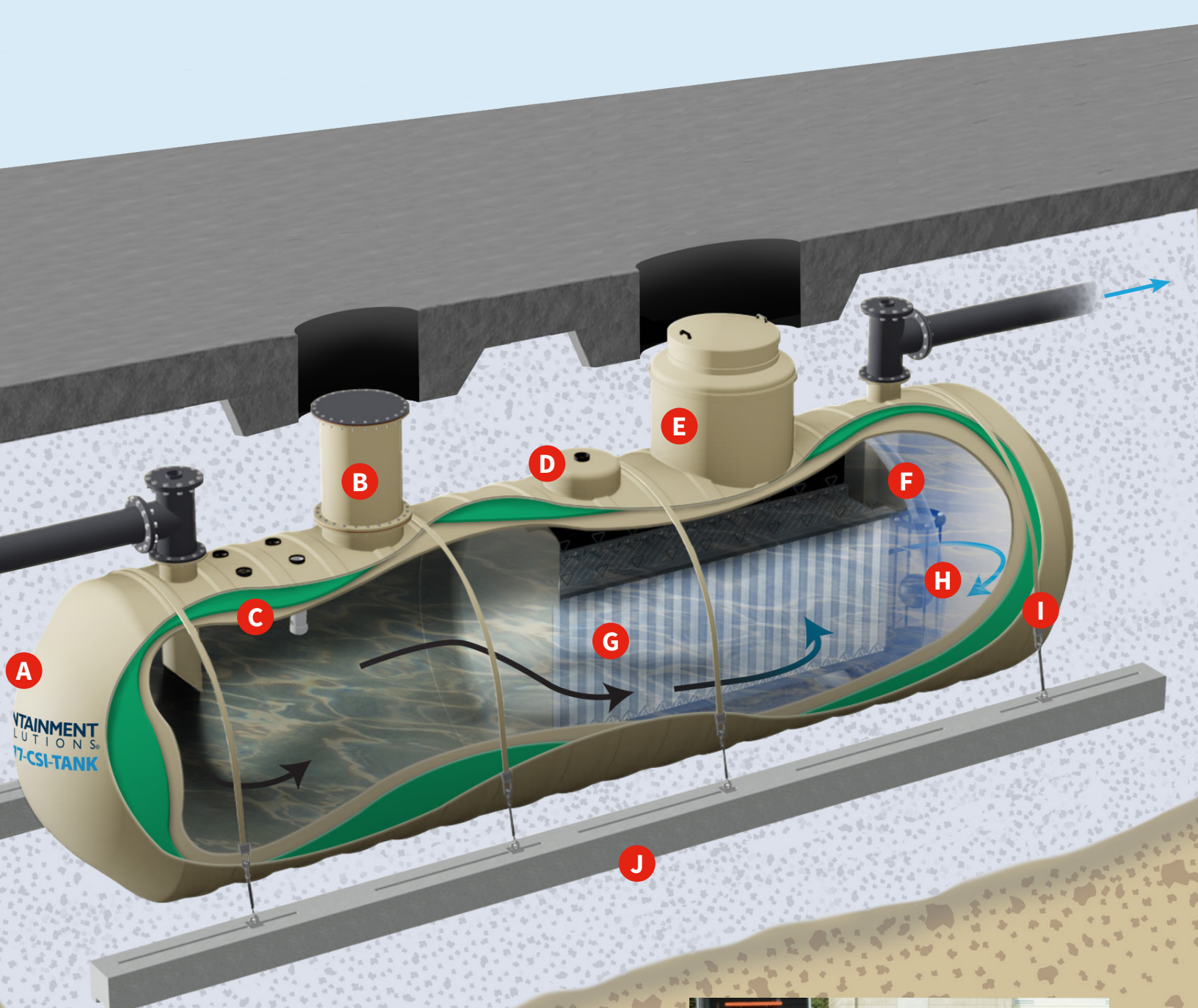


Corrugated plate packs coalesce, or join, oil droplets together forming larger masses of oil which rise to the surface.



Underground Standard Tank (CSI-10 & CSI-15 models)

	Nominal capacity (gallons)	Flow rate (gpm)	Oil storage capacity (gallons)	Oil spill capacity (gallons)	Inlet / outlet (sizes)	Nominal length		Nominal weight (lbs)	
						Single-Wall	Double-Wall	Single-Wall	Double-Wall
4 ft. Dia.	550	55	110	440	4 in.	9 ft. 8 in.	9 ft. 9 in.	425	900
	1,000	100	200	800	4 in.	11 ft.	11 ft. 1 in.	500	1,050
	1,500	150	300	1,200	4 in.	16 ft. 10 in.	16 ft. 11 in.	750	1,275
	2,000	200	400	1,600	6 in.	13 ft. 10 in.	13 ft. 8 in.	1,000	2,275
6 ft. Dia.	3,000	300	600	2,400	6 in.	16 ft.	16 ft. 9 in.	1,075	2,750
	4,000	400	800	3,200	6 in.	19 ft. 8 in.	19 ft. 9 in.	1,475	2,975
	5,000	500	1,000	4,000	8 in.	24 ft. 8 in.	25 ft.	1,800	3,475
	6,000	600	1,200	4,800	8 in.	29 ft. 6 in.	30 ft. 3 in.	2,100	3,900
8 ft. Dia.	6,000	600	1,200	4,800	8 in.	19 ft. 5 in.	19 ft. 6 in.	2,300	4,200
	7,000	700	1,400	5,600	8 in.	22 ft. 2 in.	23 ft. 7 in.	2,650	4,675
	8,000	800	1,600	6,400	10 in.	24 ft. 11 in.	26 ft. 4 in.	2,950	5,075
	9,000	900	1,800	7,200	10 in.	27 ft. 8 in.	27 ft. 9 in.	3,300	5,450
	10,000	1,000	2,000	8,000	10 in.	30 ft. 5 in.	30 ft. 6 in.	3,550	5,950
	12,000	1,200	2,400	9,600	10 in.	35 ft. 11 in.	36 ft.	4,375	7,000
10 ft. Dia.	15,000	1,500	3,000	12,000	12 in.	44 ft. 5 in.	44 ft. 6 in.	5,350	8,650
	20,000	2,000	4,000	16,000	14 in.	37 ft. 8 in.	37 ft. 9 in.	6,950	11,900
	25,000	2,500	5,000	20,000	16 in.	45 ft. 11 in.	46 ft.	8,300	13,900
	30,000	3,000	6,000	24,000	16 in.	54 ft. 2 in.	54 ft. 3 in.	9,600	16,300
	40,000	4,000	8,000	32,000	20 in.	71 ft. 3 in.	71 ft. 4 in.	12,650	20,975



Oleophilic coalescer plate packs are intended to be removed for cleaning. The number of plate packs will vary based on tank size and required effluent quality.

Aboveground Steel Separators

Our aboveground Oil/Water Separators combine a unique rectangular steel tank design with state-of-the-art coalescer technology to provide flow rates comparable to larger units. These systems are designed to separate free oils and settleable solids from rainwater runoff and washdown applications via gravity or pumped flow for intermittent, variable, or first flush flows of oil, water, or a combination of non-emulsified oil/water. Systems are installed either at grade or below grade (within a vault) and feature 10ppm effluent discharge, low maintenance and the superior quality you expect from a Fiber Glass System product.

Our separators consist of three processing chambers:

1) Primary “Oil and Sediment” Separation Chamber; 2) Secondary “Enhanced Coalescer” Separation Chamber, and 3) Effluent Discharge Chamber. These chambers allow maximum sediment and oil separation, increase retention time and increase surface area for oil separation. Additional features include a unique inlet/outlet design that minimizes external piping, support feet for convenient off-loading, and a removable top making coalescer units and debris plates accessible. The removable coalescer units are constructed of non-metallic oleophilic materials for enhanced performance.



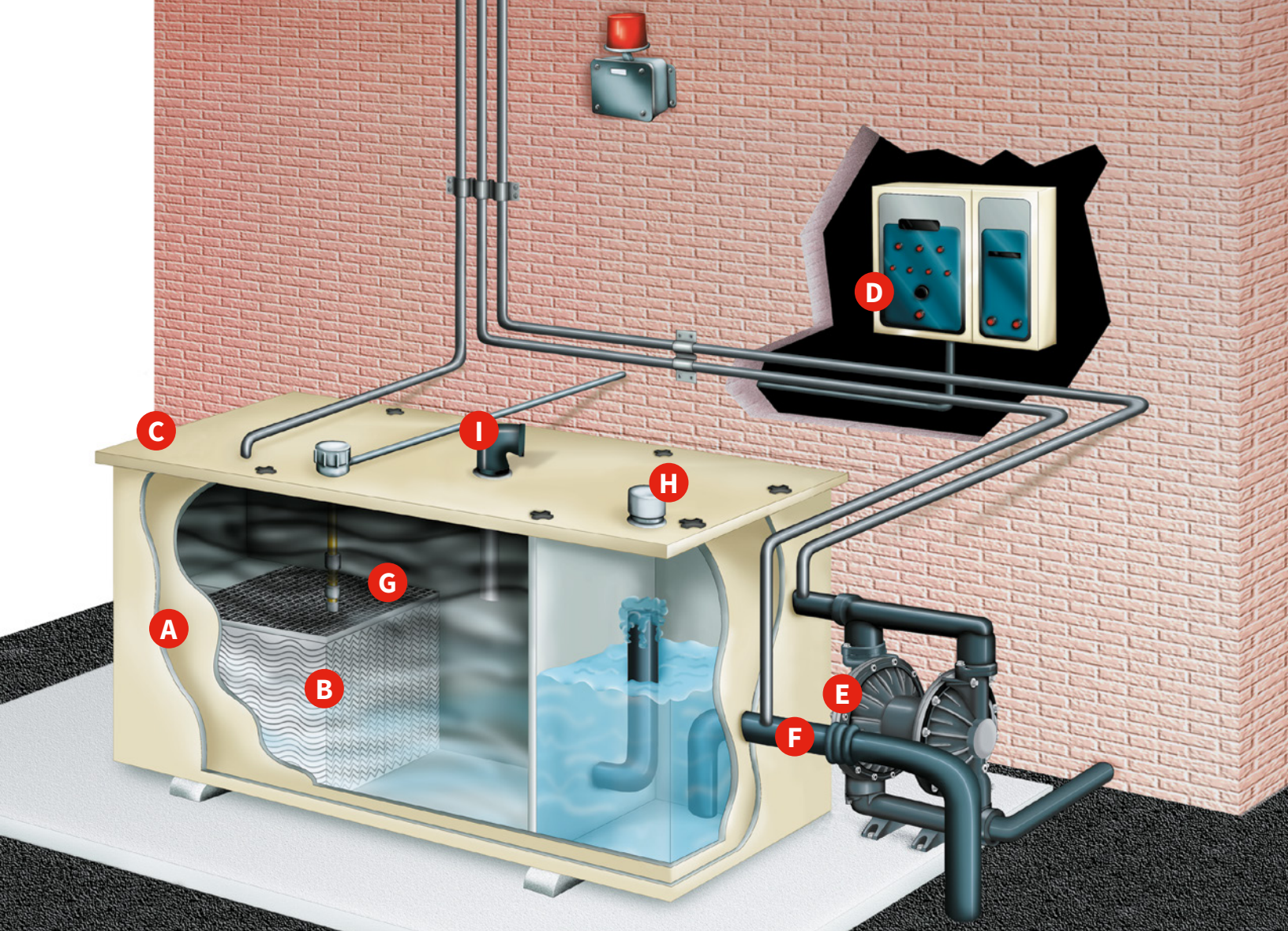
All Fiber Glass Systems LP aboveground Oil/Water Separators are designed and tested in accordance with the following criteria:

- U.S. Coast Guard Test Method 46 CFR 162.050
- Stokes’ Law
- API Bulletins No. 421 & 1630 (first edition)
- The API Manual on Disposal of Refinery Wastes
- EPA Test Method 413.1 & 413.2
- UL 142

<p>Standard Tank Features</p> <ul style="list-style-type: none"> • Superior quality and workmanship • Rugged steel construction • Interior epoxy coating • Exterior epoxy coating • Removable top and maintenance friendly design • Removable non-metallic coalescer(s) and debris plates • Bottom support feet • Oil pump-out pipe • Fittings for vent, oil sensor, oil removal, inlet, outlet 	<p>Options</p> <ul style="list-style-type: none"> • Pump platform • Air-operated inlet pumps • Automatic oil pump-out systems • Level sensing systems • Exterior protective Elastomeric Polyurethane coatings (EMPT) • Double-wall units • Scavenger tanks • Effluent pump-out systems
---	---

Aboveground Standard Tanks								
Model	Flow rate (gpm)	Nominal capacity (gallons)	Oil capacity (gallons)	Emergency oil capacity* (gallons)	Inlet / outlet (sizes)	O.D. Single-Wall dimension (LxWxH)	Single-Wall Approx weight (lbs.)	Double-Wall approx. weight (lbs.)
AOWS-10	10	100	40	90	1 in. / 2 in.	4 ft. 1 in. x 2 ft. 1 in. x 3 ft. 4 in.	625	1,100
AOWS-25	25	250	90	245	2 in. / 3 in.	6 ft. 1 in. x 2 ft. 1 in. x 3 ft. 5 in.	775	1,400
AOWS-50	50	500	120	450	4 in. / 4 in.	7 ft. 7 in. x 3 ft. 1 in. x 3 ft. 4 in.	1,225	2,125
AOWS-75	75	750	170	705	4 in. / 4 in.	10 ft. 1 in. x 3 ft. 7 in. x 3 ft. 4 in.	2,100	3,350
AOWS-100	100	1,000	240	1,035	6 in. / 6 in.	11 ft. 1 in. x 3 ft. 7 in. x 4 ft. 4 in.	2,675	4,475
AOWS-200	200	2,000	360	1,800	8 in. / 8 in.	16 ft. 9 in. x 4 ft. 1 in. x 4 ft. 4 in.	4,200	7,025
AOWS-250	250	2,500	500	2,250	8 in. / 8 in.	17 ft. 1 in. x 5 ft. 1 in. x 4 ft. 4 in.	4,475	8,025
MOP-10	10	100	40	90	1 in. / 1 in.	5 ft. 4 in. x 1 ft. 5 in. x 2 ft. 4 in.	590	925

*Emergency oil spill capacity is 90% of tank volume based on no accumulated oil in vessel at time of spill

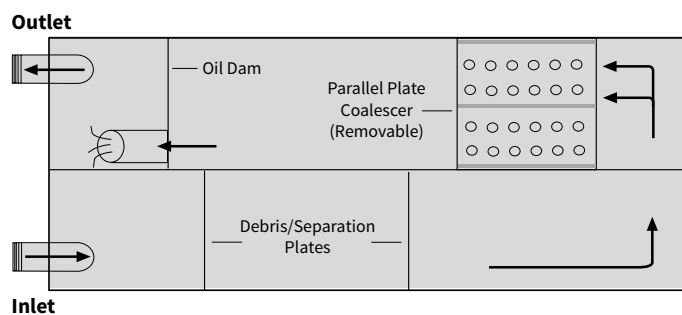


Aboveground OWS Features

- A.** Double-Wall Steel Tank
- B.** Enhanced Coalescer Filtering System
- C.** Removable Cover w/Fittings
- D.** Optional Electronic Monitoring System
- E.** Optional Inlet/Outlet Pumps
- F.** Effluent Outlet
- G.** Waste Oil Level Sensor
- H.** Vent
- I.** Oil Removal Fitting

Rectangular Design, by Design

Space-saving design and ease of installation, for an economical solution to above ground storage and treatment. Separators come in single-wall and double-wall tank designs. The all steel construction includes a special interior lining for an extended life and an exterior epoxy coating. An optional elastomeric polyurethane (EMPT) exterior coating is also available.



NOV Inc. has produced this brochure for general information only, and it is not intended for design purposes. Although every effort has been made to maintain the accuracy and reliability of its contents, NOV Inc. in no way assumes responsibility for liability for any loss, damage or injury resulting from the use of information and data herein. All applications for the material described are at the user's risk and are the user's responsibility.

© 2022 NOV Inc. All rights reserved.
JIRA 16613

Fiber Glass Systems

17115 San Pedro Ave., Suite 200
San Antonio, Texas 78232
USA

Conroe Office

500 Conroe Park West Drive
Conroe, Texas 77303
USA