Pan America Environmental, Inc.

262.716.0105 · www.panamenv.com
technical@panamenv.com

ENGINEERING SPECIFICATION

OSe Series Steel Oil/Water Separator

Engineering Specification

MODEL RANGE	GET A QUOTE	SPEAK TO AN ENGINEER
OSe-2 through OSe-80	technical@panamenv.com	262.716.0105

PRODUCT PAGE

https://www.panamenv.com/oil-water-separators/stainless-steel-oil-water-separator-ose/

SECTION 1.0 OIL/WATER SEPARATOR

Performance

The Pan America Environmental OSe Series Oil/Water Separators are designed to produce an effluent concentration of 10 mg/l or less of oil droplets 30 micron and larger of non-emulsified, free and dispersed oils. By virtue of our Flopak coalescing media and tank design, readily settleable solids are also removed. As oil water separators are primarily designed for oil separation solids removal performance is not predetermined and unpredictable unless designed specifically for your solids.

1.01 Design

The oil/water separator will be designed and fabricated per the following specifications. Rectangular tankage with features as described designed per API #421 Design & Operation of Oil/Water Separators Manual and stokes law. The design will incorporate flexible flow rating capability based on application parameters.

1.02 Influent Chamber

Influent flow enters the clog proof influent diffuser and is immediately spread out across the depth and width of the chamber. Any readily settleable solids drop to the bottom of the V-shaped solids accumulation chamber located directly under the Flopak coalescing media pack.

1.03 Oil/Water Separation Chamber

The separation chamber is to be packed with Flopak cross-corrugated coalescing media. The media pack will be designed to create a quiescent zone, a laminar flow pattern to facilitate the impingement of oil on the media, and will provide numerous impact sites and changes of flow direction.

1.04 Flopak Coalescing Media Pack

The OSe tank is provided with Flopak coalescing media, which has the following features:

- ½” or ¾” plate spacing
- PVC construction, 10 mil plate thickness
- Cross-corrugated design with plates attached to each other
- Corrugation angle to be 60°

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- 304 SS media frame with lifting lugs and removable cover (OSe24 and larger)

1.05 Oil Skimmer

An adjustable oil skimmer is provided for removing separated/floating oils from the separation chamber and provides the following features:

- Slotted rotary pipe design
- Adjustment collar for readjusting the skimmer by hand rotation
- Construction: ASTM D1785-12 NSF-PW, schedule 40 PVC
- External discharge fitting in tank wall with skimmer attachment to this fitting on inside of tank

1.06 Tank Vent

To vent the tank use the oil outlet. It is recommended to install a tee on the oil outlet with one leg of the tee vertically oriented to project venting above the tank.

Applications

- industrial oily wastewater treatment
- stormwater oil water separator
- vehicle wash oil water separator
- industrial wastewater oil separator
- refinery oil water separator
- marine oily water separator
- fuel station oil separator
- manufacturing oily water treatment
- spill response oil water separator
- environmental compliance oil separator

OWS Type

- parallel plate oil water separator
- corrugated plate interceptor (CPI)
- tilted plate interceptor (TPI)
- slant rib coalescing separator
- MPak coalescing plate
- Flopak coalescing media
- HDQPak coalescing media
- Retpak coalescing media
- enhanced coalescing oil water separator
- gravity coalescing separator
- API coalescing separator
- above ground oil water separator coalescing
- below ground coalescing separator

1.07 Sludge Hopper

The separator shall have a V-shaped solids accumulation chamber located under the coalescing media. This chamber will provide temporary solids storage. The chamber walls are to be pitched at 45° to assure simple and thorough solids removal. Dual outlet ports will be provided for sludge removal.

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1.08 Clean Water Effluent Weir

The cleansed water will flow under the oil retention baffle, over the water weir and out of the tank. This chamber is to have the capability to be expanded at the factory by expanding the standard integral chamber so a greater volume of water is available for pump suction directly from the OSe tank.

1.09 Separator Cover

The separator is to have a single or multi-sectioned cover that provides complete closure of the tank. The separator cover will be mounted to the tank via zinc plate hardware and vapor sealed with an industrial grade closed cell, compressible polyethylene gasket.

1.10 Legs

The OSe tank shall be provided with integral legs with anchor bolt holes (hardware by others).

1.11 Fittings

All fittings are to be FNPT coupling up to 3". Fittings larger to be 150# FF ANSI B16.5 flange.

1.12 Field Technician

A Field Technician can be provided ask for a quote, per Diem is $1150.00 + expenses.

SECTION 2.0 MATERIALS OF CONSTRUCTION

2.01 Steel Construction

Tank shell, baffles, cover and external structural members shall be constructed of ASTM 240, 304 stainless steel. Welded joints are continuous double welded and dye penetrant tested. Welding follows AWS 1.6 guidelines.

2.02 Surface Preparation

Interior surfaces: None. Exterior surfaces: Passivation.

2.03 Coatings

None

2.04 Piping

Internal piping shall be ASTM A312, 304 stainless steel.

2.05 Fasteners

All wetted fasteners to be ANSI, 300 series stainless steel. All non-wetted fasteners to be zinc plated.

2.06 Coalescing Media

Flopak, cross-corrugated, oleophilic, ½” or ¾” plate spaced, PVC coalescing media shall be provided as manufactured by Pan America Environmental. The media shall be packed in stainless steel frame(s) with lifting lugs (media frame provided with OSe24 & larger).

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2.07 Cover Gasketing

Closed cell, industrial grade polyethylene constructed vapor sealed cover gasketing shall be provided. No neoprene shall be permitted.

2.08 Manufacturer

The manufacturer of preference shall be Pan America Environmental, Inc.

2.09 Warranty

Pan America Environmental warrants its products to be free of defect in materials and workmanship for a period of one year from the date of shipment.

SECTION 3.0 FREIGHT AND SHIPPING PREPARATION

3.01 Freight Cost

The quoted freight cost is an actual or estimated cost. This cost is subject to change throughout the life of the quote and any resultant order.

3.02 Palletizing (DOMESTIC ORDER)

All equipment prices included palletization except where large tank or skidded systems are shipped via flat bed.

3.03 Crating

Any crating cost included or itemized includes an export slat crate design. Other crate styles can be provided on request and may incur additional cost.

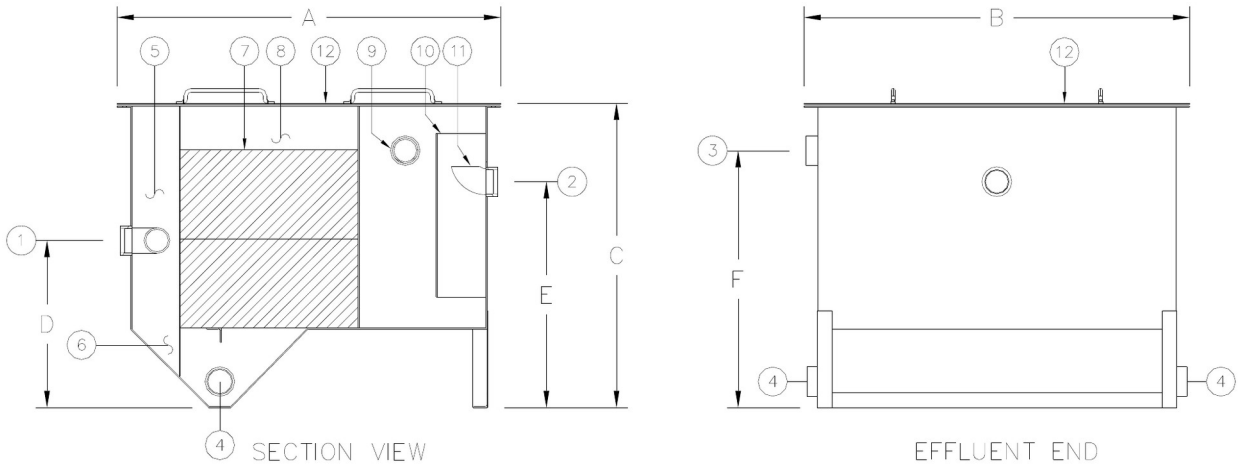
SECTION 4.0 PAN AMERICA ENVIRONMENTAL STANDARDS

4.01 Pan America uses elements of the following standards in its design and fabrication processes.

AWS D1.1/1.1M	**API**	**API-650**	**API-421**
ANSI	**IEC**	**AWS D1.6**	**UL**
UL-508	**UL-845**	**SSPC**	**ASME**
CSA	**CE**	**NEMA**	**NFPA79**
NEC			

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OSe Series Steel Separator Tank Drawing



Model	Length	Width	Height	Inlet	Outlet	Oil Outlet	Inlet Size	Outlet Size	Sludge Outlet Size	Oil Outlet Size	Empty Weight	Operat. Weight Lbs.	Flow Rate GPM (Max.)
	A	B	C	D	E	F							
OSe-2	51”	16”	31”	16.5”	20”	22.5”	2”	2”	2”	2”	170	380	5
OSe-4	51”	28”	31”	16.5”	20”	22.5”	2”	2”	2”	2”	251	668	10
OSe-8	52”	28”	43”	22”	30”	34”	2”	2”	2”	2”	349	1395	25
OSe-12	52”	40”	43”	22”	30”	34”	3”	3”	3”	3”	585	2100	36
OSe-16	52”	52”	43”	22”	30”	34”	3”	3”	3”	3”	980	3065	50
OSe-24	82”	40”	53”	41”	37”	37”	4”	4”	3”	3”	1150	4100	72
OSe-36	82”	40”	65”	53”	43”	49”	4”	4”	3”	3”	1320	5200	100
OSe-48	82”	52”	65”	53”	43”	49”	6”	6”	3”	3”	1660	6500	133
OSe-64	82"	52"	77"	65"	55"	61"	6"	6"	3"	3"	1980	7800	180
OSe-80	82"	64"	77"	65"	55"	61"	6"	6"	3"	3"	2150	10900	240

Item	Qty	Description	Item	Qty	Description
1	1	Inlet	7	1	Flopak media
2	1	Outlet	8	1	Media chamber
3	1	Oil Outlet	9	1	Oil skimmer
4	2	Sludge outlet	10	1	Oil baffle
5	1	Inlet	11	1	Outlet weir
6	1	Sludge hop	12	1	Cover

Specifying an OSe Series Steel Oil/Water Separator for your project?

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