PAN AMERICA ENVIRONMENTAL, INC.



MP Series

Coalescing Media Pack Systems

Flow rates 5 through 250,000 GPM

The MP Series coalescing media systems featuring Flopak media provide high performance oils and fuels separation in a compact, high surface area design.

Our Flopak coalescing media is designed to remove non-emulsified, free & dispersed oils and fuels from water.

Flopak is a standard feature of our high performance oil water separators and are also offered for replacement or retrofitting of existing tanks to improve performance and increase flow rates.

Removal efficiencies have been as low as <1 mg/L and as low as non-detect.

Typical, regular performance is in the 3-10 mg/L 20 or 30 micron droplet range depending on wastestream characteristics.

Pan America Environmental can provide review of your existing tank to replace existing media or engineer the fitting of Flopak into a tank for the first time via modifications to optimize tank design for the best oil separation environment.

Retpak Media

Our Retpak secondary coalescing media can be provided to high-density surface area in a small cubic area to add to your existing media or in conjunction with Flopak to increase small droplet capture.

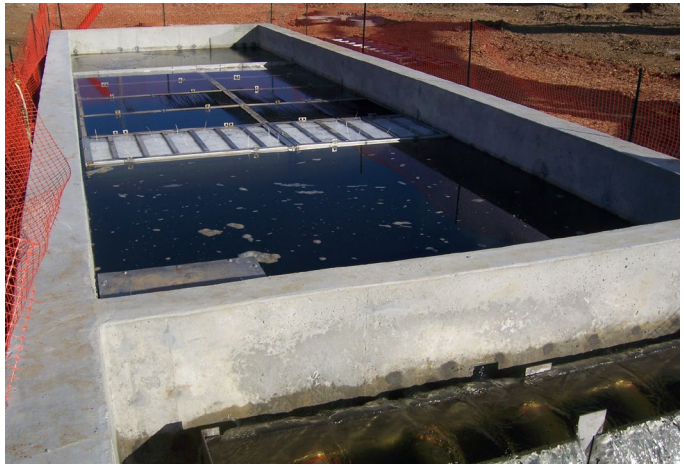
Features Include:

- Cross-corrugated surface design
- High surface area per Ft3
- Long lasting PVC construction
- Solids settling/clearing design
- Numerous droplet impact sites
- Numerous changes of flow direction
- Space efficient design
- 60° corrugation angle

Options:

- Stainless steel (304/316) media frame sets
- HPVC/polypropylene/stainless media construction
- Retpak secondary coalescing media
- Oil skimmer
- Weirplate or weirbox
- Oil reservoir
- Oil pumpout
- Alarms





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Media Pack Design

Your packs may be customized differently than these examples.

The MP Media Pack systems are provided as a customizable design to fit cast in place designs and precast concrete vaults manufactured by a variety of local and/or national precast houses. To properly quote a system we will need flow rate, oil specific gravity or you can provide a vault system drawing that you need to match and we can design to the specification. We can provide designs for any concrete ows systems from 5 GPM to 250,000 GPM.

Pack Quantity: Media packs can be provided as singular or as multiples to fit through hatches or to make handling easier. Each pack is provided with a lifting lug for moving the pack.

Sludge Riser: Media packs can be designed to provide media to the tank bottom, pack suspended above tank bottom or a pack riser with sludge baffle can be provided to allow space under the pack for sludge accumulation.

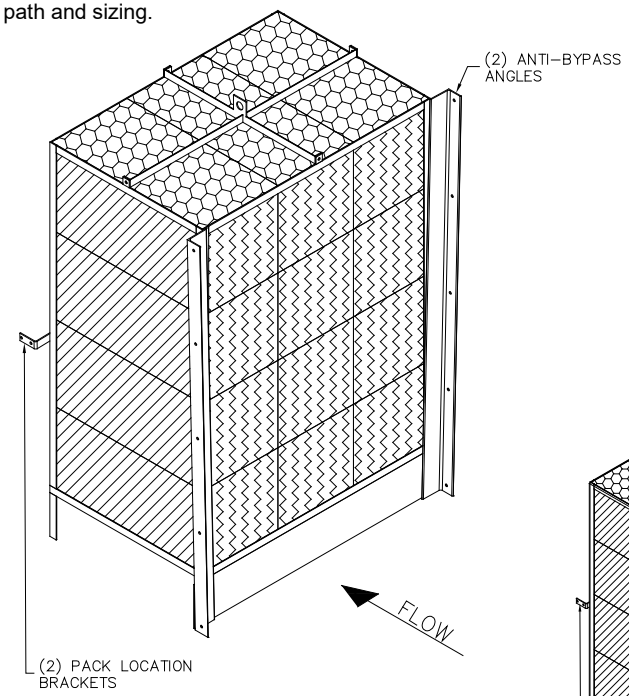
Media Types: Flopak media is available in a variety of choices. We can provide 1/2", 3/4", 1.2" plate spacing. Materials of construction can be polypropylene, PVC, HPVC, Glass Coupled polypropylene, 304 & 316 SS. The choice is based on application requirements.

The standard Flopak media most often used is 3/4" PVC, which fits most applications. Contact one of our design engineers to determine what is best for your project.

Pack Frame: The Media Pack frames are constructed of 304 SS. 316 SS or other materials can be provided such as polypropylene, polyethylene or other plastics and metals.

Anti-Bypass: Wall mounted angle baffles are provided to stop bypass from going around the media pack sides. These baffles and packs can be designed to allow for wall draft.

Flow Rate: We can design for use in cast in place or precast systems from 5 to 250,000 GPM. We can review your design and provide input as to proper design, flow path and sizing.

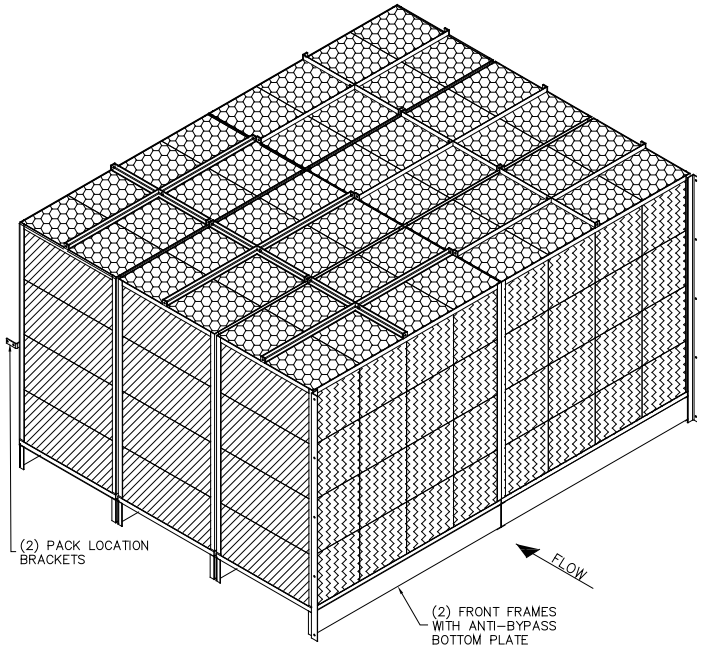


Oil Types: MP packs can be provided for a very wide variety of oils and fuels. From common fuels like gasoline, diesel and JP to LNAPL/DNAPL, HFO, bunkers to refined/crude oils, distillates and vegetable oils.

Retrofit: The MP system can be provided to retrofit existing concrete tanks to convert them to our high-performance oil water-separator design. We offer direct replacement of Facet media within Old Castle vaults including 577-CPS, 660-CPS, 612-1-CPS, 612-2-CPS, 816-2-CPS, 816-3-CPS.

Options: Pan America can provide many options to complete the system. The following are a few:

- Oil skimmer: slotted pipe, drum, belt & other types
- Alarm packages: oil, water, sludge
- Effluent weirbox
- Influent diffuser
- Effluent, influent, oil pump systems
- Effluent filter systems
- Pre & post treatment technologies for a variety of water contaminant removal solutions.



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Precast Concrete OWS

For the precast house that manufactures predesigned concrete separators we can provide an engineered media pack solution for all of their ows sizes.

Typical performance standards for most precast ows:

Oil specific gravity:	0.88	SG
Operating temp.:	50°	F
Inlet oil loading:	100	mg/L
Mean oil drop size:	130	micron
Design droplet size:	60	micron
Discharge oil concentration:	10	mg/L

Pan America can meet these criteria or its standard criteria of 10 mg/L 30 micron oil droplet. The size of the oil droplet will change the sizing of the system and amount of media required. Contact one of our design sales engineers to discuss performance and your specification.

Solids Removal

Most precast designs generally do not take into account solids removal or handling to any great extent, which may be alright if the application is void of any substantial amount of solids. In many applications grit removal is required but not much removal beyond that. As most precast designs are for stormwater treatment the passage of fines and/or colloidal solids is usually acceptable.

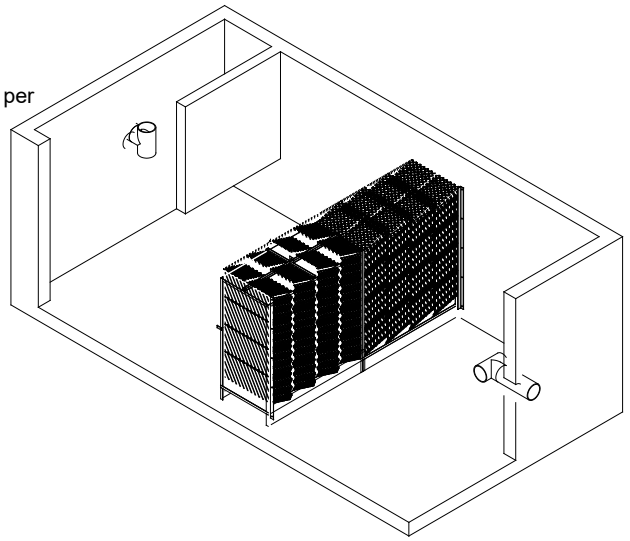
If you have concerns over solids or need to design around solids removal we can discuss and review your application to provide a design to meet your specification.

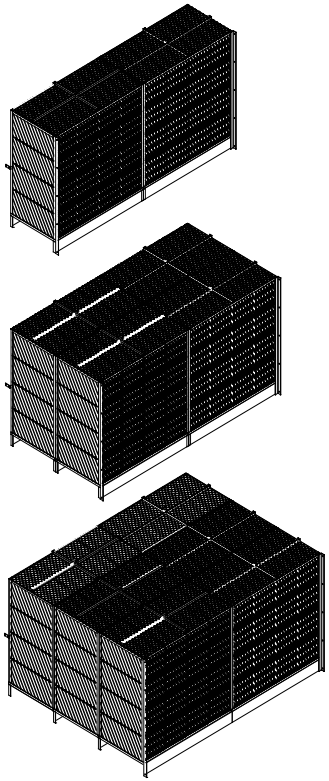
Popular Sizes

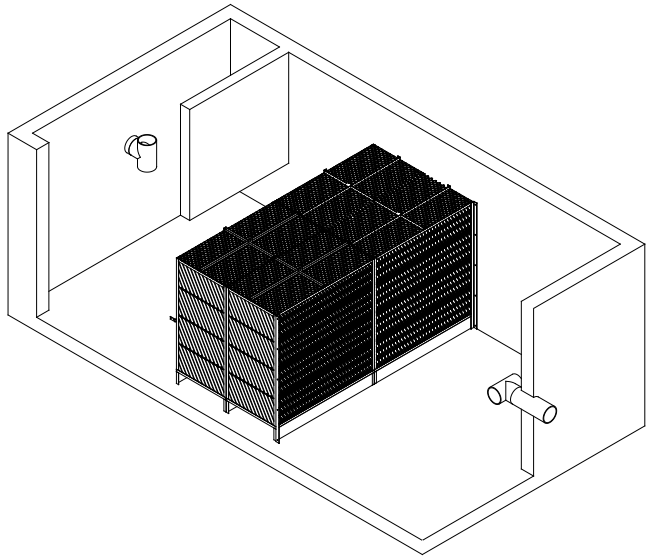
The typical popular media configurations are typically 1, 2 or 3 media pack rows. Pan America can provide any of these configurations and can customize pack quantity and sizes to fit hatches and manways.

Internal Design

The internal tank design can encompass a standard per your specification or your design or we can assist in determining the particular design to optimize your tank design.







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Cast In Place OWS (CIP)

For the cast-in-place oil water separators we can provide an engineered media pack solution for any project. As this type of project is generally specifically designed and built for a particular site Pan America can assist in the overall design of the tank while leaving the final design and engineering of the structure to the project engineers so that local codes, soil conditions etc. are met.

Typical performance standards for most CIP ows:

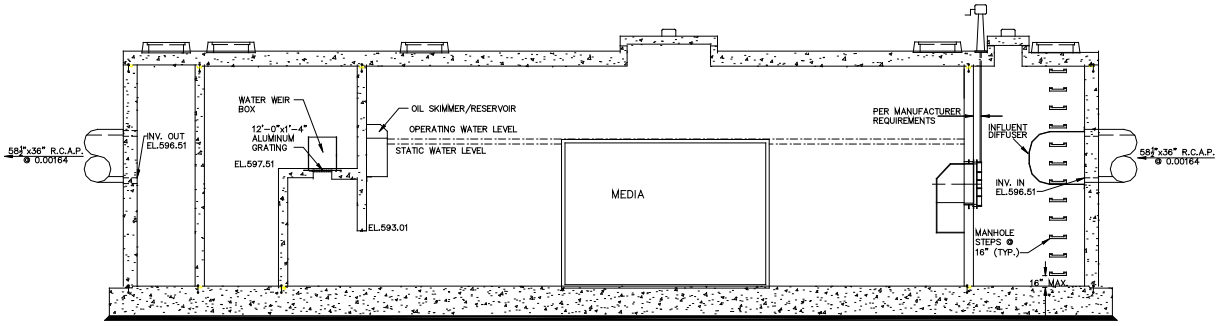
Oil specific gravity range:	0.70 - 0.95	SG
Operating temp.:	50° +	F
Inlet oil loading:	100 - 20,000	mg/L
Design droplet size:	20 - 30	micron
Discharge oil concentration:	10	mg/L

Design

All CIP ows fit into single or multiple separation channel designs. To accommodate larger flow rates more separator channels are provided to be able to handle the flow while maintaining design criteria. With this design concept any size separator can be created and provide manageable flow control in a maintenance friendly design.

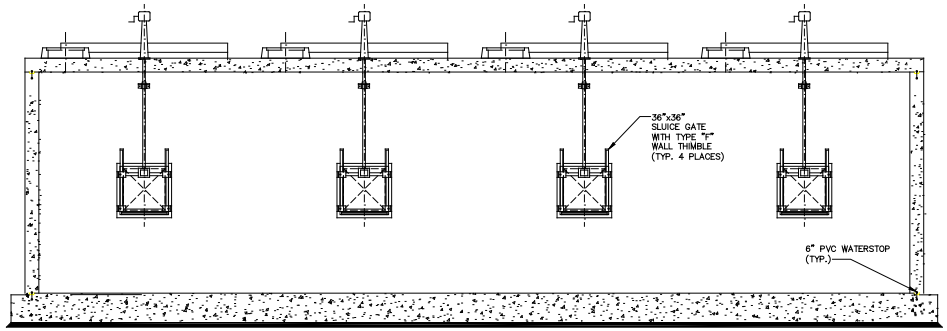
This is 9600 GPM flowing from a single channel system.





SECTIONAL SIDE VIEW

SCALE: 1/4"=1'-0"



INLET CHAMBER SECTION VIEW

SCALE: 1/4"=1'-0"

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