



PARALLEL PLATE SETTLERS



Plate Settlers and collection launders during installation.



Plate Settler stainless steel plate packs

Monroe Environmental® Parallel Plate Settlers can greatly increase the effective surface area of the existing clarifiers and sedimentation basins at water treatment facilities. New tanks can be greatly reduced in size when designed to include plate settlers as well. This is because suspended solids removal in gravity separators and clarifiers depends primarily on the surface area for settling and the multiple parallel plates provide a large surface area in a small space.



Influent Flow Distributors



Effluent Troughs

Monroe features a variety of design improvements over competitive plate settlers. These

Applications

- Potable water treatment
- Surface water clarification
- Process water treatment
- Filter backwash clarification
- Sedimentation basin retrofits

patent-pending designs provide a more equalized flow through the plate sections and also incorporate several features that make inspection, cleaning, and maintenance much easier for plant operators.

Plate Settler Design

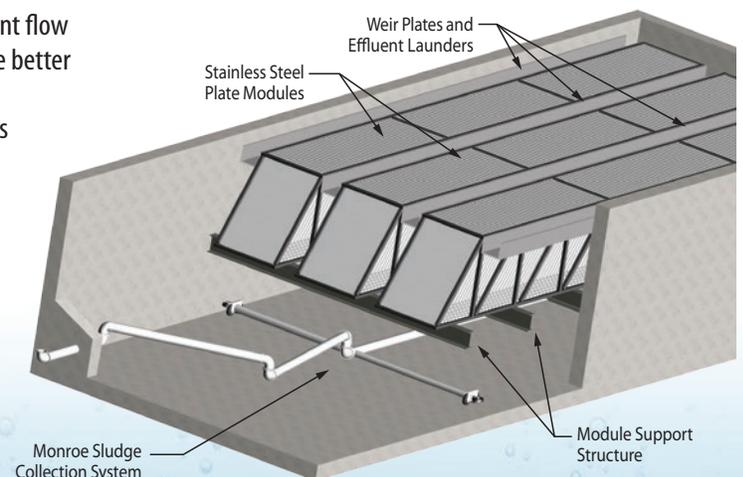
- Complete 304 stainless steel construction
- Increases throughput and capacity
- Reduces solids loading on final filtration processes

More Stable Hydraulic Flow, Which Improves Settling by up to 30%

- Variably sized influent flow distributors promote better laminar flow across the face of the plates
- Effluent is collected uniformly at the top of the plates through orifices, unlike inferior full-width slot designs
- Patent pending design

Ease of Maintenance, Improved Operator Capabilities

- Significantly more open space at top of plates
- Easy to see and clean the faces of the plates without draining the tank
- Individual plate sections can be easily removed
- Operators can walk on the top of the plate sections, even during operation





MONROE SLUDGE COLLECTORS

The **Monroe Environmental®** Sludge Collector is a hoseless, hydraulic suction collector designed to uniformly remove settled solids from the floor of a rectangular sedimentation basin. Monroe's patent-pending design improves the flow of sludge through the collector and reduces the chance for in-pipe clogging.

Hoseless Design Improves Sludge Removal

The hoseless-type collector offered by Monroe Environmental is a more efficient design for collecting settled solids from sedimentation basins versus flexible hose collectors, fixed grid collectors, and chain and flight scrapers.

The Monroe Sludge Collector utilizes all-rigid piping which avoids the pitfalls common to flexible hose collectors such as air pocketing, ripping, collapsing, and tangling. It also more efficiently captures the fluidized sludge than fixed grid collectors and chain and flight collectors which produce lower solids concentrations and require more dewatering than those captured from the Monroe Sludge Collector.

- Reduces the distance sludge must travel to be discharged from tank
- No in-pipe baffling/interference once sludge is collected
- Reduces the chance of clogging — improves sludge flow
- Telescoping arm with UHMW bushings does not impede sludge flow through the collector
- For smaller basins, no telescoping pipe is required

Applications

- Sedimentation basin solids collection
- Potable water treatment
- Surface and ground water
- Industrial process water
- Flocculated solids collection



The Monroe Sludge Collector is the perfect compliment to the highly efficient Monroe Plate Settlers for potable water treatment. The unit can also be provided separately should your plant only require a more efficient settled solids removal system.

Monroe Sludge Collector Design

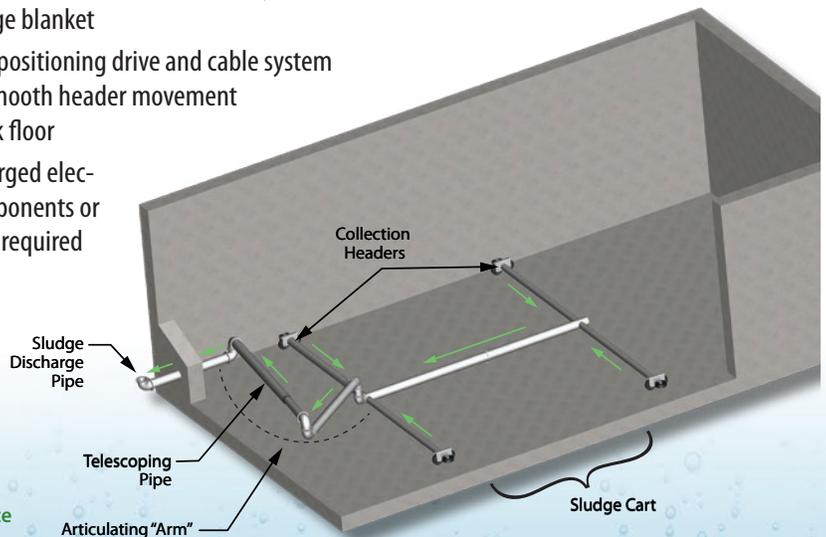
- Hoseless, hydraulic pressure suction collector — gravity head or pump induced
- 304 stainless steel construction
- Articulating sludge discharge pipe eliminates the need for cumbersome hoses
- Orifices on collection header uniformly draw from sludge blanket
- Dual-reel positioning drive and cable system ensures smooth header movement along tank floor
- No submerged electrical components or lubricants required

- Electrical panel for automatic control with digital output and position indicators
- Monroe Sludge Collector flow diagram

Alternative Sludge Collector Designs

Environmental also offers other sludge collector designs for specific applications including:

- Chain and flight scrapers
- Screw augers and mechanical agitators
- Sludge rakes
- Mud valves
- And many others



Note: Green arrows indicate sludge flow