# Enviroquip® Rapid Sludge Removal Clarifiers

Providing superior features to improve plow clarification

## Key features & benefits

- Non-clogging clarifiers
- Open RAS troughs provide sludge viewing for easy operation
- Adjusts to changing process conditions
- Constructed in galvanized mild steel or 304, 316 type stainless steel

## How we create value

- Handles up to 200% of average flow
- 95% of scum removed inside the influent well
- Low construction costs
- Minimal maintenance costs

# Enviroquip® Rapid Sludge Removal Clarifiers

## Advantages

**Why use rapid removal clarifiers?**
Properly designed Enviroquip® rapid sludge removal clarifiers provide superior features to improve the plow clarification process.

- Higher return sludge rates, capable of handling 200% of average flow
- Rapid return of activated sludge to aeration basin for process rejuvenation
- Better control of sludge blanket levels in the clarifier
- Lower concrete construction costs
- Flexibility to adjust to changing process conditions (temporary or permanent)

**Non-clogging clarifiers**
Engineers and owners certify that our SS series clarifiers are truly non-clogging.

We have eliminated clogging by:

- Drawing sludge from the floor through straight tubes into an open SludgeViewR® trough at the clarifier surface
- Eliminating bent tubes or underwater orifices
- Utilizing equal length draw tubes, eliminating the requirement for flow control devices and providing balanced sludge removal

**Open SludgeViewR troughs allow viewing of sludge**

- Providing the operator with the opportunity to view the sludge return from each tube, ensuring that pumping rates are as required
- Can also be provided with individual sections of troughs for each sludge return tube
- Controls can be provided to change the head characteristics and suction rate for each tube if the operator needs to vary the sludge flow from the system flow

Images clockwise:
Return Activated Sludge (RAS) Troughs,
All hot dip galvanized construction,
All stainless steel construction.

## Effective Scum Removal

**Center pier design provides versatility**
Center piers can be designed to accommodate a variety of functions. Scum and return sludge are kept separate by using multiple collection boxes.

This provides the design engineer with the option of removing scum and gross inorganic floatables at the source and returning them to the headworks, or removing them from the system independently.

A rotating scum beach can be incorporated into the center pier design to achieve this, and the scum can be either discharged down through the center pier or out along the bridge by use of a small submersible pump.

**95% of scum is removed inside the influent well**
Ovivo's ScumTrappR™ design includes a stationary bridge mounted scum wiper. This is located inside the influent well and pushes gross inorganic floatables and scum into a separate rotating collection box for removal from the system. Thus, 95% of the floatables are captured inside the influent well. This also eliminates the need for scum to travel across the full surface of the entire clarifier.

The remaining 5% of the biological scum (or floating sludge) which does surface outside the influent well is returned with the activated sludge for further treatment.

**Drive design minimizes maintenance problems**
Our exclusive Jackbolt™ drive mechanism eliminates the need to take the clarifier offline for bearing or gear replacement. The complete assembly can be replaced in hours using only a small portable hoist, instead of a more costly motor crane required by other drive mechanisms.

"Same Plant
Same Flows
Same Time"

Top down: Theirs and ours

OVIVO™
Bringing water to life℠

## Improved Performance

**Current reducing flocculating inlet well baffles improve clarifier performance**
Octagonal shaped uplifting inlet baffles with floors reduce and redirect currents. This prevents sludge blanket disturbance, while simultaneously directing scum to the water surface inside the clarifier flocculating well for effective scum removal, using the patented ScumTrappR design. Additional foam suppressing spray nozzles emulsify scum foam for effective scum pumping.

Current reducing baffles provide:
- Inlet current reduction
- Inlet flow redirection
- Improves scum collection
- Enhanced mixed liquor flocculation for improved settling rates

**Materials of construction**
Clarifiers are available in galvanized mild steel, types 304 or 316 stainless steel for corrosion free, maintenance free equipment.

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