

# Float-Treat® Thickener

Float-Treat® thickeners have compiled outstanding performance records for solids concentrating on water and wastewater sludges. Plants have obtained 5% total solids and more on biological sludges alone, far surpassing the performance of conventional gravity type systems.

With the Float-Treat thickener, millions of tiny bubbles float solids to the tank surface, forming a highly concentrated sludge blanket. The compacting effect of the continuous supply of air bubbles results in a sludge density much greater than normally obtained by gravity sedimentation. Skimmers remove the thickened sludge at the end of the tank for disposal.

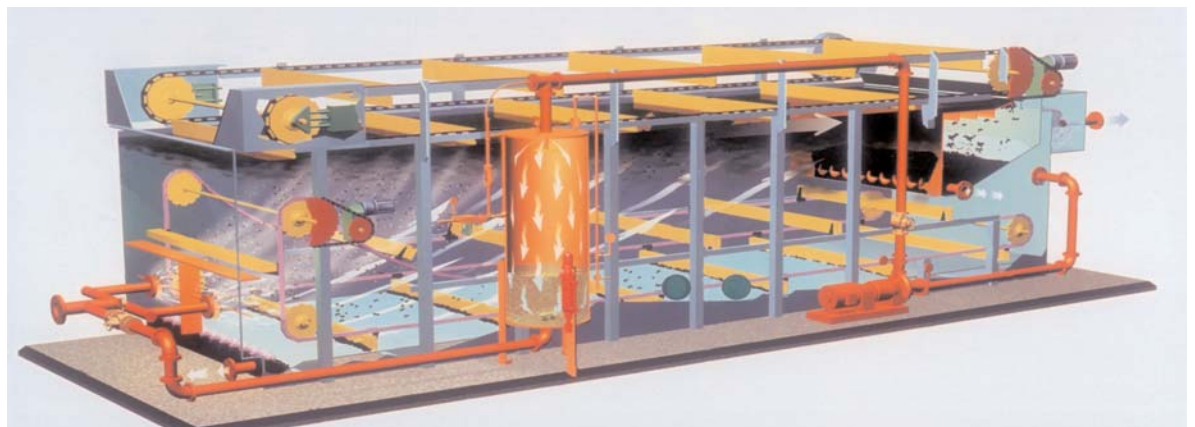
An important principle of the Float-Treat thickener is the introduction of air into an external liquid source such as recirculated effluent, blending this flow with the raw flow. The recycle liquid is pumped at elevated pressure to a saturation tank where air is introduced. While flowing through the tank, the maximum possible quantity of air is dissolved in the recycle stream.

This air-saturated stream is then blended with the sludge to be thickened and introduced to the Float-Treat tank. As the stream enters the tank, it impinges on circular, concave baffles (reaction jets) which assure thorough, rapid blending and dispersion throughout the cross-section of the flow-thru zone.

## CHEMICAL TREATMENT

Float-Treat thickeners have proven exceptionally effective in concentrating chemically treated sludges as well as sludges floated without the use of chemicals. When chemicals are employed, loadings have been increased up to 300% with some increase in float solids concentrations. The versatility of the Float-Treat thickener allows the user the choice of operating with or without chemicals depending on the best economics for each situation.

**DESIGN FLEXIBILITY** – The widest choice of tank sizes to suit any requirement...concrete or steel tanks, new or existing installations...available for use with or without chemicals.



## Data Sheet

**ADVANTAGES** – Unlike a gravity belt thickener or centrifuge, a Float-Treat thickener provides grit removal, doesn't require polymer use. Its rectangular design also permits easy weir adjustment, true plug flow operation without short circuiting, and the use of long lasting, low maintenance non-metallic components.

**CONTROLLED RESULTS** – Correct pressurized flow is selected for each application...controlled air with mechanical adjustments assures minimum optimum usage with maximum optimum usage with maximum quantity of bubbles...controlled flow distribution and blending with recycle flow introduced in raw flow inlet pipe... reaction jet baffles assure proper distribution across full width of flow-thru zone...proper controlled skimmer speed to assure the maximum sludge withdrawal rate consistent with optimum sludge concentration.

**EFFICIENT, LOW-COST PERFORMANCE** – Assured by use of simplified standard components. Sound proven hydraulic design assures economic basin construction.

**LOW PUMPING REQUIREMENTS** – By assuring optimum air saturation with exclusive pressure tank design, the minimum amount of pressure flow is needed thus reducing cost of pumping equipment, pressure vessels, controls and pumping costs.

**BENCH SCALE TESTING** – Practically all biological sludges are amenable to thickening, to some degree, with Float-Treat. The design loadings, air and recycle requirements and anticipated results can be established confidently by bench scale studies.

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