EQUIPMENT: Sludge Thickener THK Series



The Most Efficient Solution to Thicken Sludge

Centrisys Sludge Thickener

The Centrisys Sludge Thickener (THK Series) is specifically engineered to achieve high-performance thickening of biosolids. The non-conical design results in greater G-volume, allowing for the highest capacity of flow to the centrifuge. The THK improves upon existing technologies using fundamental principles of a 1) Centrifuge - 3,000 Gs, 2) Rotary Drum Thickener - fully enclosed and small footprint, 3) Dissolved Air Flotation (DAFT) - air injection. The patented Hydro-Pneumatic design has proven that NO polymer is required under normal conditions (150 SVI).



- No-Conical = greater comparative capacity
- Proprietary hydro-pneumatic control of cake solids
- Independent control of liquids and solids weir
- Greater G-volume
- Proprietary internal polymer injection system (optional)
- Highest grade materials of construction
- Proprietary tungsten carbide wear plows for grit and trash

ypical Applications

- Primary sludge
- Secondary (waste activated) sludge
- Oxidation ditch sludge
- Digested sludge
- MBR (membrane bioreactor) sludge
- Dilute pulp and paper waste prior to dewatering
- Concentration of food processing waste
- Concentration of algae
- Concentration of yeast

Features

- Proven no polymer required under normal conditions (150 SVI)
- Smallest and most efficient footprint for given flow rates compared to gravity belt and rotary drum thickening technologies
- Contained vapor system
- Expected ROI of 2.5 years due to polymer savings alone
- Reduced operating and maintenance costs
- 50% less power consumption compared to standard dewatering centrifuges
- Reduced installation costs by 35-50% (\$/gpm)
- Simple to operate with minimal operator attention





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Thickening Solutions: USA Built, Sold & Serviced Around the World







Sludge Thickener THK Series							
	ТНК200		ТНК350		ТНК600		
	Maximum	Average	Maximum	Average	Maximum	Average	
Feed Flow Rate w/o Polymer* gpm	180	125	320	265	765	640	
Feed Flow Rate w/ Polymer* gpm	250	200	500	425	1,100	800	
Approx. Bowl Diameter in (m)	18 (0.45)		21 (0.53)		26 (0.66)		
Total Static Weight - Empty Ibs (kg)	5,000 (2,950)		10,800 (4,900)		27,000 (12,250)		
Standard Main Drive HP	50		75		150		
Standard Scroll Drive HP	10		15		25		
Standard Total Installed HP	60		90		175		
G-volume Capacity at 3,000 G gal	160,000		332,000		718,000		

Sludge Thio THK Series Per	kener formance	Waste Activated Sludge (WAS)	WAS/Primary Blend	
	Minimum	0.07	0.08	
No Polymer Specific Power** kW/gpm	Maximum	0.18	0.19	
rower kwyspin	Average	0.12	0.15	
	Minimum	0.05	0.05	
Polymer Specific	Maximum	0.15	0.18	
rower kwyspin	Average	0.08	0.10	
Average Solids Recovery	w/o Polymer	93	90	
% wt./wt.	w/ Polymer	99	97	
Average Cake Solids %	w/o Polymer	4 to 7		
Total Solids	w/ Polymer	5 to 10		



*Values are approximate for Influent Solids of 0.5% to 1.5% WAS. **Specific power estimations are for normal flows. Contact Centrisys for project-specific calculations.



