EQUIPMENT: Sludge Thickener THK Series

The Lowest Total Cost of Ownership in the Industry

Centrisys Sludge Thickener

The THK sludge thickener is engineered for high-performance biosolids thickening. Compared to other centrifugal sludge thickening technologies, the THK uses 50% less power, and dramatically reduces or even eliminates the need for polymer conditioning. Thanks to these savings, the THK represents the lowest total cost of ownership in the industry.

- Proven no polymer performance
  - Thickens from 4% to 6% without polymer
  - Minimizes foam in digester
  - Reduces carbon footprint
- 50% less power consumption compared to other centrifugal sludge thickening technology
- All cylindrical/no conical design provides the greatest G-volume in comparison to other centrifuges of similar bowl diameter
  - THK200 = up to 250 gpm
  - THK350 = up to 525 gpm
  - THK600 = up to 1,100 gpm
- Optimization is a simple, two-step approach
  - Basic tuning: customize results with independent control of liquids weir and solids weir
  - Fine tuning: patented hydro-pneumatic control maintains solids to digester
- Doubles the solids concentration:
  - Doubles the solids retention time in the digester or doubles the digester capacity
  - Reduces digester heat requirement by 50% - only half of the flow needs to be heated to the digester ambient temperature of 100 °F (40 °C)
  - Doubles digester capacity
- Enclosed system increases hygienic operation and safety for operators
  - Reduces odors and gases, mainly H2S
  - Eliminates transmission of pathogens because hosing down equipment is not necessary
  - Minimizes an odor control system
- Smallest footprint efficiently utilizes available plant space

Typical 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

Designed & Built in the USA

Discover more at **Centrisys-CNP.com**

centrisys cnp

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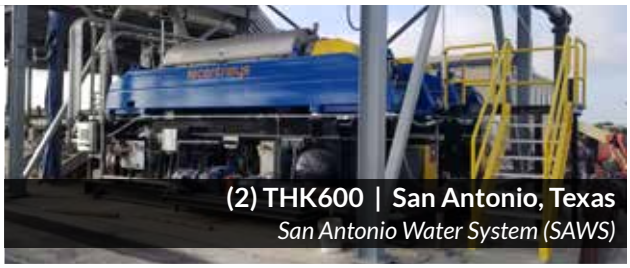
Thickening Solutions: USA Built, Sold & Serviced Around the World

(2) THK200 | Kenosha, Wisconsin
Kenosha Water Utility Wastewater Treatment Plant



(2) THK600 | San Antonio, Texas
San Antonio Water System (SAWS)

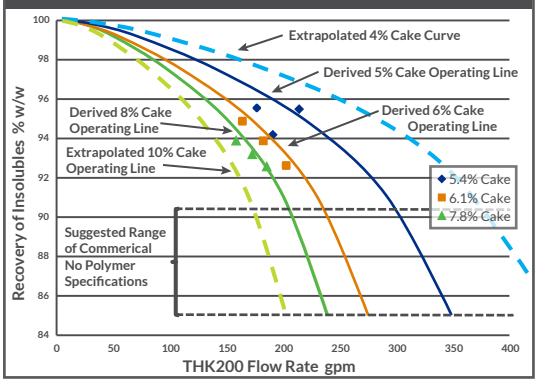
THK200 | Whitewater, Wisconsin
Whitewater Wastewater Treatment Plant

Sludge Thickener THK Series

	THK200		THK350		THK600	
	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 lbs (kg)	5,000 (2,950)		10,800 (4,900)		27,000 (12,250)	
Standard Main Drive HP	40-50		50-75		150-200	
Standard Scroll Drive HP	10		15		25	
Standard Total Installed HP	50-60		75-90		175-225	

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

Gao Bei Dian Wastewater Plant - Beijing, China
WAS No Polymer 1.2-1.35% w/w feed



**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.*

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