

Innovation and Efficiency in One Compact Solution: A New Era in Dewatering Septage and Wastewater Solids

In the rapidly advancing world of wastewater management, innovation is key to meeting growing demands for efficiency, sustainability, and simplicity. Leading the way is an advanced dewatering system engineered to transform septage and wastewater solids management. This groundbreaking technology combines high performance with low energy consumption, providing a user-friendly solution that makes efficient solids handling accessible.

This powerful dewatering system distinguishes itself by delivering up to a 27% solids cake, making it ideal for facilities seeking maximum solids handling efficiency. Refined over nearly a decade, this stationary dewatering drum offers a reliable, low-maintenance solution that processes high volumes with minimal energy input.

Key Features and Design Innovations

At the heart of this system is a stationary dewatering drum featuring a 12-inch diameter auger running the length of the drum. The auger, powered by a hydraulic motor, requires a power pack only during unloading, conserving energy throughout operations. This high-demand feature allows rapid material discharge, enabling operators to process large quantities of dewater solids efficiently. After unloading, an automatic washout nozzle cleans the drum in under thirty minutes, minimizing downtime and preparing the unit for the next cycle.

The system achieves impressive dewatering, with solids concentrations reaching 21-27% dry overnight. Composting operators will find this drum particularly useful, as it can dry material to around 20% in just three turns within two hours. As with any dewatering technology, the sludge must be flocculated using a polymer, and pre-screening is recommended to avoid pump clogs and enhance operational efficiency.

Exceptional Filtrate Quality

A standout feature of this system is its superior filtrate clarity. Unlike traditional dewatering units, which typically provide 85-95% solids removal, this system achieves a filtrate clarity of up to 99.5%. This exceptional clarity results in minimal solids returning to the head of the plant, significantly easing the load on subsequent treatment processes.

Energy-Efficient Drying Process

During the drying phase, the system's energy consumption is limited to the motor rotating the drum at a modest rate of two revolutions per hour, using only a ¼-horsepower gear reduction motor. This energy-efficient setup significantly reduces

operational costs and environmental impact, ensuring steady dewatering performance without high power demands.

Robust Construction and Minimal Maintenance

Designed for durability, the drum features a stainless-steel barrel with PVC filter tiles on a powder-coated roll-off frame. A 1/4 HP motor rotates the drum slowly on eight heavy-duty roller bearings, resulting in nearly maintenance-free operation. The bearings, rotating at a slow pace, only require occasional greasing, further reducing maintenance needs.

Operational Capacity and Versatility

Capable of handling runs of 20,000 to 30,000 gallons of sludge per day, this unit can be filled multiple times before rotation is required. The system's versatility extends to grease processing, especially when mixed with sewer sludge, making it a practical choice for various wastewater applications. Each run produces between 5-8 cubic yards of dried material—nearly twice the weight efficiency of traditional dewatering boxes.

Benefits for Modern Wastewater Management

Setting new industry standards, this dewatering system combines high efficiency, ease of use, and low energy consumption, offering a valuable solution for facilities that prioritize performance and cost-effectiveness. With its ability to produce high-solids cake, return exceptionally clear filtrate, and minimize power needs, this system is an ideal choice for modern wastewater management, delivering both innovation and efficiency in one robust package.