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wastewater treatment equipment

## Case Study: Leipsic, Ohio Disk Screw Sludge Dewatering Press Demonstration

The Village of Leipsic is situated in the rich farmlands of northwest Ohio. The village was founded in 1857 has worked hard to maintain its rural heart while attracting US and international businesses which have invested hundreds of millions of dollars in local facilities.

The Leipsic wastewater treatment plant treats an average flow of 1.0 mgd and sees peak flows of up to 6 mgd.

The WWTP has existing belt press systems which have served them very well over the years but are now considering upgrading their dewatering capacity and methods.

**Note: Leipsic purchased an OR-TEC Disk Screw Press System following the study**

OR-TEC Disk  
Screw Press in  
Leipsic WWTP





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**Utility:**  
Leipsic WWTP

**Leipsic Utilities Personnel:**  
Mr. Tony Schroeder  
Mr. Russ Teders

**Average Daily Flow:**  
1.0 mgd

**Peak Flow:**  
6 mgd

**Equipment Demonstrated:**  
OR-TEC Disk Screw Press

**Equipment Purchased by**  
**Leipsic:**  
OR-TEC ORV 404 Disk Screw  
Press

### The OR-TEC Disk Screw Press Demonstration

OR-TEC demonstrated the Disk Screw Press on both waste activated sludge (WAS) and septage sludge during a full scale demonstration at the Leipsic WWTP. Testing was carried out over the course of five days and in all 19 tests were completed. Sludge cake and inlet sludge solids numbers were run on a moisture balance operated in the Leipsic WWTP lab. Capture rates were based on composite samples taken and tested by an independent lab. Polymer usage and flowrate results were based on draw down tests completed on site. Test results were as follows

- Cake solids results ranged from 15.8% solids to 29.29% for both the WAS and Septage sludges.
- Polymer usage ranged between 10-18 lbs polymer per ton of dry solids.
- The lowest solids capture rate was 97%.

During the course of the demonstration the equipment operated without issue and performed well with both sludges. The disk screw press dewatered the two sludges very well producing clear decant, high solids capture, high cake solids and reasonable polymer usage.

Leipsic WWTP also had onsite demonstrations by three other systems. Superintendents Tony Schroeder comments below perhaps best sums up the overall experience and his conclusion following all four demonstrations

*"After pilot testing multiple dewatering devices, I am a believer in the OR-TEC Disk Screw Dewatering Press. It provides the complete package of exceptional cake and filtrate quality, low operations cost, and best of all, requires minimal operator attention"*

*-Tony Schroeder, Superintendent Leipsic WWTP*