

BRT Dewatering Tower™

Key Features:

- Sludge Dewatering with re-usable hanging geotextile bag
- Produces near Belt-Press-quality dewatered sludge with no moving parts except for Hydraulic Cylinders
- Batch Process
- Automatic Fill and Drain
- 99% Solids Capture up to 40,000 GPD
- Complete System includes sludge Pump and Polymer System



The tower is a batch fill and drain system. The standard configuration has three fill and drain cycles. The sludge pump will turn on, fill the tower and shut down for a 30-minute drain cycle. Then, the pump will turn back on for two more fill and drain cycles. The multiple fill cycles are designed to maximize each batch load.



After the three fill and drain cycles, the system will shut down and the operator can allow the batch to drain for any period desired. Typically, the system will be allowed to drain for 6-8 hours before the doors are opened and the load dumped out. Near belt-press quality can be achieved with little to no energy required.



- A rotary gear pump pumps the sludge from the base of the tower up to the top of the open top hanging bag.
- A polymer solution is injected into the tower piping and a specially designed flocculator provides a gentle but effective mixing of the polymer solution with the sludge to produce an optimum flock for maximum drainage.



- The flocculator includes a 2" Ball valve to allow the operator to take a sample of the flocced sludge that is being pumped into the hanging bag.
- With the proper flocculant, the bags the hanging bag will operate at maximum efficiency.



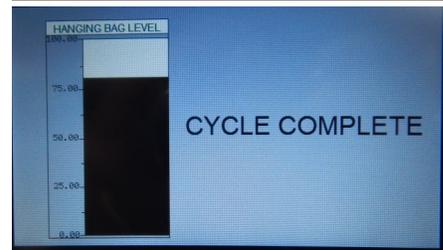
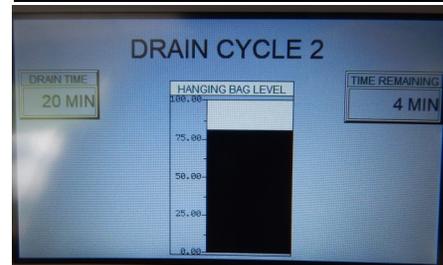
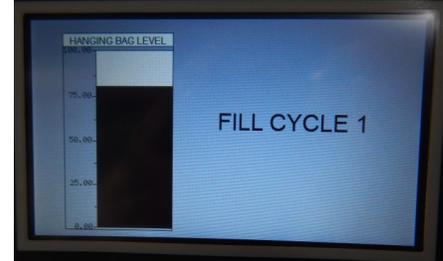
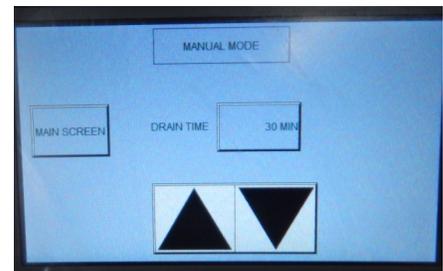
- The tower control and polymer make-down unit is a stand alone system.
- The PLC based control can be operated in Manual or Fully Automatic mode.
- When placed in Automatic, the sludge pump turns on and sludge is pumped up and into the open top bag.
- The sludge is pumped thru a Blue River Technologies flocculator , the polymer system sends a polymer solution into the sludge piping at the inlet end of the flocculator where it is mixed with the sludge as it fills the tower.
- The polymer mixing system is set up with a polymer flow sensor and a water flow sensor.
- Either of these sensors can place the unit into a fault condition if they fall below their setpoint.
- There is a high level float switch at the top that will shut down the system to avoid overflow.



- The Blue White A2 peristaltic pump meters polymer into the Blue River Technologies Poly-Hydro mixing head where it is emulsified in a low shear high intensity mixing zone and fed into the sludge line.
- The two dump doors can be opened and closed to dump the load with pushbutton controls on the control enclosure.

- The tower system control is a PLC based control with a graphical interface.
- The interface allows the operator to change the drain times to suit their particular sludge. In this case, the drain cycle is set at 30 minutes.
- When placed in Auto the sludge pump turns on and sludge is pumped into the flocculator, the polymer mixing unit turns on and pumps polymer solution into the flocculator where it is mixed with the sludge.
- The bag continues to fill until the high level probe is reached.
- At that point, the sludge pump and polymer pump shut off and the drain cycle begins.
- After the drain cycle timer times out the, cycle repeats.

In the standard set up, there are three fill cycles and three drain cycles. At the completion of the last drain cycle, the cycle complete light turns on and the operator waits for the tower to drain for the desired total drain time. This can be a few hours or even a day or two depending on the individual plant.



At the end of the drain period, the operator will put the system into manual, open the doors and drop out the solids. Then, another batch can be dewatered.

“The Leader In Geotextile Sludge Dewatering Systems”

1302 Garner St, New Castle, IN 47362 | 765-388-2161 | mconwell@nlrc.net

www.blueriverdewater.com