

## Advantages

- \* Able to accept sludge at 1 percent solids and dry to 90 percent solids in one continuous process
- \* The most energy efficient way to recapture water and dry sludge
- \* No filter press or centrifuge necessary
- \* Meets the EPA 503 regulations for Class A Bio-Solids by time and temperature
- \* No odor control needed
- \* No natural gas required
- \* No emissions control requirements

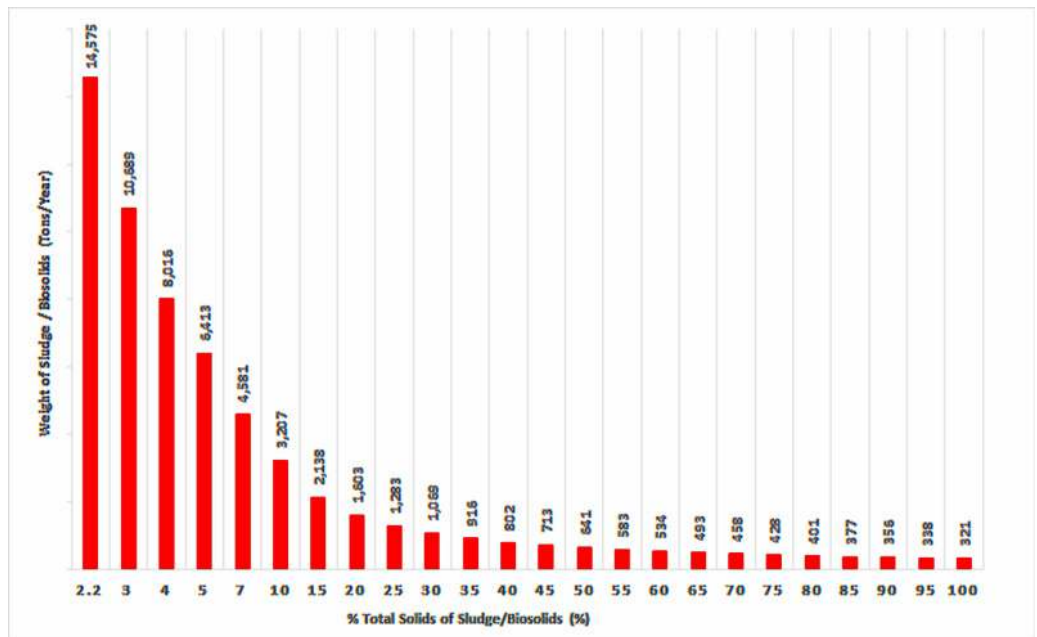
Reduce volume and weight of any type of Sewage, Organic, Pharmaceutical, and Metal Hydroxide Plating Sludge



This spiral filter heat pump driven unit is the most cost effective, and energy efficient sludge drying system in the world

## Cost

- \* A 1-ton machine would be able to process 30,000 gallons of sludge a day at 1% solids or 15,000 gallons a day at 2% solids or 9,000 gallons a day at 3% solids.
- \* ROI of 24 months or less based on liquid hauling.
- \* Machines range in size from 1/4 ton of dried solids a day to 70 metric tons of dried solids a day.



## Optional De-Watering

### Operation

The spiral filter press is a state of the art dewatering unit that will replace your current dewatering system.

This slow moving unit mounts on top of the dehumidification dryer and will accept sludge from 1% to 5% solids. The spiral blade forces the sludge between the moving plates. The water removed from the sludge during this process is called filtrate and should be sent back to the headworks or to the primary treatment system.

This process will dewater the sludge to 20% solids or more commonly referred to as (cake) without the need of adjustment.

The solid cake from dewatering drops directly into the dryer.

### Maintenance Cycle

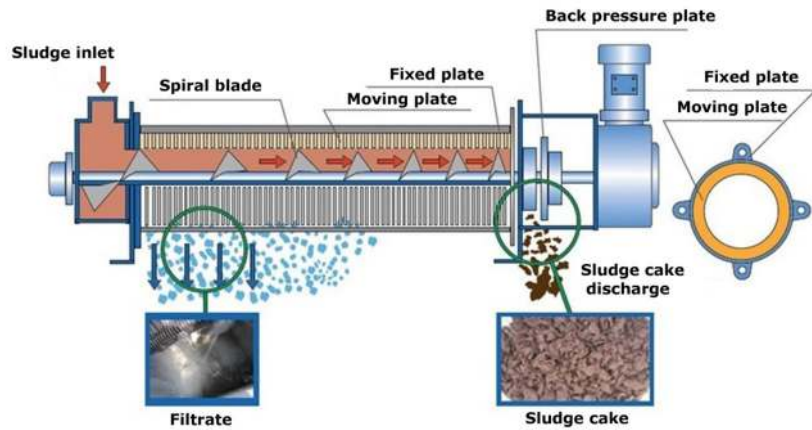
Every 12 months the “moving plates” or disk should be replaced. This will take a technician 1 day to replace the disks.

The “spiral blade” or auger should be replaced every 5 years.

The mixing tank motor should be checked once every 6 months.

The control cabinet should be cleaned and checked once a year.

## Spiral Filter Press



## Sludge Drying

### Principle

The dehumidification heat pump cycle is the most efficient way to dry sludge using hot air closed conventional recycling, condensing, dehumidifying and drying.

Both the drying and dehumidifying medium is hot air. The wet sludge absorbs the heat from the hot air to evaporate moisture. The moisture is carried out via hot air to the condenser so there is no emission of waste heat during the dehumidification drying process.

### Energy Used

1 Kwh is capable of drying 1 gallon of water.  
The electrical consumption of drying 1 metric ton of sludge from 20% solids to 80% solids is 180 Kwh.

### Waste Heat

With the addition of waste heat from outside sources the electrical load can be reduced by 80% with 36 Kwh capable of drying 1 metric ton.

### Environment

Low Temp Drying from (104-167F) in our closed cabinet produces no odor.

The condensate water may be directly discharged for reclaim use.

The drying process protects the organic sludge from losing nutrients and retains the high calorie value necessary for beneficial reuse.

Sludge volume is reduced by up to 67% and weight is reduced by 80% saving expensive transportation costs.

### Sludge Stabilization

120 Min at 158F meets the EPA 503 Class A Regulations for time and temperature.

### Automation

PLC touch screen control with remote and centralized control

Outlet Sludge can be adjusted from 50% solids to 90% solids based on the application.

