"EASY DRAIN"
SLUDGE DEWATERING SYSTEM

Can work in all-weather conditions!
Very compact!
Very Efficient!
Very fast!

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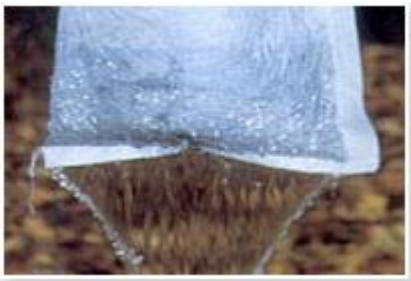
The automatic “EASY DRAIN” system dewaters and bags sludge from industrial effluent and domestic wastewater treatment plants. The system is capable of treating up to 100 kg D.S. of sludge a day.

This system is modular and is designed to optimise the filling and dewatering cycle of the filter bags. Once this cycle is over the full bags can be removed, sealed and stored in the open air for a further period of dehydration, reducing the weight and volume of the sludge cake. The special water repellent material of the sacks prevents rainwater from entering but allows dehydration of the contents by evaporation. The sacks are mounted on a special stainless steel frame, designed to distribute the sludge. The system is electronically controlled from a programmable control panel, ensuring correct process operation. Before dewatering the sludge should be conditioned with polyelectrolyte. After a few hours operation, dry solids content of 15 - 20% can be achieved, depending on the nature of the sludge. The volume of dewatered sludge is dependent on the solid content. For 1% dry solids, one machine can treat up to 20 m^3 per day.



After the initial dewatering stage on the machine, the sacks are sealed and removed with a special sack trolley and stored in an open area (after 10-24 h). During the second phase, due to the special hydrophobic sack material, sludge weight and volume continue to reduce, regardless of weather conditions. After 2-3 months storage, a cake of 50-70% dry solids content is produced. As an example, 1500 kg of sludge at 1% solids content would give, after the first phase - weight of sludge 70-80 kg (20% dry solids), after two months, a cake of at least 50% dry solids content. This would weigh only 35 - 40 kg and represents almost a 50-fold reduction of the original weight.

FEATURES AND BENEFITS:

Various models are available, with 2, 3, 6 and 12 sacks. Operation may be manual, with filtration taking place under gravity, or automatic with pressurised filtration. Multiple units may be installed, either in series or in parallel, to meet any requirements. The feature of all models:

- Compactness and low space requirements,
- An internal sludge distribution system with sack collars and clamps in stainless steel,
- A drainage collection tray beneath the machine and sack positioned for easy handling,
- Filtrate collection tank.
- High efficiency, dewater to 50 - 70% D.S.,
- Low operating and maintenance costs,
- Min. consumption of energy,
- Very small area of installation,
- Low costs of transport, sludge mass decreased up to 60 times,
- Use of normal means of transport for sludge disposal,
- Modular units - easy increase of capacity,
- Simple to install, without special construction work,
- Neatness and comfort in the all process,
- Safe for environment,
- Highly effective and reliable work throughout the year,
- Total costs reduction of sludge disposal.

AUTOMATIC OPERATION

Automatic operation consists of: programming to optimise filtration cycles and maximise capacity, the ability to alter the operating cycle to handle sludge with varying characteristics, automatic operation of a sludge feed pump or valve to feed sludge to the unit as required, automatic finishing of the filtration cycle when the unit is full and the option of extending the pressurisation phase.

PRESSURE OPERATION

Pressurisation using low pressure air (0.2 - 0.3 bar) almost doubles the capacity of the units. The sacks are mounted in stainless steel cages designed to allow rapid sack replacement.

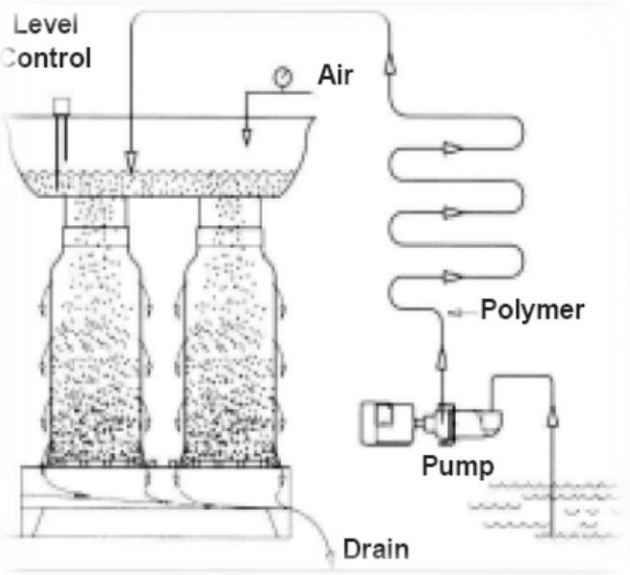
SYSTEM DESCRIPTION:-

“EASY DRAIN” 3 AB Sludge Dewatering Unit, 304 Stainless Steel, complete with (3) stainless steel baskets, control panel mounted to unit. Bag unit takes 1 to 1-1/2 hours to fill.

BASIC CONCEPTS:

The “EASY DRAIN” dewatering system consists of a unit from which disposable porous bags are hung. Sludge is injected with a flocculant and mixed thoroughly in the sludge holding tank using a slow speed flocculator. Sufficient time is allowed for sludge conditioning to take place in the SHT. The flocculated sludge is taken by gravity through sludge inlet valve to an enclosed hood just above the hanging bags. The sludge freely flows into the bags, where the solids are retained, and the water passes through into a drain located beneath the suspended bags. The water that passes through the bags is then recycled back to the plant. Once the system is started, it operates automatically. The sludge is let in the hood until the

(3) bags are full. Once the bags are full with sludge, the system continues to pump sludge until the level reaches a high level sensor located in the hood. The system then shuts down for a rest period, allowing excess water in the bags to flow through. As this water is drained, excess sludge in the hood continues to flow into the bags. When the sludge level in the hood reaches a low level sensor, the inlet valve is reopened. This refilling process repeats itself for the length of a designated work cycle. Timing sequences are programmed into the system to provide safeguards. If it takes too long to initially fill the bags, such as might occur if the sludge pump fails or the sludge tank is empty, the system goes into an alarm condition and shuts down. If the refilling of bags takes too long, the system similarly goes into an alarm condition and turns off. At the end of the work cycle the system completely shuts itself down. The filled bags are then allowed to remain above the drain, typically until the following day, and are removed at the operator's convenience. The bags are removed using a trolley specifically designed for this purpose.



For further information contact us.