Mobile Treatment Plant
for Sludge Dewatering

Reduce your Sludge
**MENA-Water - Sludge Handling Plant**

MENA-Water is manufacturer of containerized plants for sludge handling. For every case of application, we offer a solution ready to use mobile or stationary. All process equipment is arranged inside one 40 feet standard container. This enables us to achieve very short realization time. You will get reliable and tested plants and only need plug and play at site. For best performance we use either belt press with pre-thickener or screwpress complete with polymer preparation, mixer, tanks, pumps included cabling and piping, everything pre-installed.

**BELT PRESS**

Sludge is pumped, stored and polymer is prepared, dosed and mixed to the sludge flow towards the dewatering machine. Upstream there is the screw pre-thickener which performs the initial solid/liquid separation stage, taking sludge solids concentration from 0.5 - 3% up to 5 - 15 %.

The dewatering in the following belt press occurs firstly in the low pressure zone, then in the wedge zone and finally in the high pressure zone where the filter cake is compressed between the perforated cylinder cloth and the main cloth.

The discharged sludge cake can reach dry solid contents variable between 18 to 30% depending on the type of sludge.

**SCREW PRESS**

Flocculated sludge is pumped into a cylindrical screen basket wherein an auger slowly rotates. The diameter of the auger’s shaft increases towards the end of the basket and the gap between its flights decreases, and the pressure thus increases, as the sludge is moved through the basket. Sludge water is pressed through the basket’s screen.

The auger pushes the increasingly thicker sludge towards the annular clearance, defined by a circular opening and an adjustable discharge cone therein. The cone is pressed against the opening by pneumatic cylinders, thus maintaining a defined sludge pressure at the discharge end. The screw press can perform thickening from 0.5% and dewatering to up to 30% in one single stage.

**CENTRIFUGE**

Centrifuges provide solutions to all technological problems of solid-liquid and solid-liquid-liquid separation.

They are fitted with the following standard design features:

- Casing/frame design
- Vibration measurement and monitoring system
- Automatic operation with minimum energy consumption
- Vibration isolating elements
- Automatic lubrication system
CAPACITIES

- The system will handle sludge flow from 2 to 12 m³/hour per single unit
- The dry cake will be 18 - 30 % DS due to type of sludge
- High capacities can be achieved through modular arrangement

FEATURES

- Fast delivery and start-up due to the mobile concept
- Quality equipment in stainless steel
- Compact design
- High packing density
- Very good price-performance ratio
- Low maintenance and minimum operation requirements
- Minimum construction work on site and easy to relocate

APPLICATIONS

MENA-Water offers tailor-made containers to treat sludge from different applications.

- Municipal sludge
- Industrial sludge
- For mixed fiber, biological and chemical sludge

SLUDGE PUMPS

Sludge pumps can handle nearly every media from liquid to slow moving media, up to materials including solids.

SCREW PRESS

1. Sludge inlet
2. Filtrate outlet
3. Auger with increasing shaft diameter and decreasing gap between its flights
4. Filter basket with decreasing bar spacings, axially dividable as an option
5. Washing system with seperately controllable spray nozzle areas
6. Pnematic cylinders for maintaining a continuously adjustable pressure of the discharge cone
7. Press sludge discharge
8. Energy-efficient drive 0.2 - 1.5 rpm

Partial section of a HUBER Screw Press Q-PRESS®