



CONVENTIONAL THICKENERS



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Sedimentation

The Delkor Conventional Thickener is often used where the use of flocculant is problematic or expensive. The large area and low rise rates allow for particles to settle with little or no flocculant addition. Though area requirements and capital costs (CAPEX) are often higher – long term running costs (OPEX) can be considerably lower.

Sizing of Conventional Thickeners has become very accurate with Delkor test work personnel at the forefront of the latest procedures and methods. Delkor can not only give the client the sizing of a thickener but also the running costs allowing for power consumption, maintenance and flocculant usage. This allows our clients to make informed financial decisions in conjunction with process decisions.

Benefits

- Low Flocculant Consumption
- Excellent Overflow Clarity
- Easily Handles Process Fluctuations
- Reduced Running Costs
- Installed Units up to 100m Diameter
- On-Ground or Elevated Tanks
- FEA Design Capabilities
- Low Friction Rake Lift

General operation of a Conventional Thickener

The Conventional Thickener functions on the following principles:

- The inlet feed is directed into the centre feedwell
- Particles settle without the aid of a deflector cone and disperse evenly over the entire area of the thickener. A bed forms and compresses the material beneath it.
- Rakes push the compressed material to the centre for withdrawal. The rakes also aid in the dewatering of the material.
- The clarified liquor discharges into a circumferential launder at the top of the tank.

Control philosophy

The typical control of a conventional thickener is as follows:

- Underflow density to control underflow slurry withdrawal. Bed mass pressure (optional)
- Torque is monitored using hydraulic pressure or electric current (or cell loads)
- Overflow clarity is measured using a turbidity device

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CONVENTIONAL THICKENERS APPLICATIONS



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Sedimentation

Conventional, High Rate, High Density, Ultrasep and Paste Thickeners treat a variety of materials in a number of different industries.

Mineral Processing

- Material
 - Gold
 - Silver
 - Platinum Group
 - Diamond
 - Base Metals
 - Copper
 - Iron
 - Coal
 - Nickel
 - Mineral Sands
 - Uranium
 - Aluminium/Bauxite
- Application
 - Grinding
 - Leach
 - Concentrate
 - Tailings
 - Counter Current Decantation (CCD)
 - Paste Backfill
 - Clarification
 - HDS (High Density Slurry)

Water Treatment and Waste Water

- Sewage Treatment
- De-salination
- Water purification

Chemical / Industrial

- Refineries
- Smelters
- Cement Industry

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For further information, contact your regional Delkor office.

americas@delkorglobal.com
europa.cis@delkorglobal.com
centralasia.nthafrika@delkorglobal.com
subsahara.africa@delkorglobal.com
asia.pacific@delkorglobal.com

- High Rate Thickeners
- High Density Thickeners
- Paste Thickeners
- Ultrasep Thickeners
- **Conventional Thickeners**