

Andritz Centrifuge Decaners

Industrial technology perfectly adapted to the treatment of wastewater sludge

CENTRIFUGATION is your guarantee for:

- Best performance (dryness, capture rate...)
- Continuous and fully automated sludge dewatering
- Polyvalence of operation (dewatering, thickening with or without polymer...)
- Optimum flexibility (adjustment of operating parameters while running)
- Lasting robustness
- Compact design and low space requirement



Andritz, the specialist for solid/liquid separation for over 50 years, offers you the right solution for your needs.

High-performance decanter centrifuges:

The power of centrifugation used for sludge thickening and dewatering with mature industrial technologies. Over 4000 units are in operation in municipal and industrial sewage sludge treatment plants all over the world.



The D5LLTC decanter centrifuge

Andritz decanter centrifuges are designed for reduced space requirement and power consumption at identical throughput and offer unrivalled performance.

ANDRITZ, the world leader in sludge treatment technology, has once again revolutionized the drive system for decanter centrifuges: after the double drive with energy re-circulation, the new TC decanter centrifuge is the first centrifuge with a co-axial driving system, featuring a novel synchronous motor and coupling type. It is protected by worldwide patents and is used in centrifuges for thickening and/or dewatering of WWTP sludge.

The drive system is unique in that:

- The new-generation motor comes without bearings and fixed windings
- It is directly coupled to the Cyclo reducer and therefore acts both as main and secondary motor, controlled by frequency inverter, in order to optimize the bowl and the scroll speed.
- It has very precise differential speed and torque control.

Main assets:

- Lower power consumption (minus 10%) due to the completely new synchronous motor design, giving high power output and high precision of speed control as well as reliability.
- Extreme compactness: reduced space requirement and weight for ease of installation (65 m³/hr on a stretch of less than 4.40 metres !)
- Simplified kinematics & easy maintenance.
- Aesthetic design

The TC decanter centrifuge - an innovative concept - a genuinely new generation of centrifuges for the treatment of waste water sludge !

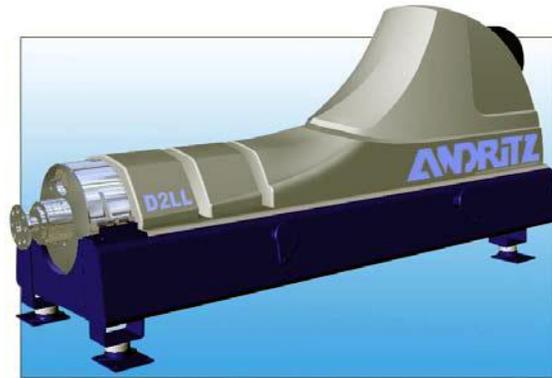
The new D2 series of ANDRITZ centrifuges offers you:

- optimized throughput capacity,
- polyvalence (thickening / dewatering)
- very competitive cost/benefit ratio

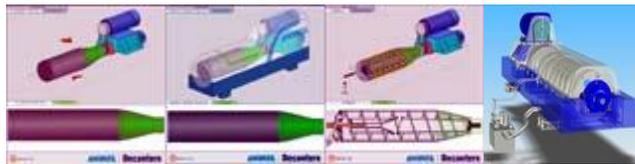
Documentation

Principle of Operation

Solid/liquid separation in Andritz decanter centrifuges takes place at high-speed rotation (over 3 000 g). The rotor consists of the cyliandroconical solid bowl and the scroll. The solid/liquid mixture is injected to the rotor of the decanter centrifuge and reaches the distributor, where it is subjected to centrifugal force.



The suspended solids are collected on the bowl wall. The scroll rakes over the centrifuged particles and conveys them to the end of the bowl, where they are discharged by gravity. The liquid, which forms a pond in the bowl, is evacuated at the other end by overflowing.



Applications:

Food industry

- Animal fats
- Fish and vegetable oils (avocado, maize, olive, palm oil ...)
- Starch
- Casein and lactose
- Thin spillage from bio-ethanol plants
- Fruit and vegetable juice
- Soy milk

Chemical industry

- Organic acids
- Polymers, resins

- Hydroxides and metal oxides
- Salts

Other processes

- Drilling mud
- Oil-containing mud

Industrial effluents from

- Slaughterhouses
- Dairies
- Paper mills
- Distilleries
- Chemical industry
- Pig manure

Advantages:

Polyvalent high-performance rotor - designed by our R&D team to obtain optimum dryness and clarification in dewatering and/or thickening applications

- New in-line design - aesthetic, compact and functional
- New abrasion protection - replaceable tiles over the entire length of the scroll flight for an optimized life span
- Speed adjustment by frequency converters, giving a maximum flexibility
- Patented energy recovery system, from secondary to main motor (reduces power consumption)
- Control and regulation
 - user-friendly STARDEC unit permits fully automatic operation
 - turn-key solutions, taking peripheral equipment into account
- Special gearboxes - robust and compact
- Sludge recovery - by a shaftless screw conveyor, with wash water draining off at the bottom of the screw
- Stainless steel (304L, 316L, Duplex...) - for an exceptional life span
- Pond depth - easily accessible
- Easy dismantling and maintenance - scroll extraction, lubrication...
- De-aerator at effluent outlet - clean, dry, and odourless room climate