Asio®
Wastewater and water treatment

DECANTER CENTRIFUGES

Solution for WWTP

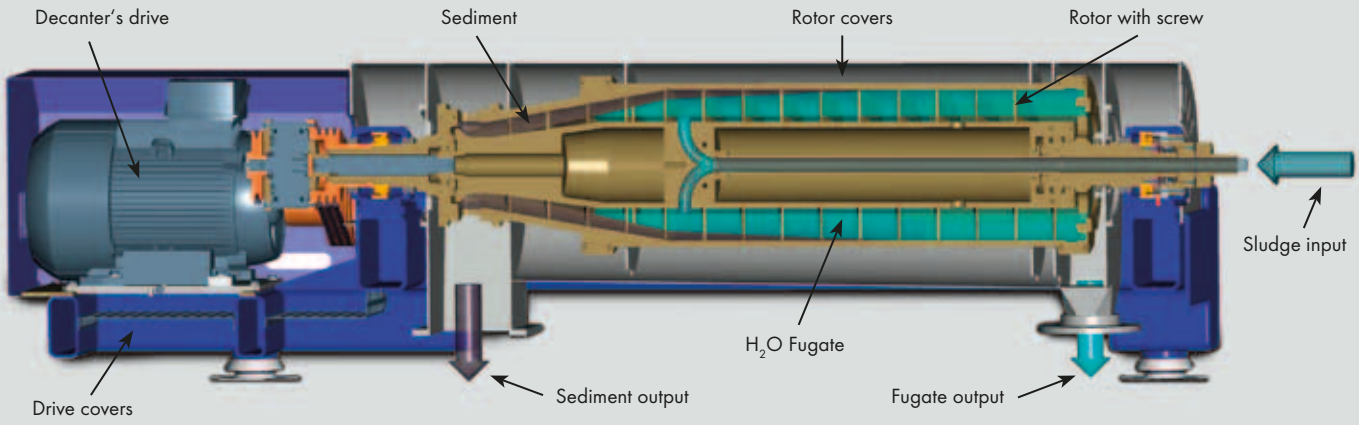
Decanter centrifuges are designed for the separation of solid and suspended parts from liquids.
The centrifuges are used in wastewater treatment plants ("WWTP"), the food and chemical industries and in agriculture. In the area of separation, we offer not only the decanter centrifuges themselves, but also the related services, including servicing of third-party equipment.

Decanter centrifuge technical description

- **Main parts:** 2 coaxial, conical-cylindrical bowls with a coincident sense of rotation running at different speeds.
- **Drive:** electromotor connected through a special gearbox ensuring the speed differential of the bowls, or three-phase motors controlled by variable speed drives.
- **The equipment includes:** control switchboard with control and protection elements.

7 advantages of decanter centrifuges

- Low susceptibility to failures – equipment without redundant auxiliary functions.
- Fast servicing including the servicing of equipment supplied by other manufacturers.
- Compact size.
- Minimum operating costs (minimum operation demands, minimum maintenance = quick return on investment).
- High content of dry matter from the drained sludge.
- High operation flexibility even at variable sludge characteristics.
- Individual approach – tailor-made solutions.



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Description of decanter centrifuge operation

1. The sludge enters the rotating bowl of the centrifuge through a suction pipe.
2. Through the effect of centrifugal force, it is forced onto the jacket of the outer bowl, where particles of higher density are separated and settle on the wall of the bowl.
3. Thanksto the differential speedbetween the screw and the outer bowl, these particles are transportedby the screw to the conicalpartof the outer bowl.
4. Particles are lifted above the liquid level and dewatered through the effect of centrifugal force.
5. Dewatered sediment is delivered by the screw to the discharge holes, through which it falls into the hopper.
6. The fluid deprived of impurities (Fugate) overflows into the collector which is usually connected to the pipeline system.

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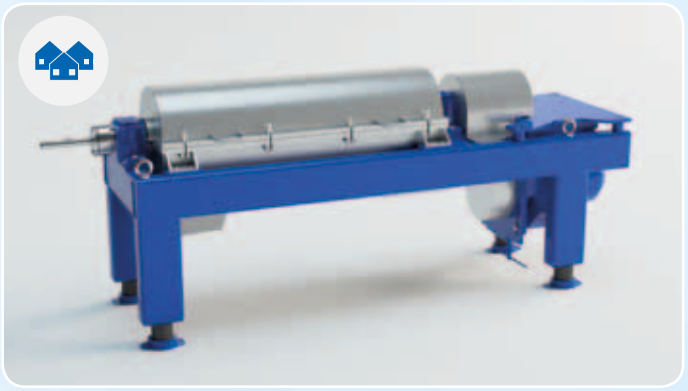
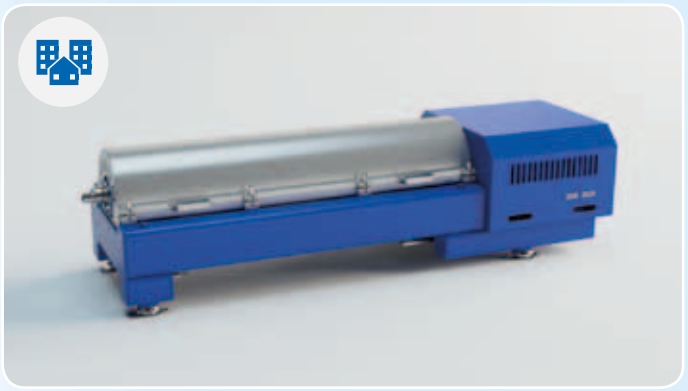
Overview of models

Type	DO250	DO250 twin-engined	DO301	DO520
Bowl diameter (mm)	250	250	300	520
Engine (kW)	12	2 × 11	1 × 5.5 1 × 18.5	1 × 33 (2,950 rpm) 1 × 7.5 (2,950 rpm)
Operational consumption	7	8.5	13	19
Maximum speed (min^{-1})	4,100	4,100	4,000	2,800
Weight (kg)	910	1,010	926	2,240
Flow rate (m^3/hour)	1–4	1–4	2–8	10–15
Number of equivalent residents	2,500–12,000	2,500–12,000	10,000–20,000	15,000–50,000
Dimensions – l×w×h (mm)	2,375×600×870	2,500×830×1,000	2,437×767×636	3,366×1,048×956

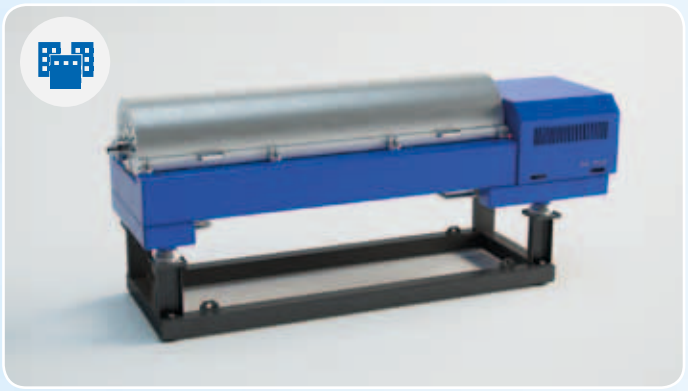


DO250
2,500 – 12,000 EO (for stable sludge)

DO250-2M
2,500 – 12,000 EO (for variable sludge)



DO301
10,000 – 20,000 EO



DO520
15,000 – 50,000 EO

Mobile decanting centrifuge

Mobile decanter centrifuges are an optimal solution for dewatering sludge in the field.

- Optimum solution **for operation of multiple small wastewater treatment plants without drainage facilities** on sludge vessels or **for one-off or occasional needs of the client**.
- Suitable for applications with an equivalent population of 1,500 – 5,000.
- Twin-engined design installed on a trailer together with a flocculation station equipped with necessary pumps, pipeline, and conveyors, including electronics.
- **We offer sale or short-term hire or even long-term lease.**

Servicing of decanter centrifuges

Thanks to their simple and rugged design decanter centrifuges require minimum repair. Most failures can be prevented with the use of our technical support and diagnostics. If failures occur, we carry out repairs either directly at the customer or in specialised shops at our manufacturing facility.

We also offer repair and maintenance services to operators of third-party decanter centrifuges. If a longer time is needed for the repair, the customer can use our mobile dewatering device, which is able to fully replace the existing decanter centrifuge for the time of the repair.