LYNX 1000

Decanter centrifuge for tailings treatment

Tailings treatment in the oil sands industry
The Alfa Laval LYNX 1000 is specially designed and built for heavy-duty solids removal in the oil and gas industry, high-speed separation and ultrafines removal. The LYNX 1000 represents a new generation of decanter centrifuges, with the most advanced design features currently available, and has proven to be a key component in treating oil sands tailings, with superior process performance and stable operation.

The LYNX 1000 removes flocculated fine particles with an effectiveness in excess of 97%, and consistently delivers a dry cake to meet the particular requirements associated with tailings treatment.

The LYNX 1000 features outstanding wear protection that enables this decanter centrifuge to cope with abrasive and coarse solids effectively, at the same time as providing extended service life.

The new design and the patented Alfa Laval Power Tubes result in up to 30% power savings compared to traditional decanter centrifuges used in oil and gas applications.

The benefits of LYNX solids separation technology
Maximum solids recovery and high level of fines removal to obtain better fluid clarity and faster fluid recovery.
- High G force available for the centrifugal separation process
- Decanter geometry specially designed for larger process volumes
- Newest design technologies

Exceptional wear protection that increases the lifetime of wear parts and reduces maintenance cycles.
- Patented feed zone design for most effective flow distribution
- Replaceable wear-resistant parts made of tungsten carbide
- Improved solids outlet protection

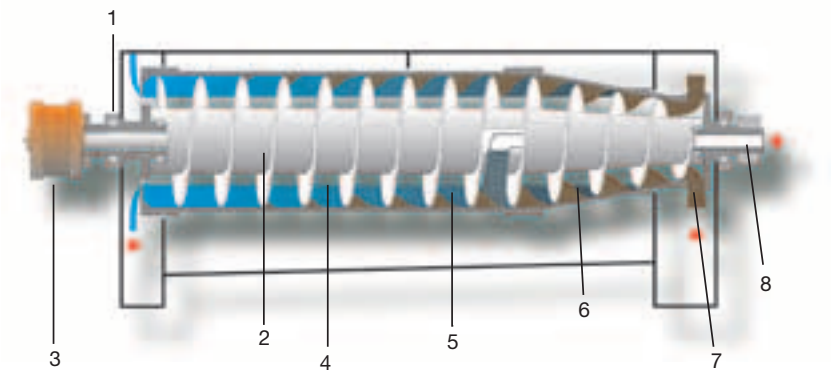
Consistently drier solids, consistent desired cake.
- Optimized conveyor and bowl geometries for increased compaction capabilities

Unmatched flow rate capacity/diameter that allows the treatment of larger process volumes in smaller machines and thereby, lower operational costs per volume treated.
- 360-degree solids outlet
- optimized designs for improved capacities

Easier access to the inside of the unit makes for faster, more effective service and cleaning. Save time and money.
- Pond depth can be adjusted quickly and easily
- Lighter and smarter cover design

2-Touch control system that improves your operating reliability and optimizes your processes. Save manpower and training costs.
- Easy to troubleshoot and service, ensuring maximum uptime
- Compatible with multiple industry standards and communication protocols
- Consistent, easy-to-use interfaces

Cutaway view



1) Main bearing
2) Screw conveyor
3) Gearbox
4) ”Pond” of clarified liquid
5) Solids deposited on bowl wall
6) Tapered beach section of bowl for discharge of solids
7) Erosion protected solids discharge ports
8) Hollow drive shaft with stationary feed tube

Principle of operation

The Alfa Laval LYNX 1000 is a decanter centrifuge that features a slender cylindrical/conical bowl with a relatively large length/diameter ratio. The bowl normally rotates at up to 2200 rpm with G forces ranging from 300 to 2700 G. The screw conveyor fitted inside the bowl continuously removes the separated solids.

The process liquid is fed into the cylindrical section, where it forms a layer – the pond – inside the wall. The thickness of this layer is established by a series of adjustable discharge Power Tubes at the end of the cylindrical section, and over which the clarified liquid is decanted, aided by centrifugal force.

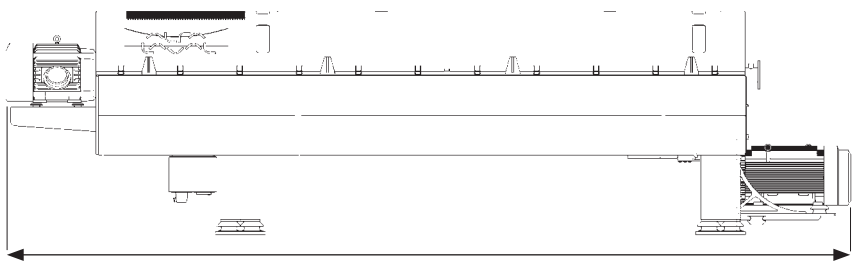
Because solids have a higher density, they settle against the bowl wall, from where they are continuously removed by the screw conveyor and transported up the conical section – the beach – and out through the discharge openings at the narrow end.

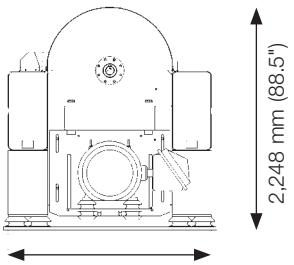
Technical data

Maximum hydraulic flow rate*:		540 m^3/h (2,380 GPM)
Max. speed with:	(1,200 kg/m^3 wet solids)	2,200 rpm (2,700 G)
Differential speed range		2-40 rpm
Solids capacity		Up to 70 ton/h (154,300 lbs/h)
Main power		Up to 440 Hp
Back drive power		Up to 200 Hp
Dry weight decanter unit		18,500 kg (39,700 lbs)

* The operating flow rate depends on the individual properties of the feed and the separation result required.

Dimensions





How to contact Alfa Laval
Up-to-date Alfa Laval contact details for all countries are always available on our website at www.alfalaval.com