Alfa Laval P3 decanter centrifuge

The perfect choice for solid-liquid separation in the mining & mineral industry

Built for the toughest applications
Alfa Laval's P3 decanter centrifuge was specifically developed for rough solid-liquid separation duties in the mining and mineral industry. Every detail has been designed to deal with the harsh conditions found in mining, mineral processing and tailings treatment applications.

To maximize durability, P3 decanters are built with carefully selected components such as Duplex stainless steel, heavy-duty bearings and a stiff box beam frame. All interior parts of a P3 decanter centrifuge exposed to abrasion are protected by replaceable tungsten carbide tiles to eliminate problems. The feed and outlet zones have been designed for smooth acceleration of the solids to minimize wear and secure an efficient separation process.

Unrivalled capacity
The P3 model offers the highest throughput on the market and handles extremely high solids loads. The special deep-pond design in combination with the unique conveyor and the optimized cone angle configuration allows the P3 to handle volumes far beyond the capacity of any other decanter centrifuge.

Highly efficient separation
The high G forces in a decanter centrifuge give a very dry, stackable cake. The high separation efficiency means P3 decanter centrifuges are exceptionally good at separating out finer particles and recovering valuable process chemicals, minerals and water. In addition, the Alfa Laval P3 has the lowest power consumption of any comparable decanter centrifuge on the market.

Applications
Alfa Laval P3s is well suited to a wide range of mining and mineral applications:

- Tailings treatment
- Recovery of water, chemicals or minerals
- Treatment of slurries with finer particles
- Where dry stacking with stackable solids is required
- Installations where flexibility and movability are required
- Where environmental concerns are important

Tungsten carbide tiles mounted on the scroll conveyor prevent abrasion problems.

The inside of the bowl is fully protected against abrasive media.

2Touch – world-class control system
Each P3 decanter centrifuge is equipped with a 2Touch control package as standard, pre-installed and factory-tested in conjunction with each particular unit.

The combination of 2Touch control systems and P3 separation technology makes sure you get the most out of any P3 installation, while keeping costs for installation, commissioning, operation and maintenance to a minimum.

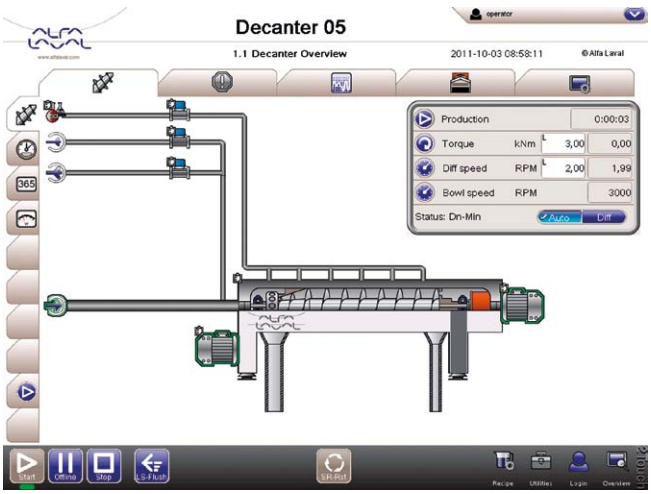
The control unit can be connected to the site's DCS system for remote monitoring and interaction, securing reliable and safe operation at all times.

Service
Maintenance requirements are very low on a P3 decanter centrifuge. It has a number of built-in features that facilitate equipment servicing.

Every Alfa Laval product comes with the full support of our global service organization. Alfa Laval Service offers a comprehensive range of services and products that brings optimal operating efficiency and return on investment throughout the entire lifecycle of your equipment.

We have a strong local presence in close to 100 countries and continuously build new local setups to ensure service at the highest level – even at remote locations.

Our Field Service Engineers handle on-site service, supported by our product specialists at the Alfa Laval Service Centres for more complex tasks, such as reconditioning.



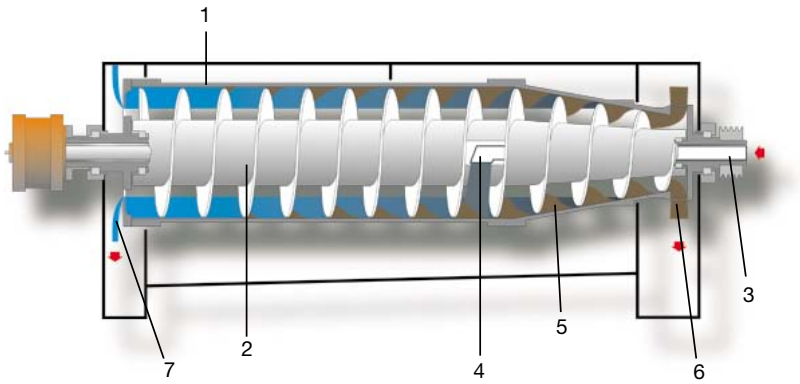
P3 decanter centrifuges are built for fully automated operation. A special upgrade to the 2Touch control system protects the decanter centrifuge against power loss, ensuring safe, uninterrupted operation, regardless of power dips or outages.

Benefits

- High cake dryness (stackable cake)
- Very high capacity and small installation area
- Fully wear protected
- Robust design and high reliability
- Lowest power consumption for any mining and mineral decanter
- Low CAPEX and OPEX

Working principle

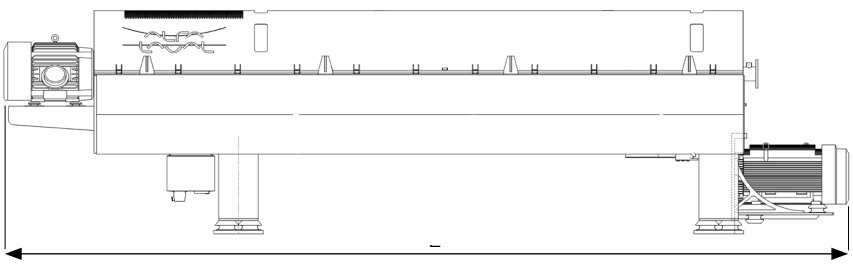
Separation takes place in a rotating cylindrical bowl (1) equipped with a scroll conveyor (2) that rotates at a lower speed. The slurry is fed into the bowl through a stationary inlet tube (3) and then smoothly accelerated in the specially designed feed zone (4). Centrifugal force deposits the solids on the inner surface of the bowl (5) and leaves at openings at the end of the conical bowl (6). The clarified liquid exits at the other end of the decanter (7).

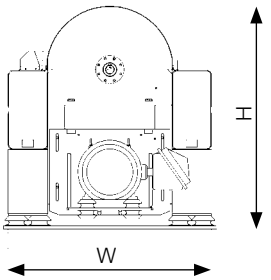


Technical data

Model	Weight kg (lbs)	Bowl material	Other product and liquid wetted parts	Main drive power kW (hp)	Back drive power kW (hp)
P3-4070	3,200 (7,050)	Duplex	AISI 316 or Duplex	37-55 (50-75)	18.5 (25)
P3-7070	6,500 (14,300)	Duplex	AISI 316 or Duplex	75-160 (100-200)	37 (50)
P3-8070	8,600 (18,959)	Duplex	AISI 316 or Duplex	55-250 (75-350)	55 (75)
P3-10070	18,500 (37,700)	Duplex	AISI 316 or Duplex	132-350 (150-475)	110 (150)

Dimensions





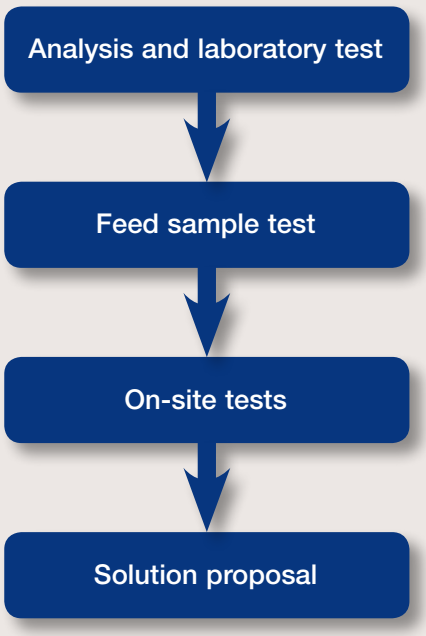
Model	L mm (inch)	W mm (inch)	H mm (inch)
P3-4070	4,855 (191)	1,060 (42)	1,376 (54)
P3-7070	6,450 (254)	1,450 (58)	1,791 (71)
P3-8070	6,900 (272)	1,510 (60)	1,850 (73)
P3-10070	8,822 (348)	2,050 (81)	2,248 (89)

On-site testing

Alfa Laval is leading the development of decanter centrifuges aimed at the mining and mineral industry, and we are keen to show you how we can help cut costs, increase performance and reduce power consumption.

We offer you a unique possibility to test a P3 decanter centrifuge at your site, allowing you to experience its outstanding separation efficiency on your specific slurries. We are confident you will be impressed by the results.

Please contact your local Alfa Laval representative to arrange a customized test of the P3 decanter centrifuge at your plant. See www.alfalaval.com for contact details.



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