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TECHNICAL ARTICLE

Seital Centrifuge: Supreme Clarification For Today's Environment

The Seital range of centrifuges represents over 20 years of development and design, specifically meeting the needs of winemakers and today's evolving winemaking environment and challenging broader market. For example, as red wine volumes are now being held in bulk storage for longer periods, the need for more effective and rapid wine clarification capabilities has emerged.

Seital's superior clarification capabilities ensures better microbial stability of stored wines post ferment, whereas the incumbent predominantly separator focused centrifuges have inherent inconsistencies and fail to deliver high-level clarity. A Seital centrifuge can also handle ex-MLF wine, even bentonite lees and gross lees.

Key benefits of the Seital technology is the reduced need for subsequent solids removal by filtration, cold settling, etc, with the inevitable losses in product volume and quality that this entails.

The emergence of new technologies such as cross flow filtration has placed greater importance on high quality clarification. High NTU wines post centrifuge will result in a higher incidence of fouling in hollow fiber cross flow membranes. Issues relating to higher wine losses in the form of increased wash regime imposes for cross flow filter membranes and greater requirements for full and partial solids discharges in cross flow filter processing, can all be mitigated by the adoption of better performing centrifuge technology.

Seital's design minimises product losses by incorporating a new metering device to ensure that the sludge discharged is highly concentrated. More concentrated sludge means more of the wine or juice retains its maximum value. It also means less vacuum filtration, and less tank space tied up holding sludge.

Seital protect product integrity via hydraulic sealing with an additional chamber at the top of the bowl. This ensures complete separation of product from air, thereby minimizing oxygen pick-up
(and maximizing carbon dioxide retention in sparkling wines.)



So how does a Seital separator achieve superior clarification?

The keys to performance in centrifugal separation are G-force and separation area. In a nutshell,

G-force is a function of angular velocity and radius. Seital separators spin faster, but have a shorter radius, compared to other centrifuges, for equivalent G-force.

Separation area is basically the total area of the discs in the separator where the solid particles are captured and directed outwards to the sludge chamber. Seital achieve a comparable area with a smaller radius in two ways: by angling the discs more sharply, and by reducing the inner diameter of the discs.

Seital's approaches to achieving G-force and separation area allow several features besides superior clarification which ensure that their clarifiers are the best tools for the clarifying job. Firstly, a Seital separator is stable enough to be skid mounted ex-works, for easy installation, and convenient re-positioning in the cellar. You don't have to bolt it to a heavy concrete plinth to ensure it doesn't go for a wander across the cellar.

Energy efficiency = savings and green credentials

A key benefit of the Seital centrifuge is variable speed feature and reduced power consumption. Equivalent separators offered by Seital's competitors are up to twice as heavy on the electricity bill. This feature is important not just because it saves you money. These days, the impact of your operations on the environment must also be considered.

So Seital separators are easier on the environment in two ways: less power consumption means less Greenhouse Gas Emissions; and less vacuum filtering means less nasty diatomaceous earth to get rid of. And let's not forget noise pollution. The muffled de-sludge of a Seital separator won't frighten your cellar hands.

Some other important Seital separator features for consideration are:

- Easy to use touch screen interface control of all operating parameters.
- Remote access / monitoring capabilities.
- NTU (turbidity) or flow rate driven settings.
- Servicing of bowl valves without the need to dismantle the bowl.
- Latest design Brush Strainer to handle the toughest Australian conditions.
- Fully equipped super efficient Double Hydro Cyclone.
- In-line strainer filter for when bypassing the brush strainer and hydro cyclones.
- Electric emergency braking as well as conventional water braking.
- Soft start VCD set up.
- Discharge capability during power failure.
- On board modulating valves.
- On board centrifugal pump.
- On board water filtration system.
- On board calculator for settings optimization.



Seital is exclusively distributed by Australian & New Zealand Winemakers P/L. For further information, call (03)9924-4060 or visit www.ausnzwinemakers.com

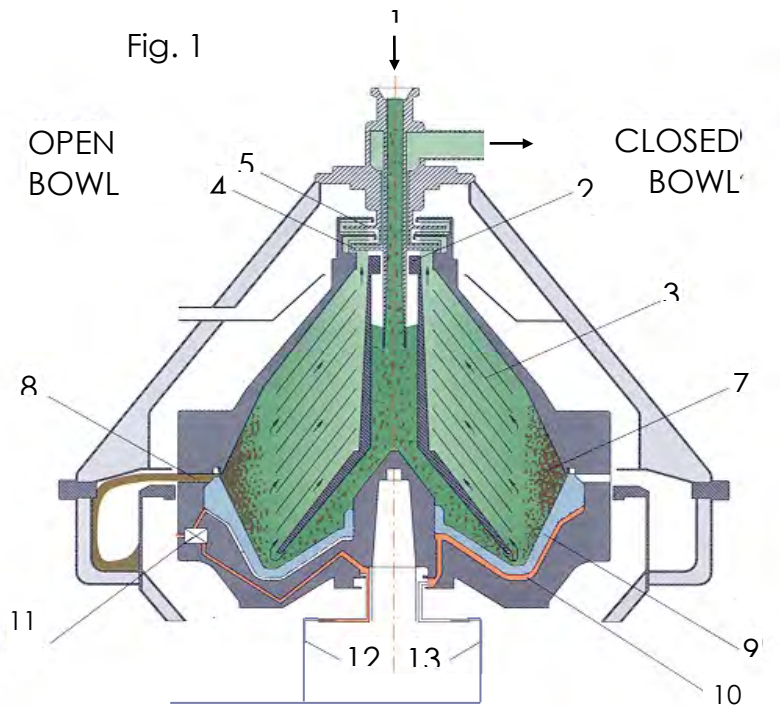




Diagram of the advanced design



Seital Centrifuges are available from 1,000 L/hr to 40,000 L/hr models