

EFFICIENT MUST CLARIFICATION IS IMPORTANT WHEN QUALITY AND QUANTITY ARE AT STAKE. THE FLOTTWEG FINE SOLIDS DECANter FROM POREXSA OFFERS COST-SAVING AND QUALITATIVE ADVANTAGES IN MUST PROCESSING. BY WANDA AUGUSTYN

FINE SOLIDS DECANter DOES THE JOB



With the harvest done and wine processing in cellars across South Africa now the main focus in the winemaking cycle, efficient must clarification is an all-important factor in the production process. PorexSA's Flottweg decanter offers various advantages compared with traditional must clarification methods.

"The main advantage is improved quality," PorexSA MD Lionel Dickens says. "The machine separates trub particles from must within seconds, thus reducing the contact time considerably. Due to their high phenol content, trub particles may have a negative impact on must quality in the event of long contact times. The clarified must is gently discharged from the machine using an adjustable impeller. Thanks to this special discharge system, the precious liquid is discharged free of foam and under pressure. Must contact with oxygen is therefore minimised."

This impressive decanter also results in optimum clarification and a high yield/recovery. Its rotor and conveyor scroll have been specifically adapted for efficient must and wine clarification. Thanks to the adjustable impeller, the separation zone in the machine can be optimally adjusted to the raw product. The best clarification results can be obtained, irrespective of the grape must's trub content. The discharged must's solids content is generally less than one percent.

The differential speed of the scroll and decanter bowl can also be adjusted, thus optimising the solids' residence time and significantly increasing the clarified must yield. Thanks to the decanter's flexibility it can be used in various wine production processes, making it a truly multifunctional piece of equipment for efficient trub management.

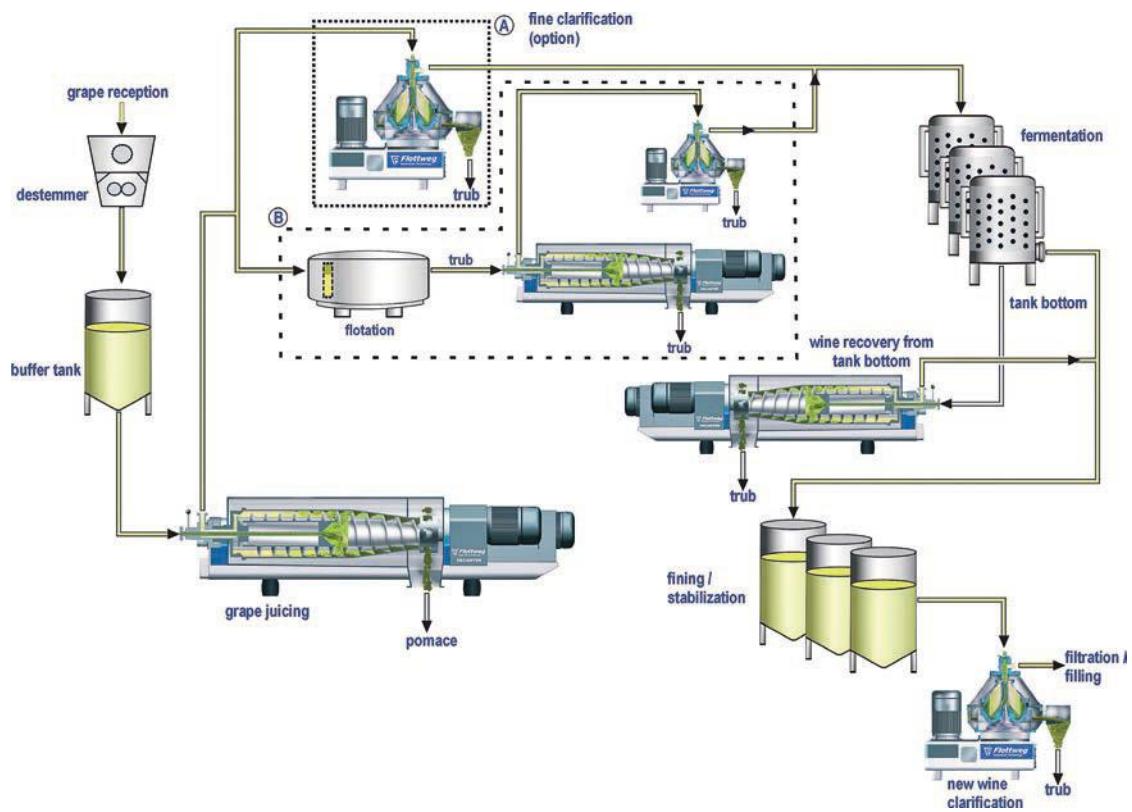
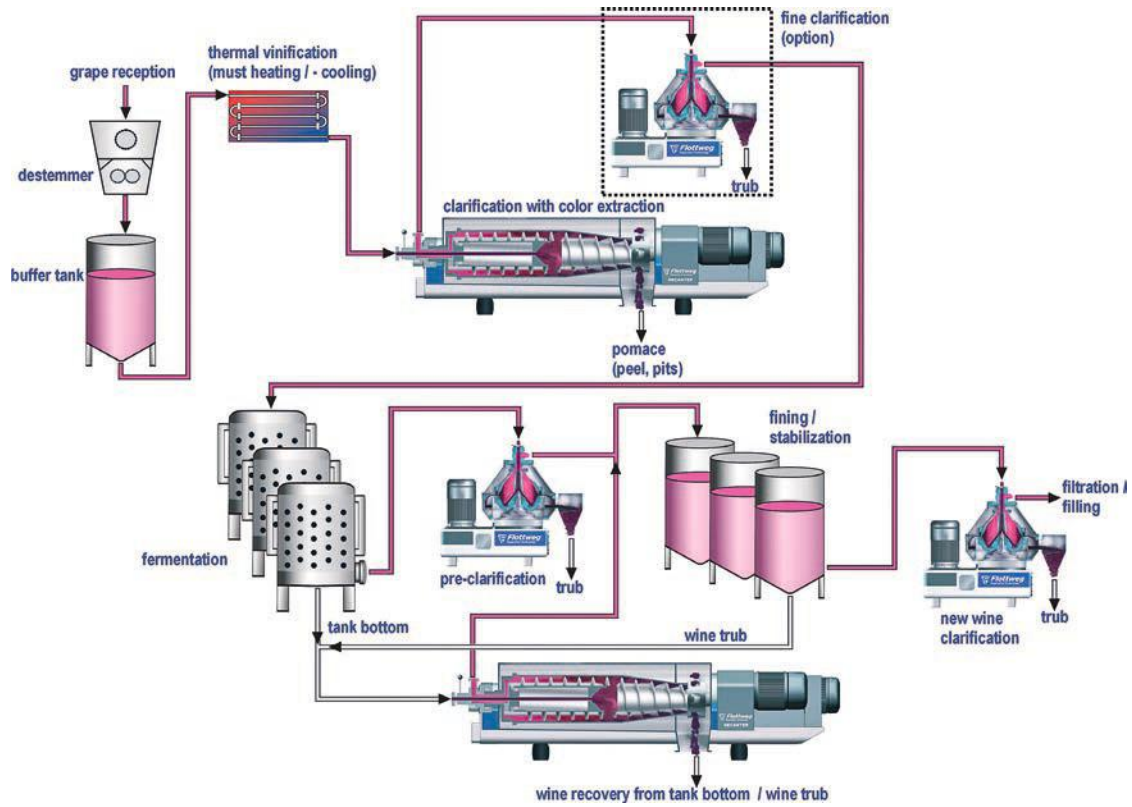
How it started

Over the past five years several tests and trails were conducted on the recovery of flotation bentonite lees in wineries. Worldwide big wineries were looking for a system to supply recovery without filter powder, that uses no consumables and has a flow rate of 2 000-10 000 litres/hour.

Most available systems in the marketplace have vacuum drum filters. Older plate and frame systems have various disadvantages such as a low recovery rate and high water usage. They are also difficult to clean and require extra waste management.

High-solids crossflow units have been available for several years, but these systems have low flow and recovery rates and lengthy washing times requiring a great deal of cleaning chemicals.

Flottweg has run flotation lees tests worldwide over the past five years and, based on the results, developed the fine solids decanter with impeller system.





“This patented system helps recover lees at a high flow rate,” Lionel says.

“The main aim is to reduce solid content to close on 10% in one separation without any consumables. The system is fully automatic from the supply tank to the decanter and is self-cleaning.”

PorexSA has tested several units and three years ago CA Filtration bought a Z4E unit which it rents out to local wineries for flotation lees recovery during the harvest season and bentonite wine recovery after the season.

According to Christo de Witt, owner of CA Filtration, they make use of not only the best machinery available, but also invested a lot of time and effort to ensure that their operators are trained and capable to handle the filtration units.

“The Z4E has given us amazing results over the past few years we have worked with it.

It breaks the lees filtration down into two processes. Firstly a decanter reduces the solid percentage of the lees. The lees are then put through a lees filter to be clarified and by doing this, most wine are recovered from the lees.

By following these processes, we have managed to push up recovery rates to the maximum.”

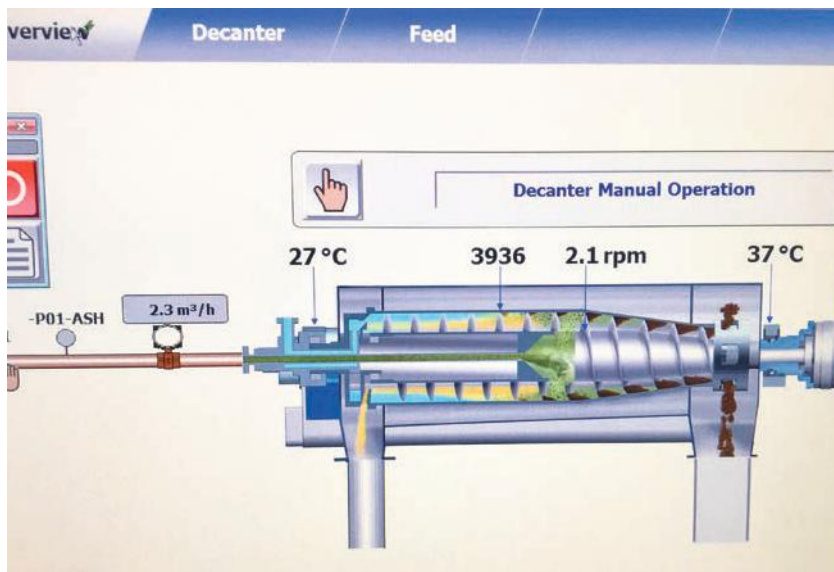
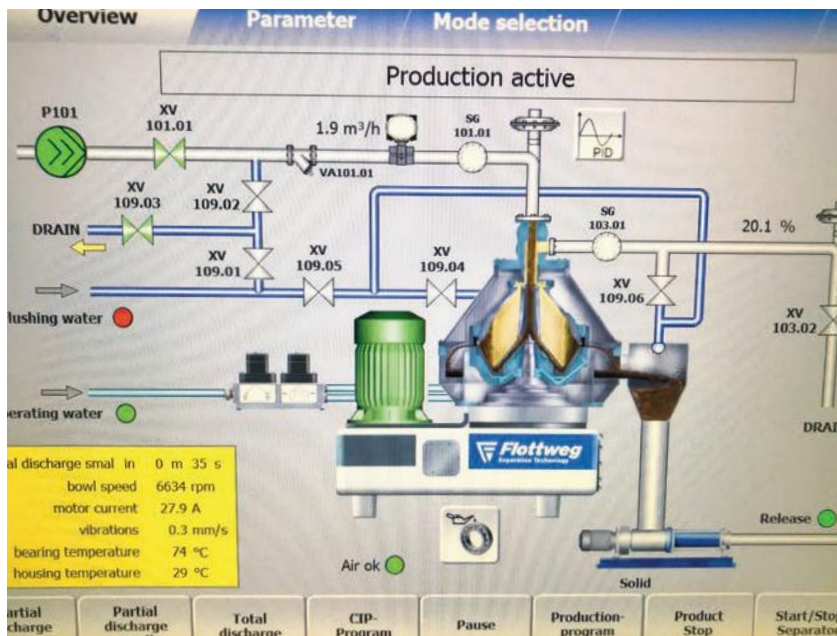
According to Christo, there are various reasons why this is his preferred machine.

“The income on recovered wine being sold is so much more than the income of the lees being sold.

These filtration methods also do not make use of any diatomaceous earth what so ever. The recovered wine is under 1NTU and this machine allows for clean and hassle free filtration.

“I would go so far to say this unite has the highest recovery rate of all the filtration methods available.”

“After three years of operation, it’s clear this system works extremely well and can be used in wineries,” Lionel says. “Tests prove the unit recovers more than 20% from the product than any other system on the



Looking back

PorexSA has been supplying the wine, spirits, juice, olive oil and water industries with top-end German-manufactured products for the past 18 years. Despite changes in the structure of the company and its relocation to new premises at Bernheim Wines on the R45 between Paarl and Malmesbury, the company's mission remains unchanged: Providing the industry with well-known, high-quality filtration and separation products and unsurpassed personal service.

As sole distributor of Flottweg, Cadalpe and Begerow/Eaton products in Africa, PorexSA is ideally positioned to supply filtration solutions and products to the beverage industry across the continent. It also provides technical advice on how to cut costs by recovering 100% of the separated product, waste product and all.

"This fine solids decanter makes sense," Lionel says. "It offers maximum purity, improves the quality of your product and has higher recovery rates than any other machine of its kind, which is what you expect from your separation technology in your cellar."

market. We installed a small test system at a winery in Bredekloof earlier this year to see if our fine solids decanter can indeed recover product to meet our clients' needs."

This system has a flow rate of 1 000-5 000 litres/hour which is adjusted to suit each client's reduction needs. "Currently we run this unit at 2 300 litres/hour to suit our clients' needs," Lionel says. "Starting solids are down by 45% to 10% and smaller than 150 Nephelometer Turbidity Units (NTU). The fine solids decanter removes all powder from the flotation lees and bentonite lees system."

Most wineries have centrifuges or a high solids crossflow machine, but this decanter does the recovery according to specification. This fine solids decanter is ideal for wineries with no equipment for solids recovery. After the harvest the decanter can be used to recover bentonite lees, while the centrifuge can be used for wine filtration. The system pays for itself in two to three years. ●

COVER PAGE PICTURE: NEIL DE WITT FROM CA FILTRATION WITH LIONEL DICKENS, POREX SA AND CHRISTO DE WITT, CA FILTRATION.