

# Velo Acciai Srl

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**V**LS Technologies, innovative solutions for liquid treatment. VLS Technologies represents worldwide a single reference point for the client for both the aspect of filtration and more complex needs that involve the whole process of liquid treatment: in addition to traditional applications, as sheet filters or pressure leaf filters, the focus of VLS Technologies is the development of innovative solutions as cross-flow filtration systems and reverse osmosis. Innovative technologies guarantee a number of advantages. For example, in cross-flow filtration the liquid is pushed by means of pressure through the particular pores of a membrane: thanks to this system the clients are able to improve the obtained quantity of product, decreasing energy consumption and production costs, for example avoiding the usage of clarifiers and adjuants.

**TLS Filter, cutting-edge technology**  
TLS Filter is VLS advanced solution for cross-flow filtration of products, such as lees and wine musts. The filter enables to free users from the daily use of rotary drum



vacuum filters and offers an automatic, economical filtration without using earth. The filtered wine is perfectly brilliant and clear (<1 NTU). It can directly be added into the filtered batch without undergoing any additional treatment (fining and filtration). The recovery, depending on the load of the filtered products, is higher than the one obtained with rotary drum vacuum filters. In addition, the filtered product is of better quality (analytic parameters are maintained, and wine is in a "pre-bottling" quality). Thanks to machinery remote control, the presence of the operator is minimal, thus ensuring easier and automatic operating process.

**Membranes, filtration and advantages**  
This cross-flow filter specifically dedicated to the treatment of "tank bottoms" is equipped with a stainless steel membrane with a selectivity adapted to very clogging products such as fining lees (bentonite, ...) and centrifuge sludge. This membrane has the characteristics to be long lasting and resistant to pressure, temperature and chemical products. Those features are as many assets for the reliability of the filtration and the capacity of regeneration of the membranes. "Tank bottoms" are filtered through a series of 2 to 12 membranes of 16 m<sup>2</sup> each. TLS filter exists with 2, 4, 6, 8, 10 and 12 membranes. Clogging is contained on the surface of the membrane which allows for more consistent removal of solids from filterable area, thus allowing for longer, more productive filter cycles. The filter, steam-sterilisable, is more productive than a classical rotary drum vacuum filter, and will not lose quality or alcohol. Moreover, residues, still containing alcohol, can easily be valorised in a distillery.

#### Areas of application

Thanks to its high-performing technology and the possibility of full customization, TLS Filter can be used to treat a great



variety of products. TLS is especially recommended for the filtration of sweet lees from continuous or discontinuous flotation and static sedimentation, and for wine and musts with high contents in solids. In addition to wine treatment, TLS can be used for fruit-juice concentrates and sugar solutions (sugar syrups, glucose, etc.), and for post-fermentation lees and fermented lees post clarification.

Other fields of application of TLS Filter are the treatment of spirits (Atex execution) and of hard products with high concentrations of filtering aids (bentonite, gelatine and charcoal).

#### TLS Filter for the South African market

Botha Kelder, one of the main wineries in South Africa, processing about 40,000 tons of grapes a year, has chosen VLS Technologies for the installation of a TLS cross-flow filter with 6 stainless membranes for the treatment of flotation lees and tank bottoms. From this it follows the elimination of costs related to filtration aids and those related to the labour required to prepare the filter for production and inspection during the process; to this is added also the possibility of working automatically 24 hours a day.

The filter has also been equipped with remote control from the smartphone or laptop that allows to command and control it even if it is not physically in place; further customizations were made as per the philosophy of our company, always dedicated to listening to the specific needs of the customer and identifying the solution that can satisfy them.

Find out more at [www.vlstechnologies.it](http://www.vlstechnologies.it)



## TLS FILTER

# WITH PASSION, AND THE RIGHT TOOLS, YOU CAN EXTRACT VALUE FROM ANYTHING.

TLS cross-flow filter is specifically dedicated to the treatment of «tank bottoms» thanks to its stainless steel membranes: it frees from the daily use of rotary drum vacuum filters, and the final product will be perfectly brilliant and clear (< 1 NTU). Finally, residues still containing alcohol can easily be valorized in a distillery. **TLS is fit for the filtration of wine musts, juice's retentates, spirits and distillates.**



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