

Valmatics



“The control system means that, for each and every drying, you can work from the factors that are most important and control the process to achieve the desired properties.”

 **valutec**[®]
WOOD DRYERS INC

Good for Wood

There are many explanations for Valutec's market successes. It would be easy to point out factors such as our offering the best solutions based on cutting-edge development work and each customer's needs. However, the most important reason for our success is really something deeper than that, our conviction that better timber drying leads to greater competitiveness and increased use of wood. This is Valutec's innermost driving force and the very reason for our existence. By helping you, as a customer, to be profitable, we are earning our place in the chain. It also constantly inspires us to develop new, innovative concepts.

Our Valmatics control system is a good example of this. For each and every drying, the system enables you to work from the parameters that are most important and control each and every process to achieve the desired properties. For us, this is a very good way of contributing to your profitability and, in the long run, increasing the use of wood.



Valmatics control system

Flexibility and great choice

Energy optimisation without compromising quality

Valmatics is an adaptive control system that gives kiln operators a perfectly adapted tool for controlling the drying process. Working from current production needs, the system offers property-centred control that, with optimum flexibility and choice, makes use of several different parameters. One given factor is energy optimisation. Via fan control, the user can limit electricity consumption and thereby achieve better drying economy. Controlling the process to achieve the desired properties also makes it possible to create the perfect balance between quality and production capacity, thereby ensuring the optimal production flow.

Optimising the drying process for all kiln types

Valmatics is suitable for all Valutec's timber kilns. It can also be used for most other makes of timber kilns. The integrated "expert system" collects data on quality parameters and, to optimise the drying process, generates proposals as to how drying should be carried out.

Expert control for easy optimisation of the drying process

Valmatics offers "expert control" that makes it easy for the operator to optimise the drying process. Our expert system includes our ValuSim simulator system. This not only generates drying schedules for process control, but also makes it possible to adapt electricity consumption to the stage of the drying process. Furthermore, the control system has an energy director that can regulate the supply from two different energy sources. On the one

hand, an electrical power monitor turns down the fans when electricity consumption exceeds a certain level. On the other, a thermal power monitor shuts off the water flow to the heat coils when peaks are reached. In both cases, adjustments are made provided that the drying process is not in a sensitive phase.

Overview and control of the drying process

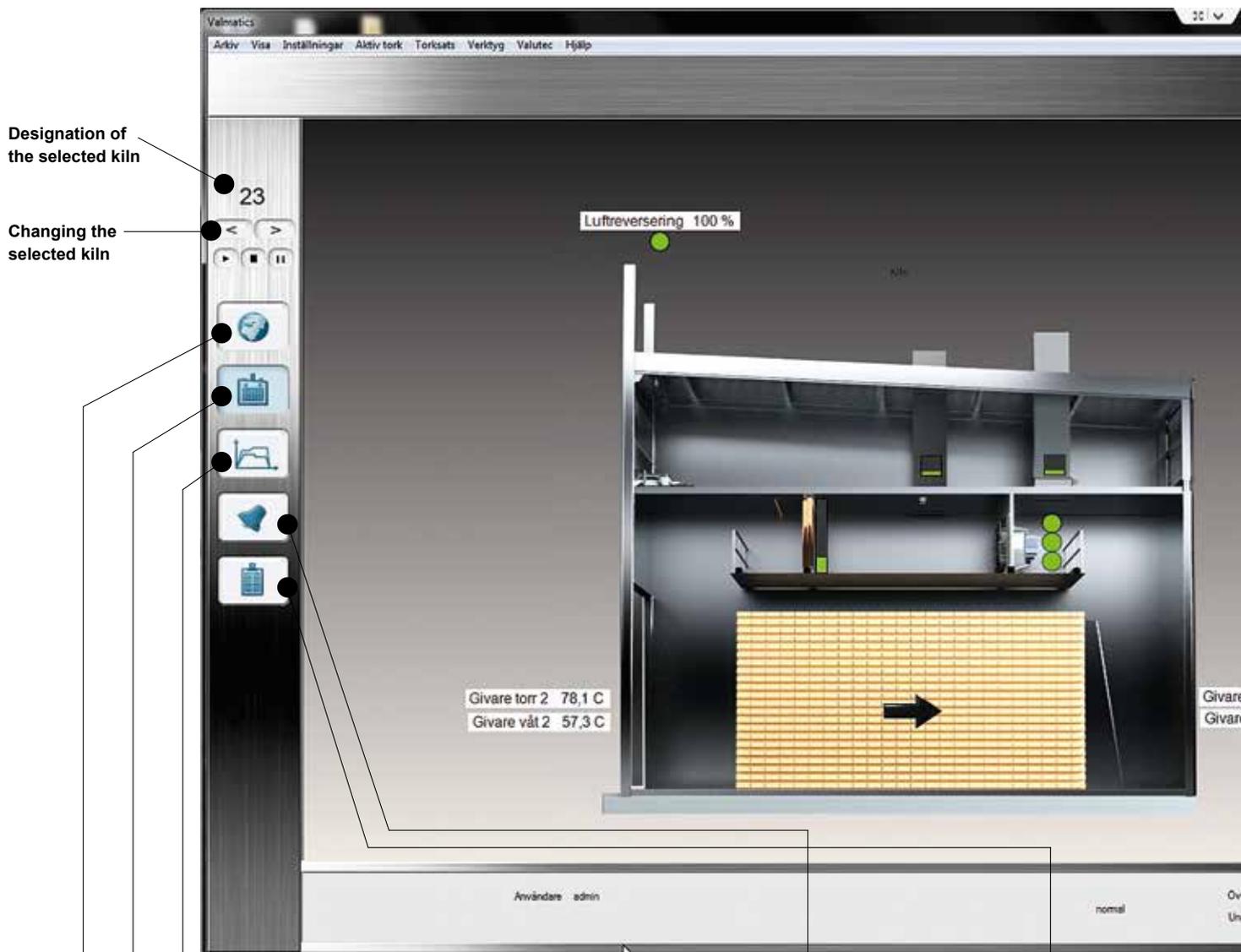
Thanks to Valmatics' user-friendly interface, it is easy for a plant's drying operators to manage the process on the basis of selected parameters. The operator can switch seamlessly between different displays and manage the process with total control of each operation.

Valmatics has an important role in kiln solutions that enable timber drying and result in a high quality end product.



Overview of every operation

Complete control process



Designation of the selected kiln

Changing the selected kiln

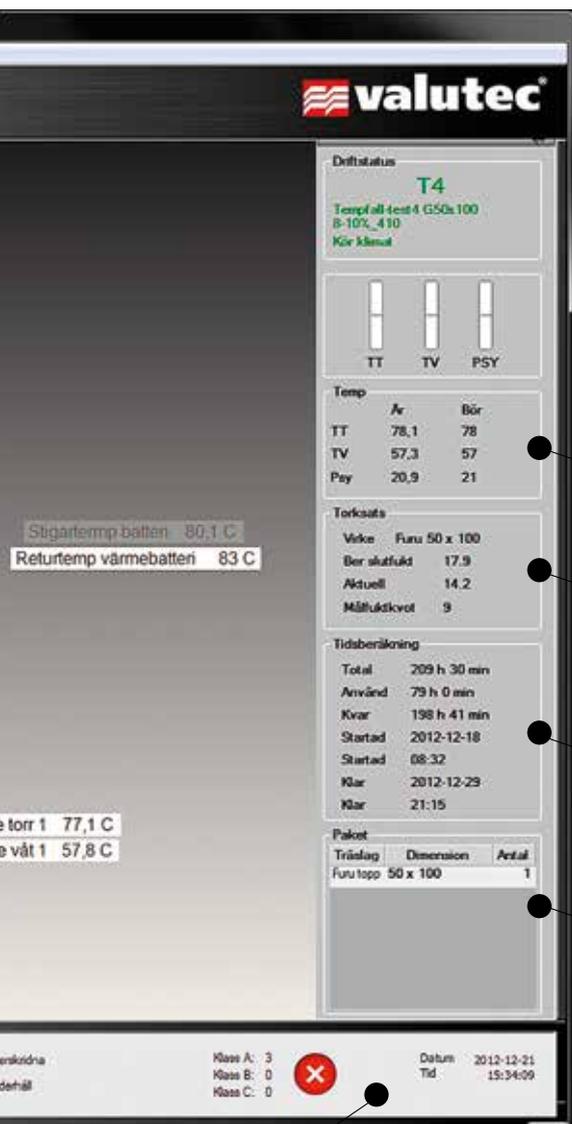
Overview display shows the status of all kilns.

Kiln display shows the detailed status of the selected kiln.

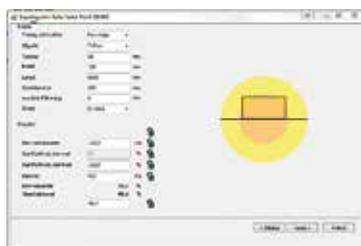
Trend curve shows the logged actual and desired values as well as all the input and output data for the selected kiln.

Alarm list shows the alarm status of all kilns

Batch results shows a report for the drying batch. Can be adjusted after manual measurements.



Reference points



1. Input data for initial moisture content.



2. Expert system proposed drying schedule.

Temperature in selected kiln

ValuSim calculations

Estimated drying time for the selected batch

Package data



3. Kiln display.



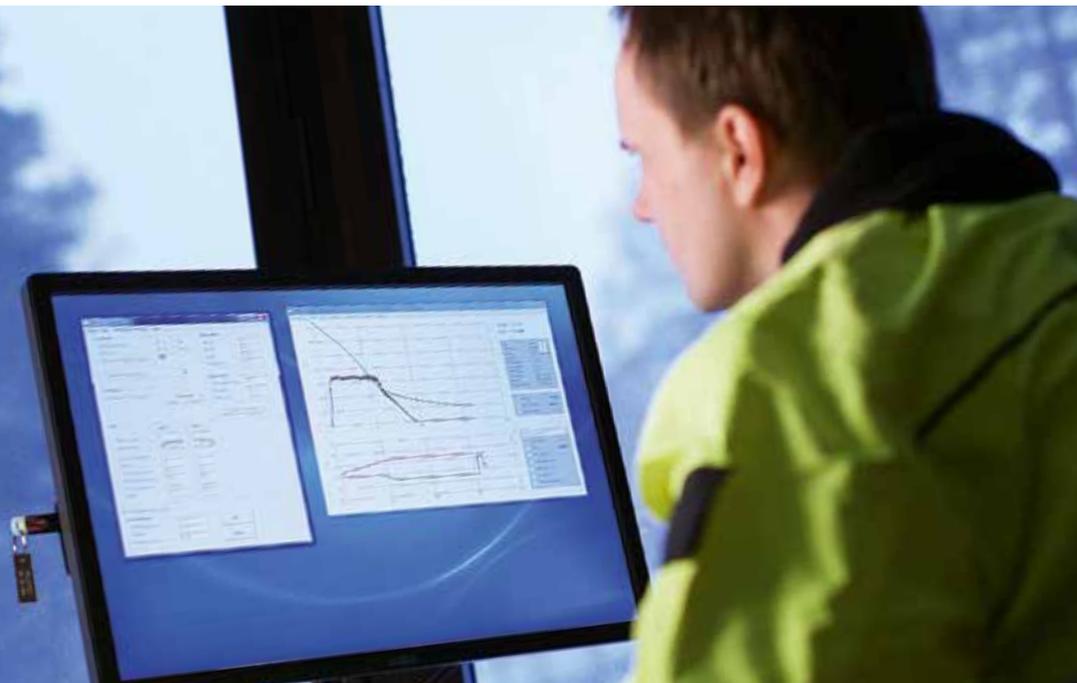
4. Drying report.



5. Overview display.

General information on the sawmill

ValuSim simulator technology



“You soon set up
the optimum drying
process.”

Technology based on Valutec’s R & D

Valutec’s ValuSim simulator technology is the result of an almost twenty-year long research and development project in the company. Through goal-oriented development and tens of thousands of hours of work, Valutec’s industry-leading specialists have devised both the calculating equipment and the applications.

Fastest way to precision drying

Valutec’s ValuSim simulator technology makes it possible to work from the factors that are most important for each individual end product and control the drying process to achieve the desired properties. Regardless of whether it is a question of energy optimisation, quality or capacity, everything is geared towards creating the optimum drying process. Furthermore, using ValuSim, you will soon find the most time-efficient drying process for each new dimension. This eradicates costly “running-in” periods.

This is how ValuSim works

ValuSim is designed to meet the differing needs of all sorts of sawmills. Our ValuSim suites build on numeric calculation of the wood’s internal moisture flows, shrinkage and drying stresses. Using comprehensive experimentation materials, simulated stresses are used to calculate surface checks. Along with the desired end quality, all known base data about the timber, the kiln and the control system is entered into a user-friendly interface. Based on this, a process that is very close to reality is simulated.

ValuSim is included in the control system

All deliveries of batch kilns with the Valmatics control system include, as an integrated function, a basic version of ValuSim. The complete ValuSim family embraces a range of stand-alone systems adapted for varying needs as regards differentiation and flexibility in the drying process. ValuSim suites are specially developed for Valutec’s entire range of batch and continuous kilns. The suites also work together with all control systems.

Control methods for various kiln types

The various possibilities for controlling the drying process depend on the type of timber kiln in question and on the kiln operator's personal preferences.

Control using a manual or a simulator-generated schedule

Valmatics offers the user great choice in controlling the drying process. For kiln operators who prefer the traditional method of controlling via own experience-based drying schedules, this possibility is always available. There are also adaptive control methods. In these, an integrated simulator continually improves the drying schedule. A drying schedule is automatically generated and can compensate for divergences during drying.

Adaptive control of batch kilns

For controlling batch kilns, there are two adaptive drying methods. These are simulator control and temperature drop control. In adaptive simulator control, the drying schedule is improved continuously via an integrated simulator, which compensates for divergences between actual and desired values. With adaptive temperature drop control, control data is generated continuously and is based on, in particular, temperature drops in the process.

Automatic climate switching in continuous kilns

For continuous kilns, we offer a control method with automatic resetting of temperatures and draught intervals depending on raw material and desired final moisture content.



Control kilns remotely via a mobile app

Valutec's control systems can easily be remotely controlled via an application on a mobile telephone. The app works with most systems and is available for both iPhones and Androids.



VALUTEC'S TRAINING COURSES

Valutec has an industry-leading training programme at both basic and in-depth levels. It focuses not only on timber drying, but also on Valmatics and other special areas. We additionally offer customised courses tailored to customer wishes and training needs.

For further details of Valutec's training courses, see www.valutec.se.

Throughout its almost one century in the sector, Valutec has developed drying equipment for the sawmill industry. Over the years, we have supplied more than 4,000 timber kilns to customers in the Nordic countries and the rest of Europe. Valutec is now Europe's leading supplier of timber kilns.

Every year, Valutec invests at least 5% of its turnover in research and development. Close collaborations with the industry's leading research bodies have resulted in continuous kilns and batch kilns that are now market leaders as regards both quality and total economy. Furthermore, Valutec's research into control systems and simulators has resulted in value-adding solutions that make it possible to realise the full value of the raw materials.

The Valutec Group includes Valutec Wood Dryers Inc, North America, Valutec AB, Sweden, Valutec Oy, Finland and Valutec LLC, Russia. Total sales amounted to approx. CAD 35 million.

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