



JARTEK → SAWMILL TECHNOLOGY





Complete solutions for sorting, sticking and packaging of sawn timber

→ **Our** range of saw mills offers a customised solution for any special needs. The wide variety of our deliveries involves saw mills ranging in capacity from 50 000 m³ up to 600 000 m³.

In every customer relationship we want to achieve a technology partnership and thrust which will last from father to son. Our long-standing customers are always provided with expert service regardless of whether it is about modernizing or implementing of a new plant.

The permanent basis of our planning is the reliable functioning in continuous operation. Our reasonably customized solutions ensure an excellent utilization ratio for the plant, at the speeds, which the other solutions are able to reach only temporarily. This will bring a real added value for your investment.

Sorting of green timber

→ **Varying** applications of the sawn timber make various demands to the dimension, strength, moisture and appearance. Sorting provides proper means to find suitable and homogeneous timber for every application. Sometimes a customer may require sawn timber different from the standard quality. This kind of request can serve the further process or end use. In this case the saw mill acts as a part of further processing.

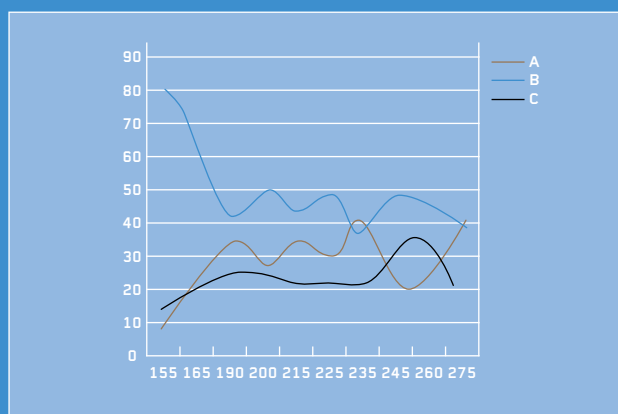
The operations of a green sorting plant include:

- transferring the sawn pieces from the saw line
- intermediate storing
- singularizing
- top and butt trimming and removal of defects
- measuring the pieces (width, height, length)
- sorting the pieces according to required parameters
- sorting to horizontal or inclined compartments



Cutting the green timber very accurately to the selling length allows to increase the green wood chips and thus to improve the productivity. One of the efficient cutting methods is trimmer sawing shown in the picture. For extremely high speeds we recommend the Jartek Free Cut system.

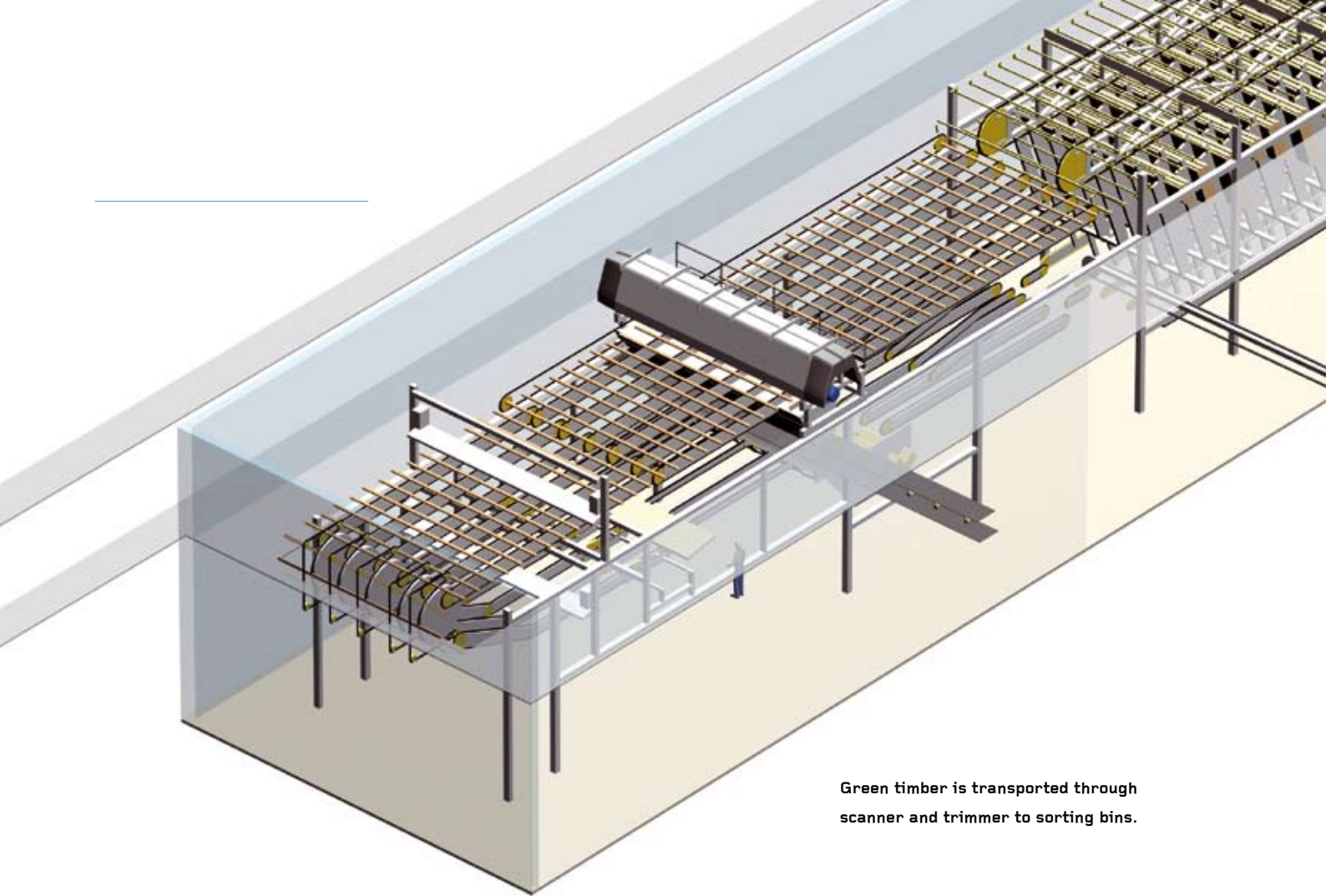
The green sorting planned by Jartek is aimed at optimal and profitable solution for the customer. Our machine vision applications are capable of detecting features such as central section, grain direction, wane timber, knots etc. In both manual and automation-based solutions, the leading idea is to achieve a system with long life cycle and high performance. The investment will pay for itself in saved maintenance and upkeep costs, without even mentioning the advantages as a result from the long operating life.



Quality yield*

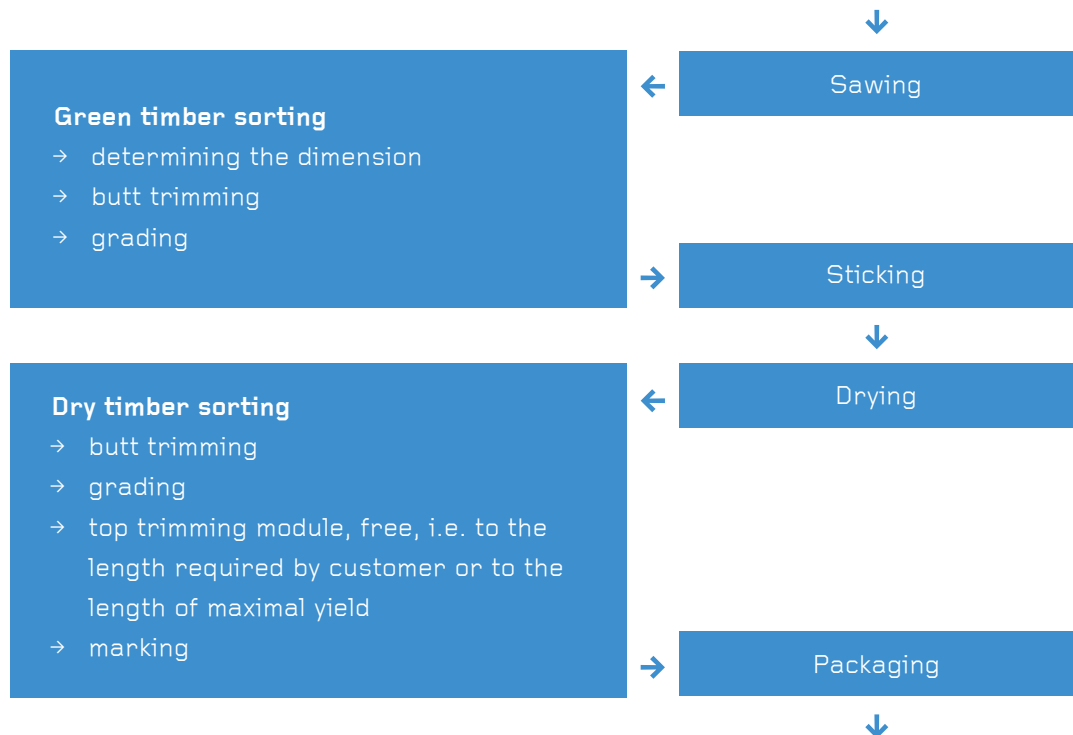
The proportion of different sawn timber qualities obtained from a log is varying widely, depending on raw material, sawing set-up and log grades. The picture shows the quality yields with varying top diameters of logs, obtained with a certain saw. There is also a lot of variation in the quality yield within the log grades.

*) Source: VTT



Green timber is transported through scanner and trimmer to sorting bins.

Sorting process flow



Sticking

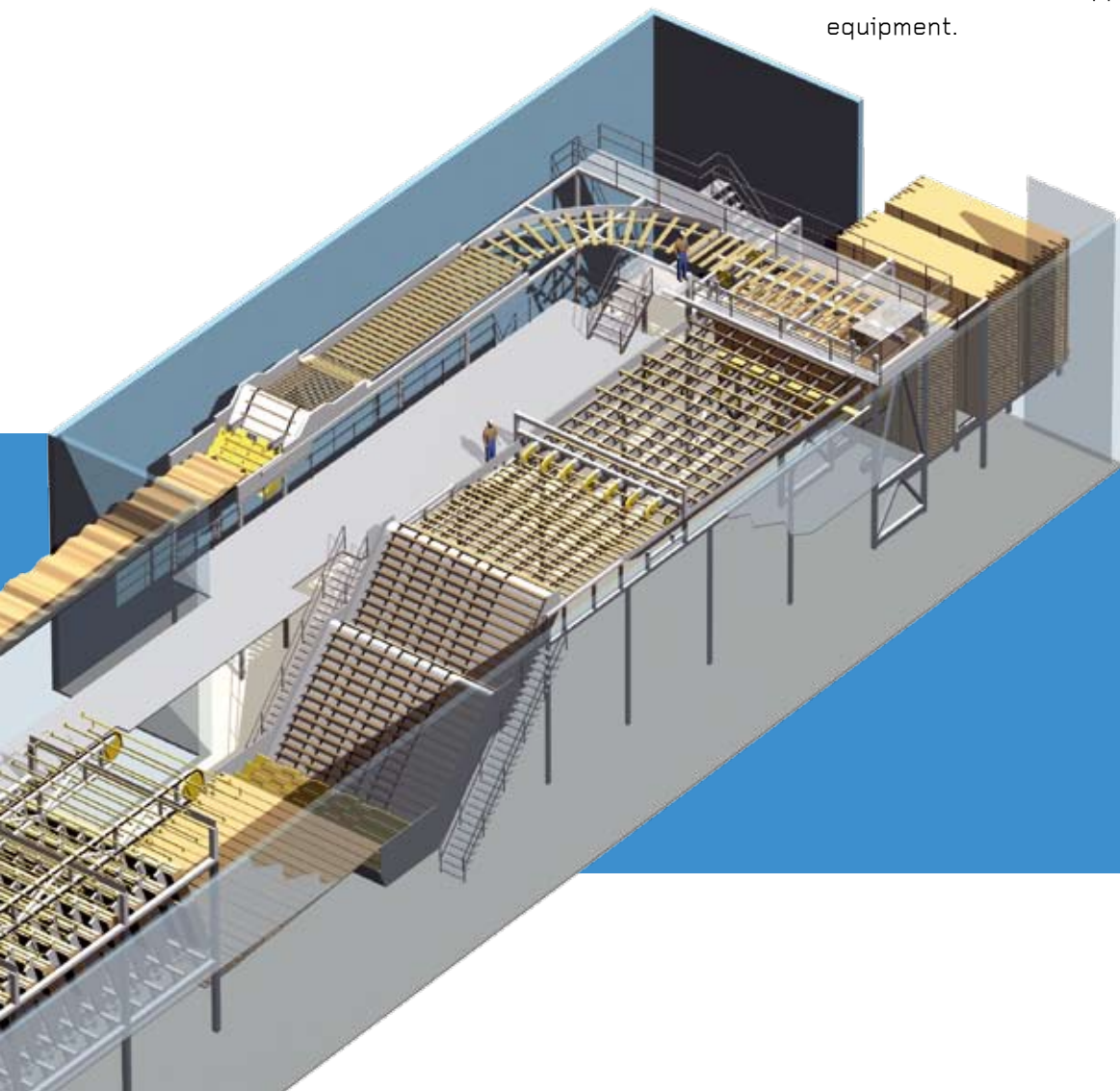
→ **The aim** of sticking is to optimise the drying process and further processing of timber. Consequently, the features of a sticker load and sticking device performance can be considered as an indicator of a flexible and effective saw mill.

Sticking is one of the most crucial operations in the saw mill. The equipment has to handle equally efficiently all the dimensions coming from the saw.

The sticking operations include:

- unpacking the sawn timber pile to one uniform layer
- building the layers
- timber stacking
- positioning the stickers
- transferring the load with a fork truck or gently with a traverse into the drying plant.

The capacity and degree of automation of each sticking device supplied by Jartek are adapted to the customer's production needs. Jartek is a market leader as a supplier of heavy-duty sticking equipment.





TIMBER STACKING:

The stacking equipment of stickers is shown in the picture. The stacking capacity will be set in accordance with the customer's requirements. The sticker magazines can be positioned automatically to each dimension.



STICKER DISTRIBUTION SYSTEM:

The picture shows the sticker distribution system. The stickers can be fed fully automatically, as shown in the picture, or using a semi-automatic mode where the stickers are put manually into magazines.



SINGULARIZERS:

This equipment is available in various versions and the selection is made to suit the customers requirements.

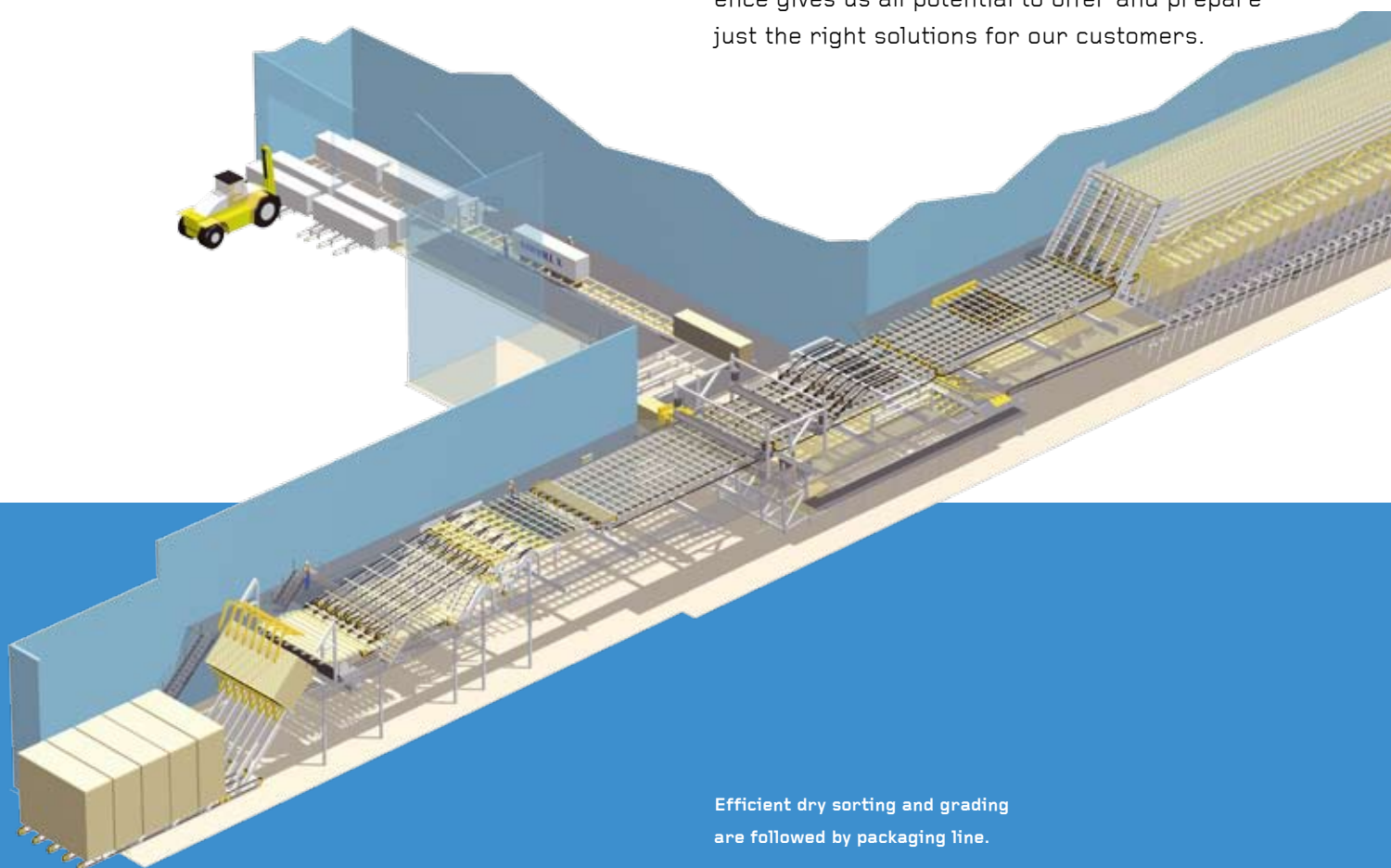
Dry sorting and grading

→ **Due** to the considerable difference in prices of various sawn timber grades, sorting is a highly important factor in improving the profitability of a saw mill. Sorting can also be utilized in optimizing the economy of saw mill operations, by considering the current demand and stock situation. In some cases it is possible to raise the quality class by shortening the sawn timber.

The basic operations of dry sorting and grading involve:

- unloading the stickers
- butt trimming
- sorting
- removal of top defects and accurate cut to required length

Jartek provides plenty of options for various degrees of automation. Many decades of experience gives us all potential to offer and prepare just the right solutions for our customers.



Efficient dry sorting and grading are followed by packaging line.



Automatic scanner grading, in between the pieces are turned.



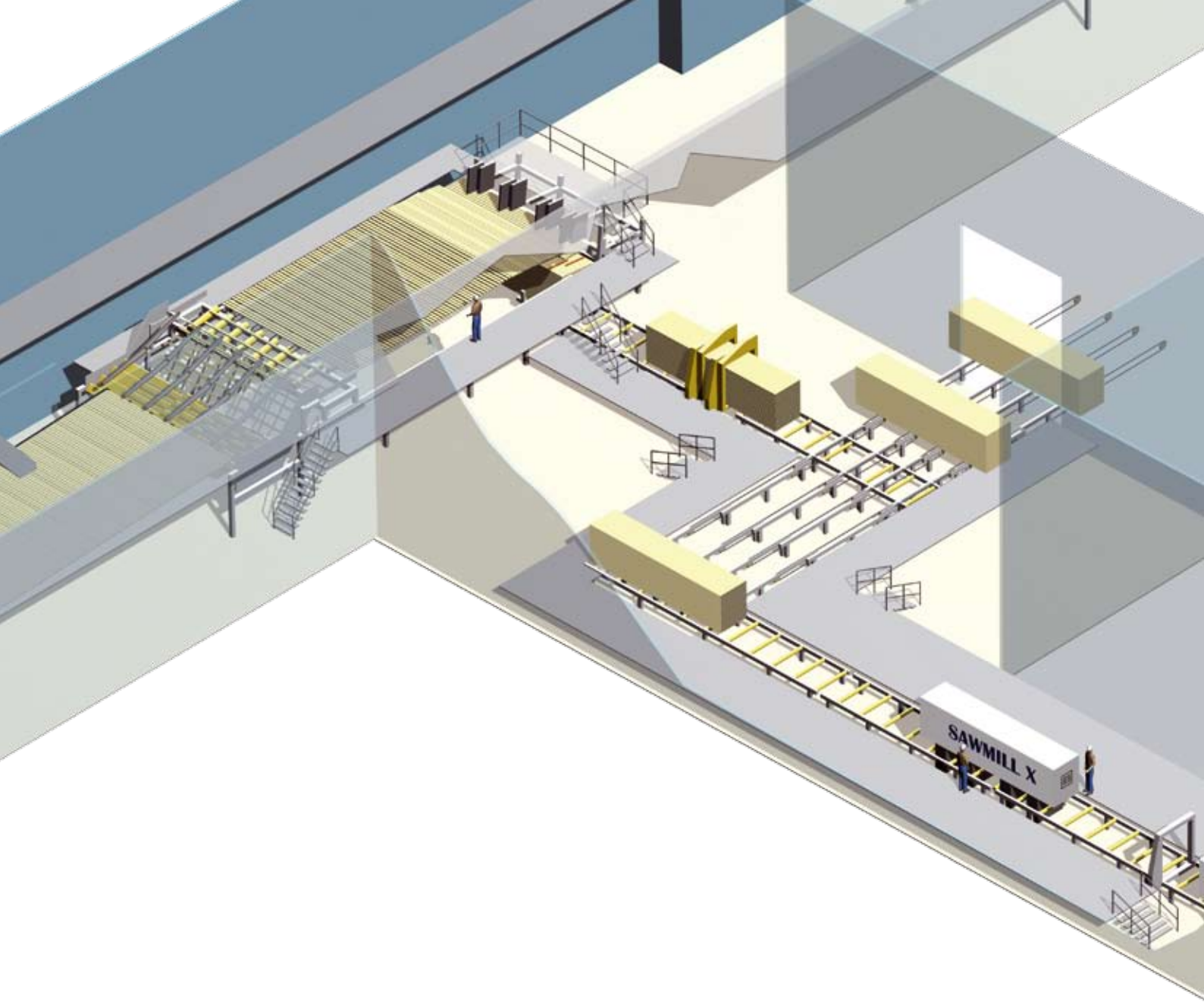
Jartek Free Cut system is the high end product for continuous cutting to lengths. Together with our trimmer it provides highly efficient cutting to the desired lengths.



UNLOADING THE STICKERS:
The pictures show the sticker unloading devices fitted with auxiliary unloaders. Thus the load change time is set to zero. Grading line for dry timber runs continuously and without any interruptions caused by the pile change.



BUTT TRIMMING:
Steplessly adjustable from 0 to 900 mm



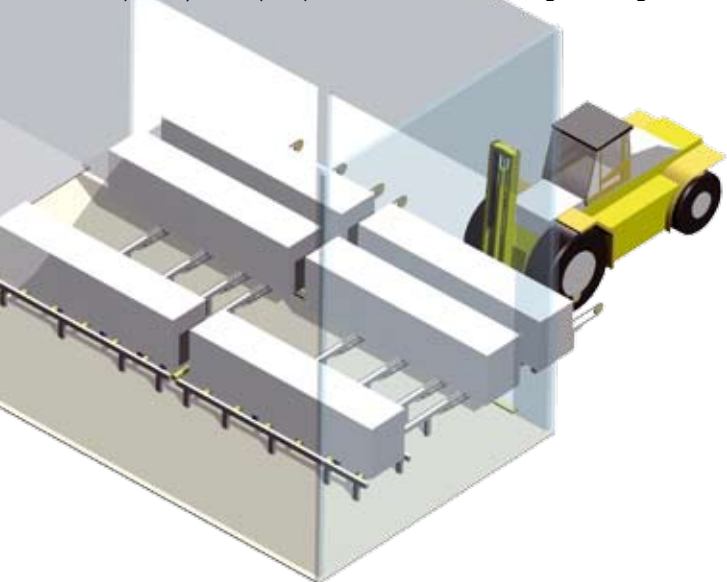
STEP FEEDER

The packaging can be provided with step feeder for more gently handling of pieces or for increased performance in connection with the double tilt hoist.

Packaging

→ **Finished** sawn goods must be packed and protected for transports. Wrapped packages are easy to move and transport without any damages. Packaging facilitates also the storing and reduces space requirement.

It is of importance for both the seller and customer that the sawn goods maintain the good quality and proper condition during storage and



transport. And this requires a careful protection. Proper protection contributes to safe and easy handling as well.

The basic operations of packaging include:

- transferring the pieces from the dry sorting stations
- measurement of length
- building the layers
- stacking of the layers
- building the packet and distributing the tie lathes
- pressing and binding the package
- wrapping the package
- transferring to dispatch department

At Jartek, the packaging solutions are aimed at achieving an attractive and properly protected package at cost-effective charge. The continuous product development enables us to react to market demands and wishes of our customers.

TIMBER STACKING

There are stacking equipment and sticker magazines shown in the picture. The number of magazines will be selected in accordance with the customer's needs.



Further processing

→ **Jartek** supplies equipment for first stage further processing. To our customers dealing with further processing belong for ex. further processing units of saw mills, log factories and manufacturers of glue laminated beams or components.

Finger-jointing lines

Jartek represents two German manufacturers of finger-jointing lines. **SMB** specializes in finger-jointing of long timber (gluelam beams, lamellas, and log blanks) and **NKT** specializes in finger-jointing of short timber (including raw-material for furniture and window manufacturers).

SMB

SMB Maschinenbau GmbH specializes in finger-jointing lines of lamellas for gluelam beams, log blanks and robust structural sawn timber.

There are three types of lines available for long timber goods (in-feeding lengths 2100 – 6100 mm) in accordance with capacity and dimensions. The compact line FLP with a capacity of 4 – 5 jointings/min and with a pressure force of 4 – 50 tons is designed for finger-jointing of log blanks and robust structural sawn goods.

Then the model **TKZ** comes with a higher working speed of 8 jointings/min.

With the model **MKZ** it is possible to achieve up to 10 – 12 jointings/min.

NKT

The patented cutting and gluing system reaches the production rate up to 8 x 600 mm sized table per minute.

Short resetting times, reduced need for maintenance and quiet operation are setting new standards to finger-jointing.



SMB's compact line is used especially in jointing larger dimensions for log-house manufacturing purposes.

Manufacturing of finger-jointing machines requires a strong expertise and NKT really manages the know-how:

- complete experience in finger-jointing of the most common wood species
- wide know-how in designing and engineering machines and electronics
- 30 years of experience in product development worldwide
- NKT team always guarantees the first class and rapid services

The lines and equipment, from the smallest machines up to fully automatic production lines, are designed to customers' specifications.

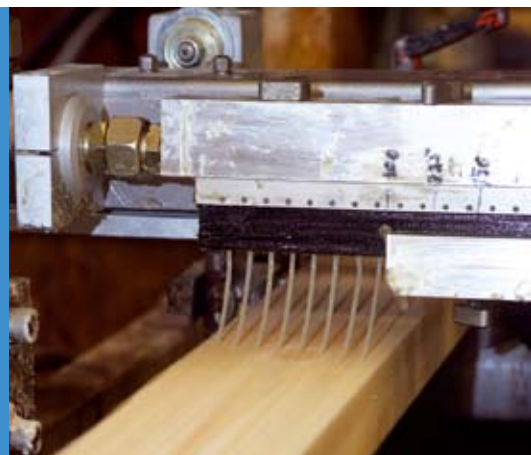
Glue application

The automatic glue applicators have proven extremely cost-effective and indispensable in continuous industrial use in particular. From

the advantages offered by OEST-glue applicators, such as accurate measuring systems along with high production rates in relation to the size of the work pieces are to be mentioned. OEST manufactures also special applications and customised solutions for specific needs.

OEST has been the leading manufacturer of glue applicators for years. Intensive cooperation with the prominent glue manufacturers enables OEST to test the new adhesives before delivering the equipment to end user. This means a clear advantage for the customers as reduced installation and test run times. There is a variety of equipment available for various operations such as finger-jointing and gluing the lamellas and gluelam beams.

Application head of OEST Ecopur G glue dosing unit for 1-component polyurethane glue.

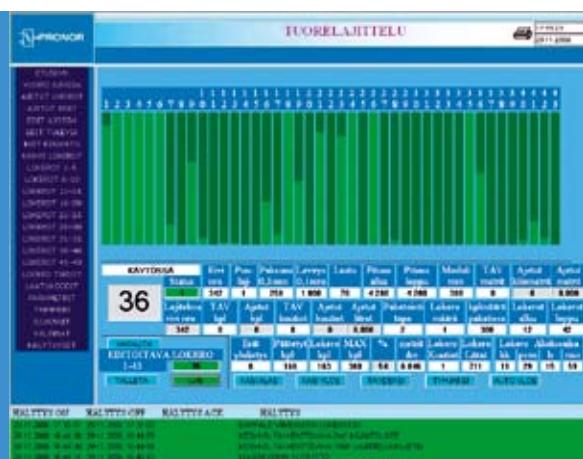
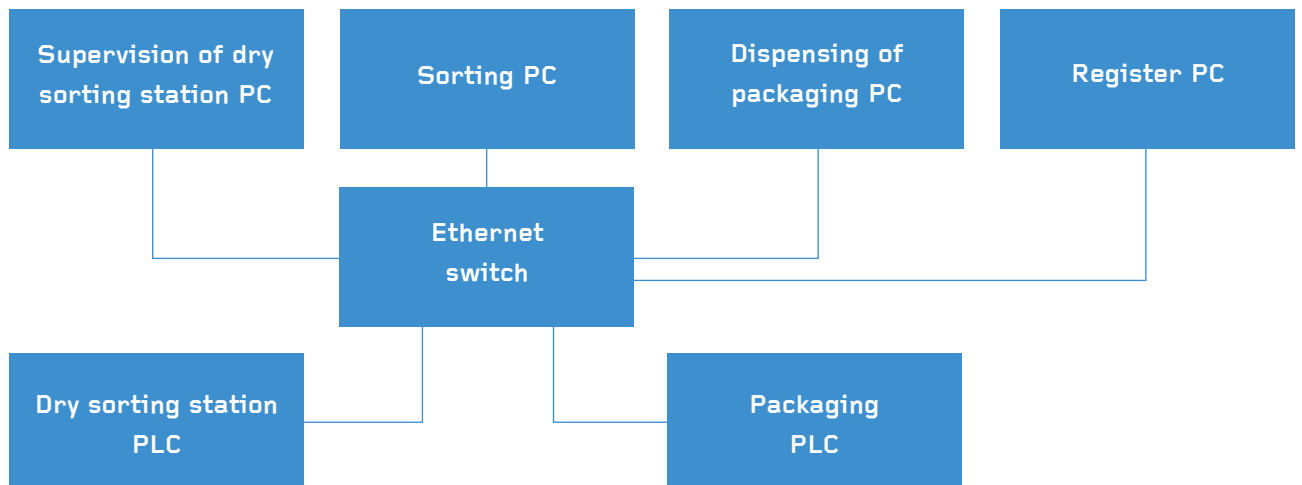


Automatic operations

→ **Automation** plays a crucial role in the operations of a modern production plant. The processes must feature easy and flexible control, not to forget the profitable business aspects.

Jartek acts in continuous cooperation with leading hardware and software producers. A seamless partnership with the end user is achieved when sitting together with all the partners at the same table.

Ethernet of the sorting and packaging station:



BIN DISPLAY

The picture shows a sample of bin display. The display allows the operator to follow the current work program and to make the necessary modifications. This kind of displays and PC are used to follow and modify several operations of a saw mill.

Modernizing and After Sales Services

Modernizing

→ **The basis** of modernizing is to achieve more profitable working conditions and enhanced environmental ergonomics. The customer's current solutions are utilized to the extent they are feasible without decreasing the productivity.

Jartek has decades of experience in various modernizing projects. Even the smallest modernizing project is not too small and neither the biggest one too big for us. Our long-term experience guarantees us the capability of helping our customers in removing the bottle necks of production and in improving of the productive capacity.

After Sales Services

→ **Jartek's** spare part service supports the availability and functionality of machines and lines for a long time in future. Whether it is concerning replacement of a wearing part or modernization work, Jartek's skilled service personnel is at your disposal anytime.



The picture shows a typical example of modernization. The compartments with fixed bottom have been replaced with a lowering low-dropping compartment.



YOUR VALUE
ADDING PARTNER
IN THE WOOD
PROCESSING
INDUSTRY

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