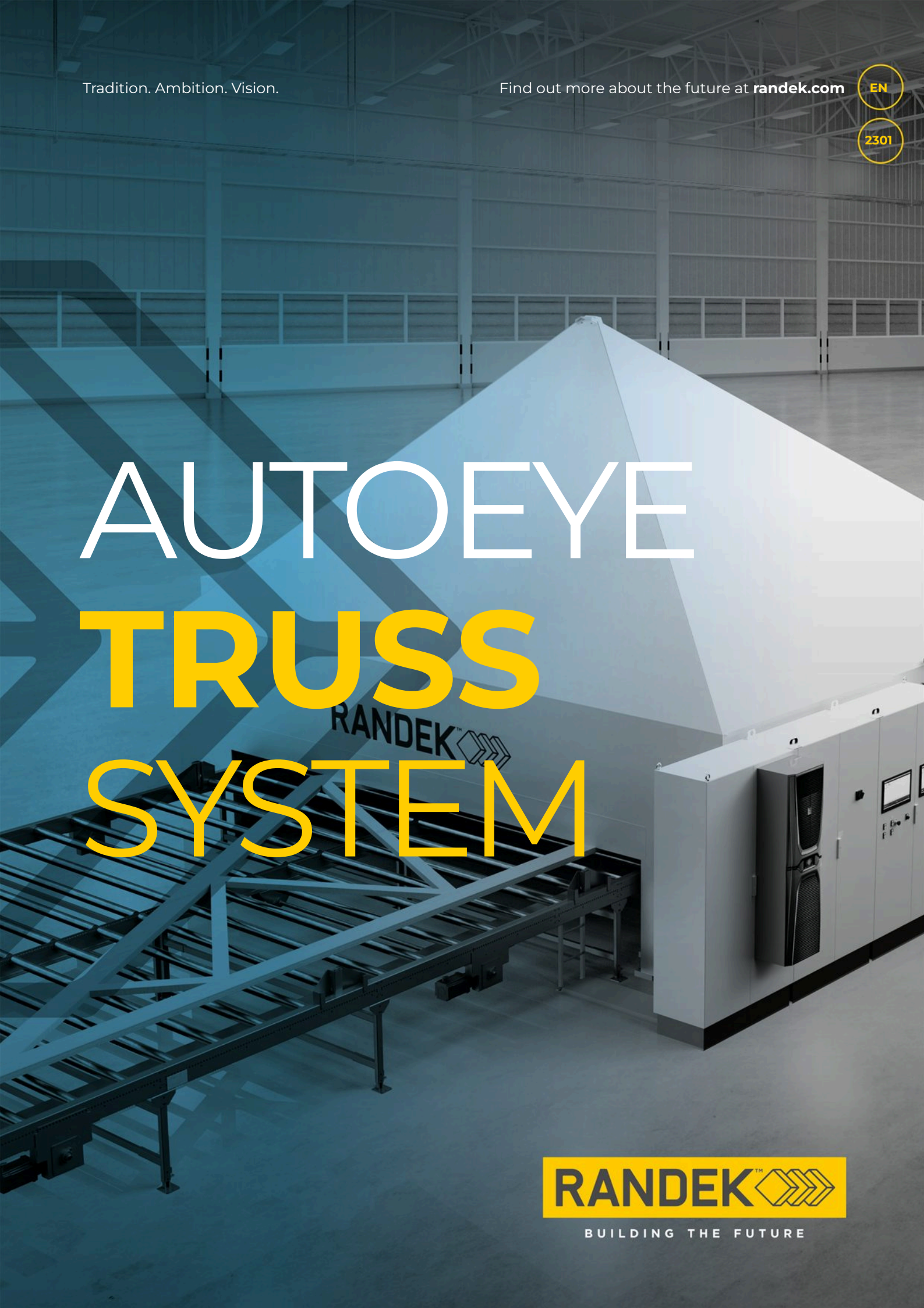
Tradition. Ambition. Vision.

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2301

AUTOEYE TRUSS SYSTEM



RANDEK™

BUILDING THE FUTURE

AUTOEYE
TRUSS SYSTEM

A SYSTEM DEVELOPED FOR AUTOMATIC PRODUCTION OF ROOF TRUSSES. THE SYSTEM COMBINES HIGH CAPACITY WITH INDUSTRIALIZED QUALITY.

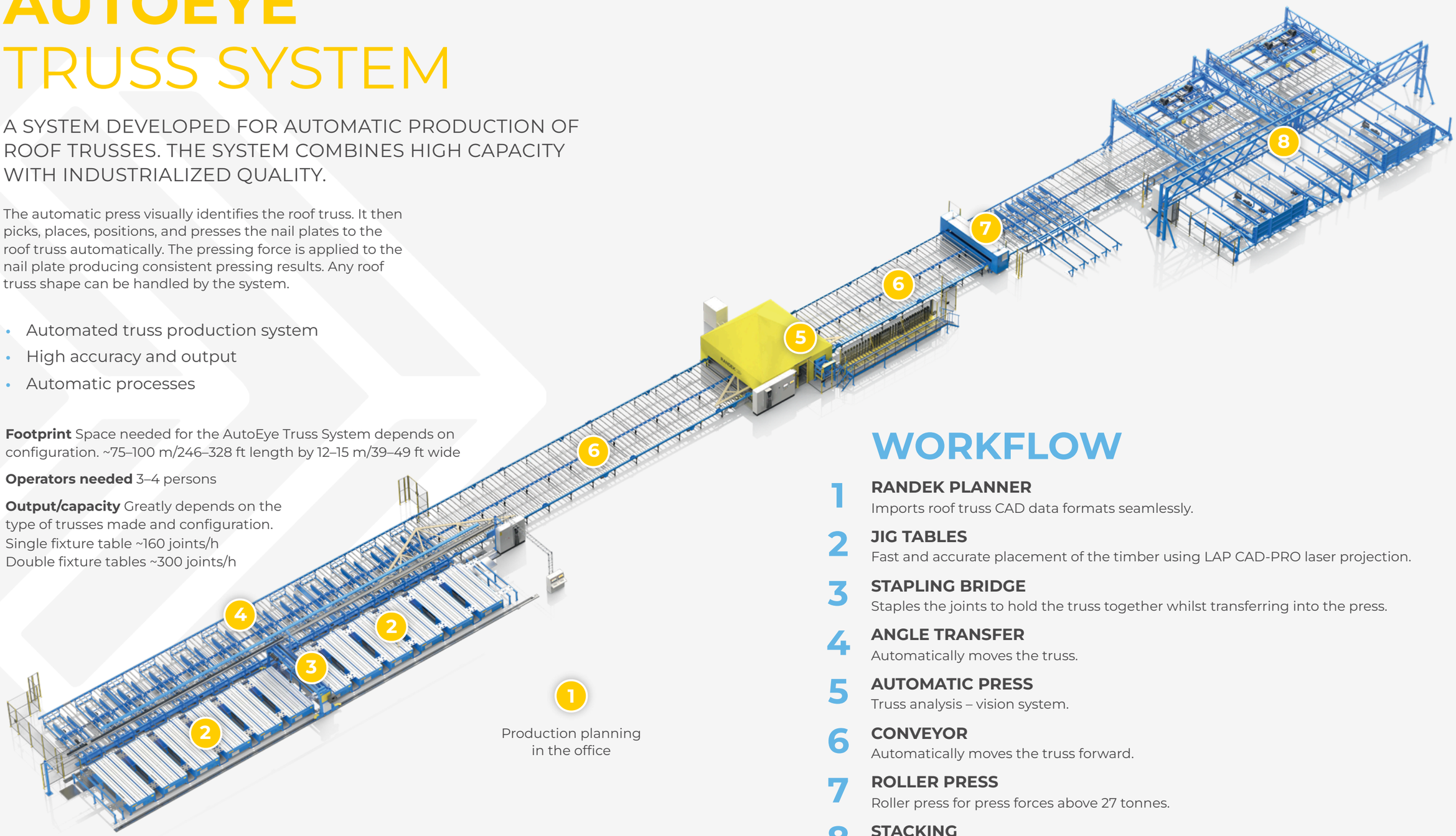
The automatic press visually identifies the roof truss. It then picks, places, positions, and presses the nail plates to the roof truss automatically. The pressing force is applied to the nail plate producing consistent pressing results. Any roof truss shape can be handled by the system.

- Automated truss production system
- High accuracy and output
- Automatic processes

Footprint Space needed for the AutoEye Truss System depends on configuration. ~75–100 m/246–328 ft length by 12–15 m/39–49 ft wide

Operators needed 3–4 persons

Output/capacity Greatly depends on the type of trusses made and configuration.
Single fixture table ~160 joints/h
Double fixture tables ~300 joints/h



Production planning in the office

WORKFLOW

1 RANDEK PLANNER
Imports roof truss CAD data formats seamlessly.

2 JIG TABLES
Fast and accurate placement of the timber using LAP CAD-PRO laser projection.

3 STAPLING BRIDGE
Staples the joints to hold the truss together whilst transferring into the press.

4 ANGLE TRANSFER
Automatically moves the truss.

5 AUTOMATIC PRESS
Truss analysis – vision system.

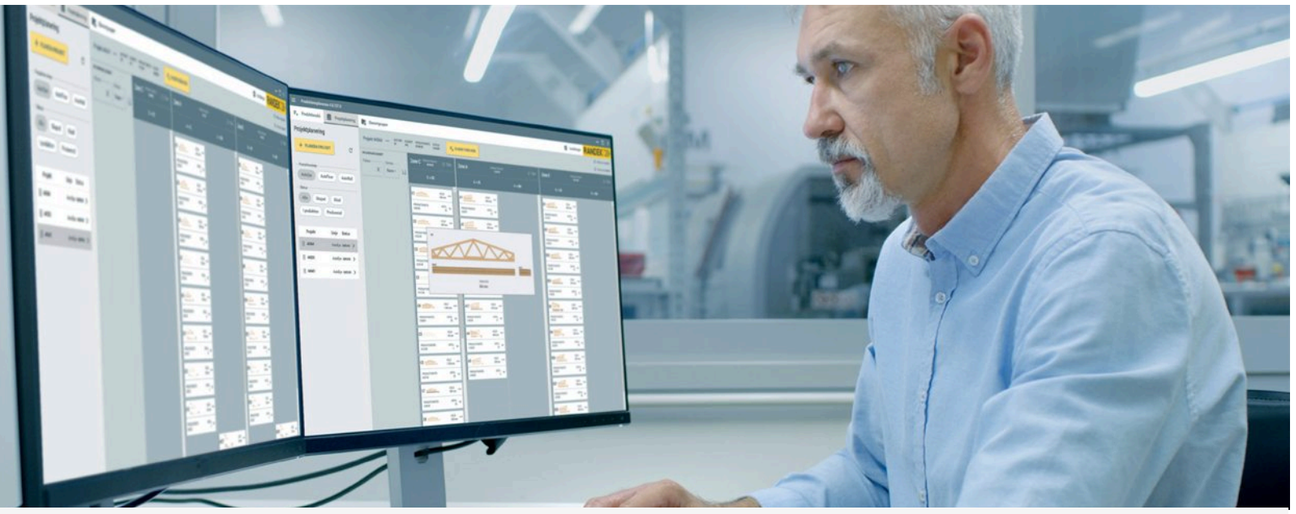
6 CONVEYOR
Automatically moves the truss forward.

7 ROLLER PRESS
Roller press for press forces above 27 tonnes.

8 STACKING
Stacks the trusses in standing packs.

RANDEK PLANNER

- Imports roof truss CAD data formats seamlessly
- Use the CAD files from anywhere in your file system or use a predefined production queue
- Easy-to-use production planning system
- Plan work orders and prepare finished stacks
- Production time estimations

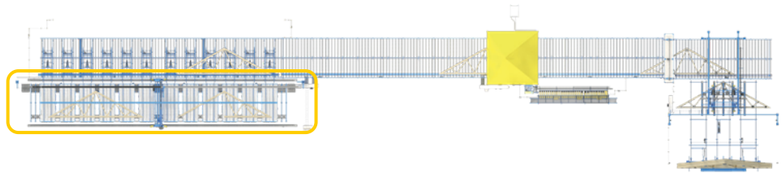


WORKFLOW ZONES

Depending on how the AutoEye Truss System is configured you can have up to three zones for truss assembly: you can combine zone A and B and use them as zone C. Depending on the stacking configuration, you can have up to four or more zones. They mirror the same configuration possibilities as in the truss assembly zones. Multiple projects can be produced and stacked simultaneously as shown in the configuration below.

- Offline planning
- Automatic setup
- Splitting tables
- Stacking

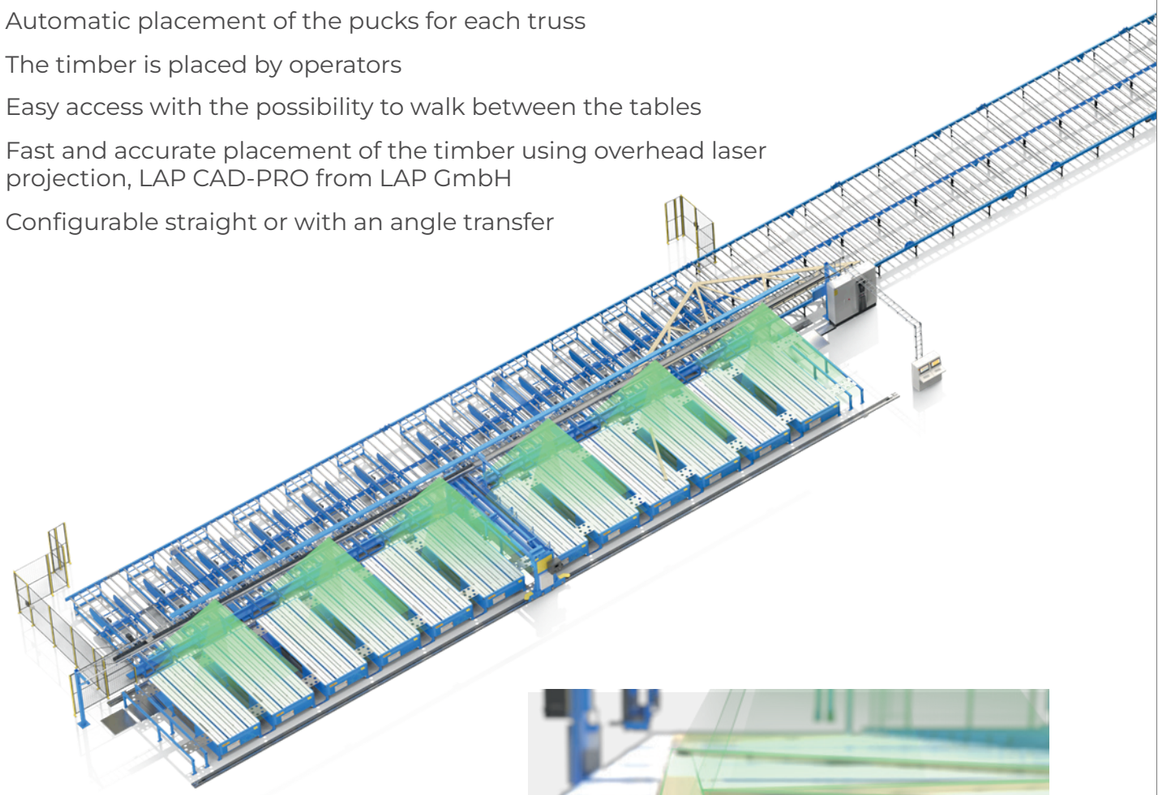




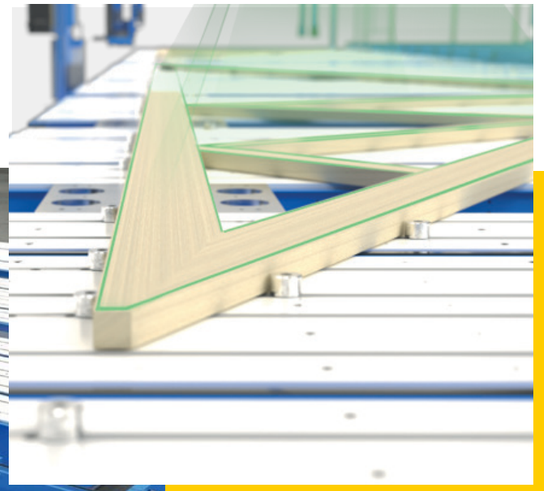
JIG TABLES

Flexible, robust, high-speed jig system

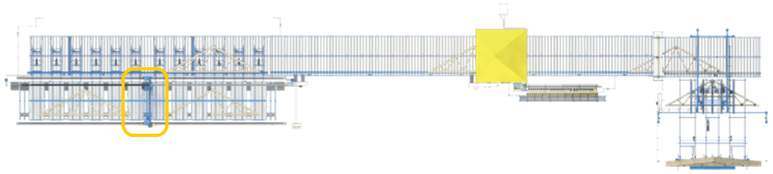
- Automatic placement of the pucks for each truss
- The timber is placed by operators
- Easy access with the possibility to walk between the tables
- Fast and accurate placement of the timber using overhead laser projection, LAP CAD-PRO from LAP GmbH
- Configurable straight or with an angle transfer







3 STAPLING BRIDGE



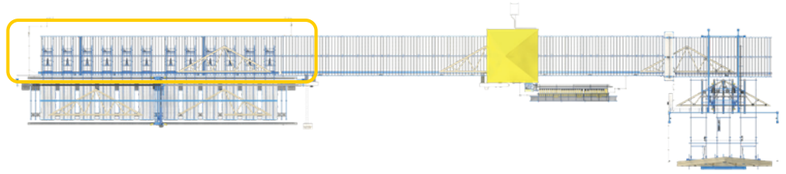
STAPLING BRIDGE OPTIONAL

- Staples the joints to hold the truss together whilst transferring into the press
- An ink-jet printer is able to mark specific product info on each truss for easy assembly on site.





4 ANGLE TRANSFER



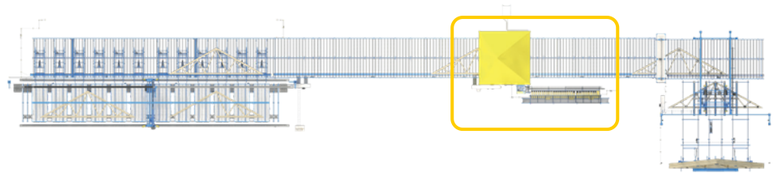
ANGLE TRANSFER

- The angle transfer automatically moves the truss from the jig tables to the infeed buffer conveyor.





5 AUTOMATIC PRESS



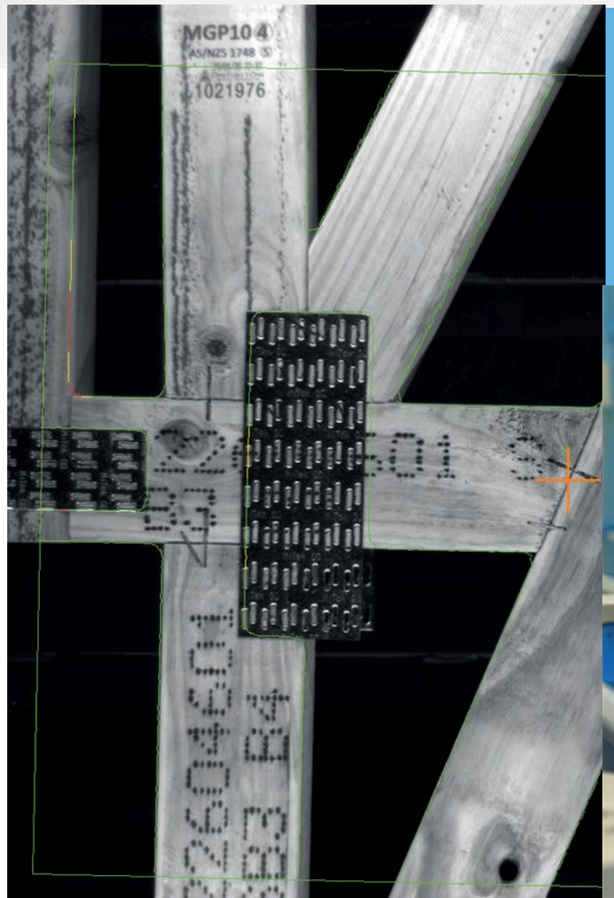
AUTOMATIC PRESS

- Nail plate handling
- Truss analysis – vision system
- Nail plate pressing – handling

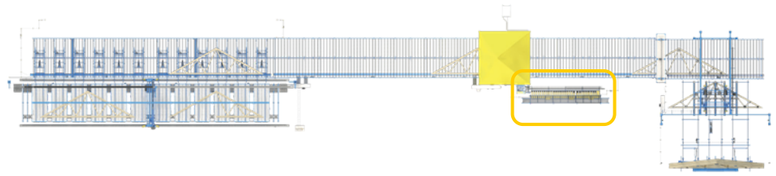


TRUSS ANALYSIS – VISION SYSTEM

- The press visually identifies each joint and positions the nail plate exactly even if the truss has a deviation in length or shape
- The vision system photographs the joint and matches it to the truss file. Based on that information it knows exactly where the nail plate is to be placed



5 AUTOMATIC PRESS



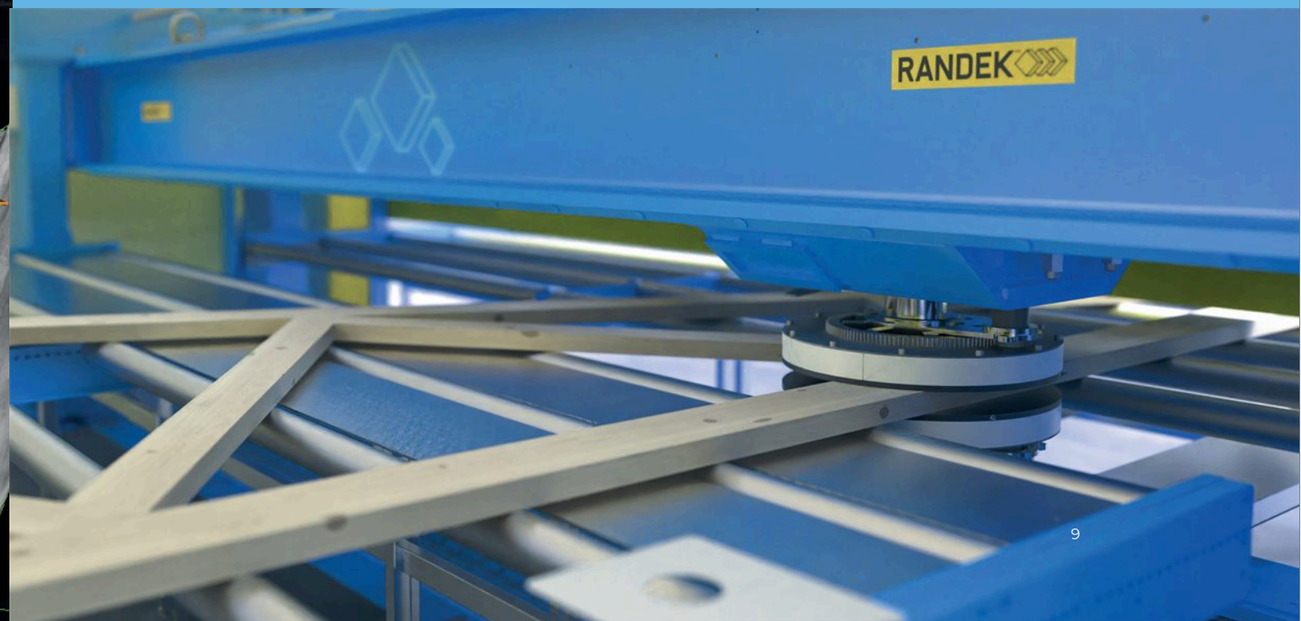
NAIL PLATE HANDLING

- **Process** The system picks the correct nail plate in advance according to the CAD file (JIG). Rotation and positioning are based on the vision system photos. The nail plate handler works simultaneously with the press.
- **Nail plate magazine** Standard includes up to 30 slots, extended up to 35 slots.
- **Nail plate sizes**
  Width 50–290 mm/2–11.5 in
  Length 100–510 mm/3.9–20.1 in

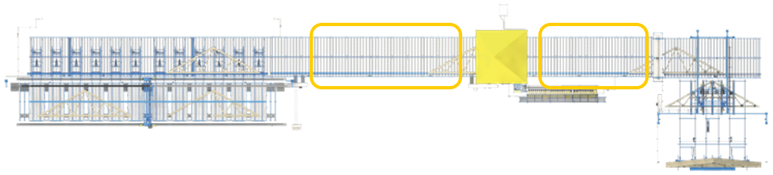


NAIL PLATE PRESSING – HANDLING

- **Adaptive press force** Press the plates with the required press force up to 27 tonnes (264 kN)



6 CONVEYOR

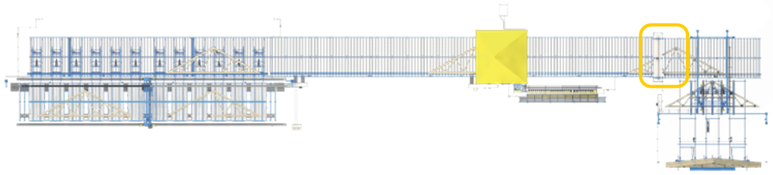


CONVEYOR

- **The conveyor** transports the roof trusses between operations

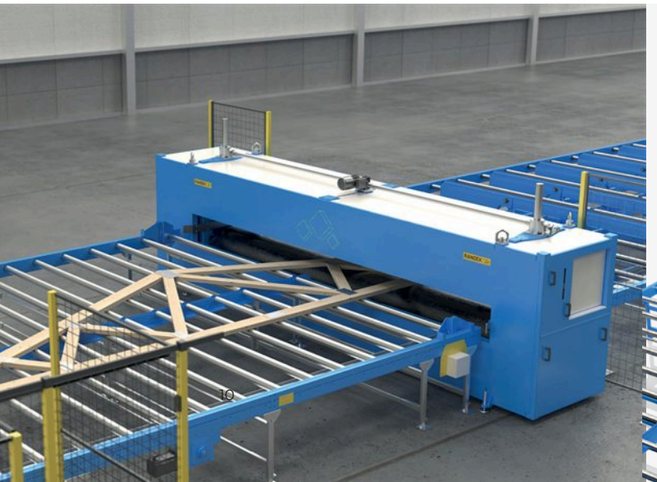


7 ROLLER PRESS



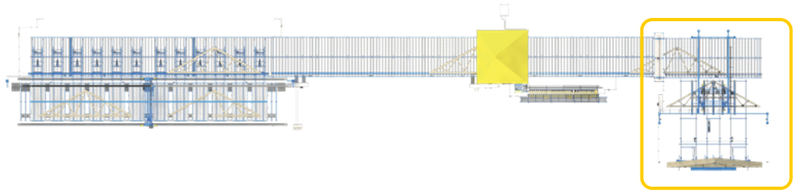
ROLLER PRESS OPTIONAL

- **Roller press** when press force higher than 27 tonnes is required



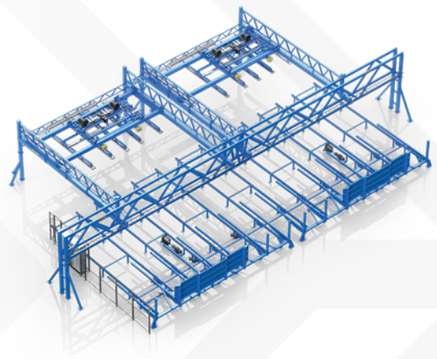


8 STACKING

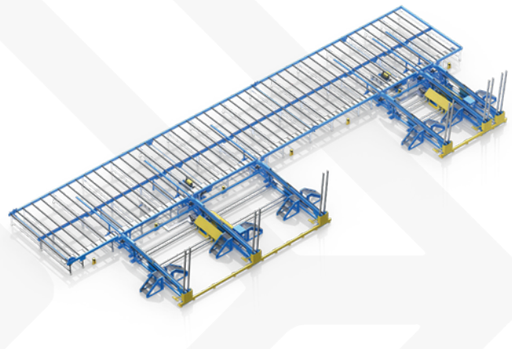


STACKING OPTIONS

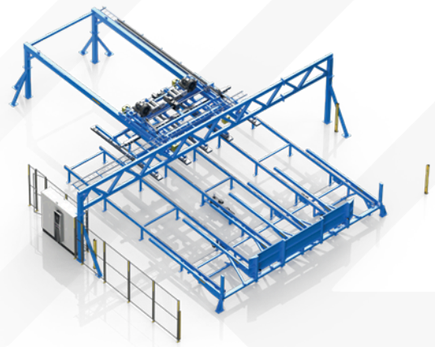
Vacuum stacker large



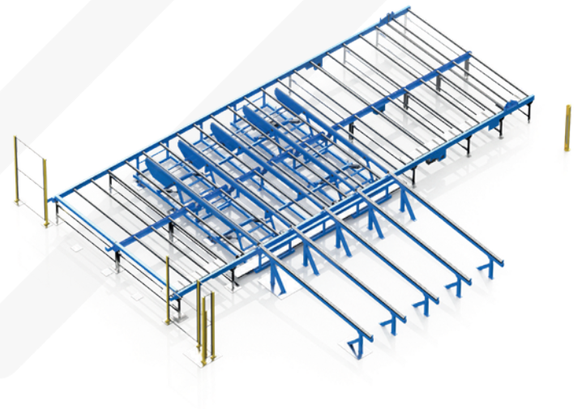
Stacker



Vacuum stacker small

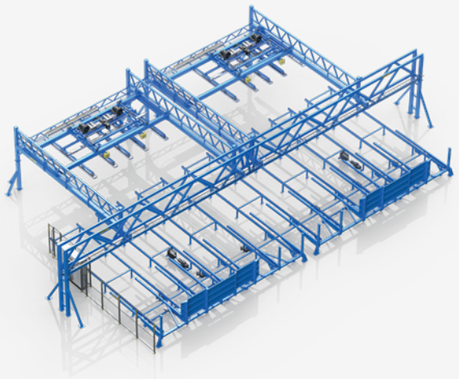


Manual stacker



VACUUM STACKER LARGE

- Stacks the trusses horizontally, optional upraiser available for standing packs
- Handles different truss sizes and shapes (max 24.5 m/80.38 ft)
- The software allows the trusses to be organised in predefined stacks ready to be transported to the building site

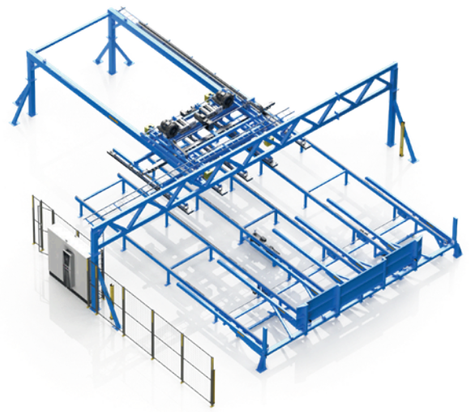






VACUUM STACKER SMALL

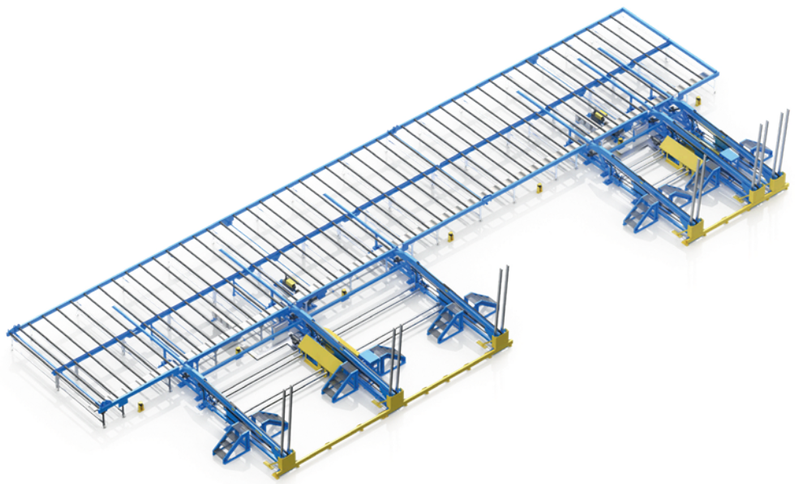
- Stacks the trusses horizontally, optional upraiser available for standing packs
- You can easily lift the packs with a forklift
- Handles different truss sizes and shapes (max 12 m/39.37 ft)
- The software allows the trusses to be organised in predefined stacks ready to be transported to the building site





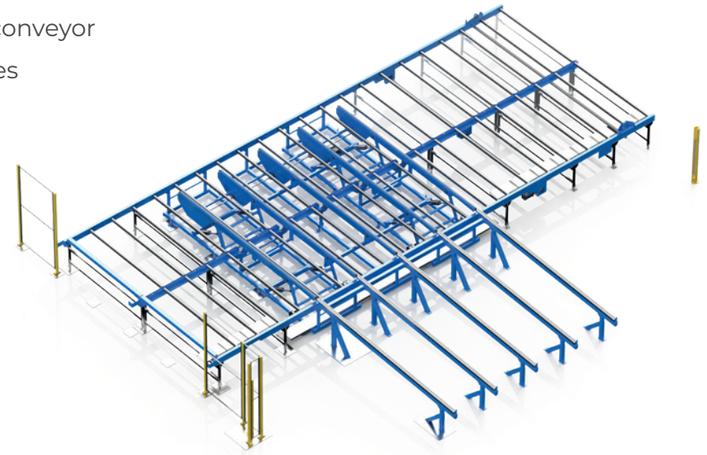
STACKER

- Stacks the trusses in standing packs
- The software allows the trusses to be organised in predefined stacks ready to be transported to the building site



MANUAL STACKER

- Moves the truss from the conveyor
- Handles different truss sizes

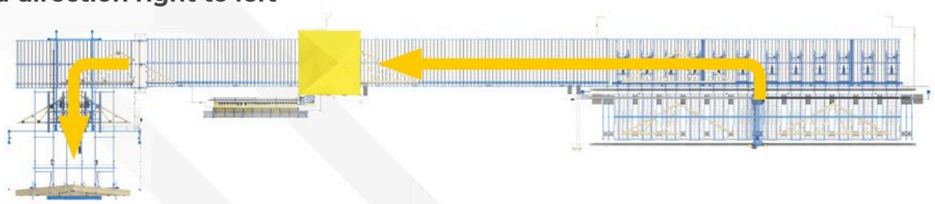




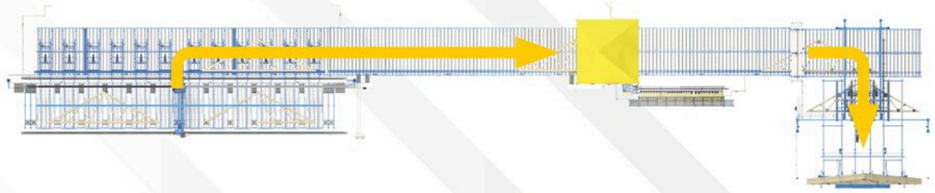
EXAMPLE LINE TYPES

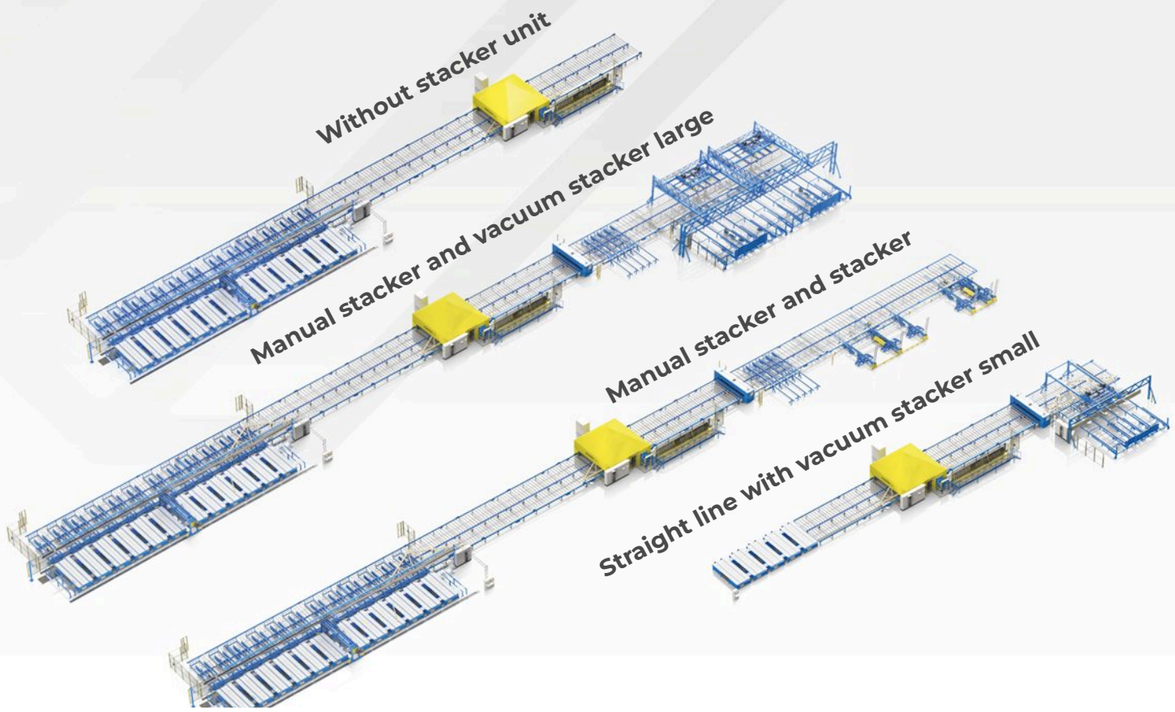
The AutoEye Truss System can be configured in several ways depending on factory footprint and desired output.

Feed direction right to left



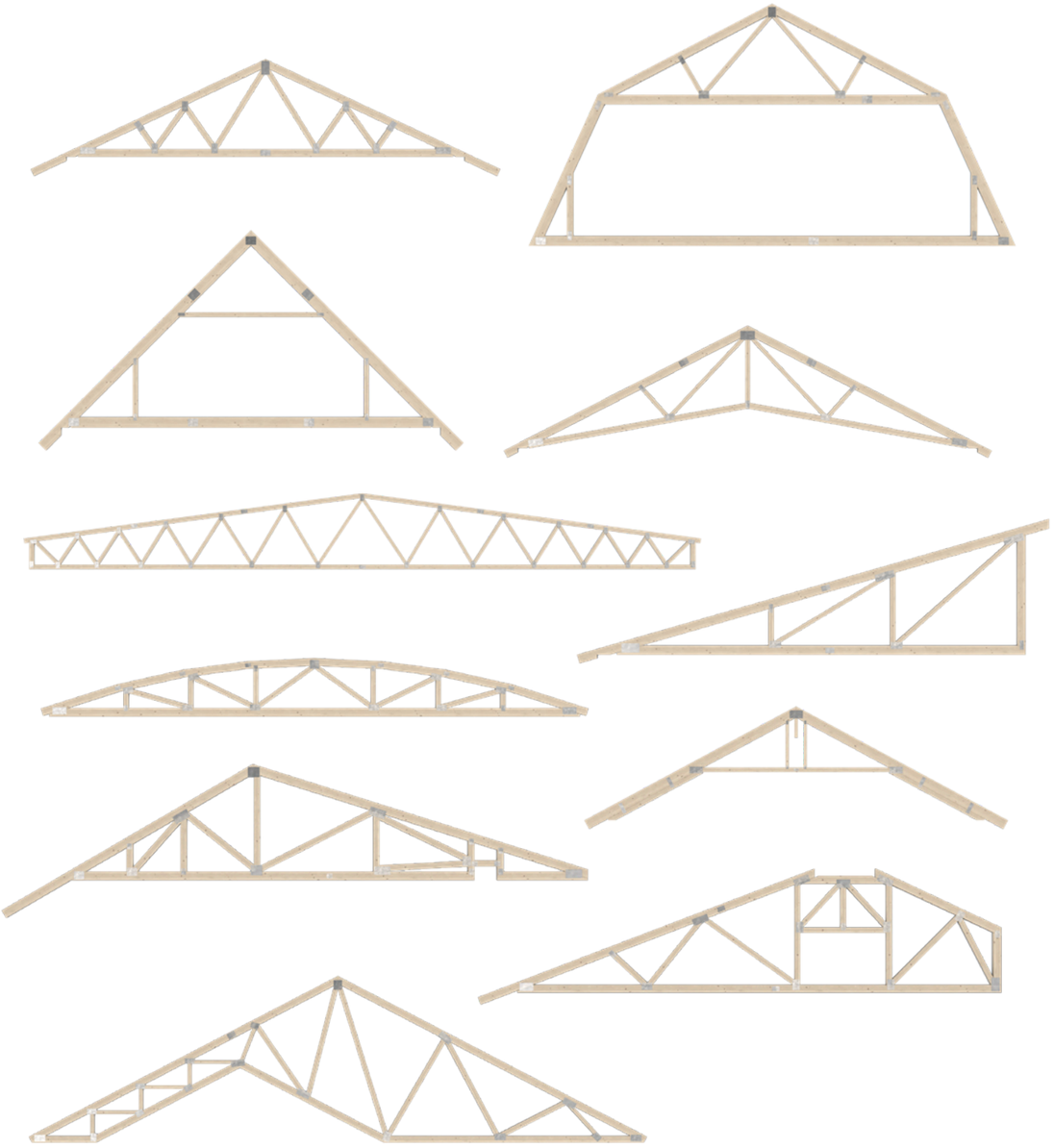
Feed direction left to right



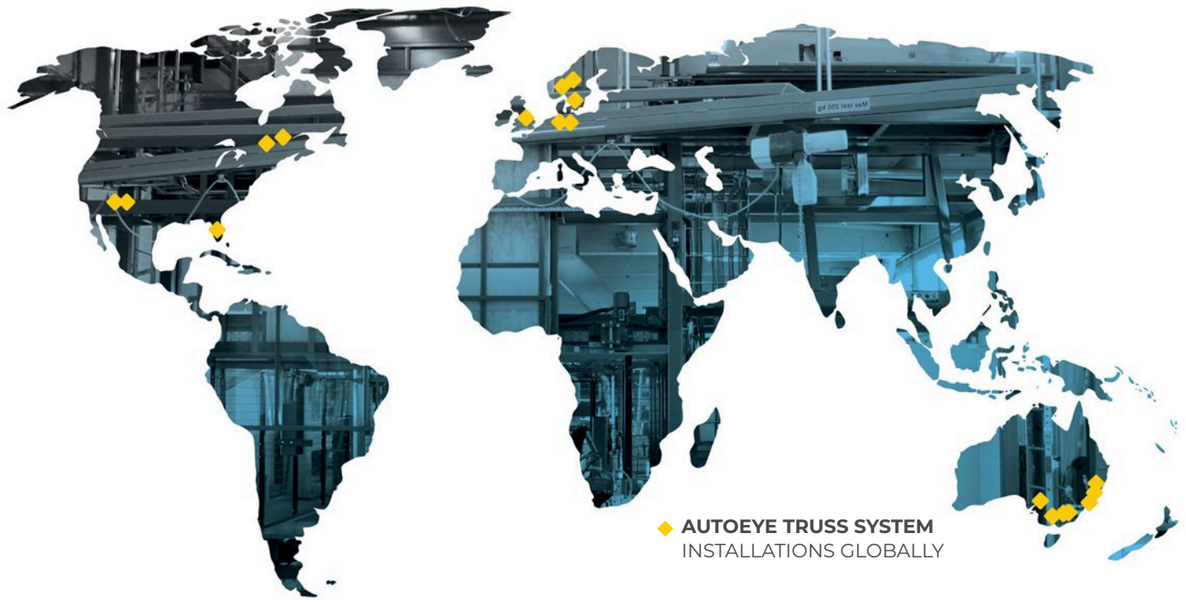


EXAMPLE TRUSS TYPES

Examples of trusses possible to manufacture in the AutoEye Truss System.







CUSTOMER COMMENTS



German company Potts

“Randek’s AutoEye Truss system is a modern and economical production line for companies who produce great amounts of nail plate binders. Due to innovative automation, the capacity of the system is huge. For these reasons, in our opinion, the system is trend-setting for economical and profitable production of nail plate trusses”

“The main advantages are the fully automatic positioning and pressing the nail plates with high accuracy. This makes it possible to produce large numbers of building components in constant and high-quality”

“In direct comparison, the system not only creates advantages in terms of productivity but also for colleagues who work with the system. The manual work of the nail plate positioning is now done automatically which makes work easier and also excludes human errors in nail plate positioning”



Australian company Universal

“We are able to build complex trusses easily, controlling production and labor. When using the old systems to build complex trusses we did not know how long this could take, which could cause red projects or lock the production for an uncertain amount of time, creating late orders and angry customers. Now we know a joint will be processed every 10–11 seconds, giving us greater control. Our production costs are significantly lowered along with training costs. Previously it would take approximately 6 months to fully train an operator to produce trusses with the right quality and productivity level whereas now they can do this from day 1, even I can build trusses. This has reduced the cost of labor control. Today we run 2 shifts without problems”

“We are very pleased with the overall quality of the system.”



Australian company Footers

“We have found the build quality of AutoEye to be excellent and the software reliable and robust. Randek’s aftersales service has been very good with the ability of remote management of the system.”

“The AutoEye saves a lot on labor costs and provides a higher quality product with greater reliability. The reduced labor cost means it is easier to create a second shift when needed. The plate placement accuracy and dimensional accuracy are unmatched by the previous systems”

“The machine turns up every Monday”

SWEDISH QUALITY LASTS

Randek has developed automation for the prefabricated house manufacturing industry since 1943. Today Randek supplies high-performance machines, robotic solutions and complete production lines to house manufacturers in 40 countries on four continents.

PRODUCTS/SYSTEM



SP720 SERIES CUT SAWS

Sturdy, reliable cut saws for house and roof truss manufacturers, with computer-controlled length stops.



WALL, FLOOR AND ROOF LINES

Tailor-made systems for prefabricated walls, floors and roofs. From manual to fully automated.



ROBOTIC SYSTEMS

Randek Robotics develops the ZeroLabor Robotic System: robot cells for sheathing, sub-assembly and insulation.



ROOF TRUSS SYSTEMS

Randek Truss System NT for traditional truss production and the AutoEye System for automated pressing.



BUTTERFLY TABLES

Wall-turning tables, a Randek invention from 1963. From a single manual table to a full line.

RANDEK SERVICES



RANDEK PRE-STUDY



MAINTENANCE



GLOBAL SUPPORT



MYRANDEK

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