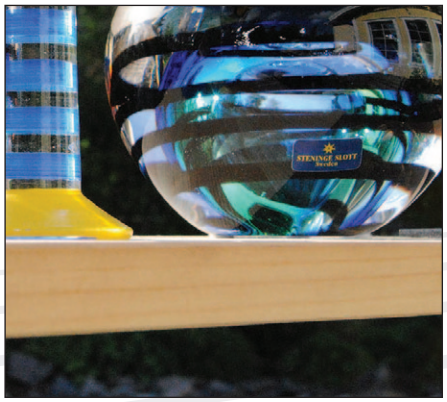
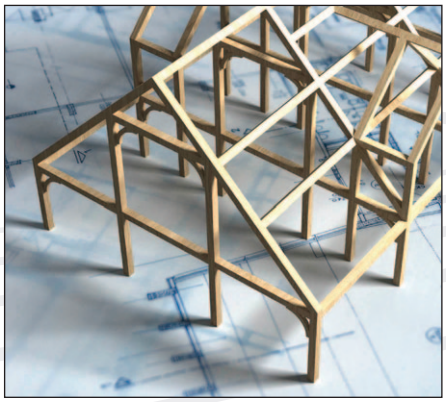
mixon *Innovative solutions*

FINGER JOINT APPLICATION
MIXED ADHESIVES SOLUTIONS





Various products where timber lamellas are connected/glued together on the cross section of the timber material. All in order to decrease the waste of the timber by bad parts or knots, or to create end-less lengths.

Advantages

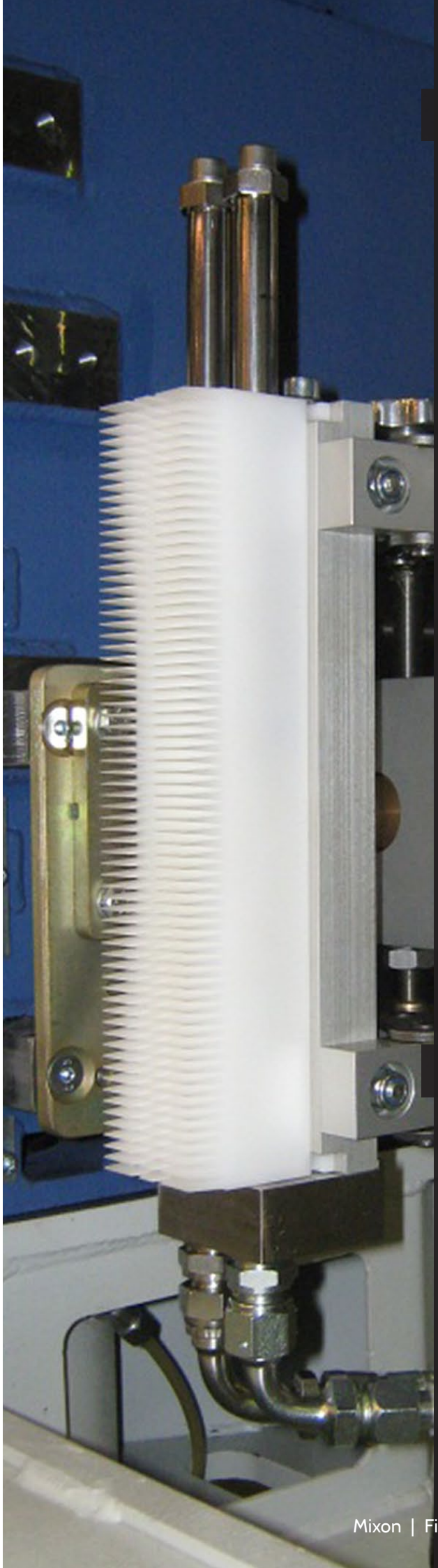
of our finger joint application systems

- Can deal with all types of adhesive systems
- Can deal with any kind of Finger Joint machine no matter which OEM supplier
- Applicable for fast lines with speed up to 250 joints per minute
- Adhesive application with a start/stop system, for accurate application of adhesive in the joint
- Applicable for any type of finger joint profile
- All parts available from stock for quick spare-part deliveries
- Optimized control system to help the operator to produce rational batches

Choice of materials and components

We have designed the equipment for long lasting reliable performance. This means that we use the state of the art materials and components like:

- High-end stainless steel qualities
- Ceramics
- High value rubbers and plastics, like Viton, HEPDM, PTFE and PEAK
- Control systems of Mitsubishi/Siemens
- Operator panel with integrated LCD touch screen
- Valves for the hydraulic system of Sun
- Components are standard Mixon stock parts or bespoke components
- Very advanced coatings to preserve the materials from acid attack



Application areas

for finger joint application

Various products where timber lamellas are connected/glued together on the cross section of the timber material. All in order to decrease the waste of the timber by bad parts or knots, or to create end-less lengths.

The products which are produced according the principle are:

- Window scantling
- Non constructive beams or lamellas
- Constructive beams
- Furniture
- Pre-process for CLT
- Laminated beams
- Other customized solution

Adhesive systems

for mixed application

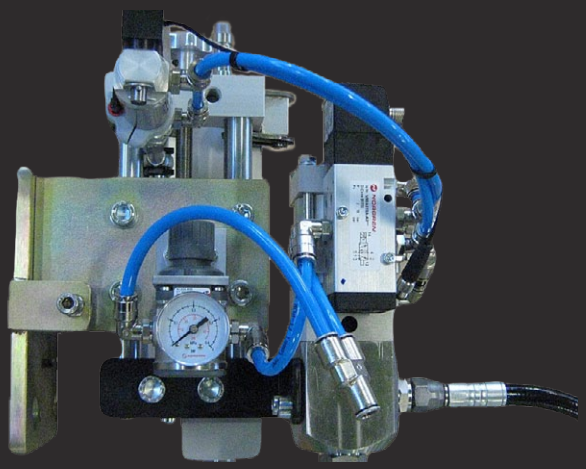
Our solutions deal with the following adhesive systems:

- One component systems like: PVAc, PUR
- Two component systems, in mixed application like: PRF, EPI, MUF, MF, UF, PVAc etc.

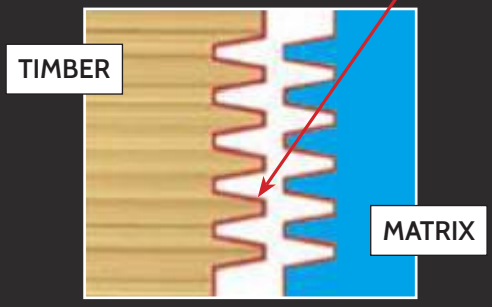
The Mixon 2400

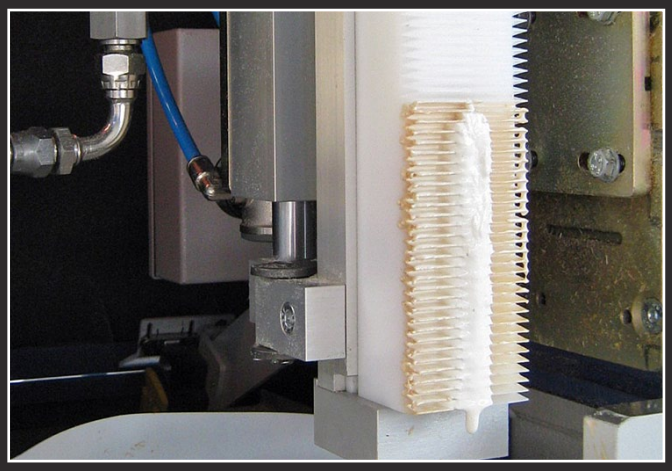
for finger joint application

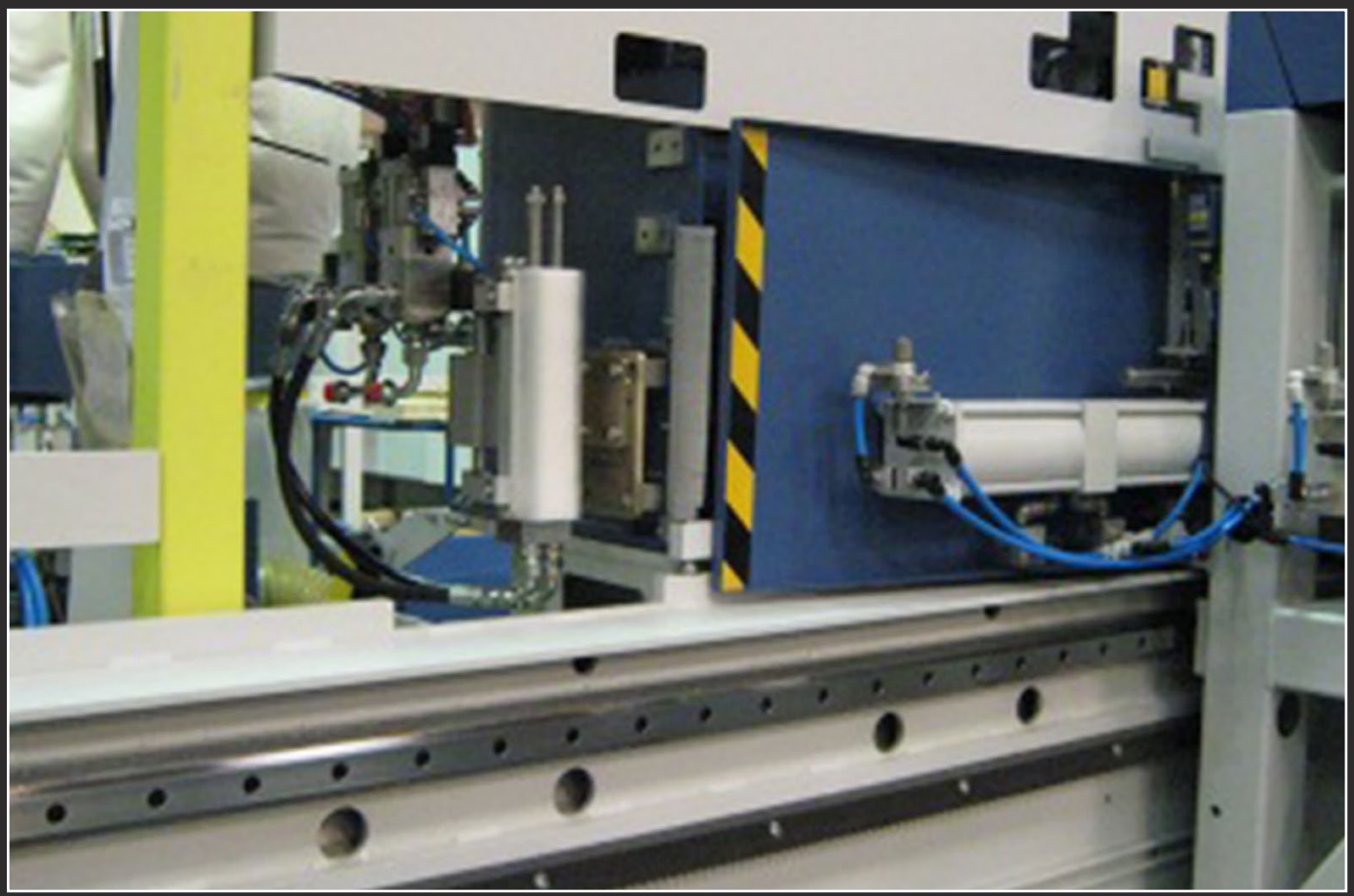
Mixon's system for mixing and dosing for finger joint application is based on 26 years of experience. In order to apply the adhesives fast, adequate and reproducible we use our reliable components and have completed the machinery with high-end control systems.



Mixed adhesive application in the joint of the timber







■ Dosage

The glue and hardener are dosed and pressurized by double working displacement pumps. Either the adhesive will be mixed before application or, if wanted the glue and hardener will meet in the teeth of the matrix. This last application is what we call a semi separate application or Pre-Mix application.

■ Application

The adhesive matrix is formed as the contra profile of the finger jointed timber. The matrix is working according to two principles. First one to apply the mixed glue in the timber joint and secondly to extrude the applied glue according to an even spread over the complete surface of the jointed timber. An approved joint needs to have a full coverage of adhesive in the joint.

The pressure in the application system is in the order of 40 to 60 bar, which gives the pre-requisites to achieve fast and accurate adhesive application in the joint. A correct start and stop of the glue cycle in the joint is guaranteed.

The application will work for horizontal- or vertical FJ profiles, as well as for compact machines, performing a single joint or for package lines. By our mix-safe control system we safeguard that the adhesive components are applied on the application area.

■ Control system

A separate operator panel placed at the working position of the operator, will allow to make all needed application adjustments. Adjustments will be visible direct for the operator.

The panel is equipped with an LCD touch screen, with simple "windows-like" menus for easy changes of the glue operation. By storing the application set-points in the memory, it's easy to recall the perfect input parameters by changes of let's say timber dimensions. This receipt handling will in all extent help the operator to quickly adjust the machine to new set-points, without losing valuable time to optimize the production.

Dosage test equipment for quick and reliable check of the applied adhesive spread and adhesive mixing ratio.

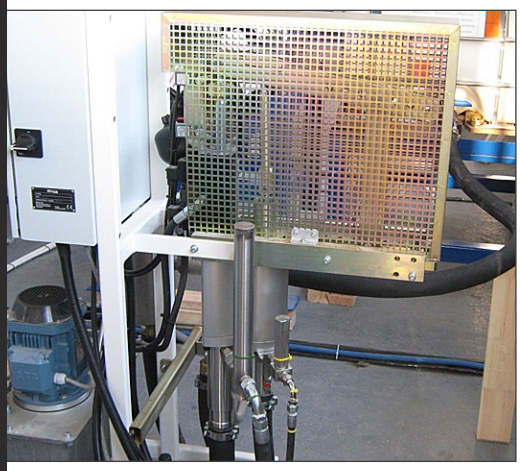
■ Cleaning

The adhesive will be mixed just before the application, which leads to a very limited amount of mixed glue in the dosage machine. Normally this mixed volume is limited to 0,1 liter.

A cleaning system of compressed air and warm water will evacuate this mixed glue at the end of the production cycle. We recommend to dismount the matrices for cleaning at the end of a production cycle.

FAQs

If you have other questions please contact us or find more information on our web site www.mixon.se.



What kind of solution does Mixon recommend, hydraulic or pneumatic driven?

■ For high performing, fast application needs the only solution is hydraulic driven.

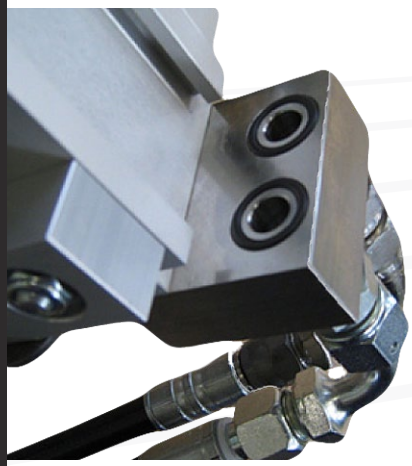
For less demanding lines a pneumatic, less costly solution, might be an alternative.

I am in need for a special solution for finger joint application, can Mixon help out?

■ Yes, we have all kinds of solutions from standard needs to tailor made solutions where we design your solution according your specific needs.

When I change glue system, do I need to change the whole machine?

■ No, normally we can offer our services by changing one of the pumps. Our standard components can easily be changed for minimum costs, but maximum flexibility.



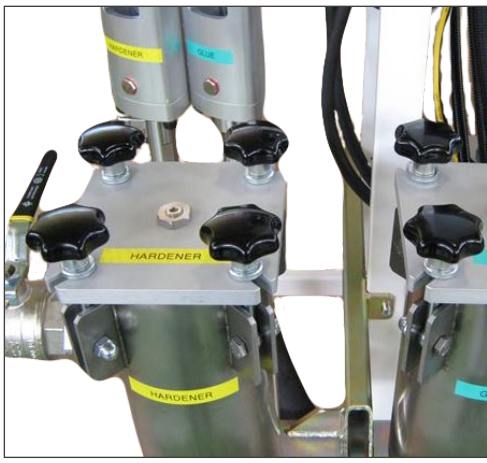
Spare parts, how can Mixon help me?

■ The absolute majority of the components we use in our machines are on stock at Mixon. After you have placed the spare part order you will normally receive the spares within 24 to 48 hours, of course depending on your coordinates.

Do I need to cool the application, due to production circumstances with a relatively high temperature?

■ Depending on each single situation, but if so we can deliver the option cooling of application.

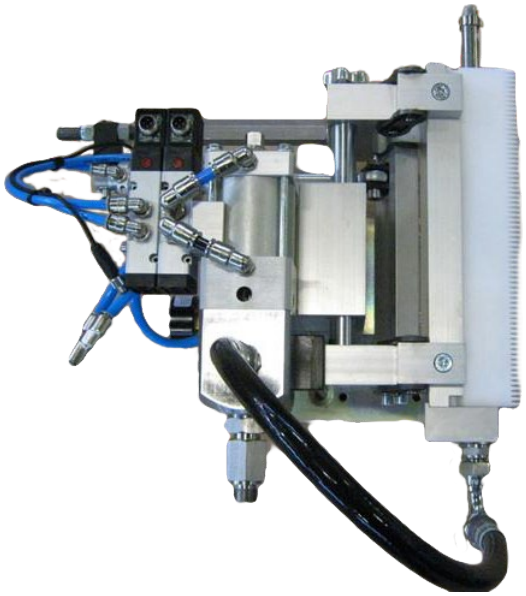
A limited number of components will be cooled to keep the adhesive temperature at low/constant value.



My production is on the other side of the world, what kind of quick assistance can Mixon offer?

■ Normally we can assist direct per phone or email. However we recommend the customer to invest in the option "remote control". This gives us the possibility to look into the program of the PLC by the www. This is a very quick and free service we can offer our customers to address issues.

Further we recommend our customers to agree on an annual preventive service, which normally gives full production availability during one year after the service.



Specifications

of our systems

■ Hydraulic

Model	Capacity (l/min)	Model	Capacity (l/min)
One side mixed application		Two sided mixed application	
Mixon 2452H/1	0,5 – 2,4	Mixon 2452H/2	0,4 – 1,9
Mixon 2453H/1	1,0 – 4,8	Mixon 2452H/2	0,5 – 2,5
Mixon 2454H/1	1,7 – 8,3	Mixon 2454H/2	1,0 – 4,8

■ Ratio & Measures

Mixing ratio	100:3 up to 100:200
Application width	between 25 and 350 mm
Weight	about 220 kg
Dimensions (l x b x h)	1.000 x 800 x 1.800 mm

■ Needed connections

Compressed air	6 bar, 100 l/min
Warm water	40–45 °C, at 6–8 bar
Electricity	400 V/50 Hz/3-phase/ 10 A or 230 V/50 Hz/3-phase/ 16 A

■ Pneumatic

Model	Capacity (l/min)	Model	Capacity (l/min)
One side mixed application		Two sided mixed application	
Mixon 2421L/1	0,4 – 1,9	Mixon 2451L/2	0,4 – 1,9
Mixon 2422L/1	0,5 – 2,5	Mixon 2452L/2	0,5 – 2,5
Mixon 2423L/1	1,0 – 4,8	Mixon 2453L/2	1,0 – 4,8

■ Ratio & Measures

Mixing ratio	100:3 up to 100:100
Application width	between 20 and 260 mm
Weight	about 180 kg
Dimensions (l x b x h)	1.000 x 800 x 1.800 mm

■ Needed connections

Compressed air	6 bar, 100 l/min
Warm water	40–45 °C, at 6–8 bar
Electricity	400 V/50 Hz/3-phase/ 10 A or 230 V/50 Hz/3-phase/ 16 A

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