

FINGER JOINT APPLICATION SEPARATE 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

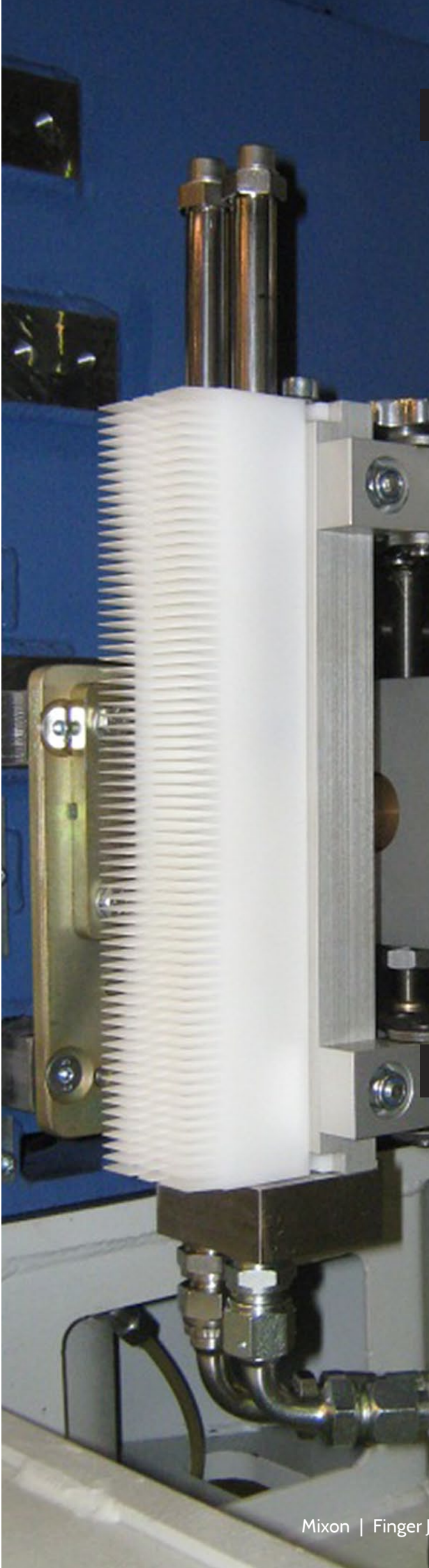
of our finger joint application systems

- No mixed or cured glue in the machine, means no more cleaning
- 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
- Application is approved by certification institutes like Trettek, SP and MPA

■ 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 separate application

Our solutions deal with the following adhesive systems:

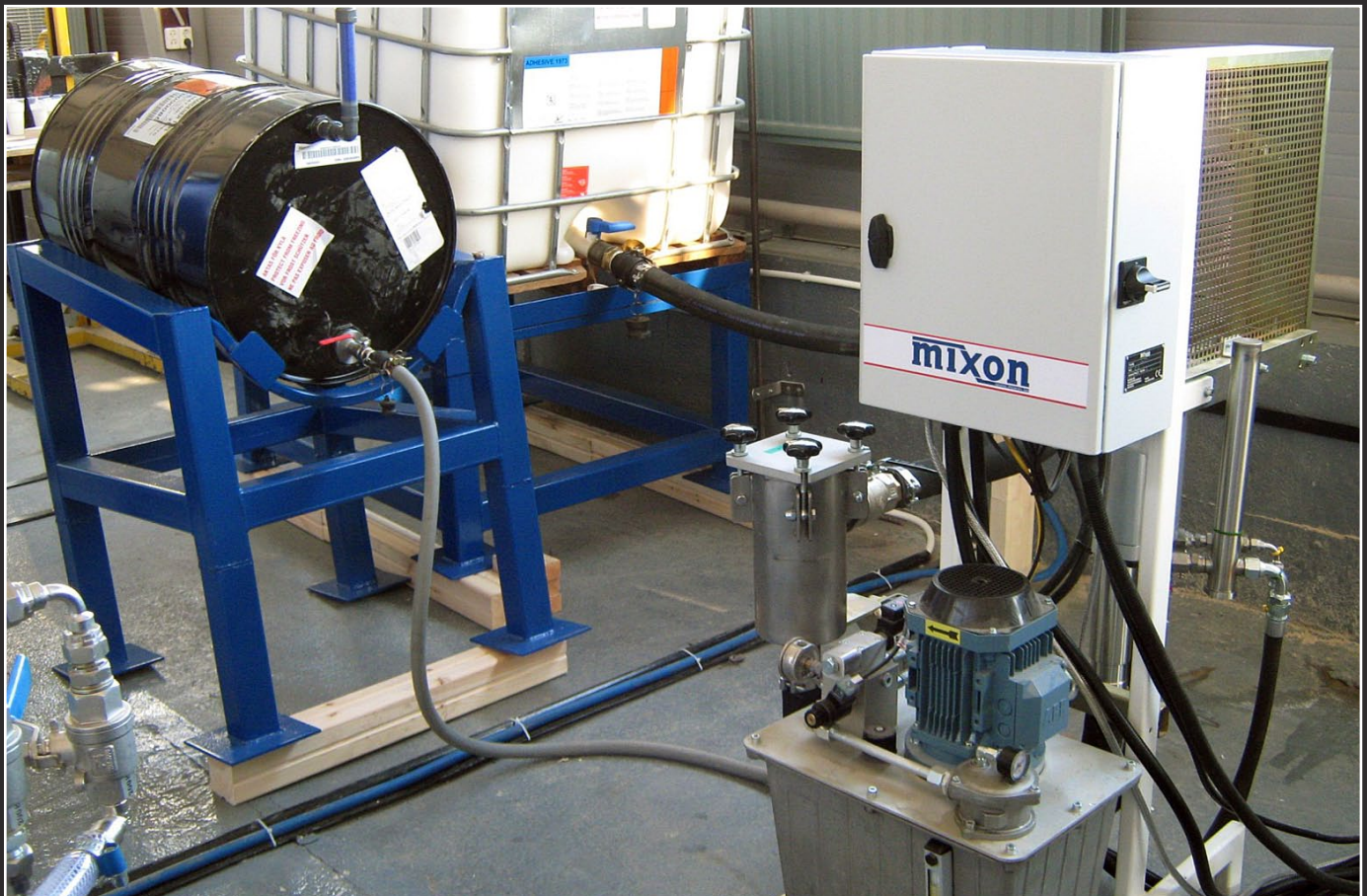
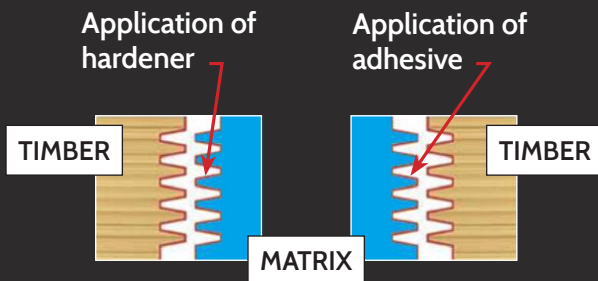
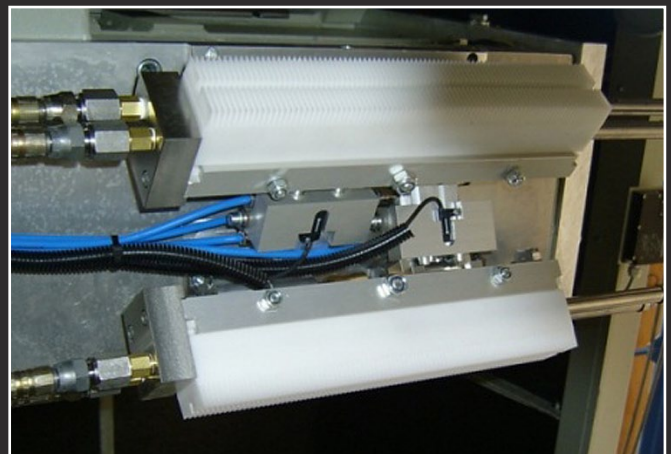
- Two component systems which allow the separate application of glue and hardener, like MUF, PRF or MMF.

The Mixon 2400-2S

for finger joint application
separate application solutions

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. Our application systems are approved by SP, Tretak and MPA.



■ Dosage

The glue and hardener are dosed and pressurized by double working displacement pumps. One end of the jointed timber will be applied with glue and the other end with hardener.

The technical solution is based on two separate controlled dosage units, as the two separate application systems can work fully independent of each other.

The adhesive will be mixed in the joint when the two adhesive components meet while the joint is pressed in the machine.

No mixed glue at any place in the machine, gives the huge advantage by the complete lack of cleaning.

■ 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 glue component in the timber joint and secondly to extrude the applied glue component 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

In order to assure that each single joint will have the two adhesive components for correct application, a control system is developed that will overview each single applied joint. The machine will automatically stop in case the applied volume is not within acceptable range. Furthermore a separate operator panel placed at the working position of the operator, will allow to make all needed application adjustments. Adjustments will be direct visible for the operator.

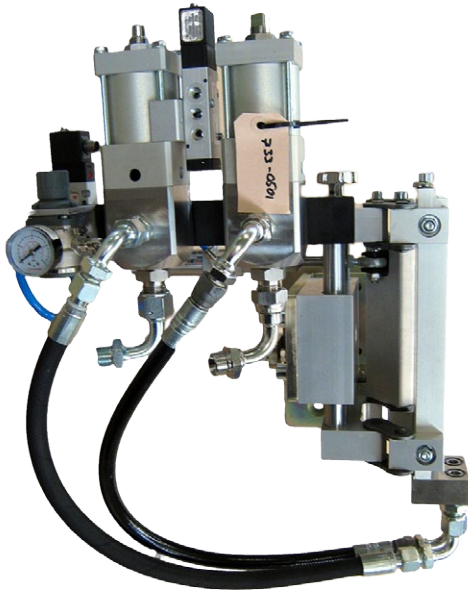
The panel is equipped with an LCD touch screen, with simple “windows-like” menus for easy changes of the glue operation. By storing the application set-points in the memory, it's easy to recall the perfect input parameters by changes for let's say timber dimensions. This receipt handling will in all 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

Due to the fact that glue and hardener are not mixed in any place of the machine, the cleaning activities are fully taken away. All available production time can be dedicated to the production of joints.

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

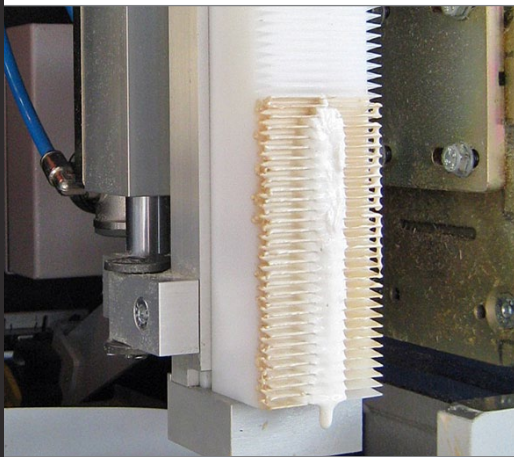


Is the separate application a proven system and what does my certification institute say?

■ The separate application is a proven system and will have the acceptance of the certification institutes like Trectek, SP and MPA.

Which kind of adhesive systems are applicable for separate application?

■ Please contact your adhesive supplier to get a full update of possibilities from an adhesive point of view. Normally the available MUF systems will give full support to apply glue and hardener separately.



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

■ 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?

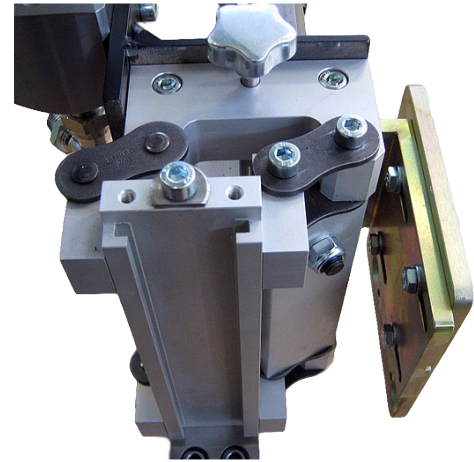
■ The absolute majority of the components we use in our machines are on stock at Mixon. After you have placed the spare part order you will normally receive the spares within 24 to 48 hours, of course depending on your coordinates.



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.

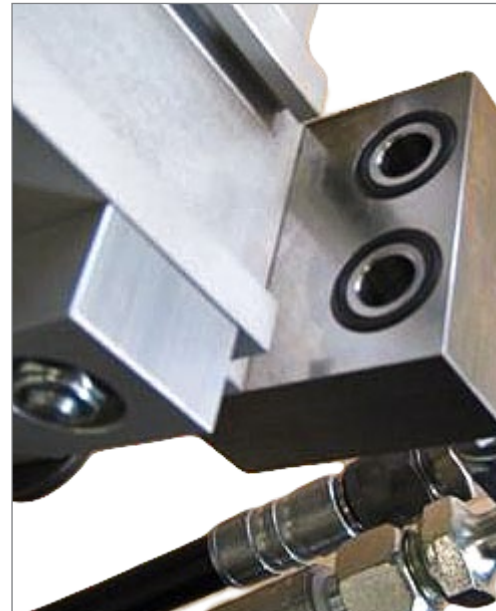
A limited number of components will be cooled to keep the adhesive temperature at low/constant value.



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)
Two sided separate application	
Mixon 2452H/2S	0,5 - 2,4
Mixon 2453H/2S	1,0 - 4,8
Mixon 2454H/2S	1,7 - 8,3
Mixon 2455H/2S	2,7 - 13,2

■ Ratio & Measures

Mixing ratio	100:50 up to 100: 200
Application width	Between 25 mm 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)
Two sided separate application	
not available	-
not available	-
not available	-
not available	-

■ Ratio & Measures

Mixing ratio	Not relevant
Application width	Not relevant
Weight	Not relevant
Dimensions (l x b x h)	Not relevant

■ Needed connections

Compressed air	Not relevant
Warm water	Not relevant
Electricity	Not relevant

Mixon | Finger Joint Application | 2400-2S Separate Series