



Gluing technologies
for the wood industry



Adhesive dosing, mixing
and application systems



OEST SYSTEMS

Machines for dosing and application of adhesives

Oest Systems holds a leading position regarding dosing and mixing equipment as well as application systems for glue mixtures and PUR adhesives.

More than 2500 customer specific machines make an important contribution in the glulam industry as well as in the production of other structural engineered wood products like CLT or I-Beams.

Customized solutions made by Oest are applied worldwide in the production of window frames, solid wood panels, formwork beams, etc.



Glulam



Cross laminated timber (CLT)



Duo / Trio beams



KVH-structural



Laminated scantling



I-beams / Formwork beams



Oest Systems is certified according to ISO 9001: 2015.



As a member in the Glued Laminated Timber Research Association (Studien-gemeinschaft Holzleimbau e.V)



and the German Engineering Association (VDMA) Oest has strong partner at his side.



Solid wood panels



3-layer panels



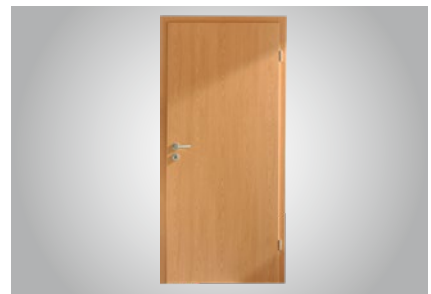
LVL / Plywood



Lightweight panels



Furniture



Doors



Surface application for lamellas 1C adhesive systems

For the automatic surface-application of glue to lamellas Oest has dosing and application equipment for one-component adhesives in the delivery program.

In particular for PUR adhesives, but also for PVAc adhesives.

Principally used for the dosing are special gear dosing pumps.

Depending on the kind of application, a variety of application heads are available.

Application head VALUETAC GX with nozzle bar and manual adjustment of the application width via a closing bar.

Application head PROFITAC VN with single needle valves for each glue thread and automatic application width adjustment.



Dosing unit KONTITOP Z with servo-drive



Application head VALUETAC GX



Application head PROFITAC VN



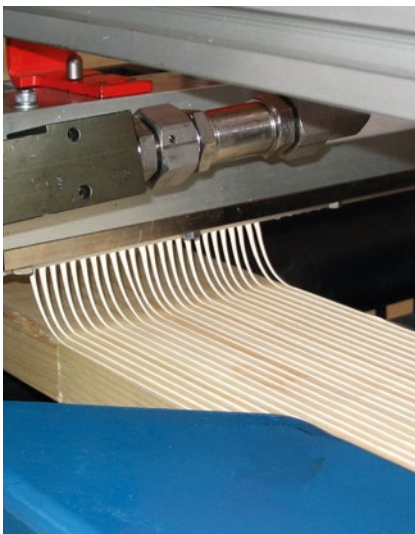
2C adhesive systems

Oest offers also dosing and application units for adhesives with two liquid components.

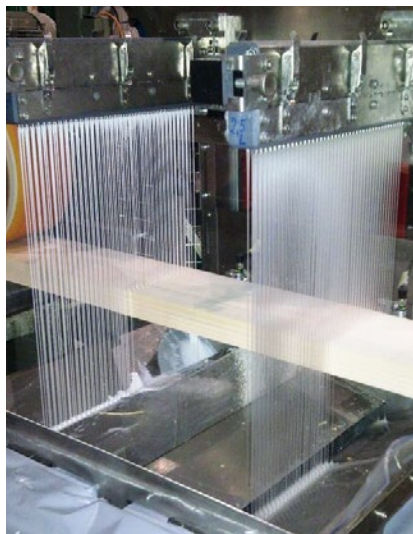
Glue and hardener will be applied either separately or as a mixture.

Adhesive mixture can be applied in the start-stop method or by using ribbon coater with constant pouring curtain.

The separate application of adhesive and hardener is exclusively carried out with ribbon coater.



Start-Stop application of mixed adhesive



Separate application of resin and hardener



Ribbon coater ECOTOP TM



Surface application for cross laminated timber 1C/2C adhesive systems

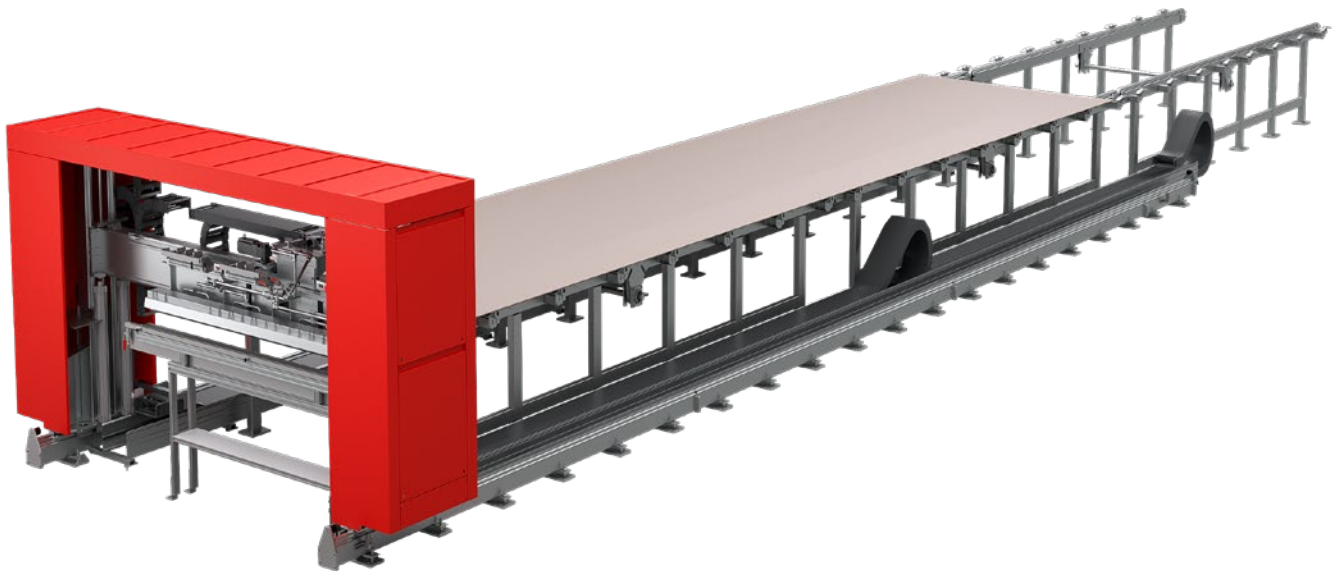
Oest is specialist for gluing systems for the production of cross laminated timber, with great experience.

There are machines available for all common adhesive systems on the market such as PUR, MUF and EPI. The delivery range is from simple application heads with fixed application

width to fully automated application heads.

Various machine concepts with servo pump technology are available for the exact dosage of adhesive. Depending on the project, individual system components or complete gluing portals can be supplied.

Gluing portals are available as standing portals, bridge portals or cantilever portals. With the cantilever portal, 2 press lines can be operated alternately.



Bridge portal with Facetac FD application head

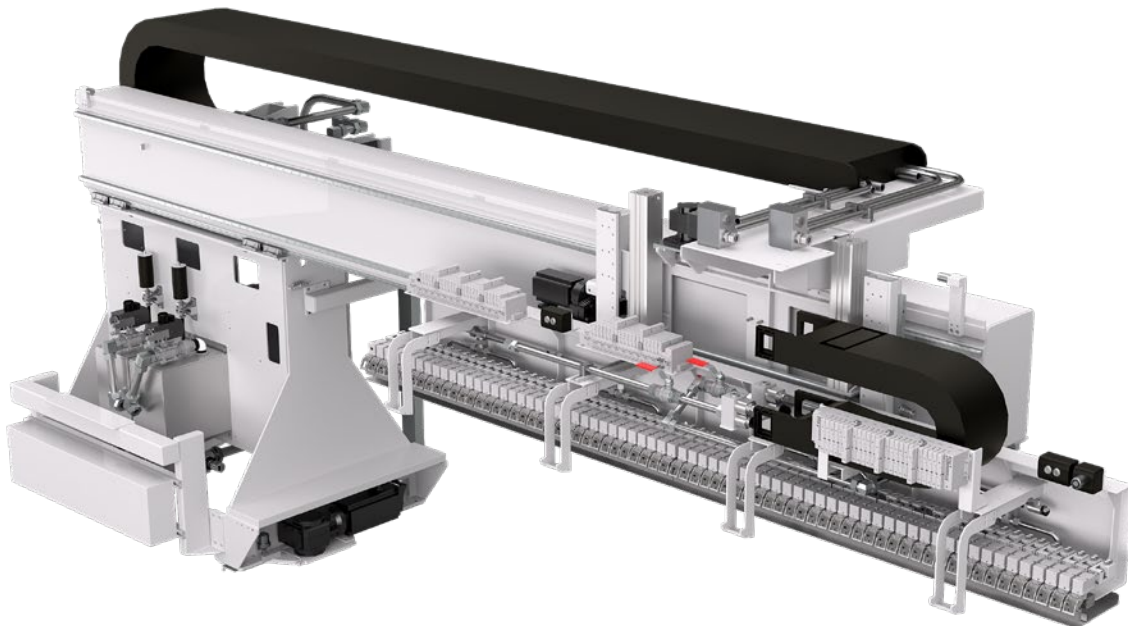


All portals have servo y and z axes for automatic height positioning and to enable all valves to be used for each gluing cycle („All in use“).

The portals can be configured with 2 or 3 adhesives on one or 2 application heads. It is also possible to mix 2 adhesives (slow and fast) to generate an optimal open time.

Where required, areas of unglued cut-outs can be detected by special sensors or via postprocessor from CAD data. Adhesive is only applied where it is needed.

Optionally, a water spraying bar, or an automatic level control can be installed.



Cantilever portal with FACETAC FD application head



Finger joint application 1C adhesive systems

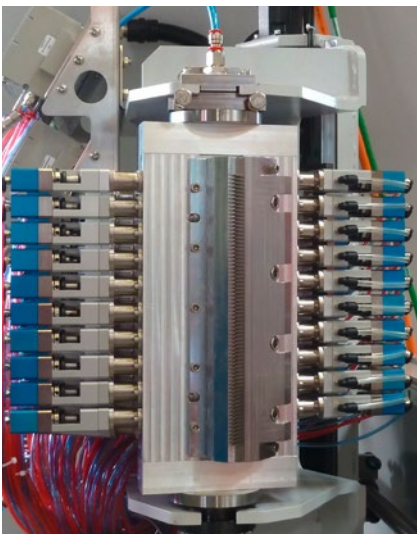
For the glue application of finger jointings, Oest has systems for the dosing and application of one-component adhesives in the product range.

PUR adhesives, as well as PVAc glues are being processed.

Depending on the application, the adhesive is applied contactless or with comb, on one side or both sides of the finger joint.

The heart of the Oest dosing systems for finger joint application are the self-developed high pressure dosing diaphragm pumps, ideal for short gluing cycles.

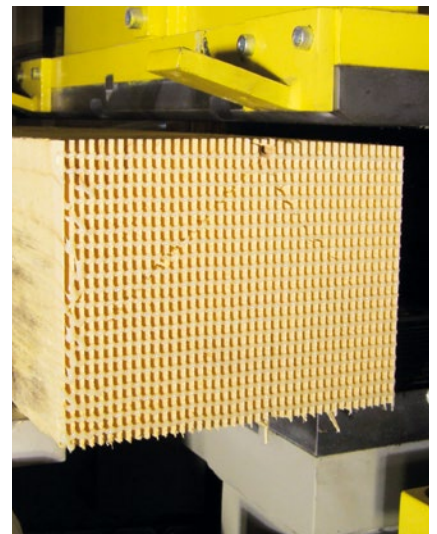
These were completed by the application heads ECOTAC, FACETAC and PROFITAC.



Application head ECOTAC VN



Application head PROFITAC V for contactless application



Contactless adhesive application crosswise to the finger profile



2C adhesive systems

The portfolio of Oest comprises also machines for the dosing and application of two-component adhesives.

These were applied either mixed or separately.

Depending on the kind of application, the adhesive is applied without contact with the application head FACETAC or with the comb system ECOTAC.

The application comb ECOTAC consists a special structure of single sheet metals plates. This guarantees a precise adhesive application and low maintenance costs.



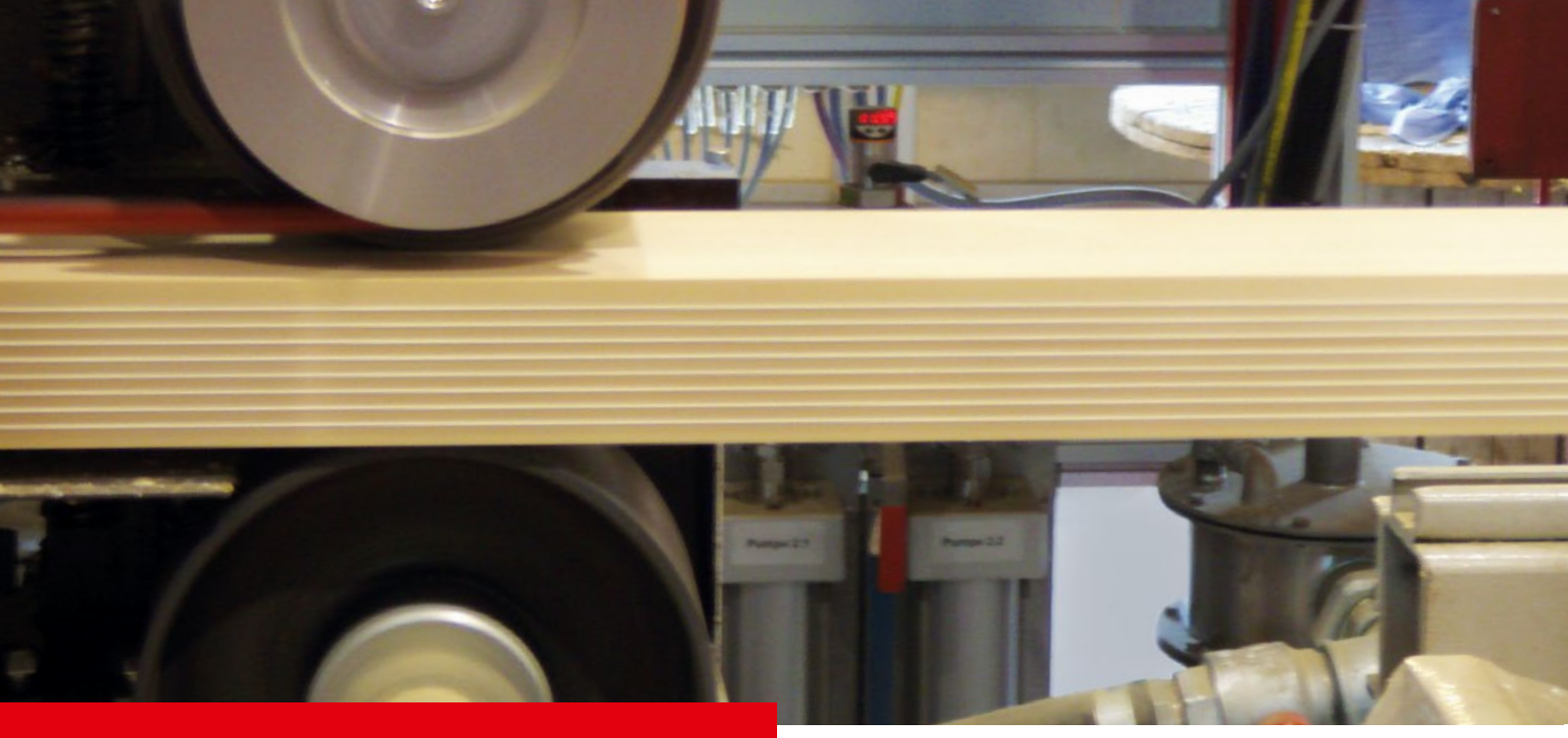
Application comb ECOTAC C



Application head FACETAC P



Dosing unit HYDROTOP/HYDROMIX



Edge application 1C/2C adhesive systems

In the case of edge gluing, the adhesive is usually applied with the CONTACT application head.

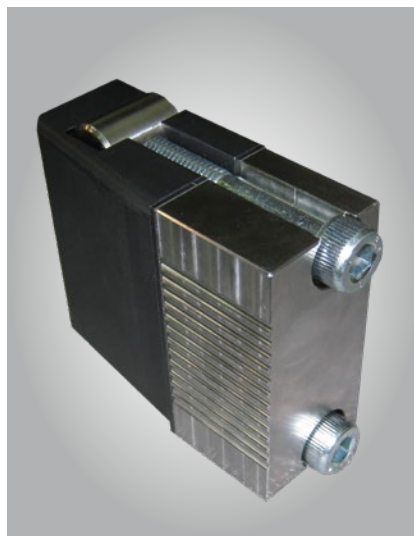
The application head rests on the wood via a spring-loaded mounting and ensures uniform adhesive application.

It is possible to use 1K adhesives (PUR, PVAc) or 2K adhesives (MUF, EPI). The 2C adhesives are mixed with a static mixer in front of the application head.

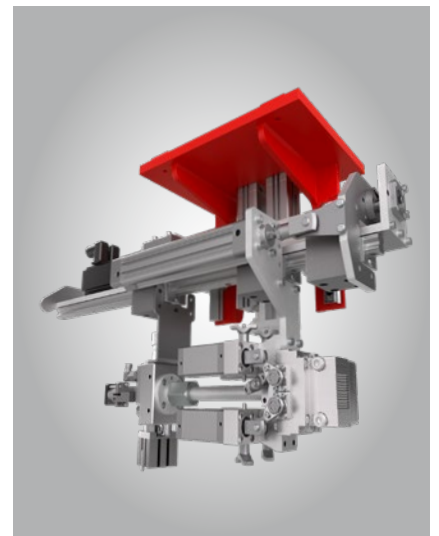
With servo and/or rotary axes, the application heads can be adapted to different production line systems and made maintenance friendly.



Application head CONTACT VN for 1C



Application head CONTACT



Application head CONTACT FS for 2C with axes



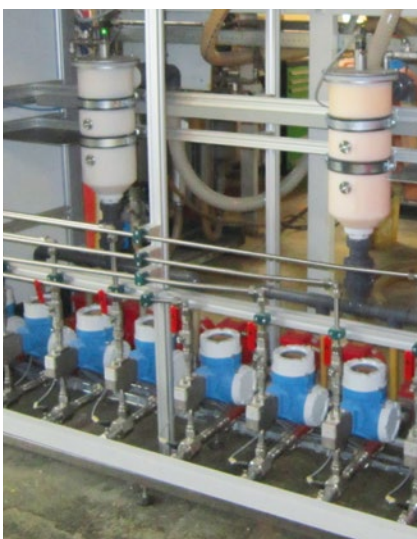
I-beams / Formwork beams 1C/2C adhesive systems

For the production of I-beams or formwork beams 1C-PUR and 2C-MUF adhesives are mainly used.

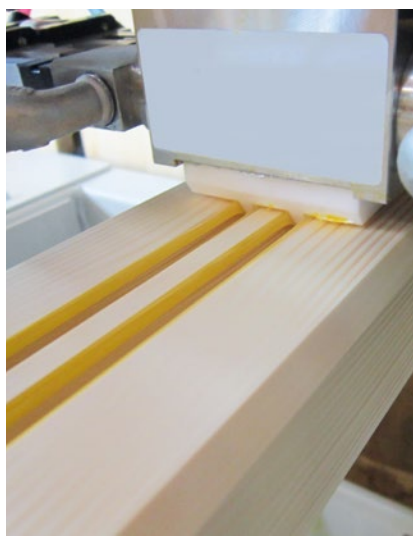
Equipment for the glue application onto the flange and web is available.

In order to ensure maximum process safety, each flank of a flange is supplied with its own dosing pump and its own material valve.

In addition to the process-safe dosing technology, it is recommended for high-performance systems to install a visual application monitoring system, which controls the continuous application of the adhesive thread on the workpiece.



2C dosing unit KONTIMIX



Application head COMBITAC S for flange-application



Application head COMBITAC G for web-application



Flexible, demand-oriented solutions

Mixing units – Pouring machines – Spraying systems

A wide range of special machines is available for many special applications, such as

- Wide pouring machines for the plywood or panel industry
- Mixers for the supply of roller glue application machines
- Spraying systems for water and/or primer application



Water/Primer-Sprayer for Lamellas



Dynamic mixer for liquid glue and hardener



Controls and monitoring

Smooth work processes in the focus

The entire electrical conception of the Oest machines are carried out by the in-house electrical department.

Short paths allow a high degree of efficiency and flexibility.

Oest PLC programmers are planning the complete machine controls and take care about the commissioning of the machine before the delivery.

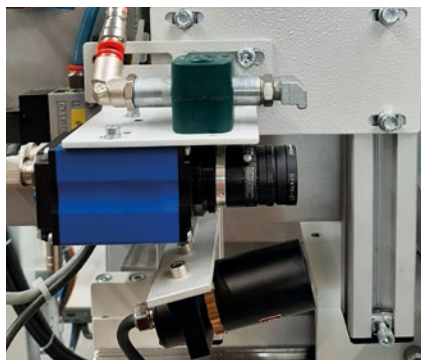
Each control can be individual configured.

The following services are among others available:

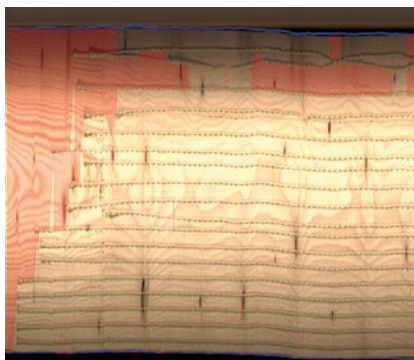
- Visualizations
- Networking with other controllers and host computer via bus systems
- Operating data logging
- Remote maintenance
- Temperature measuring
- CAD connection
- Sensor technology for contour identification

In addition to the standard monitoring functions of the Oest dosing systems, such as pump monitoring, pressure monitoring of the dosing lines, level monitoring of the holding tanks, are the following additional devices available:

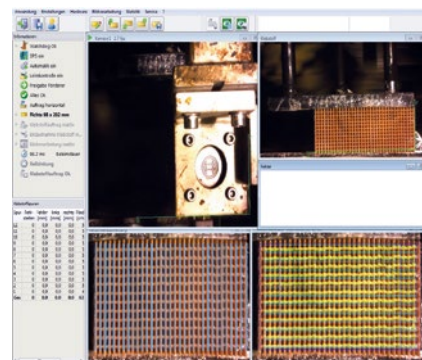
- Flow meter
- Camera monitoring
- Picture evaluation
- Sensor monitoring
- Laser level monitoring



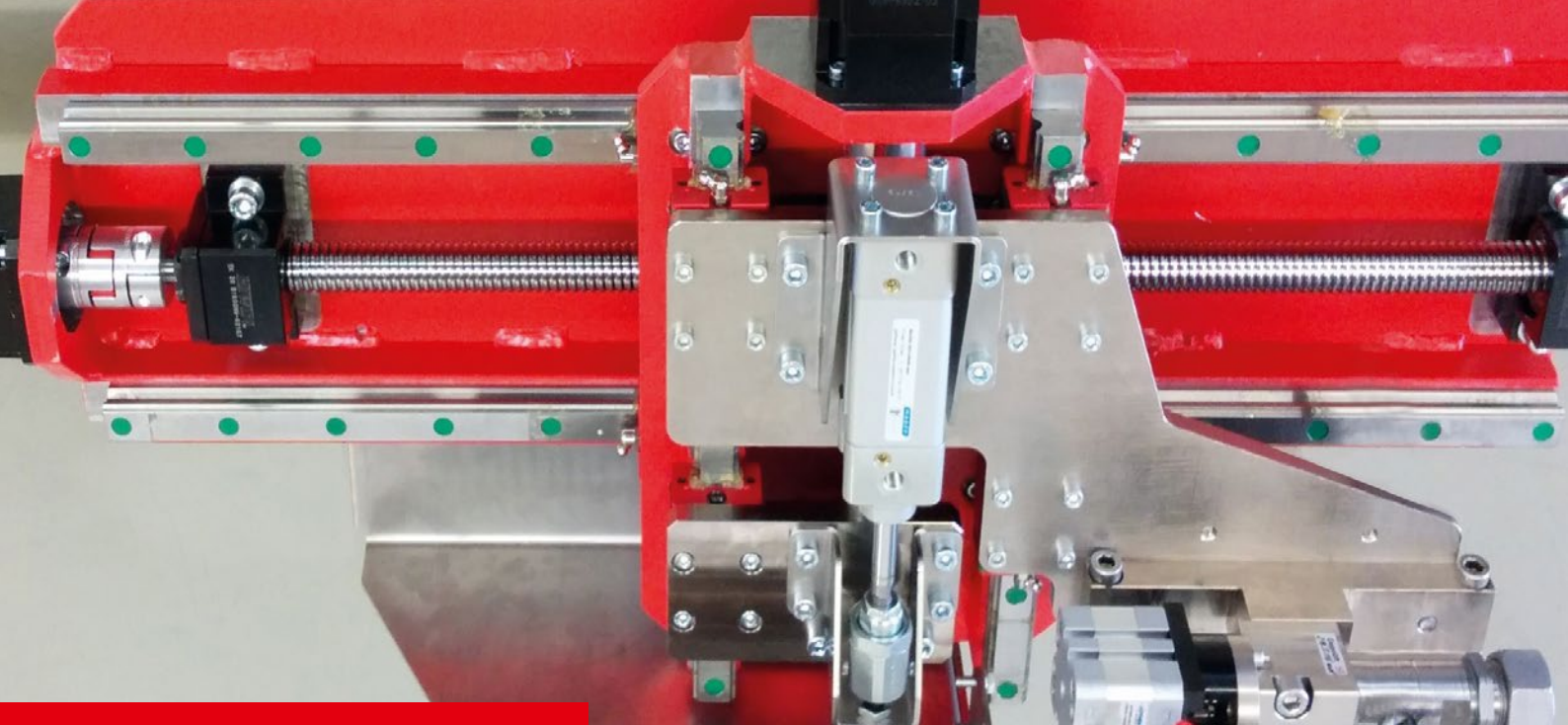
Application control edge gluing



Surface application monitoring with laser and camera



Application control fingerjointing

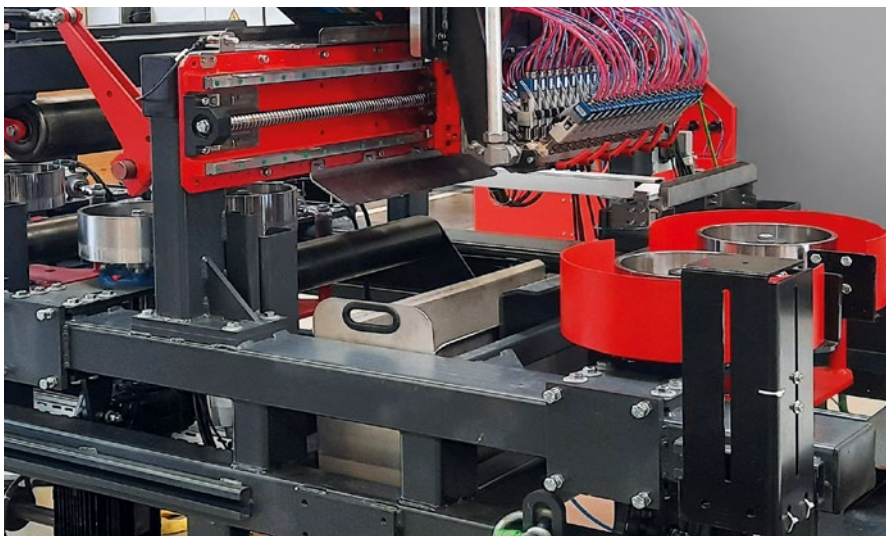


Mechanisations Portals, axes & Co

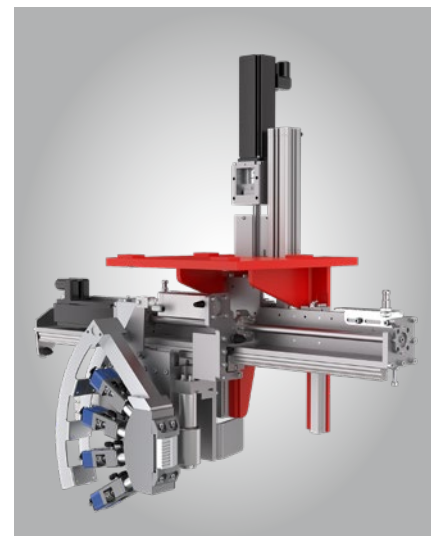
Our range of services includes also further mechanizations around our adhesive application heads.

These include for example:

- Adjustment and mounting mechanics
- Static or moveable gluing portals
- Gluing tables
- Feeding devices
- Linear axes



Feeding device for glulam lamellas with application head Profitac VN



Mechanization edge gluing head CONTAC



Accessories

Everything from a single source

Oest offers customized solutions for almost every customer requests.

Our glue dosing and application systems are individual expandable through various accessories. These include:

- Supply systems for the flexible placement of the material container
- Filter systems
- Cooling units
- Adhesive heating systems
- Temperature measurings
- Heating cabinets
- Water spray units
- Collecting tray for drums and IBC container
- Auxillary materials for adhesive handling
- Energy recovery and storage systems



Subframe for adhesive containers with pump unit KONTITOP



Adhesive climatisation



Innovative technologies
for dosing and application
of adhesive systems.

OEST SYSTEMS GmbH & Co. KG

Robert-Bürkle-Straße 7
D-72250 Freudenstadt
phone +49 74 41 539-400
systems@oest.de
www.oestgroup.com

OEST GROUP GERMANY



Member of VDMA, Verband Deutscher
Maschinen- und Anlagenbau e.V.

