



WOOD INDUSTRY

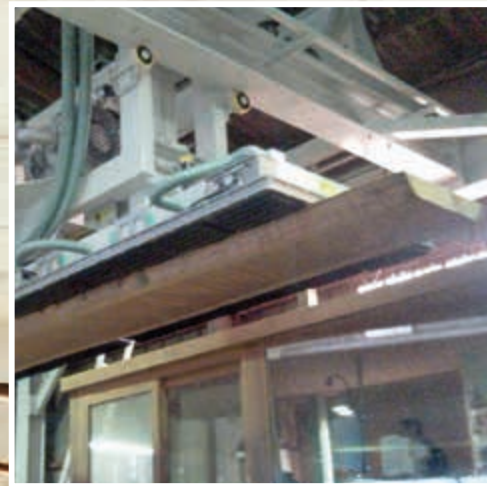
Wood lifting systems



JOULIN
vacuum handling

A brand by Piab Group

Stacking – Destacking systems for all handling in wood industry



JOULIN, vacuum handling.

Family owned, JOULIN invented the foam vacuum gripper **over 60 years ago**, and **continues to pioneer advances** in vacuum technology today.

Whether you are picking **a complete layer, partial layer or single part**, the JOULIN foam gripper automatically senses and closes the check valves in areas without product, allowing the same gripper to be used with no additional set up or re-programming.

From grippers to complete turnkey stacking and de-stacking systems, Joulin is **flexible and offers a quick response** to supply the best solution for you.

With manufacturing and design facilities in Europe and the USA, see for yourself **why 60 countries and counting trust JOULIN** for their lumber handling projects.

François & Laurent Joulin





Standard range

For more than 60 years JOULIN has supplied the wood industries with lifters.

Our range of standard gantry robots equipped with check valve technology allows you to **pick up all products**, partial layers, complete layers, random lengths and widths **without adjustment** using the same grippers.

All the models can be supplied complete turnkey or with different degrees of completion **integrated in your new or existing line**.



Gantry robot 500 t on mobile framework
Maximum capacity 500kg up to 7 cycles per minute

In detail

Grippers equipped with **patented Wave System™** (energy savings and not sensitive to dust, splinters, ...)

Grippers available in **aluminum or steel**

Traversing movement with belt drive for high speed and acceleration

Frequency drive with encoders for speed and optimizing movements

Very **low and easy maintenance**

Smart Control: Allows adjustment and vision of all parameters of the lifters. User friendly user interface with **touch screen**

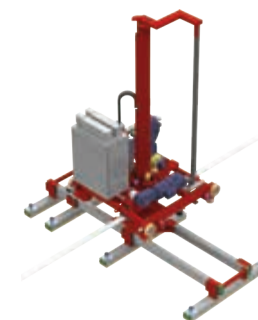
Up to **5 axis**

Telescopic columns (low roof or ceiling)

Many options available

Radio control available

All our gantry robots are manufactured using high quality, internationally-known brand components



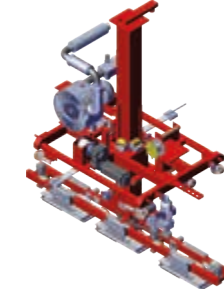
150

Maximum capacity 150 kg
Up to 4 cycles per minute



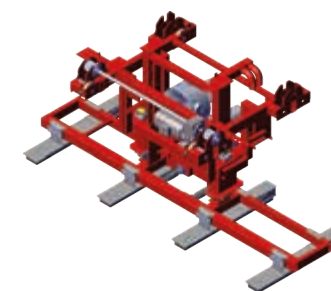
200

Maximum capacity 200 kg
Up to 10 cycles per minute



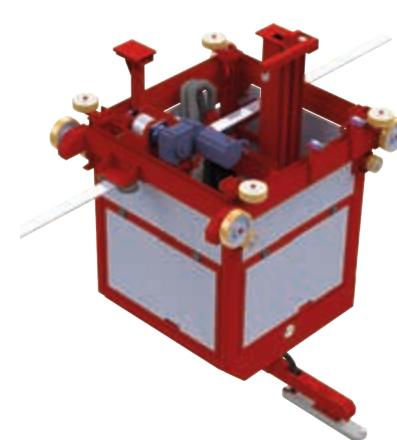
500

Maximum capacity 500 kg
Up to 7 cycles per minute



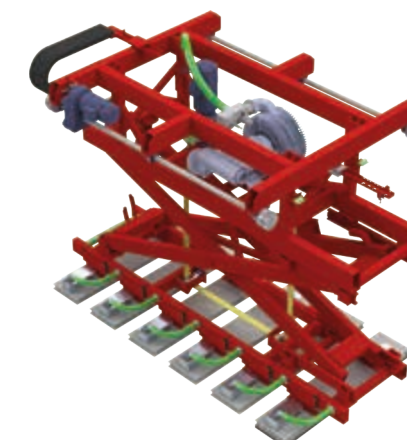
700

Maximum capacity 700 kg
Up to 6 cycles per minute



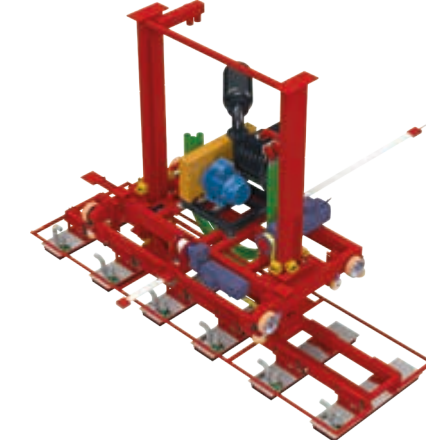
SPEED STACKER

Maximum capacity 600 kg
Up to 7 cycles per minute



1000 CS

Maximum capacity 1000 kg
Up to 4,5 cycles per minute



2000

Maximum capacity 2000 kg
Up to 4,5 cycles per minute



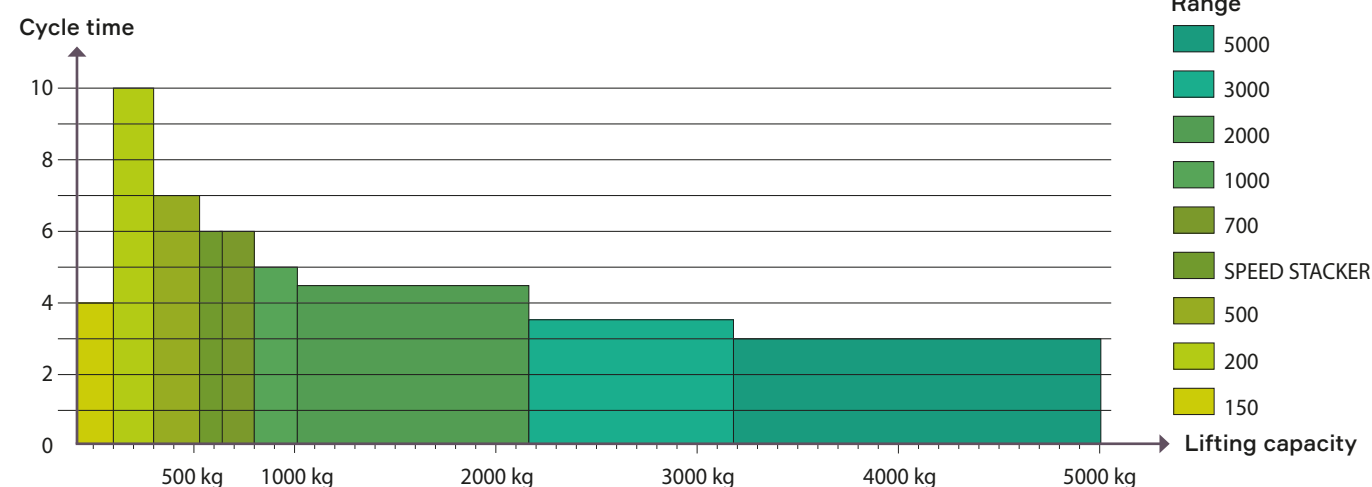
3000

Maximum capacity 3000 kg
Up to 3,5 cycles per minute



5000

Maximum capacity 5000 kg
Up to 3 cycles per minute





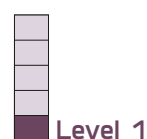
5 levels of equipment



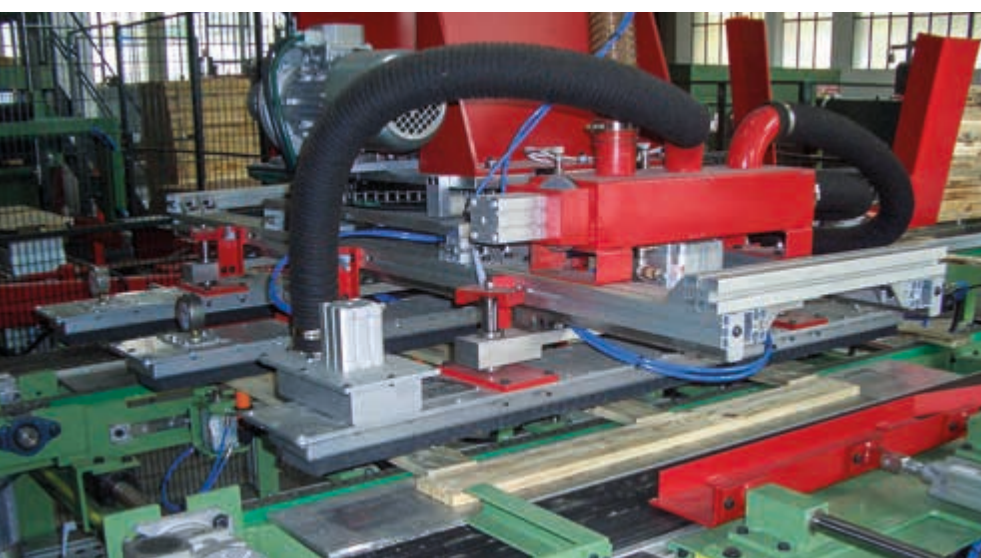
JOULIN offers **5 levels** of equipment to fit all your needs.

- 1- GRIPPERS
- 2- GRIPPERS AND FRAME
- 3- GANTRY ROBOT
- 4- COMPLETE GANTRY ROBOT
- 5- COMPLETE GANTRY ROBOT WITH CONTROL BOX

Grippers



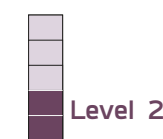
Level 1



Available Options

- **Flow Reverser** for quick release (light products such as slip sheets)
- **Blow off** (light products such as slip sheets)
- Venturi (ejectors)
- Our grippers include patented **Wave System™ GripTech™**

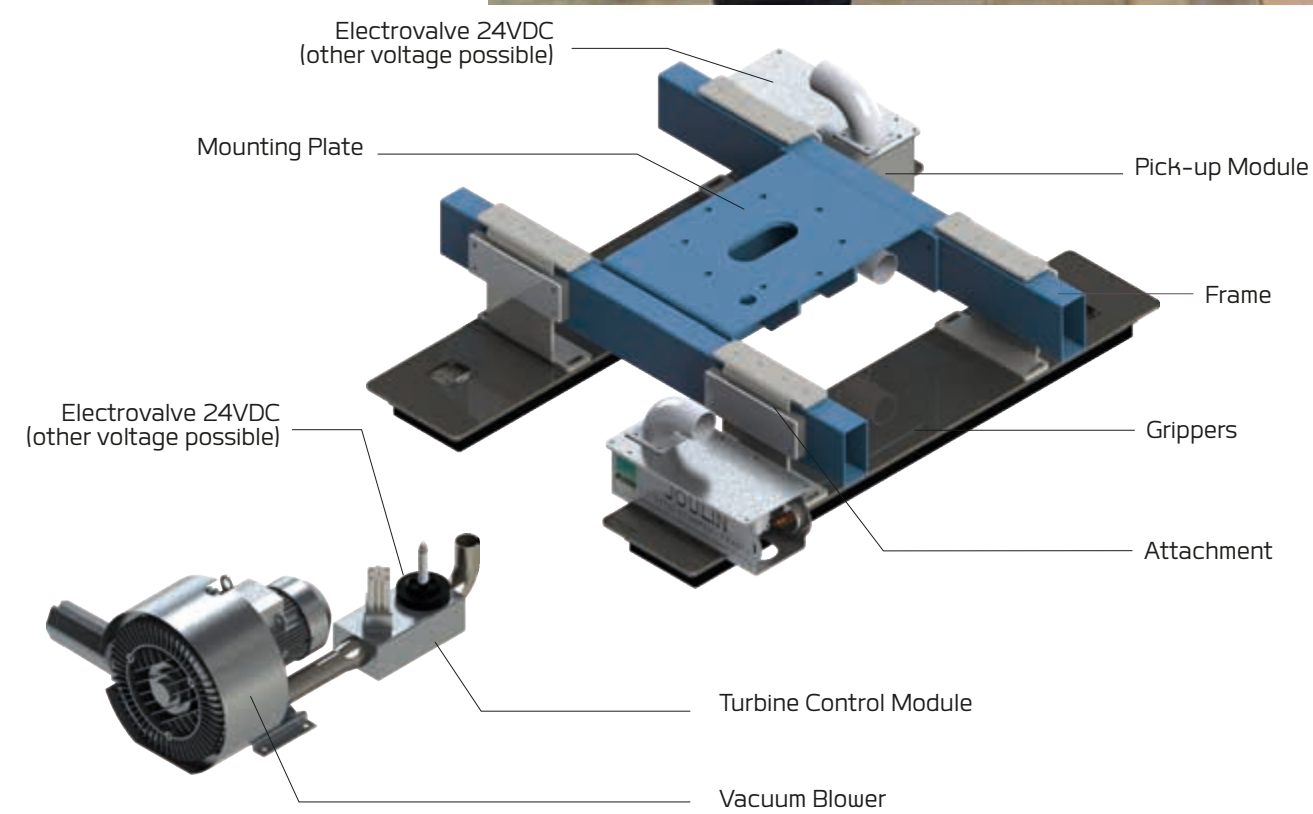
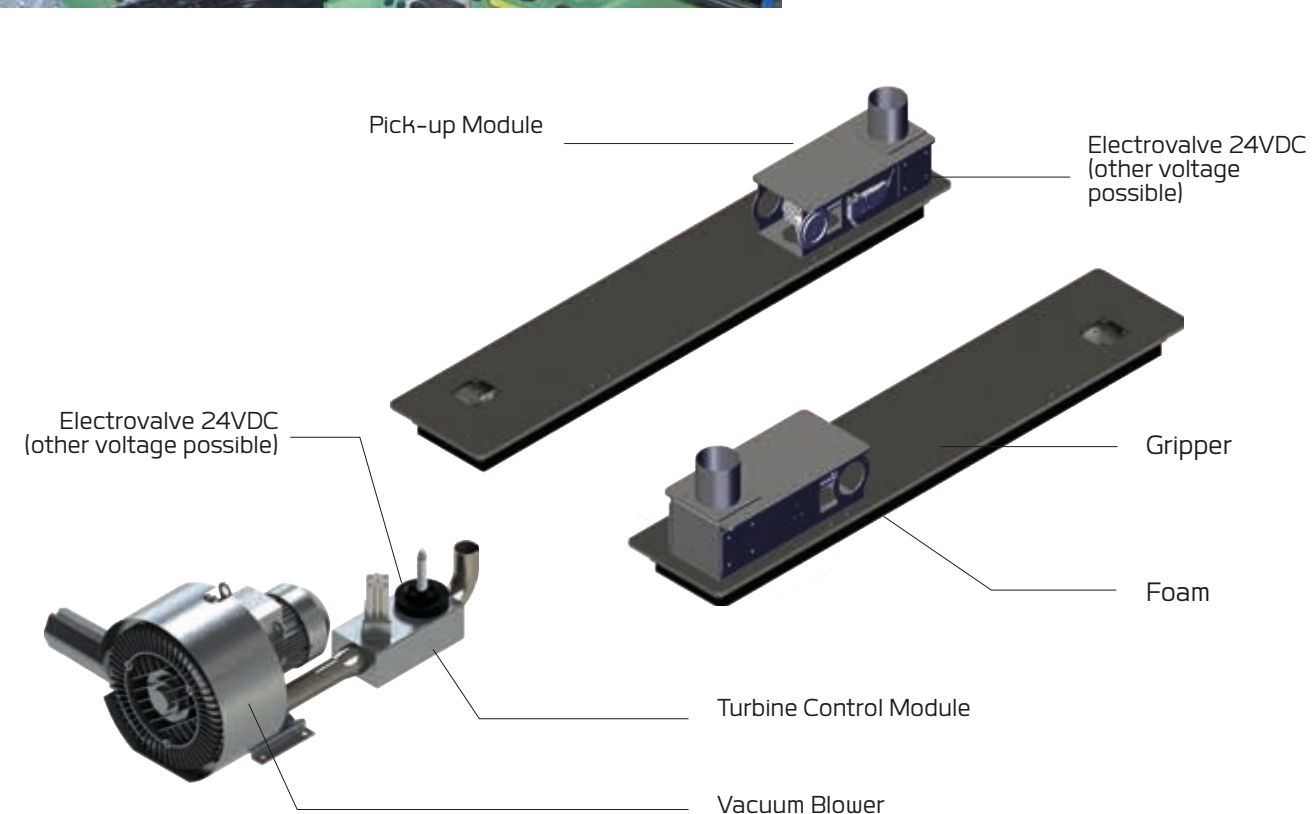
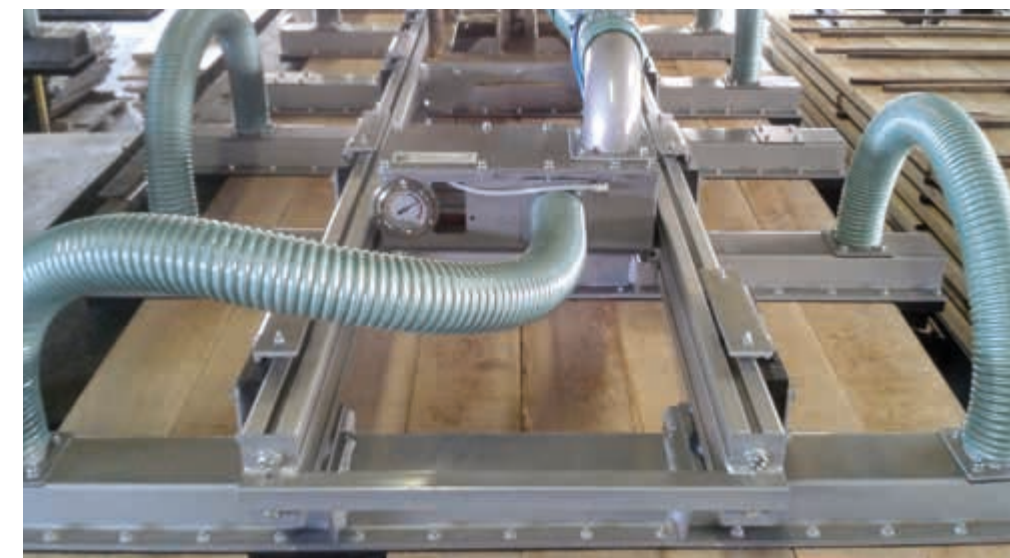
Grippers and frame



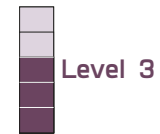
Level 2

Available Options

- **Steel or aluminum**
- Single to multiple grippers
- **Different models of attachments:** for robot or lifter
- Electrical switches and valves connected to a junction box
- Fieldbus
- Manual or powered horizontal adjustment of the gripper position



Gantry robot



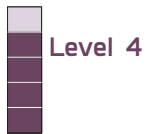
Level 3



Available Options

- From standard to special models
- **Traversing movement with belt drive** for high speed and acceleration
- Electrical switches and valves **connected to a junction box**
- **Fieldbus**
- **Single to multiple grippers**
- **Rotation** of the grippers
- Telescopic columns (low roof or ceiling)
- Grippers in **steel or aluminum**

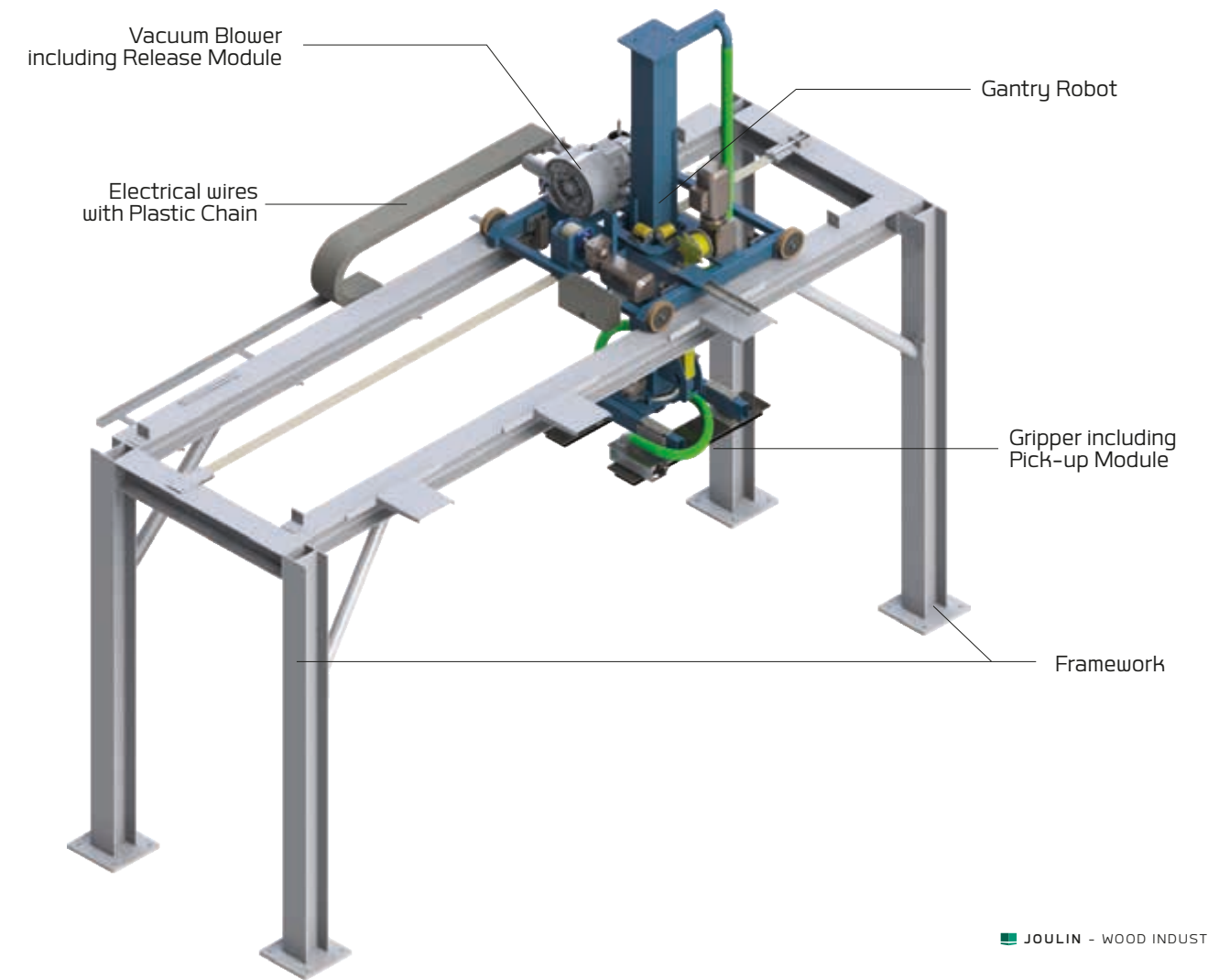
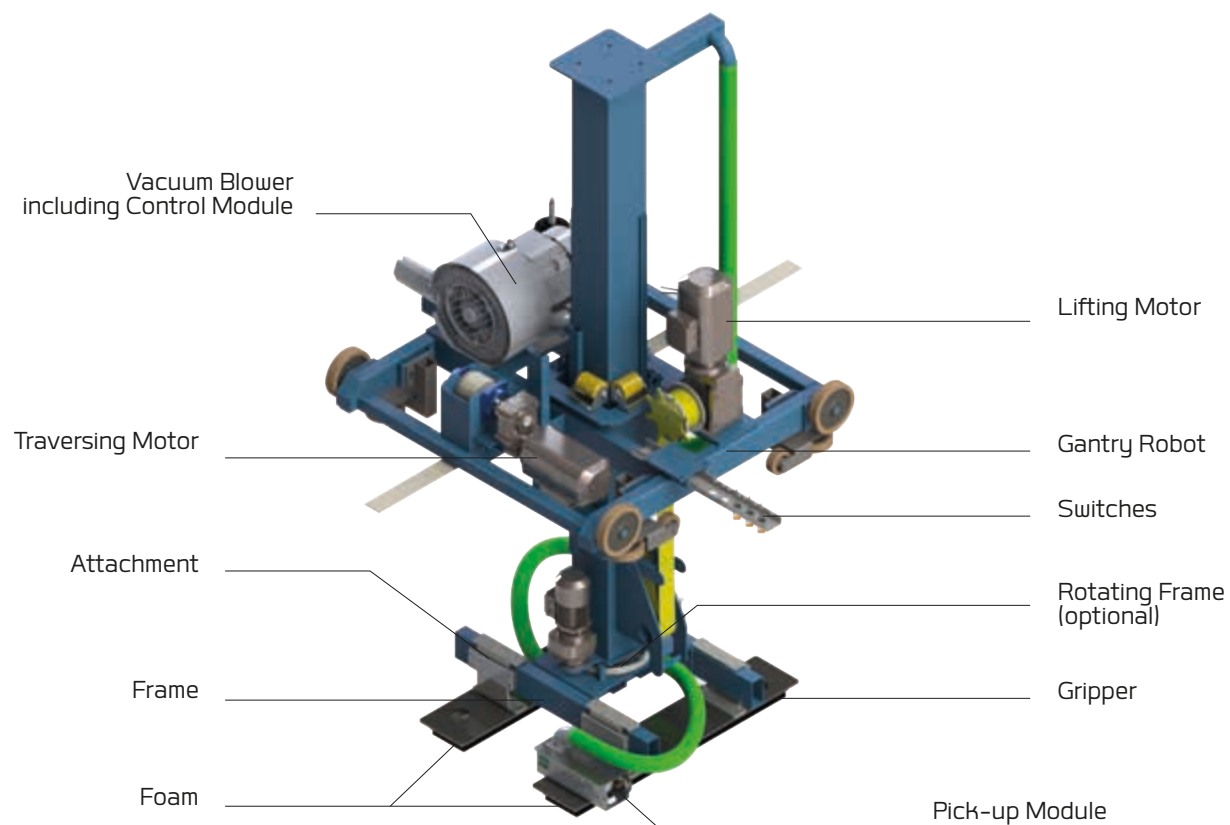
Complete gantry robot



Level 4

Available Options

- **Fixed or mobile framework**
- From standard to special models
- **Traversing movement with belt drive** for high speed and acceleration
- Electrical switches and valves **connected to a junction box**
- **Fieldbus**
- **Rotation** of the grippers
- Telescopic columns (low roof or ceiling)
- Grippers in **steel or aluminum**



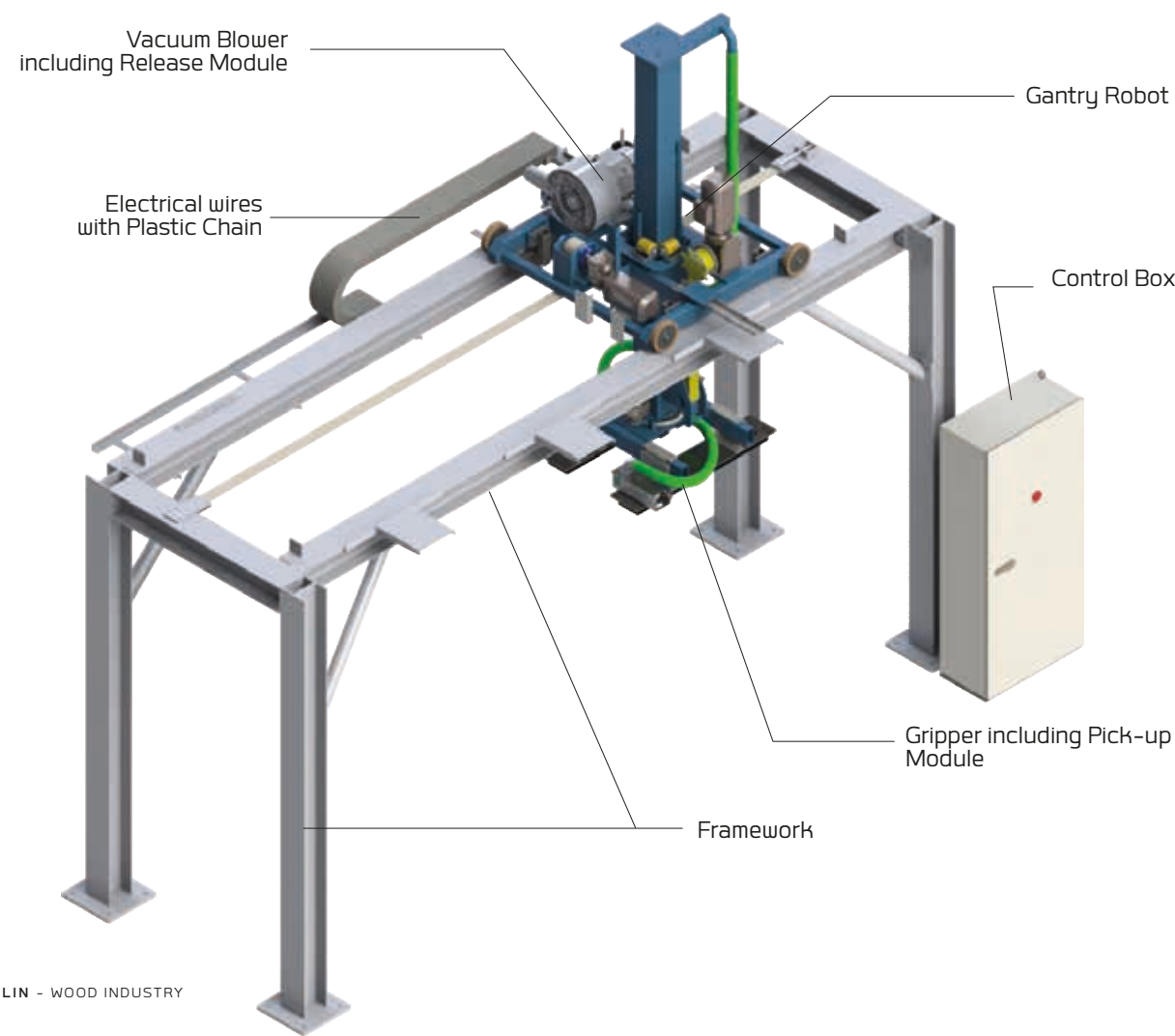
Complete gantry robot with control box

Level 5



Available Options

- Fixed or mobile framework
- **Frequency drive with encoders** for speed and optimizing movements
- **Traversing movement with belt drive** for high speed and acceleration
- Rotation of the grippers
- Telescopic columns (low roof or ceiling)
- Grippers in **steel or aluminum**
- **Up to 5 axis**
- Smart Control; allows adjustment and vision of all parameters of the lifters
- **Radio Control**

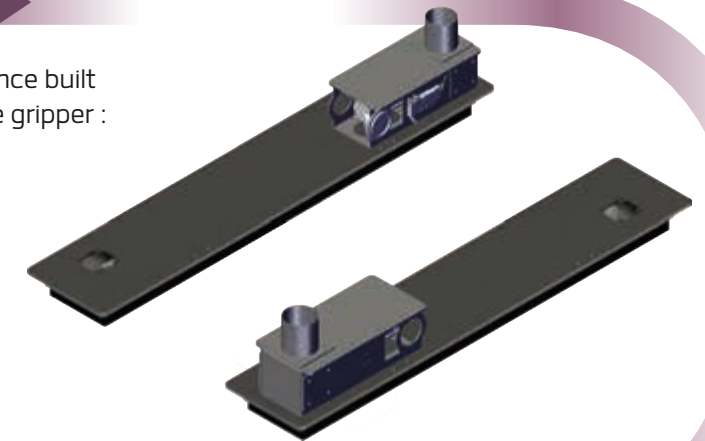


From the single gripper to the complete turnkey gantry robot

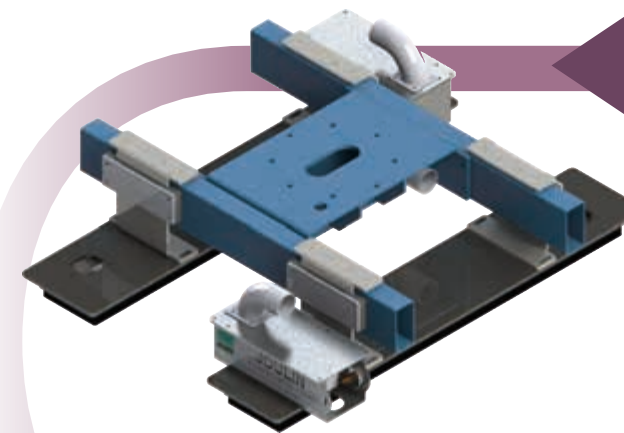
From the gripper ...

The patented check valve design has tolerance built in to allow dust particles to pass through the gripper :

- Rough, dry or green lumber,
- Molded parts,
- Complete house wall panels,
- Pallets,
- Heavy beams, ...



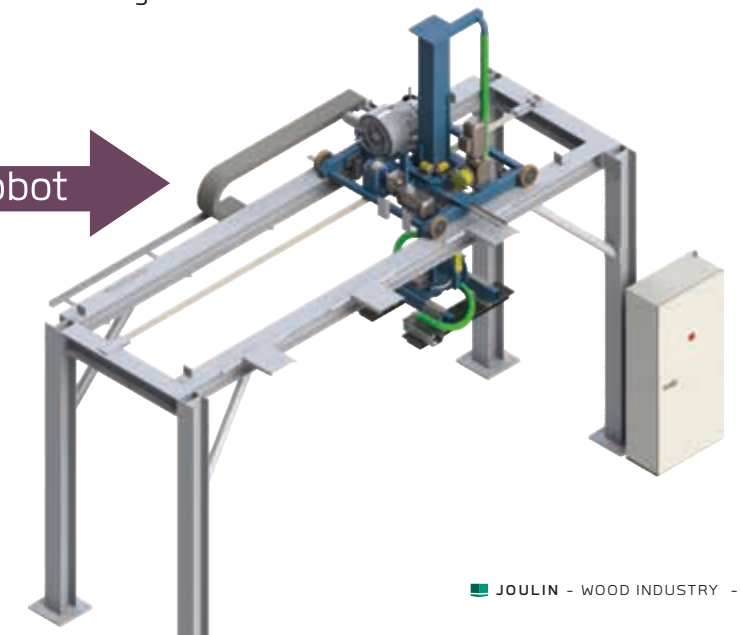
... to the frame...



- As narrow as **20 mm products**,
- Wide range of standard products,
- Easy and inexpensive to manufacture custom grippers to fit your needs,
- Many options available,
- Attachments to fit your robot or lifter,
- Short delivery time

... to complete gantry robot

Lifting capacities **up to 5000 kg**
 State of the art controls with custom programs and interactive touch screen panels.
 Many configurations and options to fit your application up to the complete turnkey gantry robot installed by our technicians.



Zoom in...

Control



Radio Control

The radio control system gives an ergonomic use allowing the **remote control** of your gantry robot. Different technologies are available.

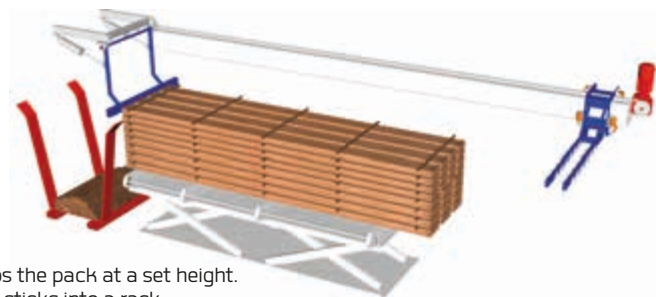


Smart Control

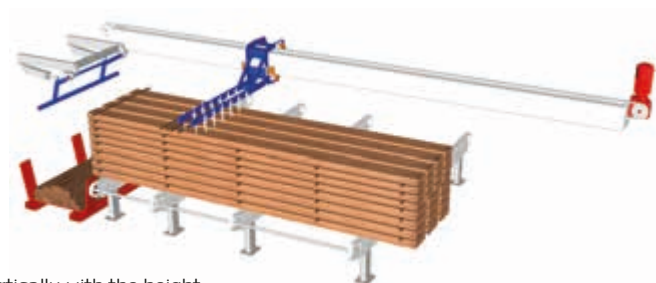
Smart Control touch screen offers **easy and friendly operation**. It helps in optimizing and adjusting the speed, acceleration, position and extra parameters of the system.

The options

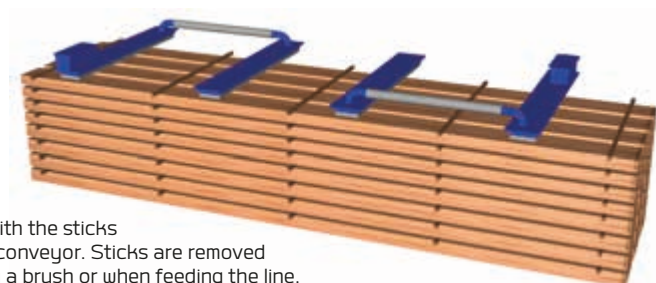
REMOVE STICKS



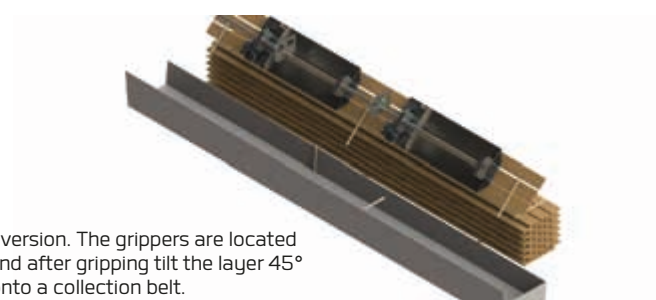
A. The lifting table keeps the pack at a set height. The brush sweep the sticks into a rack.



B. The brush adjusts vertically with the height of the pack.

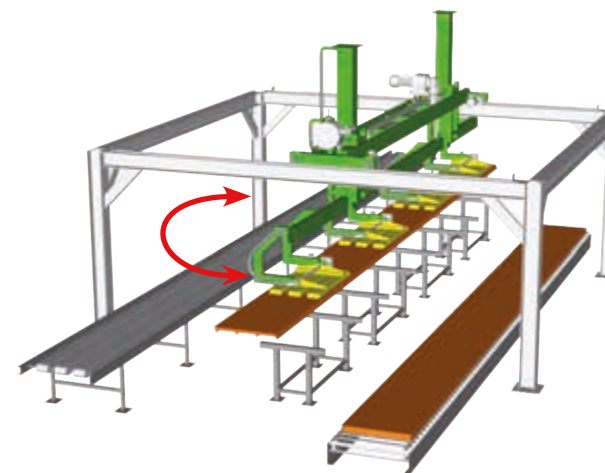


C. The layer is picked with the sticks and released on the conveyor. Sticks are removed at that time either by a brush or when feeding the line.

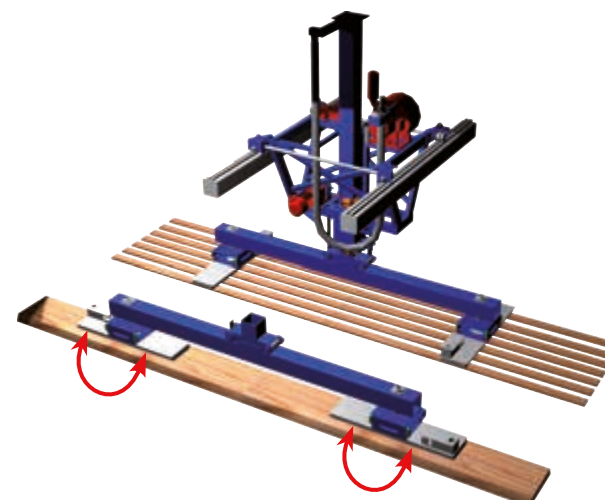


D. As a variant of the C version. The grippers are located between the sticks and after gripping tilt the layer 45° to let the sticks fall onto a collection belt.

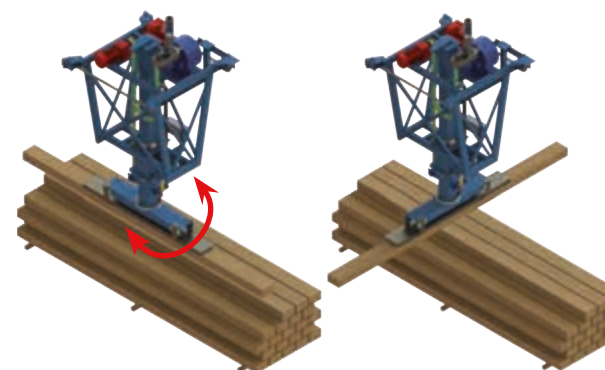
ROTATING



A. Flip over the products to inspect or release on other face (90° or 180°).

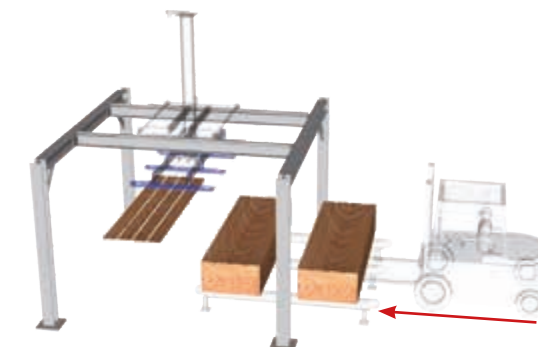


B. Switch from picking a single part to rotating 90° and picking a full layer.

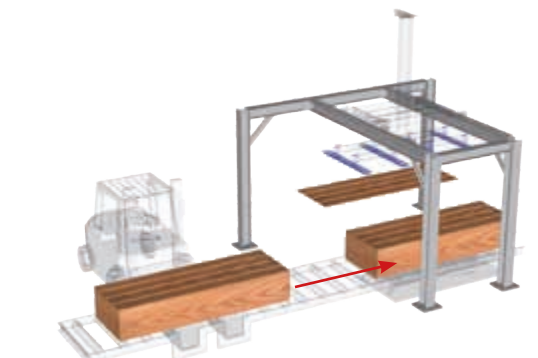


C. Horizontal rotation of the products after gripping

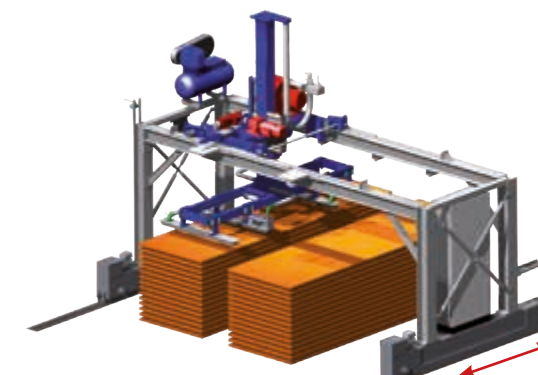
MECHANICAL OPTIONS



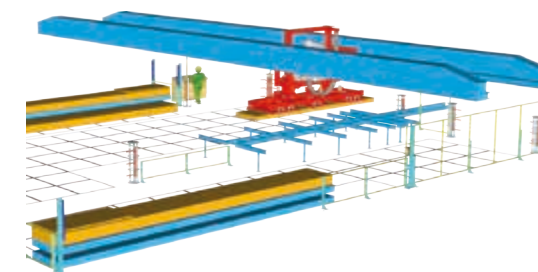
A. Wide legs for front infeed by width.



B. Narrow leg for lateral infeed by length.



C. Y horizontal movement with two mobile feet

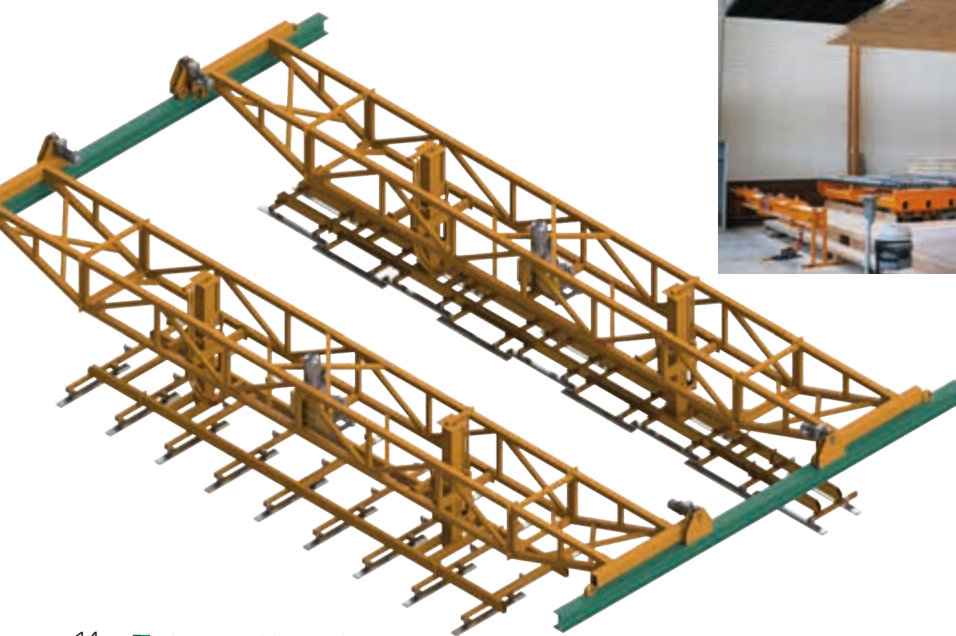


D. Y horizontal movement with two side wall or ceiling mounted rails

The applications

CLT panels

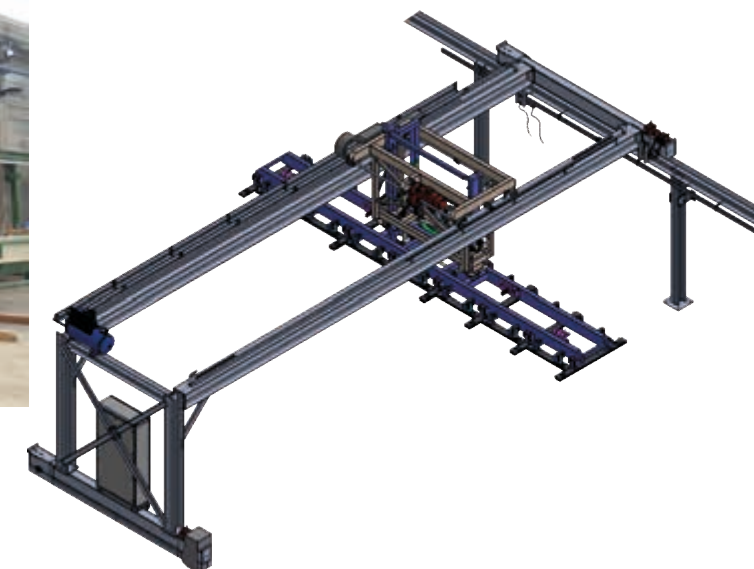
- Handling of **transverse and longitudinal** layers for panel composition
- Stacking / destacking with **multiple pick and place** positions possible
- Handling finished panels to over 20m long if needed
- **Increase productivity and profitability** of your manufacturing process
- Handles boards layers to finished panels **with the same gantry robot without adjustment**



Infeed / Outfeed of CLT press



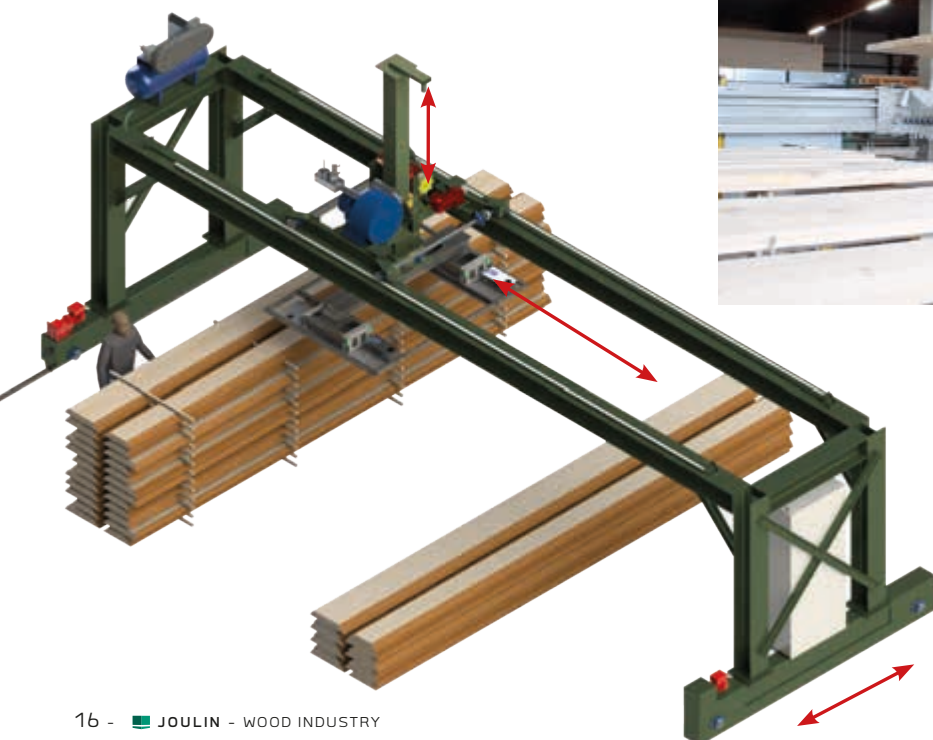
- Unstacking of **lengthwise and widthwise layers** for CLT panels
- Allows use of a specific glue to compose CLT panels
- **Variable speeds** and **precise positioning**
- **Optimizes manufacturing process** of CLT panels composition





Sticking / Desticking before or after a dry kiln

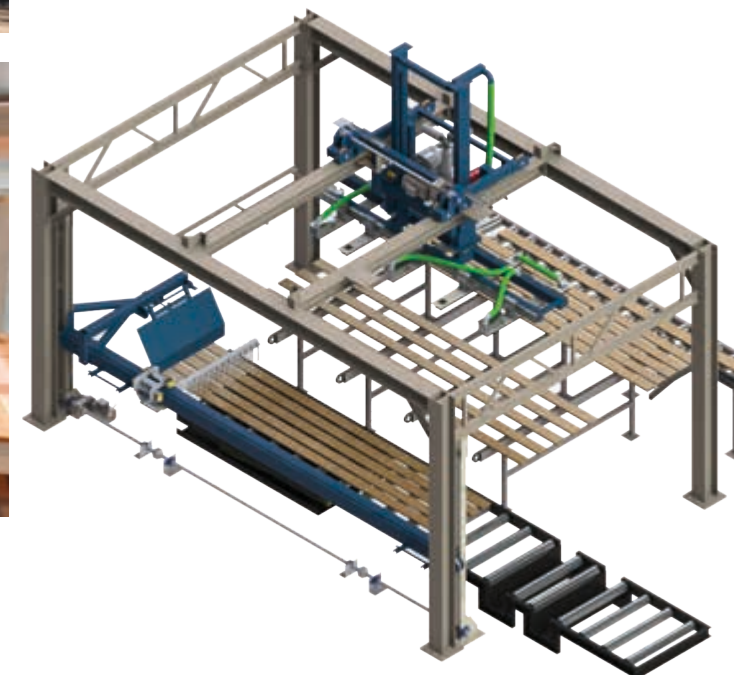
- Automatic desticking available.
- **90° rotation** of grippers available.
- **Mobile frameworks** available.
- Rough lumber including beams, sawn timber.
- All species of wood; green or dry.
- Easy to install and use.



Infeed / Outfeed of production lines



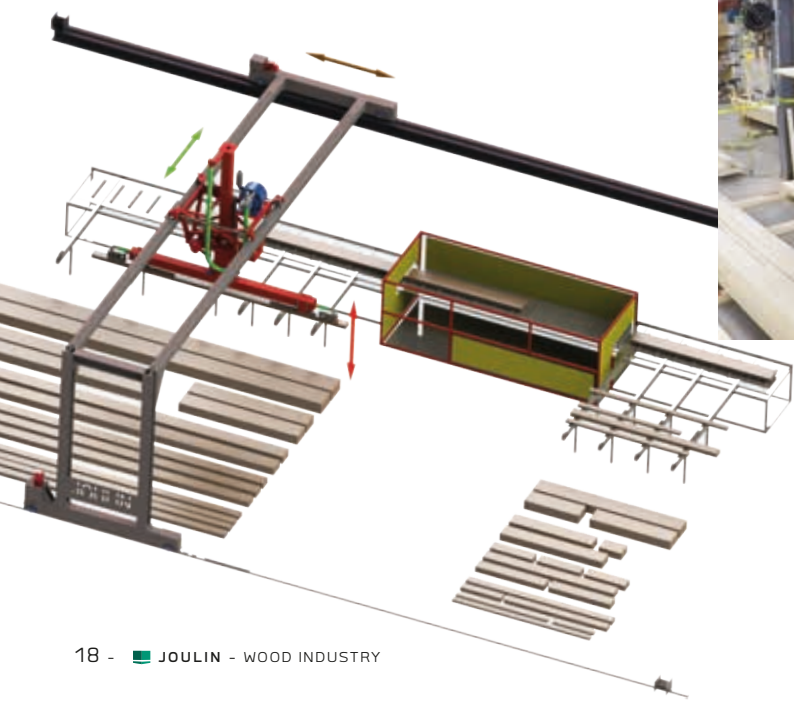
- Stacking / destacking with **multiple pick and place positions possible**
- **Automatic infeed / outfeed** systems
- Automatic desticking available
- Handles warped, grooved and molded parts as well as those with splits and holes





Loading / Unloading a CNC router and log home parts

- Allows **optimization of CNC** for increased productivity and profitability
- Handles full layers as well as individual parts to **over 13 m (43ft) long** if needed. – Pick and place products in multiple positions.
- Handles full panels to small finished parts **without adjustment**.
- No more laborious job of handling the parts.



Outfeed of band saw



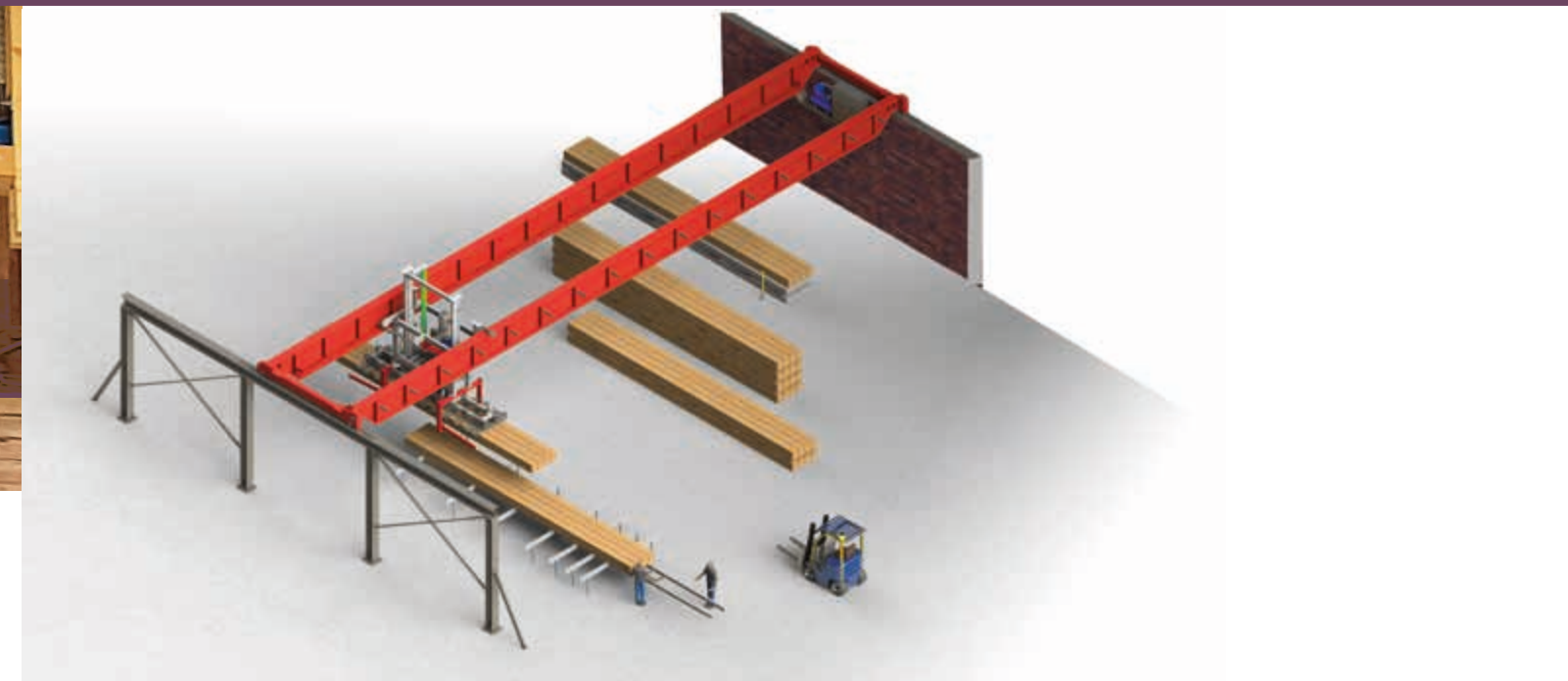
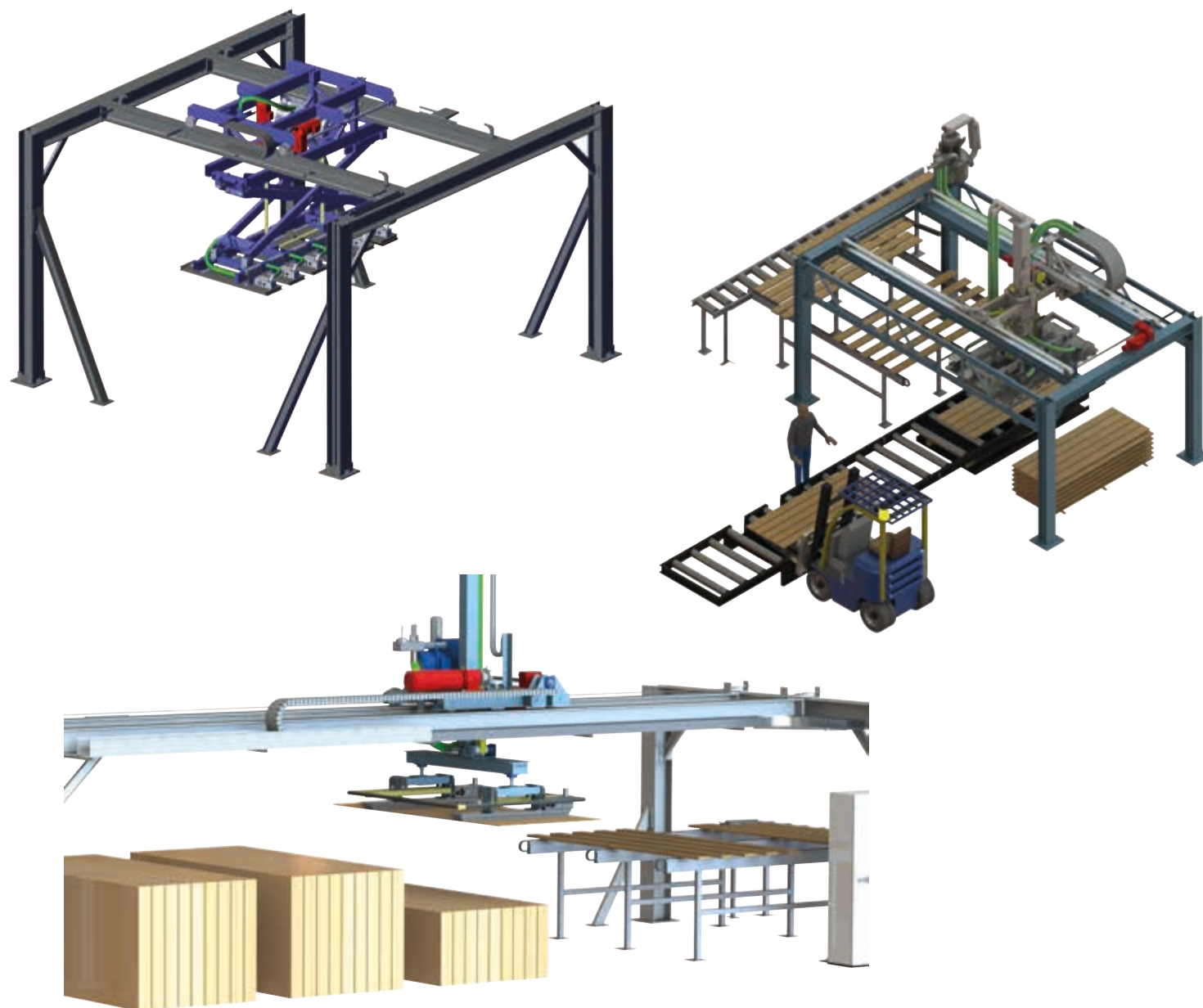
- **No adjustment necessary.**
- Unaffected by splits, sawdust, wane and defects.
- **Wide range of manipulators;** from simple and quick to complex systems.
- Lumber beams, sawn timber.



Examples of installations

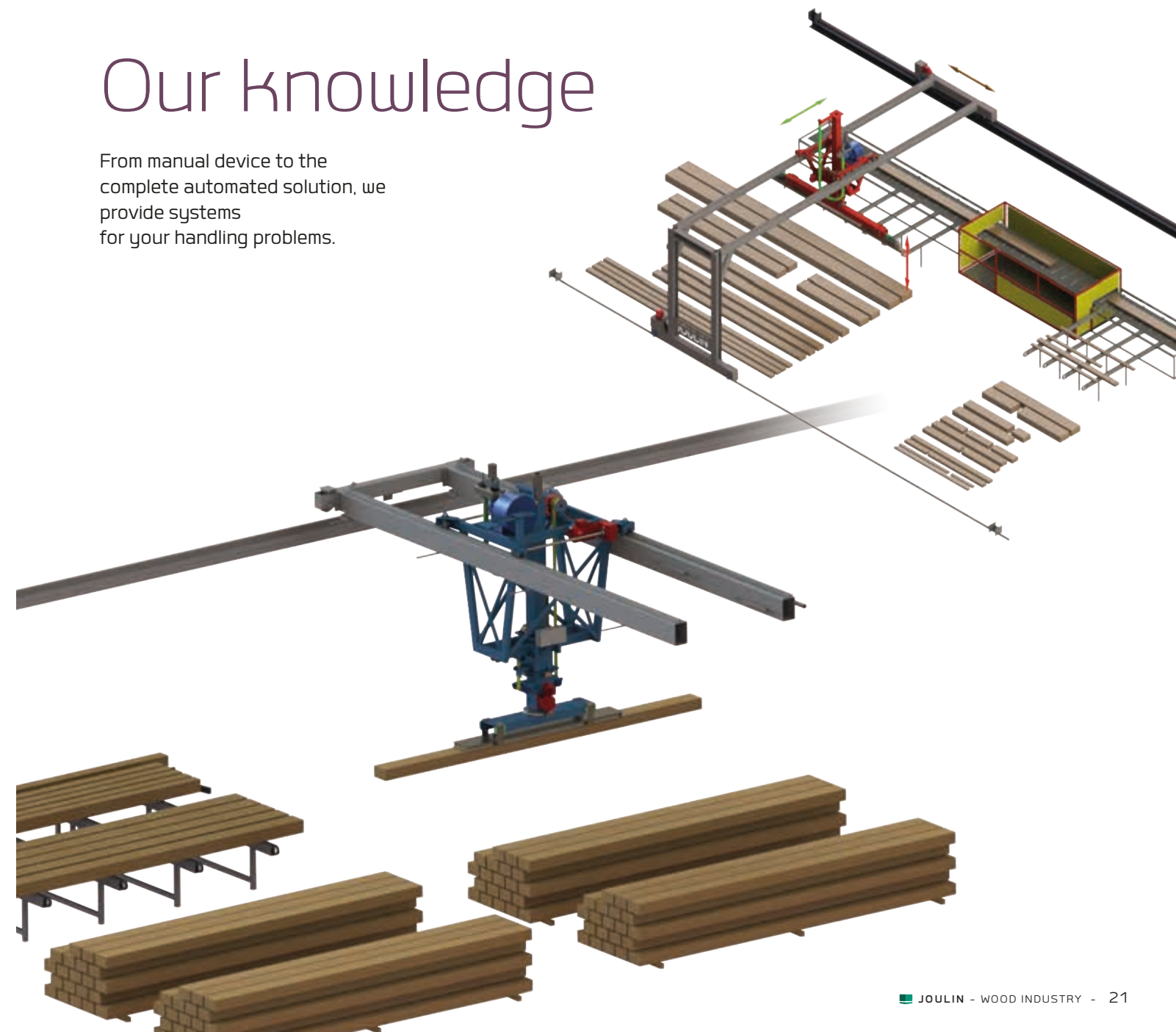
Your project

With over 60 years experience, **we provide systems** for all your needs large or small from 10 Kg (22 Lbs) to 5,000 Kg (11,000Lbs).



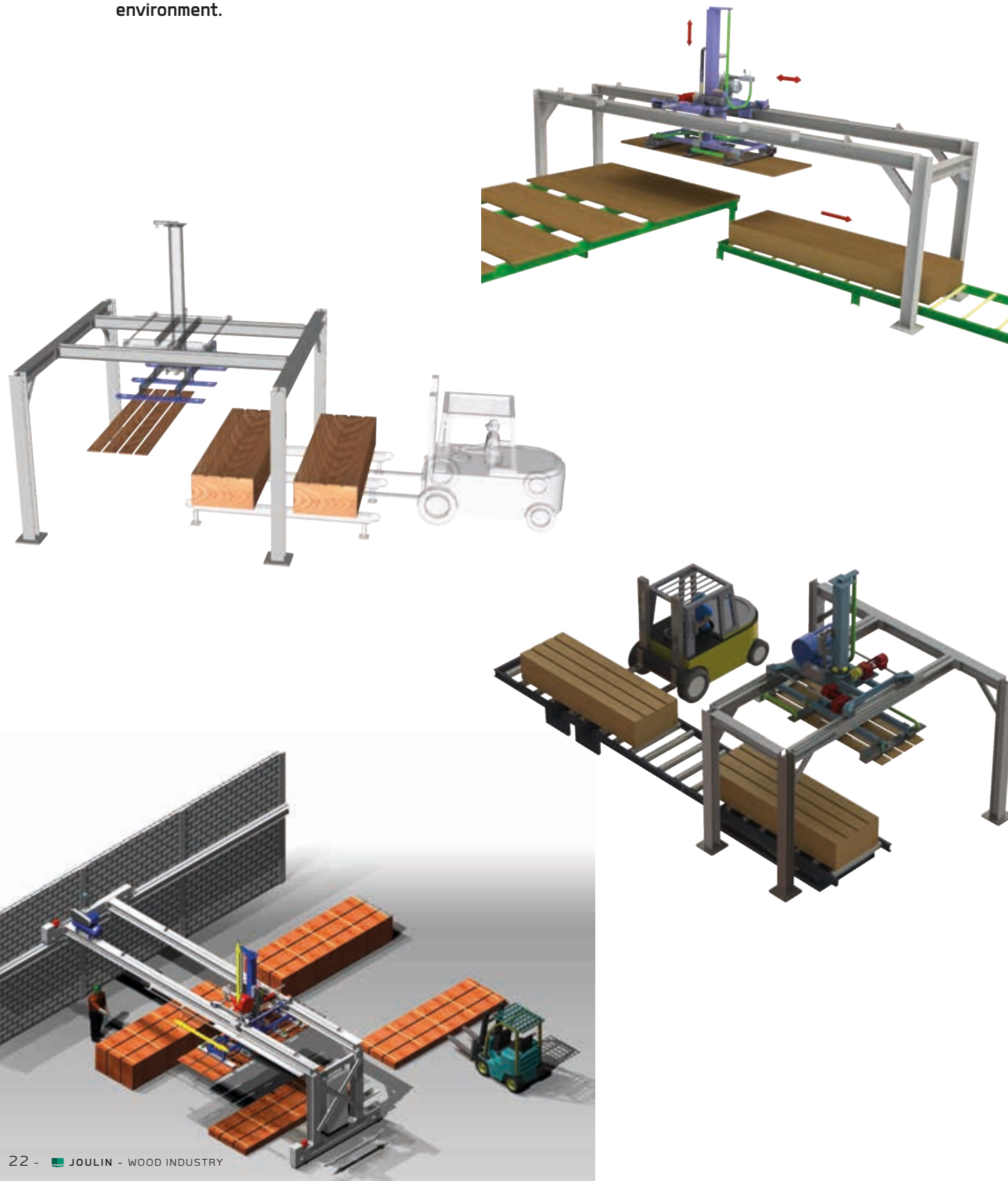
Our knowledge

From manual device to the complete automated solution, we provide systems for your handling problems.



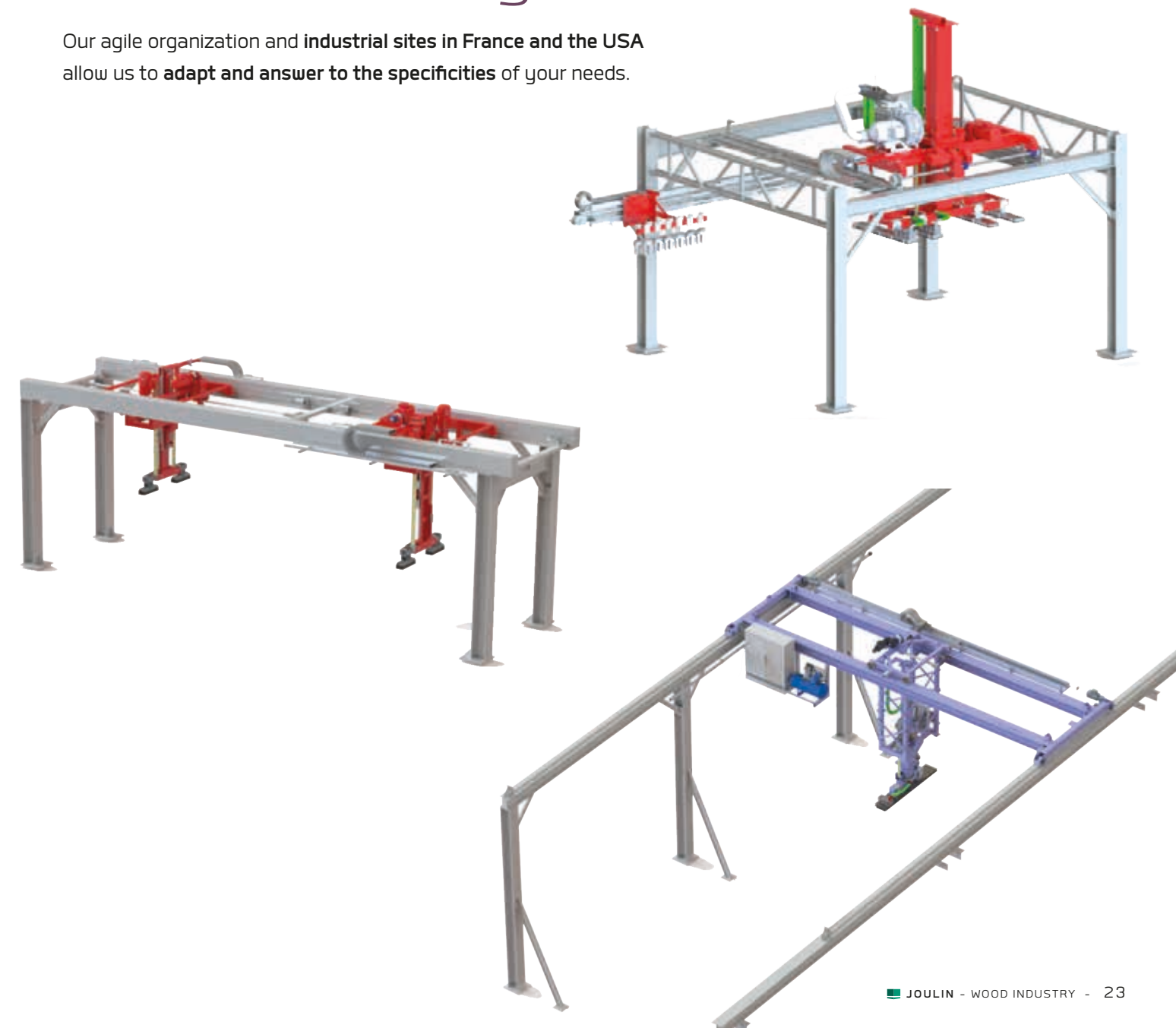
Custom solutions

You need to lift, move, stack, destack, flip, ...?
We have the fitted solution to your requirements and your production environment.



Manufacturing facilities

Our agile organization and **industrial sites in France and the USA** allow us to **adapt and answer to the specificities** of your needs.





Electrical supply

State of the art controls with custom programs and interactive touch screen panels.

Many configurations and options to fit your application up to the complete turnkey gantry robot installed by our technicians.



Example of Control Box with options



TOSIBOX

Intelligent Remote Access and Networking Device



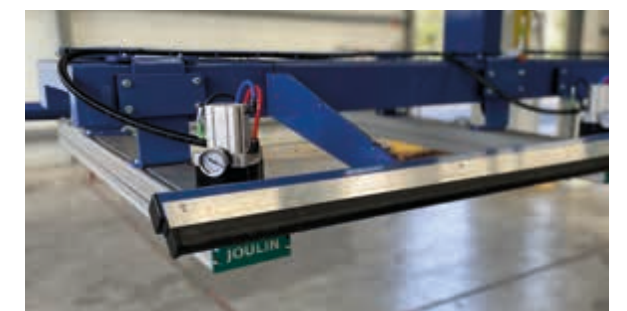
RADIO

An ergonomic device allowing the remote control of your gantry robot



TOUCHSCREEN

Helps in optimizing and adjusting the speed, acceleration, position and additional parameters of the system



SAFETY BARS

Protects operators from shearing and pinching edges

Known brand components

High quality internationally known brand components are our watchword. All are CE and UL certified.



M12 FIELDBUS MODULE

High degree of reliability
in rough environmental conditions
Meet maximum electromechanical requirements



PNP/NPN SWITCH

Robust and highly reliable
Ideal for use in demanding environmental conditions



SAFETY STRING SWITCH

Allows to start / pause the cycle at anytime
by simply pulling the string

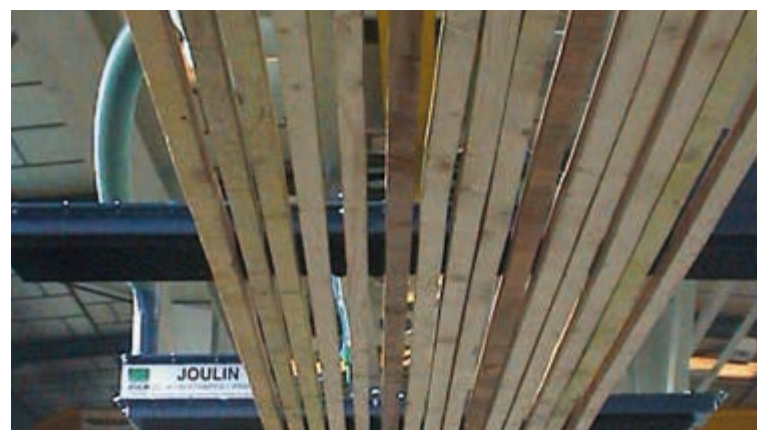
The foam grippers

Principles

- **Auto regulated** valves close in area where there is no product with remaining valves active
- Foam; **conform to the shape or the deformation** of the parts.
- **Higher air flow** compensates for leakage (see below)

BENEFITS

- Handling of porous, twisted, grooved, etc. products **with a single gripper**.
- **Strong grip for difficult or impossible products** to handle compare to vacuum cups.
- **No adjustment required** when switching between product.



Rugged grippers

- Designed to **work in unfriendly, hostile environments**.
- Not affected by dust, sawdust, sand, humidity, etc.



Zoom in...

All industries range

Find all **our range of grippers** and other products on our website or in our catalog «All industries».

joulin.com



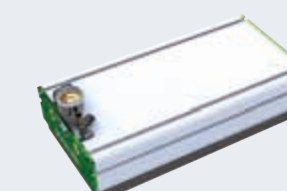
MINIGRIP



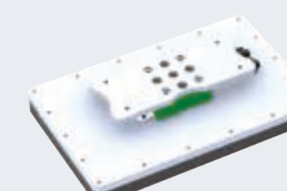
FLEXIGRIP



SAFE AND LIGHT



EXTRUGRIP



VALUE GRIPPER



A complete range

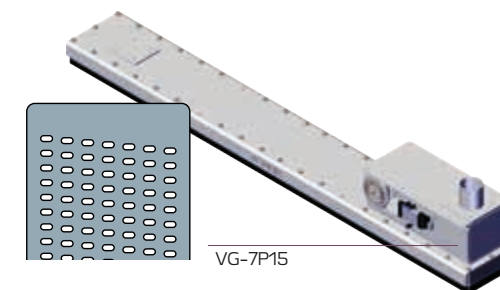
Adjustable parameters

In detail

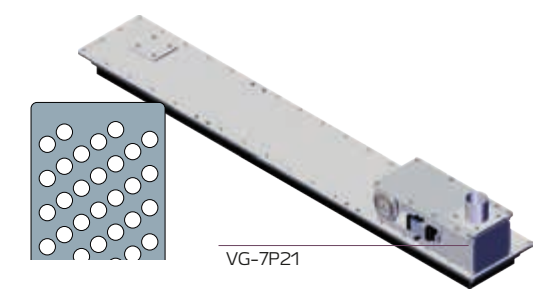
- **Adaptation** of number of rows and density of holes for the products to be handled
- **Shape of the cells** according to power to give
- **Type and adjustment of valves** according to the environment
- **Suitable choice of vacuum generator** for optimum air flow and vacuum level

Reference	Gripper width (mm)	Min. wood width (mm)	Environment*
VG-8P17,5	200	25	◆◆
VG-8P35	200	45	◆◆
VG-7P15	170	25	◆◆
VG-7P21	170	40	◆◆
VG-4P15	125	25	◆◆
VG-4P21	105	50	◆◆
VG-4P30	125	50	◆◆
VG-3P40	300	45	◆◆◆
VG-1P35	200	55	◆◆◆
VG-1P50	170	70	◆◆◆

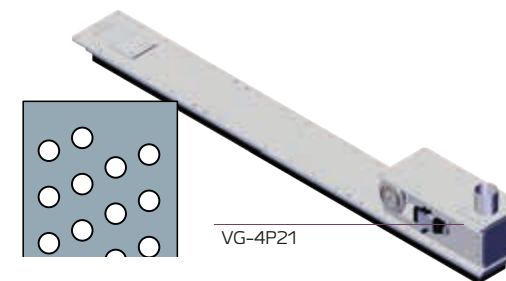
*dust, humidity



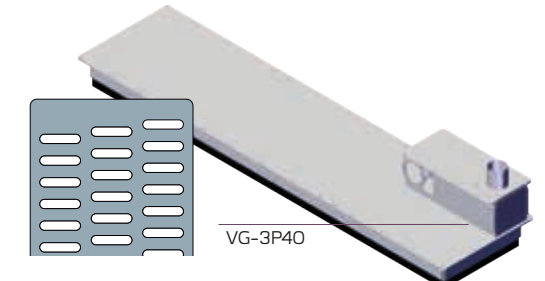
VG-7P15



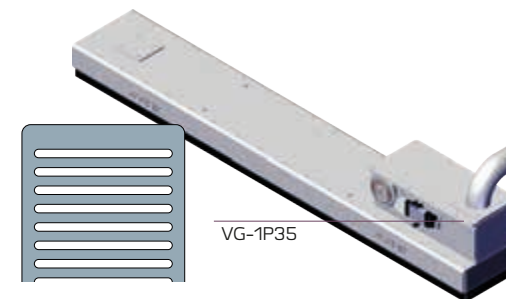
VG-7P21



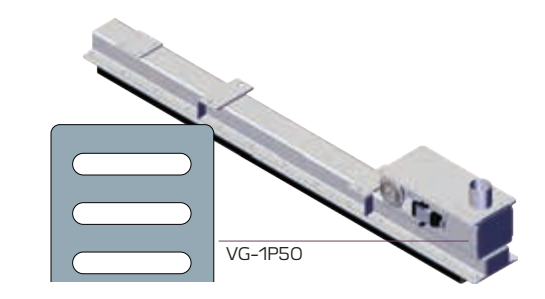
VG-4P21



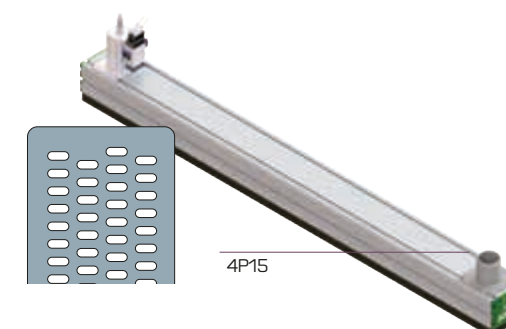
VG-3P40



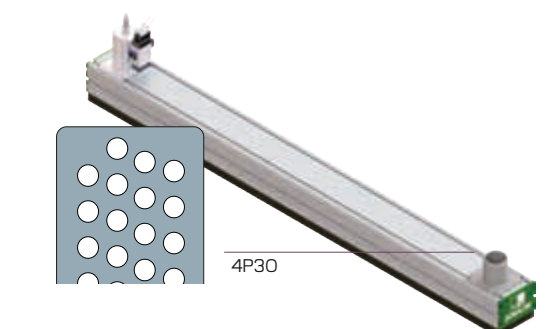
VG-1P35



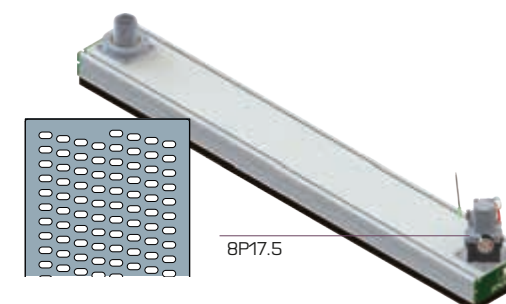
VG-1P50



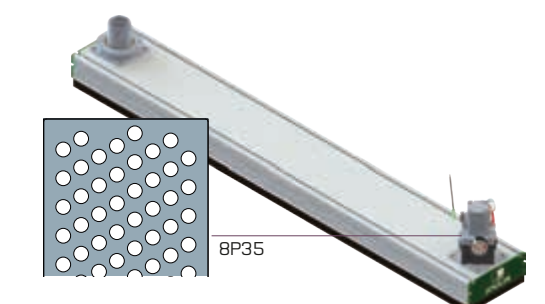
4P15



4P30

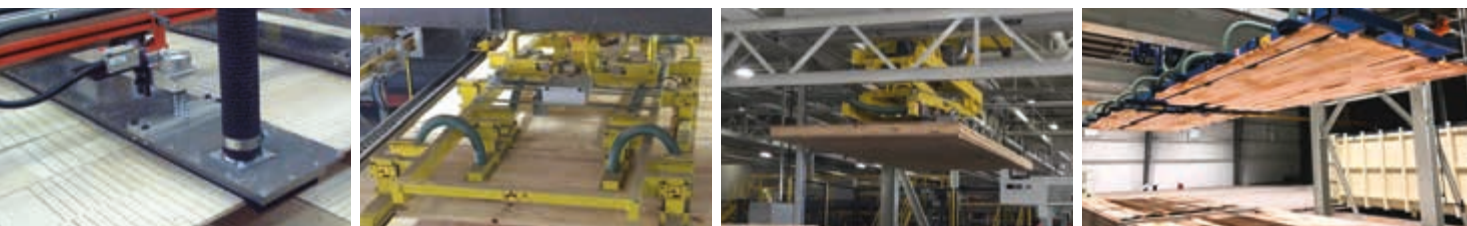


8P17.5



8P35

* dust, humidity

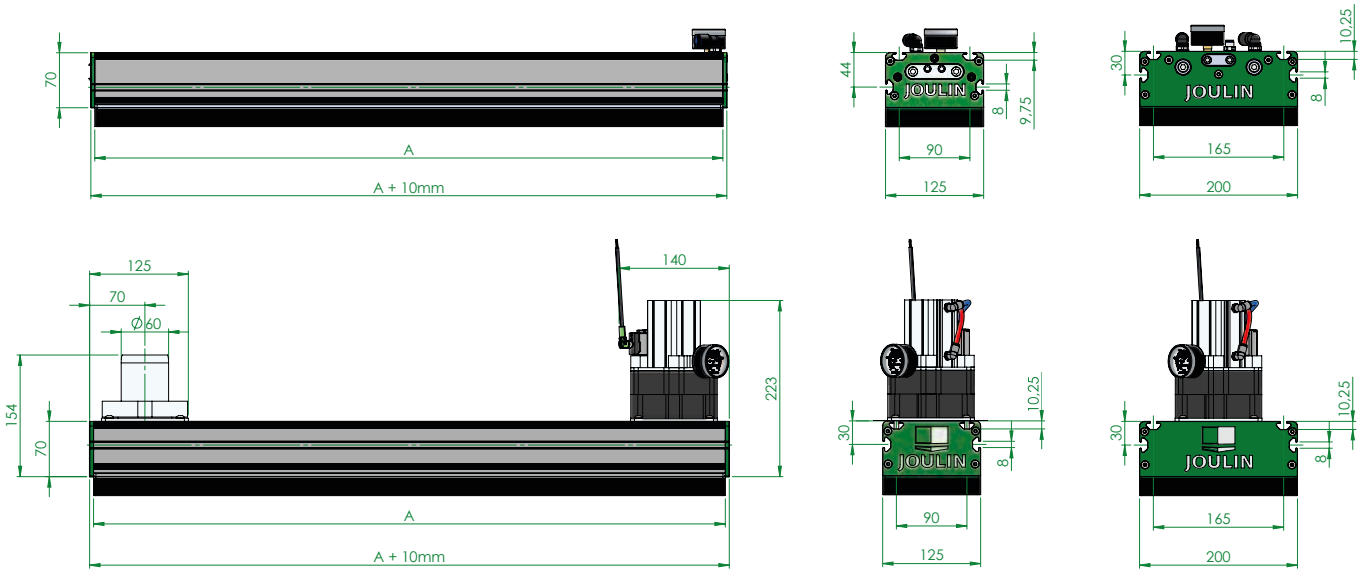




EXTRU GRIP

FOAM VACUUM GRIPPER

INTEGRATING DATA



Length of the foam A (mm)	125mm				200mm			
	EGV Weight (kg)	EGB Weight (kg)	Air Consumption (NI/sec) - EGV		EGV Weight (kg)	EGB Weight (kg)	Air Consumption (NI/sec) - EGV	
			4P15	4P30			8P17.5	8P35
250	2,7	-	3.5	1.75	4,4	-	5.25	3.5
400	3,9	4,3	3.5	1.75	5,9	6,1	7	3.5
600	5,4	5,8	5.25	3.5	8,1	8,3	8.75	5.25
800	6,9	7,3	7	3.5	10,4	10,6	12.25	7
1200	9,9	10,3	8.75	5.25	15,9	14,7	17.5	8.75
1400	11,4	11,8	14	7	17,7	16,9	21	10.5

LABELLING

EGV -VG -125x800 -4P30 -3STX2

Range of the gripper

EGV Integrated ejectors

EGB External vacuum

Technology

- PG Port Gripper

- VG Valve Gripper

Standards dimensions

- 125 ou 200x250

- 125 ou 200x400

- 125 ou 200x600

- 125 ou 200x800

- 125 ou 200x1200

- 125 ou 200x1400

Custom

- 125 ou 200x...

Pitch

- 4P15 15mm

- 4P30 30mm

- 8P17.5 17.5mm

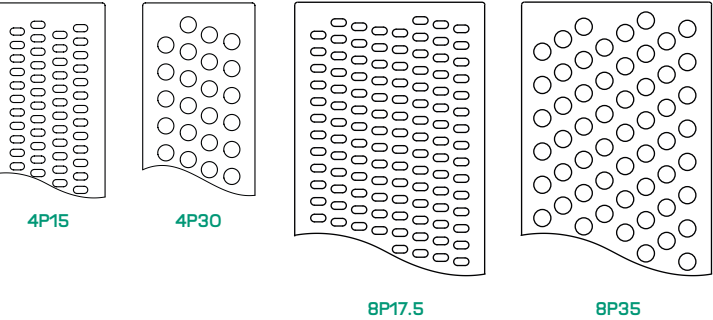
- 8P35 35mm

Integrated vacuum source (EGV only)

- 2ST 2 stages

- 3ST 3 stages

FOAM DENSITY



CONCEPT

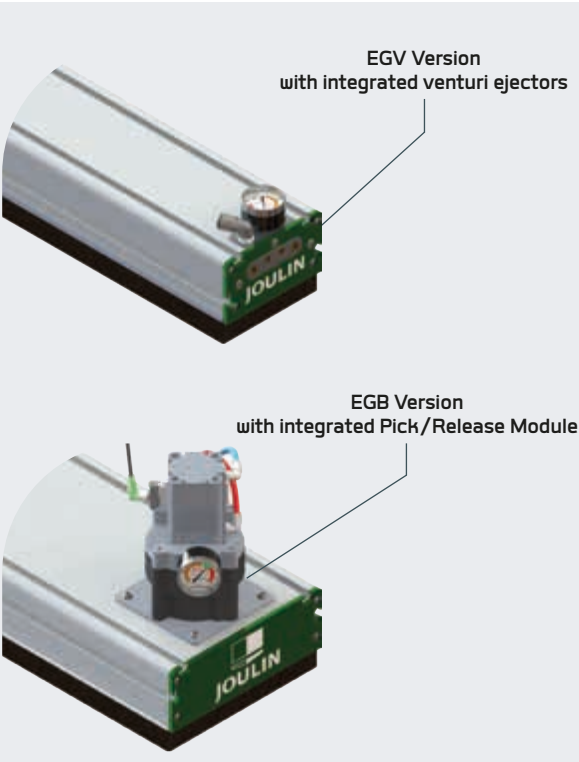
- All Joulin's technology in an aluminum profile
- External vacuum source or internal with venturi ejectors
- Different foam patterns to fit your application
- Easily adaptable on existing equipment
- 30% more efficient and fast than existing grippers

BENEFITS

- Integrated pick/release module on EGB version
- Modular for picking layers of products
- Adaptable in length up to 3000mm
- Maximum rigidity
- Possibility of partial picking or releasing of products
- Simplified adjustment of options in profile grooves

EASY TO CUSTOMIZE

- 2 available technologies: check valves or calibrated holes
- Easy to install by utilizing the grooves



Joulin foams

Performance guaranteed

A suitable foam (porosity, elasticity, ...) is the guarantee of **efficient handling and truly economical handling** (durability and maintenance costs).

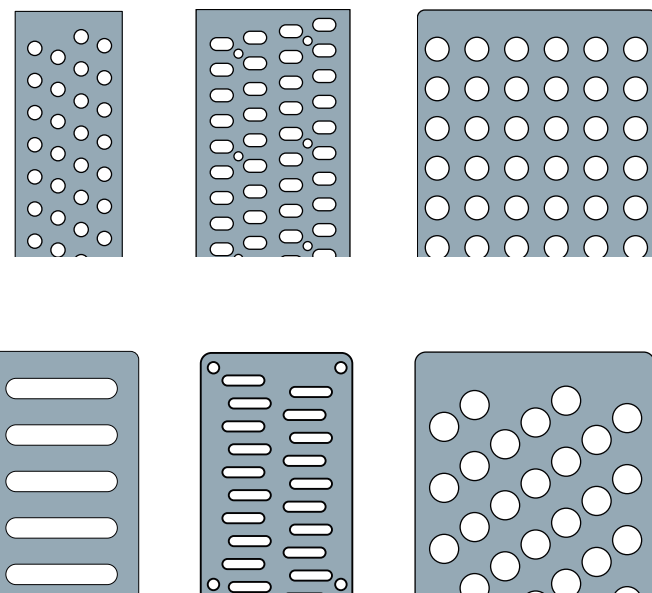
Our expertise and cutting sites in Europe and the USA allow us to guarantee quality at the best price and the most efficient service.

Our experience in the wood industry allows us to define and produce the most suitable foam for your gripper and the products to be handled.

BENEFITS

- Different thicknesses
- Different quality
- Better foam adhesive performance
- Water jet
- **Quick delivery**

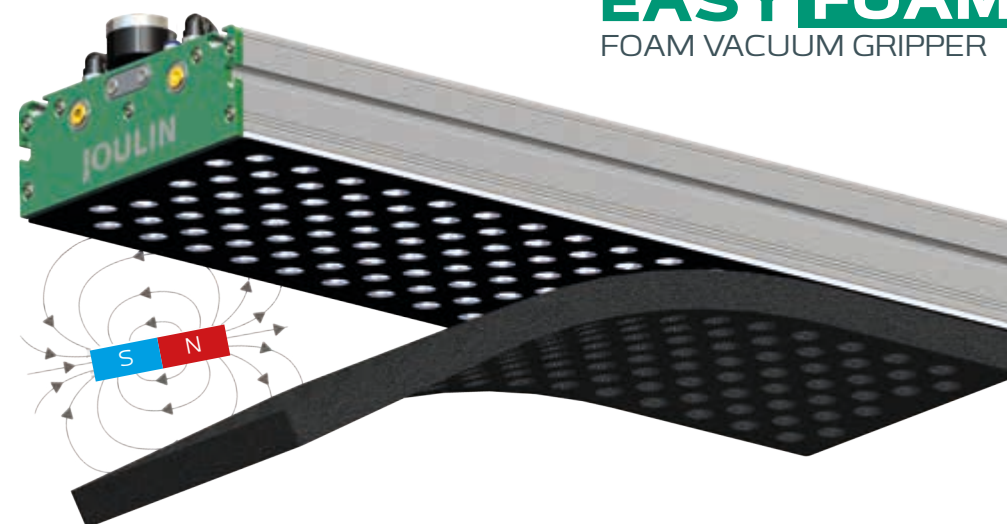
Standard or custom production



High Quality adhesive foam

Quick foam changing

EASY FOAM
FOAM VACUUM GRIPPER



New ultra quick foam changing system:
EasyFoam

Interchangeable support plates
for quick change of foam.

CONCEPT

- Fast and easy removal of foam from the gripper
- Easy to install on existing gripper(s)
- Reduces maintenance time and cost
- No adhesive to remove at foam change

BENEFITS

- Easy access to the gripper for maintenance and cleaning
- Can be removed/replaced an unlimited number of times
- Independent filter for dusty environments

EASY TO ADAPT

- Adaptable to all brands of existing grippers
- All foam styles / brands
- Easily clean and replace the filter by removing the magnetic foam

Zoom in...

Spare parts

For each JOULIN gantry robot, we stock all the spare parts (wear and maintenance) you need to maintain it.



HOSE



ROLLER



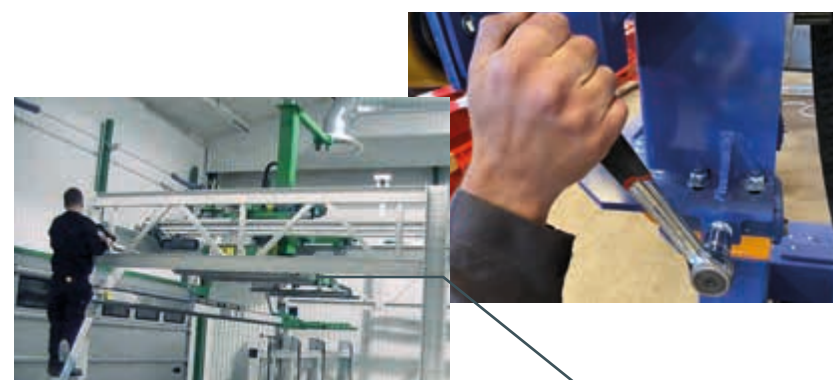
STRAP



VACUUM BLOWER



Why use our solutions?



STANDARD AND CUSTOM

Economical standard range
Multiple options
Customization



RELIABLE PARTNER

Dedicated consulting engineer
Study and production 100% in-house
Commercial reactivity and after-sales service



CONSULTING AND SERVICES

Family owned
Guaranteed performance
Customer satisfaction



JOULIN
USA

JOULIN
EUROPE

celebrating
60
years

PROXIMITY

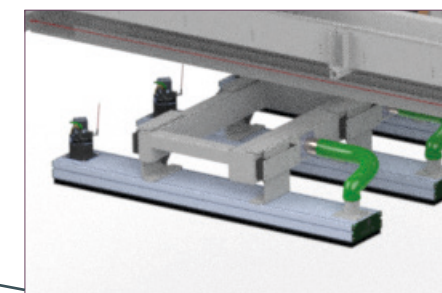
Manufacturing and design facilities in France and the USA
Supplied on 5 continents

TECHNOLOGY

Inventor of the Foam Gripper
Patented
Grippers not sensitive to dust; **50% energy saving** compared to competitors

EXPERIENCE

More than **60 years of experience**
Worldwide references





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vacuum handling

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