



WOOD INDUSTRY

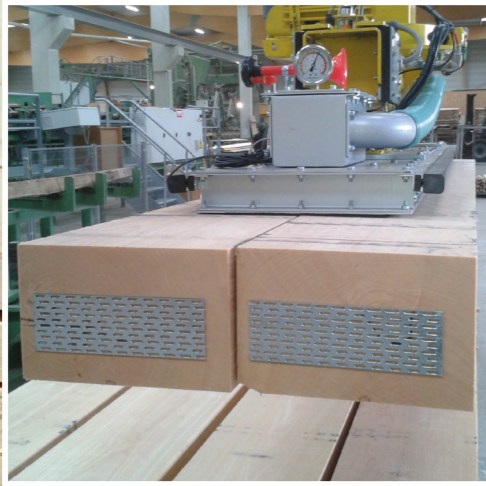
# Wood lifting systems



**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

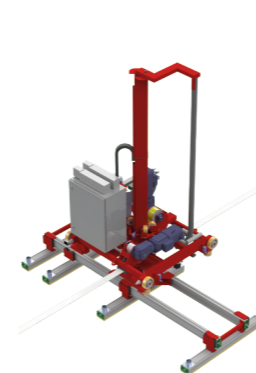
Up to 5 axis

Telescopic columns (low roof or ceiling)

Many options available

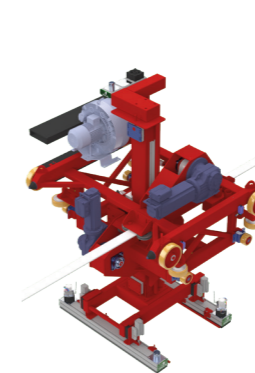
Radio control available

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



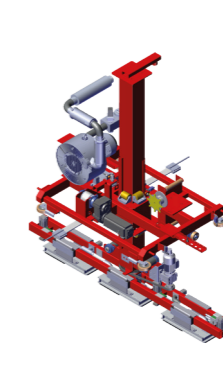
150

Maximum capacity 150 kg  
Up to 4 cycles per minute



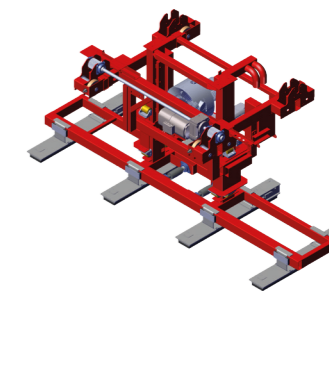
200

Maximum capacity 200 kg  
Up to 10 cycles per minute



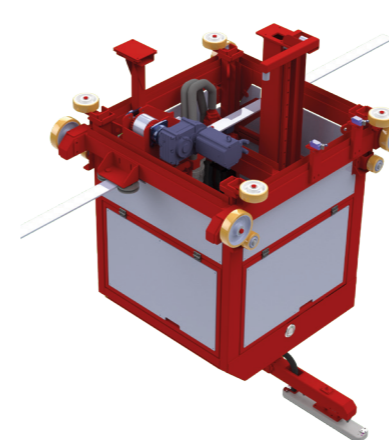
500

Maximum capacity 500 kg  
Up to 7 cycles per minute



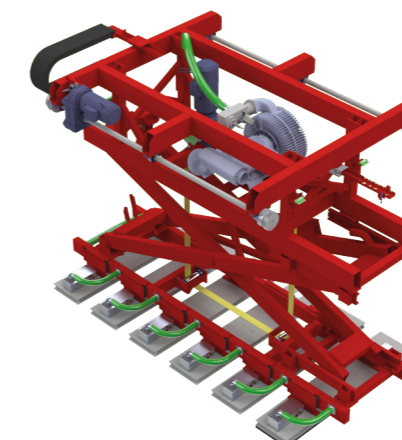
700

Maximum capacity 700 kg  
Up to 6 cycles per minute



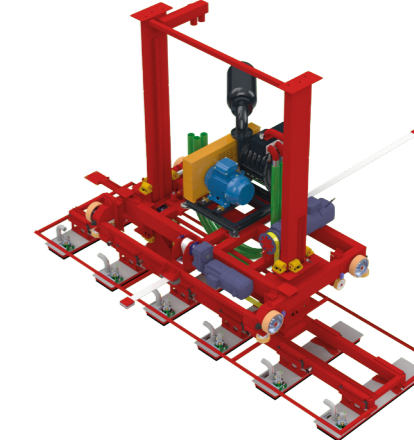
SPEED STACKER

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



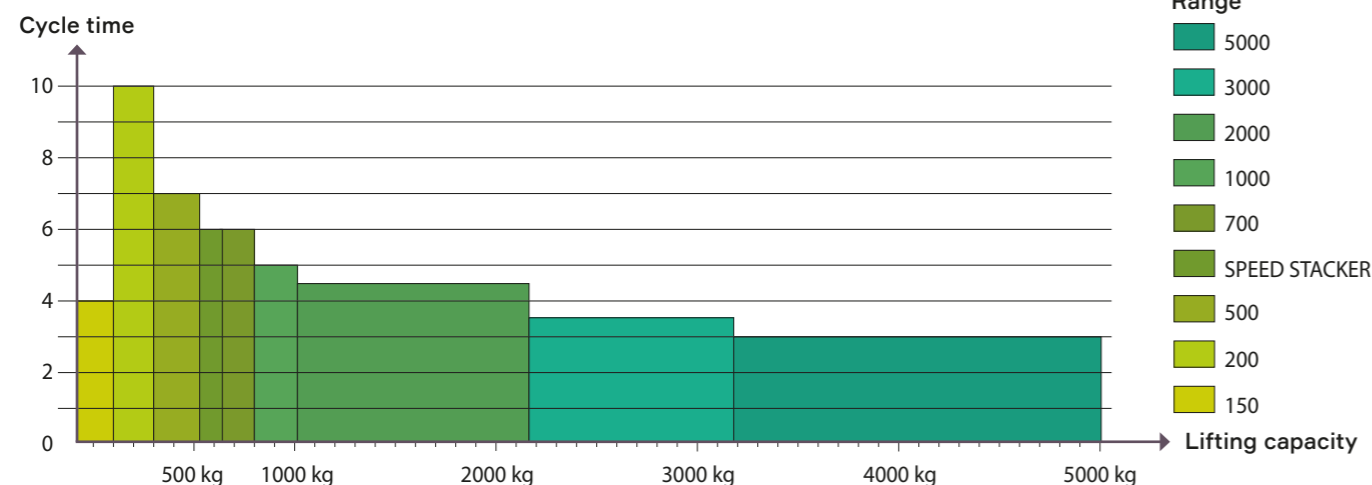
3000

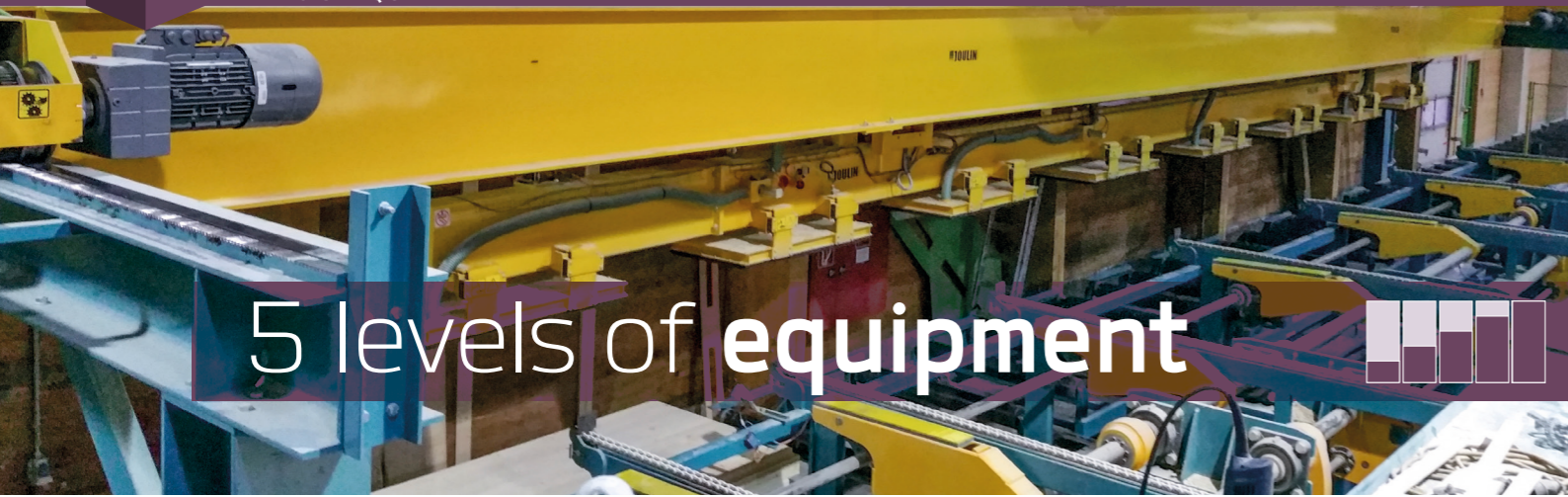
Maximum capacity 3000 kg  
Up to 3,5 cycles per minute



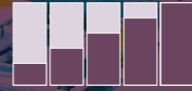
5000

Maximum capacity 5000 kg  
Up to 3 cycles per minute





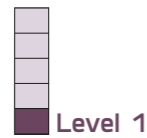
# 5 levels of equipment



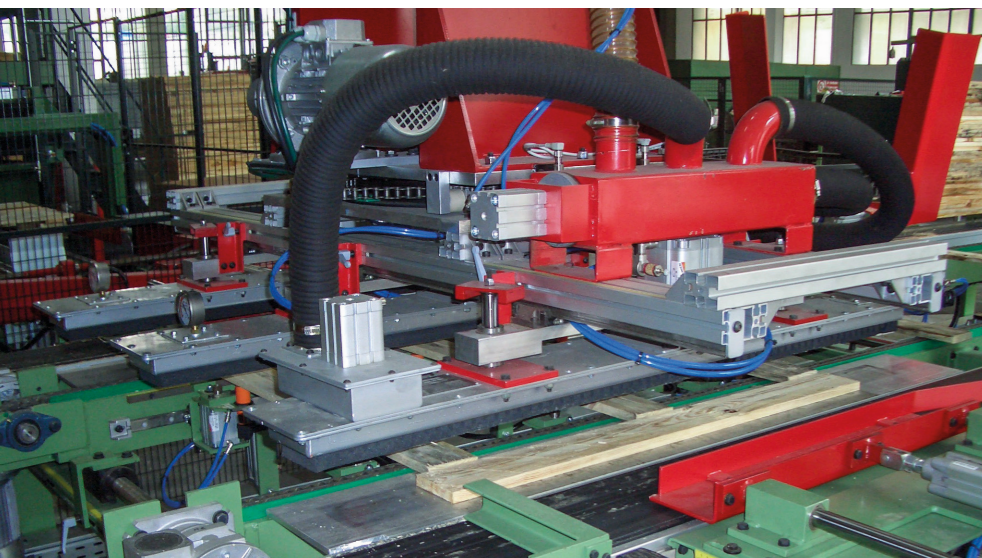
JOULIN offers 5 levels of equipment to fit all your needs.

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

## Grippers



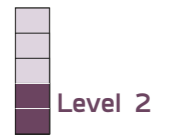
Level 1



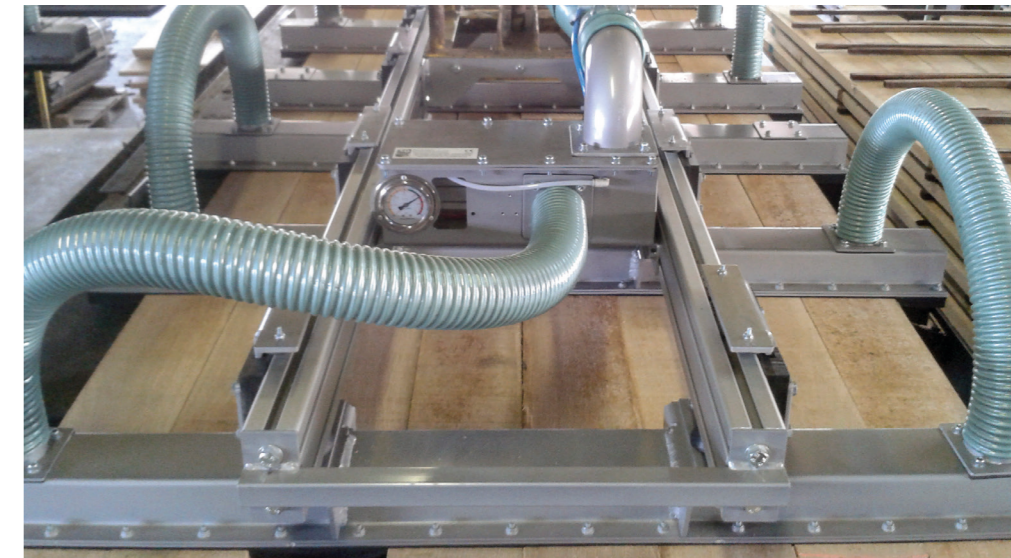
### Available Options

- **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

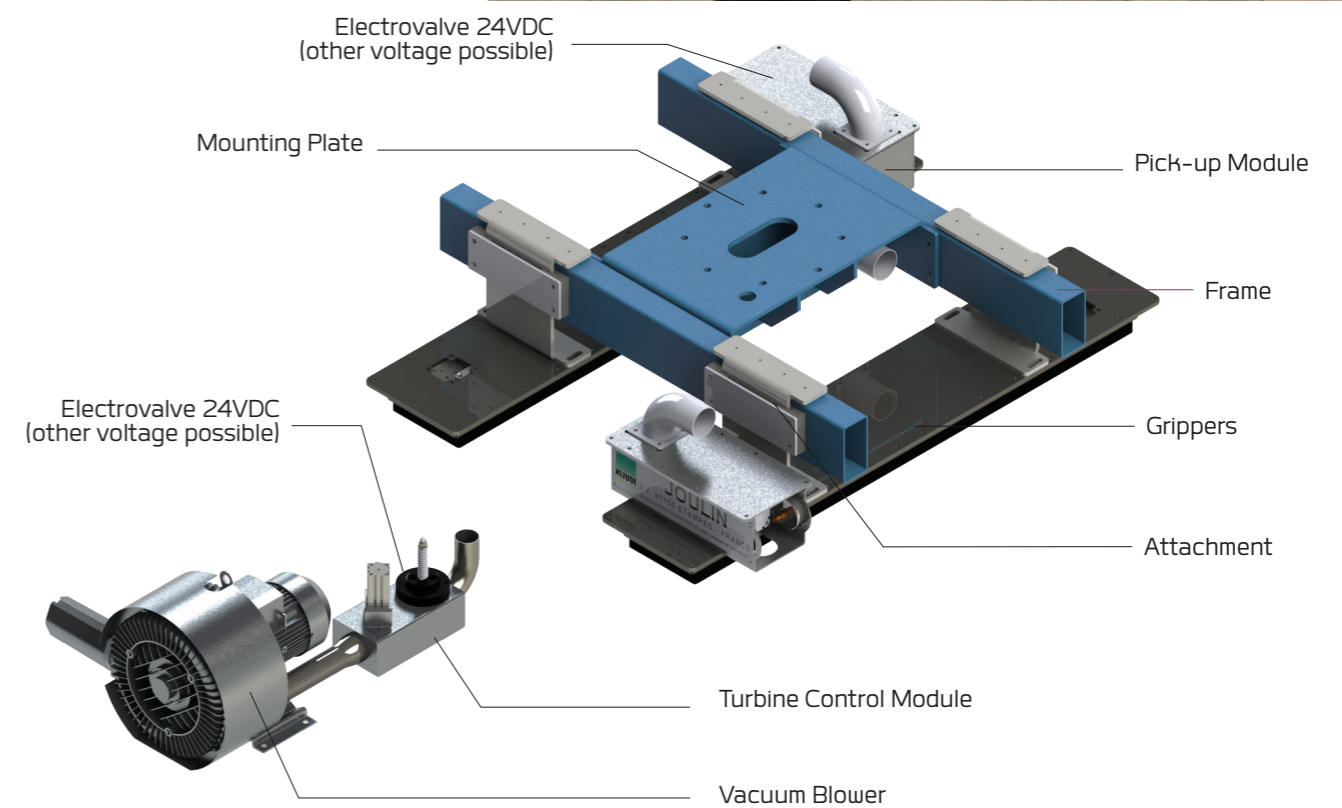
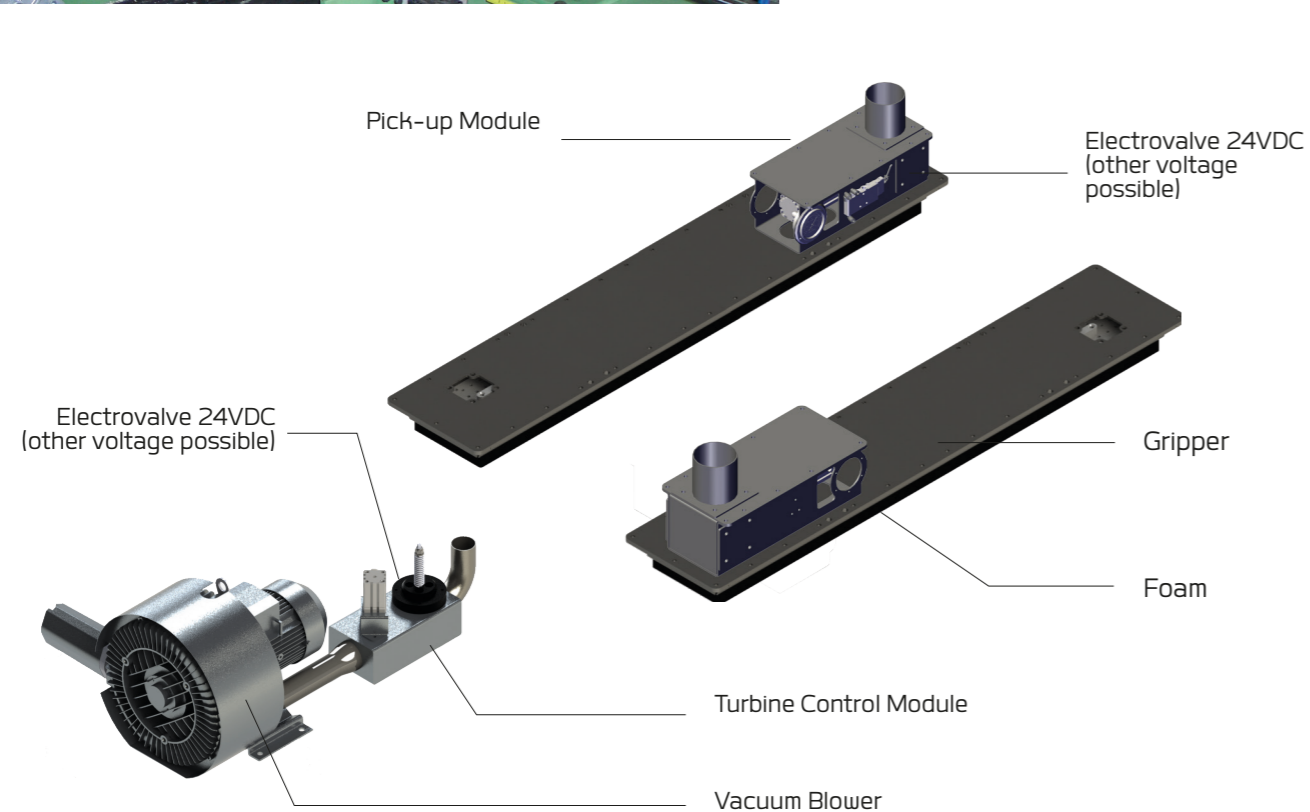


Level 2

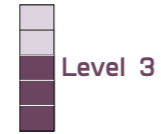


### Available Options

- **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



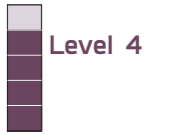
# Gantry robot



## Available Options

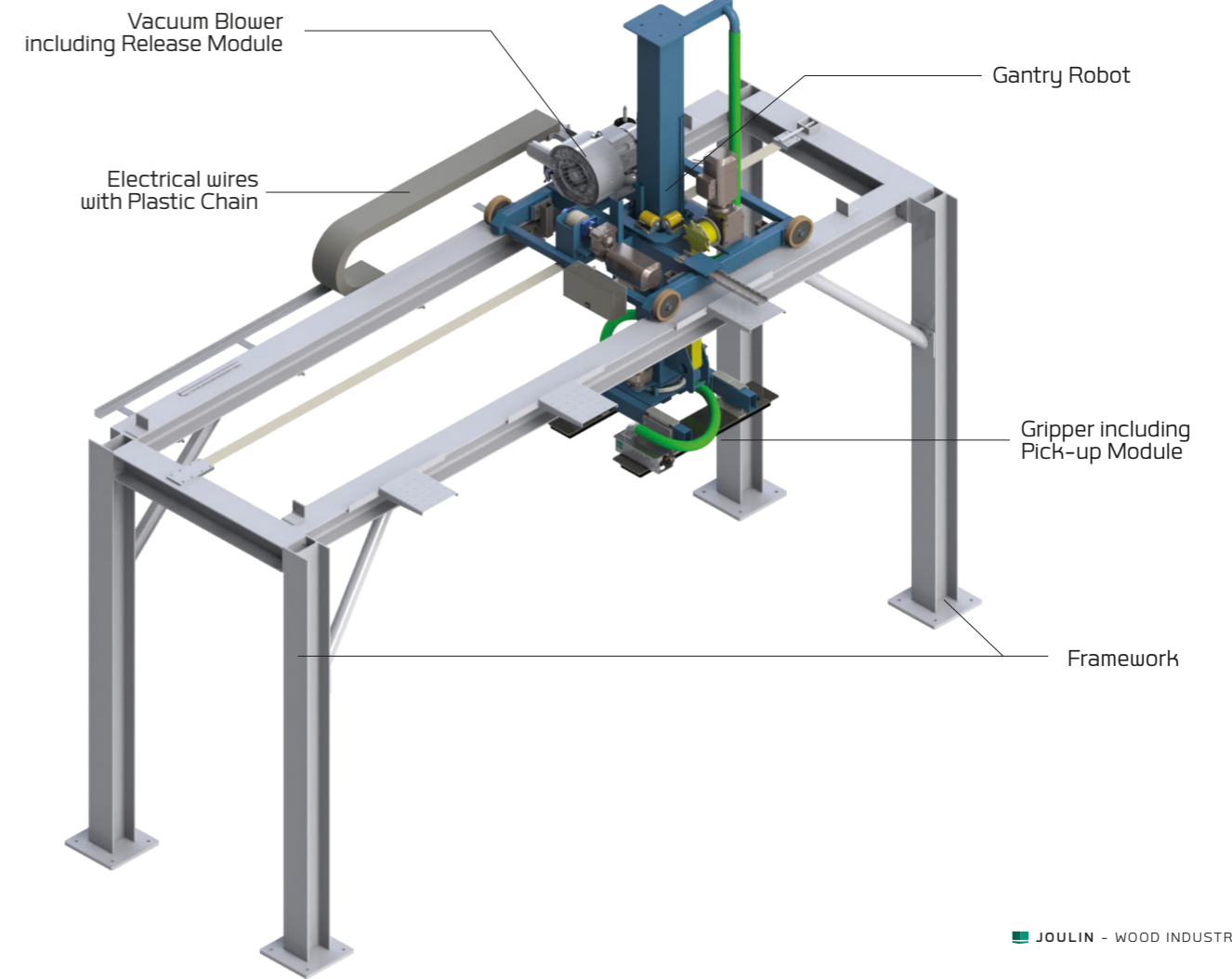
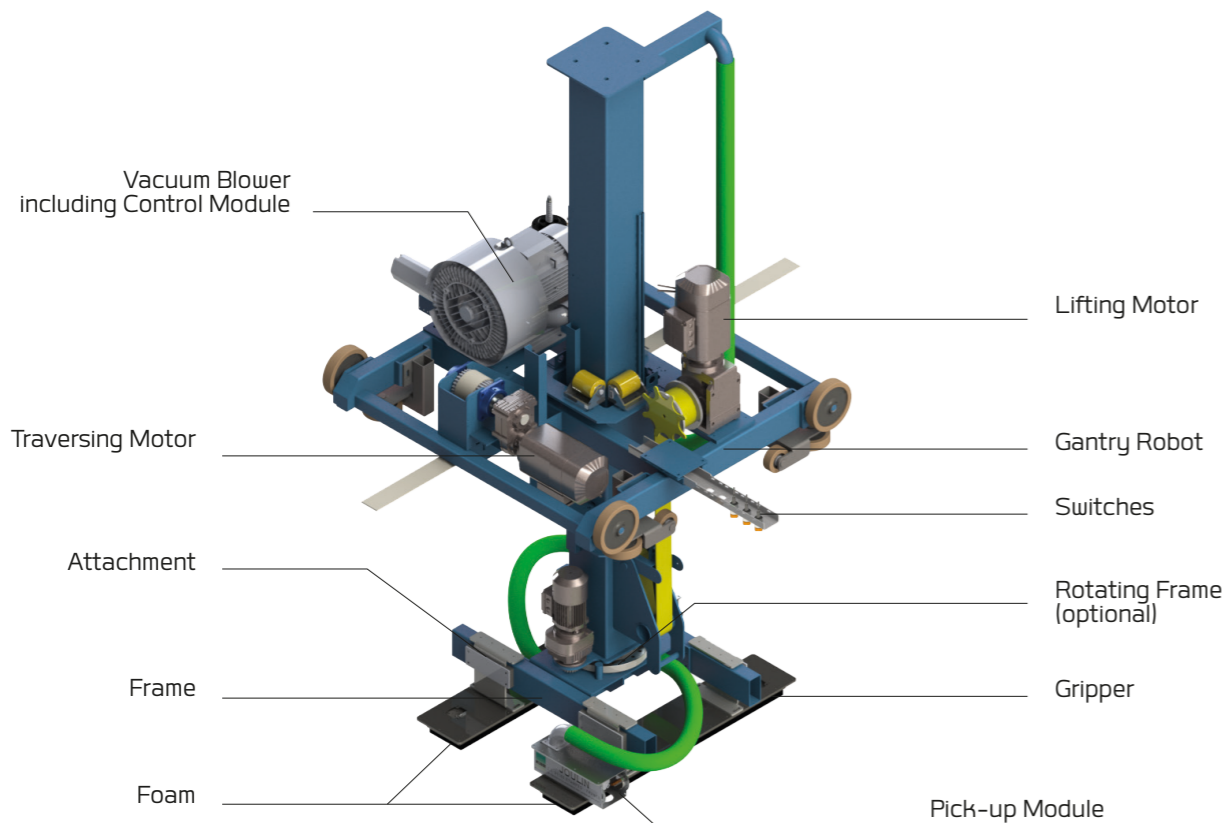
- From standard to special models
- **Traversing movement with belt drive** for high speed and acceleration
- Electrical switches and valves **connected to a junction box**
- **Fieldbus**
- **Single to multiple grippers**
- **Rotation** of the grippers
- Telescopic columns (low roof or ceiling)
- Grippers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

# Complete gantry robot



## 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**



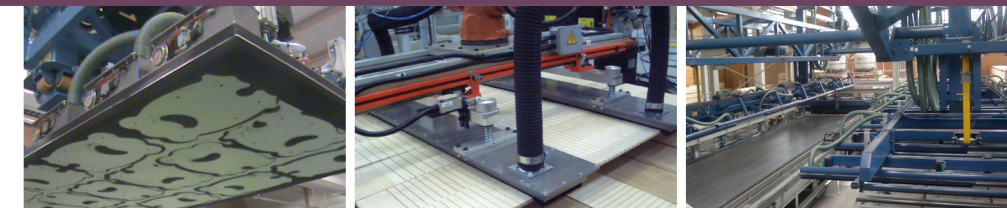
# Complete gantry robot with control box

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**

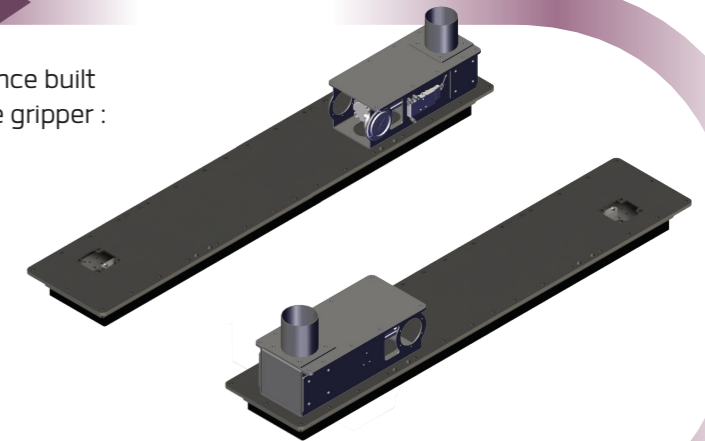


# From the single gripper to the complete turnkey gantry robot

From the gripper ...

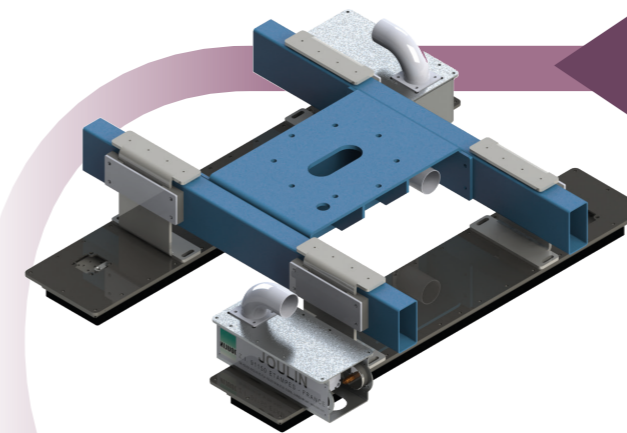
The patented check valve design has tolerance built in to allow dust particles to pass through the gripper :

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



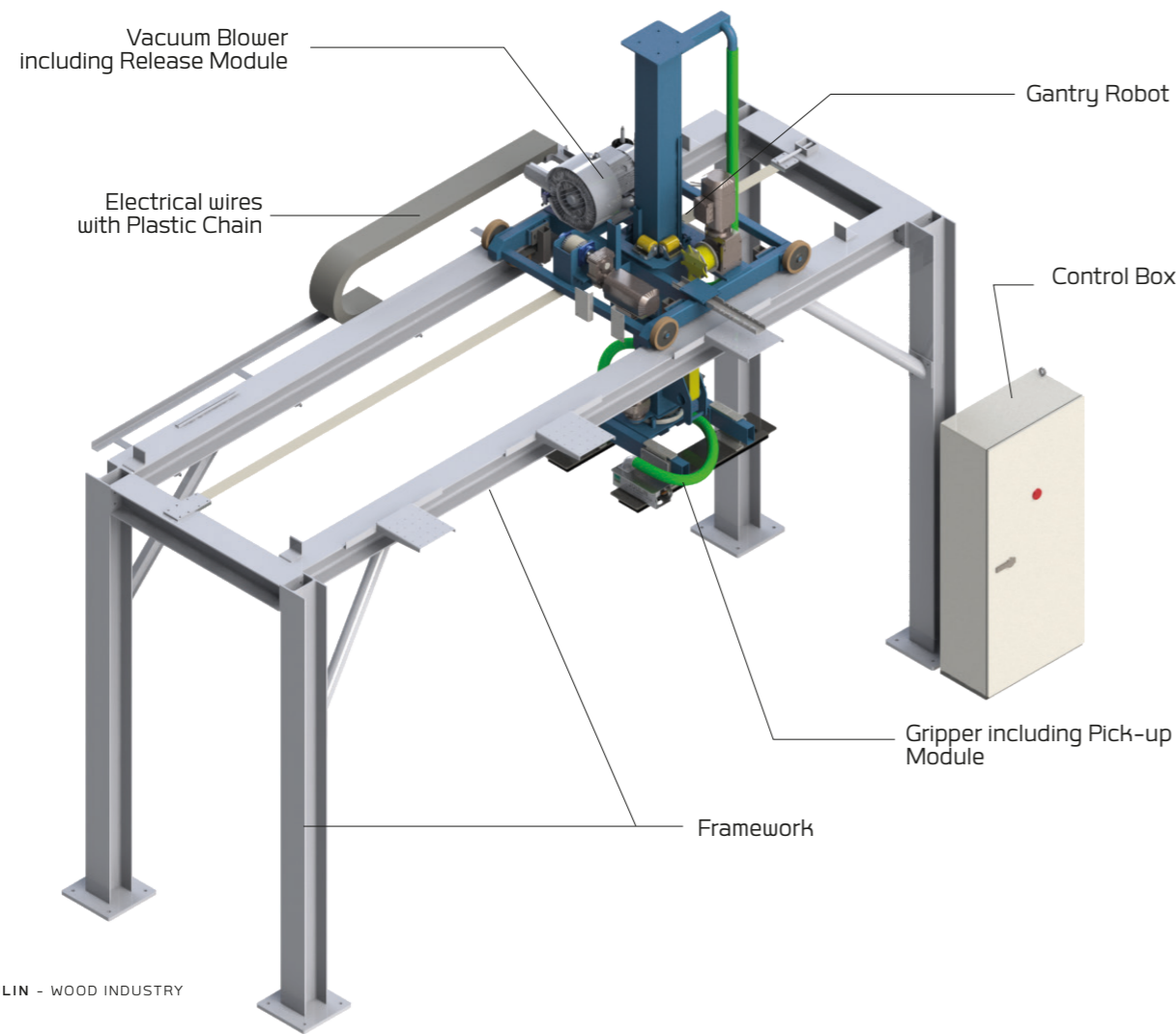
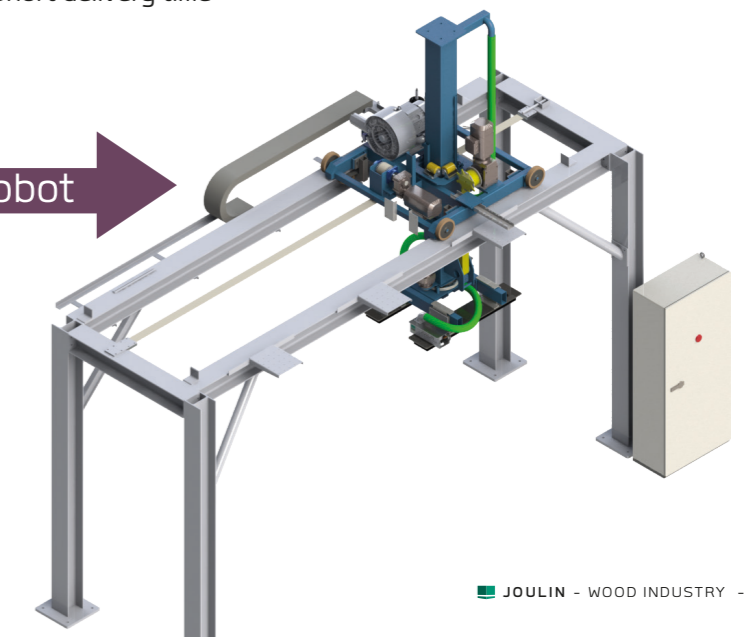
... to the frame...

- 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.

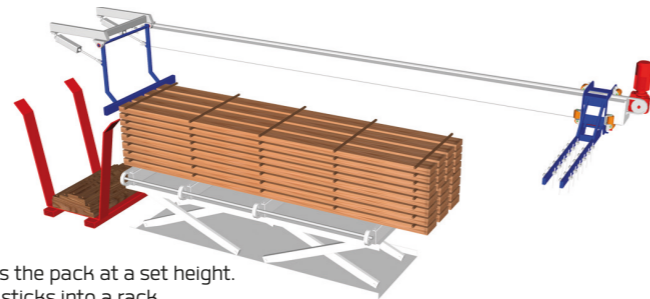


### Smart Control

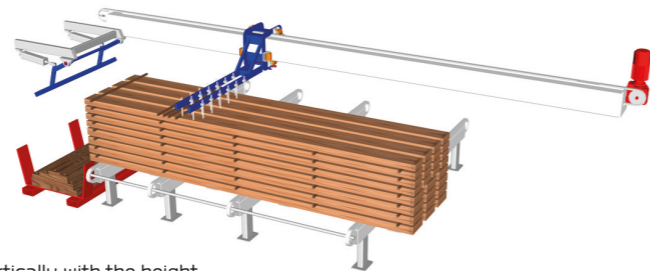
**Smart Control** touch screen offers **easy and friendly operation**. It helps in optimizing and adjusting the speed, acceleration, position and extra parameters of the system.

# The options

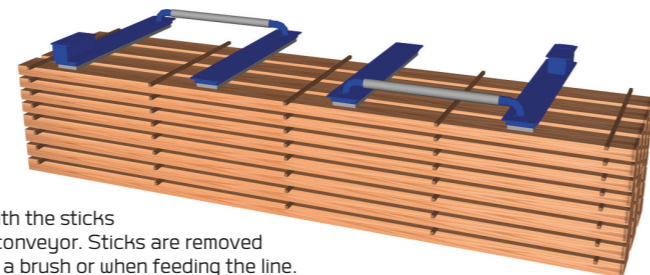
## REMOVE STICKS



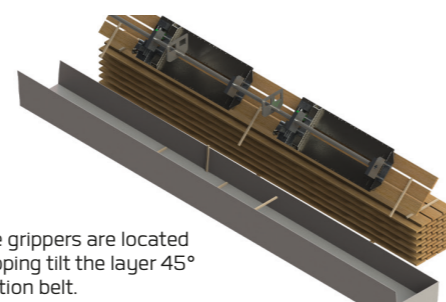
A. The lifting table keeps the pack at a set height. The brush sweep the sticks into a rack.



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

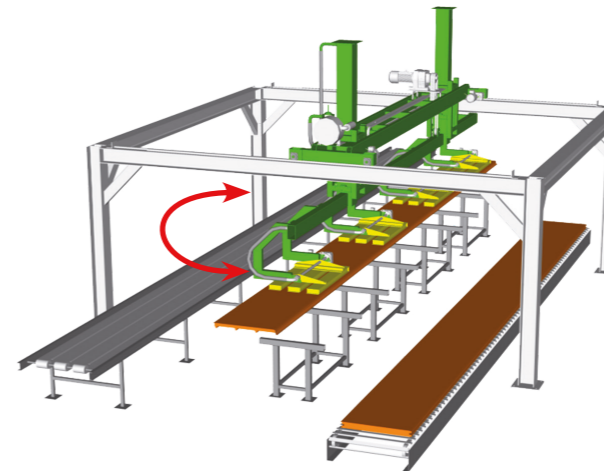


C. The layer is picked with the sticks and released on the conveyor. Sticks are removed at that time either by a brush or when feeding the line.

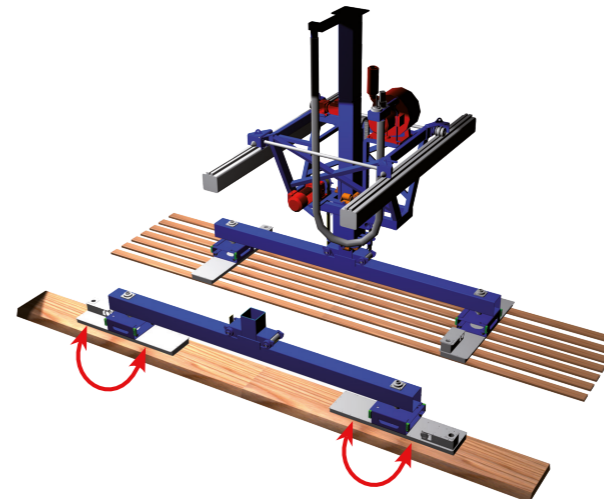


D. As a variant of the C version. The grippers are located between the sticks and after gripping tilt the layer 45° to let the sticks fall onto a collection belt.

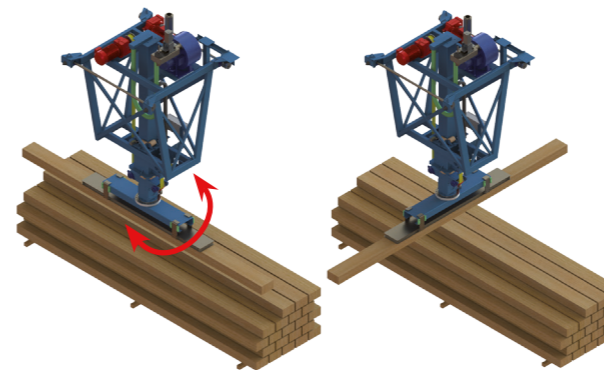
## ROTATING



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

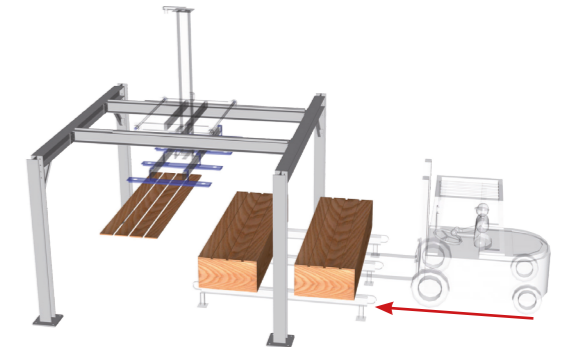


B. Switch from picking a single part to rotating 90° and picking a full layer.

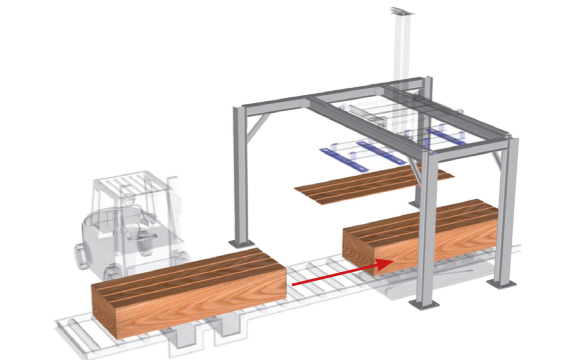


C. Horizontal rotation of the products after gripping

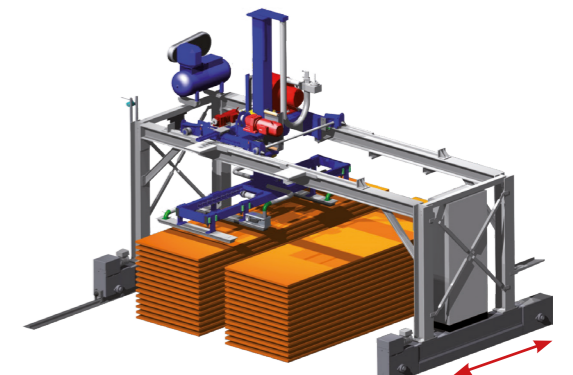
## MECHANICAL OPTIONS



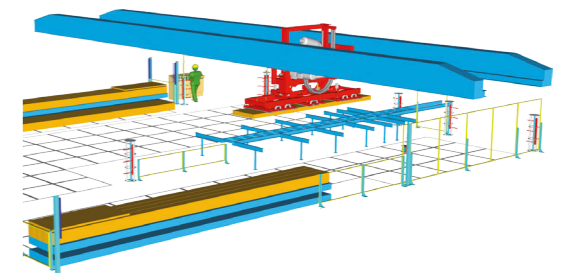
A. Wide legs for front infeed by width.



B. Narrow leg for lateral infeed by length.



C. Y horizontal movement with two mobile feet



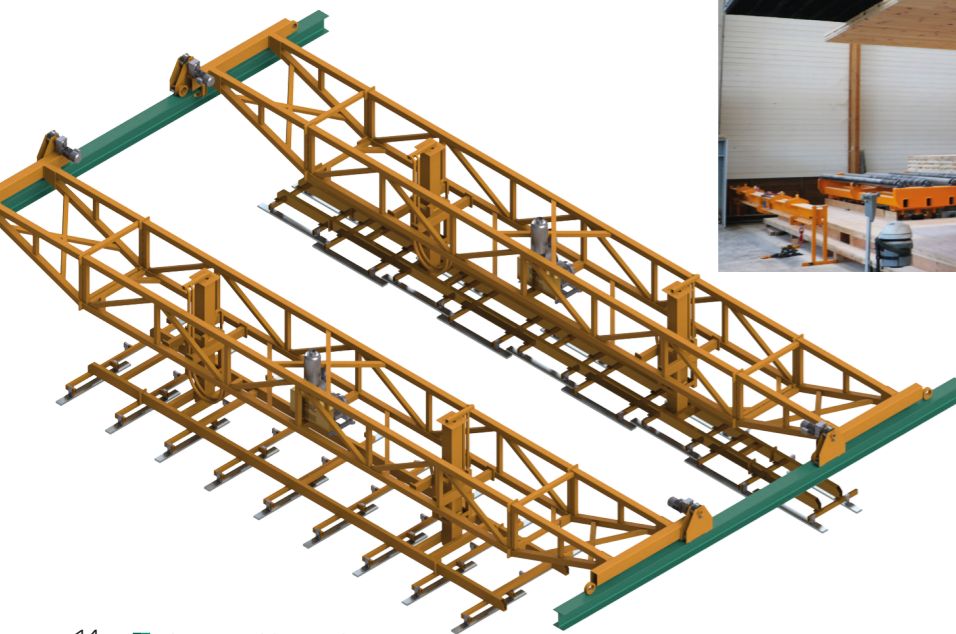
D. Y horizontal movement with two side wall or ceiling mounted rails

With over 60 years experience, JOULIN proposes solutions to fit your stacking and destacking needs. Custom solutions can be proposed after studying your requirements



## CLT panels

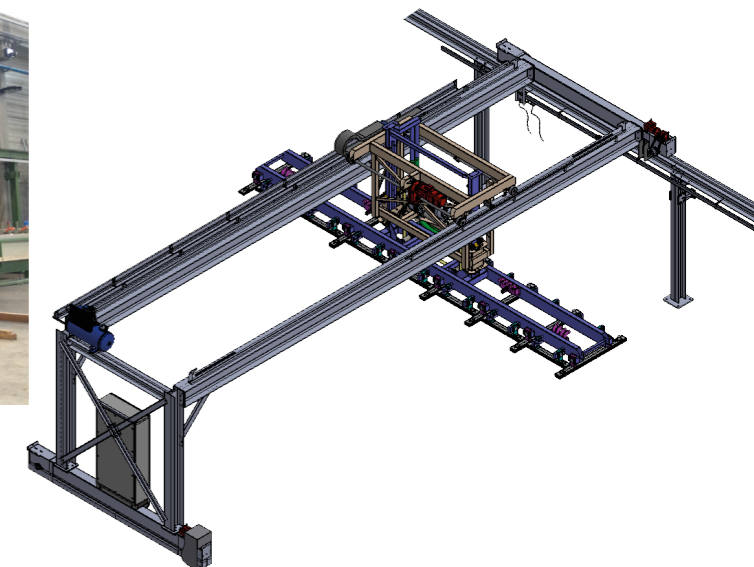
- Handling of **transverse and longitudinal** layers for panel composition
- Stacking / destacking with **multiple pick and place** positions possible
- Handling finished panels to over 20m long if needed
- **Increase productivity and profitability** of your manufacturing process
- Handles boards layers 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

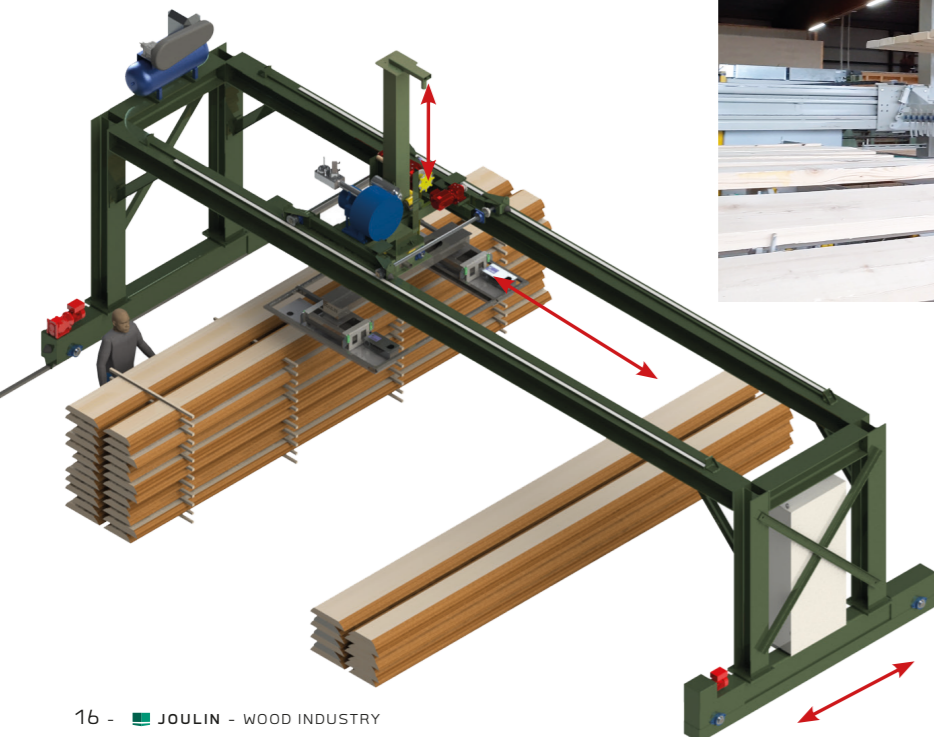




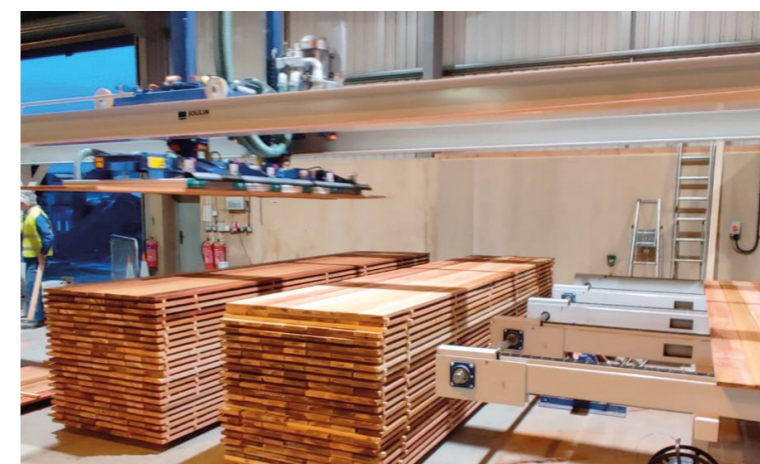


## Sticking / Desticking before or after a dry kiln

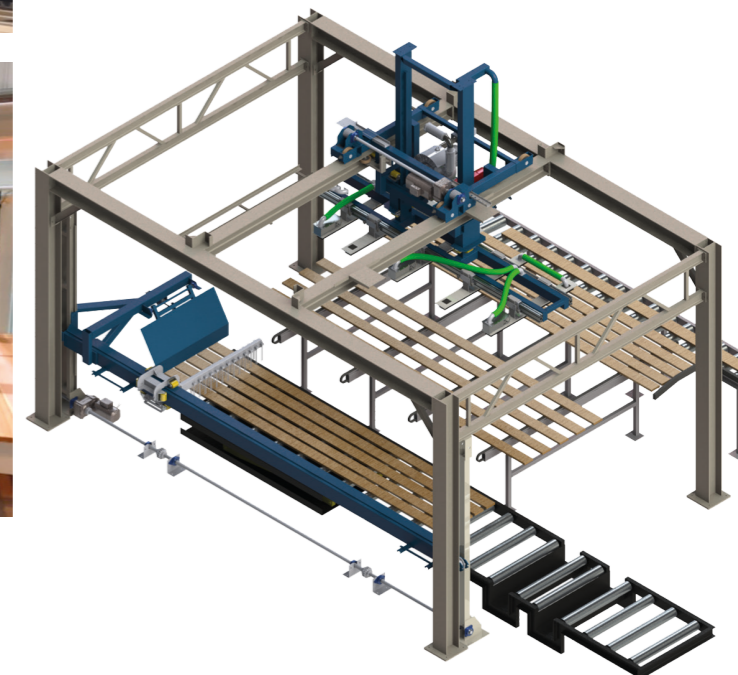
- Automatic desticking available.
- **90° rotation** of grippers available.
- **Mobile frameworks** available.
- Rough lumber including beams, sawn timber.
- All species of wood; green or dry.
- Easy to install and use.

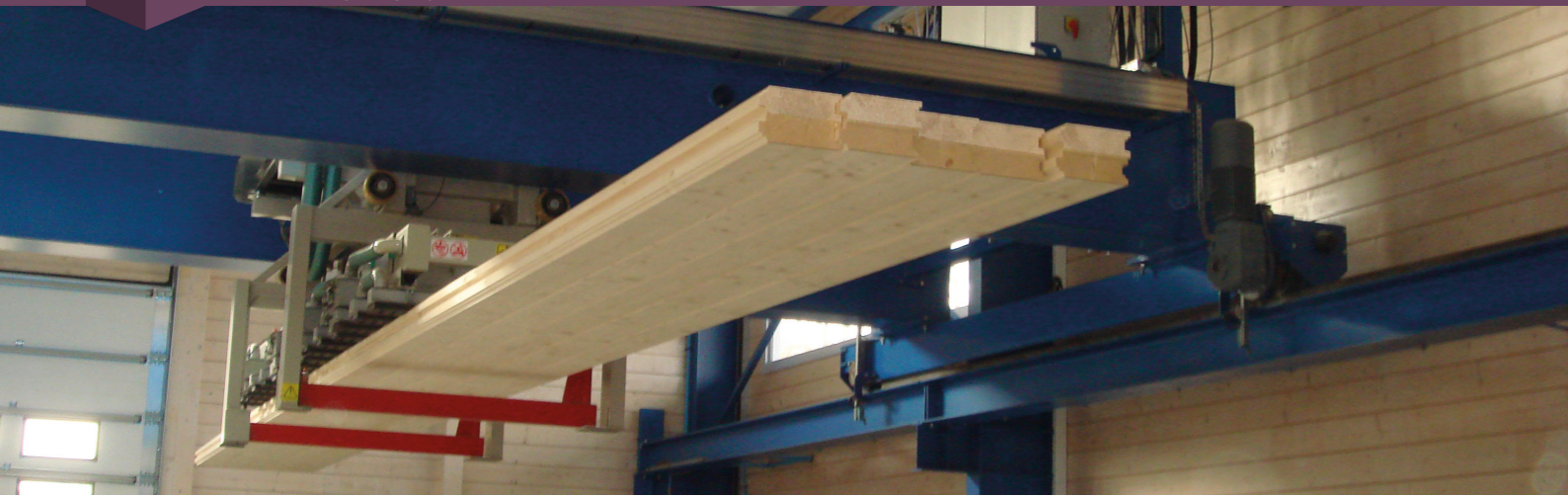


## Infeed / Outfeed of production lines



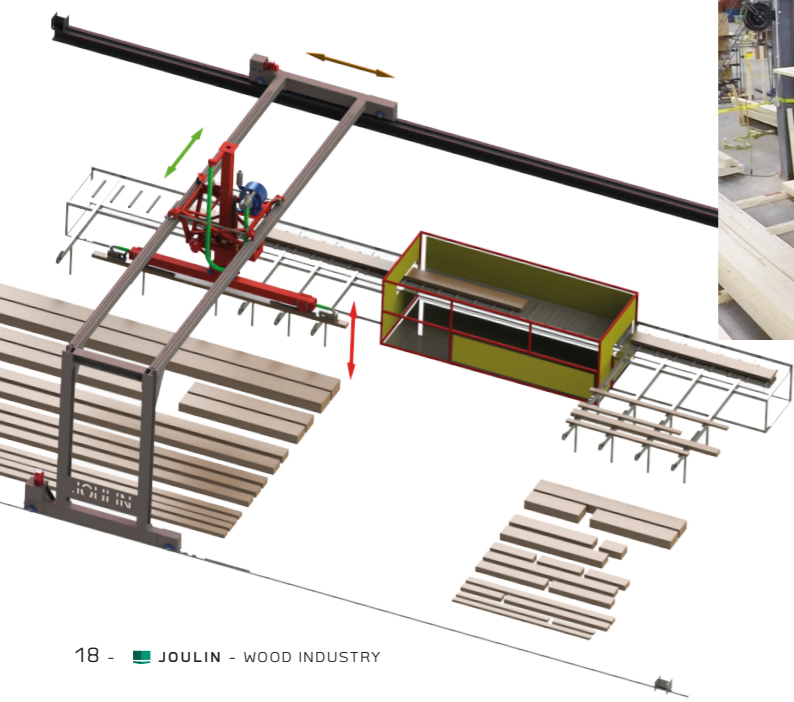
- Stacking / destacking with **multiple pick and place positions possible**
- **Automatic infeed / outfeed** systems
- Automatic desticking available
- Handles warped, grooved and molded parts as well as those with splits and holes



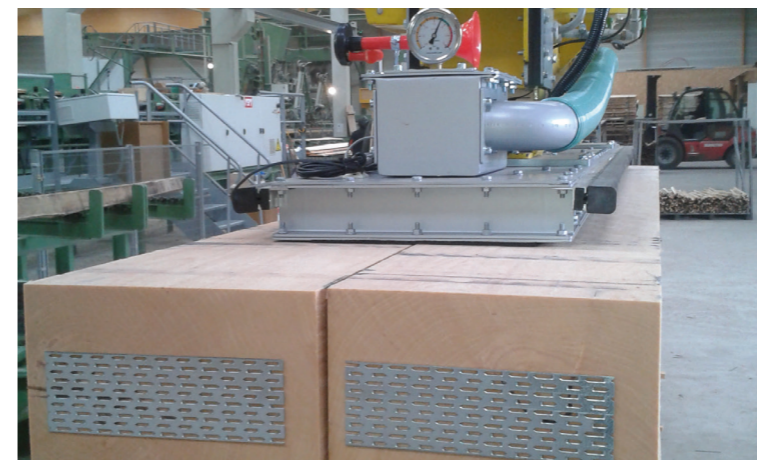


## Loading / Unloading a CNC router and log home parts

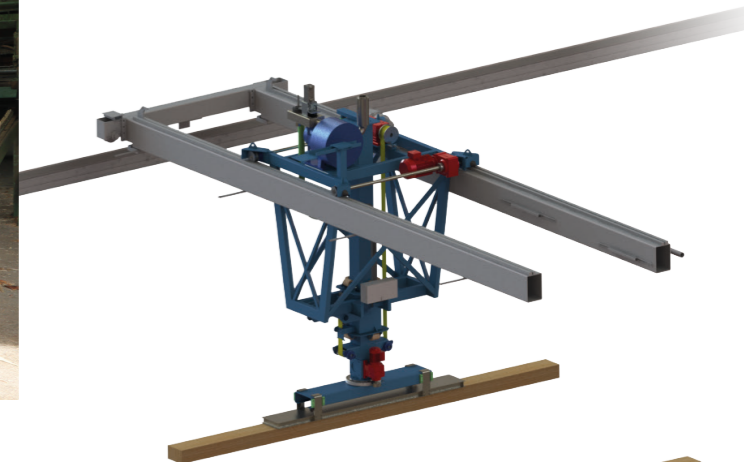
- Allows **optimization of CNC** for increased productivity and profitability
- Handles full layers as well as individual parts to **over 13 m (43ft) long** if needed. - Pick and place products in multiple positions.
- Handles full panels to small finished parts **without adjustment**.
- No more laborious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

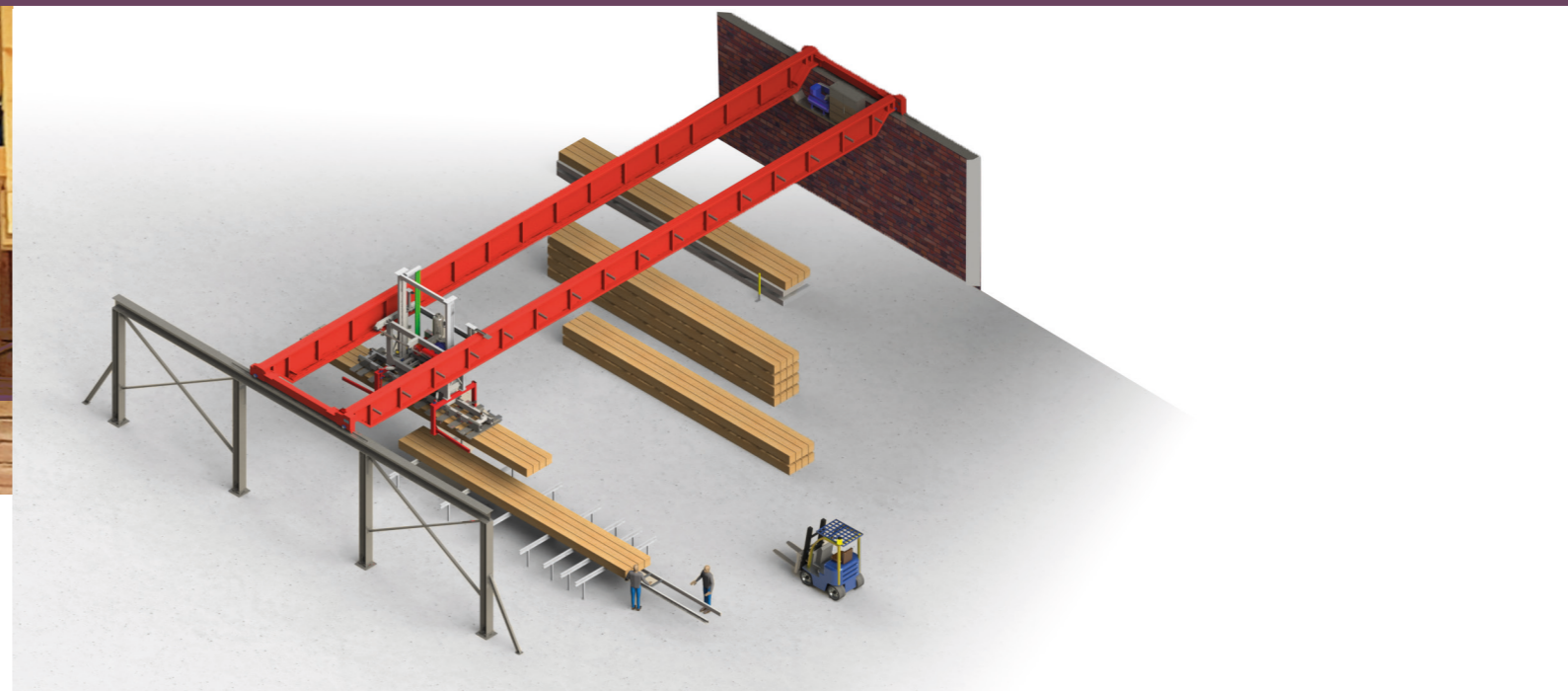
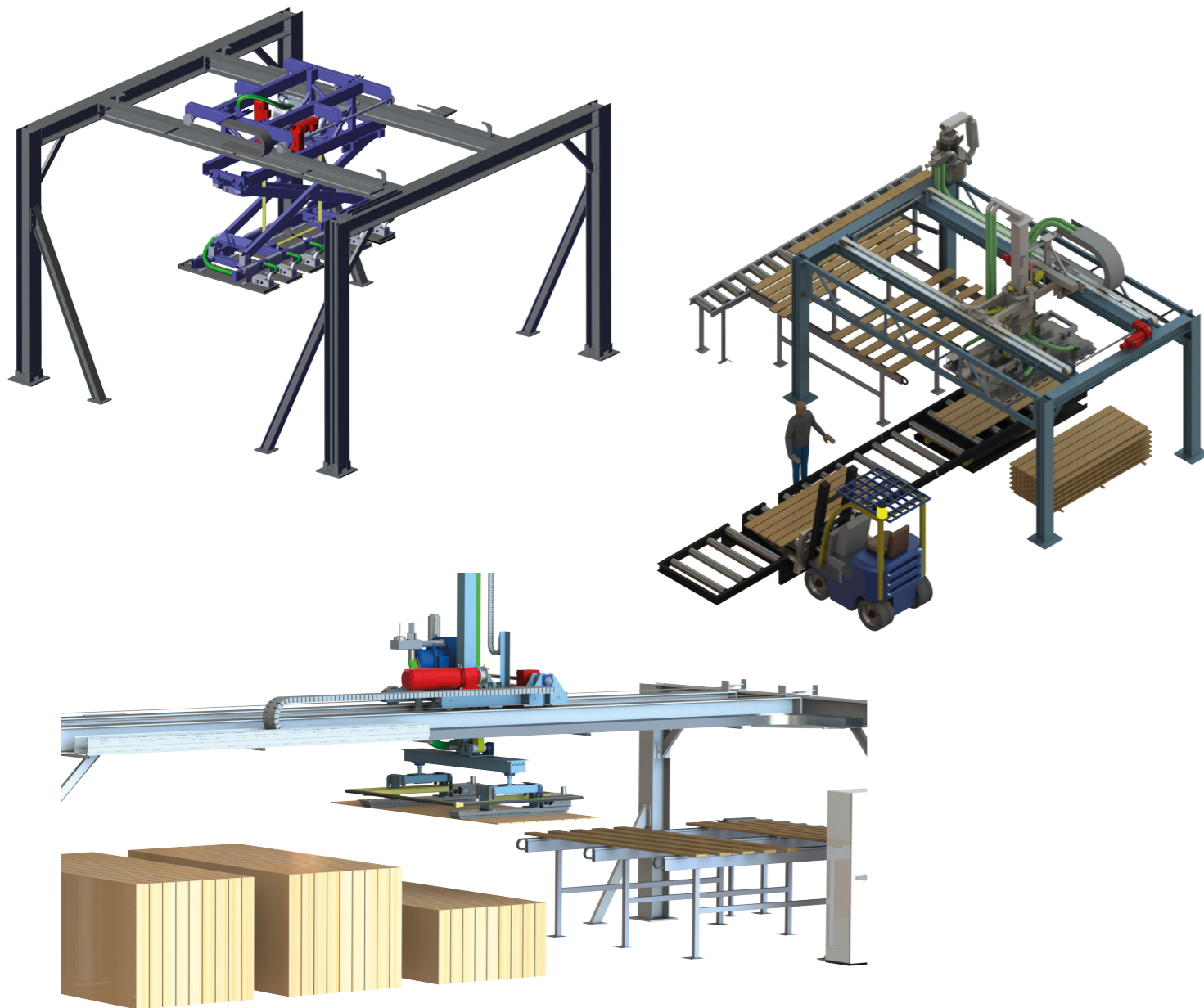




# Examples of installations

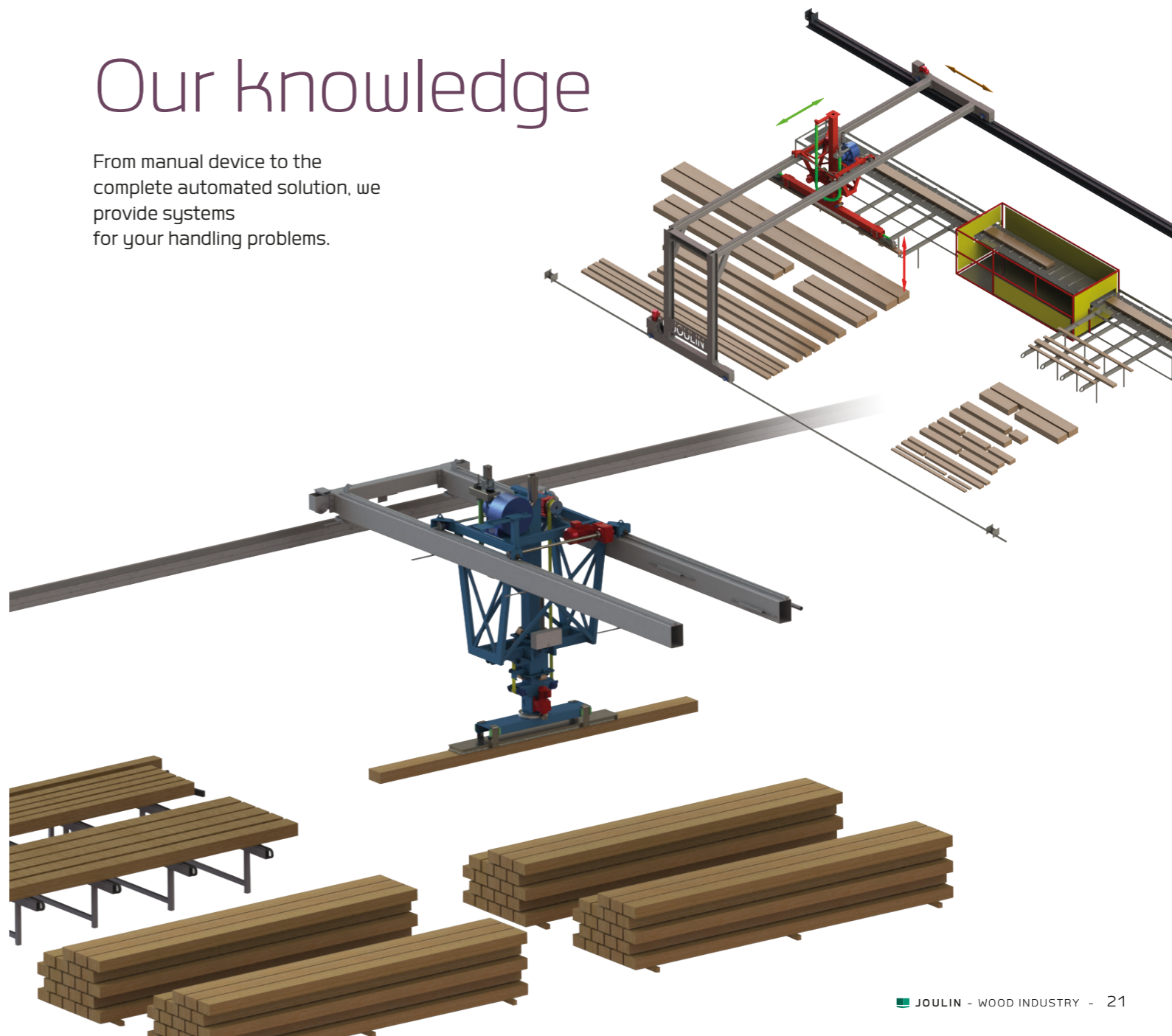
## Your project

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).



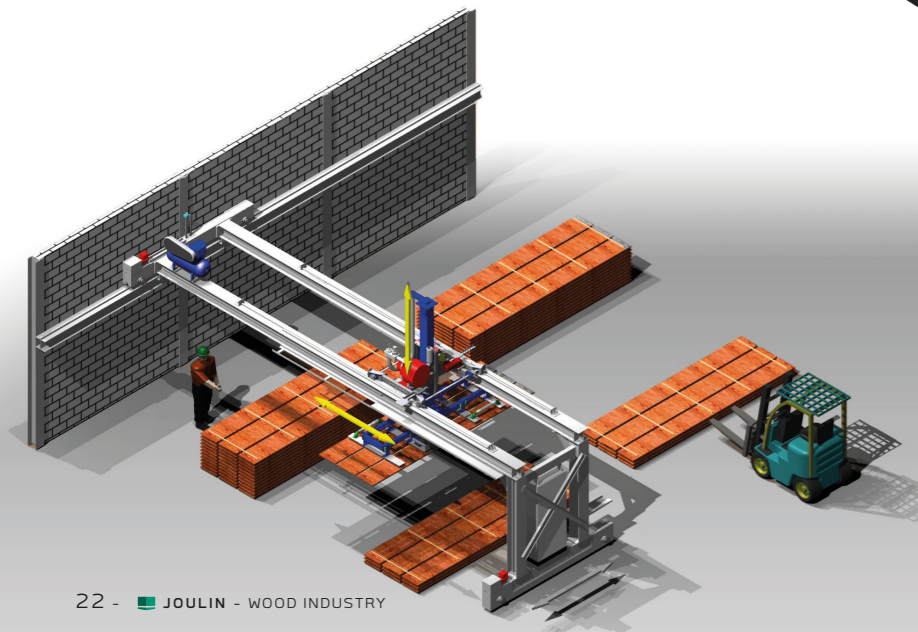
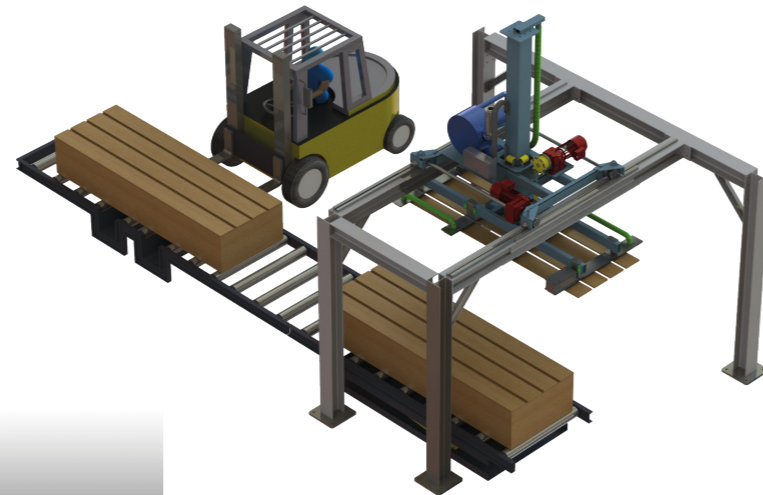
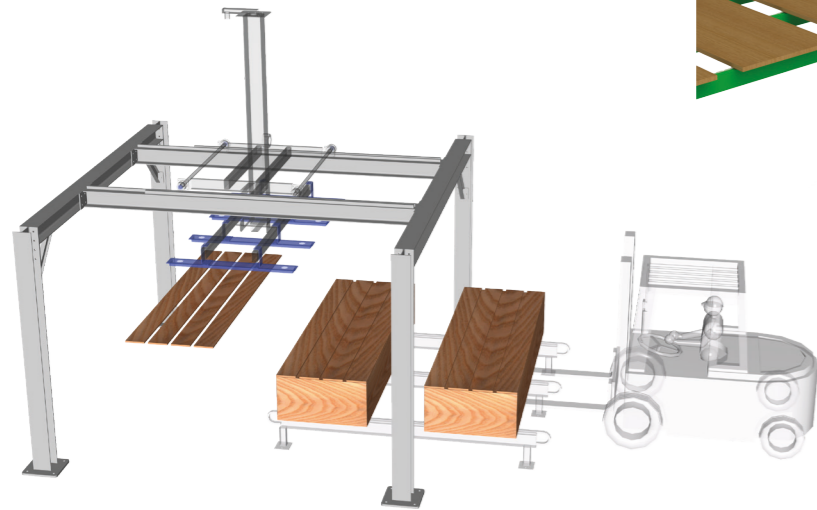
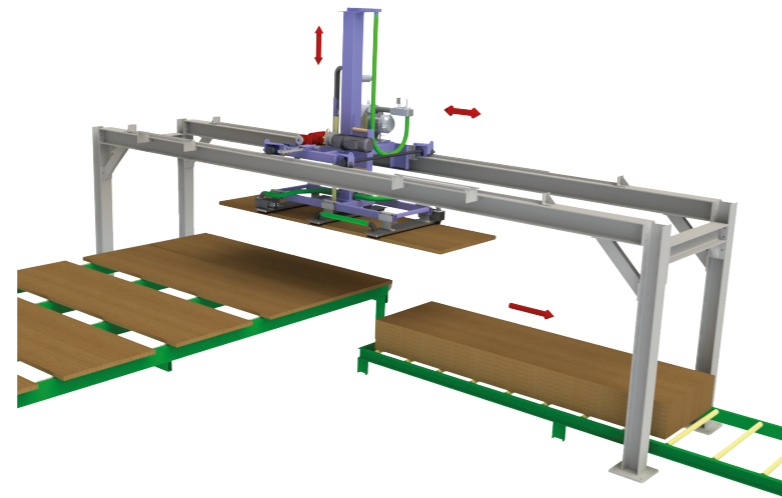
## Our knowledge

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



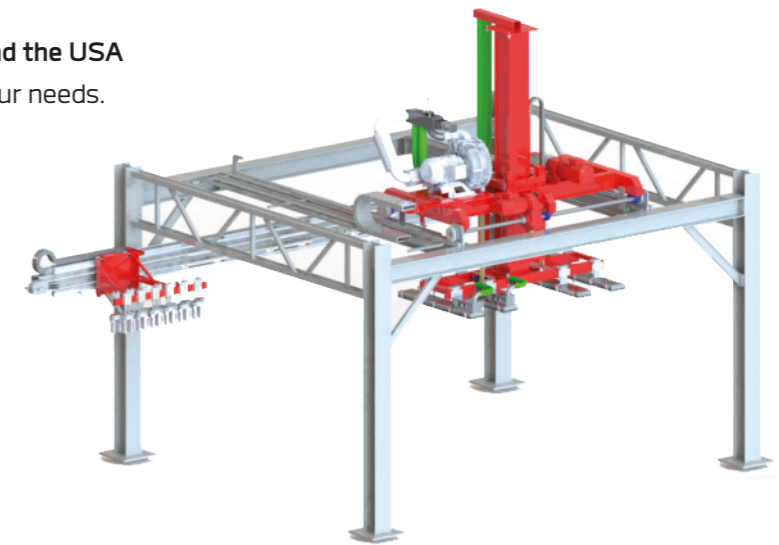
# Custom solutions

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.

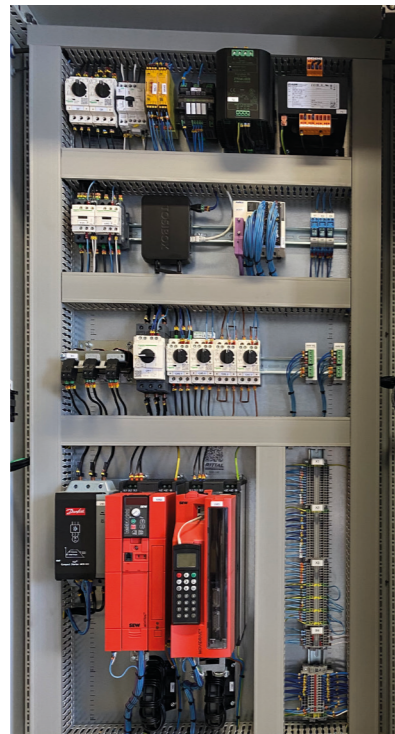




# Electrical supply

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



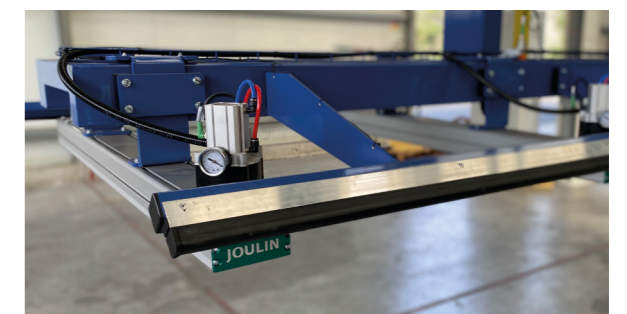
### RADIO

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

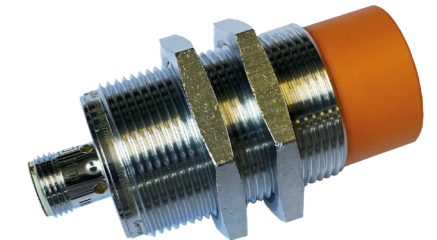
## Known brand components

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



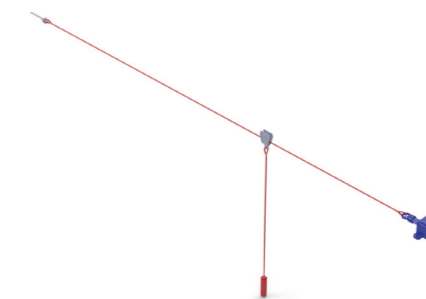
### M12 FIELDBUS MODULE

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



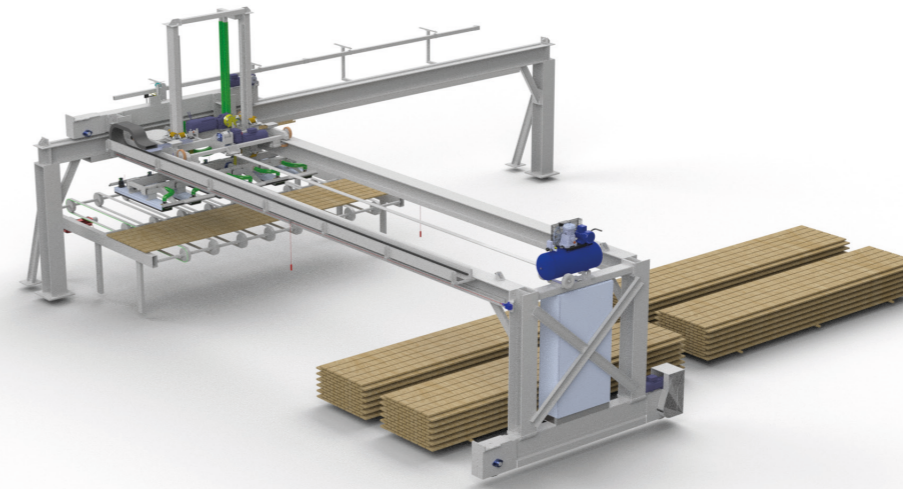
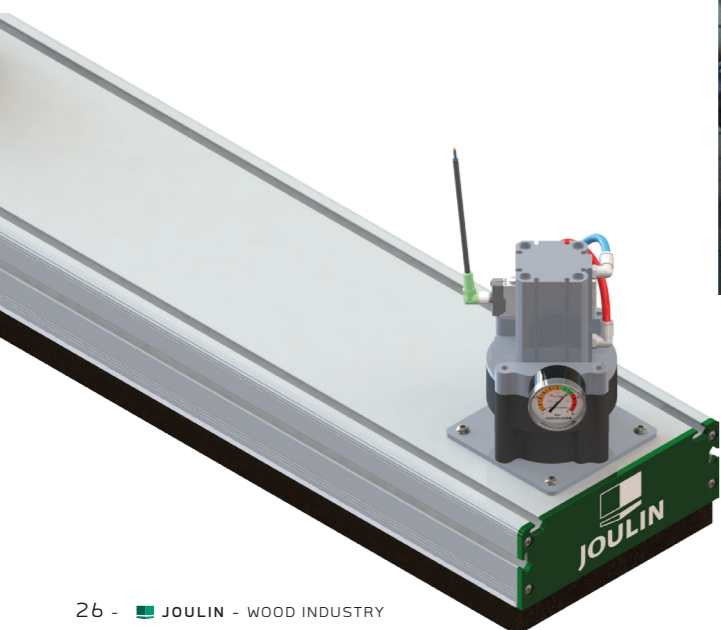
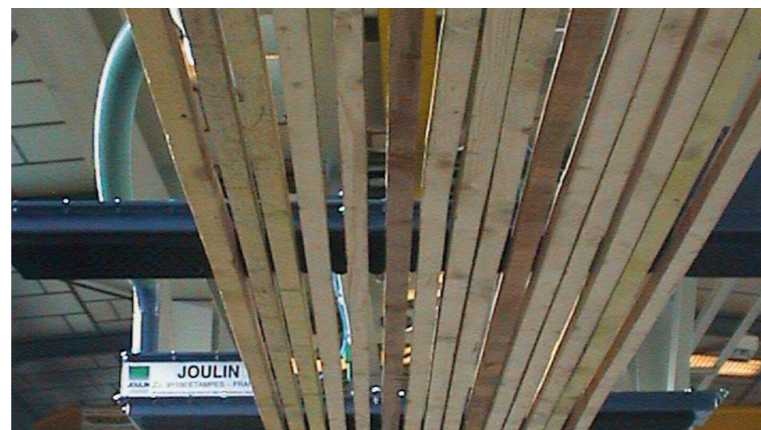
# The foam grippers

## 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...

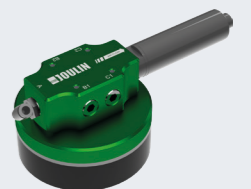
All industries range

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

[joulin.com](http://joulin.com)



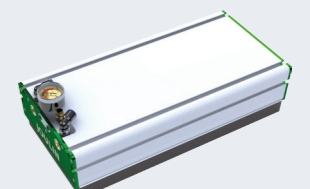
MINIGRIP



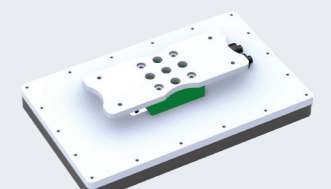
FLEXIGRIP



SAFE AND LIGHT



EXTRUGRIP



VALUE GRIPPER



# A complete range

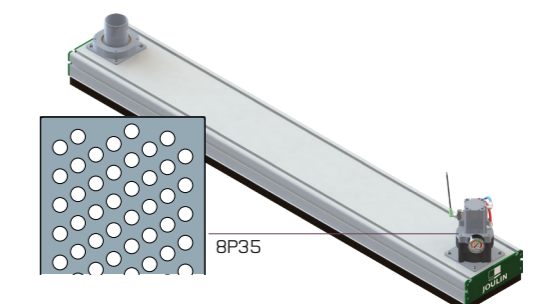
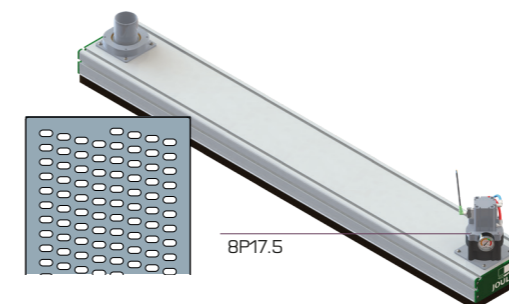
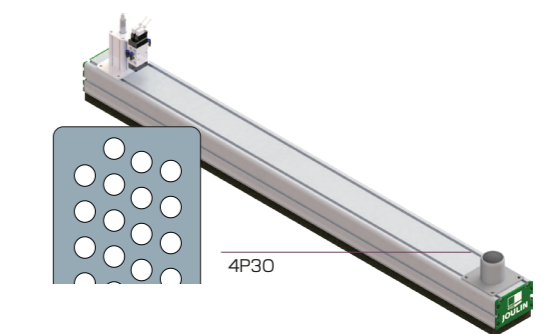
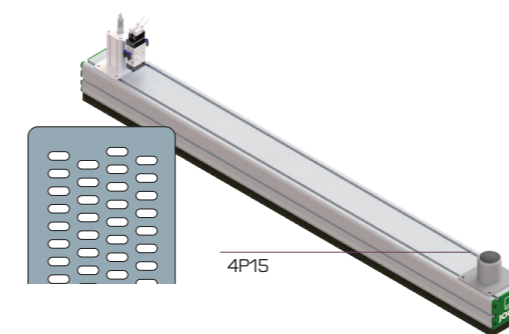
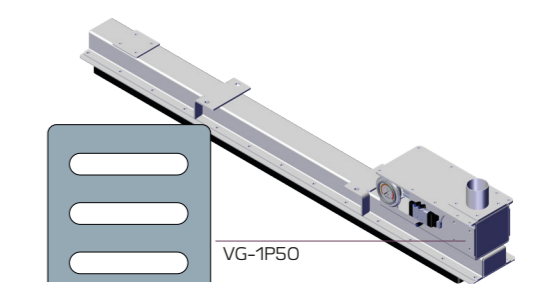
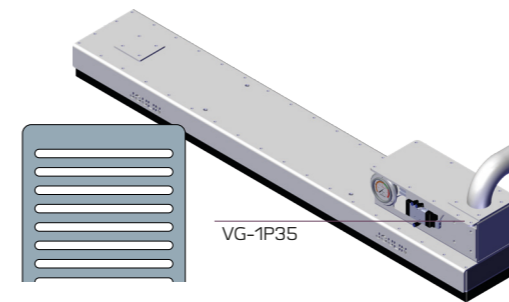
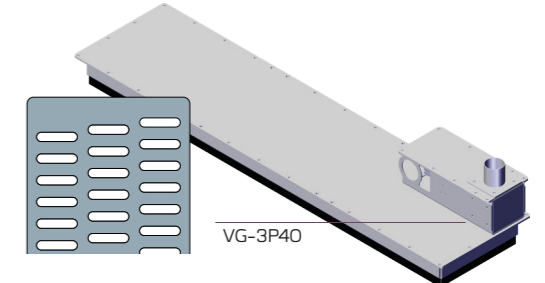
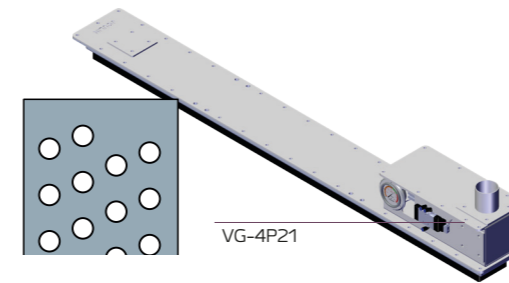
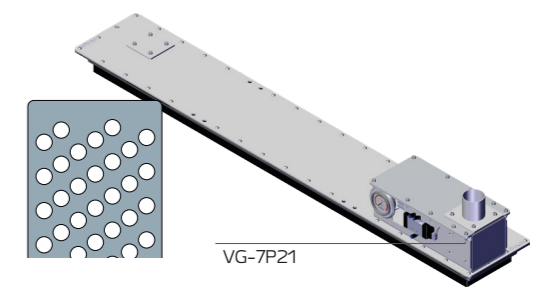
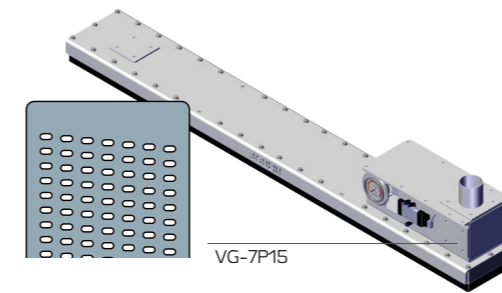
## Adjustable parameters

### 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

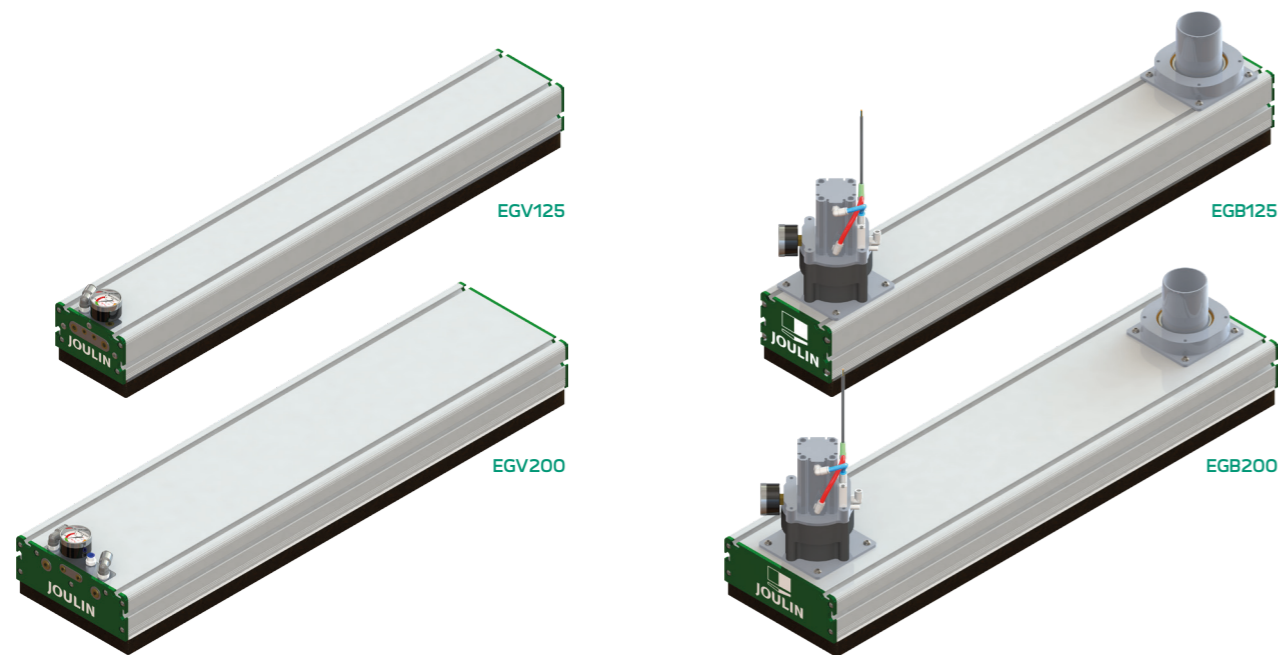
Reference	Gripper width (mm)	Min. wood width (mm)	Environment*
VG-8P17,5	200	25	◆◆
VG-8P35	200	45	◆◆
VG-7P15	170	25	◆◆
VG-7P21	170	40	◆◆
VG-4P15	125	25	◆◆
VG-4P21	105	50	◆◆
VG-4P30	125	50	◆◆
VG-3P40	300	45	◆◆◆
VG-1P35	200	55	◆◆◆
VG-1P50	170	70	◆◆◆

\*dust, humidity



\* dust, humidity





**CONCEPT**

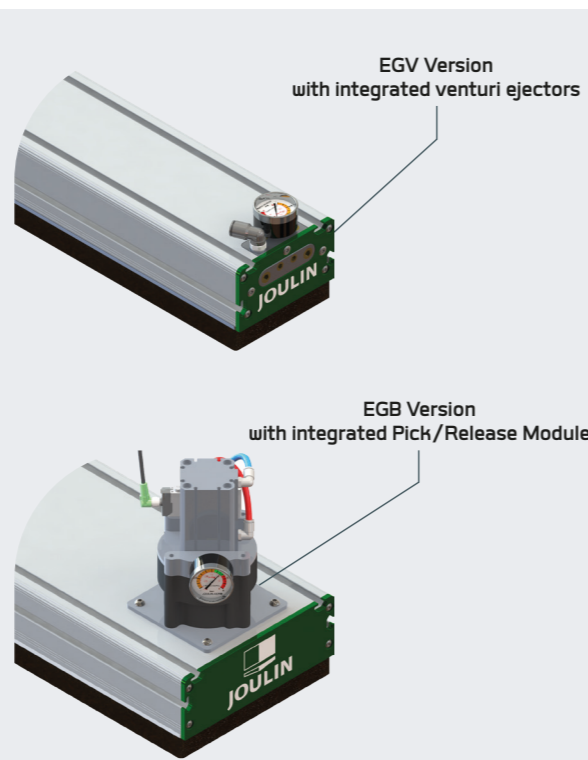
- All Joulin's technology in an aluminum profile
- External vacuum source or internal with venturi ejectors
- Different foam patterns to fit your application
- Easily adaptable on existing equipment
- 30% more efficient and fast than existing grippers

**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**

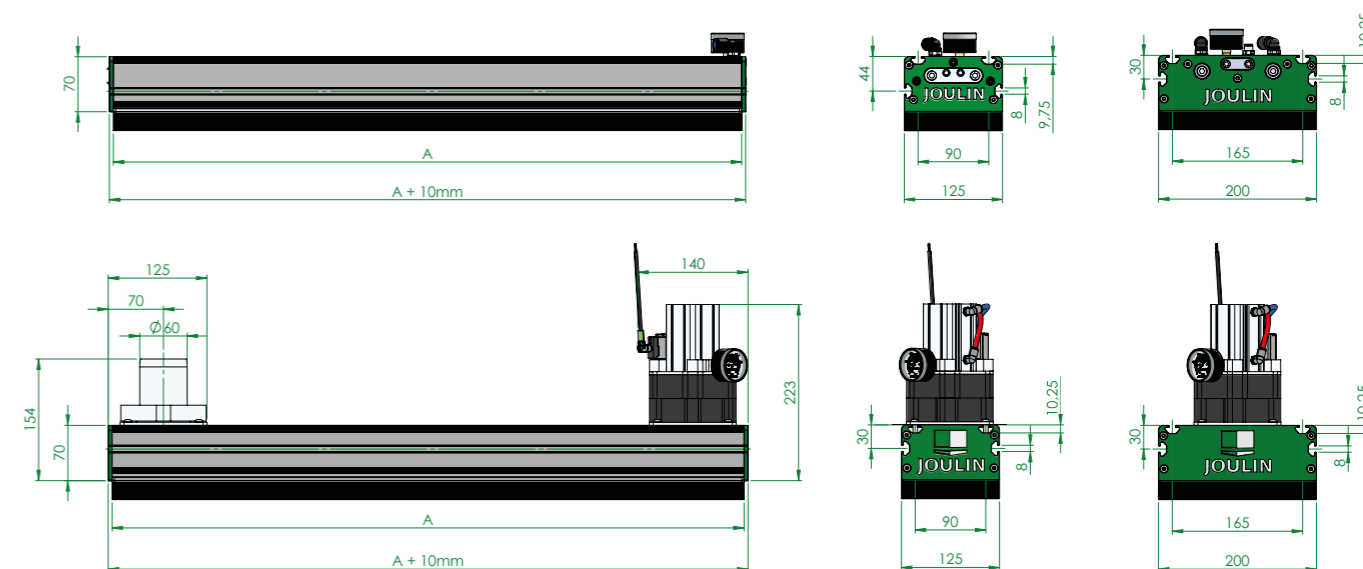
- 2 available technologies: check valves or calibrated holes
- Easy to install by utilizing the grooves



# EXTRU GRIP

## FOAM VACUUM GRIPPER

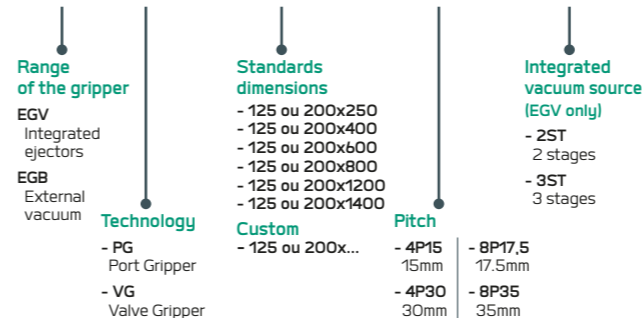
**INTEGRATING DATA**



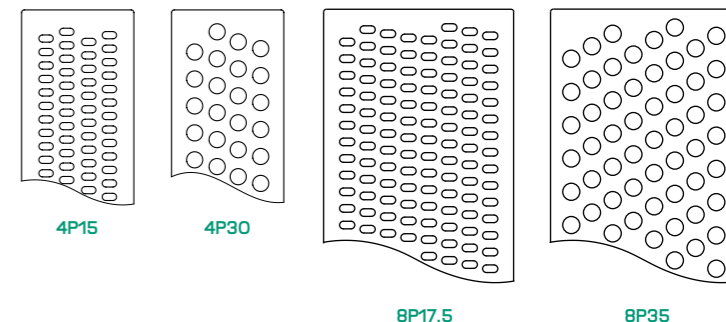
Length of the foam A (mm)	125mm				200mm			
	EGV Weight (kg)	EGB Weight (kg)	Air Consumption (NI/sec) - EGV		EGV Weight (kg)	EGB Weight (kg)	Air Consumption (NI/sec) - EGV	
			4P15	4P30			8P17.5	8P35
250	2,7	-	3,5	1,75	4,4	-	5,25	3,5
400	3,9	4,3	3,5	1,75	5,9	6,1	7	3,5
600	5,4	5,8	5,25	3,5	8,1	8,3	8,75	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**



**FOAM DENSITY**







# Joulin foams

## Performance guaranteed

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

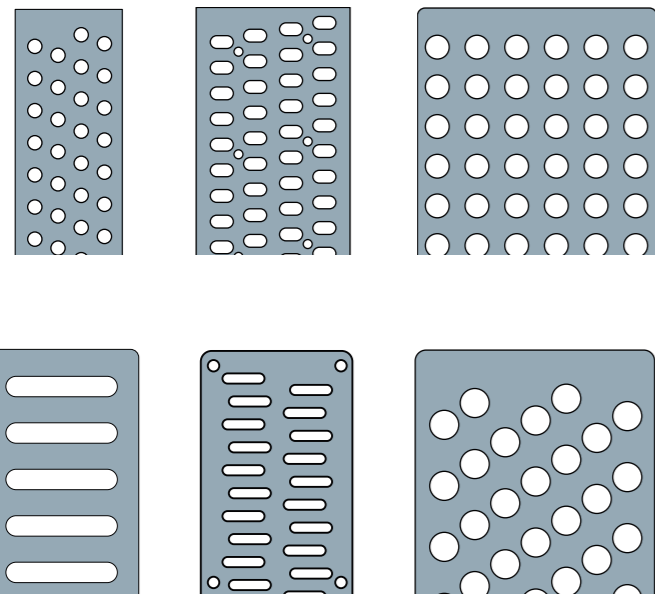
Our expertise and cutting sites in Europe and the USA allow us to guarantee quality at the best price and the most efficient service.

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**

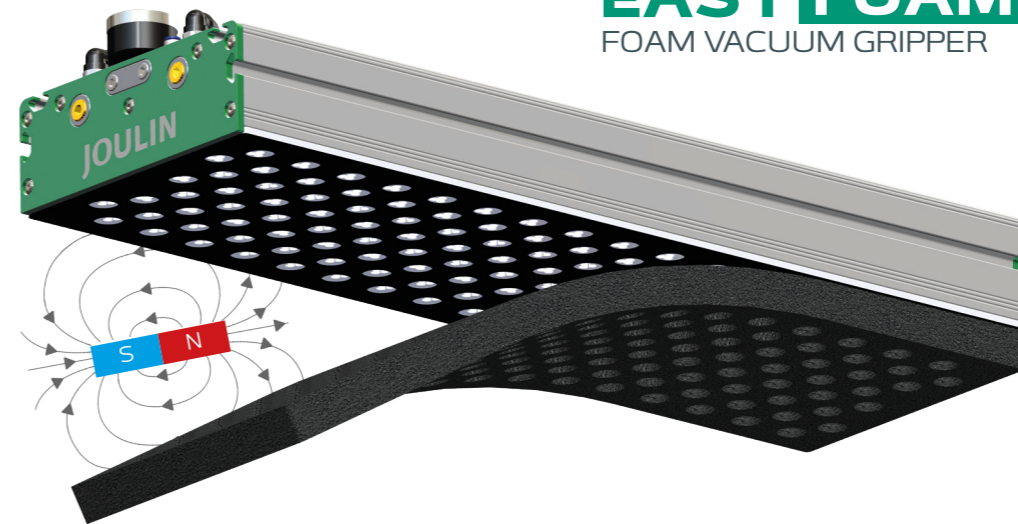
## Standard or custom production



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



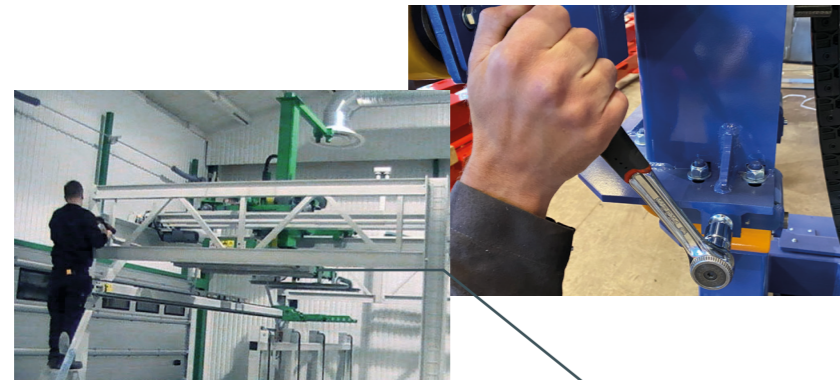
STRAP



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

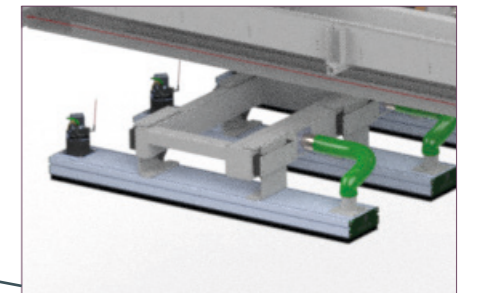


## PROXIMITY

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

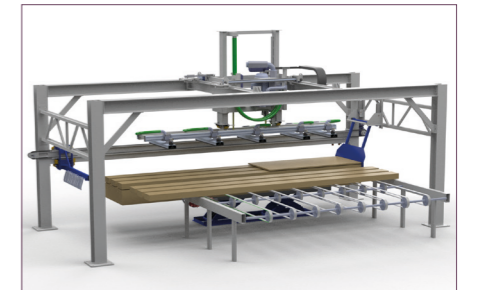
## TECHNOLOGY

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





## USA

2551 Hwy 70 SW - HICKORY  
NC-28602

Phone : **+(1) 828 327 2290**

Fax : **+(1) 828 327 8678**

## Europe

17 avenue des Grenots  
F-91150 ETAMPES

Tél. **+33 (0)1 69 92 16 16**

Fax **+33 (0)1 64 94 21 35**



**JOULIN**  
vacuum handling

A brand by Piab Group

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[www.joulin.com](http://www.joulin.com)