

# AUTOMATION

SOLUTIONS

AUTOMATIC MACHINES  
A-WR & i-AL Systems  
ROBOTIC SOLUTIONS  
AR ASSISTANCE  
IOT



**LATTUADA**  
+ADDING VALUE



LATTUADA...  
ADDING VALUE SINCE 1978

# ADDING VALUE

## THE INESTIMABLE VALUE OF GIVING AND RECEIVING

### THE VALUE RECEIVED

Every person who has trusted Lattuada has enriched its story. Each glass (or stone) processing solution completed and put into production has added even more experience and drive.

### THE VALUE OFFERED

Building on many years of market knowledge and a vast portfolio of successful projects, Lattuada continues to invest in development, research and training. With continually updated internal and external feedback, it strives to offer more quality, more solutions, more technology.

# ADDING + VALUE

## A SYNERGY OF VALUES CALLED A COMPANY

### Quality and personalisation

Are the hallmark of Lattuada's design. Attention to every detail is pursued within a customised production process, with care and attention.

### Flexibility and assistance

Maximum willingness to listen and develop the client's requests. Guarantee of follow-up and further customisation throughout the machine life cycle.

### History and experience

Since 1978, day after day, milestone after milestone, Lattuada has continued to grow in its problem-solving capacity and in guaranteeing progressive know-how to all its customers.

### Internationality and italianity

Made in Italy represents worldwide excellence in the glass sector. The sense of belonging coexists with the pride of constantly interacting with an international audience.

### Innovation and substance

Proposing new solutions is part of Lattuada's DNA. Simplification, training and constant support are the pluses offered to combine technology and user-friendliness.

### Eco-Sustainability and territory

Starting from the Italian headquarters, concrete actions for the environment have been undertaken for years. Likewise, Lattuada's solutions will be increasingly 'green'.

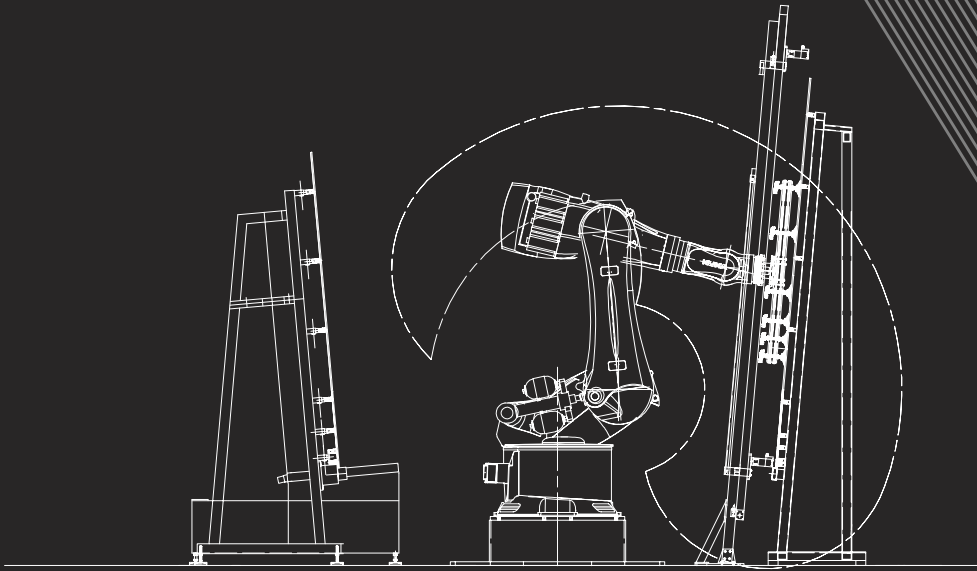
AUTOMATIC MACHINES  
A-WR & i-AL Systems  
ROBOTIC SOLUTIONS  
AR ASSISTANCE  
IOT

# AUTO MATION SOLUTIONS

EVERY CUSTOMER  
IS UNIQUE TO US...  
AS UNIQUE AS  
OUR SOLUTIONS

Robotics, A-WR & i-AL Systems, Augmented Reality and IoT: a beating heart of innovation and technology revolutionising glass and stone processing.

Lattuada brings companies into the world of Industry 4.0, by making every machine a concentrate of precision, productivity and automation.



## KNOW-HOW

**We are your partner in automation.**

For more than 5 years we have dedicated internal resources and major investments in designing and building solutions that integrate robots and automation to support our glass processing machines. Thanks to synergies with integrators with a decade of experience, we are in a position to offer up to date and world-class know-how and skills.



## CONSULTANCY

**Beyond the offer, consultancy.**

A single global consultant partner for your current and future needs. Thanks to a powerful simulation software, we can key in standard production data and values of your workday and compare them with those obtained from a presumed use of robots. This way, you can notice the difference and thus make the decision that best fits your efficiency and productivity boost needs.



## ASSISTANCE

**Training and technical support, wherever you are.**

Our teams are ready to give you appropriate training and technical support you may need, through our hotlines. Whether regarding the machine or the applications, you have a far-reaching network of agents and dealers at your disposal in every corner of the globe. As concerns robots, they require minimum maintenance considering their high and constant performance.



## SKILLS

**One application, one solution.**

Thanks to world-class collaborations and supplies, our solutions gain in effectiveness and efficiency year by year. This contributes towards developing know-how and skills assets like few others can worldwide, keeping one guaranteed focus: building applications that are not only easy to implement and use, but that can also keep production performance constant over time.



## SMARTNESS

**Customised and smart machines.**

Our machines have always been custom-built. With forty years of experience in the industry, we - at Adelio Lattuada - can modify configuration to meet your production needs. But that alone is not enough. We are committed towards making machines more automated and smarter by installing state of the art devices and sensors.



## INTEGRATION

**More targeted than ever before.**

The more machines are integrated with each other through specially studied software, the greater their efficiency and productivity. We are working on getting rid of repetitive manuals and combining control operations: we aim at creating a system where machines can communicate with each other and can make autonomous decisions to maintain high production and safety level, eliminating errors.





**A PERFECT SYNERGY  
WITH TECHNOLOGY**

# ROBOTS

**New integrated, flexible and customised solutions with the following advantages**

**01 CUSTOMISABLE SUCTION CUPS**  
vacuum with Venturi system

**02 HIGH FLEXIBILITY**  
side by side processing of glasses of different sizes with minimum distance between them

**03 AUTOMATIC MEASUREMENT OF GLASS**  
pre-setting glass size is not required

**04 EASE OF USE**  
straight-line edging machines with standard maintenance

**05 AUTOMATIC SPEED ADJUSTMENT**  
depending on the sizes of the glass

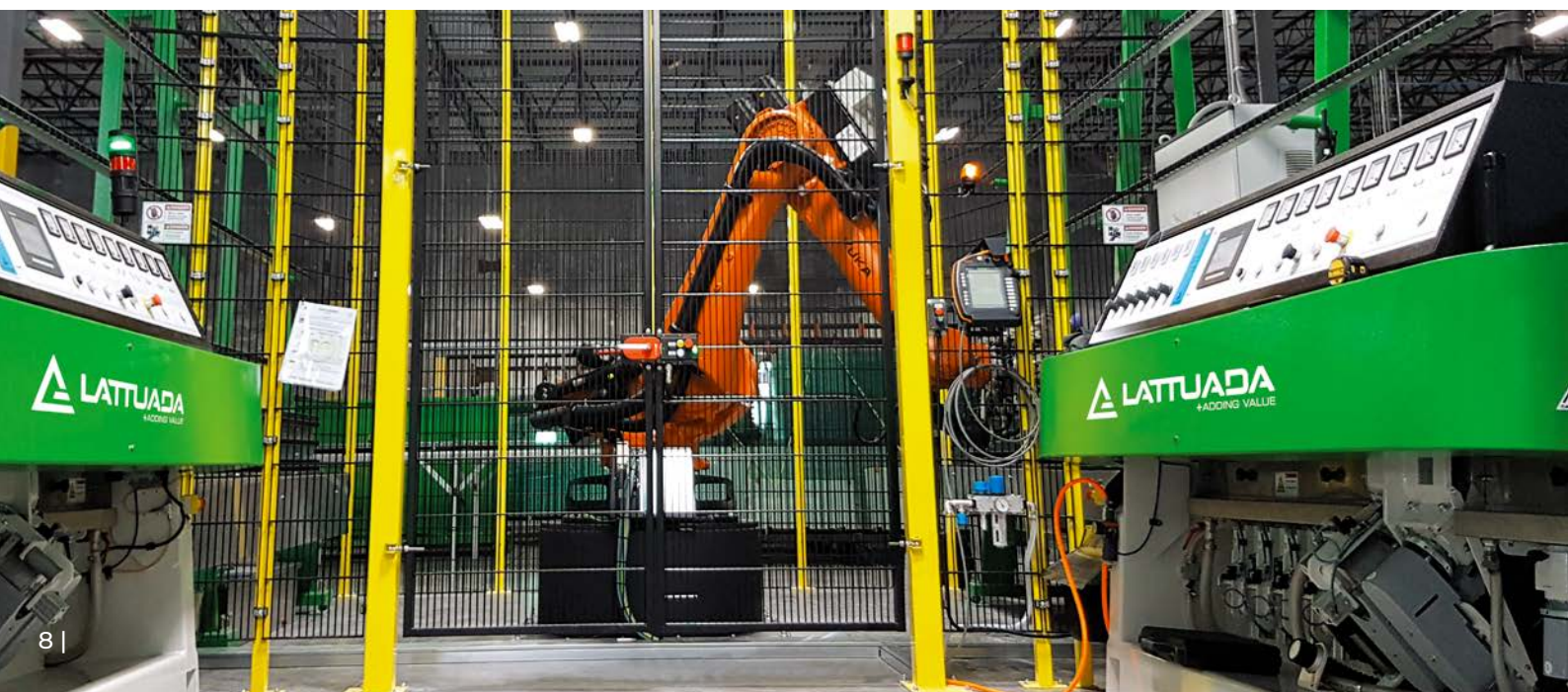
**06 LOWER COSTS**  
just one operator required

**07 HIGHER PRODUCTIVITY**  
thanks to the high speed of this system

**08 FULLY AUTOMATION OF MACHINES**  
reducing the need to access to the area, safety and productivity increase

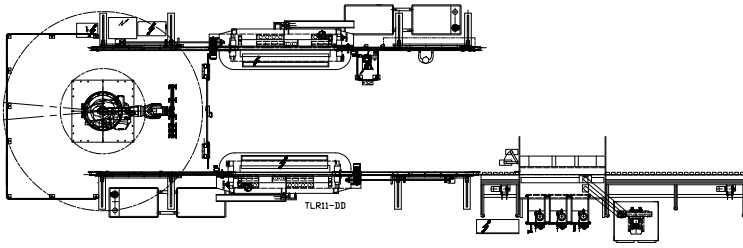
**09 OPTION OF INTEGRATION**  
with other machines

**10 CONTINUITY ASSURED**  
thanks to the low maintenance required by our machines

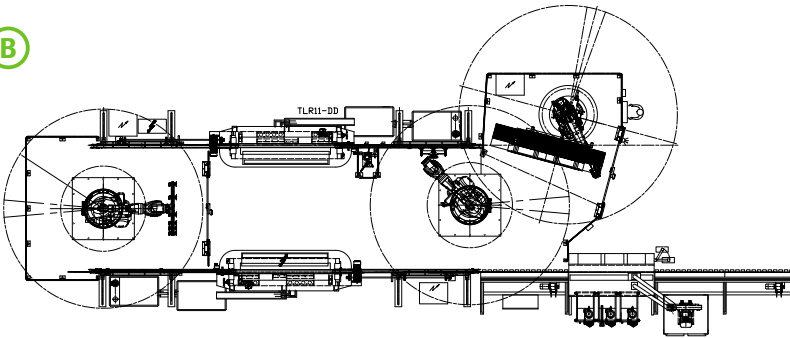




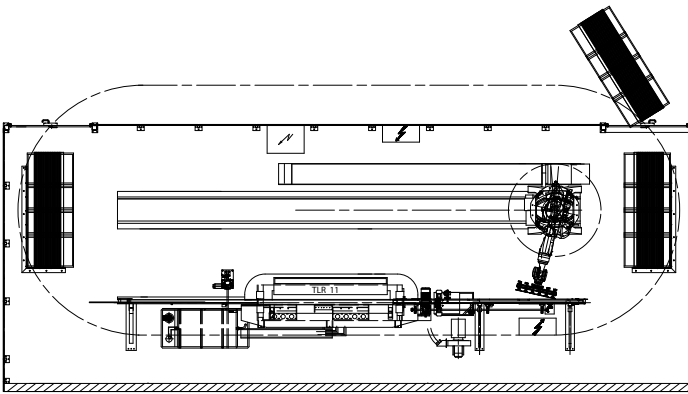
(A)



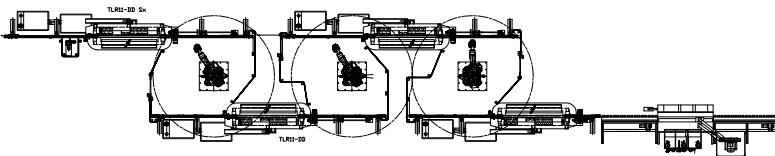
(B)



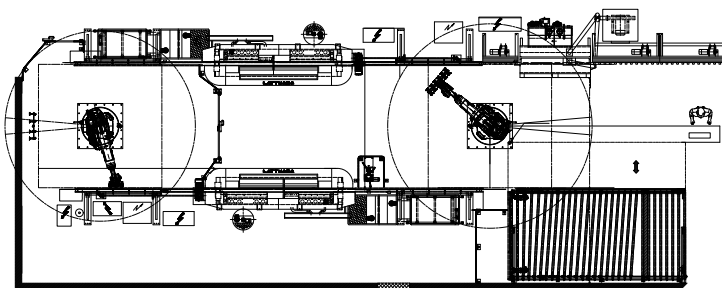
(C)



(D)



(E)



**DIFFERENT CONFIGURATIONS AVAILABLE FOR THE IMPLEMENTATION IN SEVERAL APPLICATIONS:**

**(A) 2 EDGERS AND 1 ROBOT**  
The most sold

**(B) 2 EDGERS AND 2/3 ROBOTS**  
For fully automated cells

**(C) 1 EDGER AND 1 ROBOT**  
Fully automated cell in a reduced space

**(D) 4 EDGERS AND 3 ROBOTS**  
Special solutions

**(E) INTEGRATION**  
With washers, CNCs, double-edgers, cutting, tempering or IG lines, etc.

In partnership with:



## AUTOMATIC MACHINES

# A-WR SYSTEM

The exclusive A-WR system introduces a completely automatic wheels setting management, which includes:

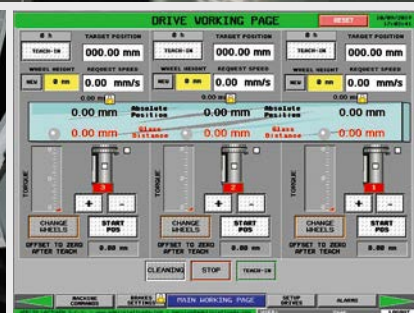
- 01.** Automatic pre-setting "ZERO" procedure of diamond and resin wheels, without glass in less than one minute
- 02.** Automatic recover of the polishing wheels' wear
- 03.** Automatic positioning for the wheel's replacement
- 04.** Jog increase/decrease of the spindle position (accuracy 0.01 mm)
- 05.** Automatic positioning on setpoint
- 06.** Automatic backlash recovery
- 07.** Automatic spindle cleaning procedure
- 08.** Wheels wear warning
- 09.** Spindle's problems warning
- 10.** Manual unlocking for any situation
- 11.** Motorized adjustable inlet conveyor
- 12.** Digital ammeters and automatic alert system for the polishing wheels wear
- 13.** Automatic detecting and compensating procedure of the inlet conveyor belt wear

# SOLUTIONS FOR AUTOMATING ACTIVITIES AND INCREASING PRODUCTION FLEXIBILITY



## ADVANTAGES OF THE LATTUADA A-WR SYSTEM

01. WHEELS SETTING IN LESS THAN 1 MINUTE, INSTEAD OF AN AVERAGE 20/30 MINUTES MANUAL SETTING
02. HOMOGENEOUS WHEELS SETTING REGARDLESS OF THE WORK SHIFT AND THE OPERATOR ON THE MACHINE
03. EXTREMELY SIMPLE TO USE, NO SAMPLE GLASS NEEDED
04. HOMOGENEOUS WHEELS WEAR AND CONSISTENT PROCESSING QUALITY
05. INCREASED SPINDLES CLEANING THANKS TO THE AUTOMATIC CLEANING FUNCTION
06. REDUCED EXIT CONVEYOR BELT WEAR OR DAMAGING DUE TO AN INCORRECT WHEELS "ZERO" SETTING
07. EARLY WARNING ON POTENTIAL MAINTENANCE ISSUES
08. MORE QUALITY, MORE PRODUCTIVITY, LESS MAINTENANCE, LESS ERRORS... MORE MARGINALITY





THE MAIN ADVANTAGES OF  
**i-AL LATTUADA** ARE

**AUTOMATIC  
MACHINES**

# i-AL

Full automation  
of glass processing

**i-AL** IS A COMPREHENSIVE PACK OF MECHANICAL, ELECTRONIC AND SOFTWARE SYSTEMS ESPECIALLY DESIGNED TO DELIVER THE MAXIMUM POSSIBLE AUTOMATION IN GLASS PROCESSING AND A FULL INTEGRATION WITH YOUR ENTIRE PRODUCTION SYSTEM

### **I-AL PACK INCLUDES:**

- 01.** Digital ammeters displayed on the touch-screen panel
- 02.** Motorized glass removal setting with portable push-button panel
- 03.** Automatic management of wheels pressure, glass removal and speed according to the thickness
- 04.** Proportional valves for pressure regulation of the polishing spindles
- 05.** Glass length measurement
- 06.** Remote assistance

**01.** REDUCED MACHINE SET-UP TIME

**02.** CONSTANT QUALITY AND PRODUCTIVITY THROUGHOUT THE SHIFT OR DAY, REGARDLESS OF DIFFERENT OPERATOR'S SKILLS

**03.** EARLY WARNING ON POTENTIAL MAINTENANCE STOPS

**04.** REMOTE MANAGEMENT

**05.** MORE QUALITY, MORE PRODUCTIVITY, LESS MAINTENANCE, LESS ERRORS... MORE MARGINALITY



SOLUTIONS FOR TRANSFORMING  
PRODUCTION AND BECOMING  
A SMART FACTORY

# INDUSTRY 4.0

Industry 4.0 has already become an active part of many companies, becoming a strong competitive factor. An approach that deeply changes the production process by implementing enabling technologies: a leap you can already take into the future through **Adelio Lattuada** products.

As a matter of fact, thanks to the PLM IOT i-Like Machines software, besides connecting machines to each other so as to monitor them constantly, we also provide clear data through an interface that is intuitive and easy to use.



01. MONITOR PRODUCTION CYCLE IN REAL TIME
02. RECEIVE ALERTS IN CASE OF MALFUNCTIONS
03. OPTIMISE PLANT AVAILABILITY AND PRODUCTION
04. PLAN MAINTENANCE WORKS
05. REDUCE FAILURES AND DOWNTIME
06. VIEW MACHINE USE DATA AND REPORT RECORDS

## THE SOFTWARE COMES WITH THE FOLLOWING MODULES:

### ▶ MONITORING MODULE

- Monitoring machine production cycle in real time
- Alarms in case of malfunction

### ▶ MAINTENANCE MODULE

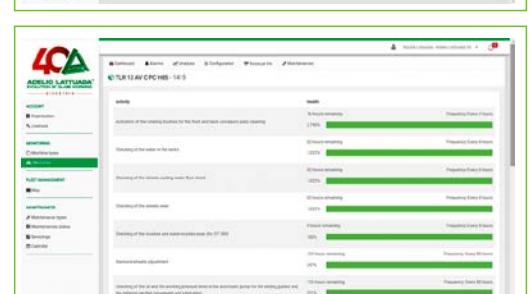
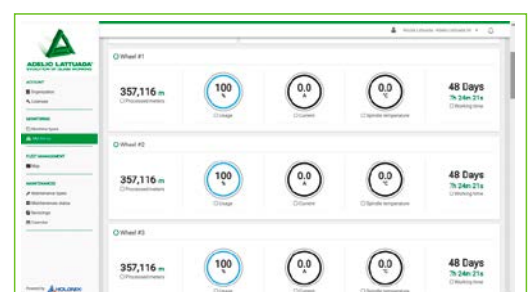
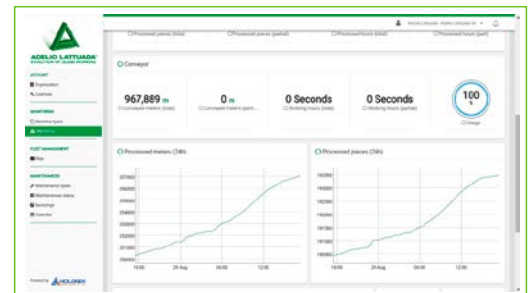
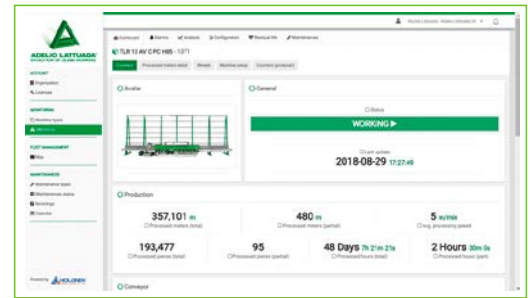
- Optimising the planning and scheduling of maintenance works
- Reducing failures and downtime
- Viewing actions and data analysis records
- Maximising plant reliability and availability

### ▶ ANALYSIS MODULE

- Viewing KPI and alarm records
- Accessing machine use report statistics

### ▶ FLEET MANAGEMENT MODULE

- Machine fleet geolocation interfacee







**ADELIO LATTUADA S.R.L.**  
Via Abbondanza, 11/13 - 22070 Carbonate (CO) IT  
T. +39 0331.832713 - info@adeliolattuada.com  
[adeliolattuada.com](http://adeliolattuada.com)

**LATTUADA NORTH AMERICA, INC.**  
6967 Wales Road, Suite F - Northwood 43619 (OH)  
T. 567 249 4486 - info@lattuada-na.com  
[lattuada-na.com](http://lattuada-na.com)