



# ETEK COMPANY PROFILE

For Automotive

**ETEK**  
TOTAL AUTOMATION SOLUTIONS



WHO  
ARE  
WE?

ETEK AUTOMATION



# History

SINCE  
**2006**

ETEK Automation Solutions JSC is the number one provider of total automated solutions in Vietnam

PARTNER OF

**200+**

FACTORY

**35,000+**

2S, 3S WORKSHOP

**200+**

VOCATIONAL SCHOOL

# Customers





# Partners

**ABB**

**Fronius**

**JL OBARA**

**ZSROBOT**

**JUNYI**

**ARO**

**GRACO**

**WAGNER**

**亚一智能**  
YAYI INTELLIGENCE

**苏力机械**  
SULI MACHINERY

**Atlas Copco**

**dalmec**

**CASUN**

**HPA**  
**faip**

Hi-Quality Building Materials  
**A&G Korea**

**SMC**

**KEYENCE**

**HWACHEON**

**SKM**  
Aluminium Solution

**TIHO**

**COGNEX**

**BÖLLHOFF**

**DEPRAG**  
machines unlimited

**ENGEL**

**BÜHLER**



WHAT  
CAN  
WE  
DO?



## AUTOMOTIVE & MORTORCYCLE MANUFACTURING

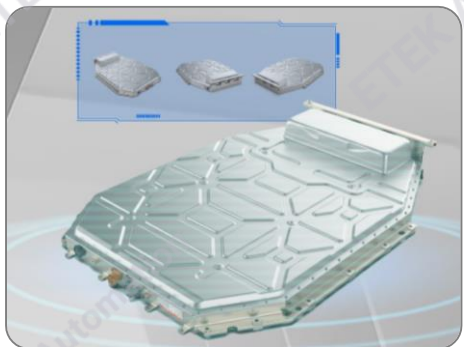




# Automotive & Motorcycle manufacturing



**Surface Treatment**  
(Cleaning, Painting, polishing,...)



**Battery Cell Pack**



**Assembly**

**Frame, Cover and Components**  
(Pressing, stamping, Extrusion,...)



**Metal fabrication**  
(welding, cutting, punching...)



**Electric car engine**  
(Assembly and processing)





# METAL FABIRICATION SOLUTIONS

FOR AUTOMOTIVE AND MOTORCYCLE MANUFACTURING





# Reference Projects

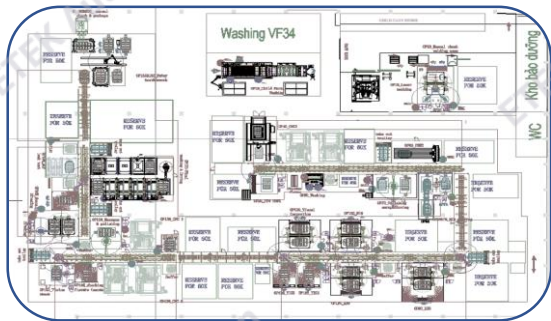
## Battery Pack Production Line (100K set/year)

Provide Turnkey automation solution included: Welding, Gluing, Assembly, CNC machining, Cleaning, Measuring,... to produce Housing-Battery for Car



## Battery Pack Production Line (25K set/year)

Provide Turnkey automation solution included: Welding, Gluing, Assembly, CNC machining, Cleaning, Measuring,... to produce Housing-Battery for Car





# Reference Projects

## Top Cover Production Line (50K pcs/year)

Provide Turnkey automation solution included: Spot welding, Gluing,... to produce Top-Cover of battery tray for car



## Aluminum Die Casting Factory

Provide Aluminum Die-Casting line to produce E-Scooter Rim





# Reference Projects

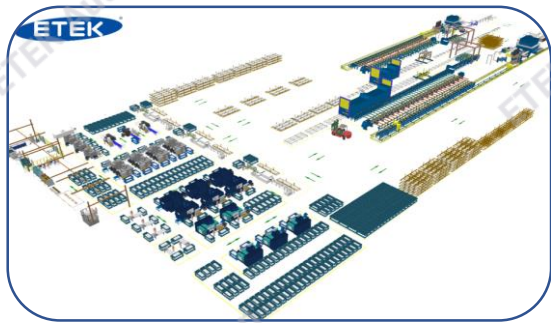
## Plastic Fabricate Productions Line

Provide large format plastic molding machine systems to produce large plastic parts on cars



## Aluminum Extrusion Factory (100k set/year)

Provide Aluminum extrusion line & CNC machining line to produce child part for battery tray

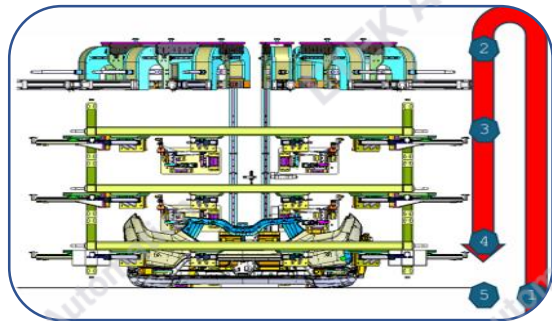
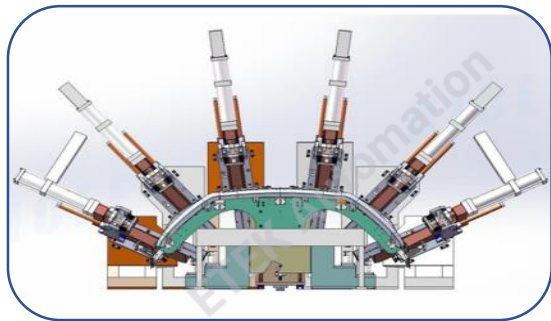




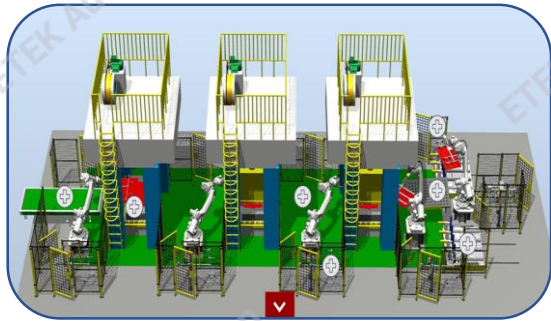
# Reference Projects

## Punching and Ultrasonic welding Machine for Sub-Assy work shop

Provide punching and ultrasonic welding Machine for Sub-Assy work shop



## Automatic Side-by-side Stamping Line





# DEBURRING POLISHING SOLUTIONS

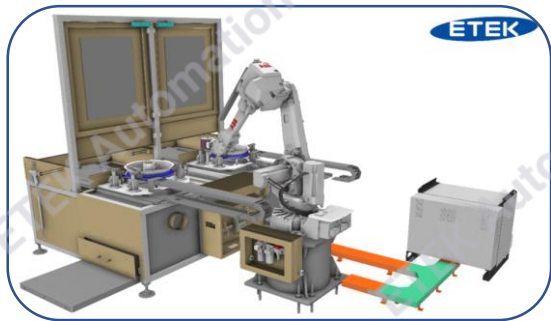
FOR AUTOMOTIVE AND MOTORCYCLE MANUFACTURING



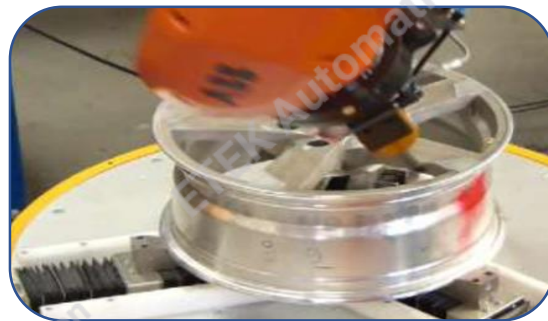
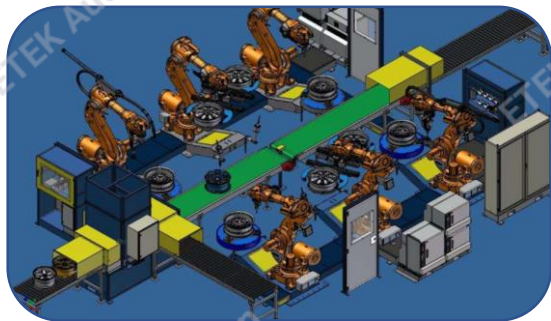


# Reference Projects

## Auto Robot Deburring Station



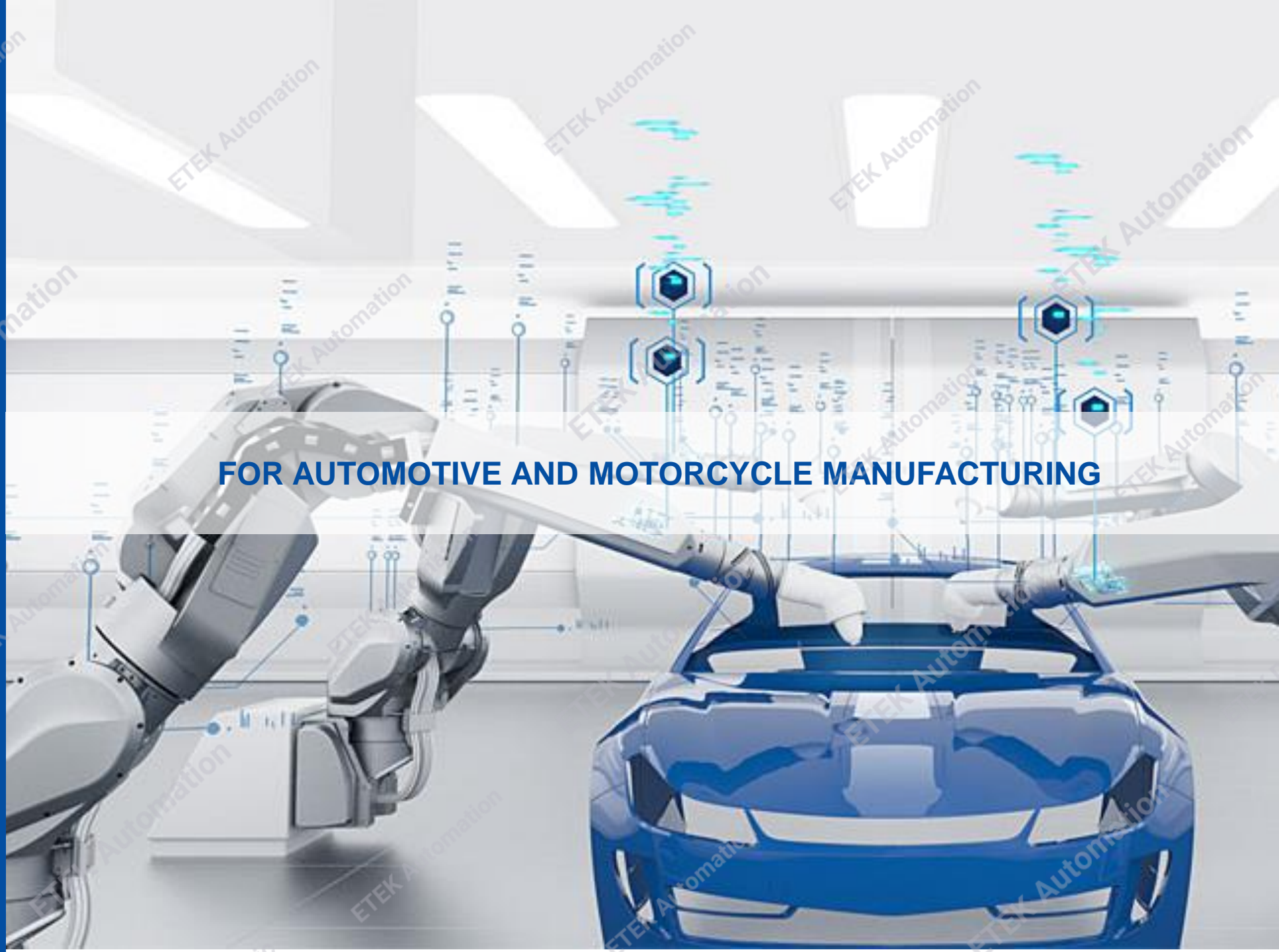
## Robot Polishing Solution





# **PAINTING SOLUTIONS**

**FOR AUTOMOTIVE AND MOTORCYCLE MANUFACTURING**



# Painting and Coating Solutions



**Powder Coating**



**Wet Coating**



**Bonding, Sealing & Encapsulation**

## Application For



- **Metal components**



- **Plastic components**



- **Alloys & steel wheels**



- **Other**

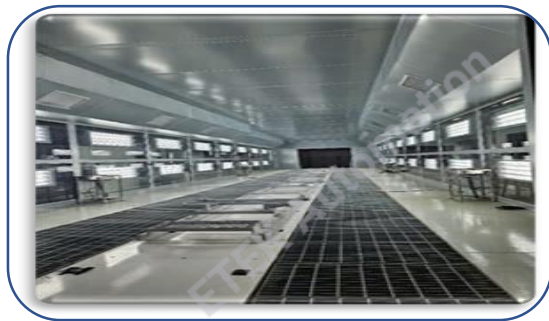
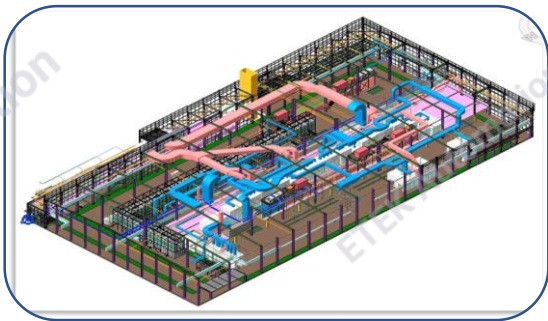




# Reference Projects

## Project For Paint Shop (50.000/ Year)

Provide turnkey: full paint shop



## E-Scooter Body and Frame Painting Line (90.000 set/ year)

Provide turnkey: ED painting & powder coating line for scooter frame painting





# Turnkey Project For Paint Shop



Manufacturing



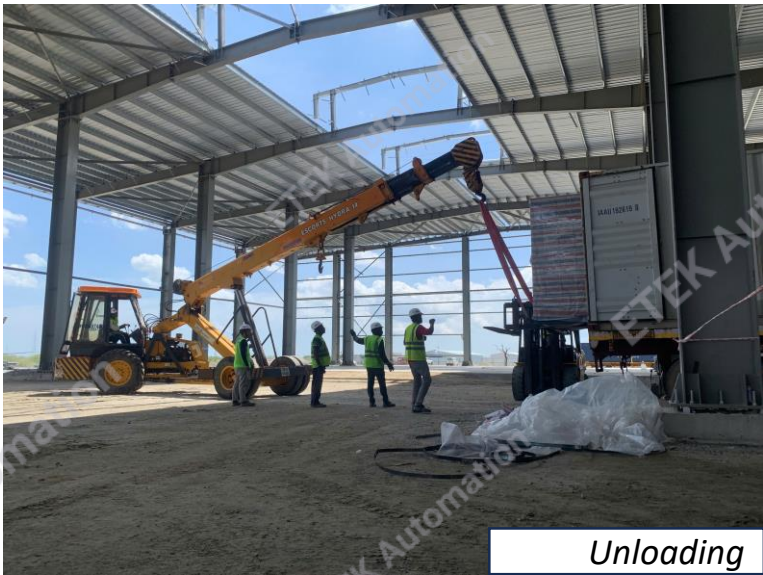
Manufacturing



Checking



Loading



Unloading



Gathering



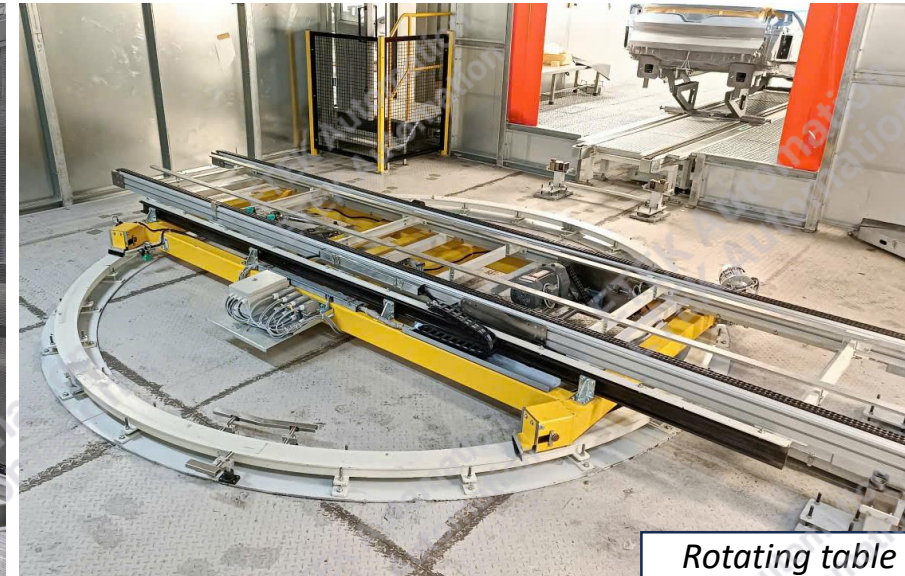
# Manual Painting Line For EV Car (7 models)



Lifter/ Elevator



Chain conveyor



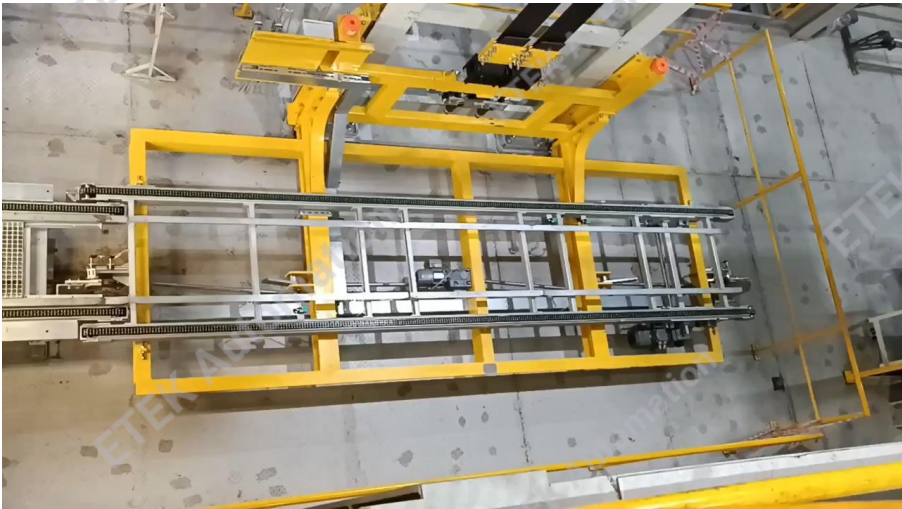
Rotating table



Cross transfer



# Manual Painting Line For EV Car





# Manual Paint Line For Bumper and Plastic Parts





# Manual Paint Line For Bumper and Plastic Parts





# ASSEMBLY SOLUTIONS

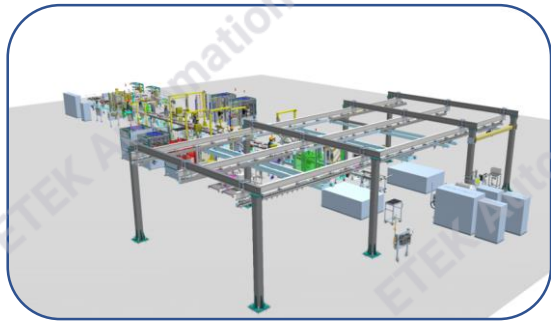
FOR BATTERY CELL/ PACK AND CONTROLLER



# Reference Projects

## Battery Pack Assembly Line

Change layout, modify conveyor, make new Fixtures for the current assembly line to match the new concept design of the new battery model



## Controller of Engine Assembly Line

Provide Turnkey solution to assembly Controller box of electric motor for 5 model EV Car





# Electric Motorbike Battery Assembly Line

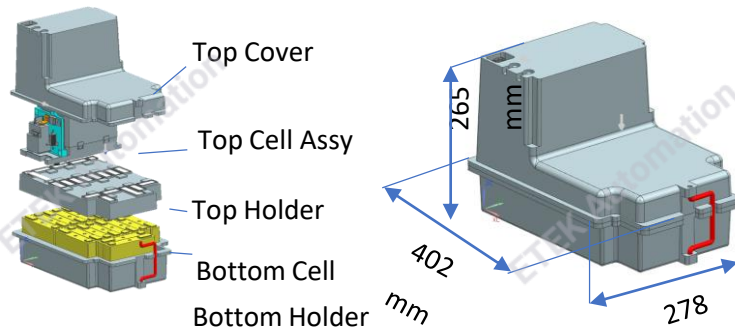


## Overview

- Application: Cell sorting, Screwing, EOL, Air leak test, Assembly,
- Capacity: 200.000 pack/year
- Area: 15x50m



## Products



## Industrial

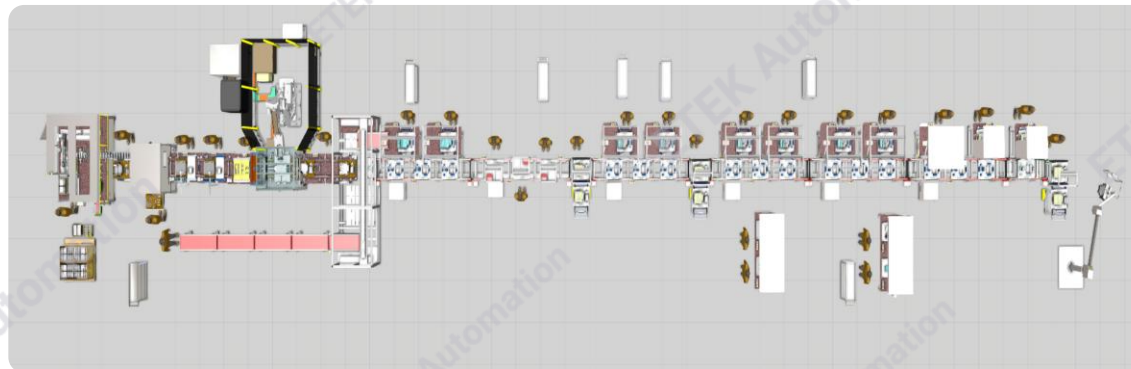
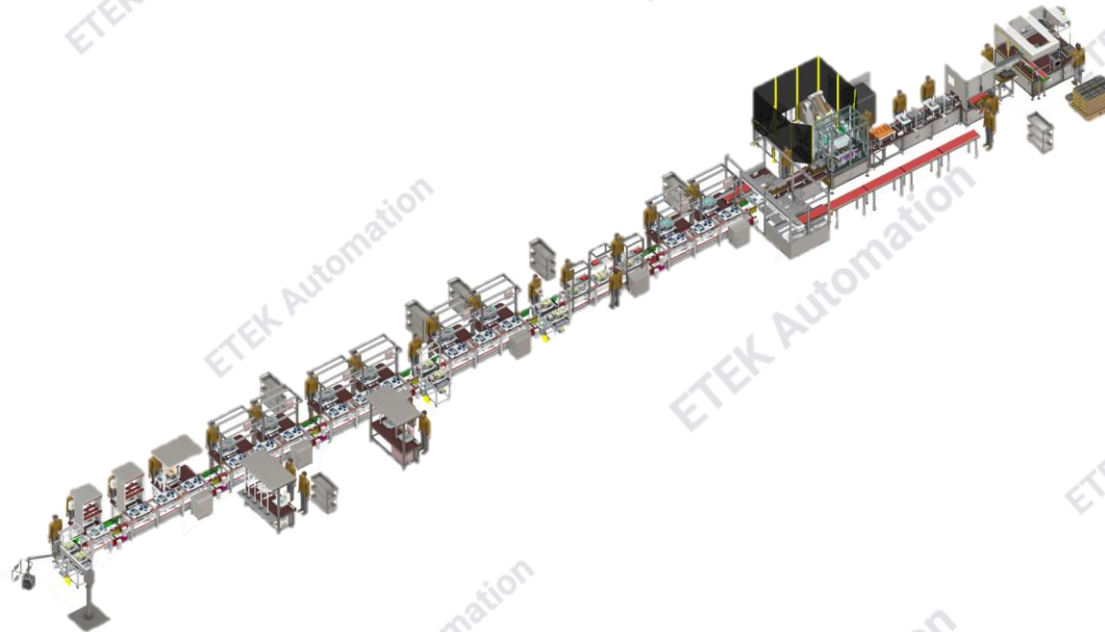
- Automotive & Accessories
- Metal



## Detail

### Process Involved:

- Cell sorting
- Cell insert
- Vision pipe check
- Holder assembly
- Laser welding
- Appearance check
- Sensor wiring layout
- Gluing
- Soldering
- Screwing
- Cover assembly
- Safety check
- Leak test and subsides assembly
- Final function check





# ASSEMBLY SOLUTIONS

FOR AUTOMOTIVE AND MOTORCYCLE MANUFACTURING





# Reference project

STT	Name of Projects	Industry	Application	Scope	Capacity
1	HEMS Conveyor Upgrade	Automotive & Accessories	Car Assembly	HEMS flexible change between models: EV CARS (7 MODEL)	38 JPH
2	Extension chassis line	Automotive & Accessories	Car Assembly	Extension chassis line and Upgrade software control	38 JPH
3	<b>Turnkey project</b> Sub axle line	Automotive & Accessories	Assembly	Assembly sub axle	38 JPH
4	<b>Turnkey project</b> Tire Assembly line	Automotive & Accessories	Assembly	Provide Turnkey solution to assembly tire	200.000 products/year
5	<b>Turnkey project</b> Bumper Assembly line	Automotive & Accessories	Assembly	Assembly Line to matching as new requirement for New products	30 products/hour
6	<b>Turnkey project</b> Speaker assembly line	3C, Electronic, Automotive	Assembly	Provide Turnkey solution to assembly speaker	49 products/hour
7	<b>Turnkey project</b> Lamp Assembly Line	Automotive & Accessories	Assembly	Provide Turnkey solution to assembly lamp	39,000 product/year



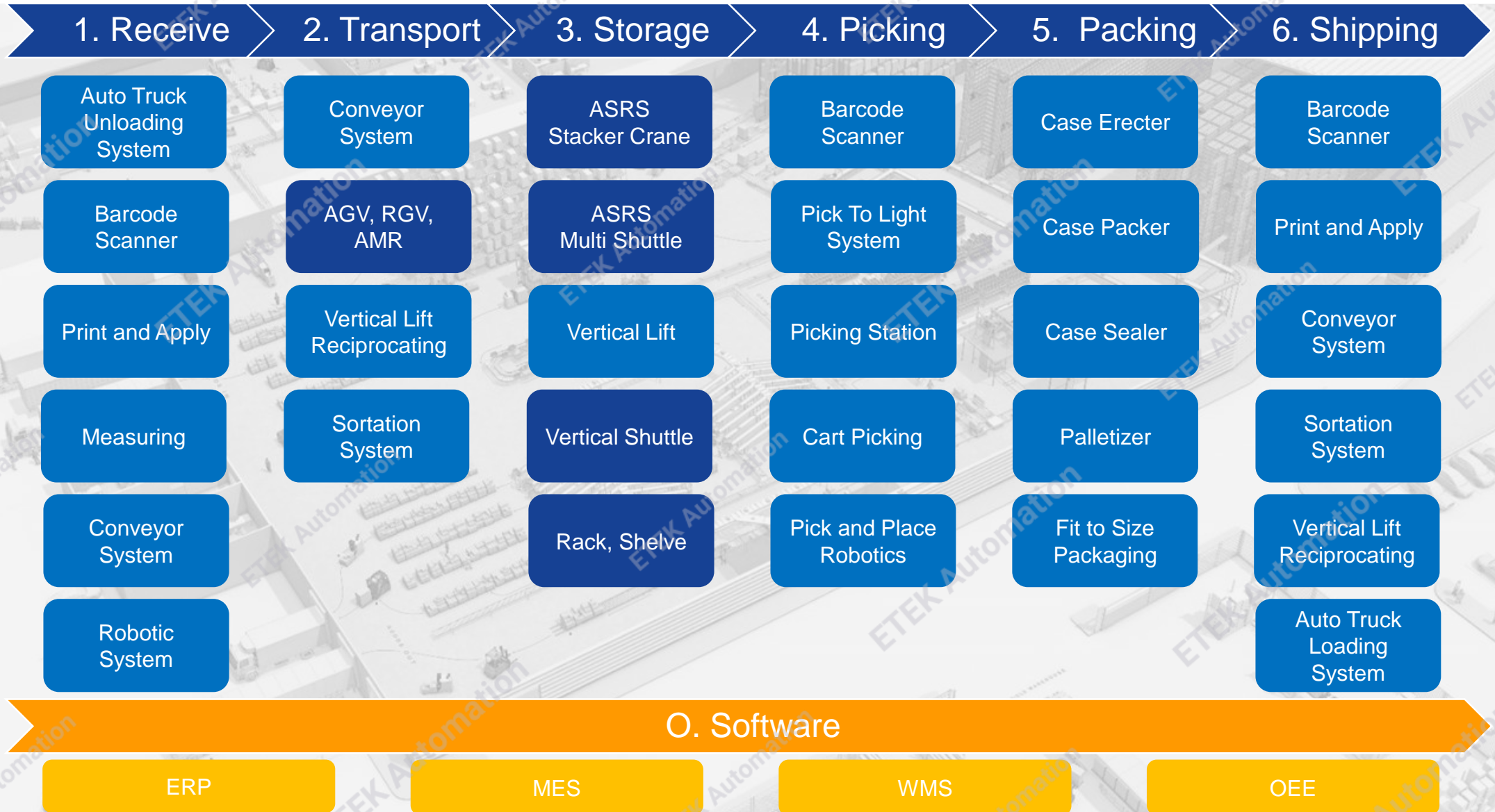
# INTRALOGISTICS SOLUTIONS

FOR AUTOMOTIVE AND MOTORCYCLE MANUFACTURING





# Intralogistics Process





# AGVs system pull out trolleys to production line



## Overview

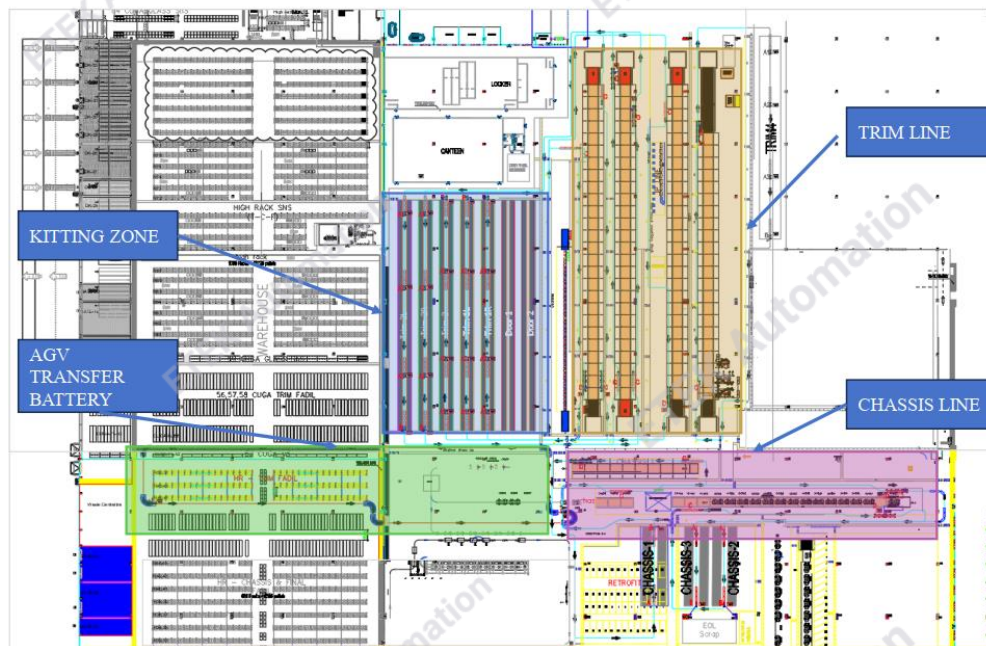
Build a new AGV system and equipment for pulling the material kitting trolleys to production line. Speed of AGV needs to be calculated, minimum amount of AGV to optimize the cost.

Build a rack for battery storage to meet at least 5 days of full production. Supplier needs to develop layout and propose optimum solution to Customer. Detail location can be discussed directly at site

Build a new AGV system to move battery from storage rack to production line. AGV type and speed need to be calculated to fit with battery product and speed of production line



## Products transfer



## Spec

- Size L1965\*W420\*H328 mm
- Rated load: 1500kg
- Navigation: Slam
- Turning radius: 1500mm
- Drive mode Differential drive
- Moving direction Forward, Turn left and right
- Max moving speed: 45m/min
- Communication method: WiFi/5G
- Guiding accuracy:  $\pm 10\text{mm}$
- Positioning accuracy:  $\pm 10\text{mm}$
- Climbing ability:  $\leq 3^\circ$
- Rated battery life: 8H
- Charging method: Automatic charging (side/ground)
- Security: Obstacle sensor+Bumper strip+Estop



# AGV Battery Housing Transfer Solution



## Overview

### Solution:

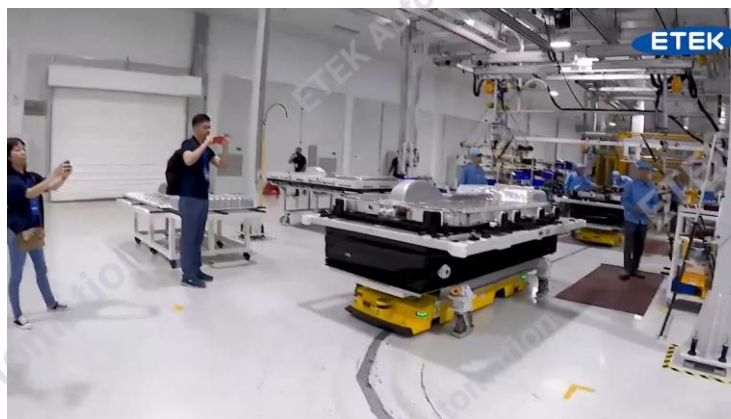
- Using laser forklift truck AGV
- Customize trolley
- Automatic charging station
- Central control system
- ETEK tray for holding batteries

### Benefits:

- Transfer heavy product rapidly, stably and safe
- Full fill cycle time requirement
- Save space for the warehouse
- Product data management



## Products transfer



## Spec

### Magnetic AGV

- Payload: 500/1000kg
- Speed: 0-45 m/minute
- Navigation: magnetic
- Battery: Lithium (8h)





# AGV Loading/Unloading Solution



## Overview

### Requirement:

- Transfer product to the production line
- Auto loading/unloading

### Solution:

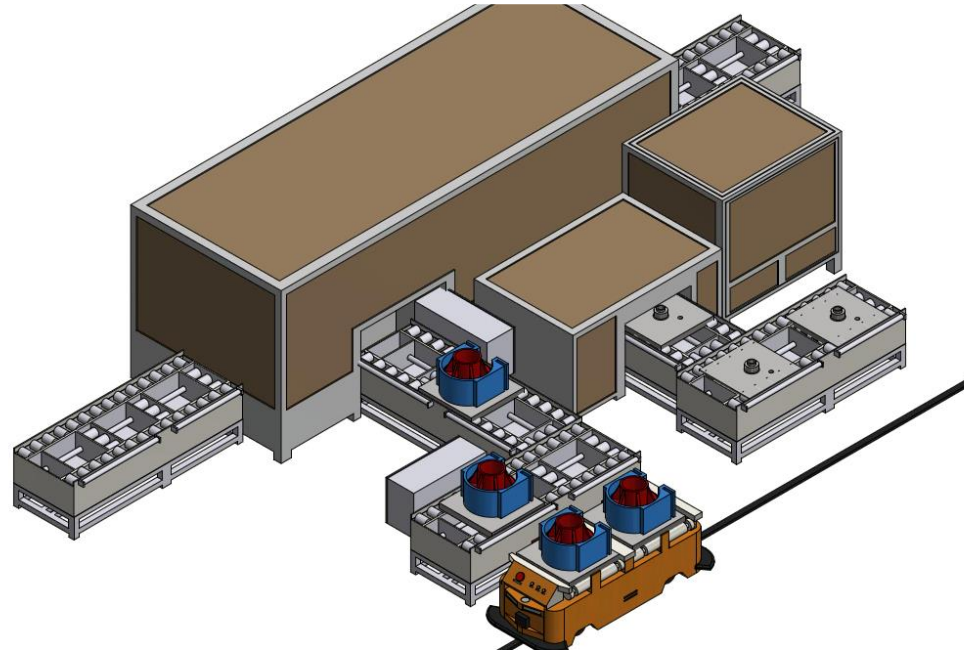
- Using Magnetic conveyor AGV
- Integrate conveyor system on AGV
- Automatic charging station
- Central control system



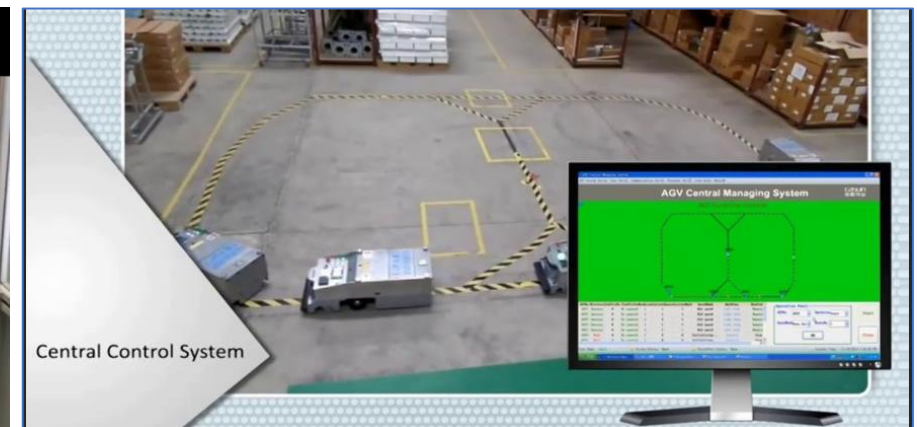
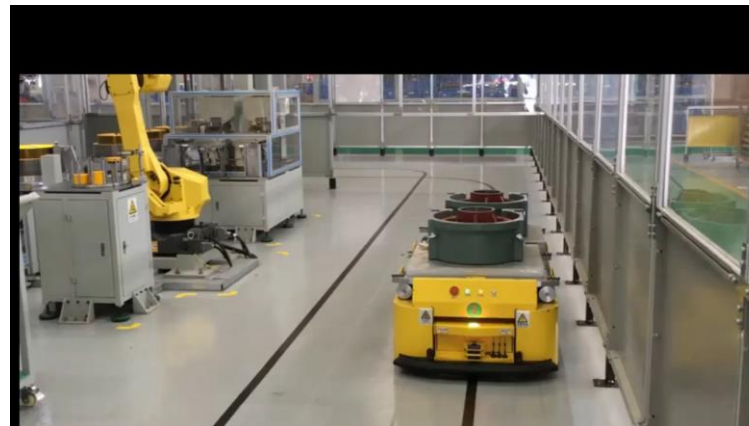
## Spec

### Magnetic Conveyor AGV

- Payload: 1000kg
- Speed: 0-45 m/minute
- Navigation: magnetic
- Battery: Lithium (8h)



## Products transfer





# AS/RS Stacker Crane Warehouse



## Overview

### AS/RS Stacker crane warehouse

- Type: Selective double deep
- Capacity: 3,200 lots
- Throughput: up to 150 pallets/hour
- Height: 8m (up to 40m)
- Dimension: (L)35 x (W)10 m
- Payload: 1,200 kg



## Products



## List Equipment

- Stacker crane machine
- AGV
- Conveyor buffer
- Size and weight checking stations

WATCH VIDEO





# Provide intralogistic system in the car painting



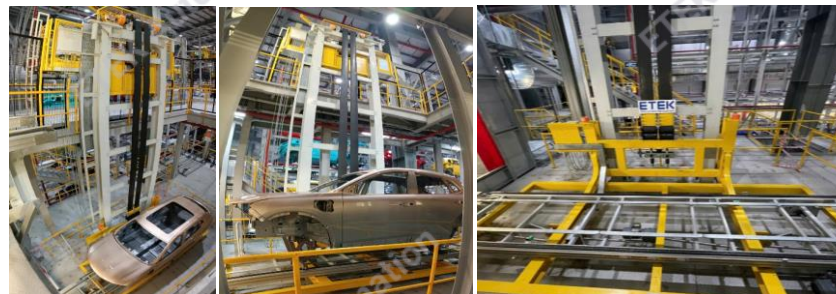
## Overview

Provide intralogistic system in the car painting

- Lift up to the floors.
- Conveyor system for transporting car body
- Vehicle rotation system car body



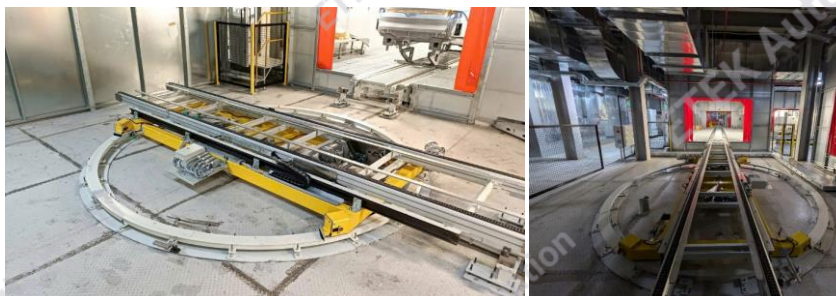
## Products



Lift up to the floors.

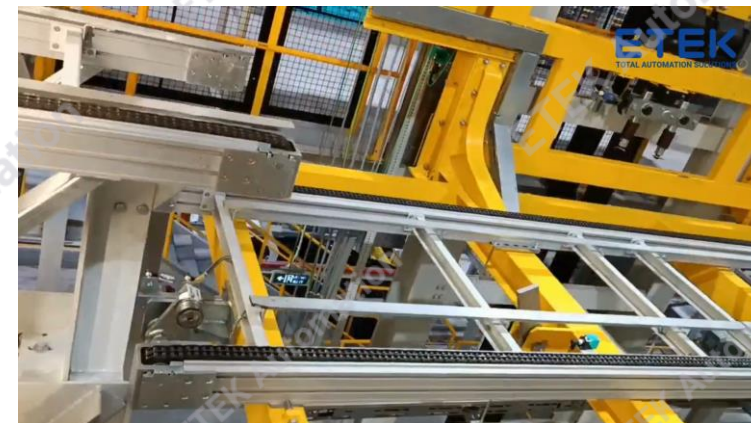


Conveyor system for transporting car body



Vehicle rotation system car body

WATCH VIDEO





# Smart Conveyor System



## Overview

Speed: can up to 2700 ppm

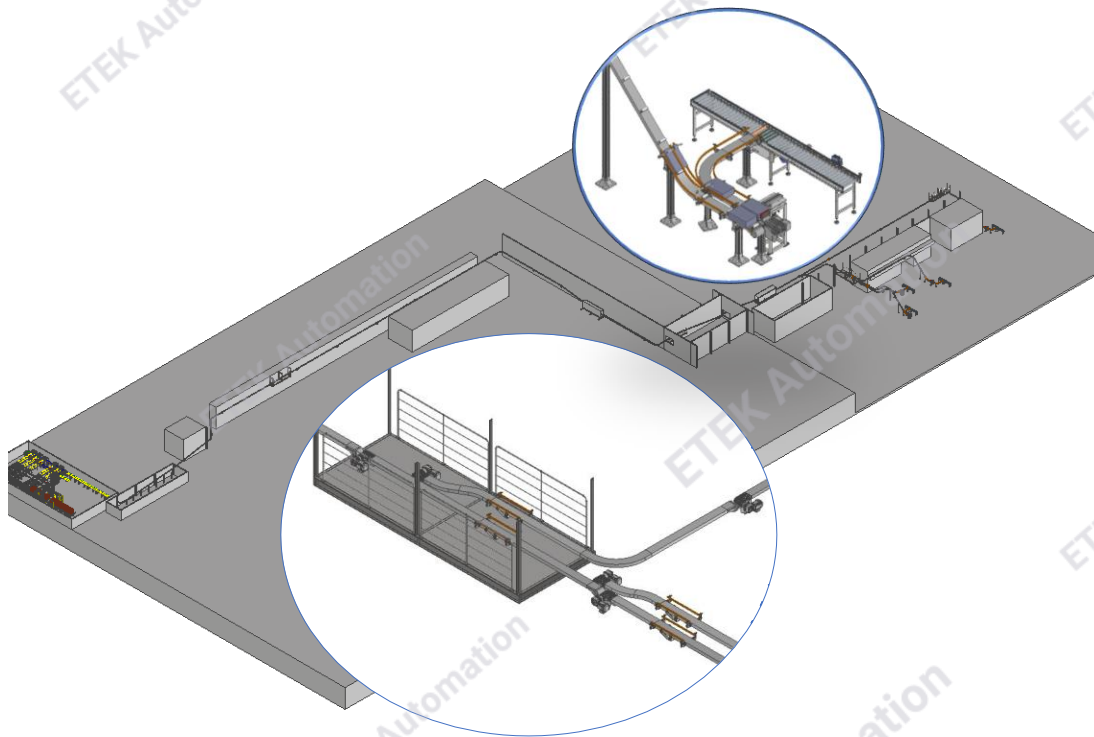
Payload: up to 15 kg

Frame: Aluminum, Stainless steel

Width: can up to 180mm



## Products



## List Equipment

- Stacker crane machine
- AGV
- Conveyor buffer
- Size and weight checking stations

WATCH VIDEO





# Provide Rack system in production line

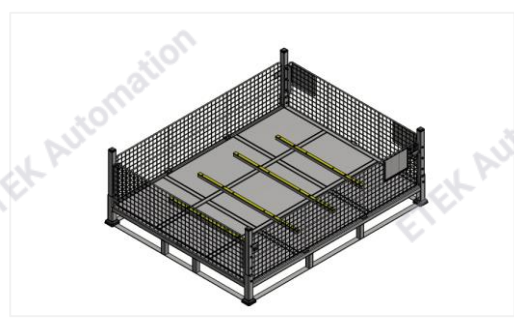
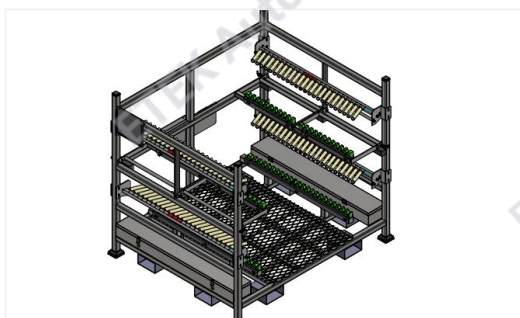
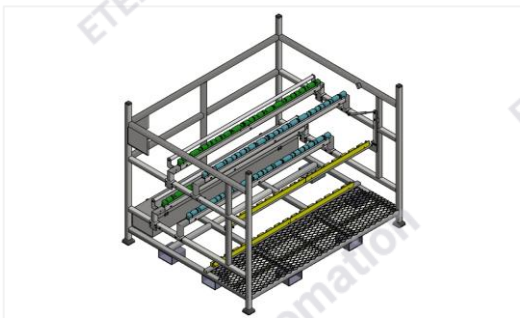


## Overview

- A complete design document for EV CAR (3D, 2D, PDF) with approval official from Vinfast (after try out samples)
- Delivery racks with quantity required in SOR after design approval.
- Provide detail quotation:
  - Steel frame
  - EV CAR plastic POM
  - EV CAR plastic POM15



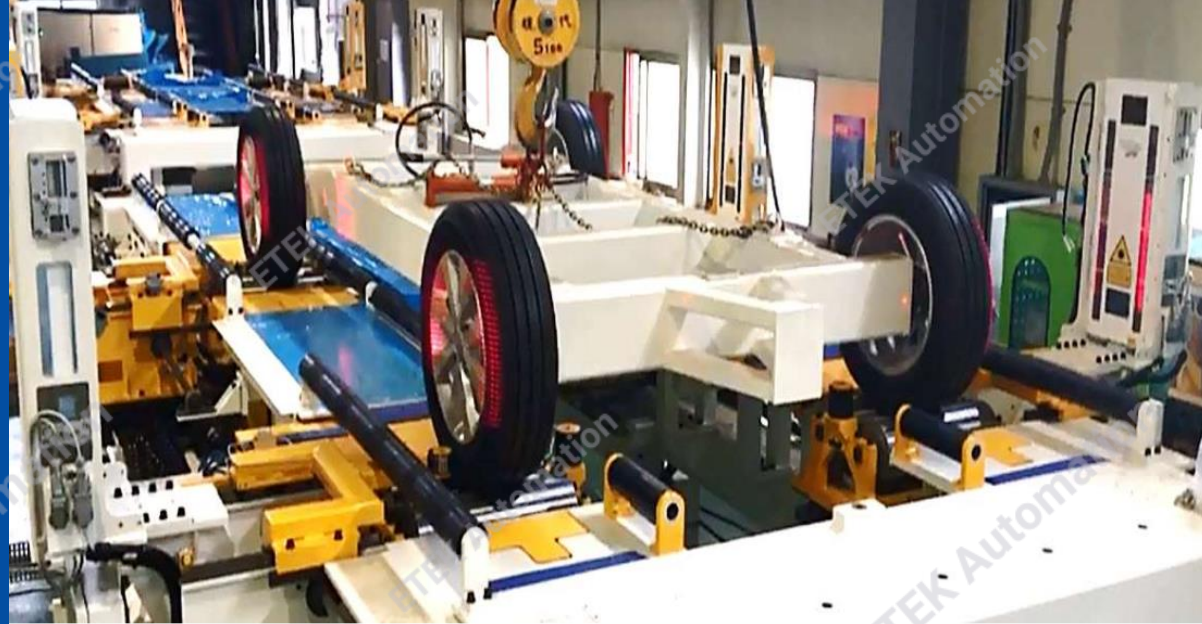
## Products





# QUALITY CONTROL SOLUTIONS

FOR AUTOMOTIVE AND MOTORCYCLE MANUFACTURING





# ADAS Station



## Overview

Number station: 03 station

Application: Calibration auto MRR, FCAM, SRR & SVM system of model: EV CAR (6 Model)

Capacity: 16JPH/station Dimension

LxWxH mm: 12000x8000x 4000

Wheelbase: 2000 – 3500 mm



## Products



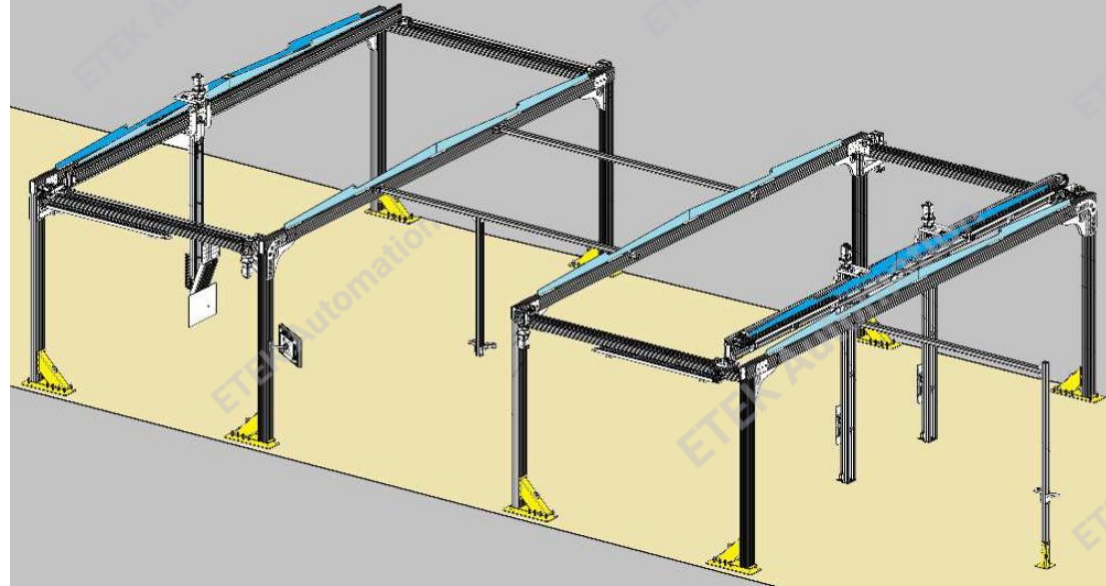
## Industry

- Automotive & vehicle



## Process

- Entry vehicle
- Input VIN number
- Connect OBD plug with vehicle.
- Self centering automatic
- Target move correct position automatic.
- Calibration MRR, FCAM, SRR, SVM system automatic.
- Send report to MES system
- Printer report
- Exit vehicle





Thank  
you

**ETEK**  
TOTAL AUTOMATION SOLUTIONS

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