



ETEK COMPANY PROFILE

For Automotive



TOTAL AUTOMATION SOLUTIONS

WHO ARE WE?



ETEK AUTOMATION



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



WHAT CAN WE DO?

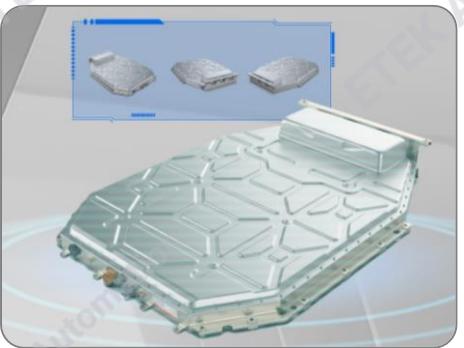
AUTOMOTIVE & MOTORCYCLE MANUFACTURING



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



Refence Projects

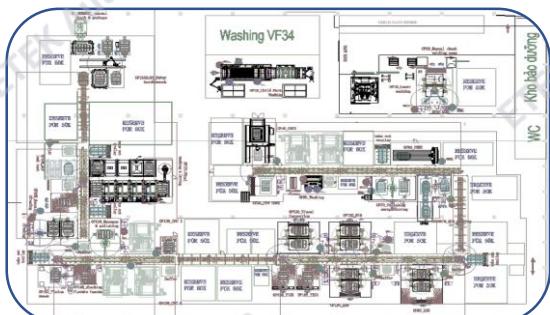
Battery Pack Production Line (100K set/year)

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



Refence 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



Refence Projects

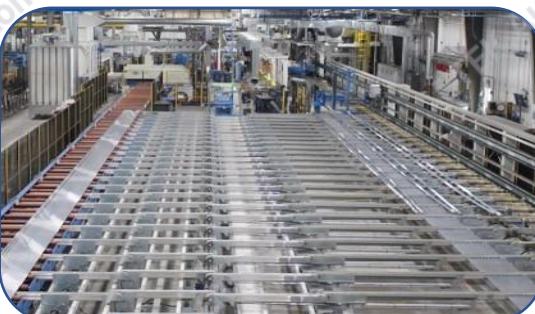
Plastic Fabricate Productions Line

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



Aluminum Extrusion Factory (100k set/year)

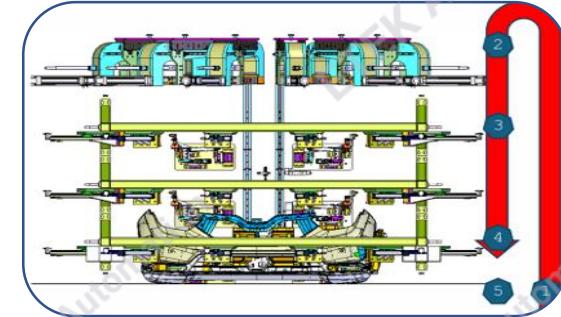
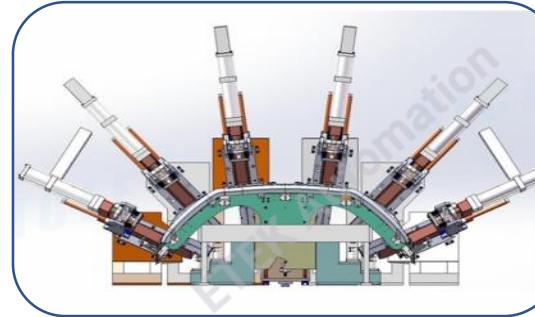
Provide Aluminum extrusion line & CNC machining line to produce child part for battery tray



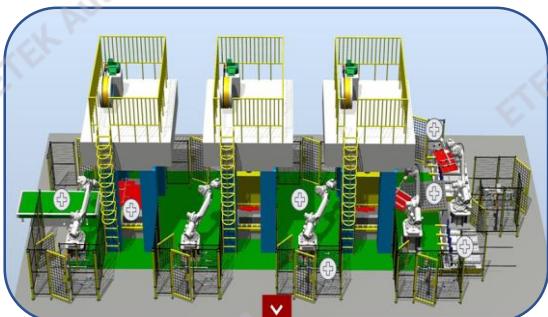
Refence Projects

Punching and Ultrasonic welding Machine for Sub-Assy work shop

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

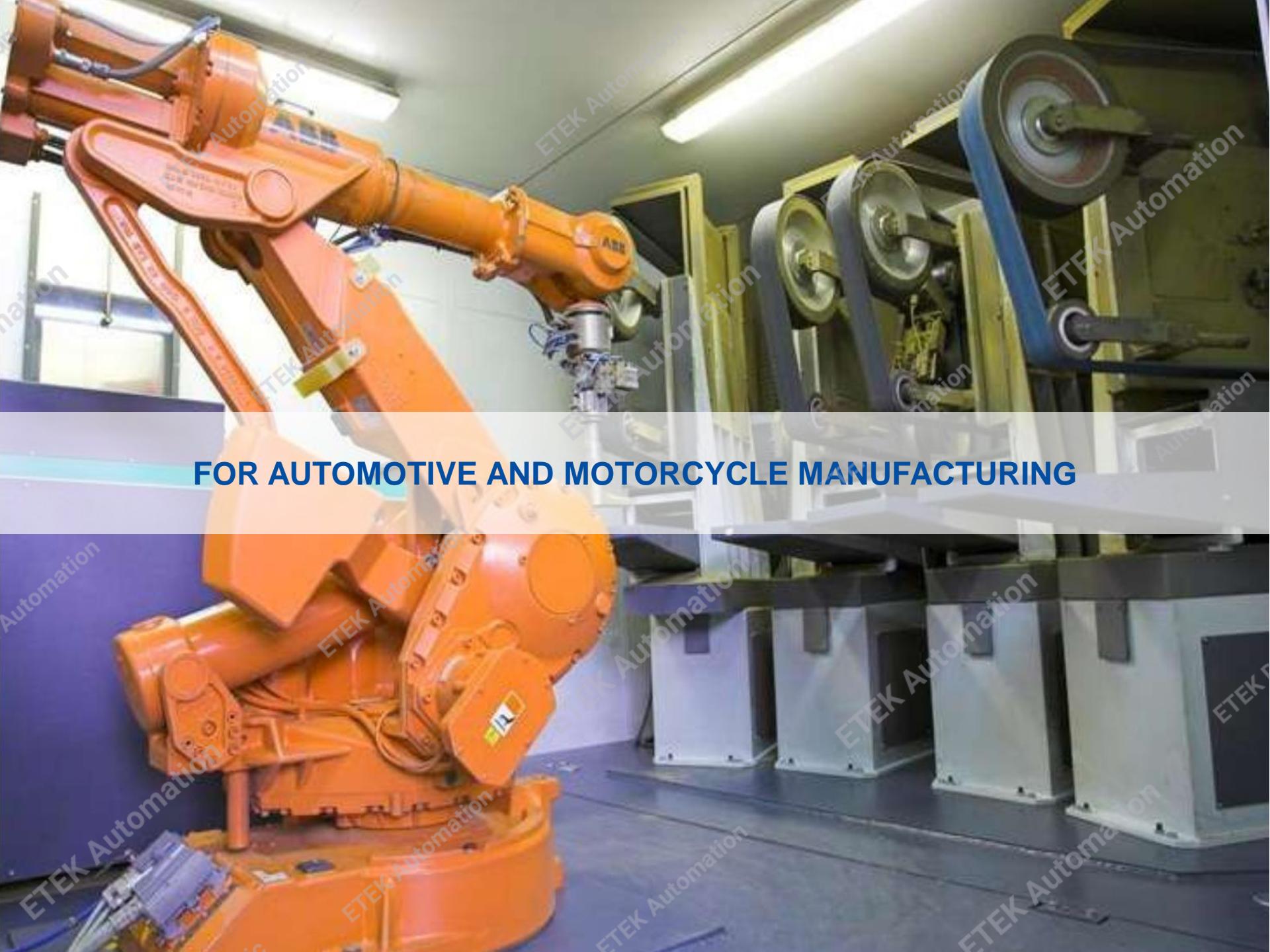


Automatic Side-by-side Stamping Line



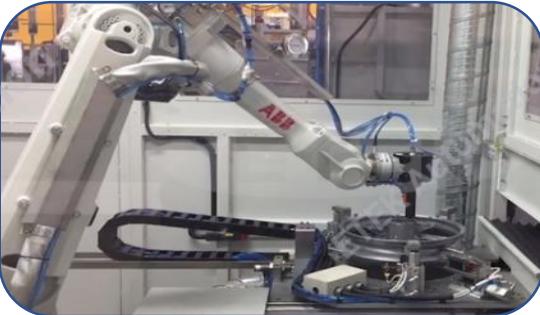
DEBURRING POLISHING SOLUTIONS

FOR AUTOMOTIVE AND MOTORCYCLE MANUFACTURING

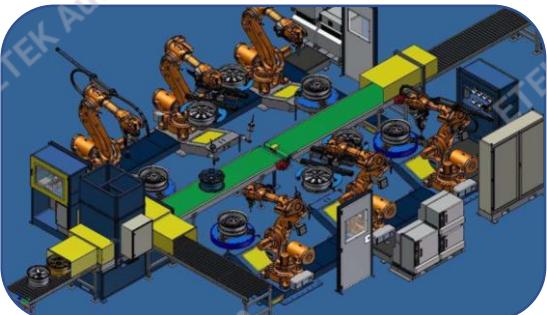


Refence Projects

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



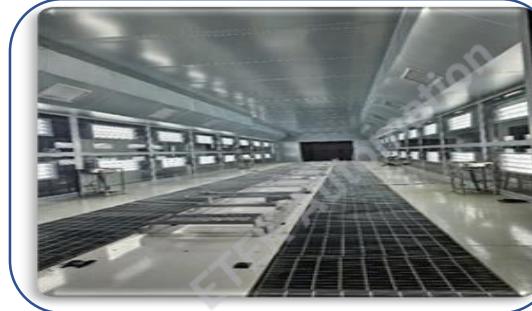
- Other



Refence 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



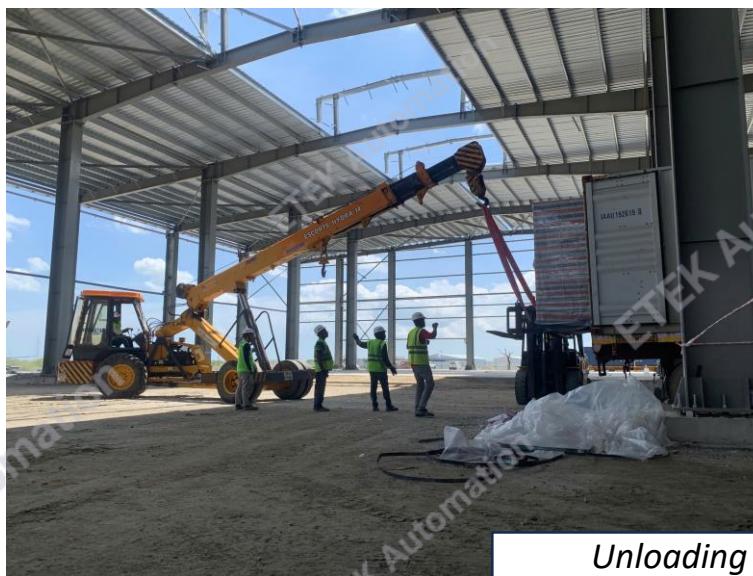
Manufacturing



Checking



Loading



Unloading



Gathering

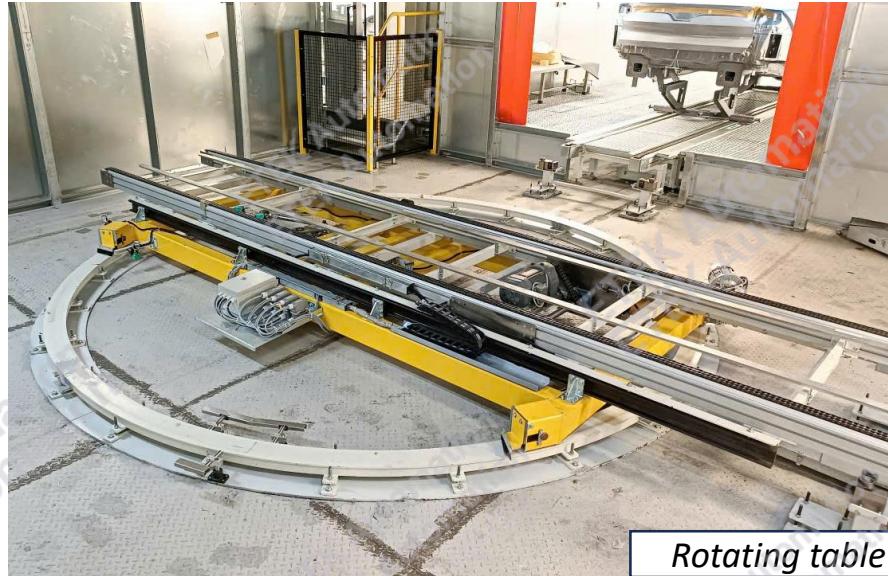
Manual Painting Line For EV Car (7 models)



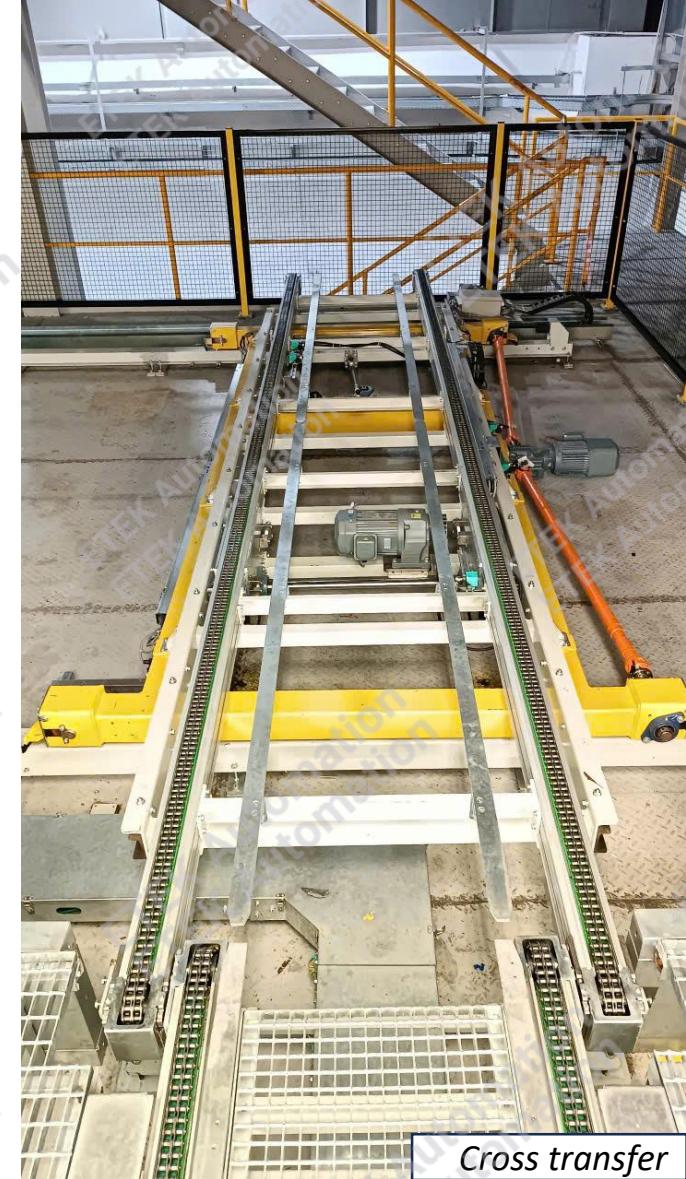
Lifter/ Elevator



Chain conveyor



Rotating table

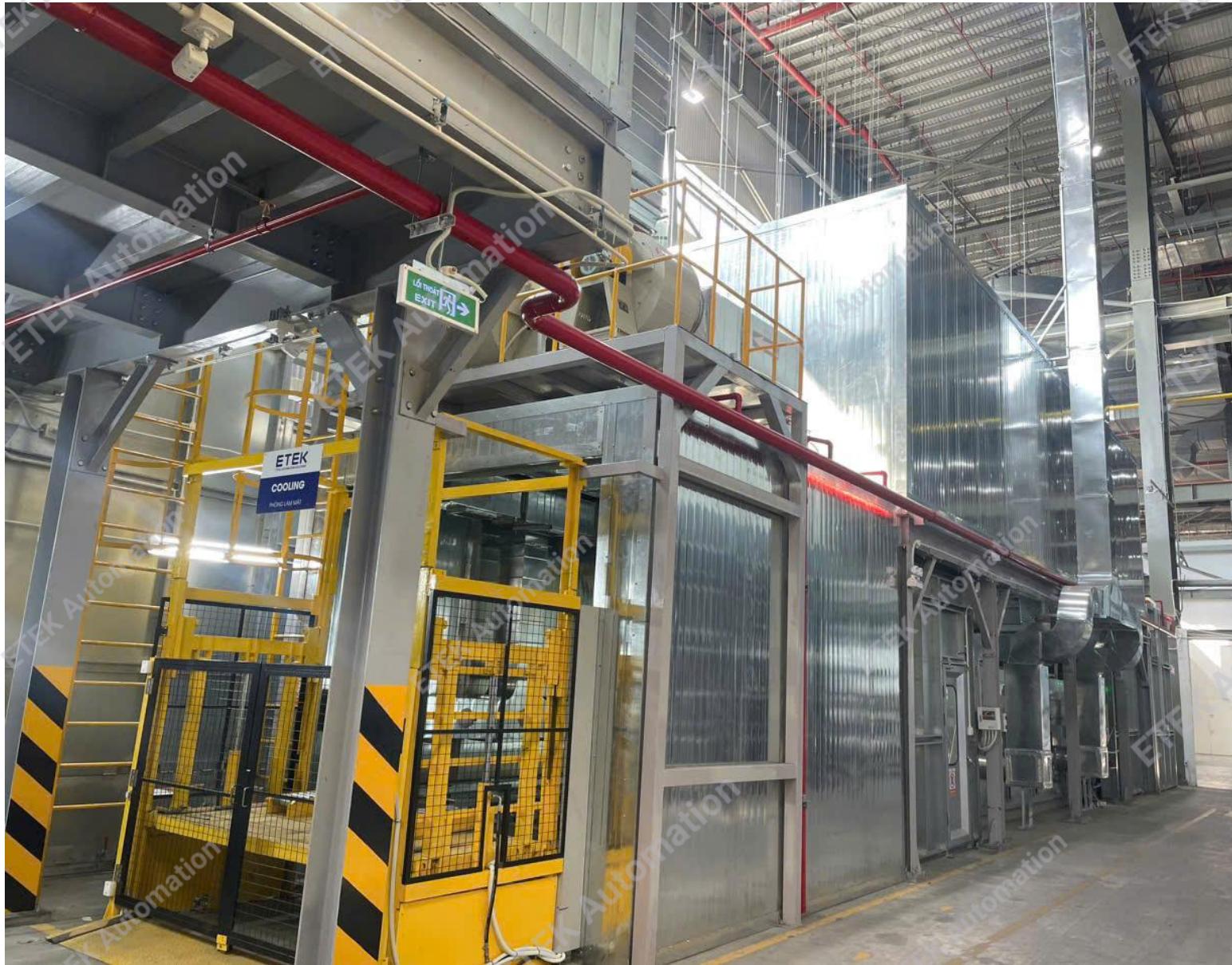


Cross transfer

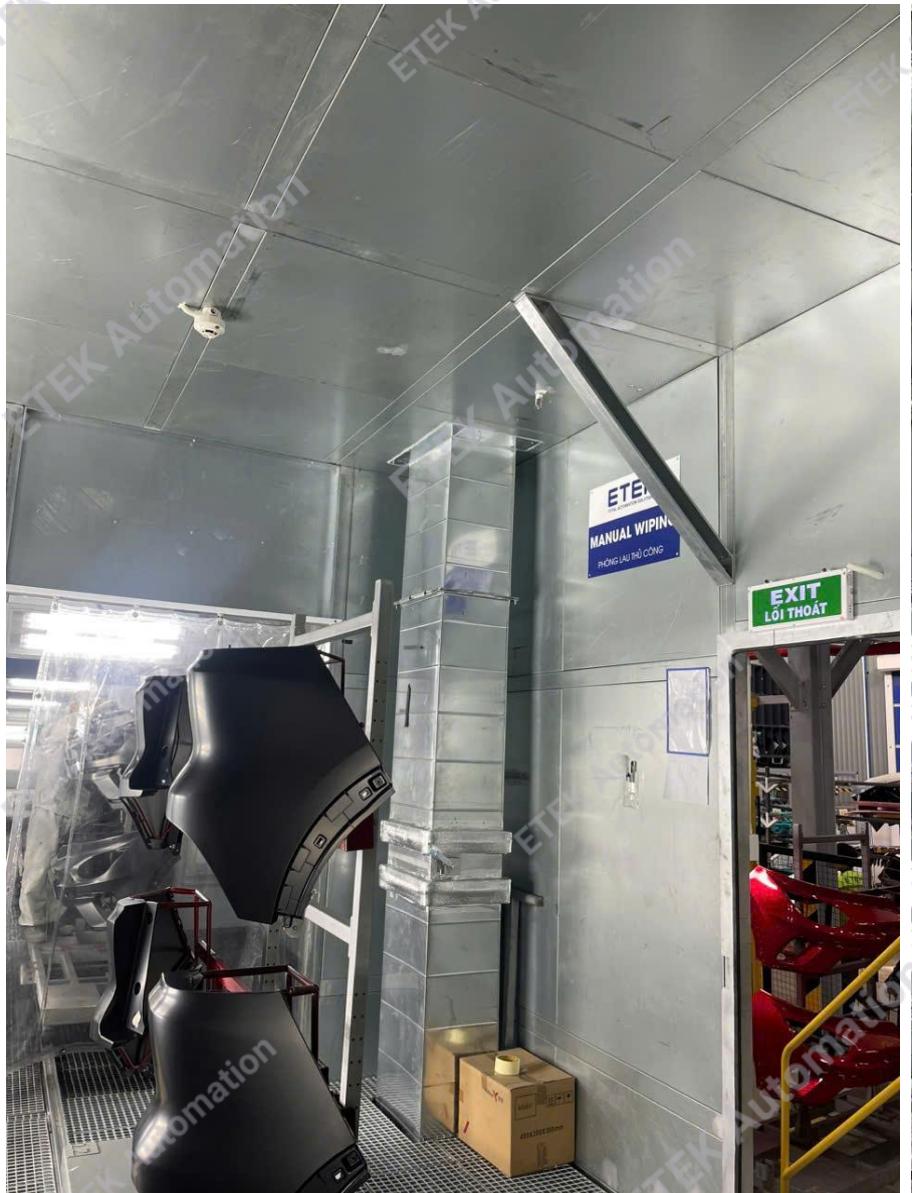
Manual Painting Line For EV Car



Manual Paint Line For Bumper and Plastic Parts



Manual Paint Line For Bumper and Plastic Parts



ASSEMBLY SOLUTIONS

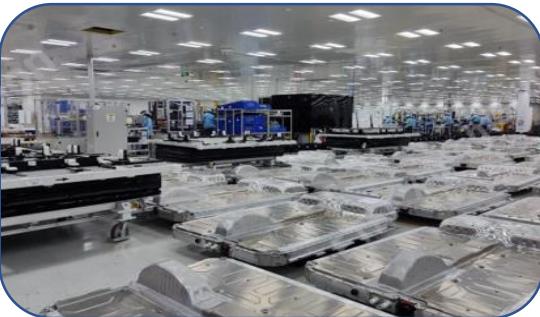
FOR BATTERY CELL/ PACK AND CONTROLLER



Refence 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

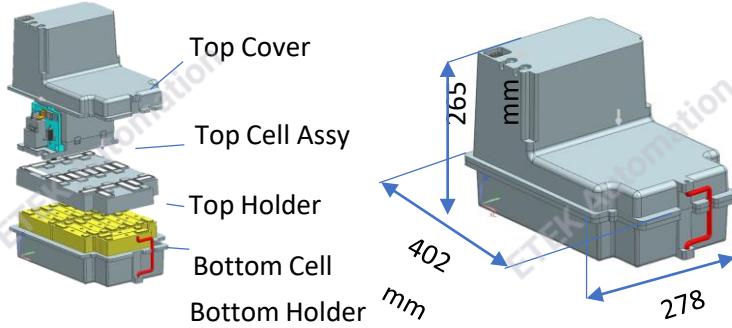


Overview

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

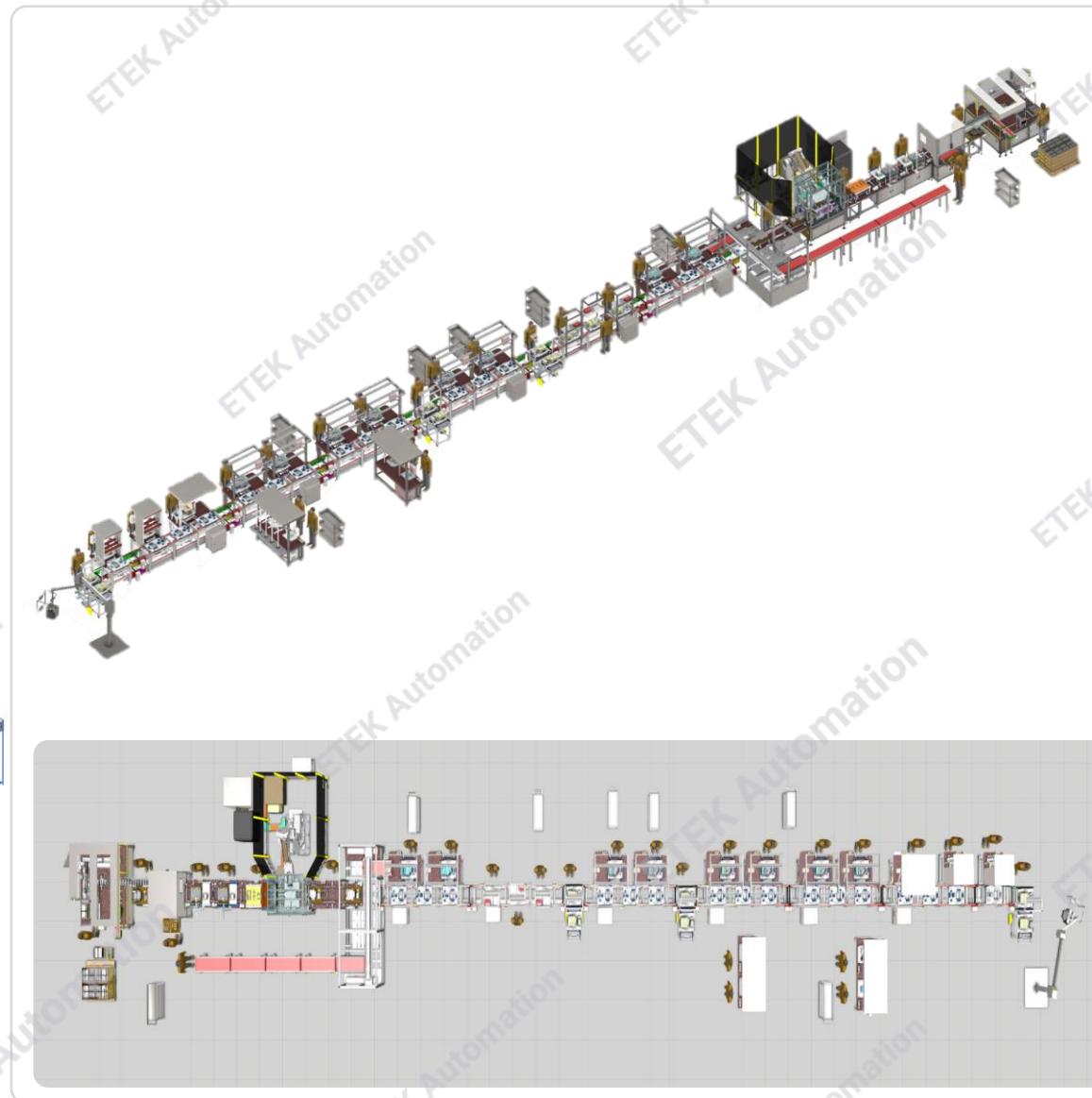


Products



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	Turnkey project Sub axle line	Automotive & Accessories	Assembly	Assembly sub axle	38 JPH
4	Turnkey project Tire Assembly line	Automotive & Accessories	Assembly	Provide Turnkey solution to assembly tire	200.000 products/year
5	Turnkey project Bumper Assembly line	Automotive & Accessories	Assembly	Assembly Line to matching as new requirement for New products	30 products/hour
6	Turnkey project Speaker assembly line	3C, Electronic, Automotive	Assembly	Provide Turnkey solution to assembly speaker	49 products/hour
7	Turnkey project 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

1. Receive

2. Transport

3. Storage

4. Picking

5. Packing

6. Shipping

Auto Truck
Unloading
System

Conveyor
System

ASRS
Stacker Crane

Barcode
Scanner

Case Erector

Barcode
Scanner

Barcode
Scanner

AGV, RGV,
AMR

ASRS
Multi Shuttle

Pick To Light
System

Case Packer

Print and Apply

Print and Apply

Vertical Lift
Reciprocating

Vertical Lift

Picking Station

Case Sealer

Conveyor
System

Measuring

Sortation
System

Vertical Shuttle

Cart Picking

Palletizer

Sortation
System

Conveyor
System

Rack, Shelve

Pick and Place
Robotics

Fit to Size
Packaging

Vertical Lift
Reciprocating

Robotic
System

Auto Truck
Loading
System

O. Software

ERP

MES

WMS

OEE

AGVs system pull out trolleys to production line

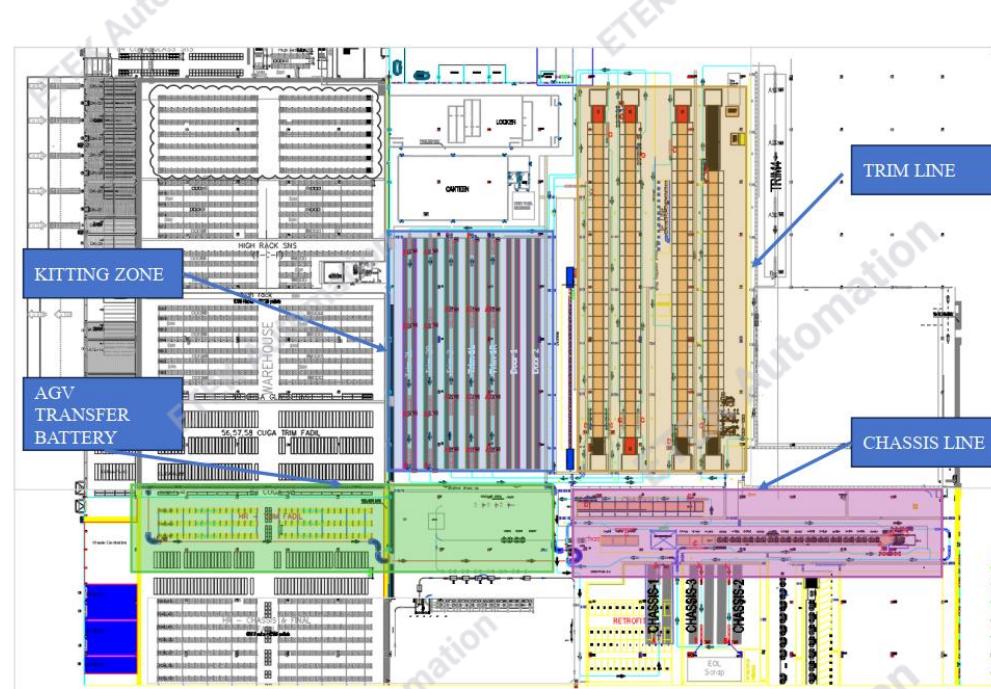


Overview

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: ± 10 mm
- Positioning accuracy: ± 10 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



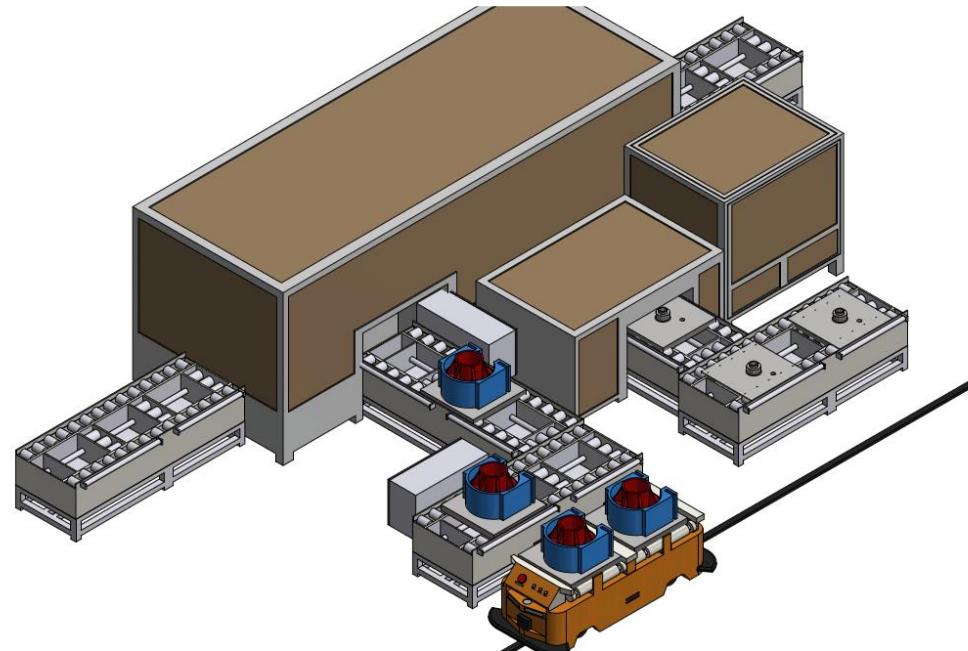
Overview

Requirement:

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

Solution:

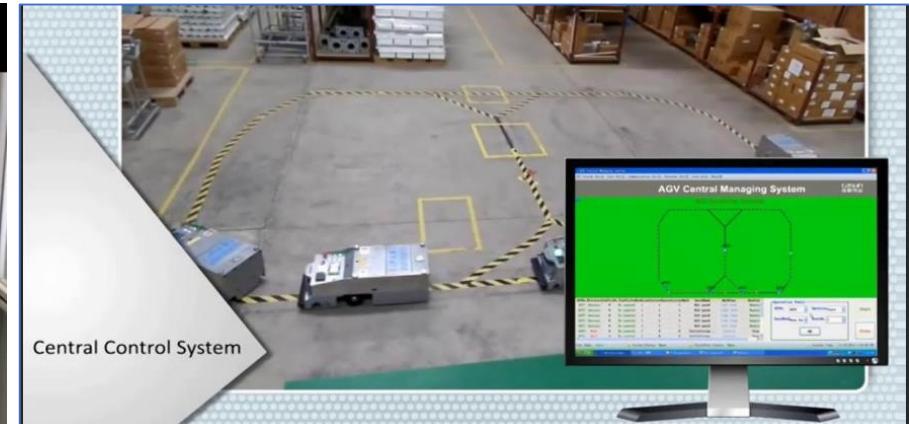
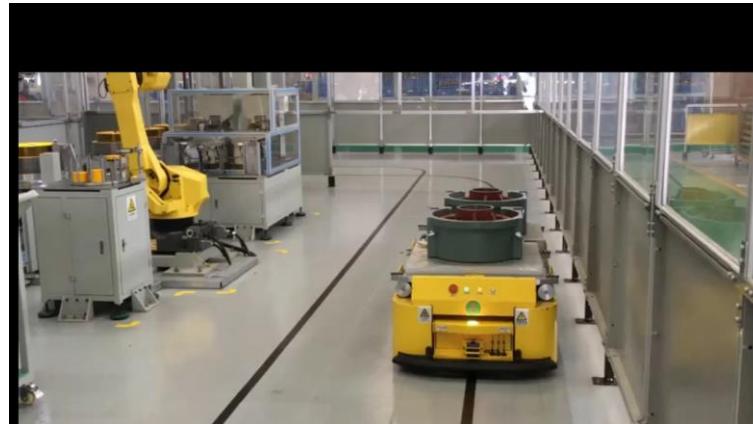
- Using Magnetic conveyor AGV
- Integrate conveyor system on AGV
- Automatic charging station
- Central control system



Spec

Magnetic Conveyor AGV

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



Products transfer

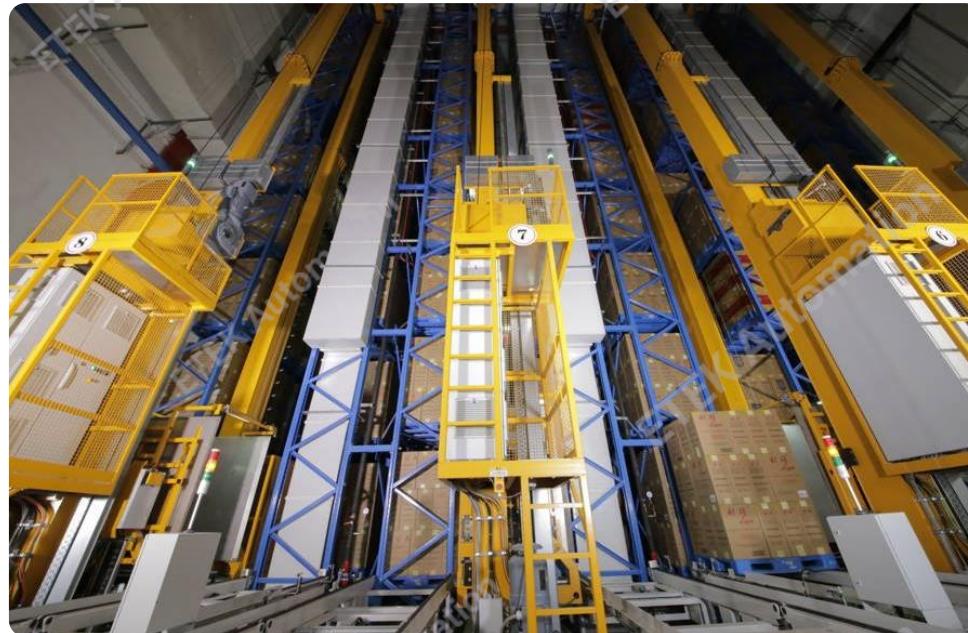
AS/RS Stacker Crane Warehouse



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
- Conveyer 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



WATCH VIDEO



Lift up to the floors.



Conveyor system for transporting car body



Vehicle rotation system car body



Smart Conveyor System



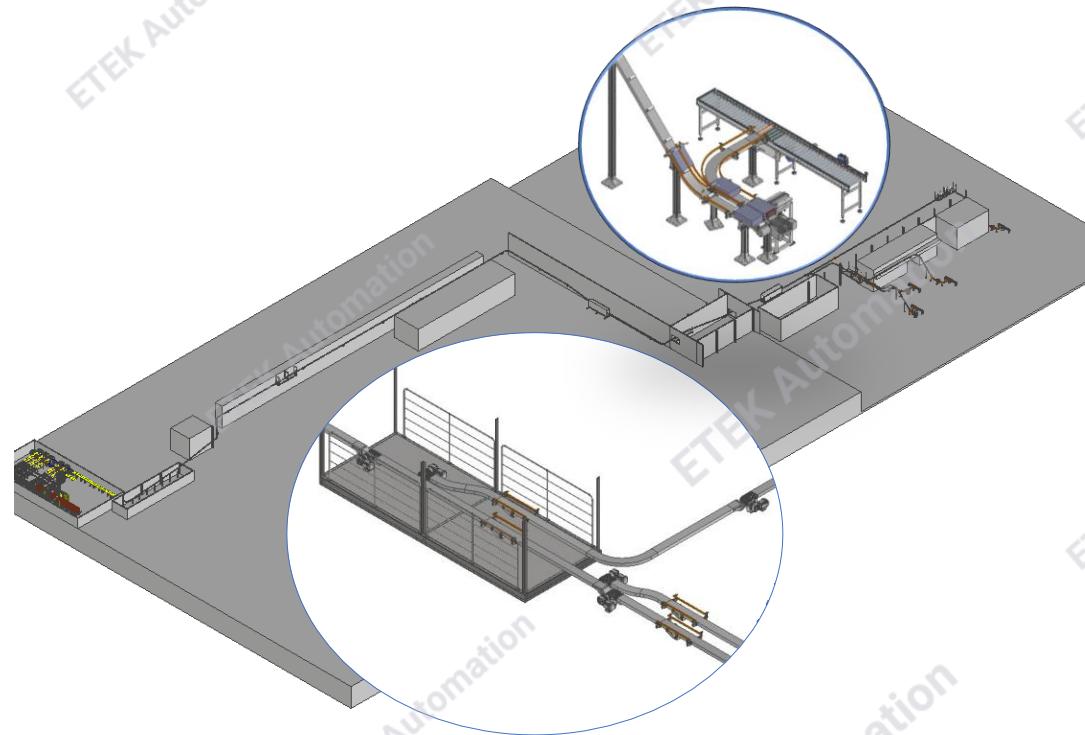
Overview

Speed: can up to 2700 ppm

Payload: up to 15 kg

Frame: Aluminum, Stainless steel

Width: can up to 180mm



List Equipment

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



Products



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

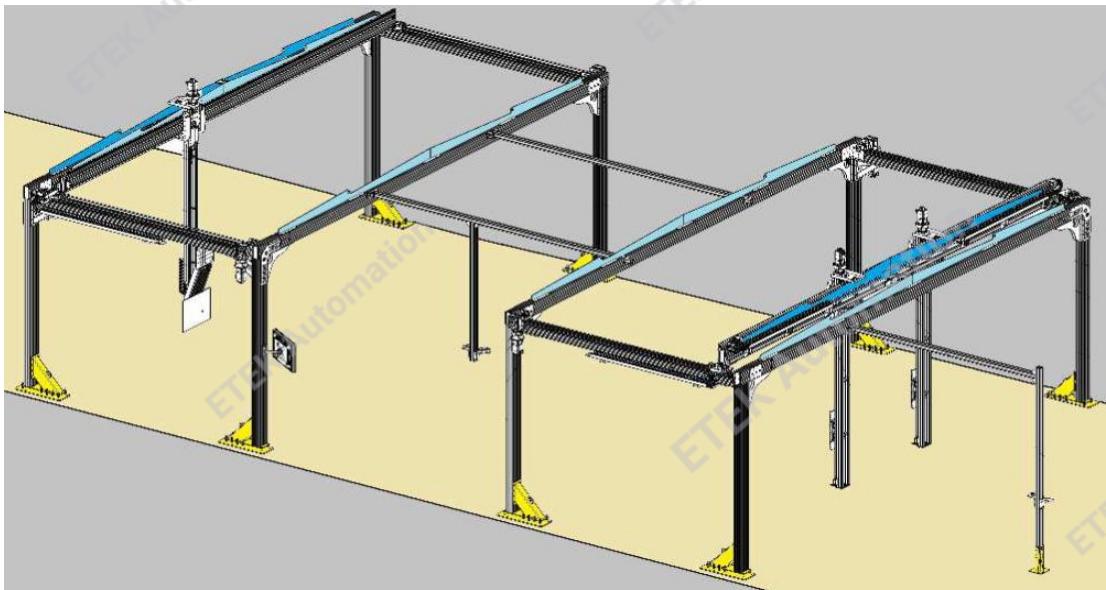
Wheelbase: 2000 – 3500 mm

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



ETEK AUTOMATION SOLUTIONS JSC

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*Thank
you*