FACTORY AUTOMATION
ASSEMBLY LINES
MEASUREMENT EQUIPMENT
Contents

Company Overview
Core Technology
Automotive and Industrial FA Equipment
Assembly Machines for Electronic and Electric Parts
Other FA Lines and Machine Tools
Overview

<table>
<thead>
<tr>
<th>Items</th>
<th>Annual Production Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive Assembly Line</td>
<td>Production Model: Oderer’s Spec. 6~12 LINE  USD 18 million</td>
</tr>
<tr>
<td>Electric &amp; Electronic Parts Assembly Line</td>
<td>Production Model: Customer’s Spec. 4~6 LINE  USD 80 million</td>
</tr>
<tr>
<td>Robot Automation and Test M/C</td>
<td>Production Model: Order Production - USD 40 million</td>
</tr>
<tr>
<td>FY 2016: Factory Scale of Land 2,300 square meter will be Constructed to add Capacity</td>
<td>CAPA Total USD 300 Million</td>
</tr>
</tbody>
</table>

Location

'Cheonan Office'

HQ & Factory

'Chilgok'

HQ Scale (Chilgok)
Land: 7369 square meter
Building: 1,880 square meter
**Patent Application**

Name: 3D Vision Inspection System  
Good NO. 10-2015-0047272

**Patent Registration**

Name: Label Separating M/C.  
Good NO. 10-0733769

Name: Box Loader Device  
Good NO. 10-0822784

Name: Sorting Device For Defective Processed  
Good NO. 10-0932194

Name: Ball Arrangement Supply Apparatus  
Good NO. 10-009751154
Certifications

- Venture Business
- ISO 9001
- Exportpromising firm

GDI Pump Ass’y Assembly Line

1. Full automation system design, Development
   - Process automation; NC Press, 3D Inspection, Performance Evaluation Autoloader Module withhold
   - Automated in assembly and inspection; high reliability high productivity, Safety, Quick Delivery

2. Laser Welding Automation
   - Soldering, Carbon steel, Special steel, SUS steel
   - Full data monitoring & recording
   - Jig & Fixture, Welding Inspection Equipment

3. User Interface
   - Meets customer requirements (PC, PLC)
   - Customer System (SPC, MES, QMS) and Interface

4. SMART Manufacturing
   - Full data Monitoring & recording process
   - DMS (Data Management System)
**GDI Pump Ass’y Assembly Line**

* Assembly and test line of GDI Pump

---

**Process**

1. Part indentation and currying
2. Laser welding and vision measure
3. Part indentation and caulking
4. Performance test and airtight inspection
5. Various data storage systems
EV Relay Laser and Plasma Process System

Electric car parts production line. An automation manufacturing system featuring laser welding and plasma assembly with test operation.
Sensor Ass’y Assembly and Test Line

An assembly and inspection line of Sensor Ass’y mounted on the front end to the bumper

*Process*

1. Insert Sensor
2. After coating, drying bonding and molding
3. Mount Ecu Ass’y
4. Leak Test
5. Performance of inspection
Knuckle, Disk and Other Parts
An assembly inspection line of Power Trunk Ass'y

FRT & REAR MODULE

Knuckle & Carrier Disc & Hub Drum & Disc Caliper cylinder Fly wheel
Knuckle Assembly Line
Spindle Ass’y Assembly Line

An assembly inspection line of Power Trunk Ass’y

*Process*

1. Part Riveting and Crimping
2. Assembly components and Soldering
3. Laser welding and airtight inspection
4. Inspection and data storage
Panorama Sunroof Guide Rail Assembly and Inspection Line

-Nut attach Inspection & Primary Coating Inspection

-Dried dual lock automatic Attach & Inspection
Clutch Assembly Line
Brake System Assembly Line
Crank Case Ass’y Assembly Line
Power Steering Assembly Line
Case Auto Welding Machine

An automated system to test CB parts with assay mechanism through various tests for electric part production companies.

**USE:** Auto supply with Case of rotary compressor pressure vessel, Bracket and Section parts and next Auto Resistance welding.

**Driving system:** WORK transfer (SERVO), WORK welding (AIR CYL')

**W/D TRANS:** AC 150KVA (B/K), DC 250KVA (S/T)
Auto Pier’g & Burr’g Machine

An automated system to test CB parts with assay mechanism through various test for electric part production companies.

USE : Drilling 3 holes at side of Case Pipe and burring

Driving system : Hydraulic Cylinder

Main Power : Hydraulic Drive Motor (15 hp, 5 hp)
- Valve Body Assembly Line
P/Valve Torsion Bar Cutting Line
ABH-250c Total Main Automated Assembly line

An automated system to manufacture electrical parts with assembly mechanism through various tests for electric part production companies.
MCB Auto Test Line System

An automated system to test CB parts with assay mechanism through various test for electric part production companies.
Inverter Semi Auto System Line

A semi automated production system to manufacture inverter with various test and packing systems or electric part production companies.
LCD Extension Panel Ass’y Line

Assembly line for production of extension panels of LCD liquid crystal
Roll Transferring System

FMS equipment for automated transfer of the rolls used for Mills to Roll Shop, unattended delivery of rolls for maintenance to and their retrieval from the grinder, automated and operational.
Roll Transferring System

Transfer System for maintenance of rolls used for mills used for an increase of productivity and operational efficiency. Maximized by automation of manual work.
Auto Loader System

Raw materials supplied into system to be auto loaded for multiple processes, such as CNC, milling, rolling. Automatic progressing system with inspection stages.
Automation Equipment

Automated equipment for assembly of automobiles and electronic products, and various types of conveyors and units for multiple processes.
Gantry Loader System

Automated system to deliver unmachined parts from the feeding mechanism and retrieve machined parts from CNC machine tools.
Gantry Loader System

NC Lathe, External Diameter & Groove width gauge