

ILHA

BUSINESS INTRODUCTION

Ver. 2024

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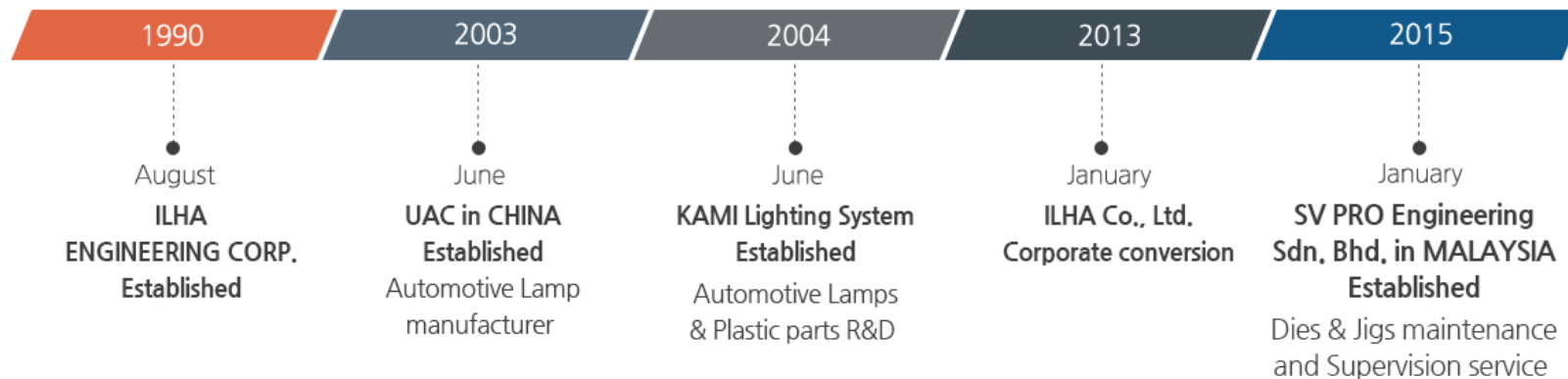
HISTORY

Best Solution Always in Quality, Time, Cost

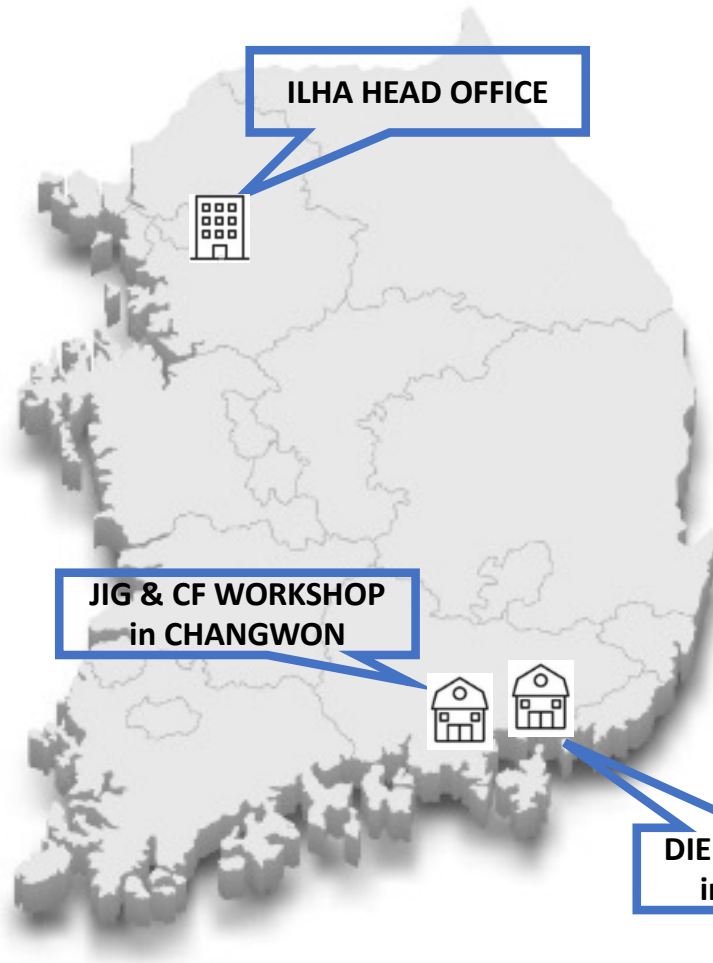
ILHA has been performing numerous projects for the global automotive industries since 1990.

We supply the most up-to-date equipment with appropriate technologies such as tooling, welding jigs, assembly & processing lines, Checking Fixtures through the collaboration with our good partnership makers.

ILHA promises **BEST SOLUTION ALWAYS!**



COMPANY LOCATION



HEAD OFFICE

APEX CITY 806,
DONGTANSUNHWANDAE-RO 823,
HWASUNG-CITY, GYEONGGI-DO,
KOREA



JIG & CF WORKSHOP

PALYONG-DONG, EUICHANG-GU,
CHANGWON, GYOUNGNAM, KOREA



DIE WORKSHOP

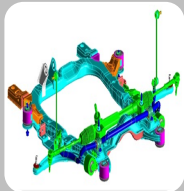
SEOGIMHAESANDAN-RO 63-9
GIMHAE-SHI, GYOUNGNAM, KOREA

BUSINESS FIELD



Styling and prototyping

- Rendering, Cray model, 3D digitizing
- Chassis, interior, exterior, functional parts
- Proto type, mockup, and real mock up sample



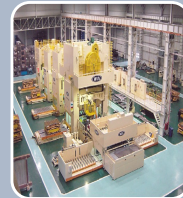
Design 3D, 2D & CAE

- CATIA , Auto CAD, and others
- CAE, SE
- Module, Chassis, interior, exterior, Engine & transmission parts



Tools and dies

- Injection mold
- stamping die, checking fixture
- Welding Jigs & Robot system



Stamping line

- Stamping press, washing unit, feeder, BTO
- Stamping automation
- Best Delivery



Production line & Test equipment

- Automation/manual assembly line
- Processing Line
- Test consulting and equipment
- Quality control consulting and data save



Checking Fixtures

- Cubic Jigs
- Checking Fixtures
- Inspection Jigs
- Resin CF

Best Solution always !

BUSINESS SPECIALITY

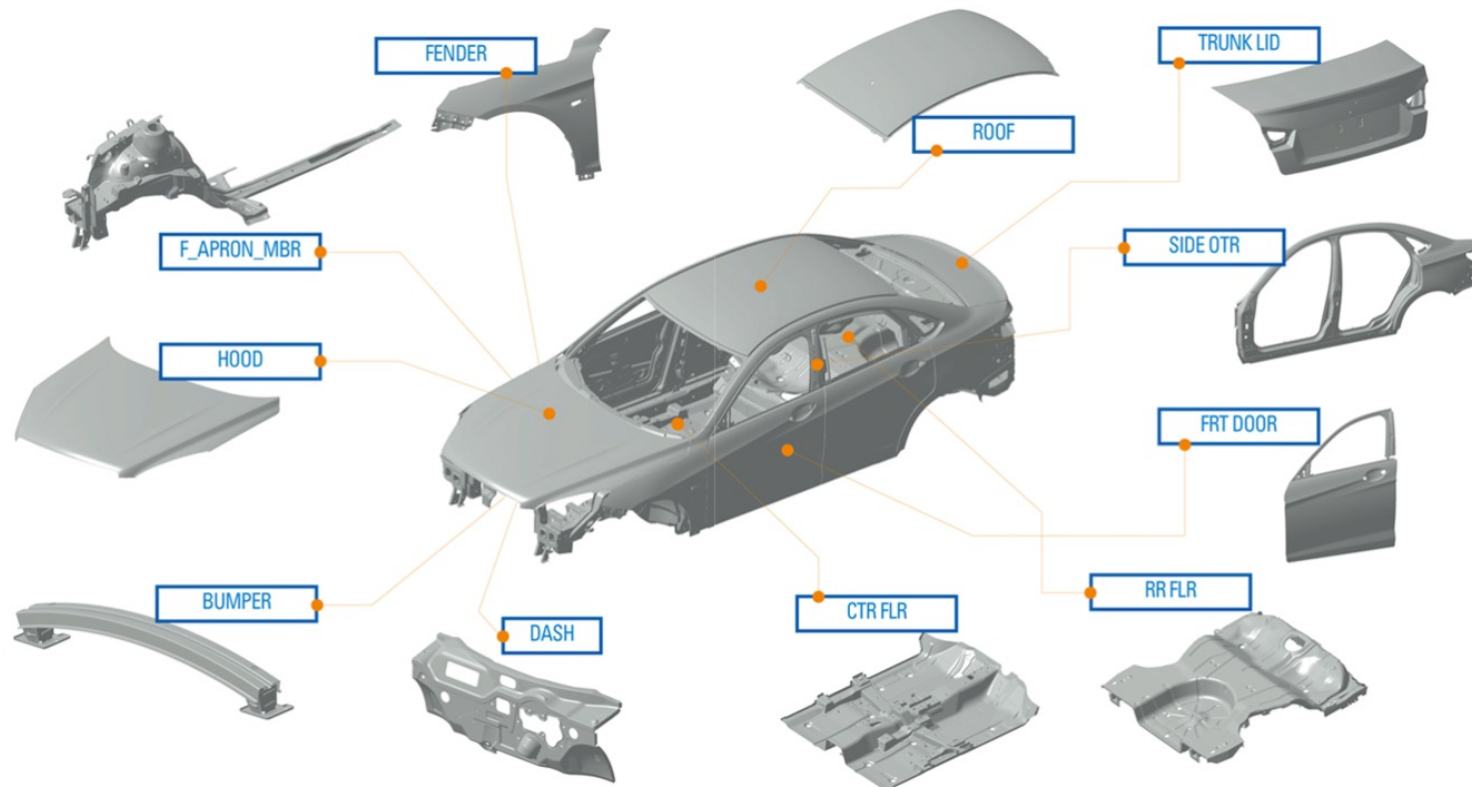
- SE BUSINESS
- PROTO TYPE
- STAMPING DIES
- MAIN BODY ASSEMBLY LINE & TRANSFER SYSTEM
- SUB-WELDING JIGS
- CHECKING FIXTURES & CUBIC JIGS
- ASSEMBLY & PROCESSING LINE
- LASER BRAZING
- LAMP ASSEMBLY & TESTER
- PAINT & ED COATING LINES
- OIL & GAS FILLING EQUIPMENT
- VEHICLE INSPECTION EQUIPMENT
- WELDING EQUIPMENT

SIMULTANEOUS ENGINEERING

- **SIMULTANEOUS ENGINEERING**
 - Study vehicle design with various aspect and improve matters during design phase
 - Prevent potential problem by improving product design in advance
- **GEOMETRIC DIMENSIONING & TOLERANCE, DESIGN TOLERANCE SYSTEM**
 - Define the control datum and geometric tolerance for each component
 - Efficient quality management by using same instructions
 - Investigate assigned tolerance for each section by analyzing stock of components
 - Prevent potential problem by applying practical tolerance in advance
- **PROCESS ENGINEERING**
 - Planning the best process to meet the quality target and program requirement
 - Provide more competitive solution with high technology and numerous experience
- **ROBOT SIMULATION & OLP (OFF LINE PROGRAM)**
 - Find out the best robot position, proper path and tools, cycle time in virtual space
 - Optimize work cell and Save time, cost by reviewing in advance under actual condition
- **PLANT SIMULATION**
 - Planning & Optimization

PROTO TYPING

- PARTS
- SUB ASS'Y
- BIW COMPLETE
- ALUMINUM PARTS
- MOCKUP
- ABS & PLASTIC



STAMPING DIES

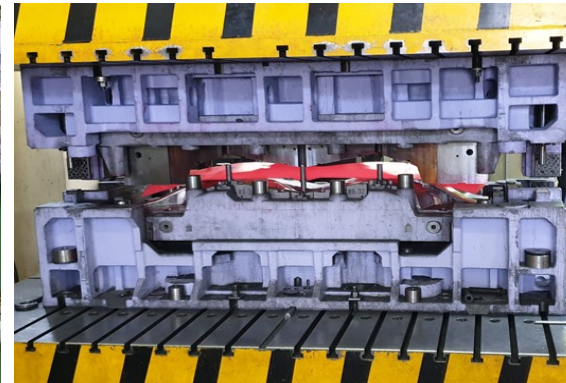
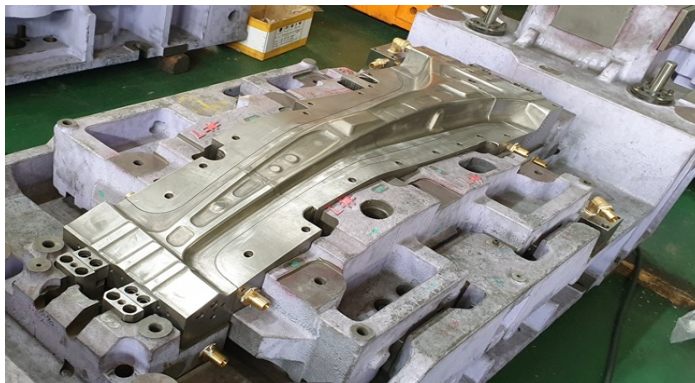
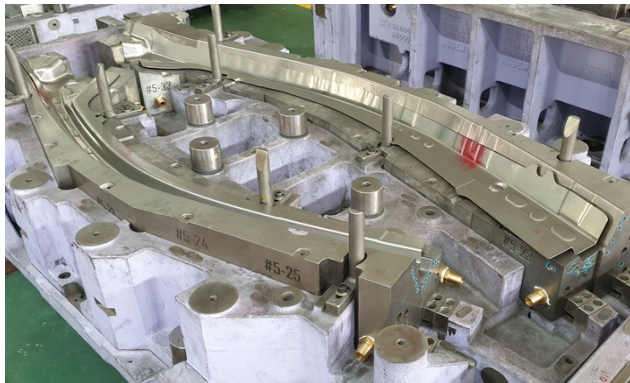
- SIDE OUTER & CLOSURES
- CHASSIS
- ALUMINIUMS
- HOT STAMPINGS
- ULTRA HIGH TENSILE STRENGTH STEEL



STAMPING DIES

- SIDE OUTER & CLOSURES
- CHASSIS
- ALUMINIUMS
- **HOT STAMPINGS**
- ULTRA HIGH TENSILE STRENGTH STEEL

B PILLAR REINF PLATE & COLUMN ON STIFFNER
MATERIAL : SABC1470, 1.4t (1470Mpa), Hot Forming

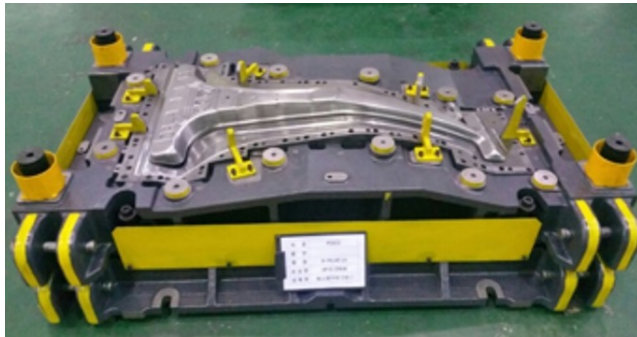


STAMPING DIES

- SIDE OUTER & CLOSURES
- CHASSIS
- ALUMINIUMS
- HOT STAMPINGS
- **ULTRA HIGH TENSILE STRENGTH STEEL**

B PILLAR

MATERIAL : 1180TRIP, 1.6t (1180Mpa), Cold Forming

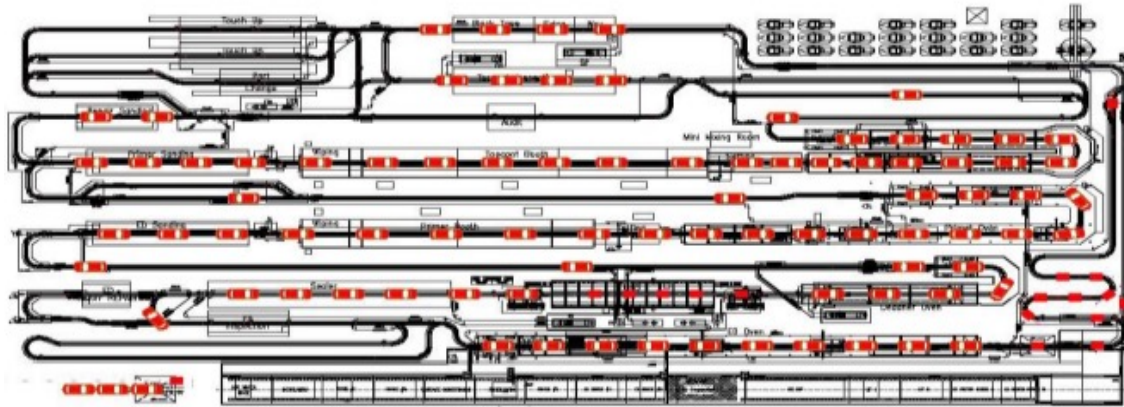


SIDE MBR, FR LWR

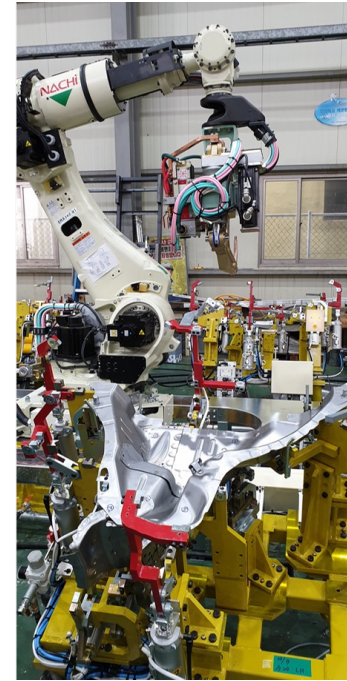
MATERIAL : 1180TRIP, 1.6t (1180Mpa), Cold Forming



WELDING JIGS



WELDING JIGS



HEMMING



Press Line Hemming



Press Line Hemming with dies changer



Table Top Hemming



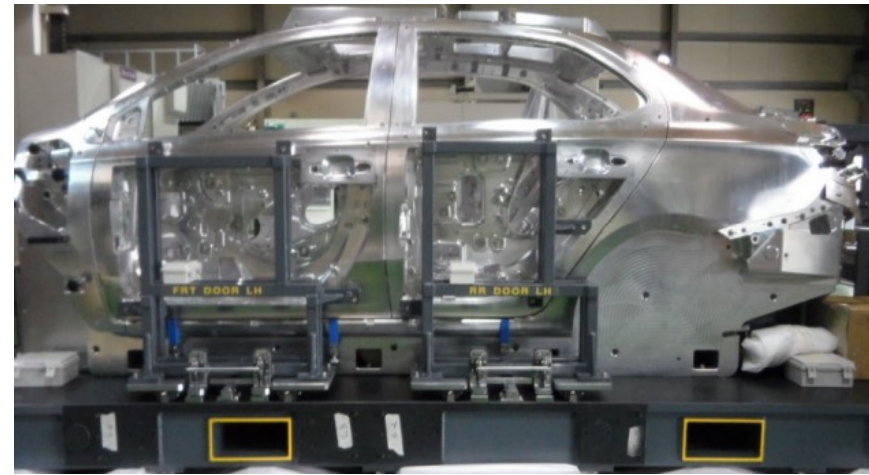
Robot Roller Hemming



Wheel House Clinch Hemming

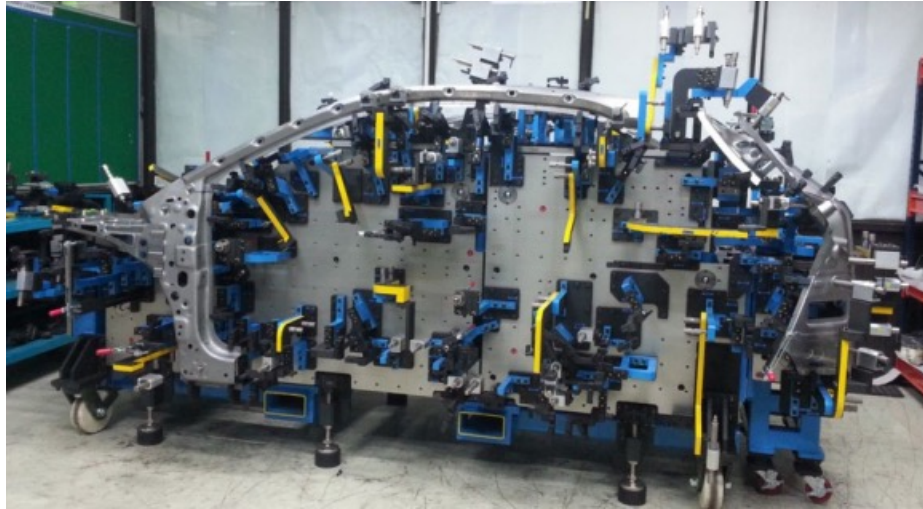
CHECKING FIXTURE & CUBIC JIG

- CUBIC - EXTERIOR & INTERIOR



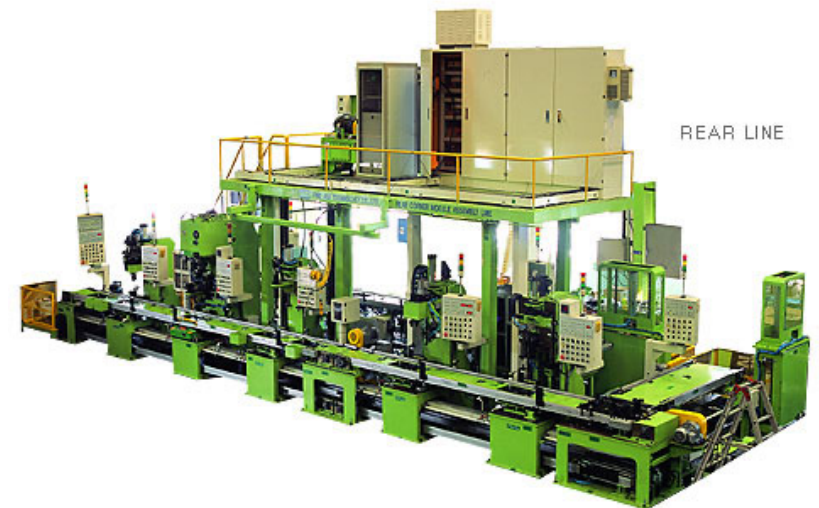
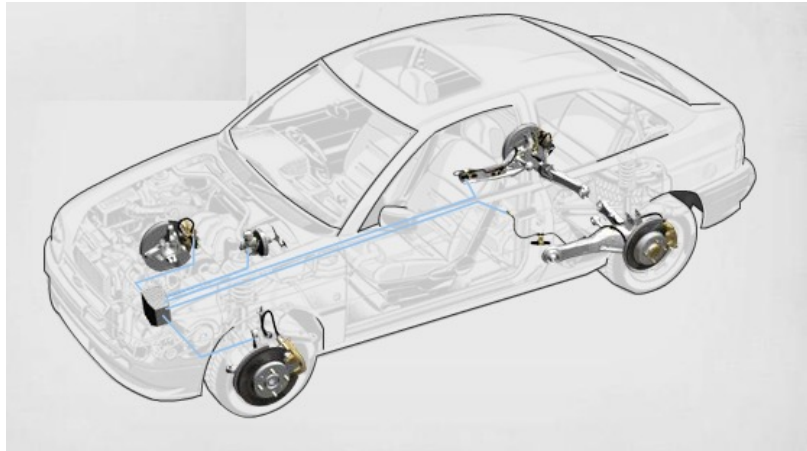
CHECKING FIXTURE & CUBIC JIG

- CHECKING FIXTURES



ASSEMBLY & PROCESSING LINE

- CORNER MODULE ASSEMBLY LINE



ASSEMBLY & PROCESSING LINE

- INTAKE AIR-FULE MANIFOLD MODULE ASSEMBLY LINE

Upper shell

1. Photograph of Tool



(Stational side)

2. Photograph of Product



(Cavity side)



(Core side)



(Core side)

Middle shell

1. Photograph of Tool

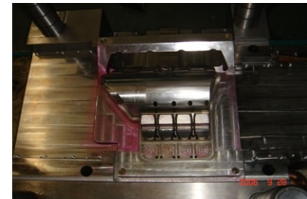


(Stational side)

2. Photograph of Product



(Cavity side)



(Movable side)



(Core side)

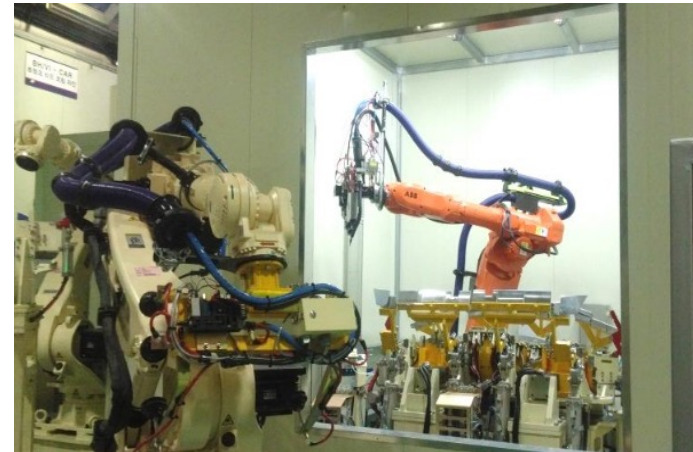
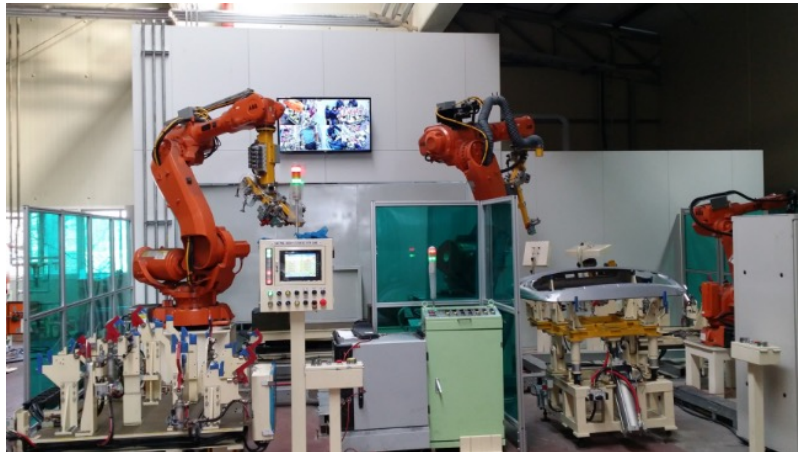


LASER WELDING & BRAZING

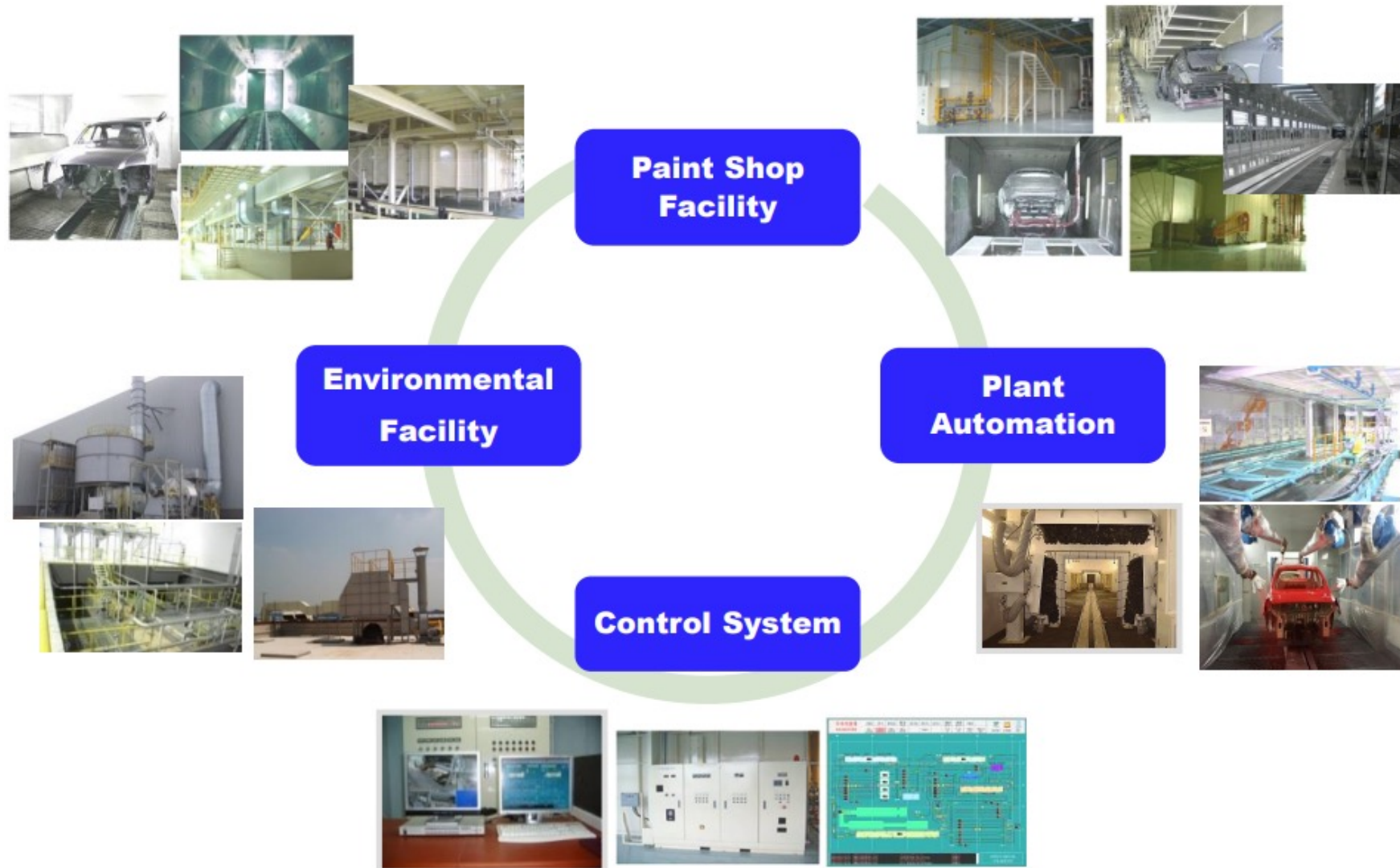
- LASER WELDING



- LASER BRAZING



PAINT & ED COATING



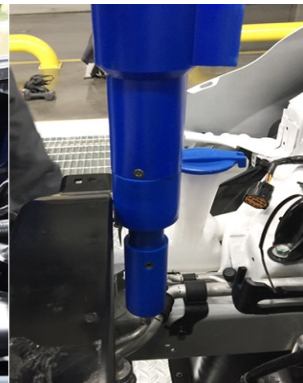
OIL & GAS FILLING EQUIPMENT

- BRAKE OIL FILLING
- COOLANT FILLING
- AIRCON GAS FILLING
- WASHER FILLING
- TM & ENGINE OIL FILLING



OIL & GAS FILLING EQUIPMENT

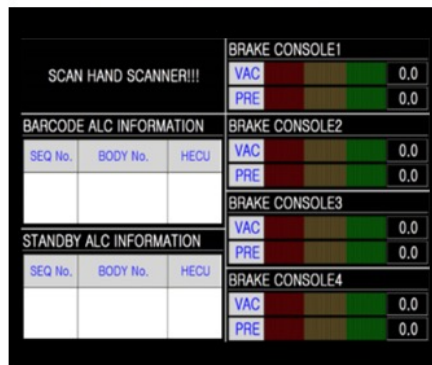
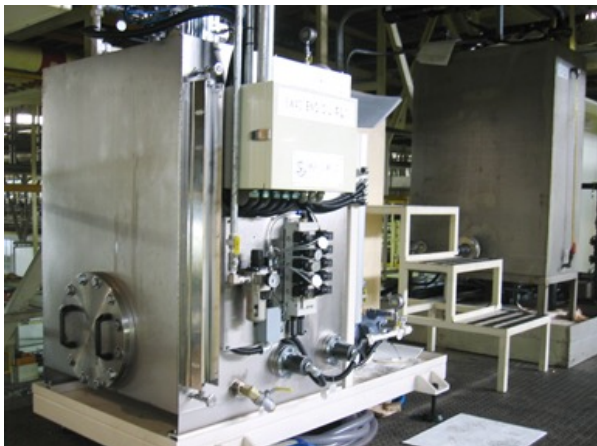
- BRAKE OIL FILLING
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- WASHER FILLING
- TM & ENGINE OIL FILLING



OIL & GAS FILLING EQUIPMENT

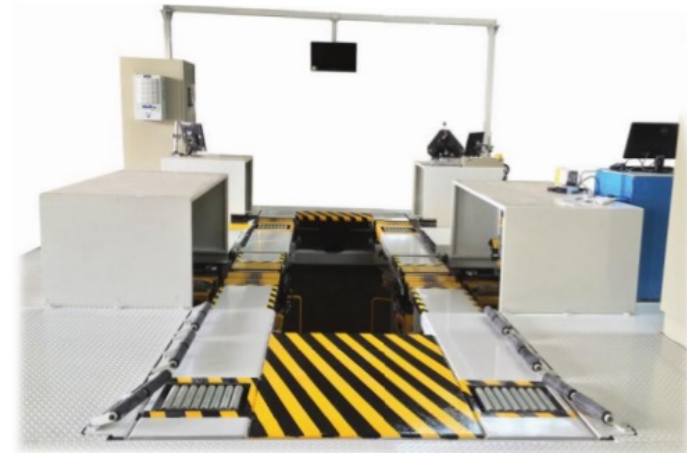
- BRAKE OIL FILLING
- COOLANT FILLING
- AIRCON GAS FILLING
- WASHER FILLING
- **TM & ENGINE OIL FILLING**

○ Date Record & Monitoring system



VEHICLE INSPECTION EQUIPMENT

- CHASSIS DYNAMOMETER
- BS DYNAMOMETER
- SPEEDOMETER TESTER
- BRAKE TESTER
- SIDE SLIP TESTER
- ABS CONTROL UNIT
- HEADLIGHT TESTER
- EMISSION ANALYZER
- DIESEL SMOKE TESTER
- NOX TESTER
- RPM TESTER
- EV DYNAMOMETER
- ROLL & BRAKE TESTER
- WHEEL ALIGNMENT TESTER
- ABS TESTER
- AXLE PLAY DETECTOR
- AXLE LOAD METER
- MOTORCYCLE TESTER



Specifications

Model	KIWAT-300	KIWAT-300R	KIWAT-300L
Measuring	Semi-Automatic	Automatic	Automatic
Feature	Roller 3points Contact Type	Roller 3points Contact Type	Non-Contact Type
Max. Load / Axle	3 ton, 5 ton, 10 ton (customizable)		
Measuring Range	Toe	±5° 00'	±5° 00'
	Camber	±3° 00'	±3° 00'
	Handle	±10° 00'	±45° 00'
Roller	Inner x Outer	950 X 2,050 mm	1,050 X 2,050 mm
	Dia X Length mm (Height X Vertical)	480 X 480 mm	Ø165 X 450 mm
		1,500 mm	1,550 mm
Wheel Base Moving Method	Plate	Motor (Ball Screw)	Motor (Ball Screw)
Detecting Method	Optical Sensor	Laser Sensor	3D Line Laser Sensor

- WHEEL ALIGNMENT TESTER

VEHICLE INSPECTION EQUIPMENT

- CHASSIS DYNAMOMETER



LIGHT DUTY



HEAVY DUTY

Specifications

Model		Chassis Dynamometer for Light Duty (CHD-250SIS)	Chassis Dynamometer for Heavy Duty (CHD-500D)
Max. Load		Less than 5.5 ton	15 ton
PAU		250 Hp (Air-Cooling type)	500 Hp X 2 (Air-Cooling type)
Driving Motor		3.7 Kw Inverter Motor	11 Kw Inverter Motor
Roller	Dia x Length	Ø226 X 850 mm	Ø450 X 990 mm
	Inner x Outer	850 X 2,550 mm	700 X 2,700 mm
	No. of Installation	4 sets	6 sets (4 sets for front wheels, 2 sets for rear wheels)
	Fixation Method	Block Type (be linked with middle lift)	Front Wheels: Block Type (be linked with middle lift) Rear Wheels: Bend Type
Lift		Air Cylinder Type	Air Cylinder Type

VEHICLE INSPECTION EQUIPMENT

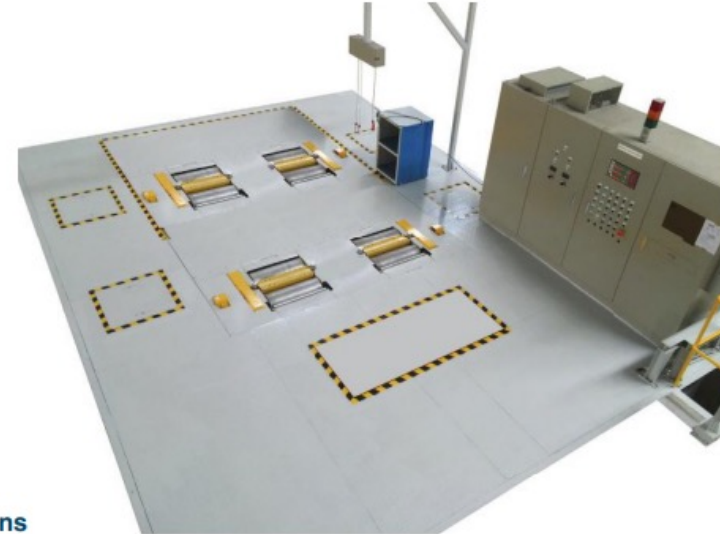
- ROLL & BRAKE TESTER



Specifications

Model	KIRB-2230	
1) Max. Load / Axle	3,000kg	
2) Operating method	Roller driving type	
3) Dimension(L×W×H)	7,800 × 2,775 × 2,200mm	
4) Air pressure	6.5kgf/cm ²	
5) Roller	Inner×Outer	850 × 2,050mm
	Dia×Length	Ø908 × 600mm
	Left-Right center distance	1,450mm
	Driving motor	22kw×4units
6) WHEELBASE	2,350-3,230mm	
7) RETAIN ROLLER	Dia × Length	Ø100 × 570mm
	Installation quantity	Front Wheel 4units, Rear Wheel 2units

- ABS TESTER



Specifications

Model	KIABT-300	KIABT-1500	
Max.Load / Axle	3 ton, 10 ton, 15 ton		
Type	2 Axle Test	1 or 2 Axle Test	
Driving Motor	15kw 6phase (2 ea)	22kw 6phase (4 ea)	
Sensors	Load Cell	Load Cell	
Roller	Dia X Length	Ø185 X 705 mm	Ø215 X 950 mm
	Inner X Outer	800 X 2,210 mm	850 X 2,750 mm
	No. of Installation	4 sets	8 sets
	Fixation Method	Hydraulic Brake	Hydraulic Brake
Lift	Air Cylinder	Hydraulic Cylinder	
Drive Speed	Normal Brake	0.5 km/h	
	ABS	5~9 km/h	
	Speed Control Method	Inverter Control	

BUSINESS OFFICES



CONTACTS

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BEST SOLUTION ALWAYS

COST, QUALITY, TIME

THANK YOU!