

EXPERT
ALL SUPREME EFFORTS
TOWARDS A WORLD



HYUNDAI MINUTENESS

THE CHALLENGE
NEVER STOP
TO THE BEST

CEO GREETING

“ WE PROMISE
THE BEST PRODUCTS
AND SERVICES
TO ALL CONSUMERS ”



Hyundai Minuteness has had a solid history in the field of construction heavy equipment parts business since its foundation on April 1st, 1979. We specialize in producing lower parts of the excavator including Recoil Spring Ass'y, Idler Ass'y and forklift steering system Steer Axle Ass'y according to high quality and reliable technology.

Hyundai Minuteness began supplying parts to the heavy equipment sector of Samsung Heavy Industries in the past and now supplies parts to Volvo excavator plants and Clark forklift plants around the world. In order to secure competitiveness and explore new markets, we established a Chinese corporation in Shanghai, China in December, 2005, and now we moved our major production bases to Linyi, Shandong Province. We supplies major products to Volvo Shanghai Plant, Volvo Linyi Plant, Shandong Lingong Linyi Plant, and Qingdao Clark Plant.

We focus to be a sustainable company that can be with the next generation in the heavy equipment parts business. To accomplish this, we were selected as a global small giant company in 2022 with our competitiveness to be on par with global manufacturers, and were selected as a K-smart lighthouse factory organized by the Ministry of SMEs and Startups as part of developing good products and creating innovative products with a challenging spirit.

We, Hyundai Minuteness, promise the best products and services to all consumers.

Thank you.

CEO *Chun-kil Oh*

THE INNOVATIVE SOLUTION PROVIDER

HYUNDAI
MINUTENESS

»»» The challenge to make a better future, Hyundai Minuteness **constantly strives for innovation** without stopping.

Hyundai Minuteness is willing to discover and think about problems that customers and society may face in the future and provide better solutions via technological innovation. Hyundai Minuteness a global company that considers people and the natural environment based on outstanding quality and technology, is expanding its influence in the global market with infinite passion and indomitable challenging spirit. We will lead the new future as a strong driving force for enhancing the sustainability of people, technology, society and the environment with clear goals and ongoing management innovations associated with the changing times.

BUSINESS CORE VALUE

HYUNDAI
MINUTENESS

»»» Hyundai Minuteness is moving toward a more advanced global company via **systematic company policy**.

We will make a strong tomorrow by implementing the company's policy considering people and the natural environment based on excellent quality and technology.

Quality



Quality first policy

We provide high quality products that give trust and impression to customers.

R&D



Improving competitiveness

We provide products that customers can be satisfied with by constant technology development.

Human



Social Contribution

We create hope and love for everyone to be happy.

Environment



Nature-friendly Management

We implement eco-friendly management for a better future.

Safety



Safe Jobs

We provide a safe job environment by introducing industry / environmental design.

Ethics



Robust corporate culture

We create a transparent and ethical corporate culture that complies with laws and regulations

MAJOR CLIENT

● Main Office Customer

● Customers in China

◎ Business Location of Hyundai Minuteness



Excellence and innovation of Hyundai Minuteness! That passion is not limited.

Hyundai Minuteness is building a global network in Europe, China, and the United States, and is spreading Korea's technology to the world. We are already strengthening our global competitiveness by maximizing our export capabilities by integrating overseas marketing channels with the endless leap of Hyundai Minuteness, which already has global competitiveness.

»» KOREA HQ and Manufacturing Facility in Korea

Title	HYUNDAI MINUTENESS Co., Ltd	Date for Foundation	1979.04.01
Address	3 Bangye-ro, Uichang-gu, Changwon-si, Gyeongsangnam-do, Korea 51396	CEO	Chun-Kil Oh, Jeong-Seok Oh
Tel	+82-55-294-2518~9	No. of Employees	50 (Office: 9, Quality Management: 4, Manufacturing: 37)
Fax	+82-55-297-2519	Main Products	· Recoil Spring Ass'y, Idler Ass'y · Pinion Gear, Swing Drive Shaft · Cover end, Head rod, Flange · Steering Axle Ass'y
Property Area	14,220㎡ (4,300 pyeong)		
Building Area	10,910㎡ (3,300 pyeong)		



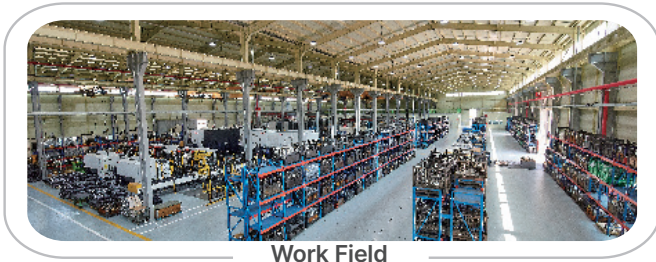
»» CHINA Manufacturing Facility in China

Title	SHANDONG HYUNDAI MINUTENESS Co., Ltd
Address	West of Dazhaojia Village, Middle of Hongshi Road, Zhengwang Town, Hedong District, Linyi City
Tel	+86-539-8826990
Date for Foundation	2017.06.25
Property Area	10,750m ² (3,250 pyeong)
Building Area	8,000m ² (2,420 pyeong)
No. of Employees	50 (Office: 7, Quality Management: 3, Manufacturing: 40)

Title	HYUNDAI MINUTENESS (SHANGHAI)Co., Ltd
Address	5 Caolianzhi Road, Huangdu Town, Jiading District, Shanghai City, China
Tel	+86-21-39596992
Date for Foundation	2005.12.02
Main Products	· Recoil Spring Ass'y, Idler Ass'y · Steering Axle Ass'y · Arm Yoke Bearing

KOREA

»» HYUNDAI MINUTENESS VIEW



Work Field



Main Office



Field Office



Show Room

»» CERTIFICATION



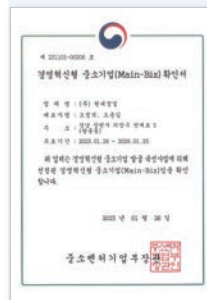
ISO Certification (9001)



ISO Certification (14001)



ISO Certification (45001)



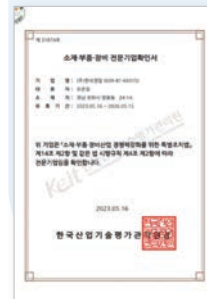
Certification of Main-Biz



Enterprise Confirmation of Performance Sharing

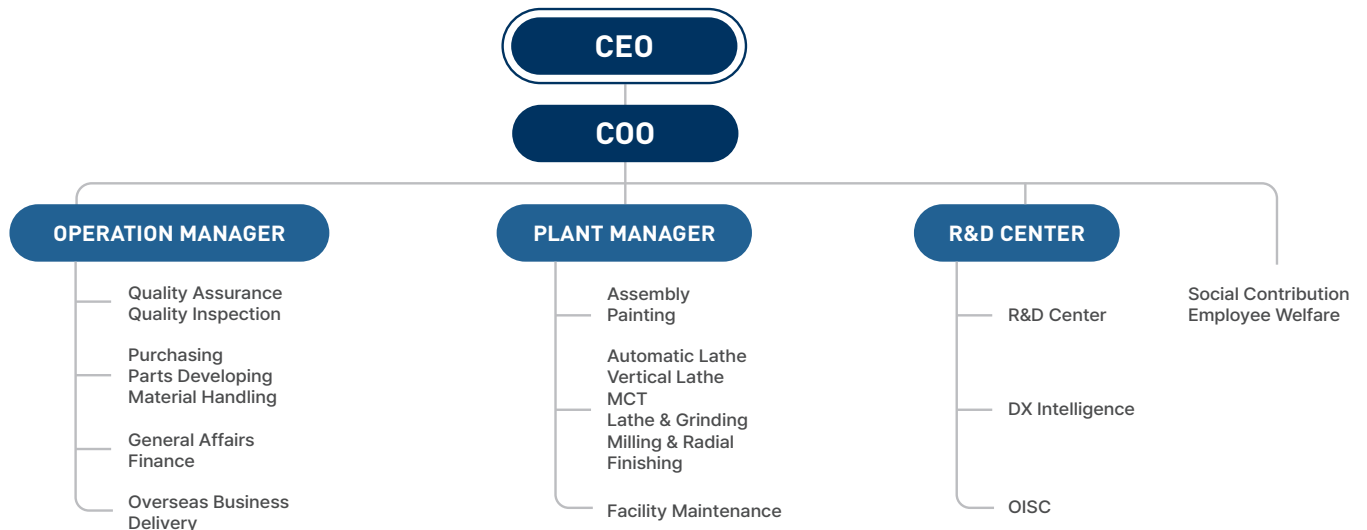


Global small Giant Designation



Materials, Components, Equipment Company Confirmation

»» ORGANIZATION



»» SHANDONG HYUNDAI MINUTENESS VIEW

»» CERTIFICATION



Work Area



Painting Line



Assembly Area



Storage Area

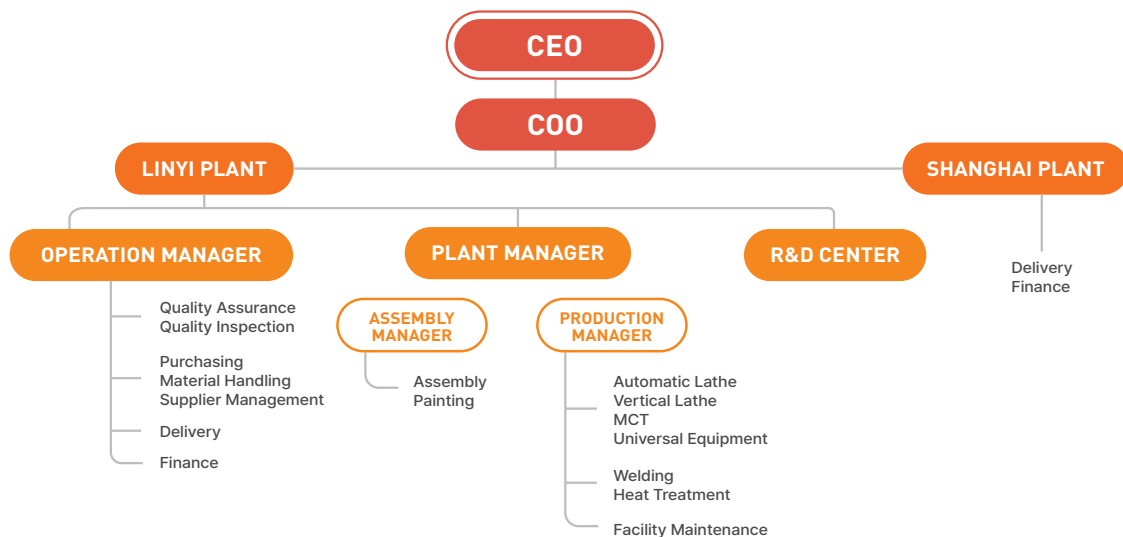


ISO Certification (9001)



ISO Certification (14001)

»» ORGANIZATION



HISTORY



KOREA

1979

04.01
Establishment of Company

1983

01
Selected as a partner of Samsung Heavy Industries (heavy equipment division)

1988

07
Selected as a promising small and medium-sized company by Kyongnam Bank

1998

07
Selected as a partner of Volvo Construction Machinery Co., Ltd

1999

03
Selected as a partner of Clark Materials Handling Asia Inc

07
Obtained ISO9002 certification from the UK BSI

2000

08
Relocation of Palyongdong factory

2002

09
Obtained ISO9001 ISO14001 certification from SPEC by building quality and environment integration system

12
Selected as CLEAN workplace from the Ministry of Labor

2005

03
Converted to Hyundai Minuteness Co., Ltd

2019

08
Relocated to a new factory in the Palyong industrial area

2021

08
ISO 45001 Certificate

2022

04
Selected as a global small giant company of Korea

09
Selected as the K-smart lighthouse factory

2023

01
Selection of Main-Biz

05
Materials, Components, Equipment Company Confirmation

10
ESG A Grade (By Nice D&B)

12
Awarded The 10 Million Dollar Export Tower

THE BEST GLOBAL COMPANY

2005

12.02

Established HYUNDAI
MINUTENESS China
Company in Shanghai

2007

05

ISO 9001 Certificate

06

Initiated Volvo China Production

12

Initiated Clark China Production

2008

03

ISO 14000 Certificate

2010

07

Initiated SDLG Production

2017

06

Relocated production
plant to Linyi Shandong

2019

08

Initiation of Product Supply by
Yantai Kepu Heavy Industries

2020

03

Initiation of Product Supply
by Shanhezheneng

2021

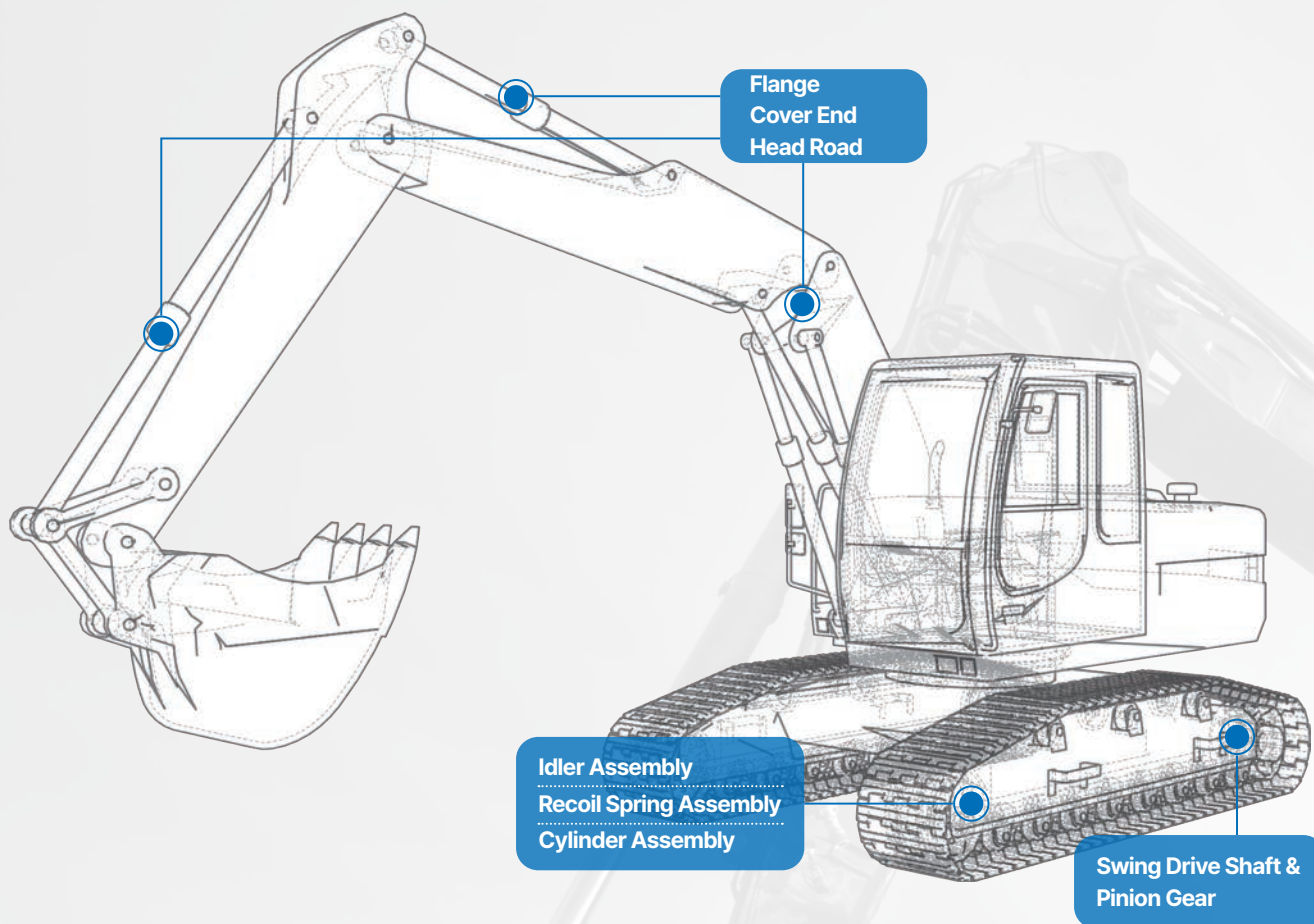
08

Initiation of Product Supply
by Sanzhongjianji

CHINA



MAIN PARTS OF EXCAVATOR



»»» IDLER ASSEMBLY

It is mounted on the lower frame of the excavator and located in front of the caterpillar track, the idler acts as a guide for the caterpillar to rotate infinitely and the recoil spring serves to buffer the impact on the caterpillar.

5ton



8ton



95ton



Division	Korea Supply Models	China Supply Models
Idler + R/Spring Ass'y	EC55, 50 ECR40, 50, 58, 88 EC950	EC55, 60, 75, 120 E615, 635, 655, 660, 665, 675, 680 E6135, 71540, 6205, 6210, 6250 EC300, 6360, 6400, 6500 U25, K50

»» RECOIL SPRING ASSEMBLY

It is attached to the lower frame of the excavator and assembled with the Idler Ass'y, keeps the tension of the caterpillar track constant so that the caterpillar can rotate, and a shock absorption device that relieves the impact of Idler in the case of collision with forward obstacles.

· Recoil Spring Ass'y and Cylinder Ass'y integrated Type

Medium (15-30ton)



Large (35-55ton)



Division	Korea Supply Models	China Supply Models
R/Spring Ass'y	Medium Size ECR145, 235, 355 EC140, 160, 180, 200, 210, 220, 250, 300 B60, B4	Medium Size EC200, 210, 220, 250, 300
	Large Size EC350, 380, 480, 550	Large Size EC350, 380

· Recoil Spring Ass'y and Cylinder Ass'y separated Type

Small (5-8ton)



Extra Large (over 70ton)



Division	Korea Supply Models	China Supply Models
R/Spring Ass'y	EC60 ECR88 EC750, 950	None

MAIN PARTS OF EXCAVATOR

》》》 CYLINDER ASSEMBLY

It is used in the Recoil Spring Ass'y and Cylinder Ass'y detachable Type and adjusts the Piston length of the Cylinder to keep the tension of the caterpillar track constant.

· It is used for small (5 to 8 tons), extra-large (over 70 tons)

Small



Extra Large



Division	Korea Supply Models	China Supply Models
Cylinder Ass'y	EC55, 60, CER40, 50, 58, 88 EC750, 950	EC55, 60E635, E675, 680

》》》 SWING DRIVE SHAFT & PINION GEAR

It is an Gear type part mounted and operated inside the excavator Swing Drive Motor



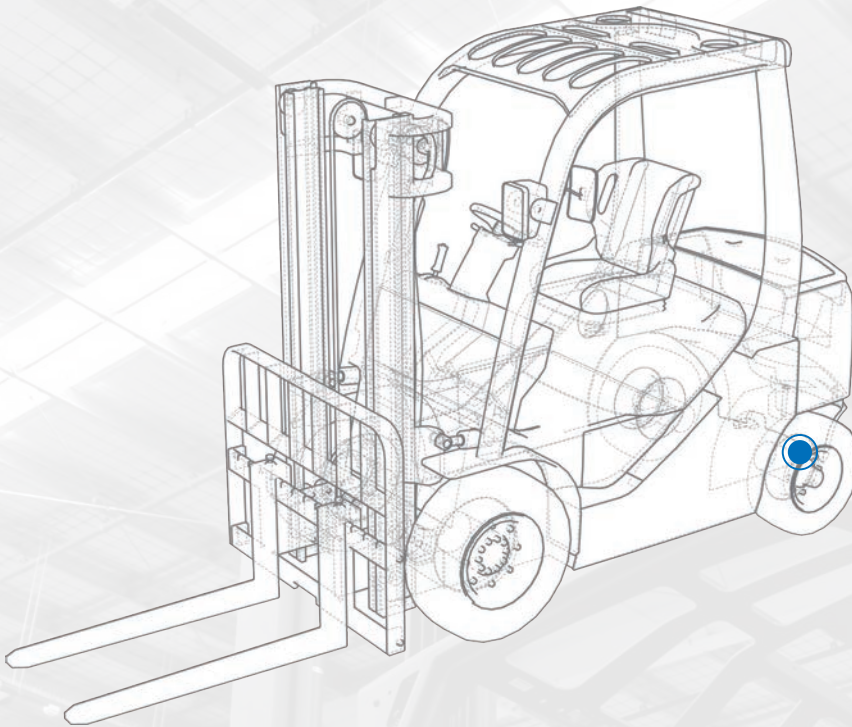
》》》 FLANGE & COVER END & HEAD ROD

It is a manufacturing component that is welded to an excavator Boom or Arm Cylinder's Cylinder Tube



MAIN PARTS OF FORKLIFTS

HYUNDAI
MINUTENESS



»» STEER AXLE ASSEMBLY

It is a steering system that is mounted on the rear of the forklift's lower frame and switches direction as the driver manipulates the steering wheel.

3-5ton



5-7ton



Division	Korea Supply Models	China Supply Models
For Engine Type Forklift	S60, S40, CGCS20, GTS20	GTS20, S10

2-3ton



2-3ton



2-3ton



Division	Korea Supply Models	China Supply Models
For Electric Type Forklift	EPX16/20s, EPX20/32, GEX16/20s, GEX20/32, GEX40/50, ECX, TMX, CTX	EPX16/20s, EPX20/32

OVERVIEW. KOREA

HYUNDAI MINUTENESS measuring the quality of the product decided to measure precisely and accurately create the highest quality.



Vertical Auto Lathe (Turning)



Machining Center (Horizontal)



5-axis multi-tasking machine



Machining Center (Vertical)



Hobbing machine



LPS+H.MCT



CNC Auto Lathe



Radial Drill



Lathe



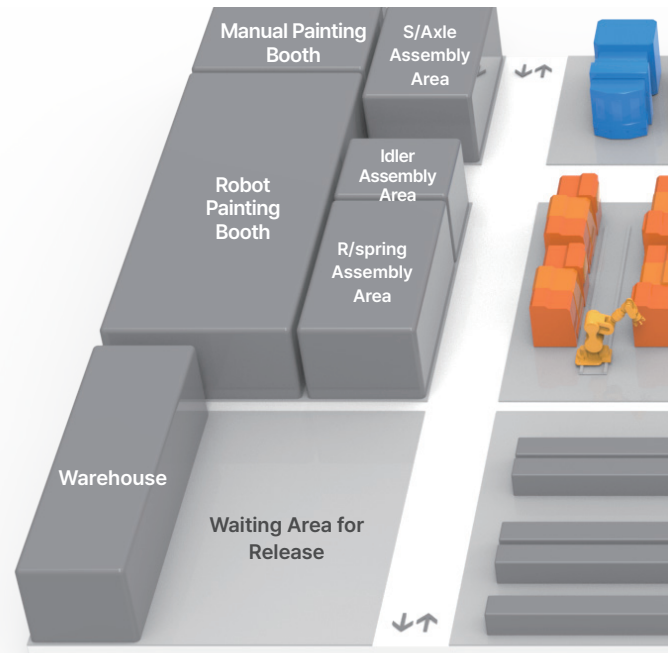
Grinder



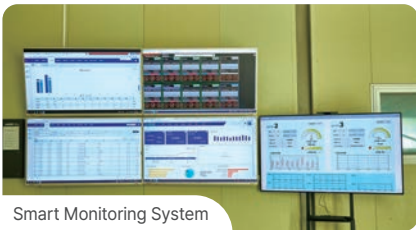
Milling



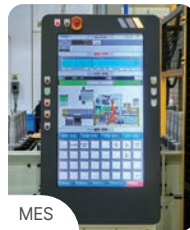
Handling Robot



4



Smart Monitoring System



MES



CNC / Robot Line



R/Spring Assembly Area



Waiting Area for Arrivals



Vertical Lathe / Robot Line



Idler Assembly Area



Measurement Room



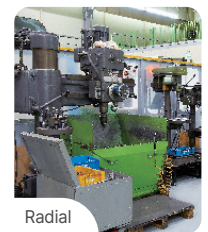
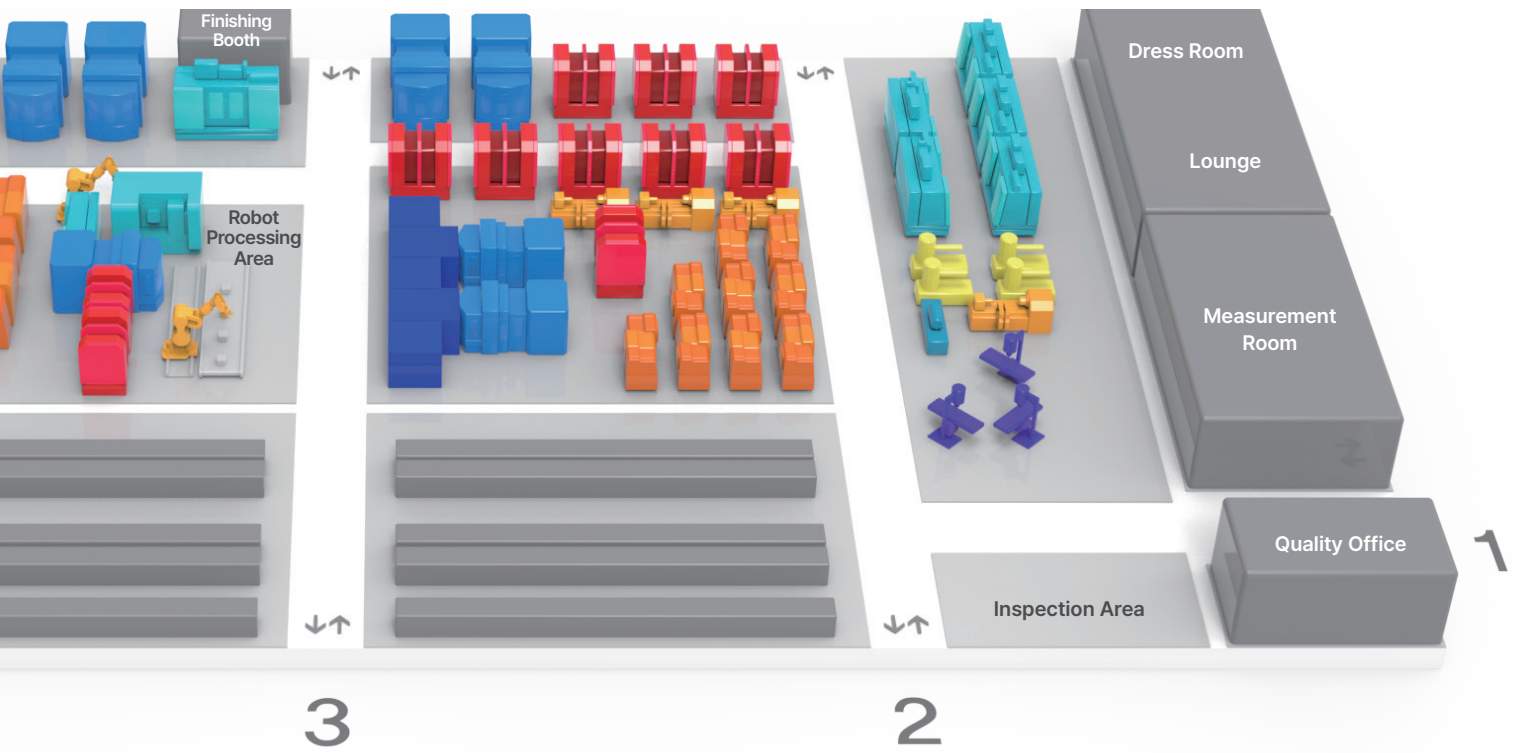
Vertical Lathe / Robot Line



S/Axle Assembly Area

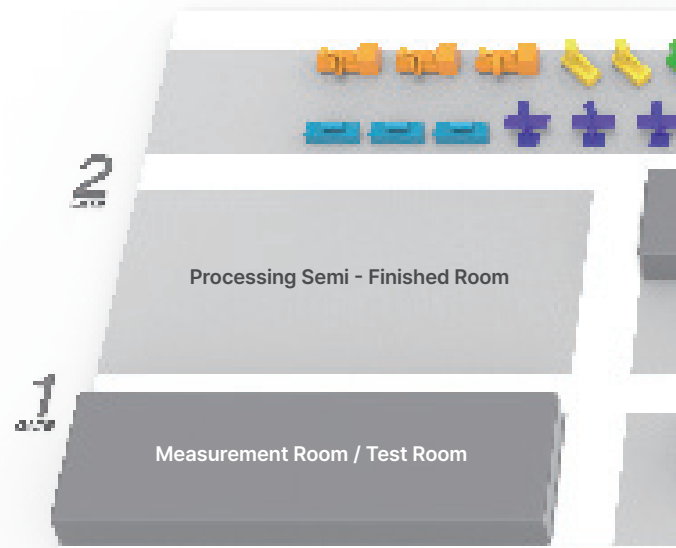


Test Room



OVERVIEW. CHINA

HYUNDAI MINUTENESS measuring the quality of the product decided to measure precisely and accurately create the highest quality.



V.MCT



Inspection Area



Work Area



Radial



Lathe



Painting Line



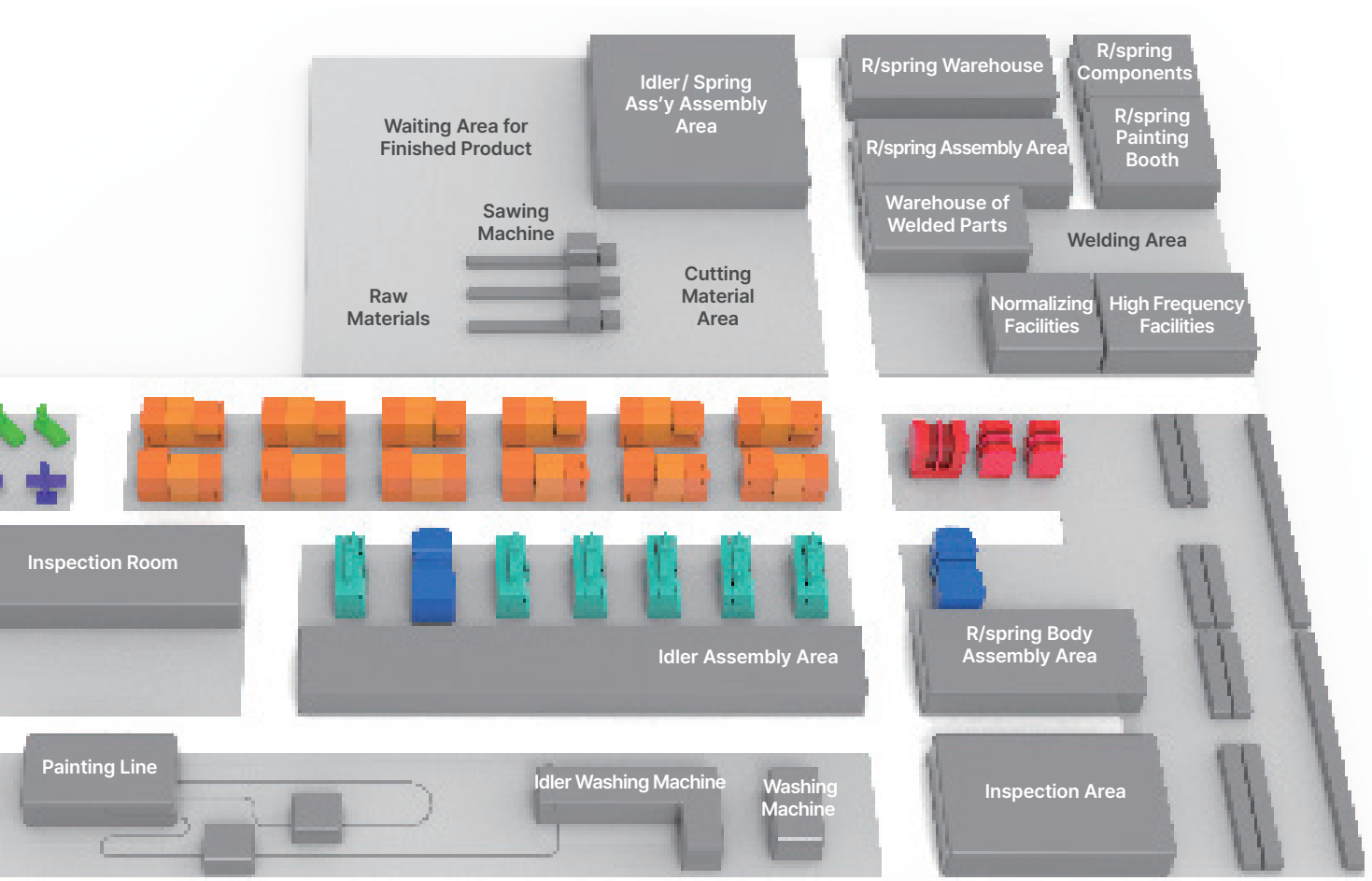
CNC



R/Spring Sub Assembly Area



Painting Line



Internal Pressure Test Machine



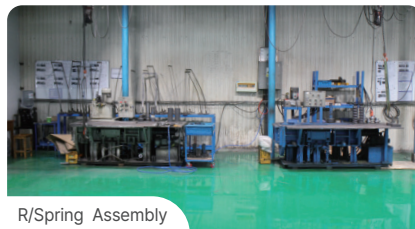
Idler Assembly



Inspection Area



Idler Assembly



R/Spring Assembly



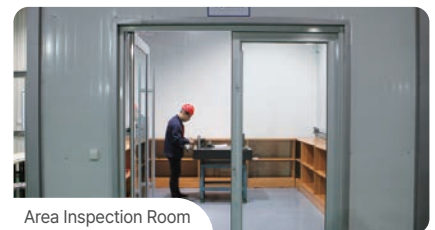
Storage



Idler Assembly Area



Painting Line



Area Inspection Room

ESG MANAGEMENT

»» ESG PROMOTION STRATEGY OF HYUNDAI MINUTENESS

HYUNDAI MINUTENESS **ESG**

Environment



- Eco-friendly Management
- Green Smart Factory (Establishing FEMS)
- Introducing solar power and ESS
- Promoting ISO50001 Certificate

Social



- Social donation via the operation of the Scholarship Association
- Improving working environment
- ISO/IEC 27001

Governance



- Complying with law and ethics
- Transparent corporate management
- Promoting ISO37301 Certificate

»» HYUNDAI MINUTENESS ESG A GRADE (BY NICE D&B)

HYUNDAI
MINUTENESS

ENVIRONMENT

SOCIAL

GOVERNANCE

PRESENT PROGRESS

E

RE100 certificate by using renewable energy

Implementing community environmental conservation activities

Promoting installation of solar panels(2nd)

S

Enacted regulations protecting consumer information

Acquired ISO27001 information security certificate

G

Reviewed the appointment of non-executive directors

Disclosure of information related to ESG

COMPLETING CONSTRUCTION

E

Environmental ISO14001 certificate

Air pollutants and hazardous chemicals management

Monitoring electricity/water usage and waste generation

Construction of the integrated supply chain for reducing the use of cutting oil

Factory energy management system

Construction of solar energy/ESS equipment

S

Quality ISO9001 certificate

Safety Management System (ISO45001)

Periodic safety education

Operating in-house welfare corporation

Established Gilok Scholarship Association

G

Declaring Ethics Management

Transparent accounting management via external audits

Low debt ratio (Under 50%)

Loan of Small Amount (Approximately 1%)

Ethical Management System

SMART FACTORY

Digital Twin K-Smart Lighthouse Factory



Leading Model for heavy equipment and parts industry with diverse types of small quantity

Management Strategy To Satisfy Customers' Needs

3D Design/Optimization of manufacturing process + Maximum productivity
+ Intelligent quality/Establishment of ESG management system

Quality



Quality first policy

Technology



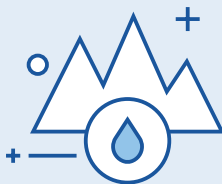
Improving competitiveness

People



Social Contribution

Environment



Nature-friendly management

Safety



Safe working environment

Ethics



Robust corporate culture

Open Innovation Sharing Center



Human

+



Data

+



AI

Collaboration

- Traditional manufacturing techniques
- Based on Toyota System JIT
- Product Design
- Tool Management

- Flexible production management
- Human resources management (Re-education/Retraining)

- Advanced techniques of manufacturing factory management
- Lean manufacturing
- Manufacturing Execution System (MES)

- Overall Equipment Effectiveness (OEE)
- Product Lifecycle Management (PLM)
- Factory Energy Management System(FEMS)

- Advanced Smart Factory
- Service
- AI
- 5G Cloud

- Digital Twin
- AAS * KAMP **
- APS ***

* AAS : Asset Administration Shell

* KAMP : Korea AI Manufacturing Platform

* APS : Advanced Planning and Scheduling

SMART FACTORY

Roadmap

1979

Establishment of Company

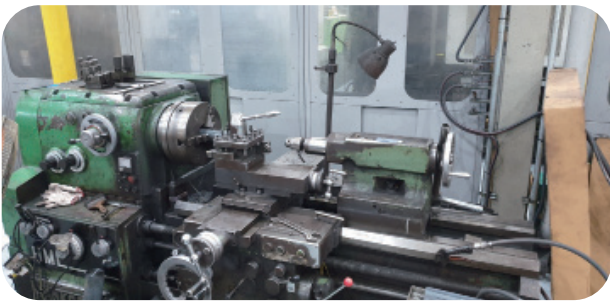
Traditional Manufacturing

2006

Introducing ERP

Transition Period

Traditional manufacturing



1979

Universal processing machine



1985

CNC
MCT

Advanced smart factory



2020

MES



2021

Automation of processing logistics
Data collection for processing facilities
Automation of painting process

2020

Introducing MES

Transformation

2022

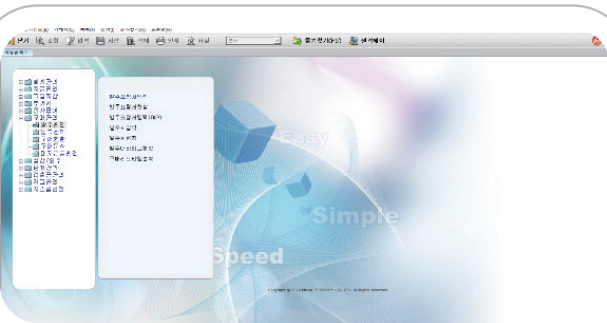
Introducing PLM

2030

Building an integrated

Optimization

Promoting for smart factory conversion



2006

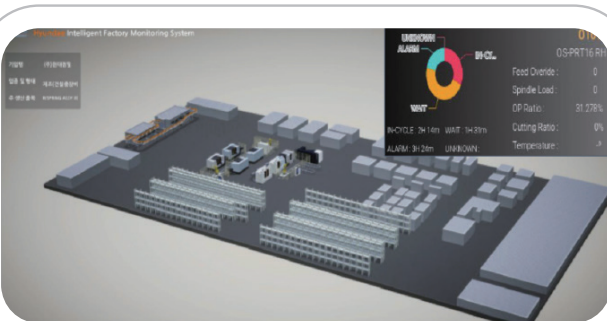
ERP



2019

Automation of processing logistics
Data collection for processing facilities
Automation of painting process

Optimizing smart factory



2022

Building IT security (office building)
Introducing PLM
Building assembly automation
Construction of solar energy / ESS equipment



~2030

Building an integrated information system
Introducing AGV for Smart Logistics
Intelligent equipment control



EXCAVATOR PARTS

IDLER ASSEMBLY
RECOIL SPRING ASSEMBLY
CYLINDER ASSEMBLY
FLANGE COVER END HEAD ROD
SWING DRIVE SHAFT & PINION GEAR

FORKLIFTS PARTS

STEER AXLE ASSEMBLY



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