

Company Introduction

# HANJOO LIGHT METAL

Introducing HANJOO LIGHT METAL  
the solid company that has been  
constantly challenging.



# World Class Global Hidden Champion

한주라이트메탈(주) 대표 | CEO **이용진** Yong-Jin Lee



세계적인 알루미늄 주조 전문회사인 저희 HANJOO LIGHT METAL을 방문해 주신 여러분들께 감사의 말씀을 드립니다.

HANJOO LIGHT METAL 대표 이용진입니다.

HANJOO LIGHT METAL은 한국의 자동차 산업이 국내외의 눈부신 수요로 양적인 팽창기에 접어든 1987년에 설립되어 국내 최고의 업력과 최대규모의 알루미늄 주조 생산능력을 겸비하였습니다. 현재는 미래 친환경 자동차를 비롯하여 다양한 산업에 알루미늄 주조기술을 활용한 초경량화 기술을 제공하고 있습니다. 한주라이트메탈의 초경량화 주조기술은 과거 내연기관의 경량화를 통한 연비절감효과를 넘어서는 자동차 샤시 및 차체의 경량화를 가능하게 합니다.

자동차 부품산업을 주도하는 글로벌 기업으로 발전하기 위해 지난 36년간 축적된 경험과 저희만의 독자적인 주조기술을 연구 개발하여 혁신적인 기술력과 적극적인 투자를 통해 국내 자동차 부품 전문기업으로 눈부신 성장을 거듭하였으며 오랜 기술력과 노하우를 바탕으로 품질혁신 그리고 창의적인 인력양성에 매진하며 더 큰 도전과 혁신을 이루어나가고 있습니다.

고객과 직원, 사회 모두의 상생을 추구하는 한주라이트메탈(주)은 알루미늄 주조 산업, 특히 자동차 부품 산업에서의 주조기술개발에 적극 기여하고, 윤리규정 준수를 통한 정도 경영을 실현하여 사회에 나눔과 공헌을 실천하는 신뢰받는 기업이 될 것을 약속드립니다.

더 나은 세상을 꿈꾸고 글로벌 리더기업으로 자동차 부품산업을 선도하는 HANJOO LIGHT METAL의 앞날에 많은 성원과 관심 부탁드립니다. 감사합니다.

I send my gratitude to everyone who visits Hanjoo Light Metal Co., Ltd., the global aluminum die casting professional.

I am YONG JIN LEE, the representative director of the company.

Hanjoo Light Metal was established in 1987 when the Korean automobile industry entered the quantitatively expanding period due to remarkable domestic and overseas demand. Thus, we have secured the country's most excellent business history and the largest aluminum die casting and production. Currently, we are providing super-light technologies applying aluminum die casting technologies to various industries including future environment-friendly automobiles. The super-light casting technologies enable lightening of automobile chassis and frames through lightening of internal combustion engines beyond fuel reduction.

In order to develop into a global company leading the automobile component industry, we have researched and developed our own unique casting technologies based on the experiences over the past 36 years. Through innovative technologies and proactive investment, we have grown remarkably as a domestic automobile component professional. Based on our technologies and knowhow built over a long period of time as well as cultivation of creative workforce, we are achieving more challenges and innovations.

Hanjoo Light Metal seeks mutual growth of its customers, employees and the society. We promise to proactively contribute to the casting technology development in the aluminum casting industry, especially, in the area of automobile components. We will realize the conscientious management through compliance with our code of ethics. This will enable us to become a trusted company that practices sharing with and contribution to the society.

Please encourage and pay attention to Hanjoo Light Metal that dreams of a better world all the time and leads the automobile component industry as a global leader. Thank you very much.

# CONTENTS

## 01. COMPANY INTRODUCTION

기업소개

Company History 연혁	05
Company Overview 개요	06
Business Strategy 사업전략	08
Organization Structure 조직도	09
Major Customers_Export 주요고객_해외	10
Major Customers_Domestic 주요고객_국내	11
Sales Status_Sales Growth 매출성장현황	12
Sales Status_Sales Analysis 매출현황분석	13

## 04. CERTIFICATION & PATENT

인증 및 특허

ISO&IATF 품질인증	30
Customer Audit 고객인증	31
Patent&Company Certification 특허 및 기업인증	32
Award Certification 수상인증	33

## 02. BUSINESS INTRODUCTION

사업소개

Business Area 사업영역	15
Casting Process_GDC 공정	16
Casting Process_ESDC 공정	17
Counter Pressure Casting Process 공정	18
Casting Process_LPDC 공정	19
Machining Process_Machining Line 가공 공정	21
Products for_Engine Part Components 엔진파트 부품	22
Products for_Chassis Part Components 샤시파트 부품	23
Products for_EV Part Components EV파트 부품	24
Products for_Marine Boat Part Components 해상기파트 부품	25

## 05. ESG Management & SOCIAL CONTRIBUTION

ESG 경영 및 사회공헌

ESG Management	35
Social Contribution	36

## 03. DEVELOPMENT & QUALITY ASSURANCE

개발 및 품질 보증

Product Development Process 제품개발프로세스	27
Quality Assurance Process 품질보증프로세스	28

01

사훈

신용 . 성실 . 창의 개발

한주금속(주)제3공장준공기념  
2003 . 12 . 20

# COMPANY INTRODUCTION

Company History

Company Overview

Business Strategy

Organization Structure

Major Customers\_Export

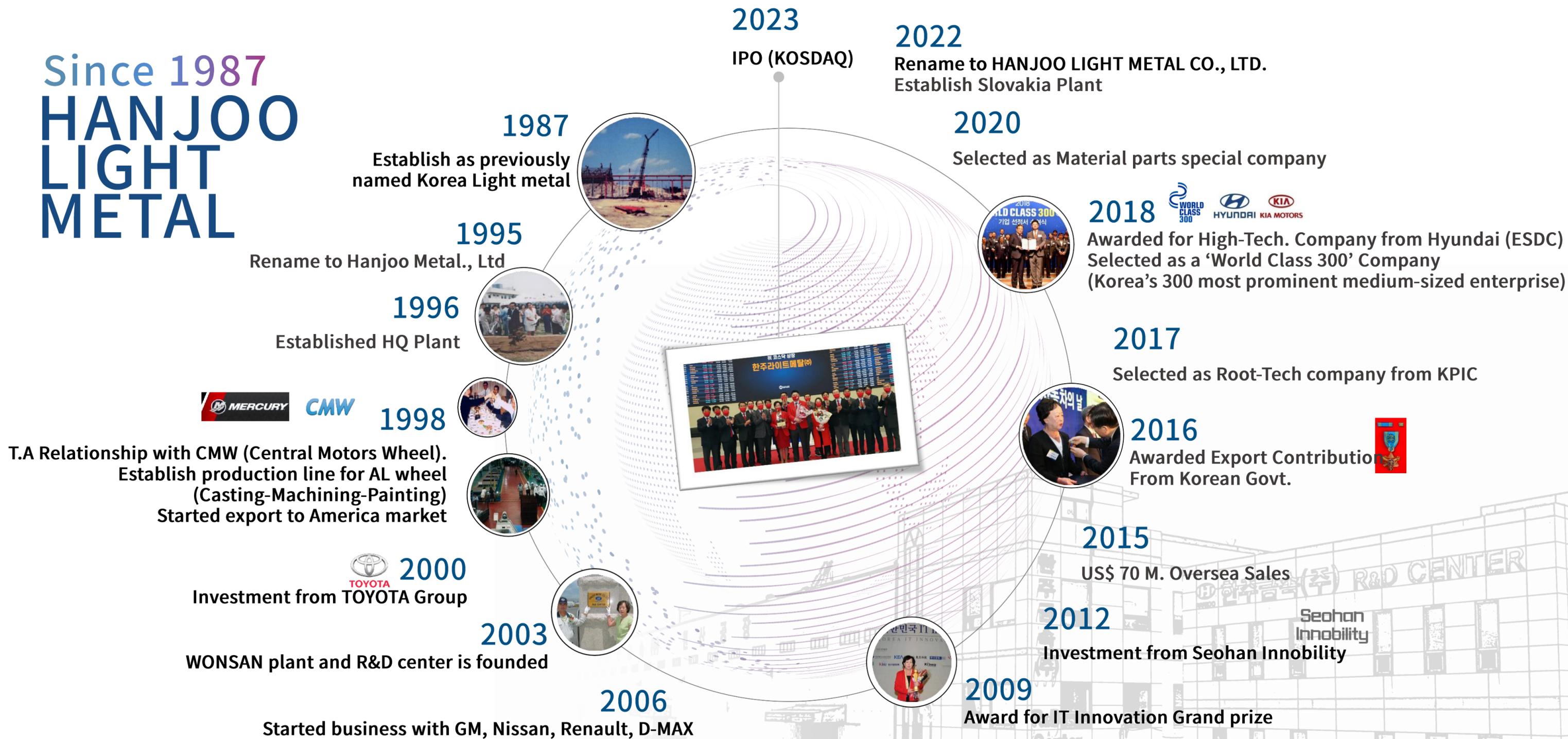
Major Customers\_Domestic

Sales Status\_Sales Growth

Sales Status\_Sales Analysis



# Since 1987 HANJOO LIGHT METAL



Seohan Innobility (주) R&D CENTER



## Company Overview *in Korea*



Warehouse

### Head Quarter and Hwasan Plant

<b>Established year</b>	December 8, 1987
<b>Address</b>	34-5, Hwasan 2-gil, Onsan-eup, Ulju-gun, Ulsan, Republic of Korea
<b>Plant area</b>	15,000m <sup>2</sup>
<b>Staff</b>	72 (Total 183 Including Outsourcing)
<b>Main processes</b>	LPDC, Machining



Warehouse

### Wonsan Plant

<b>Established year</b>	December 20, 2003
<b>Address</b>	69, Sannam-gil, Onsan-eup, Ulju-gun, Ulsan, Republic of Korea
<b>Plant area</b>	27,000m <sup>2</sup>
<b>Staff</b>	191 (Total 436 Including Outsourcing)
<b>Main processes</b>	GDC, LPDC, ESDC, Machining and Assembling

# Company Overview in Europe

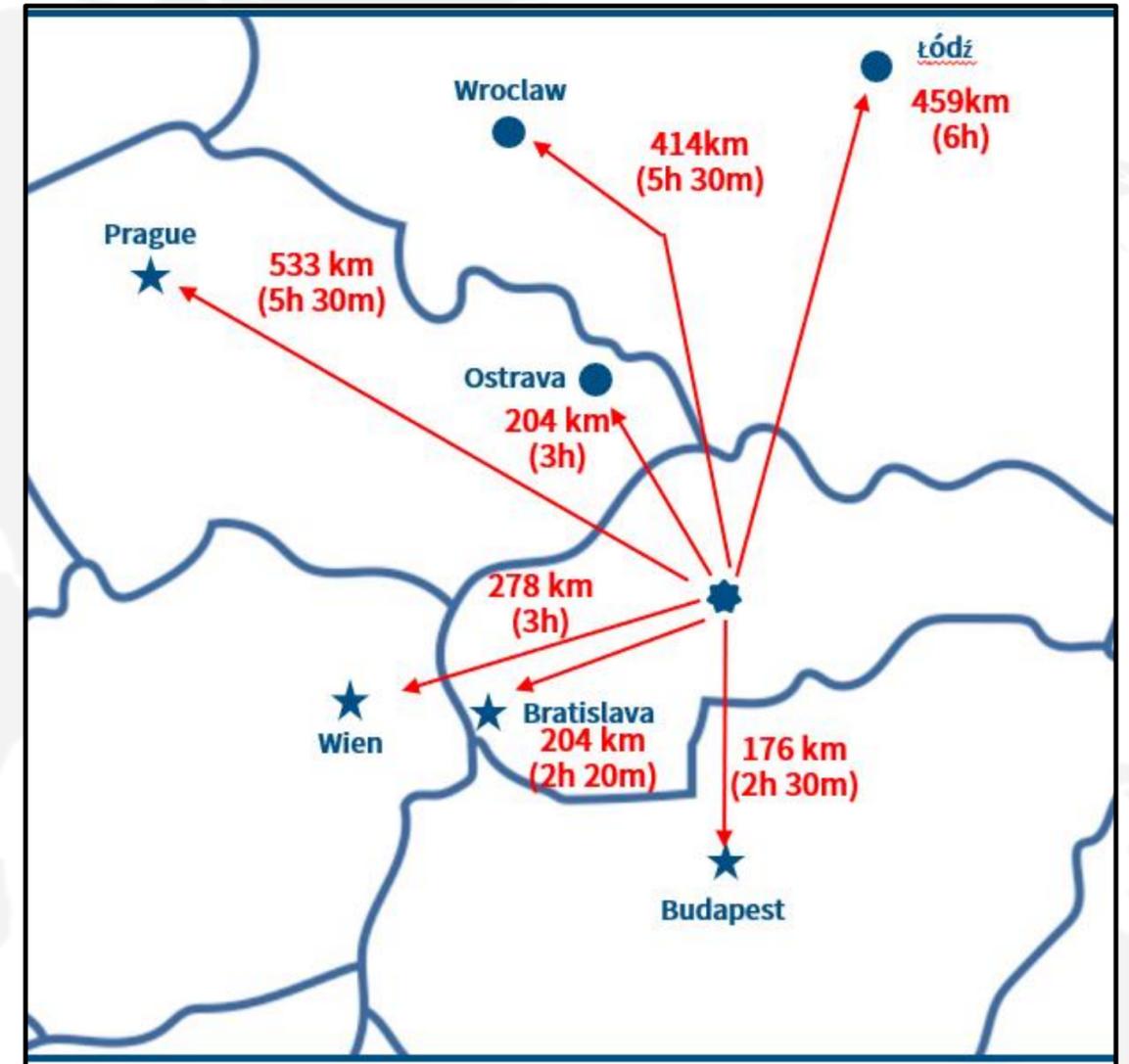


## Slovakia Plant

Established Day	Feburary, 2022
Location	Vlkanová, Slovak Republic
Plant Area	8,893m <sup>2</sup>
Staff	48 (18 officers & 30 Operators)
Main Process	CPC, LPDC, Machining

### Distance to main customers

Customer	Location	Distance
Iljin Slovakia	Prievidza	80km (1h)
Mobis Slovakia	Gbel'any	100km (1h 40m)
Mobis Czech	Ostrava	204 km (3h)
D Company Czech	Ostrava	204 km (3h)
V Company Slovakia	Bratislava	210 km (2h 20m)
V Company Hungary	Győr	220 km (2h 30m)
L Company Poland	Wrocław	414 km (5h 30m)
	Łódź	459 km (6h)





# Business Strategy

## MISSION

- Innovative Eco-friendly product
- Customer satisfaction with new products
- Leading the future industry with new technologies

## VISION

Building an overwhelming global leader with AL casting expertise

### Agenda for Vision

- A Spirit of challenge unafraid of failure
- Technology accumulation for the next generation
- IT based information system
- Expanding the global business industry

## COMPANY MOTTO

**TRUST**

Trust, Consideration, Cooperation

**SINCERITY**

Master mind, Challenge, Professional Spirit

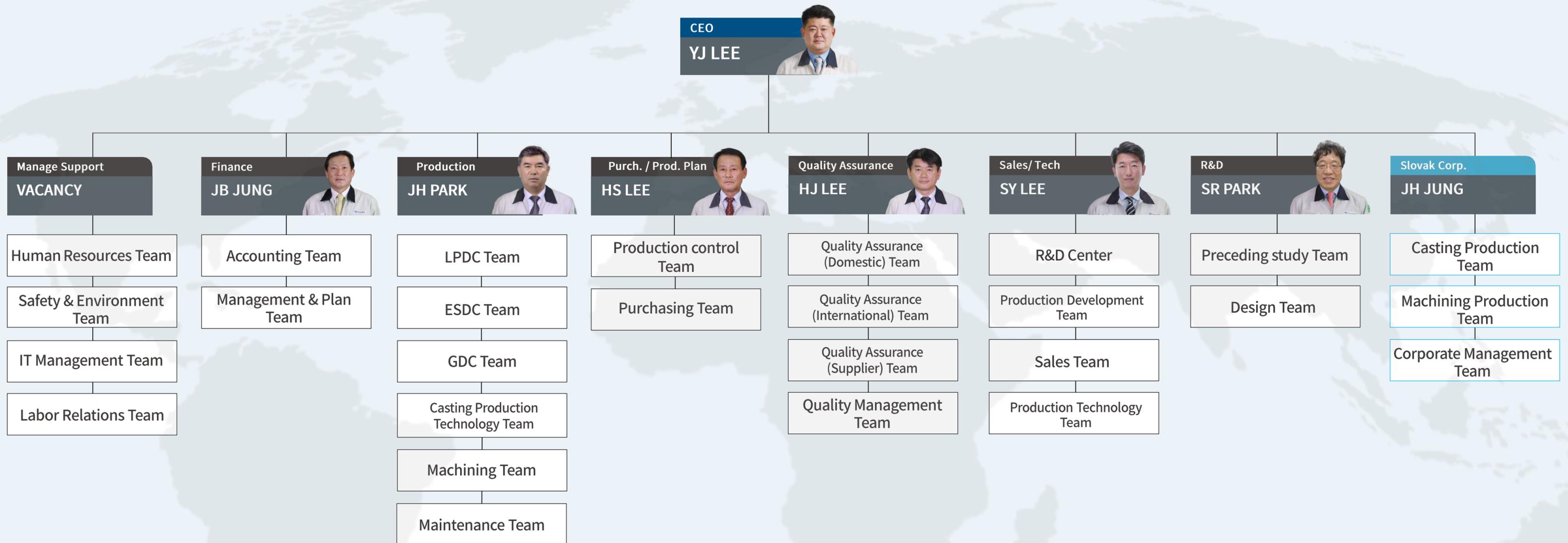
**CREATION**

Creation, Innovation

**GREEN**

Ethical Management, Eco-friendly design

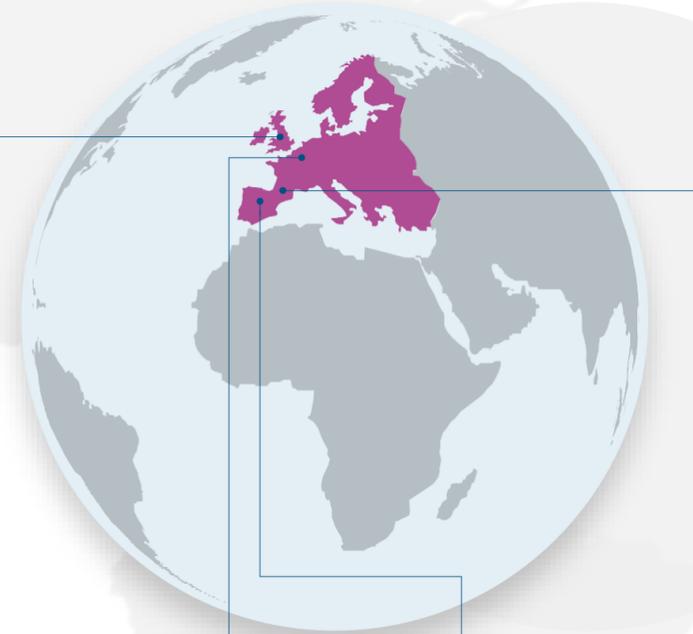
# Organization Structure





# Major Customers - Export

## EUROPE



U.K.	Germany	Spain	France

## ASIA



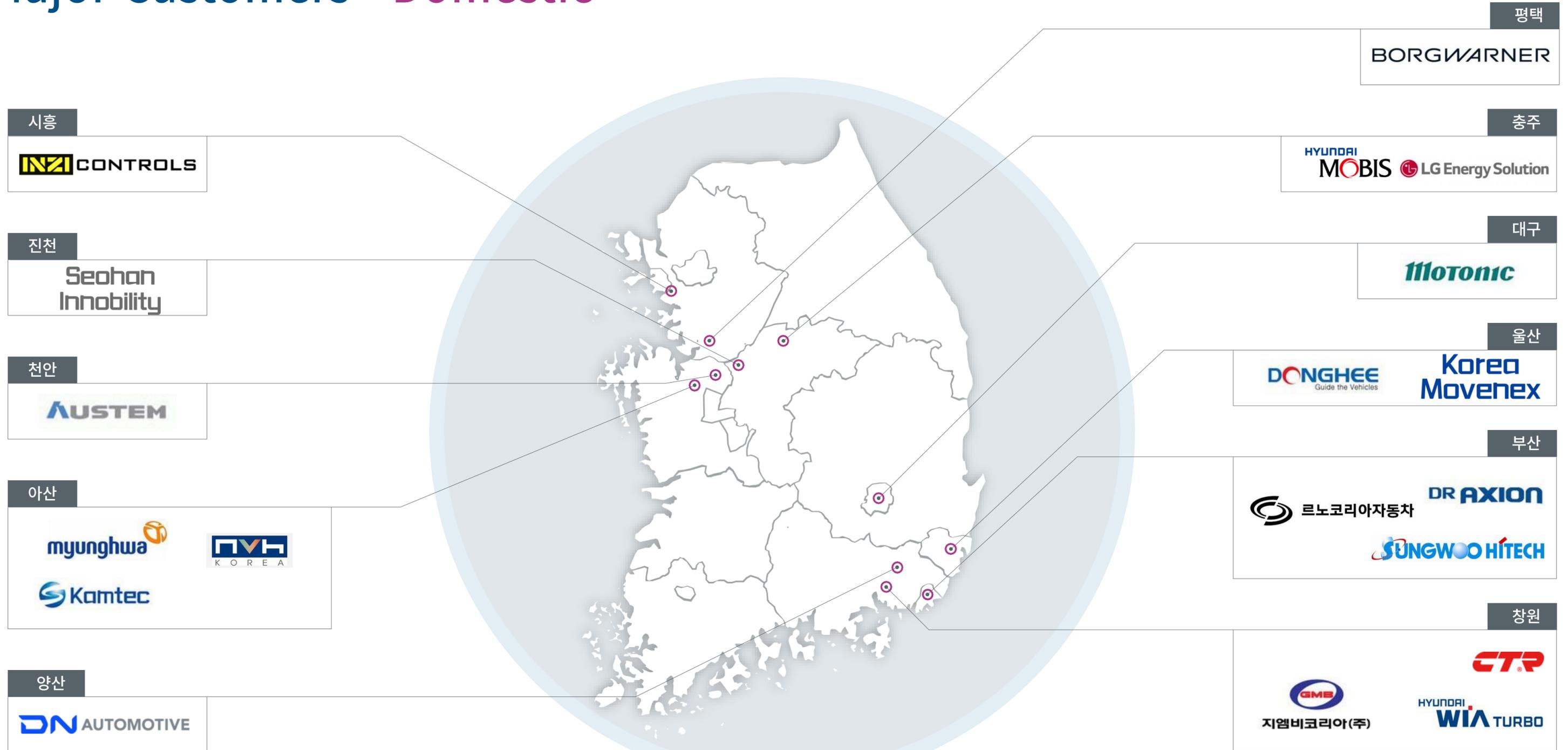
China	Japan
  上汽集团 SAIC MOTOR	      

## NORTH AMERICA



Canada	U.S.A

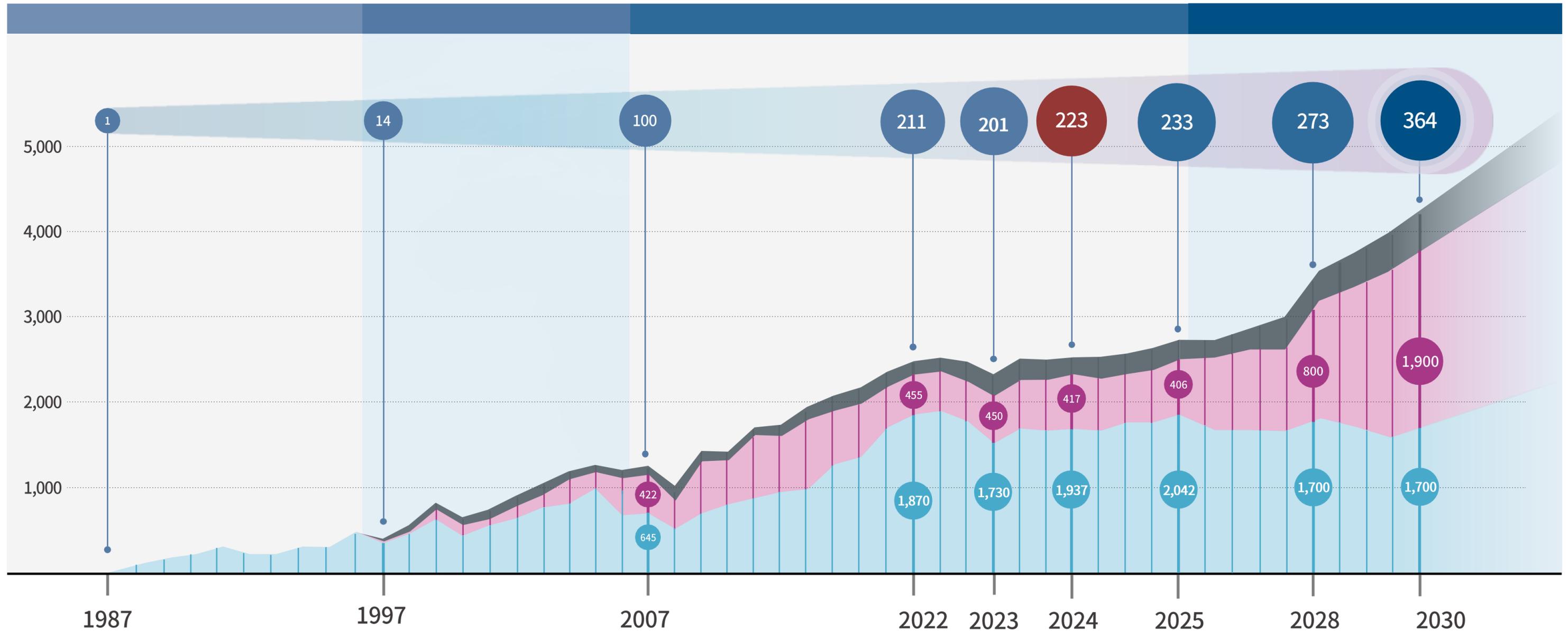
# Major Customers - Domestic





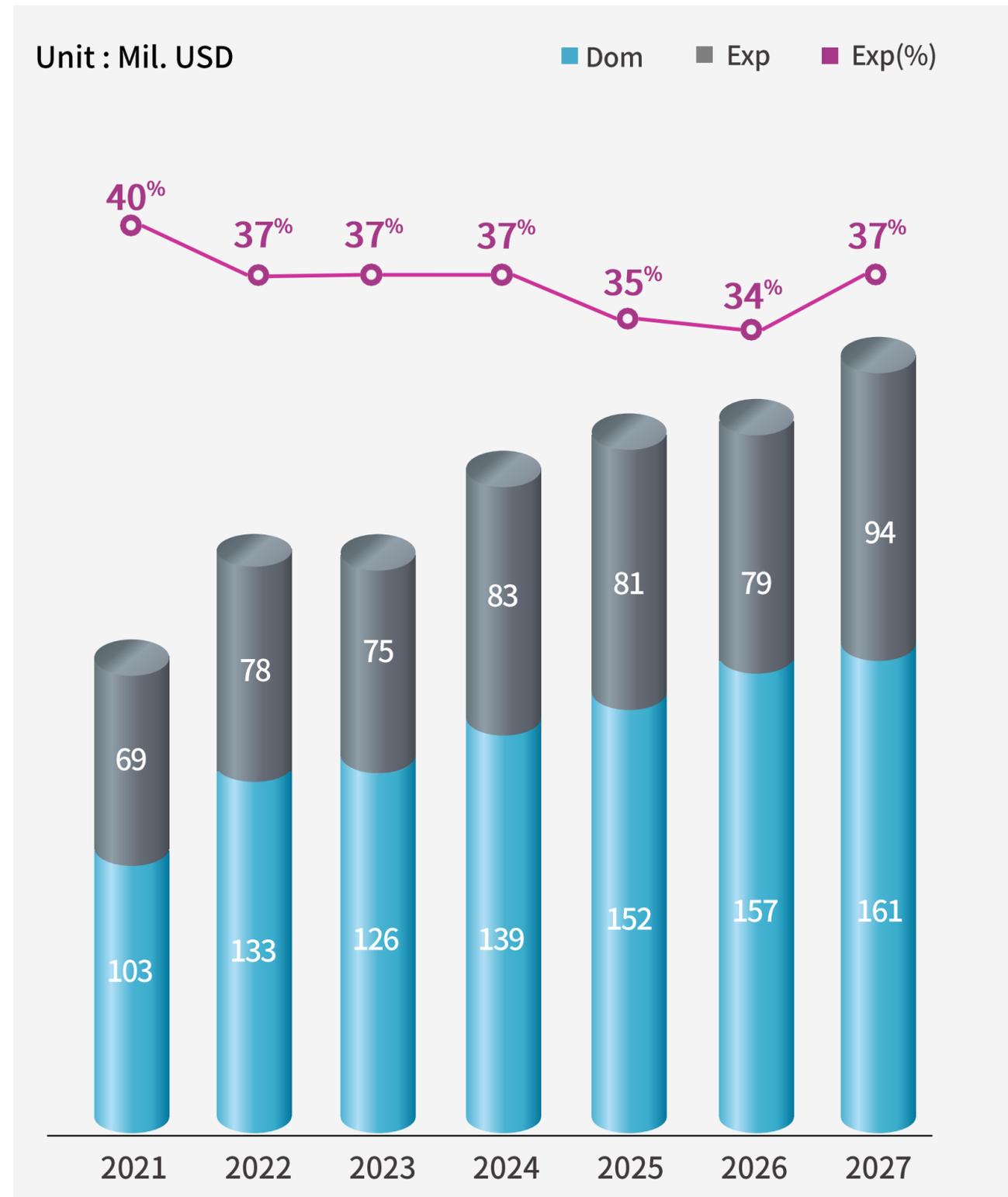
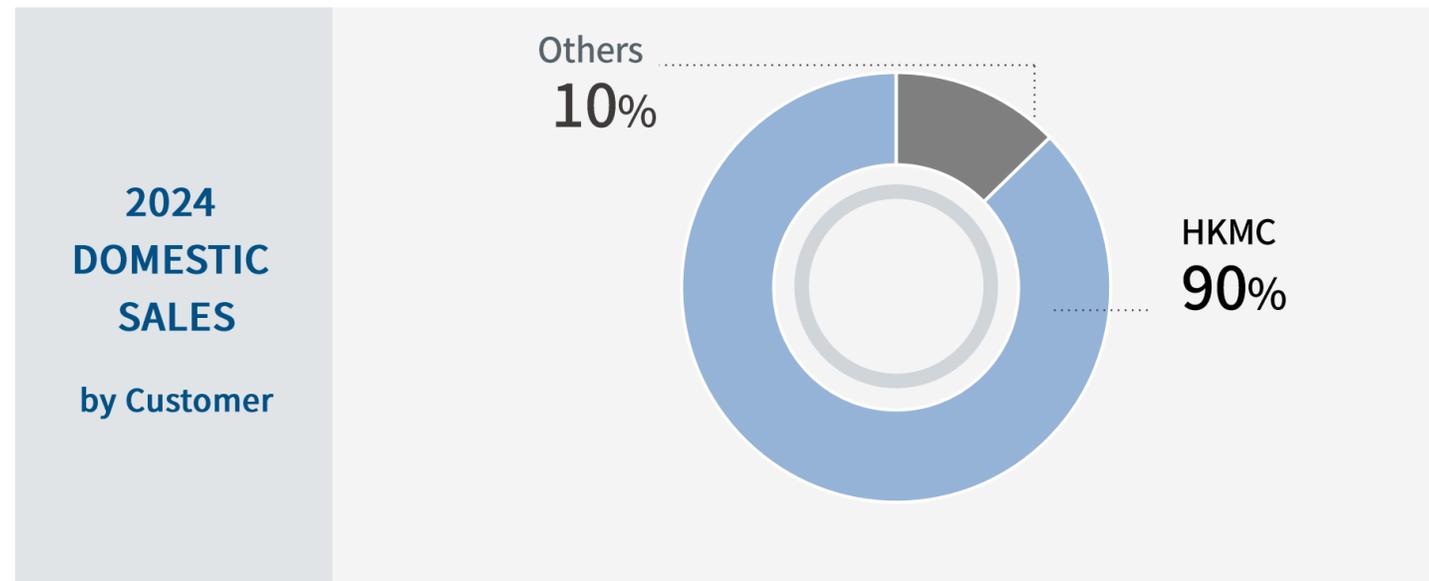
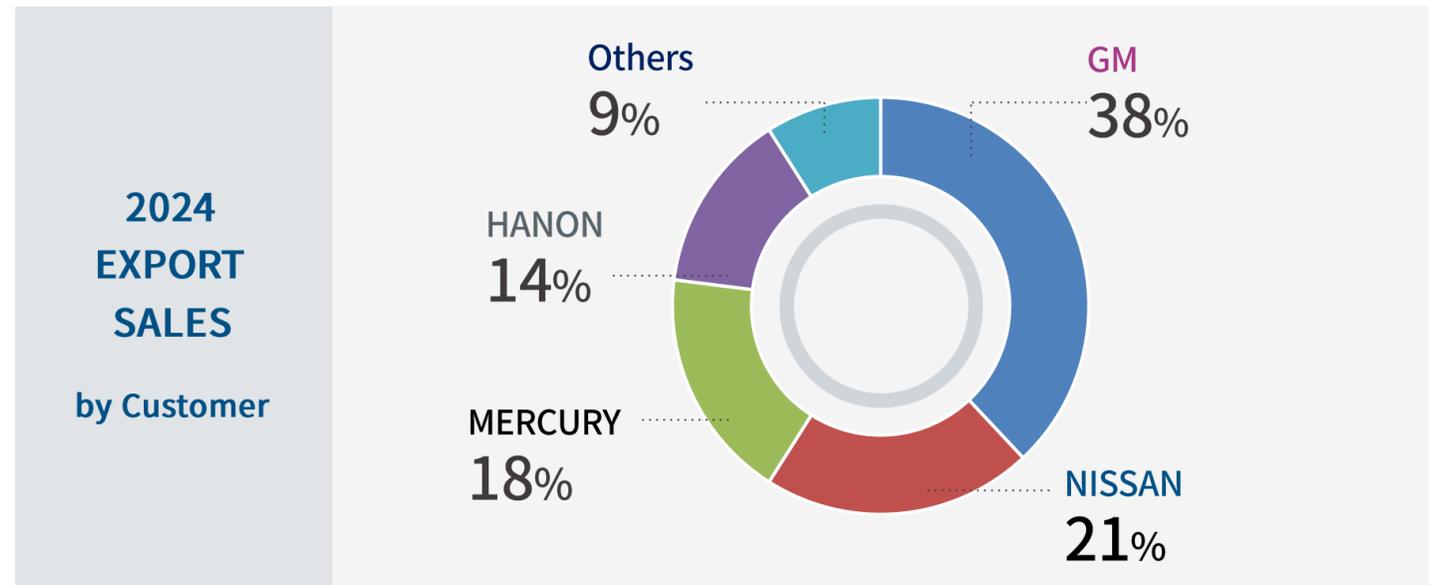
# Sales Growth

■ HQ ■ WONSAN ■ Etc.  
Unit Mil. USD





# Sales Analysis



# 02

## BUSINESS INTRODUCTION

Business Area

Casting Process\_ESDC

Casting Process\_LPDC

Casting Process\_CPC

Casting Process\_GDC

Machining Process\_Machining Line

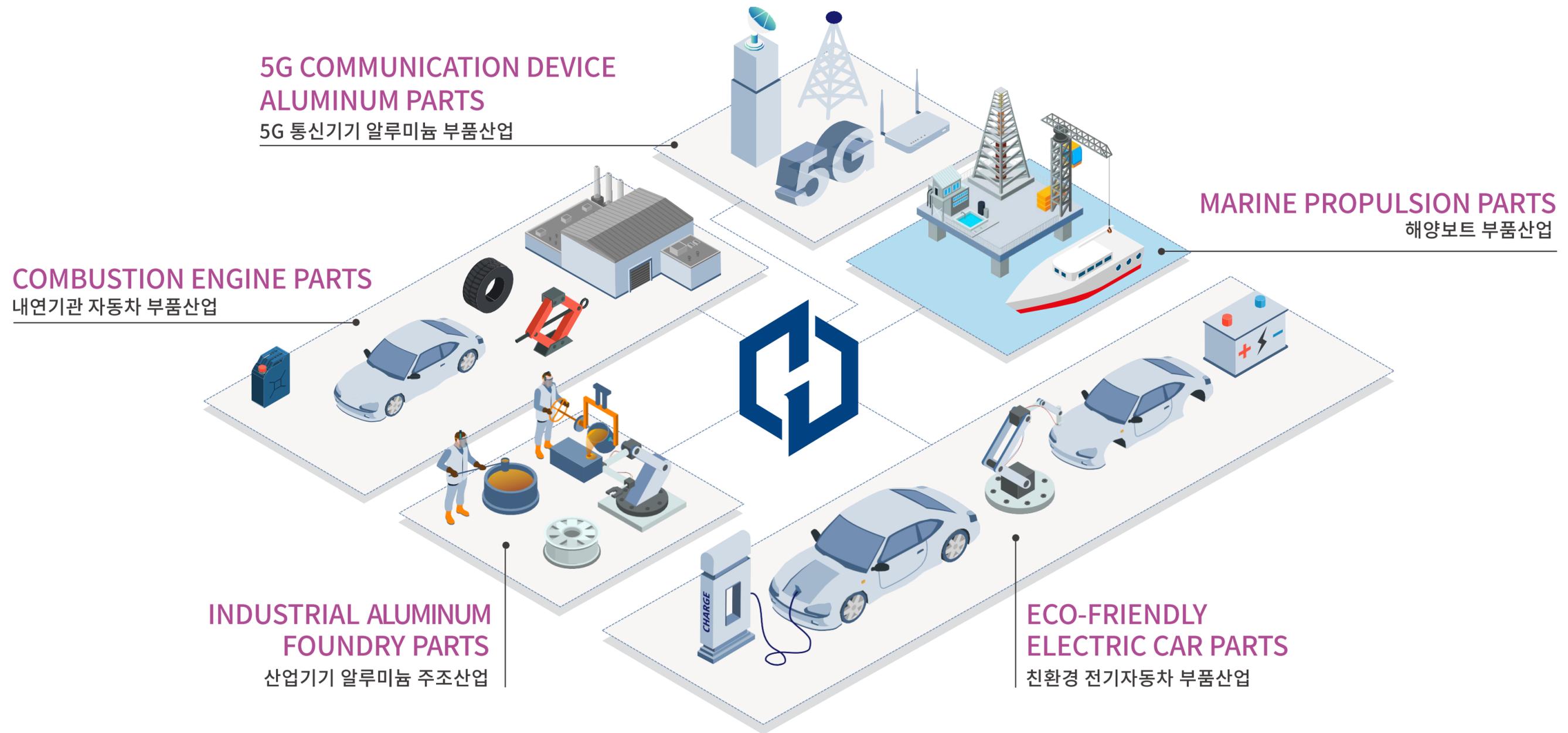
Products for\_Engine Part Components

Products for\_Chassis Part Components

Products for\_EV Part Components

Products for\_Marine Boat Part Components

# Business Area

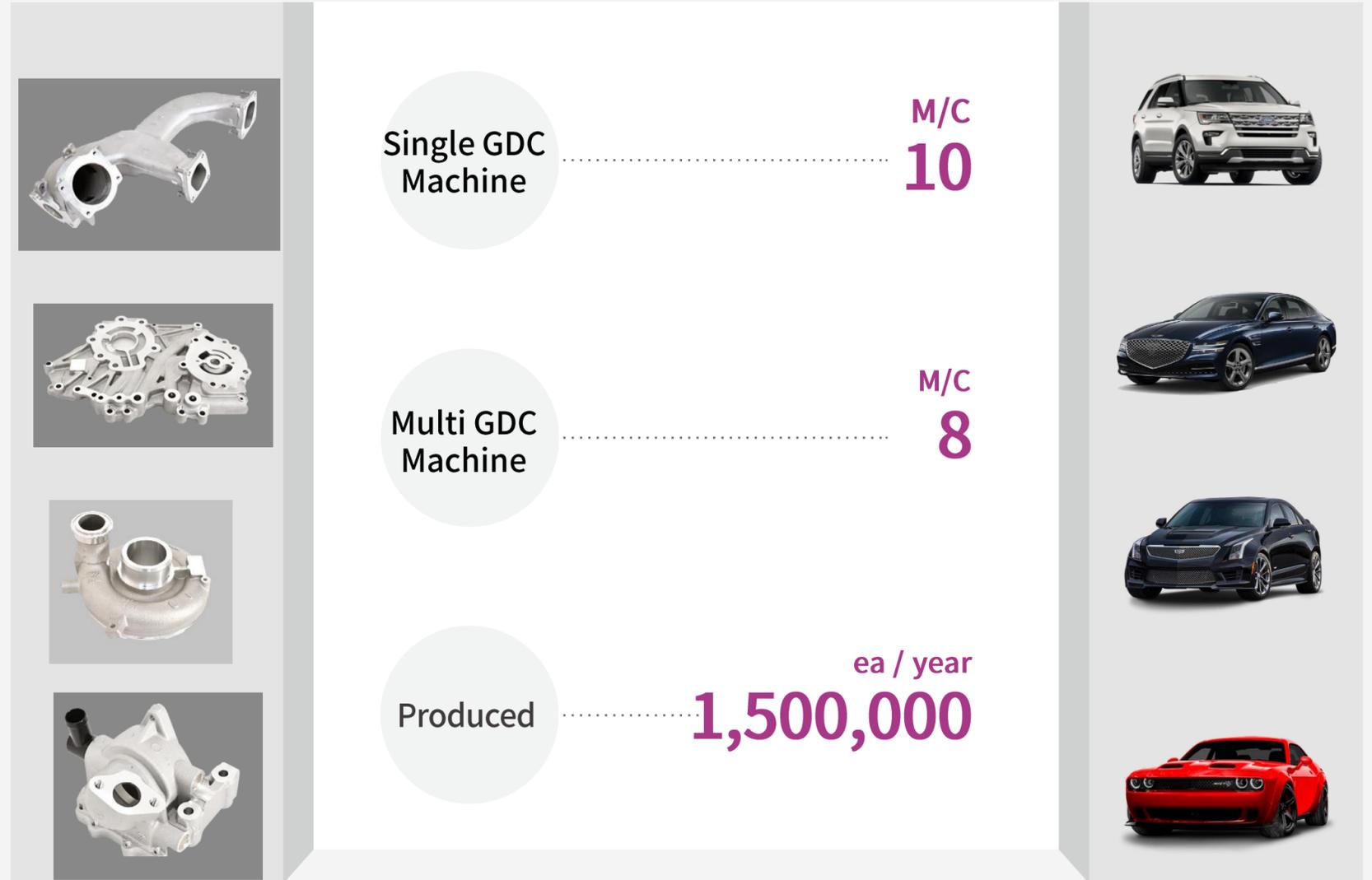


**GDC** Gravity Die Casting

# Intake Manifold, Water & Oil pump, Compressor / EGR Housing

More than 3,000 types of parts, including housing, pipes, tubes, etc. which are required for fuel/ intake & exhaust /cooler etc.

We manufacture low-cost, high-productivity, high-quality products to provide global customers with innovative gravity casting method development such as multi-gravity casting lines.



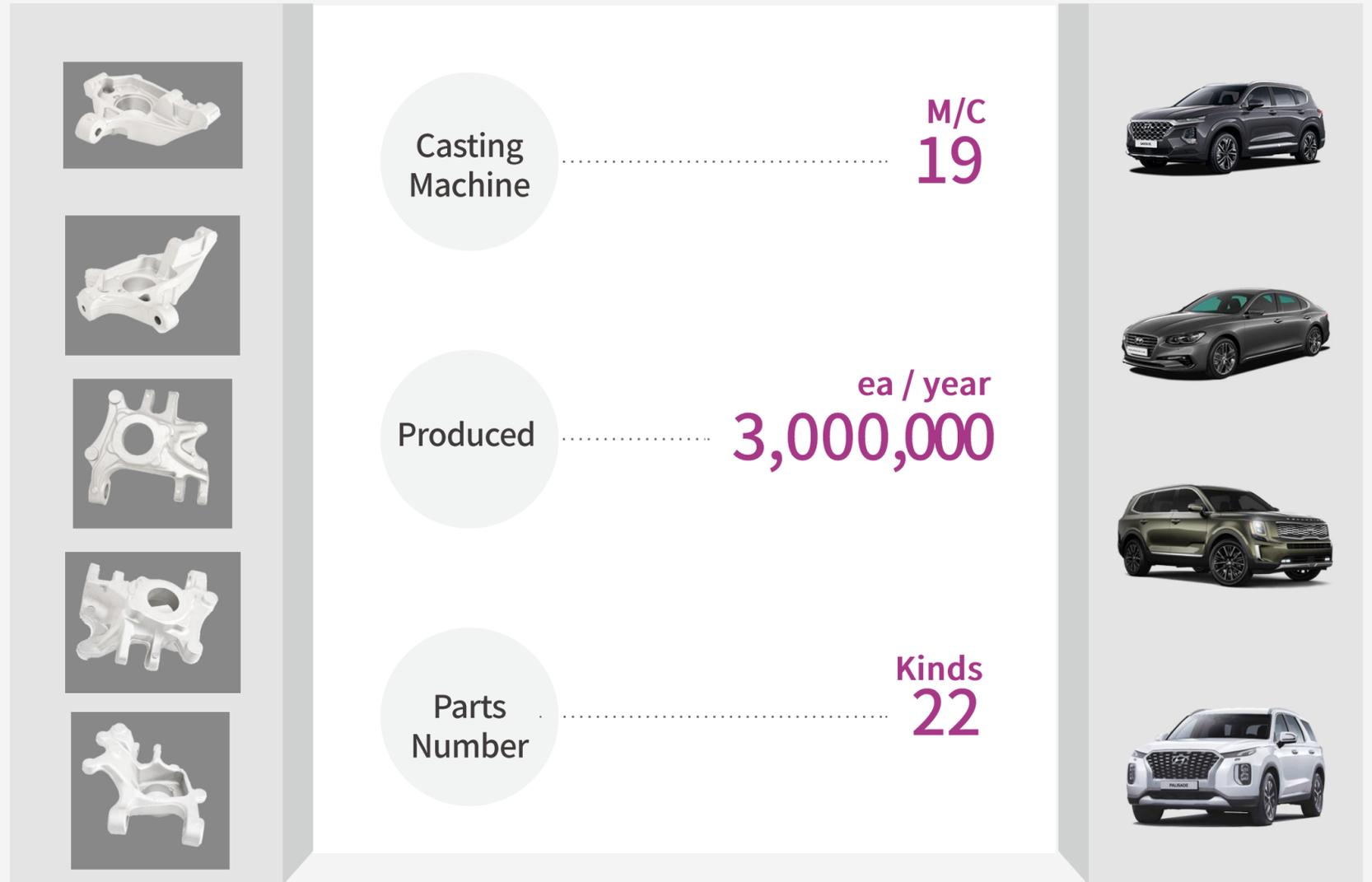
Weight ↓ Performance ↑ Cost ↓

## ESDC Electro - Magnetic Stirring Die Casting

### Knuckle & Carrier

The knuckle and carrier are very important safety components that make up the vehicle, connecting the frame to the axle to hold up the vehicle's load, absorb vibration from wheels, and steering.

We apply high magnetic power to A356 aluminum alloy materials to produce high-strength, high-ductility AL parts. This fine grain and minimized Si segregation micro-structure AL parts are being provided to global customers.

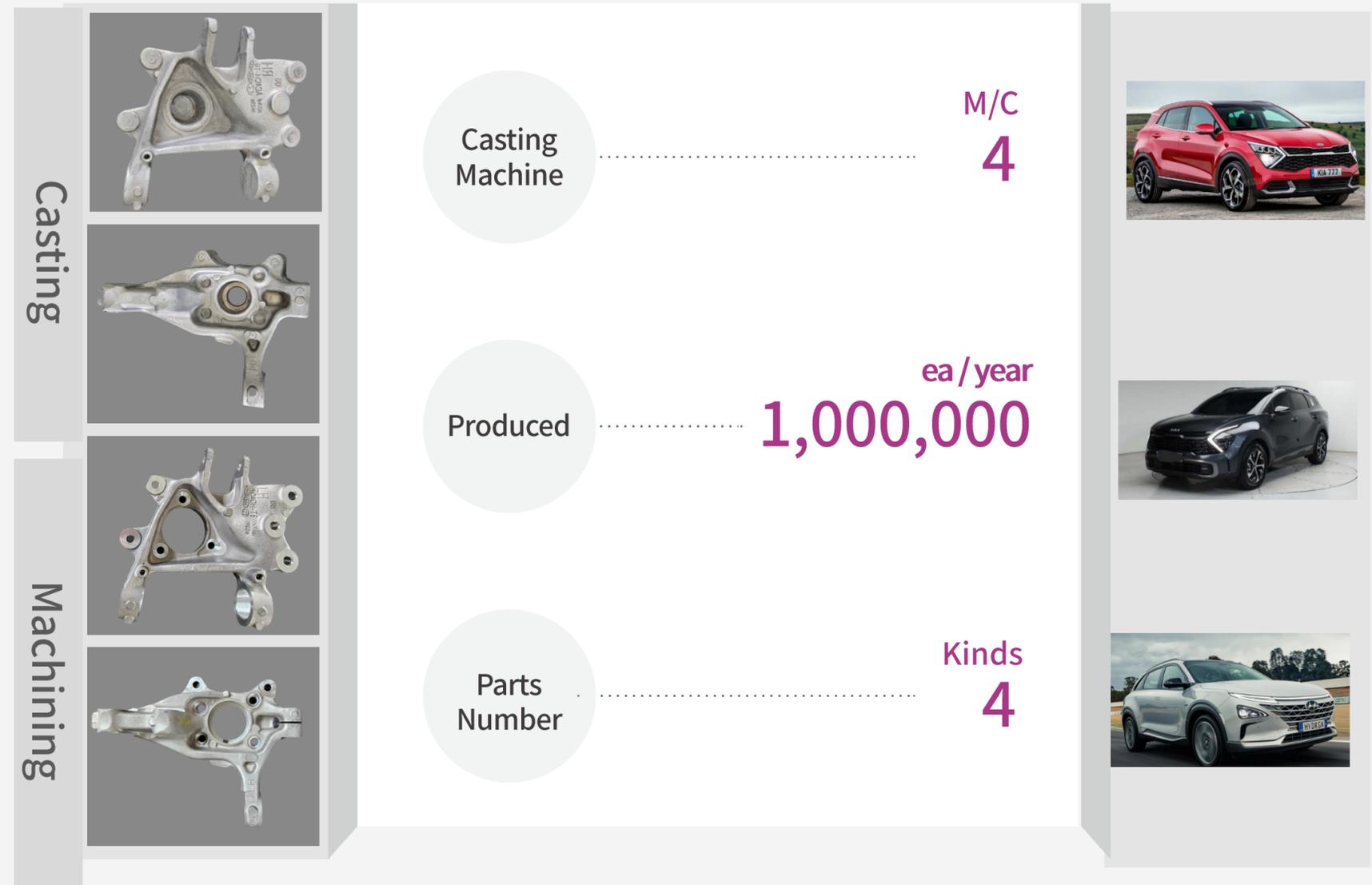


**CPC** Counter Pressure die Casting

# Knuckle & Carrier

Counter pressure casting method is an improved method of low pressure casting method, which injects molten metal into the mold using pressure difference obtained by applying different pressure to the holding furnace and the mold chamber.

Our Slovakia plant combines specialized methods such as multicavity casting and hollow casting through core insertion to produce and manufacture high-strength, high-ductility knuckle and lower arm and supplies them to European global companies.







**LPDC** Low Pressure Die Casting

# Battery Case, EV Housing, Subframe, Control Arm, knuckle

The battery case, is being extended to apply to electric vehicles. It not only requires high durability when it assembles to the vehicle, but it also isolates and protects the battery pack from external hazards that may occur while driving.

We manufacture battery cases, EV housing, sub-frame, swivel bracket, and low pressure knuckle that uses AL large-scale low-pressure casting technology to provide global customers.



**Casting Machine** ..... M/C **19**

**Produced** ..... **1,200,000** ea / year

**Maximum Size** ..... **2300 x 1600** mm

**Weight** ↓

**Performance** ↑

**Cost** ↓

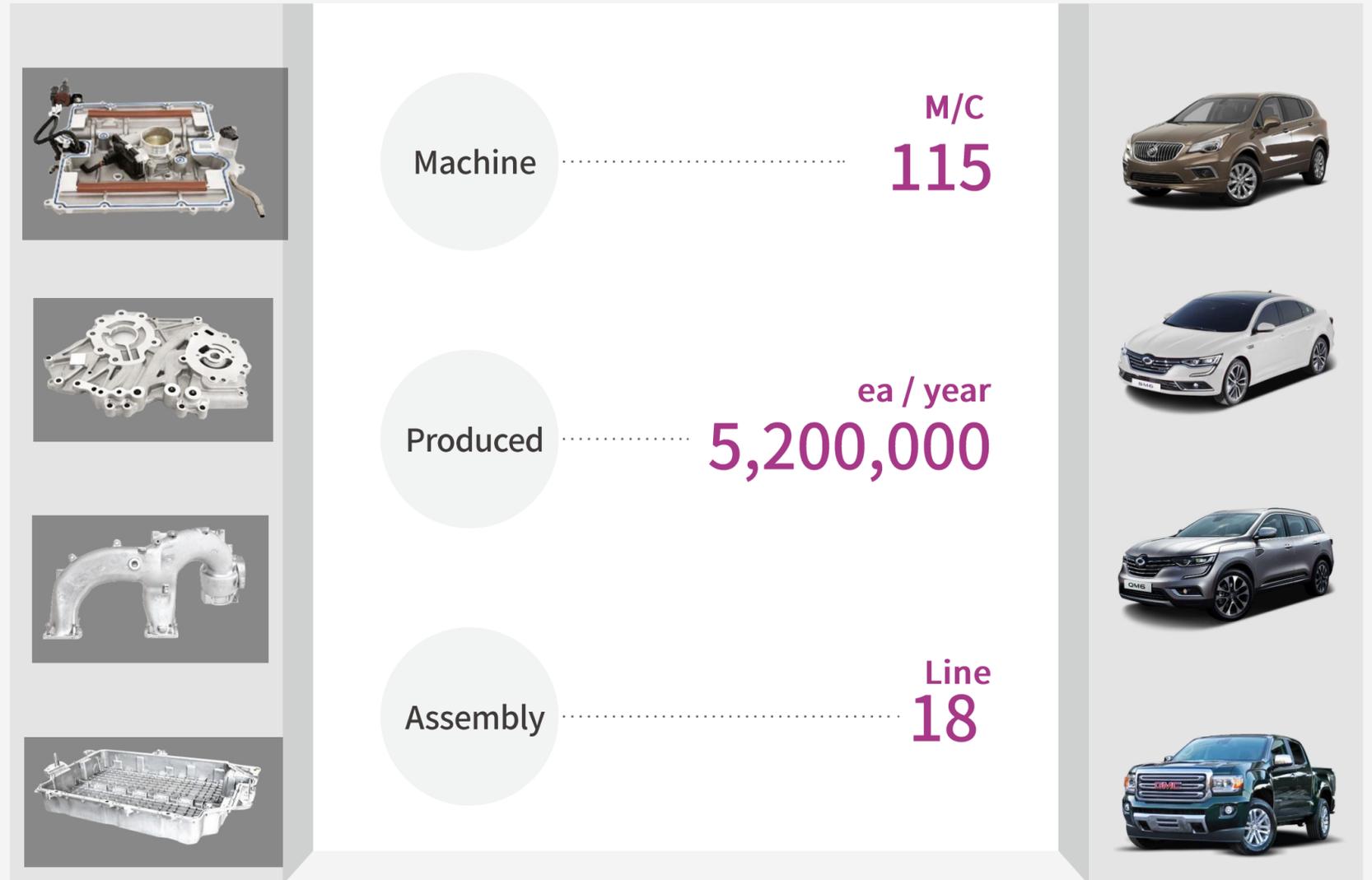
# LPDC Machine Type

Type	LPS (Low Pressure for Small)	LPM (Low Pressure for Medium)	LPL (Low Pressure for Large)	LPU (Low Pressure for Ultra-size)
Facility				
Permissible mold size (L*W) (unit: mm)	1,060 * 900	1,160 * 1,060	1,700 * 1,350	2,300 * 1,600
Applicate Parts	<p>Control Arm / Motor Housing (1 Cavity)</p> 	<p>Cross Member (1 Cavity)</p>  <p>480 mm 750 mm</p> <p>Battery Case (1 Cavity)</p>  <p>1.3m</p>	<p>Arm / Knuckle · Carrier (4 Cavity)</p> 	<p>Body &amp; Chassis Parts</p> <p>Integral Type of X-Member</p> 

# Machining Line

## Tapping Center, Machining Center, CNC Lathe

From small to large components, precision machining is performed to meet the customer requirements including leak test and function/ performance inspection. Based on AL precision processing technology, our company builds ONE-STOP processes from raw materials, casting, machining, Inspection and shipment to provide our products with global customers.

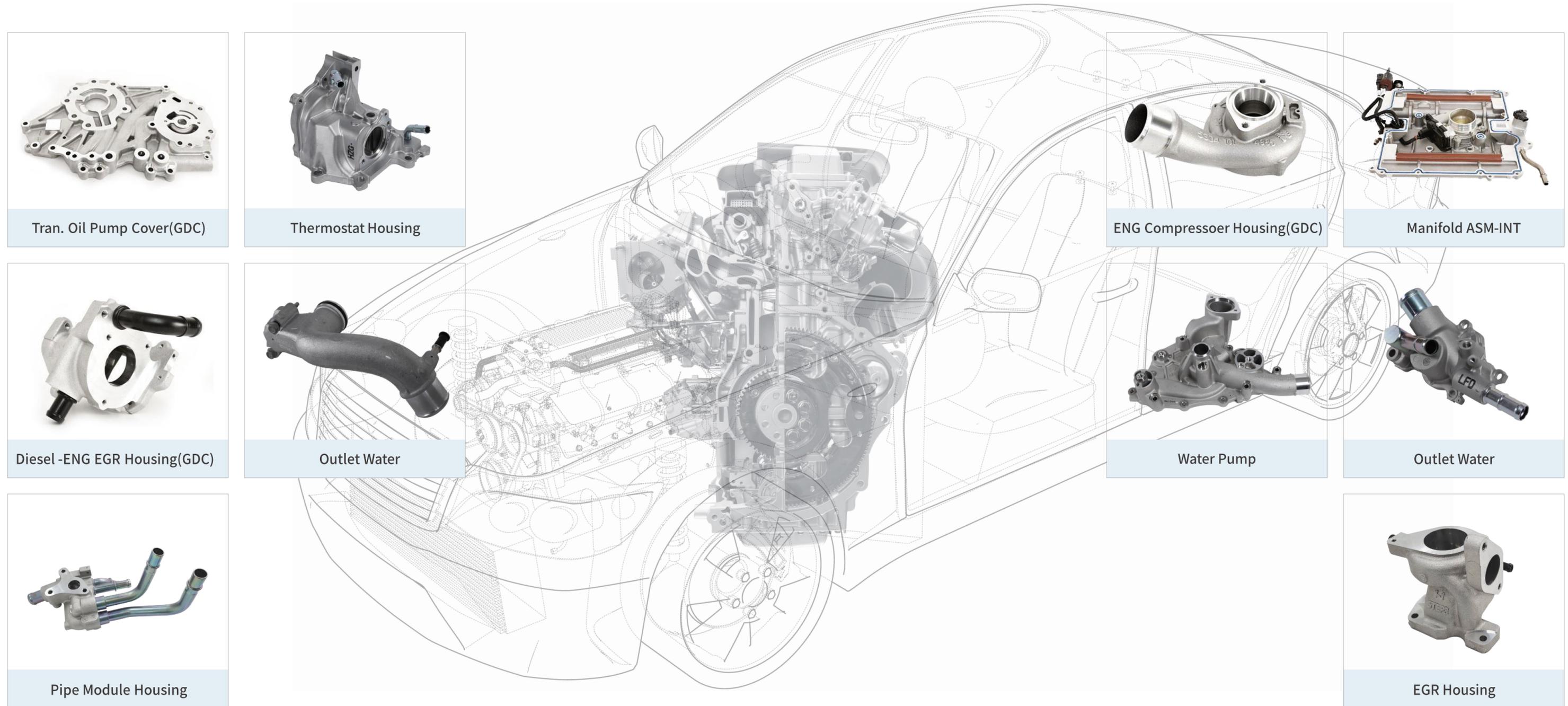


Weight

Perfomance

Cost

# Business-1 Engine Components



Tran. Oil Pump Cover(GDC)

Thermostat Housing

Diesel -ENG EGR Housing(GDC)

Outlet Water

Pipe Module Housing

ENG Compressoer Housing(GDC)

Manifold ASM-INT

Water Pump

Outlet Water

EGR Housing



## Business-2 Chassis Components


SUV Knuckle (2WD)

Large Sedan Carrier

SUV Carrier

SUV Carrier

SUV Knuckle (4WD)

SUV Knuckle (4WD)

Subframe

Bimetal Brake Rotor

Front Knuckle (LPDC)

Lower/Upper Bracket

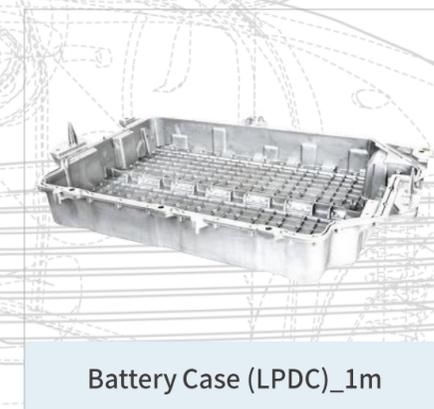
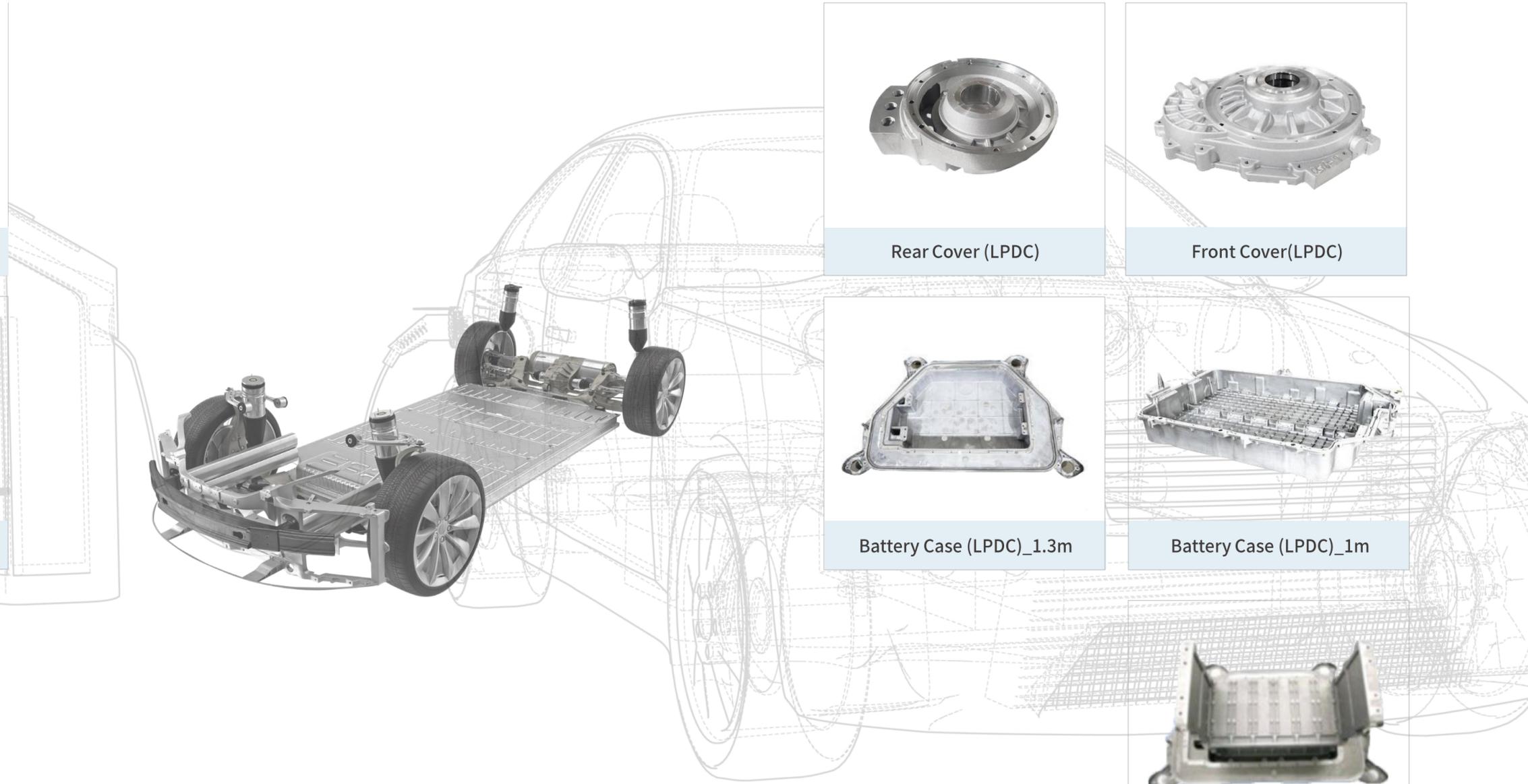
Damper Fork

Center Floor Tunnel

Upper Control Arm

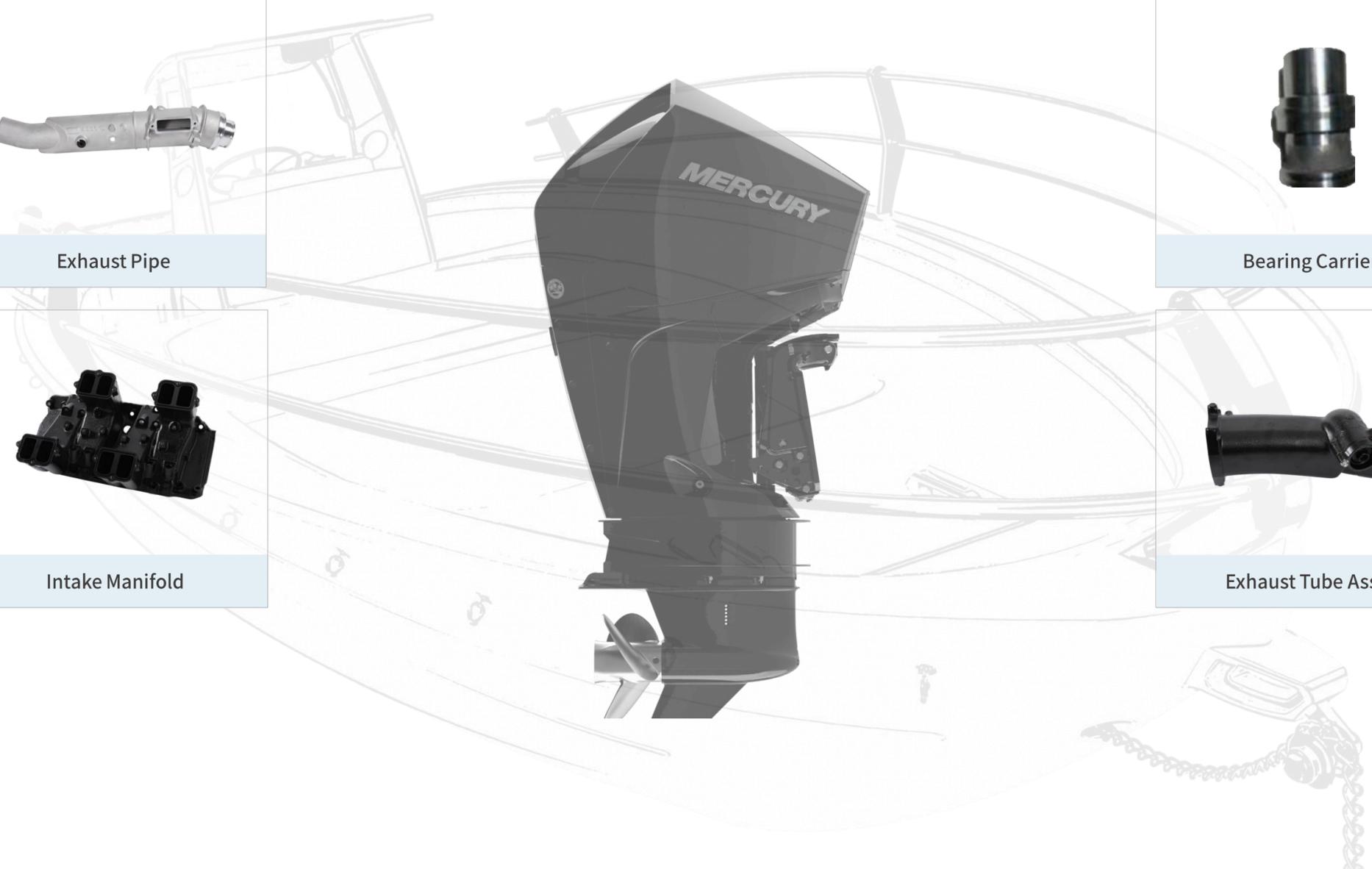
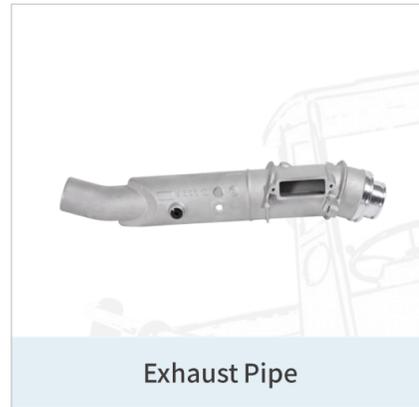
Hollow Knuckle

# Business-3 EV Components





## Business-4 Marine Boat Components



Coordinate Measuring Machine

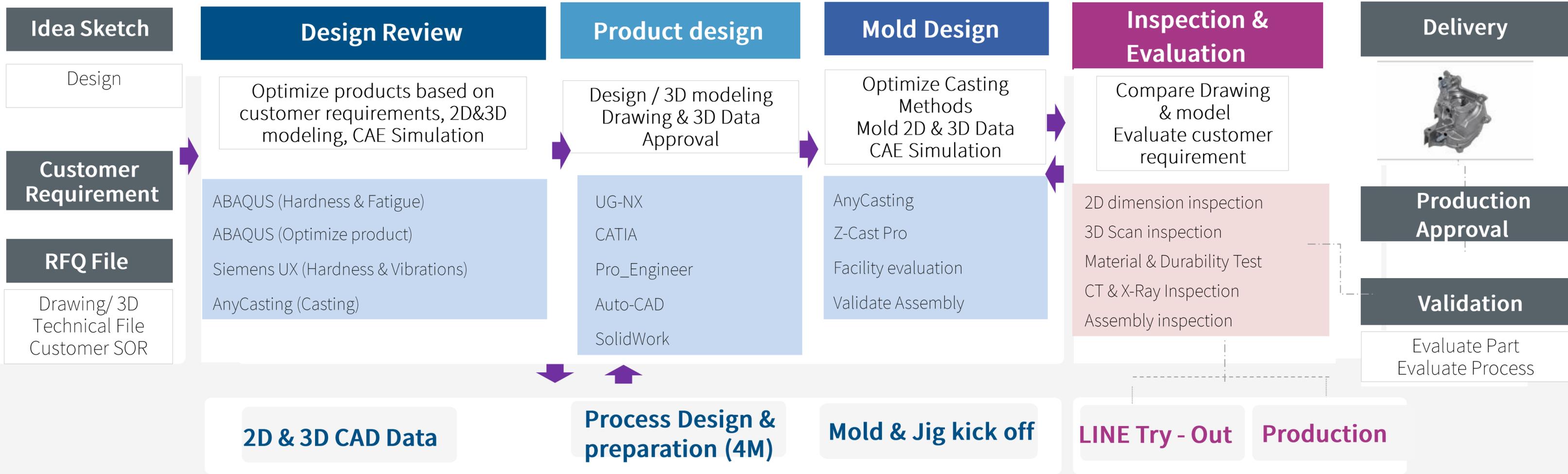
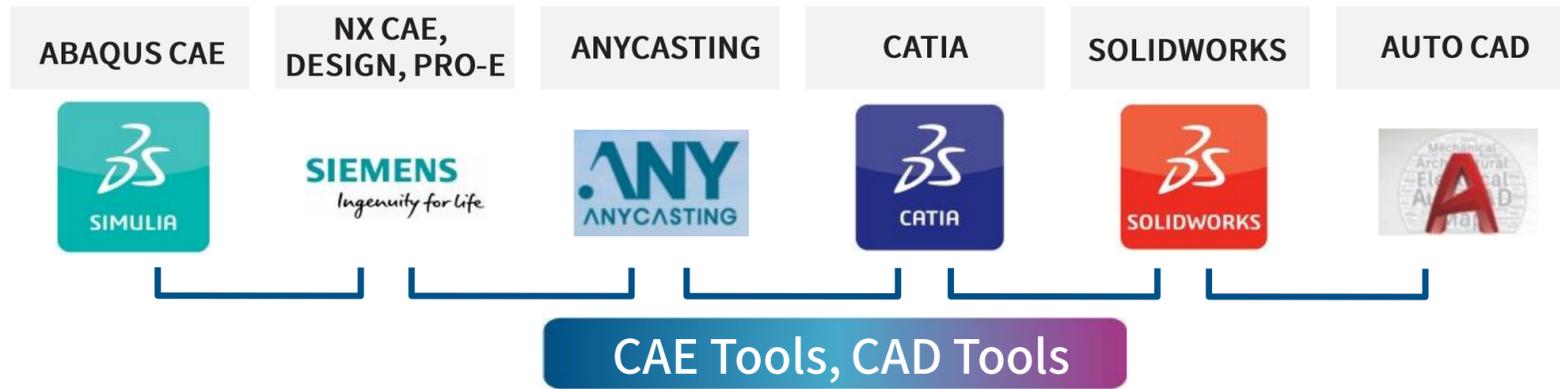
03

# DEVELOPMENT & QUALITY ASSURANCE

Product Development Process

Quality Assurance Process

# Product Design & Development





# Quality Assurance Process



## Material & Sub part mgmt.

- Material Property Evaluation
- Incoming Inspection
- Special management of important imported parts INGOT/Sand

## Sub supplier mgmt

- Periodic quality exchange meeting
- Technical support to sub supplier
- Regular system and part audits

## Warranty mgmt

- Early Production control System
- GP12
- Z-Quality Control Activity
- Inspector incentive

## Production process control

- MES Data Management System
- Frequent inspection / Process inspection
- In-line Auto dimension inspection
- BARCODE Production record system

## Part evaluation & warranty mgmt

- CMM dimension inspection
- ADR X-RAY inspection
- CT analysis (Internal defect)
- 3D Scan (Part Shape)

## Part durability test mgmt

- Impact Test
- Fatigue Test
- Durability Test from external test agencies



04

## CERTIFICATION & PATENT

ISO & IATF

Customer Audit

Patent & Company Certification

Award Certification



# ISO & IATF

Hanjoo Light Metal Co., Ltd. secures internal and external reliability by handling systematic manuals in corporate operation and customer response, Product productivity and quality are maintained at the highest level.

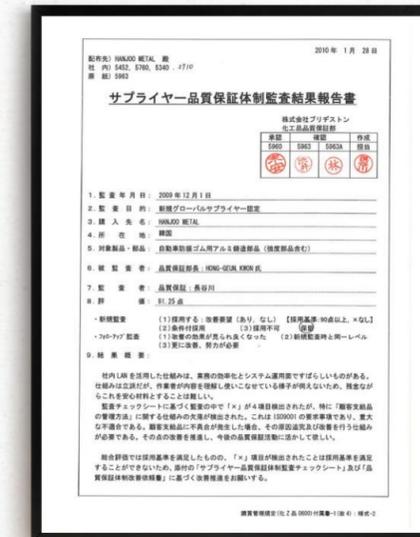
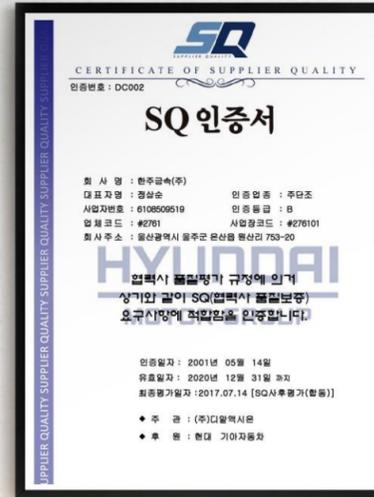
- ISO 9001 : 2015 (Hwasan Plant)  
PRODUCTION OF ALUMINUM DIECASTING PARTS FOR MOTOR BOATS AND INDUSTRIAL USES
- IATF 16949 : 2016 (Hwasan Plant)  
PRODUCTION OF ALUMINUM DIECASTING PARTS
- ISO 14001 : 2015 (Hwasan Plant)  
MANUFACTURE OF ALUMINUM DIECASTING PARTS FOR MOTORBOAT AND AUTOMOTIVE APPLICATIONS AND ALUMINUM WHEELS FOR AUTOMOTIVE APPLICATIONS
- ISO 45001 : 2018 (Hwasan Plant)  
PRODUCTION OF ALUMINUM DIECASTING PARTS
- ISO 9001 : 2015 (Wonsan Plant)  
PRODUCTION OF ALUMINUM DIECASTING PARTS FOR MOTOR BOATS AND INDUSTRIAL USES
- IATF 16949 : 2016 (Wonsan Plant)  
PRODUCTION OF ALUMINUM DIECASTING PARTS
- ISO 14001 : 2015 (Wonsan Plant)  
MANUFACTURE OF ALUMINUM DIECASTING PARTS FOR MOTORBOAT AND AUTOMOTIVE APPLICATIONS AND ALUMINUM WHEELS FOR AUTOMOTIVE APPLICATIONS
- ISO 45001 : 2018 (Wonsan Plant)  
PRODUCTION OF ALUMINUM DIECASTING PARTS





# Customer Audit

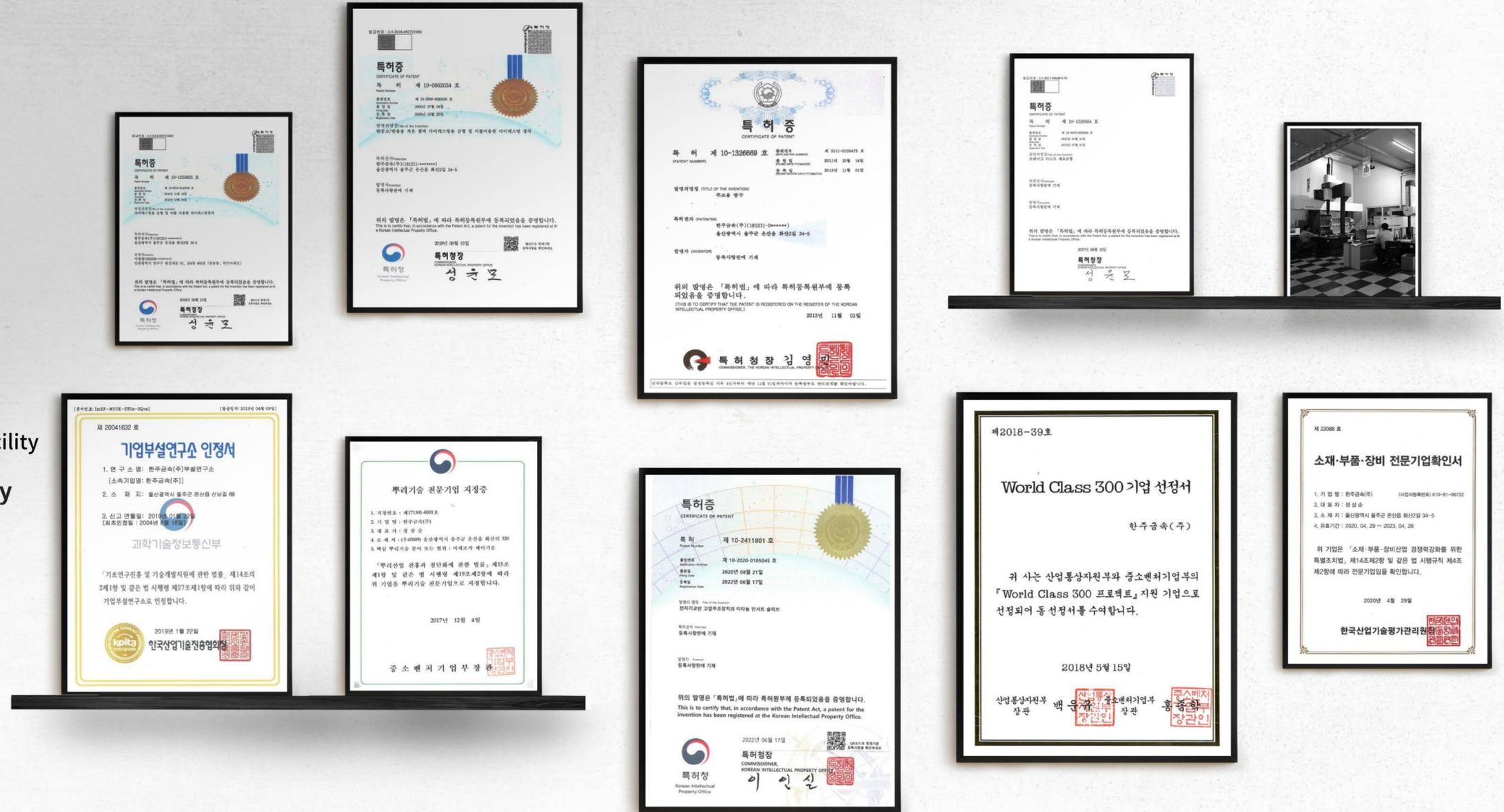
- HKMC SQ (Casting) – Hwasan Plant  
Rank : G (2019.12.17)
- HKMC SQ (Casting) – Wonsan Plant  
Rank : G (2001.05.14)
- ASES (RSM, Wheel Disc) - Hwasan Plant  
Rank : B (Satisfactory)
- ASES (RSM, Intake Manifold) - Wonsan Plant  
Rank : A (Excellent)
- Bridgestone  
Score : 91.25 (2010.01.28)
- DAIMLER  
Category 1 (2009.10.15)





# Patent & Certification

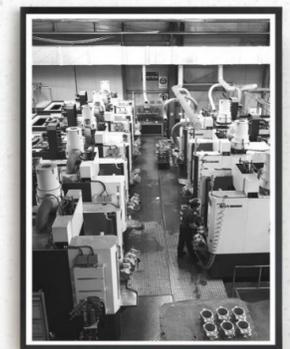
- Patent no. 10-1253605  
Die casting mold and device
- Patent no. 10-0662034  
Low temp casting mold for Semi solid low and device
- Paten no. 10-1326669  
Casting Gate
- Patent no. 10-1539564  
Break disk casting mold
- Patent no. 10-2271199  
Sleeve for ESDC facility
- Patent no. 10-2223492  
Device for Mold exchange
- Patent no. 10-2249385  
Electromagnetic vibration stirring device for ESDC facility
- Cert. of Affiliated research institute Company  
no. 20041632 (2004.06.18)
- Selection of Root tech Company  
no 171301-0001 (2017.12.04)
- Wolrd Class 300  
no. 2018-39 (2018.05.15)
- Patent no. 10-2411801  
Titanium sleeve for Electromagnetic casting
- Patent no. 10-2440267  
Split two way ESDC facility and process
- Patent no. 10-2440258  
Cooling insert mold and process





# Award

- Award US\$ 100 M. Oversea Sales Tower (2023.12.05)
- Award Steel Tower the Order of Industrial Service Merit no 2674 (2016.05.12)
- RENAULT SUPPLIER AWARD RENAULT QUALITY MADE
- DAIMLER Plaque of Appreciation (2011)
- Renault Samsung Motors ASES "A" Rank (2010)
- Renault Samsung Motors Best Supplier Award (2012)
- MERCURY CONTINUOUS IMPROVEMENT AWARD (2016)
- GM Supplier Quality Excellence Award (2017)  
Supplier Quality Excellence Award (2020)



05



# ESG Management / Social Contribution

Live Together





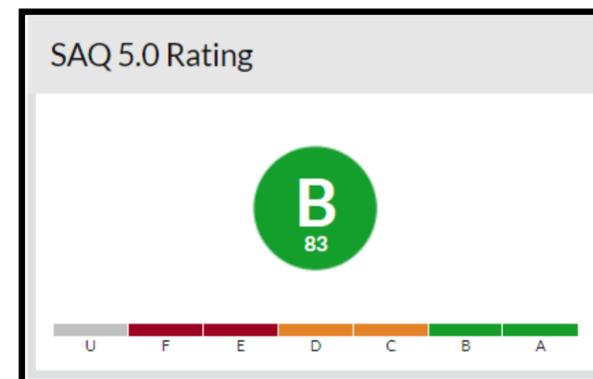
# ESG Management

- ECOVADIS : **Committed** (2024)
- CDP
- SUPPLIER ASSURANCE
  - VW REQUIREMENTS : **100%**
  - **SCORE : B83**
- ISO45001
- ECREDIBLE ESG EVALUATION
  - **ESG 4** (2024)
- QUANTIFIED ESG (HKMC)
  - **65.3** (2024)

Hanjoo Light Metal recognizes the environment and energy as key factors in its management activities, has acquired and manages ISO 14001, and is striving to support a sustainable, low-carbon, and eco-friendly economy. GHG Emission relative to Production

As a company that fulfills its social responsibilities and grows together along with the local community, Hanjoo Light Metal promotes various social contribution activities.

In order to build a transparent and bright organizational culture, Hanjoo Light Metal has established ethical regulations and codes of conduct, and all employees are encouraged to strictly comply with these regulations and codes to protect the ethical values of Hanjoo Light Metal. From such foundation, we will achieve continuous development and growth to grow into a company that delivers trust and value to our society and customers.





# Social contribution

## INPUT-OUTPUT ZERO PLASTIC

- Bye Bye Plastic Challenge

<https://www.ksilbo.co.kr/news/articleView.html?idxno=1006490>

## Social Contribution

- Hoeya River Environmental Cleanup Campaign

[www.ksilbo.co.kr/news/articleView.html?idxno=640412](http://www.ksilbo.co.kr/news/articleView.html?idxno=640412)

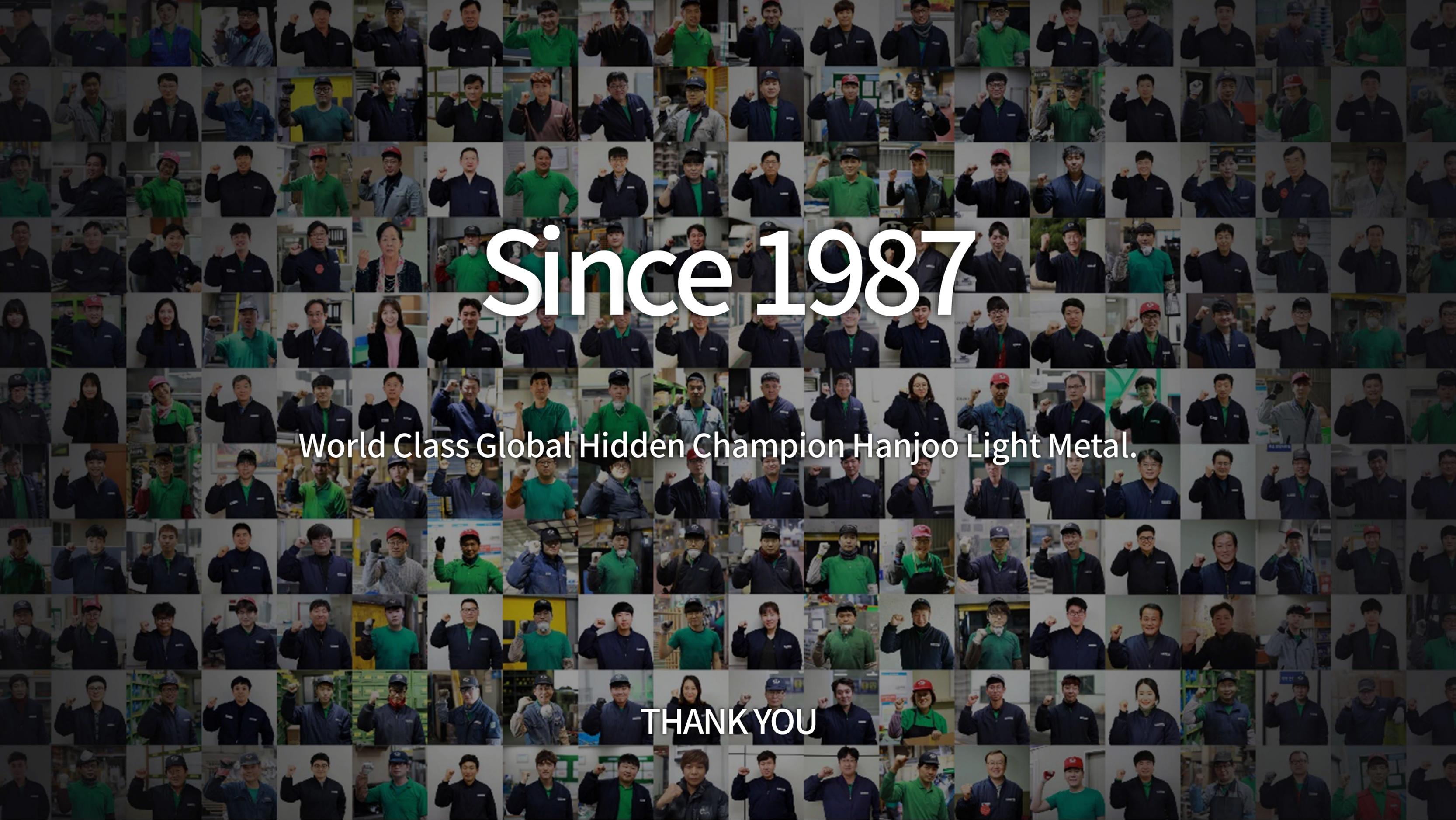
- 42nd Taxpayer Award

[www.kaica.or.kr/bbs/board.php?bo\\_table=biznews&wr\\_id=614&page=198](http://www.kaica.or.kr/bbs/board.php?bo_table=biznews&wr_id=614&page=198)

- Donation for residents affected by forest fires in Gangwon Province

[www.ksilbo.co.kr/news/articleView.html?idxno=690660](http://www.ksilbo.co.kr/news/articleView.html?idxno=690660)





Since 1987

World Class Global Hidden Champion Hanjoo Light Metal.

THANK YOU