

INNOVATION OF  
FINENESS

K-Semiconductor Materials and  
Components Company

**HANBAEK**  
PRECISION CORPORATION



# HANBAEK PRECISION CORPORATION



HANBAEK PRECISION CORPORATION

[15599] 398, Sinwon-ro, Danwon-gu, Ansan-si, Gyeonggi-do, Republic of Korea

TEL +82-31-508-1796 FAX +82-31-508-1791

SITE <https://www.ehanbaek.com> E-MAIL [hanbaek0909@ehanbaek.com](mailto:hanbaek0909@ehanbaek.com)





# HANBAEK PRECISION CORPORATION

## K-Semiconductor Materials and Components Company!

### HANBAEK PRECISION CORPORATION

HANBAEK PRECISION CORPORATION innovation thrives through our commitment to the belief that 'the difference in fineness is innovation.' As a leading force in the semiconductor industry, we specialize in precision processing technology for core semiconductor parts. Our top-notch precision parts, including semiconductor wafer vacuum chucks, semiconductor porous chucks, and semiconductor flow meters, are known for their quality and durability. With our in-house R&D Center, we enhance product quality and develop cutting-edge technologies. Moreover, we actively participate in corporate and national research support projects, aimed at localizing parts. This collaborative effort underscores our commitment to innovation and continuous improvement in the semiconductor industry.

Through collaborative partnerships with global materials, parts, and equipment companies, we optimize processes for cost-effective solutions. Our strategically integrated manufacturing infrastructure ensures prompt delivery to valued customers. We have a strong presence in both Korea and the United States, which are the world's largest semiconductor markets. This enables us to proudly serve leading global companies. Our top priority is customer satisfaction, and we are committed to continuous innovation to meet a wide range of semiconductor needs.

HANBAEK PRECISION CORPORATION, we embrace challenges, providing the best precision processing technology and top-tier products. Through continuous development of core technology capabilities for precision parts, we aim to create new business opportunities that contribute to our customers' successes. Thank you for supporting us as we shape a brighter future in the semiconductor industry.

Global Frontier

Reliable Company

Capable Partner

Experienced Skill



# Reliable Company

# HANBAEK

## Trustworthy HANBAEK for Our Clients

HANBAEK PRECISION CORPORATION, trusted by customers, is a specialized company in K-semiconductor materials and components, with an unwavering commitment to customer satisfaction. We excel in ODM/OEM manufacturing of precision parts for semiconductor equipment, including semiconductor wafer vacuum chucks, porous chucks, flow meters, and level sensors. Additionally, we offer modular component assembly solutions and specialize in precision parts for semiconductor equipment, working with exceptional materials like Oxygen-Free High Conductivity Copper (OFHC).

### [BUSINESS AREA]



#### Precision Part Manufacturing

Special Materials, Precision Machining, Short Lead Time, Securing Swift Service and Emergency Response Capability

- Semiconductor Wafer Vacuum Chuck
- Semiconductor Porous Chuck
- Semiconductor Flow Meter
- Semiconductor Level Sensor
- Semiconductor Equipment Parts
- Precision JIG Production



#### Module Component Assembly

Customized Modular Component Assembly to Meet Customer's Requirements

- Semiconductor Core Component
- Semiconductor Flow Meter



#### R&D Center

Research and Development of New Products, Special Materials, Precision Machining Technology Research

- Domestication of Parts
- Quality Improvement
- Development Support for National Projects Product Development

- 2023** Jul. CERT of a Management Innovation business Oriented SME (Main-Biz) by Ministry of SMEs and Startups
- Jun. CERT of a Technology Innovation-Oriented SME(Inno-Biz) by Ministry of SMEs and Startups
- Designation CERT of Ppuri Technology Specialised Company by Korea National Ppuri Industry Center (KPIC)
- Jan. Commencement of Export to Europe

- 2022** Dec. Awarded a Commendation from the Minister of SMEs and Startups for Venture Enterprise
- Nov. CERT of ISO 45001 OHSMS
- Sep. Designation CERT of a Promising SME in Export by Ministry of SMEs and Startups
- May. Selected for the Smart Workshop Support Project
- Mar. CERT of SME Achievement-Sharing Enterprise
- Feb. Vendor Registration for SEMES / CERT of SEMES Supplier Quality(SSQ)

- 2021** Dec. Awarded a Commendation from the Minister of Ministry of Trade, Industry and Energy
- Authentication of Merit for Export Frontier Enterprise by the Gyeonggi Provincial Government
- Mar. Commencement of Export of Semiconductor Precision Components to the United States
- Jan. Vendor Registration for SEMICS INC

- 2020** Nov. Semiconductor wafer chuck development and mass production
- Sept. TCB[Technology Credit Bureau] - Grade 3 by KODATA
- Development and Production of Flow meter for Semiconductor Equipment
- Aug. Vendor Registration for CAS -SEMICONDUCTOR

- 2019** May. CERT of Qualified Maintenance Companies by 5 power generation public corporations under KEPCO
- Vendor Registration for KSM Co., Ltd.
- Feb. Patent Registration for Size-Convertible Belt Magazine
- CERT of Ppuri Enterprise by Korea National Ppuri Industry Center (KPIC)
- Jan. TCB[Technology Credit Bureau] - 4 grade by KODATA

- 2018** Nov. Signed a Medium-sized Enterprise Technology Cooperation Agreement with Gyeonggi Techno Park's Tech Doctor
- Oct. Selected for Support in Establishing Cooperative Smart Factories for Large, Medium, and Small Enterprises
- Aug. CERT of Specialized Material Component Company
- Jun. TCB[Technology Credit Bureau] - Grade 5 by KODATA

- 2017** Dec. HANBAEK PRICISION CORPORATION established
- Vendor Registration for AP system co., Ltd.
- Nov. CLEAN Place Business Recognition
- Sept. Expansion and Relocation of the Self-Owned Business
- Apr. R&D Research Institute established
- Mar. CERT of ISO 9001 QMS & ISO 14001 EMS
- CERT of Venture Business by Kibo Technology Fund



# Capable Partner

# HANBAEK

## HANBAEK PRECISION CORPORATION: Your Growth Partner

We've forged key alliances worldwide for top-notch materials, parts, and equipments.  
This fuels our streamlined production and boosts global competitiveness.

The Difference In  
Fineness Is Innovation



Hanbaek's skilled engineering team, comprised of experts in precision component manufacturing, excels in handling tight tolerances and interpreting complex blueprints.

Leveraging superior precision machining techniques, we deliver top-notch components that not only meet but also exceed customer expectations.

We proactively address unforeseen issues in the production process with accuracy and speed, while also investing in continuous learning of new technologies and materials.



Hanbaek utilizes advanced 3D coordinate measuring machine and a range of precision measuring equipment to ensure accurate production of components and assembled modules, aligning precisely with customer specifications.

We've established a rigorous quality management and inspection system, making quality our top priority in operations.



Hanbaek delivers customized services tailored to meet customer needs.

Our advanced precision machining technology ensures accurate processing of even challenging materials, enhancing product performance.

Our optimization strategies address various customer demands, including cost-effectiveness and swift turnaround times.



Hanbaek excels in precision component manufacturing and modular assembly, offering top-tier expertise, unrivaled quality, and a commitment to ongoing innovation.

We highly value open communication and collaboration with our customers, contributing to their success.

This is how we maintain a sustainable and robust partnership, growing and thriving together.



# Experienced Skill HANBAEK

## HANBAEK's skilled ultra-precision machining technology

Precision micron machining, considering material traits  
Producing precise components with  $<3\mu\text{m}$  Flatness Tolerances

Our core focus in precision component machining is achieving the highest level of accuracy and quality with minimal variation from specified dimensions. This precision is complemented by rigorous inspection using 3D coordinate measuring machine and systematic quality management, ensuring we supply our global customers with the best.

We manufacture semiconductor precision components using challenging materials like oxygen-free high conductivity copper (OFHC), alongside a variety such as aluminum (AL5052, AL6061, AL7075), stainless steel (SUS304, SUS316, SUS630), copper, tungsten, titanium, MONEL, PEEK, POM, PI, and more.





# Key Product 1

# HANBAEK

## Semiconductor Wafer Vacuum Chuck

Hanbaek's semiconductor wafer vacuum chuck is a critical component of semiconductor manufacturing equipment, designed to securely hold wafers in place while ensuring their flatness and parallelism throughout various manufacturing processes. Our vacuum chucks maintain flatness tolerances of 3μm or less for oxygen-free high conductivity copper (OFHC), aluminum, and SUS materials. We can process wafers in sizes of 6 inches, 8 inches, and 12 inches. Additionally, we offer brazing options for 2 Floor, 3 Floor, and 4 Floor configurations to ensure compatibility with advanced processing technologies.

- Size:** 6", 8", 12"

**Materials:** AL6061, AL7075, SUS304, SUS316  
OFHC(Oxygen free High Conductivity Copper)

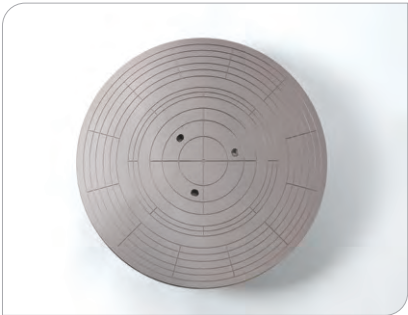
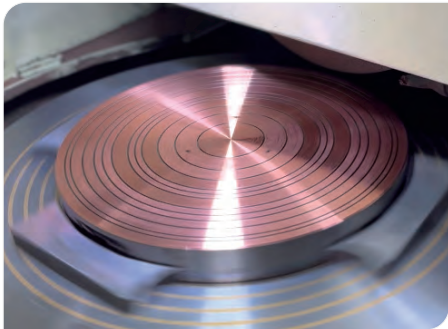
**Flatness Tolerance:** 3μm or less

**Brazing Options:** 2floor, 3floor, 4floor

**Surface Treatments:** Anodizing, Electroless Nickel Plating, Gold Plating, Mirror Polishing

### OFHC Copper Semiconductor Wafer Vacuum Chuck

OFHC copper material prolongs wafer chuck lifespan and minimizes the introduction of impurities into semiconductor materials, preventing potential contamination. Its low hardness allows for easy machining and shaping, enabling precise customization of chuck designs. However, it demands special care and precision for smooth surface finish due to challenges like warping, burrs, and deformation, as well as work hardening during machining.



Mirror Polishing



Nickel Plating



Anodizing





# Key Product 2

## HANBAEK

### Semiconductor Flow Meter Precision Component

This is a precision component of a semiconductor flow meter used in semiconductor manufacturing processes. It accurately measures the flow of various gases and liquids used in semiconductor production, providing real-time data for rigorous process control. The modular product consists of a Body, Impeller, Tungsten Shaft, and Brazing Shaft. It can be processed from materials like aluminum, stainless steel (SUS304, SUS316), POM, and PEEK. We offer sizes of 1/2", 3/4", 1", and 1 1/4".

#### Modular Product

**Size:** 1/2", 3/4", 1", 1 1/4"

**Materials:** AL6061, SUS304, SUS316, POM, PEEK

**Components:** Body, Impeller, Tungsten Shaft,  
Brazing Shaft

#### Semiconductor Flow Meter

This is a semiconductor flow meter designed for high-precision flow detection and capable of withstanding temperature changes from low to high. It is engineered to maximize utility in confined spaces by minimizing components like sensors and converters, specifically designed for semiconductor equipment.





# Key Product 3

## HANBAEK

### Semiconductor Precision Components

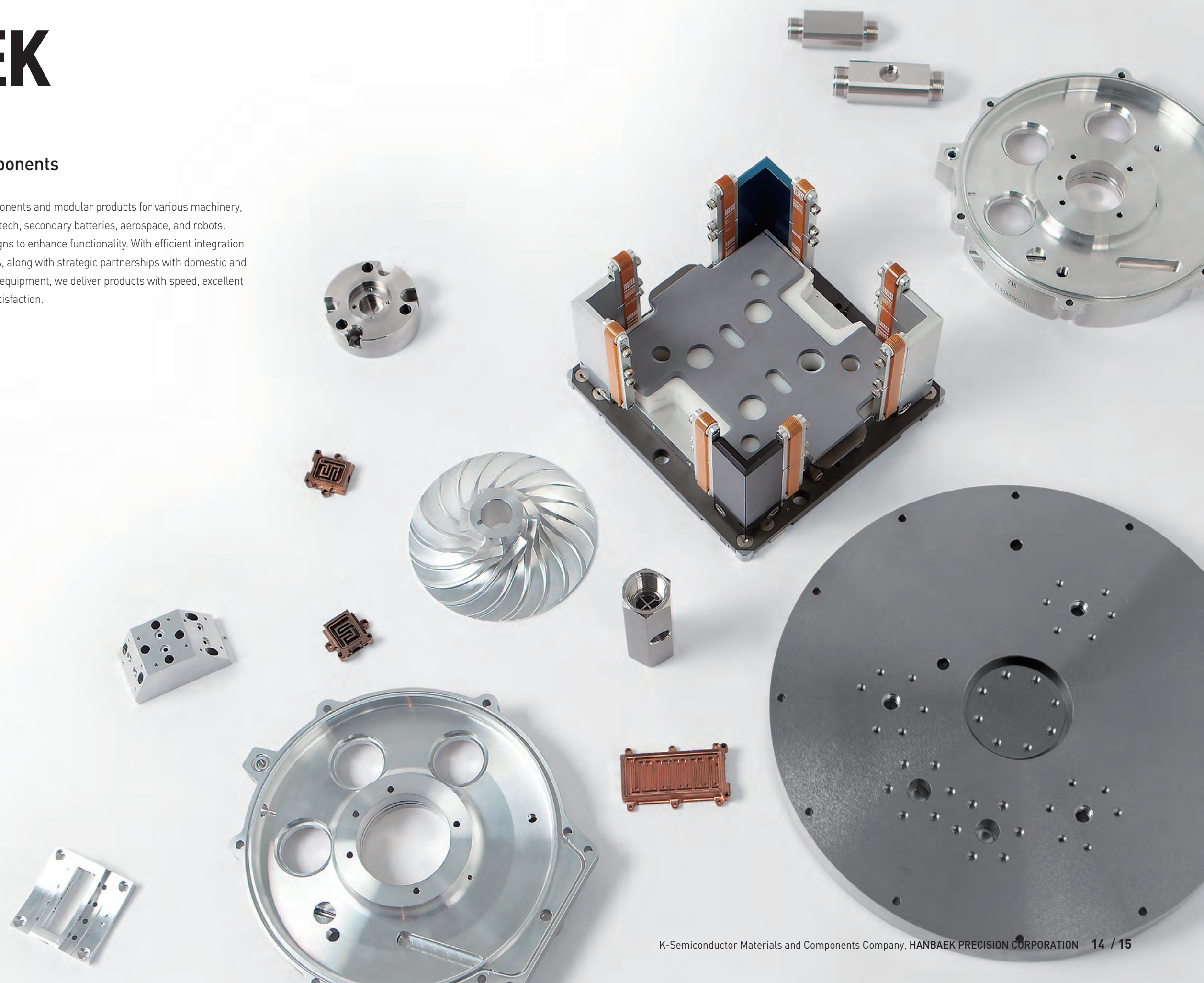
Hanbaek manufactures and supplies precision components and modular products for various machinery, including semiconductor production equipment, bio-tech, secondary batteries, aerospace, and robots. We offer tailored solutions, proposing ideas and designs to enhance functionality. With efficient integration of production, quality control, and inspection systems, along with strategic partnerships with domestic and international manufacturers of materials, parts, and equipment, we deliver products with speed, excellent quality, and competitive costs to ensure customer satisfaction.

**Size:** MCT 5~6.5", CNC 6~10", TURNMILL

**Materials:** AL5052, AL6061, AL7075, SUS304, SUS316, SUS630, Copper, Tungsten, Titanium, Monel, POM, PEEK

#### Features of Semiconductor Precision Components

Our precision components maintain strict tolerances, requiring advanced machining capabilities to achieve minimal deviation from specified dimensions. Additionally, our meticulous quality control throughout the machining process identifies and corrects specifications and variances, resulting in the production of high-quality precision components.





# Applicable Industry

# HANBAEK

Hanbaek collaborates with global partners from the early stages of projects to develop rational production processes. We offer competitive solutions to our customers, including shortened manufacturing times and cost-effective production. We export semiconductor precision components to various countries worldwide, including North America, the EU, and Asia.

Furthermore, through initial joint development with leading domestic companies, we produce and supply custom-designed products through ODM/OEM partnerships.



Secondary Battery Parts

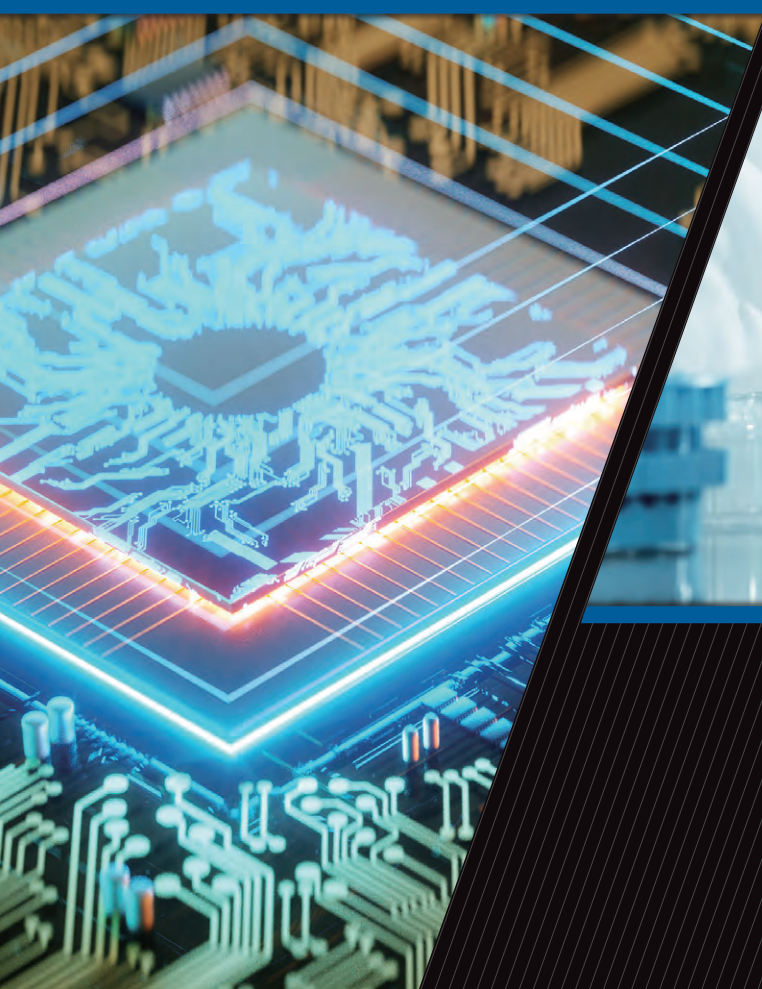


Aerospace Parts

Robot Parts



Semiconductor Parts



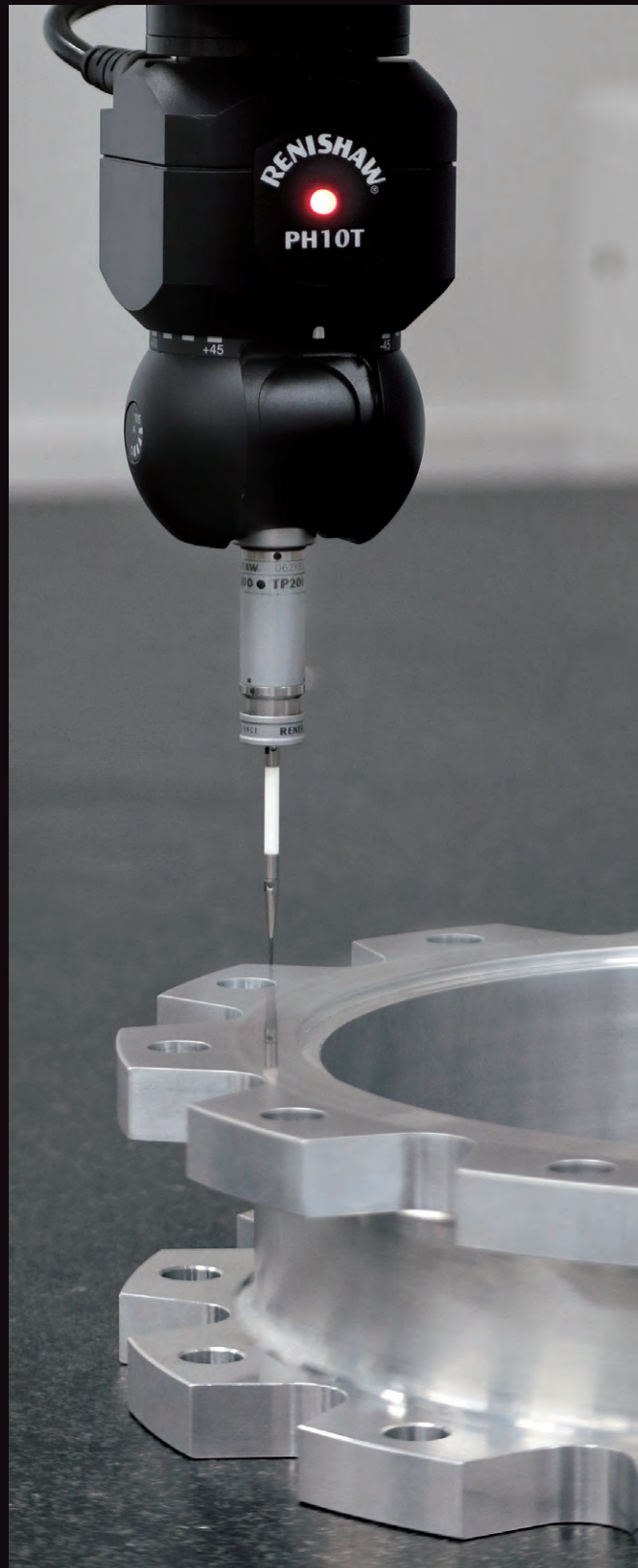
Bio Parts



# Product List 1

## Semiconductor Parts

We appreciate your understanding regarding our inability to disclose photos of our flagship products due to our security policies. For specific inquiries, please contact us via phone or email.



AL HOUSING



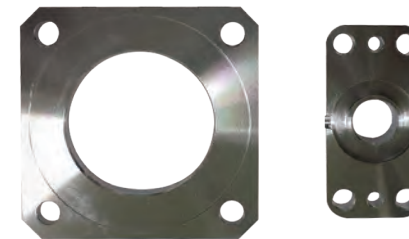
AL CHAMBER HOUSING



AL CHAMBER



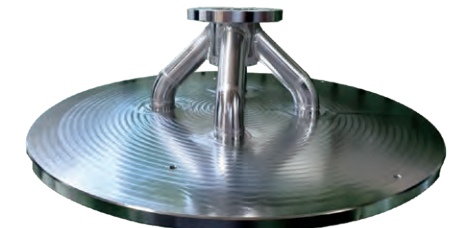
SUS FLANGE



SHOWER HEAD



SUS FLANGE PLUMBING



SHOWER HEAD



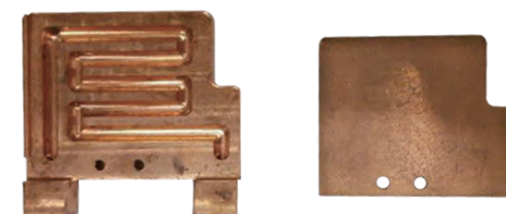
AL CHAMBER HOUSING



SUS DISPERSION PLATE



HEAT SINK FOR HYBRID VEHICLES



SUS CHUCK





# Product List 1

## Semiconductor Parts

We appreciate your understanding regarding our inability to disclose photos of our flagship products due to our security policies. For specific inquiries, please contact us via phone or email.

BODY FOR FLOW METER



AL CHAMBER



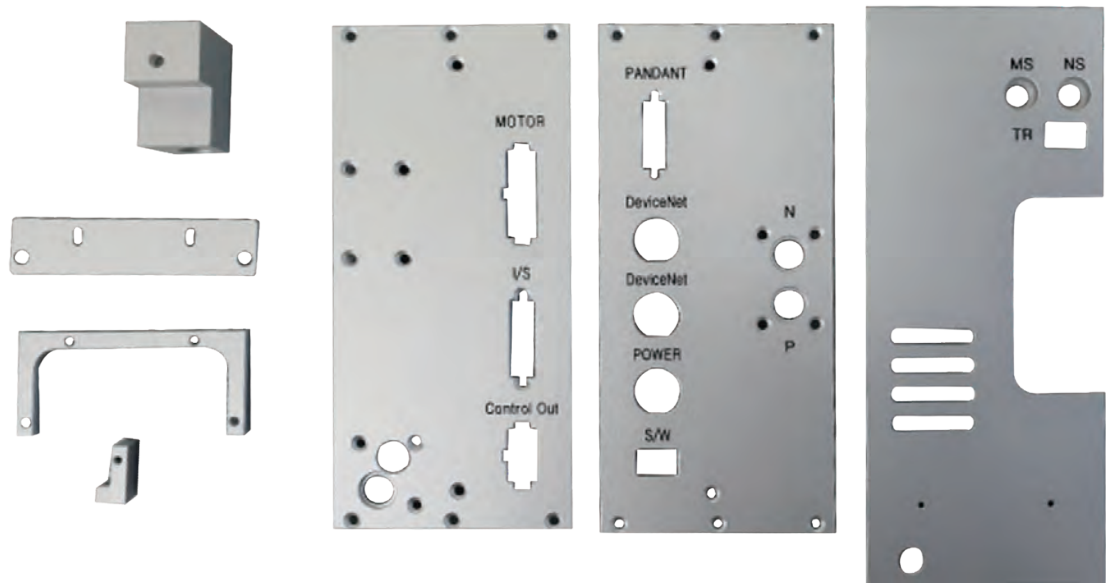
AL BASE PLATE



AL SLATE



AL MARKING THE INK FEEDER COMPONENTS



AL DISPERSION PLATE NOZZLE



SCREW



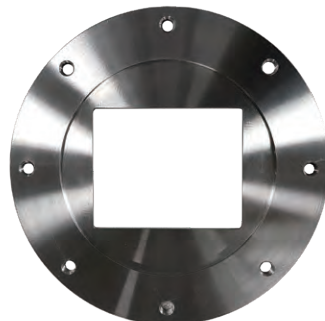
C1020 BONDNG MACHINE



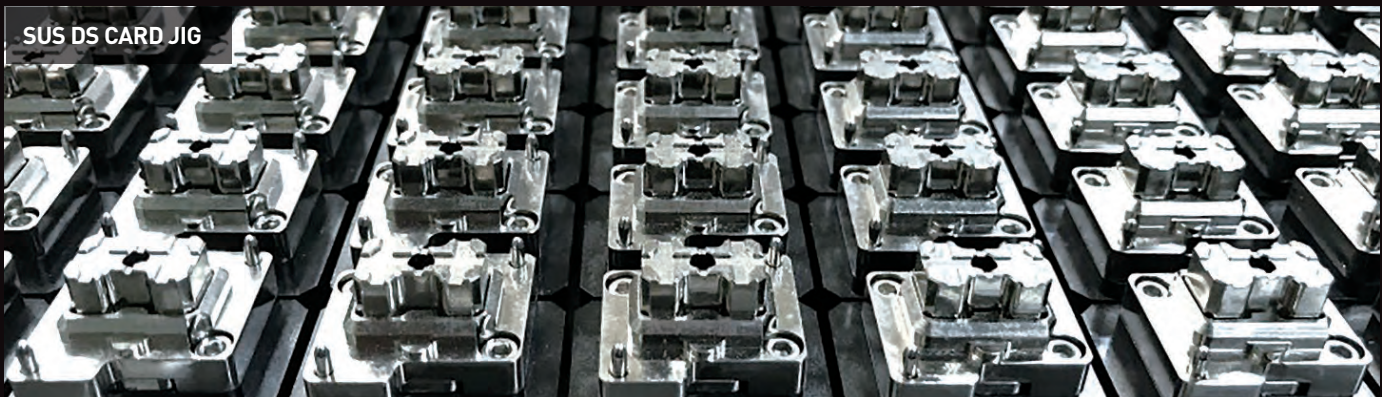
SUS FLANGE



SUS FLANGE



SUS DS CARD JIG

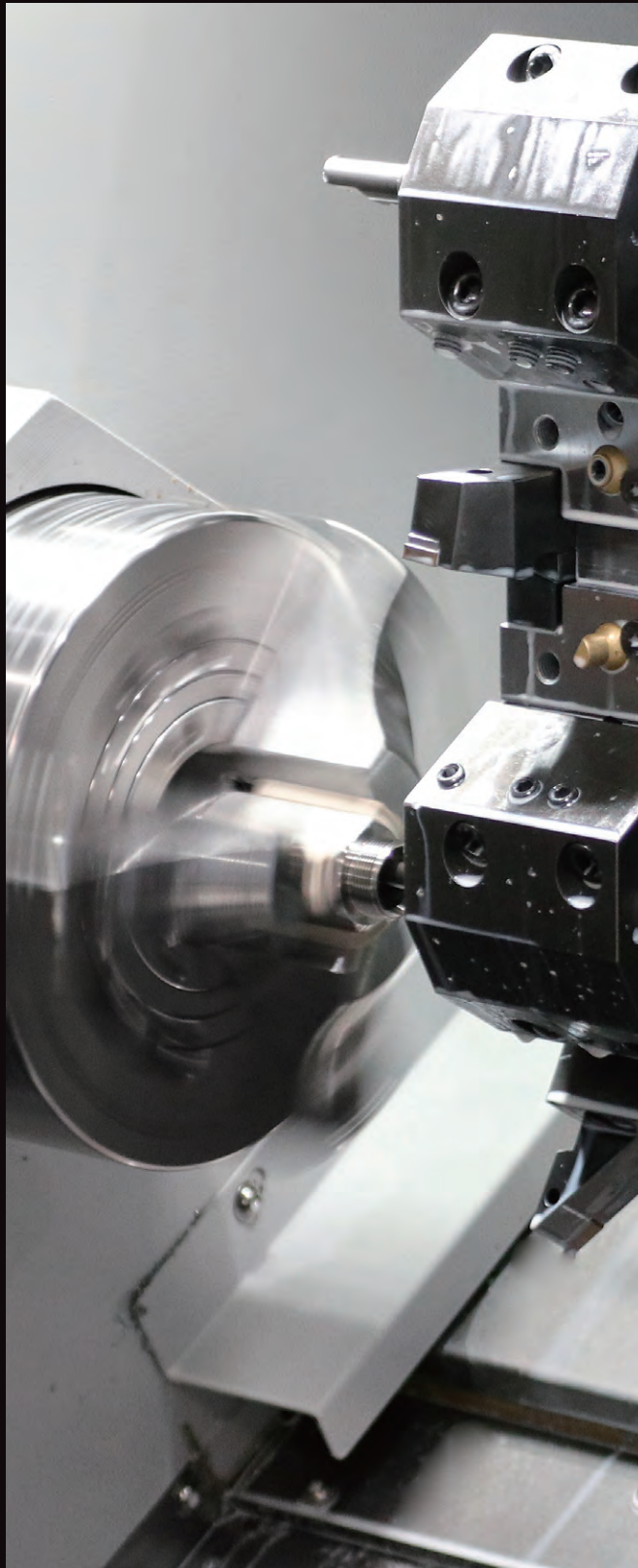




# Product List 2

## Precision Parts

We appreciate your understanding regarding our inability to disclose photos of our flagship products due to our security policies. For specific inquiries, please contact us via phone or email.



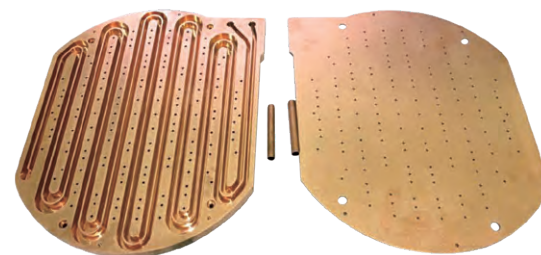
SUS MESH



S45C GEAR



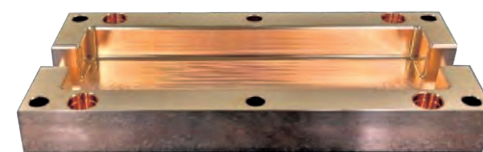
C1020 SUPER COMPUTER HEAT SINK



AN ELECTRIC CAR MOTOR PART



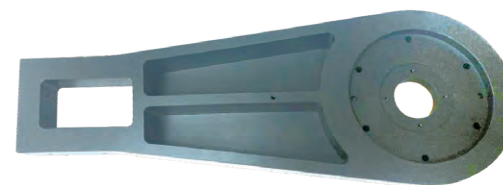
BERYLLIUM COPPER RAPID HEATING MOLD



ROBOT PART



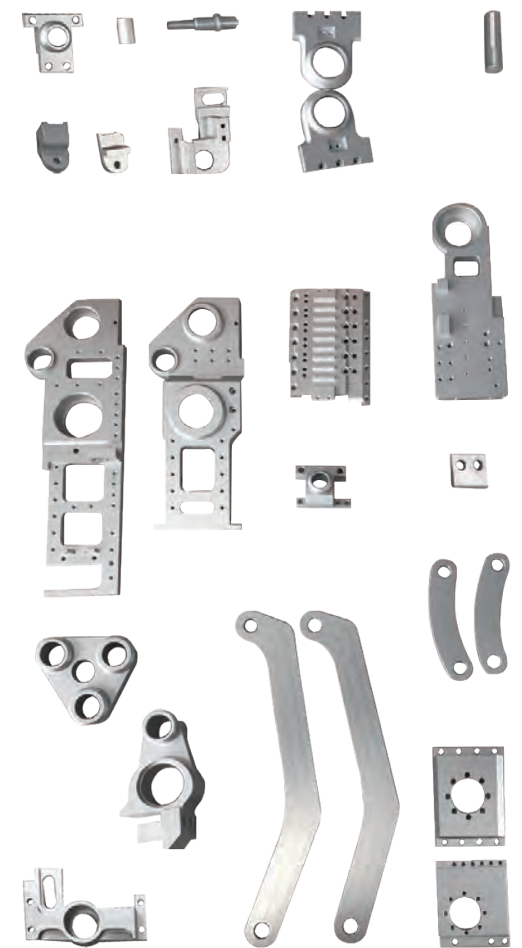
ROBOT PART



AN ELECTRIC CAR MOTOR PART



ROBOT COMPONENTS





# HANBAEK

Hanbaek produces and supplies high-quality products using a range of manufacturing equipments and precision measuring instruments.

## Precision Machining Equipments



Machining Center (Vx 650) : 2EA  
Maker : WIA  
Size : 1400 x 660 x 635



Machining Center (VX 400) : 3EA  
Maker : WIA  
Size : 800 x 460 x 520



CNC Lathe (10") : 1EA  
Maker : WIA  
Size :  $\Phi$ 590 x 720



CNC Lathe (10") : 1EA  
Maker : WIA  
Size :  $\Phi$ 590 x 720



CNC Lathe (8") : 2EA  
Maker : WIA  
Size :  $\Phi$ 350 x 270



CNC Lathe PUMA GT2100M : 1EA  
Maker : DOOSAN  
Size :  $\Phi$ 300 x 513



CNC Lathe (8") : 1EA  
Maker : DOOSAN  
Size :  $\Phi$ 350 x 270



Horizontal Grinding Machine : 2EA  
Maker : SANSEI  
Size :  $\Phi$ 500



Polishing & Mirror Grinder : 3EA  
Size :  $\Phi$ 800 370x470



Polishing Grinding Machine : 1EA



Laser Marker : 1EA  
Maker : Lasers Co., Ltd



Ultrasonic Cleaner : 1EA

## Measuring Instruments



3D Coordinate Measuring Machine



PH-3515F Projector



VMS Plus Series Videometer



Mitutoyo SJ-310 Surface Roughness Tester



Linear Height 600



Dial Height 450



Dial Indicator



Digimatic Dial Gage



Plug Gauge M4P0.7



Plug Gauge M5P0.8



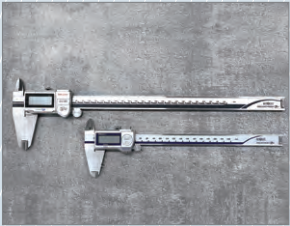
Plug Gauge 10-32 UNF



Plug Gauge 3/8-16 UNC



Digimatic Callipers



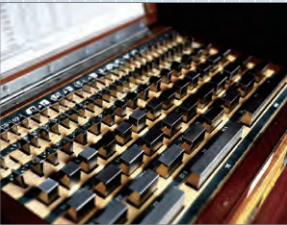
Digital Vernier Callipers



Cylinder Gage 0-150mm(0.01)



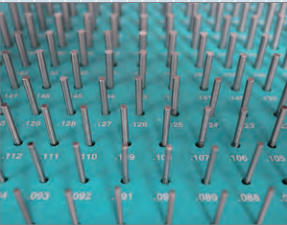
Cylinder Gage 35-60mm



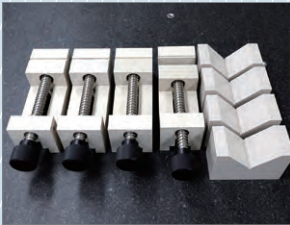
Block Gage



Pin Gage



Pin Gage



PEEK Inspection JIG for 3D Coordinate Measuring Machine

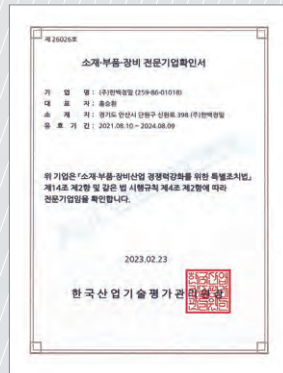


# HANBAEK

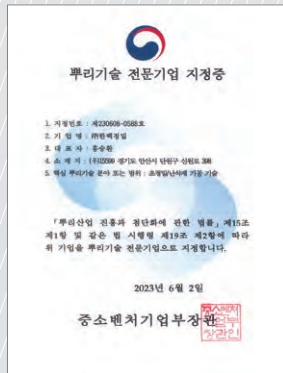
## Certification / Patent



CERT of Venture Business  
by Kibo Technology Fund



CERT of Specialized Material  
Component Company



Designation CERT of  
Ppuri Technology Specialized  
Company by Korea National  
Ppuri Industry Center(KPIC)



CERT of Recognized Corporate  
Research Institute



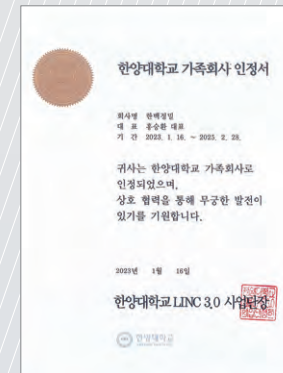
Patent Certificate  
No. 10-1948522



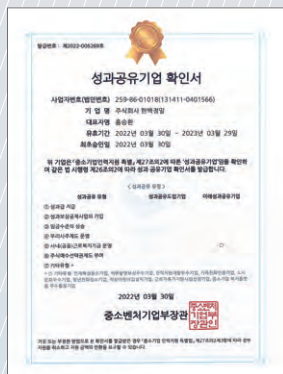
Patent Certificate  
No. 10-2132192



Design Registration  
Certificate No. 30-1025573



CERT of Recognized a Family  
Company of Hanyang University



CERT of SME  
Achievement-Sharing Enterprise



CERT of SEMES Supplier  
Quality(SSQ)



CERT of Product-Specific  
Approved Exporter by  
Head of INCHEON Customs



Authentication of Merit for  
Export Frontier Enterprise by  
the Gyeonggi Provincial  
Government



ISO 9001 QMS



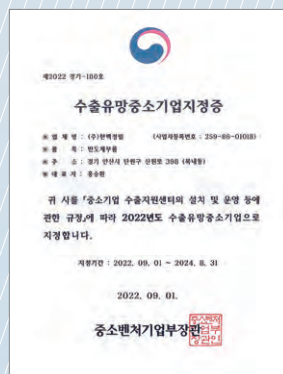
ISO 14001 EMS



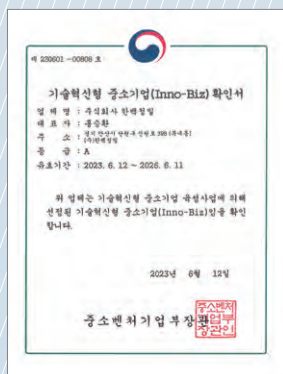
ISO 45001 OHSMS



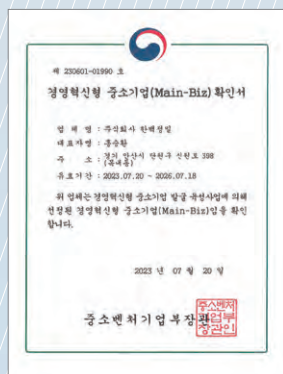
Designation CERT of Export  
Do-Dream Enterprise  
by Ministry of SMEs and Startups



Designation CERT of  
a Promising SME in Export  
by Ministry of SMEs and Startups



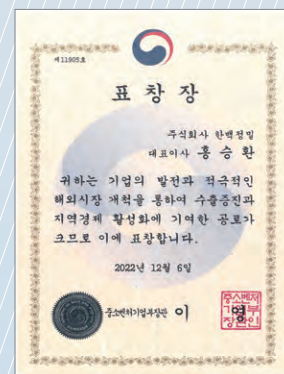
CERT of a Technology  
Innovation-Oriented  
SME(Inno-Biz) by Ministry of  
SMEs and Startups



CERT of a Management  
Innovation business-Oriented  
SME(Main-Biz) by Ministry of  
SMEs and Startups



Awarded a Commendation from  
the Minister of Ministry of Trade,  
Industry and Energy



Awarded a Commendation from  
the Minister of Ministry of  
SMEs and Startups  
for Venture Enterprise