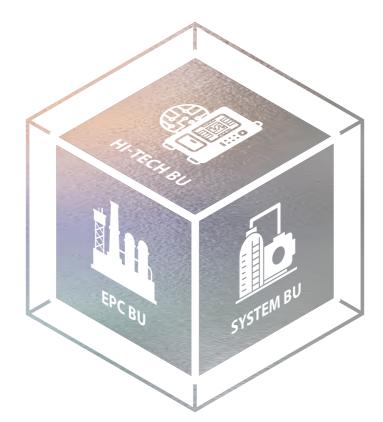
HANYANG ENG COMPANY PROFILE 2022

# **TOTAL SOLUTION PROVIDER**



HANYANG ENG

HANYANG ENG CO,.LTD

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### Contents

Business Unit	04	
High-Tech BU	06	
EPC BU	08	
System BU	10	
	10	
HANYANG ENG	12	
About Company	14	
Organization, Investments, & Credentials		
Safety Management	18	
Social Contribution	20	
Global Network & Subsidiaries	22	

### A Global Company that Provides Total Engineering Solutions

HANYANG ENG is leading the creation of customer value by implementing the best quality and services through quality management. HANYANG ENG, which provides the best total service to customers with the best technologies in the semiconductor and display fields, industrial plants (general industry and gas industry), environment, green energy, and aerospace field, is realizing sustainable growth with creative technologies to create a bigger tomorrow through innovation.



## **Business Unit**

- Hi-Tech BU
- EPC BU
- System BU

### **HANYANG ENG**

A Total Solution Provider that Contributes to the Future Value of **Customers with Leading Technologies** and Differentiated Solutions

High-Tech BU | EPC BU | System BU

HANYANG ENG, equipped with the highest level of service capability by providing leading technologies and various solutions, will be a reliable partner supporting customer success.



### **High-Tech BU**

HANYANG ENG has various elemental technologies that can be utilized in the mechanical equipment construction of domestic and overseas semiconductor/display companies. We also provide comprehensive construction, such as UHP (Ultra High Purity) piping and mechanical equipment construction, cleanroom, HVAC, utility system, and equipment, along with a unique modularization method. From high-tech engineering to construction, HANYANG ENG will open the door to the future through rich construction capabilities based on highly accumulated technologies and quality

### Modularization Method with High Quality and Safety

This is a method of manufacturing the utility supplied inside the semiconductor FAV as a unit (piping & duct) from the outside, transporting, installing, and constructing it to the site. The modularization method is a new method that provides various advantages, such as shortening the construction period and improving quality, as well as reducing required onsite manpower and securing work safety.



### Construction of Korea's First UHP Piping and Mechanical Equipment

manufacturing process for the first time in Korea.



### Modularization Process Flow Chart



In the late 1980s, HANYANG ENG contributed to the localization of the entire process from engineering to production and construction of UHP piping for the semiconductor

By expanding its business areas, such as cleanroom, HVAC, utility system, etc., HANYANG ENG has been recognized for its excellent technologies by leading semiconductor/display companies and manufacturing companies in the IT field domestically and abroad.



### **EPC BU**

EPC BU has been providing services that meet the diverse needs of customers throughout the entire process from feasibility study to engineering, procurement, construction, and commissioning as a Total Solution Provider based on domestic and overseas project experiences accumulated over the past 30 years. We will maximize the future value of our customers with our accumulated technologies and expertise and grow into a company leading the future market based on the deep trust we have gained from our customers.

### Industrial Plants (Chemicals/Materials)

HANYANG ENG is successfully carrying out EPC (engineering/procurement/construction) projects for various industrial plants, such as semiconductor/display electronic materials and material/parts/ equipment fields. We are also preparing to enter the hydrogen and green energy fields, which are the future growth engines, based on our rich and diverse business management capabilities ranging from engineering/procurement/construction to commissioning.

### Gas Industry (ASU/Industrial GAS)

HANYANG ENG has been accumulating differentiated technologies and know-how by constructing gas production facilities for over the last 20 years. Especially, in the fields of cryogenic gas equipment and ASU (Air Separation Unit) construction, which produces gases such as nitrogen, oxygen, argon, etc. from the air in the atmosphere, we have been carrying out projects for global gas production customers, including Linde Korea, Air Products Korea, and Air Liquide Korea, for a long time. We provide the best value to our customers based on differentiated technologies and accumulated know-how.

### Environment & Green Energy

HANYANG ENG has experience in engineering, manufacturing, constructing, and performing on water and wastewater treatment equipment, (ultra) pure water treatment equipment, seawater desalination equipment, condensate polishing equipment, reuse systems, etc. for power plants and industrial plants. We especially have the technology to construct a wastewater treatment plant that processes more than 100,000 tons per day, and through continuous investment, we are developing technologies and capabilities to carry out environment-related projects such as water treatment, air, waste, etc.

### Aerospace (Launch Vehicles/Testing Equipment/Parts)

HANYANG ENG's aerospace business contributed to the success of the launch by actively participating in the 'Naro-1' project, Korea's first space launch vehicle in 2013, starting with the participation in the 'KSR-III' project, the first liquid-fuel rocket in Korea in the late 1990s. We also have accumulated excellent technologies by carrying out the construction of various testing equipment and launchers necessary for the development of 'Nuri', the first Korean launch vehicle. Our technical capability has been recognized by developing core components, such as hydraulic and pneumatic umbilical, electric umbilical, and solenoid valves, which are key parts of Korean launch vehicles together with KARI (Korea Aerospace Research Institute). Moving forward, we will continue to do our best to make the aerospace industry a next-generation growth engine of the country by participating in new fields such as the performance improvement projects of the Korean launch vehicles.





### (Water & Wastewater Treatment/Reuse/Seawater Desalination)



### System BU

CCSS (Central Chemical Supply System), which is widely used in the high-tech electronics industry and new and renewable energy business, and TCMS (Total Chemical Management System), which provides supply service for ultra-precision chemicals used in semiconductor/display manufacturing processes, are the proud achievements of HANYANG ENG. HANYANG ENG proposes the Total Chemical Solution that provides all services of chemical substance supply from engineering to manufacturing, installation, operation, and maintenance with unique technology that satisfies customer needs.

### First in Korea, World-class Technology - CCSS Localization

CCSS is equipment that manages the entire process of supply, transport, mixing, and disposal of ultra-precision chemicals in an integrated manner, and it is produced/installed/operated and managed in compliance with strict quality standards through HQMS (HANYANG Quality Management System), established by HANYANG ENG throughout the process of engineering, manufacturing, testing, and installation. Since its successful localization in 1990, it has been selected as a world-class product in 2007. HANYANG ENG's CCSS equipment has been working with domestic and overseas customers such as semiconductor/display, secondary batteries, and solar power until now.



### Integrated Management Service that Maximizes Customer Satisfaction - TCMS

HANYANG ENG'S TCMS provides integrated management service throughout the entire process from inbound logistics to management, testing, storage, and disposal of ultra-precision chemicals used in semiconductor/display production. HANYANG ENG aims to enhance the safety of supplying chemicals to improve customer productivity based on advanced CCSS development and operational know-how.

Complete Automation & Unmanned Operation of the Entire Process

Leading Company in Chemical Handling & Management Technology

### Advantages of CCSS & TCMS



### **Total Solution Provider**

HANYANG ENG has been recognized for its capabilities by accumulating various business experiences and technologies in domestic and overseas markets since its establishment in 1988.
Now, HANYANG ENG is pursuing substantial growth by discovering new business models and new markets in line with the changing global paradigm to enhance future value, and practicing transparent management. Through this, we will be a 'Total Solution Provider' that provides optimized quality and services in not only the semiconductor/ display industry but also in the fields of industrial plants, gas, environment, green energy, and aerospace.

HANYANG ENG

## HANYANG ENG



### **HANYANG ENG is...**



We will provide the best service for the establishment of infrastructures such as semiconductors and displays that play a key role in high-tech future industries and high-functional life/ products, and environmental and energy industries that require sustainable workplace.

We promise to take a leap forward as a world-class company that leads the domestic market through continuous and innovative R&D for the future value of our customers as a 'Total Solution Provider'.

HANYANG ENG

### **Core Value**

### **CUSTOMER** SATISFACTION Providing Optimal Solutions to Maximize Customer Value

**TRUST IN QUALITY** 

Perfect Quality Response Based on Customer Trust

### **History**

### 1980

- 1982 Establishment of HANYANG Mechanical Engineering
- 1988 Establishment of HANYANG ENG Co., Ltd.
- 1990 Domestic production of CCSS (Central Chemical Supply System)
  - · Establishment of affiliated research institutes, ratified by the Ministry of Science and Technology
- 1993 Semiconductor Module project started
- 1996 Awarded with the 23rd Business Day Bronze Tower Order of Industrial Service Merit (for localization of CCSS) Success of mid-term base development project
  - (patent application for CCSS) Accreditation of KSA 9001 / ISO 9001 Quality Management System (construction of semiconductor equipment and mechanical equipment)
  - Accreditation of the CE mark for CCSS (TUV)
  - Accreditation of the 100PPM for guality innovation
- 1998 Accreditation of ISO 14001 Environment Management System
- 1999 Patent obtained for CCSS technology
  - · Company name changed to HANYANG ENG Co., Ltd.; 5 consecutive accident-free record achieved

### 2000

- 2000 CCSS certified for safety Registered on KOSDAQ
- 2001 Achieved the 1st place for gas facility construction and the 2nd place for mechanical equipment construction in construction capability evaluation nationwide
- 2002 Combustion exhaust gas simultaneous treatment system development project started (codevelopment with the Korea Institute of Energy Research)
  - VOC (volatile organic compound) removal device development project started (co-development with the Korea Institute of Energy Research)
- 2003 Accreditation of the KEPIC (Korea Electric Power Industry Code) certification
  - Accreditation of ISO 9001:2000 Quality Management System
- 2004 HANYANG ENG Co., Ltd. spin-off into HANYANG ENG and HANYANG Digitech (equity spin-off)
  - HANYANG ENG re-listed; HANYANG Digitech listed for the first time
  - Establishment of CTP Korea
  - · Establishment of a corporation in Dalian, China

#### **2005** • Incorporated as an affiliate of CTC

- 2006 Establishment of Weld Master Center
  - · Received the presidential citation on the 43rd Trade Day
  - Received the citation from the Minister of Commerce, Industry, and Energy on the 43rd Trade Day
  - Awarded with the Ten Million Dollar Export Tower on the 43rd Trade Day
- Establishment of a corporation in Wuxi, China
  - Designated International Top-tier Product Manufacturer (CCSS)
  - Accreditation of ISO 27001 Information Security Management System
- Founded a corporate body in Vietnam • Designated as Compliance Program Trade
- Company 2009 • Accreditation of KOSHA 18001 Occupational
  - Safety and Health Management System · Awarded with the Prime Minister's Award on the
    - 43rd Taxpayers' Day
  - Establishment of a corporation in the United States



Safety as No. 1 Management Principle



### **TECHNOLOGY** LEADER

The Best Technical Capability &

Development of Future Technology

### **SOCIAL & ENVIRONMENTAL** RESPONSIBILITY

Eco-friendly Management & Performing Social Responsibilities

### 2010 -

2010	<ul> <li>Awarded with the grand prize in the Job Creation sector for Venture Companies with Sales of KRW 100 Billion</li> </ul>
2011	<ul> <li>Awarded with the Minster's Award on the 4th Semiconductors' Day</li> <li>Awarded with the Thirty Million Dollar Export Tower or the 48th Day of Commerce</li> </ul>
2013	<ul> <li>Received a special presidential award for the successfu launch of Naro-1</li> <li>Establishment of a corporation in Xian, China</li> </ul>
2015	<ul> <li>Completed construction of Gajae-ri Manufacturing 8 Logistics Center</li> </ul>
2017	<ul> <li>Awarded with the Minister's Award on the 8th Displays Day</li> </ul>
2017	<ul> <li>Completed construction of Cheongju Manufacturing 8 Logistics Center</li> </ul>
2019	<ul> <li>Incorporated as an affiliate of DINNO Co., Ltd.</li> <li>Establishment of a corporation in Singapore</li> </ul>
2020	Accreditation of KS Q 9100 / AS 9100 Aerospace Quality Management System



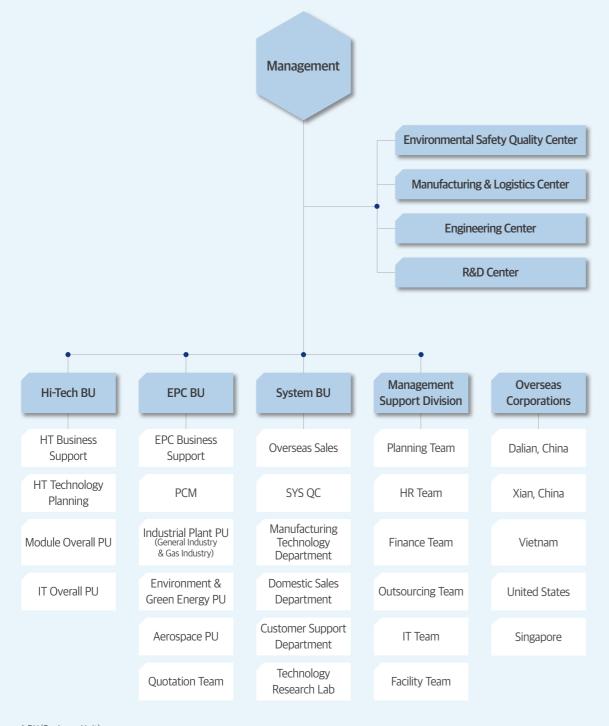


### **Credentials**

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ISO 9001	ISO 14001	ISO 2700
(Quality)	(Environment)	(Information S

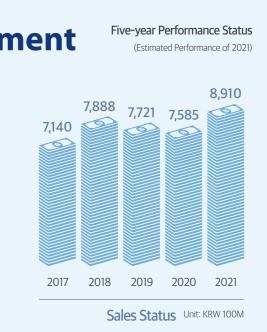


### **Organization**



\* BU (Business Unit)

\* PU(Performance Unit)



## Safety Management

HANYANG ENG

### Safety Management

At HANYANG ENG, safety is the basis of all business activities and we apply the philosophy of 'Safety = Survival of the Company'. As a company that creates futureoriented absolute values, we have established safety management policies, such as the operation of KOSHA 18001, risk assessment, severe disaster prevention response, and safety and environment win-win cooperation, and are always putting them first as a priority.



### **Key Activities**

### Operating KOSHA 18001 (Safety & Health Management System)

HANYANG ENG acquired the KOSHA 18001 certification in 2009 by reflecting the safety and health policy in our management policy. Since then, we have established a safety and health plan in accordance with guidelines and standards, and we are doing our best to maintain a rational and efficient safety and health management system by continuously evaluating the results of the implementation of the plan.

### Severe Disaster Prevention Response

On-site safety, health, and environmental management are monitored at all sites every month and monthly themed inspections are carried out by the person in charge of the site and HQ to cross-check the site in order to prevent all highrisk operations that are a risk factor to the safe environment throughout the entire construction process.

## Satisfying Safety Environment Laws & Requirements

We do our best to comply with the laws and regulations related to the safety and environment of relevant countries located at domestic and overseas sites, and to satisfy the needs of customers and local residents. For this, we prepare a safety, health, and environmental law management ledger to manage periodic training for our employees.

### **Risk Assessment**

We classify, identify, and evaluate risk factors in the entire process of engineering, equipment procurement, and onsite construction, and select management measures to minimize risks.

### **Nearmiss Report**

All employees regularly prepare Near Miss Report to improve employees' safety awareness and establish a Safety-First culture. All employees are also required to complete safety training on a regular basis as we have the safety training credit completion system.

### Safety & Health Win-Win Cooperation Activities

Since 2017, we have been running a symbiotic cooperation program implemented by the Ministry of Employment and Labor and Korea Occupational Safety and Health Agency to actively support the safety and health activities of partner companies.

### On-site Safety, Health, & Environmental Management

We establish an effective safety, health, and environmental management system, and prevent and manage problems through periodic on-site inspections. Also, we are preventing accidents, such as occupational diseases, suffocation, and poisoning in advance by collecting and reviewing hazardous substances used in all sites and monitoring the sites using them through MSDS (Material Safety Data Sheets).

# Social Contribution

HANYANG ENG

### **Key Activities**



**Social Contribution Activities** 



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### Elderly Welfare Support Project

We support facilities for the underprivileged elderlies who live in reliance on senior care facilities due to economic difficulties. We also support the elderlies living alone in the lowest class who need special so-cial assistance in addition to the basic livelihood recipients in nearby eups, myeons, and dongs

### Child Welfare Support Project

We support child protection facilities for those marginalized due to economic difficulties, and we provide living subsidies and daily necessities to poor families and disadvantaged families with economic difficul-ties in the neighborhood.

# Social Contribution

HANYANG ENG aims to become a company that promotes human happiness and fulfills its social re-sponsibilities to customers, employees, and business partners through ethical management and win-win management.



### **Social Contribution Principles**

#### Sustainability

Avoid one-time support projects / Maximize the possibility of creating synergy for positive change and self-reliance through continuous interest and support

#### Transparency

Reinforce guidance and supervision functions to enhance transparency in business operation and man-agement, as well as resource efficiency

#### Effectiveness

Improve effectiveness through a thorough inspection and performance measurement / Carry out social contribution activities focused on qualitative development rather than quantitative support



### Disabled Welfare Support Project

We are carrying out support projects for facilities for the disabled in the local community and for people with physical disabilities who are experiencing economic difficulties.



### Special Disaster Support Project

We provide basic necessities for living to people who are experiencing extreme difficulties in living due to disasters such as natural disasters in special areas.

## **Global Network** & Subsidiaries

Domestic & Overseas Business Sites

### Domestic

#### HQ

22

72, Yeongtong-ro 26beon-gil, Hwaseongsi, Gyeonggi-do Tel. 82-31-695-0000 Fax. 82-31-204-0394

#### Seoul Office

Hanyang Bldg., 123, Yeoksam-ro, Gangnam-gu, Seoul Tel. 82-2-2148-0000 Fax. 82-2-2148-0190

#### **Central Branch (Eumbong)**

32, Yeonamsan-ro, Eumbongmyeon, Asansi, Chungcheongnamdo Tel. 82-41-541-0139 Fax. 82-41-534-4634

#### Manufacturing & Logistics Center (Gajae-ri)

482-15, Samcheonbyeongma-ro, Paltanmyeon, Hwaseong-si, Gyeonggi-do Tel. 82-31-695-9006 Fax. 82-31-354-7943

### Manufacturing & Logistics Center (Cheongju)

91, Jikji-daero 307beon-gil, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do Tel. 82-43-229-0200 Fax. 82-43-229-0279

### Overseas

TOTAL SOLUTION PROVIDER

### Dalian, China

HANYANG Construction(Dalian) Co., Ltd.

United States

No.127 Liaohe Road, Wanda Plaza, Bulding 4, Room 915, Development Zones, Dalian City, Liaoning, China **Tel.** 86-411-8753-6190 **Fax.** 86-411-8753-6192

.

### Xian, China

#### HANYANG (Xian) Engineering Co., Ltd.

Room 706, Building A, Yanxiang City Plaza, No. 56 Jinye 1 Road, High-tech Zone, Xi'an, China **Tel.** 86-29-8115-4808

#### Vietnam

#### HANYANG ENG Vina Co., Ltd.

Unit 2603, Floor 26, Eurowindow B/D, No. 27 Tran Duy Hung Str, Trung Hoa Ward, Cau Giay Dist, Hanoi City Tel. 84-43-253-5265 Fax. 84-43-253-5265

### **United States**

HANYANG ENG USA Inc. 12100 Samsung BLVD SUITE 100 Austin TX 78754, U.S.A

### Singapore

HYE Global PTE., Ltd 3 Shenton Way #16-08, Shenton House Singapore

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### Affiliates

HANYANG ENG

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HANYANG ENG

### HCM Co., Ltd.

332-7, Samsung 1-ro, Hwaseong-si, Gyeonggi-do Tel. 82-31-204-4330 Fax. 82-31-695-0195 http://www.hcmkorea.com

### CTP Korea Co., Ltd.

332-7, Samsung 1-ro, Hwaseong-si, Gyeonggi-do Tel. 82-31-202-3734 http://www.ctpkorea.com

% CV & PV Business Unit separately operated

#### DINNO Co., Ltd.

D-810, 357, Guseong-ro, Giheung-gu, Yongin-si, Gyeonggi-do Tel. 82-31-229-3040 http://www.d-inno.co.kr

### Partners

### HANYANG Digitech Co., Ltd.

332-7, Samsung 1-ro, Hwaseong-si, Gyeonggi-do Tel. 82-31-695-5000 http://www.hanyangdgt.com

