



Vision 2025



ILJIN Hysolus R&D center



We will obtain the international safety certification of the hydrogen storage system which is rapidly becoming stronger by establishing the certification test system through a new R&D center, and we will also solidify the position as the top company by strengthening the product competitiveness according to the systematic operation of research based facilities.

Certification history

IATF 16949	Automotive Quality Management System	ISO 14001	Environment Management System
ISO 9001	Quality Management System	ISO 45001	Safety Health Management System



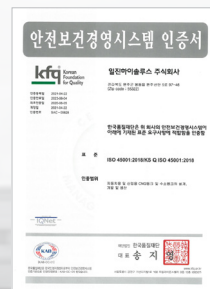
IATF 16949



ISO 9001



ISO 14001



ISO 45001



ILJIN Hysolus will lead the environment friendly mobility solution with the leading experiences and the effort of continuous research and development.



Headquarters/Factory

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Sales Office(Germany)

Environmental Business Division

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LEADING PLAYER IN CLEAN MOBILITY SOLUTION
TOTAL SOLUTION PROVIDER FOR
HYDROGEN STORAGE SYSTEM

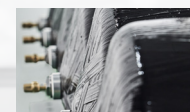
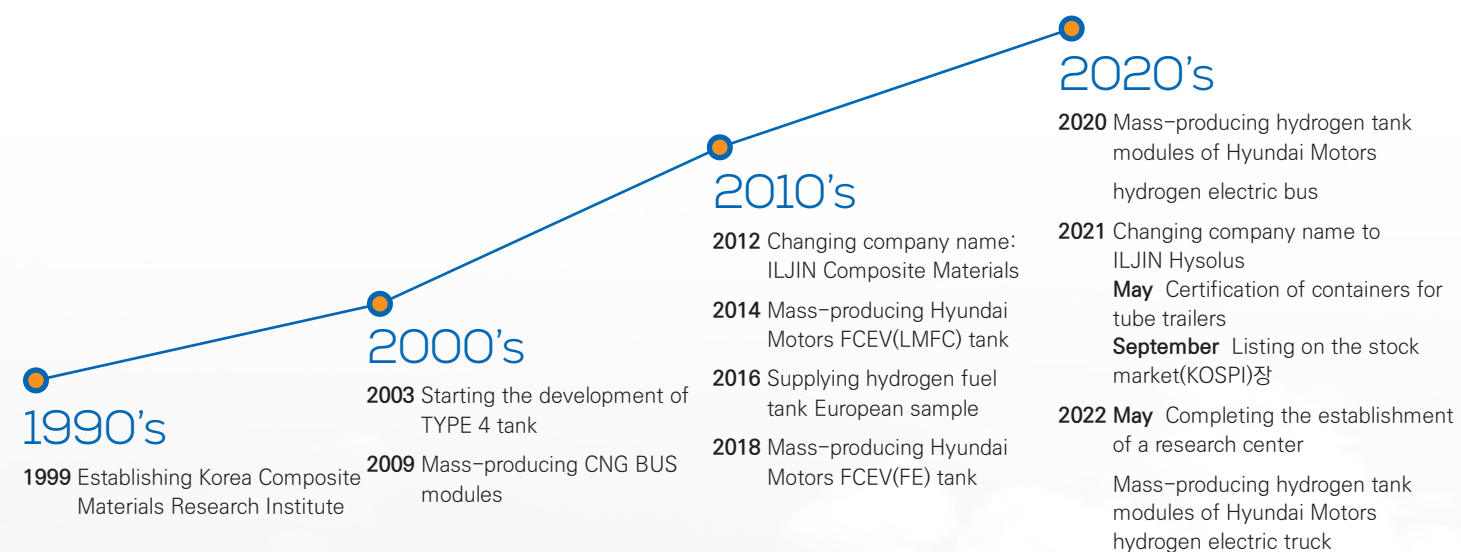
COMPANY INTRODUCTION

Company introduction



For responding to climate changes and achieving carbon neutrality, the hydrogen economy has become a reality. ILJIN Hysolus provides optimal solutions in transportation and storage areas among the value chains of the hydrogen economy. The high-pressure Type 4 container technology made over the past 20 years has been recognized at home and abroad, and the project is being expanded with leading global companies. We will maintain the global super gap based on the world's best and the biggest hydrogen storage technology.

History



H2 TANK

Selected as a Tier 1 company for Hyudai passenger cars

Securing the global No. 1 client company of hydrogen fuel cell vehicles

Mass-producing NEXO vehicles since 2018
Supplying more than 20,000 cars in cumulative numbers as of the 3rd quarter in 2021

A hydrogen tank, a key component of a hydrogen electric vehicle, is a technology-intensive product which can withstand a high pressure of 700 bar, as a non-metal liner is wound with carbon fiber composite material products. Our hydrogen tank realizes high level of stability and light weight by applying ultra-light composite material technology.

In addition to minimal testing for legal certification, our unique test ensures differentiated performance and safety.



Special features of goods



High efficiency of storing hydrogen



Reduction of product development period



Light container



Top level of safety



Highly competitive price

Most efficient hydrogen storage tank in the industry

▶ More efficient in mileage by more than 20 km when fully charged compared to other companies (based on NEXO)

Reducing the new product development period through the industry's best data accumulation of mass production(by about 50%)

▶ Rapid response to customers and reduction of period for introducing new technology

Container weight compared with other companies

▶ Higher fuel efficiency through lightweight of about -11%

▶ More than three times based on fire hazard evaluation (60 minutes)

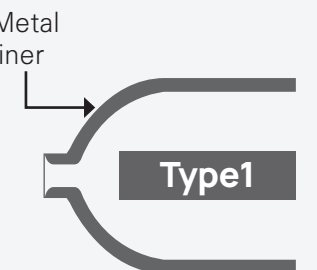
▶ Pressure rupture (more than 1.575 bar), dropping impact (1.8m), shooting (non-ruptured when penetrating), extreme temperature (-50 ~ 90 °C), etc.

▶ 10 times higher durability compared with the standard regulations of the maximum charging rounds (our product 45,000 rounds)

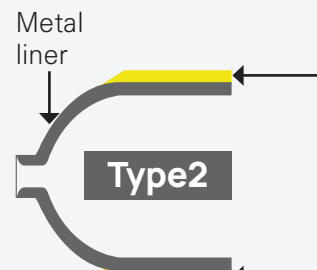
Possible to realize high performance with a small amount of composite materials

▶ Securing competitive advantage in unit cost

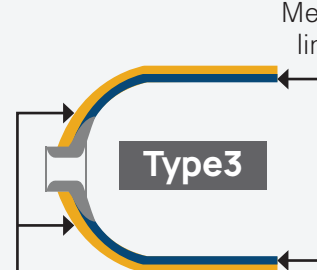
Specification



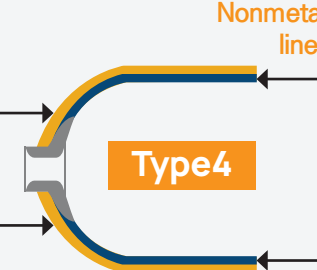
Type1



Type2



Type3



Type4

Labels: Metal liner, Glass fiber composite material, Nonmetal liner, Carbon fiber compote material

Competitive advantage compared with TYPE3
(assuming the same weight of a container)

- High efficiency (vehicle mileage + 150 km)
- Excellent durability of products (product life + 5 years)
- Cheaper by about 10%

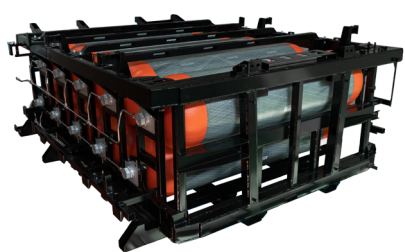
Module

Our company can provide a hydrogen storage system which meets various needs of customers besides a unit product of a tank by using the best hydrogen fuel storage technology.

Hyundai Truck and Bus selected as Tier 1 company

·Hydrogen buses have been mass-produced since 2020.

·Hydrogen trucks have been mass-produced since 2022.



Application

It is possible to apply it to various applications including mobility.



Passenger car



Truck and bus



Forklift



Drone



Train (tram)



Ship

TUBE TRAILER

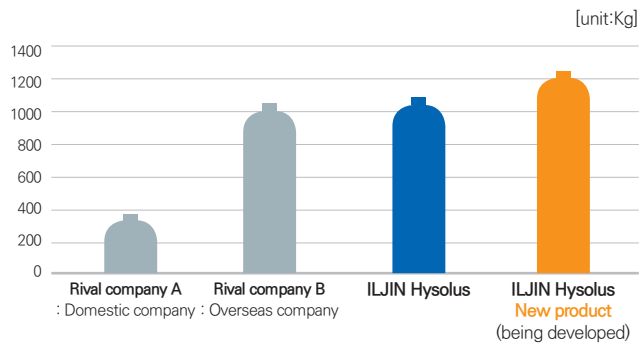
Tube trailers are one of the most efficient gas transport systems. Especially in areas where pipelines are not connected, they can be used as efficient and economical transport. Our tube trailers significantly decrease customers' operational cost by reducing the system's entire weight through superlight high-pressure tank Type4, and can be used more economically as the transported amount is greatly expanded through high pressure storage technology. Customers can select the standard size between 10~40 ft and compositions that meet demands.

[Main Application] · Hydrogen Tube Trailer · Mobile Charging Station [Main Certification] · KGS AC419 (Korea) · EN12245 (Europe)

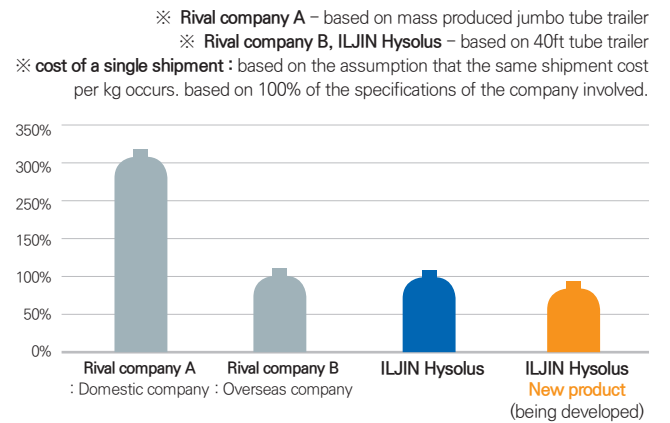


Special features of goods

amount of hydrogen per a single shipment



cost of a single shipment of hydrogen



Comparison of tube trailers

Comparison	"Rival company A : Domestic company"	"Rival company B : Overseas company"	ILJIN Hysolus	"New product of ILJIN Hysolus (being developed)"	Emphasized expression
Maximum amount of hydrogen shipment(kg)	340	1,030	1,080	1,245	▶ Much more!
Comparison of shipment cost	318%	105%	100%	87%	▶ Much cheaper!

CNG TANK

Natural gas is an environment friendly fuel. With new supply sources and extraction methods, the supply of natural gas increased around the world, and it is being used in more diverse fields. Using natural gas as fuel reduces energy cost and environmental impact

Standard pressure used : 200bar / 250bar



3 AXES OF A STRATEGY FOR EXPANDING BUSINESSES

SHORT-TERM

MID-TERM

LONG-TERM

DOMESTIC CLIENT COMPANY 01

Passenger car

Truck and bus

mutual growth by securing mass production amount by car model

Strengthening mutual partnership

OVERSEAS CLIENT COMPANY 02

Truck and bus

Passenger car

expanding overseas businesses by establishing partnership and overseas presence

Selecting markets through global diversification

APPLI CATION 03

Tube trailer

diversifying product /application

forklift train drone ship

Expanding portfolio such as tube trailer, forklift, and etc.