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CIMC ENRIC

Core Value Chain Supplier for Commercial Aerospace

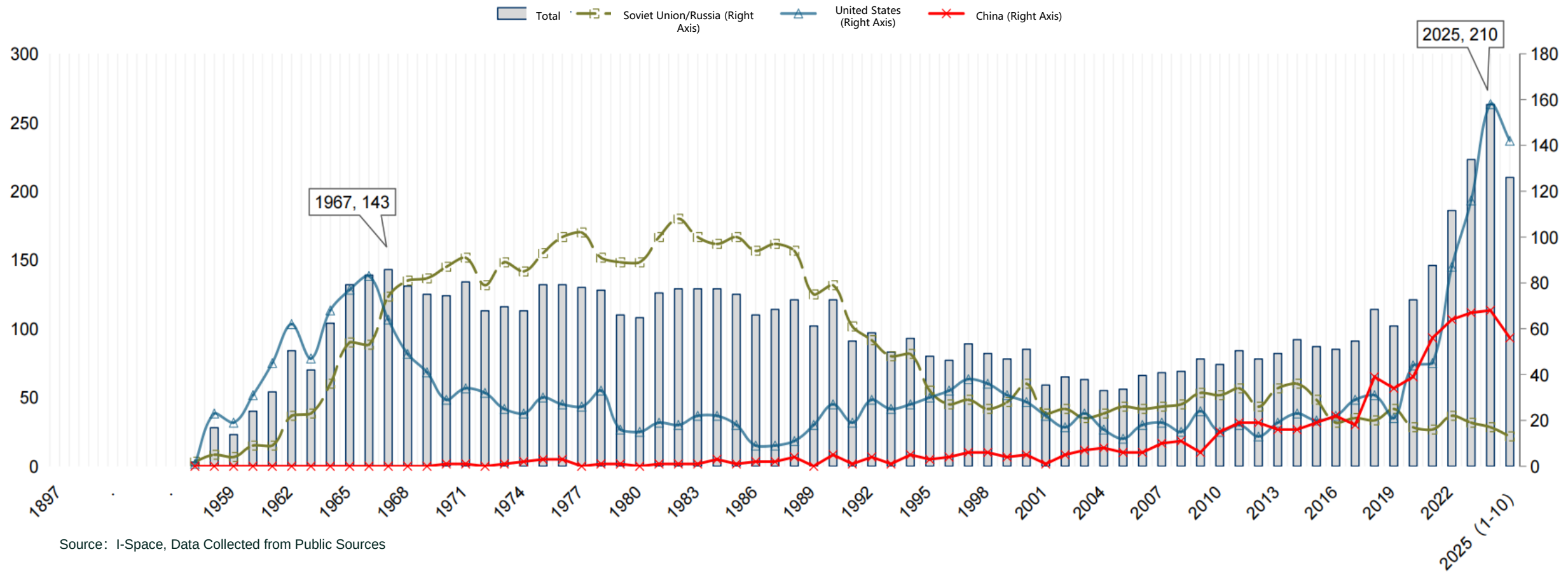
CONTENTS

1 Current Status of China’s Commercial Aerospace

Development Milestones of the Global Aerospace Industry

Incubation Period (1897-1945)	First Wave of Aerospace Industry Development During the Cold War Era (1945-1991)	Dormant Period (1991-2005)	Second Wave of Aerospace Industry Development (2006 to Present)
Theory, Experimentation, and Initial Applications	Against the backdrop of the US-Soviet Cold War following the end of World War II	Dissolution of the Soviet Union	China emerges as a key player
Goddard launches the first liquid-fueled rocket German V-2 missile	Landmark aerospace activities emerged, including satellite orbital insertion, manned spaceflight, and manned lunar landing	Emergence of civilian application trends in aerospace technology	The United States exemplifies the upward trend in commercial aerospace

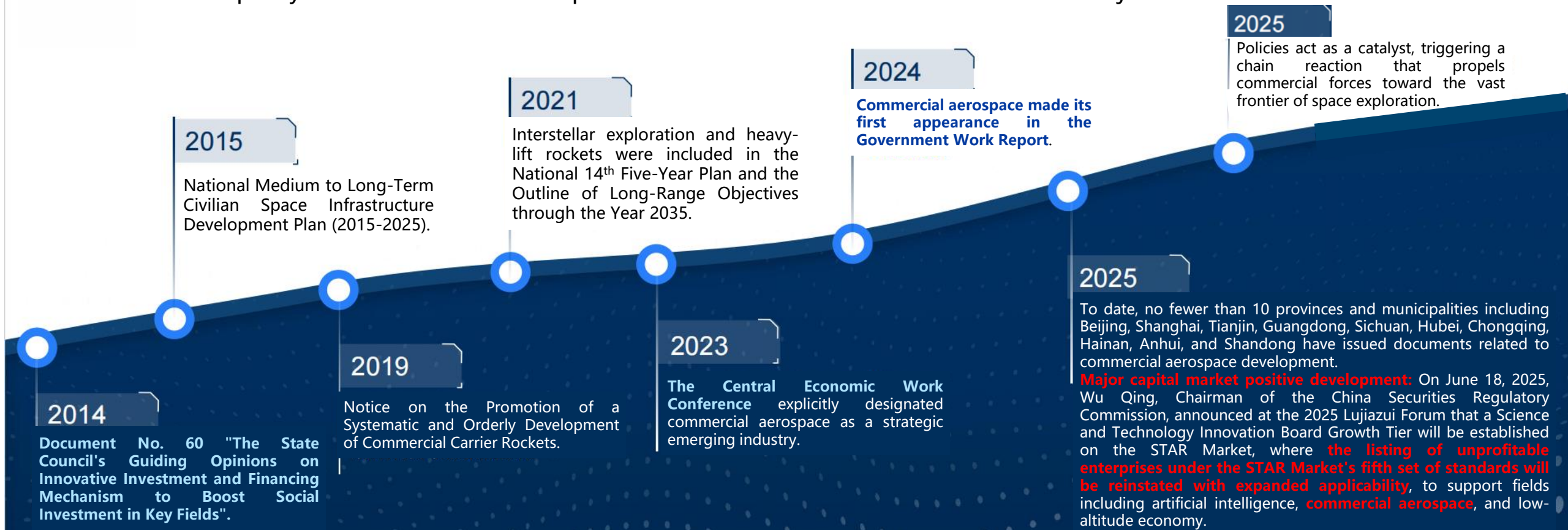
Global Annual Space Launch Count



Source: I-Space, Data Collected from Public Sources

Development Milestones of China's Private Commercial Aerospace Industry

- **Preliminary guidance phase (2014-2018):** Encouraging private sector participation in national civilian space infrastructure construction (represented by **"Document No. 60"**), building the commercial aerospace industry chain;
- **Exploration and practice phase (2018-2022):** Rapid development of upstream and downstream enterprises in the commercial aerospace industry, with private aerospace **achieving multiple milestone accomplishments** (i-Space **successfully completed its first orbital flight in 2019**);
- **Comprehensive promotion phase (since 2023):** Commercial aerospace has been booming with continuous improvement of policies and regulations. **On June 18, 2025**, Wu Qing, Chairman of the China Securities Regulatory Commission, unveiled the "[illegible]" reform policy measures to further deepen the reform of the STAR Market at the 2025 Lujiazui Forum.



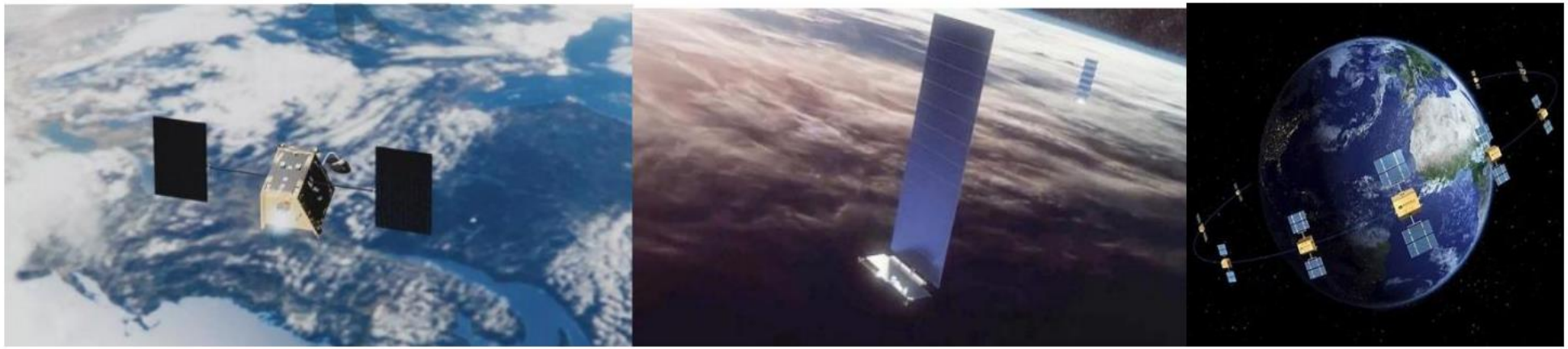
Surging LEO Megaconstellation Launch Demand & Commercial Potential

- From 2014 to 2023, the annual launch quantity of global low-Earth orbit communication satellites grew from 14 to 2,337, representing a growth of more than 160 times; in 2024, over 2,800 communication satellites were successfully sent into space, reaching a record high in launch numbers;
- China's massive Low-Earth orbit constellation projects such as "State Grid" and "Thousand Sails" are currently under development. According to constellation planning, the average annual launch demand before 2030 **will be no less than 1,500 satellites**, with an average annual launch frequency of **no less than 150 times**.

Source：I-Space, Data Collected from Public Sources

Satellite Constellation	Planned Quantity	Completion Time	Owning Company
"Starlink" Phases 1 and 2	12000+	2027	Space Exploration Technologies Corp.
"Project Kuiper"	3236	2029	Amazon.com Inc.
"Guo Wang" Constellation	12992	2035	China Satellite Network Group Co., Ltd.
"Thousand Sails" Constellation	12000+	2030	Shanghai Yuanxin Satellite Technology Co., Ltd.

Source：Data Collected from Public Sources

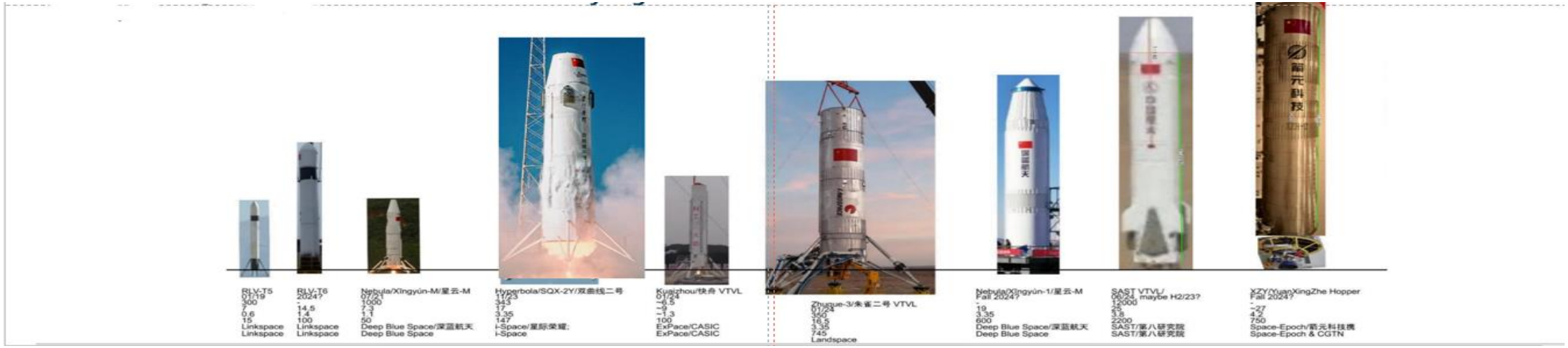


Development Trends of China's Commercial Aerospace Technologies

- Over the past decade, China's commercial aerospace sector has developed rapidly, making arduous efforts in exploring reusable launch vehicle technologies;
- Companies including i-Space, LinkSpace, Deep Blue Aerospace, CASIC, SAST (Shanghai Academy of Spaceflight Technology), LandSpace, and Space Epoch have all conducted development and flight tests of **vertical takeoff and vertical landing (VTVL) validation rockets**;
- Multiple domestic commercial rocket companies have released reusable launch vehicle development plans, and **will successively conduct orbital launch + recovery flight tests in the coming years**.

Company	Vehicle Scale	Engine Type	Maximum Altitude	Test Time
LinksSpace Aerospace	1.5 tons (scaled-down)	Liquid Oxygen/Alcohol	Approximately 300m	Aug 2019
Deep Blue Aerospace	3~4 tons (scaled-down)	Liquid Oxygen/Kerosene	Approximately 1km	May 2022
i-Space	7 tons	Liquid Oxygen/Methane	178m	Nov 2023
i-Space	11 tons	Liquid Oxygen/Methane	343m	Dec 2023
CASIC	10-ton class	Liquid Oxygen/Methane	Meter-level hovering	Jan 2024
SAST	140 tons	Liquid Oxygen/Methane	11km	Jun 2024
LandSpace	68 tons	Liquid Oxygen/Methane	10km	Sep 2024
Jianyuan	57 tons	Liquid Oxygen/Methane	2.5km	May 2025

Source：Data Collected from Public Sources



Accomplishments & Challenges

Accomplishments

Policy & Capital: Dual-Engine Drive

Policy Boost | 2025 Market Size Projected to Exceed 28 Trillion RMB | Active investments Inflow

Source: Zhongshang Industrial Research Institute

Accelerated Tech Innovation

First flight tests of reusable rockets conducted; high-performance rocket propellants being upgraded and replaced; payload capacity improved; technical routes for each segment becoming increasingly clear.

Launch activities becoming increasingly frequent

92 launches in 2025, with private rocket companies becoming a significant force, accounting for 26.4% of total launches, doubling from 2020 levels.

Source: Public News

Industrial clusters initially taking shape

Led by Beijing, Xi'an, and Shanghai, industrial clusters have initially formed in multiple regions, with upstream-downstream synergies beginning to emerge.

Challenges Faced

Core technologies still require breakthrough efforts

Reusable rocket reliability is still being verified, with gaps remaining compared to international advanced standards.

Supply chain localization needs strengthening

Dependence on imports for some high-end components and critical materials affects costs and production capacity.

Commercialization capabilities still being explored

Business models and service capabilities adapted to large-scale constellation construction are still being developed.

Current Phase: Major Chinese Commercial Rocket Enterprises

Mainstream enterprises: CAS Space, Galactic Energy, Space Pioneer, LandSpace, Orienspace, etc., totaling approximately 10 companies, among which those with launch capabilities are as follows:

Company Name	Core Orbital Launch Vehicle Models	First Orbital Launch Time	Core Characteristics
i-Space	Hyperbola-1	2019	First private enterprise in China to successfully achieve orbital launch with a carrier rocket, adopting a parallel development approach with solid small carrier rockets and liquid reusable carrier rockets
Galactic Energy	Ceres-1	November 2020	"Ceres-1" has achieved multiple consecutive successful launches, making it one of the most frequently launched private commercial carrier rockets in China
Space Pioneer	Tianlong-2	April 2023	China's first successful orbital private liquid rocket, adopting liquid oxygen/kerosene technology route
Landspace	Zhuque-2	July 2023	First company globally to achieve orbital launch with liquid oxygen/methane rocket, adopting liquid oxygen/methane technology route, and developing reusable rocket technology
CAS Space	Kinetica-1	July 2022	Mixed-ownership commercial rocket company; Kinetica-1 is a medium solid carrier rocket with payload capacity of 1.5 tons to 500 km sun-synchronous orbit
Orienspace	Gravity-1	January 2024	Gravity-1 is the world's most powerful solid rocket, adopting a fully solid strap-on three-and-a-half stage configuration

Source：Data Collected from Public Sources

2 Technology Development Trends & Industrial Ecosystem in Aerospace

Reusable rocket: The core lever for cost reduction

Core target: 2026 breakthrough and decisive victory

First stage airframe reusable 5+ times, unit launch cost reduced to below 20,000 RMB/kg, compared to 50,000-100,000 RMB/kg for non-reusable rockets.

Source：Data Collected from Public Sources, LandSpace

Key Technological Breakthroughs

- Precision Landing Control Technology
- Rapid Inspection, Maintenance and Reuse of Rocket Bodies (72-hour turnaround)
- New Generation Lightweight Thermal Protection Materials

Building a Commercial Closed Loop

Launch → Recovery → Maintenance/Inspection → Relaunch

Conceptual Diagram of Reusable Rocket Precision Landing

Propellant and Payload Capacity Upgrade: Leap in Supply Capability

Propulsion Transformation

Propellant is undergoing a comprehensive transition to liquid oxygen/methane, which is clean and environmentally friendly, has strong adaptability for reusable systems, and represents the future mainstream direction.

Payload Capacity Tiers

- 10-ton class: Expendable rockets
- 20-ton class: First-stage reusable rockets
- 50-ton class: 7-meter diameter class rockets
- 100-ton class: Two-stage reusable heavy rockets

Liquid Oxygen/Methane Rocket Engine

"Airline-like" Launch Mode: Enhanced Launch Efficiency

Infrastructure Upgrades

Upon completion of Phase II of the Hainan Wenchang Commercial Spacecraft Launch Site, annual launch capacity is expected to exceed **60** launches; other launch sites are also being expanded with additional commercial launch facilities; beyond the four major national launch sites, new commercial launch sites are being built, such as Haiyang, Shandong.

Source：Data Collected from Public Sources

Launch Process Optimization

Annual launch capacity per launch pad has been increased to **16** launches.

Achieve "Weekly Launch" Capability

Comprehensively support the high-frequency, batch launch service demands of commercial aerospace.

Modernized Rocket Launch Pad

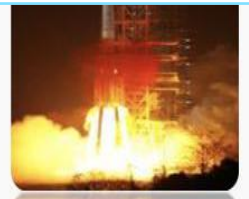
Deepening Industrial Chain Collaboration

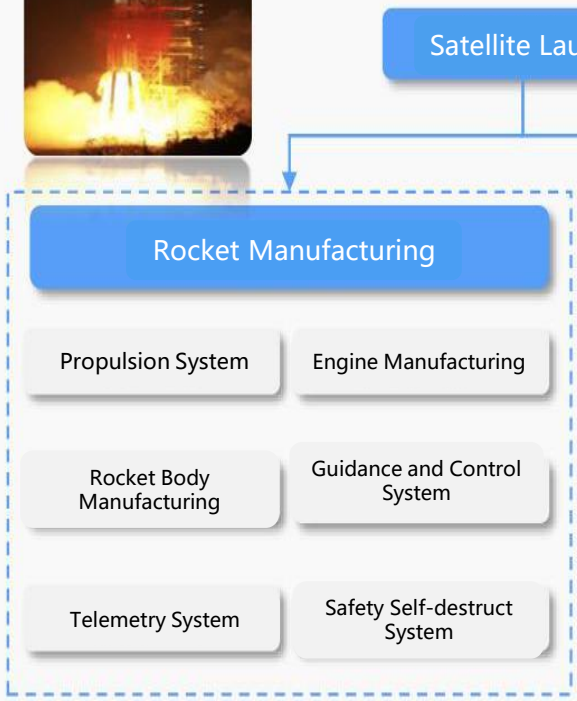
Collaboration between “State-owned + Private Enterprises"

Aerospace central state-owned enterprises provide mature technologies and infrastructure such as launch sites, fuel supply, and service guarantees, while private enterprises focus on innovation and commercialization implementation.

Localization of Upstream Supporting Industries

Localization rates of power systems and telemetry/control equipment are increasing, forming a "complete rocket as the core driver + supporting industrial clusters" pattern. In the future, several regional industrial clusters will emerge, such as Beijing Yizhuang and Xi'an Aerospace City. Other provinces including Shandong, Sichuan, and Zhejiang also have relevant industrial development plans.





Among the state-owned enterprises," China Aerospace Science and Technology Corporation (CASC) and China Aerospace Science and Industry Corporation (CASIC) dominate as the two major giants in the aerospace field.

Dual-driven by collaborative innovation and domestic substitution, building an efficient, autonomous, and controllable aerospace industrial ecosystem.

Acceleration of Commercial Closed Loop: The Key to Sustainable Development

Capital Empowerment

The STAR Market's fifth set of listing standards has been opened to commercial rocket enterprises, accelerating IPO fundraising for leading companies.

Among them, LandSpace recently formally submitted its IPO application to the STAR Market and received acceptance, sparking widespread discussion in the industry;

Additionally, multiple enterprises including iSpace, Galactic Energy, Space Pioneer, and CAS Space have disclosed progress in IPO counseling preparations, planning to list on China's A-share market; while Adaspace and Fortunetone have set their sights on the Hong Kong stock market.

Expansion of Application Scenarios

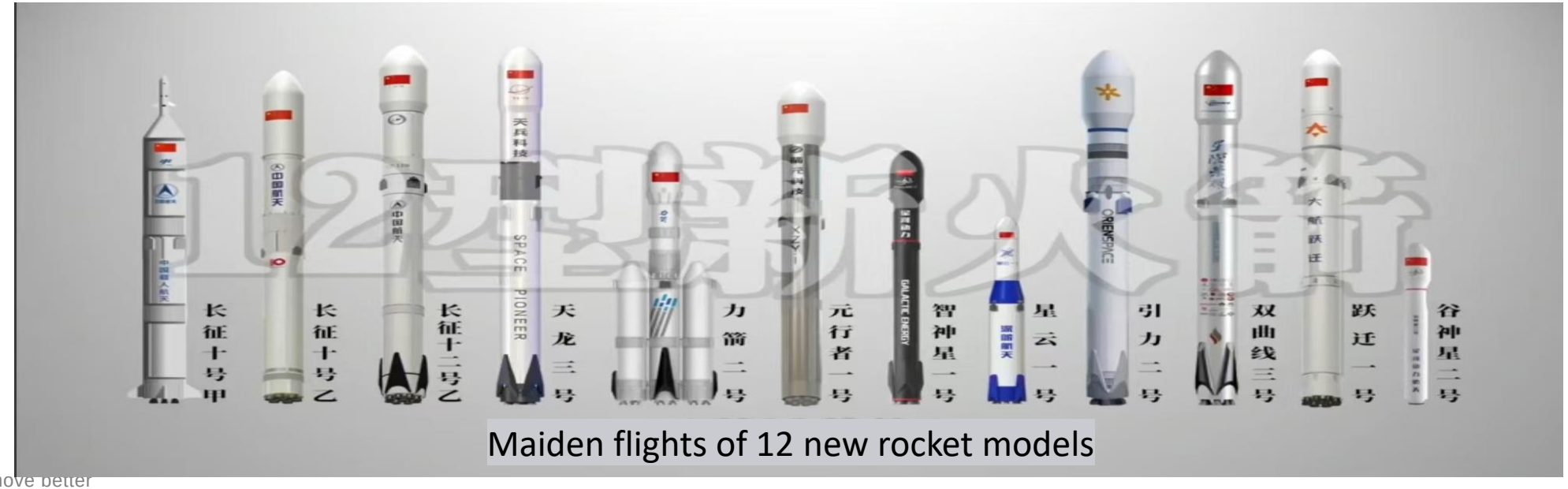
Expanding from satellite internet to areas such as remote sensing, scientific experiments, space tourism, and space resource extraction (e.g. helium-3).

Space Tourism: The New Blue Ocean of Commercial Aerospace

3 Market Outlook & Opportunities

Key Milestones and Competitive Landscape

Period	Milestones	Focus
2026	Concentrated debut flights of reusable rockets, with annual launch numbers exceeding 100	Low cost, high reliability and rapid turnaround capability
2027-2028	Large-scale application of first-stage reusable rockets	Number of reuse cycles and unit cost control
2030	Successful development of super-heavy reusable rockets	Launch capacity scale and global launch service capability



Maiden flights of 12 new rocket models

Commercial Spaceflight New Era: Low Cost, High Reliability & High-Frequency Launche

Core leap

A transition from merely “being able to launch” to commercial operations characterized by low cost, high reliability and high launch frequency.

Technology-driven

Reusable technology and liquid oxygen/methane propulsion are the core engines enabling leapfrog development.

Development inflection point

The Guowang, Qianfan and Honghu constellations together plan to deploy more than 10,000 satellites by 2030; in December 2025, China filed with the International Telecommunication Union for 203,000 satellites.

Driven by the combined forces of policy, capital and technological progress, large-scale development is expected to reach an inflection point around 2026–2027.

Source：Data Collected from Public Sources

Future grand vision for space exploration

Business Opportunities: EPC for Launch Sites and Ground Facilities

Business Overview

EPC/general contracting for propellant filling systems at rocket launch pads and engine test stands

Estimated Market Size

China market size estimated at around RMB 10 billion

Source：Data Collected from Public Sources

Business Opportunities: Rocket Propellant Tanks

Business Overview

Production and sales of metal tanks installed inside rockets for storing liquid oxygen, liquid hydrogen, kerosene and other rocket fuels and oxidizers.

Estimated Market Size

USD 3.53 billion in 2025.

USD 4.88 billion in 2030.

USD 6.53 billion in 2035.

Source：TBRC Business Research Private Ltd

Business Opportunities: Gas Supply for Launch Bases

Business Overview

Supply and sale of commonly used cryogenic liquids such as liquid nitrogen, liquid oxygen and liquid hydrogen for rocket launch bases.

Estimated Market Size

More than RMB 1 billion per year

In 2025, China conducted a total of 92 rocket launches; where a single Long March-5 launch consumes approximately 1,000 tonnes of liquid oxygen and 1,000 tonnes of liquid nitrogen at around 2,000 yuan per tonne, and about 100 tonnes of liquid hydrogen at around RMB 50,000 per tonne.

Source：Data Collected from Public Sources,

4 Our Business Related to Commercial Aerospace

High-Pressure Applications (Nitrogen, Helium, Air)

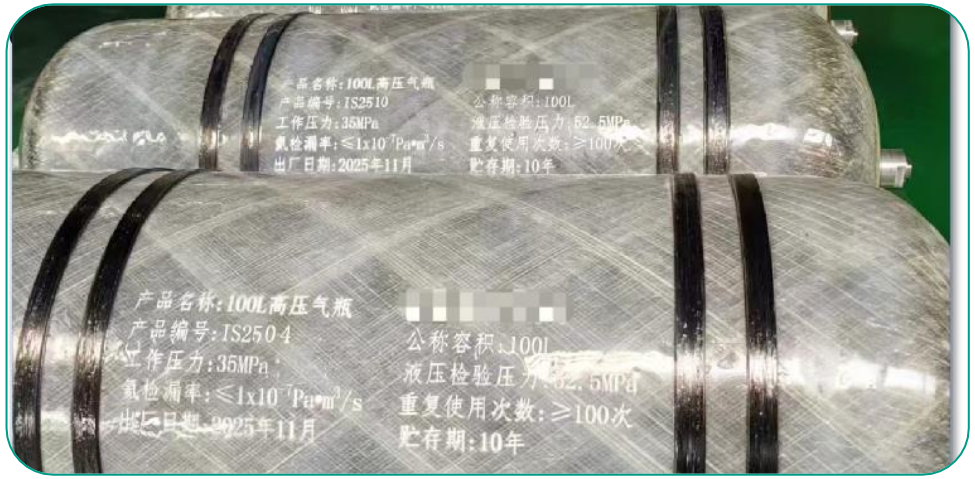
Medium	Application Scenarios
High-pressure nitrogen	1.Pressurization of propellant tanks. 2.Purging and cleaning of pipelines/equipment. 3.Power source for Rocket attitude control/separation systems. 4.Drive and protection for ground support equipment.
High-pressure helium	1.Deep pressurization of liquid hydrogen/liquid oxygen storage tanks. 2.Leak detection for systems and pipelines. 3.Working medium for high-precision attitude control systems.
High-pressure air	1.Primary purging for ground equipment. 2.Airtightness testing of non-critical pipelines.

Related products: bundle containers/ISO containers, cylinder packs (clean-treated, high-pressure/ultra-high-pressure) and other ground storage and transportation equipment.

High-Pressure Applications (Nitrogen, Helium, Krypton) – Onboard Rocket

Medium	Application Scenarios
35 MPa high pressure (nitrogen/helium)	1. Propellant pressurization and delivery: high-pressure gas in the cylinders is used to expel propellants (liquid hydrogen and liquid oxygen), ensuring stable propellant flow into the engine combustion chamber. 2. Pre-launch purging: helium is used before launch to purge pipelines, valves and engines of air and impurities. 3. Turbopump drive: provides initial power for the fuel pump and oxidizer pump of the engine. 4. Thin-wall high-pressure cylinders replace titanium alloy cylinders, offering advantages of lower weight, stable quality and reduced cost.
High-pressure krypton	Mainly used as propellant for electric propulsion systems: it provides continuous low thrust to raise the satellite from transfer orbit to its operational orbit, maintains the satellite’ s station-keeping, and enables precise attitude adjustments.

Related products: lightweight high-pressure composite cylinders and high-pressure metal



Cryogenic Applications (LOX, LN_2, LCH_4, LH_2)

Medium	Application Scenarios
Liquid oxygen	Main **oxidizer** for rocket propulsion: mixed and burned with fuels such as liquid hydrogen, kerosene and liquid methane.
Liquid nitrogen	1.Ground test cryogenic environment simulation: **simulates the low-temperature conditions** experienced by the launch vehicle in space to test the tolerance of materials and equipment. 2.Pipeline/equipment precooling: pipelines are precooled with liquid nitrogen before filling with liquid oxygen or liquid hydrogen to prevent instant vaporization of cryogenic propellants. 3.Emergency cooling medium.
Liquid methane	Next-generation **main rocket fuel.**
Liquid hydrogen	**High-performance main rocket fuel:** combined with liquid oxygen to form a “liquid oxygen–liquid hydrogen propellant”.
Liquid helium	1.**Ultra-low-temperature cooling of liquid hydrogen tanks/engines:** maintains the ultra-low-temperature storage state of liquid hydrogen and prevents vaporization. 2.C**ooling of superconducting equipment:** cools onboard high-precision devices such as superconducting gyroscopes and superconducting magnets to ensure their superconducting performance. 3.Advanced ground tests: used to simulate the **extremely low-temperature environment of deep space.**

CIMC Enric's Core Advantages in the Commercial Aerospace Sector

Prominent Core Technology Barriers

CIMC Enric possesses advanced ultra-cryogenic storage and transportation technologies (including liquid hydrogen at temperatures as low as −252.87 ℃) and ultra-high-pressure technologies (up to 103 MPa), fully compliant with domestic and international standards. Its precision welding technology is industry-leading, and the cleanliness of inner tank walls and piping meets stringent aerospace-grade purity requirements.

Global Quality and Certification System

The company leads the formulation of domestic standards for cryogenic and high-pressure products and has obtained international certifications such as ASME, enabling its products to serve major launch sites in China and North America.

Leading Delivery Capabilities

CIMC Enric can provide one-stop storage and transportation solutions for specialty gases. Its response time and delivery speed are among the best in the industry, with leading delivery volumes in the domestic market, and it is capable of rapid installation and commissioning under the extreme conditions of launch sites.

Comprehensive Inspection System

The company has one of the most comprehensive testing systems and after-sales service networks in the industry.

Integrated strengths in technology, manufacturing and services underpin global competitiveness.

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Appendix

Shijiazhuang Enric Gas Equipment (High-Pressure Applications) – Overview

Shijiazhuang Enric

Shijiazhuang Enric Gas Equipment Co., Ltd. was established in 1970 and is one of the core member enterprises under CIMC Enric Holdings Limited. The company is located in the Shijiazhuang, Hebei Province.

The company's core businesses include **energy storage and transportation equipment (low-carbon equipment), hydrogen energy storage equipment (zero-carbon equipment), specialty gas storage and transportation equipment, and integrated services.** It operates an independent R&D centre and has established multiple R&D platforms. **To date, the company has been granted more than 170 authorised patents and has led or participated in the formulation of over 20 national and industry standards.** It has received numerous honours, including National-level "Little Giant" Enterprise with Specialisation, Refinement, Differentiation and Innovation, National-level Green Factory, China Well-Known Trademark, Hebei Provincial High-Tech Enterprise, and Hebei Provincial Science and Technology Leading Enterprise.

A number of its products have filled gaps in both domestic and international markets. Its large-volume steel seamless gas cylinder series products were the first of their kind in China, and its high-pressure storage and transportation equipment has reached an internationally leading level. The independently developed **"30 MPa carbon-fiber fully-wrapped hydrogen cylinders and tube bundle containers"** were selected for the National Catalogue of First-of-a-Kind Major Technical Equipment in the Energy Sector. The company ranks first nationwide in market share for high-pressure gas storage and transportation equipment.

It serves as CIMC Enric's manufacturing base for hydrogen energy storage equipment and natural gas energy storage and transportation equipment. Its products are sold both domestically and internationally, with **exports to more than 50 countries and regions worldwide.**

Shijiazhuang Enric Gas Equipment – Major R&D Achievements & Certifications

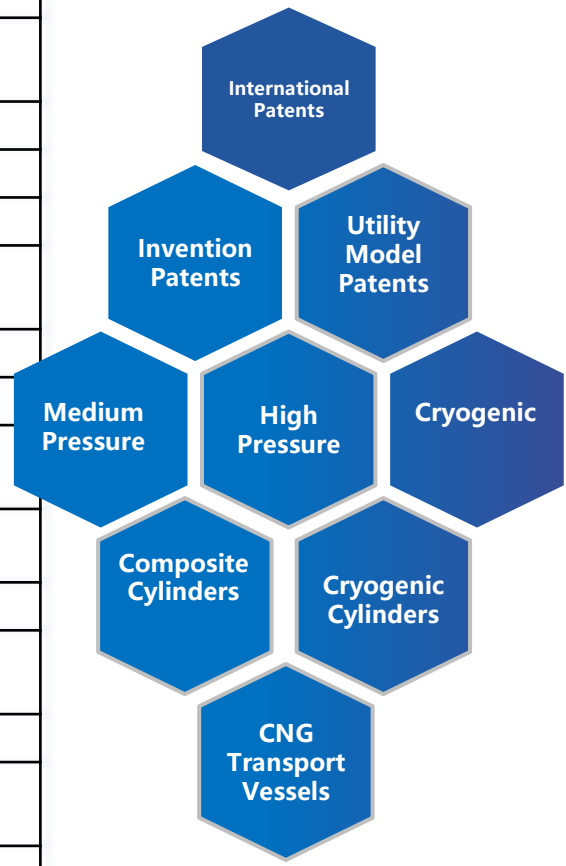
The earliest enterprise in China’s pressure vessel industry to obtain a comprehensive range of qualifications!
Currently one of the enterprises with the highest level and the most extensive qualifications obtained!

- ISO 9001 / IATF 16949 Quality Management System Certification
- ISO 14001 Environmental Management System Certification
- ISO 45001 Occupational Health and Safety Management System Certification
- Pressure Vessel Manufacturing Licences (Classes B1, B2, B3, B4, C2, C3) issued by the State Administration for Market Regulation
- Class A2 Pressure Vessel Manufacturing Licence issued by the Hebei Provincial Administration for Market Regulation
- Nigeria PC Certificate
- American Society of Mechanical Engineers (ASME) U, U2, U3 and T Authorisation Certificates
- Authorisation Certificates for Seamless Gas Cylinders and Welded Gas Cylinders issued by the U.S. Department of Transportation (DOT)
- Canada TC-3AAXM and 3TM Seamless Gas Cylinder Registration Certificates
- Korea Gas Safety Corporation (KGS) Registration Certificate
- World Manufacturer Identifier (WMI) Certificate
- India PESO Certificate

Shijiazhuang Enric Gas Equipment – Major R&D Achievements – Patents

Accumulated authorized patents exceed 170

Classification	Patent Name	Product Series
United States	energy efficient vertical cryogenic tank	Cryogenic storage tanks
United States	Floating ball filling-contol device for cryogenic tank	Cryogenic cylinders
Mexico	SISTEMA DE POSICIONAMIENTO DE BOTELLA DE GAS DE BARCO DE TRANSPORTE DE GAS NATURAL COMPRIMIDO (CNG)	CNG transport vessels
Utility Model	High-efficiency insulated horizontal liquefied natural gas storage tank	Cryogenic storage tanks
Utility Model	Large-capacity cryogenic liquid tank container	Cryogenic tank containers
Utility Model	Cryogenic storage container and cryogenic tank truck	Cryogenic tank trucks
Invention Patent	Strain-hardened cryogenic container with finite filling device and strain-hardening method thereof	Cryogenic cylinders
Utility Model	LNG vehicle-mounted cylinder	Cryogenic cylinders
Invention Patent	High-efficiency LNG cold energy utilisation system applied to commercial vehicles	Cryogenic cylinders
Invention Patent	Processing technology for large-capacity thick-walled high-pressure hydrogen storage steel liner	Hydrogen storage composite cylinders
Utility Model	Large-capacity steel liner fully wrapped high-pressure hydrogen storage container	Hydrogen storage composite cylinders
Utility Model	Tube bundle container	Tube bundle containers
Invention Patent	Large-capacity high-pressure composite cylinder with steel liner and manufacturing method thereof	Composite cylinders
Invention Patent	Manufacturing method for ultra-high-pressure hydrogen cylinders	Steel hydrogen storage cylinders
Utility Model	Tube bundle container frame, tube bundle container and natural gas daughter station vehicle	Tube bundle containers and daughter station vehicles
Invention Patent	Power-free natural gas trailer assembly with cyclic alternating control system and control method	Power-free gas refuelling vehicles
Invention Patent	CNG safe and efficient transport vessel gas cargo system	CNG transport vessels
Utility Model	Mobile container	Medium-pressure tank trucks



Shijiazhuang Enric Gas Equipment – Aerospace High-Pressure N_2 Gas Cylinder Modules

CIMC Sanctum Cryogenic Applications - Company Profile

26-Year Development Journey

1,200+ Employees

160+ Technical Staff

2 Major Production Bases

More than **280** Authorized Patents

◆Zhangjiagang CIMC Sanctum Cryogenic Equipment Co., Ltd. is a key enterprise under CIMC Enric (3899.HK).

◆The main business of CIMC Sanctum covers the entire LNG industry chain, specializing in the design, manufacturing, sales and related technical services of various cryogenic liquid storage tanks, tank trailers, tank containers and vacuum-insulated cylinders.
It undertakes EPC/general contracting for a wide range of cryogenic engineering applications, including LNG liquefaction plants, refueling stations, gasification and gas supply stations, large atmospheric storage tanks, satellite storage tanks, spherical tanks, as well as marine transportation, bunkering, fuel storage tanks and gas supply systems.

CIMC Sanctum Production Capabilities – Vehicle & Tank Base

Site Area

- The vehicle and tank base covers a land area of 200,000 square meters.
- The production area is divided into four major manufacturing workshops: Heavy-duty Workshop No. 1, Small Equipment Manufacturing Workshop No. 2, Final Assembly Workshop, and Anjietong Workshop.
- Each of the four manufacturing workshops adopts different advanced processing and manufacturing technologies.

Production Capacity

- Annual production capacity: 2,000 storage tanks, 1,600 tank trailers and tank containers, and 1,500 Anjietong units.
- Heavy-duty Workshop No. 1 can manufacture cryogenic storage tanks with a maximum capacity of 1,300 m^3.
- The company is equipped with an extra-large external heating furnace, providing a solid guarantee for the production of large-volume, high-vacuum storage tanks.

Technology R&D

CIMC Sanctum Patents, Certifications & Honors

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Patent Authorization

A total of **288** authorized patents have been obtained, including **46** Chinese invention patents, **2** U.S. invention patents, **237** utility model patents, and 5 design patents.

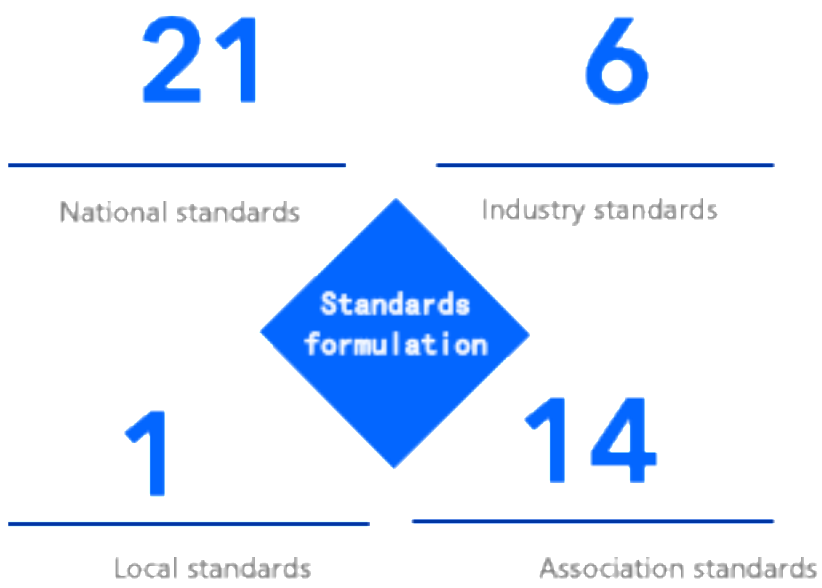
Awards and Honors

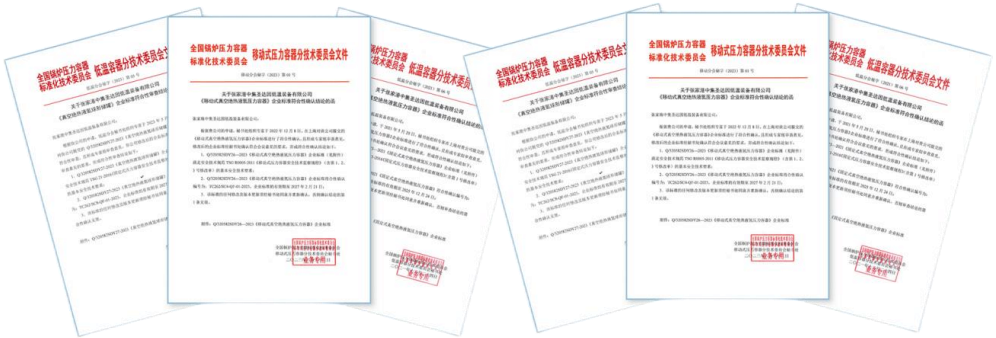
National "Little Giant" Specialized and Sophisticated SME, National Pilot Enterprise for Industrial-Information Integration, National High-Tech Enterprise, First Prize in Science and Technology Progress Award (Ministry of Education) for Austenitic Stainless Steel Strain-Strengthened Cryogenic Vessels, National Torch Program Key High-Tech Enterprise, Second Prize in National Science and Technology Progress Award for Key Technologies and Engineering Applications for Lightweight Design of Heavy Pressure Vessels, Provincial AAA-Level Quality Credit Enterprise, Provincial Famous Trademark, Provincial High-Tech Enterprise, etc.

Certifications

A3, C2, B4, D Pressure Vessel Manufacturing License, GC1 Industrial Pipeline Installation License, ISO 9001/IATF 16949:2016 Quality Management System, ISO 14001 Environmental Management System Certification, GB/T 45001 Occupational Health and Safety Management System Certification, ASME "U", "S", and "T" Stamp Certificate from the American Society of Mechanical Engineers, as well as factory approval certificates from classification societies including CCS, BV, DNV·GL, LR, RINA, etc.

CIMC Sanctum Technology R&D Participation in Standard Formulation





Participation in National Standard Formulation

Performance Test Methods for Vacuum-Insulated Cryogenic Equipment Stationary Vacuum-Insulated Cryogenic Pressure Vessels

Cryogenic Liquid Tank Containers & Stationary Vacuum-Insulated Cryogenic Pressure Vessels

High-Vacuum Multilayer Insulation Materials for Cryogenic Containers

Liquefied Natural Gas (LNG) Cylinders for Vehicles

Technical Specifications for LNG-Powered Vehicles

Selection and Installation of Safety Relief Devices for Pressure Equipment

Installation Code for Gas Supply Systems in Gas-Powered Vehicles

Welded Insulated Gas Cylinders

Guidelines for Repair of Portable Pressure Vessels

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CIMC Sanctum's Aerospace-Related Track Record

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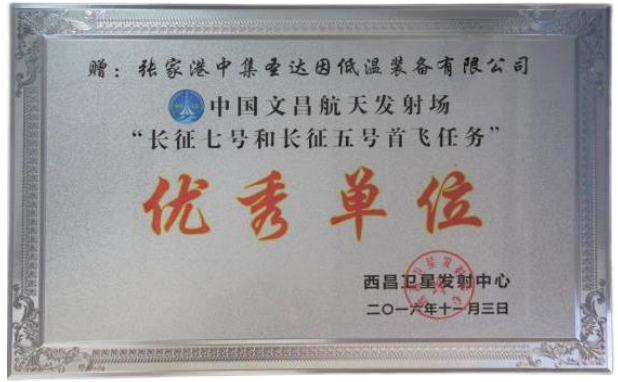
No.	Project Types	Supporting Products Provided by the Company
1	Rocket Launch	2 units of 300m³ liquid hydrogen tanks + 1 flatbed trailer
2	Rocket Launch	2 units of 300m³ liquid hydrogen tanks
3	Rocket Launch	2 units of 300m³ liquid hydrogen tanks + 1 flatbed trailer
4	Rocket Launch	2 units of 400m³ oxygen tanks
5	Rocket Launch	1 unit of 300m³ liquid hydrogen tank + 1 flatbed trailer
6	Rocket Launch	1 unit of 60m³ low-temperature liquid nitrogen storage tank
7	Rocket Launch	1 unit of 1m³ buffer tank, 1 unit of 6m³ liquid nitrogen tank, 1 unit of 20m³ liquid nitrogen recovery tank, 1 unit of 30m³ storage tank
8	Rocket Launch	1 unit of 120m³ liquid nitrogen storage tank, 2 units of 20m³ liquid nitrogen storage tanks
9	Rocket Launch	4 units of 200m³ liquid oxygen vacuum storage tanks, 2 units of 150m³ liquid nitrogen tanks, 1 unit of 100m³ liquid oxygen storage tank, 1 unit of 50m³ liquid nitrogen tank, 1 unit of 20m³ liquid nitrogen recovery tank
10	Rocket Launch	4 units of 100m³ liquid argon storage tanks
11	Rocket Launch	8 units of 250m³ methane storage tanks and complete supporting station
12	Rocket Launch	3 units of 200m³ liquid oxygen horizontal fixed vessels
13	Rocket Launch	1 unit of 50m³ liquid nitrogen tank
14	Rocket Launch	1 unit of 400m³ liquid methane tank
15	Rocket Launch	2 units of 200m³ liquid nitrogen tanks
16	Rocket Launch	4 units of 200m³ liquid nitrogen tanks
17	Rocket Launch	2 units of 1200m³ atmospheric pressure tanks, 1 unit of 30m³ liquid nitrogen storage tank
18	Rocket Launch	5 units of 120m³ kerosene storage tanks, 3 units of 150m³ kerosene storage tanks, 1 unit of 120m³ kerosene recovery tank
19	Rocket Launch	2 units of 400m³ liquid oxygen tanks
20	Rocket Launch	1 unit of 800m³ liquid nitrogen spherical tank, 2 units of 1200m³ liquid nitrogen flat-bottomed large tanks
21	Rocket Launch	12 units of 227m³ liquid oxygen/liquid nitrogen storage tanks

CIMC Sanctum's Aerospace-Related - 300m³ Liquid Hydrogen Storage Tank



The 300m³ mobile liquid hydrogen storage tank, developed for the Wenchang Spacecraft Launch Site in Hainan, supported the maiden flights of two rocket models. Its overall performance has reached internationally leading levels, providing mission support for multiple launches of the Long March rocket series. It has been recognized as a National Key New Product.

CIMC Sanctum's Aerospace-Related - 400m³ Liquid Oxygen Storage Tank

CIMC 中集
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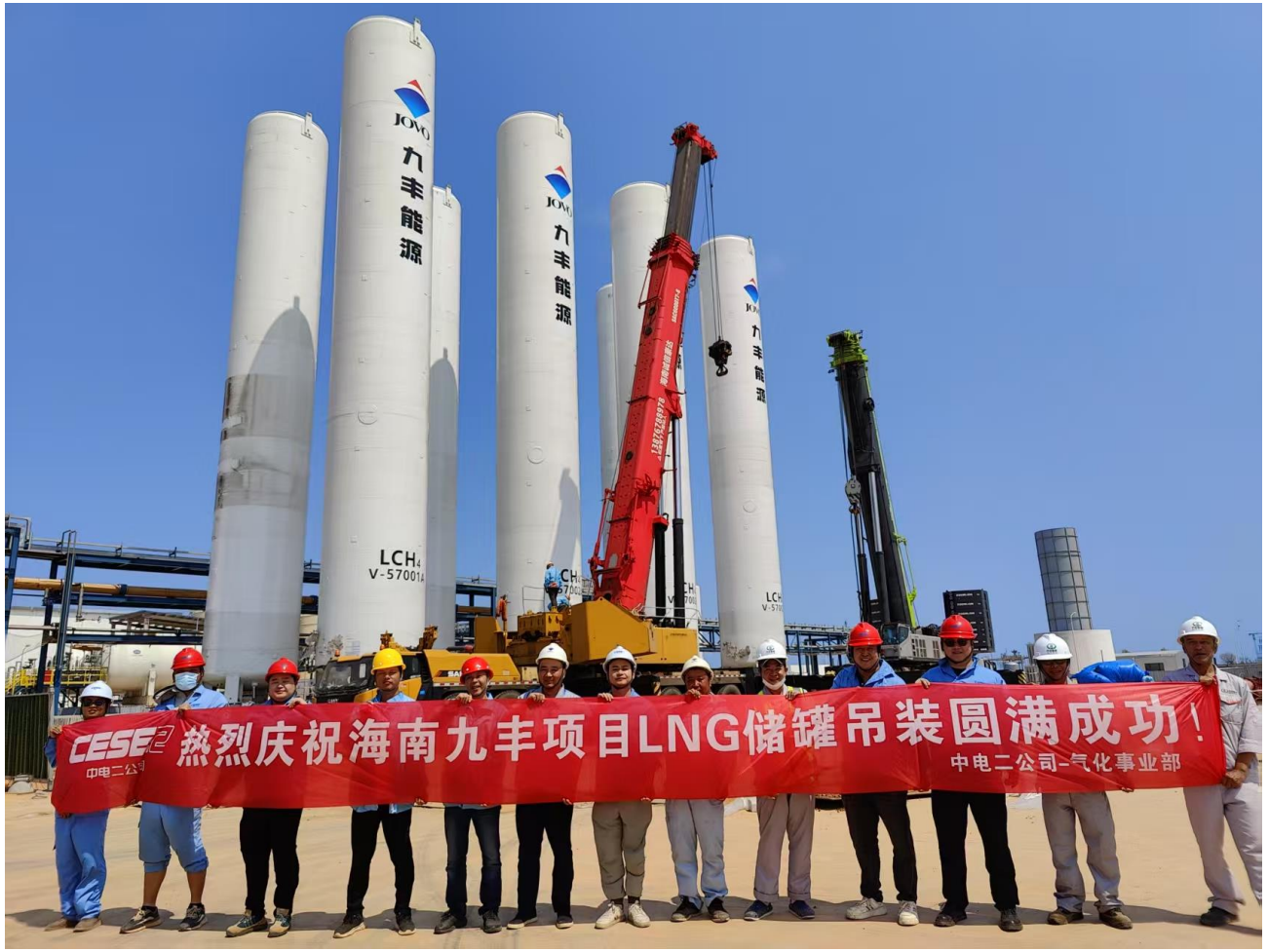
CIMC Sanctum's Aerospace-Related - Methane Storage Tank



CIMC Sanctum's Aerospace-Related - 100m³ Liquid Argon Storage Tank

CIMC 中集
ENRIC / 中集安瑞科

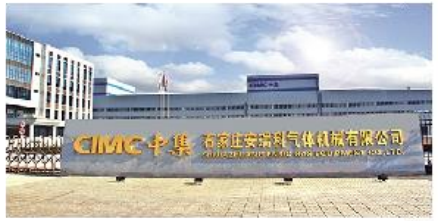
CIMC Hydrogen Energy Technology High-Pressure Applications

CIMC Hydrogen Energy Technology Co., Ltd. (hereinafter referred to as “CIMC Hydrogen Energy Technology”) is a dedicated development platform under CIMC Enric for undertaking hydrogen energy businesses both in China and overseas. It strategically focuses on three core areas: transportation, hydrogen power, and hydrogen gas, and is committed to becoming a technology-driven enterprise with a leading position in the hydrogen energy industry.

Establishing an integrated business chain of production, storage, transportation, refueling, application and intelligent hydrogen energy.

CIMC Hydrogen Energy Technology has established six internationally leading equipment manufacturing bases in Shijiazhuang, Langfang, Nantong, Zhangjiagang, and Qidong, forming an industrial layout that covers the full industrial chain equipment for hydrogen energy “production, storage, transportation, refuelling and utilization”. Its business footprint extends to more than ten countries, including Korea, Japan, Denmark, Switzerland and the United States, providing customers with integrated hydrogen energy utilisation solutions that are green, convenient and cost-effective.

Langfang Integrated Business Division



Shijiazhuang Hydrogen Energy High-pressure Gas Hydrogen Division

Shijiazhuang CIMC-Hexagon Hydrogen Energy Technologies(Hebei) Co., Ltd.
CIMC-Hexagon Hydrogen Energy Development (Hebei) Co., Ltd.

Jingmen Ammonia-Hydrogen Business Division

Zhangjiagang Liquid Hydrogen Business Division

Qidong Offshore Hydrogen Energy Business Division

CIMC Hydrogen Energy Technology (Nantong) Co., Ltd.

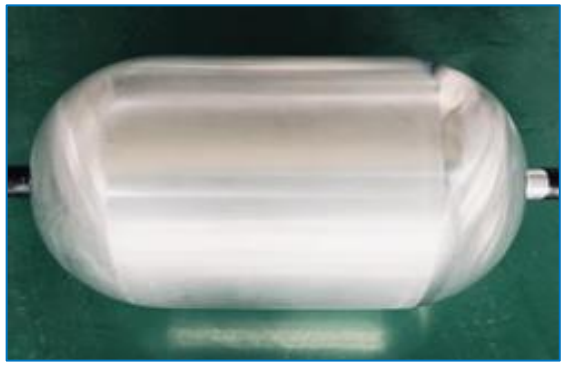
CIMC Hydrogen Energy Technology

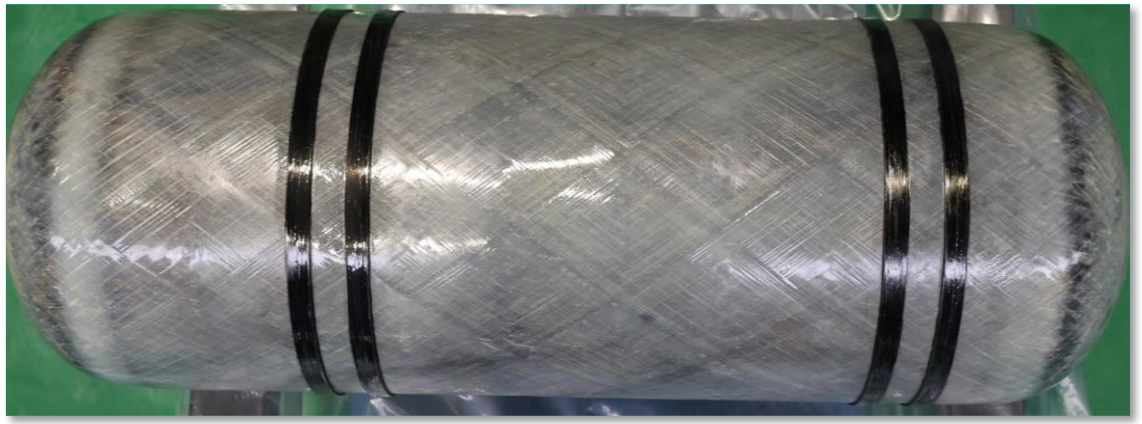
Aerospace Applications – Thin-Walled Aluminium Liner Gas Cylinders

	Specification	Cylinder Outer Diameter（mm）	Length（mm）	Total Cylinder Weight（Kg）	Working Pressure（mpa）	Status
1	56L	426	684	19.8	35	passed internal & external testing
2	130L	429	1276	38.2	35	
3	150L	428	1504	50	35	
4	500L	/	/	180	35	Under Development

liner wall thickness：1.0～4.0mm

carbon fiber：T700-grade，T800-grade，T1000-grade





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Thank you!

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