

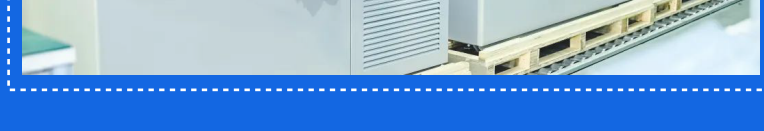
Haier Biomedical's -150°C Hydrocarbon IoT Cryo Freezer Takes Cryopreservation Technology into a New Era

Intelligent Protection of Life Science with Low Carbon Refrigeration

On March 16, a delivery ceremony was held at Haier Biomedical's IoT manufacturing facility in Qingdao, themed to "Focus on Lower Carbon, Smart Refrigeration for New Life" was held for the -150°C Cryo Freezer, a hydrocarbon IoT cryogenic freezer that leads the world in advancing life science low carbon refrigeration storage. Haier Biomedical delivered 60 units of the -150°C Cryo Freezers to international markets this week.



This is not only a technology breakthrough from Haier Biomedical in cryogenic refrigeration, but also a positive response to China's "Carbon Peak, Carbon Neutral" strategy. It is of great significance to enhance the influence of China's self-owned brands in the global industry and promote the high-quality development of the biomedical industry.



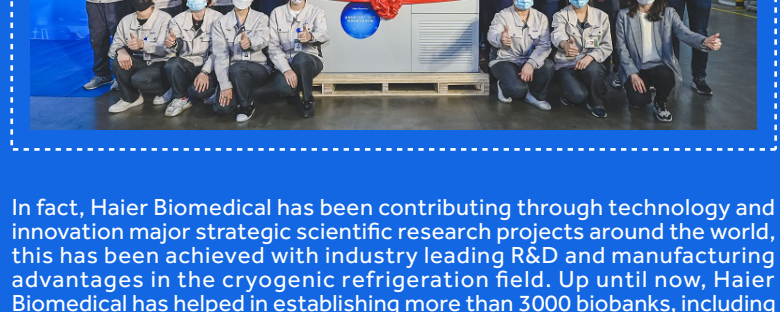
◆ Breaking through technical problems and redefining cryopreservation

Climate change is a global issue faced by us all. In September 2020, President Xi Jinping announced that China would strive to peak CO₂ emissions and achieve carbon neutrality. Environmentally friendly refrigerants are attracting more and more attention from the industry, and Europe completely banned fluorinated refrigerants since 2021. Some background to our journey to the 16th March, the environmentally friendly and energy-saving -150°C Cryogenic Freezer encountered several urgent technical problems in terms of refrigeration system selection and refrigerant ratio determination. Faced with these difficulties, Haier Biomedical was brave enough to make bold exploration and innovation and creatively developed the -150°C Hydrocarbon IoT Cryogenic Freezer in response to the requirements of the time as well as market requirements, achieving a major international milestone in the field of cryogenic storage. Haier Biomedical's latest technology breakthrough takes the global cryopreservation industry into a new era with its extreme environmentally friendly and energy-saving performance with superior stability and uniformity.

◆ Leading the global cryopreservation industry with efficient and stable IoT and hydrocarbon refrigeration technologies

The -150°C hydrocarbon IoT cryogenic freezer fresh of the manufacturing line has integrated environmental friendliness, energy saving, strong stability, and high efficiency to the world of cryopreservation storage. In terms of security, it uses a self-regulating pressure control system to ensure a stable internal pressure environment for the refrigeration system and transmits the freezer alarms in real-time through a mobile APP to safeguard the samples. With the help of the new-generation hydrocarbon refrigerants combined with the dual-compressor four-stage cascade refrigeration system, the product can adapt to a wide range of ambient temperatures from 10°C to 32°C, with smaller inner temperature fluctuation, thus achieving better and industry leading stability. The product saves the most energy in the industry, up to 30% and in terms of environmental friendliness, the unit can further protect the environment through the usage of hydrocarbon refrigerants. Additionally, it is super quiet and very suitable for use in labs with a noise level down to 55dB, it provides users with a more harmonious working experience.

The delivery of the 60 units of -150°C Cryo Freezers is the strongest voice for independent technology innovation made by the Haier Biomedical team representing China's self-owned brands to international markets.

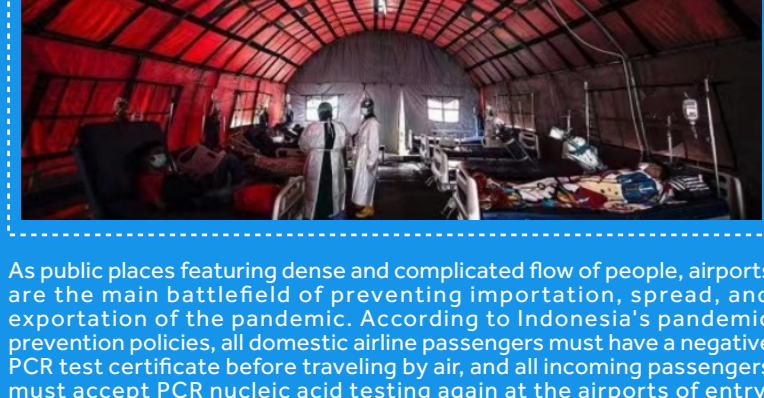


In fact, Haier Biomedical has been contributing through technology and innovation major strategic scientific research projects around the world, this has been achieved with industry leading R&D and manufacturing advantages in the cryogenic refrigeration field. Up until now, Haier Biomedical has helped in establishing more than 3000 biobanks, including the China Marrow Donor Program, China National Gene Bank, China Human Genetic Resources Bank, Wuhan Institute of Virology, CAS, the UK Biobank, and the public hospitals of Copenhagen, Denmark. Haier Biomedical's space refrigerator has entered outer space six times carried by the Shenzhou spacecraft to make contributions to space medical research. Haier's food refrigerator was incorporated into the Tianhe Space Station's core module to guarantee the fresh fruit and vegetable supply to the aerospace personnel. All these have shown Haier Biomedical's technological innovation strength as an independent brand of China.

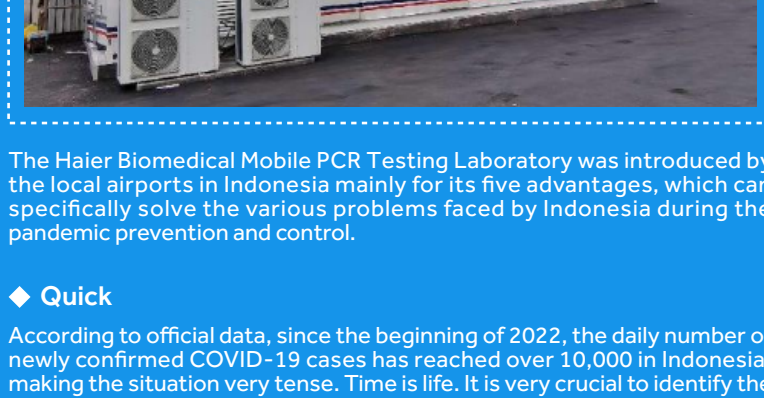
As a national brand, Haier Biomedical focuses on creating the best user experience in the Biomedical and Life Science sector. Aiming at the forefront of global scientific and technological innovation, the team at Haier Biomedical strive to bring more and more new products and new solutions to the world as the leader of biosafety science and technology ecosystems worldwide.

Haier Biomedical's Mobile PCR Testing Laboratory Contributes to the Fight Against the Pandemic with Improved Testing Capacity

COVID-19 cases have surged in Indonesia with the end of the long new year holidays and the spread of the Omicron variant. As of March 11, Indonesia has reported 5.86 million confirmed cases cumulatively, including 5.33 million cases of patients cured and discharged from the hospital.



As public places featuring dense and complicated flow of people, airports are the main battlefield of preventing importation, spread, and exportation of the pandemic. According to Indonesia's pandemic prevention policies, all domestic airline passengers must have a negative PCR test certificate before traveling by air, and all incoming passengers must accept PCR nucleic acid testing again at the airports of entry. However, as the huge traffic requires a testing speed and quality that is far beyond the capability of the existing testing method, airports sustained enormous pressures, and passengers also suffered great travel inconvenience. To improve the speed and efficiency of nucleic acid testing, local airports of the Sumatra Island in Northern Indonesia introduced the Mobile PCR Nucleic Acid Testing Laboratory designed by Haier Biomedical.



The Haier Biomedical Mobile PCR Testing Laboratory was introduced by the local airports in Indonesia mainly for its five advantages, which can specifically solve the various problems faced by Indonesia during the pandemic prevention and control.

◆ Quick

According to official data, since the beginning of 2022, the daily number of newly confirmed COVID-19 cases has reached over 10,000 in Indonesia, making the situation very tense. Time is life. It is very crucial to identify the current and potential infected cases with an improved testing speed by scientific and technological means, which is also the precondition of effectively implementing Indonesia's 3T (Testing, Tracking, and Treatment) pandemic prevention and control policies. In this process, the deployment speed of the testing tools and the PCR testing efficiency play a decisive role in timely detecting the sources of the virus and cutting off the transmission routes as soon as possible. Such an intense situation gives full play to Haier Biomedical's Mobile PCR Testing Laboratory's advantages as follows:

- **Quick Delivery**
Haier Biomedical's staff stand by all the time. From receiving orders to delivering goods, we need about 15 days only, thus greatly improving the efficiency of pandemic prevention.
- **Quick Deployment**
Pre-installed with the required testing equipment, the Haier Biomedical Mobile PCR Testing Laboratory is very convenient to use without the need for too much commissioning. It can achieve deployment and help the pandemic prevention workers to get started quickly. Also, it is movable and can be freely adjusted for use at various pandemic prevention scenarios. After the pandemic becomes controlled, it can also serve as daily pandemic prevention means and national medical reserve.
- **Quick Testing Speed**
After being deployed at the airports in replacement of the traditional testing method, it has greatly improved the local testing capacity and quality, with the testing time reduced from 18h to 2-3h and the daily testing capacity improved from 2000 to 6000-8000 per Mobile PCR Testing Laboratory.

◆ On-demand Customization

Depending on the pandemic situations and testing procedures, different countries may require different PCR testing tools. Designed with 3 core functional zones and 2 auxiliary functional zones based on a standard container, the Haier Biomedical Mobile PCR Testing Laboratory can be customized according to the customer's demands and pre-installed with all the required equipment to better satisfy the requirements and fit the actual conditions. According to Gunadi, Indonesia's Health Minister, the newly confirmed cases are mostly infected by the Omicron variant in Indonesia, so the Mobile PCR Testing Laboratory delivered to Indonesia was equipped with an Omicron-exclusive PCT testing functional zone.

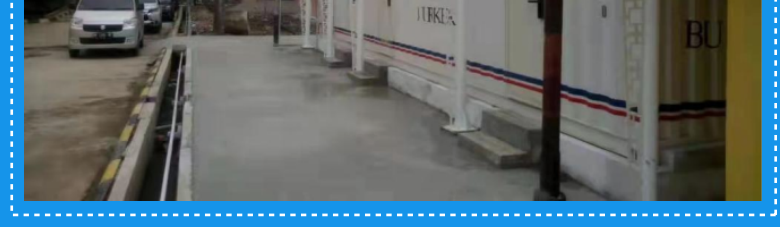


◆ Constant Temperature and Humidity

Indonesia's typical tropical rainforest climate, which features high temperature and humidity, is very unfriendly for specimen transfer and storage. If specimen quality cannot be guaranteed, the accuracy of the test results will also be greatly reduced. Haier Biomedical's Mobile PCR Testing Laboratory is capable of maintaining appropriate temperature (18-26°C) and humidity (50%-70%) most suitable for specimen storage and testing inside the testing cabin even in severe cold or extremely hot regions. Equipped with an integrated air conditioning unit, which features multiple functions, such as refrigeration and purification (medical cleanliness level), it needs no additional pipe laying and thus can minimize any safety risks.

◆ Safe, Secure, Reliable and Intelligent

According to the local media, hundreds of health workers and testing workers have gotten infected in Indonesia as a result of inadequate isolation measures and incomplete disinfection of the working environment. The Haier Biomedical Mobile PCR Testing Laboratory can be configured into a highly automated Level 1, Level 2, or Level 3 laboratory according to the users' requirements to reach automatic diagnosis, automatic analysis, safety management as key examples, and finally solve these problems. Also, the laboratory cabin is equipped with multi-language touch screen control and intercom systems to facilitate the operation, differential pressure adjustment, and communication of the medical workers and minimize direct control. Both inside and outside of the cabin are equipped with monitoring systems, air purifying sterilizers, and ultraviolet sterilizers to ensure the safety of the laboratory and the medical workers.



◆ Powerful After-Sales Support

With a strong after-sales network, Haier Biomedical can provide a complete service system and strict quality control all over the world. We have specialized professionals to track and deal with each problem reported by the customers concerning use or quality until it is resolved. The Haier Biomedical team also organizes regular training for partners to solve the worries of users.

A big thank you to the sustained efforts of all parties, the pandemic in Indonesia has eased in recent weeks, with the daily newly confirmed cases beginning to decline. Haier Biomedical's Mobile PCR Testing Laboratory has received wide recognition for its performance. It has played a key role in all stages of the pandemic, including the early stage, the widespread stage, and the local outbreak stage, and has made an indispensable contribution to the final control of the disease.

In addition to the Mobile PCR Testing Laboratory, Haier Biomedical has also launched a variety of similar products, including the Mobile Clinic that vaccinates pregnant women and children and performs routine check-ups in remote and hard to reach areas; Haier Biomedical's Mobile Solar-Drive Lab collects, screens, and tests the infectious disease specimens in remote areas. Also, Haier Biomedical has specially designed a refrigerated transport vehicle for medicines, drugs, vaccines, and other products with strict temperature requirements to serve cold-chain transportation. Haier Biomedical is always devoted to bringing more new products and solutions to the world and delivering more biomedical research programs to make life better through the intelligent protection of life science.

Haier Biomedical Supports the Vaccine Roll-out Program in Africa

Haier Biomedical supported the African Vaccine Roll-out Program. More than 1,000 units of Haier Biomedical's vaccine refrigerators & devices have been delivered and installed throughout South Africa to help the storage and distribution of COVID-19 vaccines to local communities, especially those that are at high risk and hard to reach.

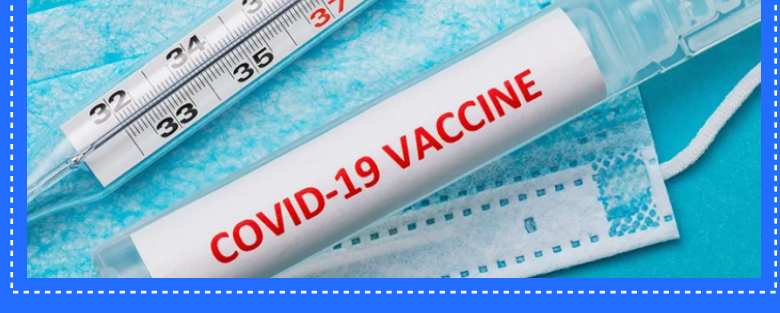
Vaccine storage is a challenge encountered by many countries in Africa. A recent survey of 34 African countries by the African regional office of the World Health Organization revealed that in 31% of countries, more than 50% of districts have challenges with cold chain capacity that are significantly prohibitive for vaccine rollout.

Vaccination can help the vaccinated bodies get rid of the corresponding infectious disease or avoid being infected, and enable the body to be immune to certain infectious diseases caused by viruses or bacteria.



"During storage, vaccines need to be continuously refrigerated or frozen so that they can maintain effectiveness" said Dr. Joe Phaahla, Minister of Health. "Any temperature fluctuation or loss can affect their effectiveness, making immunization unsafe. This is a great challenge for many countries on the African continent."

The Director of Technical Department from Haier Biomedical explained that "Cold chain management plays a key role in ensuring the safe arrival and effective inoculation drive of the vaccines, medicines, and drugs. Vaccine refrigerators must be designed with professional temperature control ability to ensure the safety of vaccine storage. Haier Biomedical's Vaccine Solution can safeguard the vaccine safety throughout the process from production to transportation, storage, and vaccination to the last mile."



Previously, thousands of Haier Biomedical's vaccine cold chain equipment has been delivered to most African countries via the United Nations and NGOs to help fight the pandemic. With the deployment of Haier Biomedical's vaccine refrigerators and monitoring devices in South Africa, a more complete vaccine safety network coverage will be established in Sub-Saharan Africa to effectively solve the last mile problems of vaccination in Africa.

Now and ongoing, the Haier Biomedical team will continue to develop and deliver to the market industry leading energy saving supported equipment, including vaccine refrigeration, freezing, transportation and monitoring for regions with power shortages, covering the whole life service cycle and contribute "Haier Biomedical's" power to public healthcare development in Africa.

Haier Biomedical Approved By Bangladesh Authorities

Biological Safety Cabinets (BSC) are air-purifying negative-pressure safety devices that prevent the aerosol dispersion of biological particles containing hazardous or unknown properties during experimental operations and processing. BSC's working principle is mainly to draw the air inside the cabinet outwards to maintain a negative pressure to protect staff through vertical airflow. The outside air is filtered through a high efficiency air filter (HEPA filter) and then enters the safety cabinet to avoid contamination of the samples during operation. The air inside the cabinet also needs to be filtered before being discharged into the atmosphere to protect the environment. The product is widely used in research, teaching, clinical testing, and production in the fields of microbiology, biomedicine, genetic engineering, and biological products.

ICDDR (International Centre For Diarrheal Diseases Research Bangladesh) is one of the world's leading global health research institutions dedicated to addressing the public health problems faced by low- and middle-income countries through innovative scientific research that has had a profound impact on health policy and medical practice locally and globally. As an authority on senior pathology center in Bangladesh, the ICDDR has strict requirements for its laboratory research and biosafety equipment.

Haier Biomedical, as the industry leader of biosafety digital healthcare, aims to create the best user experience. Haier Biomedical products are widely recognized by end users for its superior performance and high quality. Not that long ago, Haier Biomedical provided three HR900-IIAA2 biosafety cabinets to ICDDR for its disease control and R&D work.



The customer is very satisfied with the stability and performance of the BSC product. Haier Biomedical Biological Safety Cabinets are designed with intelligent constant air velocity technology which provides real-time monitoring of the air velocity of the working area, while keeping the air speed constant. Meanwhile, air flow disruption technology prevents cross flow between inside and outside airflow, with the superior air-flow distribution module providing a more uniform airflow, reducing contamination; In addition, the cabinet is designed with the American AAF (ULPA) filter with a typical efficiency of >99.9995% for 0.12 micron particles, providing vertical laminar flow to the worktable to protect samples from pollution; Finally, the digital microprocessor control system provides real-time display of key parameters and timely feedback on safety issues via audible and visual alarms, providing maximum security for laboratory personnel, environmental protection and sample protection.



As the global supplier and manufacturer of complete cold chain solutions, Haier Biomedical is committed to providing professional technology and quality products to customers and end users around the world, actively focusing on various anti-epidemic projects and contributing to the development of scientific research worldwide.

