

### Global COVID-19 Vaccine Race to Ensure Vaccine Safety Issues are NOT Underestimated & Or Ignored!



The work being done by so many globally for the COVID-19 vaccine in research and development has ushered in a staged victory in the continuous tense race to beat the virus. At present, there are a total of 80 different vaccines being developed against the coronavirus around the world, of which 18 have entered phase III clinical trials, with 7 having passed government regulatory approvals to go to market; For example, the Pfizer vaccine has been distributed in many regions worldwide, with Moderna vaccine also being approved for market in the United States, Canada and the European Union.

According to the report by the Wall Street Journal on January 8th, countries around the world are working hard to vaccinate their citizens against the COVID-19 pneumonia in response to the rising infection rate, public pressure, and concerns about the highly contagious new variants of the coronavirus. According to WHO statistics, contracts for 2 billion doses of the COVID-19 vaccine have been implemented.

However, market access to vaccines is only the starting point for large-scale vaccination programs. During the process of production, storage, transportation, distribution, and vaccination, there still exists many challenges. For example, improper storage and transportation of vaccines is likely to cause vaccine inactivation, especially when faced with such unprecedented mass vaccine transportation & management and regional distribution to almost cover the whole world. The current situation raises higher requirements for the stability of storage equipment and the efficiency of vaccine cold chain equipment.

At present, the storage requirements of the COVID-19 vaccine mainly cover three temperature zones: 2-8 °C, -20 °C and -70 °C. For different types of vaccines, Haier Biomedical provides a targeted and complete cold chain solutions for the full-temperature-zone-coverage for all COVID-19 vaccines. This coverage of various temperature zones and transport solutions perfectly solves any problems with transportation, storage, management, and vaccination, ensuring vaccine safety throughout the whole process.



### COVID-19 Vaccine Cold Chain Complete Solutions

-70°C Vaccine Cold Chain Solutions		-20°C Vaccine Cold Chain Solutions		2-8°C Vaccine Cold Chain Solutions	
Demand	Haier Biomedical Proposal	Demand	Haier Biomedical Proposal	Demand	Haier Biomedical Proposal
Storage	TwinCool Dual Compressor ULT Freezer, Smart Frequency ULT Freezer, Low Energy ULT Freezer, Water-Cooled ULT Freezer, Energy Saving 17" Touch Series, Personal ULT Freezer	Storage	-40°C Biomedical Freezer, -30°C Biomedical Freezer, -25°C Biomedical Freezer, -15°C-25°C Vaccine & Kitpack Freezer	Storage	Cold Room, SDD Vaccine Refrigerator, Ice-lined Refrigerator, Pharmacy Refrigerators for Vaccine, Blood Refrigerators for Vaccine
Transportation	Intelligent Control Cold Chain Transport Cooler, Vaccine Carry Transport Solution	Transportation	-15°C-25°C Active / Passive Cooling Transport Coolers	Transportation	Refrigeration Truck, Passive Vaccine Cold Box
Temperature monitoring	Remote Temperature Monitoring	Temperature monitoring	Remote Temperature Monitoring	Temperature monitoring	Remote temperature monitoring
Inventory	Inventory System	Inventory	Inventory System	Inventory	Inventory system

At present, Haier Biomedical has reached cooperation within the United Kingdom, Scotland, the United States, the Czech Republic, Singapore, Vietnam, Costa Rica and many other countries and has delivered cold chain equipment to help large-scale vaccine storage, transportation and vaccination requirements.

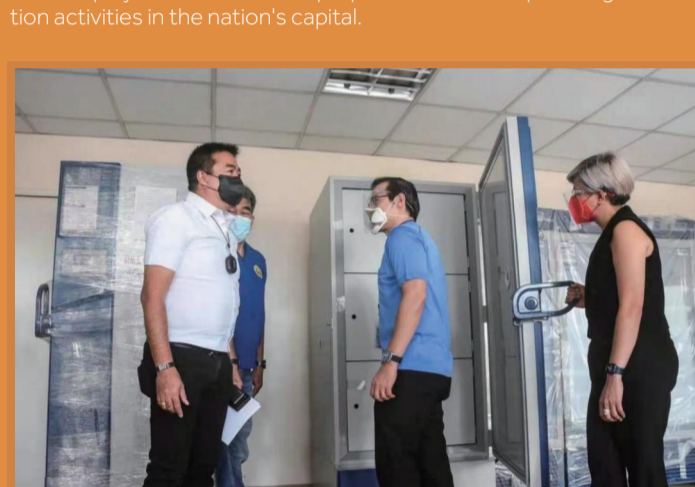
Haier Biomedical, insisting on intelligent protection of life science and being empowered by technology, is committed to delivering the optimum vaccine cold chain complete solutions globally, safeguarding vaccine safety for millions of people!

### Related Cases

#### Haier Biomedical COVID-19 Vaccine Refrigeration Units Arrived Successfully to Manila!

The Manila City government on Monday, January 18, received a batch of COVID-19 vaccine refrigeration units from Haier Biomedical, including 5 units of HYC-390 which can store vaccine doses from AstraZeneca and Sinovac, and four biomedical freezers which can store Johnson & Johnson and Moderna vaccine vials. The equipment has been deployed in line with the preparation for the upcoming vaccination activities in the nation's capital.

Manila City Mayor Francisco Domagosa inspected these machines upon arrival at the Sta. Ana Hospital where the city's COVID-19 Vaccine Storage Facility will be built and gave high recognition and praise for the Haier Biomedical product performance and user experience.



Likewise, 3 units of ULT freezers and 50 units of transport coolers from Haier Biomedical are also on the way for the immediate deployment for the city government's vaccination operations.

#### Haier Biomedical Assists Vietnam with COVID-19 Vaccine Preservation!

Not long ago, a Vietnamese leading vaccine company had an urgent demand for 32 ULT freezers for the storage of COVID-19 vaccines. The Haier Biomedical team conducted a comprehensive and detailed market analysis and matched the demand to solution requirements as soon as the need arose. The HB team proposed product solutions that would fit the user's needs - the Large Capacity Smart Frequency ULT Freezer DW-86L959BP was chosen as the best solution for this project.

Finally, after a series of comparison of product parameters, functionality, demand compatibility, cost performance and production capacity, Haier Biomedical stood out among many well-known international suppliers and won the trust of the customer.



At present, the products have been installed and are now operational, and the user expressed great satisfaction of the performance of all aspects of the products. The customers satisfaction has led to a follow-up procurement plan being drawn up with Haier Biomedical to reach a long-term cooperation partnership.

Haier Biomedical has carried out several strategic upgrades of its production capacity and production systems in recent times, this is in response to the sudden increase in demand brought about by the epidemic and to ensure our flexibility to meet customer demands. The smooth completion of this project is also due to Haier Biomedical's advanced and efficient production system and strong supply chain capabilities to meet emergency orders.

#### Haier Biomedical Smart Frequency ULT Freezer has Arrived in the Czech Republic! Kick Starting the Local COVID-19 Vaccination Program.

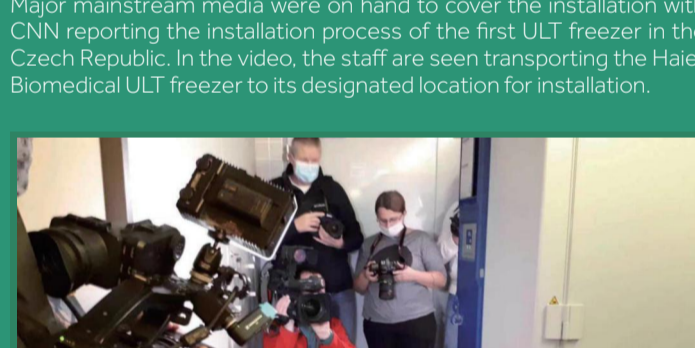
On the morning of December 26, a new Haier Biomedical Smart Frequency ULT Freezer arrived at the University Hospital in Brno-Bohunice, the Smart Frequency ULT Freezer can store tens of thousands of doses of coronavirus vaccine. The University Hospital Brno was established for potential patients with COVID-19 and has been used since the end of December. The Haier Biomedical ULT Freezer DW-86L579BP, the first ULT freezer used for COVID-19 vaccine storage in the Czech Republic, officially launching the Czech Republic's mass vaccination program.

Major mainstream media were on hand to cover the installation with CNN reporting the installation process of the first ULT freezer in the Czech Republic. In the video, the staff are seen transporting the Haier Biomedical ULT freezer to its designated location for installation.

Haier Biomedical's Smart Frequency technology is designed to manage the compressor speed on demand. The smart frequency ultra-low temperature freezers advanced frequency conversion technology and hydrocarbon refrigeration system is the world-leading energy efficiency system for ultra-low temperature refrigeration. Meanwhile the temperature uniformity is as precise as ±3 °C, combined with an advanced alarm system, it's empowered with reliable and superior performance to safeguard the vaccines!

Haier Biomedical has an extensive range of ULT freezers to meet the varied needs of customers. Sizes from 100L to 959L, to store 2ml cryovials from 4,800 to 70,000 per unit. You can choose from our Twin Cool, Smart Frequency or Standard Low Energy freezers, all with environmentally-friendly HC refrigeration, VIP insulation and microprocessor control with multiple safety alarms, plus many come with the optional IoT module for real-time monitoring for added peace of mind.

Scale up now for your cold chain requirements and lead the way with Haier Biomedical, your only choice to ensure the safety, security and reliability of your vaccines, no matter which vaccine manufacturer you choose!

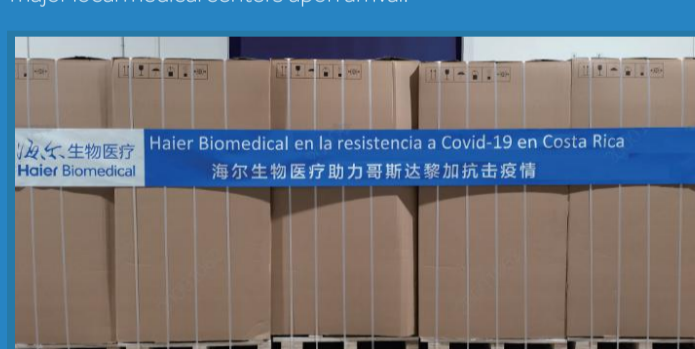


#### Haier Biomedical Smart Frequency ULT Freezers Assist Costa Rica's COVID-19 Vaccine Program!

Haier Biomedical won the bid for Costa Rica's COVID-19 vaccine storage project to help its national COVID-19 vaccination program. The winning product is the Haier Biomedical Smart Frequency ULT Freezers. With an ultra-wide storage temperature range of -40 to -86 °C, Haier Biomedical's ULT freezers can perfectly preserve the Pfizer vaccines that will arrive into Costa Rica soon, products were successfully shipped on January 11, and the equipment will be distributed to major local medical centers upon arrival.

This project has received great attention from the President of Costa Rica, and he expressed that Costa Rica would continue to expand investment in the vaccination process to ensure the safety of its people. At the same time, a number of mainstream media reported the news for the first time, and systematically introduced the exclusive advantages of Haier Biomedical Smart Frequency ULT Freezers.

Haier Biomedical's Smart Frequency ULT Freezer is designed and manufactured with world-class hydrocarbon refrigeration system and frequency conversion technology. It has lower power consumption, more stable storage temperature, ultra-precise temperature control, and the temperature uniformity reaches ±3°C, ensuring vaccine safety. At the same time, it is equipped with a 10-inch large touch screen, and the conditions inside the freezer can be seen at a glance. The freezer is manufactured with a five-layer sealing design and mature VIP insulation technology, ensuring long-term temperature stability in the event of unexpected power failure. In addition, it also has a complete remote alarm system, in addition to instant sound and light alarms, it also supports e-mail and text message alarms. Once an abnormality occurs, the staff will be notified with full access to ensure the safety of the vaccine is guaranteed!



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**Deep freezers where vaccines will be stored**  
Due to its characteristics, this drug must be stored at -70 °C to be preserved.

<p><b>CARACTERÍSTICAS NECESARIAS:</b></p> <p>1 Debe mantenerse en funcionamiento sin cuando se vaya el fluido electrónico o haya cambios de voltaje.</p> <p>2 Si hay cambios en la temperatura deben sonar alarmas y notificarse de inmediato a los encargados.</p> <p>Este panel de control muestra la temperatura y permite regularla.</p> <p>Alto 1,08m Profundidad 99,8 cm</p>	<p><b>CAPACIDAD</b></p> <p>13 equipos para 529 litros, con un peso de 325 kilos</p> <p>1 equipo para 729 litros, con un peso de 350 kilos</p> <p>Ancho 93,5 cm</p>	<p>Rango de temperaturas a las que puede mantenerse</p> <p>-40 °C, -86 °C</p> <p>Uniformidad: rango de temperatura deben proteger la temperatura mínima y máxima tolerada por el producto, en este caso, -60 °C a -80 °C. Estos modelos mantienen un rango de ±3 °C.</p> <p>Recuperación: abrir la puerta para sacar las vacunas, el golpe con la temperatura ambiente hace que la temperatura interna baje; se debe garantizar el recuperar la condición de -70 °C en cuestión de minutos.</p> <p>Si falla el fluido electrónico: estos equipos mantienen la temperatura durante cuatro horas antes de bajar a menos de -60 °C -70 °C en cuestión de minutos.</p>
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### Recommended Product

#### Biomedical Freezer DW-40L568J



- HC compressors and HC refrigerant, with consumption as low as 4kW-h/24h
- LBA foamed polyurethane meets European ROHS directives.

- Built-in evaporator ensures large internal storage space with a temperature uniformity ±4°C and adjustable shelves
- Noise as low as 44 dB