

TWINBIRD Launches Ultra-Low Temperature Portable Freezer SC-UF25 to Enable a Dry-Ice-Free Cold Chain for Research Samples



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Samples [↓](#)

TSUBAME, Japan--([BUSINESS WIRE](#))--[TWINBIRD Corporation](#) has announced the launch of the [SC-UF25](#) Ultra-Low Temperature Portable Freezer, a compact 25-litre freezer capable of reaching temperatures as low as -86°C . Scheduled for release in November 2026, the new product expands the company's line-up of solutions powered by its Free-Piston Stirling Cooler (FPSC) technology.

As life-science fields such as regenerative medicine, cell therapy and drug discovery continue to advance, reliable ultra-low-temperature management of research samples is becoming increasingly important. Although storage technologies have evolved, transport and temporary storage often depend on dry ice, posing challenges to temperature stability, operational efficiency and environmental impact. This has increased demand among researchers, laboratories and research organisations for sustainable cold-chain solutions that can maintain ultra-low temperatures from storage through to transport.

To address these challenges, [TWINBIRD](#) developed the [SC-UF25](#) using its FPSC technology, which employs helium gas as a refrigerant. The freezer achieves temperatures down to -86°C while remaining compact and lightweight. It supports standard AC power input of 100–240 V, 50/60 Hz, enabling flexible use for stationary storage as well as transport within research facilities and between locations.

Key features include precise temperature control from -86°C to -20°C in 1°C increments, low-vibration and a compact design suitable for laboratories and research

institutions where installation space is limited. The product also incorporates precision components manufactured in the renowned Tsubame-Sanjo region of Japan, drawing on advanced engineering expertise developed through decades of manufacturing excellence.

By enabling storage and transport in a -86°C environment, the **SC-UF25** helps reduce dependence on dry ice while improving the stability and efficiency of ultra-low temperature cold-chain operations. Through the application of FPSC technology, **TWINBIRD** aims to support the preservation of high-value research materials and contribute to the advancement of life-science research and operations.

The **SC-UF25** will be showcased at MEDICA 2026, one of the world's largest trade fairs for the medical and life-science sectors, held in Düsseldorf, Germany, from 16 to 19 November 2026, where **TWINBIRD** will highlight the product's contribution to sustainable ultra-low temperature cold-chain applications for research, laboratory and life-science use.

Disclaimer: The **SC-UF25** is for research, laboratory and life-science cold-chain use only. It is not registered under the EU Medical Device Regulation and is not intended for diagnosis, treatment, clinical decisions, or patient care.

Contacts

SC Business Sales, TWINBIRD Corporation fpesc@twinbird.co.jp

Media Content



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