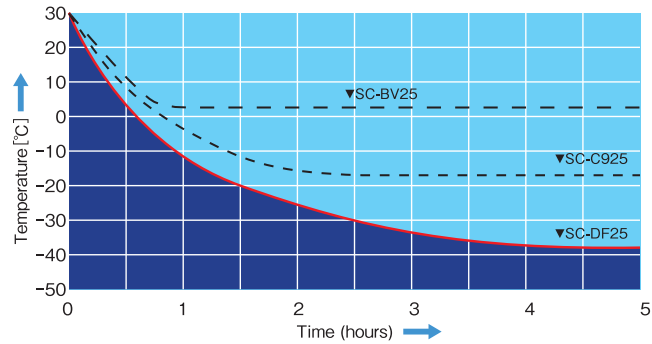


-40°C Super Low Temperature
Portable Freezer Model SC-DF25



■ Performance Data

Pull-down characteristics, at center of container
(no-load, ambient temp. 25°C)



Cooling performance may differ depending on the ambient temperature.

■ Accessories

Standard

- 1. AC Adaptor SC-AD70 1 pce
- 2. Car plug with cable (3m, 12V) 1 pce

Optional

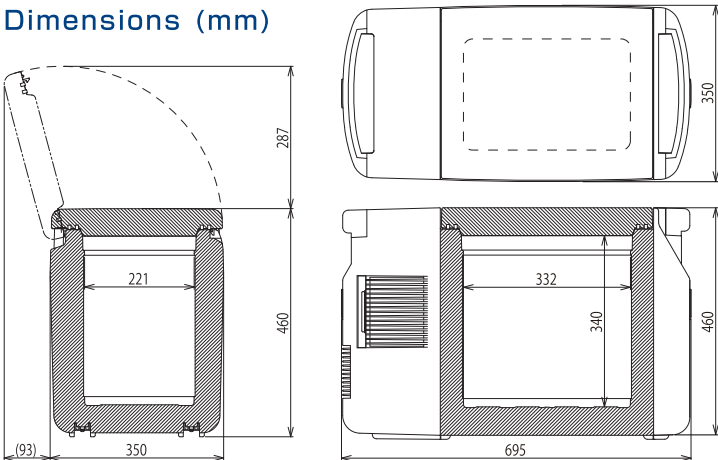
- 1. Key/Lock 1 pce
- 2. Internal Lid 1 pce
- 3. External or built-in batteries available, subject to Twinbird's confirmation



■ Technical Specifications

Model Number	SC-DF25
Temperature Setting	-40~+10°C (1°C increments)
Max Cooling Performance	-40°C (at ambient temperature 25°C)
Cooling Module Temperature Control Range	±3°C
Uniformity in Container	±2°C
Capacity	25 Liters
Cooling Module	Free Piston Stirling Cooler (FPSC), Helium Gas
Working Flood in Thermo Siphon	CO2
Power Consumption	48 W
Operating Voltage	DC12V, AC200~230V with AC Adaptor
Net Weight	15.4 kgs

Dimensions (mm)



The size, appearance and dimensions may change with the addition of internal back-up batteries.

Temperature control function does not provide a full guarantee of maintaining the set-point temperature in the freezers.
Twinbird Corporation accepts no responsibility for any damage to the contents of the freezers.

■ Portable Freezer Lineup



Model Name	Portable Freezer	Vaccine Transport Box
Model Number	SC-C925	SC-BV25
Temperature Setting	-18, -7, 3, 6, 10°C	4°C
Capacity	25 Liters	25 Liters
Interior Dimensions (W × D × H)	335 × 225 × 340 (mm)	335 × 225 × 340 (mm)
Accessories	AC Adaptor (SC-AD70) Car plug with cable (3m, 12V)	AC Adaptor (SC-AD70) Car plug with cable 3m, 12V Two removable inner baskets

The technical specifications are subject to change without notice for further improvements.
Safety Precautions: In order to use the product safely, read the instruction manual carefully before use.
Export Control Regulations: This product falls under the Japan's Foreign Exchange Trade Act and is subject to US Export Control Regulations (EAR). Please comply with these regulations.



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-40°C Super Low Temperature
Portable Freezer
Model SC-DF25



-40°C



-40°C Super Low Temperature Portable Freezer Model SC-DF25



Compact

Meeting the needs in the small-footprint such as desktop uses in life science, pharmaceutical, biotechnology, clinical and industrial laboratories.



Mobile

Anywhere and anytime. It works as a refrigerated transport container.



The most compact, mobile, high cooling performance and user-friendly portable freezer.



-40°C

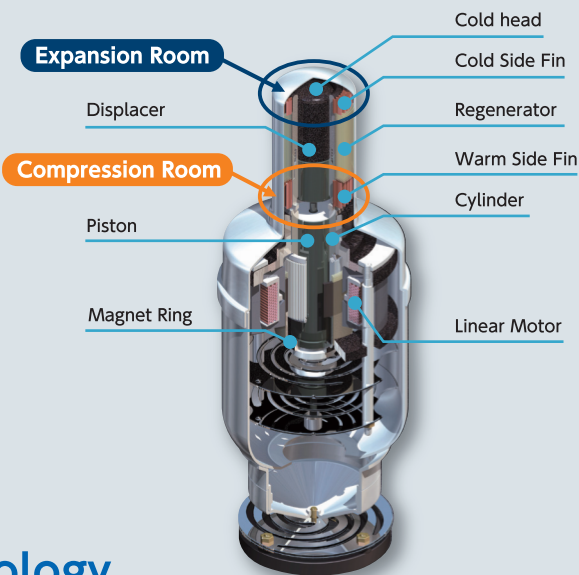
Core Technologies

Twinbird's cutting edge technologies for compactness & mobility



1 Efficient, Durable, and Environmentally Friendly "Free Piston Stirling Cooling System"

The proven Free Piston Stirling Cooling System developed by Twinbird is the heart of our products. Two free moving, linear motor driven pistons create non-cycling, quiet and efficient cooling with highly precise temperature control. The solid and oil-free construction makes the unit extremely durable and capable of cooling to -40°C. The system uses helium as the refrigerant and is environmentally friendly with a low carbon footprint and zero ozone depletion potential; thus contributing to the environmental management needs of your company.



2 Thermo Siphon Energy Transfer Technology

The Thermo Siphon Evaporator, which transfers energy from the cooling system to the container, is a state of the art system that has been proven highly effective in aerospace, energy and military applications. Unlike conventional refrigeration methods, which can experience large temperature fluctuations, the Thermo Siphon Evaporator offers rapid, continuous and uniform cooling. The simple construction contains no moving parts ensuring a rugged, robust container with uniform temperature distribution.

3 High Performance Vacuum Insulation Panels

The vacuum insulation panels, which are normally exclusive to high cost freezers, are installed in four sides of the container, allowing for enhanced cooling performance in a compact, portable body.

1 Highly Mobile

SC-DF25 has a small and efficient Free Piston Stirling Cooling system on board which is protected in a lightweight and robust body. It can plug into a standard household electrical outlet or connect 12V DC car battery; enhancing the units mobility. In addition to desktop and rack mountable uses in laboratories, SC-DF25 can be used for cold chain transportation of temperature sensitive materials between logistic centers and end-users.

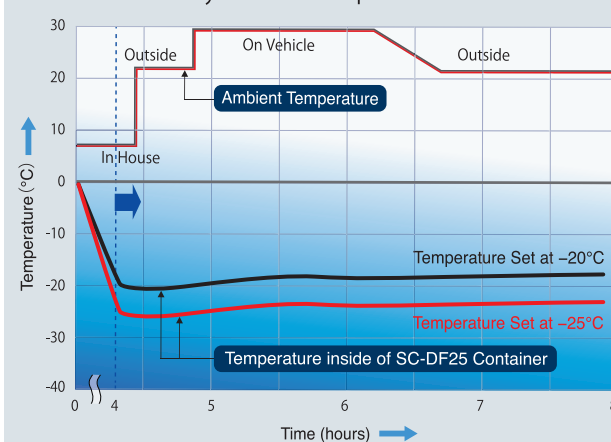
2 High Performance Makes Internal Temperature Secured

Free Piston Stirling Cooling system and Vacuum Insulation Panels ensure the container can maintain -40°C and remain stable and uniform for long periods of time, unlike dry ice or gel packs that can be affected by ambient temperature.

	SC-DF25	Dry Ice	Gel Pack
Temperature in container	Stable, unaffected by ambient temperature	Sensitive to ambient temperature	Sensitive to ambient temperature
Temperature control capability	Range: +10 ~ -40°C Accuracy: $\pm 1^\circ\text{C}$	No. Gradually increases to ambient temperature.	No. Some gel packs offer fixed temperatures.
Cold temperature holding time	Unlimited based on available power sources	Unable to hold. Dry ice will evaporate within several hours.	Unable to hold indefinitely
User friendliness	One touch operation on the splash proof control panel	Require adding dry ice continuously. Dangerous to operate without protective gear	Require refrigerator for several hours before use.
Environmental load	Zero carbon footprint as helium gas is used as the refrigerant.	Carbon dioxide is discharged to the air. High energy required for dry ice production.	Require disposal as industrial waste at the end of their product life.

Cooling Characteristics vs Ambient Temperature

Temperature inside of SC-DF25 container remains stable and unaffected by ambient temperature.



3 Simple, Easy

1. Set internal temperature by 1 °C increment.
2. Internal temperature is displayed on a digital display.
3. The status of the power supply and the cooling system are always monitored and the error indicator lights to signal a malfunction.

