

W Series

Cryogenic Freezer, Wide Open

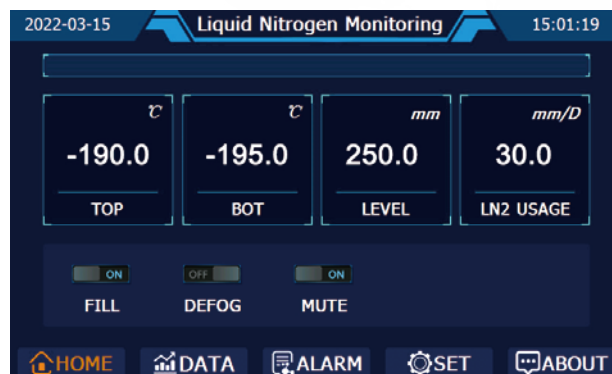
W series liquid nitrogen storage system provides ideal storage conditions for biological samples. Supported by LN₂ automatic filling system and temperature & LN₂ level monitoring system, W series cryogenic freezers provide all-round protection to precious sample, assisting life science research and cell therapy applications.

Based on the actual needs of users, Antech has innovatively optimized the performance, structure and control system of cryogenic freezer to meet the user's highest standard of large-capacity storage requirements.



Advanced Control System

- HMI human-machine interactive touch screen, display temperature, liquid level, temperature curve and alarm information.
- Important events such as temperature, alarm, liquid nitrogen fill, can be checked, and can also download through USB disk.
- Various alarms, and the alarm information can be stored and downloaded through the USB disk.
- Operating data, such as temperature and liquid level, can be stored for up to 10 years.
- Optimized structure design to achieve the best sample storage density and save space.



Features

- Multiple capacity freezers, from 175L to 600L, 2.0ml vials storage capacity from 10,000 to 40,500.
- Excellent temperature uniformity and stability, enabling samples to be stored at controlled cryogenic environment.
- Excellent vacuum performance and structural design ensure minimum liquid nitrogen consumption and lower storage costs.
- Advanced temperature, liquid level monitoring and alarm system, and can realize remote monitoring.
- Automatic supply of liquid nitrogen, safe and labor-saving.
- The liquid nitrogen supply system is controlled by multiple solenoid valves, which can effectively prevent the overflow of liquid nitrogen and sample contamination caused by high LN₂ level.
- Manual filling available under special circumstances.
- Compatible with vapor phase and liquid phase storage modes, users can choose according to their needs.
- The optimized mechanism design realizes high-density storage to save space.

Humanized Design

- Defog function, easier to find samples and shorten lid opening time.
- The remote alarm interface can be connected to the central alarm system.
- Optional backup battery in case of power failure.
- Optional vacuum jacketed hose for lower liquid nitrogen consumption.
- Optional vapor platform, for vapor phase storage of bio-specimen.



Vacuum jacketed hose

Why W Series

- High density storage
Compared with similar products, W series freezers have a small footprint and can store a large number of samples. It truly realizes high-density storage, which not only saves space, but also reduces the storage cost per sample. Both horizontal and vertical rack systems available.
- Advanced temperature monitoring system
The monitoring system based on microprocessor and platinum temperature probe can display the maximum and minimum temperature inside the tank in real time with an accuracy of $\pm 1^{\circ}\text{C}$. The user can set the alarm point by himself, with the option of alarm mute.
- Automatic LN₂ filling & level monitoring system
The liquid level monitoring system based on high-precision differential pressure sensor displays the liquid level in real time to ensure the safety and reliability of the automatic filling of liquid nitrogen. The color touch screen can display: top temperature, bottom temperature, liquid level height, daily liquid nitrogen consumption and other parameters.
- Warm gas bypass
The warm gas bypass design can remove the high temperature nitrogen (gas) in the pipeline before the liquid nitrogen is injected, so as to ensure that only ultra-low temperature liquid nitrogen is injected into freezer, which avoids the temperature fluctuation in the freezer & thermo shock to samples during filling process, protecting the safety of samples.

Racks



Slim rack/ Vertical rack



Square rack/ Horizontal rack

Slim rack/ Vertical rack	Description	Vial	Dimension, W×D×H(mm)
CFH-5-2	5 layer, for 100/81-well boxes	1.2/2ml	138*58*710
Square rack/ Horizontal rack	Description	Vial	Dimension, W×D×H(mm)
CFC-13-2	13 layer, for 100/81-well boxes	1.2/2ml	139*139*751
CFC-13-2S	13 layer, for 25-well boxes	1.2/2ml	81*81*751

Specification

Model		W100	W240	W380
Maximum storage capacity				
	PETG 1/4 straws	151700	352600	549400
	PETG 1/2 straws	67525	156950	244550
	HSV CBS high security straws	67525	156950	244550
	High security CBS straws	41625	96750	150750
	Number of canisters (φ76mm)	37	86	134
	Goblet (φ65mm) per canister	5	5	5
2ml vial	1.2 & 2ml vials	10400	24050	38350
	Number of large rack (81/100-place box)	7	17	28
	Number of small rack (25-place box)	4	6	6
	2" Boxes per rack	13	13	13
5ml vial	5ml vials (81-place)	3969	9639	15876
	Number of racks	7	17	28
	3.75" Boxes per rack	7	7	7
50ml blood bag	Numbers of blood bag	343	805	1407
	Number of frames	49	115	201
	Bags per frame	7	7	7
250ml blood bag	Numbers of blood bag	235	535	870
	Number of frames	47	107	174
	Bags per frame	5	5	5
500ml blood bag	Numbers of blood bag	185	475	680
	Number of frames	37	95	136
	Bags per frame	5	5	5
LN2 Capacity				
LN2 capacity (L)		175	380	600
Dimensions				
Inner diameter (mm)		533	787	991
Usable height (mm)		787	787	787
Overall height (mm)		1324	1324	1324
Weight empty (kg)		120	200	270
Weight full, liquid phase (kg)		262	509	758
Functions				
Controller		Touch screen	Touch screen	Touch screen
Full auto fill		Standard	Standard	Standard
Data storage/ USB port/ RS485 port		Standard	Standard	Standard
Defog		Standard	Standard	Standard
Foldable step		Standard	Standard	Standard
Accessories				
Backup battery		Optional	Optional	Optional
Vacuum jacketed hose		Optional	Optional	Optional
Vapor platform		Optional	Optional	Optional
Inventory rack		Optional	Optional	Optional
Wi-Fi connection & cloud access		Optional	Optional	Optional