

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.

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.
- The optimized mechanism design realizes high-density storage to save space.

Humanized Design

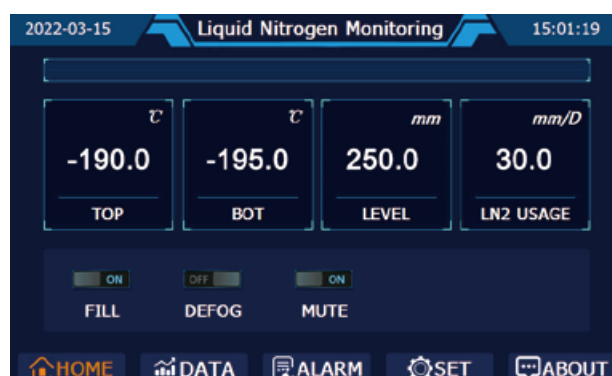
- Defog function, easier to find samples and shorten lid opening time.
- The remote alarm interface can be connected to the central alarm system.
- Optional backup battery in case of power failure.
- Optional vacuum jacketed hose for lower liquid nitrogen consumption.



Vacuum jacketed hose

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.



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, WxDxH(mm)
CFH-5-2	5 layer, for 100/81-well boxes	1.2/2ml	138*58*710
Square rack/ Horizontal rack	Description	Vial	Dimension, WxDxH(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				
Straw	PETG 1/4cc straw	180400	397700	639600
	PETG 1/2cc straw	80300	177025	284700
	HSV CBS high security straws	80300	177025	284700
	High security CBS straws	49500	109125	175500
	Number of canisters (φ70mm)	44	97	156
	Goblet (φ65mm) per canister	5	5	5
2ml vial	1.2 & 2ml vial	10725	26325	41275
	Number of large rack (81/100-place box)	7	19	30
	Number of small rack (25-place box)	5	5	7
	2" Boxes per rack	13	13	13
5ml vial	5ml vial (81-place)	3969	10773	17010
	Number of racks	7	19	30
	3.75" Boxes per rack	7	7	7
25ml blood bag	Numbers of blood bag	763	1694	2681
	Number of frames	109	242	383
	Bags per frame	7	7	7
50ml blood bag	Numbers of blood bag	476	1085	1715
	Number of frames	68	155	245
	Bags per frame	7	7	7
250ml blood bag	Numbers of blood bag	270	595	970
	Number of frames	54	119	194
	Bags per frame	5	5	5
500ml blood bag	Numbers of blood bag	210	475	760
	Number of frames	42	95	152
	Bags per frame	5	5	5
200ml blood bag	Numbers of blood bag	144	332	528
	Number of frames	36	83	132
	Bags per frame	4	4	4
700ml blood bag	Numbers of blood bag	84	196	312
	Number of frames	21	49	78
	Bags per frame	4	4	4
LN2 Capacity				
LN2 capacity (L)		194	413	643
Dimensions				
Inner diameter (mm)		550	800	1000
Usable height (mm)		785	785	785
Overall height (mm)		1300	1300	1300
Weight empty (kg)		160	270	395
Weight full, liquid phase (kg)		318	606	918
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
Step		Standard	Standard	Standard
Accessories				
Backup battery		Optional	Optional	Optional
Vacuum jacketed hose		Optional	Optional	Optional
Inventory rack		Optional	Optional	Optional
Wi-Fi connection & cloud access		Optional	Optional	Optional

* **25ml blood bag:** Pall MEDSEPTIM 25 mL, OriGen CS 25; **50ml blood bag:** Fenwal 4R9951, OriGen CS 50;

250ml blood bag: Fenwal 4R9953 & 4R5461, OriGen CS 25, CryoMACS 50 & 250, CryoPAC 025B & 050B; **500ml blood bag:** Fenwal 4R9955 & 4R5462, OriGen CS 500, CryoPAC 250B & 500B;

200ml blood bag: Gambro DF-200 or CryoMACS 50 & 250; **700ml blood bag:** Gambro DF-700, OriGen CS 1000, CryoMACS 500 & 750 & 1000, CryoPAC 750B.