

## W Series

### Cryogenic Freezer, Wide Open

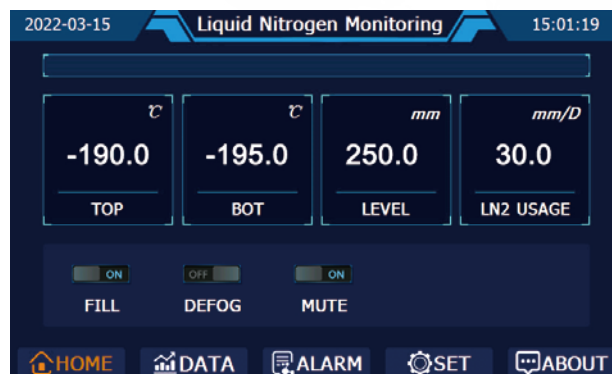
W series liquid nitrogen storage system provides ideal storage conditions for biological samples. Supported by LN2 automatic filling system and temperature & LN2 level monitoring system, W series cryogenic freezers provide all-round protection to precious sample, assisting life science research and cell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

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- 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

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- Defog function, easier to find samples and shorten lid opening time.
- The remote alarm interface can be connected to the central alarm system.
- Standard automatic charging backup battery to ensure the normal operation of the system for a period of time after power failure.

## Why W Series

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- 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
<b>Vials Capacity, Square Rack</b>			
1.2 & 2 ml vials (internally threaded)	10400	24050	38350
Qty of rack (100-cell box)	7	17	28
Qty of rack (25-cell box)	4	6	6
Number of shelves per rack	13	13	13
<b>Vials Capacity, Slim Rack</b>			
1.2 & 2 ml vials (internally threaded)	10000	23500	40500
Qty of rack (100-cell box)	20	47	81
Number of shelves per rack	5	5	5
<b>LN2 Capacity</b>			
LN2 capacity, L	175	380	600
<b>Dimensions &amp; Weight</b>			
Neck opening, mm	533	787	991
Usable internal height, mm	787	787	787
Inner diameter, mm	533	787	991
Overall Height, mm	1324	1324	1324
Weight empty, kg	120	200	270
Weight full, kg	252	490	747
<b>Functions</b>			
Controller	Touch screen	Touch screen	Touch screen
Temperature /liquid level diagram	Standard	Standard	Standard
USB port/ data download	Standard	Standard	Standard
Password access	Standard	Standard	Standard
Automatic filling	Standard	Standard	Standard
Backup battery	Optional	Optional	Optional