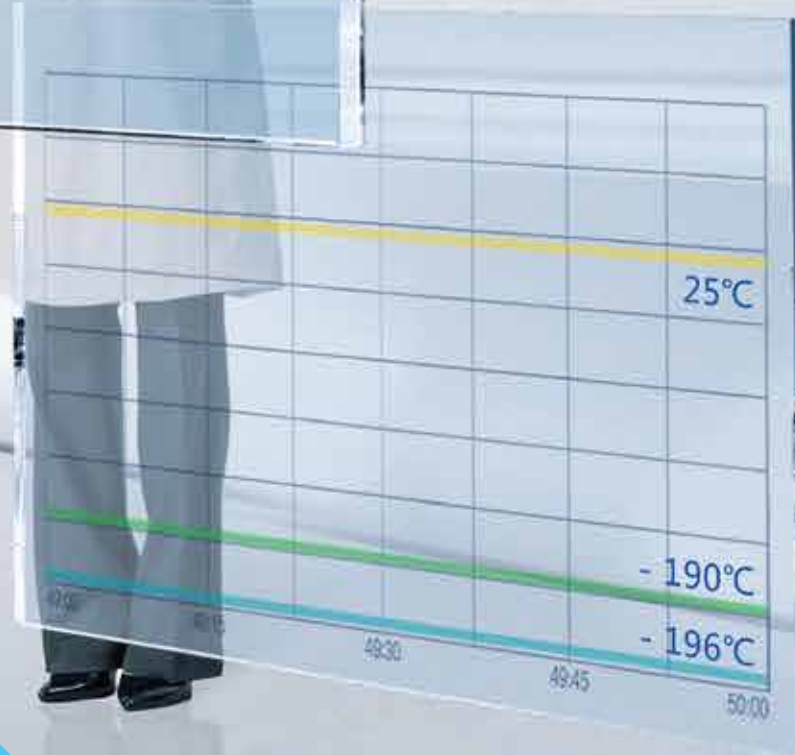


Running Mode: automatic mode
Liquid Level: 100mm
Point A Temperature: -190°C
Point B Temperature: -196°C
Inlet Valve: Open



Liquid Nitrogen Storage Solutions

Introduction

For ultimate sample safety our Smart LN₂ biological storage containers cooled by liquid nitrogen, coupled with our IoT and cloud management solution, ensures simultaneous monitoring of temperature and fluid level. Storage temperature and LN₂ fluid level are automatically and independently monitored with a high-precision controller providing accurate and real-time information on these two critical parameters. Manual measurement with rulers and manual temperature device is no longer needed saving time and improving sample safety.

Key Features

- 5 models from 2400 to 6000 cryovial capacity
- 5-year vacuum warranty
- Durable aluminium construction
- Real time monitoring of temperature and fluid level
- Cloud data storage for traceability
- Low consumption rate and high-performance stability
- Lock designed to assure sample security

Product Advantages

Colour-coded racking handles

The handles of the racking systems are colour-coded allowing customers to separate storage zones and manage their samples more easily.



New lock design

Special and dedicated lock design is to assure sample safety.



Dual temperature and liquid level monitoring

Storage temperature and liquid level are automatically monitored by a high-precision controller. Accurate and real-time information on the two parameters are available to ensure sample safety.



Multilayer protection for extreme safety

Temperature and fluid level are monitored in real-time to safeguard the storage environment. Alarms can be transmitted through email, IM and messaging apps such as WeChat.

Cloud data storage for traceability

Temperature and fluid level data can be transmitted to Haier's IoT platform for permanent data storage and traceability.

Low consumption rate and high-performance stability

High-quality automated manufacturing process ensures a high quality and a high vacuum to achieve reliable, stable performance and a low LN₂ consumption rate.



Smart Series

Specifications

Model	YDS-65-216-FZ	YDS-95-216-FZ	YDS-115-216-FZ	YDS-145-216-FZ	YDS-175-216-FZ
Maximum Storage Volume					
No. of canister	6	6	6	6	6
2ML storage vials (100/box)	2400	3000	3600	4800	6000
Layers in pickup barrel	4	5	6	8	10
5ML storage vials (81/box)	972	972	1458	1944	2430
Layers in pickup barrel	2	2	3	4	5
Function					
Liquid Nitrogen volume (L)	65	95	115	140	175
Static evaporation rate (%/d)	0.78	0.81	0.83	0.87	0.87
Effective volume (L)	55	85	105	130	165
Duration of normal operation (day)	44	66	80	94	126
Dimensions					
Mouth (MM)	216	216	216	216	216
Overall height (MM)	765	790	870	960	1060
Overall Diameter (MM)	681	681	681	681	681
Empty container weight (KG)	38.5	41.3	42.3	48.9	53.8
Full container weight (KG)	80.8	112.4	132.8	157.3	198.5

Note: Static evaporation rate is a theoretical LN₂ loss rate. Actual evaporation rate and duration of operation will depend on the usage condition and ambient. The duration of normal operation is a reference number for a typical usage of a container system at normal conditions. The actual duration varies with loading, ambient and age of the equipment.

Haier Liquid Nitrogen Storage System Biobank Series for Large Scale Storage

The Biobank Series are designed to ensure the maximum storage capacity with the minimum consumption of liquid nitrogen to lower the overall cost of operations.

Product Advantages

Optimal Use of Storage Space

Racks are stored on the rotating tray with an appropriate distance from the wall of the chamber. Liquid nitrogen or supercooled nitrogen vapor is filled in the space between the tray and the wall to maintain temperature uniformity. Storage space is equally divided into four or six fan-shaped storage areas which are clearly labelled. Each storage area is easily rotated to the opening of the tank for convenient sample access.



Designed for Both Liquid and Vapour Phase Storage

Each model of Biobank Series is designed for both liquid and vapour phase storage. For vapour phase storage, samples are kept away from the liquid nitrogen while stored in a uniform temperature that is close to the temperature range of liquid nitrogen.

Advanced Vacuum Technology and Superinsulation Technology

Haier Liquid Nitrogen storage system Biobank series applies advanced vacuum technology and superinsulation technology to ensure temperature uniformity and storage safety while reducing the consumption of liquid nitrogen. The temperature difference of the entire storage area does not exceed 10°C even in vapour phase storage and temperature near the top of the rack can be as low as -190°C.

Cryosmart Intelligent Liquid Nitrogen Control System

Haier Biobank Series of Liquid Nitrogen storage systems features Cryosmart, a monitoring and controlling solution. High-precision temperature and liquid level sensors are used to ensure accuracy. All data and samples are protected by a secure access control system.

Features

- Large scale storage capacity from 13000 to 94875 *2ml Vials.
- Vapour phase storage is the only guaranteed method to prevent cross-contamination
- Vapour phase storage temperature -190°C.
- 5-year vacuum warranty
- One-touch de-fogging for easier access.
- LN₂ splash proof make the operation more secure.
- Biobank storage compatible.

Product Details

Top of the Container



Lid Open



A Low-temperature Hose Connects the Inlet and Liquid Nitrogen Tank. A Silencer Reduces the Noise of Nitrogen Emission, Creating A Quieter Environment.



Vapour Condensation Near the Container Opening is Controlled.



Small Self-pressurized Liquid Nitrogen Supply Systems are Available and Suitable for Those Dealing with Fewer Samples.

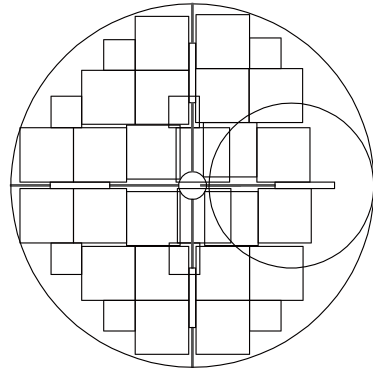
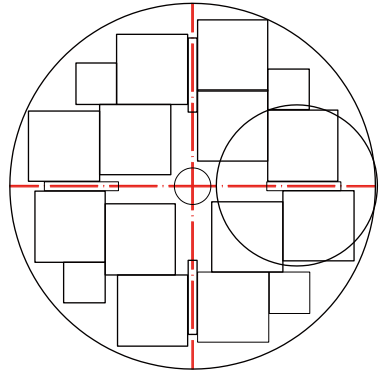


Liquid Nitrogen Container

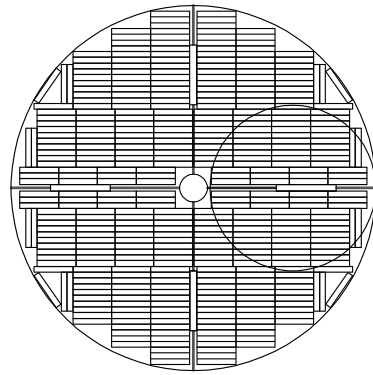
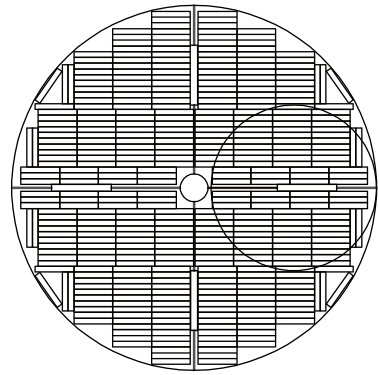
YDD-350-326

YDD-550-445

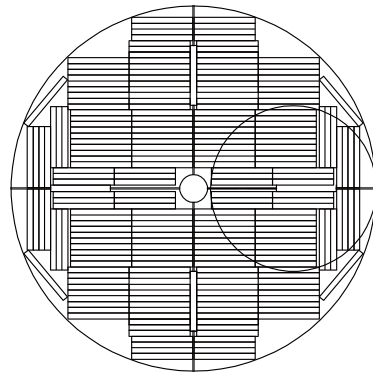
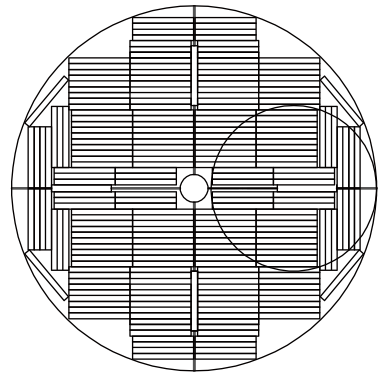
Holders



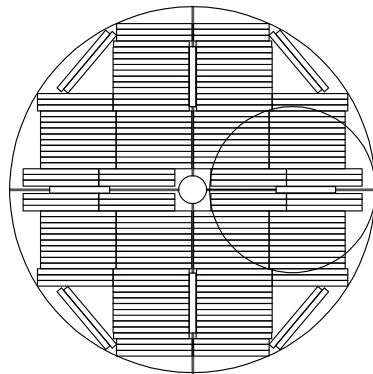
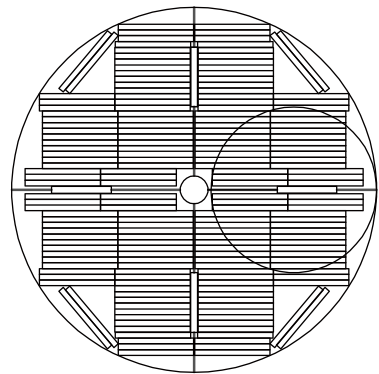
25 ml Racks



50 ml Racks



250 ml Racks

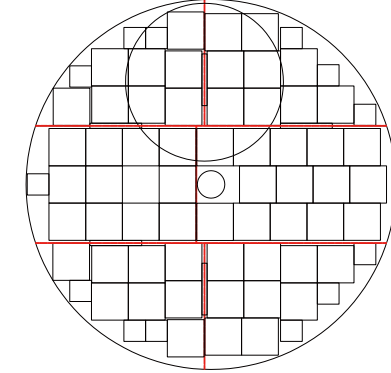
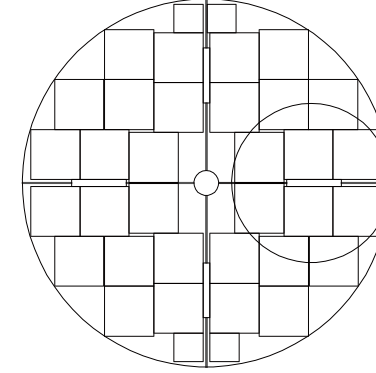


Liquid Nitrogen Container

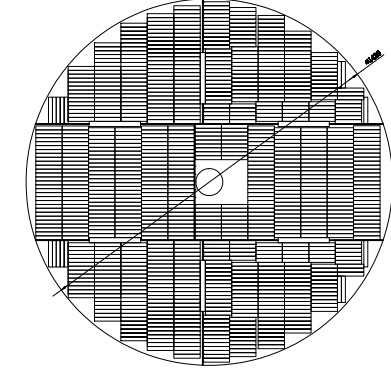
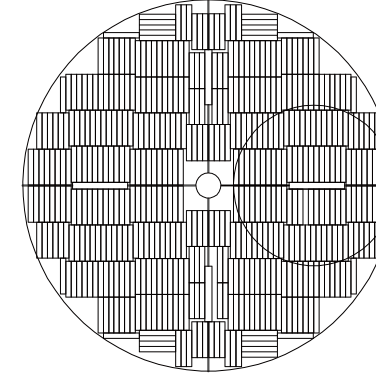
YDD-850-465

YDD-1800-635

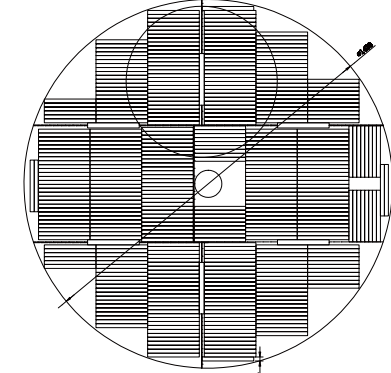
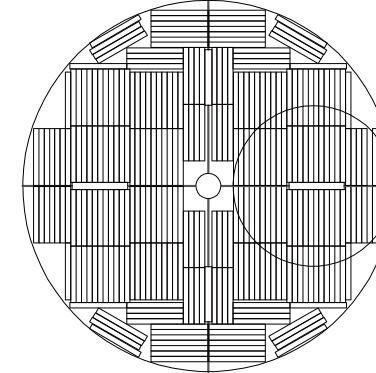
Holders



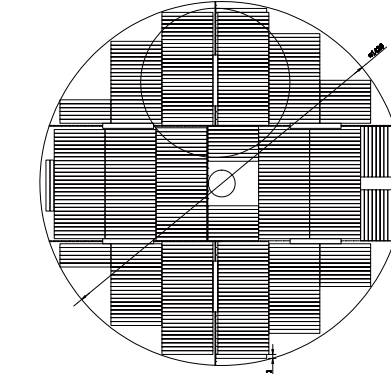
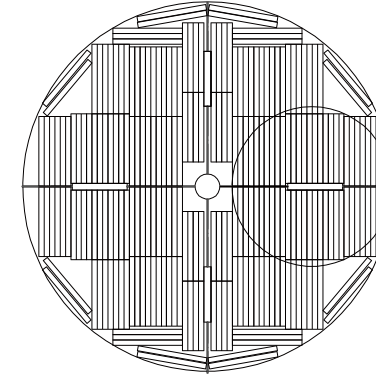
25 ml Racks



50 ml Racks



250 ml Racks



Specifications

Model	YDD-350-326	YDD-550-445	YDD-750-445	YDD-850-465	YDD-1000-465	YDD-1300-635	YDD-1600-635	YDD-1800-635
Maximum Storage Capacity								
2 ml Vials (Internal Thread)	13000	26000	36400	42900	49500	58500	76050	94875
Freeze Rack (100 wells)	12	24	24	32	32	54	54	60
Freeze Rack (25 wells)	4	8	8	4	4	18	18	13
Layers of each rack	10	10	14	13	15	10	13	15
0.5 ml Vials (Internal Thread)	16900	33800	49400	56100	66000	81900	99450	126500
Freeze Rack (100 wells)	12	24	24	32	32	54	54	60
Freeze Rack (25 wells)	4	8	8	4	4	18	18	13
Layers of each rack	13	13	19	17	20	14	18	20
Performance								
Volume of LN ₂ (L)	350	587	783	890	1014	1340	1660	1880
Volume of LN ₂ under the tray (L)	55	80	80	135	135	265	300	320
Static Evaporation(L/Day)	≤4	≤8	≤9	≤8	≤8	≤8	≤10.5	≤12.5
Dimensions								
Inside Neck Diameter(MM)	326	445	445	465	465	635	635	635
Height(MM)	1180	1266	1591	1559	1704	1398	1589	1883
Operating Height(MM)	1200	1321	1216	980	950	997	967	1097
Outside Diameter(MM)	875	1104	1104	1190	1190	1565	1565	1565
Door Width Requirement(MM)	1000	1124	1124	1210	1210	1585	1585	1585
Empty Weight(KG)	219	328	372	441	495	851	914	984
Gross Weight(KG)	490	802	1005	1160	1314	1934	2255	2504

Blood bag capacity

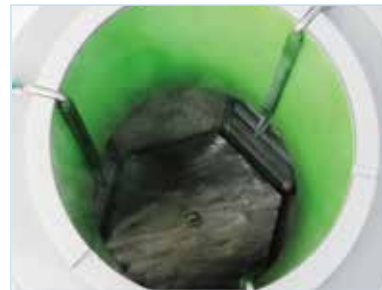
Model	YDD-350-326			YDD-550-445			YDD-750-445			YDD-850-465			YDD-1000-465			YDD-1300-635			YDD-1600-635			YDD-1800-635		
	Total No.of Bags	Rack Layers	No.of Racks	Total No.of Bags	Rack Layers	No.of Racks	Total No.of Bags	Rack Layers	No.of Racks	Total No.of Bags	Rack Layers	No.of Racks	Total No.of Bags	Rack Layers	No.of Racks	Total No.of Bags	Rack Layers	No.of Racks	Total No.of Bags	Rack Layers	No.of Racks	Total No.of Bags	Rack Layers	No.of Racks
25 ml	1296	7	216	2376	6	396	3168	8	396	3360	7	480	4320	9	480	4716	6	786	5502	7	786	7758	9	862
50 ml	792	7	132	1416	6	236	1888	8	236	2072	7	296	2664	9	296	2916	6	486	3402	7	486	4905	9	545
250 ml	300	4	100	552	3	184	920	5	184	944	4	236	1180	5	236	1170	3	390	1950	5	390	2095	5	419
500 ml(df200)	168	4	56	336	3	112	560	5	112	544	4	136	680	5	136	666	3	222	888	4	222	1290	5	258
500 ml(4r9955)	192	4	64	408	3	136	680	5	136	640	4	160	800	5	160	828	3	276	1380	5	276	1520	5	304
700 ml	96	4	32	204	3	68	272	4	68	320	4	80	400	5	80	396	3	132	528	4	132	775	5	155

Haier Liquid Nitrogen Storage System Medical Series features low LN₂ consumption and relatively small footprint for medium capacity sample storage.

Product Advantages

ULT Storage with Extremely Low LN₂ Evaporation

Freezer racks are in the ultra-low temperature environment with extremely low LN₂ evaporation. Storage temperature is maintained over the long term, even in vapour phase the temperature is below -190°.



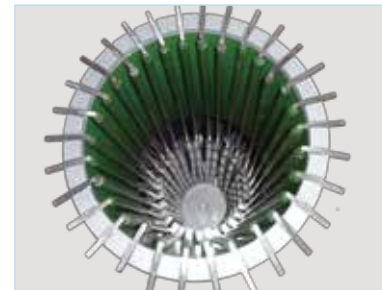
Advanced Vacuum Technology and Superinsulation Technology

Advanced vacuum and insulation technologies ensures cryopreservation under normal operation for up to four months.



Compatible for Blood Bag Storage

According to users' needs, this range can be adapted for temporary storage of blood bags before transfer to a larger scale LN₂ storage tank.



Auto-Refill System

Auto-refill system is particularly suitable for vapor phase storage. For liquid phase storage, it can also facilitate operations by avoiding frequent refills.

The auto-refill system continuously monitors the inside temperature through the ZTC-100B/100C Level Monitor, and automatically controls the inlet valve to replenish LN₂. Although less economical, it provides accurate control and ensures safety storage for over 8 weeks.

Level Monitor

Liquid level monitor continuously and reliably monitors the temperature inside the tank and informs users to refill LN₂. Three models (ZTC-100A/100B/100C) are available. The monitor offers real-time temperature display and audible/visual alarms for high temperature, sensor failure, and low liquid level.



Features

- 5 models from 2400 to 6000 cryovial capacity
- Heavy duty lockable enclosure offers excellent security
- Compatible with all major cryobox brands
- Durable aluminium construction
- Temperature data-logging monitoring available
- Liquid or vapour phase storage options
- High thermal efficiency
- 5-year vacuum warranty
- Ultra-low evaporative losses

Specifications

Model	YDS-65-216-F	YDS-95-216-F	YDS-115-216-F	YDS-140-216-F	YDS-175-216-F
Maximum Storage Capacity					
No. of Holders	6	6	6	6	6
2 ml Cryovials (100 per box)	2400	3000	3600	4800	6000
No. of Boxes in (2ml each holder)	4	5	6	8	10
5 ml Cryovials (36 per box)	648	864	1080	1296	1728
No. of Boxes in (5ml each holder)	3	4	5	6	8
Capacity					
Volume of LN ₂ (L)	65	95	115	140	175
Static Evaporation* (L/Day)	0.79	0.81	0.83	0.87	0.87
Working Volume Duration of Normal**	55	85	105	130	165
Operation (Day)	44	66	80	94	126
Dimensions					
Opening Diameter(MM)	216	216	216	216	216
Height(MM)	710	726	796	910	1026
Outside Diameter(MM)	681	681	681	681	681
Empty Weight(KG)	27.5	34.5	38.5	42.5	55
Gross Weight(KG)	80.8	112.4	132.8	157.3	198.5

* Static evaporation and static holding time is theoretical value. Actual evaporation and holding time is affected by usage, atmospheric conditions, and manufacturing tolerances.

** Duration of normal operation is for reference only to estimate container performance under normal operating conditions. Actual duration may differ due to different atmospheric conditions, usage history, manufacturing tolerances, and particular circumstances.

Accessories:

Trolley 	Holders 	Cryogenic Boxes
216 Diameter Lock Cap 	5 ml Customized Holder 	5 ml Customized Cryogenic Box