



**Haier Biomedical**  
Intelligent Protection of Life Science

# LIQUID NITROGEN STORAGE SOLUTIONS



● Headquarter ● Global warehouse ● Training center ● Global subsidiary ● Manufacturing base

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The models, parameters and performance in the brochure are subject to change due to product upgrades without prior notice.

[www.haiermedical.com](http://www.haiermedical.com)

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## Company Profile

Haier Biomedical Technology(Chengdu) Co., Ltd., is a holding subsidiary of Qingdao Haier Biomedical Co., Ltd. (Stock Code: 688139) and based in Chengdu. As a global cryogenic product manufacturing base, the facility specializes in the research, development, and production of liquid nitrogen containers and liquid nitrogen related equipment.



Extra large LCD and cryogenic intelligent management, establishing a new global standard



The chief R&D scientist is Professor Li Zongji, the former chief technology officer of Chart Industries in US, who has 40 years of experience in the development and manufacturing of liquid nitrogen tanks. Eight industry experts make up the consulting team which supports technical development and product optimization development and product optimization.

From its inception the business has been committed to the R&D and manufacture of liquid nitrogen related equipment. Our broad range of products include:

- Liquid nitrogen supply system (liquid nitrogen tower and cryogenic tube)
- Liquid nitrogen biological container
- Sample transfer equipment
- Monitoring management and software system
- Liquid nitrogen freezing technology for food (ice cream, seafood etc.)
- Liquid nitrogen thermostat technology



Haier Biomedical products and solutions are widely used across various fields, such as medical treatment, animal husbandry, scientific research, military industry, food, and industrial. Haier Biomedical have obtained ISO9001 and EU MDD (Medical Device Directive) certification.

# 4

The company has four invention patents.

# 5

The company has five software copyrights and appearance patents.

# 40

The company has obtained more than 40 utility model patents.



Key Members



Board Chairman:  
**Dr Liu Zhanjie**

Dr Liu Zhanjie is the Founder and General Manager of Haier Biomedical Co., Ltd., and former General Manager and Chief Engineer of Qingdao Haier Medical and Laboratory Products Co., Ltd.

Dr Liu received his doctoral degree in refrigeration and cryogenic engineering from the University of Shanghai for Science and Technology in 2001. Dr Liu has won multiple accolades and made significant contributions to the world of science and technology innovation.



General Manager:  
**Mr Tang Wenming**

Tang Wenming, graduated from Chengdu University of Technology, founded Chengdu Shengjie Cryogenic Equipment Co., Ltd in 2011 and served as the general manager. Following Haier Biomedical's financing in 2017, Mr. Tang established a new company, Sichuan Haishengjie Cryogenic Technology Co., Ltd. During his tenure, Mr. Tang has developed innovative solutions, directed and acquired multiple patents. At the same time, Mr. Tang also signed a cooperation agreement with the CNNC as a qualified professional supplier with the China Aerospace First Academy.



Chief Technology Officer:  
**Mr Li Zongji**

Li Zongji was the founder and general manager of Chengdu Jinfeng Liquid Nitrogen Container Co., Ltd. He began his career within the liquid nitrogen container industry in 1976, and his company was the first Chinese manufacturer liquid nitrogen containers. During his term of office, he led the drafting of three national standards of the People's Republic of China-GBT 5458-2012, Liquid Nitrogen Biological Container, GBT 14174-2012, Large Caliber Liquid Nitrogen Container, and GBT 16774-2012, Self-pressurized Liquid Nitrogen Container.

Scientific Research Projects

Chengdu Science and Technology Control Haze

In 2017, the business participated in the Chengdu Technology Control of Haze Project to explore the method of utilizing ultra-low temperature liquid nitrogen technology to control haze. Such efforts were aimed to find an effective way to improve local atmospheric diffusion conditions and air quality.



Long March 5 Launch Vehicle Project

The company has developed the 80K pre-cooling and pressurization system in partnership with the Long March 5 Orbital Launch Vehicle Model Office, this collaboration was to achieve the temperature's liquid oxygen transport pipeline. The project was a success with the products performance in flight achieving all technical requirements.



Superconducting Maglev Project



For this project, the team conducted an experiment that represented cutting-edge technology that resulted in industry leading outcomes in the field of high-temperature superconducting maglev research in China, a project jointly achieved in partnership with the Southwest Jiaotong University. Under ideal conditions, the super high-speed vacuum tube high-temperature superconducting maglev vehicle can drive at the ultimate speed of more than 1000 kilometers per hour with low energy consumption and no noise pollution.



### Human Body Cryopreserving Project

We cooperated with Yinfeng Research Institute on China's first human body cryopreserving project. The research produced the latest cryonics technology in China that allowed the human body to be stored in a -196°C environment.



### Seafood Liquid Nitrogen Freezing Project

We conducted a research project jointly with several large fishery enterprises. Based on the research results, we can achieve the rapid freezing of the seafood within five minutes to maintain the original colors, tastes, and nutrients. Such a freezing method has received unanimous praise from users relying on its fast freezing, long preservation time, and low operating costs.



### Smart IoT Liquid Nitrogen Tank



Liquid detection systems have proven problematic over the years, the existing liquid level detection methods have a low degree of intelligence and are not conducive to LN<sub>2</sub> management. To solve the above problems, we have developed smart IoT liquid nitrogen tanks, which improves the accuracy of the liquid level detection without polluting the stored samples.

**0.1°C** temperature measurement accuracy up to ±0.1°C

**±5mm** liquid level measurement error down to ±5mm

## Scientific and Technological Innovations

As society today develops rapidly toward intelligence, traditional liquid nitrogen tanks have gradually become unable to meet the market's needs. In response, we launched intelligent liquid nitrogen tanks and smart caps in 2019. These products have combined advanced intelligent monitoring technologies and IoT technologies to realize remote data monitoring, scientific and intelligent management, and intuitive display of users' sample storage situations. Such efficient sample management ensures the accuracy of sampling and improves the quality control of biological samples. Our liquid nitrogen tanks can store not only blood but also human biological samples, such as cord blood, cells, and sperm, to provide the best protection for them.

### Low Temperature Transport Trolley



### Haier Smart Cap



### YDD Series



## Biobank Series for Large Scale Storage

*Biobank series for large scale storage is designed to ensure the maximum storage capacity with the minimum consumption of liquid nitrogen to lower the overall cost of operation .*

- LN<sub>2</sub> Splashproof
- Data Logging
- Hot Gas Bypass
- 5 Year Vacuum Warranty
- From 13,000 to 94,875 Cryovials
- Self-diagnostics
- Vapour Phase Storage
- Lockable Lid
- Liquid Phase Storage
- One-touch Defogging



## Key Features

- Massive capacity between 13,000 to 94,875×2ml Vials
- Vapour phase storage is the only guaranteed method to prevent cross-contamination
- Vapour phase storage at -190°C
- 5-Year vacuum warranty
- One-touch defogging for easier access
- LN<sub>2</sub> splash proof ensures a safer operation
- Can be used to store all kinds of biological sample

## 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 vapour 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 room is easily rotated to the opening of the tank for convenient sample access.



### Designed for Both Liquid and Vapor Phase Storages

Each model from the Biobank series for large scale storage is designed for both liquid and vapor phase storage. For the vapor phase storage operation process, samples are located away from the liquid nitrogen at a uniform temperature close to that of liquid nitrogen.

### Advanced Vacuum Technology and Superinsulation Technology

Haier Biomedical's Liquid Nitrogen Storage System Biobank series for large scale storage applies advanced vacuum technology and superinsulation technology to ensure storage safety and temperature uniformity while reducing the consumption of liquid nitrogen. The temperature difference of the entire storage area does not exceed 10°C, even during the vapor phase storage process, the temperature near the top of the shelf is as low as -190°C.



### Cryosmart Level Monitoring System ITC-800N201(N4.1)

Haier Biomedical's Liquid Nitrogen Storage System Biobank series for large scale storage feature the Cryosmart system for complete monitoring and control. High-precision temperature and liquid level sensors are used to ensure accuracy. All data and samples are protected by a secure access control system.



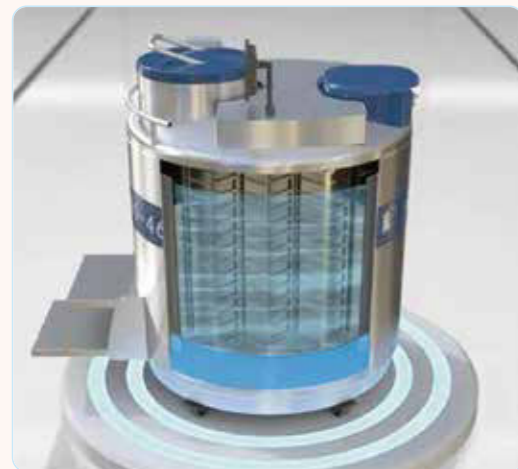
The unique design can reduce the amount of water vapor solidification on the outer surface of the neck, the container is reinforced at liquid nitrogen temperature to extend the physical service life of the container.

The large-caliber stainless steel liquid nitrogen biological container is matched with a self-pressurizing replenishment tank, which is suitable for scientific research institutions with a small sample storage capacity.

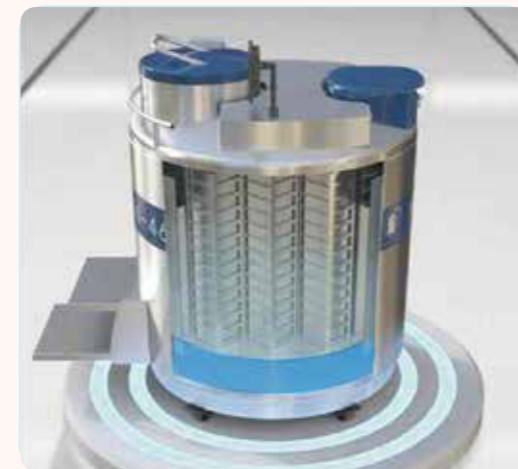


Liquid and Gas Phase

Liquid Phase



Gas Phase



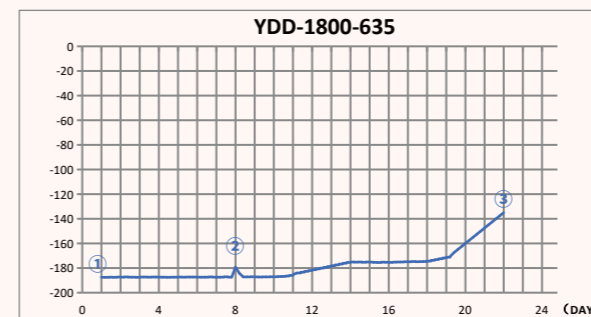
Top of the Container



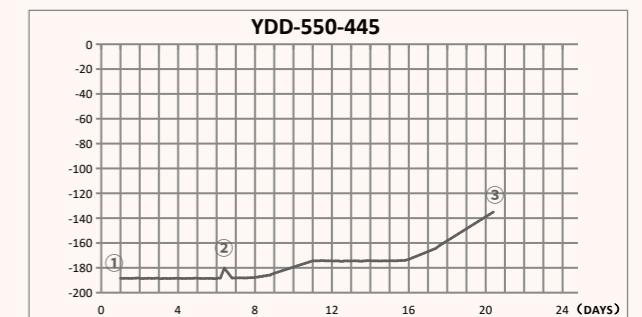
Liquid Feed System



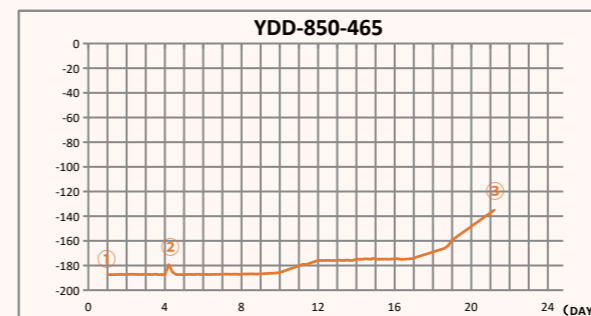
Temperature Test Graph



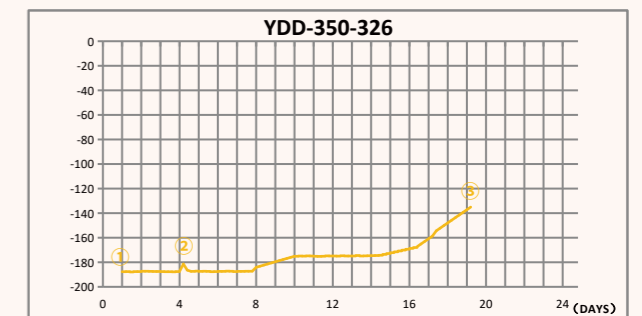
- ① Precooling stage when freezer filled to high level
- ② Lid open test, -179.2°C max
- ③ With no liquid nitrogen supply, the temperature maintained below -135°C for 22 days



- ① Precooling stage when freezer filled to high level
- ② Lid open test, -180.2°C max
- ③ With no liquid nitrogen supply, the temperature maintained below -135°C for 20 days



- ① Precooling stage when freezer filled to high level
- ② Lid open test, -179.4°C max
- ③ With no liquid nitrogen supply, the temperature maintained below -135°C for 21 days



- ① Precooling stage when freezer filled to high level
- ② Lid open test, -181.4°C max
- ③ With no liquid nitrogen supply, the temperature maintained below -135°C for 19 days

Temp Test indicates typical performance of Haier Biobank freezer with factory recommended level settings. Actual performance may vary with atmospheric conditions and usage.



Technical Parameters

Model	YDD-350-326/PM	YDD-370-326/PM	YDD-450-326/PT	YDD-550-445/PM	YDD-750-445/PM
2ml Volume	13K	16K	21K	27K	38K
<b>Maximum Storage Capacity</b>					
2 ml Vials (Internal Thread)	13000	15600	21000	27000	37800
Freeze Rack (100 wells)	12	12	12	24	24
Freeze Rack (25 wells)	4	4	8	12	12
Layers of each Rack	10	12	15	10	14
5 ml Vials (Internal Thread)	5360	6432	10548	11220	17952
Freeze Rack (81 wells)	12	12	12	24	24
Freeze Rack (25 wells)	4	4	8	12	12
Layers of each Rack	5	6	9	5	8
<b>Performance</b>					
Volume of LN <sub>2</sub> (L)	350	370	480	587	783
Volume of LN <sub>2</sub> under the Tray (L)	55	55	55	80	80
<b>Dimensions</b>					
Inside Neck Diameter (mm)	326	326	326	445	445
Effective Internal Height (mm)	600	704	900	600	828
Height (mm)	1263	1370	1570	1266	1486
Operating Height (mm)	1263	1096	1060	1266	995
Outside Diameter (mm)	875	875	875	1104	1104
Door Width Requirement (mm)	895	895	895	1124	1124
Empty Weight (kg)	219	230	286	328	372
Full Weight (kg)	502	529	674	802	1005
Shipping Weight (kg)	358	438	479	520	616

Blood bag capacity

Model	YDD-350-326/PM			YDD-370-326/PM			YDD-450-326/PT			YDD-550-445/PM			YDD-750-445/PM		
	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 (791 OS/U)	1176	6	196	1372	7	196	1602	9	178	2208	6	368	2944	8	368
50 ml (4R9951)	720	6	120	840	7	120	990	9	110	1392	6	232	1856	8	232
250 ml (4R9953)	264	3	88	352	4	88	450	5	90	516	3	172	860	5	172
500ml (DF-200)	168	3	56	168	3	56	270	5	54	336	3	112	560	5	112
500 ml (4R9955)	144	3	48	192	4	48	260	5	52	288	3	96	480	5	96
700 ml (DF - 700)	96	3	32	96	3	32	180	5	36	204	3	68	272	4	68



Technical Parameters

Model	YDD-850-465/PM	YDD-1000-465/PT	YDD-1300-635/PM	YDD-1600-635/PM	YDD-1800-635/PT
2ml Volume	43K	51K	59K	76K	95K
<b>Maximum Storage Capacity</b>					
2 ml Vials (Internal Thread)	42900	51000	58500	76050	94875
Freeze Rack (100 wells)	32	30	54	54	60
Freeze Rack (25 wells)	4	16	18	18	13
Layers of each Rack	13	15	10	13	15
5 ml Vials (Internal Thread)	18844	22640	28944	33768	46665
Freeze Rack (81 wells)	32	30	54	54	60
Freeze Rack (25 wells)	4	16	18	18	13
Layers of each Rack	7	8	6	7	9
<b>Performance</b>					
Volume of LN <sub>2</sub> (L)	890	1014	1340	1660	1880
Volume of LN <sub>2</sub> under the Tray (L)	135	135	265	300	320
<b>Dimensions</b>					
Inside Neck Diameter (mm)	465	465	635	635	635
Effective Internal Height (mm)	773	900	620	791	900
Height (mm)	1499	1619	1341	1534	1661
Operating Height (mm)	980	1090	997	967	1097
Outside Diameter (mm)	1190	1190	1565	1565	1565
Door Width Requirement (mm)	1210	1210	1585	1585	1585
Empty Weight (kg)	441	495	851	914	985
Full Weight (kg)	1160	1314	1934	2255	2504
Shipping Weight (kg)	702	926	1168	1426	1520

Blood bag capacity

Bag Specifications	YDD-850-465/PM			YDD-1000-465/PT			YDD-1300-635/PM			YDD-1600-635/PM			YDD-1800-635/PT		
	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 (791 OS/U)	2996	7	428	3852	9	428	4536	6	756	5292	7	756	7218	9	802
50 ml (4R9951)	1904	7	272	2394	9	266	2808	6	468	3276	7	468	4446	9	494
250 ml (4R9953)	832	4	208	1020	5	204	1062	3	354	1770	5	354	1940	5	388
500ml (DF-200)	544	4	136	670	5	134	666	3	222	888	4	222	1290	5	258
500 ml (4R9955)	464	4	116	520	5	104	654	3	218	792	4	198	1090	5	218
700 ml (DF - 700)	320	4	80	400	5	80	396	3	132	528	4	132	775	5	155

Racks (vertical type) and Blood bag Frame

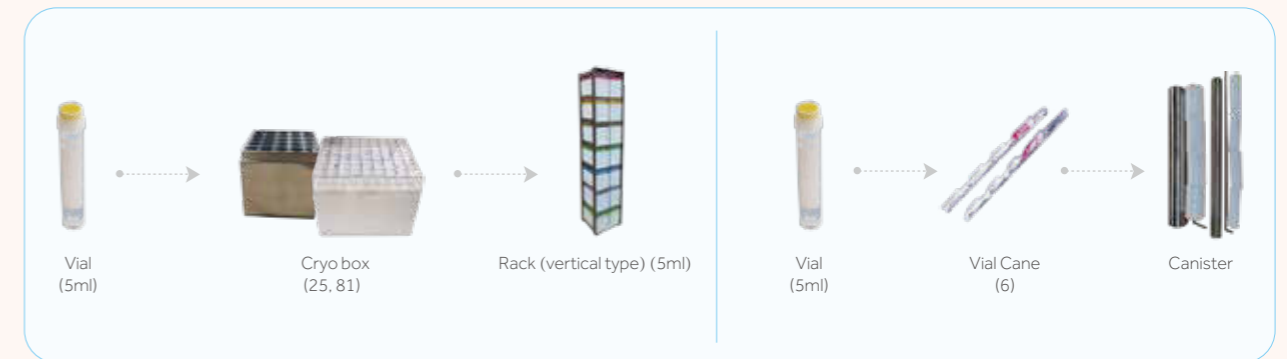
	Racks (vertical type)	25 ml Blood bag Frame	50 ml Blood bag frame
YDD-350-326 YDD-370-326			
YDD-450-326			
YDD-550-445 YDD-750-445			
YDD-850-465			
YDD-1000-465			
YDD-1300-635 YDD-1600-635			
YDD-1800-635			

Biological Sample Bank-YDD Series

Storage Example of 2ml Internally Threaded Vial



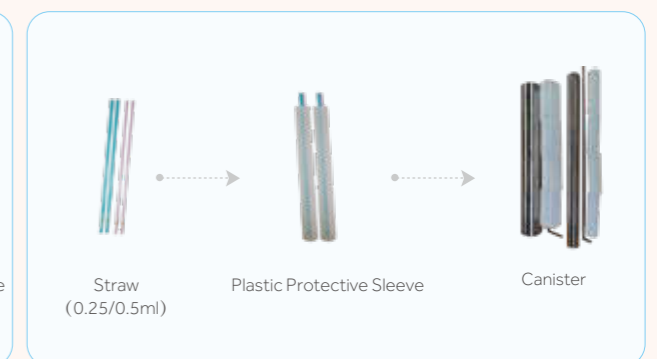
Storage Example of Tall 5ml Cryovials



Blood Bag Storage Example



Straw Storage Example



## Product List

Model	Product	Model	Description and Accessories
YDD-350-326/PM (13K)	Biobank Freezer(Smart type)	YDD-350-326/PM	Includes vacuum isolated hose (GRG-DN10/2.0), 4pcs of 10-tier rack(5*5), 12 pcs of 10-tier rack(9*9), 40pcs of cryo boxes for 2ml vial(5*5), 120pcs of cryo boxes for 2ml vial(9*9), 1 set of cryosmart(level monitoring system)
	Biobank Freezer	YDD-350-326/PM	Includes vacuum isolated hose(GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-10	Used for storing 5*5 cryoboxes(2ml), ten layers in total, suitable for YDD-350\550\1300(excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-10	Used for storing 9*9 cryoboxes(2ml), Ten layers in total, Suitable for YDD-350\550\1300(excluding cryoboxes)
	Plastic cryo box	5*5(2.0)	Used for storing 1.8ml/2ml vial(25 holes)
	Plastic cryo box	9*9(2.0)	Used for storing 1.8ml/2ml vial(81 holes)
	Plastic cryo box	10*10(2.0)	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	ITC-800N201(N4.1)	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
YDD-370-326/PM (16K)	Biobank Freezer(Smart type)	YDD-370-326/PM	Includes vacuum isolated hose (GRG-DN10/2.0), 4pcs of 12-tier rack(5*5), 12 pcs of 12-tier rack(9*9), 48pcs of cryo boxes for 2ml vial(5*5), 144pcs of cryo boxes for 2ml vial(9*9), 1 set of cryosmart(level monitoring system)
	Biobank Freezer	YDD-370-326/PM	Includes vacuum isolated hose(GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-12	Used for storing 5*5 cryoboxes(2ml), Twelve layers in total, suitable for YDD-370(excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-12	Used for storing 9*9 cryoboxes(2ml), Twelve layers in total, suitable for YDD-370(excluding cryoboxes)
	Plastic cryo box	5*5(2.0)	Used for storing 1.8ml/2ml vial(25 holes)
	Plastic cryo box	9*9(2.0)	Used for storing 1.8ml/2ml vial(81 holes)
	Plastic cryo box	10*10(2.0)	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	ITC-800N201(N4.1)	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
YDD-450-326/PT (21K)	Biobank Freezer(Smart type)	YDD-450-326/PT	Includes vacuum isolated hose (GRG-DN10/2.0), 8pcs of 15-tier rack(5*5), 12 pcs of 15-tier rack(9*9), 120pcs of cryo boxes for 2ml vial(5*5), 180pcs of cryo boxes for 2ml vial(9*9), 1 set of cryosmart(level monitoring system)
	Biobank Freezer	YDD-450-326/PT	Includes vacuum isolated hose(GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-15	Used for storing 5*5 cryoboxes(2ml), Fifteen layers in total, suitable for YDD-450\1000\1800(excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-15	Used for storing 9*9 cryoboxes(2ml), Fifteen layers in total, suitable for YDD-450\1000\1800(excluding cryoboxes)
	Plastic cryo box	5*5(2.0)	Used for storing 1.8ml/2ml vial(25 holes)
	Plastic cryo box	9*9(2.0)	Used for storing 1.8ml/2ml vial(81 holes)
	Plastic cryo box	10*10(2.0)	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	ITC-800N201(N4.1)	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module

## Product List

Model	Product	Model	Description and Accessories
YDD-550-445/PM (27K)	Biobank Freezer(Smart type)	YDD-550-445/PM	Includes vacuum isolated hose (GRG-DN10/2.0), 12pcs of 10-tier rack(5*5), 24 pcs of 10-tier rack(9*9), 120pcs of cryo boxes for 2ml vial(5*5), 240pcs of cryo boxes for 2ml vial(9*9), 1 set of cryosmart(level monitoring system)
	Biobank Freezer	YDD-550-445/PM	Includes vacuum isolated hose(GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-10	Used for storing 5*5 cryoboxes(2ml), ten layers in total, suitable for YDD-350\550\1300(excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-10	Used for storing 9*9 cryoboxes(2ml), Ten layers in total, Suitable for YDD-350\550\1300(excluding cryoboxes)
	Plastic cryo box	5*5(2.0)	Used for storing 1.8ml/2ml vial(25 holes)
	Plastic cryo box	9*9(2.0)	Used for storing 1.8ml/2ml vial(81 holes)
	Plastic cryo box	10*10(2.0)	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	ITC-800N201(N4.1)	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
YDD-750-445/PM (38K)	Biobank Freezer(Smart type)	YDD-750-445/PM	Includes vacuum isolated hose (GRG-DN10/2.0), 12pcs of 14-tier rack(5*5), 24 pcs of 14-tier rack(9*9), 168pcs of cryo boxes for 2ml vial(5*5), 336pcs of cryo boxes for 2ml vial(9*9), 1 set of cryosmart(level monitoring system)
	Biobank Freezer	YDD-750-445/PM	Includes vacuum isolated hose(GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-14	Used for storing 5*5 cryoboxes(2ml), Fourteen layers in total, suitable for YDD-450\750(excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-14	Used for storing 9*9 cryoboxes(2ml), Fourteen layers in total, suitable for YDD-450\750(excluding cryoboxes)
	Plastic cryo box	5*5(2.0)	Used for storing 1.8ml/2ml vial(25 holes)
	Plastic cryo box	9*9(2.0)	Used for storing 1.8ml/2ml vial(81 holes)
	Plastic cryo box	10*10(2.0)	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	ITC-800N201(N4.1)	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
YDD-850-465/PM (43K)	Biobank Freezer(Smart type)	YDD-850-465/PM	Includes vacuum isolated hose (GRG-DN10/2.0), 4 pcs of 13-tier rack(5*5), 32 pcs of 13-tier rack(9*9), 52pcs of cryo boxes(5*5) for 2ml vial, 416pcs of cryo boxes(9*9) for 2ml vial, 1 set of cryosmart(level monitoring system)
	Biobank Freezer	YDD-850-465/PM	Includes vacuum isolated hose(GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-13	Used for storing 5*5 cryoboxes(2ml), Thirteen layers in total, suitable for YDD-850\1600(excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-13	Used for storing 9*9 cryoboxes(2ml), Thirteen layers in total, suitable for YDD-850\1600(excluding cryoboxes)
	Plastic cryo box	5*5(2.0)	Used for storing 1.8ml/2ml vial(25 holes)
	Plastic cryo box	9*9(2.0)	Used for storing 1.8ml/2ml vial(81 holes)
	Plastic cryo box	10*10(2.0)	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	ITC-800N201(N4.1)	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module

## Product List

Model	Product	Model	Description and Accessories
YDD-1000-465/PT (51K)	Biobank Freezer(Smart type)	YDD-1000-465/PT	Includes vacuum isolated hose (GRG-DN10/2.0), 16 pcs of 15-tier rack(5*5), 30 pcs of 15-tier rack(9*9), 240pcs of cryo boxes(5*5) for 2ml vial, 450pcs of cryo boxes(9*9) for 2ml vial, 1 set of cryosmart(level monitoring system)
	Biobank Freezer	YDD-1000-465/PT	Includes vacuum isolated hose(GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-15	Used for storing 5*5 cryoboxes(2ml), Fifteen layers in total, suitable for YDD-450\1000\1800(excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-15	Used for storing 9*9 cryoboxes(2ml), Fifteen layers in total, suitable for YDD-450\1000\1800(excluding cryoboxes)
	Plastic cryo box	5*5(2.0)	Used for storing 1.8ml/2ml vial(25 holes)
	Plastic cryo box	9*9(2.0)	Used for storing 1.8ml/2ml vial(81 holes)
	Plastic cryo box	10*10(2.0)	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	ITC-800N201(N4.1)	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
	YDD-1300-635/P M (59K)	Biobank Freezer(Smart type)	YDD-1300-635/PM
Biobank Freezer		YDD-1300-635/PM	Includes vacuum isolated hose(GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
Rack (vertical type)		FDCJ-25-10	Used for storing 5*5 cryoboxes(2ml), ten layers in total, suitable for YDD-350\550\1300(excluding cryoboxes)
Rack (vertical type)		FDCJ-81-10	Used for storing 9*9 cryoboxes(2ml), Ten layers in total, Suitable for YDD-350\550\1300(-excluding cryoboxes)
Plastic cryo box		5*5(2.0)	Used for storing 1.8ml/2ml vial(25 holes)
Plastic cryo box		9*9(2.0)	Used for storing 1.8ml/2ml vial(81 holes)
Plastic cryo box		10*10(2.0)	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
Cryosmart Level Monitoring System		ITC-800N201(N4.1)	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
YDD-1600-635/P M (76K)		Biobank Freezer(Smart type)	YDD-1600-635/PM
	Biobank Freezer	YDD-1600-635/PM	Includes vacuum isolated hose(GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-13	Used for storing 5*5 cryoboxes(2ml), Thirteen layers in total, suitable for YDD-850\1600(-excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-13	Used for storing 9*9 cryoboxes(2ml), Thirteen layers in total, suitable for YDD-850\1600(-excluding cryoboxes)
	Plastic cryo box	5*5(2.0)	Used for storing 1.8ml/2ml vial(25 holes)
	Plastic cryo box	9*9(2.0)	Used for storing 1.8ml/2ml vial(81 holes)
	Plastic cryo box	10*10(2.0)	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	ITC-800N201(N4.1)	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module

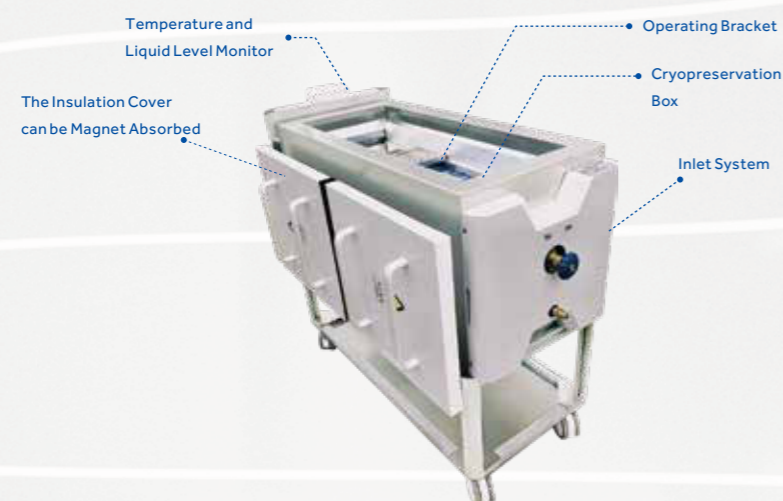
## Product List

Model	Product	Model	Description and Accessories
YDD-1800-635/ PT (95K)	Biobank Freezer(Smart type)	YDD-1800-635/PT	Includes vacuum isolated hose (GRG-DN10/2.0), 13 pcs of 15-tier rack(5*5), 60 pcs of 15-tier rack(9*9), 195pcs of cryo boxes(5*5) for 2ml vial, 900pcs of cryo boxes(9*9) for 2ml vial, 1 set of cryosmart(level monitoring system)
	Biobank Freezer	YDD-1800-635/PT	Includes vacuum isolated hose(GRG-DN10/2.0), Rack and intelligent level monitoring system are optional
	Rack (vertical type)	FDCJ-25-15	Used for storing 5*5 cryoboxes(2ml), Fifteen layers in total, suitable for YDD-450\1000\1800(excluding cryoboxes)
	Rack (vertical type)	FDCJ-81-15	Used for storing 9*9 cryoboxes(2ml), Fifteen layers in total, suitable for YDD-450\1000\1800(excluding cryoboxes)
	Plastic cryo box	5*5(2.0)	Used for storing 1.8ml/2ml vial(25 holes)
	Plastic cryo box	9*9(2.0)	Used for storing 1.8ml/2ml vial(81 holes)
	Plastic cryo box	10*10(2.0)	Used for storing 1.8ml/2ml vial (interally threaded,100 holes)
	Cryosmart Level Monitoring System	ITC-800N201(N4.1)	Suitable for all capacitive measurement of gas phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module
	Other Racks	Blood bag Frame	DCJ-250-3
Blood bag Frame		DCJ-250-4	4 layers frame used for storing 250ml blood bag, each layer storing one blood bag, with blood bag cassettes included. Suitable for YDD-850
Blood bag Frame		DCJ-250-5	5 layers frame used for storing 250ml blood bag, each layer storing one blood bag, with blood bag cassettes included. Suitable for YDD-450\750\1000\1800
Blood bag Frame		DCJ-25-6	*6 layers frame used for storing 25ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-350\550\1300
Blood bag Frame		DCJ-25-7	*7 layers frame used for storing 25ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-850\1600
Blood bag Frame		DCJ-25-8	8 layers frame used for storing 25ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-450\750
Blood bag Frame		DCJ-25-9	9 layers frame used for storing 25ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-1000\1800
Blood bag Frame		DCJ-50-6	6 layers frame used for storing 50ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-350\550\1300
Blood bag Frame		DCJ-50-7	7 layers frame used for storing 50ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-850\1600
Blood bag Frame		DCJ-50-8	8 layers frame used for storing 50ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-450\750
Blood bag Frame		DCJ-50-9	9 layers frame used for storing 50ml blood bag, each layer storing one blood bag, with blood bag cassettes included. suitable for YDD-1000\1800
Rack (vertical type)		FDCJ-25-5(5.0)	Used for storing 5*5 cryoboxes(5ml), five layers in total, suitable for YDD-350\550\1300(excluding cryoboxes)
Rack (vertical type)		FDCJ-25-7(5.0)	Used for storing 5*5 cryoboxes(5ml), seven layers in total, suitable for YDD-450\750\850\1600(excluding cryoboxes)
Rack (vertical type)		FDCJ-25-9(5.0)	Used for storing 5*5 cryoboxes(5ml), nine layers in total, suitable for YDD-1000\1800(excluding cryoboxes)
Rack (vertical type)		FDCJ-81-5(5.0)	Used for storing 9*9 cryoboxes(5ml), Five layers in total, suitable for YDD-350\550(excluding cryoboxes)
Rack (vertical type)		FDCJ-81-6(5.0)	Used for storing 9*9 cryo boxes(5ml), 7 layers in total, suitable for YDD-370\1300(excluding cryoboxes)
Rack (vertical type)		FDCJ-81-7(5.0)	Used for storing 9*9 cryoboxes(5ml), Seven layers in total, suitable for YDD-850\1600(excluding cryoboxes)
Rack (vertical type)		FDCJ-81-9(5.0)	Used for storing 9*9 cryoboxes(5ml), nine layers in total, suitable for YDD-450\750\1000\1800(excluding cryoboxes)
Rack (vertical type)		XDCJ-8-12	Used for storing 8 holes aluminium cryoboxes(2ml), Twelve layers in total, with aluminium cryoboxes included. suitable for YDD-450\750\850\1600
Rack (vertical type)		XDCJ-8-9	Used for storing 8 holes aluminium cryoboxes(2ml), Nine layers in total, with aluminium cryoboxes included. suitable for YDD-350\550\1300
Round Rack		YDCJ-97-2	With 2 stainless steel canisters( $\phi$ 97/276mm), 4 plastic goblets SNT-97 and 2 pick up lifter for goblets in total, the storage capacity for 0.5ml straw is 3016, suitable for YDD-350\YDD-550\YDD-1300

## Low Temperature Transport Trolley YDC-3000H

### Mobile Cryogenic Transfer Operation Platform

The unit can be used to preserve plasma and biomaterials during transportation. It is suitable for deep hypothermia operation and transportation of samples in hospitals, various biobanks and laboratories. High quality stainless steel in combination with the thermal insulation layer ensures the effectiveness and durability of the low temperature transport trolley.



### Product Advantages

#### Touch Screen

LCD touch operation



#### USB Data Export

It has its own USB interface and supports USB data export.



#### Real Time Monitoring

The instrument monitors the temperature and liquid level in real time and displays the expected remaining service time. Continuous working hours up to 24 hours.



### User Friendly Design



#### Appearance Spray

The appearance of spray, not easily affected by stains.



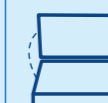
#### Caster Design

Integrated design, universal caster at the bottom, easy to move.



#### Polymer Materials

The new type of environmentally-friendly polymer material is used inside the cover plate, which is more appealing, more environment-friendly and more advanced than the commonly used pearl foam and polyurethane materials.



#### The Insulation Cover can be Magnet Absorbed

The insulation cover can be magnet absorbed to the side of vehicle, which is convenient to extract, and the space reserved at the bottom can be used to store other tools.

### Technical Parameters

Product Model	Dimensions (L × W × H mm)	Frozen Storage Space (L × W × H mm)	Liquid Nitrogen Under Tray (L)	Maximum Storage				
				5×5 Freezing Boxes (ea)	10×10 Freezing Boxes (ea)	50ml Blood Bag Boxes (ea)	200ml Blood Bag Boxes (ea)	2ml Cryopreservation Tube (ea)
YDC-3000H	1295×523×1095	900×335×163	33	65	30	105	50	3000

## cryovial transfer flask BioT Air

*BioT Air is suitable for small batch and short distance sample transportation in experimental units or hospitals. Lightweight, portable design, easy to easy to take.*

### •Lightweight design

Lightweight design, the total empty weight is only 2.8KG.

### •Multi-specification compatibilit

Compatible with 1.2ml, 1.5ml, 1.8ml, 2.0ml and 5.0ml sample cryopreservation tubes, and can also hold a 5×5-2ML cryopreservation box.

### •High thermal insulation performance

Vacuum structure ensures the working temperature in the tank-135 C ~-196 C, and the ultra-long low-temperature storage period.

### •No liquid nitrogen overflow

There is a liquid nitrogen adsorption layer at the bottom, and even if the container is dumped during dry storage, there will be no liquid nitrogen overflow, thus ensuring the safety of samples and personnel.



## Humanization Design

### Condensate water inflow prevention structure

The specially designed upper cover can prevent condensate from flowing into the container and ensure the container cover to open smoothly.



### Liquid nitrogen splash prevention structure

Ensure that liquid nitrogen is not sprayed during transportation after the container is filled with liquid nitrogen, and it is safe to use.



### Ultra-low temperature adsorption function

It is specially equipped with liquid nitrogen adsorption layer, and under special circumstances, the container pours liquid nitrogen out, which can also ensure the low temperature environment in a certain period of time and ensure the safety of samples.



## Product Parameters

O.D. (mm)	I.D. (mm)	Depth (mm)	Height (mm)	Total empty weight of tank (Kg)	Liquid nitrogen volume (L)	Storage time of liquid phase (h)	Storage time of gas phase (h)	Internal freezing tube capacity (2ml) (pcs)	Working temperature (°C)	Working environment (°C)
156	125	190	235	2.8	2	8	6	55	-135~-196	-20~40

## cryovial transfer flask Bio-2T

*Bio-2T is suitable for short-distance sample transportation in small batches in experimental units or hospitals. Lightweight, portable design, easy to take*

### •Lightweight design

Lightweight design of the product, the total empty weight is only 3kg;

### •Temperature visualization

Visual real-time temperature monitoring, and the instrument part is dustproof and waterproof;

### •Multi-specification compatibility

Compatible with 1.2ml, 1.5ml, 1.8ml, 2.0ml and 5.0ml sample storage tubes;

### •High thermal insulation performance

Vacuum structure, thickened thermal insulation material, ensuring the working temperature in the tank  $-135^{\circ}\text{C}$ ~ $-196^{\circ}\text{C}$ , and ultra-long low-temperature storage period;



## Humanization Design

### Condensate water inflow prevention structure

The specially designed upper cover can prevent condensate from flowing into the container and ensure the container cover to open smoothly.



### Liquid nitrogen splash prevention structure

Ensure that liquid nitrogen is not sprayed during transportation after the container is filled with liquid nitrogen, and it is safe to use.



### No liquid nitrogen overflow

With liquid nitrogen adsorption layer at the bottom, even if the container falls down during dry storage, there will be no liquid nitrogen overflow, which ensures the safety of samples and personnel.



## Product Parameters

O.D. (mm)	I.D. (mm)	Depth (mm)	Height (mm)	Total empty weight of tank (Kg)	Liquid nitrogen volume (L)	Storage time of liquid phase (h)	Storage time of gas phase (h)	Internal freezing tube capacity (2ml) (pcs)	Working temperature (°C)	Working environment (°C)
156	125	190	265	3	2	8	6	54	-135~-196	-20~40

## Intelligent Liquid Nitrogen Biological Container

*It is suitable for the deep and low temperature storage of plasma, cell tissues and various biological samples in hospitals, laboratories, scientific research institutes, disease control centers, various databases and other places.*

### •Easier access

With the full opening design on the top of product and hydraulic uncapping, it saves energy and is easier for storing and taking sample.

### •Brand new intelligent monitoring system

It's equipped with the brand-new intelligent monitoring system and matched with IoT module which can connect with the Haier's big data cloud platform to realize the remote data transmission. Integrating three screens, it can realize the remote alarm via APP, e-mail and other ways.

### •Reduce frosting and freezing

The brand-new cover and interlayer exhaust structure can effectively reduce the frosting and freezing at exhaust port.



## Personalized Design

### •Safe

24V DC voltage makes electricity safer.

Double lock and double control design, the sample storage is safer.

The liquid nitrogen filter can effectively reduce impurities and prolong the service life of the whole machine.

### •Convenient

With USB interface, it supports data export.

Bottom caster, easy to move, with adjustable back brake, easy to fix and stabilize.

With larger battery capacity, it can still be used after power failure.

### •Experience Feeling

Haier's family-style design is more three-dimensional and beautiful.

The advantage of operating screen position effectively reduces the influence of opening low temperature and improves the stability.

The advantage of operating LCD touch screen, integrated design, not easy to dust, screen position effectively reduces the influence of opening low temperature and improves the stability.

## Product Parameters

Product Model	Temperature (c)	Volume (L)	Overall dimensions (L × W × H, mm)	Weight (KG)	I.D. (mm)
YDD-550-1000	-196~normal temperature	550	1410×1100×1190	400	φ1000

Storage State	2ml internal-rotation freezing tube	Number of frozen shelf layers	Number of 5×5 frozen shelves	Number of 5×5 freezer boxes	Number of 10×10 frozen storage racks	Number of 10×10 freezer boxes
Gas Phase	33550	11	10	110	28	308
Liquid Phase	42900	13	8	104	31	403

Smart Series (Square Racks)

The smart, IoT and cloud management system monitors temperature and liquid levels simultaneously to provide accurate and real-time information on the critical parameters to ensure ultimate sample safety.

- IoT and Cloud Management
- Multiple Level of Protections
- Low Energy Consumption
- Temperature and Level Display
- Updated Design
- High Performance Stability
- New Lock Design



Key Features

- 5 models from 2,400 to 6,000 cryovial capacity
- 5 years vacuum warranty
- Durable aluminium construction
- Real time monitor of temperature and level
- Cloud data storage for traceability
- Low consumption rate and high performance stability
- New lock design

Product Advantages

Colour identification for Rack handles

Rack handles are colour-coded for ease of separating storage zones and managing samples.



Double lock and double control design

The new double lock and double control design requires two people to open at the same time to ensure sample safety.



Dual monitoring respectively for temperature and liquid level

Storage temperature and liquid level are automatically monitored by a high precision controller. Accurate and real-time information ensures samples safety.



Multilayer protection for ultimate safety

Temperature and level are monitored in real time to safeguard the storage environment. Alarms can be transmitted through email, IM and wechat.

Cloud data storage for traceability

Temperature and level data can be transmitted to Haier's IoT platform for storage. All data is traceable and stored permanently.

Low consumption rate and high performance stability

Automated manufacture ensures build quality and reliable vacuum which delivers stable and uniform temperature performance as well as low LN2 consumption rates.



Accessories



## Technical Parameters

Model	YDS-65-216-FZ	YDS-95-216-FZ	YDS-115-216-FZ	YDS-145-216-FZ	YDS-175-216-FZ
<b>Maximum Storage Volume</b>					
No. of Rack	6	6	6	6	6
2ml Storage Vials (100/box)	2400	3000	3600	4800	6000
Layers in Rack	4	5	6	8	10
5ml Storage Vials (81/box)	—	972	1458	1944	2430
Layers in Rack	—	2	3	4	5
<b>Function</b>					
Liquid Nitrogen Volume (L)	65	95	115	145	175
Static Evaporation Rate* (L/D)	0.78	0.94	0.94	0.94	0.95
Static Holding Time** (Day)	83	101	122	154	184
<b>Dimensions</b>					
Neck Opening (mm)	216	216	216	216	216
Overall Height (mm)	760	825	895	995	1110
Overall Diameter (mm)	681	681	681	681	681
Empty Weight (kg)	39.3	42.7	43.3	49.9	54.8
Full Weight (kg)	81.5	112.3	133.5	158.9	199.5
Shipping Weight (kg)	63.8	67.9	71.2	82.1	91.3

\* Static evaporation and static holding time are theoretical values. Actual evaporation and holding time are affected by usage, atmospheric conditions and manufacturing tolerances.

\*\* Static Holding Time: the amount of days it takes for all of the LN to evaporate out after container is filled with liquid nitrogen to pre-cool and reach thermal equilibrium and the liquid nitrogen filling rate reaches 100% under standard atmospheric condition.

## Product List

Model	Product	Model	Description and Accessories
YDS-65-216	Smart liquid nitrogen container (smart series)	YDS-65-216-FZ	Includes 6 racks(4-tier), cryoboxes(9*9), lockable cap, roller base is optional
YDS-95-216	Smart liquid nitrogen container (smart series)	YDS-95-216-FZ	Includes 6 racks(5-tier), cryoboxes(9*9), lockable cap, roller base is optional
YDS-115-216	Smart liquid nitrogen container (smart series)	YDS-115-216-FZ	Includes 6 racks(6-tier), cryoboxes(9*9), lockable cap, roller base is optional
YDS-145-216	Smart liquid nitrogen container (smart series)	YDS-145-216-FZ	Includes 6 racks(8-tier), cryoboxes(9*9), lockable cap, roller base is optional
YDS-175-216	Smart liquid nitrogen container (smart series)	YDS-175-216-FZ	Includes 6 racks(10-tier), cryoboxes(9*9), lockable cap, roller base is optional
YDS-175-216	Roller Base	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels

## Medium Sized Storage Series (Square Racks)

Medium Sized Storage Series (Square Racks) features low LN<sub>2</sub> consumption and relatively small footprint for medium capacity sample storage.

- 5 Year Vacuum Warranty
- Cryobox Storage
- High Thermal Efficiency
- Durable
- Secure
- Liquid and Vapour Storage



### Key Features

- Heavy duty lockable enclosure offers excellent security
- Compatible with all major cryobox brands
- Durable aluminium construction
- Temperature monitoring available
- Liquid or vapour phase option available
- High thermal efficiency
- 5 year vacuum warranty
- Ultra-low evaporation loss

### Product Advantages

#### ULT Storage with Extremely Low LN<sub>2</sub> Evaporation Loss

Freezer racks are in the ultra-low temperature environment with extremely low LN<sub>2</sub> evaporation. Even stored in vapour phase, the temperature will be below -190°C for a long time.

#### Advanced Vacuum Technology and Superinsulation Technology

Advanced vacuum and insulation technologies ensure cryopreservation for up to four months.

#### Compatible for Blood Bag Storage

Suitable for blood bag applications, the racks can be adapted to provide temporary blood bag storage before transferring bags to larger LN<sub>2</sub> storage tanks.



### Liquid Nitrogen Temperature Detector

The temperature monitor provides continuous and reliable monitoring of the temperature in the container. It is the ideal choice for long-term monitoring of sample storage temperature and reminding users to add liquid nitrogen.

The temperature monitor ZTC-100A has real-time temperature display function, and can also provide the following alarms:

- \* Over temperature alarm
- \* Sensor error acousto-optic alarm



### Technical Parameters

Model	YDS-65-216-F	YDS-95-216-F	YDS-115-216-F	YDS-145-216-F	YDS-175-216-F
<b>Maximum Storage Capacity</b>					
No. of Rack	6	6	6	6	6
No. 2.0 ml Cryovials (100 / Box)	2400	3000	3600	4800	6000
No. of Boxes in (2ml each Rack)	4	5	6	8	10
No. 5.0 ml Cryovials (81 / Box)	-	972	1458	1944	2430
No. of Boxes in (5ml each Rack)	-	2	3	4	5
<b>Performance</b>					
Volume of LN <sub>2</sub> (L)	65	95	115	145	175
Static Evaporation Rate* (L/Day)	0.78	0.94	0.94	0.94	0.95
Static Holding Time** (Day)	83	101	122	154	184
<b>Dimensions</b>					
Neck Opening Diameter (mm)	216	216	216	216	216
Height (mm)	712	774	846	946	1060
Outer Diameter (mm)	681	681	681	681	681
Empty Weight (kg)	38.3	41.3	42.3	48.9	53.8
Full Weight (kg)	80.8	112.4	132.8	157.3	198.5
Shipping Weight (kg)	61.8	65.9	72.9	80.1	89.2

\* Static evaporation and static holding time are theoretical values. Actual evaporation and holding time are affected by usage, atmospheric conditions and manufacturing tolerances.

\*\* Static Holding Time: the amount of days it takes for all of the LN to evaporate out after container is filled with liquid nitrogen to pre-cool and reach thermal equilibrium and the liquid nitrogen filling rate reaches 100% under standard atmospheric condition.

### Accessories

Roller Base 	Plastic Cryo Box 	Lockable Cap (SG-216) 	Rack (5ml) 
5 ml Customized Cryogenic Box 	SmartCap 	Rack 	Data transfer module-WIFI (RP-300W) 

Product List

Model	Product	Model	Description and Accessories
YDS-65-216	Liquid Nitrogen container	YDS-65-216-F	Includes 6 racks(4 layers), 9*9 cryoboxes, lockable cap, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-65-216S	Includes lockable cap, no rack, no PU bag
	Rack	FTT-81-4	Used for storing 9*9 cryo boxes(2ml), 4 layers in total, with 9*9 cryo boxes included, suitable for YDS-65-216
	Roller Base	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-216-340-6H530	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 530mm height, suitable for YDS-65-216
	Cork (216)	GS-216-220-7	Suitable for YDS-65-216、YDS-95-216、YDS-115-216、YDS-145-216、YDS-175-216、YDH-15-216、YDH-25-216
	Lockable cap	SG-216	Suitable for container with 216mm neck opening
YDS-95-216	Liquid Nitrogen container(5.0ml Vial)	YDS-95-216-F (5.0)	Includes 6 racks for 5ml, 2 layers in total, 12pcs of 5ml 9*9 cryo boxes and lockable cap included, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-95-216-F	Includes 6 racks(5 layers), 9*9 cryoboxes, lockable cap, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-95-216S	Includes lockable cap, no rack, no PU bag
	Rack	FTT-81-5	Used for storing 9*9 cryo boxes(2ml), 5 layers in total, with 9*9 cryo boxes included, suitable for YDS-95-216\YDS-25H-216
	Rack	FTT-81-2 (5.0)	Used to store 5ml cryo boxes(9*9), 2 layers in total, 9*9 cryo boxes included, suitable for YDS-65-216\95-216(Plastic cryo boxes included)
	Roller Base	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-216-370-6H580	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 580mm height, suitable for YDS-95-216
YDS-115-216	Liquid Nitrogen container(5.0ml Vial)	YDS-115-216-F (5.0)	Includes 6 racks for 5ml, 3 layers in total, 18pcs of 5ml 9*9 cryo boxes and lockable cap included, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-115-216-F	Includes 6 racks(6 layers), 9*9 cryoboxes, lockable cap, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-115-216S	Includes lockable cap, no rack, no PU bag
	Rack	FTT-81-6	Used for storing 9*9 cryo boxes(2ml), 6 layers in total, with 9*9 cryo boxes included, suitable for YDS-115-216
	Rack	FTT-81-3 (5.0)	Used for storing 9*9 cryo boxes(5ml), 3 layers in total, with 9*9 cryo boxes included, suitable for YDS-115-216
	Roller Base	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-216-450-6H660	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 660mm height, suitable for YDS-115-216
YDS-145-216	Liquid Nitrogen container(5.0ml Vial)	YDS-145-216-F (5.0)	Includes 6 racks for 5ml, 3 layers in total, 18pcs of 5ml 9*9 cryo boxes and lockable cap included, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-145-216-F	Includes 6 racks(6 layers), 9*9 cryoboxes, lockable cap, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-145-216S	Includes lockable cap, no rack, no PU bag
	Rack	FTT-81-8	Used for storing 9*9 cryo boxes(2ml), 6 layers in total, with 9*9 cryo boxes included, suitable for YDS-115-216
	Rack	FTT-81-4 (5.0)	Used for storing 9*9 cryo boxes(5ml), 3 layers in total, with 9*9 cryo boxes included, suitable for YDS-115-216
	Roller Base	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-216-570-6H770	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 660mm height, suitable for YDS-115-216

Product List

Model	Product	Model	Description and Accessories
YDS-175-216	Liquid Nitrogen container(5.0ml Vial)	YDS-175-216-F (5.0)	Includes 6 racks for 5ml, 5 layers in total, 30pcs of 5ml 9*9 cryo boxes and lockable cap included, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-175-216-F	Includes 6 racks(10 layers), 9*9 cryoboxes, lockable cap, no PU bag, roller base is optional
	Liquid Nitrogen container	YDS-175-216S	Includes lockable cap, no rack, no PU bag
	Rack	FTT-81-10	Used for storing 9*9 cryo boxes(2ml), 10 layers in total, with 9*9 cryo boxes included, suitable for YDS-175-216
	Rack	FTT-81-5 (5.0)	Used for storing 9*9 cryo boxes(5ml), 5 layers in total, with 9*9 cryo boxes included, suitable for YDS-175-216
	Roller Base	YSC-685-5W	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels
	SmartCap	LT-216-670-6H870	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 870mm height, suitable for YDS-175-216
	Cork (216)	GS-216-220-7	Suitable for YDS-65-216、YDS-95-216、YDS-115-216、YDS-145-216、YDS-175-216、YDH-15-216、YDH-25-216
	Lockable cap	SG-216	Suitable for container with 216mm neck opening
YDS-175-216	blood bag rack	XTT-25-2F14(65)	Used for storing 25ml blood bag, 2 levels in total with each layer storing 14pcs of 25ml blood bag, with 28 cassettes included, suitable for YDS-65-216, 6 racks can be fitted.
	blood bag rack	XTT-25-2F14(95)	Used for storing 25ml blood bag, 2 levels in total with each layer storing 14pcs of 25ml blood bag, with 28 cassettes included, suitable for YDS-95-216, 6 racks can be fitted.
	blood bag rack	XTT-25-3F14(115)	Used for storing 25ml blood bag, 3 levels in total with each layer storing 14pcs of 25ml blood bag, with 42 cassettes included, suitable for YDS-115-216, 6 racks can be fitted.
	blood bag rack	XTT-25-4F14(145)	Used for storing 25ml blood bag, 4 levels in total with each layer storing 14pcs of 25ml blood bag, with 56 cassettes included, suitable for YDS-145-216, 6 racks can be fitted.
	blood bag rack	XTT-25-5F14(175)	Used for storing 25ml blood bag, 5 levels in total with each layer storing 14pcs of 25ml blood bag, with 70 cassettes included, suitable for YDS-175-216, 6 racks can be fitted.
	blood bag rack	XTT-50-1F14(65)	Used for storing 50ml blood bag, 1 level in total with each layer storing 14pcs of 50ml blood bag, with 14 cassettes included, suitable for YDS-65-216, 6 racks can be fitted.
	blood bag rack	XTT-50-1F14(95)	Used for storing 50ml blood bag, 1 level in total with each layer storing 14pcs of 50ml blood bag, with 14 cassettes included, suitable for YDS-95-216, 6 racks can be fitted.
	blood bag rack	XTT-50-2F14(115)	Used for storing 50ml blood bag, 2 levels in total with each layer storing 14pcs of 50ml blood bag, with 28 cassettes included, suitable for YDS-115-216, 6 racks can be fitted.
	blood bag rack	XTT-50-2F14(145)	Used for storing 50ml blood bag, 2 levels in total with each layer storing 14pcs of 50ml blood bag, with 28 cassettes included, suitable for YDS-145-216, 6 racks can be fitted.
	blood bag rack	XTT-50-3F14(175)	Used for storing 50ml blood bag, 3 levels in total with each layer storing 14pcs of 50ml blood bag, with 42 cassettes included, suitable for YDS-175-216, 6 racks can be fitted.
	blood bag rack	XTT-250-1F8(65)	Used for storing 250ml blood bag, 1 level in total with each layer storing 8pcs of 250ml blood bag, with 8 cassettes included, suitable for YDS-65-216, 6 racks can be fitted.
	blood bag rack	XTT-250-1F8(95)	Used for storing 250ml blood bag, 1 level in total with each layer storing 8pcs of 250ml blood bag, with 8 cassettes included, suitable for YDS-95-216, 6 racks can be fitted.

Biological Sample Library-YDS Series

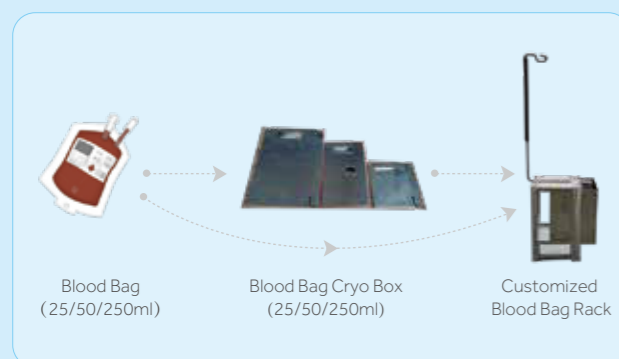
Storage Example of 2ml Internally Threaded Vial



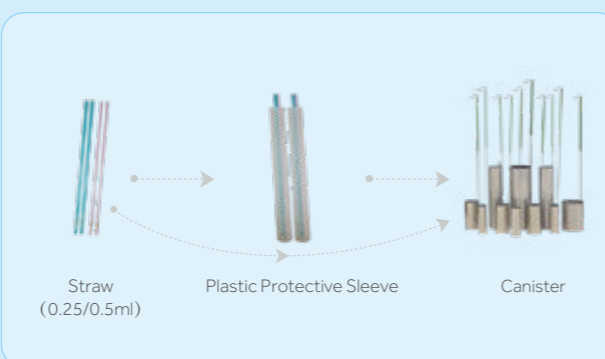
Storage Example of Tall 5ml Cryovials



Blood Bag Storage Example



Straw Storage Example



Small Sized Storage Series (Square Racks)

Widely used within many laboratories, this small-sized storage series features low LN<sub>2</sub> consumption and dual handle design. Stores between 100 and 1100 vials in square racks and cryo boxes.

- 5 Year Vacuum Warranty
- High Thermal Efficiency
- Lightweight
- 10 Litre to 50 Litre Capacity
- Durable
- Secure
- Super-Insulation
- Ideal for Lab Applications



### Key Features

- Heavy duty lockable enclosure offers excellent security
- Strong, lightweight aluminium construction
- Dual handles
- Temperature monitoring available
- Roller bases available
- High thermal efficiency
- 5 year vacuum warranty
- Ultra-low LN<sub>2</sub> evaporation loss

### Product Advantages

#### Low LN<sub>2</sub> Consumption and Maximum Storage Efficiency

Haier Biomedical's Small Sized Storage Series (Square Racks) Liquid Nitrogen Storage System features low LN<sub>2</sub> consumption and small storage capacity for laboratory applications. The lightweight containers have a smaller footprint whilst providing maximum efficiency of cryogenic storage capacity.

#### Advanced Vacuum Technology and Super-insulation Technology

Advanced vacuum and insulation technologies provide ultra-low liquid nitrogen evaporation loss and ensure up to three months cryogenic storage.

#### Five Models Available

Small Sized Storage Series (Square Racks) offers Five models with different capacity from 100, 600, 750, 900 to 1100 standard 2 ml cryovials. All models are supplied with stainless steel racks and cryogenic boxes.

### Accessories



### Technical Parameters

Model	YDS-10-125-F	YDS-30-125-F	YDS-35-125-F	YDS-47-127-T37	YDS-50B-125-F
<b>Maximum Storage Capacity</b>					
No. of Rack	1	6	6	6	6
1.2&2 ml Cryovials (25 per box)	100	600	750	1110	900
No. of Boxes in ( Rack)	4	4	5	5	6
<b>Performance</b>					
Volume of LN <sub>2</sub> (L)	10	31.5	35.5	47	50
Static Evaporation* (L/Day)	0.42	0.35	0.36	0.36	0.45
Static Holding Time** (Day)	24	90	97	130	110
<b>Dimensions</b>					
Opening Diameter (mm)	125	125	125	127	125
Height (mm)	625	704	748	718	818
Outside Diameter (mm)	300	462	462	508	462
Empty Weight (kg)	6.3	13	14.5	18.2	17.3
Full Weight (kg)	15.1	38.9	43.2	60.9	62.4
Shipping Weight (kg)	9.6	19.3	21.9	30.7	30.3

\* Static evaporation and static holding time are theoretical values. Actual evaporation and holding time are affected by usage, atmospheric conditions and manufacturing tolerances.  
 \*\* Static Holding Time: the amount of days it takes for all of the LN to evaporate out after container is filled with liquid nitrogen to pre-cool and reach thermal equilibrium and the liquid nitrogen filling rate reaches 100% under standard atmospheric condition.

### Product List

\* All models with F-suffix are supplied with stainless steel racks and cryo boxes.

Model	Product	Model	Description and Accessories
YDS-10-125	Liquid Nitrogen container	YDS-10-125-F	Include 1 square rack with 4 layers and 5*5 cryobox; lockable cap; no PU bag
	Liquid Nitrogen container	YDS-10-125	No canister; no PU bag; no lockable cap; equipped with braces for carrying
	Rack	FTT-25-4	Used for storing 5*5 cryo boxes(2ml), 4 layers in total, with 5*5 cryo boxes included, suitable for YDS-30-125/YDS-10-125
	Canister	TT10H-125	Φ97.120mm single tier canister. No goblet, suitable for YDH-10-125
	Cork (125)	GS-125-180	Suitable for YDS-10-125 YDH-10-125 YDS-50B-125
	Lockable cap	SG-125	Suitable for container with 125mm and 127mm neck opening
YDS-30-125	Liquid Nitrogen container	YDS-30-125-F	Includes 6 racks with 4 layers, 5*5 cryoboxes, lockable cap and PU bag, roller base is optional.
	Liquid Nitrogen container	YDS-30-125	Includes PU bag only, roller base is optional
	Rack	FTT-25-4	Used for storing 5*5 cryo boxes(2ml), 4 layers in total, with 5*5 cryo boxes included, suitable for YDS-30-125/YDS-10-125
	Canister	TT30-125	Φ97.120mm single tier canister. No goblet, suitable for YDS-30-125
	Roller Base	YSC-465-5W	"Suitable for tanks with diameter less than Φ465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	SmartCap	LT-125-370-6H540	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 540mm height. suitable for YDS-20-125/YDS-30-125
	Cork (125)	GS-125-210	Suitable for YDS-30-125, YDS-35-125, YDS-47-127, YDS-35B-125
	Lockable cap	SG-125	Suitable for container with 125mm and 127mm neck opening

Product List

Model	Product	Model	Description and Accessories
YDS-35-125	Liquid Nitrogen container	YDS-35-125-LYS	Includes 6 canisters(Height 276mm), lockable cap and PU bag,roller base is optional
	Liquid Nitrogen container	YDS-35-125-F	Includes 6 racks with 5 layers, 5*5 cryoboxes, lockable cap and PU bag, roller base is optional.
	Liquid Nitrogen container	YDS-35-125	Includes PU bag only, roller base is optional
	Rack	FTT-25-5	Used for storing 5*5 cryo boxes(2ml), 5 layers in total, with 5*5 cryo boxes included, suitable for YDS-35-125
	Canister	TT35-125	Φ97,120mm single tier canister. No goblet, suitable for YDS-35-125
	Canister	TTS35-125	Φ97,276mm double-tier canister, 2 goblets included. Suitable for YDS-35-125
	Roller Base	YSC-465-5W	"Suitable for tanks with diameter less than Φ465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	SmartCap	LT-125-400-6H575	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves and 575mm height. suitable for YDS-25-125/YDS-35-125/YDS-35-125
	Cork (125)	GS-125-210	Suitable for YDS-30-125 YDS-35-125 YDS-47-127 YDS-35B-125
Lockable cap	SG-125	Suitable for container with 125mm and 127mm neck opening	
YDS-47-127	Liquid Nitrogen container	YDS-47-127-T37	Includes 6 canisters(Height 276mm), lockable cap and PU bag,roller base is optional
	Liquid Nitrogen container	YDS-47-127-10TS	Includes 6 racks with 5 layers, 5*5 cryoboxes, lockable cap and PU bag, roller base is optional.
	RoundRack (Y98-37)	YTT-37-5	Includes PU bag only, roller base is optional
	Canister	TTS47-127-10T	Used for storing 5*5 cryo boxes(2ml), 5 layers in total, with 5*5 cryo boxes included, suitable for YDS-35-125
	Roller Base	YSC-525-5W	Φ97,120mm single tier canister. No goblet, suitable for YDS-35-125
	SmartCap	LT-127-370-10H570	Φ97,276mm double-tier canister, 2 goblets included. Suitable for YDS-35-125
	SmartCap	LT-127-400-6H570	"Suitable for tanks with diameter less than Φ465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	Cork (125)	GS-125-210	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves and 575mm height. suitable for YDS-25-125/YDS-35-125/YDS-35-125
	Cork (125)	GS-127-210-10	Suitable for YDS-30-125 YDS-35-125 YDS-47-127 YDS-35B-125
Lockable cap	SG-125	Suitable for container with 125mm and 127mm neck opening	
YDS-50B-125	Liquid Nitrogen container	YDS-50B-125-F	Includes 6 racks with 6 layers, 5*5 cryoboxes, lockable cap and PU bag, roller base is optional.
	Liquid Nitrogen container	YDS-50B-125-LYS	"Includes 6 canisters(Φ97、276mm), lockable cap and PU bag, roller base is optional"
	Liquid Nitrogen container	YDS-50B-125	Includes PU bag only, roller base is optional
	Rack	FTT-25-6	Used for storing 5*5 cryo boxes(2ml), 6 layers in total, with 5*5 cryo boxes included, suitable for YDS-50B-125
	Canister	TT50-125	Φ97,120mm single tier canister. No goblet, suitable for YDS-50B-125
	Canister	TTS50-125	Φ97,276mm double-tier canister, 2 goblets included. Suitable for YDS-50B-125
	Roller Base	YSC-465-5W	"Suitable for tanks with diameter less than Φ465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	SmartCap	LT-125-500-6H670	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves and 670mm height. suitable for YDS-50B-125
	Cork (125)	GS-125-180	Suitable for YDS-10-125、YDH-10-125, YDS-50B-125
Lockable cap	SG-125	Suitable for container with 125mm and 127mm neck opening	

Product Description






SmartCap is a low energy consumption IoT-based module that can monitor liquid nitrogen level and temperature in a liquid nitrogen tank. It is suitable for aluminium alloy liquid nitrogen tanks with opening port size of 50 mm, 80 mm, 125 mm, 216 mm. The built-in high efficiency lithium battery can operate the device for more than two years.

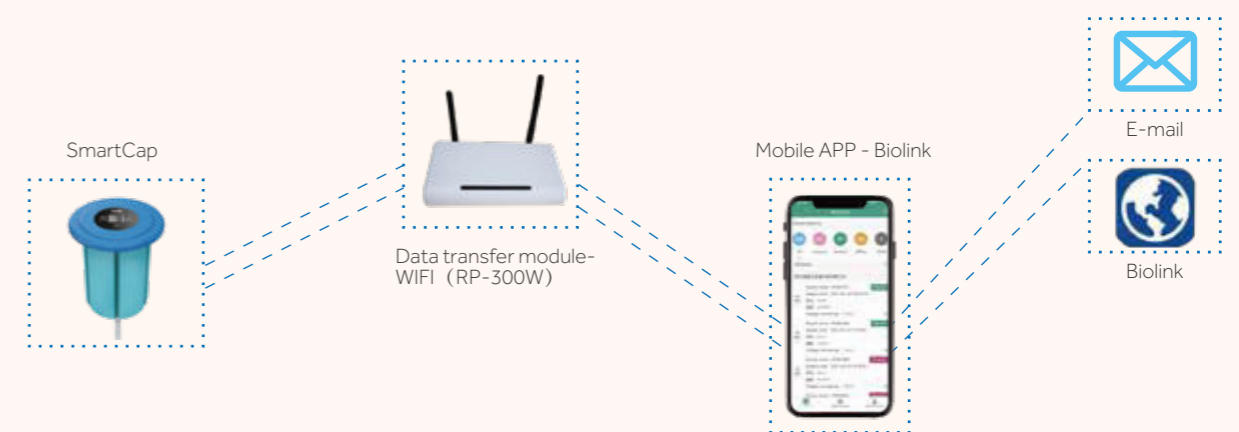


SmartCap

Product Characteristics



-  Independent, high accuracy measuring system for liquid level and temperature
-  Real time display of level and temperature, alarm setting via phone message, email, and wechat
-  Wireless transmission of level and temperature data to a data interrupter
-  Fluid level and temperature data uploaded remotely to cloud terminals for recording, printing, and storage
-  Built-in high efficiency lithium battery for longevity



The SmartCap collects liquid level data and temperature data and transmits the information to cloud data store wirelessly, via 2.4G at a fixed interval every 10 minutes. Users can check real-time data and system alarm situation at any time through the Haier mobile APP-Biolink.

## Product List

Model	Product	Model	Description and Accessories
Smart Cap	SmartCap	LT-50-220-6H360	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 360mm height. data can be transmitted to cloud platform, suitable for YDS-3/YDS-6
	SmartCap	LT-50-280-6H420	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 420mm height. suitable for YDS-10/YDS-15
	SmartCap	LT-50-370-6H540	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 540mm height. suitable for YDS-20/YDS-30
	SmartCap	LT-50-400-6H570	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 570mm height. suitable for YDS-25/YDS-35/YDS-35
	SmartCap	LT-50-450-6H580	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 580mm height. suitable for YDS-25/YDS-35
	SmartCap	LT-50-500-6H640	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 640mm height. suitable for YDS-50
	SmartCap	LT-80-220-6H370	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 370mm height. suitable for YDS-6-80
	SmartCap	LT-80-280-6H430	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 430mm height. suitable for YDS-10-80/YDS-15-80
	SmartCap	LT-80-370-6H530	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 530mm height. suitable for YDS-20-80/YDS-30-80
	SmartCap	LT-80-400-6H580	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 580mm height. suitable for YDS-25-80/YDS-35-80
	SmartCap	LT-80-500-6H640	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 640mm height. suitable for YDS-50-80
	SmartCap	LT-125-280-6H445	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves and 445mm height. suitable for YDS-10-125/YDS-15-125
	SmartCap	LT-125-370-6H540	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 540mm height. suitable for YDS-20-125/YDS-30-125
	SmartCap	LT-125-400-6H575	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves and 575mm height. suitable for YDS-25-125/YDS-35-125/YDS-35-125
	SmartCap	LT-125-500-6H670	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves and 670mm height. suitable for YDS-50B-125
	SmartCap	LT-127-370-10H570	Used for monitoring real time level and temperature for containers with 127mm neck opening, 10 grooves and 570mm height. Suitable for YDS-47-127-10T/MVE-XC47/11-10
	SmartCap	LT-127-400-6H570	Used for monitoring real time level and temperature for containers with 127mm neck opening, 6 grooves and 570mm height. suitable for YDS-47-127-6Y/YDS-47-127/MVE-XC-47/11-6
	SmartCap	LT-216-340-6H530	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 530mm height. suitable for YDS-65-216
	SmartCap	LT-216-340-4H540 D1	Used for monitoring real time level and temperature for containers with 216mm neck opening, 4 grooves and 540mm height. suitable for Thermo-Locator Jr.plus(-CY50925-70THERMO)/MVE Crysosystem 2000
	SmartCap	LT-216-370-6H580	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 580mm height.suitable for YDS-95-216
	SmartCap	LT-216-450-6H660	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 660mm height. suitable for YDS-115-216
	SmartCap	LT-216-570-6H770	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 770mm height.suitable for YDS-145-216
	SmartCap	LT-216-670-6H870	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves and 870mm height.suitable for YDS-175-216
	Data repeater	RP-3002G	SIM card to transfer data through GPRS and WIFI; include the SIM card
	Data transfer module-WIFI	RP-300W	WIFI to transfer data; prior for client not in China
	SMS alarm service cost	SMS alarm service cost	Not recommended
	Cloud platform service cost	Cloud platform service cost	Suitable for SJ CRYO'S service, charged by quantity of container, 1 year/set

## High Capacity Series for Storage or Transport (Round Canisters)

*High Capacity Series for Storage or Transport (Round Canisters) provides two cryopreservation solutions for long-term static storage and transportation of biological samples.*

- Numbered Index Canister Locations
- High Capacity
- High Thermal Efficiency
- 5 Year Vacuum Warranty
- Extended Hold Time
- LN<sub>2</sub> Dispenser
- Round Canisters for Straw Storage
- Lockable
- Roller Bases Available



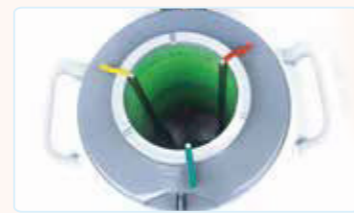
### Key Features

- Strong and lightweight aluminium construction
- Heavy duty lockable enclosure offers excellent security
- Numbered index location points for canisters
- Straw storage
- LN<sub>2</sub> dispense pump available
- Roller bases available
- High thermal efficiency
- 5 year vacuum warranty
- Ultra-low evaporation loss

### Product Advantages

Narrow neck design and excellent thermal conductivity reduces evaporation loss of liquid nitrogen to extend storage times.

Large-capacity models have wider necks for easy access to biological samples.



Long-term cryopreservation models have narrower necks with less heat intrusion.

### Technical Parameters

	Model	YDS-2-30	YDS-2-35	YDS-3	YDS-6	YDS-10	YDS-10-80
Maximum Capacity	No. of Canister	3 (3)	3 (3)	6 (0)	6 (0)	6 (0)	6 (0)
	No. of Straws (Single Layer) (0.5ml each canister)	90	165	792	792	792	2244
	No. of Straws (Single Layer) (0.25ml each canister)	204	330	1788	1788	1788	5022
	No. of Straws (Double Layer) (0.5ml each canister)	—	—	—	—	—	—
	No. of Straws (Double Layer) (0.25ml each canister)	—	—	—	—	—	—
Performance	Volume of LN <sub>2</sub> (L)	2	2	3	6	10	10
	Static Evaporation* (L/Day)	0.07	0.08	0.12	0.12	0.12	0.21
	Static Holding Time** (Day)	28	24	26	52	86	48
Dimensions	Opening Diameter (mm)	30	35	50	50	50	80
	Height (mm)	399	428	435	482	552	557
	Outside Diameter (mm)	223	204	223	300	300	300
	Canister Outside Diameter (mm)	19	25	38	38	38	63
	Outside Height (mm)	120	120	120	120	120	120
	Empty Weight (kg)	2.8	2.6	3.1	4.8	6.1	6.2
	Full Weight (kg)	4.5	4.4	6	9.9	14.5	14.7
	Shipping Weight (kg)	5.1	4.9	5.8	8	9	9.3

	Model	YDS-10-125	YDS-13	YDS-15	YDS-20	YDS-30
Maximum Capacity	No. of Canister	1 (0)	6 (0)	6 (0)	6 (0)	6 (0)
	No. of Straws (Single Layer) (0.5ml each canister)	854	—	792	792	792
	No. of Straws (Single Layer) (0.25ml each canister)	1940	—	1788	1788	1788
	No. of Straws (Double Layer) (0.5ml each canister)	—	1284	—	1284	1284
	No. of Straws (Double Layer) (0.25ml each canister)	—	2832	—	2832	2832
Performance	Volume of LN <sub>2</sub> (L)	10	13	15	20	30
	Static Evaporation* (L/Day)	0.43	0.12	0.11	0.12	0.12
	Static Holding Time** (Day)	24	109	134	168	254
Dimensions	Opening Diameter (mm)	125	50	50	50	50
	Height (mm)	625	623	591	672	705
	Outside Diameter (mm)	300	310	394	394	462
	Canister Outside Diameter (mm)	97	38	38	38	38
	Outside Height (mm)	120	276	120	120/276	120/276
	Empty Weight (kg)	6.3	6.3	8.5	9.5	12.9
	Full Weight (kg)	15.1	17.3	20.5	28.1	36.6
	Shipping Weight (kg)	8.6	11	13	15	18

	Model	YDS-30-80	YDS-30-125	YDS-35	YDS-35-80	YDS-35-125	YDS-47-127
Maximum Capacity	No. of Canister	6 (0)	6 (0)	6 (0)	6 (0)	6 (0)	10 (10)
	No. of Straws (Single Layer) (0.5ml each canister)	2244	5124	792	-	-	-
	No. of Straws (Single Layer) (0.25ml each canister)	5022	11640	1788	-	-	-
	No. of Straws (Double Layer) (0.5ml each canister)	3624	—	1284	3624	9048	8200
	No. of Straws (Double Layer) (0.25ml each canister)	8460	—	2832	8460	20760	16400
Performance	Volume of LN <sub>2</sub> (L)	30	30	35	35	35	47
	Static Evaporation* (L/Day)	0.21	0.35	0.12	0.22	0.37	0.36
	Static Holding Time** (Day)	147	90	286	159	97	130
Dimensions	Opening Diameter (mm)	80	125	50	80	125	127
	Height (mm)	709	704	749	753	748	718
	Outside Diameter (mm)	462	462	462	462	462	508
	Canister Outside Diameter (mm)	63	97	38	63	97	72
	Outside Height (mm)	120/276	120	120/276	276	276	276
	Empty Weight (kg)	13	13	14.2	14.5	14.6	18.2
	Full Weight (kg)	37	38.9	42.7	42.9	43.2	54
	Shipping Weight (kg)	18.3	19.3	20	20.7	22	28

Model		YDS-20B	YDS-30B	YDS-35B
Maximum Capacity	No. of Canister	6 (0)	6 (0)	6 (0)
	No. of Straws (Single Layer) (0.5ml each canister)	792	792	792
	No. of Straws (Single Layer) (0.25ml each canister)	1788	1788	1788
	No. of Straws (Double Layer) (0.5ml each canister)	1284	1284	1284
	No. of Straws (Double Layer) (0.25ml each canister)	2832	2832	2832
Performance	Volume of LN <sub>2</sub> (L)	20	30	35
	Static Evaporation* (L/Day)	0.2	0.2	0.2
	Static Holding Time** (Day)	101	159	179
Dimensions	Opening Diameter (mm)	50	50	50
	Height (mm)	672	705	749
	Outside Diameter (mm)	394	462	462
	Canister Outside Diameter (mm)	38	38	38
	Outside Height (mm)	120/276	120/276	120/276
	Empty Weight (kg)	9.5	12.9	14.2
	Full Weight (kg)	27.9	37.1	42.8
Shipping Weight (kg)	15.1	18.3	20.1	

Model		YDS-35B-80	YDS-35B-125	YDS-50B	YDS-50B-125
Maximum Capacity	No. of Canister	6 (0)	6 (0)	6 (0)	6 (0)
	No. of Straws (Single Layer) (0.5ml each canister)	2244	5124	792	5124
	No. of Straws (Single Layer) (0.25ml each canister)	5022	11640	1788	11640
	No. of Straws (Double Layer) (0.5ml each canister)	3624	9048	1284	9048
	No. of Straws (Double Layer) (0.25ml each canister)	8460	20760	2832	20760
Performance	Volume of LN <sub>2</sub> (L)	35	35	50	50
	Static Evaporation* (L/Day)	0.3	0.41	0.24	0.45
	Duration of Normal Operation** (Day)	119	86	213	110
Dimensions	Opening Diameter (mm)	80	125	50	125
	Height (mm)	753	748	810	817
	Outside Diameter (mm)	462	462	462	462
	Canister Outside Diameter (mm)	63	97	38	97
	Outside Height (mm)	120/276	120/276	120/276	120/276
	Empty Weight (kg)	14.5	14.6	17.2	17.3
	Full Weight (kg)	43	43.5	60.3	62
Shipping Weight (kg)	20.7	22	24	25.4	

† A(B): A for maximum number of canisters, B for number of canisters in standard configuration

\* Static evaporation and static holding time are theoretical values. Actual evaporation and holding time are affected by usage, atmospheric conditions and manufacturing tolerances.

\*\* Static Holding Time: the amount of days it takes for all of the LN to evaporate out after container is filled with liquid nitrogen to pre-cool and reach thermal equilibrium and the liquid nitrogen filling rate reaches 100% under standard atmospheric condition.

### Vials Cane Specification

Canister	Height 120mm, Diameter 38mm (50mm neck)		
Vials	Canes/Canister	Vials/Cane	Vials/Canister
0.5ml	4	3	12
1.5ml	4	3	12
2ml	4	3	12
3ml	4	3	12
5ml	4	1	4

Canister	Height 120mm, Diameter 63mm (80mm neck)		
Vials	Canes/Canister	Vials/Cane	Vials/Canister
0.5ml	16	3	48
1.5ml	16	3	48
2ml	16	3	48
3ml	16	3	48
5ml	16	1	16

Canister	Height 120mm, Diameter 72mm (127mm neck)		
Vials	Canes/Canister	Vials/Cane	Vials/Canister
0.5ml	21	3	63
1.5ml	21	3	63
2ml	21	3	63
3ml	21	3	63
5ml	21	1	21

Canister	Height 120mm, Diameter 97mm (125mm neck)		
Vials	Canes/Canister	Vials/Cane	Vials/Canister
0.5ml	—	—	—
1.5ml	40	3	120
2ml	40	3	120
3ml	40	3	120
5ml	40	1	40

Canister	Height 120mm, Diameter 104mm (127mm neck)		
Vials	Canes/Canister	Vials/Cane	Vials/Canister
0.5ml	—	—	—
1.5ml	46	3	138
2ml	46	3	138
3ml	46	3	138
5ml	46	1	46

Canister	Height 276mm, Diameter 38mm (50mm neck)		
Vials	Canes/Canister	Vials/Cane	Vials/Canister
0.5ml	4	6	24
1.5ml	4	6	24
2ml	4	6	24
3ml	4	6	24
5ml	4	3	12

Canister	Height 276mm, Diameter 63mm (80mm neck)		
Vials	Canes/Canister	Vials/Cane	Vials/Canister
0.5ml	16	6	96
1.5ml	16	6	96
2ml	16	6	96
3ml	16	6	96
5ml	16	3	48

Canister	Height 276mm, Diameter 72mm (127mm neck)		
Vials	Canes/Canister	Vials/Cane	Vials/Canister
0.5ml	21	6	126
1.5ml	21	6	126
2ml	21	6	126
3ml	21	6	126
5ml	21	3	63

Canister	Height 276mm, Diameter 97mm (125mm neck)		
Vials	Canes/Canister	Vials/Cane	Vials/Canister
0.5ml	—	—	—
1.5ml	40	6	240
2ml	40	6	240
3ml	40	6	240
5ml	40	3	120

Canister	Height 276mm, Diameter 104mm (127mm neck)		
Vials	Canes/Canister	Vials/Cane	Vials/Canister
0.5ml	—	—	—
1.5ml	46	6	276
2ml	46	6	276
3ml	46	6	276
5ml	46	3	138

### Accessories



## Product List

Model	Product	Model	Description and Accessories
YDS-2-30	Liquid Nitrogen container	YDS-2-30-YS	Includes 3 canisters, lockable cap and PU bag
	Canister	TT2-30	Φ19, 120mm single tier canister. No goblet, suitable for YDS-2-30
	Cork (30)	GS-30-125	Suitable for YDS-2-30
	Lockable cap	SG-30	Suitable for container with 30mm neck opening, suitable for YDS-2-30
YDS-2-35	Liquid Nitrogen container	YDS-2-35-YS	Includes 3 canisters, lockable cap and Braces for carrying, no PU bag
	Canister	TT2-35	Φ25, 120mm single tier canister. No goblet, suitable for YDS-2-35
	Cork (30)	GS-35-125	Suitable for YDS-2-35
	Lockable cap	SG-35	Suitable for container with 35mm neck opening, suitable for YDS-2-35
YDS-3	Liquid Nitrogen container	YDS-3-YS	Includes 6 canisters(Height 120mm), lockable cap and PU bag
	Liquid Nitrogen container	YDS-3	Includes PU bag only
	Canister	TT3-50	Φ38, 120mm single tier canister. No goblet, suitable for YDS-3
	Cork (50)	GS-50-180	Suitable for YDS-3、YDH-3、YDS-6、YDS-10、YDS-13、YDS-25、YDS-50B
	Lockable cap	SG-50	Suitable for container with 50mm neck opening
YDS-6	Liquid Nitrogen container	YDS-6-YS	Includes 6 canisters(Height 120mm), lockable cap and PU bag
	Liquid Nitrogen container	YDS-6	Includes PU bag only
	Canister	TT6-50	Φ38, 120mm single tier canister. No goblet, suitable for YDS-6
	Cork (50)	GS-50-180	Suitable for YDS-3、YDH-3、YDS-6、YDS-10、YDS-13、YDS-25、YDS-50B
	Lockable cap	SG-50	Suitable for container with 50mm neck opening
YDS-10	Liquid Nitrogen container	YDS-10-YS	Includes 6 canisters(Height 120mm), lockable cap and PU bag
	Liquid Nitrogen container	YDS-10	Includes PU bag only
	Canister	TT10-50	Φ38, 120mm single tier canister. No goblet, suitable for YDS-10
	Cork (50)	GS-50-180	Suitable for YDS-3、YDH-3、YDS-6、YDS-10、YDS-13、YDS-25、YDS-50B
	Lockable cap	SG-50	Suitable for container with 50mm neck opening
YDS-10-80	Liquid Nitrogen container	YDS-10-80-YS	Includes 6 canisters(Height 120mm), lockable cap and PU bag
	Liquid Nitrogen container	YDS-10-80	Includes PU bag only
	Canister	TT10-80	Φ63, 120mm single tier canister. No goblet, suitable for YDS-10-80
	Cork (80)	GS-80-180	Suitable for YDH-6-80、YDS-10-80
	Lockable cap	SG-80	Suitable for container with 80mm neck opening
YDS-13	Liquid Nitrogen container	YDS-13-LYS	Includes 6 canisters(Height 276mm), lockable cap and PU bag
	Liquid Nitrogen container	YDS-13	Includes PU bag only
	Canister	TTS13-50	Φ38, 276mm double-tier canister, 2 goblets included. Suitable for YDS-13
	Cork (50)	GS-50-180	Suitable for YDS-3、YDH-3、YDS-6、YDS-10、YDS-13、YDS-25、YDS-50B
	Lockable cap	SG-50	Suitable for container with 50mm neck opening

## Product List

Model	Product	Model	Description and Accessories
YDS-15	Liquid Nitrogen container	YDS-15-YS	Includes 6 canisters(Height 120mm), lockable cap and PU bag
	Liquid Nitrogen container	YDS-15	Includes PU bag only
	Canister	TT15-50	Φ38, 120mm single tier canister. No goblet, suitable for YDS-15
	Cork (50)	GS-50-210	Suitable for YDS-15、YDS-20、YDS-30、YDS-35、YDS-20B、YDS-30B、YDS-35B
	Lockable cap	SG-50	Suitable for container with 50mm neck opening
YDS-20	Liquid Nitrogen container	YDS-20-LYS	Includes 6 canisters(Height 276mm), lockable cap and PU bag
	Liquid Nitrogen container	YDS-20-YS	Includes 6 canisters(Height 120mm), lockable cap and PU bag
	Liquid Nitrogen container	YDS-20	Includes PU bag only
	Canister	TT30-50	Φ38, 120mm single tier canister. No goblet, suitable for YDS-20、YDS-30
	Canister	TTS30-50	Φ38, 276mm double-tier canister, 2 goblets included. Suitable for YDS-20/YDS-30
	Cork (50)	GS-50-210	Suitable for YDS-15、YDS-20、YDS-30、YDS-35、YDS-20B、YDS-30B、YDS-35B
	Lockable cap	SG-50	Suitable for container with 50mm neck opening
YDS-30	Liquid Nitrogen container	YDS-30-LYS	Includes 6 canisters(Height 276mm), lockable cap and PU bag, roller base is optional
	Liquid Nitrogen container	YDS-30-YS	Includes 6 canisters(Height 120mm), lockable cap and PU bag, roller base is optional
	Liquid Nitrogen container	YDS-30	Includes PU bag only, roller base is optional
	Canister	TT30-50	Φ38, 120mm single tier canister. No goblet, suitable for YDS-20、YDS-30
	Canister	TTS30-50	Φ38, 276mm double-tier canister, 2 goblets included. Suitable for YDS-20/YDS-30
	Roller Base	YSC-465-5W	"Suitable for tanks with diameter less than Φ465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	SmartCap	LT-50-370-6H540	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 540mm height. suitable for YDS-20/YDS-30
	Cork (50)	GS-50-210	Suitable for YDS-15、YDS-20、YDS-30、YDS-35、YDS-20B、YDS-30B、YDS-35B
	Lockable cap	SG-50	Suitable for container with 50mm neck opening
YDS-30-80	Liquid Nitrogen container	YDS-30-80-LYS	Includes 6 canisters(Height 276mm), lockable cap and PU bag, roller base is optional
	Liquid Nitrogen container	YDS-30-80-YS	Includes 6 canisters(Height 120mm), lockable cap and PU bag, roller base is optional
	Liquid Nitrogen container	YDS-30-80	Includes PU bag only, roller base is optional
	Canister	TT30-80	Φ63, 120mm single tier canister. No goblet, suitable for YDS-30-80
	Canister	TTS30-80	Φ63, 276mm double-tier canister, 2 goblets included. Suitable for YDS-30-80
	Roller Base	YSC-465-5W	"Suitable for tanks with diameter less than Φ465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	SmartCap	LT-80-370-6H530	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 530mm height. suitable for YDS-20-80/YDS-30-80
	Cork (80)	GS-80-210	Suitable for YDS-30-80、YDS-35-80、YDS-35B-80
	Lockable cap	SG-80	Suitable for container with 80mm neck opening

## Product List

Model	Product	Model	Description and Accessories
YDS-35	Liquid Nitrogen container	YDS-35-LYS	Includes 6 canisters(Height 276mm), lockable cap and PU bag,roller base is optional
	Liquid Nitrogen container	YDS-35-YS	Includes 6 canisters(Height 120mm), lockable cap and PU bag, roller base is optional
	Liquid Nitrogen container	YDS-35	Includes PU bag only, roller base is optional
	Canister	TT35-50	Φ 38,120mm single tier canister, No goblet, suitable for YDS-25/YDS-35
	Canister	TTS35-50	Φ 38,276mm double-tier canister, 2 goblets included. Suitable for YDS-35
	Roller Base	YSC-465-5W	"Suitable for tanks with diameter less than Φ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	SmartCap	LT-50-450-6H580	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 580mm height. suitable for YDS-25/YDS-35
	Cork (50)	GS-50-210	Suitable for YDS-15、 YDS-20、 YDS-30、 YDS-35、 YDS-20B、 YDS-30B、 YDS-35B
	Lockable cap	SG-50	Suitable for container with 50mm neck opening
YDS-35-80	Liquid Nitrogen container	YDS-35-80-LYS	Includes 6 canisters(Height 276mm), lockable cap and PU bag,roller base is optional
	Liquid Nitrogen container	YDS-35-80	Includes PU bag only, roller base is optional
	Canister	TT35-80	Φ 63,120mm single tier canister, No goblet, suitable for YDS-35-80
	Canister	TTS35-80	Φ 63,276mm double-tier canister, 2 goblets included. Suitable for YDS-35-80
	Roller Base	YSC-465-5W	"Suitable for tanks with diameter less than Φ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	SmartCap	LT-80-400-6H580	Used for monitoring real time level and temperature for containers with 80mm neck opening, 6 grooves and 580mm height. suitable for YDS-25-80/YDS-35-80
	Cork (80)	GS-80-210	Suitable for YDS-30-80、 YDS-35-80、 YDS-35B-80
Lockable cap	SG-80	Suitable for container with 80mm neck opening	
YDS-20B	Liquid Nitrogen container	YDS-20B	Includes PU bag only.
	Canister	TT30-50	Φ 38,120mm single tier canister, No goblet, suitable for YDS-20、 YDS-30
	Canister	TTS30-50	Φ 38,276mm double-tier canister, 2 goblets included. Suitable for YDS-20/YDS-30
	Cork (50)	GS-50-210	Suitable for YDS-15、 YDS-20、 YDS-30、 YDS-35、 YDS-20B、 YDS-30B、 YDS-35B
	Lockable cap	SG-50	Suitable for container with 50mm neck opening
YDS-30B	Liquid Nitrogen container	YDS-30B	Includes PU bag only, roller base is optional
	Canister	TT30-50	Φ 38,120mm single tier canister, No goblet, suitable for YDS-20、 YDS-30
	Canister	TTS30-50	Φ 38,276mm double-tier canister, 2 goblets included. Suitable for YDS-20/YDS-30
	Roller Base	YSC-465-5W	"Suitable for tanks with diameter less than Φ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	Cork (50)	GS-50-210	Suitable for YDS-15、 YDS-20、 YDS-30、 YDS-35、 YDS-20B、 YDS-30B、 YDS-35B
	Lockable cap	SG-50	Suitable for container with 50mm neck opening

## Product List

Model	Product	Model	Description and Accessories
YDS-35B	Liquid Nitrogen container	YDS-35B	Includes PU bag only, roller base is optional
	Canister	TT35-50	Φ 38,120mm single tier canister, No goblet, suitable for YDS-25/YDS-35
	Canister	TTS35-50	Φ 38,276mm double-tier canister, 2 goblets included. Suitable for YDS-35
	Roller Base	YSC-465-5W	"Suitable for tanks with diameter less than Φ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	Cork (50)	GS-50-210	Suitable for YDS-15、 YDS-20、 YDS-30、 YDS-35、 YDS-20B、 YDS-30B、 YDS-35B
	Lockable cap	SG-50	Suitable for container with 50mm neck opening
	YDS-35B-80	Liquid Nitrogen container	YDS-35B-80
Canister		TT35-80	Φ 63,120mm single tier canister, No goblet, suitable for YDS-35-80
Canister		TTS35-80	Φ 63,276mm double-tier canister, 2 goblets included. Suitable for YDS-35-80
Roller Base		YSC-465-5W	"Suitable for tanks with diameter less than Φ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
Cork (80)		GS-80-210	Suitable for YDS-30-80、 YDS-35-80、 YDS-35B-80
Lockable cap	SG-80	Suitable for container with 80mm neck opening	
YDS-35B-125	Liquid Nitrogen container	YDS-35B-125	Includes PU bag only.
	Canister	TT35-125	Φ 97,120mm single tier canister, No goblet, suitable for YDS-35-125
	Canister	TTS35-125	Φ 97,276mm double-tier canister, 2 goblets included. Suitable for YDS-35-125
	Rack	FTT-25-5	Used for storing 5*5 cryo boxes(2ml), 5 layers in total, with 5*5 cryo boxes included, suitable for YDS-35-125
	Roller Base	YSC-465-5W	"Suitable for tanks with diameter less than Φ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	Cork (125)	GS-125-210	Suitable for YDS-30-125、 YDS-35-125、 YDS-47-127、 YDS-35B-125
	Lockable cap	SG-125	Suitable for container with 125mm and 127mm neck opening
YDS-50B	Liquid Nitrogen container	YDS-50B	Includes PU bag only, roller base is optional
	Canister	TT50-50	Φ 38,120mm single tier canister, No goblet, suitable for YDS-50
	Canister	TTS50-50	Φ 38,276mm double-tier canister, 2 goblets included. Suitable for YDS-50
	Roller Base	YSC-465-5W	"Suitable for tanks with diameter less than Φ 465. Can be used for 30L, 35L and 50L tank, equipped with 5 universal wheels."
	SmartCap	LT-50-500-6H640	Used for monitoring real time level and temperature for containers with 50mm neck opening, 6 grooves and 640mm height. suitable for YDS-50
	Cork (50)	GS-50-180	Suitable for YDS-3、 YDH-3、 YDS-6、 YDS-10、 YDS-13、 YDS-25、 YDS-50B
	Lockable cap	SG-50	Suitable for container with 50mm neck opening

## Dryshipper Series for Transportation (Round Canisters)

*Dryshipper Series for Transportation (Round Canisters) is designed for safe sample transportation under cryogenic conditions (vapour phase storage, temperature under  $-190^{\circ}\text{C}$ ). Since the risk of  $\text{LN}_2$  release is avoided, it is suitable for air transportation of samples.*

- Rugged and Durable
- 3 Year Vacuum Warranty
- Cryo Absorbant
- Vapour Phase Storage
- Secure
- No  $\text{LN}_2$  Spillage



## Key Features

- Straw and cryovial storage options
- Rugged and durable aluminium construction
- Designed to ensure no  $\text{LN}_2$  spillage
- Vapour phase cryogenic storage
- Faster  $\text{LN}_2$  fill times
- Lockable lids
- 3 year vacuum warranty

## Product Advantages

### Liquid Nitrogen Adsorption

Adsorbent materials are used to absorb and retain  $\text{LN}_2$  for safe transport. No spillover of  $\text{LN}_2$  can occur even when the tank is capsized.

### Stainless Steel Mesh

Special stainless steel mesh divides storage space and  $\text{LN}_2$  absorbents to prevent absorbent materials from contaminating the samples.

### Complete Accessories Set

All models are offered a variety of stainless steel canisters and polycarbonate cryogenic boxes. Locking cover is optional.



## Accessories

Plastic Cryo Box



Canister+Rack



Rack(vertical type)



## Technical Parameters

Model	YDH-3-YS	YDH-6-80-YS	YDH-10-125-F	YDH-15-216-F	YDH-25-216-F
<b>Maximum Storage Capacity</b>					
No. of Canister	1	1	1	1	1
No. of Straws (0.5ml / EA)	132	374	—	—	—
No. of Straws (0.25ml / EA)	298	837	—	—	—
No. of 2.0 ml Cryovials	—	—	100	300	500
No. of Boxes in (2ml per holder)	—	—	4	3	5
<b>Performance</b>					
Volume of LN <sub>2</sub> (L)	3	6	10	15	25
Absorbable Volume of LN <sub>2</sub> (L)	1.3	2.9	3.4	6	9
Static Evaporation* (L/Day)	0.16	0.2	0.43	1.5	0.89
Liquid Phase Static Holding Time**(Day)	20	37	23	10	29
Vapour Phase Static Holding Time*** (Day)	8	14	8	4	10
<b>Dimensions</b>					
Opening Diameter (mm)	50	80	125	216	216
Height (mm)	435	487	625	540	716
Outside Diameter (mm)	223	300	300	394	394
Canister Outside Diameter (mm)	38	63	97	—	—
Outside Height (mm)	120	120	120	—	—
Empty Weight (kg)	3.2	6.5	8.9	13	15
Full Weight (kg)	4.7	8.9	12.5	17.8	23
Shipping Weight (kg)	5.5	7.7	9.7	15.2	20.5

\* Static evaporation and static holding time are theoretical values. Actual evaporation and holding time are affected by usage, atmospheric conditions and manufacturing tolerances.

\*\* Liquid Phase Static Holding Time: the amount of days it takes for all of the LN to evaporate out after container is filled with liquid nitrogen to pre-cool and reach thermal equilibrium and the liquid nitrogen filling rate reaches 100% under standard atmospheric condition.

\*\*\* Vapour Phase Static Holding Time: the amount of days it takes for all of the LN to evaporate out after pouring liquid nitrogen into container to making absorbent materials fully absorb LN under standard atmospheric condition.

## Product List

Model	Product	Model	Description and Accessories
YDH-3	Dry Shipper	YDH-3-YS	Includes 1 canister(Height 120mm), lockable cap and PU bag
	Canister	TT3H-50	Φ38,120mm single tier canister, No goblet, suitable for YDH-3
	Cork (50)	GS-50-180	Suitable for YDS-3、YDH-3、YDS-6、YDS-10、YDS-13、YDS-25、YDS-50B
	Lockable cap	SG-50	Suitable for container with 50mm neck opening
YDH-6-80	Dry Shipper	YDH-6-80-YS	Includes 1 canister(Height 120mm), lockable cap and PU bag
	Canister	TT6H-80	Φ63,120mm single tier canister, No goblet, suitable for YDH-6-80
	Cork (80)	GS-80-180	Suitable for YDH-6-80、YDS-10-80
	Lockable cap	SG-80	Suitable for container with 80mm neck opening
YDH-10-125	Dry Shipper	YDH-10-125-F	Includes 1 rack(4 layers),5*5 cryoboxes, lockable cap, no PU bag
	Dry Shipper	YDH-10-125S	Includes lockable cap, no Rack, no PU bag
	Rack	FTT-25-4	Used for storing 5*5 cryo boxes(2ml), 4 layers in total, with 5*5 cryo boxes included, suitable for YDS-30-125/YDS-10-125
	Canister	TTH10-125	Φ97,120mm single tier canister, No goblet, suitable for YDH-10-125
	Cork (125)	GS-125-180	Suitable for YDS-10-125、YDH-10-125、YDS-50B-125
	Lockable cap	SG-125	Suitable for container with 125mm and 127mm neck opening
	Protective case X	HKX-300/660	Suitable for YDH-10-125
YDH-15-216	Dry Shipper	YDH-15-216-F	Includes 1 rack(5 layers),9*9 cryoboxes and lockable cap, no pu bag
	Rack(vertical type)	FDCJ-81-3	Used for storing 9*9 cryo boxes(2ml), 3 layers in total. With 9*9 cryoboxes included. Suitable for YDH-15-216
	Cork (216-2)	GS-216-150 (L)	Suitable for YDH-15-216
	Lockable cap	SG-216	Suitable for container with 216mm neck opening
YDH-25-216	Dry Shipper	YDH-25-216-F	Includes 1 rack(5 layers),9*9 cryoboxes and lockable cap, no pu bag
	Rack(vertical type)	FDCJ-81-5	Used for storing 9*9 cryo boxes(2ml), 5 layers in total, with 9*9 cryoboxes included.suitable for YDH-25-216/YDS-95-216
	Cork (216)	GS-216-220-7	Suitable for YDS-65-216、YDS-95-216、YDS-115-216、YDS-145-216、YDS-175-216、YDH-15-216、YDH-25-216
	Lockable cap	SG-216	Suitable for container with 216mm neck opening

Self-pressurized Series for LN<sub>2</sub> Storage and Supply

Liquid Nitrogen Supplement Series for LN<sub>2</sub> Storage and Supply incorporates the latest innovation, its unique design utilises the pressure generated from the vapourisation of a small amount liquid nitrogen to discharge LN<sub>2</sub> into other containers. Storage capacities range from 5 to 500 litres.

- 5 Year Vacuum Warranty
- Decant Valves
- Liquid Storage
- Stainless Steel Construction
- Pressure Raising
- Integral Safety Mechanisms



Key Features

- All models are equipped with safety valves
- All welded stainless steel construction
- Rotary ring construction
- Labelled valves for easy identification
- 5 year vacuum warranty

Product Advantages

Stainless Steel Structure

Stainless steel structure can withstand the most demanding environment and ensure long-lasting security. It also provides reduced evaporation loss rate, compared with conventional welding insulation tanks.

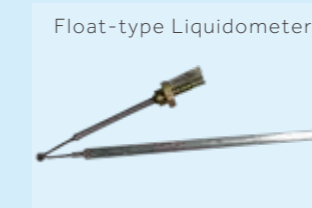
Variety of accessories

Each Self-pressurized Series for LN<sub>2</sub> Storage and Supply model is equipped with a pressure valve, a drain valve, a relief valve, and a pressure gauge.

Casters

All models have four casters for better mobility and convenient use in different occasions.

Accessories



Additional Series for Liquid Nitrogen Tank (Comparison between Standard Series and K Series)

Standard series



K series



New Functions of K Series

Digital Display Level Gauge

DLZ-300  
Digital display of fluid level  
Remote data transmission  
function



Large diameter vent valve

Rapid relief of  
over pressure  
Protection of  
safety valve



Pressure stabilizing valve

Stabilize fluid pressure  
during auto filling



## Technical Parameters

Model	YDZ-5	YDZ-15	YDZ-30	YDZ-50	YDZ-100 YDZ-100K
<b>Performance</b>					
Volume of LN <sub>2</sub> (L)	5	15	30	50	100
Static Evaporation (L/Day)	0.15	0.38	0.75	1	1.3
LN <sub>2</sub> Output (L/Min)	2	2	3	3	4
<b>Dimensions</b>					
Height (mm)	510	750	879	991	1185
Outside Diameter (mm)	329	404	454	506	606
Empty Weight (kg)	15	23	32	54	75
Full Weight (kg)	19.1	35.3	56.6	95.0	157.0
Shipping Weight (kg)	28	34	47	63	98
Pressure Parameters (MPa)	1. Standard working pressure 0.05, 2. Maximum working pressure 0.09, 3. First stage safety valve relief pressure 0.099, 4. Second stage safety valve release pressure 0.15, 5. Pressure gauge range 0-0.25				

Model	YDZ-150	YDZ-200 YDZ-200K	YDZ-240K	YDZ-300 YDZ-300K	YDZ-500 YDZ-500K
<b>Performance</b>					
LN <sub>2</sub> Capacity (L)	150	200	240	300	500
Static Evaporation (L/Day)	1.95	2.4	2.9	3.3	5.5
LN <sub>2</sub> Output (L/Min)	6	8	8	8	10
<b>Dimensions</b>					
Height (mm)	1188	1265	1350	1459	1576
Outside Diameter (mm)	706	758	758	857	1008
Empty Weight (kg)	102	130	148	202	255
Full Weight (kg)	225	296	350	448	665
Shipping Weight (kg)	132	164	177	232	324
Pressure Parameters (MPa)	1. Standard working pressure 0.05, 2. Maximum working pressure 0.09, 3. First stage safety valve relief pressure 0.099, 4. Second stage safety valve release pressure 0.15, 5. Pressure gauge range 0-0.25, 6. Rupture disc burst pressure 0.47.				

\* Static evaporation and static holding time are theoretical values. Actual evaporation and holding time are affected by usage, atmospheric conditions and manufacturing tolerances.

## Product List

Model	Product	Model	Description and Accessories
YDZ	Self-pressurized Filling tank	YDZ-5	Includes single-layer transfusion hoses (ZG-DN10/1.5)
	Self-pressurized Filling tank	YDZ-15	Includes single-layer transfusion hoses (ZG-DN10/1.5)
	Self-pressurized Filling tank	YDZ-30	Includes single-layer transfusion hoses (ZG-DN10/1.5);
	Self-pressurized Filling tank	YDZ-50	Includes single-layer transfusion hoses (ZG-DN10/1.5);
	Self-pressurized Filling tank	YDZ-100	Includes single-layer transfusion hoses (ZG-DN10/1.5) and float-type liquidometer
	Self-pressurized Filling tank	YDZ-150	Includes single-layer transfusion hoses (ZG-DN10/1.5) and float-type liquidometer
	Self-pressurized Filling tank	YDZ-200	Includes single-layer transfusion hoses (ZG-DN10/1.5) and float-type liquidometer
	Self-pressurized Filling tank	YDZ-300	Includes single-layer transfusion hoses (ZG-DN10/1.5) and float-type liquidometer
	Self-pressurized Filling tank	YDZ-500	Includes single-layer transfusion hoses (ZG-DN10/1.5) and float-type liquidometer
	Self-pressurized Filling tank	YDZ-100K	Includes single-layer transfusion hoses (ZG-DN10/1.5), Digital display level gauge (DLZ-300) and pressure stabilizer. can be used for auto filling
	Self-pressurized Filling tank	YDZ-200K	Includes single-layer transfusion hoses (ZG-DN10/1.5), Digital display level gauge (DLZ-300) and pressure stabilizer. can be used for auto filling
	Self-pressurized Filling tank	YDZ-240K	Includes single-layer transfusion hoses (ZG-DN10/1.5), Digital display level gauge (DLZ-300) and pressure stabilizer. can be used for auto filling
	Self-pressurized Filling tank	YDZ-300K	Includes single-layer transfusion hoses (ZG-DN10/1.5), Digital display level gauge (DLZ-300) and pressure stabilizer. can be used for auto filling
	Self-pressurized Filling tank	YDZ-320K	Includes single-layer transfusion hoses (ZG-DN10/1.5), Digital display level gauge (DLZ-300) and pressure stabilizer. can be used for auto filling
	Self-pressurized Filling tank	YDZ-500K	Includes single-layer transfusion hoses (ZG-DN10/1.5), Digital display level gauge (DLZ-300) and pressure stabilizer. can be used for auto filling
	Digital display level gauge	DLZ-300(YDZ-240K)	Digital display real time liquid nitrogen level of self pressurized tank, low power consumption battery, wireless transmission (YDZ-240K)
	Digital display level gauge	DLZ-300(YDZ-320K)	Digital display real time liquid nitrogen level of self pressurized tank, low power consumption battery, wireless transmission (YDZ-320K)
	Digital display level gauge	DLZ-300(YDZ-500K)	Digital display real time liquid nitrogen level of self pressurized tank, low power consumption battery, wireless transmission (YDZ-500K)
Float-type Liquidometer	FZ-100	Suitable for YDZ-100	
Float-type Liquidometer	FZ-150	Suitable for YDZ-150	
Float-type Liquidometer	FZ-200	Suitable for YDZ-200	
Float-type Liquidometer	FZ-300	Suitable for YDZ-300	
Float-type Liquidometer	FZ-500	Suitable for YDZ-500	

## Product List

Model	Product	Model	Description and Accessories
Full Bottom Canister	Full Bottom Canister	MTT2-30	Φ 19, 120mm single tier canister(full bottom), No goblet, suitable for YDS-2-30
	Full Bottom Canister	MTT2-35	Φ 25, 120mm single tier canister(full bottom), No goblet, suitable for YDS-2-35
	Full Bottom Canister	MTT3-50	Φ 38, 120mm single tier canister(full bottom), No goblet, suitable for YDS-3
	Full Bottom Canister	MTTH3-50	Φ 38, 120mm single tier canister(full bottom), No goblet, suitable for YDH-3
	Full Bottom Canister	MTT6-50	Φ 38, 120mm single tier canister(full bottom), No goblet, suitable for YDS-6
	Full Bottom Canister	MTT10-50	Φ 38, 120mm single tier canister(full bottom), No goblet, suitable for YDS-10
	Full Bottom Canister	MTT15-50	Φ 38, 120mm single tier canister(full bottom), No goblet, suitable for YDS-15
	Full Bottom Canister	MTT30-50	Φ 38, 120mm single tier canister(full bottom), No goblet, suitable for YDS-20/YDS-30
	Full Bottom Canister	MTT35-50	Φ 38, 120mm single tier canister(full bottom), No goblet, suitable for YDS-25、 YDS-35
	Full Bottom Canister	MTT50-50	Φ 38, 120mm single tier canister(full bottom), No goblet, suitable for YDS-50
	Full Bottom Canister	MTTH6-80	Φ 63, 120mm single tier canister(full bottom), No goblet, suitable for YDH-6-80
	Full Bottom Canister	MTT10-80	Φ 63, 120mm single tier canister(full bottom), No goblet, suitable for YDS-10-80
	Full Bottom Canister	MTT30-80	Φ 63, 120mm single tier canister(full bottom), No goblet, suitable for YDS-30-80
	Full Bottom Canister	MTT35-80	Φ 63, 120mm single tier canister(full bottom), No goblet, suitable for YDS-35-80
	Full Bottom Canister	MTTH10-125	Φ 97, 120mm single tier canister(full bottom), No goblet, suitable for YDH-10-125
	Full Bottom Canister	MTT30-125	Φ 97, 120mm single tier canister(full bottom), No goblet, suitable for YDS-30-125
	Full Bottom Canister	MTT35-125	Φ 97, 120mm single tier canister(full bottom), No goblet, suitable for YDS-35-125
	Full Bottom Canister	MTT50-125	Φ 97, 120mm single tier canister(full bottom), No goblet, suitable for YDS-50B-125
	Full Bottom Canister	MTTS13-50	Φ 38, 276mm double tiers canister(full bottom), with goblets included. suitable for YDS-13
	Full Bottom Canister	MTTS30-50	Φ 38, 276mm double tiers canister(full bottom), with goblets included. suitable for YDS-20、 YDS-30
	Full Bottom Canister	MTTS35-50	Φ 38, 276mm double tiers canister(full bottom), with goblets included. suitable for YDS-25、 YDS-35
	Full Bottom Canister	MTTS50-50	Φ 38, 276mm double tiers canister(full bottom), with goblets included. suitable for YDS-50
	Full Bottom Canister	MTTS30-80	Φ 63, 276mm double tiers canister(full bottom), with goblets included. suitable for YDS-30-80
	Full Bottom Canister	MTTS35-80	Φ 63, 276mm double tiers canister(full bottom), with goblets included. suitable for YDS-35-80
	Full Bottom Canister	MTTS47-127-10T	Φ 72, 276mm double tiers canister(full bottom), with goblets included. suitable for YDS-47-127-10T
	Full Bottom Canister	MTTS35-125	Φ 97, 276mm double tiers canister(full bottom), with goblets included. suitable for YDS-35-125
	Full Bottom Canister	MTTS47-127	Φ 104, 276mm double tiers canister(full bottom), with goblets included. suitable for YDS-47-127
	Full Bottom Canister	MTTS50-125	Φ 97, 276mm double tiers canister(full bottom), with goblets included. suitable for YDS-50B-125

## Product List

Model	Product	Model	Description and Accessories
cryobox	Vial cane	3X	Used for holding 3 vials(2ml)
	Vial cane	6X	Used for holding 6 vials(2ml), plastic sleeve not included
	Plastic cryo box	5×5(2.0)	Used for storing 1.8ml/2ml vial(25 holes)
	Plastic cryo box	9×9(2.0)	Used for storing 1.8ml/2ml vial(81 holes)
	Plastic cryo box	9×9(5.0)	Used for storing 4.5/4.7/5ml vial(81 holes)
	Plastic cryo box	10×10(2.0)	Used for storing 1.8ml/2ml vial (internally threaded,100 holes)
	Plastic cryo box	Y-37	Suitable for round rack to store 1.8ml/2ml vial(37 holes)
	Pastic Goblets	SNT-97	Suitable for diameter 97mm canisters
	Blood bag cassette	25ml (791 OS/U)	one bag per box,rocker arm type
	Blood bag cassette	50ml (4R9951)	one bag per box,drawer type
	Blood bag cassette	250ml (4R9953)	one bag per box, rocker arm type
	Plastic sleeve for vial cane	5016-0002 (6-type)	Suitable for vial cane that can hold 6 vials
	Stainless steel cryo box	5×5 (5.0)	Used for storing 4.5ml/4.7ml/5ml vials(25 holes)
	Stainless steel cryo box	9×9 (5.0) stainless steel	Used for storing 4.5ml/4.7ml/5ml vials(81 holes)
cryobox	Valve adaptor	CGA295	Used for connecting the valve of YDZ self-pressurized tank with single layer transfer hose
	cryogenic solenoid valve	DN7.0 (ASCO 24V)	Suitable for piping pressures≤0.5MPa, pressure 0.3MPa
	cryogenic solenoid valve	DN7.0 (JASA 24V)	Suitable for piping pressures≤0.5MPa
	Low temperature solenoid valve	DN3.0 (ASCO 24V)	Suitable for piping pressures≤0.5MPa, pressure 0.8MPa
	Vacuum isolated hose	GRG-DN10/1.0	Diameter10mm, Length 1m, special use for liquid nitrogen transferring, connection type for both side and length can be customized, charged by meter
	Vacuum isolated hose	GRG-DN10/2.0	Diameter10mm, Length 2m, special use for liquid nitrogen transferring, connection type for both side and length can be customized, charged by meter
	Single-layer transfusion Hose	ZG-DN10/1.5	Diameter10mm, Length 1.5m, Suitable for YDZ series
	Single-layer transfusion Hose	BG-DN10/1.0	Diameter10mm, Length 1.0m, Suitable for liquid nitrogen pump YDB series
	Single-layer transfusion Hose	RG-DN10	Diameter 10mm, used for liquid nitrogen transferring, fitting and length can be customized, charged in meters.
	Single-layer transfusion Hose	RG-DN6	Diameter 6mm, used for liquid nitrogen transferring, fitting and length can be customized, charged in meters.
	Hose heat insulation cotton	BMT-DN10	Suitable for DN10 single layer metal hose, 1 meter
	Cryogenic Gloves	ST-32	overall length 32cm
	Cryogenic Gloves	ST-45	overall length 45cm
	Cryogenic Gloves	ST-72	overall length 72cm
Level measuring scale	YWC-100	Measuring length100CM	



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