

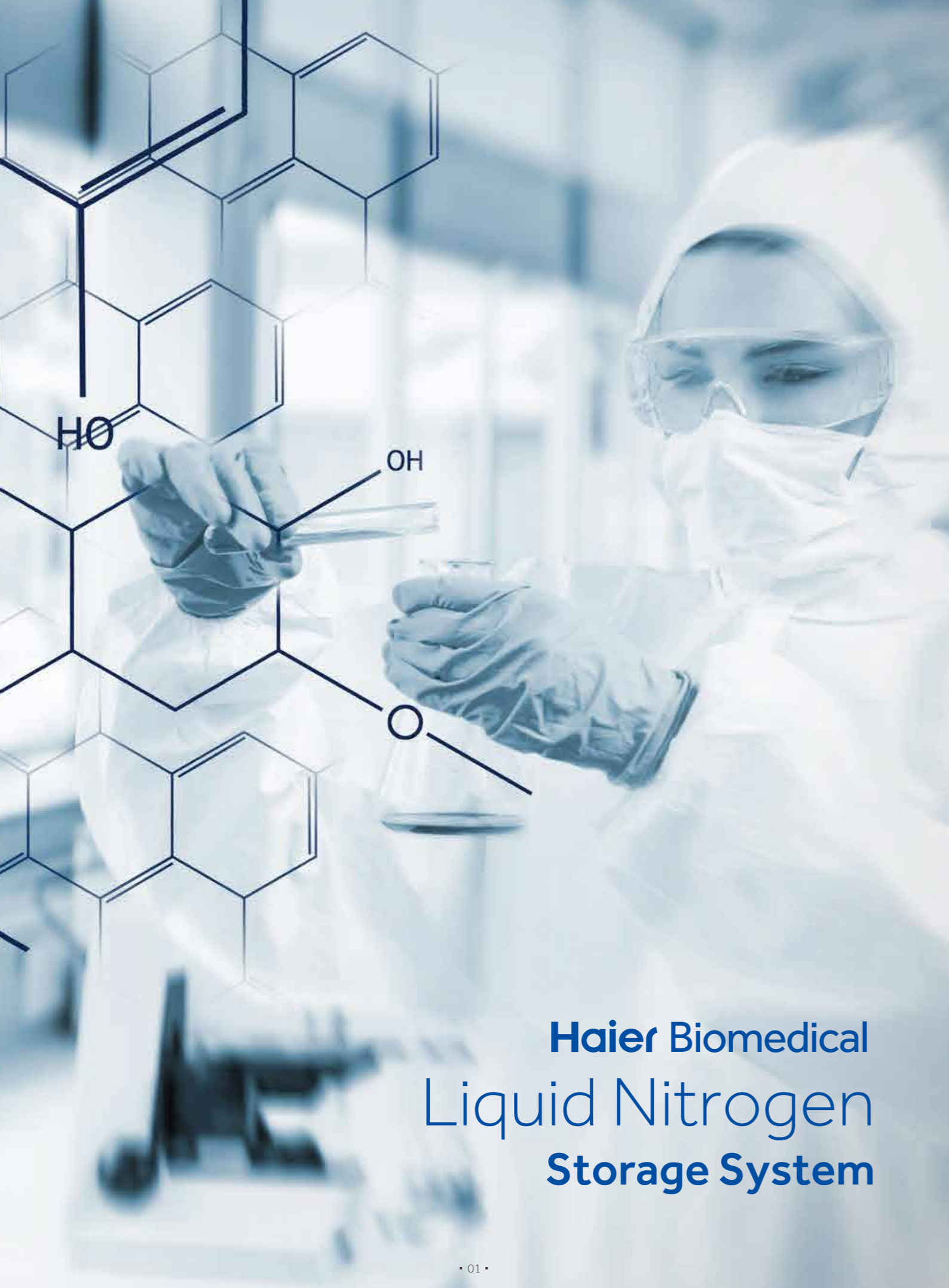
# Haier Biomedical

## Haier Liquid Nitrogen Storage Solution

Extra large LCD and cryogenic intelligent management establishing new global standard



**Haier Biomedical**  
Intelligent Protection of Life Science



# Haier Biomedical Liquid Nitrogen Storage System

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# Haier Liquid Nitrogen Storage System Smart Series

IoT and Cloud Management

Multiple Level of Protections

Low Energy Consumption

Temperature and Fluid  
Level Display

New Appearance

High Performance Stability

New Lock Design



## Smart Series

### Introduction

**Simultaneous monitoring of temperature and fluid level completed with smart, IoT and cloud management**

Aluminum alloy biological storage container cooled by liquid nitrogen (LN2) simultaneous monitoring of temperature and fluid level for ultimate sample safety.

Storage temperature and LN2 fluid level are automatically and independently monitored with a high precision controller. Accurate and real-time information on the two critical parameters are available to ensure sample safety. Measurement with rulers and manual temperature device is no longer needed.

### Key Features

- 5 models from 2400 to 6000 cryovial capacity
- 5 years vacuum warranty
- Durable aluminum construction
- Real time monitor of temperature and fluid level
- Cloud data storage for traceability
- Low consumption rate and high performance stability
- New lock design

### Product Advantages

#### Color identification for pickup tool handle

Pickup tool handles are color coded for ease of separating storage zones and managing samples.



#### New lock design

Special and dedicated lock design is to assure 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 on the two parameters are available to ensure sample safety.



#### Multilayer protection for extreme safety

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

#### Cloud data storage for traceability

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

#### Low consumption rate and high performance stability

The container is built with an automated process to ensure a high quality and a high vacuum. Stable performance and low consumption rate are achieved.



## 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 canister	6	6	6	6	6
2ML storage vials (100/box)	2400	3000	3600	4800	6000
Layers in pickup barrel	4	5	6	8	10
5ML storage vials (81/box)	972	972	1458	1944	2430
Layers in pickup barrel	2	2	3	4	5
<b>Function</b>					
Liquid Nitrogen volume (L)	65	95	115	140	175
Static evaporation rate (%/d)	0.78	0.81	0.83	0.87	0.87
Effective volume (L)	55	85	105	130	165
Duration of normal operation (day)	44	66	80	94	126
<b>Dimensions</b>					
Mouth (MM)	216	216	216	216	216
Overall height (MM)	765	790	870	960	1060
Overall Diameter (MM)	681	681	681	681	681
Empty container weight (KG)	38.5	41.3	42.3	48.9	53.8
Full container weight (KG)	80.8	112.4	132.8	157.3	198.5

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

## Haier Liquid Nitrogen Storage System Biobank Series for Large Scale Storage

LN<sub>2</sub> Splash Proof

Self Diagnostic

Data Logging

"Dry" Sample Storage

Quick Chill

Lockable Lid

Rapid Specimen Storage

Liquid or Vapor Phase Storage








5 Year Vacuum Warranty



















One-touch Defogging














From 13000 to 94875 Cryovials




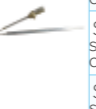






Model	Description	Accessories	
		Standard	Optional
Biobank Series for Large Scale Storage	YDD-1600-635	1600L, neck opening diameter 635mm	Includes vacuum hoses (GRG-DN10/2.0)
	YDD-1800-635	1800L, neck opening diameter 635mm	Includes vacuum hoses (GRG-DN10/2.0)
Smart Series	YDS-65-216-FZ	65L, neck opening diameter 216mm	1. Includes an intelligent locking cover 2. Includes a cork with neck opening diameter of 216mm 3. Includes 6*4-layer square canisters (FTT-4-99) 4. Includes 9*9 cryogenic boxes (may be changed for 10*10)
	YDS-95-216-FZ	95L, neck opening diameter 216mm	1. Includes an intelligent locking cover 2. Includes a cork with neck opening diameter of 216mm 3. Includes 6*5-layer square canisters (FTT-5-99) 4. Includes 9*9 cryogenic boxes (may be changed for 10*10)
	YDS-115-216-FZ	115L, neck opening diameter 216mm	1. Includes an intelligent locking cover 2. Includes a cork with neck opening diameter of 216mm 3. Includes 6*6-layer square canisters (FTT-6-99) 4. Includes 9*9 cryogenic boxes (may be changed for 10*10)
	YDS-145-216-FZ	145L, neck opening diameter 216mm	1. Includes an intelligent locking cover 2. Includes a cork with neck opening diameter of 216mm 3. Includes 6*8-layer square canisters (FTT-8-99) 4. Includes 9*9 cryogenic boxes (may be changed for 10*10)
	YDS-175-216-FZ	175L, neck opening diameter 216mm	1. Includes an intelligent locking cover 2. Includes a cork with neck opening diameter of 216mm 3. Includes 6*10-layer square canisters (FTT-10-99) 4. Includes 9*9 cryogenic boxes (may be changed for 10*10)

Accessories	Model	Picture	Applicable Model	Standard Equipped or Optional	Exterior Dimensions (mm)	Gross Weight (kg)	Other Description
Square Canister	Square Canister FTT-4-55		YDS-30-125/YDS-10-125	Optional	80×82×575	0.42	Used to store 2ml cryogenic boxes (5*5); four layers in total, including 5x5 cryogenic boxes; suitable for YDS-30-125/YDS-10-125 (including plastic cryogenic boxes)
	Square Canister FTT-5-55		YDS-35-125/YDS-47-127	Optional	80×82×610	0.48	Used to store 2ml cryogenic boxes (5*5); five layers in total, including 5x5 cryogenic boxes; suitable for YDS-35-125/YDS-47-127 (including plastic cryogenic boxes)
	Square Canister FTT-6-55		YDS-50-125	Optional	80×82×710	0.55	Used to store 2ml cryogenic boxes (5*5); six layers in total, including 5x5 cryogenic boxes; suitable for YDS-50-125 (including plastic cryogenic boxes)
	Square Canister FTT-10-55		YDD-350\550\1300	Optional	82×84×565	1.05	Used to store 2ml cryogenic boxes (5*5); ten layers in total; suitable for YDD-350\550\1300 (excluding cryogenic boxes)
	Square Canister FTT-13-55		YDD-850\1600	Optional	82×84×733	1.37	Used to store 2ml cryogenic boxes (5*5); thirteen layers in total; suitable for YDD-850\1600 (excluding cryogenic boxes)
	Square Canister FTT-15-55		YDD-1000\1800X2000	Optional	82×84×845	1.58	Used to store 2ml cryogenic boxes (5*5); fifteen layers in total; suitable for YDD-1000\1800X2000 (excluding cryogenic boxes)
	Square Canister FTT-4-99		YDS-65-216	Optional	142×144×565	0.88	Used to store 2ml cryogenic boxes (9*9); four layers in total, including 9x9 cryogenic boxes; suitable for YDS-65-216 (including plastic cryogenic boxes)

Accessories	Model	Picture	Applicable Model	Standard Equipped or Optional	Exterior Dimensions (mm)	Gross Weight (kg)	Other Description
Square Canister	Square Canister FTT-4-55		YDS-30-125/YDS-10-125	Optional	80×82×575	0.42	Used to store 2ml cryogenic boxes (5*5); four layers in total, including 5x5 cryogenic boxes; suitable for YDS-30-125/YDS-10-125 (including plastic cryogenic boxes)
	Square Canister FTT-5-55		YDS-35-125/YDS-47-127	Optional	80×82×610	0.48	Used to store 2ml cryogenic boxes (5*5); five layers in total, including 5x5 cryogenic boxes; suitable for YDS-35-125/YDS-47-127 (including plastic cryogenic boxes)
	Square Canister FTT-6-55		YDS-50-125	Optional	80×82×710	0.55	Used to store 2ml cryogenic boxes (5*5); six layers in total, including 5x5 cryogenic boxes; suitable for YDS-50-125 (including plastic cryogenic boxes)
	Square Canister FTT-10-55		YDD-350\550\1300	Optional	82×84×565	1.05	Used to store 2ml cryogenic boxes (5*5); ten layers in total; suitable for YDD-350\550\1300 (excluding cryogenic boxes)
	Square Canister FTT-13-55		YDD-850\1600	Optional	82×84×733	1.37	Used to store 2ml cryogenic boxes (5*5); thirteen layers in total; suitable for YDD-850\1600 (excluding cryogenic boxes)
	Square Canister FTT-15-55		YDD-1000\1800X2000	Optional	82×84×845	1.58	Used to store 2ml cryogenic boxes (5*5); fifteen layers in total; suitable for YDD-1000\1800X2000 (excluding cryogenic boxes)
	Square Canister FTT-4-99		YDS-65-216	Optional	142×144×565	0.88	Used to store 2ml cryogenic boxes (9*9); four layers in total, including 9x9 cryogenic boxes; suitable for YDS-65-216 (including plastic cryogenic boxes)
	Square Canister FTT-5-99		YDS-95-216\YDS-25H-216	Optional	142×144×630	0.95	Used to store 2ml cryogenic boxes (9*9); five layers in total, including 9x9 cryogenic boxes; suitable for YDS-95-216\YDS-25H-216 (including plastic cryogenic boxes)
	Square Canister FTT-6-99		YDS-115-216	Optional	142×144×690	1.08	Standard accessories include no canister; including protective jacket and excluding locking cover; maximum 6 canisters are optional
	Square Canister FTT-8-99		YDS-145-216	Optional	142×144×795	1.30	Used to store 2ml cryogenic boxes (9*9); eight layers in total, including 9x9 cryogenic boxes; suitable for YDS-145-216 (including plastic cryogenic boxes)
	Square Canister FTT-10-99		YDD-350\550\1300	Optional	142×144×915	1.48	Used to store 2ml cryogenic boxes (9*9); ten layers in total; suitable for YDD-350\550\1300 (excluding cryogenic boxes)
	Square Canister FTT-10-99 (with boxes)		YDS-175-216- F	Optional	142×144×565	2.10	10 layers in total, including 9x9 cryogenic boxes; suitable for YDS-175-216- F
	Square Canister FTT-13-99		YDD-850\1600	Optional	142×144×733	2.66	Used to store 2ml cryogenic boxes (9*9); 13 layers in total; suitable for YDD-850\1600 (excluding cryogenic boxes)
Square Canister FTT-15-99		YDD-1000\1800\2000	Optional	142×144×845	3.15	Used to store 2ml cryogenic boxes (9*9); 15 layers in total; suitable for YDD-1000\1800\2000 (excluding cryogenic boxes)	
Level Monitoring system	Level Monitoring System ZTC-100A		Suitable for both YDS series and YDZ series	Optional	95×155×35	0.50	Using platinum resistor to measure the temperature, and setting single-point level alarm through the temperature; with buzzer alarm function available
	Level Monitoring System ZTC-100B		Suitable for both YDS series and YDZ series	Optional	95×155×35	0.50	Using platinum resistor to measure the temperature, and setting single-point level alarm through the temperature; with buzzer alarm function available; with output switch control signal and direct-driven solenoid
	Level Monitoring System ZTC-100C		Suitable for both YDS series and YDZ series	Optional	95×155×35	0.50	Using platinum resistor to measure the temperature, and setting single-point level alarm through the temperature; with buzzer alarm function available; with output switch control signal and direct-driven solenoid
	Cryosmart Level Monitoring System SJMU-700N		Suitable for Only YDD series	Optional	175×195×85	3.21	Suitable for all differential pressure measurement gas-phase liquid nitrogen containers; including the liquid inlet system and excluding the wireless data transmission module

Accessories	Model	Picture	Applicable Model	Standard Equipped or Optional	Exterior Dimensions (mm)	Gross Weight (kg)	Other Description
Stainless Steel Trolley	Trolley YSC-S		Suitable for 30-50L series of products (new 47-127 liquid nitrogen containers need to be separately noted); suitable for 30L, 35L and 50L series of products; equipped with 5 universal casters	Optional	80×82×575	0.42	Used to store 2ml cryogenic boxes (5*5); four layers in total, including 5x5 cryogenic boxes; suitable for YDS-30-125/YDS-10-125 (including plastic cryogenic boxes)
	Trolley YSC-M		Suitable for 65-175L series of products; configured with 5 universal casters	Optional	80×82×610	0.48	Used to store 2ml cryogenic boxes (5*5); five layers in total, including 5x5 cryogenic boxes; suitable for YDS-35-125/YDS-47-127 (including plastic cryogenic boxes)
Liquid Nitrogen Pump	ZYB-5 Hand Held Liquid Nitrogen Pump		Suitable for series of products above 20L with opening diameter of 50	Optional	250×185×1115	18.50	Suitable for series products with neck opening diameter of 50mm and capacity of no less than 20L
	ZYB-8 Foot Step Liquid Nitrogen Pump		Suitable for series of products above 20L with opening diameter of 850	Optional	250×185×1115	24.50	Suitable for series products with neck opening diameter of 50mm and capacity of no less than 20L
Level Measuring Scale	Level Measuring Scale (600MM)		Suitable for aluminum containers below 20L (measuring length: 60cm)	Optional	60	0.12	Suitable for aluminium containers with capacity of no less than 20L (measuring length 60cm)
	Level Measuring Scale (1000MM)		Suitable for aluminum containers below 20L (measuring length: 100cm)	Optional	100	0.18	Suitable for aluminium containers with capacity of no less than 20L (measuring length 100cm)
Cryogenic Rack	Cryogenic RackYDCJ-6	Irregular inventory; no picture available; to be customized	For 50ml blood bag; 1 blood bag in each cryogenic rack layer; 6 layers in total; including blood bag cryogenic box; suitable for YDD-300\550\1300	Optional	Customized model	/	Used to store 50ml blood bag; 6 layers in total with each layer storing one blood bag; including blood bag cryogenic boxes; suitable for YD D-350\550\1300
	Cryogenic RackYDCJ-7	Irregular inventory; no picture available; to be customized	For 50ml blood bag; 1 blood bag in each cryogenic rack layer; 7 layers in total; including blood bag cryogenic box; suitable for YDD-850\1600	Optional	Customized model	/	Used to store 50ml blood bag; 7 layers in total with each layer storing one blood bag; including blood bag cryogenic boxes; suitable for YDD-850\1600
	Cryogenic RackYDCJ-9	Irregular inventory; no picture available; to be customized	For 50ml blood bag; 1 blood bag in each cryogenic rack layer; 9 layers in total; including blood bag cryogenic box; suitable for YDD-1000\1800\2100	Optional	Customized model	/	Used to store 50ml blood bag; 9 layers in total with each layer storing one blood bag; including blood bag cryogenic boxes; suitable for YD D-1000\1800\2100
	Cryogenic RackYDCJ-3	Irregular inventory; no picture available; to be customized	For 250ml blood bag; 1 blood bag in each cryogenic rack layer; 3 layers in total; including blood bag cryogenic box; suitable for YDD-350\550\1300	Optional	Customized model	/	Used to store 250ml blood bag; 3 layers in total with each layer storing one blood bag; including blood bag cryogenic boxes; suitable for YDD-350\550\1300
	Cryogenic RackYDCJ-4	Irregular inventory; no picture available; to be customized	For 250ml blood bag; 1 blood bag in each cryogenic rack layer; 4 layers in total; including blood bag cryogenic box; suitable for YDD-850	Optional	Customized model	/	Used to store 250ml blood bag; 4 layers in total with each layer storing one blood bag; including blood bag cryogenic boxes; suitable for YDD-850
	Cryogenic RackYDCJ-5-11	Irregular inventory; no picture available; to be customized	For 250ml blood bag; 1 blood bag in each cryogenic rack layer; 5 layers in total; including blood bag cryogenic box; suitable for YDD-450\750\1000\1800\1900\2000	Optional	Customized model	/	Used to store 250ml blood bag; 5 layers in total with each layer storing one blood bag; including blood bag cryogenic boxes; suitable for YDD-750\1000\1800\1900\2000
	Cork	Cork with neck opening diameter of 30mm		Suitable for corks with opening diameter of 30	Optional	128×128×210	0.20
Cork with neck opening diameter of 35mm			Suitable for corks with opening diameter of 35	Optional	128×128×210	0.24	Including the cap and the cork body; suitable for YDS-2-35
Cork with neck opening diameter of 50mm			Suitable for corks with opening diameter of 50	Optional	128×128×210	0.28	Suitable for neck opening diameter of 50mm
Cork with neck opening diameter of 80mm			Suitable for corks with opening diameter of 80	Optional	128×128×200	0.32	Suitable for neck opening diameter of 80mm
Cork with neck opening diameter of 125mm			Suitable for corks with opening diameter of 125	Optional	170×170×180	0.38	Suitable for neck opening diameter of 125mm
Cork with neck opening diameter of 216mm			Suitable for corks with opening diameter of 216	Optional	220×220×210	0.51	Suitable for neck opening diameter of 216mm
Locking Cover	Locking Cover SG-30		Suitable for locking cover with opening diameter of 30	Optional	130×130×80	0.65	Suitable for YDS-2-30
	Locking Cover SG-35		Suitable for locking cover with opening diameter of 35	Optional	130×130×80	0.65	Suitable for YDS-2-35
	Locking Cover SG-50		Suitable for locking cover with opening diameter of 50	Optional	140×140×80	0.70	Suitable for neck opening diameter of 50mm
	Locking Cover SG-80		Suitable for locking cover with opening diameter of 80	Optional	180×180×100	0.80	Suitable for neck opening diameter of 80mm
	Locking Cover SG-125		Suitable for locking cover with opening diameter of 125	Optional	210×210×120	0.90	Suitable for neck opening diameter of 125mm
	Locking Cover SG-216		Suitable for locking cover with opening diameter of 216	Optional	280×280×150	1.10	Suitable for neck opening diameter of 216mm

Accessories	Model	Picture	Applicable Model	Standard Equipped or Optional	Exterior Dimensions (mm)	Gross Weight (kg)	Other Description
Canister	Canister TT-30D		Suitable for 120mm round canister with neck opening diameter of 30	Optional	Φ 25×330	0.05	Diameter of 19mm,height of 120mm , single layered canister , Suitable for YDS-2-30
	Canister TT-35D		Suitable for 120mm round canister with neck opening diameter of 35	Optional	Φ 25×330	0.05	Diameter of 25mm,height of 120mm , single layered canister , excluding white plastic goblet , Suitable for YDS-2-30
	Canister TT-50D		Suitable for 120mm round canister with neck opening diameter of 50	Optional	Φ 38×610	0.08	Diameter of 38mm,height of 120mm , single layered canister , excluding white plastic goblet , Suitable for YDS-6,YDS-10,YDS-15,YDS-20,YD S-30,YDS-35,YDS-50 models
	Canister TT-50S		Suitable for 276mm round canister with neck opening diameter of 50	Optional	Φ 38×675	0.08	Diameter of 38mm,height of 276mm , double layered canister , including white plastic goblet , Suitable for YDS-13,YDS-30,YDS-35,YDS-50 models
	Canister TT-80D		Suitable for 120mm round canister with neck opening diameter of 80	Optional	Φ 63×675	0.16	Diameter of 63mm,height of 120mm , single layered canister , excluding white plastic goblet , Suitable for YDS-10-80,YDS-30-80,YDS-35-80,YDS-6H-80,YDS-8H-80 models
	Canister TT-125D		Suitable for 120mm round canister with neck opening diameter of 125	Optional	Φ 97×710	0.33	Diameter of 97mm,height of 120mm , single layered canister , excluding white plastic goblet , Suitable for YDS-30-125,YDS-35-125,YDS-50B-125
Cryo Tube Clip	Cryo Tube Clip (Type 3)		Universal	Optional	20×20×150	0.01	Suitable for canister with the height of 120MM , contain Cryo Tube Clip and plastic jacket , each tube contain 3,2mlCryo Tube
	Cryo Tube Clip (Type 6)		Universal	Optional	20×20×300	0.02	Suitable for canister with the height of 276MM , contain Cryo Tube Clip and plastic jacket , each tube contain 6,2mlCryo Tube
Float-Type Liquidometer	FZ-30		Suitable for 30L self-pressurization containers	Optional	/	/	Suitable for YDZ-30
	FZ-50		Suitable for 50L self-pressurization containers	Optional	/	/	Suitable for YDZ-50
	FZ-100		Suitable for 100L self-pressurization containers	Optional	/	/	Suitable for YDZ-100
	FZ-150		Suitable for 150L self-pressurization containers	Optional	/	/	Suitable for YDZ-150
	FZ-175		Suitable for 175L self-pressurization containers	Optional	/	/	Suitable for YDZ-175
	FZ-200		Suitable for 200L self-pressurization containers	Optional	/	/	Suitable for YDZ-200
	FZ-300		Suitable for 300L self-pressurization containers	Optional	/	/	Suitable for YDZ-300
	FZ-500		Suitable for 500L self-pressurization containers	Optional	/	/	Suitable for YDZ-500
	Cryogenic Gloves		Special for low temperature, 32cm in length		Universal	Optional	320×150×10
Special for low temperature, 45cm in length			Universal	Optional	450×180×10	0.10	Overall length 450mm
Special for low temperature, 72cm in length			Universal	Optional	720×200×20	0.12	Overall length 720mm
Flexible Metal Tubing	GZ-DN15/1.5		Drift diameter: 10mm; length: 1.5m; special for self-pressurization containers	Optional	1500×20×20	1.20	Diameter of 10mm , length of 1.5M, suitable for YDZ series
	GB-DN15/1.5		Drift diameter: 10mm; length: 1.0m; special for liquid nitrogen pump	Optional	1000×20×20	1.20	Diameter of 10mm , length of 1.0M, suitable for liquid nitrogen pump series



# WolfLabs

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The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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