

# Large Vapor Phase Stainless LN<sub>2</sub> Biobank

## Scope of Application

Crafted from 304 stainless steel, these large-scale cryogenic tanks deliver maximum storage capacity with minimum liquid nitrogen consumption, significantly reducing operational costs through advanced vacuum insulation technology, design for biobank, cell labs and blood station.

## Key Features



### High-Capacity & Space-Efficient Design

With a wide capacity range from 370L to 1,800L, storing 15,600–95,625 vials (2ml), the series features a compact structure that maximizes storage density.



### Reliable Temperature Uniformity & Stability

It ensures sample security with uniform -190°C vapor phase temperature, maintains below -180°C at the top layer, and stays below -150°C internally even after 48 hours of lid opening.



### User-Friendly Operation

Designed for ease of use with defog function and folding step, it also offers optional backup battery and vacuum jacketed hose for enhanced safety and operational efficiency, and can work in both vapor and liquid phase storage modes.



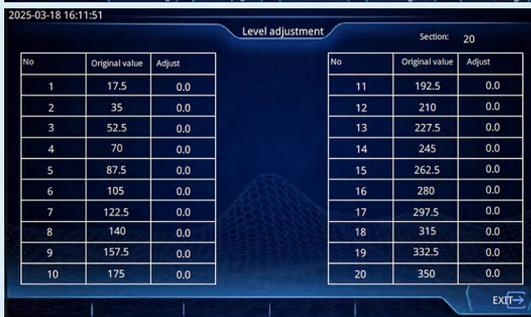
### Automated LN<sub>2</sub> Management

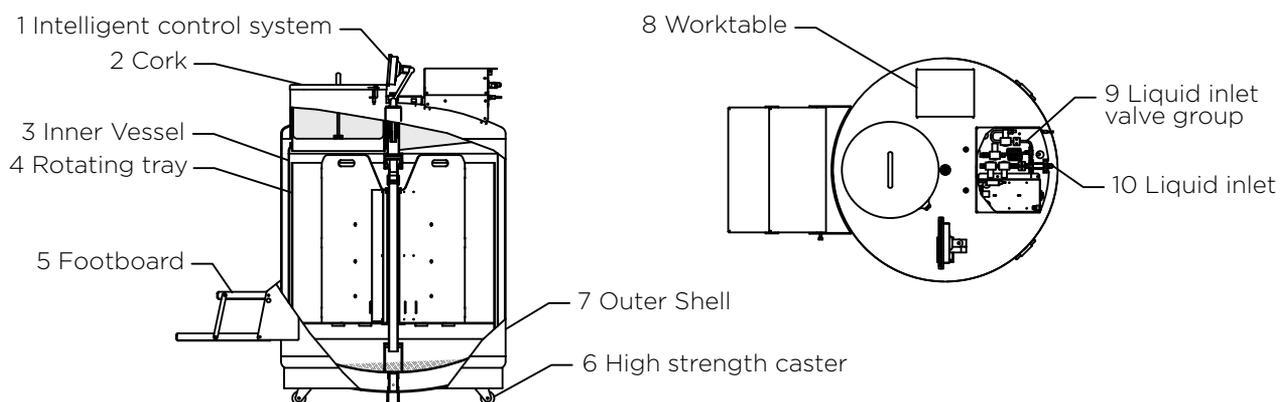
The system features automatic LN<sub>2</sub> supply with multi-valve control and high-precision liquid level and temperature sensor detection, supports manual refilling when needed.



### Advanced Control & Real-Time Monitoring

An interactive touchscreen displays real-time temperature and liquid level with  $\pm 1^\circ\text{C}$  accuracy, supports data logging and export via USB, offers customizable alarms, and includes a remote alarm interface for central monitoring systems.





## Technical Parameters



Model	YDD-370-320P	YDD-460-320P	YDD-550-445P	YDD-750-445P
<b>Maximum Storage Capacity</b>				
2ml Vials (Internal Thread)	15600	19500	28000	37700
No. of Square Racks (5*5)	4	4	16	12
No. of Square Racks (10*10)	12	12	24	26
Layers Of Each Rack	12	15	10	13
<b>Performance</b>				
Volume of LN <sub>2</sub> Under The Tray (L)	55	55	135	135
Volume of LN <sub>2</sub> (L)	370	460	550	750
<b>Dimensions</b>				
Inside Neck Diameter (mm)	317	317	445	445
Effective Internal Height (mm)	750	945	654	815
Outside Diameter (mm)	860	860	1100	1100
Height (mm)	1460	1660	1640	1805
Empty Weight (kg)	280	320	432	461
Operating Height (mm)	950	1110	915	1170
Full Weight (kg)	579	692	876	1067
Door Width Requirement (mm)	920	920	1160	1160



Model	YDD-800-445P	YDD-850-465P	YDD-1000-465P	YDD-1800-635P
<b>Maximum Storage Capacity</b>				
2ml Vials (Internal Thread)	40600	44200	51000	95625
No. of Square Racks (5*5)	12	8	8	15
No. of Square Racks (10*10)	26	32	32	60
Layers Of Each Rack	14	13	15	15
<b>Performance</b>				
Volume of LN <sub>2</sub> Under The Tray (L)	135	135	135	350
Volume of LN <sub>2</sub> (L)	800	850	1000	1800
<b>Dimensions</b>				
Inside Neck Diameter (mm)	445	465	465	635
Effective Internal Height (mm)	880	880	945	920
Outside Diameter(mm)	1100	1190	1190	1565
Height (mm)	1865	1910	1952	1920
Empty Weight (kg)	489	551	586	898
Operating Height (mm)	1200	1120	1005	1135
Full Weight (kg)	1135	1238	1394	2352
Door Width Requirement (mm)	1160	1250	1250	1625

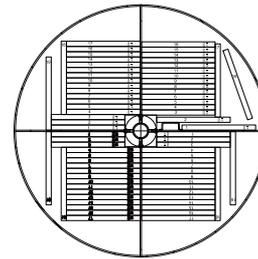
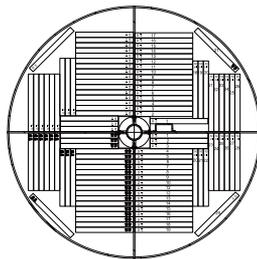
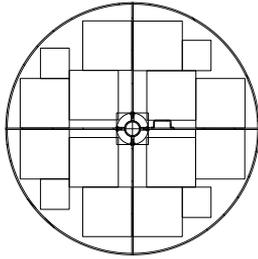
**Rack (Vertical type) and Blood Bag Frame (Recommend)**

Rack  
(Vertical type)

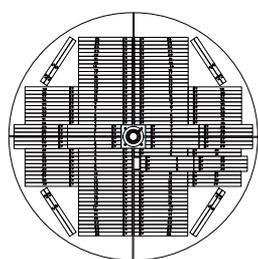
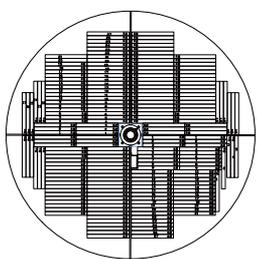
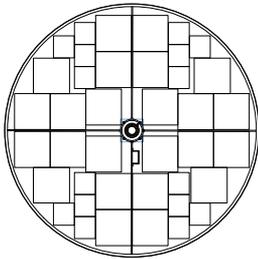
50ml Blood  
Bag Frame

250ml Blood  
Bag Frame

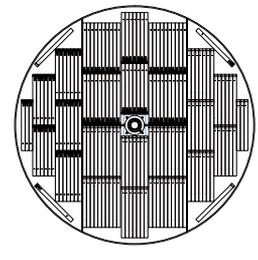
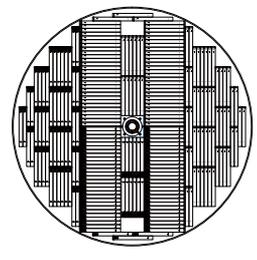
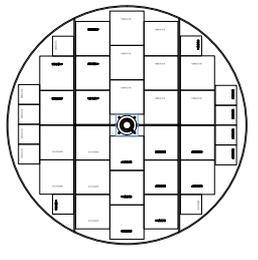
YDD-370-320P  
YDD-460-320P



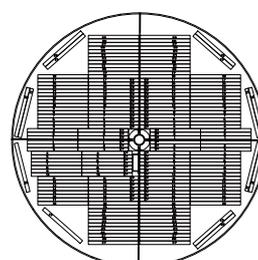
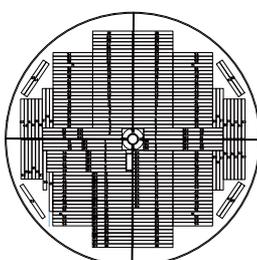
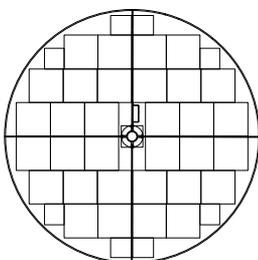
YDD-550-445P



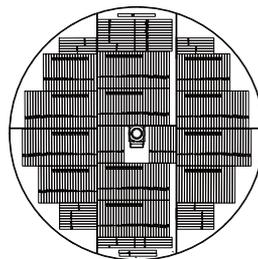
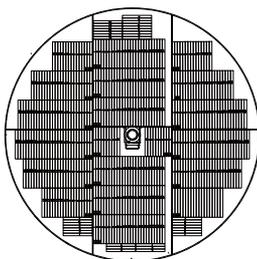
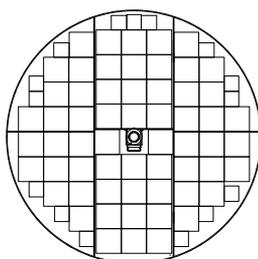
YDD-750-445P  
YDD-800-445P



YDD-850-465P  
YDD-1000-465P



YDD1800-635P



## Blood Bag Capacity

Model	YDD-370-320P			YDD-460-320P		
Blood Bag Spec.	Total No. of Bags	Rack Layers	No. of Racks	Total No. of Bags	Rack Layers	No. of Racks
25ml (791 OS/U)	1260	7	180	1620	9	180
50ml (4R9951)	798	7	114	1026	9	114
200ml (DF-200)	188	4	47	235	5	47
250ml (4R9953)	300	4	75	375	5	75
500ml (4R9955)	220	4	55	275	5	55
700ml (DF-700)	96	4	24	120	5	24

Model	YDD-550-445P			YDD-750-445P		
Blood Bag Spec.	Total No. of Bags	Rack Layers	No. of Racks	Total No. of Bags	Rack Layers	No. of Racks
25ml (791 OS/U)	2070	6	345	3024	8	378
50ml (4R9951)	1290	6	215	1968	8	246
200ml (DF-200)	300	3	100	472	4	118
250ml (4R9953)	656	4	164	920	5	184
500ml (4R9955)	444	4	111	610	5	122
700ml (DF-700)	180	3	60	280	4	70

Model	YDD-800-445P			YDD-850-465P		
Blood Bag Spec.	Total No. of Bags	Rack Layers	No. of Racks	Total No. of Bags	Rack Layers	No. of Racks
25ml (791 OS/U)	3024	8	378	3600	8	450
50ml (4R9951)	1968	8	246	2304	8	288
200ml (DF-200)	472	4	118	520	4	130
250ml (4R9953)	920	5	184	1115	5	223
500ml (4R9955)	610	5	122	740	5	148
700ml (DF-700)	280	4	70	312	4	78

Model	YDD-1000-465P			YDD-1800-635P		
Blood Bag Spec.	Total No. of Bags	Rack Layers	No. of Racks	Total No. of Bags	Rack Layers	No. of Racks
25ml (791 OS/U)	4050	9	450	7335	9	815
50ml (4R9951)	2592	9	288	4482	9	498
200ml (DF-200)	650	5	130	1200	5	240
250ml (4R9953)	1115	5	223	1960	5	392
500ml (4R9955)	740	5	148	1310	5	262
700ml (DF-700)	390	5	78	735	5	147

## Product List

YDD Series	Accessory	Model	Description	Notes	
YDD-370-320P (16K)	Cryosmart level monitoring system	MJ-3000	Suitable for all capacitive measurement of vapor phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module	Standard	
	Footboard	single step	Convenient for racks operating		
	vacuum-insulated hose	DN10/2.0	Used to connect YDD and YDZ		
	YDD-460-320P (21K)	Hoisting system	TD-1200	Assist in completing the lifting of the rack	Optional
		Rack (vertical type)	FDCJ-25-12	Used for storing 5*5 cryo boxes (2ml), 12 layers in total	
			FDCJ-81-12	Used for storing 9*9 cryo boxes (2ml), 12 layers in total	
		Cryo box	MH-25	Used for storing 1.8ml/2ml vial (25 wells)	
MH-81			Used for storing 1.8ml/2ml vial (81 wells)		
MH-100	Used for storing 1.8ml/2ml vial (internally threaded, 100 wells)				
YDD-550-445P (27K)	Cryosmart level monitoring system	MJ-3000	Suitable for all capacitive measurement of vapor phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module	Standard	
	Footboard	Two-tiered	Convenient for racks operating		
	vacuum-insulated hose	DN10/2.0	Used to connect YDD and YDZ		
	YDD-550-445P (27K)	Hoisting system	TD-1200	Assist in completing the lifting of the rack	Optional
		Rack (vertical type)	FDCJ-25-15	Used for storing 5*5 cryo boxes (2ml), 15 layers in total	
			FDCJ-81-15	Used for storing 9*9 cryo boxes (2ml), 15 layers in total	
		Cryo box	MH-25	Used for storing 1.8ml/2ml vial (25 wells)	
MH-81			Used for storing 1.8ml/2ml vial (81 wells)		
MH-100	Used for storing 1.8ml/2ml vial (internally threaded, 100 wells)				

## Product List

YDD Series	Accessory	Model	Description	Notes
YDD-750-445P (38K)	Cryosmart level monitoring system	MJ-3000	Suitable for all capacitive measurement of vapor phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module	Standard
	Footboard	Two-tiered	Convenient for racks operating	
	vacuum-insulated hose	DN10/2.0	Used to connect YDD and YDZ	
	Hoisting system	TD-1200	Assist in completing the lifting of the rack	Optional
	Rack (vertical type)	FDCJ-25-13	Used for storing 5*5 cryo boxes (2ml), 13 layers in total	
		FDCJ-81-13	Used for storing 9*9 cryo boxes (2ml), 13 layers in total	
	Cryo box	MH-25	Used for storing 1.8ml/2ml vial (25 wells)	
MH-81		Used for storing 1.8ml/2ml vial (81 wells)		
MH-100		Used for storing 1.8ml/2ml vial (internally threaded, 100 wells)		
YDD-800-445P (40K)	Cryosmart level monitoring system	MJ-3000	Suitable for all capacitive measurement of vapor phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module	Standard
	Footboard	Two-tiered	Convenient for racks operating	
	vacuum-insulated hose	DN10/2.0	Used to connect YDD and YDZ	
	Hoisting system	TD-1200	Assist in completing the lifting of the rack	Optional
	Rack (vertical type)	FDCJ-25-14	Used for storing 5*5 cryo boxes (2ml), 14 layers in total	
		FDCJ-81-14	Used for storing 9*9 cryo boxes (2ml), 14 layers in total	
	Cryo box	MH-25	Used for storing 1.8ml/2ml vial (25 wells)	
MH-81		Used for storing 1.8ml/2ml vial (81 wells)		
MH-100		Used for storing 1.8ml/2ml vial (internally threaded, 100 wells)		
YDD-850-465P (43K)	Cryosmart level monitoring system	MJ-3000	Suitable for all capacitive measurement of vapor phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module	Standard
	Footboard	Two-tiered	Convenient for racks operating	
	vacuum-insulated hose	DN10/2.0	Used to connect YDD and YDZ	
	Hoisting system	TD-1200	Assist in completing the lifting of the rack	Optional
	Rack (vertical type)	FDCJ-25-13	Used for storing 5*5 cryo boxes (2ml), 13 layers in total	
		FDCJ-81-13	Used for storing 9*9 cryo boxes (2ml), 13 layers in total	
	Cryo box	MH-25	Used for storing 1.8ml/2ml vial (25 wells)	
MH-81		Used for storing 1.8ml/2ml vial (81 wells)		
MH-100		Used for storing 1.8ml/2ml vial (internally threaded, 100 wells)		

## Product List

YDD Series	Accessory	Model	Description	Notes
	Cryosmart level monitoring system	MJ-3000	Suitable for all capacitive measurement of vapor phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module	Standard
	Footboard	Two-tiered	Convenient for racks operating	
	vacuum-insulated hose	DN10/2.0	Used to connect YDD and YDZ	
YDD-1000-465P (51K)	Hoisting system	TD-1200	Assist in completing the lifting of the rack	Optional
	Rack (vertical type)	FDCJ-25-15	Used for storing 5*5 cryo boxes (2ml), 15 layers in total	
		FDCJ-81-15	Used for storing 9*9 cryo boxes (2ml), 15 layers in total	
	Cryo box	MH-25	Used for storing 1.8ml/2ml vial (25 wells)	
		MH-81	Used for storing 1.8ml/2ml vial (81 wells)	
		MH-100	Used for storing 1.8ml/2ml vial (internally threaded, 100 wells)	
YDD-1800-635P (95K)	Cryosmart level monitoring system	MJ-3000	Suitable for all capacitive measurement of vapor phase liquid nitrogen containers, including the liquid inlet system and excluding the wireless data transmission module	Standard
	Footboard	Two-tiered	Convenient for racks operating	
	vacuum-insulated hose	DN10/2.0	Used to connect YDD and YDZ	
	Hoisting system	TD-1200	Assist in completing the lifting of the rack	Optional
	Rack (vertical type)	FDCJ-25-15	Used for storing 5*5 cryo boxes (2ml), 15 layers in total	
		FDCJ-81-15	Used for storing 9*9 cryo boxes (2ml), 15 layers in total	
	Cryo box	MH-25	Used for storing 1.8ml/2ml vial (25 wells)	
		MH-81	Used for storing 1.8ml/2ml vial (81 wells)	
		MH-100	Used for storing 1.8ml/2ml vial (internally threaded, 100 wells)	
Other Racks	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-370	Optional
		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-460/750/800//850/1000/1800	
		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-370/850/1600	
		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-750/800/850	
		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-460/1000/1800	
		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-370/850/1600	
		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-750/800/850	
		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-460/1000/1800	