LN$_2$ Biological Dewar (Square Rack Series)

Scope of Application

Low LN$_2$ consumption and light weight to provide Long-term and secure sample storage, widely used in laboratories, hospitals, pharmaceutical factories, CDC, clinics, etc.

■ Key Features

Multi Capacity Option
11 models available for 2ml Cryovials (100~ 6000), blood bags (6~252).

Low LN$_2$ Consumption
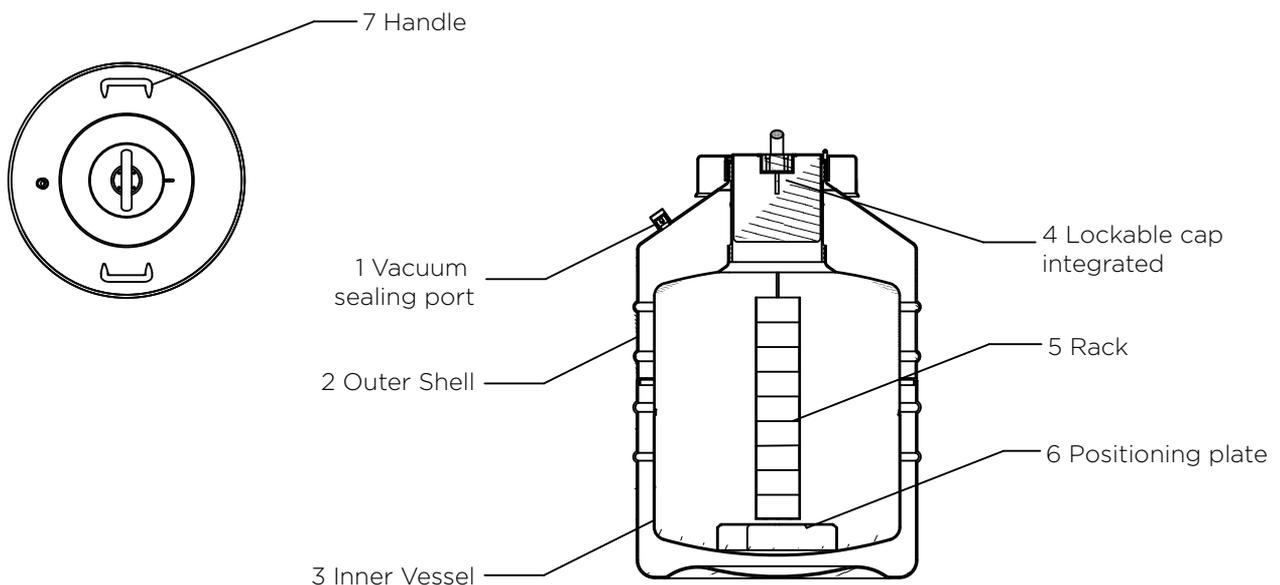Convenient and long-term storage with good temperature uniformity.

Advanced Vacuum Technology
Better temperature insulation to protect storage samples.

Durable Aluminium Alloy
Made of aviation aluminium, has excellent portability and durability.

7 Handle

1 Vacuum sealing port

2 Outer Shell

3 Inner Vessel

4 Lockable cap integrated

5 Rack

6 Positioning plate

Technical Parameters

Model	YDS-10-125	YDS-30-125	YDS-35-125	YDS-47-127	YDS-50-125
Maximum Storage Volume					
No. of Square Racks	1	6	6	6	6
2ml Vials (25 wells /box)	100	600	750	750	900
Layers	4	4	5	5	6
5ml Vials (25 wells /box)	50	300	300	300	450
Layers	2	2	2	2	3
Performance					
Volum of LN$_2$ (L)	10	31.5	35.5	47	50
Static Evapouration Rate*(L/D)	0.42	0.33	0.36	0.36	0.36
Static Holding Time**(Day)	24	95	99	131	139
Dimensions					
Neck Opening (mm)	125	125	125	127	125
Overall Height (mm)	584	736	805	734	835
Overall Diameter (mm)	300	451	451	508	508
Empty Weight (kg)	8.5	16.4	18.2	19	21.3
Full Weight (kg)	9.2	21.3	24.1	24.9	28.1
Shipping Weight (kg)	17.3	46.9	53.0	63.2	68.8

Model	YDS-65-216	YDS-95-216	YDS-115-216	YDS-120-216	YDS-145-216	YDS-175-216
Maximum Storage Volume						
No. of Square Racks	6	6	6	4	6	6
2ml Vials (100 wells /box)	2400	3000	3600	4000	4800	6000
Layers In Rack	4	5	6	10	8	10
5ml Vials (81 wells/box)	972	972	1458	1620	1944	2430
Layers In Rack	2	2	3	5	4	5
Performance						
Volum of LN$_2$ (L)	65	95	120	121	145	175
Static Evapouration Rate*(L/D)	0.78	0.81	0.85	0.85	0.85	0.87
Static Holding Time**(Day)	83	117	141	142	171	202
Dimensions						
Neck Opening (mm)	216	216	216	216	216	216
Overall Height (mm)	785	840	890	1095	1040	1090
Overall Diameter (mm)	678	678	678	584	678	678
Empty Weight (kg)	42.4	44.9	47.9	40.4	55.9	57.4
Full Weight (kg)	51	55.7	60	56.8	71.3	76.2
Shipping Weight(kg)	103.9	133.0	157.7	155.3	189.3	218.7

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

Blood Bag Capacity

Model	YDS-10-125			YDS-65-216		
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)	/	/	/	168	2	6
50ml (4R9951)	6	1	1	84	1	6
200ml (DF-200)	/	/	/	30	1	6
250ml (4R9953)	/	/	/	48	1	6
500ml (4R9955)	/	/	/	/	/	/
700ml (DF-700)	/	/	/	/	/	/

Model	YDS-95-216			YDS-115-216		
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)	252	3	6	252	3	6
50ml (4R9951)	126	3	6	168	2	6
200ml (DF-200)	30	1	6	30	1	6
250ml (4R9953)	48	1	6	48	1	6
500ml (4R9955)	36	1	6	36	1	6
700ml (DF-700)	30	1	6	30	1	6

Model	YDS-120-216			YDS-145-216		
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)	220	5	4	336	4	6
50ml (4R9951)	132	3	4	168	2	6
200ml (DF-200)	/	/	/	60	2	6
250ml (4R9953)	80	2	4	96	2	6
500ml (4R9955)	/	1	/	36	1	6
700ml (DF-700)	/	1	/	30	1	6

Model	YDS-175-216		
Blood Bag Spec.	Total No. of Bags	Rack Layers	No. of Racks
25ml (791 OS/U)	420	5	6
50ml (4R9951)	252	3	6
200ml (DF-200)	60	2	6
250ml (4R9953)	96	2	6
500ml (4R9955)	72	2	6
700ml (DF-700)	30	1	7

Product List

YDS Series	Accessory	Model	Description	Notes
YDS-10-125	Rack	FTT-25-4	Used for storing 5*5 cryo boxes (2ml), 4 layers in total, with 5*5 cryo boxes included	Standard
	Lockable cap integrated	YTGS-125	Suitable for container with 125mm and 127mm neck opening	
	Cork (125)	GS-125	Suitable for container with 125mm and 127mm neck opening	Optional
	Lockable cap	SG-125		
YDS-30-125	Rack	FTT-25-4	Used for storing 5*5 cryo boxes (2ml), 4 layers in total, with 5*5 cryo boxes included	Standard
	Lockable cap integrated	YTGS-125	Suitable for container with 125mm and 127mm neck opening	
	Cork (125)	GS-125	Suitable for container with 125mm and 127mm neck opening	Optional
	Lockable cap	SG-125		
	Roller base	TC-35	Suitable for tanks with diameter less than Φ465. Can be used for 30L and 35L tank, equipped with 5universal wheels	
	Smart cap	SRIM-200B/125	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves	
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	Standard
	Lockable cap integrated	YTGS-125	Suitable for container with 125mm and 127mm neck opening	
	Cork (125)	GS-125	Suitable for container with 125mm and 127mm neck opening	Optional
	Lockable cap	SG-125		
	Roller base	TC-35	Suitable for tanks with diameter less than Φ465. Can be used for 30L and 35L tank, equipped with 5 universal wheels.	
	Smart cap	SRIM-200B/125	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves	
YDS-47-127	Rack	FTT-25-5	Used for storing 5*5 cryo boxes (2ml), 5 layers in total, with 5*5 cryo boxes included	Standard
	Lockable cap integrated	YTGS-125	Suitable for container with 125mm and 127mm neck opening	
	Cork (125)	GS-125	Suitable for container with 125mm and 127mm neck opening	Optional
	Lockable cap	SG-125		
	Roller base	TC-50	Suitable for tanks with diameter less than Φ465. Can be used for 47L and 50L tank, equipped with 5 universal wheels.	
	Smart cap	SRIM-200B/125	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves	

Product List

YDS Series	Accessory	Model	Description	Notes
YDS-50-125	Rack	FTT-25-6	Used for storing 5*5 cryo boxes (2ml), 6 layers in total, with 5*5 cryo boxes included	Standard
	Lockable cap integrated	YTGS-125	Suitable for container with 125mm and 127mm neck opening	
	Cork (125)	GS-125	Suitable for container with 125mm and 127mm neck opening	Optional
	Lockable cap	SG-125		
	Roller base	TC-50	Suitable for tanks with diameter less than Φ465. Can be used for 47L and 50L tank, equipped with 5 universal wheels.	
	Smart cap	SRIM-200B/125	Used for monitoring real time level and temperature for containers with 125mm neck opening, 6 grooves	
YDS-65-216	Rack	FTT-81-4	Used for storing 9*9 cryo boxes (2ml), 4 layers in total, with 9*9 cryo boxes included	Standard
	Lockable cap integrated	YTGS-216	Suitable for container with 216mm neck opening	
	Cork (216)	GS-216	Suitable for container with 216mm neck opening	Optional
	Lockable cap	SG-216		
	Roller base	TC-175	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels	
	Smart cap	SRIM-200B/216	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves	
YDS-95-216	Rack	FTT-81-5	Used for storing 9*9 cryo boxes (2ml), 5 layers in total, with 9*9 cryo boxes included	Standard
	Lockable cap integrated	YTGS-216	Suitable for container with 216mm neck opening	
	Cork (216)	GS-216	Suitable for container with 216mm neck opening	Optional
	Lockable cap	SG-216		
	Roller base	TC-175	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels	
	Smart cap	SRIM-200B/216	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves	
YDS-115-216	Rack	FTT-81-6	Used for storing 9*9 cryo boxes (2ml), 6 layers in total, with 9*9 cryo boxes included	Standard
	Lockable cap integrated	YTGS-216	Suitable for container with 216mm neck opening	
	Cork (216)	GS-216	Suitable for container with 216mm neck opening	Optional
	Lockable cap	SG-216		
	Roller base	TC-175	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels	
	Smart cap	SRIM-200B/216	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves	

Product List

YDS Series	Accessory	Model	Description	Notes
YDS-120-216	Rack	FTT-81-6	Used for storing 9*9 cryo boxes (2ml), 6 layers in total, with 9*9 cryo boxes included	Standard
	Lockable cap integrated	YTGS-216	Suitable for container with 216mm neck opening	
	Cork (216)	GS-216	Suitable for container with 216mm neck opening	Optional
	Lockable cap	SG-216		
	Roller base	TC-175	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels	
	Smart cap	SRIM-200B/216	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves	
YDS-145-216	Rack	FTT-81-8	Used for storing 9*9 cryo boxes (2ml), 6 layers in total, with 9*9 cryo boxes included	Standard
	Lockable cap integrated	YTGS-216	Suitable for container with 216mm neck opening	
	Cork (216)	GS-216	Suitable for container with 216mm neck opening	Optional
	Lockable cap	SG-216		
	Roller base	TC-175	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels	
	Smart cap	SRIM-200B/216	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves	
YDS-175-216	Rack	FTT-81-10	Used for storing 9*9 cryo boxes (2ml), 10 layers in total, with 9*9 cryo boxes included	Standard
	Lockable cap integrated	YTGS-216	Suitable for container with 216mm neck opening	
	Cork (216)	GS-216	Suitable for container with 216mm neck opening	Optional
	Lockable cap	SG-216		
	Roller base	TC-175	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels	
	Smart cap	SRIM-200B/216	Used for monitoring real time level and temperature for containers with 216mm neck opening, 6 grooves suitable	