

# Smart Series (Square Racks)



## Scope of Application:

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.

## Innovative Design

- Multiple Level of Protections
- IoT and Cloud Management
- Low Energy Consumption
- Temperature and Level Display
- High Performance Stability
- New Lock Design
- Updated 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 LN<sub>2</sub> consumption rates.



## Accessories

Rack



Smart Box (SW-300)



Roller Base





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* (%/d)	0.78	0.90	0.90	0.94	0.94
Static Holding Time** (Day)	83	105	127	154	186
<b>Dimensions</b>					
Neck Opening (mm)	216	216	216	216	216
Overall Height (mm)	712	774	846	946	1060
Overall Diameter (mm)	681	681	681	681	681
Empty Weight (kg)	39.3	42.5	43.7	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
	Roller Base	YSC-M	Suitable for all 65L-175L aluminium tank, equipped with 5 universal wheels

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