

**STATEBOURNE**  
**cryogenics**

# *Biosystem Series*

Rapid specimen storage

Lockable Lid

Quick chill

IQP/OQP Protocol testing

“Dry” sample storage

Liquid or Vapour

Fully Automatic

From 10,000 to 97,600 Cryovials

5 Year Vacuum Warranty

Self Diagnostic

Data Logging

Dual solenoids

De Fog



# Biosystem Access Series

## Automatic LN2 Refrigerators.

The Biosystem 12, 24 and 50 models are designed to provide frequent-access users with rapid specimen storage and retrieval.

Full control and security backup is provided by a class-leading microprocessor controlled-system.

State of the art construction allied with the very latest in super-insulation techniques ensure that the Biosystem Access Series offer a unique combination of security and economy along with excellent isothermal properties.

Every Biosystem Access series container can be configured for either liquid (-196°C), or Vapour phase storage.

In vapour-phase operation, our design-flexibility is such that units can be configured to store at temperatures from -150°C to as low as -190°C.

Every Biosystem Access-Series unit is backed by our comprehensive 5 year vacuum Warranty and further compliance with the EC Medical Devices Directive 93/42/EC



Biosystem 12, 24 and 50 are compact and provide the best economic solution for floor space use within a laboratory.

## Access Series Features

- Castor mounted for easy location and movement within laboratory
- Full width top opening for quick access placing and retrieving samples
- Key operated lockable lid for complete access security
- Smooth surface high efficiency insulating neck plug for easy cleaning
- Painted stainless steel top plate for strength and no corrosion
- Coloured anodised storage racks available for easy identification
- Full operation and insulation instructions provided
- Installation, training, commissioning and on site maintenance are available worldwide
- De-Fog and quick chill functions for good visibility on lid opening and accelerated re-cooling after lid is shut. (timings configurable through Microprocessor settings)
- Control Systems can cope with LN2 pressure range from 20 to 40 psi.



Super Chill accessory lowers temperature and provides near isothermal storage at -190°C

optional coloured storage racks available



## Access Series Options

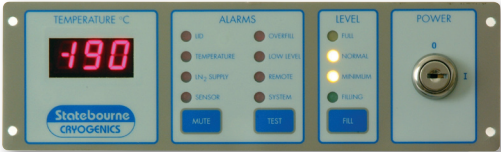
- **Vapourphase.**  
**Super chill** features for vapour phase storage provides temperature in the refrigerator lower than -190°C
- **Vapour Guard** features provides guaranteed non contact between samples and liquid nitrogen (Biosystem 24 and 50 only)
- **Pipelines.**  
**Hot Gas by-pass** feature provides additional economy when filling is by longer pipe lines as well as elimination of frost formation.
- **Daisy-chain systems** makes use of the cold pipeline and can save 20-50% LN2 consumption.

## Product Features

- Full width opening for easy quick access to all samples.
- Vapour phase storage.
- Vapour guard option on Biosystem 24 and 50.
- Quick chill feature for fast temperature recovery.
- Superchill option for vapour phase storage -190°.
- Hot gas by-pass available on all models.
- Encapsulated plug for easy cleaning.
- All metal lid and top plate for greater durability.
- Protocol Testing. all units can be offered with IQP and OQP.
- 5 YEAR VACUUM WARRANTY

## Access Series Microprocessor Controller features

- Fully alarmed for any abnormal refrigerator condition
- Data-logging of temperature vs time and all events
- Data retention ensured by back-up battery (automatically charged)
- PC connection port for desktop control and downloading data.
- Self-diagnostic electronic circuitry
- Full automatic refrigerator operational control
- Connection port for remote alarms
- Connection port for autodialler
- User configurable parameters for time and temperature functions



Biosystem 12, all units feature smooth wipe-clean neck plugs.



The tested logic of Statebourne's Microprocessor controller has been incorporated in to the proven Biosystem Access series refrigerators with sample security as the most important priority. Statebourne Engineers continuously monitor performance of all components and every unit is rigorously tested in service conditions in our factory before shipment.

**BIOSYSTEM Access 12** - The smallest fully automatic liquid nitrogen refrigerator in this series, with a capacity for the storage of 10250 2ml ampoules in the vapour phase or **12300** in the liquid phase. This model provides storage of samples for the smallest laboratory with maximum security.

**BIOSYSTEM Access 24** - The mid range model providing storage for **20350** 2ml ampoules in the vapour phase or **24050** in the liquid phase, this model provides more economic floor space utilisation with rapid accessibility and maximum security.

**BIOSYSTEM Access 50** - Bulk storage capacity of **50700** 2ml ampoules in vapour or **58500** in liquid phase this unit provides the largest volume storage with fast accessibility and all the usual Biosystem control and maximum security features.

## Technical Data

MODEL	Biosystem Access 12	Biosystem Access 24	Biosystem Access 50
PART NUMBER	9916025	9916060	9916051
LN2 Capacity (litres) Vapour/Liquid	32/178	54/334	150/762
Internal usable height mm	745	835	910
Internal usable diameter mm	617	788	1130
Weight Empty (Kg)	202	268	370
Weight Full (nitrogen) excluding ICS (kg)	346	538	986
Overall height (lid closed) mm	1077	1164	1320
Lid opening height mm	1750	2005	2685
Overall width mm	741	910	1250
Overall depth mm	900	1083	1645

See pages 6 and 7 for all sample storage capacities and system part number details.



# Biosystem Archive Series

The Biosystem 21, 40, 80 and 100 models are designed to maximise economic operation with highest capacity sample storage for the lowest possible consumption of liquid nitrogen. A liquid proof rotating internal container allows liquid levels to be controlled safely within the annular space between the drum and container wall generating near isothermal temperature mapping throughout the storage space. The container is easily turned so that every part of the storage system is accessible at the neck opening.

The Statebourne class leading microprocessor control system provides full control and security backup with the highest available level of reliability and sensor accuracy.

Statebourne's advanced fabrication techniques allied with our super-insulation expertise, ensure that the Archive Series offers the best combination of trouble-free sample security and economic operation together with excellent isothermal properties. In vapour phase storage, temperature throughout the Archive refrigerator typically vary less than 10°C.

Every Biosystem Archive-Series refrigerator incorporates the "Vapour Guard" an innovative design feature which guarantees that liquid can never come into contact with any samples. All Biosystem Archive-Series units are backed by our comprehensive 5 Year Warranty.

## All Archive Series Units Include...

- Vapour guard feature fitted as standard.
- Hot Gas by pass fitted as standard.
- De-Fog and Quick Chill functions for good visibility on lid opening and accelerated re-cooling after lid is shut (configurable).
- Control system that can cope with LN2 pressures from 20 to 40psi.
- Key operated lockable lid for complete security.



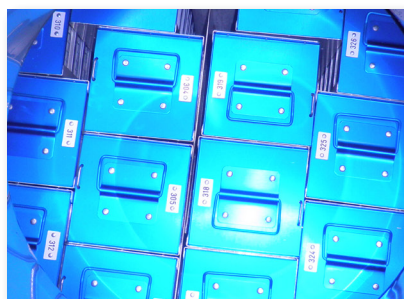
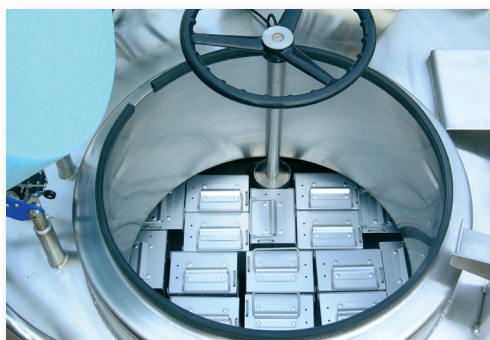
Three Biosystem 40 units provide fully automated storage for over 44,000 specimens each in vapour phase with dependable temperature stability at -185°C (Plus/minus 4°C)



Hot gas by pass controls.



Non-slip foldaway step.



- Optional coloured (anodised) storage racks available for easier identification
- Dual solenoid valves fitted for operational security
- Platinum resistance temperature sensing (most accurate and reliable)
- Full operational and installation instructions
- Biosystem includes foldaway non-slip step for easy access

## Product Features

- Massive capacity of between 40,000 to 97,000 x2ml vials.
- Vapour phase storage at -190°.
- Dry storage area free from LN2.
- Vapour guard the only guaranteed method of prevention of cross-contamination .
- De-Fog button to make access easier.
- Pipeline ready with built in hot gas by-pass.
- Off centre neck for low consumption of LN2.
- Suitable for cord bank sample storage.
- Biobank storage compatible.
- Protocol testing. All units can be offered with IQP/OQP.
- 5 YEAR VACUUM WARRANTY.

Microprocessor-controlled Maximum Efficiency  
Bulk Cryostorage LN2 Refrigerators

The tested logic of the Statebourne Microprocessor has been adapted for incorporation into the Archive Series to combine the highest available level of sample security with safe dependable operation. All electronic and mechanical components of the refrigerator are exhaustively tested during assembly and finally in service conditions by our Engineers before shipment from our factory.

Archive Series Microprocessor Controller Features

- Fully automated top up LN2
- Fully alarmed for any abnormal event
- Data-logging of all events and time/temperature record
- PC connection port for desktop control and downloading data
- Self-diagnostic electronic circuitry
- Connection port for remote alarms
- Connection port for autodialler
- User configurable settings for alarm time and temperature limits
- Data retention assured with back-up battery (automatically maintained charged)



All electronic circuitry and components comply with the current requirements of Low Voltage Directive.

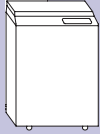
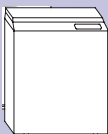
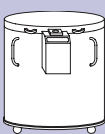
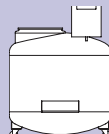
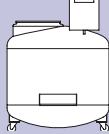


















Technical Data

MODEL	Biosystem Archive 21	Biosystem Archive 40	Biosystem Archive 60	Biosystem Archive 80	Biosystem Archive 100	Biosystem Archive 100 +
REFRIGERATOR PART NUMBER	9916092	9916082	9916083	9916049	9916084	9916088
2ML Cryovials	21,000	44,200	67,100	79,300	91,500	97,600
LN2 Capacity (litres) vapour phase (Gross internal volume litres)	81/(440)	193/(860)	236/(1244)	260/(1446)	281/(1640)	300/(1740)
Internal storage drum height mm	785	727	615	730	840	930
Internal storage drum diameter mm	750	1067	1406	1406	1406	1406
Weight Empty (Kg)	356	592	761	808	872	909
Weight Full (nitrogen) excluding ICS	711	1287	1766	1976	2197	2315
Overall Height (lid closed) mm	1433	1440	1272	1387	1497	1587
Overall Height (lid open) mm		2022	1955	2089	2199	2289
Overall Diameter (mm)	897	1227	1608	1608	1608	1608

See pages 6 and 7 for all sample storage capacities and system part number details.

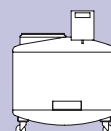
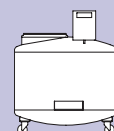
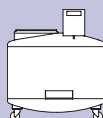
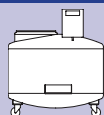
# Biosystem Series

## Biosystem Sample Storage Capacities

						
MODEL		Biosystem Access 12	Biosystem Access 24	Biosystem Access 50	Biosystem Archive 21	Biosystem Archive 40
1.2 & 2ml Cryovials		12,300 Part No. 5801259	24,050 Part No. 5801252	50,700 Part No. 5801234	21,000 Part No. 5801621	44,200 Part No. 5801466
		10,250 Part No. 5801260	20,350 Part No. 5801253	50,700 Part No. 5801234	21,000 Part No. 5801621	44,200 Part No. 5801466
5ml Cryovials		5,103 Part No. 5801382	9,639 Part No. 5801384	25,272 Part No. 5801387	9,072 Part No. 5801631	19,728 Part No. 5801472
		4,374 Part No. 5801383	8,262 Part No. 5801385	22,113 Part No. 5801388	9,072 Part No. 5801631	19,728 Part No. 5801472
1.4ml 96 Well Plates		N/A	N/A	N/A	25,344 Part No. 5801632	54,912 Part No. 5801477
		13,824 Part No. 5801374	25,920 Part No. 5801375	65,472 Part No. 5801377	25,344 Part No. 5801632	54,912 Part No. 5801477
Baxter Bags (Type R995)		192 Part No. 5801278	408 Part No. 5801342	816 Part No. 5801343	On Request	672 Part No. 5801311
		192 Part No. 5801278	408 Part No. 5801342	816 Part No. 5801343	On Request	672 Part No. 5801311
Gambro Bags (Type DF700)		126 Part No. 5801281	224 Part No. 5801357	504 Part No. 5801358	On Request	364 Part No. 5801312
		126 Part No. 5801281	224 Part No. 5801357	504 Part No. 5801358	On Request	364 Part No. 5801312
Pall 25mm Cord Blood Bags		1,200 Part No. 5801360	2,040 Part No. 5801361	4,440 Part No. 5801363	1,960 Part No. 5801633	4,340 Part No. 5801480
		1,000 Part No. 5801360	1,700 Part No. 5801361	4,440 Part No. 5801363	1,960 Part No. 5801633	4,340 Part No. 5801480
Straws 0.25cc in Goblets		170,560 Part No. 5801280	401,800 Part No. 5801334	979,080 Part No. 5801373	393,600 Part No. 5801623	729,800 Part No. 5801482
		170,560 Part No. 5801279	401,800 Part No. 5801335	815,900 Part No. 5801372	393,600 Part No. 5801623	729,800 Part No. 5801482
Straws 0.5cc in Goblets		75,920 Part No. 5801280	178,850 Part No. 5801334	435,810 Part No. 5801373	175,200 Part No. 5801623	324,850 Part No. 5801482
		75,920 Part No. 5801279	178,850 Part No. 5801335	363,175 Part No. 5801372	175,200 Part No. 5801623	324,850 Part No. 5801482
 = Liquid phase		 = Vapour phase				

# Biosystem Series

## Biosystem Sample Storage Capacities



MODEL		Biosystem Archive 60	Biosystem Archive 80	Biosystem Archive 100	Biosystem Archive 100+
1.2 & 2ml Cryovials		67,100 Part No. 5801468	79,300 Part No. 5801296	91,500 Part No. 5801470	97,600 Part No. 5801508
		67,100 Part No. 5801468	79,300 Part No. 5801296	91,500 Part No. 5801470	97,600 Part No. 5801508
5ml Cryovials		28,674 Part No. 5801474	33,453 Part No. 5801390	38,232 Part No. 5801476	43,011 Part No. 5801511
		28,674 Part No. 5801474	33,453 Part No. 5801390	38,232 Part No. 5801476	43,011 Part No. 5801511
1.4ml 96 Well Plates		76,032 Part No. 5801478	92,928 Part No. 5801379	101,376 Part No. 5801479	109,824 Part No. 5801572
		76,032 Part No. 5801478	92,928 Part No. 5801379	101,376 Part No. 5801479	109,824 Part No. 5801572
Baxter Bags (Type R995)		1,104 Part No. 5801310	1,104 Part No. 5801310	1,104 Part No. 5801310	1,104 Part No. 5801310
		1,104 Part No. 5801310	1,104 Part No. 5801310	1,104 Part No. 5801310	1,104 Part No. 5801310
Gambro Bags (Type DF700)		784 Part No. 5801308	784 Part No. 5801308	784 Part No. 5801308	784 Part No. 5801308
		784 Part No. 5801359	784 Part No. 5801308	784 Part No. 5801308	784 Part No. 5801308
Pall 25mm Cord Blood Bags		5,300 Part No. 5801364	6,360 Part No. 5801365	7,420 Part No. 5801481	8,480 Part No. 5801510
		5,300 Part No. 5801364	6,360 Part No. 5801365	7,420 Part No. 5801481	8,480 Part No. 5801510
Straws 0.25cc in Goblets		911,840 Part No. 5801306	1,139,800 Part No. 5801371	1,367,760 Part No. 5801483	1,367,760 Part No. 5801483
		911,840 Part No. 5801306	1,139,800 Part No. 5801371	1,367,760 Part No. 5801483	1,367,760 Part No. 5801483
Straws 0.5cc in Goblets		405,880 Part No. 5801306	507,350 Part No. 5801371	608,820 Part No. 5801483	608,820 Part No. 5801483
		405,880 Part No. 5801306	507,350 Part No. 5801371	608,820 Part No. 5801483	608,820 Part No. 5801483

= Liquid phase

= Vapour phase



# Storage System Description

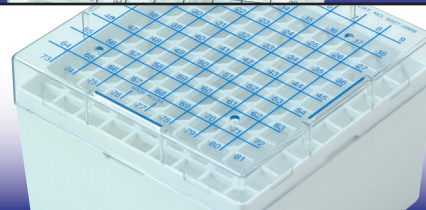
## 1.5-2ml Cryovials.

100 Cell (10x10) and some 25 Cell (5x5)  
Polycarbonate cryoboxes in aluminium racks with lifting handles and locking rods.  
(Boxes Included)



## 5ml Cryovials.

81 Cell (9x9)  
Polycarbonate cryoboxes in aluminium racks with lifting handle and locking rods.  
(Boxes Included)



## Storage plates.

To suit 96 Cell (12x8) Well plates of various volumes,  
stored in aluminium racks with double handles and locking rods.  
(Boxes Not included) ask for more details.



## Cryocyte/Blood bag storage.

Stacking aluminium special baskets with lifting handles designed to suit 250ml Baxter Blood Bag storage.  
(basket will also store 50ml and 5ml Baxter bags, capacity will vary)  
Stacking aluminium special baskets with lifting handle designed to suit Gambro Blood Bags.



## Cord Blood storage.

Aluminium trays in towers with single lifting handles and locking rods.  
(Each tray will hold a maximum of 10 cassettes, cassettes not supplied).



## Straw storage.

69mm diameter canisters made from Polycarbonate, storing 67mm diameter goblets. Goblet lifters provided.  
(Goblets not supplied)



## Dealer Information.