

Biostor Series

Standard Wide Neck Refrigerators

Biostor traditional refrigerators provide a low cost alternative to the Biosystem Series for users able to accept higher levels of refrigerator management responsibility and where full specimen storage history is not required.

The Biostor 12 and 24 are supplied with built in liquid nitrogen fill and level sensor tubes to allow the addition of an 'Auto-fill kit' using a suitable Cryostor as a reservoir (see page 18). Level sensors can be set to control liquid levels giving either liquid or vapour phase storage and temperatures as low as -185°C can be achieved at warmest point of sample storage.

Biostor 12 & 24 Models are mounted on strong castor wheels and a roller base is available for Biostor 5.



Model	Part No.	Volume Litres	Empty Wt Kg	Full Wt Kg	Int Dia mm	Int Ht mm	Ext Dia mm	Ext Ht mm	R/base Pt no	Autofill kit pt no
Biostor 5	9915120	55	28	81	406	513	460	777	9915125	-
Biostor 12	9916027	220	125	303	617	745	750	1131	-	9701042
Biostor 24	9916065	380	162	469	788	835	900	1183	-	9701042

Laboratory Open Dewars

OD Series



A **Mini** and **Maxi** range of stainless steel Open Dewars for laboratory process, bench top and industrial freezing applications provides capacities from 0.5 litres to 80 litres. Of exceptionally strong stainless steel construction, these dewars are ideal for use as cold traps, for immersion or simply for temporary liquid storage. All models are supplied with insulating lids (Except 0.5 litre model) and either swivel or fixed carry handles. Roller bases are available for larger models.

Mini

Model	Part No.	Volume Litres	Int Dia mm	Ext Dia mm	Int Ht mm	Ext Ht mm	Wt Kg Empty	Wt Kg Full	Roller Base Part No.
0.5	9915010	0.6	65	87	180	204	0.5	1.0	-
1	9915020	0.9	85	107	206	232	0.9	1.6	-
2	9915030	1.8	100	122	285	312	1.3	2.8	-
3	9915040	2.6	185	200	160	190	1.8	3.9	-
6	9915050	5.5	185	200	270	300	2.4	6.8	-

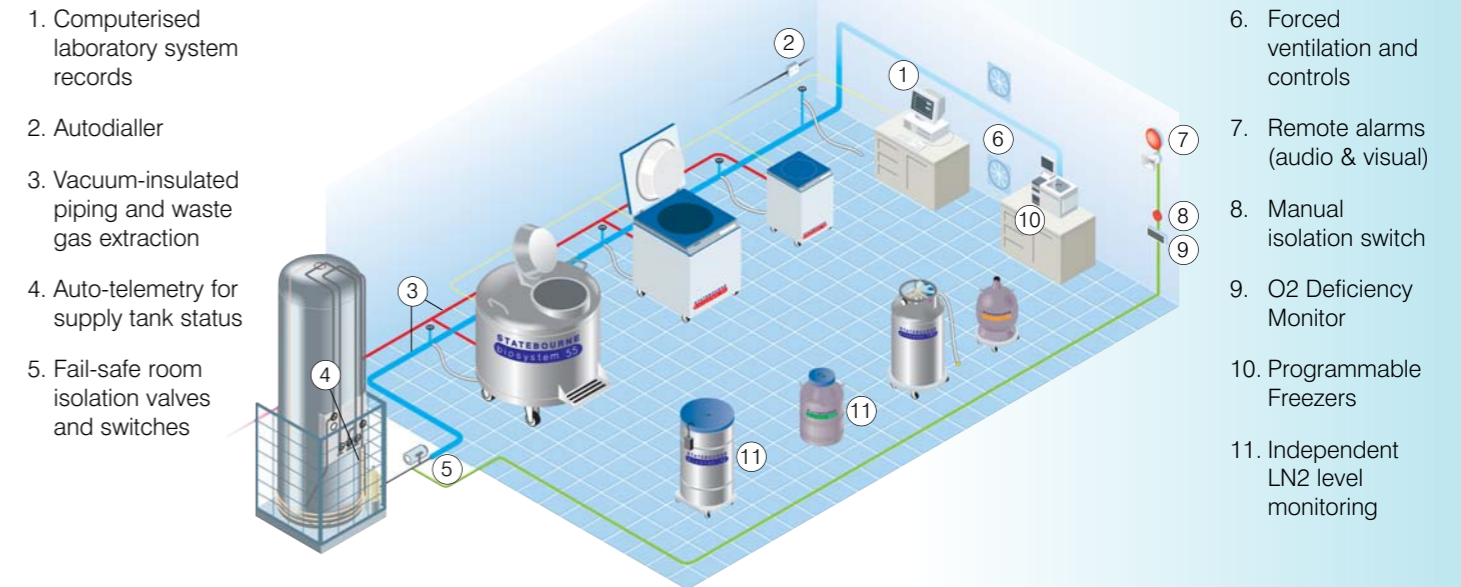
Maxi

10	9915070	10	150	217	590	725	7.1	15.5	-
25	9915090	31	327	385	400	595	15.0	40.0	9915092
50	9915100	50	381	462	471	656	25.0	65.0	9915102
80	9915115	66	406	460	513	777	28.0	81.0	9915125

Laboratory Safety

Practical LN2 Management Equipment

Both safety and practical aspects of any laboratory using cryogenic liquids require attention in the planning stages. However, even in an established laboratory, reviews of both safety and improvements may need to be considered from time to time. Statebourne Cryogenics has considerable experience in the design, manufacture and installation of all types of equipment in this field and our Engineers are always available to give advice. A typical medium sized well appointed cryogenic laboratory is shown below. Statebourne Cryogenics can supply and install complete systems.



Statebourne Engineers can advise on safety and on the installation of any of the above facilities.

Personal Safety

Protective Equipment

Cryogenic Gloves



Elasticated wrist-type
Part No. 8701031

Cryogenic Aprons & Gloves



Part No. 9701112 - Apron
Part No. 9701115 - Gloves (Medium)

Safety Visor



Part No. 8701032

O2 Deficiency Monitors



Part No. 9702062 - Wall-mounted
Part No. 9702124 - Personal

Liquid Level Control and Temperature Monitoring

Equipment for LN2 Management & Security

LC 200 Level Controller Kit (Part Number 9701042)

Can be used with **Biostor**, **Open Dewars** and **other applications** such as cold traps. The kit is supplied complete with control box, sensors, dual solenoid valves, all electrical connections and pipes with flexible delivery hose. Designed to be used with Biostor 12 and 24 models to convert to automatic operation when used with a Cryostor vessel as a reservoir, the LC 200 is supplied with a power source for mains operation.



Cryoguard with Datalogger

(Part Number 9701321)

Can be used with **Biostor**, **Biorack**, **Biotrek** and **Bio** models. Battery operated, this unit can be independently mounted on any of the Biostor, Biorack, Biotrek or Bio Series containers to provide a continuous watch on the refrigerator's condition. An alarm will sound if pre-specified temperature limits are transgressed. Additionally, a logged record of temperature at pre-specified intervals is maintained which can be downloaded to a PC. This unit is battery operated but can also be mains operated with a suitable power source.

Low Level Alarms

(Part number 9702000) Battery-operated
(Part Number 9702041) Mains-operated

These units can be used with **Bio**, **Biorack** and **Biostor**, battery or mains operated models.

Battery or mains operated these units are supplied with control box and adjustable probe fitted in a protective tube specially mounted in the neck plug of the vessel. When the level of liquid nitrogen falls more than 2 or 3mm below the set position of the probe, both visual and audible alarms are activated.



Autodialler Unit

Mains operated with auto charged battery back up (Part Number 9702160)

Can be used with **Low Level Alarm** (Mains model), **Cryoguard Datalogger** (when mains powered) and **all Biosystem** models. The Autodialler unit connects to an output port on any of the above models and receives a signal in the event of an 'alarm' condition. The Autodialler will then make a telephone connection to three numbers until an answer is received and a pre-recorded message is played.

Cryogenic Accessories

Additional Basic Equipment

Hoses

Flexible stainless steel liquid nitrogen delivery hoses with 150mm reinforcement protection at each end. Supplied in three standard lengths with one end male fitting and other end with 'bull nose' connection fitting with running connector nut.

- 1/2" BSP x 1.2m long. (Part number 3701006)
 - 1/2" BSP x 1.5m long. (Part number 3701004)
 - 1/2" BSP x 2.0m long. (Part number 3701002)
- Special lengths and end connections available on request.



Adaptors

Basic adaptor fittings to provide solutions to most situations.

- 1/2" BSPTM to CGA295. (Part number 1201382)
- 3/8" NPTM to 1/2" BSPPM Cone face to suit standard hose. (Part number 1201372)
- 1/2" BSPTM to 1/2" BSPPM Cone face to suit standard hose. (Part number 1401092)
- 1/2" BSPP socket. (Part number 1201245)



Dispensing Lance with phase separator and anti splash shield (Part number 9701262)

Connects to the 'female' end of a standard hose and is used for filling dewars and small refrigerators from a low pressure Cryostor unit.



In line safety relief valve assembly (Part number 9911009)

An essential safety item that must be fitted with any pipe or hose where it is possible for liquid nitrogen to become trapped.

Cryogenic Ball Valve 1/2" (Part number 1701003)

Brass with chromium plated finish and modified for cryogenic applications.

Sealed cell foam rubber pipe Insulation

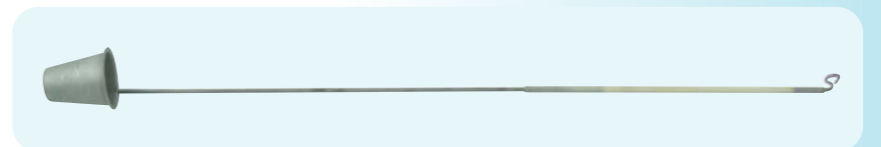
In 2 meter lengths in 2 sizes: 'small' to suit standard hose (Part number 7401028): 'large' for second layer (Part number 7401071)

Stainless steel baskets

Various sizes available for immersion applications.

Dermatology 'dipper'

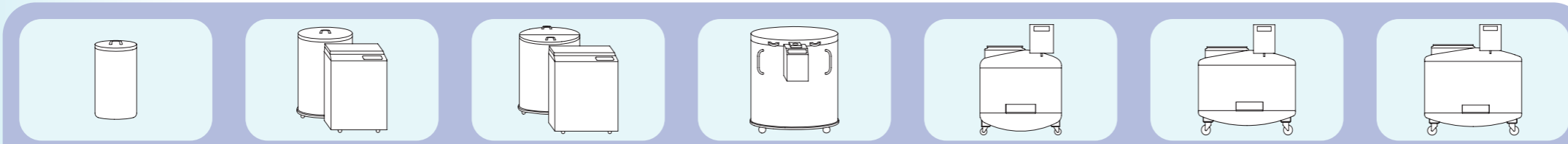
Small (10ml) stainless steel ladle with long handle (500mm) for liquid nitrogen (Part number 9701017).



Level Measuring sticks

2 lengths available: 0-50cms (Part number 9701009) and 0-100cms (Part number 9701012)

Biostor & Biosystem Sample Storage Capacities



L = Liquid phase
V = Vapour phase

Refrigerator Model	Biostor 5		Biosystem Access 12 & Biostor 12		Biosystem Access 24 & Biostor 24		Biosystem Access 50		Biosystem Archive 36		Biosystem Archive 55		Biosystem Archive 80		Storage System Description
Storage Phase	L	V	L	V	L	V	L	V	L	V	L	V	L	V	
1.2 & 2.0ml Cryovials	5,292	4,116	12,300	10,250	24,050	20,350	50,700	50,700	37,400	58,000	79,300			100 Cell (10 x 10) and some 25 Cell (5 x 5) Poly-carbonate cryoboxes in aluminium racks with lifting handles and locking rods. (Boxes Included)	
Part Number	5801064	5801067	5801259	5801260	5801262	5801253	5801216	5801216	5801262	5801294	5801296				
5ml Cryovials	972	972	5,103	4,374	9,639	9,639	25,272	22,113	16,524	23,895	33,453			81 Cell (9 x 9) Poly-carbonate cryoboxes in aluminium racks with lifting handles and locking rods. (Boxes Included)	
Part Number	5801380	5801381	5801382	5801383	5801384	5801385	5801387	5801388	5801386	5801389	5801390				
1.4ml 96 Well Plates	n/a	n/a	n/a	13,824	n/a	25,920	n/a	65,472	49,920	68,352	93,984			To suit 96 Cell (12 x 8) (Trackmate) Poly-carbonate cryoboxes stored in aluminium racks with double handles and locking rods. (Boxes not included)	
Part Number	n/a	n/a	n/a	5801374	n/a	5801375	n/a	5801377	5801376	5801378	5801379				
Baxter Bags (Type R995)	40	40	192	192	408	408	816	816	672	1,104	1,104			Stacking aluminium special baskets with lifting handles designed to suit 250ml Baxter Blood Bag Storage. (Basket will also store 50ml and 500ml Baxter Bags, capacity will vary)	
Part Number	5801119	5801119	5801278	5801278	5801342	5801342	5801343	5801343	5801311	5801310	5801310				
Gambro Bags (Type DF700)	28	28	126	126	224	224	504	504	364	392	784			Stacking aluminium special baskets with lifting handle designed to suit Gambro Blood Bags.	
Part Number	5801074	5801074	5801281	5801281	5801357	5801357	5801358	5801358	5801312	5801359	5801308				
Pall 25ml Cord Blood Bag	n/a	n/a	1,200	1,000	2,040	2,040	4,440	4,440	3,720	5,300	6,360			Aluminium trays in towers with single lifting handles and locking rods. (Each tray will hold a maximum of 10 cassettes, cassettes not supplied).	
Part Number	n/a	n/a	5801360	5801360	5801361	5801361	5801363	5801363	5801362	5801364	5801365				
Straws 0.25cc In Goblets	56,580	56,580	170,560	170,560	401,800	401,800	979,080	815,900	583,840	1,003,680	1,254,600			69mm dia canisters made from Poly-carbonate, storing 67mm dia Goblets. Goblet lifters provided. (Goblets not supplied)	
Part Number	5801072	5801152	5801280	5801279	5801334	5801335	5801373	5801372	5801305	5801306	5801371				
Straws 0.5cc In Goblets	25,185	25,185	75,920	75,920	178,850	178,850	435,810	363,175	259,880	446,760	558,450			69mm dia canisters made from Poly-carbonate, storing 67mm dia Goblets. Goblet lifters provided. (Goblets not supplied)	
Part Number	5801072	5801152	5801280	5801279	5801334	5801335	5801373	5801372	5801305	5801306	5801371				

Notes Special storage systems for other types of specimens (e.g. heart valves, special sized blood bags) can be designed and manufactured. Please consult our Technical Sales Department.
Capacities for the 'Archive' series of refrigerators are the same for 'liquid' or 'vapour' phase storage.

Racks can be numbered with high visibility 'number plates' to suit customer's inventory sample location reference systems. Racks can also be anodized in a choice of colours to assist identification. Please consult our Technical Sales Department.
All Biostor and Biosystem refrigerators operate at the lowest possible liquid nitrogen loss rates. Actual rates will depend on type of operation and liquid transfer arrangements. Please consult our Technical Sales Department for information.