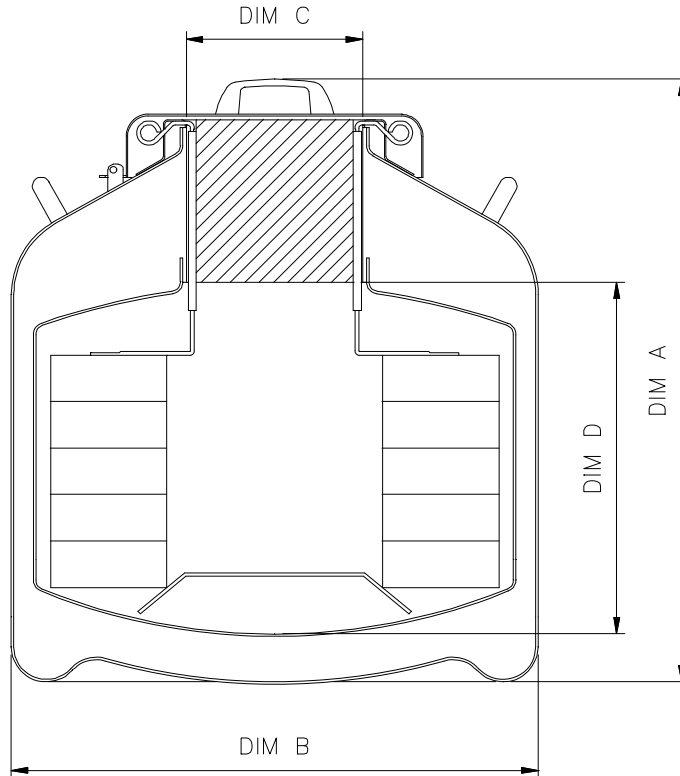


**Biorack 3000**

Part Number 9902149



Overall Height (A)	738 mm (838 mm on roller base)
Overall Diameter (B)	646 mm
Neck Diameter (C)	216 mm
Internal Depth (D)	428 mm
Weight Empty	42 kg (Including inventory system)
Weight Full	110 kg
Liquid Nitrogen Capacity	85 litres
Static Evaporation Rate	0.63 L/Day
Static Holding Time	135 Days
Number of Racks	6
Number of Cryoboxes per Rack	5 (Liquid Phase) 3 (Vapour Phase)
Cryobox Size	133 x 133 x 51 mm
Vials per Cryobox	100
Storage Capacity (2ml Vials)	3000 (Liquid Phase) 1800 (Vapour Phase)

# Operating instructions

## Biorack series



## Safety

The wearing of a suitable pair of gloves is essential for day to day operations with liquefied gases. Heavy-duty leather or thermally insulated gloves or gauntlets are ideal for this purpose.

Clear visors and thermal aprons can be worn to protect the face and body from liquid splashes. Appropriate footwear should be worn at all times.

For further information on our range of safety clothing and equipment please contact us, at the address shown at the top of this page or visit our web site at [www.statebourne.com](http://www.statebourne.com)

Use extreme care to prevent spilling and splashing during transfer and removal of storage contents and holders. Immediate medical attention should be sought for any frostbite injuries due to Liquid Nitrogen

Nitrogen gas can deplete oxygen levels within confined unventilated areas, always consult an Expert or Health & Safety operative before attempting to operate equipment which contains liquid nitrogen as O2 deficiency monitoring equipment may also be required for safe operation.

Always keep your Cryolab container in an upright position.

Do not use this storage vessel for transport, should you need to transport samples under cryogenic conditions, we can provide you with details of our Biotrek dry-shipper series.

# Operating instructions

## Biorack series

### Filling Instructions

As with any vacuum vessel, never overfill your Biorack. The liquid level should never be above the level of the bottom of the neck tube. To avoid damage to your BIORACK cryogenic storage vessel, it is important that the following procedure is followed when filling a warm vessel:

1. Remove all packaging. Failure to do so can result in chilling of the vacuum port and possible damage to the container.
2. When filling from a supply unit the transfer hose should be inserted down the neck, ensuring that the liquid does not come into contact with the index ring, as this could cause the adhesive bond to break.
2. A warm vessel should only be filled to approximately 50% capacity initially to allow the vessel to cool.
3. Allow to stand for approximately 3 hours before topping up. This will limit stress caused by the sudden temperature change associated with adding liquid nitrogen to a warm vessel.
4. Do not fill above the bottom level of the neck-tube. (Allowance should be made for displacement of Liquid Nitrogen caused by canisters if they are not initially installed). Filling the tank above this level may cause immediate or premature vacuum failure.
5. When inserting or removing canisters, care should be taken to avoid contact with the neck tube. Canisters should be inserted slowly as scratches on the neck tube can cause premature vacuum failure.
6. Once full, the vapour at the top of the neck should be allowed to settle before replacing the lid.

The pump-down boss / relief port cover should not be removed and contact with liquid nitrogen should be avoided as the extreme cold may cause shrinkage, allowing air to enter the vacuum space, this will adversely affect the performance of your Biorack.

**NEVER LEAVE YOUR CONTAINER UNATTENDED DURING A FILL, LN2 OVERFLOW IS EXTREMELY DANGEROUS TO OPERATORS AND MAY CAUSE DAMAGE TO THE TANK RESULTING IN LOSS OF SAMPLES STORED AND INVALIDATED WARRANTY**

### Storing Samples in Vapour Phase

The storage of samples in vapour phase is a safe and convenient alternative to liquid phase storage, conversion to vapour phase operation can be achieved by following the steps outlined below:

1. Remove the bottom 2 cryoboxes from each rack
2. Fill the Biorack with liquid nitrogen to the following heights (measure liquid level by using the dipstick provided with the container:

Biorack 750	110mm
Biorack 3000	90mm
Biorack 4800	90mm
Biorack 6000	90mm
3. Place racks into vessel without the 2 bottom cryoboxes from each rack.
4. When operating Biorack units in vapour phase it is strongly advisable to fit a Cryoguard alarm. This can be supplied ready to fit to the Biorack simply by changing the neck plug contact [sales@statebourne.com](mailto:sales@statebourne.com) for further details.

**Samples are now above the liquid nitrogen and are stored in the vapour phase.**



## Technical specifications

Model	Biorack 750	Biorack 3000	Biorack 4800	Biorack 6000
Liquid capacity, litres	35	85	131	160
Evaporation rate, litres/day	0.30	0.63	0.63	0.63
Holding time, days	117	135	208	254
Weight empty, Kg	19	42	46	64
Weight full, Kg	47	110	152	193
Total Vial capacity	750	3000	4800	6000
Cryobox size	5x5	10x10	10x10	10x10
Overall diameter, mm	480	646	646	648
Overall height, mm	747	738	913	1027
Neck diameter, mm	120	216	216	216
Part No.	9902132	9902149	9902154	9902144

Cryoguard alarms in mains or battery versions should be positioned in a safe and secure position.



The Cryoguard alarm sensor tube should be handled with care.



Bioracks complete with racks cryoboxes and roller base.

