

CRYOPRESERVATION EQUIPMENT

MVE HE/ETERNE SERIES, -150°C/-190°C VAPOUR STORAGE

KEY PRODUCT FEATURES AND BENEFITS

- Storage capacity from 15,600 to 79,000 vials
 - Also suitable for a wide variety of blood bag systems
- Lowest under lid temperature in the industry
- Lowest liquid usage in the industry
 - LN2 cost savings of up to 70%
- Offset neck and free moving sample turn tray
 - Easy sample access and user convenience
- Two supply solenoids to reduce risk of overfilling
- Available with TEC 3000 electronic controller
 - Keyless security system
 - Level and temperature controls with both visible and audible alarms
 - Interface to external system via serial communications with RS-485
 - Stores time and date stamped information on 30,000 most recent events



New Ergonomic double step, folds away when not required

PRODUCT DESCRIPTION:

The MVE HE/Eterne range of liquid nitrogen vapour freezers have been specifically design for vapour storage of valuable biological samples. Their efficient thermal design ensures that 95% of system surface area is enclosed by vacuum, compared to typically 60% in standard freezers. There is virtually no temperature gradient throughout the vessel and the temperature under the lid is -190°C (HE version -150°C). Therefore there is no need for any artificial aids, such as copper cylinders, which greatly increase the LN2 consumption.

The -190°C under lid temperature provides a greater safety margin below the Glass Transition Temperature giving increased long term sample viability in true vapour storage. The liquid reservoir below the sample platform will typically maintain the temperature for more than 20 days in vapour use should the supply of LN2 cease. The vessels are validated to maintain temperature of samples for at least two hours with the lid removed.

Lower Lifetime Costs - The HE/Eterne range has the lowest liquid usage compared to other liquid nitrogen vapour freezers on the market today and the lowest running cost/sample. LN2 cost savings of up to 70% can be achieved when compared to standard storage units of equivalent capacity.

Sample Integrity - The Eterne series not only reduces the running costs of the system but more importantly increases the safety of your stored samples. With the lowest possible vapour storage temperatures and a very low evaporation rate your samples will be held in the safest environment available on the market.

User Friendly - The offset neck and free moving sample turn tray provides a single sample retrieval point eliminating the reaching and stretching required with standard freezers. The 'lift over height' has been kept to a minimum, aided by either a single or double step external platform.

Efficient Use of Space - The compact design of the HE/Eterne range gives you the highest number of vials stored per square foot of laboratory space compared to other freezers on the market.

State-Of-The Art Electronic Controller Unit - The MVE TEC 3000 system is supplied with all versions of the HE/Eterne with the exception of the basic model. It offers password protection, twin platinum RTD temperature probes, high and low level alarms and LN2 usage statistics. A 72 hour battery backup and gas bypass system are available as options.

Warranty - There is a standard 2 year warranty on all equipment (parts and labour) and a **5 year vacuum warranty**. Chart MVE's products have a rugged design, high quality welds and advanced vacuum technology.

CryoService Deliver a Total Solution - to meet a wide variety of Cryopreservation requirements. This includes liquid gases and associated storage vessels, super insulated vacuum transfer pipelines, the best liquid nitrogen vapour storage freezers on the market, oxygen depletion systems and business management outputs – a total package from one provider. The Chart MVE range extends from a broad line of liquid and vapour phase freezers for straw, ampoule & blood bag storage to lightweight aluminium shippers and Dewars.

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AT A GLANCE COMPARISON OF RANGE

	MVE 810 HE/ETERNE	MVE 1520 HE/ETERNE	MVE 1830 HE/ETERNE
Total 1.2 & 2ml Vial capacity	15,600	33,800	79,950
Outer Diameter (mm)	812.8	1066.8	1524
Overall Height (mm)	1202	1351	1608

DETAILED SPECIFICATION

	MVE 810 HE/ETERNE	MVE 1520 HE/ETERNE	MVE 1830 HE/ETERNE
UNIT DIMENSIONS			
LN2 Capacity (litres)	370	756	1672
LN2 Capacity (under platform (litres)	52	133	296
Neck Opening (mm)	317	444.5	635
Useable Internal Height (mm)	698	726.4	726.4
Inner Diameter (mm)	729	977.9	1422.4
Overall Height (mm)	1202	1351	1608
Outer Diameter (mm)	812.8	1066.8	1524
Weight Empty (kg)	216	341	681
UNIT CAPACITIES			
1.2 & 2ml Vials (Internally Threaded)			
Number of Racks (100 cell boxes)	12	24	54
Number of Racks (25 cell boxes)	4	12	30
Number of Stages per Rack	12	13	13
Total Vial Capacity	15,600	33,800	79,950
Blood Bag Capacities			
Fenwall 4R9951	666	1488	2880
Fenwall 4R9953	380	760	1560
Fenwall 4R9955	272	720	1104

A Offset neck design to maintain -190°C in vapour storage (HE version -150°C) and provide low liquid nitrogen consumption with standard racks

B Durable aluminium lid - designed for longer life

C Rotating interior tray provides easy access to cryobiological samples

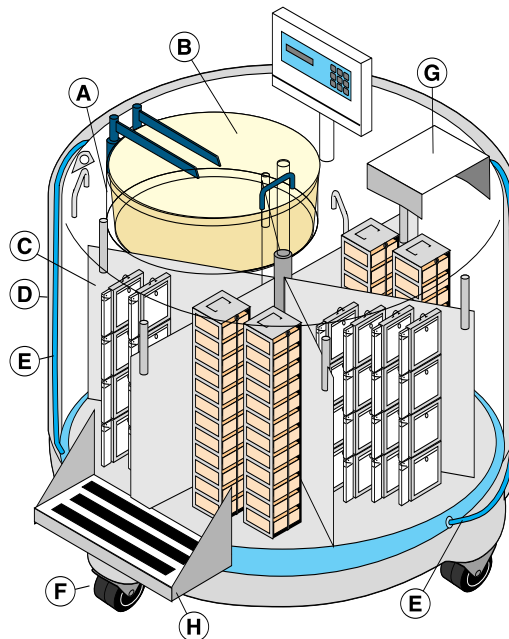
D Low maintenance, all stainless steel construction

E Annular filling lines reduces frost and ice formation near lid

F Super-tough, durable casters

G Rack Stand

H Step-up platform (MVE 1520 HE/ETERNE, 1830 HE/ETERNE) - latest version has fold up double step



OPTIONAL FEATURES

Battery Back-Up - provides fill operation for 72 hours in the event of power supply failure

Gas By-Pass - vents the incoming filling gas until liquid reaches the valve, minimising the normal filling losses associated with filling from long delivery pipes.

Systems available which conform to MMD 93/42/EEC, the Medical Device Directive for the EU