



# MVE Eterne/HE Series



There is a critical temperature for most biological samples that are cryopreserved. Known as the Glass Transition Temperature ( $T_g$ ), this is widely accepted as being in the order of  $-130$  to  $-135^\circ\text{C}$ . The long term viability of frozen samples can be seriously compromised if stored above this temperature. Further, if they experience several transitions through the temperature, in either thermal direction additional deterioration may occur. It is important that the  $\text{LN}_2$  freezer maintain a lower temperature, even during filling and sample retrieval cycles. This is much more likely to be achieved if the freezer maintains  $-190^\circ\text{C}$  than if the system is at or near the critical temperature at normal equilibrium. Chart-MVE's approach to this problem was to improve the fundamental design of freezers used in vapor phase and to design and build a nitrogen vapor freezer which addresses the previous issues associated with storage in vapor.

## PRODUCT SPECIFICATIONS

	MVE 810 / 815 Eterne/HE Series	MVE 1520 / 1536 Eterne/HE Series	MVE 1830 / 1879 Eterne/HE Series
<b>UNIT DIMENSIONS</b>			
LN2 Capacity (Liters)	370	756	1672
LN2 Capacity Under Platform (L)	52	133	296
Neck Opening (In/mm)	12.5 / 317	17.5 / 444.5	25 / 635
Useable Internal Height (In/ mm)	27.5 / 698	28.6 / 726.4	28.6 / 726.4
Inner Diameter (In/mm)	28.7 / 729	38.5 / 997.9	56 / 1422.4
Overall Height (In/mm)	47.3 / 1202	53.2 / 1351	63.3 / 1608
Outer Diameter (In/mm)	32 / 812.8	42 / 1066.8	60 / 1524
Weight Empty (Lbs/Kg)	475 / 216	750 / 341	1500 / 681
<b>UNIT CAPACITIES - VIALS</b>			
1.2 & 2 ml 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

<b>Blood Bag Capacities</b>				
Unit Capacities	Frame Ht (in/mm)	Bags/ Frame	No Frames	Total Bags
<b>MVE 810 Eterne/HE</b>				
4R9951	25.5 / 648	6	111	666
4R9953	26 / 661	4	95	380
4R9955	26 / 661	4	68	272
<b>MVE1520 Eterne/HE</b>				
4R9951	25.5 / 648	6	224	1,344
4R9953	26 / 661	4	190	760
4R9955	26 / 661	4	180	720
<b>MVE 1830 Eterne/HE</b>				
4R9951	25.5 / 648	6	480	2,880
4R9953	26 / 661	4	390	1,560
4R9955	26 / 661	4	276	1,104
<b>MedSep 810 Eterne/HE</b>				
MedSep 810 HE+	30.9/784	8	140	1120
<b>MedSep 1520 Eterne/HE</b>				
MedSep 1520 HE+	30.9/784	8	428	3424
<b>MedSep 1830 Eterne/HE</b>				
MedSep 1830 HE+	30.9/784	8	828	6624

**TWO Year Standard Warranty**  
**FIVE Year Vacuum Warranty**

Conforms to MDD 93/42/EEC, the Medical Device Directive for the EU