

MVE High Efficiency 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°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 LN₂ 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°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

UNIT DIMENSIONS	MVE 810 / 815	MVE 1520 / 1536	MVE 1830 / 1879
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
UNIT CAPACITIES - VIALS			
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

Blood Bag Capacity

MVE 810	Frame Ht (In/mm)	Bags/Frame	No Frames	Total Bags
4R9951	25.5 / 648	6	111	666
4R9953	26 / 661	4	95	380
4R9955	26 / 661	4	68	272
MVE1520				
4R9951	25.5 / 648	6	224	1,344
4R9953	26 / 661	4	190	760
4R9955	26 / 661	4	180	720
MVE 1830				
4R9951	25.5 / 648	6	480	2,880
4R9953	26 / 661	4	390	1,560
4R9955	26 / 661	4	276	1,104
MedSep 810 Eteme/HE	23.3/593	6	140	840
MedSep 810 HE+	30.9/784	8	140	1120
MedSep 1520 Eteme/HE	27.1/688	7	428	2996
MedSep 1520 HE+	30.9/784	8	428	3424
MedSep 1830 Eteme/HE	27.1/688	7	828	5796
MedSep 1830 HE+	30.9/784	8	828	6624

FIVE Year Vacuum Warranty • TWO Year Parts Warranty

Conforms to MDD 93/42/EEC, the Medical Device Directive for the EU. Freezer systems UL/C-UL Listed.

* Without inventory

**Minimum width required for vessel to pass through opening. Footprint may vary. Contact Tech Service for detailed drawings.