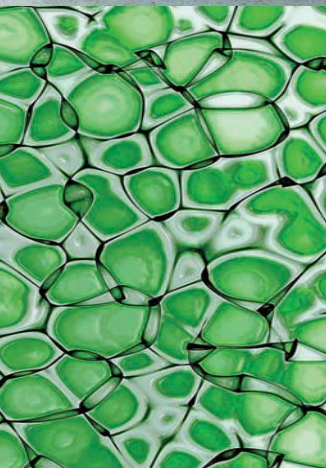


MVE Cryopreservation for Life Science

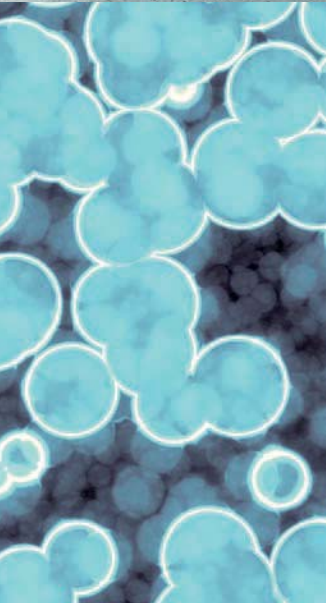
New Chart MVE Fusion Freezer Series



Stainless Storage Systems for MVE Cryopreservation

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Visit www.chartbiomed.com for more information.

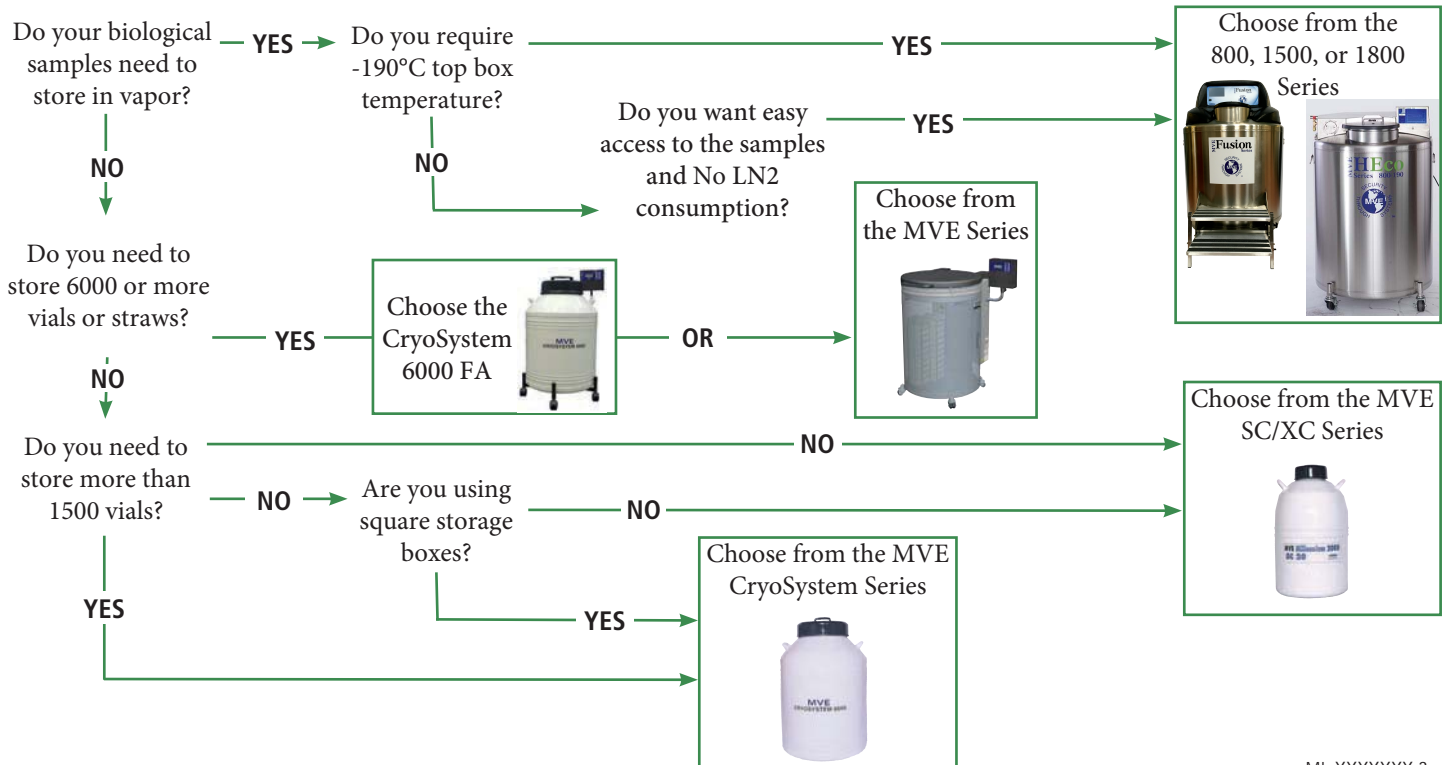
Temperature Chart

Chart MVE is the leading global manufacturer of vacuum insulated products and cryogenic systems. More than fifty years ago, we set the standard for storage of biological materials at low temperatures. Today, we continue to exceed these standards. Industries from around the world look to Chart MVE for excellence and innovation. Our solutions empower industries to better utilize cryogenic technology. In this manner, Chart MVE continues to make a vital contribution in today's biomedical Life Sciences industry.

Recommended maximum temperature for storage of biological samples.

MATERIAL TO BE STORED	VOLUME	CONTAINER	INVENTORY CONFIGURATION	CRITICAL TEMPERATURE
Algae	0.5 - 1.0 mL	Cryovial	Boxes or canes	-150°C
Blood	0.5 - 500 mL	Cryovial/Blood Bag	Boxes or canes/bag rack	-150°C
Cells:				
Animals / Human	0.5 - 1.0 mL	Cryovial	Boxes or canes	-150°C
Plant	0.5 - 1.0 mL	Cryovial	Boxes or canes	-150°C
Embryos		Straw	Canes	-150°C
Fungi:				
Mycelium	0.5 - 1.0 mL	Cryovial	Boxes or canes	-150°C
Hybridomas	0.5 - 1.0 mL	Cryovial	Boxes or canes	-150°C
Phage:				
Libraries	0.5 - 1.0 mL	Cryovial	Boxes or canes	-150°C
Protozoa	0.5 - 1.0 mL	Cryovial	Boxes or canes	-150°C
Viruses: Animal				
In Cells	0.5 - 1.0 mL	Cryovial	Boxes or canes	-150°C

Product Selector Guide



MVE Fusion Series Freezers

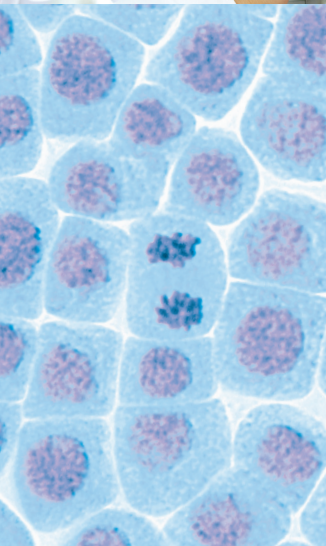
Introducing the MVE Fusion Freezer, the world's first self-sustaining cryogenic freezer. The MVE Fusion is a refrigerated liquid-based bio-storage freezer, similar in appearance and construction to a Chart High Efficiency LN2 freezer. The design of the MVE Fusion is to provide cold storage capabilities, with no need for daily supply of liquid cryogen. The 50 liters inside the pressure vessel is reliquefied during normal operation. The MVE Fusion can be used in remote locations, isolated rooms, high elevation facilities, and facilities with little or no vacuum jacketed pipe infrastructures and provides more than one week hold time without electricity.

Features include:

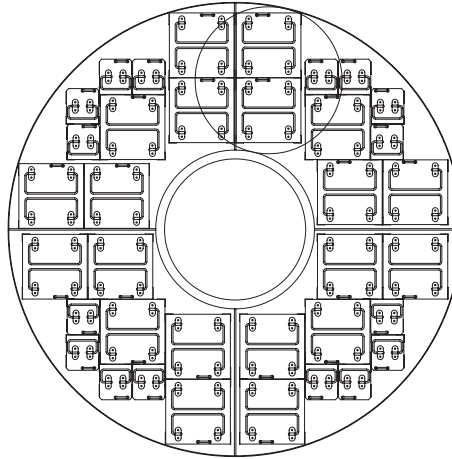
- Self-sustaining
- Dry sample storage
- Lowest liftover height
- Two tier folding step



Visit www.chartbiomed.com for more information.



Rack Layout



MVE Fusion

Maximum Storage Capacity

1.2 & 2 ml Vials (Internally Threaded)	31,200
Number of Racks <i>100 cell boxes</i>	20
Number of Racks <i>25 cell boxes</i>	16
Number of Stages per Rack	13

Performance

LN2 Capacity Fusion Inner Pressure Vessel L	50 L
LN2 Capacity Under Tray L	(Not Required)

Unit Dimensions

Neck Opening <i>in. (mm)</i>	12.5 (318)
Usable Internal Height <i>in. (mm)</i>	29.6 (752)
Inner Diameter <i>in. (mm)</i>	38.4 (975)
Overall Height <i>in. (mm)</i>	63.4 (1611)
Liftover Height <i>in. (mm)</i>	34.8 (883)
Door Width Requirement ** in. (mm)	42.0 (1067) [With handles]** 43.5 (1105)
Weight Empty* (Freezer Only) est. lb. (kg)	690 (313) Estimated
Weight Liquid Full* (Freezer With 50L & Cryocooler) est. lb. (kg)	940 (426) Estimated

Blood Bag Capacities

	Total Bags	Bags/Frame	No. Frames
791 OS/U (25 ml)	2296	7	328
4R9951 (50 ml)	1484	7	212
4R9953 (250 ml)	752	4	188
4R9955 (500 ml)	592	4	148
DF200 (200 ml)	416	4	104

DF700 blood systems will not fit through the neck

* Without inventory

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

TWO Year Standard Warranty • FIVE Year Vacuum Warranty

Chart: Total Cryogenic Solutions

Air Separation



Bulk Storage Tanks



Liquid Cylinders



Dewars



Freezers

MVE Fusion
Self-Sustaining Cryogenic Freezer



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