

MVE HEco 800 Series Freezers



With their streamlined LN2 plumbing and vacuum jacketed transfer hose, the new MVE HEco 800 Series freezers provide a 20% reduction in LN2 usage, making them the most efficient vapor freezers available. These next generation high efficiency freezers incorporate hinged work surfaces that fully enclose all electronics and plumbing to enhance overall safety and usability. The technical and visual improvements provide a more aesthetically pleasing freezer while offering greater functionality. As with all of MVE's cryogenic freezers, the MVE HEco 800 Series freezers provide maximum storage density as well as the industry's longest hold time and highest sample security.

Features include:

- 20% reduction in LN2 usage
- Fully enclosed wiring and plumbing
- Vacuum jacketed transfer hose
- Dry sample storage
- -190°C top box temperature
- Lowest liftover height
- Two tier folding step

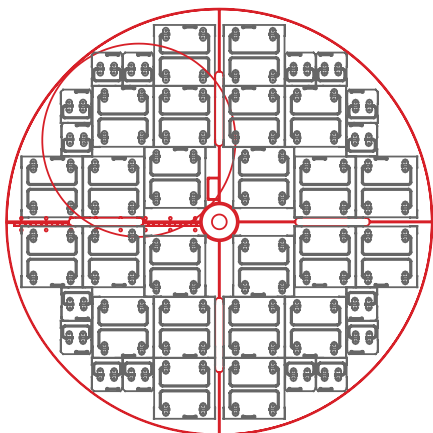


For more information, contact Air Products on 0800 389 0202

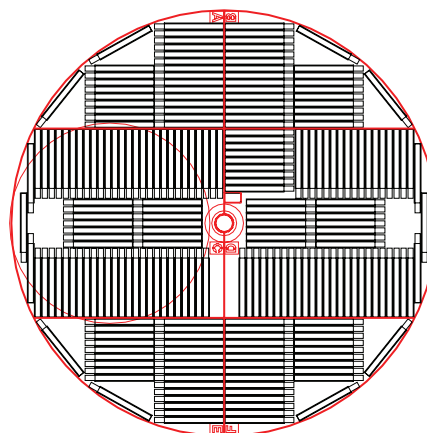
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Rack Layouts

Square Rack Layout (P)



4R9951 Layout (R)



	MVE HEco 815P-190	MVE HEco 819P-190				
Maximum Storage Capacity						
1.2 & 2 ml Vials (Internally Threaded)	15,600	19,500				
Number of Racks 100 cell boxes	12	12				
Number of Racks 25 cell boxes	4	4				
Number of Stages per Rack	12	15				
Performance						
LN2 Capacity <i>L</i>	370	463				
LN2 Capacity Under Tray <i>L</i>	52	55				
Static Hold Time—Vapor <i>days</i>	13	21				
Static Hold Time—Liquid Full <i>days</i>	77	112				
Unit Dimensions						
Neck Opening <i>in. (mm)</i>	12.5 (317)	12.5 (317)				
Usable Internal Height <i>in. (mm)</i>	26.6 (676)	34.5 (877)				
Inner Diameter <i>in. (mm)</i>	28.8 (731)	28.8 (731)				
Overall Height <i>in. (mm)</i>	49.5 (1257)	57.0 (1449)				
Liftover Height <i>in. (mm)</i>	40 (1016)	47.63 (1209)				
Door Width Requirement** <i>in. (mm)</i>	32.0 (813)	32.0 (813)				
Weight Empty <i>lb. (kg)</i>	475 (215)	515 (234)				
Weight Liquid Full* <i>lb. (kg)</i>	1134 (514)	1340 (608)				
Blood Bag Capacities						
	Total Bags	Bags/Frame	No. Frames	Total Bags	Bags/Frame	No. Frames
791 OS/U (25 ml)	1,224	6	204	1,836	9	204
4R9951 (50 ml)	768	6	128	1024	8	128
4R9953 (250 ml)	416	4	104	520	5	104
4R9955 (500 ml)	304	4	76	380	5	76
DF200 (200 ml)	236	4	59	295	5	59
DF700 (700 ml)	-	-	-	-	-	-

TWO Year Standard Warranty • FIVE Year Vacuum 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.

MVE HEco 1500 Series Freezers



The new MVE HEco Series freezers provide a 20% reduction in LN2 usage, making them the most efficient vapor freezers available. These next generation high efficiency freezers incorporate hinged work surfaces that fully enclose all electronics and plumbing to enhance overall safety and usability. The technical and visual improvements provide a more aesthetically pleasing freezer while offering greater functionality. As with all of MVE's cryogenic freezers, the MVE HEco Series freezers provide maximum storage density as well as the industry's longest hold time and highest sample security.

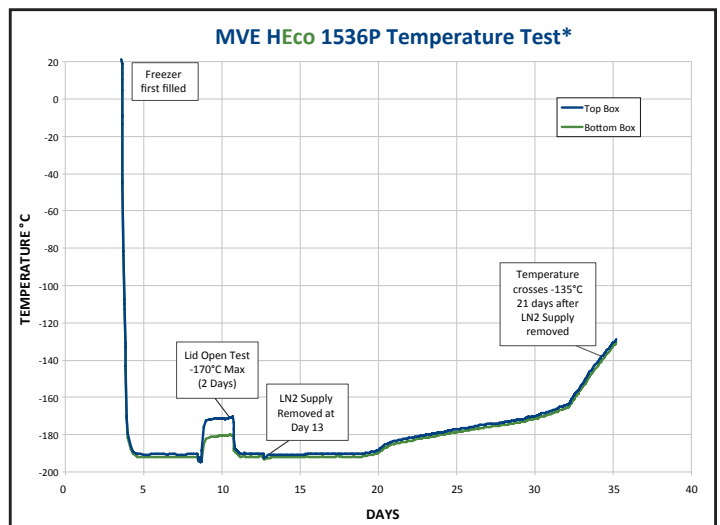
Features include:

- 20% reduction in LN2 usage
- Fully enclosed wiring and plumbing
- Vacuum jacketed transfer hose
- Dry sample storage
- -190°C top box temperature
- Lowest liftover height
- Two tier folding step



Temperature Test Graph

* Temp Test indicates typical performance of HEco Series freezer with full inventory system and factory recommended level settings. Actual performance may vary with atmospheric conditions and usage.

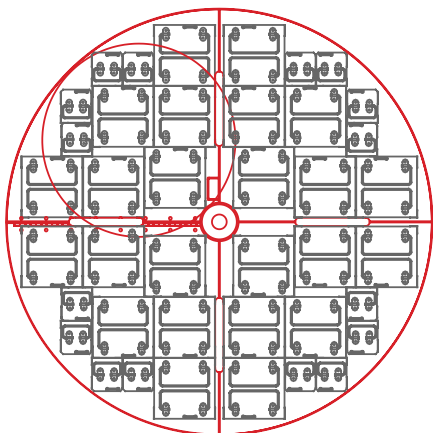


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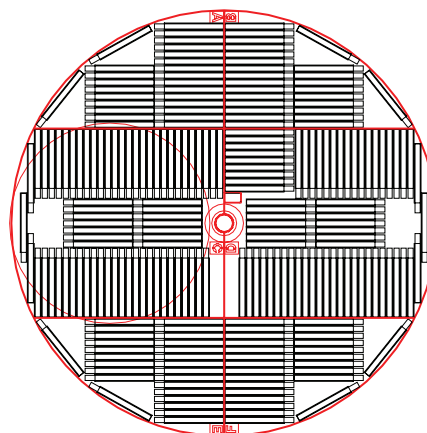
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Rack Layouts

Square Rack Layout (P)



4R9951 Layout (R)



	MVE HEco 1536P-190	MVE HEco 1539P-190	MVE HEco 1542R-190						
Maximum Storage Capacity									
1.2 & 2 ml Vials (Internally Threaded)	36,400	39,200	42,000						
Number of Racks <i>100 cell boxes</i>	24	24	26						
Number of Racks <i>25 cell boxes</i>	16	16	16						
Number of Stages per Rack	13	14	14						
Performance									
LN2 Capacity <i>L</i>	730	797	797						
LN2 Capacity Under Tray <i>L</i>	115	133	133						
Static Hold Time—Vapor <i>days</i>	21								
Static Hold Time—Liquid Full <i>days</i>	112								
Unit Dimensions									
Neck Opening <i>in. (mm)</i>	17.4 (442)	17.5 (445)	17.5 (445)						
Usable Internal Height <i>in. (mm)</i>	28.8 (732)	30.8 (782)	30.8 (782)						
Inner Diameter <i>in. (mm)</i>	38.5 (978)	38.5 (978)	38.7 (983)						
Overall Height <i>in. (mm)</i>	54.7 (1389)	63.3 (1607)	63.3 (1607)						
Liftover Height <i>in. (mm)</i>	37.3 (947)	39.2 (995)	39.2 (995)						
Door Width Requirement** <i>in. (mm)</i>	42.0 (1067)	42.0 (1067)	42.0 (1067)						
Weight Empty <i>lb. (kg)</i>	700 (318)	720 (327)	720 (327)						
Weight Liquid Full* <i>lb. (kg)</i>	2000 (907)	2140 (971)	2140 (971)						
Blood Bag Capacities									
	Total Bags	Bags/Frame	No. Frames	Total Bags	Bags/Frame	No. Frames	Total Bags	Bags/Frame	No. Frames
791 OS/U (25 ml)	2,905	7	415	3,320	8	415	3,184	8	398
4R9951 (50 ml)	1,488	6	248	1,736	7	248	1,687	7	241
4R9953 (250 ml)	812	4	203	812	4	203	768	4	192
4R9955 (500 ml)	608	4	152	608	4	152	576	4	144
DF200 (200 ml)	496	4	124	496	4	124	488	4	122
DF700 (700 ml)	256	4	64	256	4	64	264	4	66

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* Without inventory

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MVE HEco 1800 Series Freezers

The new MVE HEco Series freezers provide a 20% reduction in LN2 usage, making them the most efficient vapor freezers available. The 1800 series provides option for greater storage in one freezer. These next generation high efficiency freezers incorporate hinged work surfaces that fully enclose all electronics and plumbing to enhance overall safety and usability. The technical and visual improvements provide a more aesthetically pleasing freezer while offering greater functionality. As with all of MVE's cryogenic freezers, the MVE HEco Series freezers provide maximum storage density as well as the industry's longest hold time and highest sample security.

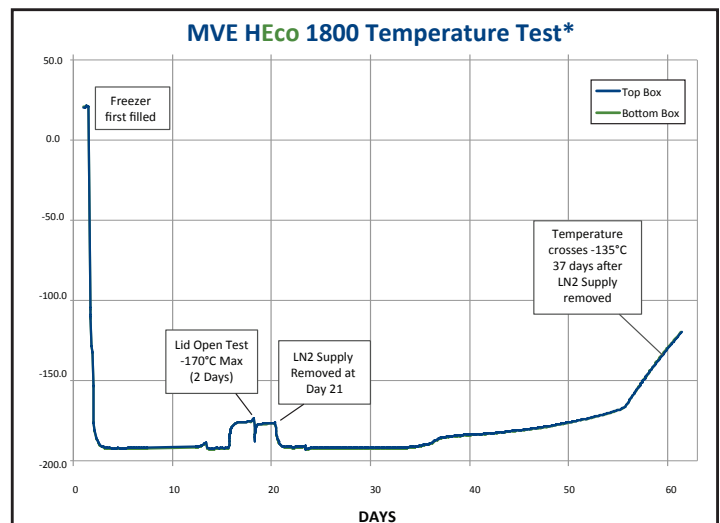
Features include:

- 20% reduction in LN2 usage
- Fully enclosed wiring and plumbing
- Vacuum jacketed transfer hose
- Dry sample storage
- -190°C top box temperature
- Lowest liftover height
- Two tier folding step



Temperature Test Graph

* Temp Test indicates typical performance of HEco Series freezer with full inventory system and factory recommended level settings. Actual performance may vary with atmospheric conditions and usage.

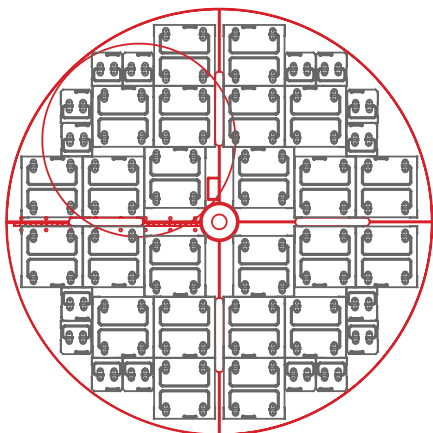


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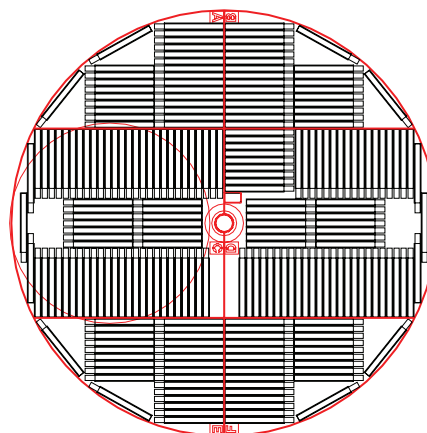
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Rack Layouts

Square Rack Layout (P)



4R9951 Layout (R)



	MVE HEco 1879P-190	MVE HEco 1892P-190	MVE HEco 1894R-190						
Maximum Storage Capacity									
1.2 & 2 ml Vials (Internally Threaded)	79,950	92,250	94,500						
Number of Racks <i>100 cell boxes</i>	54	54	60						
Number of Racks <i>25 cell boxes</i>	30	30	12						
Number of Stages per Rack	13	13	15						
Performance									
LN2 Capacity <i>L</i>	1745	1770	1770						
LN2 Capacity Under Tray <i>L</i>	318	295	295						
Static Hold Time—Vapor <i>days</i>	35	30	30						
Static Hold Time—Liquid Full <i>days</i>	174	177	177						
Unit Dimensions									
Neck Opening <i>in. (mm)</i>	24.7 (627)	24.7 (627)	24.7 (627)						
Usable Internal Height <i>in. (mm)</i>	29.5 (749)	34.5 (876)	34.2 (868)						
Inner Diameter <i>in. (mm)</i>	56.0 (1422)	56.0 (1422)	54.7 (1389)						
Overall Height <i>in. (mm)</i>	63.7 (1618)	68.6 (1742)	68.6 (1742)						
Liftover Height <i>in. (mm)</i>	38.8 (985)	44.0 (1118)	44.0 (1118)						
Door Width Requirement** <i>in. (mm)</i>	60.0 (1524)	60.0 (1524)	60.0 (1524)						
Weight Empty <i>lb. (kg)</i>	1712 (781)	1721 (781)	1721 (781)						
Weight Liquid Full* <i>lb. (kg)</i>	4830 (2191)	4875 (2211)	4875 (2211)						
Blood Bag Capacities	Total Bags	Bags/ Frame	No. Frames	Total Bags	Bags/ Frame	No. Frames	Total Bags	Bags/ Frame	No. Frames
791 OS/U (25 ml)	5,866	7	838	6,704	8	838	6,432	8	804
4R9951 (50 ml)	2,952	6	492	3,936	8	492	3,920	8	490
4R9953 (250 ml)	1,584	4	396	1,980	5	396	2,010	5	402
4R9955 (500 ml)	1,104	4	276	1,380	5	276	1,550	5	310
DF200 (200 ml)	960	4	240	1,200	5	240	1,230	5	246
DF700 (700 ml)	504	4	126	630	5	126	680	5	136

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