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Cryogenic Delivery and Storage Systems

CHART

MVE Tech Tips

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Keeping the Moisture Out

Distributors setting up a customers MVE freezer for the initial first fill will notice an additional package fastened to the inside of the freezer. This package is a desiccant bag fastened to the inside to help eliminate any moisture that could still remain. On smaller freezers the bag will be placed on the bottom whereas the larger units will have the bag attached to the handle of the turn tray. It is not considered a hazardous material and can be easily disposed of. It must be removed before LN2 can be introduced into the freezer. Attached to the bag is a note stating that the bag needs to be removed before first fill. Any freezers delivered after March 1st will have this desiccant bag attached.

Check for Shipping Damage

Starting immediately you will notice a large neon orange sign on all palletized shipments. The message is as follows:

- **Please check your shipment thoroughly upon receipt for any damage. Any visual damage observed must be noted on the carrier delivery receipt before signing.**
- **If you discover any damage to product after carrier has left, do not throw anything away! This includes all packaging materials.**
- **Concealed damage MUST be reported within 15 days of receipt, otherwise you will void any damage claim.**
- **Report damage to the carrier and Chart, Inc.**
  Chart, Inc will not be responsible for damages that are either not noted or reported within 15 days of receipt.

Chart Inc. Terms and Condition of Sale

13. Title and Risk of Loss or Damage. Despite any agreement with respect to delivery terms or repayment of transportation or insurance charges, the risk of loss or damage shall pass to Buyer and delivery shall be deemed to be complete upon delivery to a private or common carrier or upon moving into storage, whichever occurs first. At the point of shipment, Title to Equipment sold shall remain in Seller until paid for in full.

The Big Deal About Published NER'S

The question posed about evaporation rate has been addressed by MVE for decades. Why are published evaporation rates so different on similar models produced by the same manufacturer? Thirty years ago MVE decided to publish NER's that are accurate instead of nominal rates as everyone else does. It was felt that anyone could achieve whatever rate they want if under controlled condition. Whereas, MVE published NER specifications is an accurate point to measure against. We base our entire vacuum warranty on that which we still back 100% today. To advertise a nominal rate basically stating the daily loss rate will be "somewhere in that area" and in doing so relieves the manufacturer of making good on vacuum warranty claims. It comes down to the gray area of "is the dewar good or not?" It is MVE's attitude that there should be a definite point to where the customer does have legitimate grounds for that determination. If customers test results show higher that our published specification, we will repair at no charge. If we cannot repair dewar to our published specs for new units then we will replace with new. This policy will hold for the duration of the 5-year warrantee period.

The suppliers that use a nominal NER well state a + or – percentage. This is usually between 10-20%, and some suppliers go higher. That means that their dewar can be 20% worse than the claim they publish. Units purchased through MVE will be at our published evaporation rate and lower. It will never exceed it.
Finally, as a matter of revealing misconceptions of models we produce at MVE, we do not make any models better than our own MVE label. How private companies want to market them is up to them. MVE will not deviate from its establish marketing policy.

General Loss Rates Of Freezer's

The attached information will vary from same models. Be very careful that you use the evaporation and hold days as general parameters and not exact performance specification, because each freezer will not perform at the same efficiency. With that being said remember that static evaporation is under perfect conditions with freezer empty of samples and racks with concern about the temperature gradient inside. These are far from actual wiring conditions. (Precisely why we do not publish NER and hold time days.) Also be aware of the vapor platform height of the non-H.E. models is only 6" or 152mm. Use this information as general reference only. It is important that you customers are somewhat aware of this, as the competition will publish NER's and hold times knowing full well that the static evaporation rate can be manipulated to whatever looks good. Some of the evaporation tests perform by them was actually performed in an environmental chamber so heat humidity was controlled for ideal conditions. Again, this is hardly actual working conditions.

Description	810 HE Gen 2	1520 HE	1830 HE	1841	611	1411
LN2 capacity Liquid Full (liters)	377	756	1612	669	236	375
LN2 capacity Vapor Storage (liters)	52	133	260	120	49	77
Static hold time Full (days)	97	168	201	60	33	37
Static hold time Vapor (days)	13	29	32	11	7	7
Static Evaporation Rate liters/day est.	3.9	4.5	8	11	7	10

Finally, All The Numbers You Need To Contact Technical Service

Toll free direct number to technical service	1-866-819-5897
Direct Burnsville Number	952-641-6115
Cell	612-889-7810
Pager	612 579-8367
Fax	1-800-232-9683
e-mail	jim.bachman@chart-ind.com

Jim Bachman
Technical Service Rep.
Bio-Med. Div.
Chart Ind.

For copies of past Tech Tips or for more information on maintaining your nitrogen storage dewars please contact Jim Bachman at (952) 641-6115, Pager (612) 579-8367, Fax (800) 232-9683.