

# Tech Tips

(June/July 2016)

## Product Information

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### Chart MVE Doble Series Aluminum Tanks



The MVE Doble Series aluminum tanks are designed for both vapor shipment and liquid storage. These tanks utilize the same components and vacuum technology that make our current range of aluminum tanks the best-selling breeder units on the world market. The unique absorbent layer in the base of these storage units enables the tank to be charged with liquid nitrogen in as little as two hours, and they can be employed as a dry shipper. When a Doble tank arrives at its destination, the tank can be filled with liquid nitrogen and used as a long-term storage tank, therefore avoiding the need for return shipments.

Features Include:

- Liquid and vapor storage options
- Low liquid nitrogen consumption
- Convenient lightweight package
- CHARGES IN LESS THAN TWO HOURS

The MVE Doble Series tanks are available in various sizes:

Model	Part Number	Canisters	Liters	Liquid/Vapor Hold Time*
Doble 11	11507886	6	10	37 Days Liquid / 17 Days Vapor
Doble 20	11492151	6	18.5	116 Days Liquid / 21 Days Vapor
Doble 28	11527730	6	28	50 Days Liquid / 24 Days Vapor
Doble 34	11497948	6	32	100 Days Liquid / 20 Days Vapor
Doble 47	11498684	6	46	74 Days Liquid / 21 Days Vapor
Doble 47-10	11554308	10	46	72 Days Liquid / 21 Days Vapor

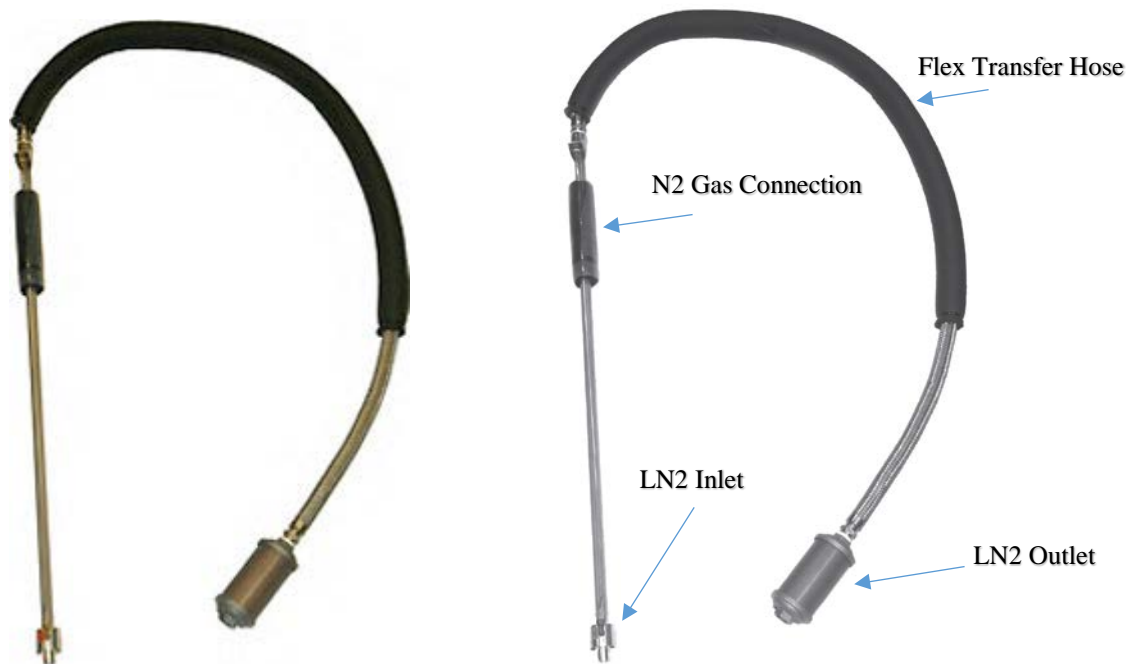
\*Hold times are nominal. Actual rate will be affected by the nature of container use, atmospheric conditions, and manufacturing tolerances.

## Chart MVE LN2 tx - Liquid Nitrogen Transfer System

Chart MVE's LN2 tx is designed specifically to allow the safe and easy removal of liquid nitrogen from an open vessel. Instead of lifting and pouring liquid nitrogen from heavy Dewars, one can simply utilize the LN2 tx to transfer liquid nitrogen from one open vessel to another. The MVE LN2 tx uses a high velocity nitrogen gas stream to create suction (vacuum) at the inlet that draws liquid up into the transfer device. Once the liquid is drawn into the gas stream, the liquid is pushed through the transfer tube and hose by the gas stream.

The LN2 tx Assembly is PN 15098872 and pictured below.

NOTE: The minimum neck opening for the vessel that liquid nitrogen is to be removed from is 3.25" (83 mm) and the minimum neck opening for the vessel that the liquid nitrogen is being transferred to is 4" (102 mm).



## Chart MVE Freezer Static Evaporation Rates (SER)

The Evaporation Rates listed below represent tanks observed in a "static setting" which means that the tanks were left undisturbed, without any lid openings for a set period of time. We understand that our freezers are most often used in non-static conditions, so with this in mind, these figures are only intended to be used as general estimates. These values can vary depending on a variety of uncontrolled parameters.

OPEN TOP		HIGH EFFICIENCY		HEco	
Model	SER (L/Day)	Model	SER (L/Day)	Model	SER (L/Day)
MVE 103	4.1	800 Series	5.0	815	5.0
MVE 205	3.0	1500 Series	7.5	819	5.0
MVE 510	6.2	1800 Series	12.5	1536P	6.5
MVE 616 & 616C	8.5	1842 (Old 1830)	12.0	1539P	6.5
MVE 808	8.0			1542R	6.5
MVE 1223	13.0			1879P	10.0
MVE 1318	8.5			1892P	10.0
MVE 1426 & 1426C	14.0			1894R	10.0
MVE 1839	13.0				

## Helpful Hints/FAQ's

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### XC 47/11-10 and XC 47/11-6 Conversion Kits

The XC 47/11-10 and the XC 47/11-6 can be converted from one to the other. The kits required to convert these tanks include a new cork and cover, a new platform to be installed at the bottom of the tank, and a new index ring from which the canisters will hang. Along with the conversion kit, new canisters must also be purchased.

PN 20569389: CONVERSION KIT FROM XC47/11 - 6 CANISTER TO XC47/11 - 10 CANISTER
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Canisters sold separately: PN 14782429
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PN 20569387: CONVERSION KIT FROM XC47/11 - 10 CANISTER TO XC47/11 - 6 CANISTER
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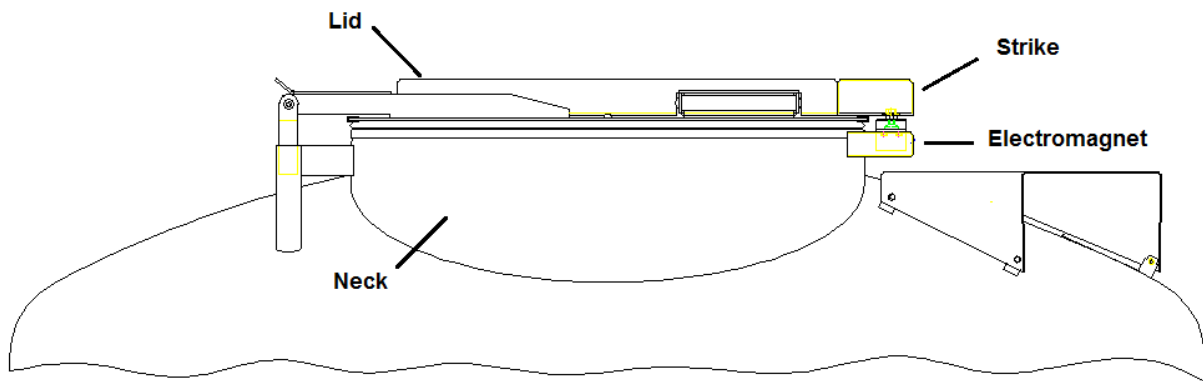
Canisters sold separately: PN 14782411
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### Magnetic Lid Lock System

Chart MVE offers an optional Magnetic Lid Lock System that can be installed onto any 1800 series freezer, *except for MVE HEco models*. The part number to reference is 13384939. The locking system should be requested at the time of purchase, as it cannot be field installed due to welding required around the neck of the freezer. Chart MVE provides **two pieces** for the locking system: one is an electromagnet and the other is a plated carbon steel strike. The magnet is mounted to the neck of the freezer and the strike is attached to the lid. The magnet has leads attached, through which a current can be applied to activate

(magnetize) it. When it is magnetized it attracts and holds the metal strike with sufficient force. When the current is removed from the magnet, the strike is released so that the lid can then be opened. Chart MVE does not include the system that activates the lock (only the electromagnet and strike). The intent is that the user has their own security provider install a card or keypad entry device on the freezer to operate the magnetic lid locking system.



### Vapor Shipper SER/NER Certificate

Q: Does PN 20582341 NER Certificate come standard with Vapor Shippers?

A: The NER Certificate is only available at the time the Vapor Shipper order is placed. Unfortunately, it cannot be ordered after the Vapor Shippers have been built and shipped. The document is serial number specific and will have to be requested at the time the order is entered. Contact Customer Service or your Sales Representative for pricing and more information.

### Freezer Plumbing Leak Check

Q: What is the recommended procedure to perform a plumbing leak check?

A: Leaky plumbing connections can create a host of problems including but not limited to:

- Slow fill times
- Nuisance alarms
- High LN2 Consumption
- Inaccurate level readings
- Inaccurate liquid usage readings

To perform a leak check:

1. With the supply system at operating pressure, thoroughly spray all transfer hose connections and freezer plumbing connections with leak detect solution
2. Allow leak detect solution to penetrate fittings for at least 30 seconds
3. Large leaks will be immediately apparent with large bubble formations
4. Small leaks will take longer to detect, with small bubble formation in the appearance of "foam"

5. Most leaks can be repaired by tightening the suspect fitting with a crescent or appropriate sized wrench
6. If tightening the fitting does not fix the leak, check the fitting for cracks and/or galling. If the fitting is damaged, replace
7. Recheck any replaced fittings for leaks

## Accessories

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### Cryogenic Gloves

Chart MVE has cryogenic gloves available to help with insertion and removal of racks and cassettes:

Medium length-M size 9717119

Medium length-L size 9717129

Medium length-XL size 9717139

Elbow length-M size 9717149

Elbow length-L size 9717159

Elbow length-XL size 9717169



### IATA Secondary Shipping Container

The IATA shipping container is used only in the IATA CryoShipper and is intended for safe delivery of biohazards. The container is held closed by six screws.



PN: 2910221 Hex Screw  
PN: 10987831 Hex Key



PN: 10862106 Secondary Container

## Canes for Straws and Vials

Chart MVE offers canes to hold straws and 1.0, 1.2, and 2.0 ml vials.

P/N 9717009 1.0ml vials and straws

P/N 9717029 1.2ml vials

P/N 9717089 2.0ml vials



## CryoSleeves for Canes

Chart MVE offers CryoSleeves to keep vials from falling from canes.

PN: 9710899 - 100 per case



## Don't Miss Out on our Upcoming Trade Shows!

Date	Show	Location
June 21-24, 2016	GGBN Biodiversity Biobanking Conference	Berlin, Germany
July 3-6, 2016	ESHRE	Helsinki, Finland
Sept 27-29, 2016	ESBB	Vienna, Austria
Oct 4-8, 2016	World Dairy Expo	Madison, WI
Oct 15-19, 2016	ASRM	Salt Lake City, UT
Oct 22-25 2016	AABB	Orlando, FL
Nov 15-18, 2016	Eurotier	Hanover, Germany
Dec 6-9, 2016	World Stem Cell Summit	West Palm Beach, FL