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Cryogenic Delivery and Storage Systems

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MVE Tech Tips

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REPLACEMENT DEWARS AVAILABLE AT GREATLY REDUCED PRICES:

Model	Description	Price	Qty
XC 47/11-6	Unit slightly above NER spec	$565.00	1
XC 32/8-10	Ten canister, 32 liter, 8 week dewar	$430.00	1
Lab 5	Repumped, retested, repainted	$201.00	3
Lab 10	Refurbished, restested, new c/c	$227.00	1
Lab 4	Completely refurbished	$190.00	2
CryoSystem 8	6.5" ID neck tube, 90 liter capacity, no racks (available upon request) 1800 vial Capacity	$650.00	7
CryoSystem 3600	Similar to a CryoSystem 4000 with 4-9 tier racks, 3600 vial capacity	$850.00	2
CryoSystem 4000	Refurbished with racks and c/c included	$950.00	1
Cryoshipper XC		$1,000.00	1
SC 20/12V	This is both a vapor shipper and a liquid dewar, similar to SC 20/20	$550.00	1
XC 35/12	35 liters with 10 canisters, unit carries a one year warranty	$550.00	1

OPERATING INSTRUCTIONS FOR LIQUID NITROGEN DEWARS

GENERAL DESCRIPTION

The SC, XC, & LAB series container is a vacuum insulated container of aluminum with fiberglass neck construction providing you with the highest efficiency possible in liquid nitrogen storage. Use the container for inert fluids only. Liquid oxygen is not compatible with fiberglass material and should not be stored.

A sharp blow to the outer vessel can damage the neck tube or start a vacuum leak. Use caution and common sense in handling the container.
Upon receipt of the container, examine it for any evidence of damage during shipping. Watch after the first fill for any signs of vacuum loss, such as frost or sweating on the outside jacket. (Some frost near the tip just after filling is normal.)

NOTE
Fill the container with a funnel or transfer line when possible. Avoid spilling liquid nitrogen over the vacuum cap near the neck as this can shrink the seal and allow air to leak into the vacuum space.

OPERATING INSTRUCTIONS FOR LIQUID NITROGEN DEWARS CON'T

A. CAUTION (using aluminum SC, XC, LAB series)

To avoid injury by frostbite, use extreme care whenever handling liquid nitrogen, liquid nitrogen storage or transfer vessels or any objects, which have come in contact with liquid nitrogen.

- Leave no areas of skin exposed.
- Always wear proper safety attire over clothing: face shield, cryogenic gloves, cryogenic apron
- Never overfill liquid nitrogen vessels.
- Always keep liquid nitrogen vessel in an upright position.
- Do not tightly seal liquid nitrogen container or prevent nitrogen gas from escaping.
- Use extreme care to prevent spilling and splashing liquid nitrogen during transfer.
- Immediately remove any clothing or safety attire on which liquid nitrogen has been spilled.
- Get immediate medical attention for any frostbite injuries due to liquid nitrogen.

B. FILLING INSTRUCTIONS

To avoid damage to your aluminum cryogenic vessel which may result in premature vacuum loss it is important that the following procedure be used during the addition of liquid nitrogen to a warm vessel and on subsequent additions.

1. Slowly pour liquid nitrogen to new or warm vessels.
2. Allow liquid nitrogen to sit in covered vessel for 2 hours to completely cool inner
3. Fill your vessel to the desired level after the 2 settling (cooldown) time.
4. If you are filling your dewar from a pressurized source, make sure that the source tank is at a low pressure (22 PSI or below).
5. If transfer hose is used for extracting liquid nitrogen from a pressurized liquid source always use a phase separator on the end of the hose.
6. Remember to always wear proper safety attire over clothing; face shields cryogenic gloves and apron.
7. Never overfill your dewar with liquid nitrogen. Overfilling the tank may cause immediate or premature vacuum failure to occur.

C. MEASURING LIQUID NITROGEN QUANTITY

1. Use wooden or plastic dipstick. Never use a hollow tube to measure liquid nitrogen.
2. Level will be indicated by frostline, which develops when dipstick is removed.

D. LIQUID WITHDRAWAL

1. liquid withdrawal for the LAB units is always done by pouring or utilizing a withdrawal device. Withdrawal device pressurizes to approximately 5 psi and the pressure forces liquid up the withdrawal tube out the valve.
2. Always wear proper safety attire; shield, gloves and apron.

OPERATING INSTRUCTIONS FOR LIQUID NITROGEN DEWARS CON'T

REPLACEMENT PARTS

MODELS	SC3/3	SC8/5	SC11/7	SC16/11	SC20	SC36
Canister	9710601	9710611	9710091	9721489	9710101	9710101
Cork/cover	10507059	10507059	10507059	10507438	10726817	1072681
Pumpout caps	3911217	3911217	3911217	3911217	3911217	3911217

MODELS	XC20/20	XC21/6	XC22/5		XC32/8	
	XC33/22	XC34/18				
Canister	11006344	9721469	9719349	9719339	9719319	9719309
Cork/cover	11028236	10507024	10506996	10507454	10507067	10507489
Pumpout caps	3911217	3911217	3911217	3911217	3911217	3911217

MODELS	XC35/12	XC43/28	XC47/11-6	XC47/11-10	XC47/11-6 SQ.
Canister	10854966	9719319	9719299	9719289	9723199
Cork/cover	10855723	10507067	10721397	10726711	10721397
Pumpout caps	3911217	3911217	3911217	3911217	3911217

MODELS	LAB 4	LAB 5	LAB 10	LAB 20		LAB 30	LAB 50
Cork./cover	10588362	10580299	10580299	10580475	10580459	10580459	
Pumpout caps	3911217	3911217	3911217	3911217	3911217	3911217	

WARNING: the venting of nitrogen vapors will create a dilution of the air's oxygen concentration necessary to support life. Exposure to this diluted atmosphere can cause asphyxiation or even death. DO NOT store or use liquid container in areas that have poor ventilation. Place liquid container outdoors or in a well-ventilated area. Failure to comply with this warning may cause serious personal injury including death.