

MVE

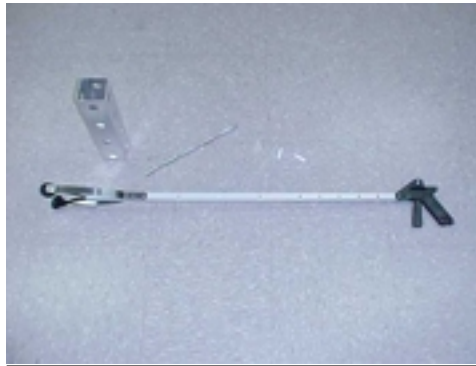
Tech Tips



A monthly publication for the MVE Biological Products Distributors

MVE INTRODUCES THE CRYO-CLAW

MVE is introducing a new product to our accessory line. The CYRO-CLAW is a retrieving device used for extracting vials, canes, straws or boxes that are stored in nitrogen freezers. This has been developed for many uses. One such use may be the removal of stray ampules, canes, and boxes from liquid nitrogen. This will also promote a further degree of safety for retrieval of samples. MVE's part number for this is 11068705.



In addition to the CRYO-CLAW, MVE also has available a **handy tool box kit**. This tool kit comes complete with all the necessary tools required for new installations and first time fills. This will also be very beneficial for those general maintenance service calls or repair contracts. The kit includes: _" drive socket set, pliers, vice grips, adjustable wrenches, wire stripper, Teflon tape, ohm meter, open end wrenches from _" to _", screw drivers-(phillips and straight slot), needle nose pliers, utility knife, flashlight, and a 30mm deep socket with adapter drive. Part number for this kit is 11081299, call for details.

PREVENTIVE MAINTENANCE CHECKS TO HELP LENGTHEN FREEZER SERVICE

- Take unit out of service to completely empty and dry out inner reservoir. This procedure should be executed every 2-3 years.
- Periodically check wear on magnetic gaskets (cabinet units) and cork/cover for wear on cork
- Periodically remove condensed ice formed on lid cork by gently rubbing gloved hand over cork surface.
- Check condition of vinyl pressure sensing tubing annually. Check for dry rot, cracking and kinks.
- Remove noticeable floating debris from liquid reservoir.
- Keep vinyl-sensing tubes from dill assembly or transfer lines. Drastic changes in temperature may affect level reading that is pressure sensitive.

PREVENTIVE MAINTENANCE CHECKS TO HELP LENGTHEN FREEZER SERVICE (Continued)

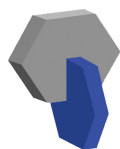
- Allow transfer hose to dry before reconnecting if using liquid cylinders for LN2 supply. Fill only when transfer hose is dry and ambient temperature. If this is not possible then cover open end of hose between changeouts.
- Periodically check for ice buildup around cork and cover lid
- Do not pull on sensor probes if probes seem to be stuck. Remove sensor assembly and allow to warm before removing or adjusting.
- Remove front and rear panel or open stand alone controller (if it is a non-cabinet unit) to inspect electrical connection for corrosion. Power down unit and if necessary, clean accordingly. This procedure should be done when unit is taken out of service for cleaning.
- Physically move the freezer about 2 inches, this will deep flat areas from forming on caster. This can be done twice annually.

It is the recommendation of the manufacturer that freezers over 10 years old should be sent back for a scheduled re-vac. You can generally expect freezers of this vintage to gradually show in increase in LN2 usage. This is due to what is commonly referred to as “soft vacuum”. The vacuum technology, although greatly improved in the last 5 years, does not last indefinitely. Hydrocarbons given off over time will deteriorate the efficiency of the vacuum integrity. Signs of this situation are: a noticeable increase of LN2 usage followed by the second stage of increased signs of frost buildup on the freezers outer jacket.

However, freezers of this vintage could experience a sudden vacuum loss with no prior signs of failure! Freezers of this vintage, other than MVE, had been using a pinched pumpout tubes instead of the pumpout plug and body. With no built in relief port, this unit would be subject to imploding. This scenario takes place when liquid nitrogen leaks into the annular space from a leak formed in the inner cavity. As the liquid warms, it expands and, as it turns to vapor, pressurizes the annular space. Having no method of rapid relief it collapses the area of least resistance. This will be the inner shell as this is the weakest dimension. MVE’s pumpout port and relief design helps eliminate this from occurring.

It is important to, not only, understand this phenomenon, but also relay this to end-users as well. At 10 years most laboratories and clinics have outgrown their storing capacities and will need to have clear, concise updated understanding of expansion programs available to them.

An example of what an imploded inner looks like is shown below:



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