

## Arrival Instructions

UNOLS East Coast Van Pool

Cold Lab #1

Silhouetle Steel Ltd. SN# 2408-06-01

The following list is intended to aid in placing the lab on the ship and making it ready for use. Any questions, concerns, or discrepancies noted should be referred to the UECVP (Timothy W Deering 302-645-4338 or [deering@udel.edu](mailto:deering@udel.edu)).

- During the course of installation, check the departure check off sheet and inventory. The lab left the UECVP complete and fully operational unless noted otherwise on these sheets.
- The lab may be moved with a large forklift (either using the slots provided or not) or by lifting with a crane. The estimated weight is **11,700** pounds with the center of gravity in approximately the center of the lab.
- Once the lab is placed on the ship it should be secured by standard “Peck & Hale” fittings, tie down chains, etc. In no case shall anything be welded to the lab nor shall holes be drilled in the lab's structure. Install the rubber isolation pads between the aluminum ISO corners at the bottom and the steel deck hardware on the ship.
- **The lab's electrical system must be set up for the correct ship's voltage before the lab is powered. Refer to the Lab Check-Off Sheet to see what input power the lab was set up for when shipped.** The lab may be set up for 208, 240, or 460Vac by following the “Lab Electrical Procedure” placard posted in the lab or in the manual. The ship power cord is provided. The cord plugs into the “Ship” receptacle on the utility end of the lab – remove and stow the waterproof cap from the receptacle. The ship end of the cable will need to be terminated by the ship's engineers to mate with the ship source of power. The green conductor is the grounding conductor and should be bonded to the ship's structure. The other three conductors are the “hot” legs. If the lab is to be operated off a voltage other than 208 Vac (i.e., 240 or 480 Vac) the selector switch (inside the lab with the electrical distribution equipment) and the fuses in the ship power disconnect with need to be changed. Additional information is in the lab manual. **In no case shall any modifications be made to the lab's electrical system since they may result in unsafe conditions and/or damage to the lab's installed equipment.**
- Once power is available, put the switch on the emergency light to “ON”. Test the light by pressing the “TEST” button.
- Connect fresh water, salt water, and the sink drain hoses as needed. Stow the cam-lock fitting covers in the supply box provided.
- Open the hot water valve in the sink and make sure the hot water tank is full. Plug in the water heater and verify operation.
- The deck drain cam-lock covers are generally left in place to contain any spills inside the lab but may be removed if desired – particularly if extensive water sampling is being conducted inside the lab.
- Remove the window covers (on personnel doors) and stow/secure inside the lab.
- Remove the two cable pass covers (as desired) and install the cowls. Stow the closure plates on the rack provided inside the lab. There is a foam insert as well as a split rubber gasket to help seal these openings and maintain temperature.
- Remove the fume hood vent cover and install the gooseneck (third 6” DIA plate aft of the HVAC recess). Ensure a completely open gasket is used and the flame screen is installed. Remove the make-up air cover plate for the fume hood (second 6” DIA plate aft of the HVAC recess) and install the cowl. Stow the cover plates on the rack provided in the lab.
- Energize CB labeled “Extractor Fan and Evaporator Fan #2” and “Outside Condensing Unit 18,000 BTU”.
- Turn on the fume hood blower and verify operation. Place the sash at the height indicated on the certification sticker to ensure proper face velocity and flow.

- **Advise the scientific party to use the fume hood blower on the “NORMAL” setting.**  
There is a dedicated cooling system to chill the make up air for the hood and the lab will be able to maintain temperature with the blower in this position. However, **it is advisable to leave the fume hood on only when in use** – not left on continuously as is normal practice in shore-based labs.

Note: The 18,000 Btu condensing unit for cooling the fume hood make-up air will not come on until the outside air temperature is 70° F or greater.

- The fume hood blower should be set on “PURGE” only in the event of a chemical spill. **The lab cannot maintain temperature when the blower is in this setting.**
- Remove the cam-lock fitting cover for the deck drain that the condensate line runs into (just aft of the HVAC recess). Stow the cam-lock cover in the lab supply box.
- **If installed**, roll up and secure the spray canvases on the chiller recess. THESE NEED TO BE FULLY OPEN TO DISIPATE HEAT AND PROPER OPERATION OF THE UNIT. They are mainly used for shipping, but should be lowered partially if taking significant spray into the recess. Lower only the side that is taking spray, and only enough to protect the condenser unit. OPEN COMPLETELY ONCE CONDITIONS IMPROVE.
- Energize the following breakers for the chiller system and set the thermostat (black knob on the control panel in the aft corner of the lab).

Main Chiller Breakers:

“Defrost/Electric Heat – Top”

“Defrost/Electric Heat – Bottom”

“Outside Condensing Unit 24,000 BTU”

“120V Spare A/C Control Panel”

- It is desirable (for safety reasons) that some sort of shipboard communication and/or general alarm bell be included in the lab. This can be accomplished by running the connecting cable through one of the open cable passes. General alarm and phone can be attached to the Uni-Strut where desired.
- Plug in the Temperature Alarm. Keep the “Low Temp” knob set for 30°F since the lab will not go below freezing. Set the “High Temp” alarm for the desired temperature. When the high temperature setting is reached, an audible alarm will sound inside the lab, and a yellow strobe will flash outside in the condensing unit recess.