

Purging the Task Pump on the 800 Cold Probe

Occasionally the task pump in the 800 cryobay will not pull a sufficient vacuum to start the cold probe. When this happens the pump may need to have a N₂ flush to get it operational again. Follow the procedure below to perform the flush.

- Take the side panels off the cryobay and place somewhere safe
- Make sure the task pump is off. If it is still running hit stop from the cryo monitor on the host computer to shut it down.
 - NOTE: If the turbo was running wait at least 10 minutes before proceeding.
- Unplug the power cord from the task pump
- Use an external power cord and plug in the task pump directly to a wall outlet. This will start the task pump.
- Quickly go to the cryo monitor and open the Advanced tab under Options.
 - Send the command <T_OFF> to the cryobay. This will shut down the turbo but leave the backing pump on inside the task pump.
- Wait a few minutes for the turbo to slow down
- Hook up a regulator to a tank of N₂ gas or use boil-off from a liquid N₂ tank. Connect a piece of hard plastic tubing to the regulator (you may need to put a quick disconnect on the regulator if one is not already present). Adjust the flow rate so a good stream of gas is coming out, but nothing that you could not stop by using your finger over the end of the tubing.
 - NOTE: Check near the pressure regulators for the power cord and hard plastic tubing as that is where I have been storing it.
- Wrap some Teflon tape around the end of the plastic tubing around 5 times.
- Open and remove the vent port from the task pump. A hissing noise will occur as you break vacuum. This is normal.
- Place the plastic tubing with the Teflon tape into the vent port as far as possible. The gas flow rate should be low enough that the tubing will stay put on its own, but close to the point where it wants to fly out.
- Wait 1-2 hours purging the dry N₂ gas through the pump.
- Turn off the task pump from the on/off switch.

- Unplug the external power cord and plug the internal power cord back into the pump and turn the on/off switch back on.
 - NOTE: This will not turn on the pump yet, just put it in a state where the software can turn it back on.
- Remove the N₂ tubing and replace the vent port fitting.
- Shut off the N₂ gas flow.
- Hit the Start button from the cryo monitor software to start the vacuum purging and the cooling process.