

# Dry Pumping Station (DPS) Protocol

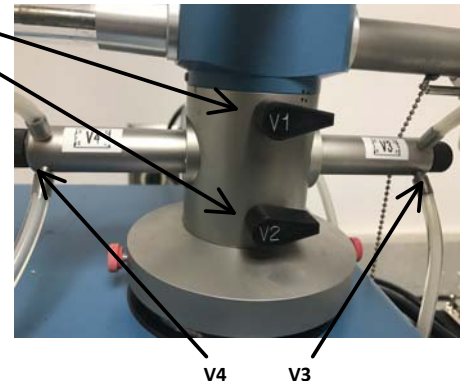
## Protocol for the Gatan Dry Pumping Station (655, 655-0500) and 626 Cryoholder.

When the DPS is off:

- Remove one of the blanking plugs
- Open V1, V2
- Replace blanking plug.
- Close V1, V2
- Fill in log book

*Turning valves and dewar evac needles are fully open when 2 threads are visible.*

*Close valves: CW - clockwise  
Open valves: CCW*



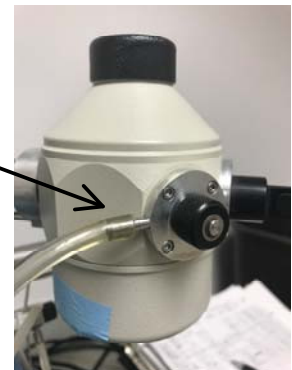
### Pump Down:

1. Inspect area and make sure all tubes are connected properly.
2. Make sure all valves are closed
3. Remove blanking plug.
4. Insert cryoholder into specimen holder assembly and replace any plugs into open assemblies.
5. Switch on Main power. Wait for right hand LEDs to turn from yellow to green. Open V2. The vacuum gauge should drop quickly to  $\sim 10^{-5}$  Torr.
6. Open V1 and wait for vacuum to reach  $5 \times 10^{-5}$  Torr. Depending on moisture it can take as long as 2 hours.
7. Connect clear tubing to the dewar.
8. Close V1.
9. Open V3 and wait until vacuum reaches  $5 \times 10^{-5}$  Torr.
10. Open dewar evac needle and allow to pump overnight.

### Bake Out:

Optionally, the cryo holder can be baked out overnight simultaneously. If the cryo holder has not been used for 1 week, baking is mandatory.

- A. Connect the cold stage control unit to dewar. (Model 900)
- B. Locate power switch(on back) and turn it on.
- C. Rotate or press the black knob 2 clicks.
- D. Start Smart Heater Control? Press black knob.
- E. Press button below "Yes" label.
- F. Note that the temperature is set to 89°C.
- G. Press button below "Yes" label.
- H. "Bake Out" overnight. Optionally it can be done for a minimum of 2 hours.
- I. Press the black knob - to Discontinue current operation?
- J. Press button below "Yes" label.
- K. Wait until dewar reaches room temperature and Power Down



### Shut Down

1. Close dewar valve(s).
2. Close V3/V4 completely.
3. Remove clear tubing from dewar and place on blanks located on rear of assembly.
4. Remove holder and replace blanking plug.
5. Open V1 and pump to  $1 \times 10^{-5}$  Torr.
6. Close V1 and V2.
7. Log usage hours.
8. Power down station.

