

# How to clean the nitrogen trap, 18T magnet

Frequency : more or less once a week

Maximal time between two consecutive cleanings : two weeks

1. FIND the vacuum pump (rotary + turbomolecular).
2. FIND tubes with proper length.
3. CONNECT tubes with each other, no stress on the tube.
4. Check the recovery line (yellow valves) → CLOSE it.
5. CLOSE the green knob. Green = open, black = closed.
6. ACTIVATE the pump. When the sound of the pump is heard, it means that the rotary pump is pumping. The turbo molecular pump will be pumping shortly afterwards, thus OPEN quickly the red knob to pump in the trap.
7. PLACE the trap in the metal rod, with heat gun activated on the other side of the rod. KEEP the heat minimal (set to 1) and the flow to medium. AVOID lying the rod on anomalies on the floor This will expand the trapped gas inside the trap, and the pump will remove them, thus cleaning the trap.
8. CLOSE the tank with plastic gloves to prevent unnecessary evaporation.
9. WAIT an hour and WATCH the pressure (RP :  $\simeq 1.3 \cdot 10^{-3}$  mbar, IG :  $\simeq 7 \cdot 10^{-7}$  mbar ).
10. WEAR gloves, CLOSE red knob before PUTTING the trap back in the tank.
11. STOP the pumps (first the tubo, then disconnect).
12. REOPEN green knob.
13. REOPEN recovery line.
14. PUT golden connector.
15. LINK trap and nitrogen reservoir with transparent tube.
16. REMOVE scotched plug (no excess pressure near the trap).
17. HOLD the tube with glove on.
18. OPEN slightly nitrogen valve and FEEL the flow through the tube.
19. OPEN more once frozen.