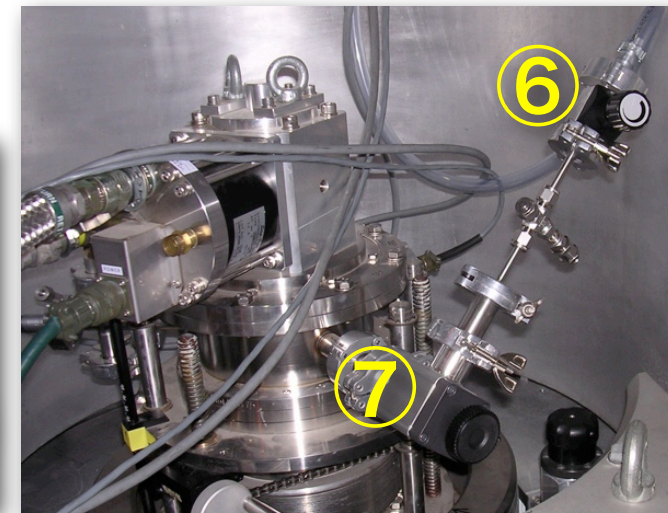
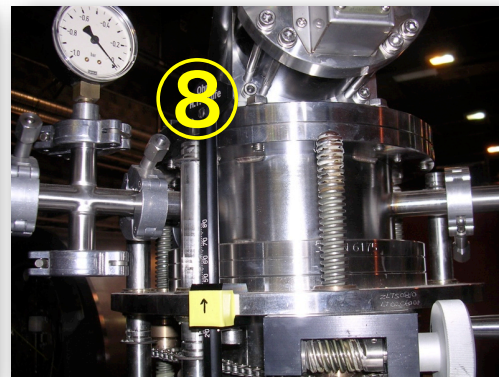
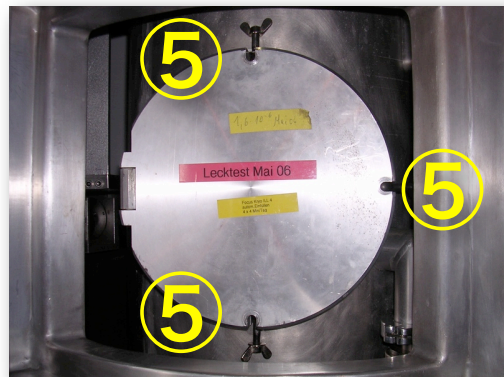
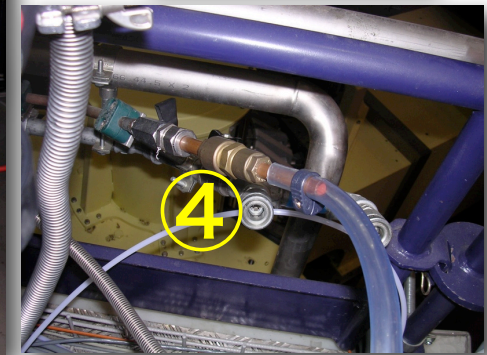
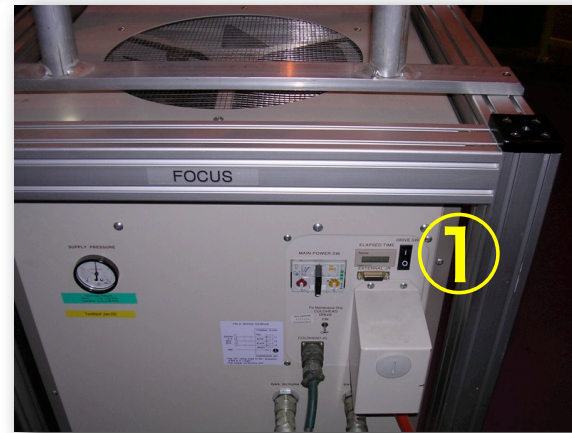


Remove sample on SUMITOMO cryocooler

1. switch off **cryocooler** ① and warm sample to $T > 85$ K (e.g. 'run tt 85' in SICS)
2. wait till you have reached $T > 85$ K
3. close **yellow valve** ② of turbo molecular pump
4. switch off turbo molecular **pump** ③
5. open nitrogen **gas supply valve** ④
6. open and free the three **screws of the door** ⑤ to sample chamber in order to avoid accidental over-pressure of the sample chamber
7. open **regulation valve** ⑥ and **isolation valve** ⑦ to the sample chamber, slowly and see thereby the **manometer** ⑧ to increase
8. at ambient pressure the door to sample chamber should open, now maximize flow of nitrogen by opening both **valves** ⑥⑦ completely
9. with a constant flow of dry nitrogen gas (to avoid freezing of ice from humid air)...
10. ...detach **heat shield** ⑨ (wear gloves!)
11. ...detach sample
12. ...keep door leaned on but do not close it firmly in order to constantly purge the sample chamber and to avoid over-pressure.



Insert sample on SUMITOMO cryocooler

1. measure height h from top flange of sample can to middle of sample
2. adjust correct height h on **linear translator** ①
3. insert dry sample and heat shield (if the cooler is still cold do all this while flooding with nitrogen gas (see remove sample instructions))
3. slowly open **yellow valve** ② to turbo molecular pump
4. close **isolation valve** ③ and **regulation valve** ④
5. close door of sample chambers with **screws** ⑤
6. switch on **turbo molecular pump** ⑥
7. see **manometer** ⑦ to decrease
8. close **nitrogen supply valve** ⑧
9. watch pressure of sample chamber (either at chopper rack or via SICS with 'vac')
10. wait till you are below 10^{-3} mbar.
11. now switch on the **Sumitomo cryocooler** ⑨, set your temperature setpoint and start your measurement
12. after 3-4h check the pressure in the sample chamber (should be less than $5 \cdot 10^{-6}$ mbar).

