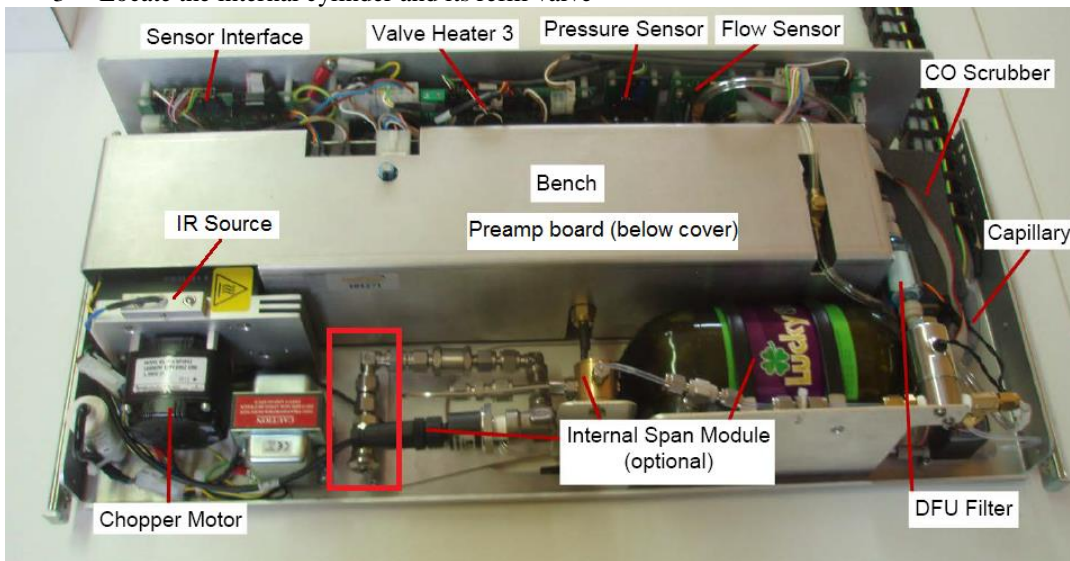
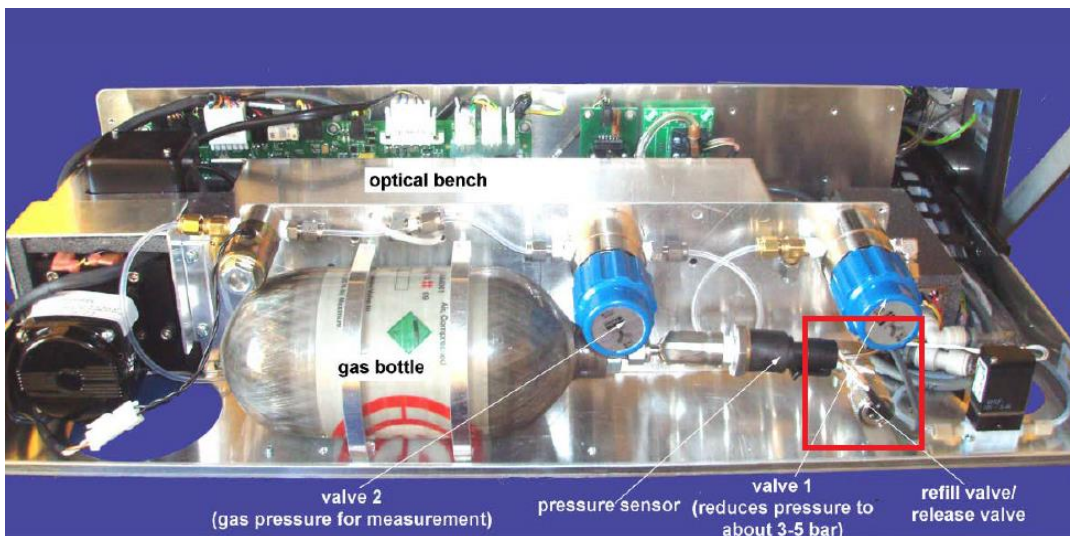


## CO module (A) – Refilling the CO cylinder

- 1- Tools you need
  - 2 big adjustable wrenches
  - Snoop (soapy water for leak check)
  - Recordum filling station [801-081205]
- 2- Locate and pull the CO module drawer
- 3- Locate the internal cylinder and its refill valve



CO(A)



CO(T)

**!** Be careful with pressurized CO. CO is toxic, and pressurized gas should always be handled with care. It is good practice to work in ventilated areas, and to avoid manipulating hazardous material when alone

**!** Be aware that the maximum pressure handled by the internal CO cylinder is 150 bar. You should therefore never attempt to refill it using a cylinder containing more than 150 bars of pressure. The maximum pressure of the cylinder is written on it

**!** The expiry date and maintenance interval are also written on the cylinder. The internal cylinder must be tested by an expert every 5 years. If the cylinder shows any sign of corrosion, damages due to heat or if it has been dropped, the cylinder must be retested

- 4- Check that the external cylinder is closed and attached to a fixed point
- 5- Connect the filling station to the cylinder and make sure the tap is on the close position. If you are not sure, open very slightly the cylinder and you will hear the gas going out if the tap is open. In this case, close the tap and close the cylinder again

**!** Use only the filling station provided by MLU-Recordum. If the tube shows any sign of damage, replace it with a new one

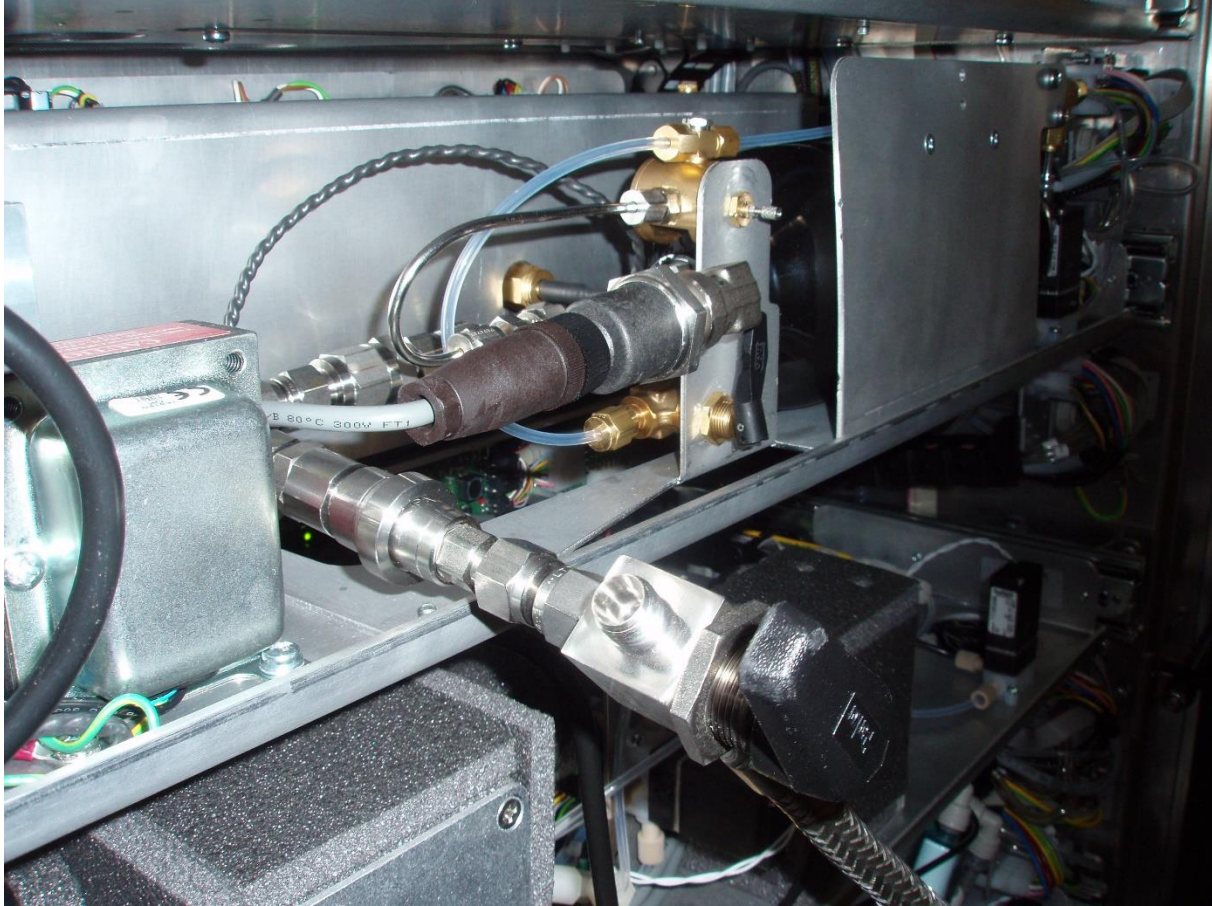


- 6- Use snoop (soapy water) to leak-check the connection between the CO cylinder and the filling station



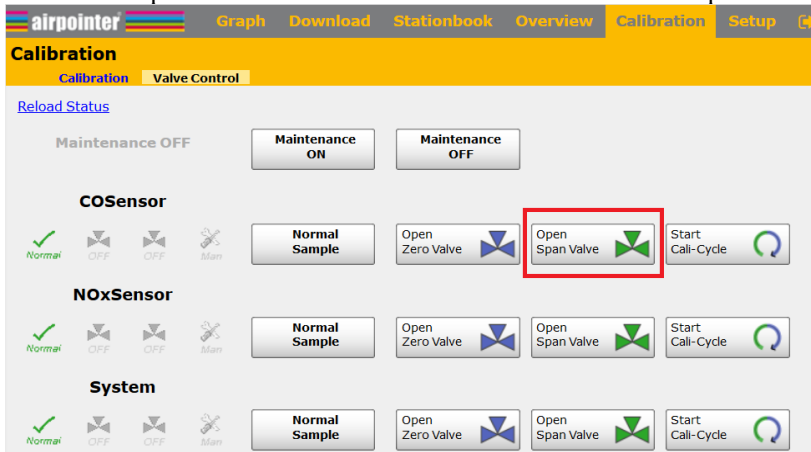
- 7- Connect the filling station to the CO module, listen for the click

**!** When connecting the filling station to the CO module, you should hear a high-pitched “click”. If you don’t hear it, the gas will leak. When sliding the filling station in the connector, you may hear a first weak click, but it doesn’t mean the connection is yet leak-free. When pushing the filling station all the way down, you can hear a 2<sup>nd</sup> click. This second click is much clearer, and only then the connection is leak-free



- 8- Open gently the cylinder, then slowly open the tap. The CO internal cylinder is being refill. You should not hear a “pssshh” sound, which would indicate gas leaking. You should rather hear a metallic screeching sound, due to the metal expanding
- 9- It should take about 20 seconds to refill the internal cylinder. You can check the real-time pressure as it is displayed in Linsens
- 10- Then close the cylinder, close the tap of the filling station, and disconnect the filling station from the CO module

11- Calibrate the airpointer with an external standard cylinder, and then in Calibration/Valve Control, open the span valve of the desired module to determine the setpoints for the internal function control



12- Write the obtained concentration in Setup/Configuration/CO/ under “Calibration Setpoints”, in the field “SetpointSpan\_CO” and click “Save...”

