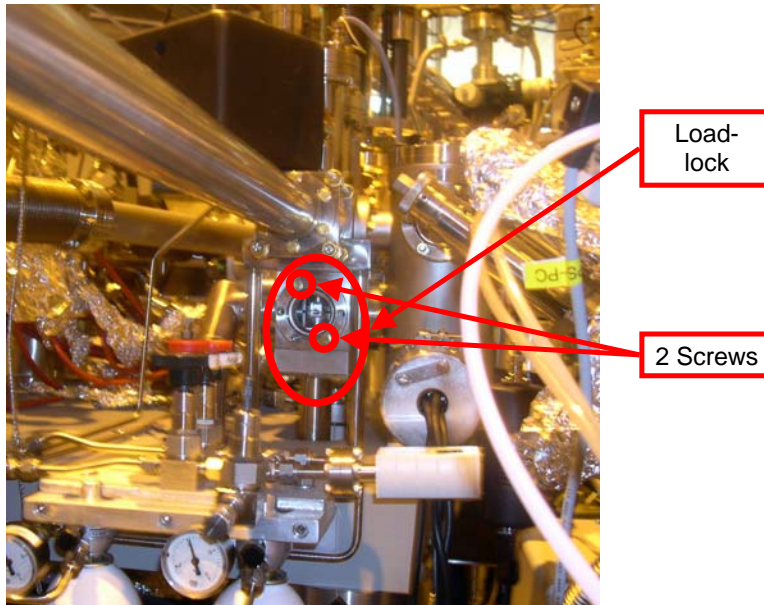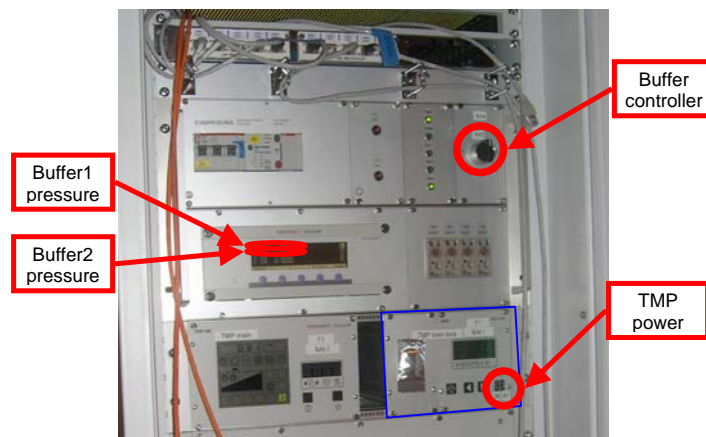# 1.) Load sample into Prepchamber

How to load a sample using the ELMITEC load lock for transfer into the PEEM.

Location

- The load lock is located below the prepchamber on the left-hand side of the PEEM.

- The forevacuum buffer is in the rack WSLA 13.0.55

1.1.) Venting the load-lock

Venting the load-lock to insert the new sample.

o   Turn N2 gas ON (behind hutch) and check for flow.

o   Set Buffer controller to P2 = ACTIVE.

o   Check that valve separating load-lock / prepchamber and prepchamber / mainchamber are CLOSED.

o   Turn TMP controller (DCU) Power = OFF

o   Wait until load-lock is vented.
Vent valve opens once speed is below 1350/min, after ~3 min.

o   Open CF40 flange

o   Turn N2 gas OFF (behind hutch).

1.2.)Install new sample

Install new sample and prepare for pump-down.

o   Close CF40 flange (two M6 screws and VITON gasket).

o   Set Buffer controller to P1 + P2 = ACTIVE.
    Wait 50sec until valve opens (Vent 1 lights up).

o   Turn TMP controller (DCU) Power = ON
    Check that pressure goes down (10^{-2} mbar after ~ 1min).

o   When $P_{LOAD} < 2 \; 10^{-6}$mbar transfer sample.

Known problems:

➢   *Sometimes the vent valve of the TMP does not close. Turn TMP controller OFF / ON*