

Disconnecting the manipulator from MST

To disconnect one (or more) probe from MST, for example to replace the Be filter or to modify the electrical connections, it is necessary to follow a precise procedure. List of actions (repeat them for each manipulator):

1. ask permission to the run coordinator of the day, and to the coordinators of the remaining days of the week, to remove the probe from MST;
2. annotate the MST and roughing line pressure (usual values are 1×10^{-6} Torr and 10 mTorr, resp.);
3. extract the probe to the end. For SXR1 use the $\frac{3}{4}$ " speed handle, for SXR2 the built-in extractor and for SXR3 and 4 use one the two 17 mm "orange" speed handle;
4. in order to close the VAT valve the SXR1 probe should be further extracted 4-5 cm, use the white spacer (see Fig.1). Since the probe has to be disconnected put the spacer vertical and not horizontal as usual;
5. close and secure the VAT valve; pressure should not change;
6. close also the two valves of the roughing system, V1 and V2 (see Fig.2); pressure should not change (note for SXR2: V2 is the valve attached to the rear part);
7. at this point the rough vacuum tubes can be disconnected;
8. also the signals cables can be disconnected; put them in a reasonable position (in order not to have the cables touching anything and have shorts, ground loops etc.) and isolate them;
9. loosen the support (1) (the one before the valve VAT, see Fig.3) using the allen wrench (only for SXR1,3,4);
10. loosen the clamp (2) after the VAT, as seen in Fig.3;
11. remove the probe;
12. in order to rough pump the valve, put the special KF adapter on the VAT valve using the same clamp and o-ring that fixed the probe. These adapters can be found in the "vacuum spare parts" box in the tomography cabinet (2nd floor). SXR1 and SXR4 valves will be connected together (two adapters and one tube), SXR2 and SXR3 will have their own adapter. The tube should be connected to one V1 (or V2) valve;
13. when the probes have been disconnected and the KF adapters attached to the valves, the V1 (or V2) valves connected to the VAT roughing line should be opened; the other V1,V2 valves must be left closed. Rough pressure will increase to several mTorr and will decrease slowly. In 45 minutes it should be ok

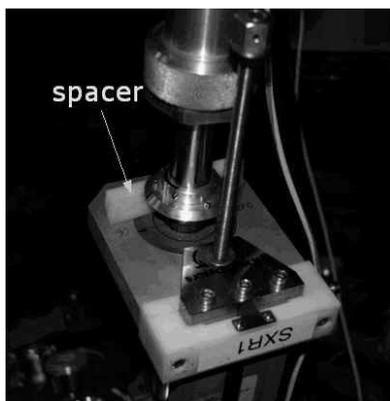


Fig.1

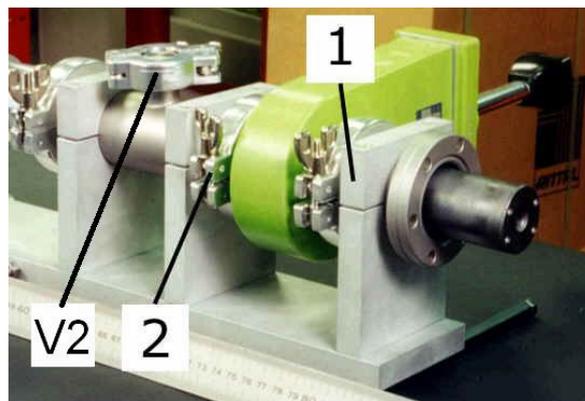


Fig.3

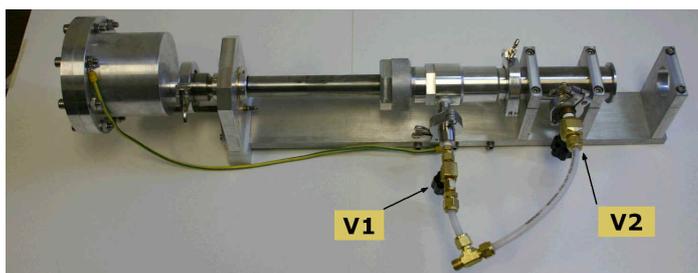


Fig.2