

Switching on the system

Switch on the PC under the table first and log in with your username and password. Then connect the Prisma 200 MS to the mains 230V line (Fig.1 A), then switch on the Pirani gauge measuring unit (Fig.1 B), check that the HL1 switch is set to middle position – OFF (Fig.1 E). Then switch on the major power switch at the Turbomolecular drag pumping stand (Fig.1 C), wait until the firmware loads up and finally switch on the pumps with on off button at the Turbomolecular drag pumping stand controlling panel (Fig.1 D).

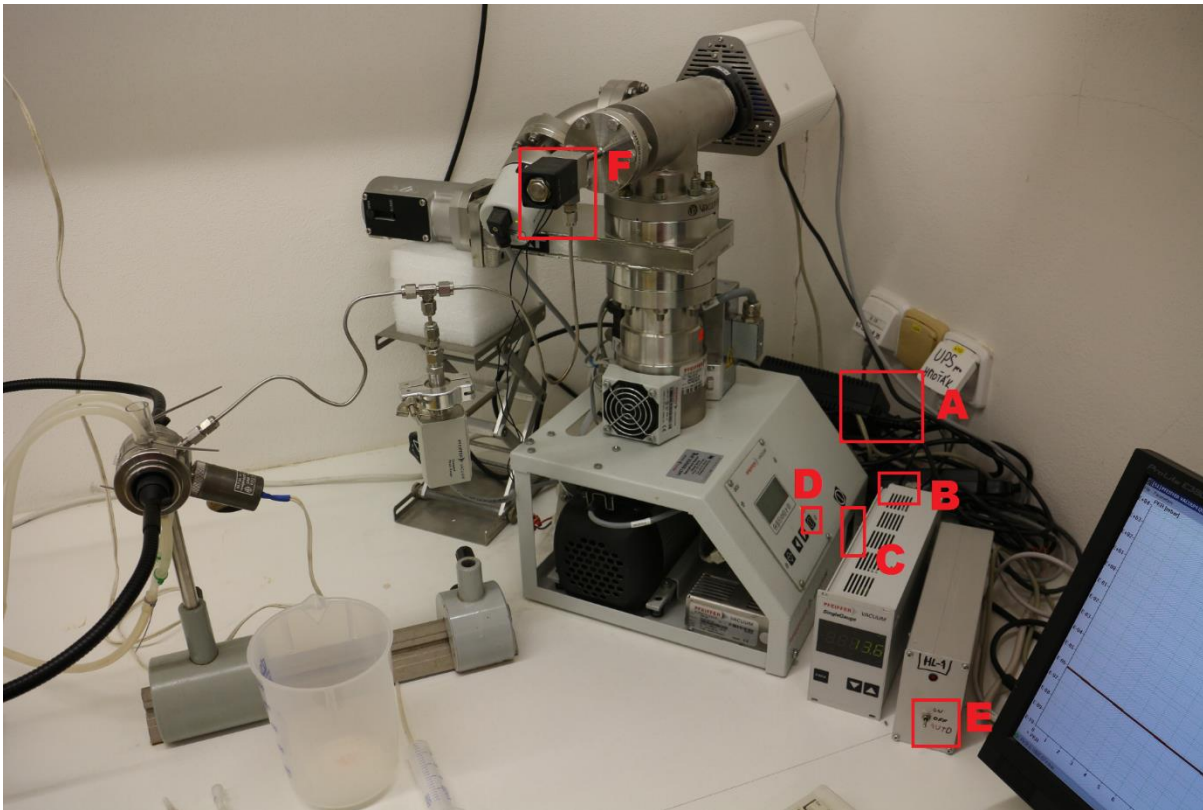


Fig. 1: MIMS Pfeiffer vacuum system

Start the Service module (C:\QS32BIT\service.exe) and start checking the pressure (menu Measure/Total pressure)

Opening the sample introduction line

After approx. 2 minutes open the Vacuum flat desk valve, if closed and wait for the vacuum to decrease. When the vacuum level reach required pressure ($2-4 \cdot 10^{-8}$ mbar) level open the sample introduction line closed by the on off electromagnetic valve. Do so by switching the valve on and off readily approx. 5 times, creating consequently decreasing peaks (Fig. 4). Leave the valve opened, approx. 2 hours, until is the introduced air and moisture pumped down to working range (10^{-6} mbar). When the pressure readings on the Pfeiffer vacuum single gauge driving unit (Fig.2 B) fall below approx. $1,8 \cdot 10^{-2}$ switch the HL1 switch readily to position AUTO (Fig.1 E, Fig02 C)

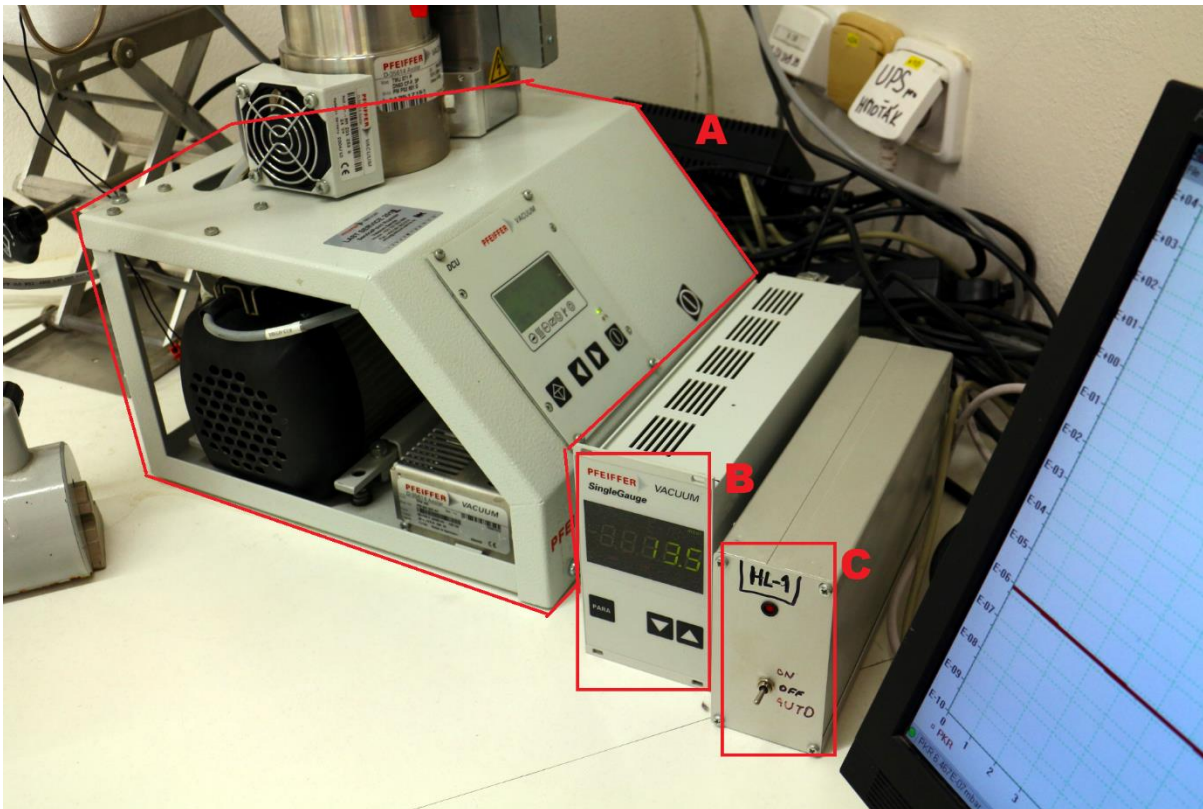


Fig. 2: Main pumping and vacuum measuring components. A- Turbomolecular drag pumping stand, B- Pfeiffer vacuum single gauge driving unit, C- HL1 switch

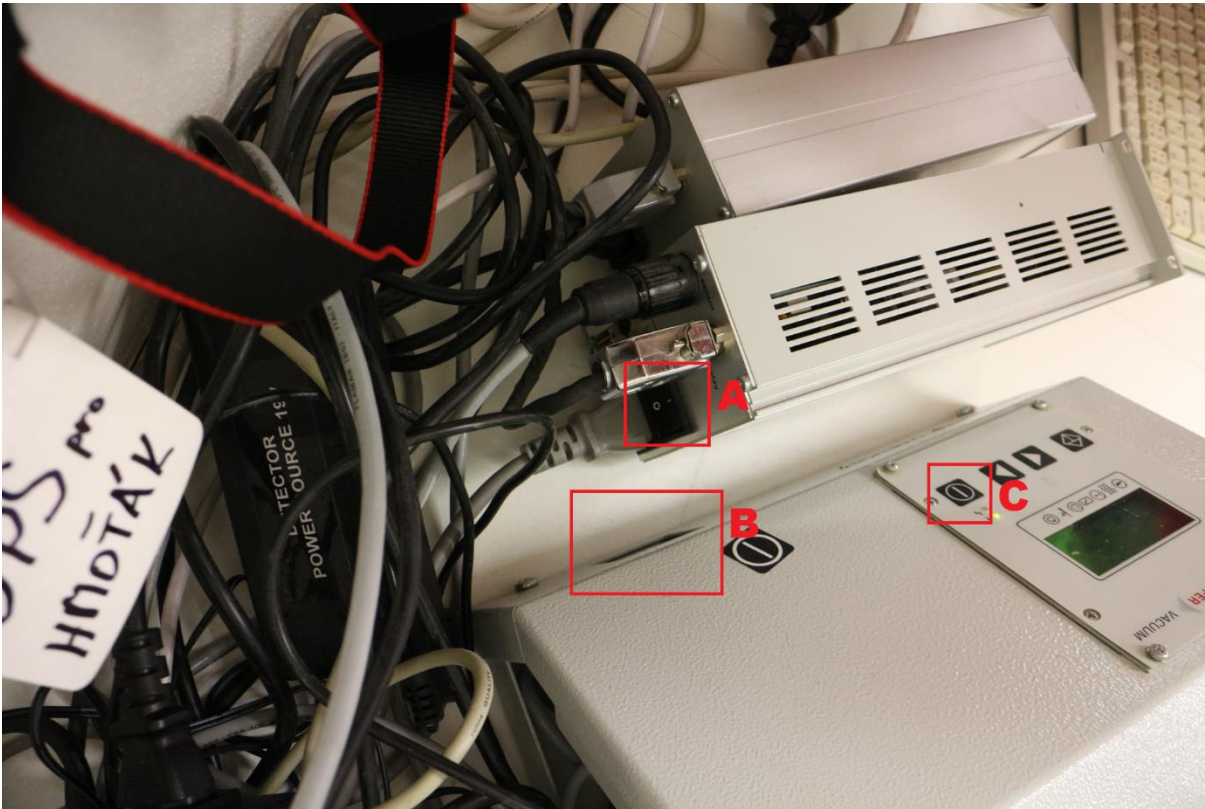


Fig. 3: Position of the 3 main switches. A- Pfeiffer vacuum single gauge driving unit, B- Turbomolecular drag pumping stand major power switch, C- on off button at the Turbomolecular drag pumping stand controlling panel

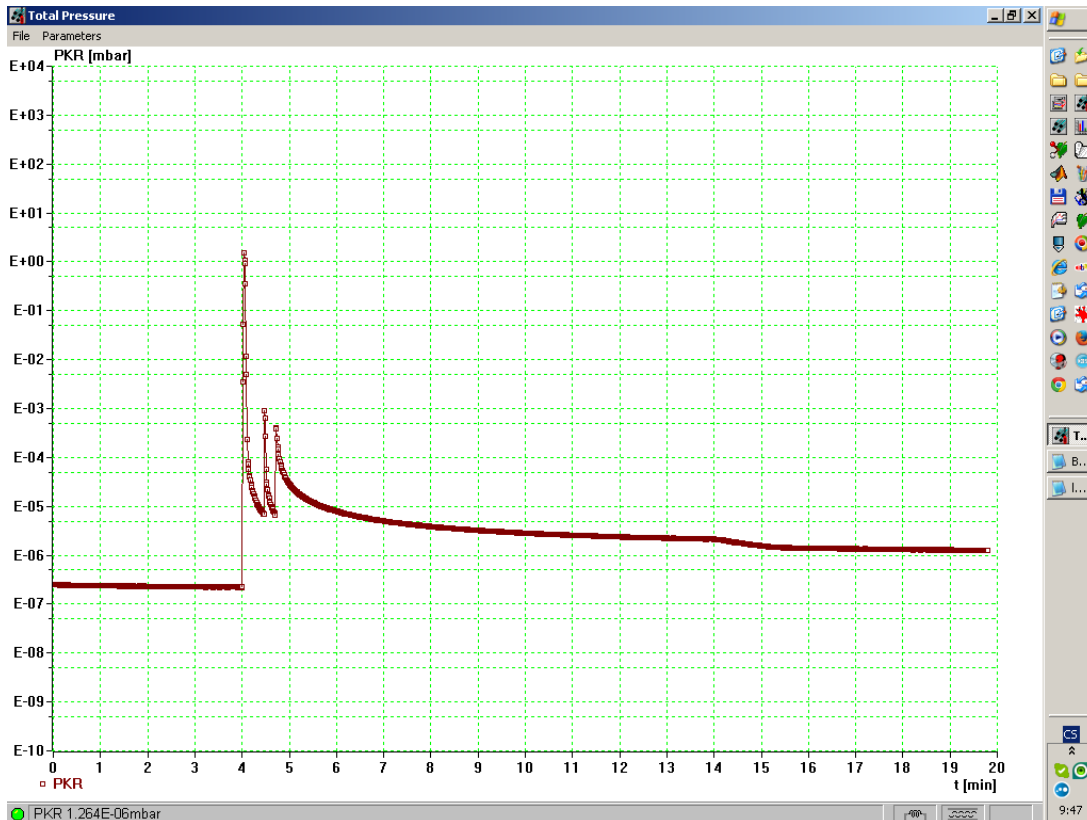


Fig. 4: Typical course of Total pressure signal when opening the ON OFF valve with HL1 switch. Y-axis pressure [mbar], X-axis time [min]. Peaks represents openings, followed by decrease. Note that the second peak is smaller and the decrease is faster.