

Check that the sensor and power leads from the FM42 are connected to the sockets on the front of the IFD7. Using the maximum air velocity as a guide, select incremental values for air velocity that will give 10–15 individual steps between minimum and maximum velocity. Check that the IFD is connected to a suitable mains supply, and check the socket on the front is connected using the lead provided to a suitable PC. Check that the red and green indicator lights on the front of the IFD7 are illuminated. Run the Arm field FM42–304 software on the PC, and check that the software indicates 'WV: OK' in the bottom right-hand corner of the window. Check that the power switch on. Check that the green watchdog indicator on the mimic screen is illuminated. Switch on the compressor using the 'Power On' button on the software mimic diagram screen. Check that the sensor readings on the software screen give sensible values. Zero the pressure sensors if necessary using the 'Zero' buttons on the mimic screen, Read through the experiment before starting, to familiarize yourself with the procedure. Switch on the mains supply to the WV?, and switch on the WD7 using the power switch on the front. The temperature should be sensible given the ambient conditions in the room (typically between 15 and 30 °C). The pressure readings should be zero when the compressor is not moving. Set the compressor speed to maximum (100%, 90% & 80%) and note but do not record the flow rate. Fully close the outlet aperture to give minimum flow. Click the button on the toolbar to record a set of readings.