



## Testing for patient circuit leaks in Tafonius

There are 3 ways to perform a leak test with Tafonius when looking for leaks from the patient circuit. The patient circuit includes the following:

- Drainage pan with fitted stoppers and manual bag port
- Soda Lime tray
- Main cylinder
- Ascending 2" tubes from drainage pan to Valve block
- The main valve block with 2 pipe feeds (4mm and 6mm) and the Dump Tubing
- Patient tubes to, and including the Y-piece (with CO2 sampling)
- Pressure sensing line
- The Selectatec back-bar and any fitted vaporiser

A leak in any of the above will result in an elevated figure for the leak tests. Before proceeding with any leak test, make sure that the absorber pan is fitted and the cylinder closed, the manual bag port is sealed, the valve block is fully assembled, the patient tubes are fitted and the Y-piece capped and that the pressure sensing line is attached to the Y-piece.

### Leak test procedures:

- 1) Automatic leak and compliance testing by Tafonius software
- 2) Manual leak testing by Tafonius software
- 3) Manual leak testing by Auxiliary software

### Leak test 1

To perform Leak test 1, follow the procedure detailed in the main user guide.

### Leak Test 2

To perform leak test 2, use the oxygen (or air) flow meter to fill the piston to about half-way (10L). Make sure the system is fully assembled and that the Y-piece is capped. Then set a CPAP value of 20cm using the CPAP button and the numeric keypad. Watch the piston image on the screen and see if the piston is descending as indicated by the falling numbers. Turn on the oxygen (or air) and adjust to a level that prevents piston movement. The flow rate of oxygen (or air) required is equal to the leak at 20cm pressure. You may then be able to identify the leak by listening or feeling around items in the patient circuit. If the leak is small and difficult to detect, increase the CPAP setting to 40cm pressure.



### **Leak test 3**

Leak test 3 is performed using the Auxiliary screen and does not involve the Tafonius software or PC.

With the machine turned off, press the main ON/OFF button. The Auxiliary screen will come on and run through its testing procedure. After testing the VIX drive, 2 beeps will be heard and then the screen clears. The text at the top of the screen then says: "Push any knob for system leak test" At this point, press any one of the 4 control knobs under the small screen. This will then take you to a screen which asks you to "FIT STOPPER TO Y-PIECE AND THEN TURN ON GAS FLOW TO TEST FOR LEAKS". The pressure in the patient circuit will now be indicated by the manometer fitted under the Auxiliary screen. Add oxygen (or air) until the manometer reads 20cm pressure. Turn off the gas flow. If the manometer needle starts to fall, add gas flow until the pressure remains steady at 20cm pressure. The gas flow is now equal to your system leak. You may then be able to identify the leak by listening or feeling around items in the patient circuit. If the leak is small and difficult to detect, increase the gas flow until a system pressure of 40cm is reached.

To assist in detecting any leaks, use the "Tafonius Troubleshooting guide", which details common sources of leaks. This guide is available to download from the Vetronic Services web site at [www.vetronic.co.uk](http://www.vetronic.co.uk). Go to Products -> Tafonius->Download.