WHAT IS CLAIMED IS:

1. A flow therapy apparatus comprising:

an inlet port configured to receive a flow of gases from at least two different gas sources;

a blower which receives the flow of gases from the inlet port, the blower configured to mix the flow of gases from the at least two different gas sources to produce mixed gases, the blower being a combined blower and mixer;

a gases flow path which receives the mixed gases from the blower; and

one or more sensors configured to measure a property of the flow of gases flowing through the gases flow path, wherein the one or more sensors is located downstream of the blower, wherein positioning the one or more sensors after the blower allows the blower to be a mixer;

wherein the gases flow path directs the gases flow through a sensing chamber, the sensing chamber comprising a sensing circuit board, wherein a first portion of the sensing circuit board is positioned at least partially within the gases flow path, wherein the sensing circuit board comprises at least a second portion of the sensing circuit board positioned outside the gases flow path, and wherein the sensing chamber comprises a seal dividing the first portion of the sensing circuit board from the second portion of the sensing circuit board.

2. The apparatus of Claim 1, wherein the inlet port comprises a valve configured to receive a flow of gases from an oxygen gas source, the valve being configured to deliver a flow of the oxygen gas to the blower.

3. The apparatus of Claim 2, wherein the valve comprises a proportional valve.

4. The apparatus of any one of the preceding Claims, wherein the sensors comprise two or more ultrasonic transducers.

5. The apparatus of any one of the preceding Claims, wherein the sensors comprise a gas concentration sensor.

6. The apparatus of any one of Claims 4-5, wherein the sensors comprise two or more ultrasonic transducers and the ultrasonic transducers are configured to determine a gas concentration.

7. The apparatus of Claim 6, wherein the ultrasonic transducers are configured to determine a flow rate.

8. The apparatus of any one of the preceding Claims, wherein the sensors comprise a heated temperature sensing element.

9. The apparatus of Claim 8, wherein the heated temperature sensing element is configured to determine a flow rate.

10. The apparatus of any one of the preceding Claims, wherein at least one of the one or more sensors are located in a sensor module.

11. The apparatus of any one of the preceding Claims, wherein the one or more sensors comprise a gas flow sensor and a temperature sensor, wherein the sensing circuit board is configured to effect thermal conduction between the gas flow sensor and the temperature sensor, and impede thermal conduction between a wall of the sensing chamber and the temperature sensor.

12. The apparatus of any one of the preceding Claims wherein the seal is a pneumatic seal.

13. The apparatus of any one of the preceding Claims, wherein the flow of gases is measured through at least a portion of the gases flow path configured to be continuously curved such that there are no significant angles.

14. The apparatus of any one of Claims 1 to 12, wherein the gases flow path comprises an entrance, a horizontal portion, and an exit, wherein the entrance and the exit are positioned in vertically opposed directions, and the horizontal portion is positioned between the entrance and the exit.

15. The apparatus of Claim 14, wherein the horizontal portion has a smooth curve along the entire length of the horizontal portion.

16. The apparatus of any one of the preceding Claims, comprising a main housing, and a motor module which comprises the blower, the motor module being received by a recess in the flow therapy apparatus.

17. The apparatus of Claim 16, wherein the entire motor recess is gas impermeable and unbroken, other than the gas flow path.

18. The apparatus of Claim 16, wherein the main housing comprises a main housing upper chassis and a main housing lower chassis.

19. The apparatus of Claim 17, wherein the main housing lower chassis is attachable to the main housing upper chassis.

20. The apparatus of Claim 19, wherein the main housing lower chassis is attachable to the main housing upper chassis either by suitable fasteners or integrated attachment features.

21. The apparatus of Claim 16, wherein the motor recess comprises a recess opening provided in a bottom wall of the main housing lower chassis, for receipt of the motor module, a continuous, gas impermeable, unbroken peripheral wall being integrally formed with the bottom wall of the lower chassis and extending upwardly from the periphery of the opening.