Pneumvent Test Methods and Test Results

Parameter Tested	Description	Testing Method	Value Range	Default Value	Error Message Displayed on LCD
Lung Pressure (Low & High)	The range of pressure in the the patient's Lung. If the pressure is lower lower than the limit the inspiration valve turns ON until pressure range is achieved	Run self-test without hooking up the respirator tubes to patient , within 10 seconds Alarm will beep displaying either "Pressure too low" or "Pressure too high". That is achieved by comparing the default lung pressure values to the expected values, if the values are out of the threshold then an alarm condition is triggered.	0-100 cmH20	20-40 cmH20	
Breathing Rate	The rate at which the breathing takes place per minute	Run self-test without hooking up the respirator tubes to patient, within 10 seconds alarm will beep displaying either "low respiration rate" or "high respiration rate". This is done by comparing the pressure at the mixture valve to the lung pressure, if there is no change it means no inhalation or exhalation has taken place and ana alarm condition will be triggered.	5-18 breaths/min	14 breath/min	
Inspiration/Expiration (I:E) ratio	The ratio of inspiration to expiration time (expressed as percentage)	Run self-test without hooking up the respirator tubes to patient, , within 10 seconds alarm will beep displaying either "inspiration missed" or "expiration missed" . This done if the pressure at the inhalation or exhalation tubes remains the same after a set amount of time (Breathing rate). If the pressure doesn't change an alarm condition is triggered.	20%-70%	50%	
Air Mixture Pressure	The range of pressure of air avaialble for the patient to inhale (Pure oxygen + Compressed Air)	The FiO2 parameter sets the ratio of oxygen to compressed air from which the self-test uses that value and compares it to the output. If the output is lower than expected FiO2 air mixture pressure the alarm will beep displaying "Low FiO2 Pressure" it is caused by either the oxygen tank going low or the air compressor getting faulty	0-200 PSI	50 PSI	
Temperature	Checks that the temperature of the unit is within operation (i.e -20 Celcius to 80 Celcius). This is the internal temperature of the device	If the internal temperature of the enclosure exceeds the temperature range the device will issue"extreme Temperature" error. Under either condition the device will not run.	(-20-80)Celcius	25 Celcius	

Operation Mode	Ensures that all three modes of operation of the ventilator are operational . i.e. Assisted, pressure and time triggered	The device will trigger the conditions of pressure and time and compare the output to the pressure valves, if the expected pressures are not reached it means one of the above conditions are faulty. Assisted mode is the only condition that requires user input (not self-tested) and the user is required to quickly create a vaccum in the tube by placing their palm of the hand and quickly removing it from the surface opening of the respiration tube	Pressure Mode	Pressure Mode