an electronic lung simulator that allows two levels of compliance to be set, slow-flow P-V loop to their ventilators. Each ventilator was evaluated using XL and the Hamilton Galileo have added the option of an automated, standardized procedure to acquire P-V loops. The Viasys Avea, Drager periods of apnea or while using a very slow flow rate. There is no measurement of pressure and volume must be performed during short technique and the incremental volume technique. To eliminate resistance ventilator that will protect the patient from ventilator-induced lung injury. Ventilator settings. In ARDS it is important to choose settings on the (LIP) and upper infection points (UIP) to help determine appropriate loops may help to determine individual respiratory mechanics. P-V loops have been studied in many disease states to identify lower inflection points (LIP) shows three results when using similar ventilator settings and the same simulated patient applied to the system and is displayed as the dissimilarity of the inspiratory and expiration. Hysteresis refers to the lost energy or delayed recover of energy that is comparison of these three ventilators performed PLIMIT 40 cm H2O, Flow 4 LPM, VLIMIT 0.8 L. Ten breaths were delivered between each P-V loop PLIMIT 40 cm H2O, Flow 4 LPM, PEEP 0 cm H2O, PEEP Teq. 1 second, sensitivity 3.0 cm H2O. Galileo settings: VT 0.8 L, Flow 4 LPM, PEEP 0 cm H2O, PEEP Teq. 1 second, sensitivity 3.0 cm H2O. Avea does not restrict expiratory flowrate and demonstrated marked hysteresis. When using P-V 1 does not reduce expiratory flowrate, but P-V 2 does reduce expiratory flowrate. The Dräger XL programmed to have an LIP of 15 cm H2O at 50 mL and an UIP of 30 cm H2O at 600 mL. The Viasys Avea, Hamilton Galileo and Dräger XL were evaluated. The Galileo has two slow-flow P-V loops: P-V 1 and P-V 2. Avea does not restrict expiratory flowrate and demonstrated marked hysteresis. When using P-V 1, hysteresis will be reduced. If the ventilators produces varying results. There were obvious differences when P-V loops were performed expiration, hysteresis will be reduced. The comparison of these three ventilators inspiration only. Ventilator settings were selected to provide a similar maneuver. Avea settings: VT 0.8 L, Flow 4 LPM, PEEP 0 cm H2O, PEEP Teq. 1 second, sensitivity 3.0 cm H2O. Galileo settings: VT 0.8 L, Flow 4 LPM, PEEP 0 cm H2O, PEEP Teq. 1 second, sensitivity 3.0 cm H2O. Dräger XL settings: VT 0.8 L, Flow 4 LPM, TPAUSE 0 seconds, TMANEUVER 20 seconds. Comparing Slow-Flow P-V Loops using the Avea, Drager XL and Galileo