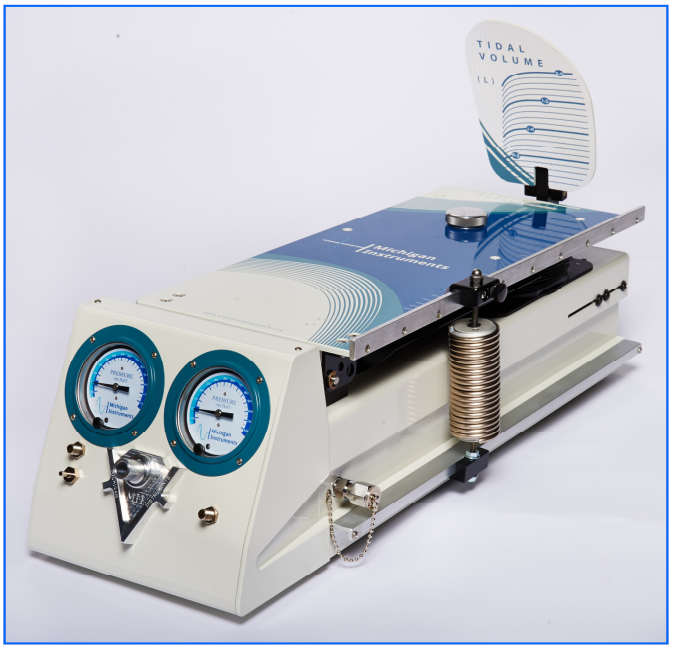
MedicalSimulator
INNOVACIÓN EN EDUCACIÓN

Michigan Instruments



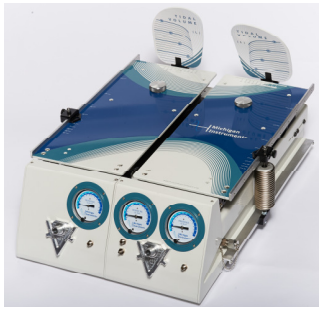
Single Adult Lung Simulator Models SLN & SL3*

**Includes the PneuView® 3*

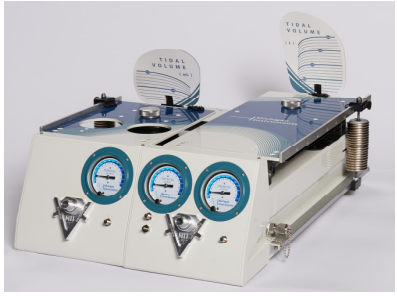
Our Training Test Lung (TTL) and PneuView3 products provide a range of realistic simulations and are particularly useful for training, testing and demonstration of devices

- Classroom Instruction
- Ventilator Testing
- Product Evaluation
- Pulmonary Research
- Quality Control
- Design Engineering
- Clinical Intervention

Available Models



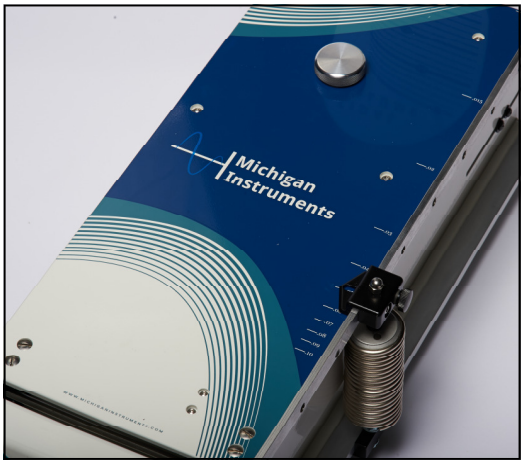
Dual Adult—
Models DAN and
DA3*



Adult//Infant—
Models AIN
and AI3*

What is the Single Adult TTL®?

- A portable analog lung system which accurately simulates human pulmonary function for testing ventilators or training under simulated load conditions.
- It can accommodate several types of oxygen measuring sensors and other sensing equipment.
- The lung visually demonstrate a variety of normal and pathological pulmonary conditions.
- The system provides an accurate measure of volumes, pressures and flow rates of medical equipment and replaces several measuring instruments at a fraction of their combined costs.



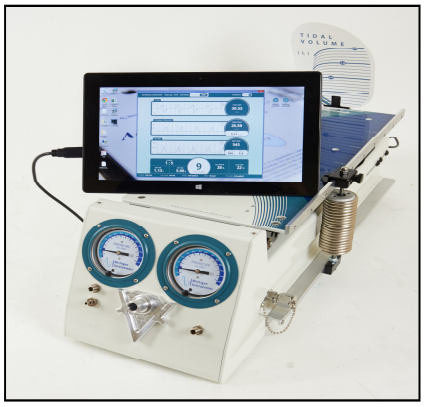
How does the TTL® work?

- The TTL® uses a single adult lung, with a range of compliance settings to simulate the pulmonary system.
- The Pneuflo® resistors offer accurate simulation at both upper and lower airway resistance in exact accordance with ASTM standards. These resistors represent the parabolic flow characteristics of the human airway.
- The pressure corrected volume measurements match spirometer volumes measured on an actual patient with the same pulmonary compliance and airway resistance.

PneuView®3 Software*

Combine lung simulation with the versatility of a personal computer

PneuView®3 Software

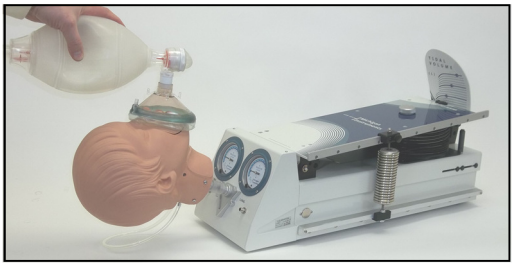


- Visually demonstrates, in real-time, the relationship between pressure, volume, and flow waveforms.
- Record a run of live ventilation data.
- Tracks ventilator performance trends for up to 1,000 hours.
- Measures pressure, volume, flow and timing parameters.
- Is compatible with High Frequency Ventilation.
- Provides FiO_2 and ambient temperature measurements
- Multiple ways to capture and review data.

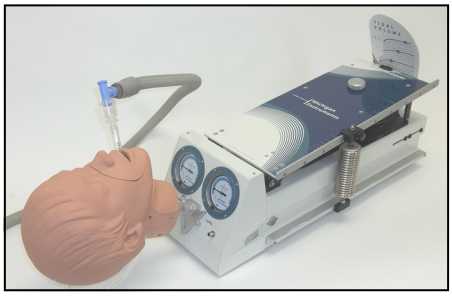
PneuView®3 Software CALCULATIONS:

Breath Rate—Inspiratory Time—Expiratory Time—I:E Ratio—Tidal Volume—Minute Volume—Baseline Pressure—And many more

Head Simulation Modules

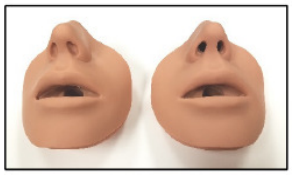


Expand the range of applications for the TTL and PneuView systems.



HSM-A—Adult

Specialized fittings and adapters to work with all generations of the TTL and PneuView systems.



Designed with open cavities and ideal for testing:

- ◊ CPAP and BIPAP Systems
- ◊ Manual Resuscitators
- ◊ Non-Invasive Ventilators and Ventilation Modes
- ◊ Oxygen Delivery Systems

Specifications

Tidal Volume Capacity: 2.0 L

Residual Lung Volume: 1.02 L

Lung Compliance (adjustable):
.01 to .10 L/cmH_2O
Accuracy: +/- 3% (at calibration

Airway Resistance (adjustable):
Rp5, 20 or 50 cmH_2O/L/sec
Accuracy: +/- 5% (at calibration flows)

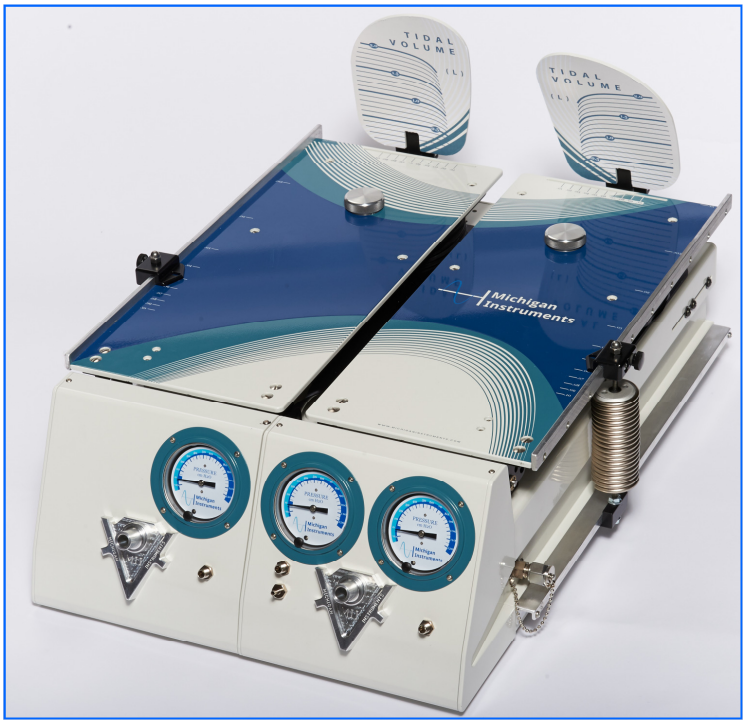
Approximately 25”x10”x13” 25 lbs. (11.3kg)

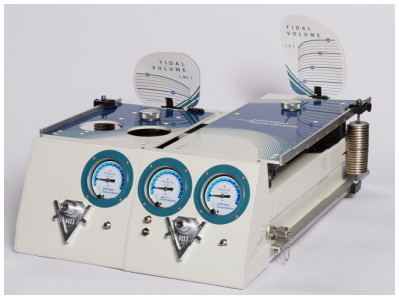
Our Devices are manufactured in the USA, at our Grand Rapids, Michigan facility. Partnerships with leaders in respiratory care training, research, product development and education continue to influence the evolution of our TTL and PneuView3 products.

MedicalSimulator
INNOVACIÓN EN EDUCACIÓN

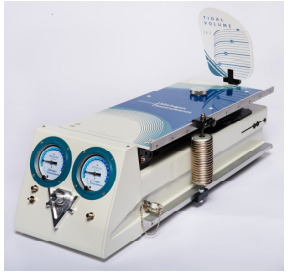
Michigan Instruments

Available Models





Adult//Infant
Models AIN and AI3*



Single Adult—
Models SLN and SL3*

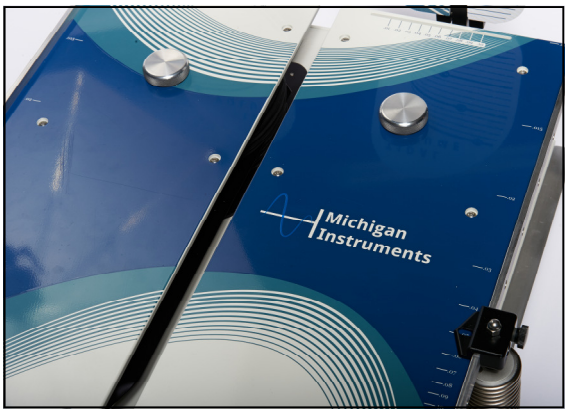
Dual Adult Lung Simulator
Models DAN & DA3*

**Includes the PneuView®3 Software*

- Classroom Instruction
- Ventilator Testing
- Product Evaluation
- Pulmonary Research
- Quality Control
- Design Engineering
- Clinical Intervention

Our Training Test Lung (TTL) and PneuView3 products provide a range of realistic simulations and are particularly useful for training, testing and demonstration of devices and therapies intended for use across a wide range of patient populations.

What is the Dual Adult TTL®?



- A portable analog dual lung system which accurately simulates human pulmonary function for testing ventilators or training under simulated load conditions.
- It can accommodate several types of oxygen measuring sensors and other sensing equipment.
- The lungs visually demonstrate a variety of normal and pathological pulmonary conditions.
- The system provides an accurate measure of volumes, pressures and flow rates of medical equipment and replaces several measuring instruments at a fraction of their combined costs.

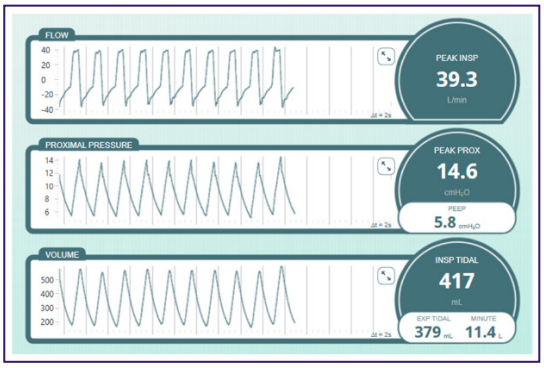
How does the TTL® work?

- The TTL® uses two adult lungs, each with its own range of compliance settings to simulate the pulmonary system.
- The Pneuflo® resistors offer accurate simulation at both upper and lower airway resistance in exact accordance with ASTM standards. These resistors represent the parabolic flow characteristics of the human airway.
- The pressure corrected volume measurements match spirometer volumes measured on an actual patient with the same pulmonary compliance and airway resistance.

PneuView®3 Software*

Combine lung simulation with the versatility of a personal computer

PneuView®3 Software



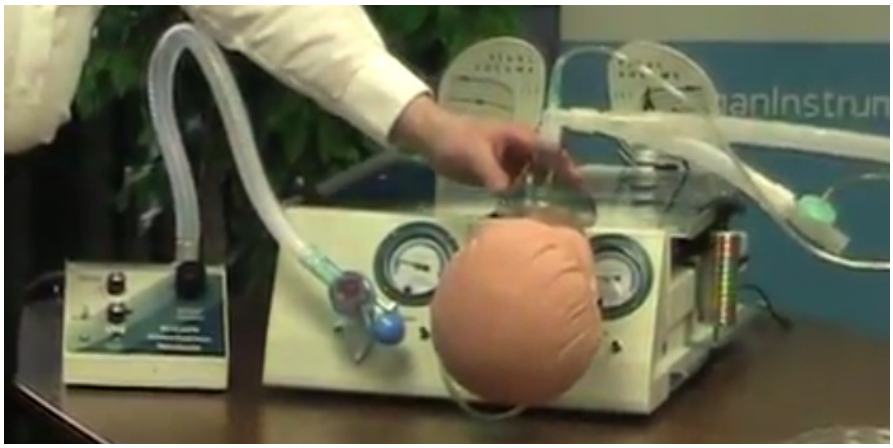
- Visually demonstrates, in real-time, the relationship between pressure, volume, and flow waveforms.
- Record a run of live ventilation data.
- Tracks ventilator performance trends for up to 1,000 hours.
- Measures pressure, volume, flow and timing parameters.
- Is compatible with High Frequency Ventilation.
- Provides FiO_2 and ambient temperature measurements
- Multiple ways to capture and review data.

PneuView®3 Software CALCULATIONS:

Breath Rate—Inspiratory Time—Expiratory Time—I:E Ratio—Tidal Volume—Minute Volume—Baseline Pressure—And many more

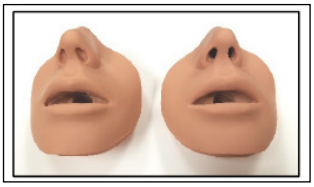
Head Simulation Module (HSM) and Breath Simulation Module (BSM).

Create a Spontaneous Breathing System



BSM -

Simulate a spontaneously breathing patient for training or studying the use of PAP, IMV, SIMV, pressure support of other ventilation model designed for use with breathing patients.



HSM -

Designed with open cavities and ideal for testing:

- ◊ CPAP and BIPAP Systems
- ◊ Manual Resuscitators
- ◊ Non-Invasive Ventilators and Ventilation Modes
- ◊ Oxygen Delivery Systems

Specifications

Lung Compliance (adjustable):
- Each Lung .01 to .10 L/cmH_2O
- Accuracy: +/- 3%
- (at calibration volumes)

Airway Resistance (adjustable):
- Rp5, 20 or 50 cmH_2O/L/sec
- Accuracy: +/- 5% (at calibration flows)

Tidal Volume Capacity:
- Each Lung 2.0 L
- Total 4.0 L
- Accuracy +/- 3% or 20 mL

Residual Lung Volume:
- Each Lung 1.02 L
- Total 2.04 L

Approximately 20”x25”x8” - 37 lbs. (16.8kg)