



INGMAR MEDICAL

Respiratory Simulation Specialists



## RespiSim<sup>®</sup> System Overview

# All-in-One Respiratory Simulation Solution

Designed to include everything educators need to provide effective ventilator management training through experiential learning that makes learners unequivocally competent to provide the best patient outcomes. RespiSim<sup>®</sup> System for ventilator management training is built around the world's most realistic breathing simulator, the ASL 5000<sup>™</sup>. With the RespiSim System, you can conduct high-fidelity ventilation management training in anesthesia, critical care, emergency medicine, pulmonology, and respiratory care.

### Effectively Train All Topics - Basic Through Advanced

- Weaning • Lung recruitment
- Lung protective ventilation • Recognizing over-distention
- Initiation of mechanical ventilation • Finding optimal PEEP
- Patient-ventilator synchrony ... and many more

**NEW**

# RespiPro™

## All-In-One Respiratory Simulation Solution

- Provide effective simulation-based experiences with high physical, conceptual and psychological fidelity
- Reap the benefits of simulation-based training without the hassle of complicated software or restrictive scenario-building capabilities
- Train all levels of learners across multiple disciplines on the full scope of ventilation management and patient care with one solution

Instructor Display with  
RespiSim Software 4.0

Learner Display with  
Patient Monitor  
Application

Your Real Ventilation  
Equipment

RespiPro Mobile Cart

RespiPro Manikin



# ASL 5000™ Breathing Simulator

A major shortcoming of most manikin simulators is that their respiratory functions are fairly simple. They offer a limited number of settings and their spontaneous breathing capabilities are inadequate. The RespiSim System is different because its core is the high-fidelity ASL 5000 Breathing Simulator. The ASL 5000's unique design makes it possible to precisely craft very realistic breath profiles.

The ASL 5000's breath patterns are created by the movement of a piston in a cylinder. This movement can be so precisely controlled that the ASL 5000 is used to develop and test ICU ventilators. In fact, many of the ventilators in hospitals today have been developed using the ASL 5000.

## Features:



Spontaneous breathing:  
Breath rate passive to 100 bpm and patient effort (muscle pressure) 0 to 50 cmH<sub>2</sub>O



Holds PEEP at any level, even > 20 cmH<sub>2</sub>O



Lung compliance from 0.5 mL/cmH<sub>2</sub>O to 250 mL/cmH<sub>2</sub>O



Airway resistance from 3 to 350 cmH<sub>2</sub>O/L/s



1 or 2 lung compartment modeling



Inspiratory and expiratory resistance values can be set separately



Tidal volume 2 mL to 2.1 L



Neonatal to adult patients



Use with any ventilator, BiPAP, or CPAP device

Simulate complex disease states and conditions including ARDS, COPD, emphysema, cystic fibrosis, chronic bronchitis, pneumothorax, apnea, pneumonia, bronchospasm, weaning off of a paralytic/ waking from anesthesia, and many more!

# RespiSim® Software

## RespiSim® Software

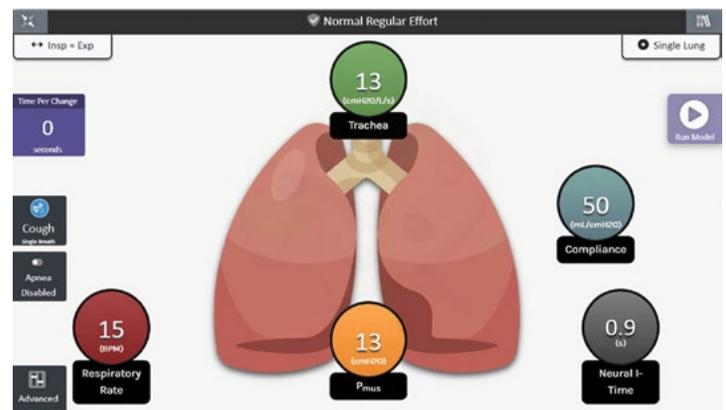
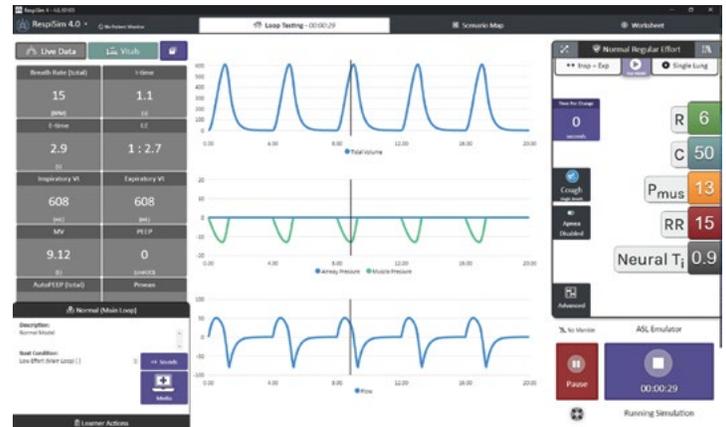
The RespiSim Software allows medical educators access to the realism and precision of the ASL 5000 with a user interface designed specifically for their needs. The RespiSim Software enables hands-on, immersive training through structured, multi-phase simulation scenarios that engage students in "clinical storytelling." The instructor can amplify effects, challenge learners with unexpected events, or intervene to get the simulation back on track and ensure that learning goals are met.

## We are pleased to announce, there is an all-new release of the RespiSim Software - version 4.0!

Designed by educators for educators, this new version has been built from the ground up and makes it easier than ever to deliver effective mechanical ventilation training via high-fidelity, hands-on simulation. Step through pre-scripted scenarios or control parameters on-the-fly with a nearly unlimited number of patient conditions available at your fingertips.

## New, improved Patient Monitor

Provide learners with a true-to-life patient monitor application including assessments during the simulation such as a library of EKG and CO2 waveforms, heart rate, blood pressure, respiratory rate, oxygen saturation, end-tidal CO2, chest x-rays, and lab results.



# RespiPro™ Manikin

## RespiPro™ Manikin

With the ASL 5000 Breathing Simulator at its core, RespiPro provides a comprehensive ventilator management training experience. You can move from initial CPR maneuvers to bag-valve-mask ventilation and intubation, all the way to complex ventilator management skills.

## RespiScope™ Advanced Auscultation

Provides lung, heart, and bowel sounds by lobe and heart chamber. It uses Cardionics' SimScope™ WiFi for exceptional sound quality.

## Train the following skills:

- Airway management (orotracheal, nasotracheal, combitube, LMA placement, right main stem)
- Proper head positioning with full head tilt, chin lift, and jaw thrust
- Managing difficult airways with an inflatable tongue with real-life size and texture
- Proper intubation techniques with “breakout” teeth to simulate the effects of bad practice in direct laryngoscopy
- Identification of tracheal deviation
- Identifying either right or left tension pneumothorax
- Needle decompression maneuver with the familiar “hiss” of escaping air
- Chest tube insertion
- Tracheotomy
- Cricothyroidotomy
- Auscultation of lung and heart sounds



## Manikin Features:



Anatomically correct airway and chest structure, one-layer tissue, “real feel” skin



Replaceable tissue sets



Unilateral and bilateral chest rise

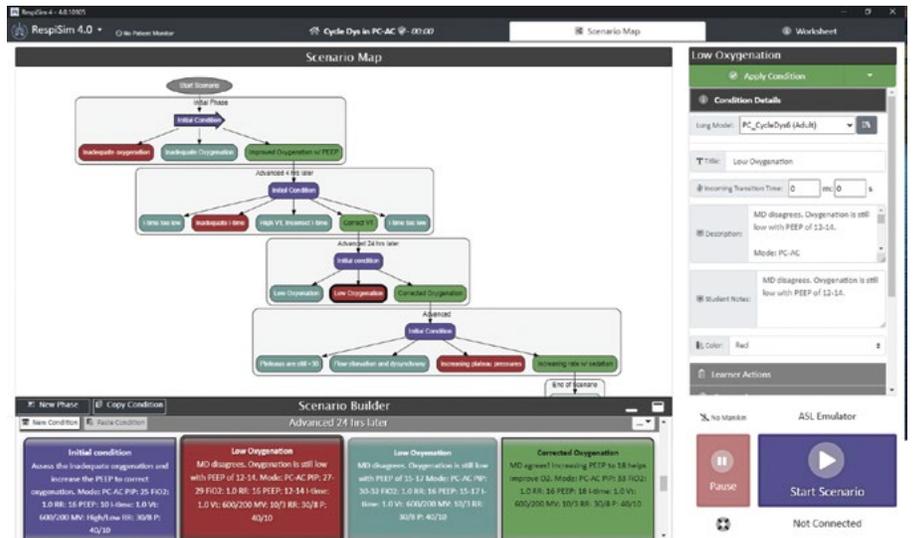


Compact torso format is easy to store and transport

# RespiSim® Scenarios

## RespiSim® Scenarios

IngMar Medical's vision for the RespiSim® System is to develop a platform for collaboration within the respiratory care community resulting in time savings for instructors, more consistent training, higher skill levels, and ultimately better patient outcomes. Simulating clinical reality is a challenging task, especially with simulations involving several opportunities for learners to gather information and make treatment decisions. RespiSim Scenarios make simulation easier and save time. RespiSim Scenarios are comprehensive learning modules which combine multiple patient conditions, assessments, instructor notes, and patient condition information for the learner. RespiSim Scenarios were developed by our Clinical Education team in collaboration with various subject matter experts. We encourage RespiSim users to customize all aspects of the scenario to meet their specific goals. If you would like help customizing or developing a scenario in RespiSim Software, please consider our consultation services.

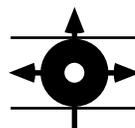


## Ventilator Interface Kit (VIK)

View ventilator parameters (modes, alarm limits, alarms) in the software during live simulations and debriefs. The VIK works with most leading ICU ventilators.

ASL Monitor - Parameters			
Device	FiO2 set	Flow Trigger set	High Press limit
BETA-B827EB-EC8E19	21	0.5	66
High Rate(f) limit	E of I:E (set)	I of I:E (set)	Insp Time set
56	3.3	1.0	0.56
Peak Flow Set	PEEP set	Rate(f) set	Therapist
67.0	9	25	autoscan
Tidal Vol set	FiO2	MAP	Minute Vol exp
390	21	12	9.72

View a full list of compatible ventilators here.



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# RespiSim® Packages

	RespiSim® Essential	RespiPro™
ASL 5000™ Breathing Simulator		
RespiSim® Software		
15" Laptop		
12" Windows Tablet		
24" Learner Display		
RespiPro™ Mobile Cart		
RespiScope™ Auscultation Option		
RespiPro™ Manikin		
RespiSim® Scenarios		
Virtual Training - Basic Software Use		
Virtual Training - Scenario Building I		
Virtual Training - Scenario Building II		

The RespiSim System is modular, making it easy to upgrade with additional components as needs and resources expand.

Scenarios included in packages!

[Click Here to View](#)

## Training

To help you quickly master the power of these tools, both packages include setup support and in-depth training. Ask about earning CRCE credits from the American Association for Respiratory Care.

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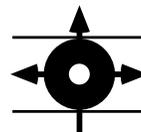


WANT TO LEARN MORE?

Email

[sales@ingmarmed.com](mailto:sales@ingmarmed.com)

to speak with a Product Specialist for more information.



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