



Laerdal
helping save lives



Realism Meets Technology

Emily and Emma

Emily



Emma



On average, approximately 250 babies are born every minute. In most cases, families are brought together in an unforgettable moment of joy. For others, unfortunate outcomes may have devastating and irreversible lifetime effects. Hence, the prioritization of simulation in neonatology is pivotal to ensure high-quality, safe, and robust systems to improve patient safety and health outcomes.

High Emotion Simulation Emily (light skin tone) and Emma (dark skin tone) are the most realistic full-term newborn simulators used to train neonatal emergency scenarios. Engineered using realistic anatomy and airway design concepts, Emily and Emma are powered by sophisticated technical architecture and a user-friendly operating system. Together, these elements create a remarkably lifelike experience—delivering training that feels authentic, deeply engaging, and emotionally resonant.

Emily and Emma

Emily and Emma

- Emily - light skin tone full-term newborn
- Emma - dark skin tone full-term newborn
- Gestational week: 39+6
 - Weight: 3400 g
 - Length: 51 cm
 - Head circumference: 35.5 cm
- Highly realistic external and internal anatomy
- Real hair
- Skin color changes to simulate cyanosis (blue) and hyperoxia (red)
- Completely wireless operation (WiFi)
- 4 hours of mobile battery use
- Battery indicator under the skin
- Ready-to-use package (incl. control laptop and patient monitor)

Airway and Breathing

- Highly realistic upper airway (customer replaceable)
- Oral and nasal intubation
- Laryngeal mask placement

Spontaneous Breathing

- Realistic and spontaneous breathing
- Spontaneous breathing with variable respiratory rate between 0 and 100bpm
- Physiological lung providing realistic values under mechanical ventilation

Breathing Pathologies

- Inverted breathing
- Subcostal retractions
- Pathological breathing sounds (e.g. grunting)
- Pneumothorax with bilateral chest drainage

Circulation

- Capillary refill time (right clavicle)
- Hypoxia and hyperoxia
- Silent palpable pulses on all four extremities (brachial and femoral) and umbilical cord
- Chest compressions with feedback
- Shockable and non-shockable arrhythmias
- Insertion of peripheral vascular accesses in all four extremities (exchangeable)
- Insertion of umbilical venous catheter and arterial lines (exchangeable umbilical cord)
- Optimized connector for umbilical cord
- Intraosseous access (3D-printed realistic proximal tibia and distal femur; exchangeable bones)
- Bilateral PICC line insertion (at antecubital fossa)
- Subclavian central line (left clavicle)

Neurology and Movements

- Normal, narrow, and dilated pupils
- Body movement of all four extremities (floppy, reduced, normal)
- Seizures

Audible Effects

- Crying
- Grunting
- Amniotic fluid

Stethoscope

- Position-dependent auscultation of breathing, heart, and belly sounds via stethoscope (included)
- Anterior and posterior auscultation sites

Sensors

- Head position sensor
- Detection of the tube in the trachea or esophagus
- Detection of tube depth
- Automatic left lung collapse during right mainstem intubation
- Effectiveness of chest compressions
- Sensor for pulse palpation
- Detection of umbilical cord transection
- Insertion of umbilical venous catheter with precise depth detection

Graphical User Interface (GUI)

- User-friendly interface with a sleek, intuitive design for effortless operation
- Real-time 3D animation of the manikin on the GUI
- Flexible control options via touchscreen or traditional keyboard and mouse
- Real-time display of all physiological and pathological processes and therapeutic interventions (e.g. mask ventilation and intubation)
- Seamless transfer of events and simulator status to the integrated debriefing interface
- Easily add annotations through the debriefing interface

Pre-Sets

- User configuration and fine-tuning of limits for head position, optimal tidal volume, chest movement, and strength of palpable pulses

Feedback Monitor

- Direct feedback for your trainees during the orientation phase on head position, PEEP, PIP, tidal volumes, ventilation rate, depth and position of endotracheal tube, and efficiency of chest compressions

Preconfigured Patient Monitors

- Easily switch between monitor types via the trainer monitor: Dräger, Philips, Nellcor, and GE
- User-defined configuration and use corresponding to the interface of the original monitor
- Touch-screen function
- Various monitor sizes
- Pre- and post-ductal saturations
- Endtidal CO₂ curve
- Motion artifacts in all curves

Scenario Design

- Pre-programmed symptoms (Gasping, RDS, Bowel Distension, Seizures, and Apnea)
- Intuitive scenario programming with a convenient quick-save feature
- Easy access to factory settings and scenario progressions

Transport

- Highly mobile system designed especially for in-situ training

Fully-Equipped and User-Ready Platform includes:

- | | |
|--|---|
| 1. Term Baby simulator – Emily/Emma | 11. Trainer laptop power supply |
| 2. Silicone oil | 12. Bluetooth mouse |
| 3. Stethoscope | 13. Tube painting kit |
| 4. Left tibias x5 | 14. Simulator charging cable |
| 5. Right tibias x5 | 15. Simulator power supply |
| 6. Magnet | 16. Router power supply |
| 7. Rechargeable AA batteries | 17. Router |
| 8. Belly button | 18. Umbilical cords x10 |
| 9. Trainer laptop including pre-installed software (GUI) | 19. Patient monitor power supply |
| 10. Patient monitor including pre-installed vital signs software | 20. Country-specific plugs for Trainer laptop and Patient monitor |

Warranty and Maintenance Programs

Emily and Emma offer two- and five-year warranty and maintenance programs that extend past the standard one-year warranty - providing full coverage on parts and labor for the entire duration.

The two-year program includes one general refurbishment, while the five-year program provides two refurbishments over their respective terms. Each refurbishment consists of a complete functional check and preventative exchange of parts subject to wear and tear. Our service team performs all checks, maintenance, and repairs at a central facility. Shipping costs are fully covered, and a fully functional replacement system can be requested for the duration of the refurbishment or repair, subject to availability.

