Laerdal
helping save lives

Emily and Emma

Realism meets Technology

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.

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: 3400g
  - Length: 51 cm
  - Head circumference: 35.5 cm
  - Highly realistic external and internal anatomy
  - Real hair
- Completely wireless operation (WIFI)
- 4 hours of mobile battery use
- Battery indicator under the skin
- Ready-to-use package (incl. control laptop and vital screen)

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

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

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

Circulation
- Capillary refill time (right clavicle)
- Hypoxia and hyperoxia
- Noiseless palpable pulses on all four extremities (brachial and femoral) and umbilical cord pulse
- Chest compressions with feedback
- Shockable and non-shockable arrhythmias
- Insertion of peripheral lines in all four extremities (exchangeable extremities)
- Insertion of umbilical venous catheter and arterial lines (exchangeable 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
- Amniotic fluid
- Grunting

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

Sensors
- Sensor for head position
- Detection of the tube in the trachea or esophagus
- Detection of tube depth
- Automatic collapse of the left lung in case of right mainstem intubation
- Sensor for the effectiveness of chest compressions
- Sensor for pulse palpation
- Detection of umbilical cord transection
- Sensor for the insertion of umbilical venous catheter and detection of insertion depth

Graphic User Interface (GUI)
- Straightforward, intuitive interface with a unique design language
- Real-time 3D animation of the manikin on the GUI
- Control via touchscreen or keyboard and mouse
- Real-time display of all physiological and pathological processes and therapeutic interventions (e.g. mask ventilation and intubation)
- Automatic transfer of events and simulator status to the integrated debriefing interface
- Ability to add annotations via the debrief

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 CO_2 curve
- Motion artifacts

Programmable Scenarios
- Preprogrammed symptoms (Gasping, RDS, Bowel Distension,Seizures, Apnea)
- Intuitive programming of scenarios via quick save function

Transport
- Highly mobile system designed especially for in-situ training

Warranty Program
- Extend your standard warranty for all parts and labor. A two-year and five-year program is available that includes general refurbishments, checks, maintenance work, and repairs.

Emily

EHE01-Y

Emma

EHE01-A

Educational Services

Emily and Emma include a virtual orientation that provides a flexible introduction experience to support and guide your onboarding journey.

Laerdal & SIMCharacters

Laerdal Medical and SIMCharacters' partnership marked a milestone in advancing healthcare simulation and a shared commitment to revolutionizing neonatal simulation training. In 2025, Laerdal's acquisition of SIMCharacters merged our expertise, enabling us to offer advanced training solutions and broaden our impact in healthcare.

Fully-Equipped and User-Ready Platform includes:

- Full-term newborn simulator
  - Emily - light skin tone
  - Emma - dark skin tone
- Simulation stethoscope
- Umbilical cords (10)
- Right tibias (5)
- Left tibias (5)
- Belly button
- Silicone oil
- Instructor laptop with simulator operating system
- Tablet computer with patient monitor software
- Mouse
- Access point (router)
- Various cables
- Protective carrying case

Warranty and Maintenance Programs

Emily and Emma offer two- and five-year warranty and maintenance programs that extend 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 the refurbishment and preventative replacement 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.

For more information, visit Laerdal.com

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