GULMOHAR
HEALTH CARE PRIVATE LIMITED

AIRVENS EIT

Electrical Impedance Tomography

Empower your clinical decisions through pulmonary visualization.

EASY TO USE

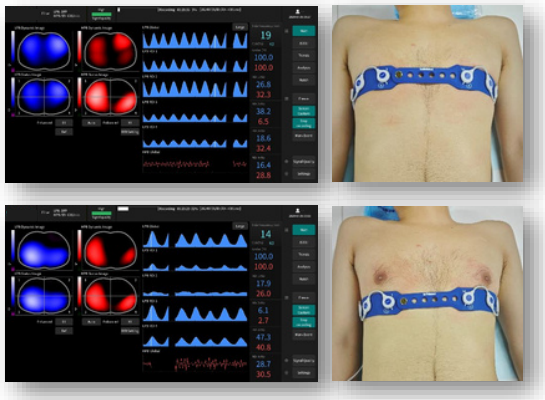
Alternative Real time, Non-Invasive imaging method at bed side

Imaging techniques	Imaging features	Point-of-care monitoring	Continuous monitoring	Global or local imaging	Operator depend	Radioactive radiation
Electrical impedance imaging (EIT)	**Functional imaging**	**Yes**	**Yes**	Whole vs. partial	No	No
Ultrasound imaging (US)	Anatomical imaging vs. functional imaging	Yes	No	part	Yes	No
Computed tomography (CT)	Anatomical Imaging	No	No	Whole vs. partial	Yes	Yes
MRI imaging (MRI)	Anatomical imaging vs. functional imaging	No	No	Whole vs. partial	Yes	No

Easy to use at the bedside

Easy to observe patients

Easy to see different section by moving the belt



AIRVENS EIT

A quick assessment of diagnosis and treatment

AIRVENS EIT provides quick assessment and bedside pulmonary ventilation and perfusion, with intuitive imaging to assist doctors in making diagnosis and treatment plans, offering timely guidance.

Continuously monitoring

Monitoring changes in the condition and treatment effects throughout the process ensures continuous safety assurance.

Individualized respiratory management

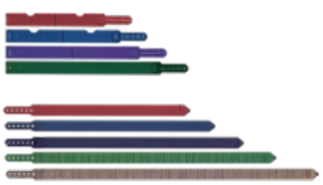
Individualized and precise treatment can provide more direct and timely guidance for accelerating the recovery of patients.

Easy to use

The belt is easy to position and operates with simplicity. Image acquisition is rapid and intuitive, facilitating clear and immediate interpretation by healthcare workers.

Accessories

Electrode Belts

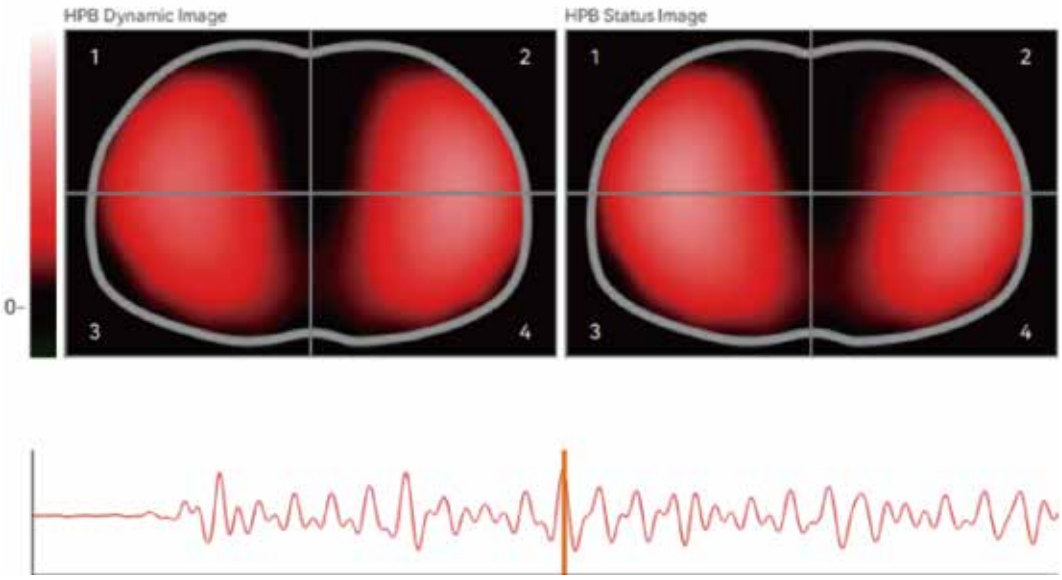


Electrode Belts Size

Chest Circumference	Suggest Model
35.5~44.5cm	4XS
41.5~52.5cm	3XS
49~60 cm	2XS
57.5~72.5 cm	XS
70~85cm	SS
80~96 cm	S
92~110cm	M
106~127cm	L
124~150cm	XL

Cables

Perfusion Imaging in EIT



What is the principle to measure perfusion?

A: Impedance signal filtered to evaluate the propagation of pressure waves through the pulmonary vascular bed has been historically termed as “pulsatility” . The signal could be influenced by the change of lung volume during respiration or the simple propagation (pulsation) of waves into the vessel wall without flow inside.

How are the signals for lung perfusion imaging obtained?

A: The signals are obtained from the changes in electric potentials on the chest surface, which occur due to both respiratory and cardiac activities. These activities affect both lung resistivity. Cardiac related signals, producing alteration of resistivity due to the movement of blood in the heart and lungs are separated from those related to variation of lung volume during respiration.

What is the principle behind lung perfusion imaging used in the EIT equipment?

A: Lung perfusion imaging with EIT involves a non-invasive technique that giving small alternating currents into the chest through the electrodes in a scanning manner to produce different electric potentials ultimately converting into a frame with electric potential differences, which are then used for the image reconstruction.

How is the perfusion signal extracted from the measured signals?

A: The perfusion signals are extracted using frequency-domain filtering techniques. By analyzing the spectrum of the measured signal, the cardiac signal, which occurs at higher frequencies than the respiratory signal, can be isolated using a digital band-pass filter.

* Larrabee S, Nugen S, Bruhn A, et al. Three-dimensional electrical impedance tomography to study regional ventilation/perfusion ratios in anesthetized pigs. Am J Physiol Lung Cell Mol Physiol. 2023;325(5).

* Stowe S, Boyle A, Sage M, Nadeau M, Praud J-P, Fortin-Pellerin É, Adler A. A Comparison of EIT Lung Perfusion Measures. Proceedings of the 19th International Conference on Biomedical Applications of Electrical Impedance Tomography (EIT 2018); 2019; Edinburgh.

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GULMOHAR HEALTHCARE PRIVATE LIMITED SINCERELY INVITE YOU TO EXPLORE AIRVENS EIT TOGETHER, TO JOINTLY OPEN UP A NEW FIELD OF MEDICAL.

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