

PORTABLE



PROGRAMMABLE



PATIENT-FRIENDLY



PATENTED SINGLE-HOSE

**ELECTROMED, INC.**

THE INNOVATIVE LEADER IN  
**AIRWAY CLEARANCE**



**SmartVest**<sup>®</sup>  
AIRWAY CLEARANCE SYSTEM

**SmartVest**  
AIRWAY CLEARANCE SYSTEM **Wrap**<sup>®</sup>



Accredited by  
The Joint Commission

*Effective, Convenient,  
and Comfortable™*

[www.SmartVest.com](http://www.SmartVest.com)

# SmartVest®

AIRWAY CLEARANCE SYSTEM

Effective, Convenient, and Comfortable™



## SmartVest® Wrap®

AIRWAY CLEARANCE SYSTEM

For years, patients with impaired airway clearance had to rely on manual Chest Physiotherapy (CPT) — a rigorous, time-consuming, and often inconsistent treatment technique.

Today, **High Frequency Chest Wall Oscillation** (HFCWO), also known as **High Frequency Chest Compression** (HFCC), is commonly prescribed and widely practiced. This method is technique-independent, better tolerated than CPT, and can be administered by either the patient or caregiver.

The use of HFCWO has reduced health care costs associated with recurrent pneumonias, antibiotic use, and hospital stays.<sup>1</sup> Thus, HFCWO via the **SmartVest® Airway Clearance System** is a highly cost-effective airway clearance choice for home care patients and for application by medical caregivers in clinic and hospital settings.

### Effective

**Soft Start®** technology delivers HFCWO with a calmer, gentler, and more relaxed treatment experience.

**Full coverage** pulsation treats the front, back, and sides of the torso simultaneously.

**SmartVest® and SmartVest Wrap® sizes** fit small children to large adults.



### Convenient

**Patented single-hose** design provides more freedom of movement, allowing the patient to perform other tasks during treatment.

**Machine-washable fabric** simplifies cleaning (**SmartVest Wrap®** must be spot cleaned).

**Dual position controls** adjust to operate the air pulse generator upright or horizontally.

Generator is **programmable** to ensure treatments are consistent each day.



Wheeled **SmartVest® Carrier** travels easily — fits inside airplane as carry-on.

### Comfortable

Port-A-Cath and G-tube discomfort is reduced by **eliminating direct pounding** to the sternum or abdomen.

**Soft Start®** technology reduces “squeeze effect” and “vest creep” on start-up.



**Soft, breathable fabric** reduces perspiration and itching. Alternative fabric colors are available.



## How does HFCWO work?

HFCWO creates a revolutionary “squeeze and release” action around the chest and torso from 5-20 times per second.

The patented **SmartVest**<sup>®</sup> inflates and delivers vigorous, yet comfortable, air pulses to the body through a single-hose powered by a programmable generator, providing the patient with greater maneuverability during treatment. The action of rapidly squeezing and releasing the chest creates air pulses, or airflows, within the lung airways, which simulate repetitive “mini-coughs.”

The simulated “mini-coughs” produced with **SmartVest**<sup>®</sup> HFCWO treatments

- Shear the mucus away from the walls of a lung’s airways.<sup>2</sup>
- Reduce the viscosity of the secretions.<sup>3</sup>
- Propel the mucus toward the larger airways where it can be expectorated or suctioned more easily.<sup>2,3</sup>

HFCWO has been a very effective form of airway clearance therapy for over a decade.<sup>1,2,3</sup>



*Dozens of studies demonstrate the effectiveness and safety of HFCWO for a wide range of patients.*

*HFCWO is proven to be an effective means of enabling patients to maintain an active and independent lifestyle.*



*The programmability and ease-of-use of the **SmartVest**<sup>®</sup> Airway Clearance System*

## *Supports an Active Lifestyle*



Ilana was diagnosed with Cystic Fibrosis at the age of eight, and for the past several years, she has depended on the **SmartVest**<sup>®</sup> to deliver consistent, effective treatments for airway clearance.

In late March, Ilana was on a trip to Italy with her high school Art Club. During her treatment, she heard a loud noise caused by a converter failure. Although the timer function continued to work, she was unable to use her system.

Electromed, Inc. was able to provide an efficient, seamless process to replace Ilana’s **SmartVest**<sup>®</sup>. A local Italian distributor delivered a new **SmartVest**<sup>®</sup> to Ilana within hours of a call to Corporate Headquarters. She was able to avoid a significant interruption in the trip and joined her travel group the next day.

The **SmartVest**<sup>®</sup> Airway Clearance System was selected for Ilana because of its “programmability, ease of use, stream-lined design, one-button application, automation, better fit, and lighter weight.” Her father praised the company, the product, and the Electromed, Inc. team, who literally “delivered” exceptional customer service halfway around the globe.

Ilana adds, “I love the **SmartVest**<sup>®</sup>! It makes it so much easier for me to travel. Besides having an incredible time the entire week in Italy, I even climbed Mount Vesuvius!” As Ilana prepares to go away to college, the **SmartVest**<sup>®</sup> will allow her to gain the independence she desires so she can continue her global travels.



*Effective, Convenient, and Comfortable™*

### How is HFCWO easier for the patient?

HFCWO-induced airflows move secretions upward to be cleared without requiring burdensome repositioning.<sup>2</sup> Repetitive airflows shear secretions from the airway walls, thin their viscosity, and mobilize them mouthward.<sup>3</sup> HFCWO is the only airway clearance method that is technique-independent and can be administered by either the patient or caregiver, with no expertise required. Patients are able to receive high-quality airway clearance treatment while in any comfortable position.

**HFCWO has been demonstrated to reduce the incidence of pneumonia and other lung infections commonly caused by the following:**<sup>4</sup>

#### Mucociliary System Disorders

Cystic Fibrosis, Primary Ciliary Dyskinesia

#### Obstructive Pulmonary Conditions

COPD (Chronic Obstructive Pulmonary Disease), Bronchiectasis, Asthma

#### Neuromuscular Disease

Muscular Dystrophy, Spinal Muscular Atrophy, ALS (Amyotrophic Lateral Sclerosis)

#### Neuromotor Disorders

Cerebral Palsy, Multiple Sclerosis, Spinal Cord Injuries

#### Restrictive Airway Disorders

Scoliosis, Kyphoscoliosis

### Additional features and services

- Multiple sizes available as patient grows
- Patient Services staffed by Respiratory Therapists
- Comprehensive and confidential turnkey reimbursement services
- Toll-free support HELPLINE (888-966-2525)
- Single Patient Use **SmartVest®** and **SmartVest Wrap®** available in multiple sizes for in-patient use

## **ELECTROMED, INC.**

*Creating superior care through innovation®*

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Ticker Symbol: **ELMD**

Made in USA

*Electromed, Inc. is committed to a strong and continuing program of innovation for the benefit of patients and their caregivers.*

*Electromed, Inc. has been awarded more than twenty patents related to HFCWO technology.*

### References

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- 3 Majaesic C, Montgomery M, Jones R, King M. Reduction in sputum viscosity using high frequency chest compressions compared to conventional chest physiotherapy. *Pediatr Pulmonol* 1996; Suppl 13: A358.
- 4 Plioplys AV, Lewis S, Kasnicka I. Pulmonary vest therapy in pediatric long-term care. *Journal of the American Medical Director's Association* 2002 Sep-Oct; 3 (5): 318-321.

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### Additional Readings

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### Specifications

USA and International voltage compatibility  
Compatible **SmartVest®** and **SmartVest Wrap®**  
sizes: small children to large adults

### Regulatory Approvals

Multiple FDA 510(k) Clearances  
ISO 13485 / ISO 9001 Certified  
EEC/CE Marked  
Licensed in Canada  
Patented and Patents Pending

All warranty information is available at  
[www.SmartVest.com](http://www.SmartVest.com)



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