

**PHILIPS**  
RESPIRONICS

*CoughAssist E70*



# More than just a comfortable cough

Flexible therapy that brings more comfort  
to your patients' airway clearance



# Flexible, customisable loosening and clearing therapy



An effective cough is critical to keep airways clear.

Clear airways are critical to ensure proper ventilation and ventilation/perfusion ratio.

For those who are unable to cough or effectively clear secretions, deep suctioning is often used to clear the airways. Unfortunately, invasive suction methods can be uncomfortable for the patient and have been linked to complications such as hypoxia, tissue damage and infection.<sup>1</sup>

The CoughAssist E70 provides an effective, yet remarkably gentle, noninvasive secretion clearance alternative for use in the hospital and at home. It clears airways for longer periods of time than tracheal suctioning, and with fewer complications.<sup>2</sup>

More and more scientific societies are specifically recommending the use of mechanical in-exsufflation technique for airway clearance management.<sup>3,4,5</sup>

## Enhanced functionality

As a direct result of the feedback and experience of our global clinician network, the CoughAssist E70 now comes with a set of new functionalities, such as;

- **Advanced Auto Mode**
- **Manual Override Capability**

# The CoughAssist E70 – delivering **airway clearance therapy** to meet your patient's needs



## Exceptional usability and comfort

- An intuitive colour interface makes it easy to assess treatment and fine-tune device settings to improve therapy efficacy and comfort.
- AC or battery powered, the CoughAssist E70 is a truly portable solution, offering patients increased freedom and support.
- Detachable battery delivers one day of therapy.<sup>6</sup>
- CoughAssist E70, Trilogy Series ventilators and BiPAP A40 share the same detachable battery unit.

## Flexibility in delivering therapy

- Three highly customisable therapy modes accommodate different patient conditions, whether for a single patient at home, or for multiple patients treated within the hospital.
- In addition to the traditional Manual and Auto modes, the Advanced Auto Mode increases the airway clearance therapy options.
- The Manual Override capability allows the clinician to quickly switch from Auto to Manual therapy when unexpected clinical situations occur.
- The foot pedal allows the caregiver to manually perform a chest thrust while holding the interface.



Therapy provided by the CoughAssist has been clinically proven to increase peak cough expiratory flows and reduce recurrent respiratory infections.<sup>7,8</sup>





# Key features and technology

## Cough-Trak algorithm

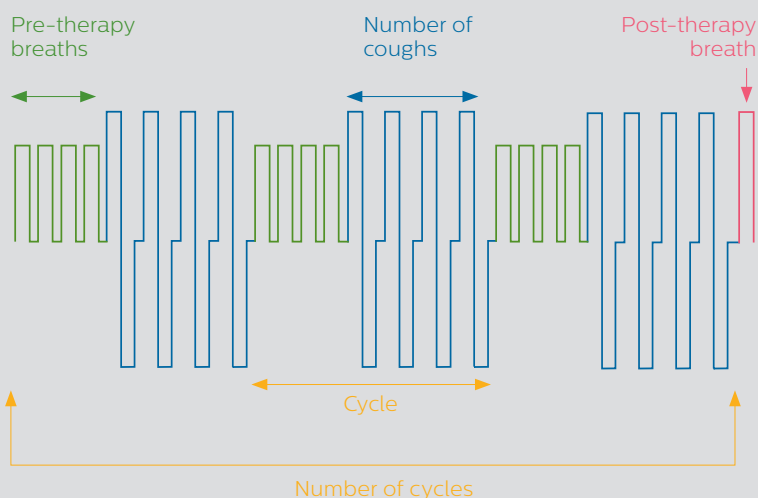
The integrated Cough-Trak algorithm aids device titration and patient synchronisation by allowing the patient to trigger therapy through inhalation, helping both comfort and compliance.

## Oscillation

The CoughAssist E70 mobilises and loosens secretions by providing high frequency oscillatory vibrations while gradually applying a positive pressure to the airway, then rapidly shifting to a negative pressure. Adjustable oscillation levels enhance mobilisation and increase the benefits of therapy.

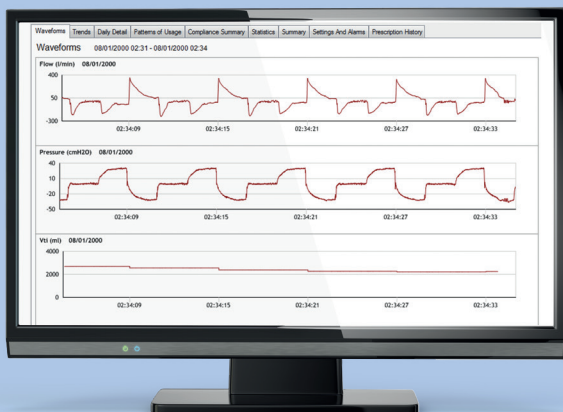
## Advanced Auto Mode

The Advanced Auto Mode allows the clinician to set a number of successive insufflations (pre-therapy breaths) prior to the cough therapy; this therapy pattern can be repeated up to 10 times as defined by the number of cycles. The clinician also has the option to end the sequence on a single insufflation by enabling the 'Post-Therapy Breath' setting. Advanced Auto Mode can help enhance recruitment as part of the airway clearance therapy and is suitable for use with all CoughAssist E70 patients.





## Data management



Data management tools help assess therapy efficacy and adapt settings as required, or as a disease progresses.

At the end of each cough cycle, the built in colour display shows real-time therapy data including:

- Insufflation Volume monitoring, which helps to determine the proper inspiratory pressure needed to deliver a deep inhalation
- Peak Cough Flow monitoring, which allows adjustment of the expiratory pressure needed to deliver an effective cough
- SpO<sub>2</sub> and heart rate monitoring at rest, which gives instant feedback on therapy efficacy.

The removable SD card records in depth therapy data for extended follow-up using DirectView software.

# Specifications

	Manual mode	Automatic mode	Advanced Auto Mode*
Preset		1, 2, 3	
Cough-Trak	N/A	OFF/ON	OFF/ON
Pre-Therapy Breaths	N/A	N/A	OFF, 1 to 10
Pre-Therapy Pressure	N/A	N/A	0 to +70 cmH <sub>2</sub> O, in increments of 1 cmH <sub>2</sub> O
Pre-Therapy Flow	N/A	N/A	Low/Medium/High
Pre-Therapy Time	N/A	N/A	0-5 sec., in increments of 0.1 sec.
Pre-Therapy Pause	N/A	N/A	0-5 sec., in increments of 0.1 sec. <i>Only if Cough-Trak is OFF</i>
Number of Coughs	N/A	N/A	1 to 15
Inhale Pressure		0 to 70 cmH <sub>2</sub> O, in increments of 1 cmH <sub>2</sub> O	
Inhale Flow		Low/Medium/High	
Inhale Time	N/A	0 to 5 sec., in increments of 0.1 sec.	
Exhale Pressure		0 to -70 cmH <sub>2</sub> O, in increments of 1 cmH <sub>2</sub> O	
Exhale Time	N/A	0 to 5 sec., in increments of 0.1 sec.	
Pause Time	N/A	0 to 5 sec., in increments of 0.1 sec. <i>Only if Cough-Trak is OFF</i>	
Oscillation		OFF/Inhale/Exhale/Both	
Frequency	1 to 20 Hz, in increments of 1 Hz. <i>Only available if Oscillation is activated.</i>		
Amplitude	1 to 10 cmH <sub>2</sub> O, in increments of 1 cmH <sub>2</sub> O. <i>Only available if Oscillation is activated.</i>		
Number of Cycles	N/A	N/A	1 to 10
Post-Therapy Breath	N/A	N/A	ON/OFF
AC voltage source		100 to 240 VAC, 50/60 Hz	
DC power source		12 VDC	
Dimensions (cm)		23.1 (h) x 29.2 (w) x 19 (d)	
Weight		3.8 kg (4.3 kg with battery)	

\* Only with firmware 1.09 and beyond

## Ordering information

Device (part numbers)	International	Brazil	China	Japan
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<b>CoughAssist E70</b> Includes device without battery, SD card, patient circuit large 1.8m, carry bag, AC power cord, air filter and a circuit retainer	1098159	1098161	1098162	1098163
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Accessories	Part number	Patient circuit kits	Part number	
			1.8m tubing	2.7m tubing
Oximetry interface cable	1098718	Patient circuit infant**	1090830	1098403
Foot pedal	1059017	Patient circuit toddler**	1090831	1098404
Roll stand	1098655	Patient circuit small**	1090832	1098405
Circuit retainer	1099035	Patient circuit medium**	1090833	1098407
Carry bag	1098884	Patient circuit large**	1090834	1098408
Water trap	1098720	Patient circuit trach***	1090835	1098409
Detachable battery	1043570	Patient circuit mouthpiece***	1090836	1098410

\*\* Contains mask, tubing, mask adapter and bacterial filter

\*\*\* Contains interface (mouthpiece or trach adapter), tubing and bacterial filter

## References:

1. Invasive suction linked to complications such as hypoxia, tissue damage and infection. *AARC Clinical Practice Guideline. Endotracheal suctioning of mechanically ventilated adults and children with artificial airways. Respiratory Care 1993;38(5)500-504*
2. CoughAssist therapy keeping airways clear longer than trached suction and with fewer complications. *Sancho J, Servera E, Vergara P, Marin J. Mechanical in-exsufflation vs tracheal suctioning via tracheostomy tubes for patients with amyotrophic lateral sclerosis: a pilot study. Am J Phys Med Rehabil 2003;82(10)750-753*
3. Guidelines for Respiratory Management of Children with Neuromuscular Weakness, British Thoracic Society. *Thorax July 2012 67: i1-i40.*
4. Home Mechanical Ventilation, A Canadian Thoracic Society Clinical Practice Guideline, *Can Respir J Vol 18 No 4 July/August 2011*
5. AARC Clinical Practice Guideline: Effectiveness of Non Pharmacologic Airway Clearance Therapies in Hospitalized Patients, *Respiratory Care Journal, Dec 2013, Vol 58 N°12*
6. One day of therapy is defined as performing a typical treatment 4 times. A typical treatment being 4 to 6 sequences of 4 to 6 cough cycles at +/-40cmH<sub>2</sub>O
7. CoughAssist therapy clinically proven to increase Peak Cough Flows. *Chatwin M, Ross E, Hart N, Nicol AH, Polkey MI, Simmonds AK. Cough Augmentation with Mechanical Insufflation/Exsufflation in Patients with Neuromuscular Weakness. Eur Respir J: March 2003; 21(3):502-508*
8. CoughAssist therapy proven to reduce recurrent respiratory infections. *Alice C. Tzeng and John R. Bach. Prevention of Pulmonary Morbidity or Patients with Neuromuscular Disease. Chest 2000;118:1390-1396. DOI 10. 1378/Chest 118.5.1390*



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