TRACOE

TrachPhone: A multifunctional HME to optimize pulmonary health

Atos

TrachPhone -
A multifunctional HME that optimizes breathing and pulmonary health

TrachPhone is a lightweight heat and moisture exchanger (HME) providing effective humidification with additional features for suctioning, speech, and supplemental oxygen. HMEs have been shown to restore humidity and warmth to the inhaled air which results in decreased viscosity of mucus, less coughing, and improvements in respiratory functions. [1-3]

Speech occlusion valve

TrachPhone has a spring mechanism that can be depressed to restore airflow to the upper airway facilitating voice during digital occlusion.

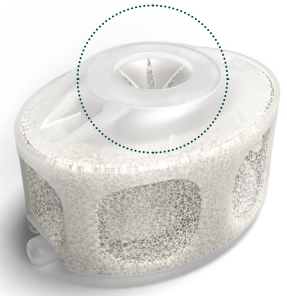
A cuffless tracheostomy tube or a deflated cuff is required for use of the speech occlusion valve.

Suction port

The integrated suction port allows for tracheal suction without removing the HME.

Suctioning through the suction port with the integrated breakthrough membrane results in better containment of aerosolized secretions.

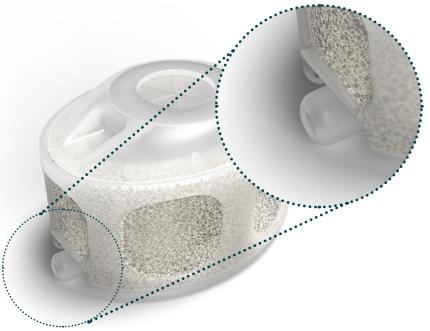
When suctioning, insert the suction catheter through the membrane of the suction port.



Oxygen port

TrachPhone has an oxygen port (4mm) that allows for integrated administration of supplemental oxygen.

If supplemental oxygen is required, connect oxygen tubing to the oxygen port. The supplied oxygen passes through the HME foam.



Better pulmonary health

After a tracheotomy, natural humidification and filtration functions are lost. The use of HMEs reduces coughing, mucus viscosity and improves tracheal climate and pulmonary function.[1-4]*

During exhalation, the HME captures heat and moisture from the exhaled breath. (See illustration 1)

Illustration 1 (exhaling)

During inhalation, the stored heat and moisture are released to condition the inspired air. (See illustration 2)

Illustration 2 (inhaling)

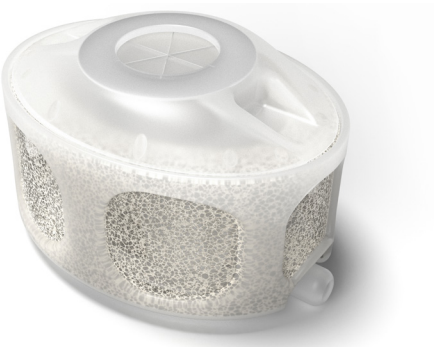
*Post-market clinical study, sponsored by Atos Medical (2010), data on file

Product performance

Moisture loss at VT = 500mL	17mg/L
Moisture loss at VT = 1000mL	18mg/L
Pressure drop at 30 L/min	20Pa
Pressure drop at 60 L/min	50Pa
HME media	Foam treated with calcium chloride
Dead space	9.5mL
Tidal volume	>50mL
Oxygen supply port	4mm
Weight / Length	2.9g / 22mm
Height / Width	28mm / 38mm
Connection	15mm

Single patient use only, disposable. Individually packaged.

Intended use: For patients breathing spontaneously via a tracheostomy tube.



The TrachPhone HME media is a foam which retains heat and moisture to be recycled during the breathing cycle. The foam is treated with calcium chloride, referred to as a hygroscopic compound, which enhances the moisture retention properties. Hygroscopic compounds have been found to provide better moisture output to the respiratory system, when compared to non-hygroscopic HMEs.[5]

The TrachPhone HME also provides partial restoration of natural breathing resistance. HMEs have been shown to reduce dynamic airway collapse and improve respiratory function.[6-8]

Trachphone Tips and Guidelines

- Attaches directly to the 15mm connector of a pediatric or adult tracheostomy tube
- Can connect 4mm oxygen tubing to the integrated oxygen port to deliver up to 4 liters per minute of supplemental oxygen
- Do not place external humidification over the HME
- Do not use below recommended tidal volume range (50ml) as added dead space may cause CO_2 retention at low tidal volumes
- It is important to use an HME all day and night to restore heat and humidification
- Should not be used for more than 24 hours from initial application
- Secretions can be wiped away from the HME if visible and HME does not appear clogged
- Do not rinse the HME in water or any other solution as this will substantially reduce the moisture retention and function of the HME
- To be used with spontaneously breathing patients

TrachPhone Benefits

In a study comparing TrachPhone to the use of conventional external humidification in patients with a tracheostomy, the following benefits were reported:

- Increased patient and healthcare provider satisfaction [9]
- Easier set up and maintenance [9]
- Improved patient mobility [9]
- Decreased noise [9]
- Decreased suction requirements [9]
- Considerable cost savings [9]

Ordering Information

REF#	Description	Qty
7704	TrachPhone	50
7707	TrachPhone	30

Always read the Instructions for use before starting to use any products.
For Instructions For Use, please visit www.atosmedical.us.

References

1. Rozsasi A, Leiacker R, Fischer Y, Keck T. Influence of passive humidification on respiratory heat loss in tracheotomized patients. Head Neck. 2006;28(7):609-13.

2. van den Boer C, Lansaat L, Muller SH, van den Brekel MW, Hilgers FJ. Comparative ex vivo study on humidifying function of three speaking valves with integrated heat and moisture exchanger for tracheotomised patients. Clin Otolaryngol. 2015;40(6):616-21.

3. de Kleijn BJ, van As-Brooks CJ, Wedman J, van der Laan BFAM. Clinical feasibility study of protrach dualcare a new speaking valve with heat and moisture exchanger for tracheotomized patients. Laryngoscope Investigative Otolaryngology. 2017;2(6):n/a-n/a.

4. Vitacca M, Clini E, Foglio K, Scalvini S, Marangoni S, Quadri A, et al. Hygroscopic condenser humidifiers in chronically tracheostomized patients who breathe spontaneously. Eur Respir J. 1994;7(11):2026-32.

5. Mebius C. A comparative evaluation of disposable humidifiers. Acta Anaesthesiol Scand. 1983;27(5):403-9.

6. Jones AS, Young PE, Hanafi ZB, Makura ZG, Fenton JE, Hughes JP. A study of the effect of a resistive heat moisture exchanger (Trachinaze) on pulmonary function and blood gas tensions in patients who have undergone a laryngectomy: a randomized control trial of 50 patients studied over a 6-month period. Head Neck. 2003;25(5):361-7.

7. Zuur JK, Muller SH, de Jongh FH, Van ZN, Hilgers FJ. The physiological rationale of heat and moisture exchangers in post-laryngectomy pulmonary rehabilitation: a review. Eur Arch Otorhinolaryngol. 2006;263(1):1-8.

8. Scheenstra RJ, Muller SH, Vincent A, Sinaasappel M, Hilgers FJ. Influence of breathing resistance of heat and moisture exchangers on tracheal climate and breathing pattern in laryngectomized individuals. Head Neck. 2010;32(8):1069-78.

9. Kearney A, Norris K, Bertelsen C, Samad I, Cambridge M, Croft G, Peavler S, Groen C, Doyle PC, Damrose EJ. Adoption and Utilization of Heat and Moisture Exchangers (HMEs) in the Tracheostomy Patient. Otolaryngol Head Neck Surg. 2023 May 10. https://doi.org/10.1002/ohn.368individuals. Head Neck. 2010;32(8):1069-78.

Contact your Tracoe Sales Specialist with any questions or reach out to us at info.us@atosmedical.com

1.800.217.0025
@ info.us@atosmedical.com
www.atosmedical.us

Atos