

TrachPhone®

TrachPhone - A multifunctional HME providing good humidification.

Atos

Breathing-Speaking-Living
atosmedical.com



TrachPhone is a lightweight HME providing good humidification, with an additional feature for suctioning and supplemental oxygen. It also contains a speaking valve function, where the top lid can be pressed to occlude the tracheostomy tube for voicing.

Better pulmonary health

After a tracheotomy, the upper airway is bypassed and the patient breathes directly through the tracheostomy tube. Thus, the inhaled air is not heated, moisturized or filtered. The use of Heat and Moisture Exchanger (HME) in tracheostomized patients provide heat and moisture of the inspired air and gives patients positive pulmonary effects such as decreased viscosity of mucus secretions, less coughing and improvements in respiratory functions^{1-4a}. To get the HME exchange effect the patients need to both inhale and exhale through the HME.

When exhaling through an HME, the natural heat and moisture of the air are retained by the HME system, see illustration 1.

Heat and moisture are released from the HME during inhalation, and as a result the inhaled air is heated and moisturized⁵, see illustration 2.



Illustration 1 (exhaling)



Illustration 2 (inhaling)

^aPost-market clinical study, sponsored by Atos Medical (2010). Data on file.

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- Speaking valve function
- Suction port acts as a cough relief valve
- Integrated suction port
- Integrated oxygen supply port

The TrachPhone HME media is a foam which retains heat and moisture to be re-cycled during the breathing cycle. The foam is treated with calcium chloride, referred to as 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 HMEs⁶.

The TrachPhone HME also provides partial restoration of natural breathing resistance. The restoration of natural breathing resistance may reduce dynamic airway collapse and so optimizes overall respiratory function⁷⁻⁹.



Performance and Facts

Moisture loss at VT 500 ml	17 mg/L
Moisture loss at VT 1000 ml	18 mg/L
Pressure drop 30 L/min	20 Pa
Pressure drop 60 L/min	50 Pa
HME media	Foam treated with calcium chloride
Dead space	9,5 ml
Tidal volume range	VT >50 ml
Oxygen supply port	4 mm
Weight	2.9 g
Connection	15 mm

Single patient use only, disposable. Individually packed products

Intended use: For patients breathing spontaneously via an ET tube or a tracheostomy tube in the hospital or at home.

Speech valve

TrachPhone contains a valve with a spring that can easily be depressed with a finger to facilitate speech. After releasing the finger, the valve will open automatically.



Suction port

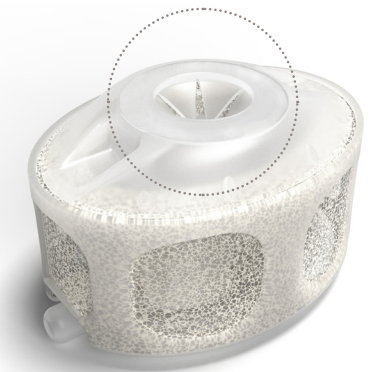
The integrated suction port allows for tracheal suction without removing the HME.

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

As the HME does not need to be removed during suctioning, you're avoiding any displacement of the tracheostomy tube.

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

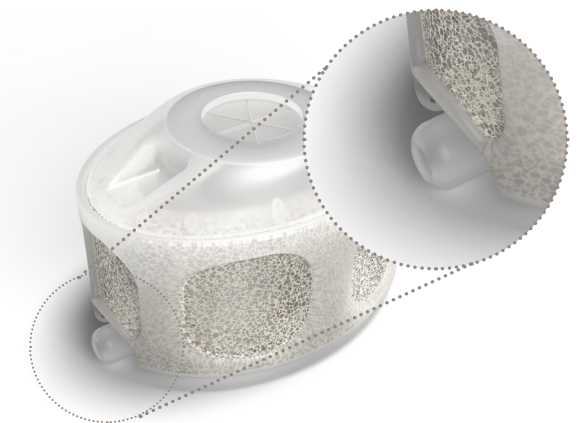
In case of coughing or blockage the suction port acts as a cough relief valve.



Oxygen port

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

If supplemental oxygen is required, connect an oxygen tube to the oxygen port. The supplied oxygen passes through the HME foam and allows for administration of up to 3-4 L/min.




Instructions for use

- The device should be placed at the open end of the ET tube or tracheostomy tube of a spontaneously breathing patient.
- Check connection is properly fixed.
- HME efficiency is reached after a few breaths.
- Replace every 24 hours or more often as required, to avoid resistance increase due to accumulation of secretions.
- Before use, check product for deformity and valve function by depressing the valve and releasing it.
- Do not use if the device shows any signs of defect, or if the package is opened or damaged.

Contraindications

- Do not use beyond recommended tidal volume range (50-1000 ml), as added dead space may cause CO₂ retention at too low tidal volumes.
- Do not use on dehydrated patients or patients with very heavy secretions from the lungs and airways.

Ordering Information		REF
	TrachPhone, 30 pcs	7707
	TrachPhone, 50 pcs	7704

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

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 tracheotomized 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, Cini 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. Toremalm NG. A heat-and-moisture exchanger for posttracheotomy care. An experimental study. *Acta Otolaryngol*. 1960;52:461-72.
6. Mebius C. A comparative evaluation of disposable humidifiers. *Acta Anaesthesiol Scand*. 1983;27(5):403-9.
7. 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.
8. 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.
9. 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.

Contact us for more information

We develop products in close cooperation with leading institutions, doctors, physicians, nurses, speech-language pathologists, and patients from all over the world, to improve patients' quality of life through smart and innovative solutions.

For more information about our assortment and Instructions for Use, please visit www.atosmedical.com.



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