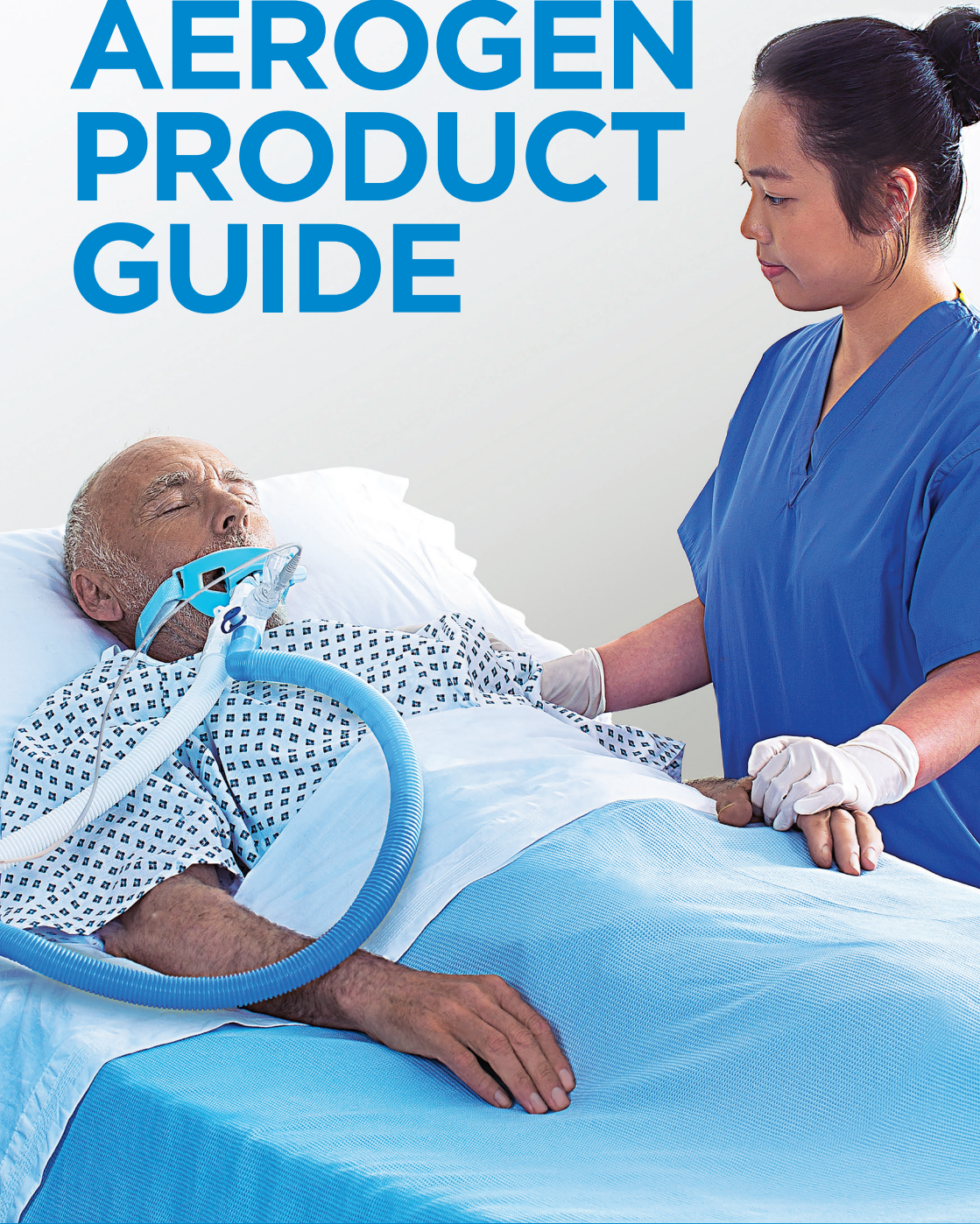


AEROGEN PRODUCT GUIDE



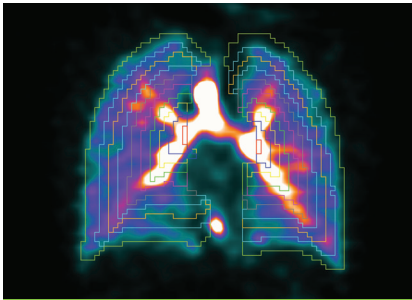
Aerogen[®]
Pioneering Aerosol Drug Delivery

/ Aerogen® Ultra

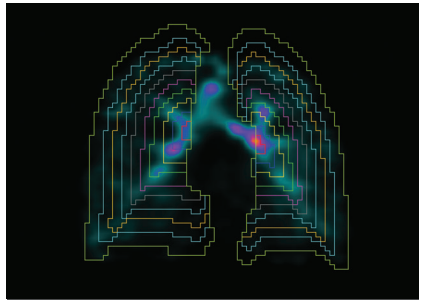


- Delivers significantly more medication in half the time¹
- Improves patient response to treatment²
- Works with and without O₂³
- Can be used with either a mask or mouthpiece³

Aerogen Ultra delivers 6X greater lung dose*



Aerogen Ultra



Jet nebuliser

Lung dose delivered: Aerogen Ultra 34.1%; jet nebuliser 5.2% (p<0.001)

Residual dose volume: Aerogen Ultra 2.4%; jet nebuliser 62.8% (p=0.008)

Nebulisers were filled with diethylenetriaminepentaacetic acid labelled with technetium-99 m (99mTc-DTPA, 2 mCi/4 mL) Dugernier J. et al 2017⁴

*Aerogen Ultra compared to a standard jet nebuliser.

SUPERIOR PATIENT CARE WITH AEROGEN ULTRA

In a comparison study with a jet nebuliser, Aerogen Ultra resulted in:

32%

reduction in admission rates⁵

85%

of patients achieving symptom control with one 2.5mg salbutamol dose⁵

37_{min}

median reduction in ED length of stay⁵

1. Hickin S. et al. Poster at the College of Emergency Medicine Clinical Excellence Conference 2014 2. Cushen B, et al. BTS poster presentation. 2016 3. Aerogen Solo Instruction Manual 4. Dugernier J. et al Pharmaceutical research. 2017;34:290-300. 5. Dunne RB and Shortt S. Comparison of bronchodilator administration with vibrating mesh nebulizer and standard jet nebulizer in the emergency department. The American journal of emergency medicine. 2017

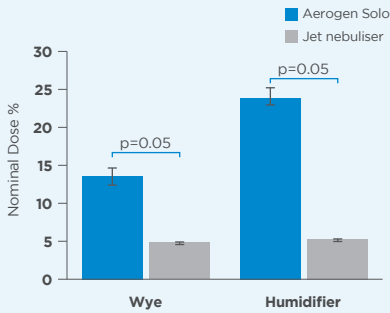
/ Aerogen® Solo



- Quick and easy to set up¹
- Virtually silent²
- Single patient use¹

Aerogen Solo achieves superior drug delivery*

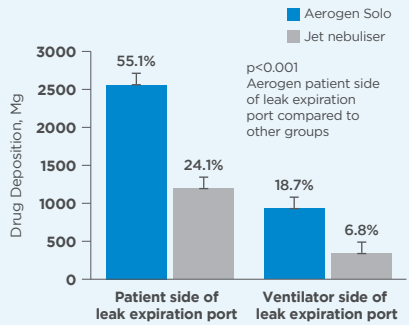
MECHANICAL VENTILATION



Ari A. et al. 2010³

*Studies comparing Aerogen Solo and standard jet nebulisers

NIV



Abdelrahim et al. 2010⁴

CONFIDENCE AND CONSISTENCY OF PATIENT CARE

- ✓ Refill medication without breaking the circuit¹
- ✓ Can be used with all medications for inhalation*
- ✓ No heating or degradation of medication¹
- ✓ Minimal residual volume (<0.1ml for 3ml dose)¹
- ✓ High speed of delivery⁵
- ✓ Does not affect ventilator parameters¹
- ✓ Suitable for solutions, suspensions, proteins & peptides⁶
- ✓ Can be placed at the wye or at the humidifier¹

*which are approved for use with a general purpose nebuliser¹

1. Aerogen Solo Instruction Manual 2. Ari A. et al. J Aerosol Med Pulm Drug Deliv 2015;28(4):281-289
3. Ari A. et al. Respir Care 2010;55(7):845-851 4. Abdelrahim ME et al. J Pharm Pharmacol 2010;62(8):966-972
5. Hickin S et al. Poster at the College of Emergency Medicine Clinical Excellence Conference 2014 6. Dhand R. Nebulizers that use a vibrating mesh or plate with multiple apertures to generate aerosol. Respiratory care. 2002;47:1406-16; discussion 1416-8.

Continuum of Care

Aerogen can be used across all modalities for ventilated and non-ventilated patients



Neonate



Paediatric



Adult

AEROGEN CONTINUOUS NEBULISATION TUBE SET



- ✓ Works with standard syringe pumps¹
- ✓ Non-standard luer connectors eliminate the risk of misconnection¹
- ✓ Precise volumetric dosing for reliable, controlled aerosol delivery¹
- ✓ Drop-by-drop continuous nebulisation.¹

AEROGEN POWER SOURCES



/ Aerogen Pro-X Controller

- ✓ 30-minute and continuous mode options¹
- ✓ 45-minute battery life for patient transfer within the hospital¹

/ Aerogen USB Controller

- ✓ 30-minute and 6-hour mode options while connected²



Trusted by the world's leading ventilator manufacturers

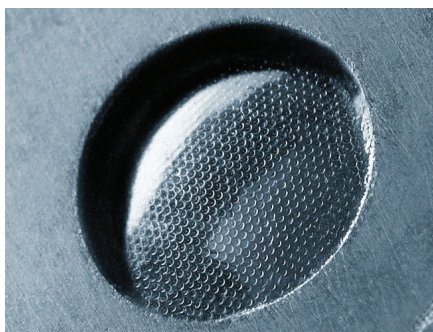


1. Aerogen Solo Instruction Manual. 2. Aerogen USB Controller System Instruction Manual

High performance aerosol drug delivery



At the heart of every Aerogen device is our unique **palladium vibrating mesh technology**.



Aerogen vibrating mesh technology comprises a unique dome-shaped aperture plate perforated with **over 1,000 precision formed tapered holes**.



When energy is applied, the aperture plate vibrates at **128,000 times a second** producing a low-velocity, fine particle, nebulised mist of consistently sized droplets (1-5 μ m)¹ to achieve superior lung deposition of medication.^{2, 3}

1. Aerogen Solo Instruction Manual. 2. Dugernier J. et al Pharmaceutical research. 2017;34:290-300.
3. Galindo-Filho VC et al. Respir Care 2015;60(9):1238-1246

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