

tremoflo C-100

Airwave Oscillometry System (AOS)

Measurement Principle	Oscillometry (Forced Oscillation Technique, FOT)
Oscillator Technology	Breathe-through Vibrating Mesh (Patented)
Measurement Modes	AOS: Pseudo-random noise
Measurement Duration	20 sec (min.), user adjustable 3 repetitions (as per guideline)
Patient Interface	Bacterial/viral filter with integrated mouthpiece
Dimensions & Weight	19 x 13 x 14 cm, 0.7 kg (handheld only) 21 x 14 x 24 cm, 1.7 kg (handheld & cradle)
Performance	Meets and exceeds ERJ 2003, 22: 1026-1041
Market Clearance	Canada, United States, Israel EU (European Community), Australia/NZ

More information at www.tremoflo.com



tremoflo Benefits

- Tidal Breathing
No forced expiration.
- Respiratory Mechanics
Info related to small airways.²
- Fast & Easy
Test in a few minutes.
- Adult & Pediatric
Normative values provided.
- Intra-Breath Analysis
Pattern & Time-Course.
- Easy Daily Calibration
Less than 30sec.
- Compact & Portable
Weighs only 700 g.
- Pre/Post Testing
Automated Workflows.



¹ Hirsh et al., AAAAI 2011
² Usmani et al., RESPIRATORY MEDICINE 2016
³ Al-Alwan et al., AJRCCM 2014
⁴ Galant et al., AAAAI 2017
⁵ Johnson et al., THORAX 2007

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Caution: Federal (USA) law restricts this device to sale by or on the order of a licensed practitioner.

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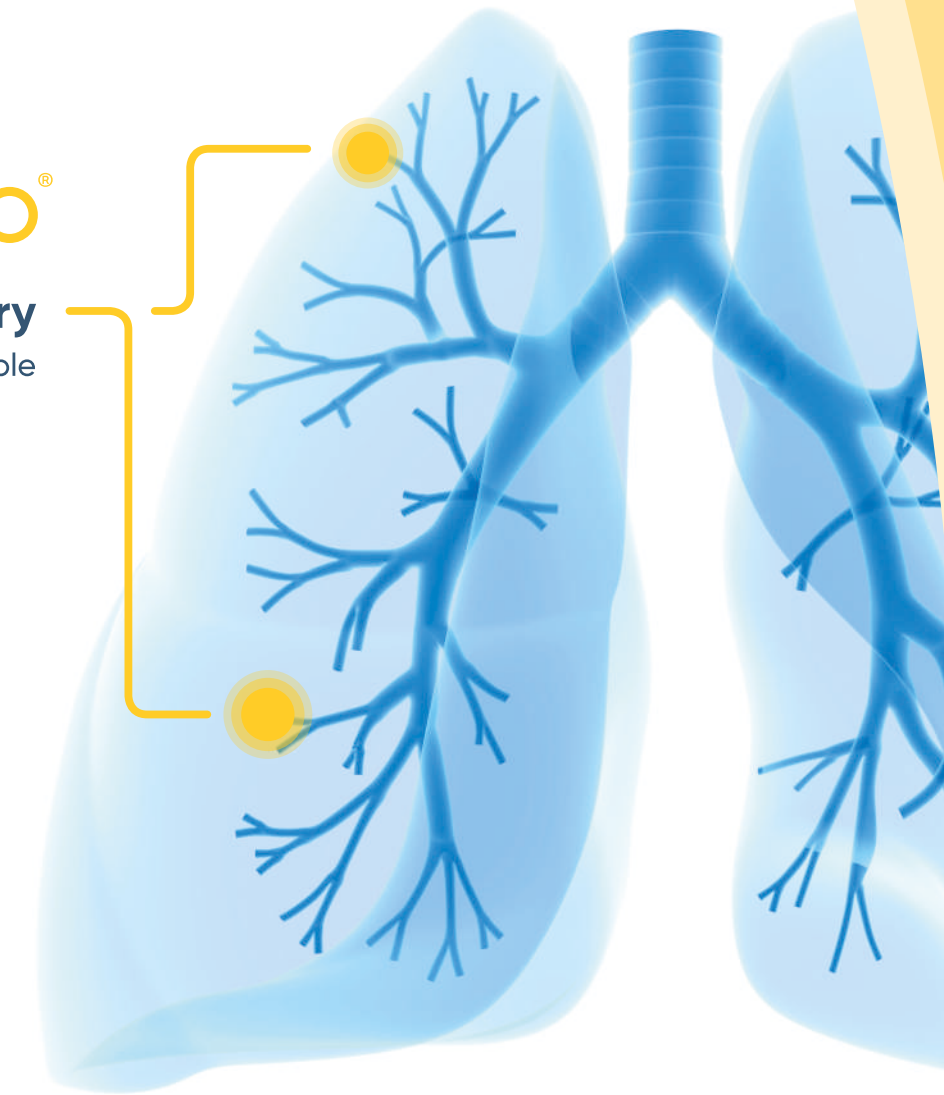
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Authorised Dealer

Shaping New Perspectives on Pulmonary Function

tremoflo®
Airwave Oscillometry
Fast, Easy, Portable



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I N D I A

The Importance of Small Airways

The tremoflo C-100 provides information related to small airway function.

The small airways are frequently involved early in the course of [asthma and COPD] diseases, with significant pathology demonstrable often before the onset of symptoms or changes in spirometry and imaging.

McNulty and Usmani, ECRJ 2014

Peripheral airway impairment may be clinically relevant at all levels of asthma severity and control.

Galant et al., AAAAI 2017



tremoflo[®] Airwave Oscillometry Fundamentals

tremoflo measurements are fast and easy. The patient just breathes quietly.

To assess respiratory function, the tremoflo adds a gentle oscillatory wave to the patients regular, quiet breathing. A short measurement duration of only 20 seconds allows three repetitions within a couple of minutes, even in patients who have difficulty performing spirometry.

Oscillometry Outcomes

Summary of clinician interpretations per published studies¹⁻⁵

A pair of two curves calculated from the raw data reflects the mechanical properties of the respiratory system in characteristic patterns. Several key outcome parameters are then derived from these curves.

Characteristic Patterns

- R** The **Resistance** curve shown to reflect central and peripheral airways.²
- X** The **Reactance** curve shown to reflect elasticity and peripheral airways.³

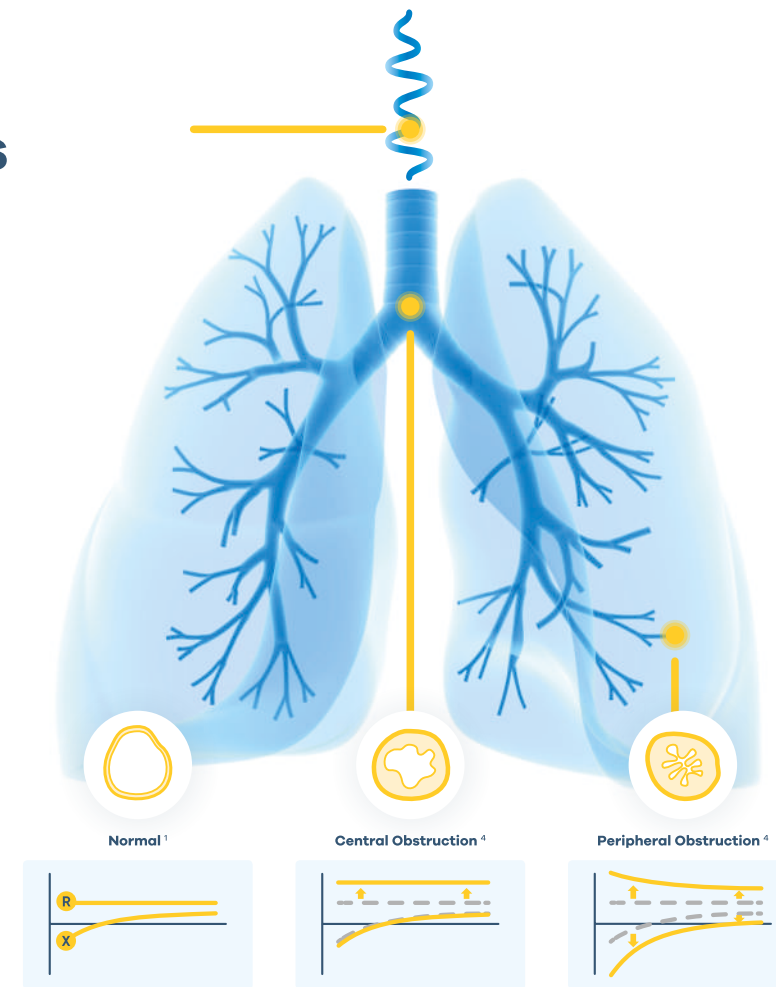
Key Outcomes

Resistance at 5 Hz ¹	R_5	Normal	↑	↑
Resistance change, 5 to 20 Hz ¹	R_{5-20}	Close to zero	↑	↑
Reactance area ¹	AX	Normal	↑	↑

tremoflo C-100 Flexible Support Arm

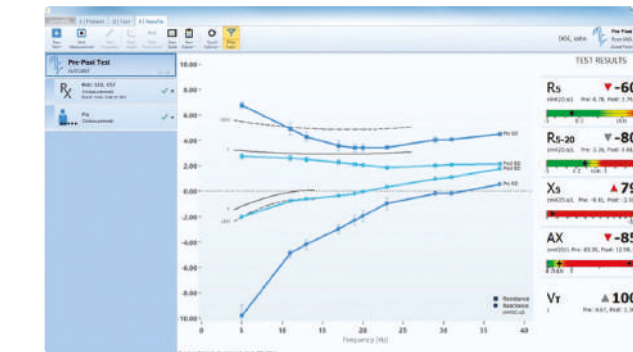
The flexible support arm in a nutshell

- Portable**
- Facilitating distancing**
- Flexible**
- Lab & office use**
- Ergonomic Design**
- Easy to install**

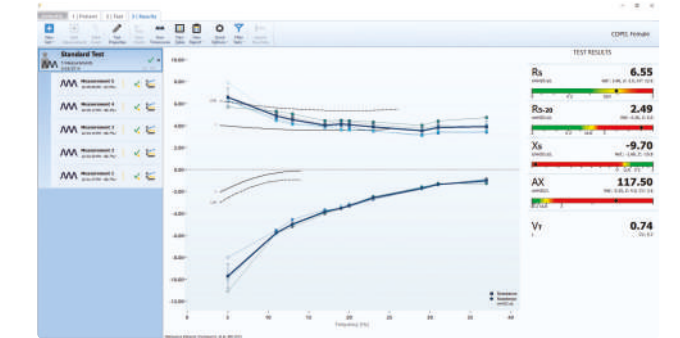


Actual tremoflo Data

A simple green-to-red gauge scale clearly shows whether patients fall within or outside normative values that are available for pediatrics and adults.



Pre/Post Test
Asthma Patient



COPD Patient

Expert Opinions

Oscillometry offers an in-office tool that can assess peripheral airway impairment even in young children and may detect airway obstruction earlier than spirometry.

Galant et al., AAAAI 2017

Monitoring small airway function by [Oscillometry] can be useful in identifying patients who are at risk for losing asthma control, and in assisting with clinical decisions and treatment plans.

Bickel et al., Chest 2014

In studies that use both [oscillometry] and spirometry, [oscillometry] is more useful than spirometry in children in differentiating asthma from healthy cohorts

Galant et al., AAAAI 2017

Oscillometry has been found to be useful in measuring response to bronchodilators, such as salbutamol and ipratropium, in patients with asthma and COPD.

Bickel et al., Chest 2014

Vertical reach range - from table top	74 cm over to 27 cm under		
Horizontal max. reach at table top level	67 cm		
Degrees of freedom	Tilt 135°	Rotation 360°	Pan 360°
tremoflo attachment	Locking mechanism for secure grip of the tremoflo		
Table clamp aperture (compatible table top thickness)	Up to 5 cm		
Dimensions	Length (cm)	Height (cm)	Width (cm)
Overall envelope when packed	40	19	9
Fully extended	75	13	9
Weight	1.1 kg		
Colour	White		
Cleanability	Clean with soapy water, or alcohol, or chlorine based solution		
Compatibility	This arm is compatible with tremoflo C-100		