

Forced Oscillometer

with Spirometer (FOT)

PISTON PDD-301/so



The Forced Oscillation Technique (FOT) provides a contemporary, dependable, and cost-effective approach for measuring the impedance of the respiratory system. This method necessitates minimal cooperation from patients, making the FOT device particularly suitable for pediatric pulmonology. Its effectiveness is enhanced when used in conjunction with spirometry, allowing for seamless switching between FOT and spirometry modes with the simple adjustment of a knob.

Features

FOT

- Measurement of the components of the airway impedance at different frequencies
- Determination of the resonance frequency of the airways
- Average calculation of Reproducible Impedance Spectra
- Model evaluation of Impedance Spectra
- Calculation of Resistance / Reactance of the respiratory system
- Random induced frequencies
- Sequential induced frequencies

- Robust & durable design
- Comprehensive data analysis software
- Meet & exceeds ERS guidelines
- Easily identification between asthma & COPD
- Simple tidal breathing
- Suits for both Children & Adult use

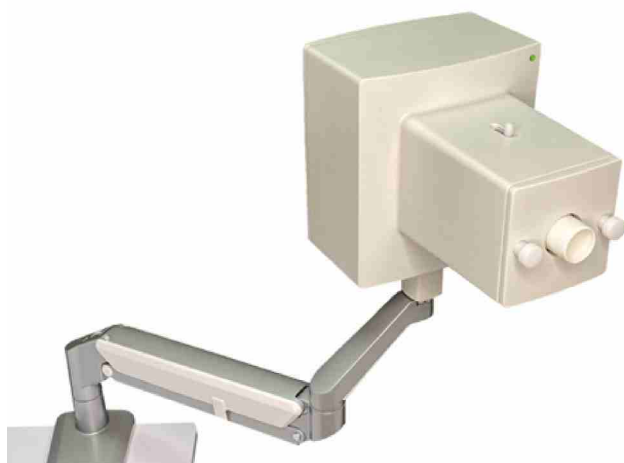
Spirometry

- Forced vital capacity
- Slow vital capacity
- Maximal vital capacity
- Pre, Post Analysis

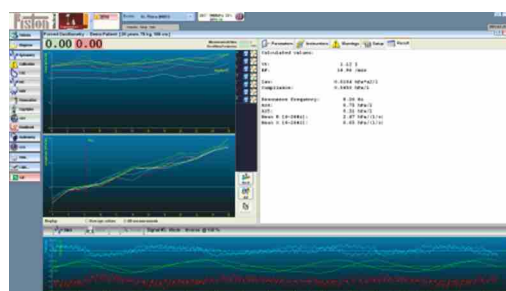
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Impedance as a function of frequency
Model matching for Reproducible Spectra



Technical Specifications

Flow meter	Lilly type pneumotachometer with screen
Flow range	±15 l/s
Accuracy	±2% or 50 ml, whichever is greater
Dead space	36 ml
Resistance	60 Pa/l/s @ 15 l/s
Induced frequency range	4 Hz - 48 Hz
Induced pressure wave	max. 0,2 kPa
Induced power	max. 50W

Size without patient circuit	Height: 300 mm Wide: 300 mm Deep: 150 mm
Weight	7.2 kg
Power supply	90 ÷ 260 VAC 50/60 Hz
Power consumption	75 VA
Minimum PC Requirement	Core i3-10th Generation, 4 GB RAM/256 GB SSD or 1TB HD Pre-loaded Windows
Operating Conditions	Temp 0-40 °C/32 – 104 °F Rel.Humidity 5-95 % Atmosph.Pressure 620 – 1060 hPa

Measured Parameters

- **Forced Oscillation Technique:** Rrs, Irs, Crs, fres
- **Forced vital capacity:** FVC, FEV*0.5, FEV*1.0, FEV*0.5/IVC, FEV*0.5/FVC, FEV*1.0/IVC, FEV*1.0/FVC, PEF, FEF*25-75%, FEF*75%, FEF*50%, FEF*25%, FET, MTT, FIVC, FIV*0.5, FIV*1.0, PIF, FIF*25-75%
- **Slow vital capacity:** IVC, IRV, ERV, TV, SVC
- **Maximal vital capacity:** MVV, MVV*f