Technical Specifications

System for the oscillometric determination of respiratory impedance by Impulse Oscillometry (IOS)

- Global mean values of the respiratory impedance separated into resistance- and reactance spectrum
- Easy-to-understand graphic model-based interpretation including respiratory parameters for central and peripheral airways
- Breath by breath analysis including volume and flow dependency of respiratory impedance
- Slow and forced spirometry (inspiratory and expiratory flow/volume curve and Tiffeneau Test)

Components:
- Computer and TFT monitor or as portable notebook version, multi-color ink-jet printer
- Heated JAEGGER™ pneumotach
- IOS head including loudspeaker generator
- Reference impedance for calibration
- Complete recording and analysis software including powerful data management features
- Complete range of accessories including 3-liter-calibration pump
- Option: easy-to-move trolley

Technical data

Flow measurement

- JAEGGER Pneumotach
- Range ±20 L/s
- Accuracy 0.2 - 12 L/s ±2%
- Resistance <0.05 kPa/(L/s) at 10L/s
- Resolution 10 mL/s
- Common mode rejection ratio (CMRR) 60 dB at 50 Hz
- Common mode 70 dB at 35 Hz
- Volume determination digital integration
- Range ± 20 L
- Resolution 1 mL
- Mouth pressure JAEGGER pressure transducer
- Range ±2 kPa
- Accuracy < ±2 %
- Test signal impulse
- Pulse interval 0.1 - 6 s
- Impulse length 45 ms
- Frequency range 0 - 100 Hz
- Power spectrum - 20 dB at 40 Hz
- Calibration CAL-Pack, automatically
- Reference impedance 0.2 kPa/(L/s)
- Accuracy < ±2 %

Oscillometric parameters

- Z5 Magnitude of respiratory impedance
- R5 Total respiratory resistance
- R20 Proximal respiratory resistance
- X5 Distal capacitive reactance
- Fres Resonant frequency

Spirometric parameters

- Static lung volumes: VT, ERV, IRV, IC, IVC, EVC, VCmax, ...
- Dynamic lung volumes: FEV1, FVC, FEV1/IVC %, FEV1/FVC %, FEV1/VCmax %, FEF75, FEF50, FEF25, PEF, FIV1, PIF, MIF50, ...

MasterScreen™ IOS

Available with spring or tube support arm
(not illustrated)

Dimensions

MasterScreen™ IOS Trolley (option)

- Trolley with adjustable, swivel-mounted desktop: 60 x 66 cm (23.6 x 26 inches)
- Required space: 90 x 120 cm (35.4 x 47.2 inches)

Quality and Safety

- CareFusion is certified according to ISO 9001/IEC 13485
- MasterScreen™ IOS complies with the regulations of European (Medical Device Directive) and US (FDA) law.

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PN 791809

carefusion.com
MasterScreen™ IOS An Overview:

**Measurement Programs:**
- Impulse Oscillometry
- Spirometry/Flow-Volume
- Animation (Spirometry)
- Bronchial Test incl. APS Pro
- Anterior Rhinomanometry
- Tidal Breathing Analysis in Children

**Administrative Programs:**
- Data Base
- Data Base Tools
- Export/Statistics via SQL Data Base
- Screen and Printer Report
- Trend Report Module
- Interpretation Oscillometry
- Interpretation Spirometry
- Off-line Input
- ReportDesigner
- Predicted Value Generation
- User Predicted Values
- LanguageMaker
- User Parameters
- Patient Manager
- AMOS
- Network Data Base
- Interface for Hospital/Practice System

**Hardware Options:**
- Trolley
- Provocation System APS
- Anterior Rhinomanometry
- Bedside

**Upgrade Options:**
- Body Plethysmography
- Diffusion
- Ergospirometry
- Pediatric applications (baby lung function)

**Performance Features:**
- Desktop version, portable as notebook version or mounted on trolley
- Heated pneumotach for highest accuracy
- New, user-friendly graphical user interface
- Comprehensive standard equipment
- Meets international guidelines and standards
- Especially suited for:
  - Pulmonology and allergology
  - Pediatrics and geriatrics
  - Occupational medicine
  - Screening, epidemiology and experimental respiratory physiology