

Meridian Series™

Cardiorespiratory Diagnostic Systems



INTRODUCING THE MERIDIAN SERIES: THE FUTURE OF CARDIORESPIRATORY DIAGNOSTIC TESTING

The Meridian Series cardiorespiratory diagnostic system is an innovative solution for assessing cardiovascular and respiratory function. It redefines diagnostic standards with a focus on accuracy and precision, ensuring the highest level of performance. Explore the features that set the Meridian Series apart from spirometry to CPET (cardiopulmonary exercise testing).



MODULAR SYSTEM DESIGN

- Versatile cart and tabletop setups.
- Option for customer-provided computer.
- Maximized testing comfort.
- Exceptional performance and reliability.



FLOW SENSORS FOR SIMPLICITY AND ACCURACY

- Proprietary preVent® flow sensor and DirectConnect™ metabolic flow sensor.
- Maximum infection control.
- Save time between patients.
- Meets or exceeds ATS/ERS standards.



SEAMLESS PATIENT TRANSITIONS

- Eliminates warm-up delays.
- No flow recalibration needed.
- Ensures uninterrupted diagnostic testing.
- Effortless operation with intuitive Ascent™ cardiorespiratory diagnostic software and streamlined workflow solutions.



Ascent™ Software: The Powerhouse behind your Meridian System

ASCENT SCHEDULER: ALWAYS READY FOR TESTING

- System is always prepared for testing.
- Automatically warms up, ready on-demand.
- Delivers fast, accurate results without waiting.

COMPREHENSIVE REPORTING

- Generates clear, customizable reports.
- **Integrates vital diagnostic data:** patient demographics, test parameters, physiological measurements and graphical results.
- Easy integration with EHR systems via export options.

INTUITIVE AT/VT1 SELECTION

- Identifies key health markers: Anaerobic Threshold (AT) and Ventilatory Threshold 1 (VT1).
- **Critical for:** assessing exercise capacity, determining training zones, and evaluating patient health.

ADVANCED CURVE FITS

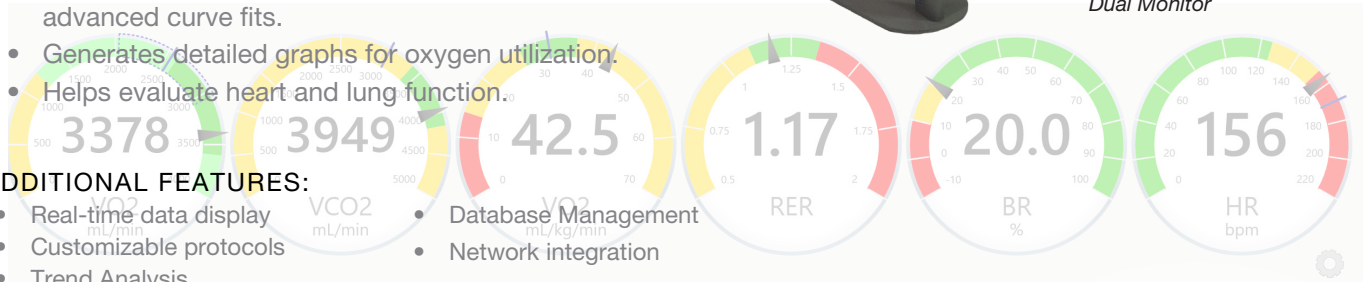
- Provides deeper insights into body's response with advanced curve fits.
- Generates detailed graphs for oxygen utilization.
- Helps evaluate heart and lung function.

ADDITIONAL FEATURES:

- Real-time data display
- Customizable protocols
- Trend Analysis
- Database Management
- Network integration



Tall Cart with
Dual Monitor



A Variety of Patient Interface Options

We offer a variety of patient interface options for optimal comfort and effective patient care, accommodating individual needs and preferences. Increased patient comfort leads to more accurate testing results.



MOUTHPIECES

SHOWN: MOUTHPIECE
WITH SALIVA TRAP



FACE TENT

SHOWN: FACE TENT
WITH BACTERIAL FILTER



FACE MASK

SHOWN: PREVENT™
FACE MASK (SIZES XS-L)



FACE MASK

SHOWN: V2/8900 MASK
(SIZES XS-L)

Comprehensive Diagnostics, Your Way: Flexible and Modular

The Meridian Series is your all-in-one solution, seamlessly combining Spirometry and Gas Exchange. This single advanced platform allows you to explore lung function, exercise capacity, cardiac performance, and metabolic analysis, elevating your diagnostic precision. The Meridian seamlessly integrates with specialized exercise equipment from leading manufacturers.



Short Cart with
Single Monitor



Also
Available:

Desktop Configuration

System can be placed
on any solid surface
for maximum flexibility.
The computer can be
customer provided for all
configurations.



preVent® flow sensor FOR SIMPLICITY AND ACCURACY

Efficiency Redefined, Hygiene Elevated

Our proprietary preVent® flow sensor saves time and provides maximum infection control. It is a market leader in flow technology (pneumotach), offering superior accuracy and precision.

- Eliminates warm-up or flow recalibration between patients.
- Simple snap in setup contains no moving parts or electronics ensures maximum infection control.
- Versatile and cost-effective with options to use a filter (spirometry only), sterilize, or discard
- Meets ATS/ERS standards and specifications.
- Independently validated*

YOUR INFECTION CONTROL, YOUR CHOICE:

THREE OPTIONS FOR YOUR PEACE OF MIND

We prioritize infection control and offer flexible options to align with your needs. With the preVent flow sensor, you control the level of safety and convenience required.

1. **Change:** Simply change the filter and keep the same preVent flow sensor.
2. **Re-Use:** Change the flow sensor between patients and replace with disinfected components.
3. **Dispose:** Dispose of the flow sensor after each patient.

* Porszasz JA, Barstow TJ, Wasserman KA. Evaluation of a symmetrically disposed Pitot tube flowmeter for measuring gas flow during exercise. *Journal of Applied Physiology*. 1994 Dec 1;77(6):2659-65.

Service & Support

BEST-IN-CLASS SERVICE & SUPPORT

- Our specialists, including exercise physiologists, complete extensive training on each MGC Diagnostic system.
- Benefit from our U.S.-based Live Technical Support, where expert assistance is readily available by phone, internet, and remote connection. We're committed to answering 90% of calls within two minutes.
- Regional Field Service Engineers are dispatched for on-site support.

The Meridian Series offers maximum flexibility to configure your pulmonary function and gas exchange systems. Select the product that best meets your needs, or contact your sales representative for more information.

TESTING CAPABILITIES	CPX	CARDIO ₂	CCM
PULMONARY FUNCTION TESTS:			
• Spirometry (FVC, SVC, MVV)	✓	✓	✓
• Arterial blood gases (ABG manual entry)	✓	✓	✓
ECG/HEART RATE CONFIGURATIONS:			
• Integrated 12-lead ECG	-	✓	-
GAS EXCHANGE TESTS:			
• Direct fick cardiac output	✓	✓	✓
• Exercise capacity	✓	✓	○
• Nutrition assessment: REE/RMR	○	○	✓
	✓ standard ○ optional		

SPECIFICATIONS

MODULE ONLY

- H x W x L: 5 x 15.5 x 14 in (12.7 x 39.37 x 35.56 cm)

TALL CART

DUAL MONITORS

- Base: W x D: 23 x 27 in (58.42 x 68.58 cm)
- Width: 48 in (121.92 cm)
- Height: 70 in (177.8 cm)

SINGLE MONITORS

- Base: W x D: 18 x 24 in (45.72 x 60.96 cm)
- Width: 48 in (121.92 cm)
- Height: 70 in (177.8 cm)

SHORT CART WITH SINGLE MONITOR

- Base: W x D: 18 x 24 in (45.72 x 60.96 cm)
- Width: 24 in (60.96 cm)
- Height: 60 in (152.4 cm)

PREVENT® FLOW SENSOR

- Bidirectional Pitot tube flow sensor
- Range: ±18 L/s
- Accuracy: ±2% or 50 mL, whichever is greater
- Resistance: <1.5 cm H₂O @ 14 L/s
- Dead space: 39 mL

DIRECTCONNECT™ METABOLIC FLOW SENSOR

- Bidirectional Pitot tube flow sensor
- Patent number: 5,038,773
- Accuracy: ±2% or 10 mL, whichever is greater
- Resolution: 2.4 mL/s
- Range: 0–40 L/min
- Application range: 100–2000 mL
- Tidal volume range: 100–2000 mL

POWER REQUIREMENTS

- 100-240 V/50-60 Hz

O₂ ANALYSIS

- Type: Galvanic
- Range: 0-100%
- Response: (10-90%) <180 ms
- Accuracy: ±1%

CO₂ ANALYSIS

- Type: Non-dispersive infrared (NDIR)
- Range: 0-15%
- Response: (10-90%) <180 ms
- Accuracy: ±0.1% (0-10% CO₂)

GAS SAMPLE

- Proprietary gas-drying sample circuit

GAS REQUIREMENTS

ULTIMA CARDIO₂/CPX/CCM

- Calibration gas: 5% CO₂, 12% O₂, bal N₂ (5-7 psi)
- Reference gas (recommended): 21% O₂, bal N₂ (5-7 psi)



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MGC Diagnostics and its affiliates are equal opportunity/affirmative action employers committed to cultural diversity in the workforce.

Part# 061388-001 RevA

