



MGC Diagnostics HypAir

A complete, modular Pulmonary Function Testing (PFT) system for spirometry, lung volumes, diffusion, and respiratory mechanics, controlled by Expair/Ascent software.

<https://mgcdiagnostics.com>

Overview

MGC Diagnostics HypAir PFS (Pulmonary Function Testing System) is a high-precision, reliable, and modular diagnostic device and software solution designed for comprehensive cardiorespiratory health assessment. The system is controlled by the powerful **Expair II** or **Ascent** software, which provides an intuitive and user-friendly interface for data collection, review, and management.

Key Capabilities

The HypAir PFS is capable of performing a wide range of pulmonary function tests in a single station, making it ideal for respiratory care departments, clinical labs, and research organizations. Key testing capabilities include:

Complete Spirometry: Forced Vital Capacity (FVC), Slow Vital Capacity (SVC), Maximum Voluntary Ventilation (MVV), and Minute Tidal Ventilation, including bronchial provocation testing software.

Lung Volumes Measurement: Offers a choice of methods including Helium Dilution (FRC-He) and Multibreath Nitrogen Washout (FRC-N2).

Lung Diffusion Capacity (DLCO): Provides a large choice of DLCO measurement methods, including traditional single-breath and real-time gas analysis with various tracer gases (Helium, Methane).

Respiratory Mechanics Testing: Measures Maximum Inspiratory and Expiratory Pressure (MIP/MEP), Sniff Nasal Inspiratory Pressure (SNIP), and Inspiratory Occlusion Pressure (P0.1) for respiratory muscle evaluation.

Software and Integration

The system leverages MGC Diagnostics' advanced software solutions for seamless workflow and data management:

Data Management: Uses **Ascent Networking** to connect diagnostic and review workstations, storing critical data in a centralized **Microsoft SQL Server® database**.

EMR/HIS Integration: The **AscentConnect™ HL7 interface software** facilitates seamless data exchange with Electronic Medical Records (EMR) and Hospital Information Systems (HIS) via **HL7 2.X** format. This allows for the transfer of patient orders, demographics (ADT), test data, and reports (PDF, TXT, XML).

Diagnostic Tools: Features a predicted value editor, new interpretation algorithms (LLN, ULN, Z-score), automated quality control software, and trend tabular data reporting.

Technical Advantages

preVent® Flow Sensor (PFS): Utilizes a small, durable, and lightweight flow sensor with no moving parts or electronics, ensuring high precision, low maintenance, and maximum infection control with options for changing, re-using, or disposing of components.

Modular Design: Allows users to start with basic options and upgrade over time to complete pulmonary function testing equipment.

Key Features

- Complete Spirometry (FVC, SVC, MVV)
- Lung Volumes Measurement (He Dilution & N2 Washout)
- Diffusion Capacity (DLCO/DLNO)
- Respiratory Mechanics Testing (MIP/MEP, P0.1)
- HL7 EMR/HIS Integration (AscentConnect)
- Centralized SQL Server Database
- Automated Quality Control Software
- preVent® Flow Sensor Technology
- Bronchial Provocation Testing
- Predicted Value Editor (LLN, Z-score)

Pricing

Model: enterprise

Pricing is not publicly disclosed. The system is sold as a hardware and software bundle, typically requiring a direct quote from MGC Diagnostics or a distributor. It is noted for low cost of operation and low maintenance.

Target Company Size: medium, enterprise

Integrations

Electronic Medical Records (EMR) via HL7, Hospital Information Systems (HIS) via HL7, Microsoft SQL Server

Compliance & Certifications

ATS/ERS Guidelines, HL7 2.X

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