

# MasterScreen<sup>®</sup> PFT

All-in-one Diffusion System, Truly Real-Time,  
 New Analyzer Technology



- Spirometry/Flow-Volume/MVV
- FRC Helium
- Real-Time Single Breath Diffusion
- Intra Breath Diffusion
- Options:
  - NO Diffusion (Dm & Vc)
  - NICO (Q\_Pulm)
  - Rebreathing Diffusion
  - SQL Database for Research



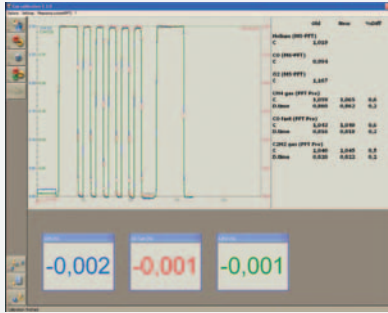
Diffusion Testing by **JAEGER<sup>®</sup>**, it's Experience that Counts.

VIASYS Healthcare  
 Respiratory Care  
 Your partner:

Outpatient Monitoring	Lung Function Diagnostics	Cardiorespiratory Diagnostics
Sleep Diagnostics & Therapy	Point-of-Care Diagnostics	Ventilation

# All Diffusion Technologies Packed in one Compact Device

By adding new features compared to the standard MasterScreen PFT we have created a very reliable lung function system which allows fast patient testing. New fast analyzer technology makes real-time gas analysis possible, independent of expired flow velocity. The new rapid responding three gas analyzer is measuring real-time diffusion capacity and alveolar volume, as well as Pulmonary Blood Flow (Q\_Pulm is not available in the US). The Intra Breath method or the Rebreathing method may be utilized when patients are short of breath at rest and the standard breath-hold methods are not well tolerated.

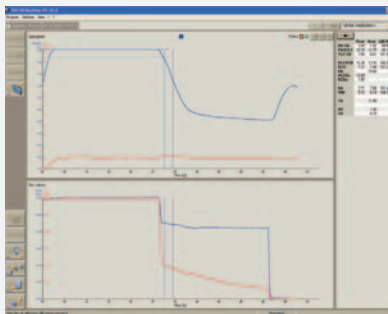


## Automated Gas Calibration

- After calculating the delay time, gain factors are determined. Fully automated.

As an option we can add NO Diffusion, offering the membrane and capillary blood volume components of diffusion. Furthermore, Rebreathing Diffusion can be added. Now that norm values are published, this effortless testing gives a true indication of diffusion during daily normal conditions. DLCO\_IB method can be used at rest and during exercise, to evaluate the behavior of the pulmonary capillary bed (Recruit and Distend) under stress conditions.

The disappearance curve of C<sub>2</sub>H<sub>2</sub> allows the calculation of Pulmonary Blood Flow (NICO is not available in the US).



## Real-Time Single Breath Diffusion

- After a deep inspiration, the patient holds his breath for 10 seconds followed by a normal expiration.

- DLCO, KCO and static lung sub-values are calculated automatically.

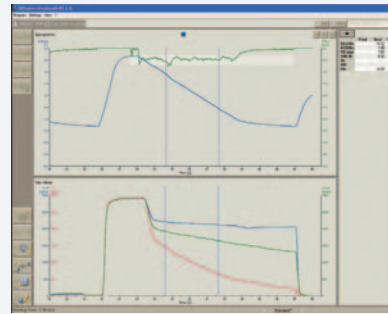
Our Multi-Gas analysis makes it possible to distinguish between dead space and alveolar plateau.

Sample position and sample size can be adjusted without the need of repeating the test. You are now certain to have an alveolar sample, even with pulmonary restricted patients. The Software has the new ATS/ERS 2005 guidelines implemented. Windows XP and Windows Vista compatible.

Modular, precise and incomparably quick.

The optional SQL Database Export program allows to export data from the JLAB Database to the SQL Database.

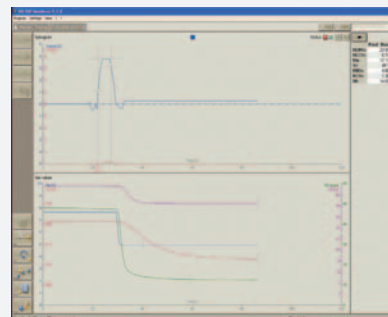
Diffusing Capacity should be measured whenever diffusion is suspected to be impaired, i.e. mainly in patients suffering from pulmonary fibrosis or pulmonary emphysema. Indication of therapy, trend and assessment play a decisive role. To broaden your diagnostic spectrum, the system can be equipped with a Body plethysmograph or a FRC-He Rebreathing option. All you need included in a single system!



## Intra Breath Diffusion

- After a deep inspiration the patient gently empties the lung.

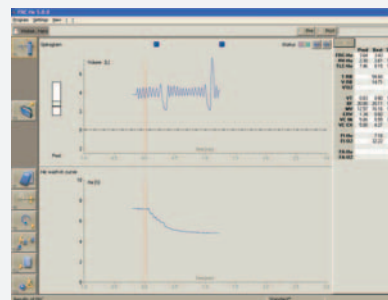
- DLCO, KCO and static lung sub-volumes are calculated automatically.
- Option: If acethylene is added, NICO and stroke volume can be determined.



## NO Diffusion (Option)

- To determine the membrane factor and the capillary blood volume, nitric oxide can be used. After a deep inspiration, the patient holds his breath for 4 seconds.

- DLCO, DLCO/VA as well as DLNO and DLNO/VA are calculated. Lung sub volumes are standard.



## Rebreathing Diffusion (Option)

- If the patient is not able to perform a deep inspiration, our Rebreathing Diffusion Technology is a perfect alternative.

- In obstructive patients, a lower VA might underestimate the DLCO values because of the unequal distribution of ventilation. KCO is often very low.



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