



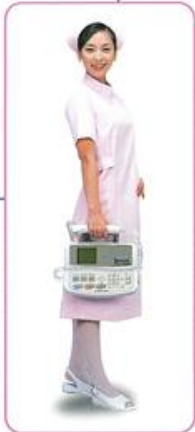
# Spirometry System

For testing asthma, COPD, and other respiratory failure patients.  
 &  
 Evaluation of middle-aged smokers and people  
 with chronic cough and sputum.

## CHESTGRAPH HI-101



Ideal  
for clinics



- Simple operation** Just press the buttons and testing is completed in three minutes.
- Compact** Compact for mobility.
- Sensor** Proven ATS accuracy.
- Economic pricing** Ideal spirometer for office use.

### Spirometry should be performed on most adults.

#### Early diagnosis of chronic obstructive pulmonary disease (COPD) patients.

Spirometry is indispensable in the diagnosis of respiratory failures. Compared to chest X-ray test or arterial blood gas analysis, only a spirometry test can detect patients several years before they become short of breath. This ideal spirometer allows easy testing in a short time.

Symptom	Cough, sputum		Exertional dyspnea	Resting dyspnea		
Spirometry	Normal	Borderline	Minor Airways obstruction	Moderate Severe Airways obstruction		
Arterial blood gas	Normal			Hypoxemia		
Chest X-ray	Normal			Hyper-inflation		
	35	40	45	50	55	60 (Age)

Note: The above chart is quoted from "office Spirometry" by Paul L. Enright, Robert E. Hyatt.

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## Respiratory failure patients are increasing.

Increase of elderly people and those with allergies due to adverse effects of tobacco, environmental pollution, and stress have been causing a conspicuous increase of chronic obstructive pulmonary diseases (COPD) in recent years. For example, over one-quarter of smokers over the age of 40 will have abnormal test results. The number of patients who require oxygen therapy is increasing. Spirometry should become as routine as measuring blood pressure.

### Application

- (1) For the diagnosis of bronchial asthma, pulmonary emphysema, chronic bronchitis, pulmonary fibrosis, pneumoconiosis, or tuberculosis, and for the assessment of therapeutic effects for these diseases.
- (2) For testing subjects with sputum or cough.
- (3) For the diagnosis of shortness of breath or respiratory failure and identifying causes of these symptoms.
- (4) Assessing the effects of smoking or air pollution.
- (5) Assessing the effects of aging upon the respiratory organs.
- (6) Pre-operative test for anesthesia or surgical operation.
- (7) Test for upper airway narrowing.
- (8) Collective screening at companies and schools.
- (9) Management of patients receiving bronchodilators.

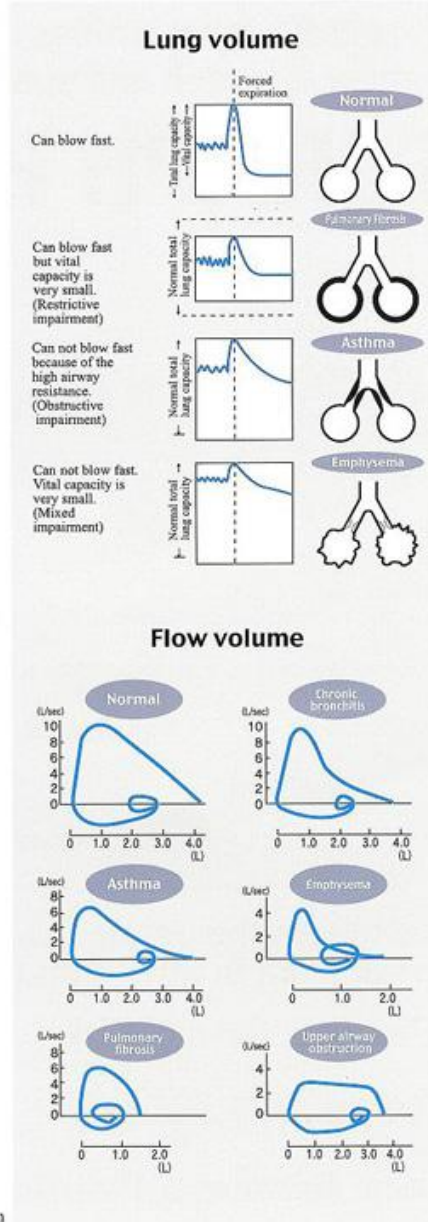
### Infants can be tested.

#### Specifications

Flow measurement	: Orifice type pneumotach sensor, Interchangeable, Re-usable
Volume measurement	: Flow integration method
Volume accuracy	: Within $\pm 3\%$ , or within $\pm 50\text{ml}$
Flow range	: $0.05$ to $\pm 14\text{L/s}$
Volume range	: $10\text{L}$
Test items	: Slow vital capacity (SVC) Forced vital capacity (FVC) Maximal voluntary ventilation (MVV) BD inhalation test
Monitor	: LCD display
Printer	: Thermal printer (paper width: 60mm)
Data storage	: Approx. 100 tests
Computer interface	: RS-232C
Predicted formulas	: Knudson, Morris, Polgar, ITS, ECCS, Crapo-Hsu, and Asia
Quality assurance	: IEC601-1-2, IEC601-1, ISO9001, EN46001, European Directive 93/42/EEC
Power requirement	: AC100V - 240V, 50/60Hz
Battery	: Rechargeable lead-acid battery, (12V, 0.8Ah)
Power consumption	: 11VA
Dimensions	: Approx. 300(W) $\times$ 210(D) $\times$ 100(H)mm
Weight	: Approx. 2.2kg

#### Standard Accessories

Sensor grip	1pc
Flow sensor	3pcs
Paper mouthpiece	50pcs
Nose clip	2pcs
Printer paper	1roll
Power cable	1pc
Operation manual	1pc

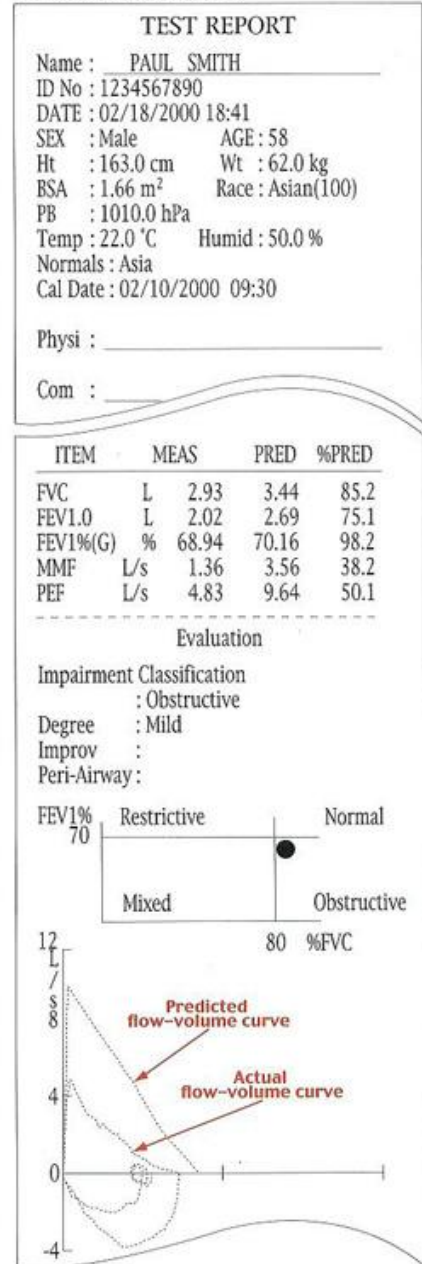


#### Optional Items

Calibration syringe (3L or 1L)
Data management software
Spiro-filter

## Spirometry System CHESTGRAPH HI-101

Printout Example(actual size)



Specifications are subject to change without notice.

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