

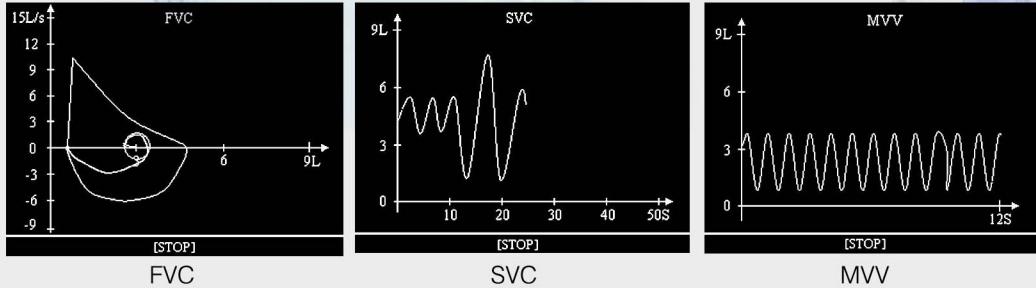
# MSA99 Spirometer



- Vital Capacity Test, Forced Vital Capacity Test, Maximum Voluntary Ventilation Test.
- Bronchodilator Test
- Bronchial Challenge Test (functional upgrading)
- Mainly used in hospitals, clinics, physicians' offices, laboratories and industrial health screenings.

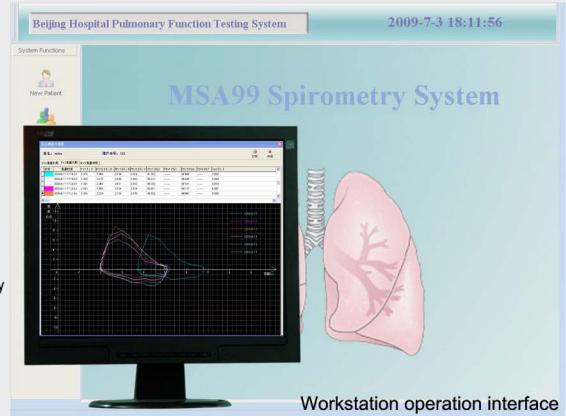
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## Main measurement parameters of MSA99

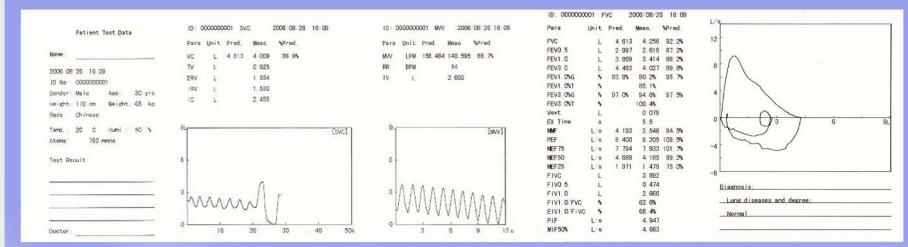
VC	Vital Capacity	MMF	The maximum mid-expiratory flow, same as MMEF
ERV	Expiratory Reserve Volume	PEF	Peak Expiratory Flow
IRV	Inspiratory Reserve Volume	MEF75	Maximum Expiratory Flow rate when 75% FVC remains, same as FEF25
TV	Tidal Volume	MEF50	Maximum Expiratory Flow rate when 50% FVC remains, same as FEF50
IC	Inspiratory Capacity	MEF25	Maximum Expiratory Flow rate when 25% FVC remains, same as FEF75
FVC	Forced Vital Capacity	FIVC	Forced Inspired Vital Capacity
FEV0.5	Forced Expiratory Volume in 0.5s	FIV0.5	0.5s Forced Inspired Volume
FEV1.0	Forced Expiratory Volume in 1s	FIV1.0	1s Forced Inspired Volume
FEV3.0	Forced Expiratory Volume in 3s	FIV1.0/FVC	Forced Inspired Volume in 1s/Forced Vital Capacity
FEV1.0%G	Forced Expiratory Volume in 1s/Forced Vital Capacity	FIV1.0/FIVC	Forced Inspired Volume in 1s/Forced Inspired Vital Capacity
FEV1.0%T	Forced Expiratory Volume in 1s/Vital Capacity	PIF	Peak Inspiratory Flow
FEV3.0%G	Forced Expiratory Volume in 3s/Forced Vital Capacity	MIF50%	Inspiratory Flow in 50% Inspired Vital Capacity
FEV3.0%T	Forced Expiratory Volume in 3s/Vital Capacity	MVV	Maximum Voluntary Ventilation
Vext	Volume of Expiration	RR	Respiratory rate per minute
EX Time	Expiratory Time	TV(MVV)	Tidal Volume in MVV measurement



## Features:

- Meet the ITS, NIOSH, ERS and DIAGNOSIS standard
- Multi-language display and measurement report
- With precision flow sensor, easy to clean and sterilize, long-term durability
- 4.5.7" 320×240 dots LCD, memory capacity 300 measurement records
- Built-in precise 110mm thermal printer
- Small size, light weight and easy to carry
- It can be connected to PC station through USB port, performing a pulmonary function test directly with PC station, also thousands of measurement records can be stored.
- PC workstation supports the measurement and post-bronchodilator test
- PC workstation supports multi-language display and report printing
- Support prediction equation for different races, including ITS, ECGR, KNUDSON, MORRIS / DOLGAR prediction equations.

## Print Report



High-precision differential pressure flow sensor

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