



# Astra<sup>★</sup>200™

## Multi-Functional Spirometry – Advanced. Accurate. Affordable.

The Astra200 is designed to provide a whole new level of sophistication to spirometry testing, giving you a wealth of choices in configuring your spirometer to meet your needs. Choose the comprehensive pre-set program or customize your Astra200 to calculate, display and print the data and graphics needed to assist in your diagnosis.



*From simple hand-held spirometry to interactive testing linked to your PC, the Astra200 provides multi-functional capability — in a surprisingly affordable package.*

**sdi**

DIAGNOSTICS

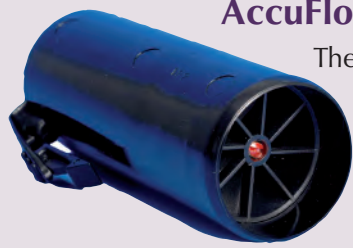
*The Spirometry Source*



## Astra200 Puts the Power of Multi-Functional Spirometry in Your Own Hands.

### Multi-Functional Capabilities

Whether calculating, displaying or printing, the Astra200 has been designed to offer multiple spirometry test functions, allowing you to decide the level of sophistication that you need for your lab or office. Offering diagnostic testing in a compact hand-held design, the Astra200 is ideal for pre- and post-drug spirometry as well as baseline testing for Exubera® patients.



### AccuFlo™ Digital Turbine

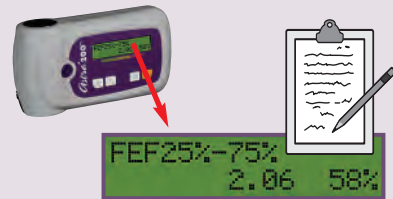
The Astra200 is engineered to use SDI's highly accurate AccuFlo bidirectional digital turbine. The AccuFlo, with its unique flow triggers, ensures patient comfort by allowing tidal breathing prior to the test. Its precision will provide consistent, accurate results even at the low flows often encountered in obstructed patients.

## Choose the test mode that serves your needs:

1

### True Portability: Mobile Mode

- Test patients in the field\*
- Read data directly from screen display
- Completely mobile; no external cable

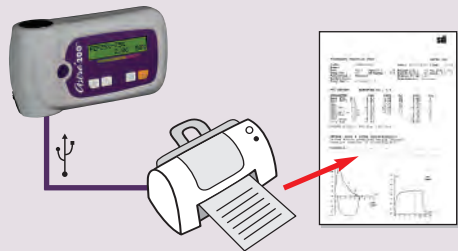


\*or in the office

2

### Direct-to-Printer: Print Mode

- Test patients in your office
- Connect Astra200 to your printer
- Print custom comprehensive reports



3

### Direct-to-PC: Download Mode

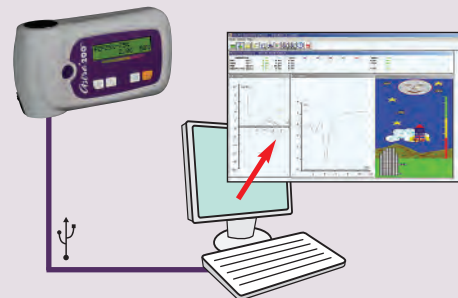
- Test patients in your office or lab
- Connect Astra200 to your PC
- Download test results to the patient's permanent record
- Print selected data from stored files



4

### Direct-to-PC: Interactive Mode

- Connect Astra200 to PC or laptop
- Test patients in your office or lab
- Observe test results in real time
- View comprehensive results or perform bronchoprovocation studies
- Save results to permanent records or print hard copies



EXUBERA® is a registered trademark of Pfizer, Inc., New York, NY.

# Astra200 Features

**Unique flow triggers**  
Allows tidal breathing for easier, more accurate testing

**Firmware upgrades at no charge**  
Keeps your instrument current

**Highly configurable program**  
Choice of custom or pre-set programs includes latest NLHEP guidelines

**Measures over 40 parameters of FVC, VC and MVV**

**Choice of 14 Predicted Sets**

**Internal temperature sensor**  
Automatic BTPS correction



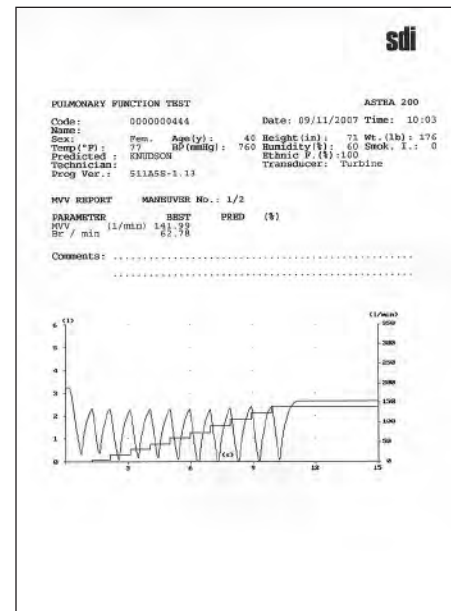
**Bright LCD display screen**  
Easy-to-read data, comments and interpretation

**Automated maneuver acceptability**  
Assures accurate results

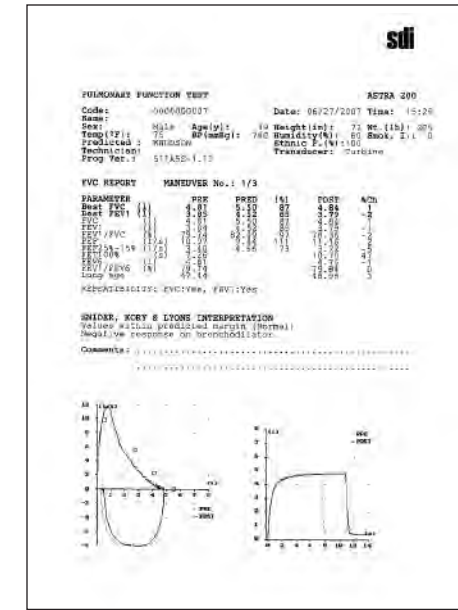


**Optional Bluetooth-to-PC**  
Speedy wireless communication

**Standard USB connection to PC and printer**  
Fast and easy direct communication



**Customizable reports**  
Print only the values and graphs you need



ENTER PIN  
Pin: 0000

To maximize security of patient data and prevent unauthorized use, a custom PIN code access is provided.

MAIN MENU  
4 Customize

A full range of format choices is available to allow you to customize your Astra200 to facilitate your testing and reporting needs.

REPEATABILITY  
FVC:Yes FEV1:Yes

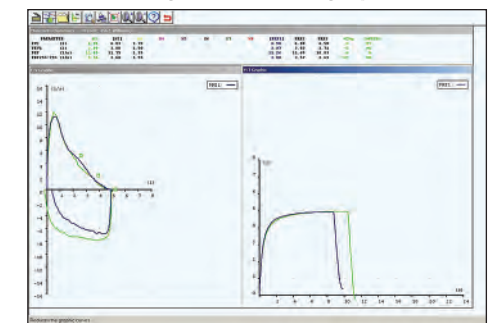
Astra200 follows all 2005 spirometry equipment guidelines outlined by the ERS/ATS.

FEV1/FEV6  
80.75 98%

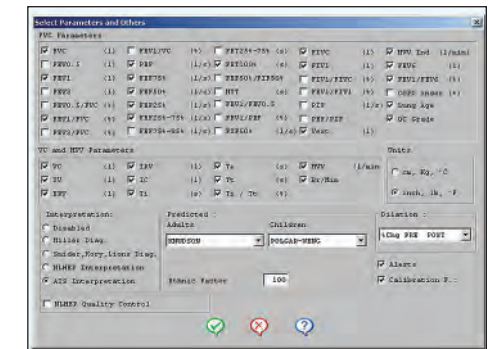
Measure and observe up to 40 parameters, including current NLHEP values.

### AstraPro™ Spirometry Software Included!

Enables interfacing with your EMR system and reporting, printing and downloading of data and graphics.



Perform real-time interactive testing onscreen, link with your EMR system, view pre- and post-drug data and graphs.



Configure parameters, graphs, incentives and reports.

# Astra200™ Spirometer

## Technical Specifications

### Forced Parameters Measured

Forced Vital Capacity: FVC, FEV<sub>.5</sub>, FEV<sub>1</sub>, FEV<sub>3</sub>, FEV<sub>6</sub>, FEV<sub>1</sub>/FVC, FEV<sub>1</sub>/FEV<sub>6</sub>, FEV<sub>.5</sub>/FVC, FEV<sub>3</sub>/FVC, PEF, FEF25, FEF50, FEF75, FEF25-75, FEF 75-85, FET, FEV<sub>1</sub>/FEV<sub>.5</sub>, FEV<sub>1</sub>/PEF, MIF50, FIVC, FIV<sub>1</sub>, FIV<sub>1</sub>/FVC, FEV<sub>1</sub>/FIV<sub>1</sub>, PIF, MTT, PEV/PIF, Lung Age

MVV: Br/min

### Relaxed Parameters Measured

VC: VC, TV, ERV, IRV, IC, Ti, Te, Tt, Ti/Tt

Maneuvers per patient: 5 total; best test and last test highlighted

Interpretation: Selectable – Kory, Miller, ATS, NLHEP (Ferguson)

Predicted sets: Selectable – 14 Total

Ethnic correction: Selectable – % Actual, Caucasian, Hispanic, AfroAmerican

Language: Selectable – English or Spanish

### Measurement Scale (BTPS)

Flow range: 0–16 L/sec

Volume: 0–10 L

Measurement method: Infrared Interruption via Digital Turbine

Dynamic flow resistance: <1.5 cm H<sub>2</sub>O/L/sec @ 14 L/sec

### Precision of Measurements (BTPS)

At highest volume: +/- 3% or 50 mL

At highest flow: +/- 5% or 150 mL

Time related precision: .5%

Volume resolution: <6 mL

Sampling frequency: 50 Hz

### Hardware Specifications

Storage capacity: >150 studies

Keyboard: 5 keys

Communication: USB to printer and PC, RS232

Optional: Bluetooth to PC

Dimensions: 5.75" x 3.25" x 4.0"

Power supply: 2 x 1.5 DC Alkaline or NiMH batteries

Weight: 9 oz (250 g)



**Free Carrying Case**  
High-impact plastic case keeps unit and accessories ready for mobile testing.

**Astra200 is compatible with printers using USB connection and PCL6 drivers.**



**AstraGuard PFT Filters**  
Designed exclusively for Astra Spirometers. Free starter pack of 10 filters included with every Astra200.



Cross-section of filter media shows placement of interior media. Edge of media is bonded to exterior housing to form a tight seal.



The filter media is tailored to fit inside every mouthpiece, providing an effective guard against cross-contamination.

Your dealer is:

**sdi**

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