



Astra³⁰⁰™

Intuitive Touchscreen Spirometry

The Astra300 puts the sophistication and simplicity of a touchscreen in the palm of your hand. Enter data, review patient results and send or print reports with precision and ease. Customize your Astra300's firmware to facilitate and expand your testing and reporting functions. Output test data to your PC with AstraPro Spirometry software to further enhance your testing capabilities.



Simply tap on the Astra300's sensitive touchscreen to make available a wealth of useful functions.

sdi

DIAGNOSTICS

The Spirometry Source



Astra300 Puts Sophisticated Simplicity in the Palm of Your Hand.

The Touchscreen Makes It Easy. SDI Makes It Accurate.

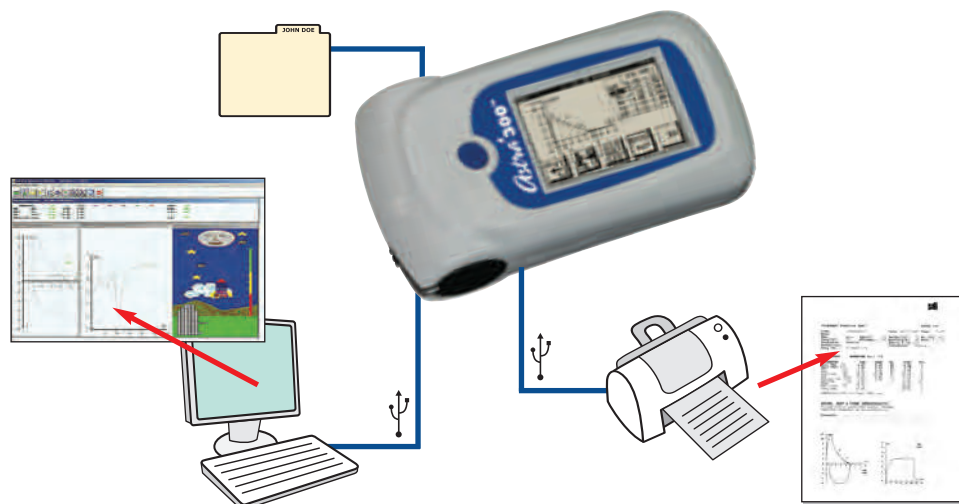
Easily report your choice of up to 40 spirometry test parameters, all measured accurately and precisely with the highly sophisticated Astra300 Spirometer. Using the bright and sensitive touchscreen, you can easily access multifunctional capabilities and view both graphic and tabular data. Entering patient data, patient testing and reporting couldn't be easier. Exporting test data to a printer or PC via USB is quickly accomplished with just a few stylus taps on the touchscreen. A Bluetooth-to-PC module is available as an option for truly wireless communication.

AccuFlo™ Digital Turbine



The AccuFlo bidirectional turbine with optoelectronic rotary sensor is easily detached for cleaning. Sapphire bearings ensure optimal performance for the life of the turbine. AccuFlo has a unique flow trigger algorithm that allows tidal breathing prior to the patient expiratory effort making the spirometry test easier for the patient and insuring quality test results.

Multifunctional Capability Allows You the Flexibility of Choosing the Testing Method.



Choose whatever testing configuration fits your needs best:

- Test patients in your office or lab, with a wide array of testing configurations.
- Observe test results in real time.
- Download test results to the patient's permanent record.
- Perform interactive real-time testing on your PC.
- Save results to permanent records or print hard copies of selected data.

Astra300 Features

Choice of 14 Predicted Sets

Large touchscreen display

Optional Bluetooth-to-PC
Speedy wireless communication



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

Automated maneuver acceptability
Assures accurate results

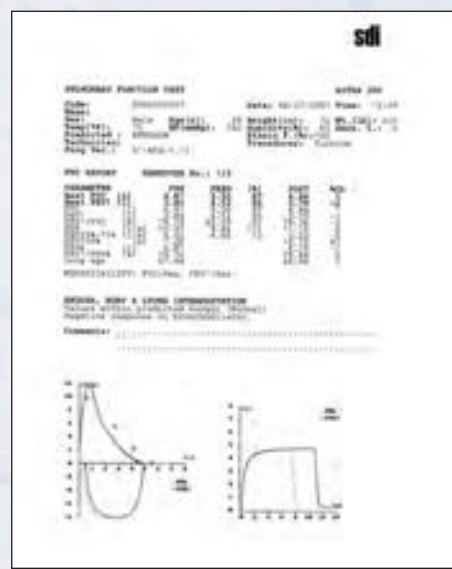
AstraPro spirometry software included

Measures over 40 parameters of FVC, VC and MVV

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

Optional Pulse Oximetry
Standard USB connection to PC and printer
Fast and easy direct communication

AccuFloDigital Turbine Transducer

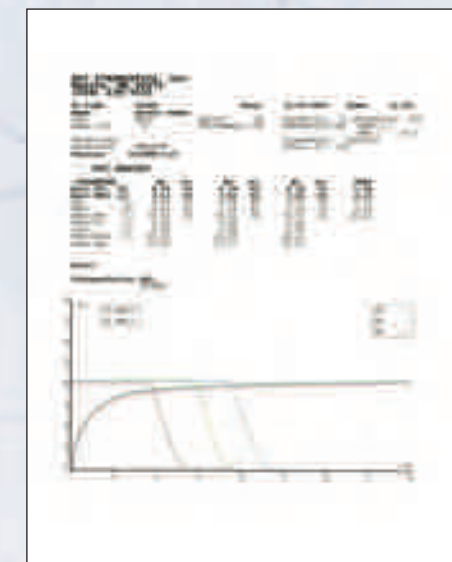
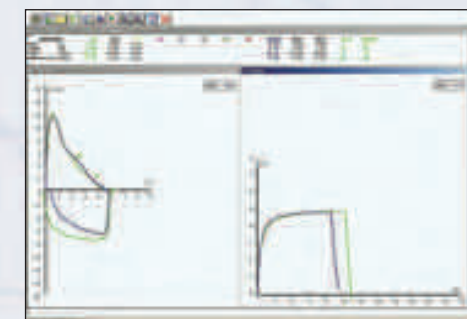


Comprehensive reporting
Configure your final reports to detail only the information you need to assist you in arriving at a diagnosis or an interpretation of the patient status.

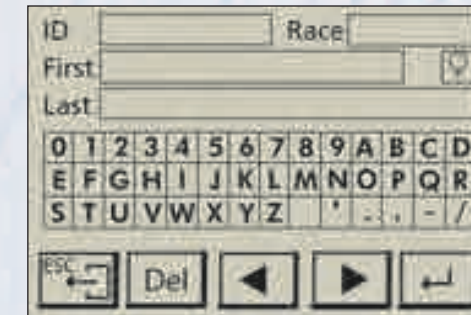
AstraPro™ Software Expands Astra300 Versatility

Sophisticated communication links allow patient test data transfer from the spirometer to PC archive or output to EHR. Perform real-time pre- and post-bronchodilator and bronchial challenge testing or utilize the incentive program with your pediatric patients.

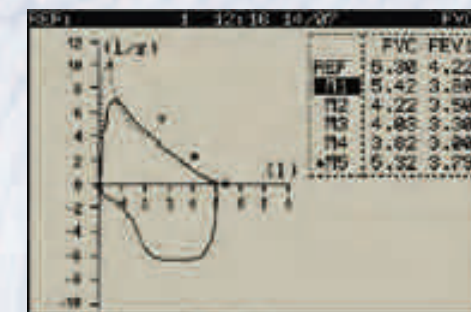
Astra300 communicates with your PC directly via USB or wirelessly via the optional Bluetooth module.



Optional Occupational Health Module
Meets all testing mandates of OSHA and SSA.



Patient information is easily entered as alphabetic or numeric data with just a few taps of the stylus.



View patient data easily on either the graphics screen or scroll through all chosen parameters on the report screen.



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



The optional SpO₂ module provides additional capability and links directly with your Astra300's RS232 interface.

Astra300™ Spirometer

Technical Specifications

Forced Parameters Measured

Forced Vital Capacity: FVC, FEV₁, RV₁, FEV₂, RV₂, FV₁, FVC₁, FV₂, FEV₁, FV₂, FV₃, FVC₁, FV₂, FV₃, FV₄, FVC₁, FV₂, FV₃, FV₄, FV₅, FV₆, FV₇, FV₈, FV₉, FV₁₀, FV₁₁, FV₁₂, FV₁₃, FV₁₄, FV₁₅, FV₁₆, FV₁₇, FV₁₈, FV₁₉, FV₂₀, FV₂₁, FV₂₂, FV₂₃, FV₂₄, FV₂₅, FV₂₆, FV₂₇, FV₂₈, FV₂₉, FV₃₀, FV₃₁, FV₃₂, FV₃₃, FV₃₄, FV₃₅, FV₃₆, FV₃₇, FV₃₈, FV₃₉, FV₄₀, FV₄₁, FV₄₂, FV₄₃, FV₄₄, FV₄₅, FV₄₆, FV₄₇, FV₄₈, FV₄₉, FV₅₀, FV₅₁, FV₅₂, FV₅₃, FV₅₄, FV₅₅, FV₅₆, FV₅₇, FV₅₈, FV₅₉, FV₆₀, FV₆₁, FV₆₂, FV₆₃, FV₆₄, FV₆₅, FV₆₆, FV₆₇, FV₆₈, FV₆₉, FV₇₀, FV₇₁, FV₇₂, FV₇₃, FV₇₄, FV₇₅, FV₇₆, FV₇₇, FV₇₈, FV₇₉, FV₈₀, FV₈₁, FV₈₂, FV₈₃, FV₈₄, FV₈₅, FV₈₆, FV₈₇, FV₈₈, FV₈₉, FV₉₀, FV₉₁, FV₉₂, FV₉₃, FV₉₄, FV₉₅, FV₉₆, FV₉₇, FV₉₈, FV₉₉, FV₁₀₀

MVC: B/min

Related Parameters Measured

VC: VC, RV, FRC, RV₁, RV₂, RV₃, RV₄, RV₅, RV₆, RV₇, RV₈, RV₉, RV₁₀

Measurements per patient: 5 - total test set and last test highlighted

Interpretation: Selectable - King, NIOSH, AOS, NIOSH (cong. and)

Profile and sets: Selectable - 10 total

Units correction: Selectable - % Actual, Caucasian, Hispanic, AfroAmerican

Language: Selectable - English or Spanish

Measurement Scale (BIPSI)

Flow range: 0-16 L/sec

Volume: 0-100 L

Measurement method: Improved interpolation via Digital Turbine

Dynamic flow resistance: <0.5 cmH₂O/Lsec @ 1.5 L/sec

Precision of Measurements (BIPSI)

At highest volume: ±0.3% or 30 mL

At highest flow: ±0.5% or 1.50 mL

Flow relative precision: ±0%

Volume resolution: 0.01 mL

Sampling frequency: 20 Hz

Hardware Specifications

Storage capacity: 1000+ study files store

Keyboard: Alphanumeric, LCD touch screen

Communications: USB to printer and PC, RS232

Optional Bluetooth v. 1.2

Dimensions: 5.75" x 3.37" x 4.0"

Power supply: 2 x 1.5 DC Alkaline or NiMH batteries

Weight: 9.6 oz (270 g)

Optional

• FDA mobile

• Flex Pulse Oximetry module and program

• NIOSH test cycle target mask

• 1/2 liter flow syringe

Astra300 is compatible with printers using USB connection and PC16 drivers.



Astraclear PE Filter
Designed to reduce the risk of embolism during testing. Available in 100 and 200 µm.



Flow Syringe
A 1/2 liter flow syringe used for calibration and testing.



PC Filter with 1/2 liter flow syringe
A 1/2 liter flow syringe used for calibration and testing.



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