

## CardioSoft Diagnostic System Spirometry

## Safe and efficient respiratory assessment

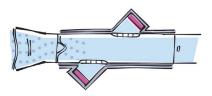
- Uniquely designed for CardioSoft™
   Diagnostic System, the EasyOne CS
   provides calibration-free spirometry
   testing, with increased patient safety
- Easy-to-use spirometer with patented digital ultrasonic flow measurement technology for fast, accurate and reliable operation
- Ultrasonic flow measurement is independent of gas composition pressure, temperature and humidity, and helps reduce errors due to these variables, supporting high-quality measurement
- Export best test or manually select best of three test curves to CardioSoft Diagnostic System, and EMRs. Data is also exportable in MicroSoft® Excel,® XML, HL7,® PDF, and GDT

- Single-patient-use spirette minimizes risk of cross-infection and improves hygiene for inspiratory and expiratory tests
- Spirette is ergonomically designed to fit both pediatrics and adults comfortably
- Efficient, cost effective operation through economical consumables and long battery life
- Meets current standards for respiratory assessments

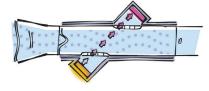


## Disposable Spirette Technology

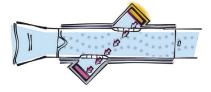
## **Ultrasonic Flow Measurement**



Transducers located on either side of the Spirette cavity emit and receive sound in alternating directions.



When gas flow is present in the tube, a pulse that travels against the flow is slowed down and takes a longer time to reach the opposite transducer.



Conversely, a pulse traveling with the flow is sped up and takes a shorter time to reach the opposite transducer.

CardioSoft Diagnostic System Spirometry provides the test modes and common reports for standard respiratory assessments.

Test modes	FVC, FVL, Slow VC, MVV, Pre/Post
Parameters	FVC, MVV, FEV6, FEV1, FEV1/FVC, FEV1/VC, FEV1/FEV6, MEF25 (FEF75), MEF50 (FEF50), MEF75 (FEF25), MEF25%-75%, PEF, FET, FIVC, PIF, IVC, ERV, IRV pre-post % variation, Lung Age
Size	83 x 158 x 43 mm (3.3 x 6.2 x 1.7 inches)
Weight	242 grams (8.6 ounces), with batteries
Measuring accuracy	
Volume	±2% or 0.050 l
Flow	±2% or 0.020 l/s, (except PEF)
PEF	±5% or 0.200 l/s
MVV	±5% or 5 l/min.
Measuring range	
Volume	±12
Flow	±16 l/s
Resistance	Below 0.3 cm H <sup>2</sup> O/L/s
Display	64 x 160 graphic display
Data entry	14-key keyboard
Data memory	For up to 700 tests, stored in EasyOne CS
Respiratory tube	Disposable spirette respiratory tube
Measurement principle	Ultrasound transit-time measurement
Adult predicted	NHANES-III, Knudson_83, Knudson_76, Crapo, Morris, ERS (ECCS/EGKS), Forche (Austria), Sapaldia (Switzerland), Roca (Spain), Berglund, Gulsvik, Hedenström, Gore, Cherniak (only for MVV)
Pediatric predicted	Dockery (Harvard), Hsu, Zapletal, Polgar, Hibbert
Power supply	
Power consumption	2 alkaline batteries, type AA, 1.5V typical 0.6 W
Storage	
Temperature	-20 to 50°C
Relative humidity	5% to 95%
Ambient pressure	500 to 1060 hPa
Operating conditions	
Temperature	0 to 40°C
Relative humidity	0% to 95%
Ambient pressure	500 to 1060 hPa
Meets standards	2005 ATS/ERS Standardization of Spirometry NLHEP Spirometry Review Process

Computer specifications	
Microprocessor	Minimum Pentium® 4 class processor with 2 GHz
RAM	Minimum 1 GB Windows® 7 Professional (32 bit); 2 GB Windows 7, Windows 8.1 (64 bit) or Windows 10 (64 bit)
Hard drive	Minimum 80 GB and 4 GB of free space if used as a standalone system
SW installation	DVD-ROM drive
Pointer	Mouse
Graphics adapter	Minimum: SVGA 1024 x 768 Recommended: SXGA 1280 x 1024
Interfaces	Minimum: 2 USB ports (1.1, 2.0, or 3.0) for each device using this type of interface, CD-RW, SD card, network interface card (recommended), Serial RS232 for each device using this interface type
Operating system	Windows 7 Professional (32 bit) with SP1
	Windows 7 Professional (64 bit) with SP2
	Window 8.1 Pro (64 bit)
	Windows 8.1 Enterprise (64 bit)
	Windows 10 Professional (64 bit)
Printer	Equivalent to HP® P3015dn (Customer Supplied
Additional software for export functionality	Microsoft® Word and Excel® (optional)
Networking LAN	Wireless: 802.11 G, N (optional)
	TCP/IP interface

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