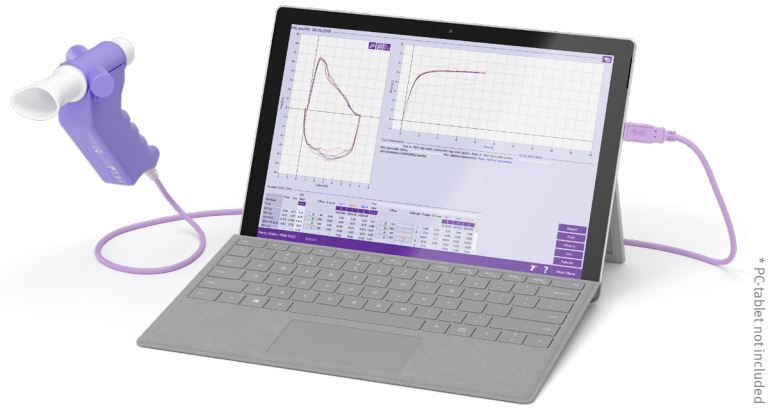


Easy on-PC

Modern PC-based spirometer offering maximum functionality and value



* PC/cables not included

Spirometry (FVC, FVL, SVC, MVV, Provocation)

The proven ultrasound technology
NDD TrueFlow

**no calibration, no warm-up
time, no moving parts**

Real time curves and pediatric incentives

Intuitive PC-based solution

Automated user guidance throughout maneuvers based on ATS/
ERS standards 2019 and 2005

Reproducible results ensure comparability in multicenter studies

Immediate test quality feedback in accordance with
ATS/ERS criteria

Z-score, LLN and %predicted for fast interpretation of results

Export of pdf files and raw data

Flexible HL7 and XML interface for easy EMR integration

Absolute hygienic solution with Spirette consumable eliminates
the risk of cross-contamination

Customizable reports

Powerful data-management



The original ultrasonic flow measurement is highly accurate in all flow ranges, independent of gas composition, pressure, temperature and humidity and does not require calibration during its life-time. The sensor is never in direct contact with the patient's flow. NDD TrueFlow is a hygienic and resistance-free solution.

Standards & Recommendations

Quality, Medical Devices & Electrical	ISO 13485, ISO 14971, IEC 62366, IEC 62304, ISO 26782, ISO 23747, IEC 60601-1, IEC 60601-2, ISO 10993-1
FDA	510(k) market clearance
MDD 93/42/EEC	CE marked
Associations & Institutes	ATS/ERS 2019 and 2005, NIOSH/OSHA, SSA Disability

Languages

English, Brazilian Portuguese, Chinese, Croatian, Danish, Dutch, Finnish, French, German, Italian, Japanese, Norwegian, Portuguese, Russian, Spanish, Swedish, Turkish, Vietnamese

Technical

Printing options	direct to printer or over network
Data management	EasyOne Connect (SQLite, MS SQL Server)
Interface	HL7, XML, GDT
No. of tests	> 10'000 tests
Age range	Spirometry > 4 years
Device classification	Type BF applied part
Operating conditions	Temp 0 - 40 °C/32 - 104 °F Rel. Humidity 5 - 95 % Atmosph. Pressure 620 - 1060 hPa

Requirements PC/ Laptop

Hard disk capacity	Installation/ system 1 GB Data up to 4 GB
RAM	2 GB
Operating system	Windows 7, Windows 8 and 8.1 (32 and 64 Bit), Windows 10 (32 and 64 Bit)

Parameters

FVC	ATI, BEV, EOTV, FEF10, FEF25, FEF2575, FEF2575_6, FEF40, FEF50, FEF50/FVC, FEF50/VCmax, FEF60, FEF75, FEF75-85, FEF80, FET, FET25-75, FEV.25, FEV.5, FEV.5/FVC, FEV.75, FEV.75/FEV6, FEV.75/FVC, FEV.75/VCmax, FEV1, FEV1/FEV6, FEV1/FVC, FEV1/FVC6, FEV1/VC, FEV1/VCmax, FEV3/FVC, FEV3/VCmax, FEV3, FEV6, FVC, MEF20, MEF25, MEF40, MEF50, MEF60, MEF75, MEF90, MMEF, MTC1, MTC2, MTC3, MTCR, PEF, PEFT, t0, VC, VCmax
FVL	ATI, BEV, CVI, E50/150, EOTV, FEF10, FEF25, FEF2575, FEF2575_6, FEF40, FEF50, FEF50/FVC, FEF50/VCmax, FEF60, FEF75, FEF75-85, FEF80, FET, FET25-75, FEV.25, FEV.5, FEV.5/FVC, FEV.75, FEV.75/FEV6, FEV.75/FVC, FEV.75/VCmax, FEV1, FEV1/FEV6, FEV1/FIV1, FEV1/FIVC, FEV1/FVC, FEV1/VC, FEV1/VCmax, FEV3/FVC, FEV3/VCmax, FEV3, FEV6, FIF25, FIF2575, FIF50, FIF50/FEF50, FIF75, FIV.25, FIV.5, FIV1, FIVC, FVC, MEF20, MEF25, MEF40, MEF50, MEF60, MEF75, MEF90, MIF25, MIF50, MIF75, MMEF, MMIF, MTC1, MTC2, MTC3, MTCR, PEF, PEFT, PIF, t0, VC, VCmax
SVC	ERV, IC, IRV, Rf, VC, VCex, VCin, VCmax, VT
MVV	MVV, MVV6, MVVtime, Rf, VCext, VT

Predicted normal values Spirometry

GLI	Quanjer 2012, Stanojevic 2009
North America	Crapo 1981, Dockery (Harvard) 1993, Eigen 2001, Gutierrez (Canada) 2004, Hsu 1979, Knudson 1983, Knudson 1976, Morris 1971 & 1976, NHANES III (Hankinson) 1999, Polgar 1971
Latin America	Chile 2010, Chile (Pediatrics) 1997, Pereira 1992, Pereira 2006/2008, Pérez-Padilla (PLATINO) 2006, Pérez-Padilla (Mexico) 2001, Pérez-Padilla (Mexico, Pediatrics) 2003
Europe	ERS (ECCS, EGKS, Quanjer) 1993, Garcia-Rio (SEPAR) 2013, Falaschetti 2004, Forche (Austria) 1988 & 1994, Klement (Russia) 1986, Roca (Spain, SEPAR) 1982, Rosenthal 1993, Sapaldia (Switzerland) 1996, Viložni 2005, Zapletal 1977, Zapletal 2003
Europe Scandinavia	Berglund Birath (Sweden) 1963, Finnish 1982 (1998), Gulsvik (Norway) 1985, Hedenström 1985 & 1986, Langhammer (Norway) 2001, Kainu (Finland), 2016, Nystad 2002
Australia	Gore Crockett 1995, Hibbert 1989
Asia	Chhabra (India) 2014, Dejsomritrutai (Thailand) 2000, Indonesia 1992, IP (China, HongKong) 2000 & 2006, JRS 2001 & 2014
Africa	Mengesha (Ethiopia), 1985

Flow/Volume Sensor

Type	Ultrasonic transit time
Flow Range	± 16 l/s
Flow Resolution	4 ml/s
Flow Accuracy (except PEF)	± 2% or 0.020 l/s
Volume Resolution	1 ml
Volume Accuracy	± 2% or 0.050 l
PEF Accuracy	± 5% or 0.200 l/s
MVV Accuracy	± 5% or 5 l/min
Resistance	~ 0.3 cm H ₂ O/l/s at 16 l/s
Sample Rate	400 Hz

Order Information

Part Number	Product
2700-3	Easy on-PC System Includes: Spirometry sensor and EasyOne Connect software

Accessories

Part Number	Product
2050-1	Case of 50 Spirette mouthpieces
2050-5	Case of 200 Spirette mouthpieces
2050-10	Case of 500 Spirette mouthpieces
2030-2	NDD Calibration syringe 3L with Spirette Cal Check Adapter