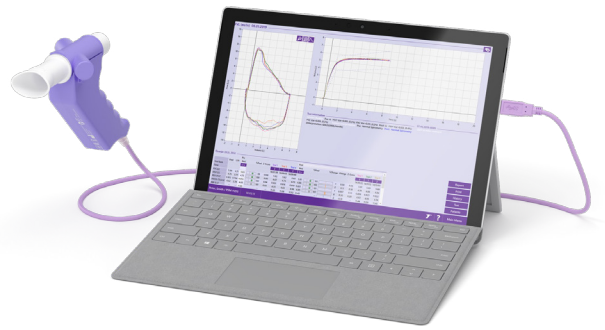
Medical Technologies

Inspiring innovation. Every day.

Easy on-PC

Modern PC-based spirometer offering maximum functionality and value



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

The proven ultrasound technology **ndd TrueFlow**

- calibration-free
- no warm-up time
- no moving parts

Real-time animated incentives

Proven integration with top EMR/EHR systems

Long-term trending of results

Automated quality feedback and interpretation

Intuitive software interface

Integrated provocation test with customizable protocols

Wide range of selectable predicted values

Calibration-free technology

TrueFlow *makes the difference*

ndd's unique ultrasonic flow measurement is highly accurate in all flow ranges, independent of gas composition, pressure, temperature and humidity.

ndd **TrueFlow** is a resistance-free solution that does not require calibration during its lifetime.

Standards & Recommendations

Quality, electrical, medical devices	IEC 60601-1, IEC 60601-1-2, IEC 62304, IEC 62366, ISO 13485, ISO 14971, ISO 26782, ISO 23747
FDA	510(k) market clearance
MDR (EU) 2017/745	CE-marked
Standards & institutes	ATS/ERS 2005 spirometry standard, ATS/ERS 2019 spirometry standard, ATS/ERS 2022 interpretation strategies, NIOSH, OSHA, SSA Disability

Languages – User Interface

Chinese, Croatian, Danish, Dutch, English, Finnish, French, French (Canada), German, Italian, Japanese, Norwegian, Portuguese, Portuguese (Brazil), Russian, Spanish, Swedish, Turkish, Vietnamese

Technical Specifications

Printing Options	Direct to printer or via network
Data management	EasyOne Connect (SQLite, MS SQL Server)
Export/EMR	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 5-90 % Atmosph. pressure 620-1060 hPA

Requirements for PC

Hard disk capacity	Installation/system 1 GB Data up to 4 GB
RAM	2 GB
Operating systems	Microsoft Windows 7, Microsoft Windows 8 and 8.1 (32 bit and 64 bit), Microsoft Windows 10 (32 bit and 64 bit), Microsoft Windows 11

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Parameters

FVC	ATI, BEV, EOTV, FEF10, FEF25, FEF25-75, FEF25-75_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, FEV1Q, 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/I50, EOTV, FEF10, FEF25, FEF25-75, FEF25-75_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, FEV1Q, FEV3, FEV6, FIF25, FIF 25-75, 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, MVV_6, MVVtime, Rf, VCext, VT

Predicted Normal Values – Spirometry

GLI	Stanojevic 2009, Quanjer 2012, Bowerman 2023 (Global GLI)
North America	NHANES III (Hankinson) 1999, Knudson 1983, Knudson 1976, Crapo 1981, Morris 1971 & 1976, Hsu 1979, Dockery (Harvard) 1993, Dockery (Harvard) 1993, Polgar 1971, Gutierrez (Canada) 2004, Eigen 2001, Cherniak 1972
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, Vilozni 2005, Zapletal 1977, Zapletal 2003
Europe Scandinavia	Hedenström (Sweden) 1985/1986, Gulsvik (Norway) 1985, Berglund Birath (Sweden) 1963, Langhammer (Norway) 2001, Finnish 1982/1998, Nystad 2002, Koillinen 1998, 2001, Kainu (Finland) 2016
Australia	Hibbert 1989, Gore Crockett 1995
Asia	Chhabra (India) 2014, Dejsomritrutai (Thailand) 2000, (Indonesia) 1992, IP (China, HongKong) 2000 & 2006, JRS 2001 & 2014
Africa	Mengesha (Ethiopia) 1985

Flow/Volume Sensor

Measurement principle	Ultrasonic transit-time
Measuring range	±16 l/s
Flow resolution	4 ml/s
Flow accuracy (except PEF)	±2.5% or 0.020 l/s
PEF accuracy	±5% or 0.200 l/s
Volume accuracy	±2.5% or 0.050 l
MVV accuracy	±5% or 5 l/min
Resistance	~ 0.3 cm H_2O/l/s at 16 l/s
Sample rate	400 Hz

Order Information

Order number	Product
2700-3	Easy on-PC System

Accessories

Order number	Product
2050-1	Spirette standard box of 50 pcs.
2050-5	Spirette standard box of 200 pcs.
2050-10	Spirette standard box of 500 pcs. Not available in all countries
2030-2	ndd 3-liter calibration syringe with Spirette Cal Check Adapter