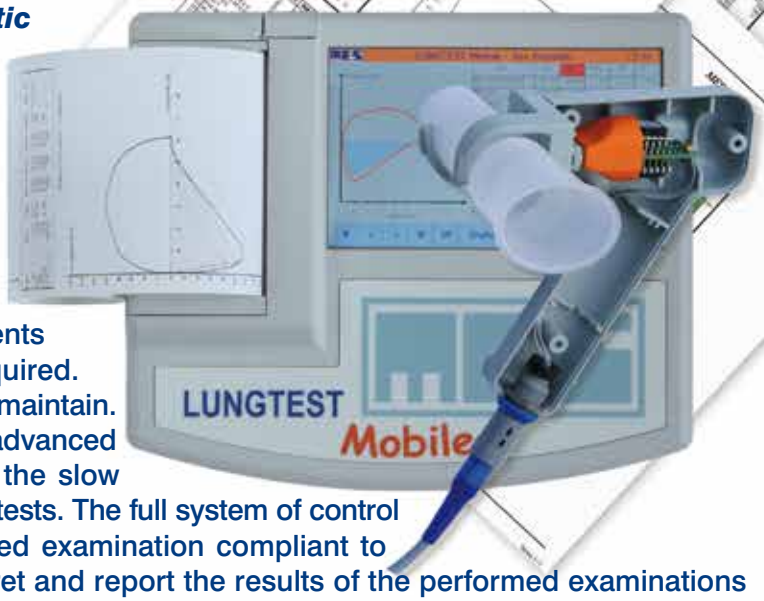
Spirometer CE 1011
LUNGTEST Mobile

Lungtest Mobile is a small portable diagnostic spirometer with built-in thermal printer. The spirometer has a big and wide angle high resolution colour touch-screen. A built-in very fast and quiet thermal printer provides results reports.



A spirometer contains a built-in specialized computer for performing tests and developing results and an accurate measurement unit. A patented replaceable pneumotach headpieces protect patients against infections and bacterial filters are not required. Lungtest Mobile spirometer is easy to use and to maintain. High measurement accuracy and technologically advanced software allow to perform with Lungtest Mobile the slow spirometry, forced flow-volume and a few optional tests. The full system of control over the correctness and quality of the performed examination compliant to ATS/ERS standards, and the possibility to interpret and report the results of the performed examinations put the Lungtest Mobile spirometer on a par with the specialised diagnostic spirometric systems.

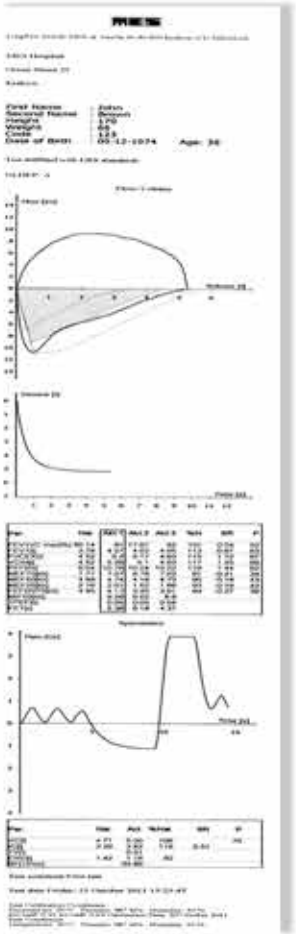
Air tubes eliminated thanks to headpiece digitizing

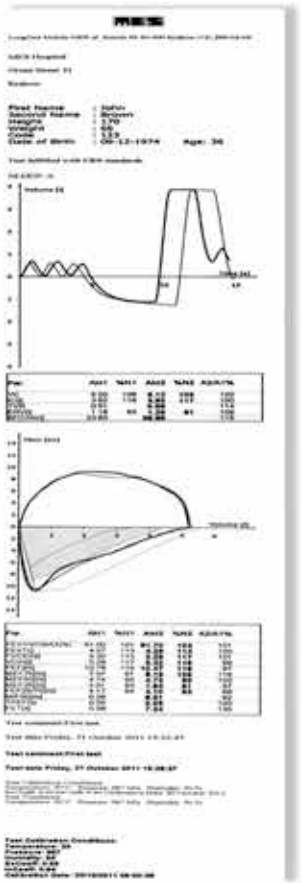
We have brought to effect the main change of flow transforming in our devices. We have developed and registrated in Patent's Office our new invention which enable to eliminate air tubes and a flow signal from our pneumotachpgraph MES DV 40 is changed to a digital form next to pneumotachograph and sent by cable (or Bluetooth in the future) to a main unit. We can say that we produce digital pneumotachograph now.

Basic advantages and possibilities of the Lungtest Mobile spirometer:

- replaceable measurement heads – with no anti-bacterial filters – completely protect the examined patient from the infection of the respiratory tract
- flow converted to a digital form close to headpiece
- automatic control over the correctness of the examination performance according to ATS/ERS standards with additional comments
- automatic assessment of the quality of the correctly performed examination in the A-F scale
- automatic assessment of the diastolic test according to ERS with text commentary
- possibility to turn on the automatic diagnosis system
- possibility to present the slow spirometry and the flow-volume curve
- high definition colour touch-screen 7 inches
- air tubes eliminated
- graphical and numerical demonstration of the results comparison for 30 recorded test maximum
- big screen icon driven interface easy operated by finger
- comparison of the results with predicted values
- ergonomic patented handle of the replaceable measurement head
- latest versions of software included in the price of the spirometer.
- very large 1000 patients database with quick searching
- possibility to calculate standard deviations and percentile of the predicted values
- possibility to control the spirometer calibration by the user with the use of a 3l syringe
- direct connection to external printers
- possibility to edit one's own report from the examination
- possibility to transmit results of tests to PC computer in order to create own reports
- very fast and quiet printer
- small weight
- two USB ports

Spirometer LUNGTEST Mobile





MES has certificate ISO 13485

PATIENT'S DATA
The spirometer allows to introduce the following patient's data:
first name, last name, patientís code, date of birth, height, weight, sex.

PREDICTED VALUES
Usually the due values are calculated according to ERS but the Lungtest Mobile software contains actually several authors including GLI, NHANES III, Kuster, Falaschetti etc.

EXAMINATIONS PERFORMED BY THE SPIROMETER
Slow spirometry VC, IC, ERV, TV, BF.
Flow-volume curve FEV 1, FVC EX, PEF, MEF 75, MEF 50, MEF 25, FEF25/75, TPEF, FET, MIF 50, BEV, FEV1/VC MAX, VC IN
and
FEV0.5, FEV0.75, FEV1, FEV2, FEV3, FEV6, FVC EX, PEF, MEF75, MEF50, MEF25, MEF@FRC, FEF75/85, FEF25/75, FEF 0.2-1.2, VPEF, TPEF, FET, TPEF%FET, MEF50% FVC EX, FEV1% FVC EX, FEV1% VC, FEV1/PEF, VCmax, FEV1% VCmax, FEV1% FEV3, FEV1% FEV6, BEV, BEV%FVCex, TC25/50, MTT, AEX, FVC IN, FIV1, PIF, MIF50, FIT, TPIF, VPIF, TPIF%FIT, FEV1% FVC IN, MEF50/MIF50, PEF/PIF, FEV1/FIV1, FET%FIT, TTOT (on a print raport).

MAXIMAL MINUTE VENTILATION MVV, BF, BR

PRE/ POST BRONCHODILATATION
When a test is repeated after intake of the medicine, results of the second test are related to the results of the test preceding the medicine intake. Each initial test is marked as PRE and the test following the medicine intake is marked as POST to facilitate interpretation of the recorded results. The software allows automatic evaluation of a diastolic test consistent with ERS/ATS standards.

ADDITIONAL OPTIONS
Electronic weather station module - for ATP/BTPS correction.

DATA BASE Patient data are stored in the database, providing the flexibility to access, manipulate and report data in multiple ways, as well as transmitting the results to external programs.

PRINTOUTS Lungtest Mobile allows printing of the results and comparisons of results on a built-in thermal printer and on an external black and white printer.

TECHNICAL PARAMETERS:

HEADPIECE	**MES TYPE DV 40**
Dead space	38 ml
Resistance	< 0,9 $cmH_2O/l/s$ at 14 l/s
Flow range	+/- 20 l/s
Flow measurement accuracy	< 2 %
Flow resolution	1 ml/s
Volume range	+/- 10 l
Volume measurement accuracy	< 2 %
Volume measurement resolution	10 ml

High resolution colour touch-screen	LCD 800x480 dot, 7" size
Internal thermal printer	112mm paper's width
External port	2 x USB
Dimensions	220x250x52mm
Weight	0,9 kg
Power supply	230 V ±10%, 50 Hz, 20 VA

Rechargeable battery internal pack (*option*)

ADVANTAGES OF OUR DIGITIZING HEADPIECE:

- air tubes for flow measurement not necessary
- parameters do not change in the course of a test
- headpiece cable conneced with main unit
- pre-test calibration is not required
- high accuracy and resolution
- sterile for each patient
- easily sterilizable
- no moving elements
- small dead space
- low flow resistance
- no heating system

PATENT NR: 173767

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