CITREX™

«The compact and mobile
testing device for ventilators.»

imtmedical

Developed for mobile use

simple. compact. reliable.

Simple operation
CITREX is simple and intuitive to operate. The colour screen offers excellent readability and can be adapted to any situation due to its flip-screen function.

Bidirectional flow measurement
The newly developed measuring method allows extremely precise, bidirectional flow measurement with low measuring resistance.

Respiratory parameters
All the relevant respiratory parameters are measured and calculated.

Real-time graphs
The devices measures flow, volume, four pressures, temperature and oxygen concentration.

Gas standards and gas types
13 gas standards and 7 gas types can be measured so as to meet a range of measuring requirements.

Memory function
It is simple to save measurements on the device and export them to external data media for subsequent analysis.

Interfaces
Due to the numerous interfaces, the device is ideal for networking, remote control and configuration.

A compact device with everything you need
CITREX is especially impressive due to its size, low weight and robustness. All required components are integrated and the battery enables prolonged independent use.

Options and accessories

The device is shipped with all important parts for immediate use in the field. There are also a number of accessories and options which can be purchased separately.

Transport bag (optional)
The transport bag is made of high-quality materials and is big enough to securely hold and transport the device along with all accessories. There is also space for optional accessories such as test lungs and the adapter set.

Price includes:

- CITREX H4 device
- High-performance battery
- Universal power plug
- USB cable
- Micro SD memory card
- Protection filter
- Quick-start guide
- Data CD

Adapter-Set (optional)
The adapters contained in the set allow connection of virtually any test object to the CITREX device. Minimum dead space and very slight differences in the diameter of the flow stream help increase measurement accuracy.

Oxygen measurement (optional)
Fast and precise measurement of oxygen concentration is an important function when verifying and calibrating ventilators. This option is available for new devices or can be acquired subsequently as a retrofit set.

Technical Specifications

Flow and Pressure Measurements	Range	Accuracy
Flow	± 300 L/min	± 1.9 %* or ± 0.1 L/min**
Temperature compensated	yes	
Pressure compensated	yes	
Pressure		
High	0 .. 10 bar	± 1 %* or ± 10 mbar**
Differential	± 200 mbar	± 0.75 %* or ± 0.1 mbar**
Flow channel	-50 .. 150 mbar	± 0.75 %* or ± 0.1 mbar**
Barometer	500 .. 1150 mbar	± 1 %* or ± 5 mbar**
Units		
Flow	L/min, L/s, cfm, mL/min, mL/s	
Pressure	bar, mbar, cmH_2O, inH_2O, Torr, inHg, hPa, kPa, mmHg, PSI	

Other Measurements	Range	Accuracy
Oxygen, pressure compensated	0 .. 100 %	± 1 % O_2**
Gas temperature	0 .. 50 °C	± 1.75 %* or ± 0.5 °C**
Gas types	Air, Air/O_2, N_2O/O_2, Heliox (21 % O_2), He/O_2, N_2, CO_2	
Gas standards	ATP, ATPD, ATPS, AP21, STP, STPH, BTPS, BTPD, 0/1013, 20/981, 15/1013, 25/991, 20/1013	

Ventilation Parameters		Range	Accuracy
Breath rate		1..1000 bpm	±1 bpm or ± 2.5 %**
Time	Ti,Te	0.05 .. 60 s	± 0.02 s
Ratio	I:E	1:300 .. 300:1	± 2.5 %*
	Ti/Ttotal	0 .. 100 %	± 5 %*
Volume	VTi, Vte	± 10 L	± 2 %* or ± 20 mL**
Minute volume	Vi, Ve	0 .. 300 L/min	± 2.5 %*
Peak flow	Insp. / Exp.	± 300 L/min	± 1.9 %* or ± 0.1 L/min**
Pressure	Ppeak, Pmean, PEEP, Pplateau	0 .. 150 mbar	± 0.75 %* or ± 0.1 mbar**
Compliance	Cstat	0 .. 1000 mL/mbar	± 3 %* or ± 1 mL/mbar**
Volume trigger	Adult, Pediatric, HFO	flow or pressure at preset and at adjustable levels	

General Information	
Color display	yes
Realtime curves	flow, pressure, volume
Interface	RS-232, USB, Ethernet, CAN, Analog Out, TTL
Power	90 .. 260 VAC
Battery	4 hours
Dimension (w x d x h)	11.4 x 6 x 7 cm
Weight	0.4 kg
Calibration	Annually
Memory card	yes
Approvals	CE

Legend The greater tolerance is valid: * Tolerance related to the measured value ** Absolute tolerance

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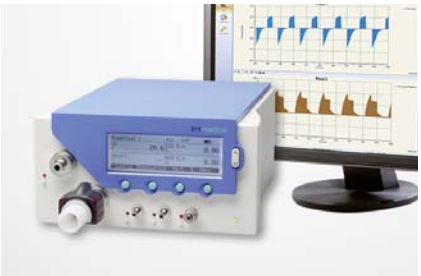
The perfect device for every application

For a several years, now, imtmedical has been the market leader and most important supplier of testing and calibration solutions for ventilators and anaesthesia devices. Developers appreciate the reliability and accuracy of the devices, as do service technicians and quality specialists.

The compact class for mobile use
CITREX was designed for mobile use and meets all the requirements of day-to-day field operations. Reliable, compact and mobile.

- Verification and calibration of ventilators (hospital and homecare)
- Use in production plants



The market leader in the lab and development category
The three models of the FlowAnalyser are put to use wherever high-precision measurement of pressure, flow and volume is required. Measurements can be subjected to detailed analysis using FlowLab software.

- Lab, research and development
- Calibration of ventilators
- Anaesthesia gas measurement
- Verification of spirometers and oxygen concentrators

...and just the right test lung, too
The various imtmedical test lung models cover every conceivable purpose.

- Calibration of ventilators and anaesthetic equipment
- Quick daily check of various devices
- Instruction courses and training programs
- Research and development

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MADE IN SWITZERLAND

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