# CITREX H5

Technical specification

analyser
the art of measuring

The ideal all-in-one testing device for biomedical engineers, independent service organisations, anaesthesia device and ventilator manufacturers.

CITREX H5 is the gas flow and pressure measurement instrument with the most advanced user interface. It's portable, accurate and enables users to individually configure their measuring screens.

The new CITREX H5 is designed to meet a wide variety of day-to-day applications. Its precise and highly reliable capabilities allow it to analyse the performance of different medical devices such as ventilators and anaesthesia machines or oxygen flow meters, pressure gauges and suction devices.

**Features:**

- Big 4.3" multi-touch display with 800 × 480 pixels
- Intuitive graphical user interface
- Extended profile capabilities
- Flow and pressure trigger settings
- Up to 17 gas standards and up to 26 respiratory parameters
- On-screen measurement, realtime parameter reading
- Statistics evaluations


*« The ideal all-in-one mobile testing device for all ventilators. »*

## Technical specification CITREX H5


| Flow and pressure measurements | | Range | Accuracy |
|---|---|---|---|
| Flow | Measuring direction | Bidirectional | |
| | Temperature compensated | Automatic | |
| | Pressure compensated | Automatic | |
| | Humidity compensated | Manually | |
| | High Flow | ± 300 L/min | ± 1.9 %* or ± 0.1 L/min (for 10..40°C)** |
| Pressure | High Pressure ($P_{High}$) | -1 – 10 bar | ±1%* or ±7mbar** |
| | Differential Pressure ($P_{Diff}$) | ± 200 mbar | ± 0.75 %* or ± 0.1 mbar** |
| | Pressure in High Flow Channel ($P_{Channel}$) | -50 – 150 mbar | ± 0.75 %* or ± 0.1 mbar** |
| | Atmospheric Pressure ($P_{Atmo}$) | 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 | Concentration | 0 – 100 % | ± 1 % $O_2$** |
| | Pressure compensated | ≤ 150 mbar | |
| Temperature | In High Flow Channel | 0 – 50 °C | ± 1.75 %* or ± 0.5 °C** |
| $CO_2$ | Concentration (with optional OR-703) | 0 – 15 vol% | ± (0.2 vol% + 2 % of reading) |
| | | 15 – 25 vol% | unspecified |
| $N_2O$ | Concentration (with optional OR-703) | 0 – 100 vol% | ± (2 % vol% + 2 % of reading) |
| HAL, ISO, ENF | Concentration (with optional OR-703) | 0 – 8 vol% | ± (0.15 vol% + 5 % of reading) |
| | | 8 – 25 vol% | unspecified |
| SEV | Concentration (with optional OR-703) | 0 – 10 vol% | ± (0.15 vol% + 5 % of reading) |
| | | 10 – 25 vol% | unspecified |
| DES | Concentration (with optional OR-703) | 0 – 22 vol% | ± (0.15 vol% + 5 % of reading) |
| | | 22 – 25 vol% | unspecified |
| Gas types | | Air, $O_2$, Air/$O_2$, $N_2O$, $N_2O/O_2$, He/$O_2$, $N_2$, $CO_2$ | |
| Gas standards | | ATP, ATPD, ATPS, AP21, STP, STPH, BTPS, BTPS-A, BTPD, BTPD-A, 0/1013, 20/981, 15/1013, 25/991, 20/1013, NTPD, NTPS | |

| Ventilation parameters | | Range | Accuracy |
|---|---|---|---|
| Breath rate | Rate | 1 – 1000 bpm | ± 1 bpm* or ± 2.5 %** |
| Time | $T_i$, $T_e$ | 0.05 – 60 s | ± 0.02 s |
| Ratio | I:E | 1:300 – 300:1 | ± 2.5 %* |
| | $T_i/T_{cyc}$ | 0 – 100 % | ± 5 %* |
| Breath volumes | V | | ± 2 %* or ± 0.20 mL (> 6 sL/min)** |
| | Vti, Vte | ± 10 L | ± 2 %* or ± 0.20 mL (> 6 sL/min)** |
| Minute volume | Vi, Ve | 0 – 300 sL/min | ± 2.5 %* |
| Pressure | $P_{Peak}$, $P_{Mean}$, PEEP, $P_{Plateau}$, IPAP | 0 – 150 mbar | ± 0.75 %* or ± 0.1 mbar** |
| Peakflow | $PF_{Insp}$, $PF_{Exp}$ | ± 300 sL/min | ± 1.9 %* or ± 0.1 sL/min** |
| Compliance | $C_{Stat}$ | 0 – 1000 mL/mbar | ± 3 %* or ± 1 mL/mbar** |
| Trigger | Adult, Pediatric, HFO, ext. Trigger | Adult, Pediatric, HFO; Adjustable on flow or pressure curves with user-defined limits. | |

| General information | |
|---|---|
| Power | 100 – 240 VAC, 50/60 Hz |
| Battery | 5 hours |
| Power consumption | 2.5 – 6 W |
| Weight | 0.52 kg |
| Dimensions (w × d × h) | 11.4 × 7 × 7.3 cm |
| Data storage | Internal and microSD Card |
| Display | 4.3" Multi-Touch (color), Realtime curves |
| Interfaces | RS-232, USB, Ethernet, CAN, Analog Out, TTL, WLAN, TSI4000 and Prima Protocol |
| Calibration | Annually |
| Conditions Ambient temperature | 15 – 40 °C (59 – 104°F) |
| Conditions Humidity | 10 – 90 % R.H.*** |
| Approvals | CE, BC (Energy Efficiency for Battery Charging Systems), CSA (North America), IEC 61010-1:2010, IEC 61326-2:2012 |

The greater tolerance is valid:
*Tolerance related to the measured value, ** Absolute tolerance, *** The unit sL/min is based on ambient conditions of 0 °C and 1013.25 mbar (DIN 1343).

IMT Analytics

IMT Analytics AG . Gewerbestrasse 8 . 9470 Buchs . Switzerland
T +41 81 750 67 10 . www.imtanalytics.com

304.530.000_04, 2021-02 Subject to changes without notice.