

# CARDIOVIT AT-104 PC Ergo-Spirometry

Perfect Ergo-Spirometry



**SCHILLER**

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The Art of Diagnostics

## Multi-tasking performance



### Multiple use – multiple benefits

The CARDIOVIT AT-104 PC ECG Recorder and Workstation has been completed by high-performance Ergo-Spirometry analysis functions.

This multi-functional diagnostic workstation is now unifying all major cardio-pulmonary functions within one single device, with an excellent price/performance ratio, featuring:

- Double flat screen system:
  - 1 screen for cardiology
  - 1 screen for pneumology
- High performance in Exercise ECG testings
- High quality Wasserman graphics
- Comfortable mask system
- O<sub>2</sub>/CO<sub>2</sub>-Gas analyzer/spirometer
- Easy to use
- Fully data-compatible digital recordings

### Breath-by-breath analysis!

Every breath and every heartbeat is analyzed according to the individually set parameters and shown on the monitors in real time. With its two separate monitors, the CARDIOVIT AT-104 PC Ergo-Spiro allows direct visual comparison of ergospirometrical and ECG data! Various interfaces guarantee perfect data-transfer of the saved values to Patient Data Management Systems (PDMS).



## Technical Data:

### Technical Description Gas Analyzer:

**Measurements** (Integrated into AT-104 PC):

15 x 15 x 15 cm (l x h x w)

**Weight:** 2,35 kg

**Power supply:** 100-240 V, 50/60 Hz

**Safety Class:** VDE II, safety insulated, Safety type IP 44, Class BF

### Measurement Methods:

**Breath-by-breath gas analysis**

**Flow volume processing according to ECCS or ATS.**

**Amount of gas adjusted with STPD.**

**Environmental sensors:**

- Flow sensor insensitive to moisture: 0 to  $\pm 17$  l/sec., resolution 10 ml
- Temperature: 0 to 50° C
- Barometer pressure: 600 to 1050 mBar (measurement range: -100m to 3500m above sea level)

**Flow measurement (patented diaphragm spiropceptor):**

Measurement range 0 to  $\pm 17$  l/sec., max. deviation  $\pm 2,5$  %, volume range 0 to 300 l, resolution 10 ml/sec.

**Gas analyzer**

**O<sub>2</sub> chemical cell:**

- Measurement range: 0 to 100 % O<sub>2</sub>
- Measurement accuracy: Better than  $\pm 0,1$  %
- Response time: < 80 msec. (10 to 90 %)

**Ultra sound density method analyzer CO<sub>2</sub>:**

- Measurement range: 0 to 17,5 % CO<sub>2</sub>
- Measurement accuracy: Better than  $\pm 0,1$  %
- Response time: < 80 msec. (10 to 90 %)

**Fully automatic zero alignment and calibration of the gas analyzers at minimal gas consumption**

**Automatic measurement of ambient conditions**

**Manual entry of blood gas values (lactate etc.)**

### Software:

**Operation system:** Windows™ 2000

**Parameters:** METS, VT, VE, fR, VO<sub>2</sub>, VCO<sub>2</sub>, RQ, VE/V, VO<sub>2</sub>, VCO<sub>2</sub> equivalents, O<sub>2</sub> pulse, VD/VT, FEQ<sub>2</sub>, FEQ<sub>2</sub> as well as secondary parameters

**Automatic determination of the anaerobic threshold after V-slope, CO<sub>2</sub> excess or RQ=1**

**Scaling optimization for the diagrams**

**Editing possibility for all basic parameters**

**Export/import function with standardized protocols for integration into HIS**

**Technical data of CARDIOVIT AT-104 PC:**

See specific brochure

### Operating Conditions:

**Ambient temperature:** Between 10 and 40° C

**Relative humidity:** Between 30 and 90 %

**Atmospheric pressure:** Between 900 and 1060 hPa

All technical data is subject to changes aiming to continued innovations. The PowerCube produced by Ganshorn Medizin Electronic GmbH, Niederlauer, Germany, has been integrated into the CARDIOVIT AT-104 PC Ergo-Spiro device. It fully complies with SCHILLER's view on quality.

## More comfort with more benefits

- Simultaneous presentation of all cardio-pulmonary parameters and graphs on two monitors
- Real breath-by-breath gas determination of metabolic and hemodynamic parameters during resting and exercise tests
- Bi-directional flow sensor insensitive to moisture
- Limit monitoring of any parameter with alarm functions
- Automatic control of ergometer using configurable profiles
- Economical, as all accessories are sterilizable and reusable
- Integrated interpretation program according to Karlman Wasserman
- Free combination of parameters and graphs for individual result protocols
- Network ability of CARDIOVIT AT-104 PC Ergo-Spiro



## Answer fax

Yes, I am interested in the innovative products from SCHILLER.  
Please send me more information about:

### Resting ECG:

- CARDIOVIT AT-1
- CARDIOVIT AT-1 smartprint
- CARDIOVIT AT-2
- CARDIOVIT AT-2 plus

### Exercise ECG (Multitasking Systems):

- CardioLaptop® AT-110
- CardioLaptop® PT-160
- CARDIOVIT AT-102
- CARDIOVIT CS-200
- CARDIOVIT AT-104 PC
- CARDIOVIT AT/SP-10
- Ergometry

### Spirometry:

- SPIROVIT SP-1
- SPIROVIT SP-2
- CS-200 Ergo-Spiro
- PC Spirometry

### Monitoring:

- ARGUS PRO System
- PHYSIOGARD TM/CS 910
- Pulse Oximeter OX-2
- MR Compatible Monitoring
- ARGUS LCM Monitor

### Defibrillators/Monitoring:

- FRED® (First Responder External Defibrillator)
- FRED® easy
- DEFIGARD (1002, 3002 IH, 6002)

- Holter ECG** MT-100/200
- Telemedicine:** MT-120/220 and AT-4 TELE
- SEMA-200 **Data Management System**
- BR-102 **Blood Pressure Recorder**
- MS-3 **Pocket ECG**
- VAC-100 **Vacuum Electrode System**
- ECG & Spiro **Accessories**

Name: \_\_\_\_\_

Hospital: \_\_\_\_\_

Position: \_\_\_\_\_

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