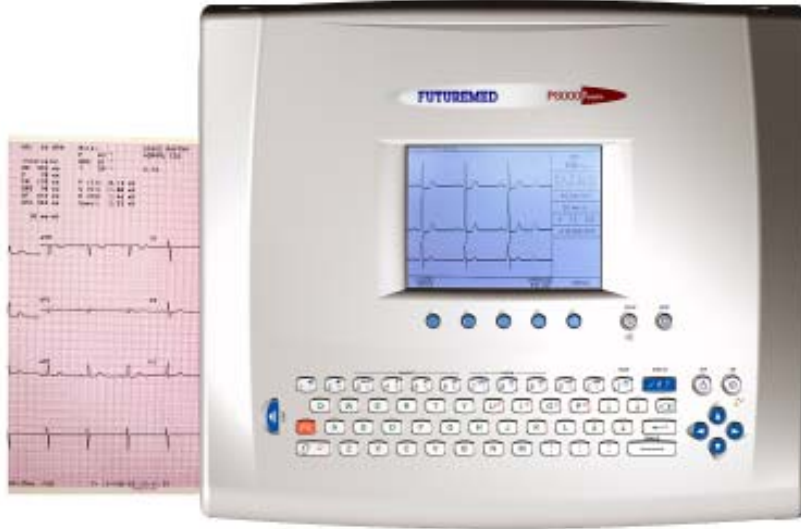


# P8000Power



## Resting ECG with Optional Spirometry and Exercise Stress Testing



### Resting ECG

P8000Power is a unique instrument that combines 12 lead resting ECG, exercise ECG and spirometry in one compact, light weight and economical package.

At its core, P8000Power is a 12 channel resting electrocardiograph to which spirometry and stress testing can be added as the owner's needs grow.

Standard features include a full alphanumeric keyboard for fast entry of patient information. Quick Access keys under the screen correspond to displayed menus, making navigation intuitive and fast.

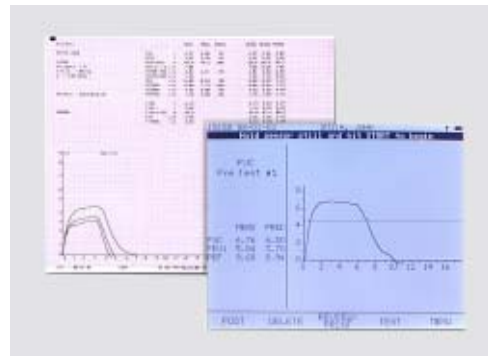


Despite being compact and portable, P8000Power has a full size paper carriage, giving the operator the ability to generate 8.5 x 11" reports in virtually any setting. It can also be connected to a standard printer, for non-fading printouts on low cost and readily available generic copy paper.

A high resolution backlit screen displays the leads in real time, allowing the operator to monitor waveforms and ensure the quality of tracings prior to printing.

Reports can be generated manually or automatically. Waveforms are printed in 3, 6 or 12 channel formats. Interpretive models also provide rhythm leads, average cycles, reference markings, tables of measurement, reason statements and diagnosis, including adult and pediatric interpretation.

### Spirometry



P8000Power can be ordered with spirometry, or upgraded by the owner at a later time. This economical feature gives P8000Power the diagnostic capabilities of a complete spirometer, including inspiratory and expiratory FVC, MVV, SVC and Pre/Post comparison. Flow/volume and time/volume graphs are displayed on screen in real-time,

giving the operator the ability to ensure test quality as patients perform a maneuver. Disposable sensors prevent cross-contamination and eliminate the need for sterilization. Its rechargeable battery and compact size make P8000Power uniquely ideal for testing patients and printing full page reports in any setting. P8000Power meets ATS, OSHA and SSD standards for spirometry.

### Exercise ECG

The optional "stress" upgrade is a cost-effective way to add more value to this instrument. A standard RS-232 interface links P8000Power to a treadmill or bicycle. The operator can choose from a list of existing protocols or define a new protocol. Additional ports allow for automatic blood pressure measurement, and for a larger display on a standard VGA monitor.



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**FUTUREMED**

# P8000POWER ECG with OPTIONAL SPIROMETRY and EXERCISE STRESS TESTING

- High resolution preview screen / monitor
- Full alphanumeric keyboard
- Quick Access Keys for fast, intuitive operation
- Full page (8.5 x 11") printer
- Connects to plain paper printers
- Connects to standard color monitors
- Multiple user-selectable digital and adaptive filters to ensure clean, sharp tracings
- Optional interpretation for children and adults
- Exercise stress testing option can be added by owner; factory installation not required.
- Spirometry option can be added by owner; does not require factory installation.

## ORDERING INFORMATION

P8000PD.B	P8000Power ECG, Basic
P8000PD.0	P8000Power ECG, with interpretation
P8000PD.1	P8000Power Combination ECG, with interpretation and Spirometer
P8000PD.2	P8000Power Combination Resting and Exercise/Stress Testing ECG
P8000PD.3	P8000Power Combination Resting and Exercise/Stress ECG with Spirometer

## SPECIFICATIONS

### System

<b>Size:</b>	39 x 33 x 10 cm / 15" X 13" X 3.9"
<b>Weight:</b>	5 Kg (with paper) / 8.8 lbs
<b>Power:</b>	100-115V or 220-240V, 50/60Hz
<b>Battery:</b>	Built in 12V lead acid battery ~ 4 hours of use per charge
<b>Power consumption:</b>	Max 30VA
<b>Memory:</b>	Up to 40 ECG or spirometry recordings
<b>Printer:</b>	High resolution digital thermal printer
<b>LCD display:</b>	Type: Backlit high resolution LCD Size: 320 x 240 pixel, 3.5 x 5"
<b>Monitor output:</b>	Standard CRT or TFT interface
<b>Printer output:</b>	Parallel interface to plain paper printer
<b>Languages:</b>	English, Spanish, French, others

### Resting ECG

**Acquisition:** 12 simultaneous leads, Standard or Cabrera. 10 seconds of instantaneous acquisition.  
**Formats:** 4, 6 or 12 channels on 8.5 x 11" paper  
**LCD and External Display:** 3 channel display of waveforms (toggles to display other leads), speed, gain, heart rate, filter (on/off), lead contact, name.  
**Sampling rate:** 1000 Hz, 5uV LSB  
**Dynamic range:**  $\pm 10\text{mV}$   
**Paper speed:** 5/10/25/50 mm/s (direct)  
**Sensitivity:** 5/10/20 mm/mV, auto or manual  
**Digital resolution:** 5  $\mu\text{V}$   
**Frequency response:** 0 - 150 Hz (IEC/AHA)  
**Common mode rejection:** > 140 dB  
**Input impedance:** > 100 MOhms

**Leakage current:** < 10  $\mu\text{A}$

**Safety standard:** CF according to IEC 60601-1 and IEC 601-2-25.

**Protection class:** I according to IEC 60601-1 (with internal battery), IIa according to EEC directive 93/42 (medical protection class)

**Conformity:** CE according to 93/42/EEC

**Pacemaker input circuit:** Fully floated and isolated, defibrillation protected (with Futuremed cable only)

**Pacemaker detection:**  $\geq \pm 2\text{mV} / \geq 0.1\text{ ms}$

**Filters:**

- Myogram: 25 or 35 Hz
- Algorithmic baseline stabilizer and noise reduction
- AC noise filter: 50 or 60 Hz
- Operator can enable or disable any filter

**Optional analysis:** ECG measurements (intervals, amplitudes, electrical axes), average complexes with optional measurement reference markings. Adult and pediatric interpretation.

### Spirometry

**Spirometry Measured Values:** **FVC**, FEV0.5, FEV1, FEV1/FVC, FEF25-75, PEF25%, FEF50%, FEF75%, FIVC, FIV1, FIV1/FIVC, PIF, FIF50%. **SVC**, ERV, IRV, TV. **MVV**, RR, TV. **Pre/Post comparison.**

**LCD Display:**

- Real time Flow/volume loop or time/volume graph
- Real time SVC curve, Real time MVV wave
- Measurements (predicted, actual, % difference)
- Pre vs. Post (pre-effort, post, % difference)
- Interpretation
- Up to 3 spirometry tests

**Predicteds:** Crapo, Morris, Polgar, Knudson, Knudson76, ERS, others. Extrapolated predicted values.

**Measurement Range:**

Flow: 0 to  $\pm 14\text{ l/s}$   
Volume: 0 to  $\pm 11\text{ liters}$

**Flow Impedance:** < 0.2 mbar\*s/l at 12 l/s

**Spirometry Standards:** P8000Power meets or exceeds ATS, OSHA and NIOSH standards for spirometry.

### Exercise Stress ECG

**Interface:** Treadmill or stationary bike, RS-232 port

**Protocols:** Choice of standard and user-defined protocols for bike and treadmill. Automatic calculation of J-point.

**LCD and External Display:**

- 3 lead waveforms (toggles to display 12 leads)
- Heart rate
- ST slope & amplitude of user-selected lead (mV/mV/s)
- Stage, time and current load
- Blood pressure (Manual entry, or automatically received from stationary bikes with compatible interface).

## FUTUREMED

For more information, call **1-800-222-6780**

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