

K071702

**510(k) SUMMARY OF SAFETY AND EFFECTIVENESS**

<b>Submitter</b>	Breas Medical AB Företagsvagen 1 SE 435 33 Molnlycke Sweden	FEB 15
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<b>Summary Date</b>	June 14:th, 2007	
<b>Name of Device</b>	Breas Vivo 40 System	
<b>Common Name</b>	Bilevel system	
<b>Classification Name</b>	Non- continuous ventilator (21 CFR 868.5895	
<b>Product Code</b>	MNT	
<b>Predicate Device</b>	Respironics Vision (K982545) Breas Vivo 40 (current device (K053607))	

**Device Description:**

The Vivo 40 is a pressure-supported and pressure-controlled ventilator with a CPAP function intended for spontaneous breathing patients who require long-term support by mechanical ventilation during night and part of the day.

In the treatment of chronic respiratory failure, positive airway pressure ventilation is well established and common practice as a mean to assure sufficient gas exchange. There are a number of devices legally marketed in the United States for this application.

The Vivo 40 can be used in clinical settings (e.g., hospitals, sleep laboratories, sub-acute care institutions) and home environments. It must always be prescribed by a licensed physician.

It is not intended for life support applications or for transport of critical care patients.

The therapy delivered by the Breas Vivo 40 System can be either:

- 1) Pressure Controlled Ventilation (PCV) or
- 2) Pressure Support Ventilation (PSV) or
- 3) Constant Positive Airway Pressure (CPAP)

The Vivo 40 airflow is delivered via a single lumen outlet tube that may be connected to various invasive and non-invasive patient interfaces, such as nasal masks. To minimize CO<sub>2</sub> rebreathing, masks or other interfaces permitting a leak flow of at least 12 liters/minute at the output pressure setting of 4 cmH<sub>2</sub>O are recommended.

The Vivo 40 has an auto-switching power supply that facilitates use in conjunction with international travel (100 – 240 VAC). It can also be used with an external 12.5/ 24 VDC power source when AC mains line voltage is not available.

The outer dimensions of the Vivo 40 housing are 7.2 × 9.1 × 8.9 inches, and the device weighs 8.9 pounds.

**Intended Use:**

The Breas Vivo 40 is designed for spontaneous breathing patients who require long-term support by mechanical ventilation during night and part of the day.

The CPAP function is intended to deliver continuous positive airway pressure therapy for the treatment of obstructive sleep apnea.

The Breas Vivo 40 shall only be used by patients with spontaneous breathing.

The Breas Vivo 40 is not intended for life support or life-sustaining applications or for transport of critical care patients.

The Breas Vivo 40 is intended for non-invasive or invasive use with appropriate patients.

The Breas Vivo 40 is intended for treatment of adult (who weigh more than 30 kg) patients.

The Breas Vivo 40 is intended to be operated by qualified and trained personnel.

**Comparison of Use and Technological Characteristics:**

The Vivo 40 can be used in clinical settings (e.g., hospitals, sleep laboratories, sub-acute care institutions) and home environments. It must always be prescribed by a licensed physician.

It is not intended for life support applications or for transport of critical care patients.

As compared with the cited predicate device, the Breas Vivo 40 System has:

Same intended use (Respironic Vision)

Same environments of use

Similar design (microprocessor-controlled blower as air source)

Same technology (software based pressure-, flow- and time- regulation)

The differences that do exist are minimal and involve primarily user preference features. The Breas Vivo 40 System has additional display indicator and audible alarm features as well as lockout features (to provide clinicians with optional means to control the ability of patients to change pressure settings). These features are described in labeling for the device that includes an Operator Manual.

**Summary of Performance Testing:**

1. Non-clinical testing was conducted to verify that the Breas Vivo 40 System is capable of meeting its stated performance specifications and that all Risk Analysis issues have been appropriately addressed. The device passed all tests.
2. Comparative testing, including testing of work of breathing for invasive use, to predicate devices was performed. This bench- testing confirmed that the Breas Vivo 40 System is substantial equivalent with regards to Wave-form performance as well as Work of Breathing and Pressure Dynamic regulation.

3. Testing was in the original application conducted to demonstrate compliance with applicable requirements in the November 1993 draft “Reviewer Guidance for Premarket Notification Submissions” published by the FDA’s Division of Cardiovascular, Respiratory, and Neurological Devices and the July 1995 “Draft Reviewer Guidance for Ventilators”. The testing included but was not limited to:

- Electrical Safety testing per IEC 601-1
- Safety and Essential Performance testing per ISO 10651-6
- Safety and Performance testing per ISO 17510-1
- Electromagnetic Compatibility testing (EMC testing)
- Mechanical Safety testing
- Environmental testing
- Functional testing
- Particle matter testing

The device passed all tests.

4. All device software was documented and tested in accordance with the FDA’s May 11, 2005 “Guidance for the content of Premarket Submissions for Software Contained in Medical Devices”. The device passed all tests.

5. Clinical studies were not required to support a substantial equivalence determination.

**Conclusions:**

The Breas Vivo 40 System meets its stated performance specifications and criteria outlined in the Reviewer Guidance publications referenced above. We conclude that the device is capable of operating safely in its intended environments and will be effective in fulfilling its intended use.



FEB 15 2008

Food and Drug Administration  
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Mr. Ibb Jessen  
Quality Assurance & Regulatory Affairs Manager  
Breas Medical AB  
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SWEDEN

Re: K071702  
Trade/Device Name: Breas Vivo 40 Invasive  
Regulation Number: 868.5895  
Regulation Name: Continuous Ventilator  
Regulatory Class: II  
Product Code: MNT  
Dated: January 31, 2008  
Received: February 4, 2008

Dear Mr. Jessen:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

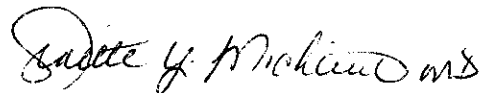
If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (240) 276-0115. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely yours,



Chiu Lin, Ph.D.

Director

Division of Anesthesiology, General Hospital,

Infection Control and Dental Devices

Office of Device Evaluation

Center for Devices and

Radiological Health

Enclosure

## Indications for Use

510(k) Number (if known): K071702

Device Name: Breas Vivo 40 Invasive

### Indications for Use:

The Breas Vivo 40 is an assist ventilator intended to augment the breathing of spontaneously breathing adult patients (>30 kgs) suffering from respiratory failure, respiratory insufficiency, or obstructive sleep apnea.

It is not intended to provide the total ventilatory requirements of the patient.

It is intended to be used for both invasive and non- invasive applications.

The Breas Vivo 40 is intended to be operated by qualified and trained personnel.

The Breas Vivo 40 is intended for use in clinical settings (e.g., hospitals, sleep laboratories, sub-acute care institutions) and home environments.

The Breas Vivo 40 must always be prescribed by a licensed physician.

Prescription Use  X   
(Part 21 CFR 801 Subpart D)


AND/OR

Over-The-Counter Use \_\_\_\_\_  
(21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE  
OF NEEDED)

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Concurrence of CDRH, Office of Device Evaluation (ODE)



(Division Sign-Off)

Division of Anesthesiology, General Hospital  
Infection Control, Dental Devices

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