

Puritan Bennett™

Respiratory Insight Software



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Preface

Purpose of This Manual

This manual contains important information regarding the safe operation of the Puritan Bennett™ 560 Ventilator.
Ensure that you read and understand the instructions contained in this manual before operating the software.



Warning

READ SAFETY INFORMATION FIRST:

Before using the software and associated equipment, read, understand, and strictly follow the information in Chapter 1, "Introduction".

Qualification of Personnel

This software, and the related data files and reports, should only be used by qualified personnel who have been appropriately trained in the use of the software, per the instructions in this manual, and who are clinically qualified to use the data and reports.

Warranty

Information regarding your product warranty is available from your sales representative or Covidien.

Technical Support



SolvITSM
CENTER
Knowledge base

For online technical support, visit the SolvITSM Center Knowledge Base by clicking the link at <http://www.respiratorysolutions.covidien.com>. Here, you will find answers to frequently asked questions about the Puritan Bennett™ 560 Ventilator and other Covidien products 24 hours a day, 7 days a week. If you require further assistance, contact your local representative or call Technical Support. See "[List of Technical Support Contacts](#)" on page Preface-iv.

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Introduction

1.1 Definitions

This manual uses three indicators to highlight critical information: Warning, Caution, and Note. They are defined as follows:



Warning

DEFINITION OF A WARNING:

Indicates a condition that can endanger the patient or the ventilator operator.

Caution

Indicates a condition that can damage the equipment.

Note:

Indicates points of particular emphasis that make operation of the software more efficient or convenient.

It is essential to read, understand and follow these instructions before using the Puritan Bennett™ Respiratory Insight Software.

In order to use the software correctly and efficiently, and to help prevent incidents, please pay particular attention to section 1.2, “Warnings” as well as all warnings and cautions contained throughout this manual.

1.2 Warnings



Warning

READ SAFETY INFORMATION FIRST:

Before using the software and associated equipment, read, understand, and strictly follow the information in Chapter 1, “Introduction”.



Warning

FOR VENTILATION DATA SUPPORT ONLY:

The Puritan Bennett™ Respiratory Insight Software is intended to support the display and analysis of ventilator data only and is not a diagnostic tool.



Warning

USE OF ACCESSORIES:

To ensure proper performance of the ventilator and software, use only accessories approved and recommended by Covidien. For further information contact your equipment supplier or Covidien.

1.3 Cautions

Caution

The USB memory device must be connected after starting the software to enable automatic detection.

Caution

It is the service provider's responsibility to preserve the confidentiality of the data saved to the USB memory device and in the software database.

Caution

Disconnecting the USB memory device or requesting a restart of the software during transfer results in an error message warning users that events may be lost and requesting a restart of the transfer procedure.

Caution

Selecting the ERASE DATA button erases ALL files present on the USB memory device.

Caution

Use only a 32 bit formatted USB memory device.

Caution

Formatting the USB memory device to the FAT 32 format erases all files present on the USB memory device.

Caution

Adobe^{™*} Acrobat Reader Software must have been installed onto the computer or the report function will not be available and an error message will be automatically generated. Two reports cannot be open at the same time.

Software Overview

2.1 Overview

This manual contains information for using the Puritan Bennett™ Respiratory Insight Software with the Puritan Bennett™ 560 and 520 Ventilators. This section gives a description of the device, its intended use, the software icons and the menu layout. Before using the software, thoroughly read this manual. The latest version of this manual is available at: www.respiratorysolutions.covidien.com.

2.2 Description

The Puritan Bennett™ Respiratory Insight Software is ventilator data display software for use with the Puritan Bennett™ 560 and 520 Ventilators. It utilises patient data from the ventilator for analysis purposes. Caregivers may download data from the ventilator to a PC via a USB memory device to provide a means for analysis. Functionality of the software includes:

- Quick access to data from the ventilator and the patient
- Access to ventilator settings for the caregiver to confirm that settings are pertinent
- Verification of user compliance with medical prescription
- Access to patient ventilation parameters and patient progress
- Management of patient files and associated ventilation data
- Monitoring of homecare patient compliance
- Monitoring ventilation quality for homecare patients using trend curves of up to 12 months and detailed two day ventilation curves



Warning

FOR VENTILATION DATA SUPPORT ONLY:

The Puritan Bennett™ Respiratory Insight Software is intended to support the display and analysis of ventilator data only and is not a diagnostic tool.

Target Operators

The software may be operated by:

- Respiratory therapists
- Physicians
- Nurses
- Service Providers

2.3 Intended Use

The Puritan Bennett™ Respiratory Insight Software displays and stores ventilator data from the Puritan Bennett™ 560 and 520 ventilators, including settings, trending and waveforms, to support target operators intending to view and analyse the data.

2.4 Software Icons

Table 2-1. Software Icons











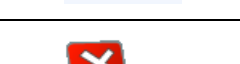
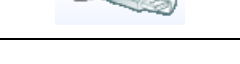

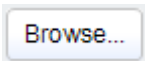
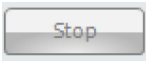













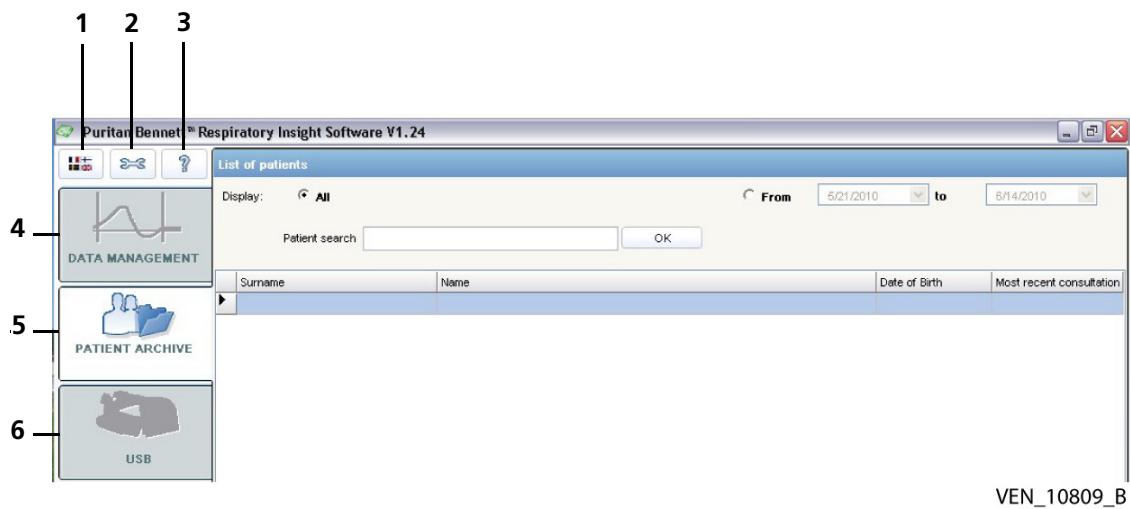
Icon	Description
	Data Management — Provides access to the patient information form. If there is no associated patient, the software prompts selection of a specific patient data set.
	Patient Archive — Lists all currently available patient data information forms.
	USB — Allows the management of data on the USB memory device. Indicates connection of a USB memory device to the computer.
	Language — Allows selection of desired available languages.
	Configuration — Allows modification of the report page.
	Help — Provides the Puritan Bennett™ Respiratory Insight Software manual in PDF format in the language selected during software configuration.
	Puritan Bennett™ Respiratory Insight Software icon — Launches the software.
	View directly from USB — Allows viewing of data directly from the USB memory device.
	Save data to computer — Allows data from the USB memory device to be saved to the computer.
	Erase data — Allows data on the USB memory device to be deleted.
	PDF button — Allows the user to create a report in PDF format.
	Next — Allows the user to start to transfer or erase data.
	OK — Allows the user to confirm a choice, for example, when searching for a patient by name.

Table 2-1. Software Icons

Icon	Description
	Browse — Allows the user, for example, to choose directory to install the software or to find a logo.
	Stop — Allows the user, for example, to stop the transfer of data.
	Up and Down buttons — Allows the user to navigate drop down menus.
	Right button — Allows the user to select a patient.
	Create patient — Allows the user to create a patient information sheet.
	Display patient data — Allows the user to display the patient data.
	Delete — Allows the user to delete a patient from the list of patients.
	Cancel — Allows the user to exit the configuration menu without saving any changed settings.
	Plus and minus buttons — Allows the user to display or hide graphs.
	Cursor button — Allows the user to view ventilation graph measurements.
	Magnification button — Allows user to increase or decrease magnification of graphs.
	Close software button — Allows the user to close down the Respiratory Insight Software package.
	Up key — Allows the user to choose parameters on the ventilator keyboard.
	Down key — Allows the user to choose parameters on the ventilator keyboard.
	Enter key — Allows the user to select the parameter on the ventilator keyboard to transfer or erase data.

2.5 Overview of Menu Layout

Figure 2-1. Menu Layout



Utility Buttons

- 1 Language
- 2 Configuration
- 3 Help

Module Access Buttons

- 4 Data Management
- 5 Patient Archive
- 6 USB

Software Installation

3.1 Overview

This section describes the procedure for the correct installation of the Puritan Bennett™ Respiratory Insight Software onto the computer and the correct method for using the USB memory device.

This software package contains an installation CD containing the Puritan Bennett™ Respiratory Insight Software and a manual. A printed manual is available upon request.

3.2 Prerequisites

3.2.1 Hardware requirements

The minimum configuration required by the computer is as follows:

- Windows™* XP, Windows Vista™* or Windows™* 7
- Intel™* Pentium™* processor (1 GHz or faster)
- 512 MB RAM
- Monitor screen - 15 inch @ 1152 x 864 pixels
- One USB memory device (4GB maximum) in 32 bit format.
- Minimum resolution 800 x 600 pixels.

3.2.2 Software requirements

The USB memory device must be formatted to the FAT 32 format. Refer to Chapter [3.8](#), "Formatting the USB Memory Device".



Warning**USE OF ACCESSORIES:**

To ensure proper performance of the ventilator and software, use only accessories approved and recommended by Covidien. For further information contact your equipment supplier or Covidien.

3.3 Installation Procedure

To install the Puritan Bennett™ Respiratory Insight Software:

1. Insert the CD in the computer's CD drive.
2. Close the CD drive.

Note:

The installation should start automatically. If not, double-click on RespiratoryInsightSoftwareSetup.exe, located on the CD to start the installation.

To allow the installation to proceed you must accept the terms and conditions of use.

3. Close all other applications and follow the installation instructions.

Browse...

4. The software automatically installs in the "C:\Program Files\PuritanBennettPortable" directory on your hard disk. To install the software in another directory, click on the BROWSE button and select the required directory. Click on the NEXT button.

Next >

5. The software automatically sets up a default file named "Respiratory Insight Software" for data storage. Choose a different file name if needed to meet institutional or personal requirements.
6. Select the option to create a desktop shortcut and/or an icon on the quick start bar.

Note:

The Installation status is indicated on a progress bar.

OK

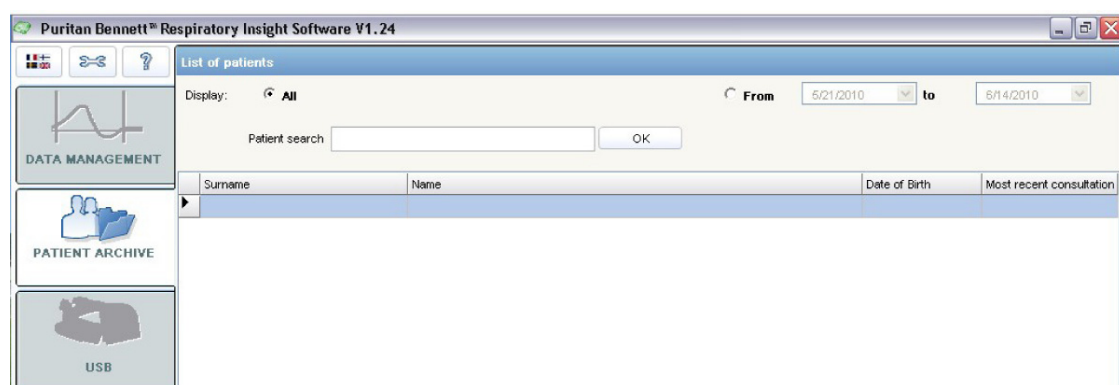
7. Click on the OK button when a successful installation message appears.

3.4 Starting the Software



Start the software by double-clicking on the Puritan Bennett™ Respiratory Insight Software desktop icon, or by choosing Puritan Bennett™ Respiratory Insight Software from the Start menu. Configuration during install dictates the precise location of this icon.

Figure 3-1. Starting the Software



VEN_10809_B

3.5 Configuring the Software

To configure the software:


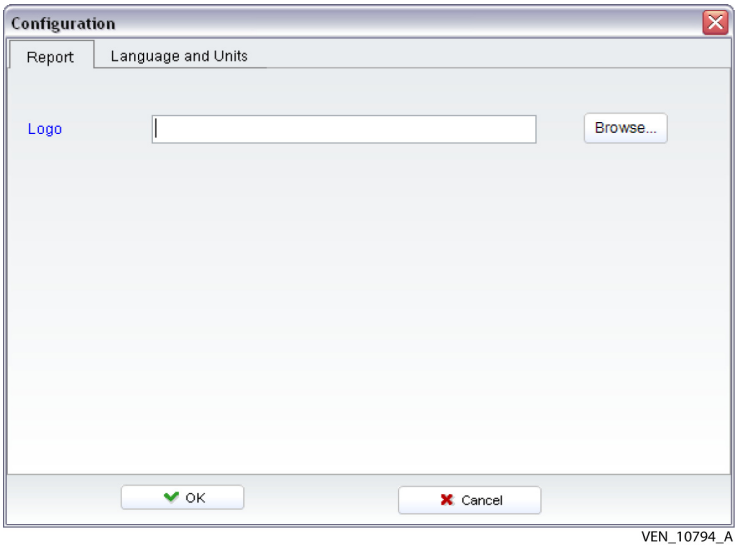
-  Click on the configuration icon.
- The following configuration window appears:

Figure 3-2. Configuring the software



3.6 Customising the User Interface

3.6.1 Language

To select a software language



Note:

The Language and Units tab can also be accessed using the language button.

1. Select the Language and Units tab.

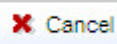


2. Click to display the drop down menu listing the available languages.

3. Select the required language.



4. Click on the OK button to set the language and exit the configuration menu.



5. Click on the CANCEL button to exit the configuration menu without saving any changed settings.

3.6.2 Units of measure

To select a unit of measurement

1. Select the Language and Units tab.



2. Click on the DOWN button next to the Height label to display the drop down menu listing the available options.

3. Select the required unit of measurement.

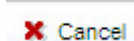


4. Click on the DOWN button next to the Weight label to display the drop down menu listing the available options.

5. Select the required unit of measurement.



6. Click on the OK button to set the units of measure and exit the configuration menu.

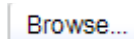


7. Click on the CANCEL button to exit the configuration menu without saving any changed settings.

3.6.3 Image or Company Logo

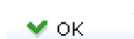
To automatically insert an image or your company's logo on all generated reports:

1. Select the Report tab.



2. Click on the BROWSE button browse to the directory containing the required file.

3. Select the relevant file.



4. Click on the OK button.

Note:

The logo should be in Bitmap format.



To access a copy of the Puritan Bennett™ Respiratory Insight Software manual electronically, click on the Help button and select the desired language.

3.7 USB Memory Device Connection

Ventilator operating data is transferred using a USB memory device.

The USB memory device is connected to a USB port on the computer to allow transfer data to the database called Patient archive.

The software automatically detects the USB memory device and provides the corresponding menu. If several memory devices are connected, the software uses the last connected memory device.

Caution

The USB memory device must be connected after starting the software to enable automatic detection.

Caution

Use only a USB memory device formatted to the FAT 32 format.

Caution

It is the service provider's responsibility to preserve data confidentiality of the data saved to the USB memory device and in the software database.

3.8 Formatting the USB Memory Device

To format the USB memory device to the FAT 32 format:

1. Using the host computer, go to My Computer.
2. Right click on USB and select Format. A separate window will appear.
3. From the File System drop down menu, select the FAT 32 option.
4. Press Start.

Note:

Formatting USB memory device to the FAT 32 format erases all files present on the USB memory device.

If the software is exited during data transfer, a warning message to confirm if the data previously loaded should be saved is displayed.

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Software Operation



4.1 Overview

This section identifies methods for viewing and collecting patient ventilation data using the Puritan Bennett™ Respiratory Insight Software with the Puritan Bennett™ 560 and 520 Ventilators. It describes how to transfer, view and save data.

4.2 Data Management

4.2.1 Data Transfer






To transfer data from a ventilator to a USB memory device:

1. Connect the USB memory device to the ventilator.
-  2. Press on the UP or DOWN keys on the ventilator keyboard to choose between the following parameters:
 - Transfer Continuously
 - Transfer Trends
 - Erase Key
-  3. Press on the ENTER key on the ventilator keyboard to transfer or erase the data as selected.

Caution

Selecting Erase Key erases ALL files present on the USB memory device.

To transfer data from the USB memory device to a computer

1. Connect the USB memory device to the computer, preparing to transfer data from a USB memory device.
2. Select one of three options from the USB Memory Device screen.
 -  a. Select SAVE DATA TO COMPUTER to transfer patient data from the USB memory device to the computer disc.
 -  b. Select VIEW DIRECTLY FROM USB only if this is the preferred method for your institution.
 -  c. Select ERASE DATA only to erase patient data on the USB memory device. Use this option only after transfer of the patient data to the computer disc is complete. The software requires the users to confirm erasure.
3. Select the files required from the patient list to save patient data.
-  4. Click NEXT to start the transfer.
5. If no patient list appears, the software prompts users to select a specific patient data set.
6. Monitor the progress of the transfer by watching the progress bar on the monitor.
-  7. To stop the transfer, click on the STOP button and confirm this request when prompted.

8. After completion of the ventilation data transfer, users can choose navigation tabs (patient, compliance, trends or monitoring if available) or be redirected to the patient list.

Note:

The patient data is **not** assigned to a file on the computer, but remains on the USB when using the VIEW DIRECTLY FROM USB option.

Selecting ERASE DATA erases ALL files present on the USB memory device.

4.2.2 Saving Data

To save patient data from the VIEW DIRECTLY FROM USB option

1. Click on the Patient tab.
2. Save data by clicking on the ADD TO PATIENT button



Note:

In VIEW DIRECTLY FROM USB mode only one file can be read at any time. When SAVE DATA TO COMPUTER mode, one or more files can be saved.

If several files have been selected for download, the user must wait until complete transfer of the last file prior to accessing patient data.

It is not possible to transfer a file containing corrupt data. Users cannot reassociate files associated with a specific patient to a different patient. Any attempt to do so results in an error message.

For further information refer to Puritan Bennett™ 560 or 520 Clinician's Manuals

Caution

Disconnecting the USB memory device or requesting a restart of the software during transfer results in an error message warning users that events may be lost and requesting a restart of the transfer procedure.

4.2.3 Viewing Data

Using the search function to access saved data:



PATIENT ARCHIVE

1. Click on the PATIENT ARCHIVE button to display the list of recorded patients, and allowing access to patient files.
2. Use the search function to find a patient or data using the following filter options.
 - a. Search for a patient by typing the patient name directly into the text box and clicking OK.
 - b. Search for a specific consultation date by clicking on the FROM button and using the drop down calendar.
 - c. Sort each column in the file table by increasing or decreasing order (for example, by patient name, surname or date of birth). Click on the column's title to sort a column using the UP or DOWN symbols to the right of the title.
- ▶ 3. Select the patient information form by clicking on the corresponding line in the table. An arrow symbol will appear on the selected line.



OK



4. Click on the DISPLAY PATIENT DATA button to access all information saved for the selected patient.

Software Data Output

5.1 Overview

The section describes how target operators may use the data downloaded from the USB memory device to provide monitoring, analysis and management of patient care. It explains how data is organised into five pages, each with its own top-tab: patient, device, compliance, trends and monitoring. It also describes how to update, manage and save this data.

5.2 How Data is Organised

Data is divided into five top-tabbed windows:

- **Patient** — Contains patient personal data in two areas (patient information and pathology)
- **Device** — Contains a list of all ventilator model types and serial numbers associated with the patient
- **Compliance** — Contains data related to patient compliance based on prescribed ventilation use
- **Trends** — Contains graphed ventilator trending data
- **Monitoring** — Contains graphed ventilator data monitoring history

5.2.1 Patient

Selecting the patient tab provides data related to the patient. The patient page acts as an identity card for each patient, and patient information can be updated from this page. The patient page is divided into two areas: patient information and pathology.

5.2.1.1 Patient Information

The top portion of the patient page contains fields for the patient ID, patient's name, surname, date of birth (age is automatically calculated from this), gender, telephone numbers and the last appointment date.

Note:

For reasons of patient confidentiality, do not enter patient identifiable information into the patient ID field.

5.2.1.2 Pathology

The lower portion of the patient page allows the input of diagnostic information, including pull-down menus for selecting the diagnosis description, ventilation mode and interface. The software also provides two areas for entering additional diagnostic information.

To update the patient page:

1. Click the CREATE PATIENT button.
2. Familiarise yourself with the resulting patient information window.
3. Input data as required.

Figure 5-1. Updating patient data

Patient	Device	Compliance	Trends	Monitoring
Patient Information				
ID	<input type="text"/>			
Surname	<input type="text" value="xxx"/>	Name	<input type="text" value="xx"/>	
Date of Birth	<input type="text" value="5/21/1968"/> <input type="button" value="v"/>	xx years old	Gender	<input type="radio"/> male
Telephone	<input type="text"/>		Mobile	<input type="text"/>
Most recent consultation date	<input type="text" value="5/21/2010"/> <input type="button" value="v"/>			
Address	<input type="text"/>			
Post Code	<input type="text"/>			
Town	<input type="text"/>			
State/Province	<input type="text"/>			
E-mail	<input type="text"/>			
Location	<input type="text" value="Select:"/> <input type="button" value="v"/>			
Height	<input type="text" value="0"/> ft	<input type="text" value="0"/> in	Weight	<input type="text" value="0"/> lbs
Pathology				VEN_10811_C

To save patient data

Once patient information has been changed, the save icon at the bottom of the screen turns from grey to red.



1. To save patient information, click SAVE.

Caution

It is the service provider's responsibility to preserve the confidentiality of data saved to the USB memory device and in the software database.

To delete a patient from the file database

1. To delete a patient from the file database and all related data, select the appropriate patient name.



Delete patient

2. Click on the DELETE PATIENT button.
3. Confirm this action by clicking YES.

5.2.2 Device

Selecting the Device tab will display all the ventilators, including model type and serial number, associated with the related patient.

Figure 5-2. Accessing device information

Patient	Device	Compliance	Trends	Monitoring
List of ventilators used by this patient				
	Serial Number	Model		
▶	40966KC06P00	PB560		
	40966KC07P30	PB560		

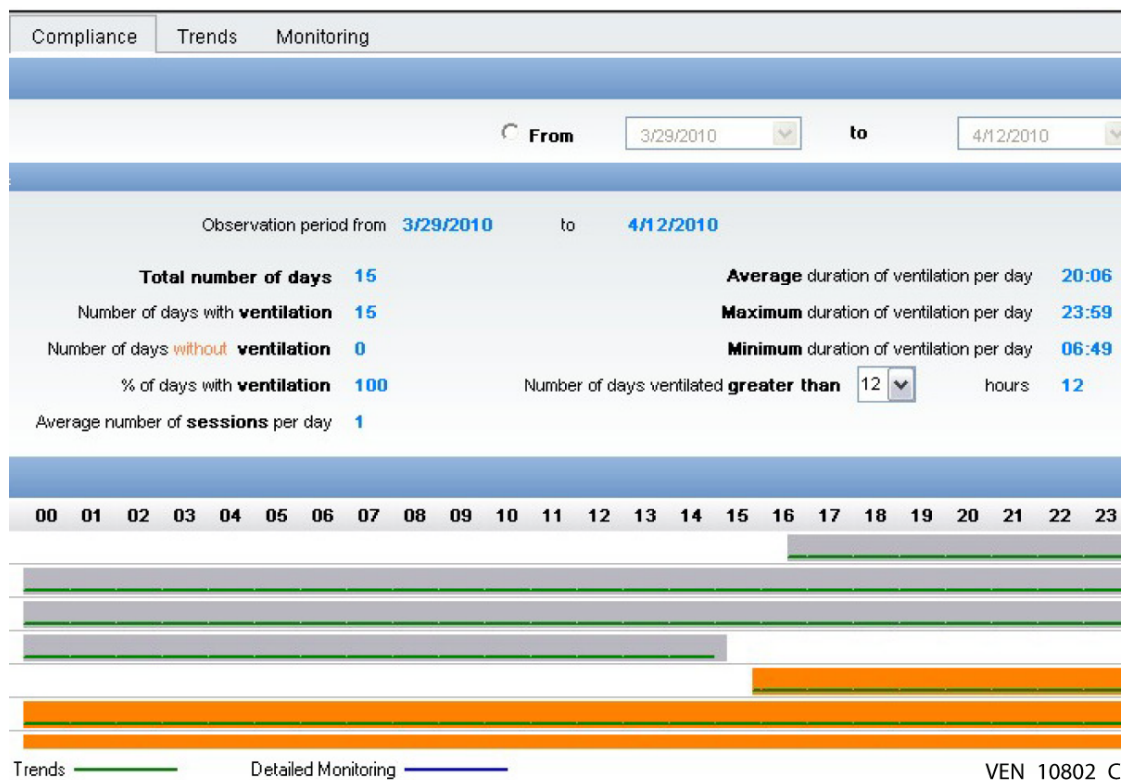
VEN_10806_C

5.2.3 Compliance

Selecting the Compliance tab provides data related to patient compliance. Review specific patient operating statistics contained in the database:

1. Select a patient from the list of files or consult patient data directly (see section 4.2.3, "Viewing Data").
2. Click on the Compliance tab.

Figure 5-3. Accessing compliance information



3. The software automatically collects, stores and calculates compliance statistics by taking all events recorded in the ventilator's file as a basis for calculations. To refine these statistics, select the period over which the compliance data is to be calculated; the result is displayed under the Observation period section.

The software calculates the following statistics for the defined reporting period:

- **Total number of days** — Calculates total days for the reporting period. A day is defined as starting at midnight each day.
- **Number of days with ventilation** — Calculates ventilation days. A ventilation day is defined as a day during which ventilation has been activated at least once.
- **% of days with ventilation** — Calculates percentage of ventilation for the reporting period. This is defined as the number of ventilation days divided by the total number of days during the reporting period, and then multiplied by 100.
- **Number of days without ventilation** — Calculates percentage of ventilation-free days for the reporting period. This is defined as a day during which ventilation has not been activated.
- **Average number of sessions per day** — Calculates the average number of ventilation start ups in any one day.
- **Average duration of ventilation per day** — Calculates the average time during which the patient is ventilated during any one day.
- **Maximum duration of ventilation per day** — Calculates the total duration of ventilation in hours and minutes recorded on the day with the maximum duration of ventilation in the selected reporting period.
- **Minimum duration of ventilation per day** — Calculates the minimum length recorded during one day.
- **Number of days ventilated greater than xx hours** — Calculates patient ventilation compliance with medical prescription.

To verify compliance of medical prescription:

1. Set the drop down menu on the exact number of daily ventilation hours prescribed by the doctor in the Number of days ventilated greater than xx hours section.
2. Check the patient is following the prescription according to the number of days in the observation period.

Note:



Print reports at any time by clicking the PDF button. Adobe™* Acrobat Reader software starts and automatically prints the «Patient compliance» data. To save or print the report use the Adobe™* Acrobat Reader software File menu. See section 5.3, "Creating Reports".

5.2.4 Trends

5.2.4.1 Trend data fields

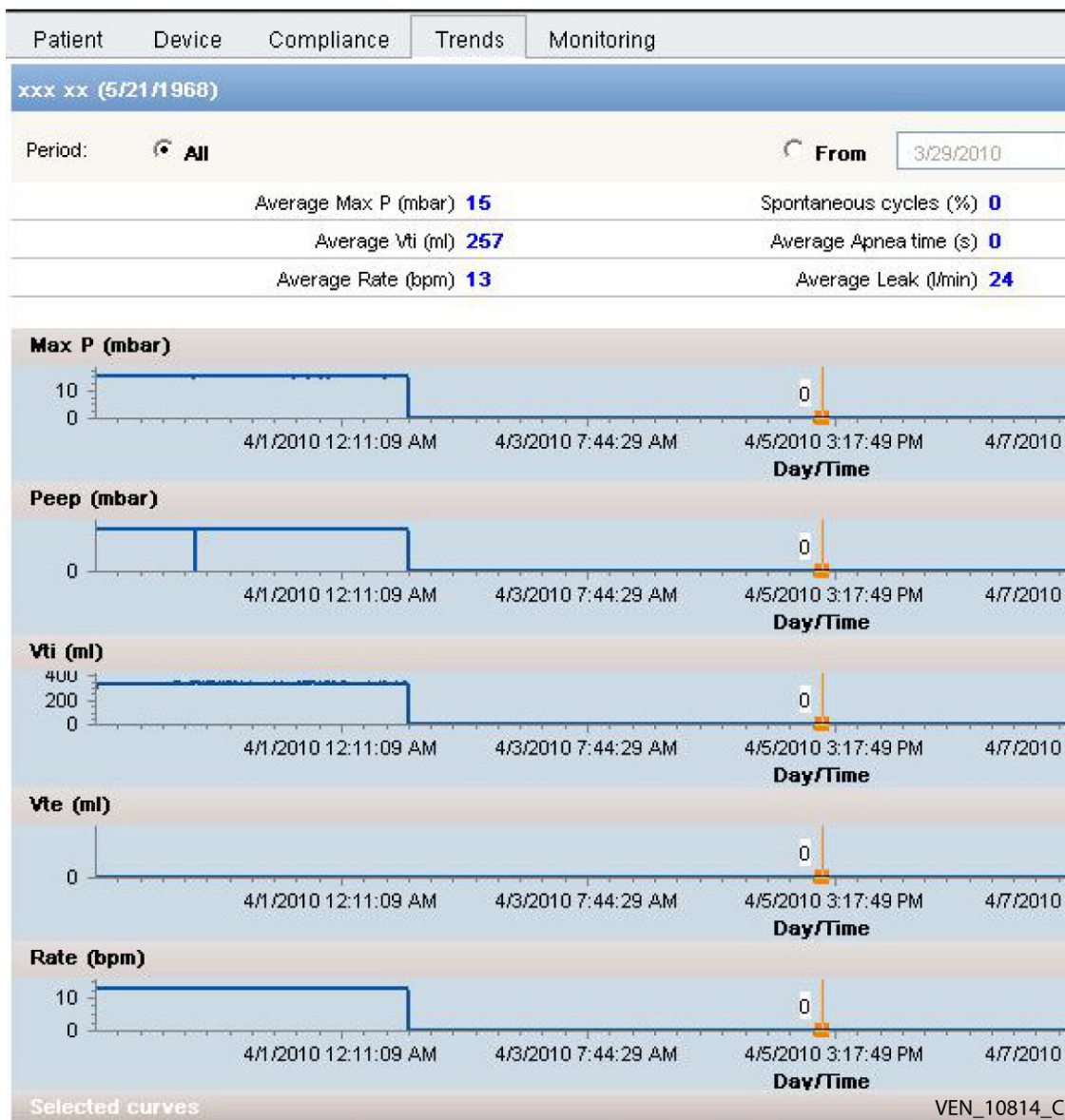
- Max P (mbar)
- PEEP (mbar)
- Vti (ml)
- Vte (ml)
- M Vol (l)
- Leak (l/min)

- Rate (bpm)
- Alarm Events

5.2.4.2 Sampling rate

- One sample per breath cycle when monitoring data is recorded.
- One sample per minute when trends data only is recorded.

Figure 5-4. Accessing trend data



The software calculates the following statistics for the defined reporting period:

- Average Max P (mbar)
- Average Vti (ml)
- Average Rate (bpm)
- Spontaneous cycles (%)
- Average Apnea Time (s)
- Average Leak (l/min)

5.2.4.3 How to select or deselect a graph

Choose to hide or display one or more graphs at the same time. Select graphs you want available to view using the checkboxes located at the bottom of the screen.



To hide or display a graph, click the PLUS or MINUS symbol to the right of the corresponding graph title line accordingly.

Note:

All patient trends may be selected for display.

5.2.4.4 Using measurement cursors

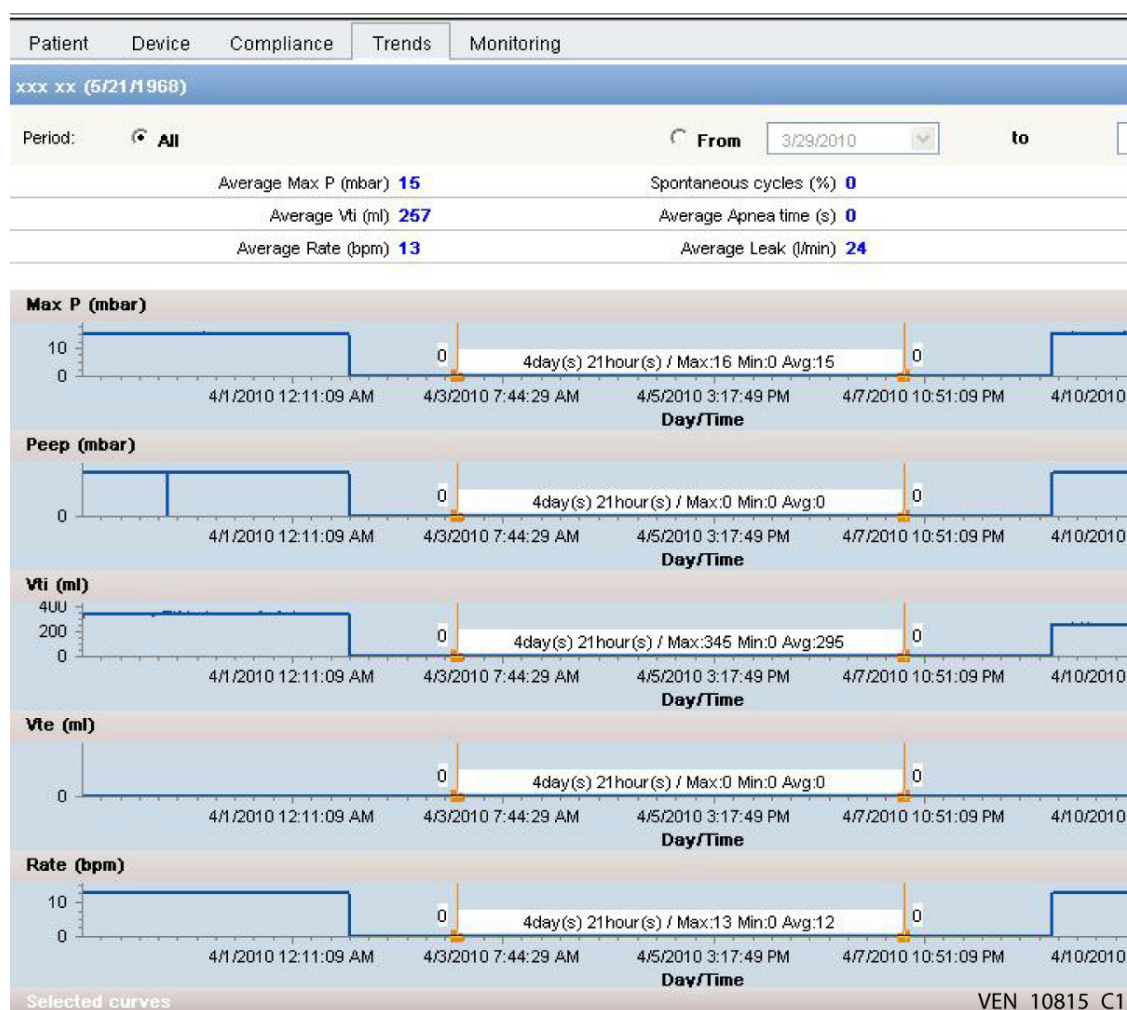
The software has two types of cursors to assist in ventilation graph measurement. By default the vertical cursor is in view. The numerical value displayed on the graph with the cursor corresponds to the cursor's position.

To get multiple readings at a given time:



1. If the vertical cursor is not currently available, click on the CURSOR button and the vertical cursor will appear on the screen. Measurements at a given time are simultaneously displayed on all graphs.

Figure 5-5. Accessing multiple trends simultaneously



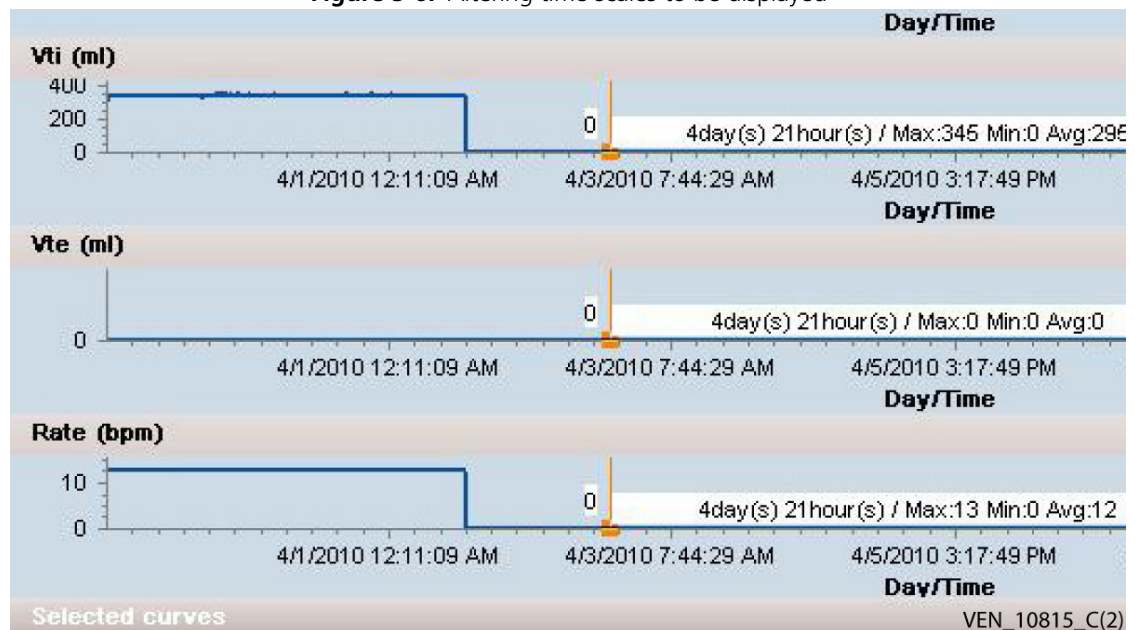
2. Click directly on the required time intervals on the page to acquire the desired readings.



To alter time scales:

1. Click the DUAL VERTICAL CURSOR button and two vertical cursors appear on the screen.
2. Select the area of the screen where the left hand vertical bar is to be placed. The bar will automatically position itself.
3. Select the area where the right hand vertical bar is to be placed. The time delta and minimum, maximum and average readings during that time are displayed between the two vertical bars. This function measures, for example, inhalation and exhalation times or trigger response times when used with the zoom function. Time measurements are displayed on all graphs simultaneously.

Figure 5-6. Altering time scales to be displayed



5.2.4.5 Using the zoom function

To use the zoom function in one of three ways:

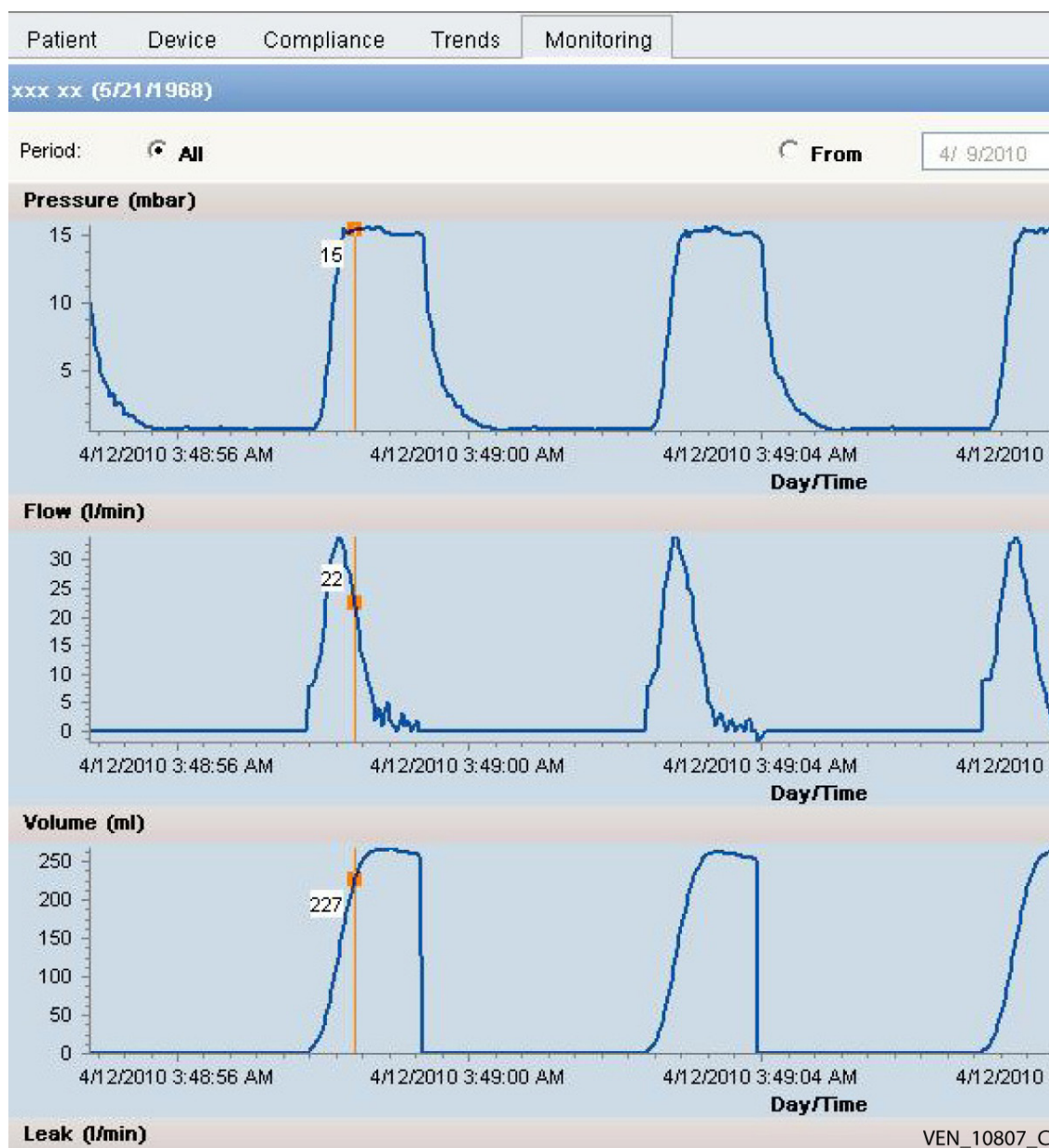


1. Click the INCREASE MAGNIFICATION button to the right of the slider bar to increase magnification incrementally.
2. Click the DECREASE MAGNIFICATION button to the left of the slider bar to decrease magnification incrementally.
3. Move the slider bar to the left or right to quickly adjust magnification to the desired level.
 - Zoom is applied equally to all graphs simultaneously.

5.2.5 Monitoring

Selecting the Monitoring tab provides access to monitoring data. Within the Monitoring tab, the data displayed are only those that were recorded during the time that the USB memory device was connected to the ventilator. This is different data from that displayed within the Trends tab, which are trend cycles of up to 12 months. The graph selection/deselection, cursor and zoom functions operate in exactly the same way as in the Trends tab (See section 5.2.4, "Trends".)

Figure 5-7. Accessing monitoring data



Pressure graph (mbar) - The pressure graph displays patient pressure measurements every 40 ms.

Flow graph (l/min) - The flow graph comprises inhaled flow measurements corrected by leakages measured during the preceding cycle. It is displayed every 40 ms during the inhalation phase and exhaled flow measurements displayed every 40 ms during the exhalation phase. The exhaled flow is only displayed if an exhalation block is being used with a double limb patient circuit.

Volume graph definition (ml) - The inhaled volume graph includes inhaled volume measurements. For modes without an exhalation valve, this volume is corrected by estimating the leak.

Leakage graph (l/min) - The leakage graph comprises leakage measurements measured at the end of exhalation. One leakage value is displayed per ventilation cycle.

5.3 Creating Reports

The software provides easy access to patient data using a variety of reports. A report in PDF format can be generated from the Compliance, Trends, or Monitoring pages of the software.

To create a report:

1. Select a patient from the list of files.
 - Select information to be included in the report using Compliance, Trends or Monitoring tabs. Select a period of time for the report using the dropdown calendar.
2. Click the PDF button. The Adobe™* Acrobat Reader software starts and the report prints. Users may also save and print reports using the Adobe™* Acrobat Reader software FILE menu.



Caution

Adobe™* Acrobat Reader Software must have been installed onto the computer or the report function will not be available and an error message will automatically be generated. Two reports cannot be open at the same time.

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Troubleshooting

6.1 Overview

This section describes how to troubleshoot common problems while using the Puritan Bennett™ Respiratory Insight Software. It includes information about error code messages and how to obtain technical help and support.

6.2 Help and Support

If you experience a problem while using the software and are unable to correct it, contact your equipment supplier or your local Covidien representative. See [“List of Technical Support Contacts,”](#) on page [Preface-iv](#).

6.3 Troubleshooting the Software

In the event of a software malfunction:



1. Close the software using the CLOSE button and restart it by clicking on the Puritan Bennett™ Respiratory Insight Software icon on your desktop.
2. If this procedure has no effect, close all open applications, then restart your computer. Start the software with the Puritan Bennett™ Respiratory Insight Software icon on your desktop.

Contact your supplier if the cause of the problem cannot be determined.

6.4 Corrective actions

This section describes how to respond when an incident occurs.

The most likely incidents are as follows:

Table 6-1. Corrective actions

Alarm message or incident description	Possible reason for the incident	Potential corrective action
The application does not start.	Installation problem.	Uninstall and reinstall.
No auto detection of the memory device.	Memory device connection before application started.	Remove and reinsert USB memory device.
Adobe™* Acrobat Reader software not available.	Not installed, or version not up to date.	Download and install Adobe™* Acrobat Reader software at www.adobe.com .

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Software Specifications

Table A-1. USB memory device characteristics

Characteristics	Supported formats
USB compatibility	USB flash memory USB 2.0 or USB 1.1
Memory file format	USB 32 bit format (sector size: 512 Kb - 2048 KB)
Number of files	Maximum 999
USB size	128 MB to 4 GB

Table A-2. Data transfer characteristics

Ventilator data description	Capacity
Trends capacity	86 MB
Events capacity	512 KB or 5,500 events
Monitoring capacity	42 MB / 48 hours

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