

# Vista™ basic

## Instructions for Use



Rx Only



# WARRANTY

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## WARRANTY

B. Braun provides 24 months warranty as of the date of delivery for every Vista™ basic Infusion Pump. This includes the repair or replacement of damaged parts as a result of design/manufacturing errors or material defects. Modifications or repairs to the unit by the owner or third parties invalidate the warranty.

The warranty does not cover the elimination of faults attributable to incorrect/inexpert handling, normal wear and tear, or rechargeable batteries.

The CE mark confirms compliance with the “Council Directive on Medical Products 93/42/EEC” dated the 14<sup>th</sup> of June, 1993.

B. Braun Melsungen AG

## INSPECTION ON DELIVERY

Despite careful packaging, the risk of transport damage cannot be entirely excluded. Upon delivery, please check that nothing is missing. Do not use a damaged device! If the device is damaged, contact the Service Department. See “Maintenance, Storage, & Service.”

## RESPONSIBILITY OF MANUFACTURER

Manufacturer, assembly, and installation personnel or instructors can only be held responsible for any effects on device safety, reliability, and performance if

- ◆ Installation, expansion work, readjustments, modifications, or repairs are carried out by personnel authorized by the above,
- ◆ The electrical wiring for AC power satisfies the requirements of VDE 0100, 0107, and/or the IEC publications, or regional and/or national variations,
- ◆ The device is operated in line with the Instructions for Use, and
- ◆ Regular technical inspections (Preventative Maintenance) are carried out every 2 years as outlined in the Service Manual.

Packaging: The pump packaging is reusable.

Package Contents: Vista basic Infusion Pump, drop sensor, power cable, pole clamp, Instructions for Use.

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The Vista basic is a volumetric infusion pump intended to provide accurate and continuous flow of parenteral and enteral fluids.

Qualified medical staff should decide how the device should be used based on its features and specifications.

For more details, please read the Instructions for Use.

Rx only.

# WARNINGS & CAUTIONS

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The following should be observed to avoid patient/user injury. This Instructions for Use manual contains detailed instructions and warnings on the use of the Vista™ basic Infusion Pump. Please read it completely prior to using this device. This manual is intended to reinforce the teaching given to the user by a trained health care professional or an authorized B. Braun representative.

## WARNINGS

- ◆ B. Braun will assume no responsibility for incidents which may occur if the product is not used in accordance with product labeling.
- ◆ Make sure the pump is stable, either fastened securely to the IV pole or resting on a flat surface.
- ◆ Prior to use, always check the audible and visual alarms (and staff call, where applicable).
- ◆ Connection of pump tubing to the patient should only be made after the tubing is loaded and the unit is turned on. Disconnect tubing from patient when changing solution containers to avoid the danger of incorrect dosage.
- ◆ Ensure there are no kinks in the tubing.
- ◆ Always read and follow the instructions that accompany the source container and IV administration sets you are using. Carefully follow the instructions for loading, removing, and reloading the set, as well as the recommended set change intervals.
- ◆ Change pumping section on tubing every 24 hours. Do not use tubing for more than 72 hours or per current facility protocol.
- ◆ Always check pump data prior to starting infusion.
- ◆ Do not operate this device in environments where there is an explosion hazard! A possible explosion hazard exists if the pump is used in the presence of flammable anesthetics.
- ◆ The EMC-limits (Electro-magnetic compatibility) according to IEC/EN 60601-1-2 and IEC/EN 60601-2-24 are maintained. If the equipment is operated near other equipment which may cause high levels of interference (e.g. HF surgical equipment, nuclear spin tomography units, mobile telephones, etc.) maintain the recommended protective distances for these devices. Under certain conditions, malfunctions may occur which lead to a device alarm with permanent alarm tone. Interference may occur e.g. at electro-magnetic fields > 10 [V/m] resp. electro-magnetic discharges > [8 kV].
- ◆ Monitoring of the patient and infusion status is necessary to ensure the infusion is being delivered as anticipated. The Vista basic has been designed to stop fluid flow to the patient under certain alarm conditions. Also, prior to starting an infusion, verify that no drops are falling in the drip chamber and the programmed information is correct.

# WARNINGS & CAUTIONS

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- ◆ After starting an infusion, make sure drops are falling in the drip chamber. If no drops are falling, make sure the roller clamp is open. If the roller clamp is open and still no drops are falling, replace and dispose of the set.
- ◆ The air detector cannot recognize the introduction of air at 3-way stopcocks, infusion ports, and other lines/tubes below the pump.
- ◆ See section entitled “Drop Sensor” for additional information on using the device without a drop sensor.
- ◆ To avoid mechanical or electronic damage, do not steam autoclave or immerse the pump in any fluids or cleaning solutions. Always disconnect electrical power cord from outlet before cleaning to prevent electrical shock.
- ◆ Use only equipment, accessories, parts, and disposables that are intended for use with the Vista basic.
- ◆ Do not clean, disinfect, or sterilize any part of the device by autoclaving or with ethylene oxide gas. Doing so may damage the device and void the warranty. Only external parts of the pump should be disinfected. See “Maintenance, Storage, & Service” for suggested cleaning solutions.
- ◆ Technical specifications are not guaranteed with any other tubing than that approved for use with the Vista basic.
- ◆ Any analog and digital components connected must demonstrate that they meet EN specifications (i.e. EN 60950 for data processing equipment and EN 60601 for electrical medical equipment).
- ◆ Only an authorized system configuration technician responsible for meeting the specifications of standard EN 60601-1-1 may connect additional devices to the signal inputs or outputs.

## CAUTIONS

- ◆ Rx only.
- ◆ Do not attempt to infuse two fluids simultaneously using the Vista™ basic.
- ◆ Variations in pressure, e.g. caused by change in level of fluid container, may affect the accuracy of the device.
- ◆ If several pieces of infusion equipment are connected together, it is possible there may be mutual influence. Possible incompatibilities can be found in the instructions for use for the drug or for the other appliances.

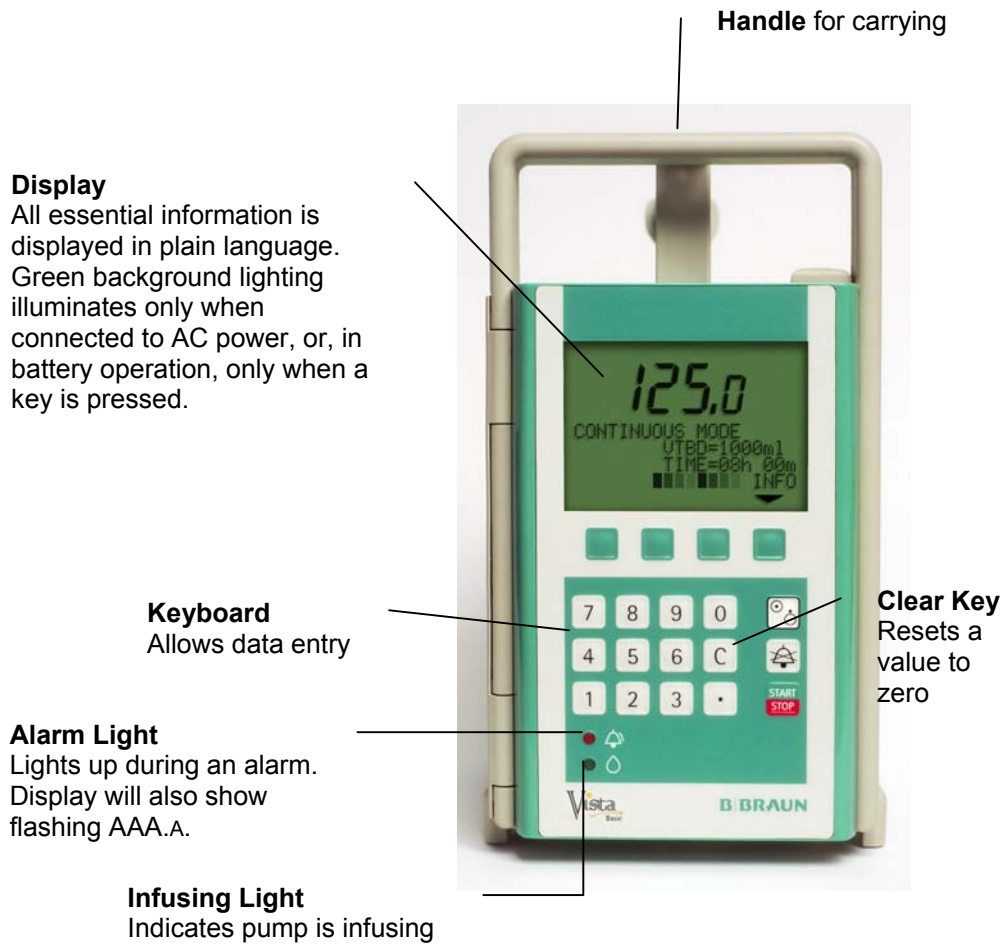
## SAFETY STANDARD

The Vista basic meets all safety standards for medical electrical devices, corresponding to IEC 60601-1 and IEC 60601-2-4.

**NOTE:** IEC 60601-1 corresponds to European Standard EN 60601.

# INTRODUCTION

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# INTRODUCTION

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# PREPARING THE INFUSION

## Prepare the Pump

1. Check for cleanliness, completeness, and damage. If unit appears damaged, do not use it.
2. Attach the pump to an IV pole by turning the knob on the pole clamp clockwise, or place the pump on a flat, stable surface.
3. Plug the pump's power cord into an electrical outlet.

## Turn on the Pump

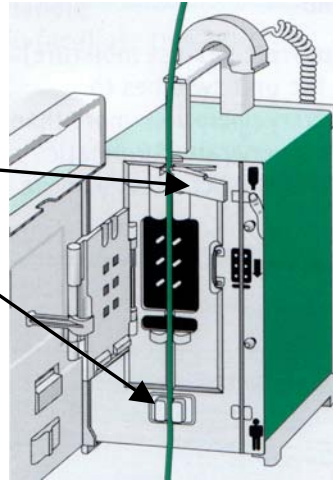
1. Press  (ON/OFF).
2. Listen for 3 loud beeps.
3. Check screen for completeness of all pixels on the display. The Alarm () and Infusing () lights will blink once.

## Load the Set



1. Prepare the solution container and prime the administration set according to

the instructions provided on the set package. Close the roller clamp.

2. Check that the drip chamber is about 1/3 full and there is no air in the set.
3. Open the pump door by pressing the Door Open Button on the top right corner of the pump.
4. Push and hold open the clamp at the top of the fluid path.
5. Insert tubing in clamp and release clamp.
6. Thread the tubing down the fluid path, making sure the tubing is pressed into the Air-in-Line detector at the bottom of the fluid path. The roller clamp should be below the pump.
7. Close the door and open the roller clamp. Check that no drops are falling in the drip chamber.
8. Place drop sensor on drip chamber (optional).
9. Connect set to patient site.



## Turning off the Pump

1. Press  to stop the infusion.
2. Close the roller clamp.
3. Press and hold  for 2 seconds.



# Continuous Mode

When the pump is turned on, it may display: **Tubing Type VISTA Pump Set**  
Confirm you are using a Vista™ Pump Set, then press **YES**.

The pump may then display: **Is This a New Therapy?**

**YES**

Begins in Continuous Mode with all data cleared.

**NO**

Returns to the beginning of the last program with all data retained.

The pump may then display: **Prime Set?**

**YES**

Press YES to begin priming set.

- Press STOP to end priming.
- Press EXIT to begin Continuous Mode.

**NO**

Begins in Continuous Mode with all data cleared.

Press the green key below your answer.

**YES**

Press YES to begin priming set.

- Press STOP to end priming.
- Press EXIT to return to the beginning of the last program with all data retained.

**NO**


Returns to the beginning of the last program with all data retained.

## CONTINUOUS MODE

This section explains how to program a Continuous Mode infusion. For directions on how to program other Modes and Options, refer to those sections later in this manual.

There are three ways to enter infusion data in Continuous Mode:


### **RATE and VTBD (Volume To Be Delivered)**

1. Enter rate in ml/hr.
2. Press VTBD (Volume To Be Delivered).
3. Enter bag volume in ml.
4. Press OK. (To leave screen without saving changes, press EXIT.)
5. Press  to begin the infusion. Check for drops in the drip chamber.


# Continuous Mode

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## **VTBD and TIME**

1. Press VTBD.
2. Enter bag volume in ml.
3. Press OK. (To leave screen without saving changes, press EXIT.)
4. Press TIME.
5. Enter infusion time in hours and minutes.  
**NOTE:** For a 2 hour infusion, enter 2, 0, 0. The pump will show: Time: 02h00m
6. Press OK. (To leave screen without saving changes, press EXIT.) The pump calculates the rate and asks: **Accept Rate?**
7. Press OK.
8. Press  to begin the infusion. Check for drops in the drip chamber.

## **RATE and TIME**

1. Enter rate in ml/hr.
2. Press TIME.
3. Enter infusion time in hours and minutes.
4. Press OK. (To leave screen without saving changes, press EXIT.)
5. Press  to begin the infusion. Check for drops in the drip chamber.

## **To Change the Rate**

1. Press  to stop the infusion.
2. Press . The display will reset to 000.0 ml/h.
3. Enter a new rate.
4. Press  to begin the infusion. Check for drops in the drip chamber.

## **To Change the Rate While Infusing**

1. Enter a new rate.
2. Press OK.  
**NOTE:** If the OK key is not pressed within 10 seconds of the change, the infusion will continue at the old rate.

# Continuous Mode

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## **KEEP VEIN OPEN RATE**

After an infusion is complete, the pump will alarm and begin pumping at 1.0 ml/hr or the current infusion rate, whichever is less.

1. Stop the infusion.
2. Turn off the pump or reset the program.

## **INFORMATION KEY**

This key is only available while the pump is infusing.


1. Press INFO.
2. The Total Infused value and the Total Time of the infusion completed are displayed.
3. Press INFO again and the Battery Left and Total Operation time of the pump is displayed.
4. The pump will return to the main infusion screen after 10 seconds.

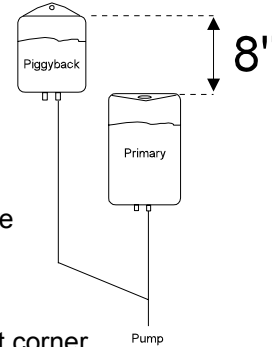
The Vista™ basic contains many options to allow custom programming. To access the various options, press OPTS while the pump is stopped. Pressing OPTS each time will move you to the next option. Eventually, the OPTS key will bring you back to the mode from which you began.

Depending on the model, some modes/options may have been disabled and will not appear on the display when the OPTS key is pressed.

## PIGGYBACK

The Piggyback feature allows programming of a secondary (Piggyback) infusion. The pump automatically switches from the Piggyback to the Continuous Mode infusion when the Piggyback program is complete. The option is only available if there is data in the Continuous Mode.

1. Connect the Piggyback set to the injection site on the tubing above the pump on the primary set. Open the roller clamp on the Piggyback set.
2. Hang the Piggyback solution container at least 8 inches above the primary solution container.
3. Program the continuous infusion in the Continuous Mode (see "Continuous Mode").
4. Press OPTS.
5. Press ON to turn the Piggyback feature on.
6. Press END. PIGY will now be displayed in the lower left corner.
7. Press PIGY.
8. Enter the Piggyback infusion data as you would Continuous Mode data.
9. Press  to start the Piggyback infusion.
10. Check that drops are falling in the Piggyback drip chamber.




**CAUTION:** Do not attempt to infuse both Continuous and Piggyback fluids at the same time. Use primary sets with check valves.

**NOTE:** To prevent incorrect delivery, the programmed Piggyback volume to be delivered must equal the amount of fluid in the Piggyback container. Automatic Piggyback is not intended for the infusion of fluids requiring flushing before and after administration.




**NOTE:** If the Piggyback container is not empty, the remaining Piggyback fluid will be delivered at the Continuous Mode rate once the pump transitions back to the Continuous Mode.

**To Exit Piggyback**


1. Press  to stop the infusion.
2. Press END.
3. Press OPTS.
4. Press OFF to turn Piggyback off
5. Press END to return to Continuous Mode.

**RAMP/TAPER MODE**

The Ramp/Taper Mode is designed to deliver infusions, such as Total Parenteral Nutrition (TPN), which require gradual ramp up and taper down rates. The pump automatically calculates the rate changes required to match the volume, total time, and ramp/taper time parameters.

1. Press OPTS until display shows RAMP TAPER MODE.
2. Press ON.
3. Enter the total bag VOLUME to be delivered.
4. Press OK.
5. Enter the RAMP UP time, in hours and minutes.  
**NOTE:** The pump defaults to 01h00m. To change, press , and enter the time.
6. Press OK.
7. Enter the TAPER DOWN time, in hours and minutes.  
**NOTE:** The pump defaults to 01h00m. To change, press , and enter the time.
8. Press OK.
9. Enter the TOTAL Time for the infusion.
10. Press OK  
**Note:** The pump calculates the maximum rate and asks: **Accept Rate?**
11. Press OK.
12. Press  to start the infusion. Check for drops in the drip chamber.


**To Review or Change Ramp/Taper Mode Data**

1. Press OPTS until display shows RAMP TAPER MODE.
2. Press ON.
3. Review the data on each screen and press OK if data is correct or press  to clear the current data and re-enter new data. Press OK to accept new data.

**To Clear Ramp/Taper Mode**


1. Press OPTS until display shows RAMP TAPER MODE.
2. Press CLR.
3. Press YES to clear all the data in Ramp/Taper Mode.
4. Press ON and continue to program a new Ramp/Taper program.

**To Exit Ramp/Taper Mode**

1. When infusion is complete, press  to stop the KVO.
2. Press EXIT.
3. Press END to return to Continuous Mode.


**Fast Taper**

The infusion can be interrupted to begin an early taper down process during the Ramp/Taper Mode Infusion.


1. Stop the infusion.
2. Press FAST.
3. Enter the FAST Taper Time in hours and minutes.
4. Press OK.
5. Press  to start the infusion. Check for drops in the drip chamber.

## PROGRAM MODE

Program Mode is for infusions requiring up to 9 separate rates and volumes to be delivered one after another. This is designed to deliver infusions for stepped oncology drugs, circadian medication delivery, and other custom programs.

1. Press OPTS until display shows PROGRAM MODE.
2. Press ON.
3. Enter the rate of the first Step.
4. Press OK.
5. Enter the volume of the first Step.
6. Press OK.
7. Continue to enter the rates and volumes for Steps 2-9.
8. If less than 9 Steps are needed, press OK with a rate of zero.
9. Press OK to accept the total Program Volume.  
**NOTE:** Pressing CHNG on this screen returns to Step 1 for review and changes.
10. Press  to start the infusion. Check for drops in the drip chamber.


### To Review or Change Program Mode data

1. Press OPTS until display shows PROGRAM MODE.  
**Note:** If Program Mode is infusing, stop the infusion and press EXIT.
2. Press ON.
3. Review the data on each screen and press OK if data is correct or press  to clear the current data and re-enter new data. Press OK to accept new data.
4. OR, press CHNG on Accept Program Volume screen (see #9 **NOTE** above).

### To Clear Program Mode


1. Press OPTS until display shows PROGRAM MODE.  
**Note:** If Program Mode is infusing, stop the infusion and press EXIT.
2. Press CLR.
3. Press YES to clear all the data in Program Mode.
4. Press ON and continue to program a new Program.

### To Exit Program Mode

1. When infusion is complete, press  to stop the KVO.
2. Press EXIT.
3. Press END to return to Continuous Mode.

**DELAY A MODE**

The start of Continuous, Piggyback, Ramp/Taper, and Program Modes may all be delayed. The Vista™ basic also provides an option to extend the Infusion Complete alarm at the end of the infusion.

1. Program the infusion.
2. Press OPTS until display shows DELAY A MODE.
3. Press ON.
4. Enter in how many hours and minutes the infusion should begin.  
**NOTE:** This is NOT a clock time like 12:30 pm.
5. Press OK.
6. Enter how long, in hours and minutes, after the end of the infusion the pump should wait before alarming.
7. Press OK.
8. Press YES if the pump should run at KVO during the delay times. Press NO if the pump should not infuse during the delay times.
9. Review the data and press OK. To change the data, press EXIT and begin with #3 above.
10. Press  to begin the delayed infusion.



**To Exit Delay A Mode**

1. Stop the infusion.
2. Press OPTS until display shows DELAY A MODE.
3. Press OFF.
4. Press END to return to the previously active mode.



**DOSAGE CALCULATION**

This feature allows a rate to be calculated given the concentration and dose.

1. Press OPTS until display shows DOSAGE CALC.
2. Press ON.
3. If concentration unit desired is other than the one displayed, press button under the mcg? until units desired appear in the CONCENTRAT. (0\*/ml) line.
4. Enter the concentration of the solution. If the concentration of the solution is not known, go to #6 below. Press  to clear current data and re-enter new data.
5. Press OK.
6. To calculate the concentration of the solution, use ← to move the \* to the mg field. Enter the amount of drug in the solution. Then press → to move the \* to the ml field. Enter the amount of solution.
7. Press OK.
8. Enter the body weight if part of the dosing parameters, then press OK. If body weight is not part of the dosing parameters, press OK with 0 in the body weight field.
9. If time unit desired is other than the one displayed, press button under the /h? until time unit desired appears in the first line. Enter the dose or use → to move the \* to the rate field and enter the rate.
10. Press OK.
11. Press  to begin the infusion.

**To Review Data During Infusion**

1. Press INFO twice.

**To Exit Dosage Calculation**

1. Stop the infusion.
2. Press OPTS until display shows DOSAGE CALC.
3. Press OFF.
4. Press END.

# OPTIONS

## Bolus Mode, Interval Bolus (Intermittent Mode)

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### **BOLUS MODE**

This feature allows a bolus to be given during a Continuous Mode infusion.


1. Press OPTS until display shows BOLUS MODE.
2. Press ON.
3. Press RATE.
4. Enter the rate at which the bolus should infuse, then press OK.
5. Press END.
6. To give a bolus during the infusion, press BOL.
7. Enter the amount of bolus to be given in ml.
8. Press OK.

### **Bolus Without Entering a Volume**

1. During the infusion, press BOL and hold down until a second BOL is displayed to the right.
2. Continue to hold down the first BOL while also pressing the second BOL.  
A bolus will be given as long as both BOL keys are held down. The pump will display the amount of bolus being administered and will beep once after each milliliter delivered.

### **INTERVAL BOLUS (INTERMITTENT MODE)**

The basal/KVO rate and entire bag volume must be entered in CONTINUOUS MODE first.

1. Press OPTS until display shows BOLUS MODE.
2. Press ON.
3. Press TIME.
4. Enter the time between the start of each dose, then press OK.
5. Press RATE.
6. Enter the rate at which the dose is to be given, then press OK.
7. Press VTBD.
8. Enter the volume of each dose, then press OK.
9. Press END.
10. Press . The pump will deliver at the basal/KVO rate for the interval time, then begin delivery of the first dose.

**TOTAL INFUSED**

The Total Infused information screen displays the total amount of fluid in ml that has been pumped since the last time the Total Infused was cleared.

**To Clear the Total Infused**

1. Press OPTS until display shows Tot Infused=.
2. Press .
3. Press END.

**STANDBY**

This function allows the pump to be put on standby while retaining all set infusion data. This function is only available in Continuous Mode.

1. Press OPTS until display shows STANDBY
2. Press ON.
3. Enter time in hours and minutes the pump is to stand by.
4. Press  to clear the current data and re-enter new data. Press OK to accept new data.
4. Press OK.

The pump will count down to zero and then alarm **Pump Stopped!**

**To Exit Standby Function**

1. Press EXIT to return to Continuous Mode.

**Note:** If countdown has already started, press END to return to Continuous Mode.

## OPTIONS Occlusion Pressure, Drop Sensor, Battery

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### **OCCLUSION PRESSURE**

The pressure at which a downstream occlusion alarm will be triggered may be varied. The higher the pressure limit, the less sensitive the pump is to changes in fluid resistance.

1. Press OPTS until display shows OCCLUSION PRESSURE.
2. Press (--) to change pressure to Low. Press (+) to change pressure to High.
3. Press END to return to Continuous Mode.

**NOTE:** Low corresponds to approximately 8 PSI and high to approximately 17 PSI.  
High pressure limits may increase the severity of an infiltration without alarming.

### **DROP SENSOR**

Using a drop sensor eliminates the need for pre-setting a VTBD in Continuous Mode and senses upstream occlusions and empty solution containers.

**NOTE:** Turning the Drop Sensor feature off forces volumes to be entered and prevents sensing of upstream occlusions.

#### **To Turn On the Drop Sensor**

1. Press OPTS until display shows DROP SENSOR.
2. Press ON.
3. Press END to return to Continuous Mode.

#### **To Turn Off the Drop Sensor**



1. Press OPTS until display shows DROP SENSOR.
2. Press OFF.
3. Press END to return to Continuous Mode.


### **BATTERY CAPACITY**

This is an indicator of the remaining battery time in hours and minutes. This screen also indicates the amount of time the pump has been in operation.

1. Press OPTS until display shows Battery Left =.
2. Press END to return to Continuous Mode

**DATA LOCK**

This feature prevents unauthorized use by locking out all keys except , ,

, and .

1. Press OPTS until display shows DATA LOCK.
2. Press ON.
3. Press END to return to Continuous Mode.

**To Turn Off Data Lock**

1. Press OPTS until display shows DATA LOCK.
2. Press the decimal key.
3. Press OFF.
4. Press END to return to Continuous Mode.

**CONTRAST SELECTION**

This feature allows the contrast of the screen to be changed for best possible viewing.

1. Press OPTS until display shows CONTRAST SELECTION.
2. Press (+) to increase the contrast (make the text darker). Press (-) to decrease the contrast (make the text lighter).
3. Press END to return to Continuous Mode.

**ADJUST CLOCK**

This feature allows the time and date to be changed.

1. Press OPTS until display shows ADJUST CLOCK.
2. Press DAT to enter the date. (Press  to clear the current data and re-enter new data.)
3. Enter the date using two digits for month, day and year.  
**Example:** November 5, 2001 is entered as 11 05 01
4. Press OK
5. Press TIME to enter the time of day.  
**Note:** The time is set using 24 hour Military Time.  
**Example:** 6:30pm is entered as 18:30
6. Press OK
7. Press END to return to Continuous Mode.



**LOUDNESS**



This feature allows the volume of the alarm tone to be changed.

1. Press OPTS until display shows LOUDNESS.
2. Press (+) to increase the alarm volume. Press (-) to decrease the volume.
3. Press END to return to Continuous Mode.

# OPTIONS

# Alarms

In alarm situations, press  to silence the alarm. Correct the problem. Resume the infusion by pressing .

Alarm	Possible Cause	Action
Air-In-Line!	Air bubble in air-in-line sensor	Remove air from system
Check Drop Sensor!	Solution container empty	Replace solution container
Free Flow!	Roller clamp closed	Open roller clamp
Not Enough Drops!	Set loaded incorrectly	Re-load set
Too Many Drops!	Kinks, closed clamps, or blockage	Check for blockage
	Droplets on wall of drip chamber	Shake drip chamber
	Drop sensor out of position	Reposition drop sensor
Door Open!	Door opened during infusion	Close door
Dwnstream Occlusion!	Downstream tubing kinked	Correct kinks
	Filter blocked	Correct blocked filter
	Closed clamp	Open clamps
	IV positional or infiltrated	Check IV site
	Catheter or vein too small	Increase occlusion limit
	Occlusion limit too low	
Invalid data!	Entered data is out of range	Press  ; re-enter data
Keep Vein Open Rate: Infusion Complete	Programmed infusion is complete	Stop infusion
Low Battery!	30 minutes until battery is fully discharged	Silence alarm and connect pump to AC power
Plug In Now!	Battery is discharged	Connect pump to AC power
Pump Stopped!	No key panel activity for 2 minutes or Standby time expired	Silence alarm; begin infusion
Unit Malfunction!	Internal error	Press  until display reads: "Do not press any key until display is off;" wait until pump turns off, turn device on. If alarm repeats, return for service.

# AC, 12 V, BATTERY, & CC INTERFACE

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## AC and 12 V

- ◆ Check AC voltage as per rating label.
- ◆ Insert/screw on power lead (12 V lead in ambulance car) on back.

## Battery Operation

- ◆ Switching to internal battery is automatic in the event of power failure or if 12 V or AC is not connected.
- ◆ Charge battery on initial use, following a battery alarm, or after 2 months of non-use.
- ◆ Charging time: approx. 16 hours. Longer charging has no detrimental effect.
- ◆ Full battery provides operation for 3.0 hours at highest delivery rate.
- ◆ Battery capacity is approx. 50% after 2 years.
- ◆ The service life of the battery can be extended by completely discharging it from time to time and then fully recharging it on AC power.

## CC Interface

Interface descriptions available from B. Braun. Connection to interface input uses MFC plug.

### Documentation

- ◆ All operating data of the Vista™ basic can be called up and logged via external computer



# MAINTENANCE, STORAGE, & SERVICE

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## Maintenance

Clean the pump with a soft, lint-free cloth or swab dampened with soap and water, a general non staining chemical disinfectant, isopropyl alcohol (15%), derivatives of phenylphenol (5%) or ammonium chloride (10%).

As a general recommendation for cleaning and disinfecting this device, use a lint-free cloth dampened (not soaked) with a 0.5% bleach (Sodium Hypochlorite) solution (10% solution with water). The solution is most effective when prepared weekly and allowed to remain on the device for approximately 10 minutes prior to wiping off.

- ◆ Do not use acetone solutions containing glutaraldehyde or abrasive cleansers on the pump. If necessary, Betadine or Iodine solutions may be used, but they will stain the pump.
- ◆ Do not use abrasive cleaning tools or pressurized spraying devices as these may damage the device.
- ◆ Do not sterilize the pump using ethylene oxide (EtO) gas.
- ◆ Do not steam autoclave or immerse the pump in any fluids or cleaning solutions.
- ◆ Always turn off the pump and disconnect it from the electrical outlet prior to cleaning.

## Storage

Store the pump away from excessive heat, cold, or humidity. Keep devices plugged into electrical power during storage.

## Service

If the pump fails to respond to the operating or troubleshooting procedures listed in this manual and the cause cannot be determined, discontinue use and forward it to an authorized B. Braun Service Center.

Should it be necessary to return a pump for repair, contact Technical Support at B. Braun Customer Service at 800-627-PUMP. A Returned Materials Authorization number will be provided. Carefully pack the pump (preferably in the original packing) and ship it prepaid to:

B. Braun Medical Inc.  
Attn: Service Manager  
1601 Wallace Drive  
Suite 150  
Carrollton, TX 75006 USA

B. Braun cannot assume responsibility for loss or damage to returned pumps while they are in transit.

Product complaints may be sent to the Quality Manager at the above address. With each complaint, please include pump serial number and full description of difficulty, including all settings, types of fluids, times, and alarm messages. Return set used if possible. Contact Technical Support for an RMA number prior to return.

# SPECIFICATIONS

<b>Mechanism</b>	Linear peristaltic volumetric infusion pump
<b>Dimensions WxHxD</b>	5.5 in (14cm) x 9.4 in (24cm) x 7.8 in (20cm)
<b>Weight</b>	6.8 lbs. (3.1 kg)
<b>Power Requirements</b>	100-120 VAC, 50-60 Hz, 13 Watts
<b>Leakage Current</b>	Max 30 $\mu$ A
<b>Battery</b>	7.2V, 1.2 Ah NiCd (rechargeable)
<b>Battery Operating Time</b>	$\approx$ 3.5 hours at 125 mL/hr
<b>Rate Range</b>	0.1 to 800.0 mL/hr in 0.1 mL increments with Vista™ tubing
<b>Volume to be Infused Range</b>	0.1 to 9999.9 mL
<b>Occlusion Pressure</b>	Variable Settings Low: 8 PSI High: 17 PSI
<b>KVO Rate</b>	1 mL/hr or selected rate, whichever is lower
<b>Flow Rate Accuracy</b>	$\pm$ 5% measurement time 8hr, temp. 71.6° F
<b>Alarms</b>	Air-in-Line, Low Battery, Plug In Now, Bag Empty, Downstream Occlusion, Door Open, Pump Stopped, KVO, Unit Malfunction
<b>Air-in-Line Alarm</b>	Air bubble size 0.3mL* or 1.5mL/hr** *Can be set from 0.01 to 0.3 mL in service program **Can be set from 0.5 to 3.5 mL/hr in service program
<b>Memory</b>	User option to retain last Continuous and Piggyback Mode data upon power up. Permanent data retention in Program and Ramp/Taper Modes after pump is turned off
<b>Tubing</b>	B. Braun Vista™ administration sets
<b>Modes/Features</b>	Continuous and Piggyback Modes, Program Mode for variable infusions, Ramp/Taper Mode for TPN infusions and Delay A Mode for postponing infusion start and finish
<b>Operating Temperatures</b>	Operating: 64.4° F to 95° F, 10.15 PSI to 15.37PSI Non-Operating: -13° F to 131° F, 10.15 PSI to 15.37 PSI



B. Braun Medical Inc.  
824 Twelfth Ave.  
Bethlehem, PA 18018

Tel 800-227-2862  
[www.bbraunusa.com](http://www.bbraunusa.com)

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