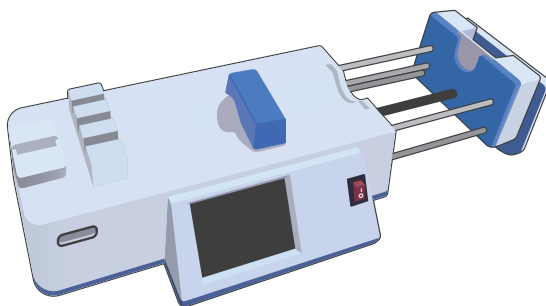


PortaScope.com

**Veterinary Automated
Peritoneal Dialysis Device**



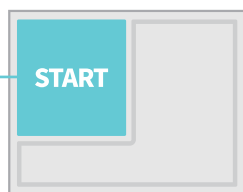
User Manual

FOR VETERINARY USE ONLY

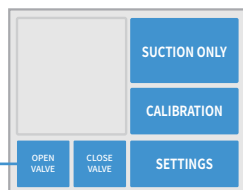
DIRECTORY

peritoneal dialysis	01
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02.Perform Priming	07
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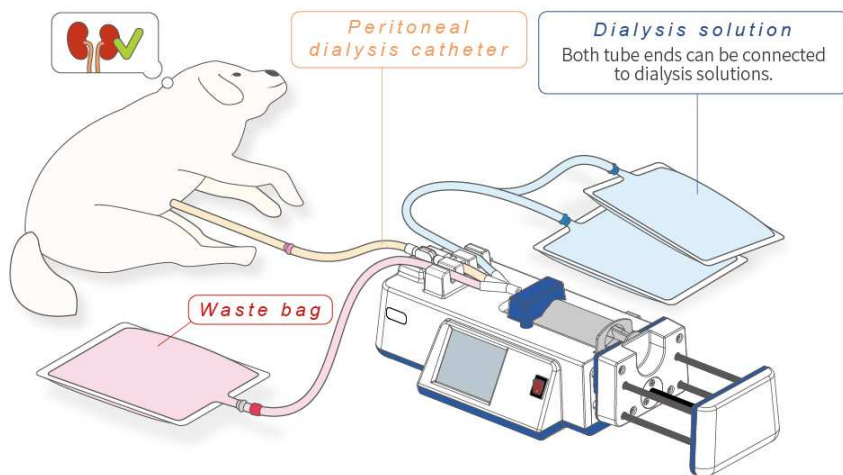


Suction Function	16
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Peritoneal dialysis

Multi-way automated valves reduce risk of infection.

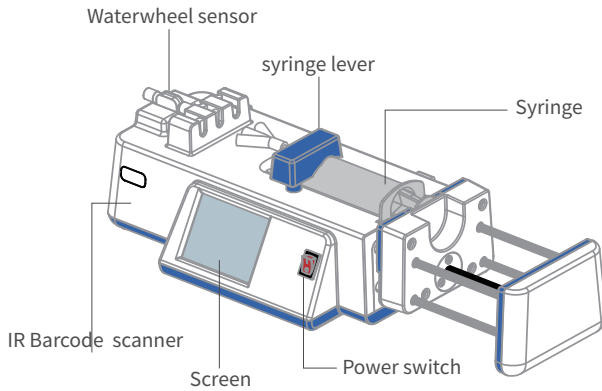
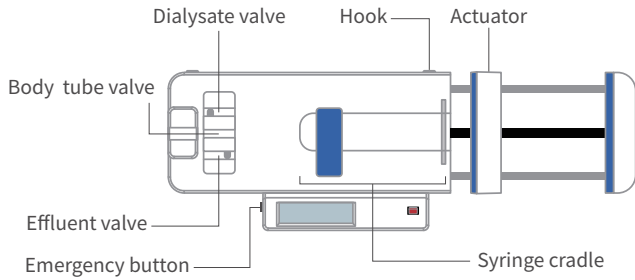


Product Identification

CPU	1G Hz
Memory	1GB/512MB (Flash/RAM)
Monitor	3.5",320x240 pixel RGB touch panel
Wireless Network	802.11 b/g/n
Injection rate	1-5 variable
Extraction rate	1-8 variable
Dwell time	1-180 min
Total Dialysis volume	30-10000 ml
Dialysate/patient weight	10-80 ml/kg
Flow detection	enable/disable
Dialysis record storage	1000 patient records
Event log	automatically recorded
Dialysis status posting	real time
Software upgrade	OTA via WIFI

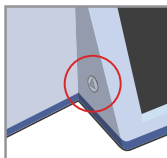
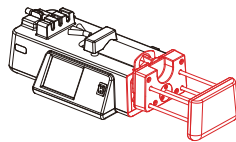
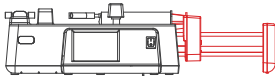
Flexible operation

- 1.Dwell time and dialysate/patient weight changeable ; replenish dialysate during dialysis
- 2.Pause or terminate dialysis at any time ; store/recall pre-dialysis and post-dialysis blood information



WARNING

Avoid touching the parts shown in red (see diagram, below) while operating the device.



EMERGENCY BUTTON: Depressing this button for 10 seconds forces the device to immediately shut down.

01 START

01. Enter Tubing Barcode

02. Perform Priming

03. Enter Medical Record

04. Perform Peritoneal Dialysis



Barcode expired

The dialysis tubing associated with that barcode expired at 08:44 on 2010/01/02. Please use a new set of tubing.

NEW

CANCEL

1. Tubing barcode has expired.

Select **NEW** to scan new tubing barcode.

Select **CANCEL** to return to the main page.

Once scanned, the barcode associated with a new set of tubing is valid for up to 48 hours of continuous use. To lower the risk of infection, we do not recommend using the same set of consumables (tubing, syringe, etc...) for more than 24 hours. Tubing should be discarded after use. Never clean and re-use tubing - discard it and open a new, sterile set of consumables.

Please scan barcode or skip

SCAN

KEY IN

SKIP

CANCEL

2. Scan or Key-in tubing barcode

To scan the barcode, select **SCAN** and place the tubing barcode in front of the scanner (see diagram below).

To manually enter the tubing barcode, select **KEY IN**.

Select **SKIP** to continue using the previously-scanned tubing barcode (provided it is not expired).

Select **CANCEL** to go back to the main menu.

01. Enter Tubing Barcode

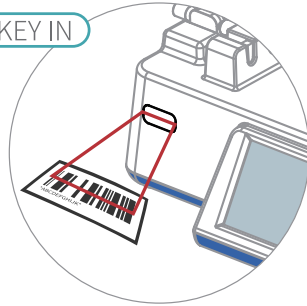
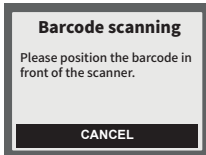
You can use A or B to enter the tubing barcode.

A. SCAN

B. KEY IN

A. SCAN

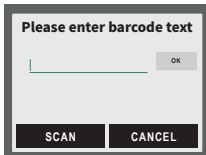
Barcode scanning



Scan the barcode by holding it in front of the scanner (see right illustration). or select **CANCEL** to return to the previous screen.

B. KEY IN

Enter barcode manually



Barcode text position



Press inside the data entry area and then use the displayed keypad to enter the barcode text. (Use this option if the barcode can't be scanned)

Barcode accepted and expiration date logged.

Select **OK** to continue.

The consumables (syringe and tubing) will expire at the time shown.

From the time of first use, the consumables will expire in 24 hours, or 48 hours if used continuously.

Barcode accepted

The dialysis tubing will expire in 24 hours, at 08:35 on 2010/01/02.

OK

4.The barcode is successfully scanned.

Select **OK** to go to next page.

The expiration time is **24 hours** after scanning this barcode. It can be used continuously for up to 48 hours. The dialysis process will be forced to stop after 48 hours,for the installation of a new set of tubing

ATTENTION

If there is a syringe present in the syringe cradle please lift it out.

OK

5.Actuator homing

In order for the syringe to be installed , the actuator has to move itself to the proper position. Press **OK** to proceed.

Please install syringe and tubing, press OK to perform priming.



OPEN VALVE

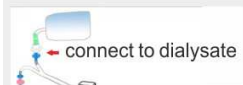
OK

6.Syringe and tubing installation

Install the syringe into the syringe cradle (scale-side down) and make sure that the barrel flange and plunger flange go into their respective slots.

01. Enter Tubing Barcode
- 02. Perform Priming**
03. Enter Medical Record
04. Perform Peritoneal Dialysis

Need to perform priming?



YES

SKIP

1. Perform priming

Connect connector to dialysate then.

Select **YES** to start priming or press **SKIP** to skip priming.

NOTE: This process should be performed aseptically.

Priming

The device is now going through the priming process. Please wait.

2. Priming in progress

The device is performing priming.

PRIMING COMPLETE

REPEAT
PRIMING

START
DIALYSIS

3. Priming complete.

Select **REPEAT PRIMING** to perform priming again.

Select **START DIALYSIS** to begin dialysis.

03 START

01. Enter Tubing Barcode

02. Perform Priming

03. Enter Medical Record

04. Perform Peritoneal Dialysis



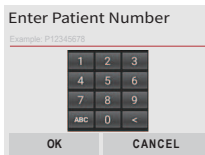
Patient Menu

Press **NEW** **Part A** to enter new patient information.

Press **HISTORY** **Part B** select patient information in history.

Press **BACK TO HOME** to return to the main page.

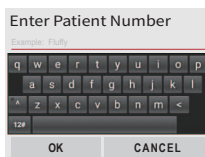
A. NEW PATIENT



1. Enter the patient's number.

Enter patient's medical record number and press **OK** to go to next page.

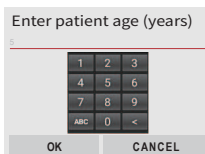
Select **CANCEL** to return to the previous page.



2. Enter the patient's name.

Enter patient's name and press **OK** to go to next page.

Select **CANCEL** to return to the previous page.



3. Enter the patient's age.

Enter the patient's age and press **OK**.

Select **CANCEL** to return to the previous page.

Enter total dialysate supply(30~10,000ml)

0				
1	2	3	4	OK
5	6	7	8	
9	0	.	DEL	CANCEL

4. Enter the volume of dialysate

Enter total dialysate supply(30~10000ml).

Select **CANCEL** to return to the previous page.

Enter patient weight (0.1 - 50 kg)

0				
1	2	3	4	OK
5	6	7	8	
9	0	.	←	CANCEL

5. Enter the patient's weight (in kg)

Enter patient weight and press **OK** to go to next page.

Select **CANCEL** to return to the previous page.

Enter vol. of dialysate per kg (ml)

10	20	30	40
50	60	70	80
-	Current: 40	+	
OK		CANCEL	

6. Enter dialysate volume (in ml) per kilogram of weight

The minimum volume is 10, while the maximum volume is 80. The default volume is 40. Press **+/-** to increase / decrease in 5 ml increments.

Select **CANCEL** to return to the previous page.

Dwell time? (in min)

10	20	30	40
50	60	70	80
-	Current: 40	+	
OK		CANCEL	

7. Set dwell time

Use these settings ?

Dialysate supply :150ml
Total rounds: 3
ml/round:50ml
Dwell time: 1 mins

YES

NO

8. Confirm settings

Select **YES** to apply the current settings.

Select **NO** to return to setting screen.

Ready to start dialysis
Connect body tube to dialysis catheter



OK

9. Syringe installation reminder

Connect body tube to dialysis catheter and press **OK**.



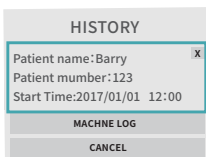
Patient Menu

Press **NEW** **Part A** to enter new patient information.

Press **HISTORY** **Part B** select patient information in history.

Press **BACK TO HOME** to return to the main page.

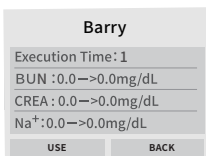
B.HISTORY



1. Select patient's data

Swipe up and down on screen (between HISTORY and MACHNE LOG) then touch screen to select current patient data.

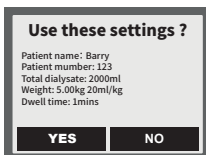
Select **CANCEL** to return to the previous page.



2. Patient's data

Press **USE** to select this patient data.

Press **BACK** to return to the previous page.



3. Whether to use these settings

Select **YES** to use these settings.

Select **NO** to return to the previous page.

- 01. Enter Tubing Barcode
- 02. Perform Priming
- 03. Enter Medical Record
- 04. Perform Peritoneal Dialysis**

Note: During the first two rounds of treatment, some dialysate may remain in the abdominal cavity of the patient. It will be drained out gradually during later rounds.

<-:0ml ->:0ml

Round 1 of 3
Injection: On-going
Dwell time:
Extraction:

PAUSE

OPTION

Tubing will expire in 21 hours 53 minutes

1. Perform peritoneal dialysis

The screen displays the following information:
Current round / total number of rounds.
Action (injection / extraction) currently in progress.

<-: The volume of dialysate injected into the abdominal cavity.

->: The volume of dialysate extracted from the abdominal cavity.

Press **PAUSE** **Part A** in case of any problem during operation or if you wish to interrupt the treatment. The expiration time of the dialysis tubing is shown at the bottom of the screen (Press **PAUSE** for more than 1 second to pause dialysis). Select **OPTION** **Part B** to options screen.

BUN CREA Na⁺ K⁺ Cr

pre-dialysis 0

mg/dL

1	2	3	4	OK
5	6	7	8	
9	0	.	←	

CANCEL

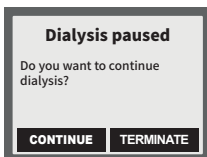
2. Enter the pre-dialysis

Enter pre-dialysis post-dialysis blood chemistry information and press **OK** to go to next page.

Select **CANCEL** to skip this page.

04 START

A. PAUSE



Dialysis paused

Select **CONTINUE** to resume dialysis.

Select **TERMINATE** to stop the treatment.



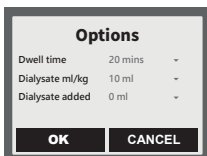
Extract the remaining dialysate?

After pressing **TERMINATE**.

Select **YES** to extract then go to next step.

Select **NO** to go to next step.

B. OPTIONS



Options

Settings for dwell time and dialysate ml/kg or adding dialysate during the treatment.

Any changes made will go into effect in the following round.

Press **OK** to apply changes.

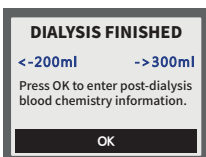
Press **CANCEL** to undo.



Option to remove syringe and tubing

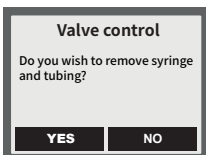
Select **YES** to unlock the valves and remove syringe and tubing.

Select **NO** to lock the valves (both dialysis and body tube) and return to the main page.



4. Dialysis finished

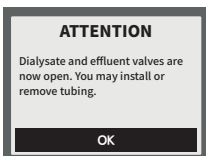
Select **OK** to go to next page.



5. Whether to remove the syringe and tubing

Select **YES** to unlock the valves and remove syringe and tubing.

Select **NO** to lock the valves (both dialysis and body tube)and go to step6.



6. Remove the tubing.

Please remove the tubing(dialysate and efflent tube).

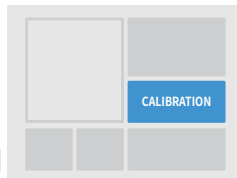
Then select **OK** to next page and remove bodytube.



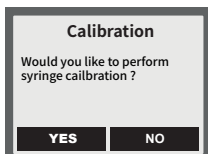
7. Enter the post-dialysis

Enter post-dialysis blood inforation item by item and press **OK**.

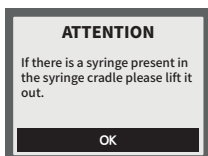
Select **CANCEL** to return to the main page.



Follow these instructions to calibrate the device (do this whenever starting a new course of dialysis and/or changing to a new syringe and tubing)



1. Perform Syringe Calibration.



2. Syringe removal

If the syringe has already been installed into the syringe cradle, remove it from the syringe cradle and select **OK**.

Note: At this point the Actuator will move to the setup position.



3. Syringe installation

Install the syringe into the syringe cradle, scale-side facing down. Make sure that the plunger flange goes into the slot in the actuator.

Secure the syringe with the syringe lever. Select **OK** to start 0ml calibration.



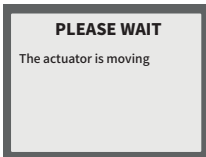
4. "0 ml" Syringe calibration

Select **LEFT/RIGHT** (press and hold) to adjust the position of the plunger until it is at the 0ml mark on the syringe.

Select **NEXT** to perform 50ml calibration.

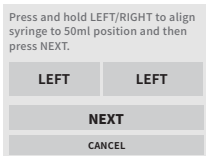
Select **CANCEL** to return to the previous screen.

ATTENTION: When moving the plunger to the left, do not allow the plunger to reach the bottom of the syringe where it can go no further. Doing so may shorten the life of the actuator.



5. Moving

The actuator will move the plunger to the approximate 50ml position of the syringe.



6. "50 ml" Syringe calibration

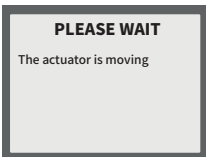
Select **LEFT/RIGHT** (press and hold).

to adjust the position of the plunger until it is at the 50ml mark on the syringe.

Select **NEXT** to complete syringe calibration.

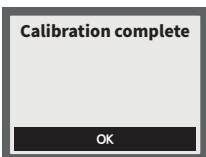
Select **CANCEL** to return to the previous screen.

ATTENTION: When moving the plunger to the right, please do not allow the plunger to reach the top of the syringe where it can go no further. Doing so may shorten the life of the actuator.



7. Moving

The actuator will move the plunger back to the 0ml position of the syringe.



8. The syringe calibration is completed.

Select **OK** to return to the main page.

SUCTION

MAIN MENU SUCTION FUNCTION



Before proceeding, make sure the Y-tube is connected to the syringe.



1. Enter the volume of fluid to be extracted.

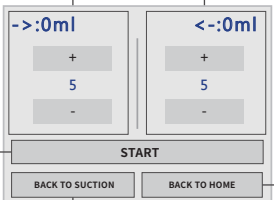
Changes made on this screen will become effective in the next cycle.

The fastest speed is 8 | The slowest is 1 | The default speed is 5

<p>->:0ml</p> <p>The amount of fluid extracted is shown on the top-left</p> <p>+ / - 5</p> <p>The speed column on the left allows the extraction rate to be set</p>	<p><-:0ml</p> <p>The amount of fluid that has been pushed to the waste bag is on the top-right</p> <p>5 + / -</p> <p>The right column allows the speed of the injection into the waste bag to be set</p>
---	--

EXTRACTION

INJECTION



[START / STOP]

Press **START** to begin suction.
Select **STOP** to stop the current action.
Resume the process by selecting **START**.

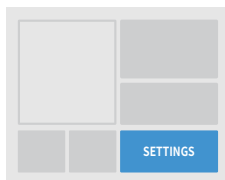
[BACK TO HOME]

To return to the main page. Press **STOP** first.
Press more than 1sec.

[BACK TO SUCTION]

To return to previous page. Press **STOP** first.
Press more than 1sec.

MAIN MENU ▼ SYSTEM SETTINGS

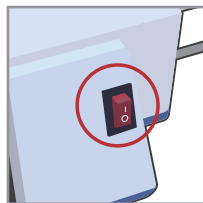
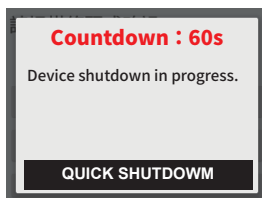
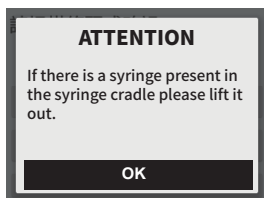


SETTINGS

System Settings
Wi-Fi
Touch Calibration
Date/time
Display
Speed
Body Tube Flow Detection ▶
Language
Reset to Default
System Update
About
BACK

- Connect to network
- Touch Calibration
- Set Date / time
- Adjust the brightness of the screen
- Adjust Injection/extraction speed
- Detect fluid flow direction
- Set display language(English,Chinese...)
- Reset settings to factory defaults
- Update system software
- Current system and APP version
- Press **BACK** to go to the previous page

SHUTDOWN



Please remove the syringe and all the tubing before shutting down.
Press **OK** after removing the syringe and tubing.
The actuator will reposition itself and then the device will automatically begin 60s countdown. Press **QUICK SHUTDOWN** to shut down immediately.

