

## POSITIONING OF ENDO P<sup>®</sup> AND ENDO H<sup>®</sup>

When placed on an equipment cart the ENDO P<sup>®</sup> should be at least 10 cm below the patient's median line and approximately 50 cm from the ground. When placed on the Bonvisi Tower (shown below) the ENDO P<sup>®</sup> will be 50 cm from the ground which is **ideal**.

Place the ENDO H<sup>®</sup> on the lowest shelf.

Place the ENDO P<sup>®</sup> on the shelf above the ENDO H<sup>®</sup>.

## BONVISI TOWER

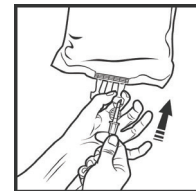


## CONNECTING THE DAY CASSETTE

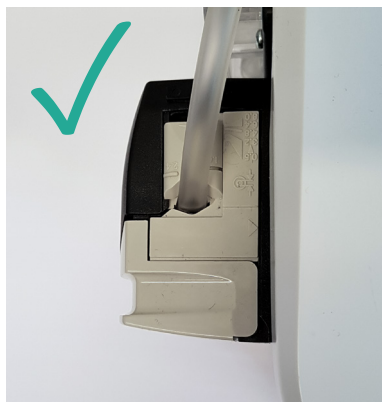
The Day Cassette can be used for more than one patient for an operating session up to 12 hours of continuous use.

**Personnel not wearing sterile scrubs, use aseptic technique:**

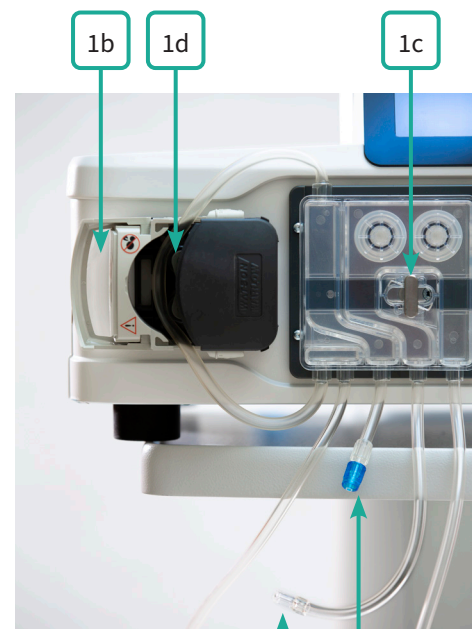
1. Open the sterile packaging and remove the cassette and associated tubes. Close all three clamps. Remove the protective cap from one of the cannula spikes and connect it to a bag of sterile irrigation fluid Fig.1a. If two irrigation bags are to be used the other cannula should be connected to a second bag in the same manner.
2. Open the light-grey cover Fig. 1b on the left pump by moving it to the left. Check that the metallic key Fig. 1c on the cassette holder is in the horizontal position, then slide the cassette into place over the key until it clicks into place and is in contact with the front of the ENDO P<sup>®</sup>. Secure the cassette to the pump by turning the key 90° to the right.
3. It is important to place the tubing loop centred over the black wheel on the left pump, see Fig 1d and Figs. 1g. Close the light-grey cover by moving it to the right.
4. If ENDO H<sup>®</sup> is not used, the connections for this must be connected to one another: Complete this by connecting tubes Fig. 1e and Fig. 1f to one another using the Luer connectors. If ENDO H<sup>®</sup> is used connect the Endo H<sup>®</sup> Heater Bag as instructed in the next chapter.
5. Check that all Luer locks are securely tightened.
6. Open the clamp for the primary bag of irrigation fluid.



1a



1g



1f

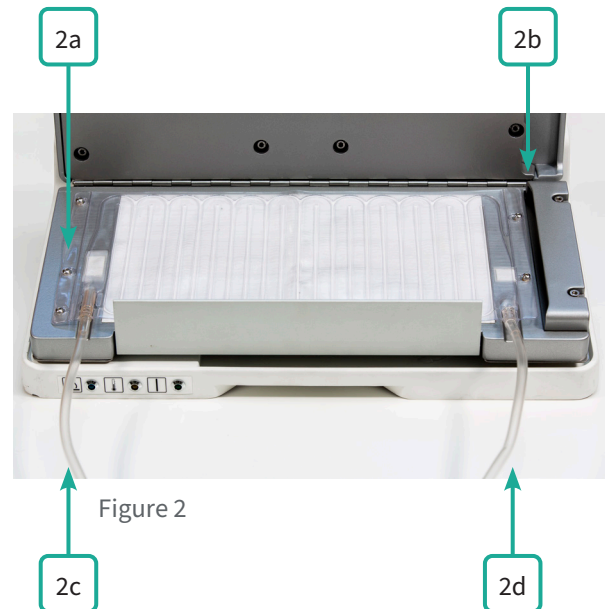
1e

Figure 1

## CONNECTING THE HEATER BAG

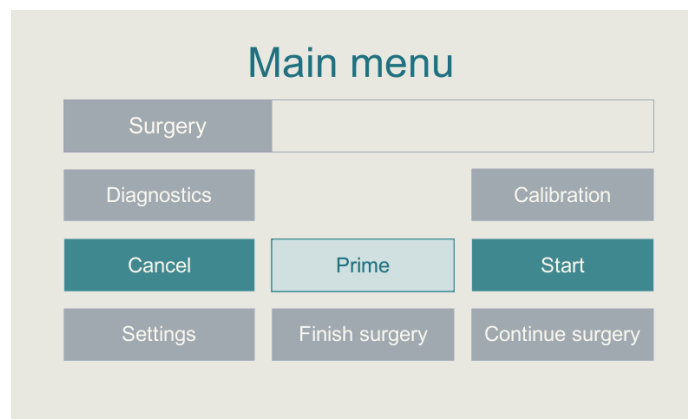
**Personnel not wearing sterile scrubs, use aseptic technique:**

1. Place the three holes of the Heater bag over the three studs on the left side of the ENDO H<sup>®</sup> heater plate Fig. 2a. Place the Heater Bag's two holes on the two studs on the right side of the ENDO H<sup>®</sup> Fig. 2b.
2. Press firmly to close the ENDO H<sup>®</sup>.
3. Connect the Endo H<sup>®</sup> Bag tubes to the Day Cassette by connecting Fig. 2c to Fig. 1f, then connect Fig. 2d to Fig. 1e.
4. Check that the cable between ENDO H<sup>®</sup> and ENDO P<sup>®</sup> is correctly connected to the rear of both devices.
5. Plug the ENDO H<sup>®</sup> power cord into the earthed outlet.
6. Turn ON power by using the switch located on the rear of the unit. In a few seconds, the power-on LED (green) and heating LED (blue) will be lit.



## PRIMING THE DAY CASSETTE

1. Make sure that all clamps on the Day Cassette are open.
2. Make sure the tubing is not kinked or obstructed by a wheel from for example the equipment in the operating room.
3. Make sure that the instrument's inflow and outflow ports are fully open.
4. The Patient Cassette should not be primed.
5. From the Main Menu press **Prime** and **Start**
6. Once the fluid reaches the end of the Day Cassette tubing press **Standby** to stop the flow.
7. The Day Cassette will not fill completely – this is normal.



## CONNECTING THE PATIENT CASSETTE

### Personnel wearing sterile scrubs:

1. Remove the Irrigation Tube from the Patient Cassette packaging. Close the clamp on the Irrigation Tube and check that the Luer connectors are securely tightened. Remove the transparent cap from the Luer connector and connect it to the inflow channel on the instrument. If the Luer connector does not fit, it can be cut off using sterile scissors and the tubing pushed into position on the inflow port. Now pass the Irrigation Tube over to the nonsterile (circulating) staff for connection to the Day Cassette.
2. Remove the Patient Cassette from the packaging. Remove the transparent cap from the red Luer connector and connect it to the outflow port on the instrument. If the Luer connector does not fit, it can be cut off using sterile scissors and the tubing pushed into position on the outflow port. Now pass out the Cassette over to the nonsterile (circulating) staff for connection to the ENDO P<sup>®</sup> pump.

### Personnel not wearing sterile scrubs:

1. If a used check valve remains from a previous procedure, this must be removed from the Day Cassette tubing, see Fig. 3a.
2. Connect the Irrigation Tube to the blue Luer connector furthest to the right on the Day Cassette. See Fig. 3b.
3. Open the light-grey cover Fig. 3c of the right pump by moving it to the right. Check that the metallic key on the cassette holder Fig. 3d is in the horizontal position. Slide the cassette into place over the key until it clicks into place and is in contact with the front of the Endo P<sup>®</sup>. Secure the cassette to the pump by turning the key 90° to the right.
4. It is important to place the tubing loop centred over the black wheel on the right pump Fig. 3e. Close the light-grey cover by moving it to the left.
5. The tubes that run from the cassette must run freely down from the cassette without being twisted.
6. Check that all Luer locks are securely tightened. Open all clamps.
7. Place the tube labelled WASTE into a non-conductive waste container. Make sure that nothing blocks the flow and do not connect any active device such as suction pumps to the tubing of the ENDO P<sup>®</sup> disposables. (!)

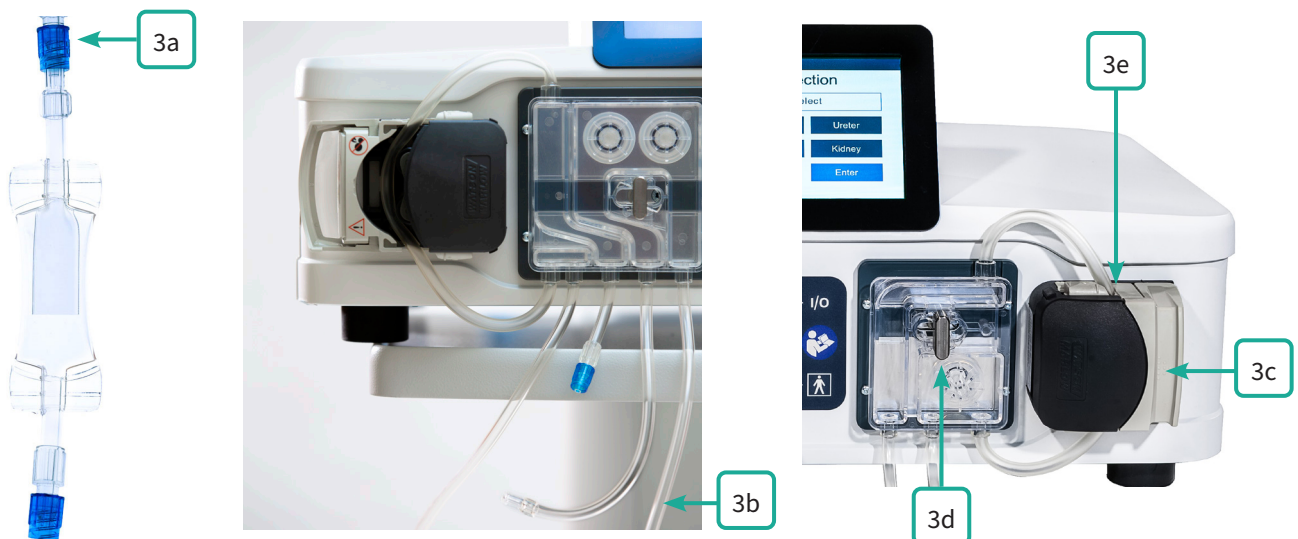


Figure 3

## DISCONNECTION OF SINGLE-USE MATERIALS AFTER SURGERY

### WHEN MULTIPLE SURGERIES WILL BE PERFORMED ON THE SAME DAY

#### Personnel not wearing sterile scrubs, use aseptic technique:

1. The connections to the Heater Bag should be left in place. No adjustments needed.
2. Close all tube clamps on the Irrigation Tube, Patient Cassette and Day Cassette. Ensure that the white clamp on the Day Cassette's tube furthest to the right Fig. 4a is closed.
3. Disconnect the Irrigation Tube and Patient Cassette from the operating instrument.
4. Remove the Patient Cassette from the ENDO P<sup>®</sup> by opening the cover and releasing the metallic key.
5. Disconnect the Irrigation Tube at the Luer lock beneath the check valve Fig. 4b. Leaving the check valve in place protects the system from contamination when the system is inactive between cases. Discard the rest of the Irrigation Tube in accordance with hospital waste procedures.
6. A new Irrigation Tube can be connected when the next surgery starts. Follow Patient Cassette instructions.

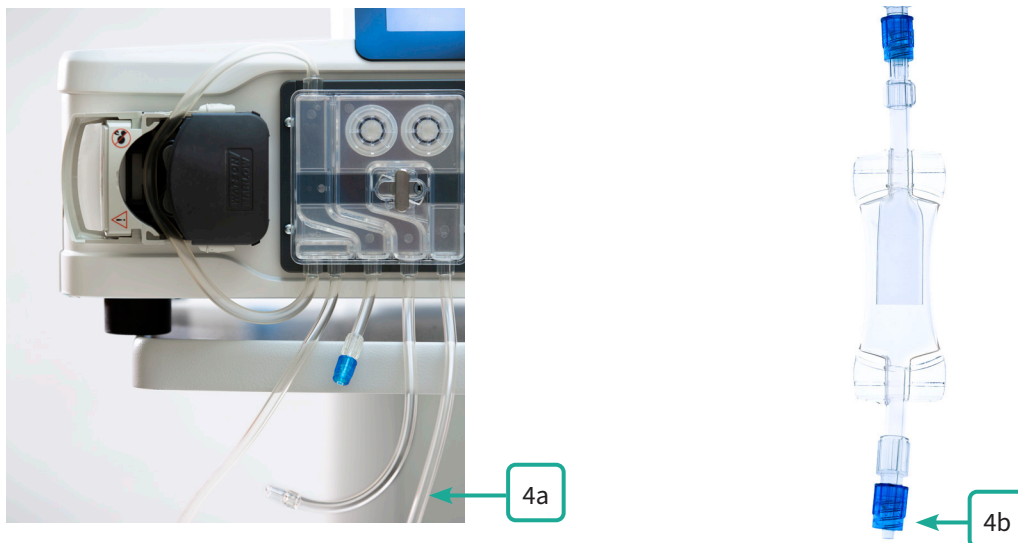


Figure 4

### WHEN THE FINAL SURGERY OF THE DAY HAS BEEN COMPLETED

#### Personnel not wearing sterile scrubs:

1. Turn off the ENDO P<sup>®</sup>. Turn off the ENDO H<sup>®</sup> and wait 2 min for the hot surfaces to cool down.
2. Close all disposables' tube clamps and disconnect all tubing from the operating instrument.
3. Remove the Patient Cassette and Day Cassette by releasing the respective metallic key 90° to the left and opening the covers.
4. Remove the ENDO H<sup>®</sup> Heater bag by opening the ENDO H<sup>®</sup>.
5. Discard all disposables according to hospital waste policy.



## PRIMING THE IRRIGATION TUBE AND OPERATING INSTRUMENT

- Make sure all clamps are open (one irrigation bag at a time).
- Make sure that the instruments inflow and outflow ports are open.
- Hold the instrument over the waste container and press **Prime**.
- Once fluid reaches the tip of the instrument the procedure can begin.
- You can also use **Start Surgery** (see next chapter) when priming the Irrigation Tube and instrument.

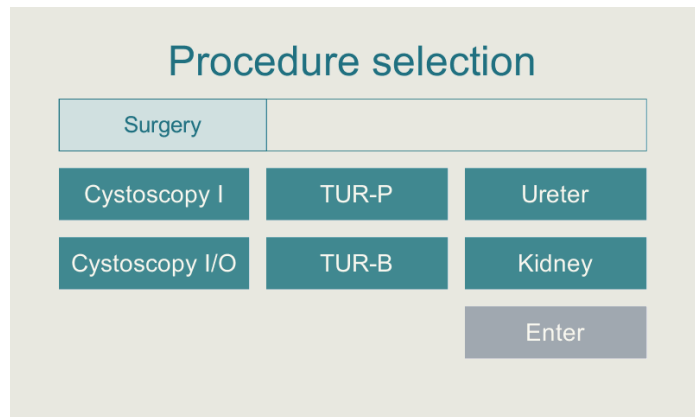


Figure 8

## SELECTION OF PROCEDURES

When using the ENDO BP™ and its data, the control of the target pressure is dynamic and automatically maintained based on the patient's systemic blood pressure. The patient's measured systemic blood pressure (systolic/diastolic) and delivery pressure (DP) are continuously shown on the device display.

If not using the ENDO BP™ the device will use the procedure specific default settings. Each surgery type has default settings (pre-set) for flow and pressure. If the use of the ENDO BP™ is interrupted or its readings are out of range the device will automatically use the procedure-specific default settings.

Check that all clamps are open. Select the desired surgery type/procedure. Confirm the procedure by tapping **Enter** then reconfirm by pressing **Accept**. Press **Start Surgery** when you are ready to start the procedure.

SURGERY TYPE	ENDO BP™ MAY BE USED	DEFAULT FLUID FLOW	DEFAULT FLUID PRESSURE
TUR-P: PROSTATE SURGERY	Yes	200 mL/min	50 mmHg
TUR-B: BLADDER SURGERY	Yes	150 mL/min	30 mmHg
URETER: SURGERY IN THE URETER	No	200 mL/min	30 mmHg
KIDNEYS: SURGERY IN THE RENAL PELVIS	No	15 mL/min	30 mmHg
CYSTOSCOPY: DIAGNOSTIC EXAMINATION OF THE URINARY TRACT	No	200 mL/min	Max 50 mmHg

## USING THE FOOTPEDAL DURING SURGERY

	MODE	SINGLE PRESS	DOUBLE PRESS	3-SECOND PRESS
Blue pedal	Standby			Starts Surgery
	Surgery	1. First single press decreases flow by 30%. 2. Second single press decrease flow by further 15%.	1. First double press increases flow by 30% for 2 minutes. 2. Second double press increases flow by further 15% for 2 minutes.	Goes to Standby
Red pedal	Standby			Starts Surgery
	Surgery	1. First single press decreases pressure by 30%. 2. Second single press decrease pressure by further 15%.	1. First double press increases pressure by 30% for 2 minutes. 2. Second double press increase pressure by further 15% for 2 minutes.  Note: Default pressure is set to 30 mmHg for most surgery types.	Goes to Standby
Both pedals simultaneously	Surgery			Flushing function at 600 mL/min

This product is distributed locally by

(Space for information about the authorized Bonvisi<sup>®</sup> representative)



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