

# FlexiPump™ Independent Flushing System User Manual



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## TABLE OF CONTENTS

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3	OVERVIEW: FlexiPump™ Independent Flushing System
4	INSTALLATION
6	OPERATION
6	Keypad Settings
8	Connecting Devices
10	Tube Sets
10	MAINTENANCE
10	Disinfecting surfaces
11	Disinfecting tube sets
12	Changing tube sets
14	Conducting flow validation tests
15	TROUBLESHOOTING
20	REPLACEMENT ITEMS, ACCESSORIES

## OVERVIEW

# FlexiPump™ Independent Flushing System

The FlexiPump system is designed for use in a medical reprocessing area, and has been fully tested for use with a wide variety of reusable lumened devices, including rigid and flexible endoscopes, minimally invasive surgical devices, ocular and robotic devices, and suction tips.

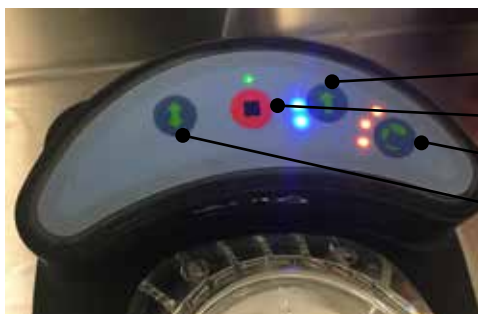
Accessories are available from Pure Processing to adapt the system to multiple additional uses. The FlexiPump tube sets connect to most devices, with or without luer locks and/or ports. A pressure relief feature is included to help protect scopes during flushing. The FlexiPump system can be used alone or can augment existing pumps.



## DESCRIPTION

### Components

- Removable cap with side tabs
- Electric cord
- Pump housing



### Key Pad

- Forward Flush button
- Stop Cycle button
- Speed Control button
- Impact Cycle button



### Internal Components

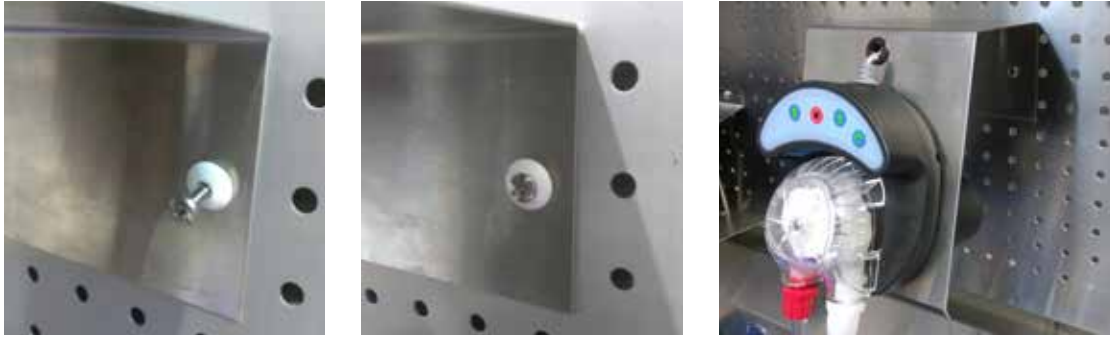
- Supply Tube (connects to medical devices)
- Rotor
- Squeeze Tube

## INSTALLATION

### Set-up: on Multi-Pump Bracket

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To install your multi-pump bracket on your wall, insert the anchor in the bracket holes. Line up the pegboard holes and the anchor, and screw in the steel bracket securely.

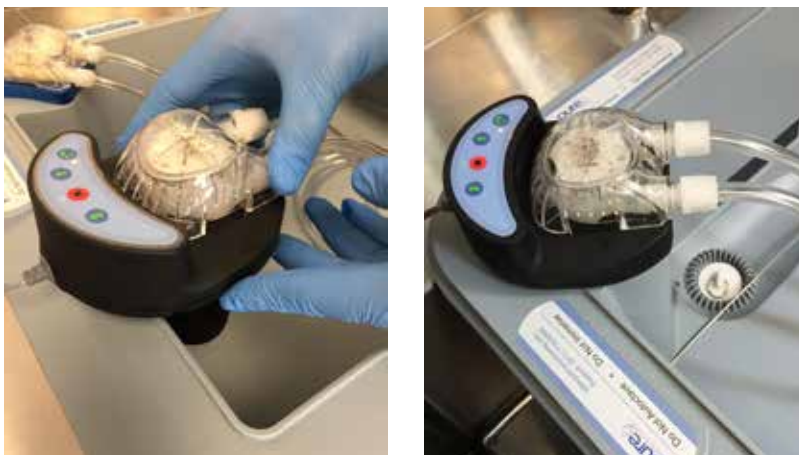


To install on solid walls, position the bracket onto the wall, and note where the drilling will be located. Pre-drill a 1/4" hole will into the area. Line up the bracket holes to the pegboard holes, and screw in steel bracket securely.

### Set-up: on Pure Station™ Sink Insert

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The FlexiPump system can be inserted into the corner well of the PureStation Sink Insert, or along the side ridges molded into the sink.



*The FlexiPump unit is not meant to be submerged; use caution when installing near water.*

## Set-up: Power Supply

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Once your FlexiPump system has been installed in its preferred place, remove the black power cord from your FlexiPump box. Take the barrel end of the gray cord found at the back of the FlexiPump and insert the barrel end of the black power supply to the gray cord. Make sure there are no frays in the wires.

Once both barrel cords have been tightly secured, plug the power supply into your wall outlet. Run the forward flush on your FlexiPump to make sure that the power has been installed correctly.

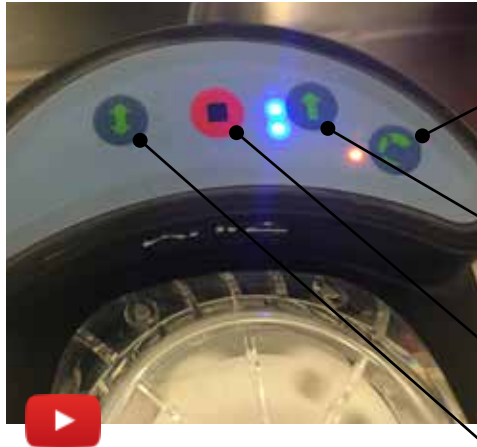


*Do not submerge the power or barrel cords. Please use caution when installing near water.*

## OPERATION

# Keypad Settings

Because fluid will take the path of least resistance, it is important that instrument channels attached to a FlexiPump system are approximately the same diameter, to assure consistent flushing into all the devices. **For this reason, do not attach a large-diameter lumen to one lead and a small-diameter lumen to another on the same pump system.**



For a video demonstration, visit our YouTube page at:  
[youtube.com/user/pureprocessing](https://youtube.com/user/pureprocessing)

### Key Pad Operation

- **Speed Control**  
Push the button **ONCE** for low (500 ml per minute), **TWICE** for medium (750 ml per minute), and **THREE TIMES** for high speed (1,000 ml per minute).
- **Forward Flush**  
Press the button **ONCE** for 30 seconds, **TWICE** for 60 seconds and **THREE TIMES** for 90 seconds.
- **Stop**  
Press to stop all pump action and cancel any cycle.
- **Impact**  
Press for clogged devices. Press the button **ONCE** for two (2) minutes, **TWICE** for four (4) minutes, and **THREE TIMES** for six (6) minutes.

## Speeds



### Low speed

This setting is designed for small channels, 1 to 3 millimeters (mm) in size. This setting will flush a total of 200 mL of fluid in 30 seconds. **Do not turn up the speed** when you hear the motor slowing down. The smaller channels cannot accommodate any higher flow volume. Trying to force it to go faster will cause a back-up in the motor and will make the pressure release valve drain fluid.



### Medium speed

This setting is designed for channels that are 2 to 3 mm in diameter. This setting will flush a total of 375 mL of fluid in 30 seconds. **Do not turn up the speed** if you hear the motor slowing down. However, if there is fluid draining from the pressure relief valve, you can consider slowing the pump speed.







### High Speed

This setting will flush a total of 500 mL of fluid in 30 seconds. This is used for channels larger than 4 mm in diameter.



*Too much pressure and speed for small devices can result in tube set damage.*

# FlexiPump Cycles and Keypad Settings

KEY PAD FUNCTIONS	
<b>Forward Flush</b> 	<b>Most frequently used button; time controlled:</b> <ul style="list-style-type: none"> <li>• 1 LED light- 30 seconds</li> <li>• 2 LED lights- 60 seconds</li> <li>• 3 LED lights- 90 seconds</li> </ul>
<b>Speed/Volume</b> 	<b>It's important to control the volume without too much pressure:</b> <ul style="list-style-type: none"> <li>• 1 LED light- Low- for small devices 1-2 mm diameter, such as suction tips and eye instruments (500 ml** per min.)</li> <li>• 2 LED lights- Medium- medium devices 2-3 mm diameter (750 ml** per min.)</li> <li>• 3 LED lights- High- large devices, 4 mm and larger diameter, such as laparoscopic, robotic, or orthopedic lumens (1000 ml** per min.)</li> </ul> <p>**Milliliters flushed is the total volume. Example: if three devices are flushed at the same time on high speed – each device flushes 333 ml per minute.</p>
<b>Impact Cycle</b> 	<p>Used on devices that have material clog or impact. The impact cycle will create a push and pull pressure- moving in a forward direction, and then stopping to reverse and create suction. This feature will allow the clog to soften up and allow you to push a brush through.</p> <p><b>Time controlled:</b></p> <ul style="list-style-type: none"> <li>• 1 LED light: 2 minutes</li> <li>• 2 LED lights: 4 minutes</li> <li>• 3 LED lights: 6 minutes</li> </ul>
<b>Stop</b> 	<b>Stops the flushing</b>

The Impact cycle is used ONLY for devices that are clogged. The FlexiPump tube set must be decontaminated after each Impact Cycle run.



## OPERATION

# Connecting Devices

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Many lumened/channeled devices can be properly connected and flushed with the FlexiPump system.



### For devices with luer locks:

Twist the FlexiPump tube collar onto the device with a luer, until locked.

Flush the device following manufacturer's recommendations.



### For devices with luer ports:

Pull the tube collar back.

Insert the slip tip into the device.

Flush according to manufacturer's recommendations.



### For devices without luer locks or ports:

Use a cup adaptor to create a tight seal.

Flush according to manufacturer's recommendations.



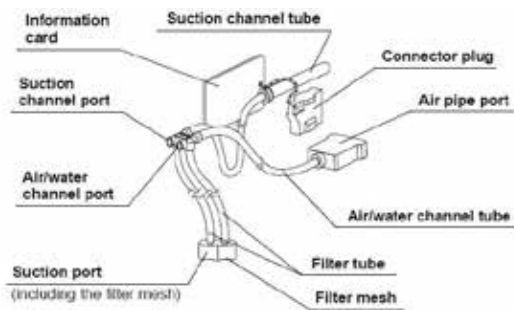
### For devices with female luer locks:

Use a female-to-female luer lock adapter.

Flush according to manufacturer's recommendations.



It is important to follow the manufacturer's instructions for use (IFU) for each flexible endoscope. The FlexiPump system replaces the syringe flushing method in the pre-cleaning sections of these IFU.\*



The **injector tube** (or suction channel tube in this example) is used to inject reprocessing fluids into the instrument channel, suction channel, and air/water channels of the endoscope. It is also used to flush air through these channels to expel fluids.

Follow the device manufacturer's IFU to attach the injector tube to the scope.



Attach the FlexiPump tube set luer locks to the suction channel port and air/water port of the injector tube. Directions may vary depending on the scope and the manufacturer.



Cap off all unused tubes on the FlexiPump Tube Set. If there are two channels on the endoscope, place a FlexiPump end cap on the end of the third FlexiPump tube lead. If you are flushing only one channel or lumen, cap off the other two FlexiPump tube leads with luer end caps.



#### IMPORTANT

*Most endoscope manufacturers specify how much cleaning solution to flush through the device. Follow IFU's to prepare the cleaning solution. Carefully monitor all device exit points for flushing cleaning solution to ensure copious flushing.*

*Be sure to rinse devices per manufacturer's IFU.*

## OPERATION

# Tube Sets

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### PSI Settings

Please refer to the manufacturer's IFU for each instrument's pressure requirements. The FlexiPump system can be used with a low-pressure tube set or a higher-pressure tube set. In general, smaller flexible devices (urology scopes and ocular instruments, for example) require lower pressure.

There are multiple leads on any FlexiPump tube set. **If any tubes are not in use, be sure they are secured with end caps provided in the tube set.**



*If the pump sounds or looks stressed, turn the speed setting down to avoid unnecessary wear on the motor.*

*PLEASE NOTE: The FlexiPump Independent Flushing System is intended for manual and flushing of lumened devices. It is not for final treatment and does not replace manual brushing and rinsing. Refer to each medical device manufacturer's instructions for use for complete cleaning requirements.*

## MAINTENANCE

# Set-up: tube sets

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The drop-down tube on each new tube set is 30 inches long. If the tube is too long for your sink, it can be cut to shorten it. Each FlexiPump tube set comes with two, three, or five leads, each of which can be attached to an instrument. You can use them all at once. If you have fewer than three devices to flush, you can cap off the unused lead(s) to ensure appropriate pressure into the lead(s) with attached devices. Use the end cap provided with your tube set. You may also re-use end caps from other FlexiPump tube sets.



## MAINTENANCE

# Disinfecting surfaces

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The surfaces of the system should be cleaned daily and whenever there is visible soil.

**Step 1** Wipe all external surfaces with a ready to use disinfectant, including the tubing, and allow them to air-dry.



For a video demonstration, visit our website.

## MAINTENANCE

# Disinfecting the tube sets

**STEP 1** Pour 500mL of your ready to use disinfectant into an open, clean container.

**STEP 2** Place the drop down tube into the container with disinfectant, assuring it's fully submerged.

**STEP 3** Press the forward flush button to begin filling tube set with disinfectant. Run at least 100mL of disinfectant through the tube leads. Press STOP.

**STEP 4** Attach end caps onto all the tube leads and set the speed control on Low. Position your pressure relief valves over a container or sink bay. Run a Forward Flush until disinfect is expelled through the pressure relief valves. Press STOP. Your tubes are now completely filled with disinfectant.

**STEP 5** The disinfectant should remain inside tubing for the contact time of the disinfectant.

**STEP 6** After the contact time has elapsed, in a empty sink basin, point the tube leads downward. Slowly take off the end caps. Some pressure will have built up inside, so use caution.

**STEP 7** Run the remainder of the disinfectant through the tube sets.

**STEP 8** Fill a container with 500 mL of clean water and place the drop down tube inside. Rinse at least 500mL through the tube leads to ensure a proper rinse.



**Bleach or alcohol based disinfectants are not compatible with the FlexiPump Irrigation Tube Sets.**

Size	Quantity	Product ID
24 ounces	15 bottles per case	PSC240-1
1 gallon	4 bottles per case	PSC128-1



For a video demonstration, visit our website.

## MAINTENANCE

# Changing tube sets

### The Importance of Changing Tube Sets

#### 1. Infection Prevention

Hard water deposits could potentially build up on the inside surface of the tube set.

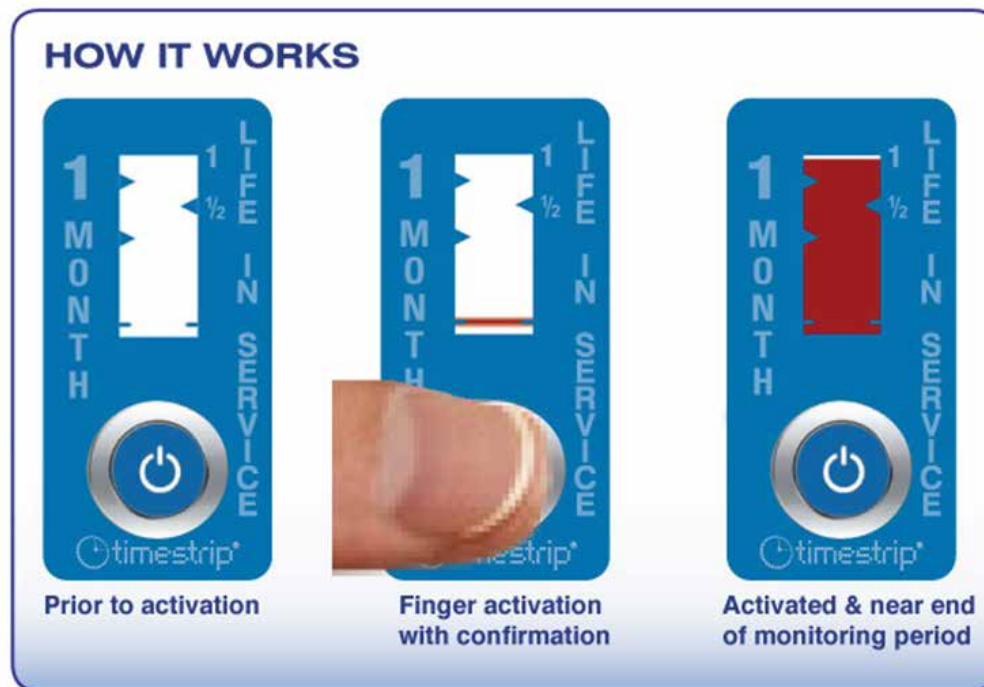
#### 2. Reduced Flow Rate

The squeeze tube can lose its elasticity with time and frequent use.

#### 3. Reduced Pump Life

The factory-applied tube set lubricant eventually wears away, resulting in more resistance and more work for the pump. This can reduce the pump's overall useful lifetime.

Each tube set will include a 30 day timestrip® attached.



### Best Practice Solution

Whenever you change a tube set, write your initials and expiration date on the back of the timestrip® label.

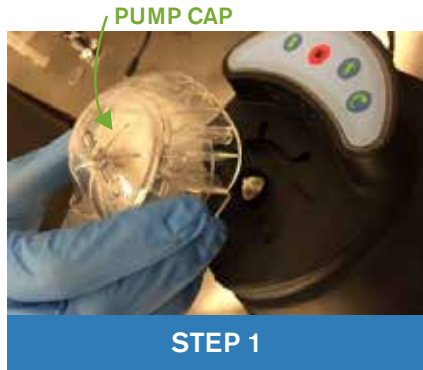
Initials:

Expiration Date:



## MAINTENANCE

# Step-by-Step Instructions for Replacing a Tube Set



Remove the Pump Cap by pressing on both side tabs and pulling gently.



Flip the Pump Cap upside down (as pictured above) and unthread the tubing from the Tube Rotor.



Now that the old set has been taken out, remove the Tube Rotor from the Pump Cap.



Thread your new tube set around the Tube Rotor (as pictured above). It is important that the red tube component is on the right side in this step.



Place the new tube set and rotor inside the pump cap. Properly align the tube set fittings so that they are properly situated in the cap fittings.



Flip the Cap right-side up. Notice the red component is on the left side now.

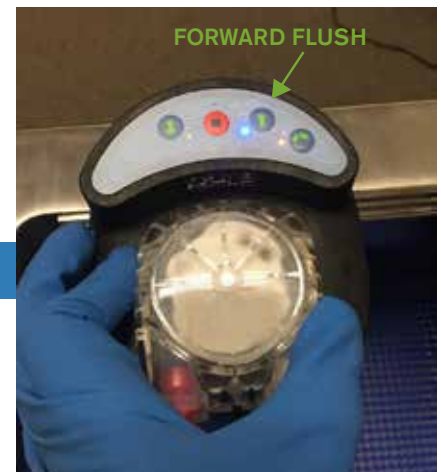


**FINAL STEP**

Press on both sides of the Pump Cap and place it back onto the base, making sure that it snaps down fully.

### TIP

If you experience difficulty snapping the cap into place, try activating the "forward flush" button and then proceed to push the cap down until it fastens into place properly.



## MAINTENANCE




# Conducting a Flow Validation Test

The flow validation will test every speed on the FlexiPump: low, medium, and high for 30 seconds each to assure your FlexiPump is dispensing the right amount of liquid. We recommend running the flow validation test at least once a day. You may use the log provided in the back of this manual to keep track of your flow validation tests.

- Step 1** Place the down tube into a container of water that contains at least 1000mL of water. Remove all the end caps from the 3 tube leads.
- Step 2** Run an initial Forward Flush for at least 30 seconds on high speed, ensuring water is dispensed from each tube lead (indicating the tubing is properly primed).
- Step 3** Place the 3 tube leads into the solution caddy container. Make sure to hold the 3 tube leads into the container while the pump is running. This will measure how much liquid is dispensed during the flush cycles.
- Step 4** Make sure your Speed button is on the low setting, showing 1 LED light. Press the Forward Flush button once to run the FlexiPump for 30 seconds on Low. Verify that at least 200mL of water was dispensed.
- Step 5** Empty the solution container and refill your container of water, assuring that you have at least 1000mL of water. Place the tube leads back into the solution container.
- Step 6** Set your Speed button to medium, showing 2 LED lights. Press the Forward Flush button once for a 30 second cycle. Verify that at least 300mL of water was dispensed.
- Step 7** Empty the solution container and refill your container of water, assuring that you have at least 1000mL of water. Place the tube leads back into the solution container.
- Step 8** Set your Speed button to high, showing 3 LED lights. Press the Forward Flush button once for a 30 second cycle. Verify that at least 400mL of water was dispensed.



*If the pump does not pass the flow validation test, please see page 16 for troubleshooting assistance.*

Time	Speed		Water Dispensed
30 seconds	Low		200mL or more
30 seconds	Medium		300mL or more
30 seconds	High		400mL or more

*The volume flow is a guideline and can be impacted by variables including "in use" age of tube set, electricity, and gravity displacement. High volume users may have to change the tube sets more frequently if volume falls below the stated guideline due to excessive usage. Flow volume above and beyond stated guideline is deemed acceptable. For optimal volume performance, do not remove lubricant from the squeeze tube when changing tube sets.*



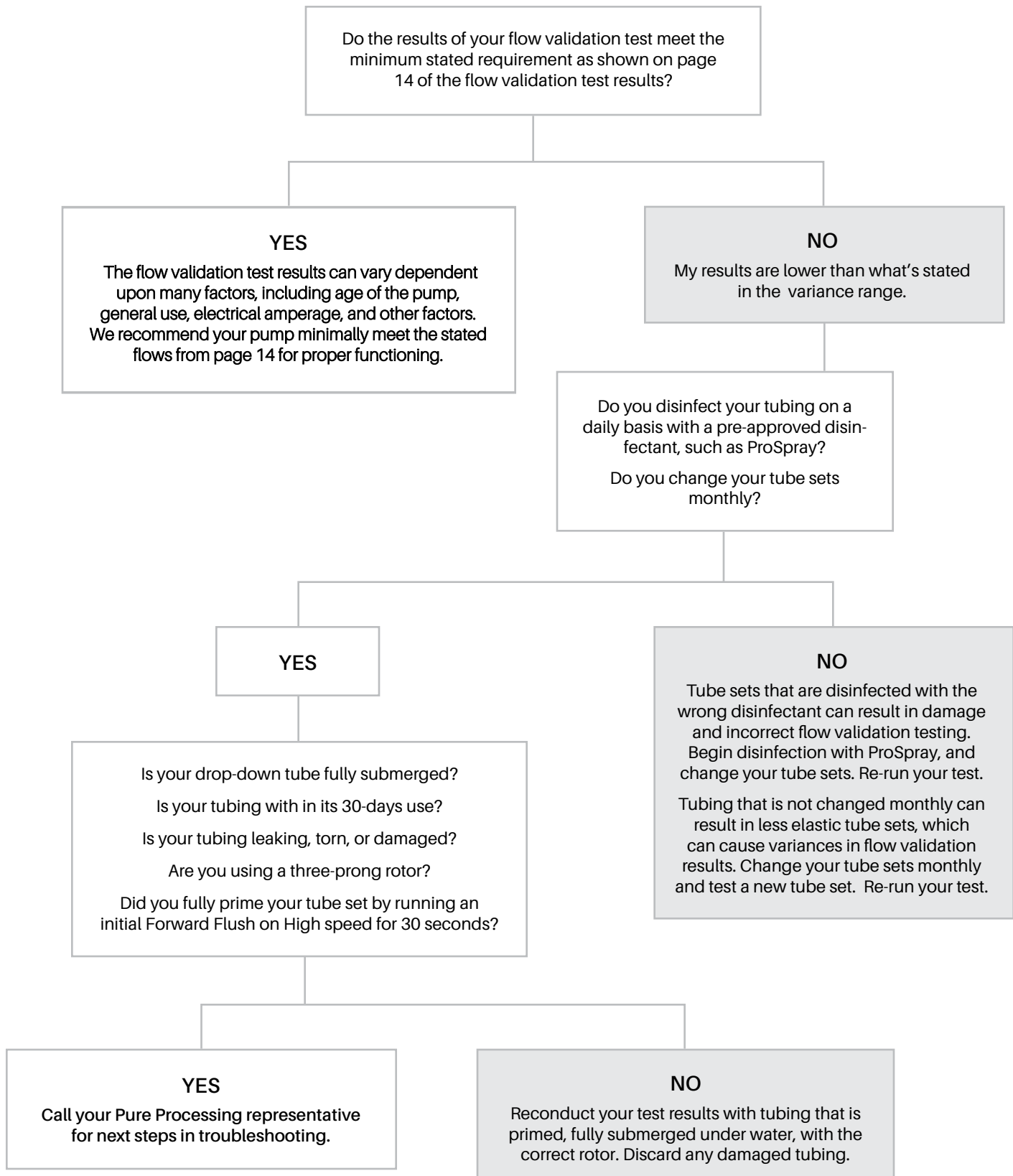
## TROUBLESHOOTING

Problem	Recommendation	Notes
Power to the unit, but buttons don't work	Disconnect the black and gray cords at the barrel connector. Reconnect making sure they are tight. If there is no power to the unit, slightly turn the adapter to engage the two and tighten. Repeat as necessary. Leave the unit to cool for thirty minutes.	Contact Pure Processing Support for more help resolving this issue.
Rotor is spinning but no solution is coming out of the end of the device	Make sure your drop-down tube is fully submerged, and the correct end of the tubing is in the solution. Check for kinks in the tube set, and that it is properly installed.	Contact Pure Processing Support for more help resolving this issue.
My devices don't seem to be clean	Check the device manufacturer's cleaning recommendations. Check the disinfectant IFU, and confirm that all directions have been properly followed.	
The Impact Cycle isn't working for my clogs	The Impact Cycle works in conjunction with your detergent. Assure that you're using the right detergent for the soil clog.	
I'm not flushing the same amount of liquid in my cycles	Conduct a flow validation test per page 15 in this user manual. Replace your tube set.	Contact Pure Processing Support for more help resolving this issue.
Water is leaking from under the cap	Check your tube set for cracks, and that your tube set is installed properly.	Contact Pure Processing Support for more help resolving this issue, or consult your warranty sheet for tube set replacements.
One or more components on the tube set are broken	Replace your tube set. Contact Pure Processing to discuss replacing your tube set according to the warranty replacement policy.	
System makes a lot of noise	Use a surface liner to cushion vibrations, or install on a back wall to remove countertop noise.	
Unit randomly stopped while flushing	The FlexiPump uses timed cycles; assure that the pump stopped before the timed cycle elapsed. Unplug your unit and assure barrel connectors are fully engaged. Run a new cycle.	Contact Pure Processing Support for more help resolving this issue.
Pump cap will not stay locked in the base	Replace your cap and assure your tubing is fully installed in the cap.	Contact Pure Processing Support for more help resolving this issue.

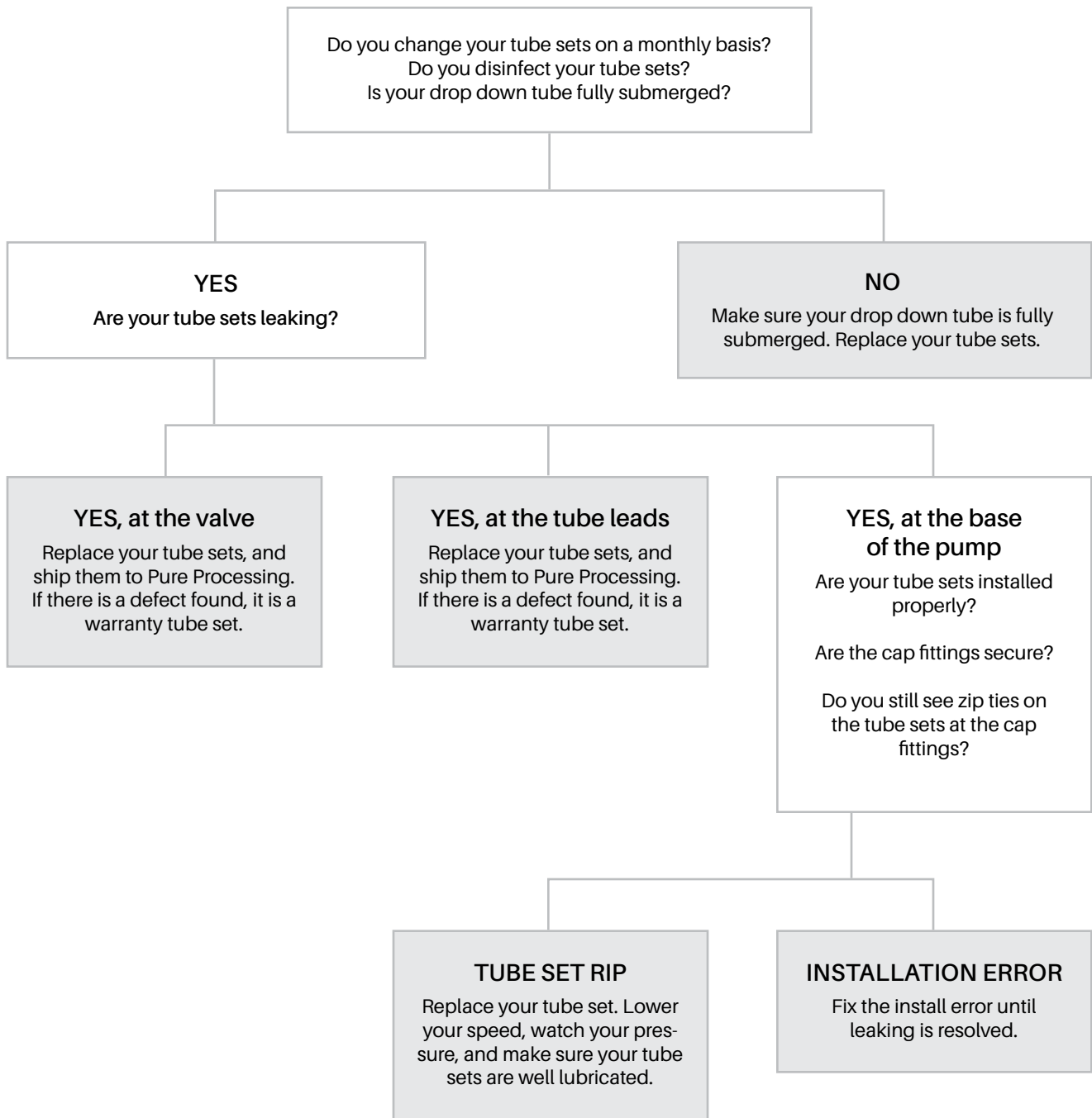


*Facilities that have high volume should consult with their representatives on the appropriate amount of FlexiPumps for their department.*

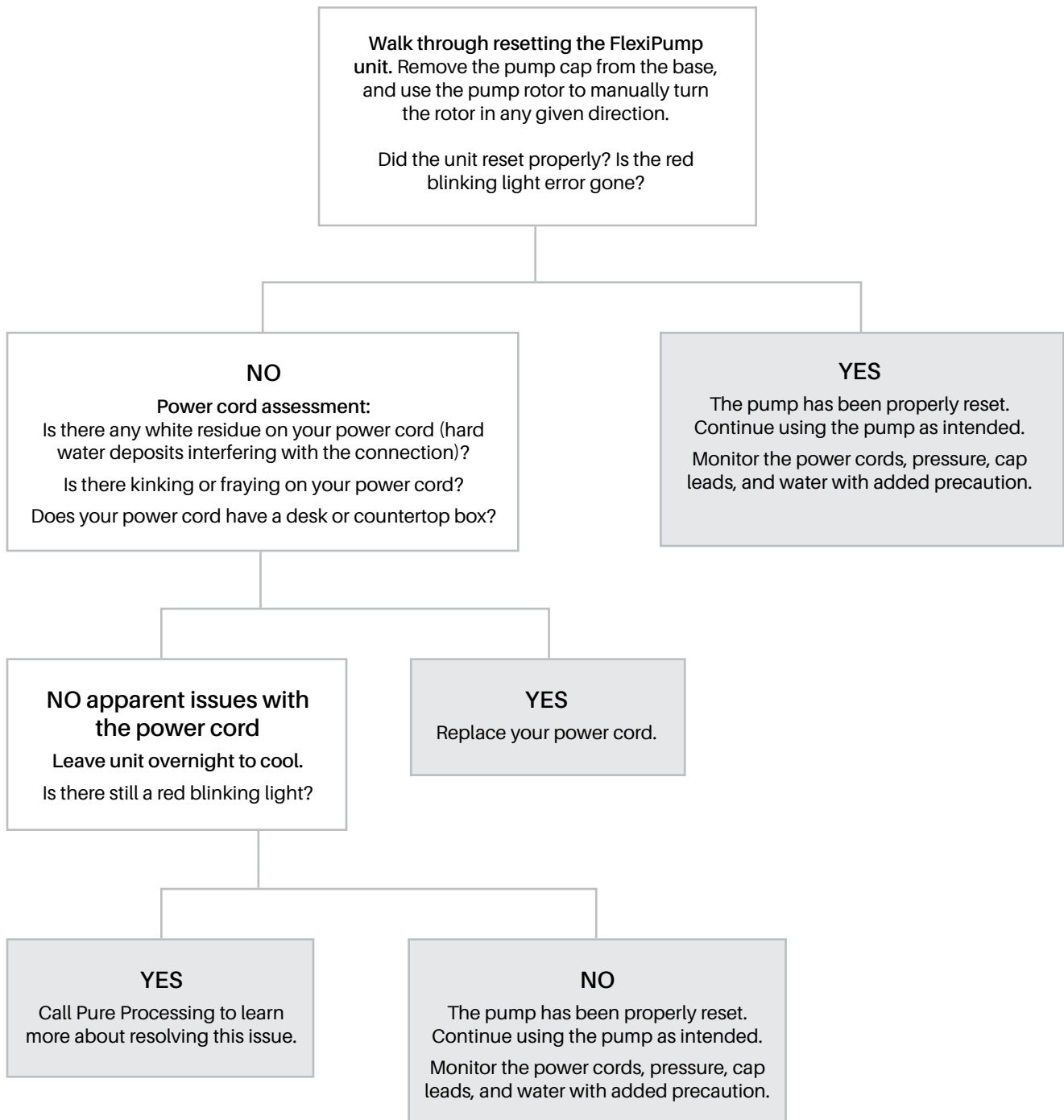
### Issue: My FlexiPump is failing its daily flow validation test.



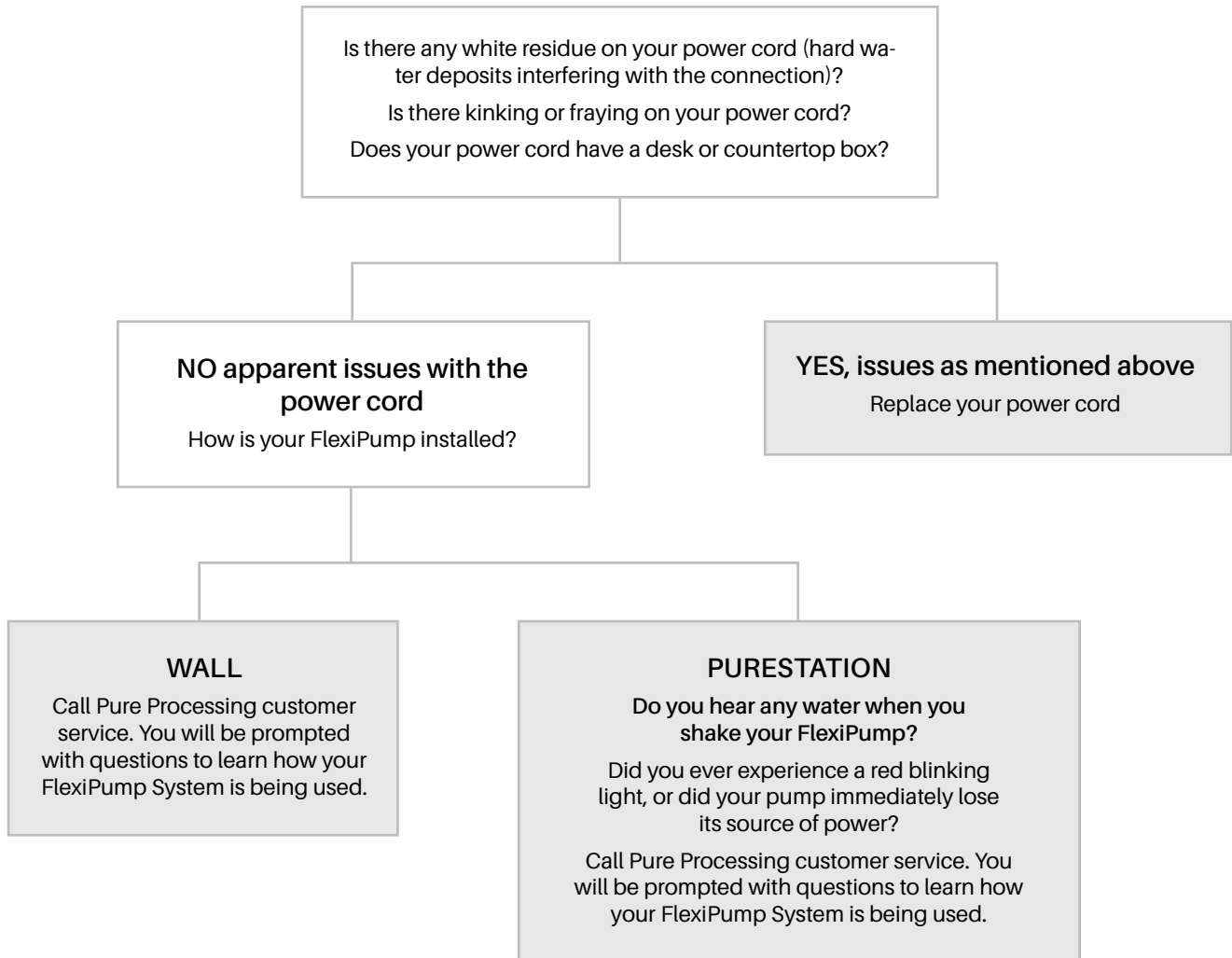
**Issue: No fluid is coming from my tube sets/ my tube sets are leaking.**





### Issue: My pump has a red blinking light.



### Issue: No power to my FlexiPump system






## REPLACEMENT ITEMS, ACCESSORIES

	Product	Product Code
	FlexiPump™ Irrigation Tube Set Two-Lead, 15 psi or 30 psi; box of 6	FXITS-0215psi6-PH FXITS-0230psi6-PH
	FlexiPump™ Irrigation Tube Set Two-Lead, 15 psi or 30psi; single	FXITS-0215psi-PH-01 FXITS-0230psi-PH-01
	FlexiPump™ Irrigation Tube Set Three-Lead, 15 psi or 30 psi; box of 6	FXITS-0315psi6-PH FXITS-0330psi6-PH
	FlexiPump™ Irrigation Tube Set Three-Lead, 15 psi or 30psi; single	FXITS-0315psi-PH-01 FXITS-0330psi-PH-01
	FlexiPump™ Irrigation Tube Set Five-Lead, 15psi; box of 6	FXITS-0515psi6-PH
	FlexiPump™ Irrigation Tube Set Five-Lead, 15psi; single	FXITS-0515psi-PH-01
	FlexiPump™ Power Supply	FPPS-01
	FlexiPump™ Pump Cap (1 pack of 10 caps)	FLX-CAP-PH
	FlexiPump™ Pump Rotor (1 pack of 10 caps)	FLX-ROTOR-PH



**REPLACEMENT ITEMS, ACCESSORIES**

	Product	Product Code
	FlexiPump™ Ceramic Weight and Filter (1 pack of 10)	FPCW-10
	FlexiPump™ Accessory Kit, includes: <ul style="list-style-type: none"><li>- 20 female-to-female luer locks</li><li>- 5 rubber cup adapters</li><li>- 50 XL slip tips</li><li>- 25 end caps</li></ul>	ACC-KIT
	TimeStrip™ Time Indicators (1 pack of 100 TimeStrips)	TM-1M

## ADDITIONAL ACCESSORIES

These products are available from Pure Processing and are compatible for use with the FlexiPump system:

	Item	Product Code
	PureChannel™ Flush Instrument Channel Cleaner, 1 gallon size PureChannel™ Flush Instrument Channel Cleaner, 32 oz. size	PCF-08 PCF-32oz
	PureChannel™ Flush Touch-less Auto Dispenser	PCFTAD
	ProSpray™ Ready-to-Use Disinfectant/Cleaner, 1 gallon size ProSpray™ Ready-to-Use Disinfectant/Cleaner, 32 oz. size	PSC128-1 PSC240-1
	ProWash™ Multi-Purpose Instrument Detergent and Cart Wash; 1 GAL ProWash™ Multi-Purpose Instrument Detergent and Cart Wash; 5 GAL ProWash™ Multi-Purpose Instrument Detergent and Cart Wash; 15 GAL	PRW128-1 PRW640-1 PRW-1920
	PureStation™ Sink Insert	PS1616 PS1626
	PureStation™ Dedicated Eye Sink	PSFP1616-EYE PSFP1626-EYE
	FlexiPump™ Single Bracket Holder	FP-SNBR
	FlexiPump™ Double Bracket Holder	FP-DBBR
	FlexiPump™ Triple Bracket Holder	FP-TRBR

**FLEXIPUMP™ INDEPENDENT FLUSHING SYSTEM**Pure Processing Customer Support:  
1-877-718-6868

Daily Assurance Log

Tube Replacement: Name: \_\_\_\_\_ Date: \_\_\_\_\_

Day	Flow Validation Test			Initials
1		Pass	Fail	
2		Pass	Fail	
3		Pass	Fail	
4		Pass	Fail	
5		Pass	Fail	
6		Pass	Fail	
7		Pass	Fail	
8		Pass	Fail	
9		Pass	Fail	
10		Pass	Fail	
11		Pass	Fail	
12		Pass	Fail	
13		Pass	Fail	
14		Pass	Fail	
15		Pass	Fail	
16		Pass	Fail	
17		Pass	Fail	
18		Pass	Fail	
19		Pass	Fail	
20		Pass	Fail	
21		Pass	Fail	
22		Pass	Fail	
23		Pass	Fail	
24		Pass	Fail	
25		Pass	Fail	
26		Pass	Fail	
27		Pass	Fail	
28		Pass	Fail	
29		Pass	Fail	
30		Pass	Fail	
31		Pass	Fail	

Day	Disinfection Procedure			Initials
1		Pass	Fail	
2		Pass	Fail	
3		Pass	Fail	
4		Pass	Fail	
5		Pass	Fail	
6		Pass	Fail	
7		Pass	Fail	
8		Pass	Fail	
9		Pass	Fail	
10		Pass	Fail	
11		Pass	Fail	
12		Pass	Fail	
13		Pass	Fail	
14		Pass	Fail	
15		Pass	Fail	
16		Pass	Fail	
17		Pass	Fail	
18		Pass	Fail	
19		Pass	Fail	
20		Pass	Fail	
21		Pass	Fail	
22		Pass	Fail	
23		Pass	Fail	
24		Pass	Fail	
25		Pass	Fail	
26		Pass	Fail	
27		Pass	Fail	
28		Pass	Fail	
29		Pass	Fail	
30		Pass	Fail	
31		Pass	Fail	

Month &amp; Year: \_\_\_\_\_ Unit Number: \_\_\_\_\_