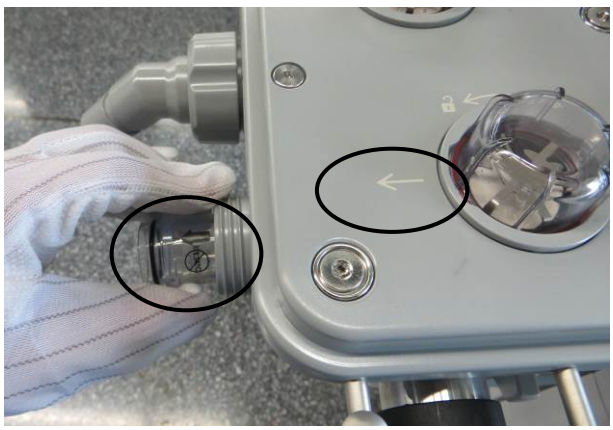
3. Hold the bellows housing tightly and turn it clockwise until it stops. Ensure that the side of the housing marked with scale is facing the operator.

13.1.2.6 Install the Flow Sensor

⚠WARNING

- **Tighten the locking nuts when installing the flow sensor. Failure to do so may result in invalid measurement.**
- **Exert care when moving the anesthesia system to prevent the flow sensor from getting damaged.**
- **The end of inspiration/expiration connectors which connects the breathing tube shall be kept downward to prevent condensed water from entering the breathing system.**

1. Ensure that the direction of arrow on the flow sensor is same to that on the breathing system and the side with printed illustration is facing upward.



2. Insert the flow sensor horizontally.
3. Align the inspiration/expiration connectors and their locking nuts with the flow sensors.

4. Tighten the locking nuts clockwise.

⚠WARNING

- **Do not use talc, zinc stearate, calcium carbonate, corn starch or equivalent materials to prevent tackiness. These materials can go into the patient's lungs and airways and cause irritation or injury.**
- **Do not put both of the breathing system or the O_2 sensor in liquid or autoclave them.**
- **Inspect all parts for deterioration. Replace them if necessary.**

NOTE

- **The process for autoclave sterilization of the Anesthetic Breathing System has been tested and found to be in compliance with ISO 17664:2017. Compliance to ISO 17664:2017 only applies when bacterial filters are used to filter air coming in from the patient and returning air to the patient. Filters must be properly installed.**

All parts of the breathing system can be cleaned and disinfected. The cleaning and disinfection methods are different for different parts.
You need to select the appropriate method to clean and disinfect the parts based on the actual situations to avoid cross-contamination.
The table below lists the cleaning and disinfecting agents and autoclaving process that may be used on the anesthesia system.

Name	**Type**
Ethanol (75%)	Moderately efficient disinfectant
Isopropanol (70%)	Moderately efficient disinfectant
Glutaraldehyde (2%)	Highly efficient disinfectant
Soap water (pH value of 7.0 to10.5)	Cleaning agent
Clean water	Cleaning agent
Steam autoclave*	Highly efficient disinfection

Steam autoclave*: All breathing system components are autoclavable except the PAW gauge, flow sensor and O_2 sensor. If the breathing system is configured with the autoclavable flow sensors, the flow sensors can be autoclaved. The components can be autoclaved up to a maximum temperature of 134ºC (273ºF) for 20 minutes (recommended time). Bellows can be autoclaved at 134ºC (273ºF) for 7 minutes (recommended time). Suction tubes and liquid collection bottles are not autoclavable.

The table below lists our recommended cleaning and disinfection methods for all parts of the breathing system.

Parts	Cleaning methods		Disinfection methods		
	1 Wipe	2 Immersion	A Wipe	B Immersion	C Steam autoclave
Breathing tubes and Y-piece		★		★	★
Breathing mask		★		★	★
Flow sensor		★		★	★[1]
Airway Pressure Gauge	★		★		
Bellows assembly (not including bellows)		★		★	★
Bellows		★		★	★
Inspiratory and expiratory check valves assemblies		★		★	★
O_2 sensor	★		★		
Canister assembly		★		★	★
Canister connection block assembly		★		★	★
Water collection cup		★		★	★
Bag arm		★		★	★
BYPASS assembly		★		★	★
Breathing system		★		★	★
Manual bag		★		★	★

★ indicates applicable cleaning or disinfection method.

Cleaning methods:

1. Wipe: wipe with a damp cloth immersed in alkalescent detergent (clean water or soap water with pH of 7.0 to 10.5) or alcohol solution and then wipe off the remaining detergent with a dry lint free cloth.

2. Immersion: flush with water first and then immersed in alkalescent detergent (clean water or soap water with pH of 7.0 to 10.5) (water temperature 40ºC recommended) for approximately three minutes. Finally clean with water and dry completely.

Disinfection methods:

A. Wipe: wipe with a damp cloth immersed in medium- or high-efficiency detergent (such as 75% alcohol, 70% isopropanol, or 2% glutaraldehyde) solution and then wipe off the remaining detergent with a dry lint free cloth.

B. Immersion: immersed in medium- or high-efficiency detergent (such as 75% alcohol, 70% isopropanol, or 2% glutaraldehyde) solution (immersion time varies according to the disinfectant). Then clean with water and dry in the air completely.

C. Steam autoclave: Bellows are capable of being autoclaved at 134℃ for 7 min (recommended time). Other components of the breathing system are capable of being autoclaved at maximum 134℃ for 20 min (recommended time).

Note: A and B belong to medium level disinfection and C to high level disinfection.

[1] If the breathing system is configured with the autoclavable flow sensors, the flow sensors can be autoclaved.