



**RankenJordan**  
PEDIATRIC BRIDGE HOSPITAL

## BiWaze Cough Assist For Child With Tracheostomy With or Without A Ventilator



BiWaze Cough System

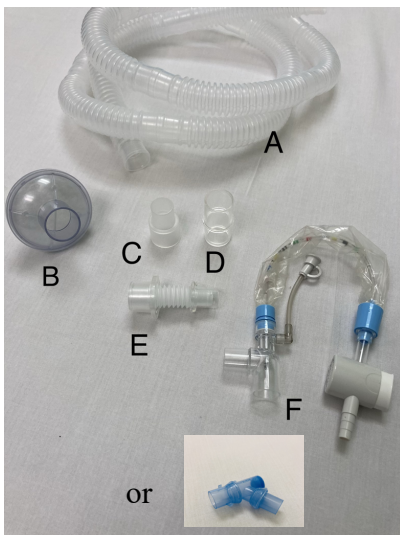
The BiWaze Cough Assist device removes mucus or secretions from the lungs through mechanically applied pressure. The machine will provide pressure on both inhalation and exhalation imitating a natural cough. It is a very effective treatment to reduce the risk of retained mucus which could lead to a lung infection.

### How is the cough assist connected to you child?

The cough assist can be attached directly to the tracheostomy tube with different adapters as:

- A. Corrugated Tubing
- B. Bacterial Filter
- C. Two-Step Adapter, REF # 001824
- D. 22 x 22mm adapter, may just use 22 x 15mm adapter and omit option C
- E. Omni flex adaptor, REF #3222
- F. Inline Suction, or PEEP Keep adapter

The cough assist can be connected with an elbow adapter, like that with a PEEP Keep (A) or in-line suction catheter (B).



A. with PEEP Keep adaptor



B. with In-Line suction catheter

## **Steps to using the BiWaze Cough Assist With and without a ventilator (trach-only)**

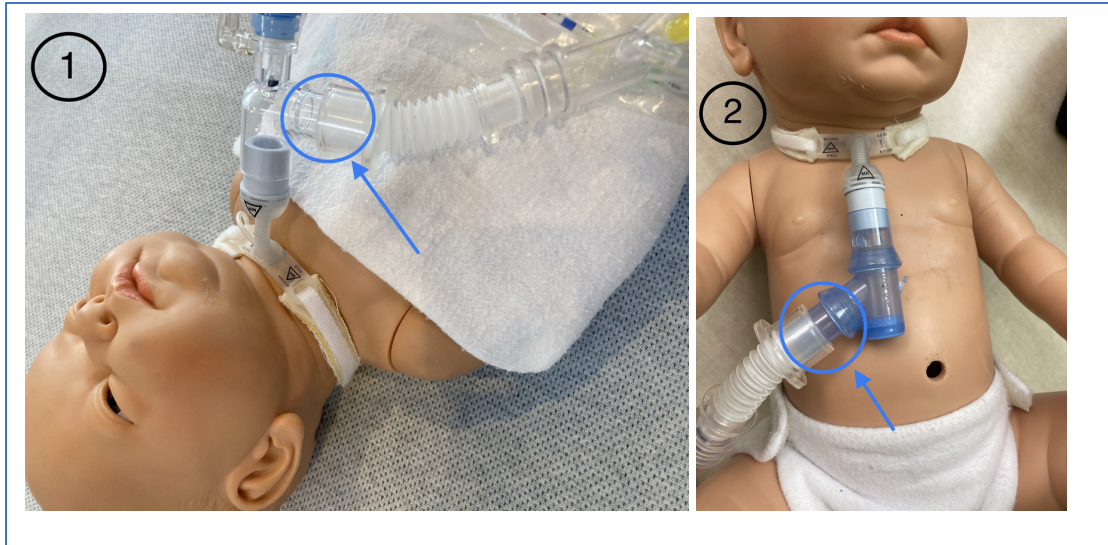
1. Gather all equipment, as seen on the first page.
2. Gather suction supplies.
3. Place your child in an upright sitting position, as tolerated.
4. If your child has a cuffed tracheostomy, deflate the cuff during the treatment if not already deflated.

### **With a Ventilator**

1. Power on the cough assist and check the settings/pressures as determined by your child's physician.
2. Disconnect the ventilator circuit from the elbow of the inline suction catheter (1) or trach adaptor (2) and put aside within easy reach.
3. Connect the cough assist tubing to the elbow of the inline suction and immediately start the treatment by pressing Therapy (button or touchscreen start). The cough assist will then cycle automatically from inhalation (+ pressure) and exhalation (- pressure), then pause before the next breath is delivered.
4. Continue this in/out breath cycle for 5 cycles. If there are visible secretions at the trach hub during this time disconnect the cough assist and suction.
5. After 5 completed in/out cycles disconnect the cough assist and put on standby. Immediately place your child back on the ventilator. Suction the trach and allow your child to resume normal breathing.
6. Repeat the steps above 3 to 5 more times as needed to clear secretions.
7. After the treatment is complete: power off the cough assist and make note of the date, time, quantity/consistency of your child's secretions.

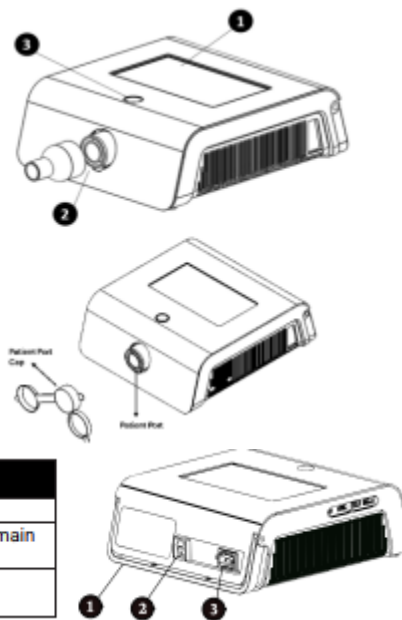
### **Without a Ventilator (Trach-only)**

1. Power on the cough assist and check the settings/pressures as determined by your child's physician.
2. Disconnect the circuit from the elbow of the inline suction catheter (1) or trach adaptor (2) and put aside within easy reach.
3. Connect the cough assist tubing to the elbow of the inline suction and immediately start the treatment by pressing Therapy (button or touchscreen start). The cough assist will then cycle automatically from inhalation (+ pressure) and exhalation (- pressure), then pause before the next breath is delivered.
4. Continue this in/out breath cycle for 5 cycles. If there are visible secretions at the trach hub during this time disconnect the cough assist and suction.
5. After 5 completed in/out cycles disconnect the cough assist and put on standby. Next, place your child back on the device that they were using previously. Suction the trach and allow your child to resume normal breathing.
6. Repeat the steps above 3 to 5 more times as needed to clear secretions.
7. After the treatment is complete: power off the cough assist and make note of the date, time, quantity/consistency of your child's secretions.

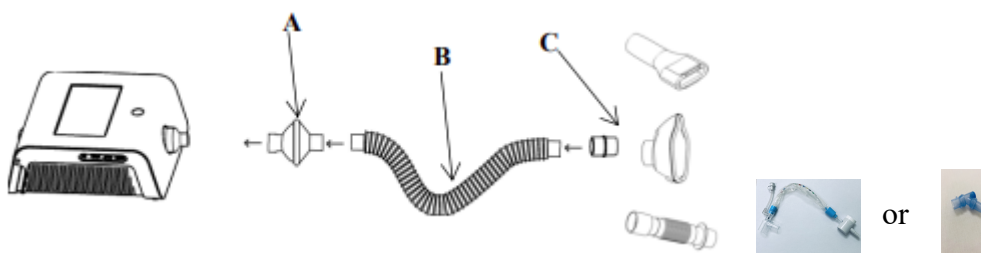


## BiWaze Cough System

SI No	Item	Description
1	Touch Screen	The touch screen allows you to view and edit therapy settings, system status information, real-time patient data, and logs.
2	Patient Port and Patient Port Adapter	The breathing circuit is connected to this port for therapy delivery through the patient port adapter.
3	Device Mode Button with LED	This LED light provides different color code lights. Green: Manual Mode Blue: Auto Mode Red: Error or shutdown mode The button within the LED light provides the ability to Start and Pause therapy.



SI No	Item	Description
1	Handle	Handle to carry the device
2	Power source switch	Cuts off AC mains and battery power to the main processor
3	AC Power Inlet	AC power cord connection



- A. Standard Bacterial/Viral (B/V) filter
- B. Standard 6 feet long, 22 mm diameter single tube
- C. Optional 22mm connector & patient interfaces

## Cleaning and maintenance

### The device:

Wipe the outside of the cough assist with the following cleaning materials:

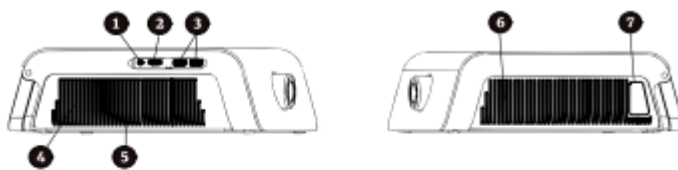
- Clean cloth with water and mild detergent
- 70% Isopropyl alcohol

### The breathing circuit and bacteria filter:

- After each use, the circuit should be washed thoroughly with mild liquid detergent and water. Make sure the parts are dried completely before connecting to the cough assist again.
- The bacteria filter cannot be washed and should be replaced when blocked with mucus or moisture.
- Replace the adaptors if they become broken.

### The air filter:

- The air filter should be cleaned every 1 month and replaced every 6 months with normal usage.
- Make sure device is disconnected from power source
  - o Remove the filter from enclosure
  - o Examine the filter for cleanliness and integrity
  - o Wash the filter in warm water and mild detergent. Rinse thoroughly.
  - o Allow the filter to air dry completely. Only BiWaze filters should be used as replacement filters.
  - o Reinstall the filter.



Device Left Side

Device Right

Sl No	Item	Description
1	Foot Pedal port	Connection port for Foot Pedal
2	HDMI port	External HDMI display
3	USB ports	Connection for USB Flash drive
4	Air outlet	Outlet port for expiratory air
5	Power supply cooling Fan location	Cooling fan for the power supply
6	MCB Fan	Main control board fan
7	Air Inlet Filter	Inlet port for inspiratory air

## Your Child's Settings:

**Preset 1**

Mode:  Manual  Automatic

Pause Pressure: \_\_\_\_\_ cmH<sub>2</sub>O

Inhale pressure: \_\_\_\_\_ cm H<sub>2</sub>O

Inhale flow:  Low  Medium  High

Inspiratory time: \_\_\_\_\_ sec.  NA

Exhale pressure: \_\_\_\_\_ cm H<sub>2</sub>O

Expiratory time: \_\_\_\_\_ sec.  NA

Pause time: \_\_\_\_\_ sec.  NA

**Preset 2**

Mode:  Manual  Automatic

Pause Pressure: \_\_\_\_\_ cmH<sub>2</sub>O

Inhale pressure: \_\_\_\_\_ cm H<sub>2</sub>O

Inhale flow:  Low  Medium  High

Inspiratory time: \_\_\_\_\_ sec.  NA

Exhale pressure: \_\_\_\_\_ cm H<sub>2</sub>O

Expiratory time: \_\_\_\_\_ sec.  NA

Pause time: \_\_\_\_\_ sec.  NA

**Preset 3**

Mode:  Manual  Automatic

Pause Pressure: \_\_\_\_\_ cmH<sub>2</sub>O

Inhale pressure: \_\_\_\_\_ cm H<sub>2</sub>O

Inhale flow:  Low  Medium  High

Inspiratory time: \_\_\_\_\_ sec.  NA

Exhale pressure: \_\_\_\_\_ cm H<sub>2</sub>O

Expiratory time: \_\_\_\_\_ sec.  NA

Pause time: \_\_\_\_\_ sec.  NA

### Recommendations:

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### To Learn More:

- Respiratory Care  
314-684-1495
- Ask your child's Healthcare  
Provider
- <https://abmrc.com/biwaze/>