BiWaze® Cough SYSTEM

CoughCue

What is CoughCue?

CoughCue is an advanced feature of the BiWaze Cough System that follows the patient's natural breathing rhythm. By sensing the end of the inspiratory phase, CoughCue automatically triggers the transition to exhalation — delivering a more natural, synchronized cough.

- ✔ Designed to improve patient comfort
- ✔ Mimics the body's natural cough reflex
- ✔ Helps to improve therapy tolerance

How it works

- Mimics evidence-based breathing techniques (such as the Active Cycle of Breathing Technique) by guiding a slow, deep inhalation with a brief hold, followed by cough — helping air move behind mucus to promote clearance.[3,4,5]
- Enables patient–device synchronization, which may reduce discomfort and make therapy feel more natural.
- Supports physiologic breathing principles by allowing the device to adapt to the patient's own inspiratory effort, rather than relying only on preset timing.

Why "Slow" Inhalation Prior To A Cough Matters

Studies show that the way a patient inhales prior to a cough influences cough effectiveness. A slower, controlled inhalation may help maintain glottic openness, allow greater lung volume recruitment, and optimize cough peak flow.[1,2,6,7,8]

The CoughCue feature in BiWaze Cough supports a more natural completion of inhalation prior to the expiratory phase of the cough cycle.

The BiWaze Cough Advantage with CoughCue

- Smart Synchronization – Matches therapy to patient effort in real time
- Comfort & Compliance – Designed to feel less "forced," more natural experience
- Clinically Informed – Based on established physiologic principles and studies

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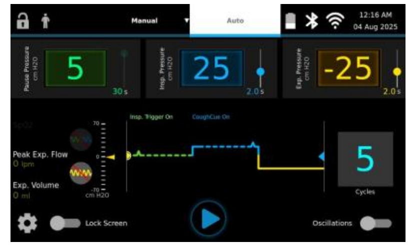
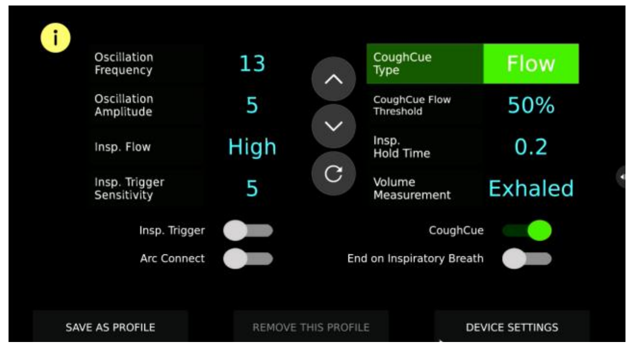
CoughCue Settings

- To change settings, click the "settings" icon
- Press "CoughCue" on right-side to enable



Flow Trigger

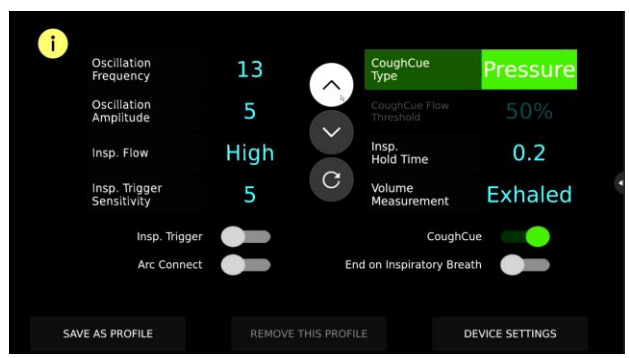
- After the flow drops to set threshold from the peak inspiratory flow, we transition to expiratory phase.
- There are two threshold options for peak inspiratory flow:
  - 0% (lungs are full)
  - 50% (lungs are half full)
- As soon as the flow drops to the set percentage of peak inspiratory flow, the expiratory phase is triggered.



An optional hold time is available from 0 to 2.0 seconds to allow for full lung expansion after the flow threshold is reached.

Pressure Trigger

- When the pressure within the patient's lungs reaches the set insp. pressure, the expiratory phase is triggered.
- The insp. pressure flow rate can be adjusted between Low, Medium, or High.



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3. Wilson, L. M., Saldanha, I. J., & Robinson, K. A. (2023, February 2). *Active cycle of breathing technique for cystic fibrosis* (Cochrane Review No. CD007862). Cochrane Database of Systematic Reviews. https://doi.org/10.1002/14651858.CD007862.pub5
4. Lewis LK, Williams MT, Olds TS. *The active cycle of breathing technique: a systematic review and meta-analysis.* Respir Med. 2012;106(2):155–72
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6. Andersen, T., et al. (2018). *Laryngeal responses to mechanically assisted cough in progressing amyotrophic lateral sclerosis.* Respiratory Care, 63(5), 538–549.
7. Andersen, T., et al. (2017). *Laryngeal response patterns influence the efficacy of mechanical assisted cough in amyotrophic lateral sclerosis.* Thorax, 72(3), 221–229.
8. Kotajima, F., et al. (2023). *Inspiratory maneuver influences peak cough flow.* Respiratory Care, 68(6), 888–896.

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