

# ZEN-O™ AND ZEN-O LITE™ PORTABLE OXYGEN CONCENTRATORS (POCs)

Rate Responsive Therapy (RRT)



- › Sensitive breath detection technology
- › Rapid oxygen delivery for optimum therapy
- › Keep your patients better saturated with RRT

*Efficient. Effective. Clinically Sound.*

# RATE RESPONSIVE THERAPY (RRT)

**Zen-O™ and Zen-O lite™** portable oxygen concentrators (POCs) from GCE Healthcare provide optimum oxygen therapy by delivering a constant bolus of oxygen and up to twice as much oxygen than of some other POCs at setting 2 in pulse mode.

## CONSTANT PULSE OXYGEN DELIVERY

GCE Healthcare’s Rate Responsive Therapy (RRT) technology in the Zen-O™ and Zen-O lite™ POCs delivers a constant bolus of oxygen and automatically responds to the increase or decrease of a patient’s breath rate.

Some other POCs deliver a fixed volume of oxygen per minute (fixed minute volume) at a selected pulse mode setting. This means that the bolus size may be reduced or the unit can skip breaths at higher breath rates. To compensate the user would have to increase the setting on the POC or the POC is forced to deliver oxygen intermittently (skipping breaths).

An independent study showed that POCs with fixed minute volume reduce the bolus of oxygen delivered, and therefore the FiO<sub>2</sub> delivered per breath decreases.

*“the most important finding from a standpoint of clinical application, is that oxygen delivery for all POCs in this study decreased as the breathing frequency increased.”*

The Zen-O™ and Zen-O lite™ POCs were not included in this study.

### Benefits of Rate Responsive Therapy:

- Zen-O™ and Zen-O lite™ keep patients saturated even at high breath rates\*
- No need to change the device settings in advance of increased physical activity

## RATE RESPONSIVE THERAPY VS FIXED MINUTE VOLUME

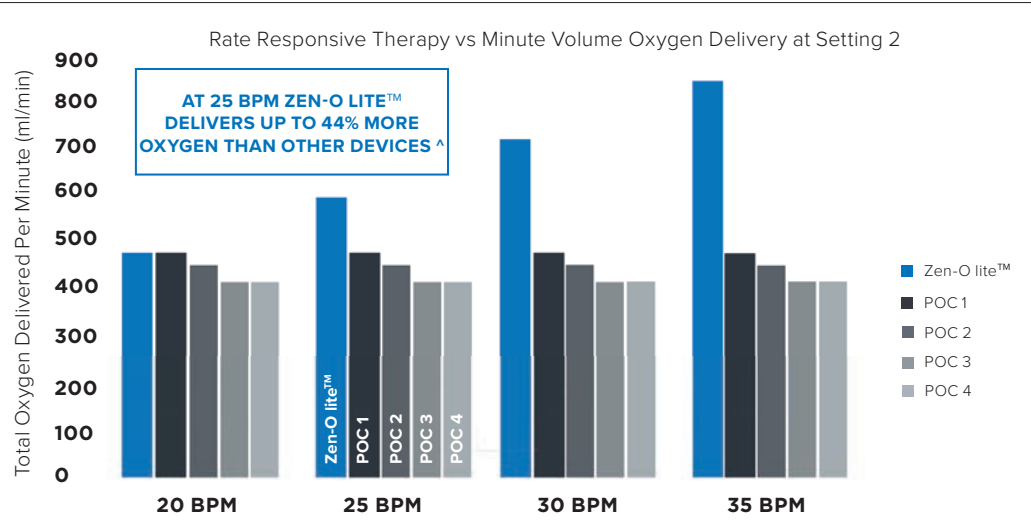
### Rate Responsive Therapy

- Automatically delivers a variable amount of oxygen, providing more or less as the patient’s demand changes
- Bolus size is constant regardless of the breath rate\*
- Does not skip breaths
- FiO<sub>2</sub> levels are maintained as breath rate increases
- RRT automatically adjusts to the needs of the patient, delivering more or less oxygen as the patient’s breath rate changes.

### Fixed Minute Volume

- Delivers a fixed volume of oxygen at a selected setting in one minute irrespective of the breath rate
- Smaller bolus sizes at higher breath rates
- May skip breaths at higher breath rates
- Patient’s FiO<sub>2</sub> declines as breath rate increases
- At higher activity levels the patient is required to increase the pulse setting to maintain the same oxygen delivery volume.

\*Up to 40 breaths per minute



^ Devices compared in GCE’s evaluation.

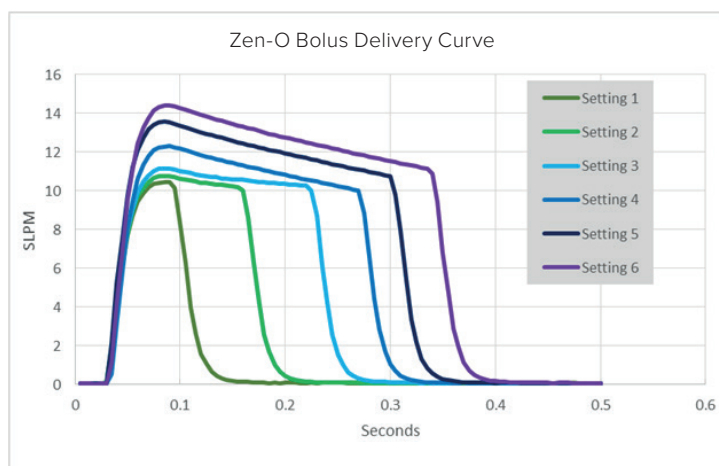
## HIGH BREATH SENSITIVITY AND RAPID DELIVERY

At GCE Healthcare we understand that respiratory effort varies between patients, that is why we use very sensitive breath detection technology. With  $-0.12$  cm/H<sub>2</sub>O sensing pressure, the Zen-O™ and Zen-O lite™ can meet the needs of shallow-breathing patients.

In addition Zen-O™ and Zen-O lite™ deliver the full dose of oxygen within 0.5 seconds of inspiration, irrespective of the setting selected.

### Benefits:

- High sensitivity ensures that patients with shallow breaths can trigger the delivery of oxygen
- Rapid delivery ensures oxygen is delivered to the patient quickly when they need it most



### Reference

1. Comparison of Four Under 5 lb. Portable Oxygen Concentrators  
Prepared by Strategic Dynamics Inc. March 7, 2013



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