



Introducing the new Hi-Ox™

THE ONLY OXYGEN MASK PROVEN TO DELIVER >80% OXYGEN, EVEN AT 8 LPM



The Hi-Ox delivers solutions for treating and transporting patients with high-flow oxygen needs:

- **Proven solution** delivers higher FiO₂'s than ANY mask, at ANY flow. Proven to deliver >80% oxygen, even at 8 LPM.
- **Delivering >90% oxygen** to severely hypoxic patients is simplified by the design and performance of the Hi-Ox.
- **Transporting patients** who require very high flows is always a problem when typical E-cylinder regulators only go to 10 -15 LPM. The Hi-Ox solves that problem.
- **Discharging high oxygen flow dependent patients.** The Hi-Ox solution enables patients requiring high flow oxygen to be discharged sooner to home or hospice centers, making them treatable with oxygen concentrators.

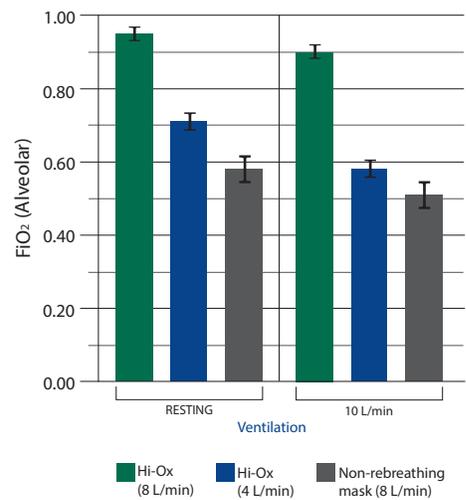
The simple fact is that conventional oxygen masks just can't deliver high FiO₂'s to hypoxic patients. The Hi-Ox was developed to solve that problem.

The Hi-Ox delivers higher FiO₂'s than ANY mask, at ANY flow. It's the only disposable mask proven to deliver >80% oxygen, even at 8 LPM.

Not a conventional mask, the Hi-Ox is a unique non-breathing, sequential dilution mask that delivers high FiO₂'s at one-half to one-third the flow of other devices.

Finally, a simple, low-cost solution for hospitals, and field applications where oxygen resources are limited by flow requirements or tanks.

Hi-Ox versus Non-Rebreathing Mask Performance Data



Data from: M Slessarev, R Somogyi, D Preiss, A Vesely, H Sasano, JA Fisher. Efficiency of oxygen administration: Sequential gas delivery versus "flow into a cone" methods. Crit Care Med; 34:829-834, 2006

Finally, a mask with no limits

THE HI-OX — NEW TECHNOLOGY OXYGEN MASK FOR PATIENTS REQUIRING HIGH OXYGEN CONCENTRATIONS

The limitations of conventional oxygen delivery

Conventional oxygen masks just can't deliver a high FiO₂ to hypoxic patients. Just sitting at rest, most adults have a peak inspiratory flow of 30 liters per minute. Add a little exertion from dyspnea where the patient's flow increases, and the limitations of these masks become even more significant.

Unless the flow from the oxygen mask meets the patient's inspiratory flow, 21% room air leaking in from around mask and in through the mask's exhalation holes during inspiration, will dilute the 100% oxygen and the patient won't get the >80% oxygen you want to deliver.

Plugging the holes

The Hi-Ox starts with a soft vinyl facemask that seals to the face and has no holes in the mask for exhalation that would allow room air to enter. Dilution of the inspired oxygen is also limited by a better face seal assured by dual head straps (above and below the ears) and a more anatomic foam lined bridge for the nose that moves the mask down from around the eyes.

Changing the delivery with sequential dilution

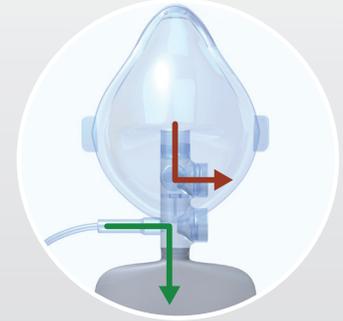
Gas flow is controlled by three low resistance valves. The 3-valve system separates the reservoir bag inspired oxygen from the exhalation path to the room. The Hi-Ox's third sequential dilution valve opens only once the reservoir bag is emptied, so that room air is sequentially added at the end of the inspired breath. Taking advantage of the patient's approximate 150 ml anatomic deadspace, which does not participate in gas exchange, the oxygen concentration of that gas in the airways becomes immaterial to the delivered FiO₂ to the alveoli. This means that high concentrations of oxygen can be delivered at relatively lower flowrates.



Aerosol Delivery Feature

Now you can also deliver aerosolized drugs while maintaining high inspired oxygen concentrations. The Aerosol Adapter for the Hi-Ox enables use of most small volume nebulizers to deliver aerosols right to the breathing path of your patients without going through valves or baffles that reduce aerosol delivery.

How the Hi-Ox™ and Sequential Dilution Work



During exhalation, the patient's breath flows only out the exhalation valve. There are no holes in the mask for exhaled flow. During this time, the oxygen flow entering the Hi-Ox fills the inspiratory reservoir.



During the patient's inspiration, 100% oxygen entering the Hi-Ox and stored in the reservoir flow up through the inspiratory valve to the facemask without the dilution from holes in conventional masks. The oxygen source also applies closing pressure against the dilution valve.



If the patient's inspiratory demand exceeds the .75-liter reservoir (and the reservoir has emptied), the dilution valve will open and fill the patient's deadspace with room air. Filling non-gas exchange deadspace limits reductions in alveolar oxygen delivery.

Distributed by:



7241 Garden Grove Blvd., Suite G • Garden Grove, CA 92841
www.Cereteclnc.com info@Cereteclnc.com
office 714.823.3468 fax 714-373.0505