

# New Technology of the Oxylator EM-100 & EMX

No other device, period, answers the various requirements of pre-hospital EMS better than the Oxylator EM-100's & Oxylator EMX's patient accommodating technology. Not the imposing "BVM", not the imposing "demand-valve", and not the old technology, imposing, time-cycled, volume-delivery, "vents". Lets look at some of the advantages afforded by the accommodating Oxylator Technology.

1. **Patient Care & Safety**..... The Oxylator will tell you much more about your patient's changing conditions. The Oxylator EM-100 or EMX will suddenly increase its cycling BPM rhythm when lung volumes or compliance changes occur that are caused by partial extubations, sudden right mainstem intubations, or collapsed lungs. Even though the BPM rate changes, the minute volume delivered to the patient remains the same, thus protecting the patient. Since the Oxylators, as well, are pressure limited, the remaining good lung volume experiences no greater pressure than that pressure experienced prior to that abrupt lung volume change. A subtle BPM cycling rhythm increase over time would indicate a gradual filling of the lungs with fluid, thus automatically adjusting to a reduction of the patient's ventilated lung volume. The old technology of "vents" would not alert you to the above changes until a "pop-off" pressure was exceeded (possibly over pressurizing the remaining good lung), and then the "vent" would simply alarm and cease its operation, thus compromising ventilation with no hint as to the problem.
2. The potential for **"hands free" cycling ventilation** not only provides the efficiency of a "vent" during transport, but the Oxylator's accommodating technology prevents the potential for guessing wrong on the patients Inhalation:Exhalation ratios (patient's certainly do not have their I:E ratios taped to their forehead). Thus, "stacking" of breaths or "trapping" of air is prevented, even in less experienced hands, mentally tired hands, distracted hands, or excited hands. The "stacking" problem can only occur with every other imposing ventilation device like the BVM, the demand valve, or the "vent", but not the Oxylator EM-100 or Oxylator EMX.
3. **CPR**..... The Oxylators were designed for CPR. The Oxylator Technology offers another "set of hands" if you are caught in a situation where you might be required to do CPR by yourself while your other team members are very busy with their own victims, or you have a need for airway management while you administer other lifesaving treatments to the patient. As well, the Oxylator cycles the patient's ventilation "in sync" with your chest compressions, thus delivering added volumes to the patient when needed. Additionally, the Oxylator EM-100 or Oxylator EMX are possibly the only ventilating devices available today that are able to properly ventilate a patient during continuous chest compressions.

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4. **Consistent breaths or volumes delivered by the Oxylator**..... This could only be accomplished by a “vent” prior to the Oxylator technology. BVMs certainly cannot deliver consistent and proper volumes to a patient over an extended transport, etc. Patient’s who might “buck” the “vent”, will not “buck” the Oxylator, because the new accommodating technology of the Oxylator works with the patient’s natural breathing pattern, not against it.
5. **Mass casualty Situations (earthquake, US&R, HAZMAT, etc., etc.)** With respect to confined space rescues / ventilation of victims of earthquakes, etc., the only device that comes close to the Oxylator EM-100 or Oxylator EMX in the category of confined space ventilation is the "demand-valve" (and that's only because of its size). Speaking of US&R type references, Turkish rescue personnel used Oxylator EM-100s in the after shocks of the Turkey earthquakes. There are at least five letters of commendation from these rescuers. BVMs are certainly not the answer in conditions of restricted space. As to the HAZMAT benefits the Oxylator Technology, the Office of Emergency Preparedness’ National Medical Response Teams (NMRTs), and subsequently quite a few of the MMRSs / MMSTs, quickly realized that the Oxylators were the only ventilation devices easily, safely, and efficiently used by rescuers in bulky HAZMAT suits and thick gloves.
6. **Cube & Weight**.... This is obviously an important characteristic of the small, and lightweight Oxylators.
7. **Patient Populations**..... The Oxylator Technology can be used down to 10 kilos in weight (ISO 8382), thus broadening that patient population age and weight range to be potentially ventilated.
8. **Durability, Simplicity, Value**..... The Oxylator Technology has a 5 year warranty.....3 more years than any old technology transport ventilator. If you can count, you can use them! The versatility of the Oxylator EM-100 and Oxylator EMX speaks volumes.