

Dear Medical Professional,

On behalf of The AeroBreath Team, I thank you for your vocation and service to those in need.

The AeroBreath ventilators use reciprocation of a bellows to deliver a preselected volume of air for each inspiration. Volume selection is made by placing a pin in the appropriate location before ventilation begins. Ventilation rate and inspiration /expiration ratio are controlled by the patient or caregiver for the S Lane machines or by motor and simple electric controls for the E Lane machines. For the motorized units, BPM and I/E are controlled with two knobs, like the burner controls on a grill, the first setting the inspiration duration and the second setting the expiration duration. All machines incorporate a pressure valve, adjustable from 0 to 60 cm H₂O, which limits the inspiration pressure and provides safety relief. Cranking an S machine is like riding a bicycle with each downstroke delivering an inspiration. The crank handle is then “coasted” around to the top where the patient or caregiver waits before delivering the next breath. Simply put, the AeroBreath S is a better Ambu® Bag for true ventilation over prolonged periods.



Operator charts are provided for lookup of control settings pre-characterized to deliver the selected TV at the desired BPM and I/E Ratio. Pressure setting is with reference to a graduated scale. Instrumentation is optional, via provision for Ambu®, or equivalent, manometers on the AeroBreath and/or proximal on the patient circuit.

PEEP, which is proving pivotal in treatment of Covid 19, is optional via provision for Ambu®, or equivalent, valve on the patient circuit.

Patient circuit attachment is using standard 22 mm duct. Recommended delivery appliance is a non-vented BiPAP mask with anti-asphyxiation valve. An exhalation valve on the Patient Circuit proximate to the patient is controlled by a 1/8” pressure tube from the AeroBreath unit. Expired air may be collected, filtered and/or directed from the exhalation valve. Required operating force on the handle is light, about like operating a manual eggbeater in a bowl of water.

All breathing circuit components of AeroBreath ventilators are fabricated from bio-compatible materials. All interior surfaces are accessible for cleaning and disinfection. Structural components of the S and E Lane units are PVC and ABS plastic.

Offered accessories include a rugged base that may be weighted with water for placement on table, cart or on the ground, and a pole mounting stand. Simple field-constructed PVC pipe frameworks may be used for fixturing rows of units for use in tight quarters.

Power requirement for the motorized E Lane machines is 24 VDC which may be obtained from a power puck (think laptop power supply) compatible with local line voltage. Power consumption is approximately 8 Watts. Operation for up to 3 days between recharge is possible from a pair of small car batteries.

Our new SE lane ventilator can be used in either operator-powered or electrically-powered automatic mode, and is capable of spontaneous assist breathing support.

Sincerely,
Jim Richards
Chairman

The AeroBreath™ Project, Inc.
274 Valley Road, South Burlington, Vermont 05403 USA <https://aerobreath.us>
Vermont Non-Profit, 501(c)(3) Pending U.S. and Foreign Patents Pending

Ambu® is a registered trademark of Ambu A/S Corporation