i. Initial settings:

Tidal volume	6–8 mL/kg ideal body weight	Go to ARDSNET table of height and Predicted Body Weight and Tidal volumes. Use 6–8 mL/kg as a starting point. Patients with known acidosis should start with 9 mL/kg
Respiratory rate	12–14 (or 8–12) breaths/min	Adjust for target minute ventilation based on $EtCO_2$
Inspiratory time	1 second	Adjust 0.7–1.2 seconds to maintain desired I:E ratio (inspiration-expiration) ratio of 1:2 and patient comfort
PEEP	5 cmH_20	
FiO_2	60%	Titrate to achieve target O_2 saturation (94–98%)
Sensitivity	-2 cmH_20	

ii. Set the heat moisture exchange (HME) at circuit Y.
iii. Plateau pressure (PPlat) goal is less than 30 cmH_20

Patient Safety Considerations

1. Ventilators have different capabilities and features. Users must be familiar with the device they use and must be properly educated on its use and application in the specific population being treated
2. Ensure that all vent alarms are set appropriately, and patient is continually monitored with pulse oximetry and waveform capnography
   a. Set all alarms that involve high pressure, low pressure, minute volume, and apnea
   b. Plateau pressure (PPlat) goal is less than 30 cmH_20
   c. Set high pressure alarm 10 cmH2O above resting PIP
   d. Set low pressure alarm 5 cmH2O below resting PIP
   e. Set low minute volume alarm 25% below resting minute volume
3. During transport of a critically ill patient only necessary adjustments should be made to the ventilator. Focus on maintaining adequate oxygenation, minute volume and patient comfort.
4. An increase in the respiratory rate shortens the expiratory time. If changing rate, also check the I:E ratio (the proportions of each breath cycle devoted to the inspiratory and expiratory phases) and adjust the inspiratory time if necessary
5. The inspiratory time can be adjusted slightly to ensure greater patient comfort, however any change in inspiratory time will affect the I:E ratio. Rarely should an inspiratory time be less than 0.7 for an adult
6. Assure proper sedation level for patient to tolerate ventilator
7. Assure patient does not have auto-PEEP
8. Asthmatics and patients with severe bronchoconstriction require different initial settings: for example, PEEP of 0, FiO_2 100%, tidal volume 5 mL/kg, rate 10, I:E of 1:4 – 1:6 to allow full exhalation and limit breath stacking/auto-PEEP. Hemodynamic instability may indicate increased intrathoracic pressure and require either manual chest wall compression to promote full exhalation or possibly needle chest decompression for pneumothorax