Initial Adult Ventilator Settings

You have to start somewhere
✓ Fraction of inspired oxygen (FiO2)—100%
✓ Positive End Expiratory Pressure (PEEP)—5 cmH2O
✓ Respiratory Rate—12 breaths per minute
✓ Tidal Volume 6-8 ml per weight in kilograms (ideal body weight).
   Most adults will require at least 500 ml.

Mechanical Ventilation
Oxygenation and Ventilation
Oxygenation is based on PaO2 and/or SpO2
• To treat hypoxia, increase the FiO2 or Positive End Expiratory Pressure (PEEP)
• Start PEEP at 5 cmH2O. If not successful, increase the PEEP to 8, then 10. Wait 20 minutes between changes to allow recruitment of the alveoli.

Ventilation is based on PaCO2 and/or ETCO2
• To treat hypercapnia (elevated CO2), the alveolar minute ventilation needs to be increased.
• Increase the respiratory rate
• Increase the tidal volume

AARC (American Association of Respiratory Care) Guidelines to adjusting ventilator settings
• PaCO2 > 45 (or ETCO2 > 50)
  • Increase Respiratory Rate
  • Increase Tidal Volume
• PaCO2 < 35 (or ETCO2 < 30)
  • Decrease Rate
  • Increase Tidal Volume
• PaO2 < 60 (SpO2 < 90%)
  • Increase FiO2
  • Increase PEEP
• SpO2 > 95% (or appropriate oxygenation for patient)
  • Reduce FiO2
  • Reduce PEEP to 5