

In response to the critical global need for mechanical ventilation, Avante is offering a simple, effective solution for multiple ventilation needs. The Avante Respiratory Support System combines proven components from the Avante product line for a versatile ventilation solution. The Avante RSS comes equipped with the MVP Ventilator, the Waveline ECO Patient Monitor, the PH300 Humidifier, and a High Flow Oxygen Blender. This system will allow intubated or masked patients to receive ventilation care in either an ICU or transitional care setting. In addition, the MVP Ventilator and High Flow Oxygen Blender are capable of pneumatic operation in emergency situations, where electrical power is unavailable, and a ventilator is required to sustain life.

## Avante MVP Ventilator

The Avante MVP Ventilator can be used in several types of invasive and non-invasive ventilation modes. The versatility of the MVP will fit the needs of many therapies, making it ideal for treatment of complications from COVID-19 and the effects it has on the respiratory system. The time cycled ventilator can be used for:

**Continuous Mandatory Ventilation (CMV):** Ventilation based on set variables – Inspired Time, Expired Time, and Flow Rate. Tidal Volume is achieved by setting the Inspired Time x Flow L/sec = Inspired Tidal Volume. In case of spontaneous effort, the MVP will switch from inspiratory phase to expiratory phase based on airway pressure.

**Intermittent Mandatory Ventilation (IMV):** The pressure sensing feature will allow for mandatory breaths while sensing the presence of spontaneous effort by patient and switch to expiratory cycle. The ventilator then delivers the next scheduled breath as set by the therapist.

**Pressure-controlled Ventilation (PCV):** Breaths delivered based on Peak airway pressure controls that, when reached, switch to expiratory phase of breathing cycle.

**Intermittent Positive Pressure Ventilation (IPPV):** Effective for treating apneic or dyspneic patients. Pressure sensing features allow the MVP to be used for this mode of ventilation as well.

PEEP is controlled using an inline PEEP valve being added to the breathing circuit. PEEP 4-20 cmH<sub>2</sub>O.

## Waveline ECO Patient Monitor

The Avante Waveline ECO is a high-resolution, user-friendly patient monitor that comes standard with 3/5-lead ECG, RESP, SPO<sub>2</sub>, TEMP, NIBP, with optional EtCO<sub>2</sub> monitoring. Measuring physiologic vital signs is a critical component to a patient care system. Noninvasive respiratory monitoring should include both oxygenation (via pulse oximetry) and ventilation (via capnography). All critical vital signs can be monitored by the Waveline ECO to add another layer of monitoring care. For the most critical, the optional EtCO<sub>2</sub> capability of the monitor can be added.

### PH300 Humidifier

The Avante PH300 Humidifier delivers warm and humidified air and oxygen to patients. It can be used with or without heated wire circuits, and the temperature set ranges from 30°- 75° C. The humidifier features automatic temperature monitoring from 0°-75°C. If the humidifier chamber is dry and causes the unit to be over temperature (95° C), the humidifier will automatically shut off and sound an alarm to prevent patient harm.

Humidification is a widely accepted recommendation for all patients receiving either invasive or non-invasive mechanical ventilation. In its [clinical practice guidelines](#), the American Association for Respiratory Care states “humidification is necessary to prevent hypothermia, disruption of the airway, epithelium, bronchospasm, atelectasis, and airway obstruction.” <sup>1</sup>

### High Flow Oxygen Blender

The Avante High Flow Oxygen Blender mixes medical grade compressed air and oxygen to provide a pressurized gas source, ranging from 21 to 100 percent oxygen. Low supply and supply differential alarms are standard. High flow ranges up to 120LPM make it ideal to supply the MVP Ventilator for FIO2 control. The High Flow Oxygen Blender connects to oxygen sources through a DISS connection and will interface with most hospital medical gas infrastructures. Will work with Cylinders, generators, or pipeline sources.

#### Customer Testimonial

<sup>1</sup> *Humidification During Invasive and Noninvasive Mechanical Ventilation: 2012*  
Ruben D Restrepo, Brian K Walsh  
*Respiratory Care May 2012, 57 (5) 782-788; DOI: 10.4187/respcare.01766*