

## GUIDE FOR INITIAL SETTINGS FOR VENTILATION ON THE HAMILTON T1

*Assumes an ED patient who is **apnoeic** (sedation) & **nursed at 30 degrees** to minimise aspiration*

*Always carefully titrate **sedation** (for ease of transport in ED ideally morphine and midazolam), avoid further paralysis*

	<b>LUNG PROTECTIVE STRATEGY</b> (all patients unless obstructive)	<b>OBSTRUCTIVE STRATEGY</b> (Asthma, Anaphylaxis etc.)																												
<b>Mode</b>	SIMV+ is default ED choice*	SIMV+ is default ED choice*																												
<b>VT</b>	Hamilton T1 will estimate based on Ideal Body Weight (Height and Sex) - should be around <b>7mls/kg</b>	Hamilton T1 will estimate based on Ideal Body Weight (Height and Sex) - should be around <b>7mls/kg</b>																												
<b>RR</b>	<b>14-20 / min</b> (higher if DKA or other severe Metabolic Acidosis)	<b>6-10 / min or less</b> (Seek Expert Help) Consider " <b>Permissive Hypercapnia</b> " (avoid automated (ASV) mode)																												
<b>Pressure alarm</b>	T1 default is set to <b>40cmH20</b> - this will alarm at Peak Pressure of 30cmH20 (can increase if plateau pressure ok - PTO)	T1 default is set to <b>40cmH20</b> - this will alarm at Peak Pressure of 30cmH20 (can increase if plateau pressure ok - PTO)																												
<b>Fio2 (%oxygen)</b>	Titrate Sats>94 and ABG (Hamilton turbine can provide 21-100% O2)	Aim for a 'safe' sats (e.g. Sats 90-94%) (Seek Expert Help)																												
<b>PEEP / PEEP scale</b>	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>PEEP (cm H<sub>2</sub>O)</td> <td>5</td> <td>5</td> <td>8</td> <td>8</td> <td>10</td> <td>10</td> <td>10</td> <td>12</td> <td>14</td> <td>14</td> <td>14</td> <td>16</td> <td>18</td> </tr> <tr> <td>F<sub>i</sub>O<sub>2</sub></td> <td>0.3</td> <td>0.4</td> <td>0.4</td> <td>0.5</td> <td>0.5</td> <td>0.6</td> <td>0.7</td> <td>0.7</td> <td>0.7</td> <td>0.8</td> <td>0.9</td> <td>0.9</td> <td>0.9</td> </tr> </table> <p style="text-align: center;">Seek Expert Help as required (PTO)</p>	PEEP (cm H <sub>2</sub> O)	5	5	8	8	10	10	10	12	14	14	14	16	18	F <sub>i</sub> O <sub>2</sub>	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	0 (or up to 5) PEEP (Seek Expert Help)
PEEP (cm H <sub>2</sub> O)	5	5	8	8	10	10	10	12	14	14	14	16	18																	
F <sub>i</sub> O <sub>2</sub>	0.3	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9																	
<b>Inspiratory to Expiratory (IE) ratio</b>	On Hamilton T1 adjust I:E ratio by changing "inspiratory time" (ratio will vary with rate)	On Hamilton T1 adjust by changing "inspiratory time" (aim ratio I:E>1:4)																												
<b>*Recommended ED Mode</b>	<b>*APVsimv / SIMV+</b> Volume-targeted mandatory breaths can be alternated with pressure-supported spontaneous breaths.																													

**OWN THE HAMILTON** (adapted from LITFL own the Oxylog)

2 sided doc - Cut here and laminate

## 6 Key Steps to Start Ventilation with Hamilton T1

- (1) Touch one of the three **Quick Setup** buttons.
- (2) Touch Male or **Female**.
- (3) Touch **Pat. Height** and adjust patient height using the Press-and-Turn knob. This estimates ideal body weight (IBW). IBW is used to determine startup settings
- (4) If required, touch '**Modes tab**' to change ventilation mode - SIMV+ is default choice (PTO)
- (5) Review control and alarm **settings**.
- (6) Touch **Start** ventilation

## Knobology and Modes



### OTHER T1 MODES:

- **APVcmv / (S)CMV+** Breaths are volume targeted and mandatory.
- **PCV+**: All breaths, whether triggered by the patient or the ventilator, are pressure controlled and mandatory
- **PSIMV+**: Mandatory breaths are pressure controlled. Mandatory breaths can be alternated with pressure-supported spontaneous breaths.
- **SPONT**: Every breath is spontaneous, with or without pressure-supported spontaneous breaths.
- **ASV**: Operator sets a target %Minute Volume, PEEP, and Oxygen (breath frequency, tidal volume, pressure, and I:E ratio are based on input from patient)

### • HIGH PRESSURE STEPS

- If pressure alarms check for agitation and tube obstruction.
- If this is not the cause and vitals are normal check Plateau Pressure by pressing the insp hold (lung icon button) -the resulting pressure line (PPlat) should be <30cmH20