Infant Star High Frequency Ventilator

Fixed I.T. = 0.018 sec (18 milliseconds)

Frequency Changes
1. Lower Freq allows increased expiratory time (longer I:E ratio) which minimizes air trapping (use to treat PIE, pneumothorax).
2. Lower Freq will decrease alveolar ventilation (to avoid hypocarbia).
3. A higher Freq up to 15 Hz will improve oxygenation by increasing lung volume from decreased expiratory time (shorter I:E ratio)

Alveolar ventilation = (TV)^2 frequency

TV is represented by Amplitude

Increased alveolar ventilation will increase CO2 removal

To increase alveolar ventilation, either increase the amplitude or increase the frequency (up to 15 Hz)

* Tidal volume basically doesn't change with the frequency on the Infant Star ventilator.

MAP
time

I:E
1:3
15 Hz (900 bpm)

I:E
1:8
6 Hz (360 bpm)

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