

COVID-19 Medical Air demand Advisory

Design consideration regarding the anticipated additional demand on the medical air compressor system for the support of COVID-19 related ventilator use.

For instance:

R.T. provides you with an additional inventory of the 200 ventilators in reserve for this emergency.

Of the 200 ventilators, 60 – 65 of these machines have their own **internal air compressor** to be plugged into the wall.

To lessen the impact on the medical air source equipment, employ the these ventilators first.

Reality assist for design capacity of the existing medical air compressor source equipment:

Observe the actual function of the medical air source system.
You observe only one of the four compressors is in use at the time.

Since 3 compressors in use at one time is considered meeting calculated peak flow demand, it is reasonable to calculate there is room for more ventilator patients on this system, as designed.

I would state, comfortably, the current use factor of the **medical air source equipment observed is less than 30% design peak flow demand capacity** of this system.

Then, assuming you have the current medical air system rated capacity from the manufacturer you can comfortably state how many ventilators each medical air system will be able to accommodate without needing the reserve compressor to activate and cause the Lag (malfunction) alarms to activate.

The demand on the medical air system by each ventilator can be provided by the appropriate Clinical Manager. Typically, Total Minute Ventilation with FiO₂ provides the demand on the medical air system for this calculation.

Respectfully,
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