

Understanding Concentrators

Oxygen



Everyone is talking about oxygen concentrators now. Most of us had not heard of them before. Many know about distillers which extract water from air, yet very few realised that even oxygen can be extracted from air. So what is an Oxygen Concentrator and how do you choose the right one?

The most important is to understand that Covid patients require 90% Oxygen concentration at 1to 5Litre flow and above to 10L

Tips on Selecting the right oxygen concentrator.

The most important is to understand Covid patients require 90% Oxygen concentration at 1to 5Litre flow and above to 10L when

they are suffering with acute respiratory discomfort.

90% oxygen concentration is the most important point here.

1. We can break down oxygen concentrator into small (5 to 10 kg) oxygen concentrator suitable for COPD patients, medium (15 to 19kg) and large (20kg and above) oxygen concentrators are suitable for critical care and for COVID patients.
2. Small oxygen concentrators can have options from 1 Litre to 9 Litre Flow but this does not mean you get 90% oxygen at higher flow like at 5 litre. On small oxygen concentrators 90% oxygen concentration is achieved only at lower flows of 1litre to 2 litre. on higher flows the oxygen concentration drops to 30% as you increase the flow. Suitable for COPD patients but not for COVID patients.
3. Check the specs of the oxygen concentrator and if you see 90% – 30% or (1L/min , 2L/min) means 90% oxygen is available only at 1Litre flow or 2Litre flow respectively and on higher flows oxygen drops to 30%. The air we breathing is with 21% oxygen. So small (5kg to 10kg) oxygen concentrator at higher flows gives output of 30% oxygen means its just blowing air.
4. weight is the best indicator to understand the oxygen production capacity.

A 5kg to 10kg oxygen concentrator means a small compressor which will only manage to give an output of 90% oxygen at 1 litre to max 2 Litre

A 15kg to 19kg Oxygen Concentrator will have a compressor that can easily give an output of 90% oxygen at flows from 1 Litre to 5 Litre Oxygen (Ideal for COVID patients and critical care patients)

A 20 kg and above oxygen concentrator will have a large compressor which can give an output of 90% oxygen from 1Litre

to 10Litre flow. (Ideal for COVID patients and critical care patients and for dual patients to use same machine with accessories)

Please do not only see the output flow of an oxygen concentrator like 5litre, 10litre or so. the most important is to make sure you get 90% Oxygen at highest flow level.

For a small family with no senior citizens a 5 litre at 90% oxygen concentration should be good enough.

For 2 senior citizens or for a big family 10 litre at 90% oxygen concentration should be good enough as it can support 2 patients at once if the need arises. And can assist senior citizens during home critical care if the need arises.

Please do not get fooled and pay big money for small oxygen concentrator sold by highlighting 5 Litre and 8 Litre and do not give an output of 90% concentration of oxygen at higher flows which is the need of the hour.

Please read the specs well and if required please ask your supplier to show you the oxygen output on an oxygen analyzer at higher flow of 5 Litre or 10 Litre.

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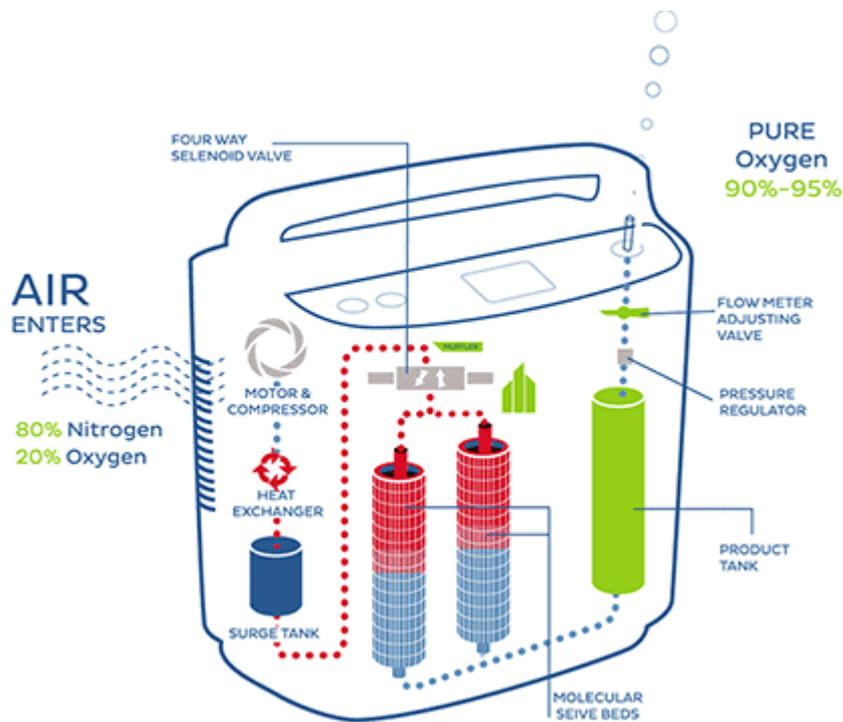
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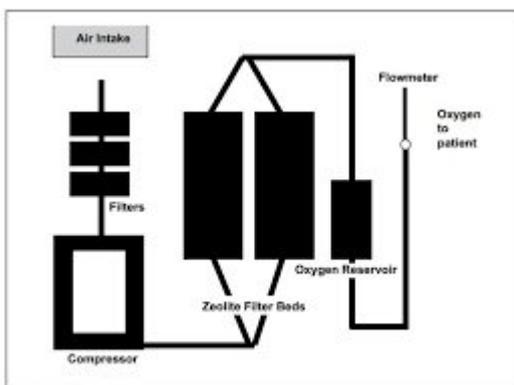
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Flow Diagram of an Oxygen Concentrator
 Courtesy: Oxygen Concentrator Store

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Block Diagram of an Oxygen Concentrator

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Also most importantly consult a doctor before you invest your hard earned money in the device. Right now, because of a shortage of oxygen supplies, the concentrators are overpriced. As soon as supply meets demand, the price of concentrators will come down.