Dynaxcel
ENGINEERS PVT. LTD.
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Medical Grade Oxygen 24x7

PSA Based On Site Oxygen Generation System

DynaO

Salient Features

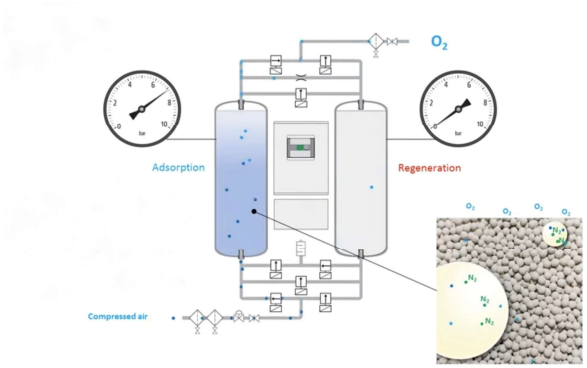
- Produce as per Demand
- Uses pressure swing adsorption (PSA) technology to produce medical oxygen 93%±3 from ambient air.
- Easy to install: preassembled and skid-mounted
- Control panel / user interface, with numerical and graphical values, as applicable
- Gas sensors and PLC Based Warning system
- Oxygen as per ISO 10083

Benefits

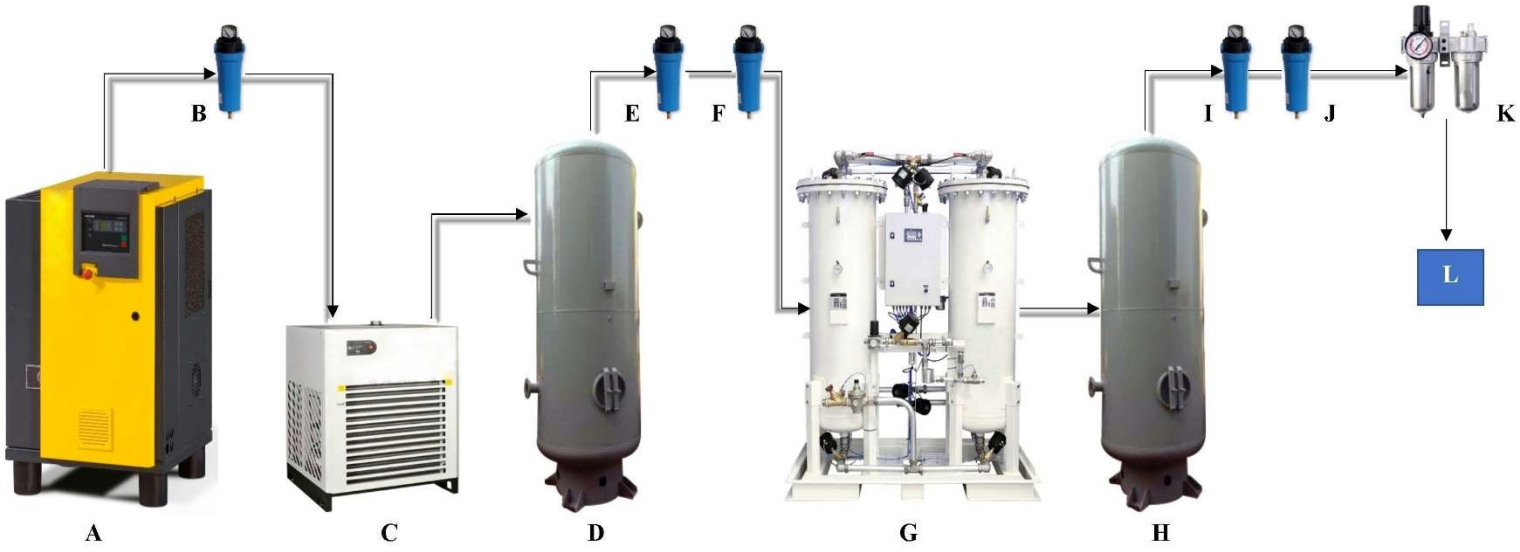
- Oxygen Safe for medical use as per USP requirements
- Availabilty of Medical grade Oxygen 24 Hours a day, 7 days a week.
- Dependency on outside source reduced
- Faster payback period
- Automatic switchover to the secondary oxygen supply
- Easy to Install and use

Principle of Operation

PSA plant employs Zeolite molecular sieves to separate the oxygen from the air. Oxygen with high purity is delivered whereas the nitrogen adsorbed by the molecular sieves is sent back into the air through the exhaust pipe. Pressure swing adsorption (PSA) process comprises of two vessels filled with molecular sieves and activated alumina.



Schematic for On-site Oxygen Generation



A: Compressor
B: Pre-Filter
C: Refrigeration Air Dryer
D: Air Receiver
E: Fine Filter
F: Activated Carbon Filter
G: Oxygen Generator
H: Oxygen Tank
I: Micro Filter
J: Bacteria Filter
K: Pressure Regulator
L: Manifold

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Refrigeration Dryer

- Highly Efficient refrigeration air dryer for pretreatment of compressed air
- Dew points as per ISO 8573 class 4
- Eco friendly refrigerant (R134a, R407c)

Highly Efficient Coalescing filters

Highly Efficient Coalescing filters to remove

- Moisture
- Dust Particle up to 0.01 micron
- Oil Aerosols up to 0.003mg/cu.m
- Bacteria Penetration up to 0.0001%

Air & Oxygen Tank

- Large capacity compressed air and oxygen tanks
- Anti-corrosive paint for better life
- Optional: SS Tank
- Pressure Safety valve, Pressure gauges and draining system for automatic and manual

PLC Based controller

- Flow & Pressure
- Failure Alarms
- Auto controls
- Gas Purity

Oxygen Generator

- PSA type oxygen generator
- It is the engine that drives the separation of oxygen from air to achieve the purity of 93±3%.
- Nitrogen is adsorbed at elevated pressure and oxygen is produced
- During the regeneration step, nitrogen is desorbed via depressurization.
- As one is adsorbing, the other is regenerating and vice versa

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Specification

Air Quality	:	ISO 8573 - 2010 Class 1-4-1
Air Inlet Temperature	:	45 deg C Max.
Ambient Temperature	:	45 deg C Max.
Air Pressure	:	7 bar G
Oxygen Pressure	:	3-6 bar
Power	:	415 ± 15 VAC, 50 Hz, 3 Phase
Oxygen Purity	:	93 ± 3%

Model	Capacity		Equivalent Cylinders	Air Requirement (Compressor Power)			Dimensions L X B X H
	LPM	Cum/hr	No. of cylinders / day	cfm	Pressure in kg/cm2	Power in KW	feet
DynaO 140	140	8.4	25-30	78	7	11	4 x 6 x 5
DynaO 225	225	13.5	45-50	125	7	18	5 x 7 x 6
DynaO 375	375	22.5	75-85	205	7	30	6 x 8 x 6
DynaO 550	550	33	110-125	310	7	45	6 x 8 x 7
DynaO 950	950	57	170-220	525	7	75	7 x 9 x 7

For other models, contact us

Manufactured by

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Represented by