TRIDENT
engineering quality air & gas











- System guidelines as per ISO 10083
- Oxygen Safe for medical use as per USP requirements
- Faster payback period
- Automatic switchover to the secondary oxygen supply
- Digital display - Oxygen purity & Pressure

Onsite Oxygen Plant

GO

PSA BASED ON SITE OXYGEN GENERATION SYSTEM

The Trident on-site oxygen generator systems are perfect for anyone who wants their own flexible and reliable supply of oxygen without compromising on quality. Trident Oxygen Generators allow you to produce the gas exactly where you need it, when you need it.

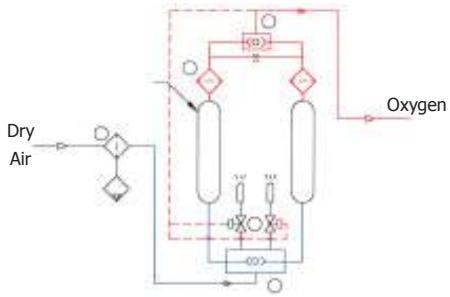
Benefits

- Produce as per Demand
- Avoid Cylinder Availability Issues
- Avoid Logistics and Management Problem
- Faster Payback period within 1Year and lesser
- Eliminate safety risk associated with handling high pressure cylinders
- Can be used as Mobile application also.
- Gas sensors and PLC Based Warning system
- Oxygen as per ISO 10083
- Concentration up to 93 ± 3%

Principle of Operation

Drying Cycle : Purified (Moisture and oil free) air from the compressed air system, Passing through one of the tower filled with Molecular Sieves (Zeolite type). The sieves selectively adsorbs nitrogen, allowing oxygen to pass through at the desired purity level.

Regeneration Cycle : During regeneration cycle, the sudden depressurisation brings out nitrogen molecules strapped in the sieves pores to the surface of the beads. Small portion of oxygen from the drying tower is passes over the sieves through the regeneration orifice. This results in complete regeneration of Molecular Sieves.

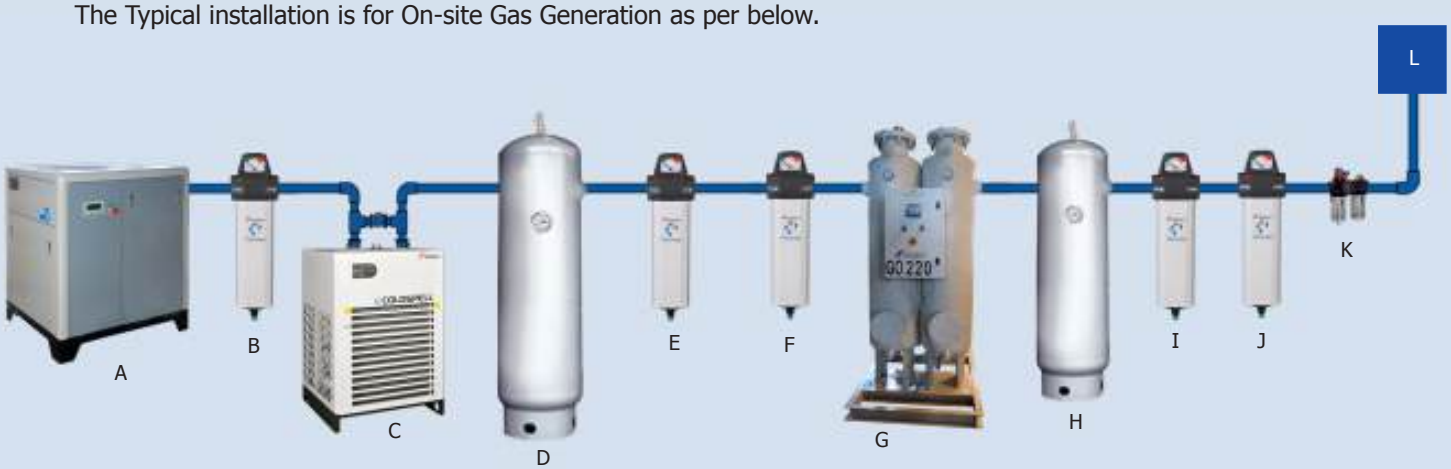


The automatic cycling of the adsorption and desorption between the two beds enables the continuous production of oxygen.

Detailed design of process parameters followed by extensive validation has resulted in consistant performance in Oxygen Series.

Highly reliable PLC based controller with digital display of generator operations.

The Typical installation is for On-site Gas Generation as per below.



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

ISO 10083 : 2006

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Refrigeration Dryer

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

High 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%





Oxygen Generator

- PSA type oxygen generator to achieve the purity of 93±3%.
- Highly reliable valves and components tested as per industrial standard.
- Oxygen compatible materials.

PLC Based controller with Digital Display

- Gas Purity
- Pressure
- Failure warning visual & Audible
- Operation hours
- Provide indication of plant maintenance schedule





Air and Oxygen Tank

- Compressed air and oxygen tanks are designed as per IS 2825
- Anti-corrosive paint for better life
- Optional : SS Tank
- Pressure Safety valve, Pressure gauges and draining system for automatic and manual

Care Pack Services

Trident generators are designed in such way, it will work at site 24 x 7 without any trouble. All the components used in generators are highly reliable and tested as per Industrial standards. All the safety precautions has been addressed (Stand by gas supply mode automatically in case of any failure mode like, Purity, Power failure etc.) to give uninterrupted gas supply.

However trained service personal will attend the service calls for breakdown as well as preventive maintenance. Necessary documents will be provided and training will be given to the users to handle minor breakdowns.

• 45 service outlet in India • Centralized service logging system • Onsite Training for the users • Genuine spares available at nearest point • Competitive and effective Annual Maintenance Contracts available at the end of warranty period

Model	Capacity		Equivalent		Air requirements (Comp. Power)			Overall Dimensions L x B x H (Feet) (approx.)
	LPM	cu.m/hr	Liqiud oxygen liters/day	No. of cylinders / day	cfm	Pressure in Kg/Cm²	Power in KW	
GO 50	50	3.0	90	5 - 11	31	7	5	3 x 5 x 5
GO 85	85	5.1	153	15 - 18	44	7	7.5	3 x 5 x 6
GO 140	140	8.4	252	25 - 31	78	7	11	4 x 6 x 5
GO 180	180	10.8	324	35 - 40	100	7	15	4 x 6 x 6
GO 230	230	13.8	414	45 - 50	125	7	18	5 x 7 x 6
GO 260	260	15.6	468	50 - 60	144	7	22	5 x 7 x 7
GO 390	390	23.4	702	70 - 86	205	7	30	6 x 8 x 6
GO 470	470	28.2	846	90-105	250	7	37	6 x 8 x 7
GO 570	570	34.2	1026	110-126	310	7	45	6 x 8 x 7
GO 710	710	42.6	1278	130-160	390	7	55	7 x 9 x 6
GO 960	960	57.6	1728	170-220	525	7	75	7 x 9 x 7

Specification :

For higher model, contact factory

Oxygen Purity ..... 93±3%
Oxygen Pressure ..... 4 - 5 bar a
Air pressure ..... 7 bar g
Air Inlet Temperature ..... 45 deg C max
Ambient Temperature ..... 45 deg C max
Air quality ..... ISO 8573 - 2010 class 1-4-1

Treatment Prodcuts included in the Scope

Model	Air Dryer	Air Receiver Liters	Air Filters	Carbon Tower	Oxygen generator	Oxygen Receiver Liters	Bacterial Filter
GO 50	CS40	300	T100	TCT 100	OxyGen 50	300	TB 100
GO 85	CS60	300	T100	TCT 100	OxyGen 85	300	TB 100
GO 140	CS100	500	T250	TCT 250	OxyGen 140	500	TB 100
GO 180	CS150	500	T250	TCT 250	OxyGen 180	500	TB 100
GO 230	CS200	500	T600	TCT 600	OxyGen 230	500	TB 100
GO 260	CS200	1000	T600	TCT 600	OxyGen 260	1000	TB 100
GO 390	CS300	1500	T851	TCT 851	OxyGen 390	1500	TB 100
GO 470	CS400	1500	T851	TCT 851	OxyGen 470	1500	TB 100
GO 570	CS400	1500	T851	TCT 851	OxyGen 570	1500	TB 100
GO 710	CS500	2000	T1210	TCT 1210	OxyGen 710	2000	TB 100
GO 960	CS650	2000	T1210	TCT 1210	OxyGen 960	2000	TB 100

Suggested Guidelines for Selection :

Capacity= (1 x No. of beds + No. of beds in ICU x 10 + No. of beds in operation theater x 10) (lpm)