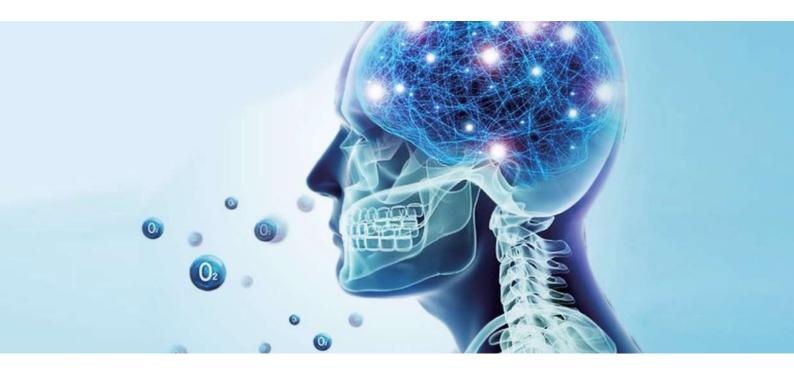
GSA Oxygen Generators

GOG Series PSA Oxygen Generators Global Standard Air & Gas







Why O₂ Generator?

Why O₂ Generator?

Oxygen is one of must-have gases in diverse industries. It has been widely used in various fields such as chemical processing, electronics, laser cutting, food and medicine, and the demand for this gas keeps rising. Therefore, it is critical to supply oxygen in a stable and continuous fashion.

GSA's O₂ generator provides high-quality oxygen which can meet customer needs at the lowest costs, using pressure swing adsorption (PSA) technology.

Applications

- Chemical processing
- Welding and cutting Pharmaceuticals





Food and fermentation



Electronic industry

Medicine

Iron making and steel making

Incineration and water treatment

 Metal refining Fish farming

Aviation

Ozone formation



Positive Effects



- Installed on the site and immediately produces oxygen from compressed air
- No production setbacks from an issue in oxygen refill, delivery or supply
- · Reduction of operating and maintenance costs
- Offers 90-95% oxygen purity according to customer needs

O₂ Generator

The O₂ generator is operated under the following mechanism: Oxygen is supplied by separating nitrogen from compressed air, using desiccants filled in two absorbers. Compressed air including both nitrogen and oxygen supplies oxygen by adsorbing nitrogen while passing through a zeolite molecular sieve (ZMS) layer which has micro pores filled in the absorbers.

The two absorbers repeat pressurizing, absorbing, depressurizing and washing by taking turns and supply oxygen consecutively.

GSA's pressure swing adsorption (PSA)-based O_2 generator has a specially designed distributor at the bottom of the absorber so that it is able to supply high-quality oxygen which meets customer needs in a continuous and stable manner. In addition, the use of durable valves enables stable operation. Since diverse features needed to control the system are supported, settings and operations which meet user needs are enabled.



O₂ Generator for Stable Supply

O2 Generator with Diverse Features



1

PRESS. SAFETY VALVE

Guarantees system stability with KOSHA-certified safety valves

2

3

Reliable AUTO Valve

Guarantees stable operations even under frequent use with proven angle-sheet valves

High-quality Desiccant

Supplies oxygen in a stable fashion, using high-quality carbon molecular sieve (CMS)

Precision Orifice

Minimizes flow rates for regeneration, using a precision orifice

5 Control Panel

Enables stable and precise control, using PLC and touchscreen

6 High-quality Measuring Instruments

Low failure rates and great operating performances with high-quality measuring instruments such as a pressure gauge



Activated Alumina

Activated alumina added to the bottom, ensuring stable performances



High-quality Muffler

Minimizes noise which occurs during purge with Allied Witan or an optimally designed muffler



Distributor for Stable Purity

Installs a distributor to prevent drifting inside a large absorber and ensure stable purity

Technical Specification

Oxygen Capacity (Nm³/h)														
90%	1.7	2.9	4.3	6.8	9.9	12.1	14.9	18.1	26.2	41.1	54.2	73.7	86.3	116.6
93%	1.5	2.7	3.9	6.3	9.1	11.1	13.6	16.6	24.0	37.7	49.7	67.5	79.1	106.9
95%	1.4	2.5	3.6	5.8	8.4	10.3	12.6	15.3	22.2	34.8	46.0	62.4	73.2	98.9
Dimensions (mm)														
L	2,100	2,400	2,650	2,850	3,300	3,400	3,550	3,650	4,000	4,700	5,100	5,800	6,000	6,200
W	1,200	1,350	1,600	1,950	2,150	2,350	2,400	2,500	2,600	3,100	3,500	4,000	4,250	4,500
Н	2,000	2,050	2,100	2,100	2,100	2,100	2,200	2,230	2,540	2,600	2,700	3,000	3,150	3,300
Required Compressed Air (Nm ³ /h)														
Capa.	19	33	48	77	112	137	168	204	296	464	612	831	974	1,316

Components

Power consumption (kW)														
Air Comp.	4	5.5	7.5	11	15	18	22	27	37	55	75	90	110	150
Ref. Dryer	0.46	0.62	0.68	0.72	1.3	1.3	1.6	1.6	2.1	2.3	3.0	4.6	5.1	8.5
Oxy. Gener.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Total	5.46	7.12	9.18	12.72	17.3	20.3	24.6	29.6	40.1	58.3	79.0	95.6	116.1	159.5

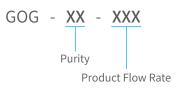
Design Conditions

- Inlet Air Press. : 7.0 barg
- Inlet Air Temp. : 5 °C ~ 45 °C
- Ambient Temp. : 20 °C
- Inlet Air Quality : ISO8573-1 class 1-4-1
- Unit Performance : $\pm 5\%$

References

- Models under VSA as well as PSA are also customizable.
- Models under ASME in addition to KS are also customizable.
- Large models bigger than those stated in the specifications above are also customizable.
- The specifications are subject to changes without notice for product improvement.

Nomenclature



Components



Oxygen Generator with O₂ Holder 9





