

Oxygen Generator Model HD User Manual

Introduction and Product Images

An oxygen concentrator is an oxygen-generating device that minimizes the machine's size while offering superior oxygen production performance, making it easy to use independently or in conjunction with other machines. Its working principle is to obtain a high concentration of oxygen by separating oxygen from the air. Air contains approximately 78% nitrogen and 21% oxygen. The oxygen concentrator uses pressure swing adsorption (PSA) technology to separate the nitrogen and oxygen from the air, collecting the oxygen and ultimately obtaining a high concentration of oxygen.

The working principle of an oxygen concentrator mainly includes several steps: air extraction, air filtration, air compression, air condensation, air drying, filtration and drainage, and oxygen separation. First, air is extracted using an oil-free compressor. The air is then filtered to remove dust, smoke, odors, and other pollutants. Next, the air is compressed to a predetermined pressure, raising its temperature and creating high-temperature, high-pressure air. Then, a condenser lowers the temperature of the compressed air, causing water vapor to condense. This condensate and compressed air are then passed through a dryer to remove the condensate, resulting in dry compressed air at room temperature. Finally, the compressed air passes through a molecular sieve tower using pressure swing adsorption to remove nitrogen, yielding high-purity oxygen.

Actual product image:



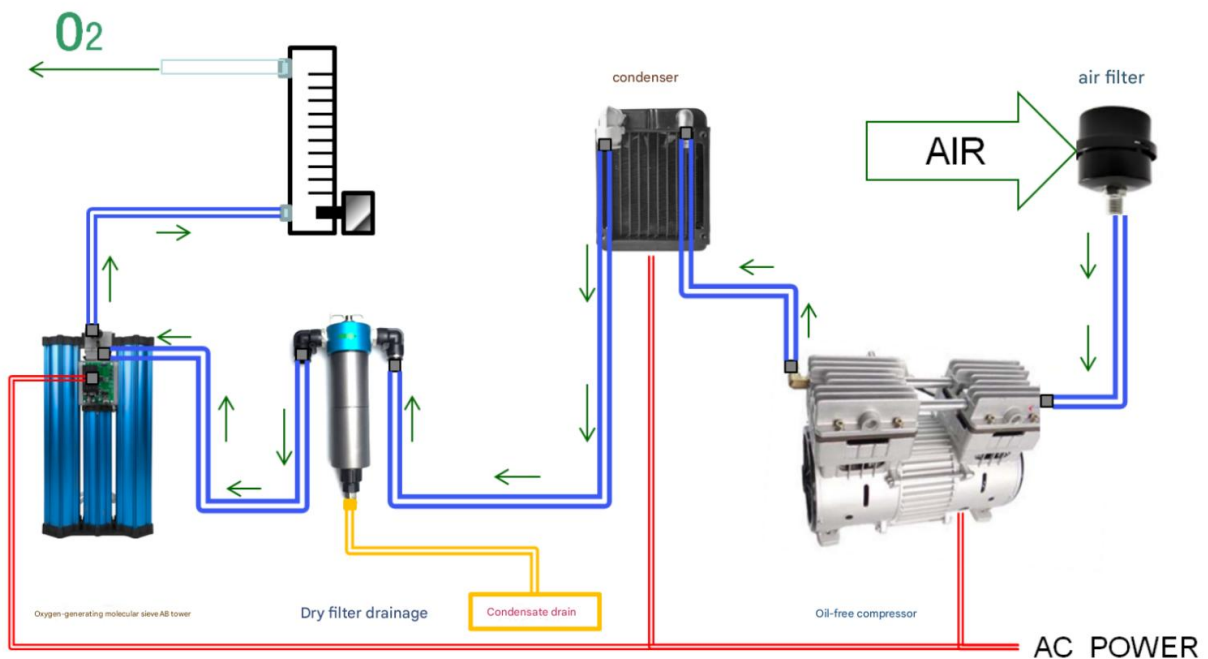


Machine structure and working principle

Machine structure: Composed of a stainless steel casing, cooling fans, dust filter, compressor, condenser, high-pressure gas pipe, high-temperature gas pipe, intake air filter silencer, filter drainage device, molecular sieve adsorption tower, oxygen flow meter, exhaust silencer, control circuit, etc. The stainless steel casing contains an oil-free compressor and shock-absorbing springs.



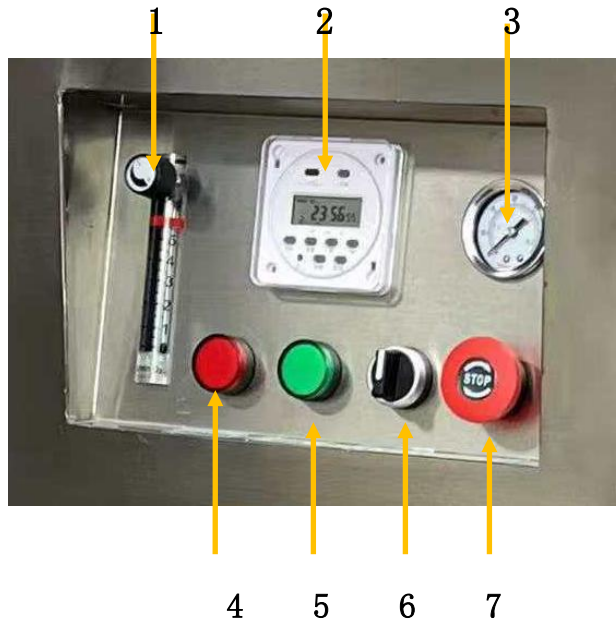
Oxygen production workflow principle diagram



Technical parameters

model	5L/MIN	10L/MIN
Operating voltage	AC220V/50HZ Other voltages can be customized.	AC220V/50HZ Other voltages can be customized.
Rated power	400 W	800 W
maximum oxygen	5L/min	10 L/min
Oxygen purity	93%~96%	93%~96%
Control method	Power on start	Power on start
Machine size	35*45*72 CM (Length * Width * Height)	35*45*72 CM (Length * Width * Height)
Machine weight	18 KG	25 KG
Machine casing material	Stainless steel	Stainless steel
Cooling method	air-cooled	air-cooled
Oxygen outlet	Pagoda 8MM/10MM	Pagoda 8MM/10MM
Work environment requirements	4~ 40 °C , humidity less than 98 % , No areas with heavy dust or flammable/explosive materials. Avoid rain and direct sunlight; store in a cool, dry place.	4~ 40 °C , humidity less than 98 % , No areas with heavy dust or flammable/explosive materials. Avoid rain and direct sunlight; store in a cool, dry place.
Oxygen output pressure	60KPA	60KPA
Oxygen output flow rate	Adjustable from 0 to 5 L/MIN	Adjustable from 0 to 10 L/MIN

Machine Panel Instructions



- 1. Oxygen flow meter
- 2. Timer
- 3. Pressure gauge
- 4. Power indicator light
- 5. Operation indicator light
- 6. Three-position selector switch (timer, stop, normally open)



- 8. AC power input
- 9. AC power output (ready)
- 10. Oxygen outlet nozzle

Precautions for Machine Installation

*Use is prohibited in flammable and explosive locations.

Avoid rain and direct sunlight.

Large dust levels, such as in flour mills, fabric processing plants, and dusty environments, may cause blockages in ventilation and cooling systems.

* Machine installation environment: cool and dry place, temperature less than 40°C, humidity <98%RH.

*The machine contains an air compressor, and although shock-absorbing springs have been

installed, there is slight vibration during operation.

*The cable connected to the machine must be grounded. If a ground wire is missing, the machine casing must be connected to the ground using a wire.

Maintenance and Upkeep

To ensure the equipment performs well and to protect your interests, please provide necessary routine maintenance.

a) The equipment should always be kept in a dry and clean environment.

Ambient temperature: 4°C—40°C

Relative humidity: 5%—98%RH (no condensation on machine surface)

b) Equipment maintenance and upkeep must be carried out with the power supply disconnected.

c) Regularly check whether each electrical component is damp, whether the insulation is good (especially the power supply), and whether the grounding is good.

d) If moisture is found or suspected in the equipment, an insulation test should be performed, and drying measures should be taken. The power button must only be pressed when good insulation is ensured!

e) Regularly check whether the ventilation openings are unobstructed and whether there are any louvers covering or blocking the ventilation openings.

f) The equipment should generally not be used continuously for more than 24 hours at a time.

g) After the equipment has been used for a period of time, the dust should be removed and **the equipment cleaned. The condenser may be clogged with dust, and a high-pressure air gun is needed to clean the dust. The air filter can be disassembled and cleaned with a high-pressure air gun .**

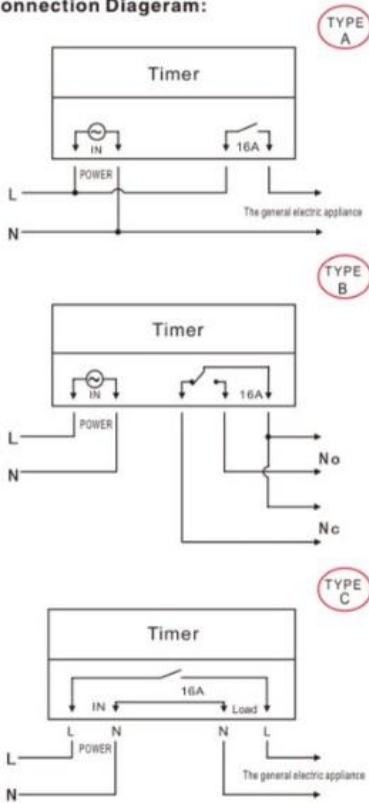
h) Handle the equipment with care during movement and transport. The machine contains delicate and fragile parts, and violent impacts may cause damage.

Timer Operation Instructions

WEEKLY PROGRAMMABLE TIMER



Connection Diagram:



Dimensions:



DIN Rail Installation

Advanced pre-setting one week before
 Digital electronic time switch with daily programs
 Repeat programs with 16 on/off setting: and manual over-ride
 Lithium battery power reserve
 Auto time error correction ± 60sec, weekly

Unlock instructions

Press the "C/R" button for the time, and the "⌚" character disappears in the lower left corner of the display screen. At this time, the control switch is to unlock the state. All keys are valid, can be set or other operation. If not operated in 15 seconds, the time controlled switch is automatically locked. Such as finish setting up, you can also press the "C/R" button for four times, after manual lock button is invalid.

Technical data:

Voltage rating : AC 220V 50 /60Hz
 Voltage limit: AC 180V ~250V
 Hysteresis: ≤1 sec/day (25°C)
 ON/OFF operation: 16 ON & 16OFF
 Power consumption :2VA (max)
 Display : LCD
 Service life : Mechanical 10⁷
 Electrically 10⁷
 Minimum interval :1 minute
 Weight : approx 40g

Order voltage

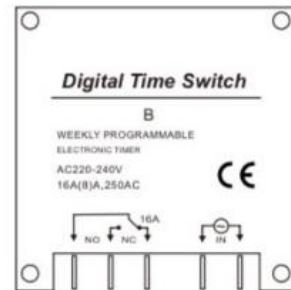
12V, 24V, 36V, 48V, 110V

Count down: 1 sec-99min 56sec
 Pulse: 1 sec -59min 59sec
 Load capacity: resistive load: 16A/250V AC
 Lagging load: 10A/250Vac
 lamp load: 2000W
 Switching contact: 1 changeover switch
 Power reserve: 3 years (NI-MH battery)
 Ambient temperature: -10~+40°C
 Ambient humidity: 35~85%RH

DISPLAY:



1	Ⓟ	TIMER
2	D+	DAT
3	H+	HOUR
4	M+	MIN
5	⌚	CLOCK
6	C	RESET
7	MANUAL	MANUAL C/R
8	C/R	Cancel/Recovery



Operating instruction:

- To start switch: press reset Key At the first time, if you want to the present time, please press "⌚" On Board, then press D+, H+, M+ to adjust the number to the present time.
- Enter into programming as follows:

Step	Key	Programming
1	Press Ⓟ	Setting 1 ON time (display 1 on)
2	Press H+/M+	Setting hours and minutes
3	Press D+	To select same every day, or different time each day
4	Press Ⓟ	Setting 1 off time (display 1 off)
5	Press H+/M+	Setting hours and minutes turn off time
6	Press D+	If you want the same every day, you need not press this key
7	Repeat step 2-6	Set 2-16 on/off time
8	Press ⌚	End

If you do not require 16 settings, press "⌚" to the end

Note:

- Time setting should according to the time sequence, couldn't be set crossly
- System with quit automatically if there's no operating within 10 seconds and no data is saved.
- Function 3, 4, 5 can not be used simultaneously.

