



**NITROGEN GENERATOR
& OXYGEN MACHINE
制氮机 & 制氧机**

Airhorse[®]
艾玛压缩机



广州艾玛压缩机有限公司
GUANGZHOU AIRHORSE COMPRESSOR CO.,LTD



AHN系列·变压吸附制氮机

AHN SERIES · PRESSURE SWING ADSORPTION NITROGEN GENERATOR

● **完善的流利设计**

最优使用效果

Perfect fluent design, optimal use effect.

● **特有的分子筛保护措施**

延长沸石分子筛的使用寿命

Special protection measures for molecular sieve extend the service life of zeolite molecular sieve.

● **自动联锁氮气放空装置**

保证产品氮气质量

Automatic interlocking nitrogen venting device to ensure product nitrogen quality.



● **操作简便，运行稳定，自动化程度高，可实现无人运行**

Simple operation, stable operation, high degree of automation, and can be operated without anyone

● **合理的结构设计**

气流分布均匀减轻气流高速冲击

Reasonable structure design and uniform airflow distribution reduce the impact of high-speed airflow

● **选配制氮机流量，纯度自动调节系统，远程监控系统等**

Optional nitrogen generator flow rate, automatic purity adjustment system, remote monitoring system, etc.

技术优势

TECHNICAL ADVANTAGES

安装方便

EASY TO INSTALL

- 制氮机结构紧凑，整体撬装，占地小，无需基建投资，投资少。
- The nitrogen generator has a compact structure, an overall skid-mounted, small footprint, no infrastructure investment, and low investment.

优质碳分子筛

HIGH QUALITY CARBON MOLECULAR SIEVE

- 具有吸附容量大，抗压性能高，使用寿命长。正常操作使用寿命可达10年。
- It has large adsorption capacity, high compression resistance and long service life. The service life of normal operation can reach 10 years.



不合格氮气自动排空系统

AUTOMATIC EMPTYING SYSTEM FOR UNQUALIFIED NITROGEN

- 开机初期的低纯度氮气自动排空，达到设计指标后自动供应氮气。
- The low-purity nitrogen at the initial start-up is automatically emptied, and the nitrogen is automatically supplied after reaching the design index.

理想的纯度选择范围

IDEAL PURITY SELECTION RANGE

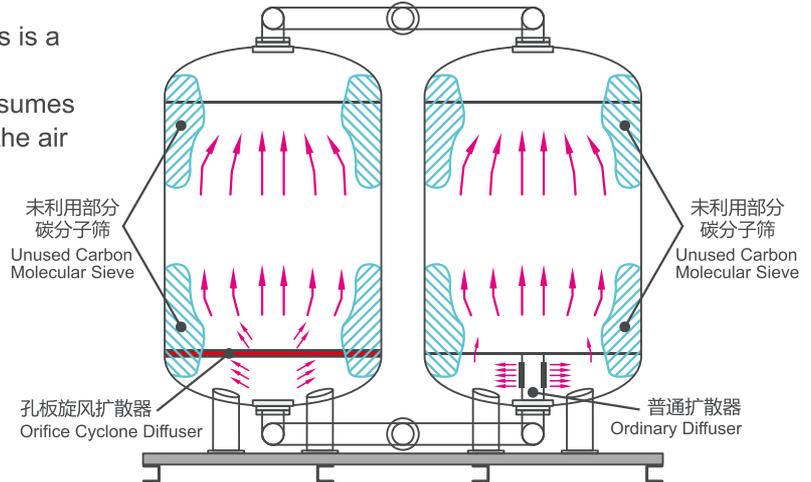
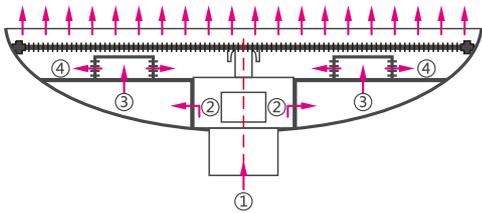
- 氮气纯度调节方便，可根据用户的需求在79%~99.999%之间任意调节，加上独特的氮气纯化技术，在制氮机后端连接加氢或加碳纯化机，可获得99.9995%的高纯氮气。
- The nitrogen purity is easy to adjust, and it can be adjusted arbitrarily between 79% and 99.999% according to the needs of users. With the unique nitrogen purification technology, a hydrogenation or carbon purification machine is connected at the back of the nitrogen generator to obtain a high of 99.9995% Pure nitrogen.

NITROGEN GENERATOR 制氮机

比其它的氮气供应方式更经济

MORE ECONOMICAL THAN OTHER NITROGEN SUPPLY

- 变压吸附工艺是一种简便的制氮方法，以空气为原料，能耗仅为空压机所消耗的电能，具有运行成本低、能耗低、效率高等优点。
- The pressure swing adsorption process is a simple nitrogen production method. It uses air as the raw material and consumes only the electric energy consumed by the air compressor. It has the advantages of low operating cost, low energy consumption, and high efficiency.



机电仪一体化设计实现自动化运行

INTEGRATED DESIGN OF MECHATRONICS AND INSTRUMENT TO REALIZE AUTOMATIC OPERATION

- 进口PLC控制全自动运行。氮气流量、压力、纯度可调并连续显示，可设定压力、流量、纯度报警并实现远程自动控制和检测计量，实现真正无人操作。先进的控制系统使操作变得更加简单，可实现无人值守和远程控制，并可对各种工况进行实时监控，从而保证了氮气纯度、流量、压力的稳定。
- Imported PLC control fully automatic operation. Nitrogen flow, pressure, and purity are adjustable and continuously displayed. Pressure, flow, and purity alarms can be set, and remote automatic control and detection and measurement can be realized, realizing truly unmanned operation. The advanced control system makes the operation easier, can realize unattended and remote control, and can monitor various working conditions in real time, thus ensuring the stability of nitrogen purity, flow and pressure.



高品质元器件是运行稳定可靠的保证

HIGH-QUALITY COMPONENTS ARE THE GUARANTEE OF STABLE AND RELIABLE OPERATION

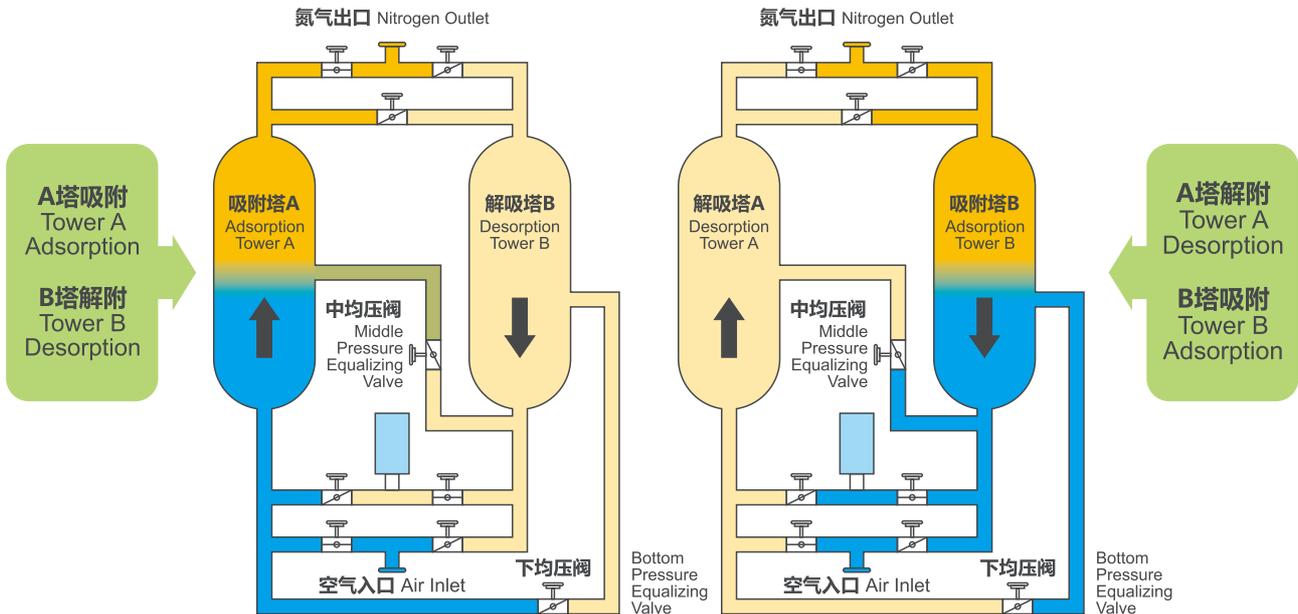
- 气动阀、电磁阀等关键部件采用进口配置，运行可靠，切换速度快，使用寿命达500万次以上，故障率低，维修方便，维护费用低。
- High-quality components are the guarantee of stable and reliable operation. Pneumatic valves, solenoid valves and other key components adopt imported configuration, reliable operation, fast switching speed, service life of more than 5 million times, low failure rate, convenient maintenance, and low maintenance cost.



系统独特的循环切换工艺

THE UNIQUE CYCLE SWITCHING PROCESS OF THE SYSTEM

- 降低了阀门的磨损，延长了制氮机的使用寿命。
- The valve wear is reduced and the service life of the nitrogen generator is prolonged.



工作原理

WORKING PRINCIPLE

在一定的压力下，由于动力学效应，氧、氮在碳分子筛上的扩散速率差异较大，短时间内，氧分子被碳分子筛大量吸附，氮分子在气相中富集，达到氧氮分离。

Under a certain pressure, due to the dynamic effect, the diffusion rate of oxygen and nitrogen on the carbon molecular sieve is quite different. In a short time, the oxygen molecules are adsorbed by the carbon molecular sieve in a large amount, and the nitrogen molecules are enriched in the gas phase to achieve the separation of oxygen and ammonia.

由于碳分子筛对氧的吸附容量随压力的不同而有明显差异，降低压力，即可解吸碳分子吸附的氧分子，使碳分子筛再生，得以重复循环交替，连续产生高品质氮气。

Since the oxygen adsorption capacity of carbon molecular sieve varies significantly with pressure, lowering the pressure can desorb the oxygen molecules adsorbed by carbon molecules, so that the carbon molecular sieve can be regenerated, and the cycle can be repeated alternately to continuously produce high-quality nitrogen.

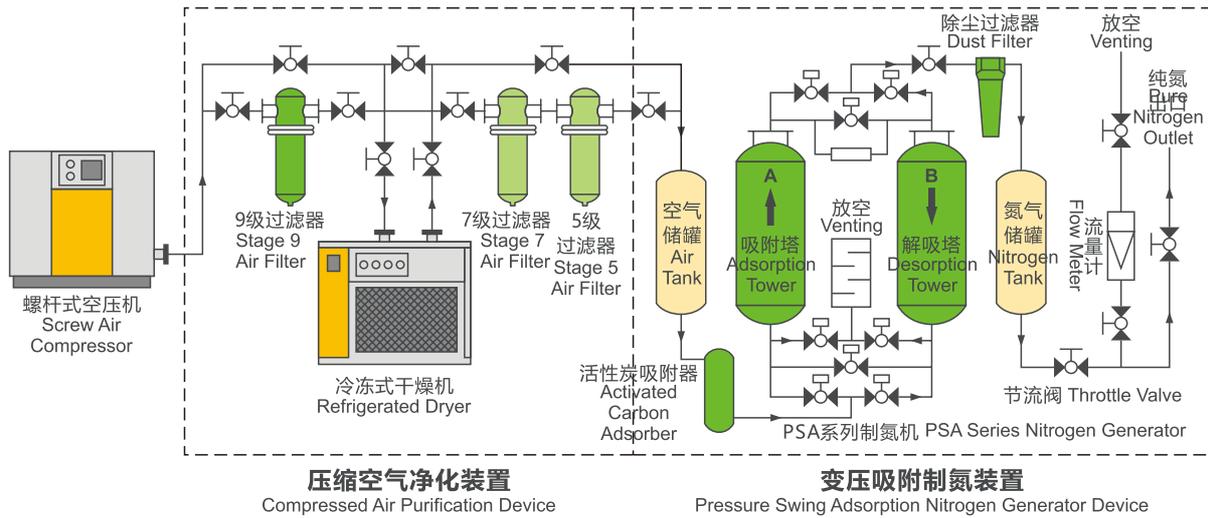
技术指标

TECHNICAL INDEX

| | |
|---------------------------|-------------------------------------|
| 氮气流量 / Nitrogen Flow Rate | 1-3000Nm ³ /h |
| 氮气压力 / Nitrogen Pressure | 0-0.7Mpa |
| 氮气纯度 / Nitrogen Purity | 95-99.999% |
| 露点 / Dew Point | ≤-40°C(常压下 / Under Normal Pressure) |

SYSTEM FLOW CHART

系统流程图



AHN-95 NITROGEN GENERATOR

AHN-95型制氮机

| 型号 Model | 产气量 Air Flow (Nm ³ /h) | 耗气量 Air Consumption (Nm ³ /min) | 尺寸 / Size L×W×H (mm) | 进气口 Air Inlet (DN mm) | 进气口 Air Outlet (DN mm) | 重量 Weight (Kg) |
|-------------|---|--|----------------------------|-----------------------------|------------------------------|----------------------|
| AHN95-10 | 10 | 0.4 | 1500×1000×1650 | 15 | 15 | 580 |
| AHN95-20 | 20 | 0.8 | 1500×1000×1800 | 15 | 15 | 680 |
| AHN95-30 | 30 | 1.1 | 1800×1200×1650 | 25 | 15 | 740 |
| AHN95-40 | 40 | 1.6 | 2200×1400×1900 | 25 | 25 | 850 |
| AHN95-50 | 50 | 2.0 | 2200×1400×2100 | 25 | 25 | 980 |
| AHN95-60 | 60 | 2.4 | 2200×1500×2100 | 25 | 25 | 1130 |
| AHN95-80 | 80 | 3.2 | 2400×1600×2100 | 32 | 25 | 1420 |
| AHN95-100 | 100 | 4.0 | 2500×1800×2200 | 32 | 25 | 1790 |
| AHN95-120 | 120 | 4.8 | 2500×1800×2600 | 40 | 25 | 1950 |
| AHN95-150 | 150 | 6.0 | 2500×1800×2800 | 40 | 32 | 2420 |
| AHN95-200 | 200 | 8.0 | 3000×2000×2600 | 50 | 32 | 3060 |
| AHN95-250 | 250 | 10.0 | 3000×2000×2600 | 50 | 32 | 3850 |
| AHN95-300 | 300 | 12.0 | 3500×3000×2700 | 50 | 32 | 4500 |
| AHN95-400 | 400 | 16.0 | 3500×2700×3000 | 65 | 40 | 5025 |
| AHN95-500 | 500 | 20.0 | 3800×2900×3000 | 65 | 40 | 5625 |
| AHN95-600 | 600 | 25.0 | 4000×2000×3000 | 80 | 50 | 6750 |
| AHN95-800 | 800 | 30.0 | 5500×4000×3100 | 80 | 50 | 7200 |
| AHN95-1000 | 1000 | 40.0 | 5500×4000×3500 | 100 | 50 | 8100 |

*注：本表所列氮气纯度95%，氮气压力0-0.7Mpa(表压)，露点≤-40℃。原料压缩空气压力0.8Mpa(表压)，20℃环境温度，0米标高和80%相对湿度为设计基准。

*NOTE: The nitrogen purity listed in this table is 95%, Nitrogen pressure is 0-0.7Mpa (Gauge pressure), Dew point≤-40℃. Raw material compressed air pressure is 0.8Mpa (Gauge pressure), 20℃ ambient temperature, 0 meter elevation and 80% Relative humidity is the design basis.

AHN-98型制氮机

AHN-98 NITROGEN GENERATOR

NITROGEN PURITY

98%

氮气纯度 98%

| 型号 Model | 产气量 Air Flow (Nm ³ /h) | 耗气量 Air Consumption (Nm ³ /min) | 尺寸 / Size L×W×H (mm) | 进气口 Air Inlet (DN mm) | 进气口 Air Outlet (DN mm) | 重量 Weight (Kg) |
|-------------|---|--|----------------------------|-----------------------------|------------------------------|----------------------|
| AHN98-10 | 10 | 0.45 | 1500×1000×1650 | 15 | 15 | 580 |
| AHN98-20 | 20 | 0.9 | 1500×1000×1800 | 15 | 15 | 680 |
| AHN98-30 | 30 | 1.2 | 1800×1200×1650 | 25 | 25 | 740 |
| AHN98-40 | 40 | 2.0 | 2200×1400×1900 | 25 | 25 | 850 |
| AHN98-50 | 50 | 2.1 | 2200×1400×2100 | 25 | 25 | 980 |
| AHN98-60 | 60 | 3.0 | 2200×1500×2100 | 32 | 25 | 1130 |
| AHN98-80 | 80 | 3.8 | 2400×1600×2100 | 32 | 25 | 1420 |
| AHN98-100 | 100 | 4.2 | 2500×1800×2200 | 32 | 25 | 1790 |
| AHN98-120 | 120 | 5.1 | 2500×1800×2600 | 40 | 25 | 1950 |
| AHN98-150 | 150 | 6.5 | 2500×1800×2800 | 50 | 32 | 2420 |
| AHN98-200 | 200 | 8.6 | 3000×2000×2600 | 50 | 32 | 3060 |
| AHN98-250 | 250 | 10.8 | 3000×2000×2600 | 50 | 32 | 3850 |
| AHN98-300 | 300 | 12.8 | 3500×3000×2700 | 50 | 40 | 4500 |
| AHN98-400 | 400 | 18.0 | 3500×2700×3000 | 65 | 40 | 5025 |
| AHN98-500 | 500 | 21.5 | 3800×2900×3000 | 65 | 50 | 5625 |
| AHN98-600 | 600 | 25.5 | 4000×2000×3000 | 80 | 50 | 6750 |

*注：本表所列氮气纯度98%，氮气压力0-0.7Mpa(表压)，露点≤-40℃。原料压缩空气压力0.8Mpa(表压)，20℃环境温度，0米标高和80%相对湿度为设计基准。

*NOTE: The nitrogen purity listed in this table is 98%, Nitrogen pressure is 0-0.7Mpa (Gauge pressure), Dew point≤-40℃. Raw material compressed air pressure is 0.8Mpa (Gauge pressure), 20℃ ambient temperature, 0 meter elevation and 80% Relative humidity is the design basis.

NITROGEN GENERATOR 制氮机

AHN-99 NITROGEN GENERATOR

AHN-99型制氮机



NITROGEN PURITY

99%

氮气纯度 99%

| 型号 Model | 产气量 Air Flow (Nm ³ /h) | 耗气量 Air Consumption (Nm ³ /min) | 尺寸 / Size L×W×H (mm) | 进气口 Air Inlet (DN mm) | 进气口 Air Outlet (DN mm) | 重量 Weight (Kg) |
|-------------|---|--|----------------------------|-----------------------------|------------------------------|----------------------|
| AHN99-10 | 10 | 0.51 | 1500×1000×1650 | 15 | 15 | 580 |
| AHN99-20 | 20 | 1.02 | 1500×1000×1800 | 15 | 15 | 680 |
| AHN99-30 | 30 | 1.53 | 1800×1200×1650 | 25 | 15 | 740 |
| AHN99-40 | 40 | 2.04 | 2200×1400×1900 | 25 | 25 | 850 |
| AHN99-50 | 50 | 2.55 | 2200×1400×2100 | 25 | 25 | 980 |
| AHN99-60 | 60 | 3.07 | 2200×1500×2100 | 32 | 25 | 1130 |
| AHN99-80 | 80 | 4.09 | 2400×1600×2100 | 32 | 25 | 1420 |
| AHN99-100 | 100 | 5.11 | 2500×1800×2200 | 40 | 25 | 1790 |
| AHN99-120 | 120 | 6.13 | 2500×1800×2600 | 50 | 32 | 1950 |
| AHN99-150 | 150 | 7.66 | 2500×1800×2800 | 50 | 32 | 2420 |
| AHN99-200 | 200 | 10.22 | 3000×2000×2600 | 50 | 40 | 3060 |
| AHN99-250 | 250 | 12.77 | 3000×2500×2600 | 65 | 40 | 3850 |
| AHN99-300 | 300 | 15.33 | 3500×2500×2700 | 65 | 40 | 4500 |
| AHN99-350 | 350 | 17.88 | 3500×2700×2700 | 65 | 40 | 5025 |
| AHN99-400 | 400 | 20.44 | 3500×2700×3000 | 80 | 40 | 5625 |
| AHN99-500 | 500 | 25.55 | 3800×2900×3000 | 80 | 40 | 6750 |
| AHN99-600 | 600 | 30.66 | 4200×2900×3000 | 100 | 50 | 7200 |
| AHN99-800 | 800 | 40.88 | 5500×4000×3100 | 125 | 50 | 8100 |

*注：本表所列氮气纯度99%，氮气压力0-0.7Mpa(表压)，露点≤-40℃。原料压缩空气压力0.8Mpa(表压)，20℃环境温度，0米标高和80%相对湿度为设计基准。

*NOTE: The nitrogen purity listed in this table is 99%, Nitrogen pressure is 0-0.7Mpa (Gauge pressure), Dew point≤-40℃. Raw material compressed air pressure is 0.8Mpa (Gauge pressure), 20℃ ambient temperature, 0 meter elevation and 80% Relative humidity is the design basis.

AHN-995型制氮机

AHN-995 NITROGEN GENERATOR

NITROGEN PURITY

99.5%

氮气纯度 99.5%



| 型号 Model | 产气量 Air Flow (Nm ³ /h) | 耗气量 Air Consumption (Nm ³ /min) | 尺寸 / Size L×W×H (mm) | 进气口 Air Inlet (DN mm) | 出气口 Air Outlet (DN mm) | 重量 Weight (Kg) |
|-------------|---|--|----------------------------|-----------------------------|------------------------------|----------------------|
| AHN995-5 | 5 | 0.3 | 1000×600×1700 | 15 | 15 | 300 |
| AHN995-10 | 10 | 0.56 | 1500×1000×1900 | 25 | 25 | 680 |
| AHN995-20 | 20 | 1.11 | 1500×1000×1900 | 25 | 25 | 770 |
| AHN995-30 | 30 | 1.67 | 1800×1200×1950 | 25 | 25 | 990 |
| AHN995-40 | 40 | 2.22 | 2200×1500×2000 | 25 | 25 | 1140 |
| AHN995-50 | 50 | 2.78 | 2200×1400×2400 | 32 | 25 | 1310 |
| AHN995-60 | 60 | 3.33 | 2200×1500×2400 | 32 | 25 | 1505 |
| AHN995-80 | 80 | 4.44 | 2400×1600×2400 | 32 | 25 | 2520 |
| AHN995-100 | 100 | 5.55 | 2500×1800×2500 | 40 | 25 | 2385 |
| AHN995-120 | 120 | 6.66 | 2500×1800×2900 | 40 | 32 | 2600 |
| AHN995-150 | 150 | 8.33 | 2800×2000×2900 | 50 | 32 | 3230 |
| AHN995-200 | 200 | 11.10 | 3000×2000×3000 | 65 | 40 | 4090 |
| AHN995-250 | 250 | 13.87 | 3000×2500×2600 | 65 | 40 | 4865 |
| AHN995-300 | 300 | 16.65 | 3500×3000×3000 | 65 | 40 | 6000 |
| AHN995-400 | 400 | 22.20 | 3500×2700×3600 | 80 | 50 | 7500 |
| AHN995-500 | 500 | 27.76 | 3800×2900×3300 | 80 | 50 | 9000 |
| AHN995-600 | 600 | 33.31 | 5000×4000×3100 | 100 | 50 | 9745 |
| AHN995-800 | 800 | 44.41 | 5500×4000×3500 | 100 | 50 | 10800 |
| AHN995-1000 | 1000 | 53.0 | 5500×4000×4000 | 125 | 65 | 12400 |

*注：本表所列氮气纯度99.5%，氮气压力0-0.7Mpa(表压)，露点≤-40℃。原料压缩空气压力0.8Mpa(表压)，20℃环境温度，0米标高和80%相对湿度为设计基准。

*NOTE: The nitrogen purity listed in this table is 99.5%, Nitrogen pressure is 0-0.7Mpa (Gauge pressure), Dew point≤-40℃. Raw material compressed air pressure is 0.8Mpa (Gauge pressure), 20℃ ambient temperature, 0 meter elevation and 80% Relative humidity is the design basis.

NITROGEN GENERATOR 制氮机

AHN-999 NITROGEN GENERATOR

AHN-999型制氮机



NITROGEN PURITY

99.9%

氮气纯度 99.9%

| 型号 Model | 产气量 Air Flow (Nm ³ /h) | 耗气量 Air Consumption (Nm ³ /min) | 尺寸 / Size L×W×H (mm) | 进气口 Air Inlet (DN mm) | 进气口 Air Outlet (DN mm) | 重量 Weight (Kg) |
|-------------|---|--|----------------------------|-----------------------------|------------------------------|----------------------|
| AHN999-5 | 5 | 0.33 | 1000×600×2200 | 15 | 15 | 350 |
| AHN999-10 | 10 | 0.66 | 1500×1000×2250 | 15 | 15 | 8800 |
| AHN999-20 | 20 | 1.33 | 1800×1200×1800 | 15 | 15 | 1025 |
| AHN999-30 | 30 | 2.0 | 1800×1200×2300 | 25 | 15 | 1320 |
| AHN999-40 | 40 | 2.6 | 2200×1500×2300 | 25 | 15 | 1520 |
| AHN999-50 | 50 | 3.3 | 2200×1500×2600 | 32 | 25 | 1745 |
| AHN999-60 | 60 | 4.0 | 2200×1500×2900 | 32 | 25 | 2005 |
| AHN999-80 | 80 | 5.4 | 2500×1800×2600 | 40 | 25 | 2520 |
| AHN999-100 | 100 | 6.7 | 2500×1800×3000 | 40 | 25 | 3180 |
| AHN999-120 | 120 | 8.0 | 2800×2000×2900 | 50 | 25 | 3465 |
| AHN999-150 | 150 | 10.0 | 3000×2000×3100 | 50 | 25 | 4310 |
| AHN999-200 | 200 | 13.4 | 3200×2500×3200 | 50 | 32 | 5450 |
| AHN999-250 | 250 | 16.7 | 3200×2700×3200 | 65 | 32 | 5850 |
| AHN999-300 | 300 | 20 | 3500×3000×3700 | 65 | 40 | 8000 |
| AHN999-400 | 400 | 27 | 3700×2700×3500 | 80 | 40 | 10000 |
| AHN999-500 | 500 | 33.5 | 4000×3000×4200 | 80 | 50 | 12000 |
| AHN999-600 | 600 | 40.1 | 4200×3250×4200 | 100 | 50 | 13000 |
| AHN999-800 | 800 | 54 | 5500×4000×4200 | 125 | 40 | 14400 |
| AHN999-1000 | 1000 | 67 | 5500×4000×4800 | 125 | 65 | 16560 |

*注：本表所列氮气纯度99.9%，氮气压力0-0.7Mpa(表压)，露点≤-40℃。原料压缩空气压力0.8Mpa(表压)，20℃环境温度，0米标高和80%相对湿度为设计基准。

*NOTE: The nitrogen purity listed in this table is 99.9%, Nitrogen pressure is 0-0.7Mpa (Gauge pressure), Dew point≤-40℃. Raw material compressed air pressure is 0.8Mpa (Gauge pressure), 20℃ ambient temperature, 0 meter elevation and 80% Relative humidity is the design basis.

AHN-9999型制氮机

AHN-9999 NITROGEN GENERATOR

NITROGEN PURITY

99.99%

氮气纯度99.99%



| 型号 Model | 产气量 Air Flow (Nm ³ /h) | 耗气量 Air Consumption (Nm ³ /min) | 尺寸 / Size L×W×H (mm) | 进气口 Air Inlet (DN mm) | 进气口 Air Outlet (DN mm) | 重量 Weight (Kg) |
|-------------|---|--|----------------------------|-----------------------------|------------------------------|----------------------|
| AHN9999-5 | 5 | 0.42 | 1200×800×2000 | 15 | 15 | 500 |
| AHN9999-10 | 10 | 0.84 | 1600×1000×2100 | 15 | 15 | 1065 |
| AHN9999-20 | 20 | 1.7 | 1800×1200×2100 | 25 | 15 | 1365 |
| AHN9999-30 | 30 | 2.5 | 2200×1400×2300 | 32 | 25 | 1755 |
| AHN9999-40 | 40 | 3.3 | 2400×1600×2200 | 32 | 25 | 2020 |
| AHN9999-50 | 50 | 4.2 | 2400×1600×2500 | 40 | 25 | 2325 |
| AHN9999-60 | 60 | 5 | 2500×1800×2650 | 40 | 25 | 2675 |
| AHN9999-80 | 80 | 6.8 | 2800×200×2600 | 50 | 25 | 3360 |
| AHN9999-100 | 100 | 8.4 | 3000×2000×2800 | 50 | 25 | 4235 |
| AHN9999-150 | 150 | 12.6 | 3200×2500×3200 | 65 | 32 | 5750 |
| AHN9999-180 | 180 | 15.2 | 3500×2800×3100 | 65 | 32 | 7000 |
| AHN9999-200 | 200 | 16.8 | 3500×3000×3400 | 65 | 32 | 7275 |
| AHN9999-250 | 250 | 21 | 3800×3000×3500 | 80 | 40 | 8555 |
| AHN9999-300 | 300 | 25.3 | 4000×3000×4000 | 80 | 40 | 10665 |
| AHN9999-400 | 400 | 33.7 | 4200×3250×4200 | 100 | 40 | 12000 |
| AHN9999-500 | 500 | 42 | 4200×3250×4200 | 125 | 50 | 13000 |
| AHN9999-600 | 600 | 51 | 5500×4000×4200 | 125 | 50 | 14400 |
| AHN9999-800 | 800 | 67.5 | 5500×4000×4800 | 150 | 65 | 16560 |

*注：本表所列氮气纯度99.99%，氮气压力0-0.7Mpa(表压)，露点≤-40℃。原料压缩空气压力0.8Mpa(表压)，20℃环境温度，0米标高和80%相对湿度为设计基准。

*NOTE: The nitrogen purity listed in this table is 99.99%, Nitrogen pressure is 0-0.7Mpa (Gauge pressure), Dew point≤-40℃. Raw material compressed air pressure is 0.8Mpa (Gauge pressure), 20℃ ambient temperature, 0 meter elevation and 80% Relative humidity is the design basis.

APPLICATION FIELDS

应用领域



半导体及电子元件生产的氮气保护
Nitrogen protection for semiconductor and electronic component production.

电子工业
ELECTRONICS
INDUSTRY

热处理
HEAT
TREATMENT

光亮退火、保护加热、粉末冶金及磁性材料烧结等
Bright annealing, protective heating, powder metallurgy and magnetic material sintering, etc.



配置除菌过滤器，可用于充氮包装、粮食储藏、蔬果保鲜、酒类封装和保存。
Equipped with a sterilization filter, which can be used for nitrogen-filled packaging, grain storage, fruit and vegetable preservation, wine packaging and preservation.

食品工业
FOOD
INDUSTRY

煤炭工业
COAL INDUSTRY

井上移动式制氮机
Inoue mobile nitrogen generator



氮气覆盖、置换、清洗、压力输送、化学反应搅动、化纤生产保护等。
Nitrogen coverage, replacement, cleaning, pressure conveying, chemical reaction agitation, chemical fiber production protection, etc.

化学工业
CHEMICAL
INDUSTRY

石油天然气工业
OIL AND GAS
INDUSTRY

石油炼制、容器及管路充氮吹扫和检漏、注氮采油
Petroleum refining, container and pipeline nitrogen filling purge and leak detection, nitrogen injection oil extraction



中西药充氮贮藏、充氮药料气动传送等。
Nitrogen-filled storage of Chinese and Western medicines, pneumatic conveying of nitrogen-filled materials, etc.

医药行业
PHARMACEUTICAL
INDUSTRY

电缆行业
CABLE INDUSTRY

交联电缆生产保护气
Shielding gas for production of cross-linked cables



冶金工业、橡胶工业、航天工业等。
Metallurgical industry, rubber industry, aerospace industry, etc.

其他
OTHER

工作原理

WORKING PRINCIPLE

空气经空压机压缩后，经过除尘、除油、干燥后，进入空气储罐，经过空气进气阀、左进气阀进入左吸附塔，塔压力升高，压缩空气中的氮分子被沸石分子筛吸附，未吸附的氧气穿过吸附床，经过左产气阀、氧气气阀进入氧气储罐，这个过程称之为左吸，持续时间为几十秒。左吸过程结束后，左吸附塔与右吸附塔通过均压阀连通，使两塔压力达到均衡，这个过程称之为均压，持续时间为35秒。均压结束后，压缩空气经过空气进气阀、右进气阀进入右吸附塔，压缩空气中的氮分子被沸石分子筛吸附，富集的氧气经过右产气阀、氧气气阀进入氧气储罐，这个过程称之为右吸，持续时间为几十秒。同时左吸附塔中沸石分子筛吸附的氮气通过左排气阀降压释放回大气当中，过程称之为解吸。反之左塔吸附时右塔同时也在解吸。为使分子筛中降压释放出的氮气完全排放到大气中，氧气通过一个常开的反吹阀吹扫正在解吸的吸附塔，把塔内的氮气吹出吸附塔。这个过程称之为反吹，它与解吸同时进行的。一直循环进行下去，而连续产出高纯度的产品氧气。

PSA制氧机因为其显著的优点而被广大用户所青睐，它广泛地应用于冶金助燃，化工、环保、建材、轻工、医疗、水产养殖、生物技术、污水处理等领域。

After compressed by the air compressor, the air enters the air storage tank after dust removal, oil removal, and drying, and enters the left adsorption tower through the air inlet valve and the left inlet valve. The tower pressure increases, and the nitrogen molecules in the compressed air are zeolite With molecular sieve adsorption, the unadsorbed oxygen passes through the adsorption bed and enters the oxygen storage tank through the left gas production valve and oxygen gas valve. This process is called left suction and lasts for several tens of seconds. After the left suction process is over, the left adsorption tower and the right adsorption tower are connected through a pressure equalization valve to balance the pressure of the two towers. This process is called equalization and the duration is 35 seconds. After the equalization is over, the compressed air passes through The air intake valve and the right intake valve enter the right adsorption tower, the nitrogen molecules in the compressed air are adsorbed by the zeolite molecular sieve, and the enriched oxygen enters the oxygen storage tank through the right gas production valve and oxygen gas valve. This process is called right suction. The duration is tens of seconds. At the same time, the oxygen adsorbed by the zeolite molecular sieve in the left adsorption tower is released back to the atmosphere through the left exhaust valve, which is called desorption. On the contrary, the right tower is also desorbed when the left tower is adsorbed. The nitrogen released by the depressurization of the molecular sieve is completely discharged into the atmosphere, and the oxygen passes through a normally open backflush valve to purge the desorbing adsorption tower, and the nitrogen in the tower is blown out of the adsorption tower. This process is called backflushing. , It is carried out at the same time as the desorption. It keeps going on, and continuously produces high-purity product oxygen.

The PSA oxygen generator is favored by users because of its remarkable advantages. It is widely used in metallurgical combustion, chemical, environmental protection, building materials, light industry, medical, aquaculture, biotechnology, sewage treatment and other fields.



安装方便:

设备结构紧凑、整体撬装，占地小无需基建投资，投资少。

● 优质沸石分子筛具有吸附容量大，抗压性能高，使用寿命长。

● 故障安全系统为用户配置故障系统报警及自动启动功能，确保系统运行安全比其它供氧方式更经济。

EASY TO INSTALL:

The equipment is compact, skid-mounted as a whole, and occupies a small area without capital investment and low investment.

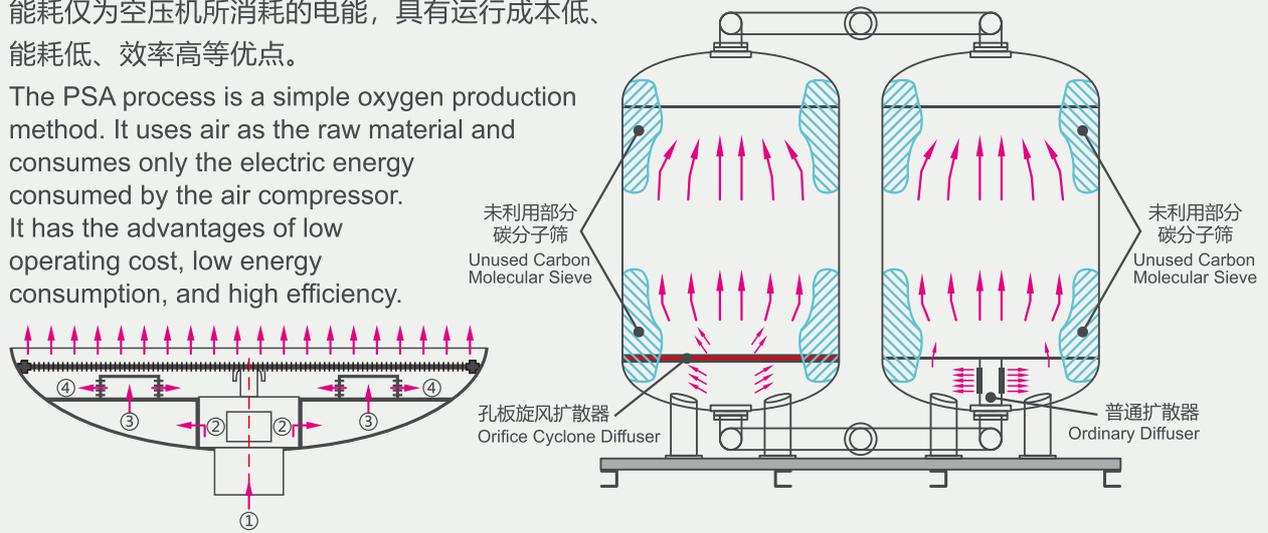
● High-quality zeolite molecular sieves have large adsorption capacity, high pressure resistance and long service life.

● The fail-safe system configures the user with the function of failing system alarm and automatic start to ensure the safe operation of the system, which is more economical than other oxygen supply.



PSA工艺是一种简便的制氧方法，以空气为原料，能耗仅为空压机所消耗的电能，具有运行成本低、能耗低、效率高等优点。

The PSA process is a simple oxygen production method. It uses air as the raw material and consumes only the electric energy consumed by the air compressor. It has the advantages of low operating cost, low energy consumption, and high efficiency.



机电仪一体化设计实现自动化运行

INTEGRATION OF MECHATRONICS AND INSTRUMENTATION ACHIEVE AUTOMATED OPERATION

● 进口PLC控制全自动运行。氧气流量压力纯度可调并连续显示，可设定压力、流量、纯度报警并实现远程自动控制和检测计量，实现真正无人操作。先进的控制系统使操作变得更加简单，可实现无人值守和远程控制，并可对各种工况进行实时监控，从而保证了气体纯度、流量的稳定。

● Imported PLC control fully automatic operation. The oxygen flow and pressure purity can be adjusted and displayed continuously. The pressure, flow, and purity alarms can be set, and remote automatic control and detection and measurement can be realized, realizing truly unmanned operation. The advanced control system makes the operation easier, can realize unattended and remote control, and can monitor various working conditions in real time, thus ensuring the stability of gas purity and flow.



高品质元器件是运行稳定可靠的保证

HIGH-QUALITY COMPONENTS ARE THE GUARANTEE OF STABLE AND RELIABLE OPERATION

- 气动阀门、电磁先导阀门等关键部件采用进口配置，运行可靠，切换速度快，使用寿命达百万次以上，故障率低，维修方便，维护费用低。
- The key components such as pneumatic valve and electromagnetic pilot valve adopt imported configuration, reliable operation, fast switching speed, service life of more than one million times, low failure rate, convenient maintenance and low maintenance cost.



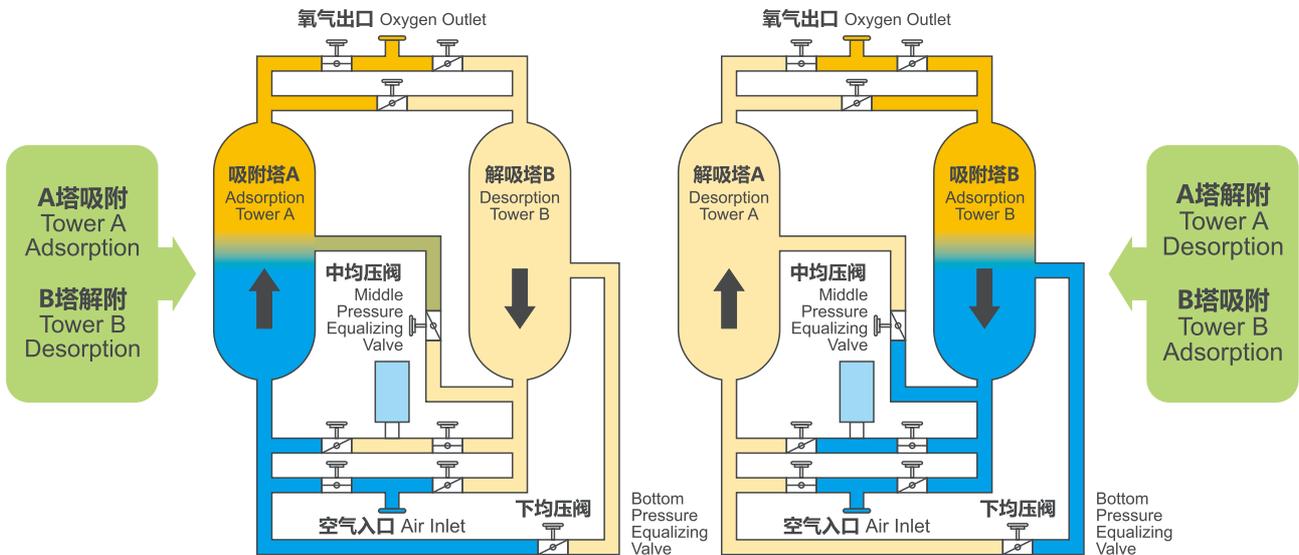
氧含量连续显示、超限自动报警系统在线监控氧气纯度，确保所需氧气纯度稳定。先进的装填技术保证设备的使用寿命，沸石分子筛采用“暴风雪”法装填，使分子筛分布均匀无死角，且不易粉化；吸附塔采用多级气流分布装置和平衡方式自动压紧装置；并且使沸石分子筛吸附性能保持压紧状态，从而保证吸附过程中不产生流化现象，有效延长沸石分子筛使用寿命。

The oxygen content is continuously displayed, and the over-limit automatic alarm system monitors the oxygen purity online to ensure that the required oxygen purity is stable. Advanced filling technology guarantees the service life of the equipment. Zeolite molecular sieves are filled with the "blizzard" method to make the molecular sieve evenly distributed without dead corners and not easy to pulverize, the adsorption tower adopts a multi-stage air distribution device and a balanced automatic compaction device, and the zeolite The adsorption performance of the molecular sieve is kept in a compressed state, so as to ensure that no fluidization occurs during the adsorption process, and effectively extend the service life of the zeolite molecular sieve.

系统独特的循环切换工艺

THE UNIQUE CYCLE SWITCHING PROCESS OF THE SYSTEM

- 降低了阀门的磨损，延长了设备使用寿命和降低了维护费用。
- Unique cycle switching process reduces the wear of the valve, prolongs the service life of the equipment and reduces the maintenance cost.



OXYGEN MACHINE 制氧机

不合格氧气自动排空系统

AUTOMATIC EMPTYING SYSTEM FOR UNQUALIFIED OXYGEN

- 开机初期的低纯度氮气自动排空，达到设计指标后自动供应氮气。
- The low-purity oxygen at the initial start-up is automatically emptied, and the oxygen is automatically supplied after reaching the design index.

理想的纯度选择范围

IDEAL PURITY SELECTION RANGE

- 氧气纯度调节方便,可根据用户的需求在21%~93±2%之间任意调节。
- The oxygen purity is easy to adjust, and it can be adjusted arbitrarily between 21% and 93±2% according to the needs of users.

● 完善的流利设计 最优使用效果

Perfect fluent design, optimal use effect.

● 特有的分子筛保护措施 延长沸石分子筛的使用寿命

Special protection measures for molecular sieve extend the service life of zeolite molecular sieve.

● 自动联锁氧气排空装置 保证产品氧气质量

Automatic interlocking oxygen emptying device to ensure product oxygen quality.



● 合理的内部构件

气流分布均匀减轻气流高速冲击
Reasonable internal components, uniform airflow distribution, reduce the impact of high-speed airflow.

● 操作简便，运行稳定，自动化程度高，可实现无人运行

Simple operation, stable operation, high degree of automation, and can be operated without anyone.

● 可选配氧气装置流量，纯度自动调节系统，远程监控系统等

Optional oxygen device flow rate, automatic purity adjustment system, remote monitoring system, etc.

TECHNICAL PARAMETERS

技术参数

| 型号 Model | 产气量 Air Flow (Nm ³ /h) | 氧气纯度 Oxygen Purity | 氧气压力 Oxygen Pressure (Mpa) | 有效耗气量 Effective Air Consumption Nm ³ /min(0.6Mpa) |
|-------------|---|-----------------------|----------------------------------|--|
| AHSO-3 | 3 | 93±2% | 0.2-0.3 | 0.7 |
| AHSO-6 | 6 | | | 1.4 |
| AHSO-10 | 10 | | | 2.3 |
| AHSO-20 | 20 | | | 4.6 |
| AHSO-30 | 30 | | | 7 |
| AHSO-50 | 50 | | | 11.6 |
| AHSO-60 | 60 | | | 14 |
| AHSO-80 | 80 | | | 18.6 |
| AHSO-100 | 100 | | | 23 |
| AHSO-150 | 150 | | | 35 |
| AHSO-200 | 200 | | | 46.6 |



应用范围

APPLICATION RANGE



锅炉系列

BOILER
Series



工业燃煤锅炉 / 燃气锅炉
燃油锅炉 / 垃圾焚烧炉

Industrial Coal-fired Boilers
Gas-fired Boilers / Oil-fired Boilers
Garbage Incinerators



窑炉系列

KILN
Series



玻璃窑炉 / 回转窑 / 水泥窑
陶瓷窑 / 金属冶炼炉

Glass Kiln / Rotary Kiln
Cement Kiln / Ceramic Kiln
Metal Smelting Furnace



发电机系列

GENERATOR
Series



燃油 / 燃气发电机组
Fuel and Gas Generators



售后服务
AFTER-SALES
SERVICE

目前艾玛压缩机有限公司销售和服务网络在中国划分了华东、华南、华西、华北和东北五个大区域，200多家网点。在主要城市都设立了办事机构，并有优秀的服务人员为您提供优质、快捷的服务。

AirHorse Compressor Co., Ltd. Sales and service network in China is divided into east China, south China, Hwaseo, north China and northeast five large regions, more than 200 outlets. In the main cities have set up offices, and have excellent service staff to provide you with quality, fast service.

AirHorse 艾玛

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