

股票简称：国林科技
股票代码：300786

GUOLIN®

真诚 求实 高效 创新



工业气体分离技术 Industrial Gas Separation Technology

GUOLIN®

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青岛国林环保科技股份有限公司
Qingdao Guolin Environmental Technology Co.,Ltd

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公司简介

Brief Introduction



青岛国林环保科技股份有限公司成立于1994年，是集科、工、贸于一体的高新技术企业，是臭氧产生机理研究、臭氧设备及气体分离系统设计与制造、应用工程方案设计、安装、调试、运行及维护的专业化公司，是国内臭氧行业的代表企业。公司于2019年7月23日正式登陆深交所创业板挂牌交易，证券简称：国林科技，证券代码：300786。

国林科技作为国内率先突破10kg/h、50kg/h、100kg/h、120kg/h大型臭氧发生器设计制造技术的企业，公司产品涵盖全系列臭氧发生器及臭氧系统设备，目前已广泛应用于市政给水深度处理、市政污水处理、工业废水处理、烟气脱硝、化工氧化等领域。

国林科技作为中国城镇建设行业标准《水处理用臭氧发生器》（CJ/T 322-2010）负责起草单位，国家标准《水处理用臭氧发生器技术要求》（GB/T 37894-2019）负责起草单位，先后承担了国家十二五重大科技专项水专项中“非玻璃介质大型臭氧发生器设备研制及其产业化”课题；国家十三五重点研发计划“燃煤污染物（SO₂、NO_x、PM）一体化控制技术工程示范项目”中的“基于前置臭氧氧化的NO_x与SO₂协同吸收技术”课题；国家十三五重大科技专项水专项中“城镇供水系统关键材料设备评估验证及标准化”之“大型臭氧发生器集成装备研发评估验证及标准化”课题。

历经二十余年的发展，国林科技现已成为全球知名的臭氧系统装备专业化生产企业，全球臭氧系统供应商。

Qingdao Guolin Environmental Technology Co., Ltd was established in 1994, which is a high-tech enterprise based on advanced ozone technology and is ranked as the leading ozone system suppliers in China. Guolin is professional company which engaged in ozone generation mechanism research, ozone and gas separation equipment design and manufacture, ozone application project design, installation, debugging, operation and maintenance. On July 23, 2019, the Company officially landed on the GEM of the Shenzhen Stock Exchange, securities abbreviated as: Guolin Technology, stock code: 300786.

Guolin is the first manufacturer in China which can produce ozone generator with 10kg/h, 50kg/h, 100kg/h and 120kg/h capacity. The company's products cover the whole series of ozone generator and ozone generator system equipment, which has been widely used in the municipal water supply depth treatment, municipal sewage treatment, industrial wastewater treatment, flue gas denitrification, chemical oxidation and other fields.

Guolin is the main drafting unit of China Urban Construction Industry Standard--- "Ozone Generator for Water Treatment" (CJ/T322-2010) and National Standard--- "Technical Requirements for Ozone Generator for Water and Waste Water Treatment" (GB/T 37894-2019). Guolin undertakes in the project task of 12th Five-Year Plan "Special Water Item" --- "Non-glass dielectric tube large ozone generator research, development and industrialization", project task of "Synergistic Absorption Technology of Pre-ozonation of NO_x and SO₂" in 13th Five-Year Plan key R&D program---Demonstration project of integrated control technology for coal-fired pollutants(SO₂, NO_x, PM) and project task of "Evaluation and Standardization of Integrated Equipment of Large Ozone Generator" in 13th Five-Year Plan Special Water Item---Evaluation and Standardization of Key Material and Equipment in Urban Water supply system.

With more than 20 years of development, Qingdao Guolin Environmental Technology Co., Ltd. has become the globally known professional ozone equipment manufacturer and global ozone system supplier.

企业文化 Guolin Culture

公司使命 MISSION

发展臭氧科技、铸造绿色工业，致力于改善人类生存环境的崇高事业

Developing ozone technology and creating green industry. We will continually contribute to improving living environment of human beings.

公司价值观 VALUE

做创造价值的人，做受人尊重的企业

Be a man of creating values and be an enterprise to be respected.



公司愿景 VISION

成为全球臭氧系统供应商，为用户提供稳定、先进、创造价值的产品

We are committed to becoming global ozone system supplier and providing stable, advanced and valuable product for our valued customer.

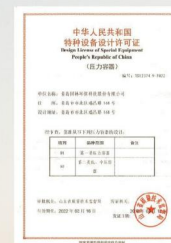
经营理念 PHILOSOPHY

科技创新 产业报国

Scientific and technological innovation, industries serve the country.



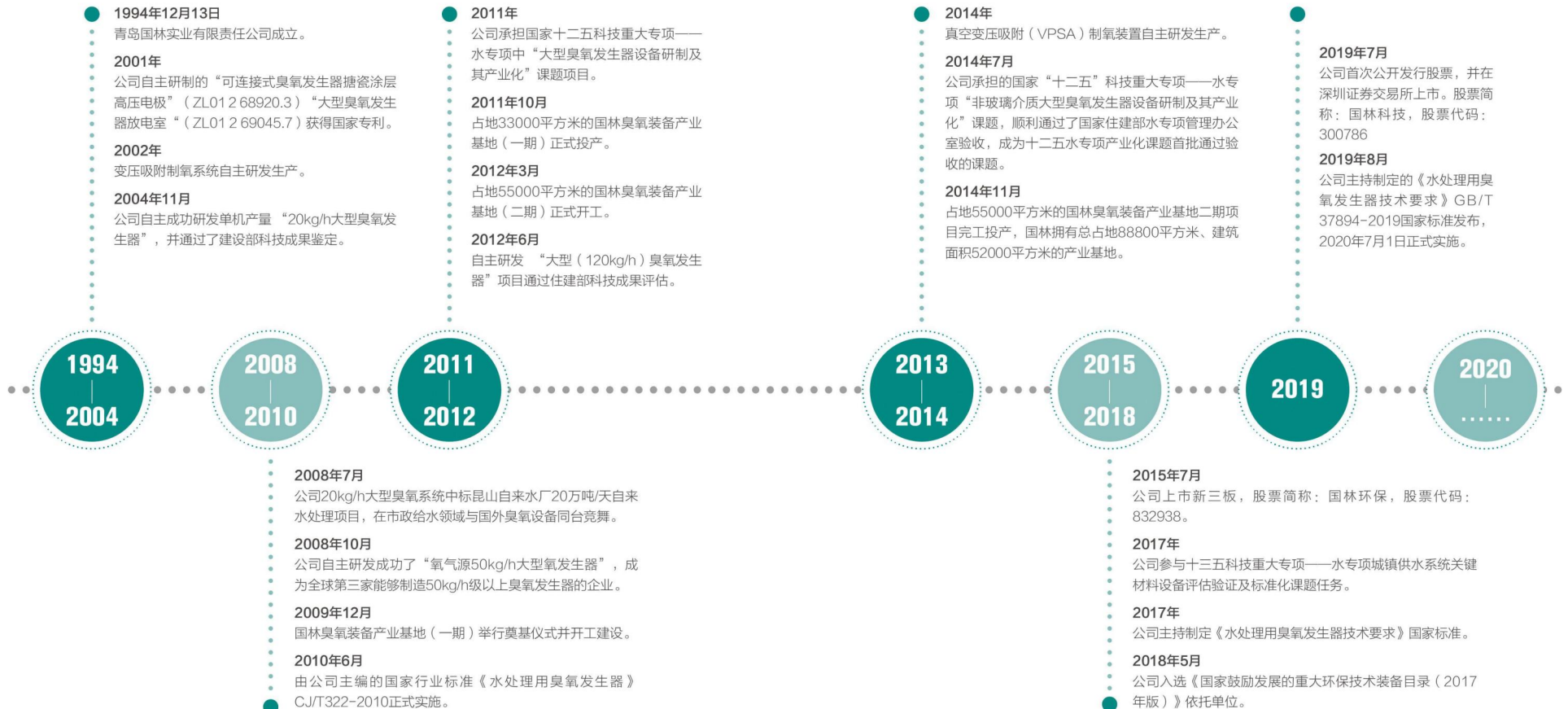
荣誉资质 Honor





国林大事记 History

GUOLIN®



气体分离总装车间 Gas Separation Equipment General Assembly Workshop



国林科技气体分离总装车间建筑面积近4500平方米，拥有高级工程师、中级工程师、高级技工、中级技工等专业生产人员。

小型撬装气体分离设备在总装车间安装调试完成。生产组装过程严把质量关，为客户提供操作方便、安装快捷、性能优良的一体化撬装气体分离设备。

大型气体分离设备在总装车间内制作单体设备，经防护包装后发至项目现场。国林科技根据项目进度安排专业技术人员到现场负责安装技术指导 and 开车调试。在调试期间，工程师会根据用户的实际使用情况，优化气体分离系统工艺参数，保证气体分离系统长期稳定运行。

Guolin gas separation equipment general assembly workshop area is 4500m². We have senior engineers, mid-level engineers, senior technicians, mid-level technicians and other professional staff.

The installation and debugging of skid mounted gas separation equipment have been completed in the general assembly workshop. The production and assembly process strictly control the quality, to provide customers with easy operation, quick installation and excellent performance of integrated skid-mounted gas separation equipment.

The large gas separation equipment is manufactured in the assembly workshop and sent to the project site with protective packaging. According to the project schedule, Guolin arranges professional technicians to the site to be responsible for installation technical guidance and commissioning. During the commissioning, the technicians will optimize the process parameters of the gas separation system according to the actual using situation to ensure the long-term stable operation of the gas separation system.

压力容器车间 Pressure Vessel Workshop

压力容器车间建筑面积近15600平方米，拥有山东省技术监督局颁发的D1/D2级压力容器制造及设计许可证，配有X射线探伤机、超声波探伤机、光谱分析仪、四辊卷板机、刨边机、埋弧自动焊、管板自动焊、高速数控钻等设备设施。车间不断提升装备智能化水平，优化资源配置，为用户提供高品质压力容器产品及解决方案。

The building area of the pressure vessel workshop is nearly 15600m². We have the D1/D2 pressure vessel manufacturing and design license issued by Shandong Provincial Bureau of Technical Supervision. The workshop is equipped with X Ray flaw detector, ultrasonic flaw detector, spectral analyzer, four-roll bending machine, edge planer, shearing machine, submerged arc automatic welding machine, tubesheet automatic welding machine, high-speed CNC drilling and other equipment and facilities. The workshop continuously improves the intelligent level of equipment, optimizes resource allocation, and provides users with high-quality pressure vessel products and solutions.



技术体系 Technology System

专业全面的工艺选型和配置 Professional and comprehensive process selection and configuration

根据用户不同情况选择单塔、双塔、多塔工艺，为用户提供更优异的供氧解决方案。

According to the different requirements of users choose single tower, double tower or multi-tower process, to provide users with the most excellent oxygen supply solutions.

综合性能优良 Excellent comprehensive performance

技术指标先进，能耗低，运行费用低；自动化程度高，装置操作简单，可随开随用；负荷调节灵活方便，具备扩产能力。

Advanced technical indicators, low energy consumption, low operating costs; High degree of automation, simple operation of the device, can be used at any time; Flexible and convenient load regulation, good ability to expand production.

制氧和臭氧系统的整合优化 Integrated optimization of oxygen and ozone generation systems

整合变压吸附制氧系统和臭氧发生器系统，使两套系统更好的匹配和兼容是国林科技的独具优势。

Integrate PAS oxygen generation system and ozone generation system to make the two systems better match and compatible is the unique advantage of Guolin Technology.

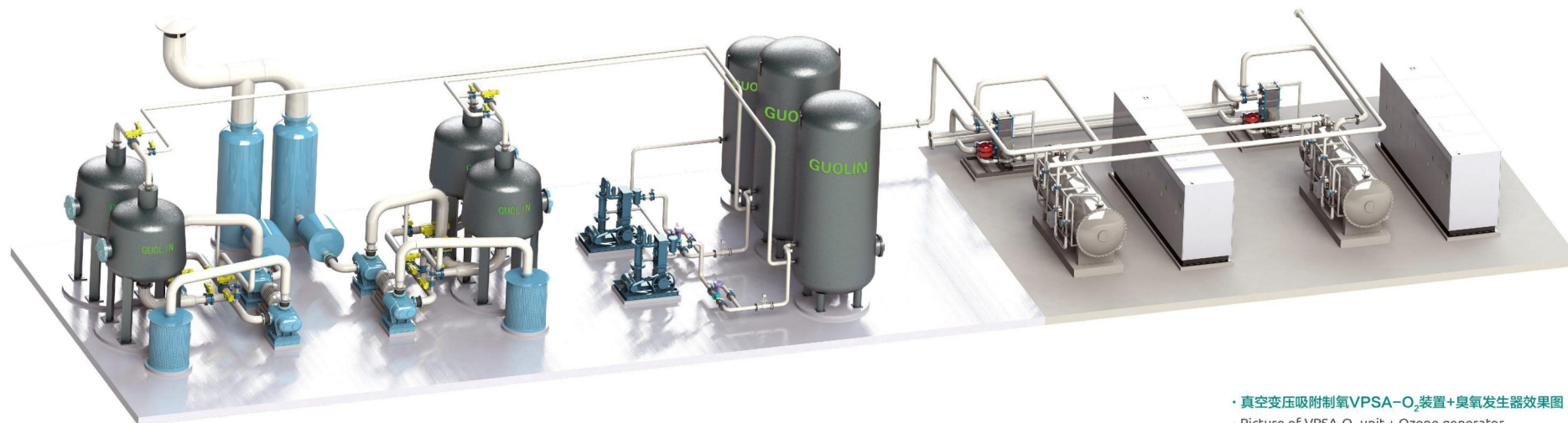
专业的吸附塔设计和制造 Professional adsorption tower design and manufacturing

大型装置采用新型径向吸附塔设备工艺，空气从吸附塔底进入，分散到内筒四周进入，然后从四周按径向方向通过吸附剂床层，在中心流道中得到产品氧气，并通过中心设计管道出吸附塔。径向吸附塔工艺，保证空气在吸附床层中线流速度低（空塔线速度 $\leq 0.2\text{m/s}$ ）、传质优、阻力小（ $\leq 2\text{KPa}$ ），有效减少因床层阻力造成的能耗损失，传质区域稳定可控。新型径向制氧吸附塔具有吸附均匀、吸附效率高、占地面积小、可大型化设计等优点。

小型装置采用轴向吸附塔，空气从吸附塔底进入，经过底部分布器，从轴向通过吸附剂床层，产品氧气通过吸附塔顶部管道出吸附塔。轴向吸附塔内结构简单，设计和制造难度低，可靠性高。在吸附塔顶部采用料仓或专用的压紧结构使吸附剂保持紧实状态，同时也避免了吸附剂的跳动和磨损，保证了吸附剂的使用年限。轴向吸附塔加工制造成本低，在小型VPSA-O₂装置中广泛使用。

The large device adopts a new radial adsorption tower equipment process, in which air enters from the bottom of the adsorption tower and is dispersed around the inner cylinder, and then passes through the adsorbent bed in the radial direction from all sides to obtain product oxygen in the central flow passage, and then exits the adsorption tower through the central design pipeline. The radial adsorption tower process ensures that the air flow velocity in the middle line of the adsorption bed is low (the linear velocity of the empty tower is $\leq 0.2\text{m/s}$), the transmission quality is excellent, and the resistance is small ($\leq 2\text{KPa}$), effectively reducing the energy loss caused by the bed resistance, and the mass transfer area is stable and controllable. The new type of radial oxygen production adsorption tower has the advantages of uniform adsorption, high adsorption efficiency, small floor area and large scale design.

The small device adopts the axial adsorption tower. The air enters from the bottom of the adsorption tower, passes through the bottom distributor, and passes through the adsorbent bed from the axial direction. The product oxygen exits the adsorption tower through the pipe at the top of the adsorption tower. The inner part of axial adsorption tower is simple in structure, low difficulty in design and manufacture and high in reliability. At the top of the adsorption tower, a bin or a special compression structure is used to keep the adsorbent in a compact state, and avoid the pulsating and wearing of the adsorbent, thus ensuring the service life of the adsorbent. Axial adsorption tower has low manufacturing cost and is widely used in small VPSA-O₂ units.



· 真空变压吸附制氧VPSA-O₂装置+臭氧发生器效果图
· Picture of VPSA-O₂ unit + Ozone generator

GFV型真空变压吸附（VPSA）制氧机

GFV Model Vacuum Pressure Swing Adsorption (VPSA) Oxygen Generator

优势特点 Advantage

- ◆ 技术指标先进，能耗低，运行费用低。
- ◆ 自动化程度高，装置操作简单，随开随用。
- ◆ 气体分布效果好，床层利用率高，结构简单的新型结构吸附塔，可根据用户的需求选用轴向吸附塔或径向吸附塔。
- ◆ 装置配备的罗茨鼓风机、罗茨真空泵、空压机、气动蝶阀、专用分子筛等关键部分采用国内外知名厂商产品，保证系统运行的可靠性和稳定性。
- ◆ 公司具有一、二类压力容器的设计、制造资质和压力管道 GC2 级安装许可证。装置所有非标设备均自主设计和制造。
- ◆ 整合臭氧系统和 VPSA 制氧系统，使两套控制系统更好的匹配和兼容，运行稳定，节能降耗。
- ◆ Advanced technical indicators, low energy consumption, low operating costs.
- ◆ High degree of automation, simple device operation, convenient to use.
- ◆ The new structure adsorption tower with good gas distribution effect, high bed utilization rate and simple structure can be selected as axial or radial adsorption tower according to the needs of users.
- ◆ Device equipped with the Roots blower, Roots vacuum pump, air compressor, pneumatic butterfly valve and other key equipment supplied by domestic and foreign well-known manufacturers, so the excellent quality ensures the reliability and stability of the system operation.
- ◆ The company has the design and manufacture qualification of pressure vessels of Class I and Class II and Installation License of Pressure Pipeline GC2. All non-standard equipment are designed and manufactured independently.
- ◆ The integration of ozone system and VPSA oxygen generation system makes the two control systems better match and compatible, stable operation, energy saving and consumption reduction.



技术参数 Technical parameters

- ◆ 氧气产量：70~10000Nm³/h（标准状态下）
- ◆ Oxygen Capacity: 70~10000 Nm³/h (under standard conditions)
- ◆ 氧气纯度：60%~95%可调
- ◆ Oxygen Purity: 60%~95% adjustable
- ◆ 出气压力：0.03MPa~0.04MPa（G）
- ◆ Gas Pressure: 0.03MPa~0.04MPa (G)
- ◆ 露点：-40℃~-60℃
- ◆ Dew Point: -40℃~-60℃

型号 Model	氧气产量 Oxygen Capacity	氧气浓度 Oxygen Purity	制氧单耗 Power Consumption	装机功率 Installed Power	占地尺寸 Area	型号 Model	氧气产量 Oxygen Capacity	氧气浓度 Oxygen Purity	制氧单耗 Power Consumption	装机功率 Installed Power	占地尺寸 Area
	Nm ³ /h	wt%	KWh/Nm ³	KW	m ²		Nm ³ /h	wt%	KWh/Nm ³	KW	m ²
GFV-70	70	90%	0.41	45	21	GFV-800	800	90%	0.34	450	96
GFV-120	120	90%	0.4	75	32	GFV-1000	1000	90%	0.34	560	144
GFV-150	150	90%	0.39	90	32	GFV-1500	1500	90%	0.33	800	180
GFV-200	200	90%	0.38	110	40	GFV-3000	3000	90%	0.33	1600	300
GFV-250	250	90%	0.37	132	40	GFV-5000	5000	90%	0.33	2600	500
GFV-300	300	90%	0.36	160	40	GFV-8000	8000	90%	0.33	4200	950
GFV-400	400	90%	0.35	220	45	GFV-10000	10000	90%	0.33	5300	1440
GFV-500	500	90%	0.35	280	50						

注：上表为氧气浓度 90% 时部分真空变压吸附（VPSA）制氧机型号参数，其他规格制氧机选型参数请联系我公司
 Remark: The above table shows partial oxygen generator(VPSA) model parameters which oxygen concentration is 90%. Please contact our company for other specifications of oxygen generator model parameters.

真空变压吸附（VPSA）制氧机案例

VPSA Oxygen Generator Projects

客户名称 Customer name	系统规模 System scale	客户名称 Customer name	系统规模 System scale
林西县富强金属有限公司	1500 Nm ³ /h	唐山海港开发区污水处理厂	630 Nm ³ /h
内蒙古久科康瑞环保科技有限公司	800 Nm ³ /h	江苏联发环保新能源有限公司	400 Nm ³ /h
赛得利（江西）化纤有限公司	800 Nm ³ /h	帝斯曼江山制药（江苏）有限公司	400 Nm ³ /h
石家庄栾城区污水处理厂	700 Nm ³ /h	江苏宏邦化工科技有限公司	190 Nm ³ /h
河南嵩岳碳素有限公司	320 Nm ³ /h	宿松县复兴污水处理厂	180 Nm ³ /h
海宁恒逸热电有限公司	960 Nm ³ /h	屯南污水处理厂	360 Nm ³ /h
新疆天山溢达碳素有限公司	320 Nm ³ /h	长德污水处理厂	150 Nm ³ /h
临颖县第二污水处理厂	640 Nm ³ /h	扬州市汤汪污水处理厂	300 Nm ³ /h
陕西延长石油（集团）有限责任公司	560 Nm ³ /h	中海石油宁波大榭石化有限公司	150 Nm ³ /h
国网节能服务有限公司	750 Nm ³ /h	中国石油兰州石化公司	240 Nm ³ /h
河北鑫海化工集团有限公司	500 Nm ³ /h	岳阳慧聚新材料科技有限公司	120 Nm ³ /h
新疆天雨煤化工集团有限公司	480 Nm ³ /h	新疆库尔勒中泰石化有限责任公司	220 Nm ³ /h
赛得利（福建）纤维有限公司	660 Nm ³ /h	内蒙古伊泰石油化工有限公司	220 Nm ³ /h



江苏联发环保新能源运行现场



河北鑫海化工运行现场



帝斯曼江山制药运行现场



兰州石化运行现场

GFN型变压吸附（PSA）制氧机

GFN Model Pressure Swing Adsorption (PSA) Oxygen Generator

优势特点 Advantage

- ◆ 技术指标先进，能耗低，运行费用低。
- ◆ 自动化程度高，装置操作简单，可随开随用。
- ◆ 气体分布效果好、床层利用率高、结构简单的新型结构吸附塔。
- ◆ 装置配备的空压机、气动程控阀等关键设备采用国内外知名厂商产品，保证系统运行的可靠性和稳定性。
- ◆ 公司具有一、二类压力容器的设计、制造资质和压力管道 GC2 级安装许可证。装置所有非标设备均自主设计和制造。
- ◆ 整合臭氧系统和 PSA 制氧系统，使两套控制系统更好的匹配和兼容，运行稳定，节能降耗。
- ◆ Advanced technical indicators, low energy consumption, low operating costs.
- ◆ High degree of automation, simple device operation, convenient to use.
- ◆ Gas distribution effect is good, high bed utilization rate, simple structure of the new type adsorption tower structure.
- ◆ Device equipped with air compressor, pneumatic program control valves and other key equipment supplied by domestic and foreign well-known manufacturers, to ensure the reliability and stability of the system operation.
- ◆ The company has the design and manufacture qualification of pressure vessels of Class I and Class II and Installation License of Pressure Pipeline GC2. All non - standard equipment are designed and manufactured independently.
- ◆ The integration of ozone system and PSA oxygen generation system makes the two control systems better match and compatible, stable operation, energy saving and consumption reduction.



技术参数 Technical parameters

- ◆ 氧气产量：1~500Nm³/h (标准状态下)
- ◆ Oxygen Capacity: 1-500 Nm³/h (under standard conditions)
- ◆ 氧气纯度：60%~95%可调
- ◆ Oxygen Purity: 60%-95% adjustable
- ◆ 出气压力：0.3MPa~0.6MPa (G)
- ◆ Gas Pressure: 0.3MPa~0.6MPa (G)
- ◆ 露点：-40℃~-60℃
- ◆ Dew Point: -40℃~-60℃

型号 Model	氧气产量 Oxygen Capacity N m ³ /h	氧气浓度 Oxygen Purity wt%	需要空气量 Feed Gas N m ³ /h	占地尺寸 Area W×D m	型号 Model	氧气产量 Oxygen Capacity N m ³ /h	氧气浓度 Oxygen Purity wt%	需要空气量 Feed Gas N m ³ /h	占地尺寸 Area W×D m
GFN5-PA	5	90%	60	0.75×1.7	GFN150-PA	150	90%	1800	2.8×5.4
GFN10-PA	10	90%	120	0.85×2	GFN200-PA	200	90%	2400	3.5×6.5
GFN30-PA	30	90%	360	1.1×3.3	GFN300-PA	300	90%	3600	4×8
GFN50-PA	50	90%	600	1.3×3.6	GFN400-PA	400	90%	4800	5×12
GFN80-PA	80	90%	960	1.5×3.75	GFN500-PA	500	90%	6000	6×13
GFN100-PA	100	90%	1200	2×5.3					

注：上表为氧气浓度90%，原料气进装置压力：0.7M (G) 时部分变压吸附 (PSA) 制氧机型号参数。其他规格制氧机选型参数请联系我公司气体产品部
 Remark: The above table shows partial oxygen generator(PSA) model parameters which oxygen concentration is 90% and pressure of the raw material air intake device is 0.7M(G).
 Please contact our company for other specifications of oxygen generator model parameters.

变压吸附（PSA）制氧机案例

PSA Oxygen Generator Projects

客户名称 Customer name	系统规模 System Scale	数量 Number	客户名称 Customer name	系统规模 System Scale	数量 Number
百合花集团股份有限公司	150 Nm ³ /h	1套	山西省平遥县焦化集团	70 Nm ³ /h	1套
洛阳石化含盐污水处理厂	150 Nm ³ /h	2套	天津保税区污水处理厂	60 Nm ³ /h	2套
陕西龙门煤化工有限责任公司	150 Nm ³ /h	1套	河北健民淀粉糖业有限公司	60 Nm ³ /h	1套
无锡雪浪环境科技股份有限公司	120 Nm ³ /h	1套	上海固多仪器设备有限公司	60 Nm ³ /h	2套
蒲城海泰新材料产业有限公司	110 Nm ³ /h	1套	青龙湖再生水厂	60 Nm ³ /h	2套
苏州科环环保科技有限公司	110 Nm ³ /h	2套	中国石化锦州石化分公司	60 Nm ³ /h	3套
无锡三开高纯化工有限公司	110 Nm ³ /h	1套	三星工程建设(上海)有限公司	50 Nm ³ /h	1套
鞍山七彩化学股份有限公司	110 Nm ³ /h	1套	山东智博格瑞环保科技有限公司	50 Nm ³ /h	1套
陕西永宏生物科技有限公司	110 Nm ³ /h	1套	浙江双益环保科技有限公司	50 Nm ³ /h	2套
佳木斯高新区污水处理厂	90 Nm ³ /h	2套	山东祥超化工有限公司	50 Nm ³ /h	1套
南京诚志永清能源科技有限公司	90 Nm ³ /h	2套	中海沂青股份有限公司	40 Nm ³ /h	1套
延安炼油厂	80 Nm ³ /h	2套	山西金承环境工程有限公司	40 Nm ³ /h	2套
山东昌邑石化有限公司	80 Nm ³ /h	2套	绍兴国周针织科技有限公司	40 Nm ³ /h	2套
中国石化海南炼油化工有限公司	80 Nm ³ /h	2套	奥加诺苏州水处理有限公司	40 Nm ³ /h	1套
山东垦利石化集团有限公司	80 Nm ³ /h	1套	中海沥青(泰州)有限责任公司	40 Nm ³ /h	2套



西藏亚东水产养殖项目



中石化宁波工程运行现场



无锡自来水厂运行现场



苏州科环运行现场

GPN变压吸附 (PSA) 制氮机

GPN PSA Nitrogen Generator

气体分离装置应用领域

Gas Separation Device Application Areas

优势特点 Advantage

- ◆ 技术指标先进, 运行费用低, 建设成本低。
- ◆ 自动化程度高, 装置操作简单, 可随开随用。
- ◆ 装置配套的空压机、气动蝶阀等关键设备采用国内外知名厂商产品, 保证系统运行的可靠性和稳定性。
- ◆ 公司具有一、二类压力容器的设计、制造资质和压力管道 GC2 级安装许可证。装置所有非标设备均自主设计和制造。
- ◆ Advanced technical indicators, low energy consumption, low operating costs.
- ◆ High degree of automation, simple device operation, convenient to use.
- ◆ Equipment form a complete set of key equipment such as air compressor, pneumatic butterfly valve uses the domestic and foreign well-known manufacturer's products, to ensure the reliability and stability of the system operation.
- ◆ The company has the design and manufacture qualification of pressure vessels of Class I and Class II and Installation License of Pressure Pipeline GC2. All non-standard equipment are designed and manufactured independently.



技术参数 Technical parameters

- ◆ 氮气产量: 1~10000 Nm³/h (标准状态下)
- ◆ Nitrogen Capacity: 1~10000 Nm³/h (under standard conditions)
- ◆ 氮气纯度: 90%~99.999%可选
- ◆ Nitrogen Purity: 90%~99.999% selectable
- ◆ 出气压力: 0.3MPa~0.6MPa (G)
- ◆ Gas Pressure: 0.3MPa~0.6MPa (G)
- ◆ 露点: -40℃~-60℃
- ◆ Dew Point: -40℃~-60℃

型号 Model	氮气产量 Nitrogen Capacity Nm ³ /h	氮气浓度 Nitrogen Purity wt%	需要空气量 Feed Gas Nm ³ /h	占地尺寸 Area m ²	型号 Model	氮气产量 Nitrogen Capacity Nm ³ /h	氮气浓度 Nitrogen Purity wt%	需要空气量 Feed Gas Nm ³ /h	占地尺寸 Area m ²
GPN500-PA	500	99.5%	1350	24	GPN3000-PA	3000	99.5%	8100	70
GPN800-PA	800	99.5%	2160	27	GPN3500-PA	3500	99.5%	9450	75
GPN1000-PA	1000	99.5%	2700	32	GPN4000-PA	4000	99.5%	10800	90
GPN1500-PA	1500	99.5%	4050	39	GPN4500-PA	4500	99.5%	12150	108
GPN2000-PA	2000	99.5%	5400	48	GPN5000-PA	5000	99.5%	13500	200
GPN2500-PA	2500	99.5%	6750	59					

注: 上表为氮气浓度 99.5%, 原料气进装置压力: 0.8M (G), 产品氮气压力: 0.6MPa (G) 时部分变压吸附 (PSA) 制氮机型号参数 (不含空压机), 其他规格制氮机选型参数请联系我公司气体产品部。

Remark: The above table shows partial nitrogen generator (PSA) model parameters (excluding air compressor) which nitrogen concentration is 99.5% and pressure of the raw material air intake device is 0.8M(G) when the nitrogen pressure of the product is 0.6Mpa (G). Please contact our company for other specifications of nitrogen generator model parameters.



化工行业
Chemical Industry

水处理
Water Treatment

烟气处理
Flue Gas Denitrification

水泥生产
Cement Production

石油天然气
Oil and Natural Gas

造纸行业
Pulp and Paper Industry

钢铁行业
Iron and Steel Industry

有色金属冶炼
Nonferrous Metal Smelting

食品行业
Food Industry

电子元器件
Electronic Components

煤矿
Coal Mine

橡胶轮胎
Rubber Tyre

制药
Pharmacy

垃圾焚烧
Waste Incineration

医疗行业
Medical Industry

玻璃行业
Glass Industry

配套设备 Accessory Equipment

气动程控阀门

Pneumatic Programmed Valve

采用寿命长、密封等级高、开关速度快的多偏心气动蝶阀，开关200万次以上无泄漏。

Adopt multi-eccentric pneumatic butterfly valve with long life, high sealing class and fast switching speed, no leakage for more than 2 million times on-off.



制氧/制氮专用分子筛

Special Molecular Sieve For Oxygen Generation/Nitrogen Generation

采用具有优良的吸附性能、较大的吸附容量、足够的强度和抗磨性的制氧/制氮专用分子筛，保证设备技术性能稳定，能耗低，投资少。

The special molecular sieve for oxygen/nitrogen generation with excellent adsorption performance, large adsorption capacity, sufficient strength and wear resistance is adopted to ensure stable technical performance of the equipment, low energy consumption and less investment.



压力容器

Pressure Vessel

公司具有一、二类压力容器的设计、制造资质和压力管道GC2级安装许可证，装置包含的吸附塔、缓冲罐等非标准设备均可自主设计制造，充分保证产品质量。

The company has the design and manufacture qualification of pressure vessels of class I and Class II and the installation license of pressure pipeline GC2. The adsorption tower, buffer tank and other non-standard equipment contained in the device can be designed and manufactured independently to fully ensure product quality.



隔音降噪装置

Noise Reduction Device

动设备隔音降噪装置，采用一定重量和刚性不透气的金属作为外壳，内侧附加吸声材料，经过特殊工艺精制而成。

Sound insulation and noise reduction device of power equipment adopts certain weight and rigid and airtight metal as the shell, and the inner side adds sound absorbing material, which is refined by special technology.



预处理器

Preprocessor

吸附原料空气中粉尘、SO₂等组分，防止分子筛吸附量衰减。

Absorb dust, SO₂ and other components in the air of raw materials to prevent the absorption from molecular sieve attenuation.



吸干机

Adsorption Air Dryer

利用变压吸附原理，去除压缩空气中的水和油，保证气源质量。

The water and oil in compressed air are removed by the process of PSA to ensure the quality of air source.



仪表风系统

Instrument Air System

以压缩空气为动力，为气动阀提供符合要求的控制气源，通过控制编程达到对阀门的自动控制。

Driven by compressed air, the valve is automatically controlled through control programming to provide the required control air source for pneumatic valves.

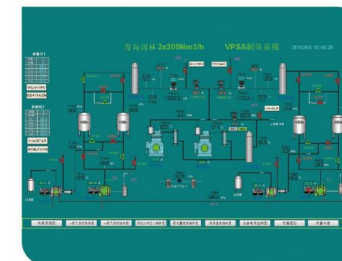


系统总控

Main Control System

采用总控系统，实现对制氧系统数据采集、实时控制、优化操作，能够保证装置的长期、稳定、安全运行。能够与臭氧系统控制程序及保护程序整合，确保整套系统的稳定运行。

The general control system is adopted to realize the data acquisition, real-time control and optimized operation of the oxygen production system, which can guarantee the long-term, stable and safe operation of the device. Be able to integrate with ozone system control program and protection program to ensure the stable operation of the whole system.



客户服务 Customer Service

客服中心设有400和800全国售后服务专线，采用区域服务负责制，在北京、上海、广东、山东、江苏、西安、新疆等地设有固定联络点。

售后服务专线：400-6532-616 800-8600-113

The customer service center has 400 and 800 national after-sales service special hotlines. It adopts the regional service responsibility system, and has fixed contact offices in Beijing, Shanghai, Guangdong, Shandong, Jiangsu, Xian, Xinjiang and other places.

After sales service hotline: 400-6532-616 800-8600-113

7×24全年无休服务。我们拥有专业售后服务团队、气体分离系统专用服务车，为您提供“2小时快速响应，24到达现场”的用心服务。

We supply 7×24hrs all year service. We have a professional after-sales service team, gas separation system special service vehicle, to provide domestic customer with "2-hour quick response, 24-hour on-site" attentive service.

智能主动服务。我们建立了完善的客户服务档案，通过管理平台，为您提供积极主动服务。

We supply intelligent active service. We have established a complete customer service file, and provide customers with active service through the management platform.

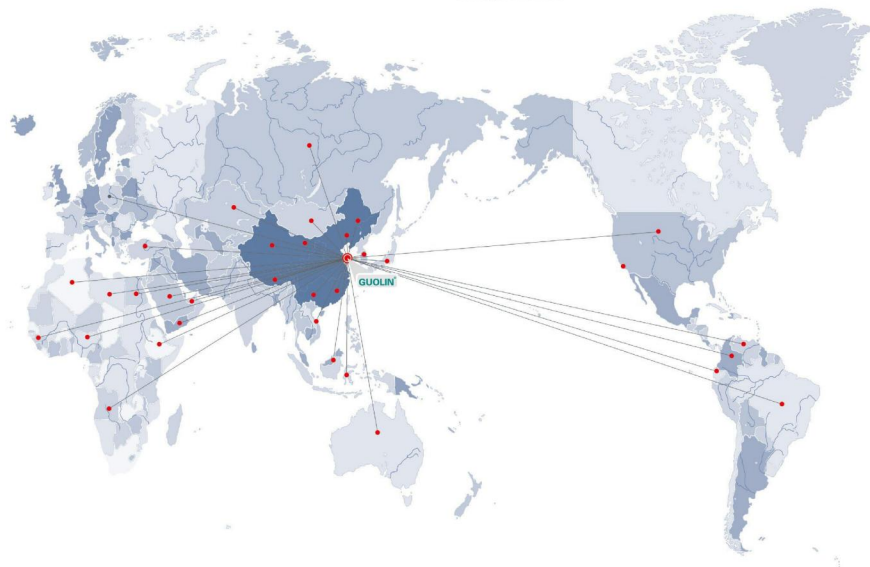


专家贴心服务。我们与国内的气体分离运行及应用技术专家长效合作，建立常态化的全国流动服务体系，足迹遍布全国各地，协同为您提供增值的技术和咨询服务。

We supply expert attentive service. We have a long-term cooperation with domestic experts in gas separation operation and application technology and establish a normalized national mobile service system with footprints all over the country, which could provide customer with value-added technology and consulting services.

升级改造服务。我们致力于工业气体分离技术的不断创新、进步，为确保气体分离系统能更好的稳定运行，我们可以协同您对气体分离系统中相关设备进行升级改造，为您解决后顾之忧。

Upgrade service. We are committed to the continuous innovation and progress of industrial gas separation technology. In order to ensure the stable operation of the gas separation system, we can cooperate with you to upgrade the relevant equipment in the gas separation system, so as to solve your worries.



合作伙伴 Partners

