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烟台史密德环保有限公司



公司简介

BRIEF INTRODUCTION

烟台史密德环保有限公司是国内知名的环保设备专业制造商。拥有自主品牌，10多年来，通过引进日本、德国等国外的先进废气净化技术，研发并生产了专业级别的VOCs废气处理设备，尤其是无泵水旋设备为国家技术级专利产品，得到诸多地方环保部门的认可，协助诸多企业完成环保净化升级改造并顺利通过环境评审。

本司生产的无泵水旋、活性炭吸附设备、UV光解+活性炭吸附设备、环保打磨设备、RCO催化燃烧脱附等设备广泛应用于家具（木门、橱柜、地板、整木定制等）、汽车、化工等行业。

史密德环保提供的无泵水旋具有占地空间小、低能耗、高效过滤漆雾（95%-98%）、设备的使用寿命可达数十年，可自由搬迁等特点。我们可环保设备的处理效果也远远高于行业标准，获得大家一致认可。

史密德环保，一直秉承“专业、专注、创新”的经营理念，以技术创新、服务模式创新、管理与机制创新为三大支点，致力于打造中国废气治理第一品牌。

Part 1 激光工作组 Laser Working Group

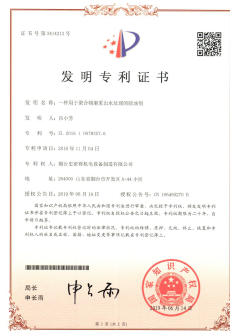
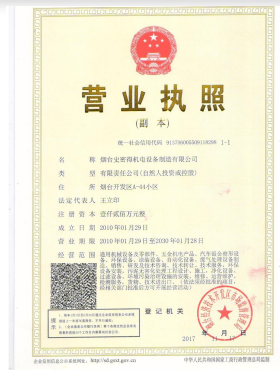


Part 2 折弯工作组 Bending Working Group



证书和报告

Certification and Reporting



目录

Content

03-04

高压水旋柜
High-pressure Water Rotation Painting Booth

05-06

自动捞渣水旋柜
Automatic Cleaning Water Rotation Painting Booth

07-08

水旋塔
Water Rotation Tower

09-10

活性炭吸附设备
Activated Carbon Adsorption Equipment

11-12

UV光解+活性炭吸附设备
UV Photolysis + Activated Carbon Adsorption Equipment

13-16

打磨柜/打磨房
Grinding Cabinet/Grinding Room

17-20

RCO催化燃烧在线设备
RCO Catalytic Combustion On-line Equipment

21-23

RCO催化燃烧离线设备
RCO Catalytic Combustion Off-line Equipment

高压水旋柜

High-pressure Water Rotation Painting Booth

产品简介/Product Brief

高压水旋柜是本公司新型产品，该设备中应用的无泵水旋是本公司国家技术级专利，适用于处理喷涂时产生的颗粒物、挥发性有机废气，可广泛应用于涂装行业。

High-pressure Water Rotation Painting Booth is a new product of our company. The pump-free water spinning used in this equipment is a national technical grade patent of our company. It is suitable for the treatment of particulate matter and volatile organic waste gas produced during spraying. It can be widely used in the coating industry.



适用范围/Application Range

适用于处理浓度高、颗粒大的油雾、漆雾、粉尘、漆渣等。例如：处理喷涂时产生的挥发性有机废气。

适用行业：适合于家具厂、自行车厂、工艺品厂及五金塑胶厂的大批量工件生产。

High-pressure Water Rotation Painting Booth is suitable for oil mist, paint fog, dust, paint residue...etc, who with high concentration and large particle size. For example: treatment of volatile organic emissions from spraying.

Applicable Industry: suitable for mass production of furniture factory, bicycle factory, handicraft factory and metal plastic factory.



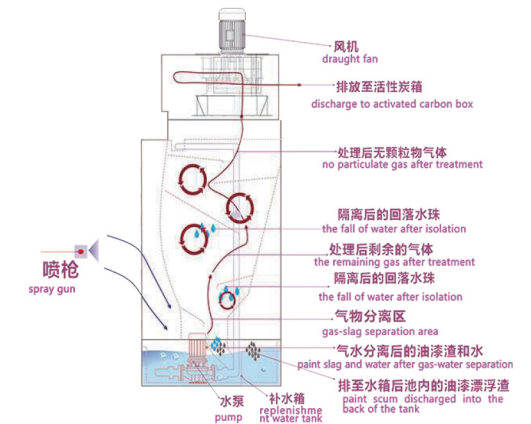
优势/Advantage

- 1、本设备拥有国家技术专利，漆雾处理率达到95%以上，设备运营成本降低50%以上。
- 2、机型丰富，容易根据安装场所选择相适应的机型。
- 3、分离室与回水槽系统化设计，使水槽内的清扫、维护与检查更为容易。

- 1、This equipment has the national technical patent, the paint fog processing rate reaches above 95%, the equipment operation cost reduces more than 50%.
- 2、With varieties of models, easy to choose the appropriate type according to the installation site.
- 3、The systematic design of separation chamber and return tank makes it easier to clean, maintain and check the tank.

原理/Principle of Operation

高压水旋柜运行时，含有漆雾、漆渣的有机废气被排风机高速吸入设备。含有漆雾的废气首先与雾化的水幕撞击，其中部分粘性物质被截留在水中，然后穿过水幕进入气液分离室，漆雾、漆渣在离心力作用下从废气中分离出来，并被水捕集。气体进入后端进行处理，水则被挡水板阻隔，排出至前端设备的后部水箱中。设备运行中不断有新水经自动补水装置加入水箱，水箱中的水可反复循环使用，无需排放。漆渣漂浮在水箱水面上，通过定期清除达到净化水的目的。

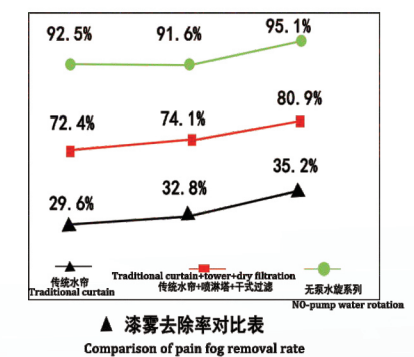


When the high-pressure water rotary cabinet is in operation, the organic waste gas containing the paint mist and the paint residue is drawn into the equipment by the high-speed suction device of the exhaust fan. The exhaust gas containing the paint mist is first struck with the atomized water curtain, in which part of the viscous substance is trapped in water and then through the water curtain into the gas-liquid separation chamber, the paint mist and the paint residue are separated from the exhaust gas under the action of centrifugal force and are collected by water. The gas enters the back end for processing, and the water is blocked by the water baffle and discharged to the rear water tank of the front end equipment. In the operation of the equipment, new water is continuously added into the water tank through the automatic water-replenishing device, and the water in the water tank can be recycled repeatedly, and the water tank is not required to be discharged. The paint residue floats on the water surface of the water tank, and the purpose of purifying water is achieved by periodically removing the paint residue.

注意事项/ATTENTION

为了消除漆渣的粘性及喷房防锈，请使用处理剂将水槽内的PH值控制在9-11的范围内，特别是使用酸性强的涂料时应特别注意。水槽内的漆渣应及时清除，避免堆积。

In order to eliminate the stickiness of paint slag and anti-rust of spray room, please use the treatment agent to control the PH value in the flume within the range of 9-11, especially when using strong acidic coatings. The paint residue in the tank should be removed in time to avoid accumulation.



尺寸规格/Product Specification

规格 (Specifications)	尺寸 (Dimensions)	风量 (Air Volume)	水泵 (Water pump)	出风口 (Air Outlet)	材质 (Material)
3 米	L3000*W1500*H2400	11000- 13000m3/h	1.1kW*1	φ 750*1	不锈钢 stainless steel
4 米	L4000*W1500*H2400	15000- 18000m3/h		φ 750*2	
5 米	L5000*W1500*H2400	20000- 22000m3/h	1.5kW*1	φ 750*2	
6 米	L6000*W1500*H2400	25000- 28000m3/h	1.1kW*2	φ 750*2	

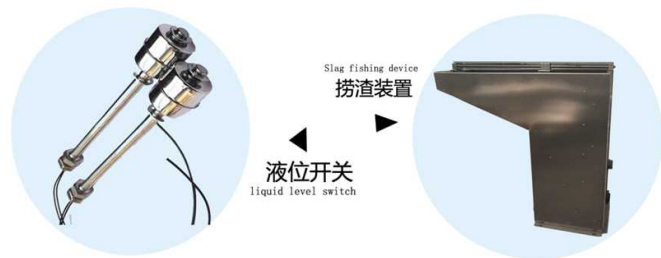
自动捞渣水旋柜

Automatic slag water rotation painting booth

产品简介/Product Brief

在企业的VOCs废气处理的设备中，有较多的处理设备都涉及较频繁的捞渣作业，而人工捞渣工作劳动强度大、工作效率低、阻碍了生产效率的提升。针对这种情况，我司专业开发了新型配套水旋柜，水旋柜的自动捞渣设备，该设备操作灵活简便，单次捞渣量得到大幅提高，从而降低了工人的作业强度，提高了生产效率。

In the vocs waste gas treatment equipment of the enterprise, more treatment equipment are involved in the frequent slag fishing operation, but the labor intensity of the artificial slag fishing work is high and the working efficiency is low, which hinders the improvement of the production efficiency. In view of this situation, our company has specially developed a new type of supporting water rotation painting booth, automatic slag fishing equipment for water rotating tower. The operation of the equipment is flexible and simple, and the single slag amount has been greatly increased, thus reducing the working intensity of the workers and improving the production efficiency.



优势/Advantages

- 1.自动化操作：自动化程度高，分离效率高，动力消耗小，无噪音，耐腐蚀性能好，在无人看管的情况下可保证连续稳定工作。
- 2.自动捞渣、方便处理：带有自动捞渣装置，采用自动化送渣管路，溢水管路，实时根据液面水位进行自动调节，降低设备堵塞，降低维修成本。
- 3.水位精控：带自动溢水管路，不锈钢液位控制开关，对水位控制更精准，保证设备运行正常。
- 4.下沉排水口：该设备下沉水箱排水口，处于水箱最低位置，外接电磁阀，可利用真空一次排尽，排水更顺畅。



1. Automatic operation: high degree of automation, high separation efficiency, low power consumption, no noise, good corrosion resistance, can ensure continuous and stable work under the condition of unattended.
2. Automatic slag fishing, convenient treatment: with automatic slag fishing device, using automatic slag supply pipeline, overflow pipeline, real-time according to the liquid level of automatic adjustment, reduce equipment blockage, reduce maintenance costs.
3. Water level precision control: with automatic overflow pipeline, stainless steel liquid level control switch, more accurate water level control, to ensure the normal operation of the equipment.
4. Sinking drain: the equipment sinking water tank drain is designed in the lowest position of the water tank, connect external solenoid valve, can use vacuum for one time discharge, drainage is much smoother.

特点/Characteristics

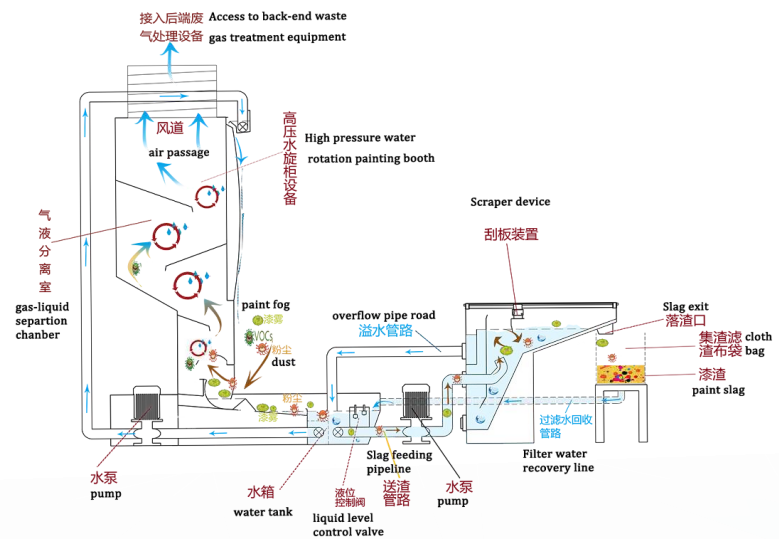
- (1) 捞渣过程的自动化，大大减少作业人员的劳动强度和工作量，安全性能更有效保障。
- (2) 该设备中采用多重管路控制，一是便于机器的检修，及时处理突发问题，还可以多次循环利用水资源，回收过滤水，降低水资源的消耗，降低成本。
- (3) 304不锈钢液位开关控制阀，无机械连接件，水位控制精准，运作简单可靠。

- (1) the automation of slag fishing process greatly reduces the labor intensity and workload of operators, and the safety performance is more effective.
- (2) the equipment adopts multiple pipeline control, one is to facilitate the maintenance of the machine, to deal with sudden problems in time, but also to recycle water resources many times, recover and filter water, reduce the consumption of water resources and reduce the cost.
- (3) 304 stainless steel liquid level switch control valve, no mechanical connector, accurate water level control, simple and reliable for operation.

原理/Principle of Operation

该设备前端搭配高压水旋柜，利用水雾碰撞将带有漆雾的废气进行气雾分离，把颗粒物捕集至专用水箱中，而后带有漆雾、粉尘等颗粒物的废水通过水泵高压运送至捞渣水箱中，经由刮板装置捕捞漆渣，推至专用的集渣滤渣布袋中进行后期集中处理。

The front end of the equipment is equipped with high pressure water rotation painting booth, the waste gas with paint fog is separated by water fog collision, and the particles are collected into the special water tank, and then the waste water with lacquer fog, dust and other particles is transported to the slag fishing tank through the pump, and the lacquer slag is caught by the scraper device and pushed to the special slag collection filter bag for later centralized treatment.



设备参数/Plant Parameter

自动捞渣水旋柜具体参数 Parameter of honeycomb activated carbon			
设备型号 (Model NO.)	CYAG5000	风机功率(Fan power)	5.5KW*2
主体尺寸 (Body size)	L5000*W2000*H2500mm (可定制)	水泵功率(Pump power)	1.5KW
主体板材(Body material)	201不锈钢 (可根据要求定制)	送渣水泵 (Slag feeding pump)	0.75KW
风机2台；水泵2台；应急消防系统1套			
2 draught fans, 2 pumps, 1 set emergency fire protection system			

*规格可按客户要求定制 Custom specification available

水旋塔

High-pressure Water Rotation Painting Booth

产品简介/Product Brief

高压水旋塔是在水旋柜的基础上研制出来的，该设备的漆雾分离率可以达到93%-96%，并且投资费用较少，运行成本也较低。使用水旋塔不必改造厂房原有车间，可放置在室外，用风管介入车间原处理设备后端（例如老式水帘机），极大提高了漆雾处理效果，适用于急需整改和添加环保设备的企业。

The high-pressure water rotation tower is developed on the basis of water rotation booth. The separation rate of paint fog in this equipment can reach 93% - 96%, and the investment cost is less and the operation cost is lower.

The use of water rotation tower does not need to transform the original workshop of the factory, but can be placed outdoors, using air duct to intervene in the back end of the original treatment equipment of the workshop (such as the old water curtain machine), which greatly improves the treatment effect of paint fog, and is suitable for enterprises in urgent need of rectification and adding environmental protection equipment.



适用范围/Application Range

适用于处理浓度高、颗粒大的油雾、漆雾、粉尘、漆渣等。例如：处理喷涂时产生的挥发性有机废气。

适用行业：适合于家具厂、自行车厂、工艺品厂及五金塑胶厂的大批量工件生产。

High Pressure water rotation tower is suitable for oil mist, paint fog, dust, paint residue...etc, who with high concentration and large particle size. For example: treatment of volatile organic emissions from spraying.

Applicable Industry: suitable for mass production of furniture factory, bicycle factory, handicraft factory and metal plastic factory.



优势/Advantage

1. 可与企业原有环保设备组合使用，降低企业环保改造成本。
2. 模块化产品，后期环保升级成本低。
3. 设备运营成本低，维护简单方便。

1. It can be used in combination with the original environmental protection equipment in the enterprise to reduce the cost of environmental protection transformation of the enterprise.
2. Modular products, low cost of environmental protection upgrade.
3. Equipment operation cost is low, maintenance is simple and convenient.

原理/Principle of Operation

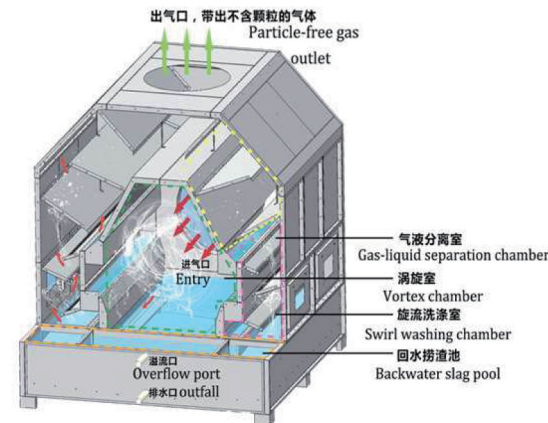
含有漆雾、漆渣、油雾、粉尘的有机废气被排风机高速吸入设备，通过涡旋室的离心力，进入旋流洗涤室，使废气的浓度和粘度降低，经处理的废气再进入气液分离室。再离心力的作用下，漆雾、漆渣、油雾、粉尘等颗粒物从混合废气中分离出来，碰到水膜上被收集。分离出的有机废气（通过离心力甩干后，已经和正常空气的湿度一样）进入到后端的废气处理系统，分离出的水则被挡水板阻隔，通过排渣口返回到水箱，废渣回落到回水槽被收集至后部回水捞渣池中。在高速返回冲击力的作用下，漆雾形成类似泡沫状的漆渣漂浮在回水捞渣池水面上，通过定期清除漆渣，达到净化水从而使水达到持续循环利用的目的。

The organic exhaust gas containing paint mist, paint residue, oil mist and dust is inhaled by the exhaust fan at high speed. Through the centrifugal force of the vortex chamber, it enters the swirl washing chamber, which reduces the concentration and viscosity of the waste gas, and the treated waste gas enters the gas-liquid separation chamber. Under the action of centrifugal force, paint mist, paint residue, oil mist, dust and other particulate matter are separated from the mixed waste gas and collected on the water film. The separated organic waste gas (which is dried by centrifugal force and already in the same humidity as the normal air) enters the exhaust gas treatment system at the back end, and the separated water is blocked by the water shield and returned to the tank through the discharge port. The waste residue falls back to the back sink and is collected into the backwater pool. Under the action of high speed returning impact force, paint slag similar to foam floats floating on the water surface of recycling slag pool. By removing lacquer slag regularly, the water can be purified so as to achieve the purpose of sustainable recycling.

注意事项/ATTENTION

为了消除漆渣的粘性及喷房防锈，请使用处理剂将水槽内的PH值控制在9-11的范围内，特别是使用酸性强的涂料时应特别注意。水槽内的漆渣应及时清除，避免堆积。

In order to eliminate the stickiness of paint slag and anti-rust of spray room, please use the treatment agent to control the PH value in the flume within the range of 9 -11, especially when using strong acidic coatings. The paint residue in the tank should be removed in time to avoid accumulation.



尺寸规格/Product Specification

型号 (Model)		CYT2.0W-250	CYT3.0W-380	CYT-4.0W500	
项目 (Projct)					
捕集率(%) Capture rate	硝基涂料 (Nitro-based coating)		96%(参考值)Reference Value		
	聚氨酯涂料 (Polyurethane coating)		93%(参考值)Reference Value		
	丙烯酸涂料 (Acrylic coating)		95%(参考值)Reference Value		
	三聚氰胺涂料 (Melamine coating)		96%(参考值)Reference Value		
噪音(dB) Noise	离机 1.5m(1.5m Fron device)		84	85	86
水泵 Water Pump	型号 (Model No)		ISG50-100(I)65-100(I)A		
	功率(kW)(Water Powe)		1.5*12.2*12.2*2		
	防护等级(Protestion Level)		IP54		
	转速(r/min)(peed)		2900		
风机 Draught Fan	根据前、后端设备选型(To be decided according to front-end equipment selection)				

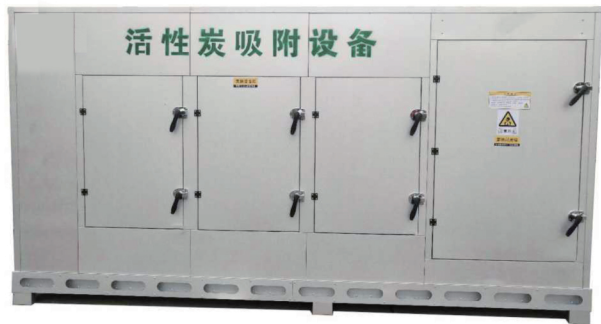
活性炭吸附设备

Activated Carbon Adsorption Equipment

产品简介/Product Brief

活性炭吸附设备又称活性炭箱，是本公司新设计研发的一款高效率经济实用型净化装置，主要应用于VOCs有机废气的处理，VOCs去除率高达80%以上。

Activated carbon adsorption equipment also known as activated carbon box, is a high efficiency, economical and practical purification device designed and developed by our company. It is mainly used in the treatment of VOCs organic waste gas, and the removal rate of VOCs is more than 80%.



优势/Advantages

- 1、吸附效率高，适用范围广，能处理多种混合有机废气。
- 2、设备构造紧凑，占地面积小，全密闭型，室内外皆可使用。
- 3、维护管理简单方便，能耗低。

- 1、High adsorption efficiency, wide application range, can deal with a variety of mixed organic exhaust gases.
- 2、Compact structure, small area, closed type
- 3、Simple and convenient maintenance and management, low energy consumption



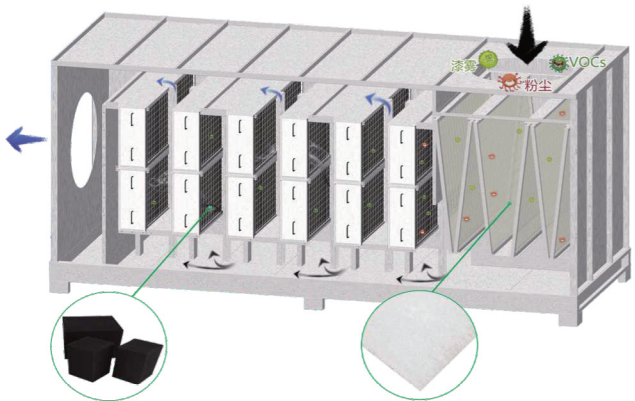
尺寸/Specification

型号 (Model)		CYH2.0W-390	CYH3.0W-478	CYH4.0W-782
项目 (Project)				
主体尺寸 Body size	长 Length(mm)	3900	4780	7280
	宽 Width(mm)	1650		1700
	高 Height(mm)	2300	2300	2700
处理风量 Treated air volume(m³/h)		20000	30000	40000
迎风面积 Frontal area(m²)		8.4	11.2	14
风速 Wind speed(m²/s)		0.66	0.74	0.79
活性炭体积 Activated carbon volume(m³)		1.68	2.24	3.08
主体材质 Body Material		全镀锌钢板 2mm 2mm aluminum-plated galvanized sheet		

原理/ Principle of Operation

由于活性炭表面上存在着未平衡和未饱和的分子引力或化学键力，因此当活性炭的表面与气体接触时，就能吸引气体分子，使其浓聚并保持在活性炭表面，此现象称为吸附。利用活性炭的吸附能力，使废气与大表面的多孔性活性炭相接触，废气中的污染物被吸附在活性炭表面上，使其与气体混合物分离，净化后的气体高空排放。

Because of the unequilibrium and unsaturated molecular gravity or chemical bond force on the surface of activated carbon, when the surface of activated carbon is in contact with gas, it can attract gas molecule, make it concentrated and keep on the surface of activated carbon, this phenomenon is called adsorption. By using the adsorption ability of activated carbon, the waste gas is contacted with the porous activated carbon on the large surface, and the pollutants in the waste gas are adsorbed on the surface of activated carbon to separate it from the gas mixture, and the purified gas is discharged from the air at high



优势/Advantages

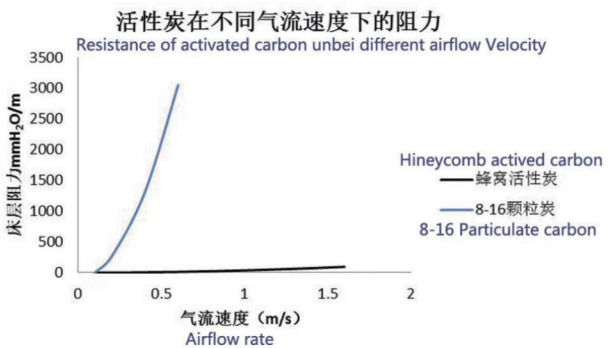
蜂窝活性炭：以其独特的蜂窝结构，具有开孔率高，气体分布均匀，几何面积更大，扩散路程更长；耐磨损、抗粉尘污染能力强等优点。与同类型的活性炭相比，蜂窝状的最大优点在于压力损失小。

Honeycomb activated carbon: with its unique honeycomb structure, with high porosity, uniform gas distribution, larger geometric area, longer diffusion distance; and has the advantages of anti-wear and strong resistance to dust pollution and so on. Compared with the same type of activated carbon, The greatest advantage of the honeycomb is that the pressure loss is small.

高效过滤棉：抗湿度达到100%，可水洗；抗温达到80°C/176°C，不易燃，自动熄灭；符合DIN53438阻燃标准：F1；过滤对象≥5μm微粒及异物。

high efficiency filter cotton, moisture resistance up to 100%, washable;The temperature resistance reaches 80 °C and 176 °C, which is non-flammable and self-extinguished; Meets Din 53438 FLAME RETARDANT STANDARD: F1; filtration object ≥ 5 μ m particles and foreign matter.

压降特性曲线



活性炭吸附材料参数

Parameter of honeycomb activated carbon

规格Specification(mm)	100*100*100/100*100*200
壁厚Wall thickness (mm)	1
碘吸附值Iodine sorptionride(%)	≥ 600
脱附温度Desorption temperature	≤120
水分Moisture(%)	≤3
表观密度(g/m3)Apparent densi ty	0.42-0.45

UV光解+活性炭吸附设备

UV photolysis + Activated carbon adsorption equipment

产品简介/Product Brief

UV光解+活性炭吸附设备是本公司具有完全自主知识产权的环保净化产品。该设备可彻底分解工业废气中有毒有害物质，高效的净化效果使处理后的废气完全无害化排放。

UV photolysis + Activated carbon adsorption equipment is a completely independent intellectual property rights of our environmental protection purification products. The equipment can completely decompose the toxic and harmful substances in the industrial waste gas and make the treated waste gas completely harmless by the high efficiency purification effect. This equipment combines two kinds of waste gas treatment technology, effectively improves the exhaust gas purification efficiency, and the use scope is wider.



适用范围/Application Range

常用于喷涂、烤漆、塑料、印刷、食品、饲料、养殖、污水厂、垃圾站等行业中低浓度的VOCs有机废气处理。

Commonly used in low concentration VOCs organic waste gas treatment in spraying, baking paint, plastics, printing, food, feed, aquaculture, sewage plants, garbage stations, etc.

优势/Advantages

使用范围广，高效处理多种工业废气，无二次污染，运行稳定可靠。

运行成本低，能耗低，维护管理方便。

设备占地面积小，处理风量。

Wide range of use, efficient treatment of a variety of industrial waste gas, no secondary pollution, stable and reliable operation. The operation cost is low, the energy consumption is low, the maintenance and management is convenient, the equipment covers a small area and the handling air volume is large.

设备参数/Plant Parameter

型号(model.no)	CYUH3500	CYUH3600	CYUH5520
项目(project)			
紫外线灯管 (Ultraviolet lamp)	30支	60支	60支
紫外线波段 (Ultraviolet band)	185 nm		
光照强度 (Strength of illumination)	980 lm/m2		
15mm初效过滤棉 (Primary filter cotton)	6.9m ²	9.4m ²	9.4m ²
蜂窝状活性炭 (Modified honeycomb activated carbon)	0.84m ³	0.56m ³	1.68m ³

原理/Principle of Operation

该设备分为两部分，前段采用UV光解工艺，后段采用活性炭吸附工艺。

1. UV光解工艺

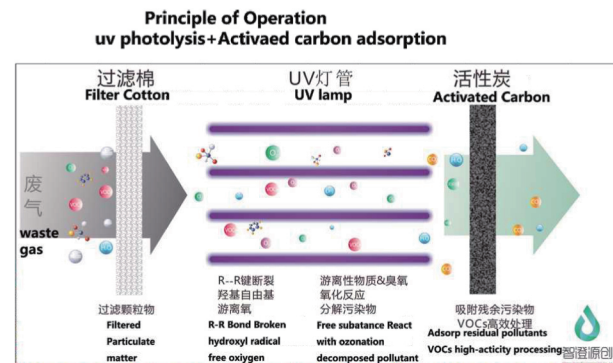
光解部分采用分段设置，前端使用过滤棉过滤，去除颗粒物及水滴。而后进入光解区，对VOCs有机废气进行降解。

利用特制的高能紫外线光束照射有机废气，裂解有机废气的分子键，瞬间打开和断裂苯，甲苯，二甲苯，非甲烷总烃，氨，三甲胺，硫化氢，甲硫醚，二甲二硫，苯乙烯，硫化物等物质的分子键。

同时，当紫外线波长在200NM以下时，O₂ 分子会被分解生成游离氧；游离氧与O₂ 结合生成O₃，即UV+O₂→O+O+（游离氧）O+O₂→O₃（臭氧），O₃会与呈游离态的污染物物质发生氧化反应，把高分子废气化合物降解转变成简单、低害或无害的物质，如CO₂、H₂O等。

2. 活性炭吸附工艺

活性炭装置放在设备末端，吸附废气中残余有机废气。采用的蜂窝状活性炭为多孔蜂窝状，孔隙结构发达，比表面积大，低阻低耗，吸附率高。



The equipment is divided into two parts, the first part is UV photolysis process, the second section is activated carbon adsorption process.

1. The photolysis

UV photolysis process is divided into sections, and the filter cotton is used in the front end to remove particulate matter and water droplets. Then the organic waste gas of VOCs was degraded into the photolysis zone. To irradiate organic waste gases with specially made high energy ultraviolet light beams, to crack the molecular bonds of organic waste gases, to open and break benzene, toluene, xylene, non-methane total hydrocarbons, ammonia, trimethylamine, hydrogen sulfide, methyl thioether, dimethyldisulfide, and to break benzene, toluene, xylene, total non-methane hydrocarbons, Molecular bonds of styrene, sulfides, etc. At the same time, when the UV wavelength is below 200nm, the O₂ molecule will be decomposed to form free oxygen. Free oxygen binds with O₂ to form O₃, that is, UV+ O₂ → O+O+ (free oxygen) O+O₂ → O₃ (ozone). O₃ reacts with free pollutants and transforms the degradation of polymer waste gas into a simple one. A low-harm or harmless substance, such as CO₂, H₂O, etc.

2. Activated carbon adsorption process

activated carbon device is placed at the end of the equipment, adsorbing residual organic waste gas from the waste gas. The honeycomb activated carbon is porous honeycomb-shape, with well-developed pore structure, large specific surface area, low resistance and low consumption, and high adsorption rate.



打磨柜/打磨房

Grinding cabinet/grinding room

产品简介/Product Brief

本公司最新设计的打磨设备采用了先进的过滤器、最新技术的清灰系统、低能耗的抽风系统。可将作业中产生的扬尘迅速吸入并过滤分离。该设备投入运行后，车间粉尘收集率可提高到95%以上，向车间外环境排放的粉尘可削减至0。解决了过去车间污染严重、粉尘无组织扩散等非常严重的问题。

环保打磨房在设计上采用新技术，工艺上使用先进的设备制作加工，管理上严格控制生产、安装的每个细节，从而使交付给用户的每台设备均是质量可靠的产品。

The company's latest design of grinding equipment using advanced filters, the latest technology Of the Ash Removal System, low-energy exhaust system. The dust produced in the operation can be quickly inhaled and filtered and separated. After the equipment is put into operation, the dust collection rate of the worktop can be hureased to more than 95% , and the uust emitted to the enviroment outside the workshop can be reduced to 0 , which solves serious problems , such as serious pollution in the workshop and unorganized diffusion of the dust.

The grinding equipment adopts new technology in design , uses the advanced equipments , with strictly controls in production and installation,to make sure that every device delivered to the user with excellent quality.



特点/Features

- 1.脉冲反吹型一体式吸尘机打磨柜，插上电源立即就能进行除尘工作，节能电控箱，自动控制风机开与关，节约用电，无需管道，是一种很好的吸尘设备。排出的气体，可在车间流通，达到环保要求。
- 2.过滤面积非常大，过滤风速极低，运行阻力小，保证设备低能耗运行。

1.Pulse back blowing integrated cleaning cabinet, plug in the power supply can immediately carry out dust removal work, energy saving electric control box, automatic control fan on and off, saving electricity, no pipe, is a very good cleaning equipment. The discharged gas can be circulated in the workshop to meet the requirements of environmental protection.

2.The filtration area is very large, the filtration wind speed is very low, the operation resistance is small, and the equipment runs with low energy consumption.

3.Good stability, prevent leakage, grinding cabinet is made of steel plate, durable and not easy to break.



原理/Principle of Operation

本磨柜采用负压式设计，即含有粉尘的气体由冲孔均流板进入下箱体，利用涤纶针刺毡布袋过滤空气，通过脉冲振打布袋，将粉尘和气体分离，使粘附在滤筒表面的粉尘颗粒物掉到下方的集尘抽屉，而气体穿过滤筒由风机送入上箱体，净化后的空气可以直接通过除尘器的回风口排出，完成整个系统的循环。

The grinding cabinet adopts negative pressure design, that is, the gas containing dust enters the lower box from the punching plate, polyester needle-punched felt bag is used to filter the air, and the dust and gas are separated through the pulse vibration felt bag, so that the dust particles attached to the surface of the felt bag fall into the dust collecting drawer, and the gas passing through the down filter cylinder is fed into the upper box body by the fan, and then the purified air can be discharged directly through the air outlet of the dust collector, complete the cycle of the whole system.

优势/Advantages

- 节省占地，节约能源，安装自由度大。
- 低能耗，运行成本低，经济合理。
- 防爆风机质量好，风量大，效率高，运行安全，低噪音，低震动，使用寿命长。
- 脉冲清灰，只需要将集尘抽屉中的粉尘倒掉就可以，清理方便、快捷，相比湿式打磨吸尘设备，无二次污染，高效率，清灰彻底，滤筒损伤小，系统阻力小。
- 稳定性好，防止泄露发生，传统的布袋容易破裂，打磨柜采用钢板材质，经久耐用不易破损。
- Save occupation of land, save energy, installation degree of freedom.
- Low energy consumption, low operating cost, economic and reasonable.
- Explosion-proof fan quality, large air volume, high efficiency, safe operation, low noise, low vibration, long service life.
- Pulse ash cleaning, only need to removed the dust collected in the drawer, easy to clean, fast, compared with wet grinding cleaning equipment, no secondary pollution, high efficiency, clear ash thoroughly, less damage to the filter tube, small system resistance.
- Good stability, prevent leakage, the traditional cloth bag is easy to break, grinding cabinet is made of steel plate, durable and not easy to break.



尺寸规格/Product Specification

打磨柜具体参数 Parameters			
设备型号 (Model NO.)	CY2019D4000	主体板材(Body material)	2MM 镀铝锌板 2mm aluminum -plated galvanized sheet
主体尺寸 (Body size)	L4000*W1200*H2600mm (可定制)	风机功率(Fan power)	5.5KW
内含脉冲电控阀，配电箱 1 台，风机 1 台，聚酯纤维滤筒；应急消防系统 1 套 Contains pulse electric control valve, 1 distribution box, 1 fan, polyester needle -punched felt bag ; 1 set of emergencx fire contro systemm			
*规格可按客户要求定制 Custom specification available			

主要系统的介绍/ Introduction of main system过

滤系统 (Filter system)

- 多折结构设计，过滤器内部为多孔钢网，两端钢制法兰，空气出口端设计有密封圈。
- 过滤面积非常大，过滤风速极低，运行阻力小，保证设备低能耗运行。
- multi-folded structure design, filter internal made of porous steel mesh, both ends adopts steel flanges, seal ring designed for air outlet.
- Filter area is very large, filtration wind speed is very low, operation resistance is small, to guarantee equipment under a low energy consumption operation.

清灰系统 (Ash cleaning system)

- 脉冲清灰
- 旋转清灰结构
- Pulse ash cleaning
- rotating dust cleaning structure
- high efficiency, complete cleaning ash, less damage to filter tube and less resistance of system.

抽风系统 (Explosion-proof fan)

- 防爆风机
- 风量大、效率高、运行安全、低噪音、低震动、使用寿命长
- high air volume
- high efficiency, safe operation, low noise, low vibration and long service life

泄灰系统 (Ash relief system)

- 刮板链条输送，运行稳定，维护方便
- 自动控制，节约能
- scraper chain conveying, stable operation, easy maintenance
- automatic control, saving energy consumption

PLC+HPI自动控制系统 (PLC+HPI automatic control system)

- PLC编程集中控制所有系统的运行，保证工厂的安全、稳定、高效率运行，并减轻操作人员的劳动强度，使工厂性能得以最大限度的发挥
- 故障监控功能：电机过热保护，脉冲阀状态监控，压力表状态监控
- 各操作集中化，自动化，最优化
- 提高节能效果
- PLC programming centrally controls the operation of all the systems, ensures the safety, stability and high efficiency of the plant, reduces the labor intensity of the operator, and maximizes the performance of the factory.
- fault monitoring function: motor over-heat protection, Pulse valve condition monitoring, pressure gauge status monitoring,
- centralized operation, automation, optimization
- improve energy efficiency

打磨房各部件/ Polishing room components



阀



风机



滤筒



布袋

RCO催化燃烧在线设备

RCO Catalytic Combustion On-line

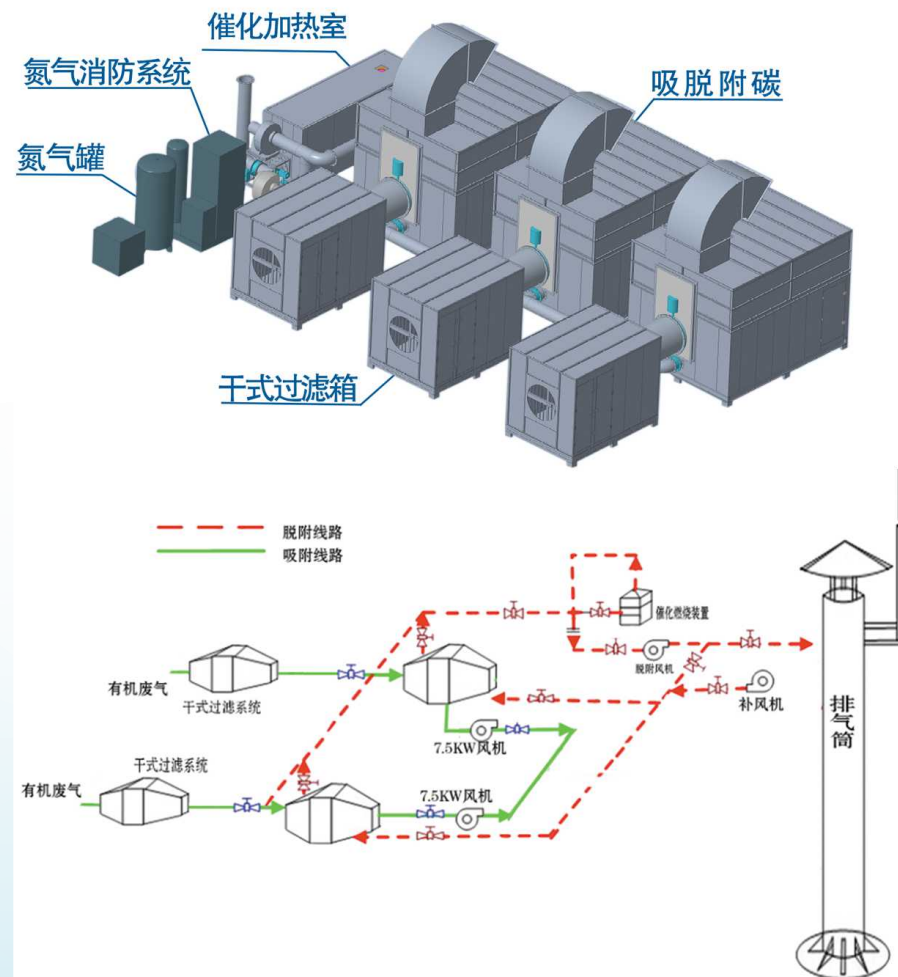
产品简介/Product Brief

RCO催化燃烧在线设备是本公司研发人员吸收国内外先进技术设计出的新型设备，废气净化处理可全自动运行。

RCO catalytic combustion online equipment is a new type of equipment designed by our R & D department to absorb domestic and foreign advanced technology, waste gas purification treatment can be operated automatically.

废气经预处理除去水分、粉尘、油雾等颗粒状物质，经过合理的布风，使其均匀地通过固定吸附床内的活性炭层，在一定的停留时间，有机污染物被吸附到活性炭中并浓缩，洁净气体通过排气筒排放。

The waste gas is pretreated to remove moisture, dust, oil mist and other particulate substances, and through reasonable air distribution, it can uniformly pass through the activated carbon layer in the fixed adsorption bed. At a certain residence time, the organic pollutants are adsorbed into activated carbon and concentrated, and the clean gas is discharged through the exhaust tube.



优势/Advantages

技术工艺先进，设施运行稳定可靠，故障率低，维护保养简便，运行费用低。

. 所有设备均按户外型要求进行设计、制造，可有效防风、防雨、防锈。

. 采取多重安全设施，杜绝安全事故发生。

. 催化燃烧系统结构精巧，热风复式循环蓄热，热效率高，能量损失小，实现了脱附吸热与燃烧放热的热平衡，即燃烧过程中不耗用外加电能，能耗低。

. 催化燃烧效率高、净化彻底。采用新型蜂窝载体+贵金属催化剂，起燃温度低，燃烧彻底，无焰燃烧，无二次污染。

. 本吸附床具有碳层多，分布均匀、稳定、气流压降小，吸附性能好的优异性能。

. 采用PLC全自动控制，可间歇运行亦可连续运行。

. The technology is advanced, the operation of the facility is stable and reliable, low failure rate, simple the maintenance, and low operation cost.

. All equipment are designed and manufactured according to outdoor requirements, which can effectively prevent wind, rain and rust.

. Adopt multiple safety facilities to avoid accidents.

. The catalytic combustion system has the advantages of exquisite structure, hot air compound cycle heat storage, high thermal efficiency and small energy loss. The thermal balance between desorption heat absorption and combustion heat release is achieved, that is, there is no external electric energy consumption and low energy consumption in the combustion process.

. The catalytic combustion efficiency is high and the purification is thorough. Adopt new honeycomb supporter + precious metal catalyst has the advantages of low ignition temperature, complete combustion, flameless combustion and no secondary pollution.

. The adsorption bed has many excellent properties, such as many carbon layers, uniform distribution, stable air flow pressure drop and good adsorption performance.

. PLC automatic control, intermittent operation or continuous operation both available.



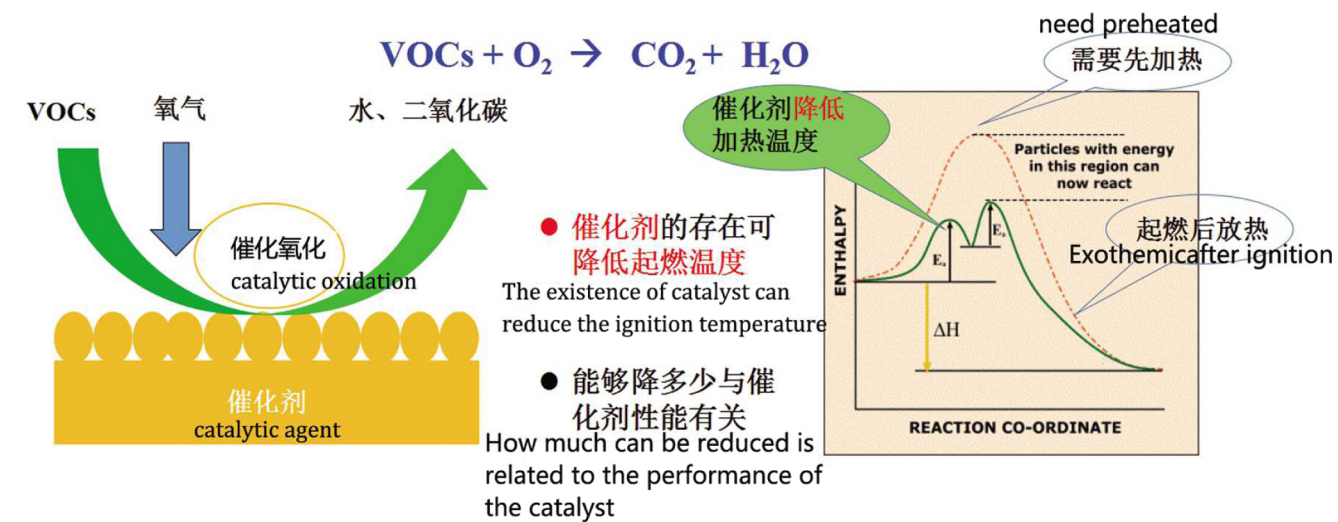
催化剂性能/ Catalyst Performance

TFJF型催化剂采用堇青石蜂窝陶瓷体作为第一载体， γ - Al_2O_3 为第二载体，以贵金属Pd、Pt等为主要活性组分，是一种新型高效的有机废气净化催化剂。贵金属铂和钯，具有高活性、高净化效率、耐高温及长使用寿命。

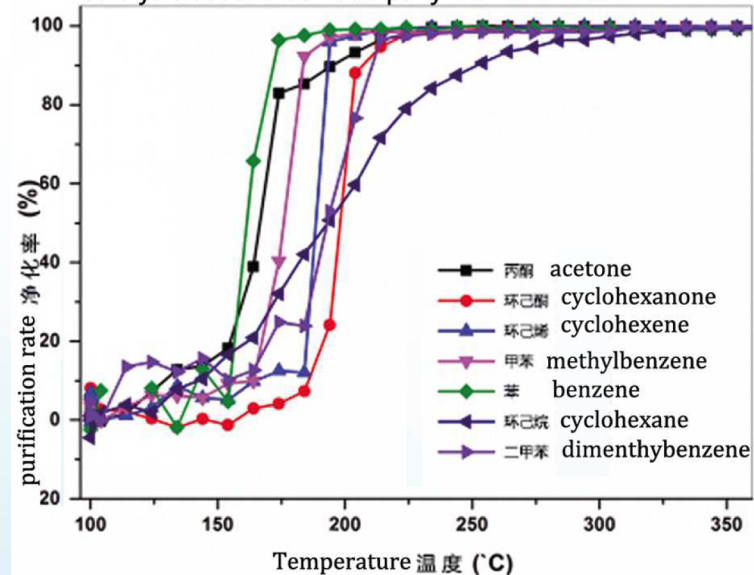
当倍有机物2000-8000 mg/m^3 范围内，空速10000-12000 h^{-1} 条件下，净化效果 $\geq 98\%$ 。

TFJF catalyst is a new and efficient catalyst for organic waste gas purification by using cordierite honeycomb ceramic as the first carrier, γ - Al_2O_3 as the second carrier and precious metal Pd, Pt as the main active component. Precious metal platinum and palladium, with high activity, high purification efficiency, high temperature resistance and long service life.

Under the condition of space velocity 10000-12000 h^{-1} , the purification effect is $\geq 98\%$ in the range of multiple organic matter 2000-8000 mg/m^3 .



我司采用的催化剂对不同挥发性有机气体的净化率
purification rate of different volation Organic gases by
Catalysts used in our Company



设备参数/ Plant Parameter

有机废气净化催化剂材料参数

Material parameters of catalyst for organic waste gas purification

材质 (Material)	堇青石(Cordierite)	活性成分 (Active Ingredient)	Pt,Mg,Al,Si,Fe,Ca,K
尺寸(size)	100*100*40mm	孔型(Pore Pattern)	方形(边长为1.4mm) Square(length 1.4m)
孔密度(Pore density)	32个/cm2	孔壁厚度 (Pore wall thickness)	0.5mm
深层主晶相 (Deep main crystal phase)	γ - Al_2O_3	比表面积(Specific area)	$\geq 120\text{m}^2/\text{g}$
堆积密度(Stacking density)	540-640g/L	空速(Airspeed)	10000-12000 h^{-1}
催化剂活性温度 (Catalyst activity temperature)	210°C	耐冲击温度 (Impact Temperature)	750°C



设备参数/ Plant Parameter

RCO催化燃烧离线装置参数 Specification			
主体尺寸 (Body size)	9520*1700*1930mm	单次脱附活性炭数量 (Quantity of single desorption activated carbon)	2.24m³
脱附风量 (Desorption air volume)	3000m³/h	脱附静压 (Desorption static pressure)	2380Pa
排风风量 (Exhaust air volume)	2000m³/h	排风静压 (Exhaust static pressure)	1100Pa
活性炭脱附箱；主体加温系统；板式换热器 active carbon desorption box,mainbody heating system and plate type heat exchanger			
脱附风机1台；补冷风机1台 One desorbed fan and one supplementary cooling fan			
PLC智能电控（触摸屏）1套；控制阀：气动阀+电动阀；应急消防系统1套 PLC intelligent electronrc control(touch screen)1 set,control vave,pneumatic valve electric valve,emergency fire control system 1 set			

*规格可按客户要求定制 Custom specification available

优势/ Advantages

1. 设备操作方便，采用PLC集中控制操作，可实现自动脱附，确保脱附达到最佳效果。
 2. 起燃温度低，能耗少，运行费用低。
 3. 设备安全性高，配有阻火系统，防爆泄压系统，超温报警系统及先进的自控系统。
 4. 所有设备均为按户外型要求进行设计、制作，可有效地防风、防雨、防冻、防锈。
 5. 催化燃烧效率高、净化彻底。采用新型蜂窝载体+贵金属催化剂，使起燃温度低、燃烧彻底、安全无焰燃烧，产物无毒、无害。
1. The equipment is easy to operate, using PLC centralized control operation, can achieve automatic desorption, to ensure that the best effect is achieved.
 2. Low ignition temperature, low energy consumption, low operation cost.
 3. The equipment is safe and equipped with fire-proof system, explosion-proof and pressure-relief system, over-temperature alarm system and advanced automatic control system.
 4. All equipment is designed and manufactured according to the requirements of outdoor type, which can effectively prevent wind, rain, frost and rust.
 5. The catalytic combustion efficiency is high and the purification is thorough. A new honeycomb supporter + precious metal catalyst was used to make the ignition temperature low, complete combustion, safe flameless combustion, and the outlet non-toxic and harmless.

安全措施/ Safety measures

1. 燃烧方式为催化燃烧，属低温无焰燃烧，绝对无明火产生。
 2. 严格控制系统中VOCs气体的浓度低于其爆炸下限1/4。
 3. 在脱附床的进气管路设置滤尘阻火器；催化装置设有防爆膜片。
 4. 全系统设备和风管均良好接地，以消除静电。
 5. 催化和吸附装置均有温度报警系统并配有旁通，新空气风管以便“飞温”时引入空气。
 6. 保温性能良好，采用质轻的硅酸铝耐火纤维材料保温。
1. Combustion mode is catalytic combustion, low-temperature flameless combustion, absolutely no open fire.
 2. The concentration of VOCs gas in the strict control system is less than 1 / 4 of its explosion limit. 3. A dust trap is arranged in the inlet pipe of the desorption bed; the catalytic device is equipped with an explosion-proof diaphragm.
 4. The system-wide equipment and duct are well grounded to eliminate static electricity.
 5. Both the catalytic and adsorption devices have a temperature alarm system and are equipped with a by-pass, new air duct for introduction of air at the time of the "flying temperature"
 6. Heat preservation performance is good, light weight aluminum silicate refractory fiber material is used to heat preservation.

工业环保治理一站式解决方案服务商

One-stop solution service provider for industrial environmental protection

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- ◆ 探索与创新，环保技术领先行业
- ◆ 学习与合作，引进先进环保理念
- ◆ 高标准、高效率，为客户提升绿色价值
- ◆ 引技术、抓品质，用科技发展绿色经济

合作客户

Cooperative customers



RCO催化燃烧离线设备

RCO Catalytic Combustion Off-line Equipment

产品简介/Product Brief

RCO催化燃烧离线设备将吸附挥发性有机物活性炭脱附，有机物经高效催化分解为二氧化碳和水，实现活性炭再生。

The RCO catalytic combustion off-line equipment will adsorb the volatile organic carbon, and the organic matter is decomposed into carbon dioxide and water by high-efficiency catalytic decomposition, so as to realize the regeneration of the activated carbon.



适用范围/Application Range

可处理苯、醇、酮、醛、酯、醚、烷等混合有机废气。可处理烘道、印制铁罐、表面喷涂、印刷油墨、机电绝缘处理、皮鞋粘胶等工序产生的有机废气。

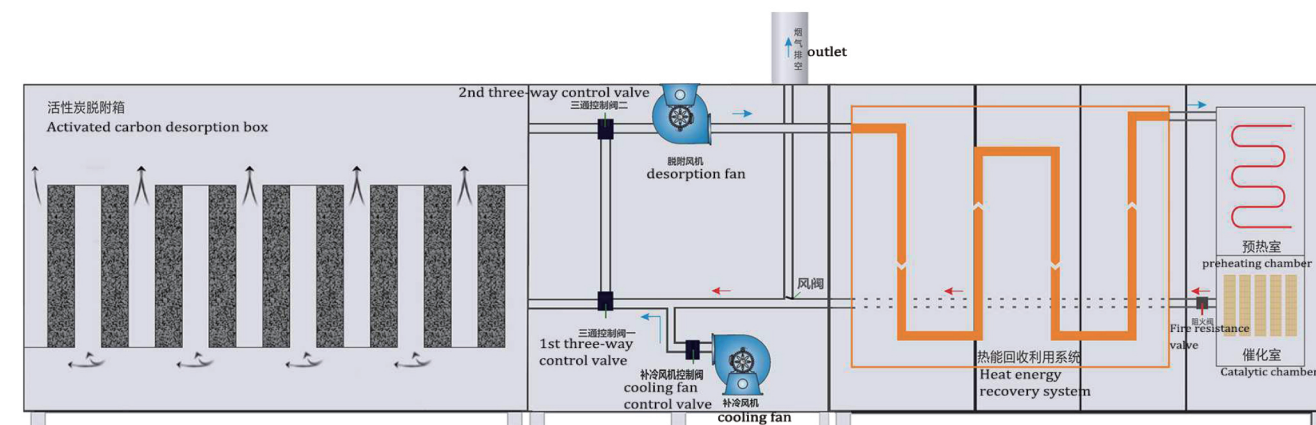
It can deal with benzene, alcohol, ketones, aldehydes, esters, ethers, alkanes and other mixed organic waste gases. Can deal with drying, printing cans, surface spraying, printing ink, electrical insulation treatment, shoes viscose and other processes produced organic waste gas.



流程/process

废气经管道由风机送入板式换热器，将废气升高到一定温度后进入预热室，经过预热室的加热使废气升温到催化起燃温度（350℃），然后进入催化反应床，在催化剂的活性作用下，有机废气进行氧化反应生成无害的水和二氧化碳，并放出一定的热量。反应后的高温气体再次进入板式换热器，经换热后，最后以较低的温度经引风机排入大气。

The exhaust gas is piped into the plate heat exchanger from the fan to enter the preheating chamber after raising the exhaust gas to a certain temperature, heating the exhaust gas to the catalytic ignition temperature (350 °C) through the preheating chamber, and then entering the catalytic reaction bed. Under the activity of the catalyst, the organic waste gas is oxidized to produce harmless water and carbon dioxide, and some heat is released. After the reaction, the high temperature gas enters the plate heat exchanger again. After heat transfer, the high temperature gas is finally discharged into the atmosphere through the induced fan at a lower temperature.



原理/Principle of Operation

在化学反应过程中，利用催化剂降低燃烧温度，加速有毒有害气体完全氧化的方法，叫做催化燃烧法。在催化净化过程中，催化剂的作用是降低活化能，由于催化剂的载体是由多孔材料制作的，具有较大的比表面积和合适的孔径，当加热到280-350℃的有机气体通过催化层时，氧和有机气体被吸附在多孔材料表层的催化剂上，增加了氧和有机气体接触碰撞的机会，提高了反应速率，使有机气体与氧产生剧烈的化学反应而生成CO₂和H₂O，同时产生热量，从而使得有机气体变成无毒无害气体。

In the process of chemical reaction, catalyst is used to reduce combustion temperature and accelerate the complete oxidation of toxic and harmful gases, which is called catalytic combustion method. In the process of catalytic purification, the role of the catalyst is to reduce the activation energy, because the catalyst carrier is made of porous materials, has a large specific surface area and appropriate pore size, when heated to 280 °C - 350 °C organic gas through the catalytic layer, Oxygen and organic gases are adsorbed on the catalysts on the surface of porous materials, increasing the chance of contact and collision between oxygen and organic gases, increasing the reaction rate, and making the organic gases react violently with oxygen to form CO₂ and H₂O, and at the same time generate heat. As a result, organic gases become non-toxic and harmless gases.