



***SANTY***

CONTACT NUMBER: 400-877-5531

WEBSITE: [www.santyclean.com](http://www.santyclean.com)

FACEBOOK

YOUTUBE

***SANTY***  
**TECHNOLOGY**

highly engineered environmental equipment and service solutions

## ABOUT SANTY TECHNOLOGY

Santy Environmental System, founded in 2003, is the integration of research and development, production and sales, a world leader in air pollution control equipment and waste gas treatment equipment.

Armed with a firm background in process chemistry and system mechanics, Santy Environmental System, with more than 50 high-tech patents, evolved as a leading innovator and supplier of high-quality air pollution control systems.

Santy Environmental System pioneered leading developments in the evolution of thermal oxidizer, regenerative thermal oxidizer (RTO), and catalytic oxidizer technologies which are the primary methods used to destroy volatile organic compounds (VOCs) and hazardous air pollutants (HAPs).

SANTY is committed to providing our customers with products and services that meet or exceed expectations. We aim to maintain an impeccable reputation in our field and ensure our success well into the future.



## WHY CHOOSE US



### INSTALLATION SUPERVISION

SANTY offers an experienced site team to install your new equipment: Skilled trades supervision, safety watch, and project managers.

### TECHNICAL SERVICE & SUPPORT

SANTY representatives are here for you if you need help resolving a production issue or need technical support or expertise.



### OFF-THE-SHELF PRODUCTS

Don't need a custom solution? SANTY offers off-the-shelf products at a reduced cost. Use a standard product and save on engineering and design fees.

### TROUBLESHOOT EQUIPMENT

Having trouble with a SANTY product? Our product experts are available to help you identify the underlying issues and get it up and running quickly.



### COST-EFFECTIVE CONSULTING

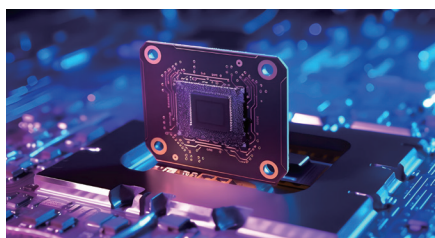
Need an expert opinion or some technical advice? SANTY Engineers and Project Managers are available for short- or long-term consulting arrangements.

## INDUSTRIES SERVED

The applications for SANTY pollution control systems in industrial facilities are numerous. Our engineering expertise, thorough design techniques and breadth of pollution control technologies make us the first choice for dependable solutions across the following industries.



Automotive  
Can Coating  
Carbon Fiber  
Chemical Processing  
Composites  
Engine Test Cells  
Ethanol & Biodiesel  
ETO Sterilization  
Film, Tape & Labels  
Food & Bakery  
Metal Decorating  
Natural Gas Processing  
Paint Finishing & Production  
Petrochemical  
Petroleum Refining  
Pharmaceutical  
Plastics  
Printing: Flexographic,  
Web Offset & Gravure  
Pulp & Paper  
Remediation  
Rubber Curing  
Semiconductor and Electronics  
Soil & Groundwater Remediation  
Wood Products & Finishing



SANTY has installed new Regenerative Thermal Oxidizers at the following companies.



# PRODUCTS CATALOG

**01 • Regenerative Thermal Oxidizer (RTO)**

**02 • Zeolite Concentrator**

**03 • Catalytic Oxidizer (CO)**

**04 • Zeolite Concentrator + Catalytic Oxidizer (CO)**

**05 • Activated Carbon Adsorption & Desorption**

**06 • Activated Carbon Adsorption & Desorption  
+ Catalytic Oxidizer (CO)**

**07 • Carbon Adsorption Vacuum Desorption  
Condensation Recovery System**

**08 • Scrubber**

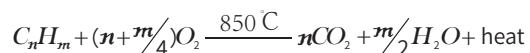
**09 • Cyclone Hybrid Tower**

**10 • Air Filtration Unit**

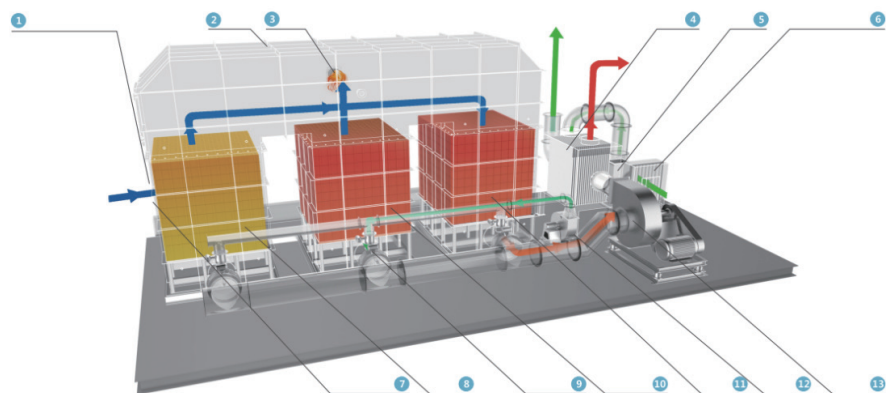
# Regenerative Thermal Oxidizer (RTO)

## What is a Regenerative Thermal Oxidizer?

A Regenerative Thermal Oxidizer (RTO) is a combustion device that controls volatile organic compounds (VOCs), hazardous air pollutants (HAPs), and odors by converting (destroying) the emissions into carbon dioxide and watervapor through the use of heat before exhausting them to the atmosphere. RTOs play a crucial role in promoting sustainable industrial practices by reducing emissions, conserving resources, and minimizing environmental impact.



Depending on air flow and required purification efficiency, a SANTY RTO comes with 2, 3 or 5 chambers. All RTOs are customized to fulfil specific needs in order to achieve maximum performance and the lowest possible operating costs. SANTY RTOs can achieve thermal efficiencies up to 97% and destruction efficiencies that can exceed 99%.



- |                       |                          |                               |
|-----------------------|--------------------------|-------------------------------|
| 1. Access pane        | 6. Primary filter        | 11. Regenerative chamber      |
| 2. RTO                | 7. VOCs air inlet        | 12. Purging motor             |
| 3. Burner             | 8. Regenerative chamber  | 13. Main ventilation machines |
| 4. Heat exchanger     | 9. RTO switch valve      |                               |
| 5. Heat exchanger fan | 10. Regenerative chamber |                               |

## RTO Operation

The basic operation of a Regenerative Thermal Oxidizer consists of four key steps:

### 1. Heating:

Industrial process exhausts carrying VOCs & HAPs are passed through a heated ceramic material in one tower, heating the gas up to ~1300°F.

### 2. Combustion:

A natural gas-fired burner heats the polluted air stream from 1300°F to ~1450°F, thereby oxidizing all complex carbon solvents into CO<sub>2</sub> and water vapor.

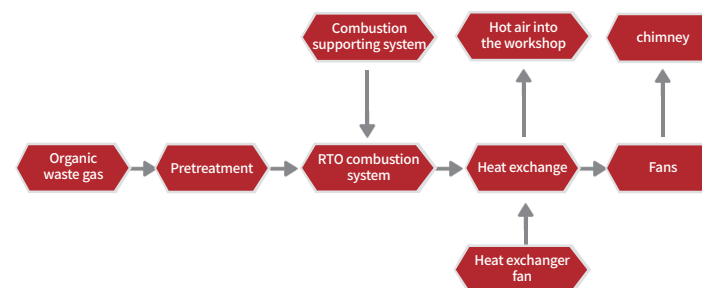
### 3. Recovery:

The post-combustion hot gas is passed down through the second tower, which contains the same heat sink ceramic material, and recovers 95% of the heat from the burner.

### 4. Purge:

Only in the 3-tower design, the third tower purges a small amount of fresh air into the combustion chamber to prevent any exhausts from escaping.

## The description of the chart



## Applicable working conditions

| Best working conditions                                        | Applicable organic components                        | Pay attention                                                                                          |
|----------------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| High concentration<br>Small air volume<br>High calorific value | Almost all organic compounds containing exhaust gas. | Organic waste gas containing s, cl, halogen compounds is required to increase the treatment at the end |

## The table of equipment selection

| system model | air flow (m/h) | footprint (length X width) | treatment efficiency | thermal storage efficiency | plant heat recovery efficiency |
|--------------|----------------|----------------------------|----------------------|----------------------------|--------------------------------|
| 3T-RYC-005   | 5000           | 5570*2070*4900mm           | 98%-99%              | 295%                       | 65%-85%                        |
| 3T-RYC-010   | 10000          | 7170*2370*5000mm           | 98%-99%              | ≥95%                       | 65%-85%                        |
| 3T-RYC-020   | 20000          | 9230*2990*5900mm           | 98%-99%              | ≥95%                       | 65%-85%                        |
| 3T-RYC-030   | 30000          | 11960*2990*5900mm          | 98%-99%              | ≥95%                       | 65%-85%                        |
| 3T-RYC-040   | 40000          | 14720*2990*6400mm          | 98%-99%              | ≥95%                       | 65%-85%                        |
| 3T-RYC-050   | 50000          | 17460*2990*7000mm          | 98%-99%              | 295%                       | 65%-85%                        |

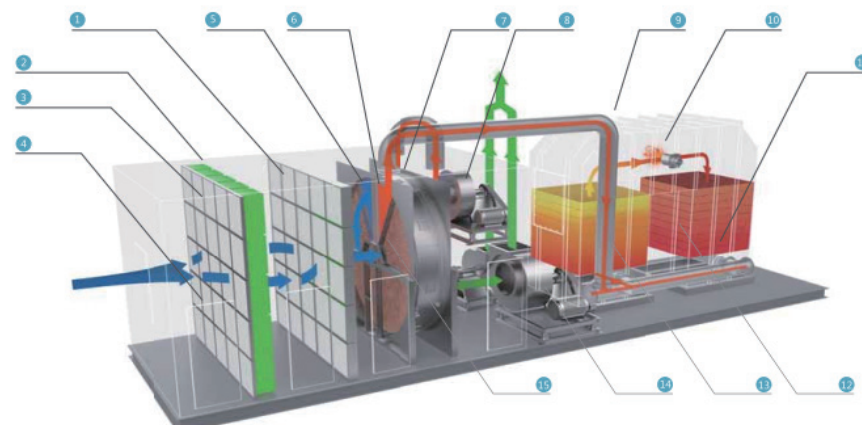
Note: the data will vary according to different conditions.

## Zeolite Concentrator

### How does Zeolite Concentrator work?

A zeolite concentrator is the ideal solution when it comes to pollution abatement of large air flows with a low VOC concentration. The concentrator consists of a rotating zeolite wheel, in which the pollutants first are adsorbed and then subsequently released (desorbed) in a low volume of air with a higher concentration. The Zeolite concentrator of SANTY is very efficient and can help keep expenses low.

The desorption air from the zeolite wheel is subsequently processed in a Catalytic Oxidizer or in a Regenerative Thermal Oxidizer.



1. High efficiency filter
2. Bag air filter
3. Prime filter
4. Access door
5. Cooling zone

6. Desorption zone
7. Runner
8. Fan (desorption)
9. RTO
10. Bumer

11. RTO switching valve
12. Regenerative room
13. Regenerative room
14. Fan (desorption)
15. Adsorption area

# Zeolite Concentrator Operation

The basic operation of a Zeolite Concentrator consists of two key steps:

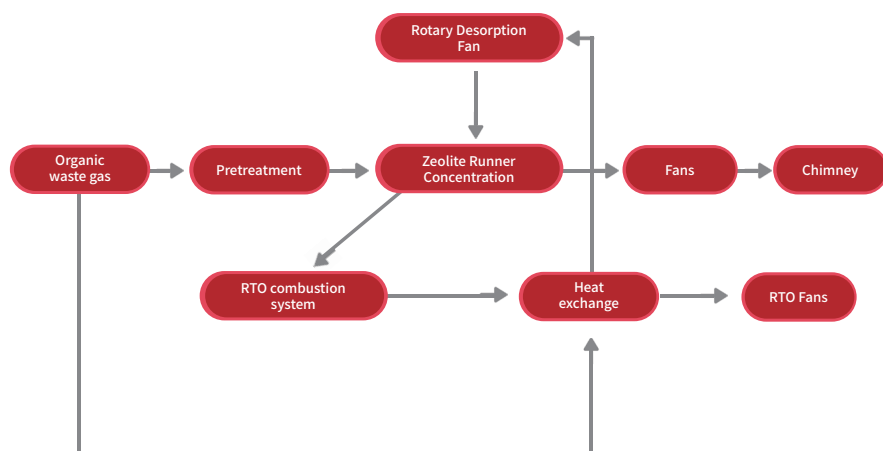
## 1.Adsorption and concentration:

The exhaust gas is adsorbed by the zeolite in the rotor, and the cleaned exhaust gas is exhausted into the atmosphere by a system extraction frequency conversion fan; the adsorber can provide a huge zeolite surface area to contact the VOCs, and the rotor continues to rotate at a speed of 1 to 6 revolutions per minute.

## 2.Desorption:

The VOCs in the rotor are concentrated into a saturated zeolite zone, and the heat flow (about 200 °C换单位) provided by the heat exchanger is used for desorption. After the desorption is completed, it is rotated to the cooling zone, cooled by normal temperature air blow to normal temperature and then rotated to adsorption Concentrated area.

## The description of the chart



## Applicable working conditions

| Best working conditions                                                     | Applicable organic components                                                    | Inapplicability organic components               |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------|
| Low concentration<br>Large air volume<br>Temperature<50°C<br>Humidity<90%RH | Benzene<br>Methylbenzene<br>Xylene<br>Alcohol<br>Ketone<br>Aldehyde<br>Ester,etc | UV paint<br>Curing agent<br>High boiling polymer |

## The table of equipment selection

| system model | air flow | footprint<br>(length X width) |
|--------------|----------|-------------------------------|
| 3T-HTC-010   | 10000    | 10m*5m                        |
| 3T-HTC-020   | 20000    | 13m*5m                        |
| 3T-HTC-050   | 50000    | 18m*6m                        |
| 3T-HTC-080   | 80000    | 21m*6m                        |
| 3T-HTC-100   | 100000   | 23m*8m                        |
| 3T-HTC-150   | 150000   | 25m*8m                        |
| 3T-HTC-200   | 200000   | 30m*10m                       |
| 3T-HTC-250   | 250000   | 32m*10m                       |

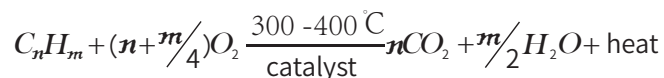
Note: the data will vary according to different conditions.

# Catalytic Oxidizer (CO)

## How does Catalytic Oxidizer (CO) work?

Catalytic oxidizers are used to clean exhaust air containing specific organic gaseous compounds. The hazardous elements are oxidized to form water vapor and carbon dioxide by means of a catalyst. The catalyst ensures that oxidation takes place at a relatively low temperature, depending on the actual composition of the hazardous compounds. The lower operating temperature can reduce the operating costs and prove to be a more efficient solution.

SANTY has the required professional knowledge and experience to ensure that each system is tailored to meet individual customer needs in order to achieve the optimum solution from a technical and a financial perspective.



## Composition Structure

Shell, heat exchanger, electric heating system, catalytic bed, control system and other components.

The table of equipment selection

| Model      | Air volume | Equipment size   | Heat transfer | heating power |
|------------|------------|------------------|---------------|---------------|
| 3T-HCO-005 | 500m/h     | 2130*1025*1930mm | 12 m          | 33KW          |
| 3T-HCO-010 | 1000m/h    | 2130*1025*2550mm | 24m           | 40KW          |
| 3T-HCO-020 | 2000m/h    | 2230*1175*2560mm | 48 m          | 72KW          |
| 3T-HCO-030 | 3000m/h    | 2665*1175*2560mm | 72m           | 90KW          |
| 3T-HCO-050 | 5000m/h    | 3165*1280*2860mm | 120m          | 160KW         |
| 3T-HCO-100 | 10000m/h   | 3865*1360*3060mm | 180m          | 290KW         |
| 3T-HCO-200 | 20000m/h   | 4200*1850*3560mm | 320m          | 580KW         |

| Model      | Air volume | Equipment size   | Heat transfer | heating power |
|------------|------------|------------------|---------------|---------------|
| 3T-HCO-005 | 500        | 2130*1025*1930mm | 12m           | 33KW          |
| 3T-HCO-010 | 1000       | 2130*1025*2550mm | 24m           | 40KW          |
| 3T-HCO-020 | 2000       | 2230*1175*2560mm | 48 m          | 72KW          |
| 3T-HCO-030 | 3000       | 2665*1175*2560mm | 72m           | 90KW          |
| 3T-HCO-050 | 5000       | 3165*1280*2860mm | 120m          | 110KW         |
| 3T-HCO-100 | 10000      | 3865*1360*3060mm | 180m          | 132KW         |
| 3T-HCO-200 | 20000      | 4200*1850*3560mm | 320m          | 196KW         |

Note: The heating method can be electric heating or natural gas heating. The heating power in the table above is electric heating power.

## Zeolite Concentrator + Catalytic Oxidizer System

Zeolite concentrator and catalytic Oxidizer system designed by SANTY are suitable for treating VOCs with high air volume and low concentration. The system is mainly composed of pretreatment device, zeolite runner device, catalytic purification device, fan, chimney and so on.

## Zeolite Concentrator + Catalytic Oxidizer System Operation

The basic operation principle of Zeolite Concentrator+ Catalytic Oxidizer System consists of two key steps:

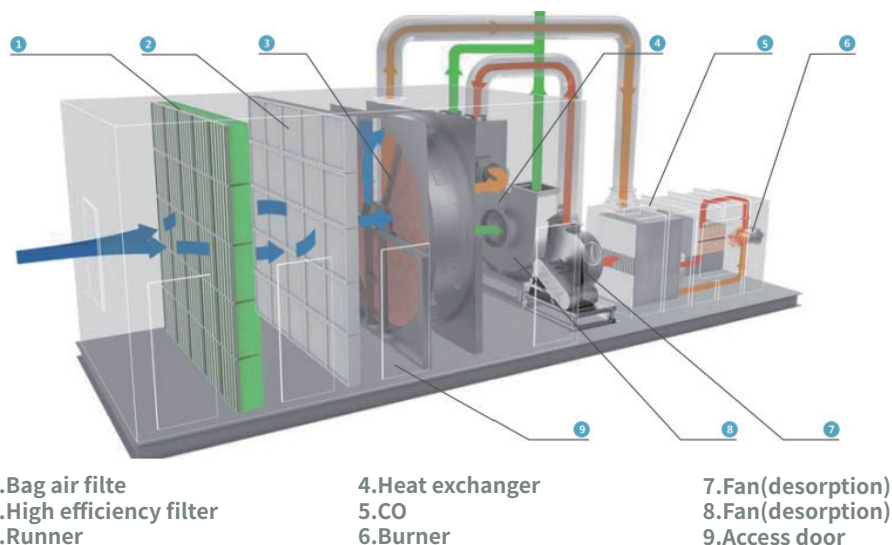
### 1.Adsorption:

VOCs are adsorbed by the zeolite molecular poriferous sieve.

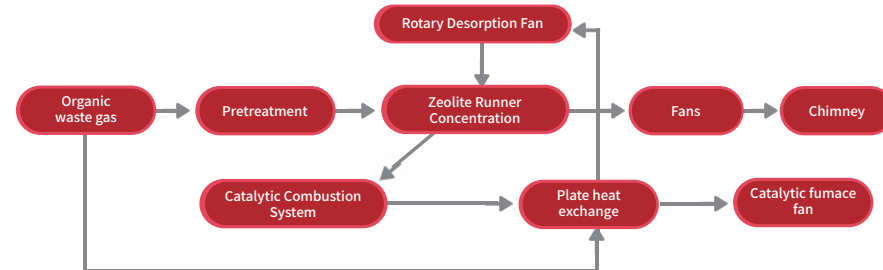
### 2.Combustion:

C and H compounds in the organic components are oxidized into harmless CO<sub>2</sub>, H<sub>2</sub>O and so on under the catalytic combustion temperature at 300-400 degrees Celsius.

## System process flow chart



## The description of the chart



## Applicable working conditions

| Best working conditions                                           | Applicable organic components                                                             | Inapplicability organic components                                                    |
|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Low concentration<br>Medfan<br>Temperature<50°C<br>Humidity<90%RH | Benzene<br>Methylbenzene<br>Xylene<br>Alcohol<br>Ketone<br>Aldehyde<br>Partial esters,etc | UVpaint<br>Curingagent<br>High boiling polymer<br>Halogen elementsand their compounds |

## The table of equipment selection

| system model | air flow | footprint<br>(length X width) |
|--------------|----------|-------------------------------|
| 3T-HTC-010   | 10000    | 10m*5m                        |
| 3T-HTC-020   | 20000    | 13m*5m                        |
| 3T-HTC-050   | 50000    | 18m*6m                        |
| 3T-HTC-080   | 80000    | 21m*6m                        |
| 3T-HTC-100   | 100000   | 23m*8m                        |
| 3T-HTC-150   | 150000   | 25m*8m                        |
| 3T-HTC-200   | 200000   | 30m*10m                       |
| 3T-HTC-250   | 250000   | 32m*10m                       |

Note: the data will vary according to different conditions.

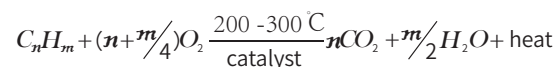
# Activated Carbon Adsorption & Desorption

## System Introduction

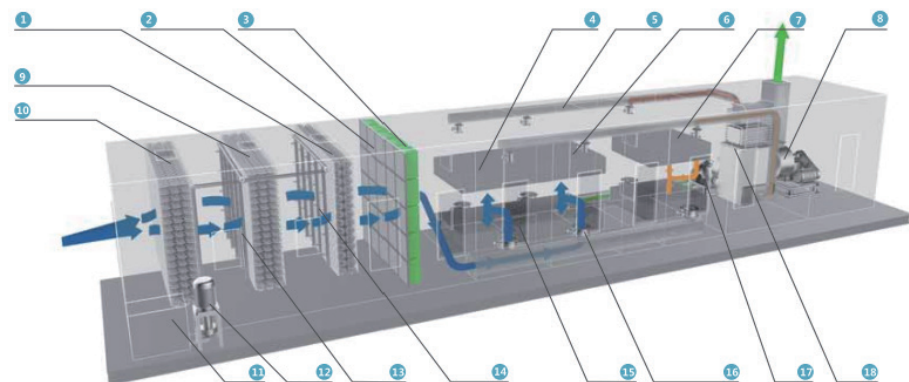
Activated carbon is a very small carbon particles, it has a large surface area and there are smaller holes in the carbon particles. Activated carbon adsorption and desorption makes use of the characteristics of carbon to remove low concentrated gaseous pollutants. It mainly consists of activated carbon, box, pressure meter, etc.

## Activated Carbon Adsorption & Desorption + Catalytic Oxidizer System

Organic gas adsorption-catalytic purification device is a new product, designed by SANTY, thanks to its many years of experience in organic waste gas treatment, which is high efficiency and energy saving.

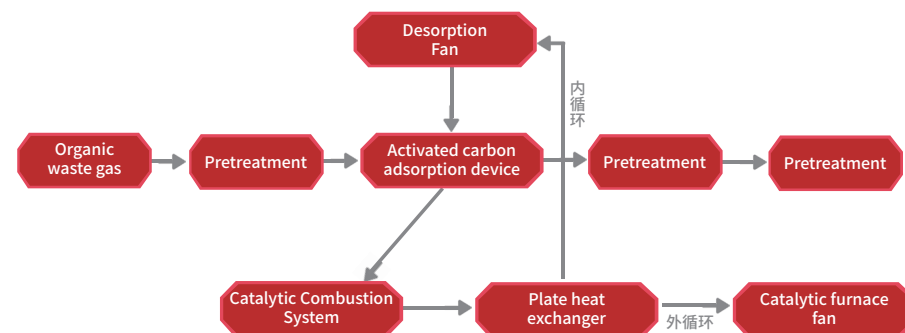


## System process flow chart



- |                           |                       |                            |
|---------------------------|-----------------------|----------------------------|
| 1. Demist                 | 7. Desorption chamber | 13. Sprayer                |
| 2. Plate filter           | 8. Fan                | 14. Waterpipe              |
| 3. High efficiency filter | 9. Filling layer      | 15. Access door            |
| 4. Adsorption chamber     | 10. Filling layer     | 16. Pneumatic switch valve |
| 5. Pipe                   | 11. Water tank        | 17. Fan                    |
| 6. Adsorption chamber     | 12. Water pump        | 18. CO                     |

## The description of the chart



## Applicable working conditions

| Best working conditions                                                              | Applicable organic components                                                              | Inapplicability organic components                                              |
|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Low concentration<br>Medfan<br>Temperature $\leq 40^\circ C$<br>Humidity $\leq 90\%$ | Benzene<br>Methylbenzene<br>Xylene<br>Alcohol<br>Ketone<br>Aldehyde<br>Partial esters, etc | UV paint<br>Curing agent<br>High boiling polymer<br>halogen<br>Heavy metal-salt |

## The table of equipment selection

| system model | air flow | footprint<br>(length X width) |
|--------------|----------|-------------------------------|
| 3T-HTC-010   | 10000    | 10m*4m                        |
| 3T-HTC-020   | 20000    | 13m*4m                        |
| 3T-HTC-040   | 40000    | 15m*5m                        |
| 3T-HTC-050   | 50000    | 18m*6m                        |
| 3T-HTC-100   | 100000   | 22m*6m                        |
| 3T-HTC-150   | 150000   | 25m*8m                        |

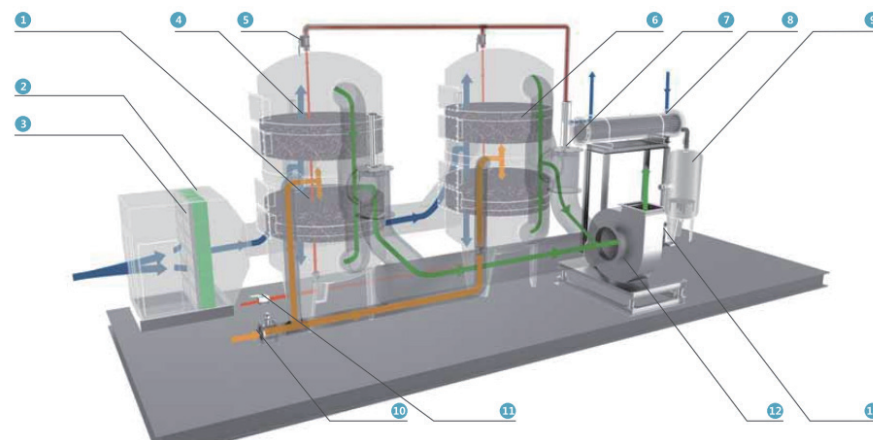
Note: the data will vary according to different conditions.

# carbon adsorption vacuum desorption condensation recovery system

## System Introduction

an activated carbon adsorption vacuum desorption condensation recovery system, which comprises an activated carbon tank, wherein an exhaust pipe of the activated carbon tank is connected with a recovery pipeline through a switching valve, and the recovery pipeline is sequentially provided with a cooler, a vacuum pump group, a condenser, a gas-liquid separator and a solvent storage tank; the active carbon tank comprises a tank body, wherein an active carbon layer is arranged in the tank body, a first tank body and a second tank body are correspondingly arranged at two ends of the tank body, and a heat dissipation tube bundle penetrating through the tank body and the active carbon layer is correspondingly communicated between the first tank body and the second tank body; the inside of the second box body is provided with a baffle plate, and the baffle plate divides the inner cavity of the second box body into a steam inlet cavity and a dead steam collecting cavity with equal volumes. The utility model adopts the modes of vacuum desorption and steam heating to carry out desorption of the activated carbon, and then condensation recovery, solves the problem of low solvent quality caused by easy reaction of the high-temperature solvent of nitrogen when the traditional high-temperature nitrogen desorption is adopted, reduces energy consumption and realizes energy conservation and consumption reduction of enterprises.

## The flow diagram of system process

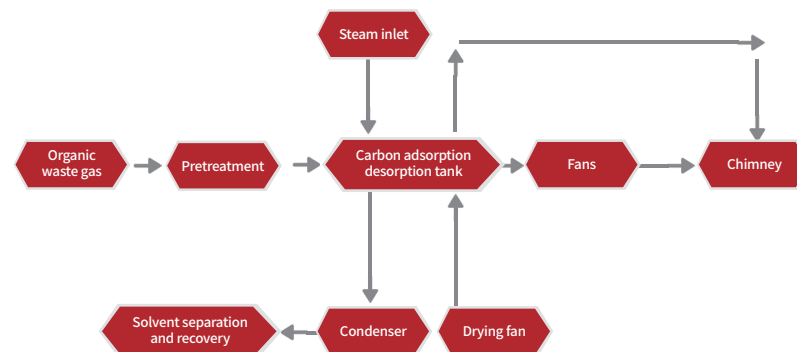


1. Adsorption tanks  
2. High efficiency filter  
3. Plate filter  
4. Adsorbent bed  
5. Steam outlet

6. Adsorption tanks  
7. Switching valve  
8. Condenser  
9. Oil-water separator  
10. Dry air inlet

11. Steam inlet  
12. Fan  
13. Separate the reservoir

## The description of system process



## Applicable working conditions

| Best working conditions                                                       | Applicable organic components                                                 | Inapplicability organic components        |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------|
| Single component<br>High recovery value<br>Dew point higher organic compounds | Low boiling point<br>Low viscosity<br>Recycling high value organic components | High boiling point<br>Easy polymerization |

## Applicable working conditions

| Model      | Air volume (m/h) | Tank size (mm) | Filling (kg) | Steam (kg/h) | Cooling water (t/h) |
|------------|------------------|----------------|--------------|--------------|---------------------|
| 3T-HZL-005 | 5000             | φ 1300*2000mm  | 800kg        | 100          | 8                   |
| 3T-HZL-010 | 10000            | φ 1900*2700mm  | 1700kg       | 180          | 16                  |
| 3T-HZL-015 | 15000            | φ 2300*3500mm  | 2490kg       | 260          | 24                  |
| 3T-HZL-020 | 15000            | φ 2700*4000mm  | 3430kg       | 350          | 32                  |
| 3T-HZL-025 | 25000            | φ 3000*4600mm  | 4240kg       | 420          | 40                  |
| 3T-HZL-030 | 30000            | φ 3200*4900mm  | 4823kg       | 500          | 48                  |
| 3T-HZL-050 | 50000            | φ 3200*4900mm  | 4823kg       | 1000         | 96                  |
| 3T-HZL-100 | 100000           | φ 3200*4900mm  | 16120kg      | 1500         | 114                 |

## Scrubbers

A scrubber or scrubber system is a system that is used to remove harmful materials from industrial exhaust gases before they are released into the environment. There are two main ways to scrub pollutants out of exhaust, and they are:

### Wet Scrubbing:

The removal of harmful components of exhausted flue gases by spraying a liquid substance through the gas.

### Dry Scrubbing:

The removal of harmful components of exhausted flue gases by introducing a solid substance to the gas - generally in powdered form.

Both of these methods work similarly and perform the same process of removing pollutants. The main difference is the materials they use to filter the gases.

## The table of equipment selection

| Model      | Air volume (m/h) | Diameter (mm) | H (mm) | Access to the outlet (mm) | Thickness | Water pump |
|------------|------------------|---------------|--------|---------------------------|-----------|------------|
| 3T-XDT-003 | 3000             | 750           | 4000   | 300                       | 6T        | 3HP        |
| 3T-XDT-005 | 5000             | 900           | 4000   | 400                       | 6T        | 3HP        |
| 3T-XDT-010 | 10000            | 1300          | 4400   | 550                       | 8T        | 5HP        |
| 3T-XDT-015 | 15000            | 1600          | 4630   | 700                       | 10T       | 5HP        |
| 3T-XDT-020 | 20000            | 1900          | 4800   | 800                       | 10T       | 7.5HP      |
| 3T-XDT-025 | 25000            | 2100          | 5000   | 900                       | 10T       | 7.5HP      |
| 3T-XDT-030 | 30000            | 2300          | 5300   | 1000                      | 10T       | 7.5HP      |
| 3T-XDT-035 | 35000            | 2500          | 5500   | 1100                      | 10T       | 10HP       |
| 3T-XDT-040 | 40000            | 2600          | 6000   | 1180                      | 10T       | 10HP       |
| 3T-XDT-045 | 45000            | 2800          | 6100   | 1200                      | 10T       | 10HP       |
| 3T-XDT-050 | 50000            | 3000          | 6200   | 1330                      | 10T       | 15HP       |

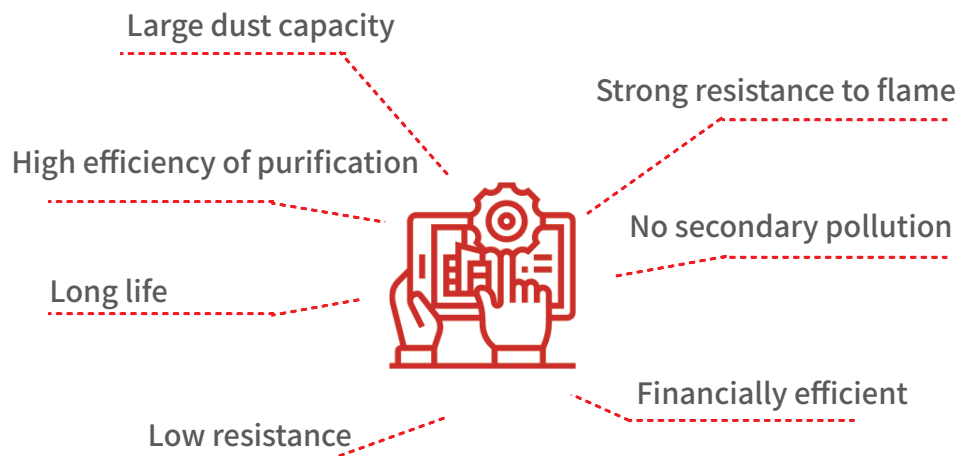
# Air Filtration Unit

## System Introduction

The combination of curved filter plate and fiber filter is a new environmentally friendly product used in dry spray, and its internal separation technology can effectively absorb the out-of-range spray, forcing the jet to change the direction of the air several times, so that those particles that are heavier than air adhere to the baffle wall and will not be carried away with the air. Some small particles are filtered through fiber filter cotton, and the purification effect of paint mist can reach more than 98%.

SANTY provides customers with a wide range of high-quality filter models, from primary filters, medium efficient particulate filters (MEPA) to high efficient particulate filters (HEPA), supporting customized models and materials.

## Technical Features



## The table of equipment selection

| Model      | Air volume | Fow rate | Equipment size | Main materia | Material thickness |
|------------|------------|----------|----------------|--------------|--------------------|
| 3T-GSL-005 | 5000       | 2m/s     | 1700*720*1510  | Q235         | 2mm                |
| 3T-GSL-010 | 10000      | 2m/s     | 1700*1380*1510 | Q235         | 2mm                |
| 3T-GSL-015 | 15000      | 2m/s     | 2100*1380*2122 | Q235         | 3mm                |
| 3T-GSL-020 | 20000      | 2m/s     | 2400*1380*2122 | Q235         | 3mm                |
| 3T-GSL-025 | 25000      | 2m/s     | 2400*2042*2142 | Q235         | 3mm                |
| 3T-GSL-030 | 30000      | 2m/s     | 2700*2300*2150 | Q235         | 3mm                |
| 3T-GSL-035 | 35000      | 2m/      | 2700*2300*2150 | Q235         | 3mm                |
| 3T-GSL-040 | 40000      | 2m/s     | 3400*2200*2354 | Q235         | 3mm                |
| 3T-GSL-045 | 45000      | 2m/s     | 3500*2300*2400 | Q235         | 3mm                |
| 3T-GSL-050 | 50000      | 2m/s     | 3500*2300*2400 | Q235         | 3mm                |
| 3T-GSL-055 | 55000      | 2m/s     | 3700*2400*2800 | Q235         | 3mm                |
| 3T-GSL-060 | 60000      | 2m/s     | 3700*2400*2800 | Q235         | 3mm                |

# Cyclone hybrid tower

## 1. Introduction to the device

The cyclone hybrid tower is a new type of gas purification equipment, which is widely used in industrial waste gas purification, particulate matter treatment, and pretreatments of complex systems.

Under the action of the fan, the exhaust gas enters the cyclonic hybrid tower. Then by the centrifugal force created by and the cyclone hybrid tower, the exhaust gas containing dust moves horizontally centripetally. The longer the dust-containing gas stays, the better the washing effect is, which thoroughly improves the technical defects of the spray tower under some specific working conditions, such as incomplete dust removal and easy blockage of the water spray tower. The cyclone hybrid tower adopts patented technology to avoid the blockage of the pump and sprinkler, greatly improving the production efficiency, and the water in the pool can be recycled to avoid the trouble caused by secondary pollution, and save water resources.

Several "circular cyclone barrels" and high-efficiency defogging plates are installed in the cyclone tower. The circular cyclone barrels is equipped with a solid packing ball, and the defogging plate of the top layer is used to purify the water mist, to achieve the purpose of dewatering mist. The dust-containing gas swirls up in the tower, and contacts with the liquid swirl entering from the top of the tower on each plate to complete the dust removal task; Through the action of centrifugal force, the large particles in the exhaust gas sink into the pool, and finally cleaned manually, so that the gas is purified and discharged up to the standard, and the water in the cyclone tower can continue to be recycled.

## 2. Technical features

- **Efficient hybrid cyclone:** Because of the existence of high-efficiency atomizing nozzles, it can effectively and comprehensively contact with the exhaust gas to achieve the purpose of effectively removing pollutants. Cyclone hybrid towers lose some of their pressure, but pressure loss is not easily changed over time.
- **Not easy to clog:** The traditional tower requires a large amount of packing, which takes more time and manpower to install and replace, and the packing is easy to clog after long-term operation. However, the cyclone hybrid tower has a cyclone barrel with a high throughput rate, and the flow rate is faster to avoid blockage.
- **Prevent rancid smell of circulating water:** According to the needs of the project, an aeration device can be installed in the water treatment to prevent the rancid smell of water and inhibit the occurrence of silt, which can use water for a longer time than other scrubbers.

## 3. The field of application

- Occasions with large dust content;
- It is often used in spray painting, occasions with large particle content and limited footprints;
- It is suitable for pre-treatment such as zeolite concentration rotor and activated carbon adsorption and desorption catalytic oxidation system.

## 4. Equipment selection

| 参数<br>型号  | 外形规格(cm) |      |      | 设备参数   |             | 水泵技术参数  |          |
|-----------|----------|------|------|--------|-------------|---------|----------|
|           | 长(L)     | 宽(W) | 高(H) | 阻力(Pa) | 风量(m³/h)    | 功率 (KW) | 流量(m³/h) |
| QH50-6K   | 178      | 106  | 298  | 1200   | 3000~6000   | 1.5     | 15       |
| QH60-10K  | 188      | 106  | 298  | 1200   | 7000~10000  | 2.2     | 25       |
| QH80-20K  | 218      | 133  | 321  | 1200   | 10000~20000 | 2.2     | 25       |
| QH100-30K | 238      | 133  | 315  | 1200   | 20000~30000 | 2.2     | 25       |
| QH120-40K | 238      | 156  | 325  | 1200   | 30000~40000 | 4.0     | 42       |
| QH150-50K | 278      | 196  | 345  | 1200   | 40000~50000 | 2.5     | 50       |