

## Overview of Waste Treatment and Recycling Equipment

A waste is the useless substance in gas, liquid and solid forms produced and discarded by human during the process of production and consumption. According to the definition presented in the 2<sup>nd</sup> article of Our Nation's current "Wastes Cleaning Regulations", the general wastes refer to domestic or other non-industrial refuse, human and animal discharges as well as carcasses in solid and gas forms, which will pollute the environmental sanitation. Hazardous industrial wastes are defined as the toxic, dangerous discarded substances with concentration and quantity high enough to affect human health or pollute environment. The general industrial wastes stand for any non-hazardous industrial wastes.

The concept of managing solid wastes has changed drastically recently. "Discarded Wastes" are no longer considered as useless substances; they are considered as temporarily misplaced resources. Thus, implementing resources recovery and reuse of discarded wastes is a universally accepted value. The Government has drafted "Resources Recovery and Reuse Regulations" to facilitate the recovery tasks and set the direction for future waste disposal. Recovery of resources from wastes must be the first priority. If the waste cannot be reused, it will then be discarded and disposed of.

### I 、Technology for Waste Disposal

The waste disposal refers to applying physical, chemical and biological methods to speed up the cycling process in the natural environment in order to rapidly decompose the wastes into harmless

products to achieve the objectives of reducing quantity, resource recovering, removing hazards and stabilizing. The primary consideration for disposal of wastes is to conform to the regulations of current laws and regulations in achieving waste reduction, recovery and reuse. When the recovery is not required by laws and regulations or when cost-effective technology is not available, the subsequent disposal methods will be considered for achieving the non-hazardous objective in order to avoid environmental pollution.

The technology for disposal of wastes includes preliminary, intermediate and ultimate disposal. 1. Preliminary Disposal: consisting of collection, classification, temporary storage, transportation, cracking, recovery and reuse. 2. Intermediate Disposal: encompassing (a) the various physical and chemical methods, e.g. neutralization, oxidation, activated carbon adsorption and reverse osmosis, etc., and (b) biological methods, including sanitary landfill and composting, and (c) thermal method: consists of thermal cracking, wet oxidation and various forms of incineration, and 3. Ultimate Disposal : including: (a) stable landfill, (b) sanitary landfill, (c) close landfill, and (d) ocean disposal. Commonly used waste disposal technology and equipment are shown in Figure 1.

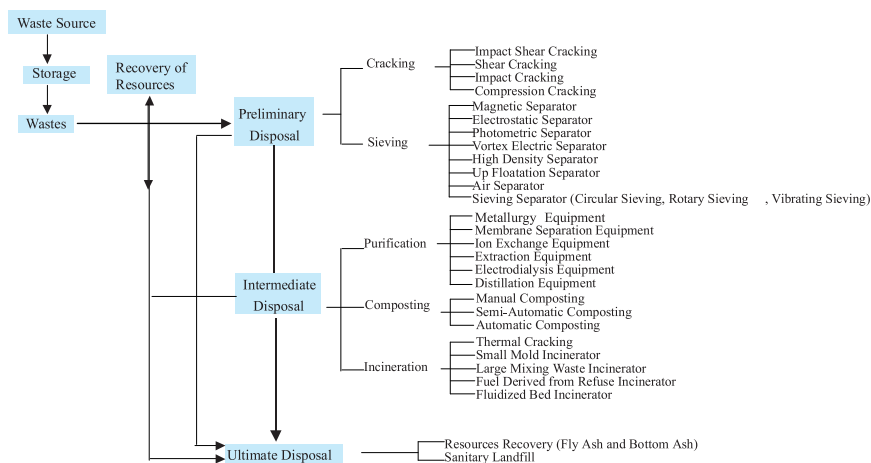


Figure 1: Classification of Commonly Used Waste Disposal Technology and Equipment

## II 、Commonly Used Domestic Waste Treatment Equipment

### 1 、Preliminary Treatment

The objective of preliminary disposal is to protect the subsequent disposal operations in addition to categorizing valuable resources. Preliminary disposal methods include cracking and sieving. Waste cracking will increase the apparent specific weight of the waste and to increase the efficiencies of waste separation and incineration. The cracking can be accomplished using pressurized cracking, impact cracking, shear cracking and impact/shear cracking. Sieving waste is to group valuable components of the waste to facilitate recover and reuse. It is usually combined with the cracking operation using gravitation, wind, magnetic, sieving, vortex and electricity, electrostatic and photometric separators. Using a proper material for cutting blades is of great importance to manufacturing

the cracking equipment. Domestic companies currently do not have the capability to produce the blade and thus it is imported. The general cracking equipment can be manufactured by domestic companies.

## 2、Intermediate Treatment Equipment

The intermediate disposal refers to the physical, chemical and biological reactions used to achieve waste quantity reduction, hazard removal and resource recovery. The function of intermediate disposal can be classified into three categories of incineration, composting and purification. Incineration is a rapid oxidation reaction. It is the most widely used technology in Taiwan. This method uses various forms of incinerators to achieve quantity reduction with exceptional results. Thermal cracking can be said as another form of low-temperature incineration. Composting is the biological process using microorganisms to degrade, convert and stabilize organic substances. The resulting product is organic fertilizer that can be used as soil conditioner. The composting equipment can be used to carry out natural piling, static piling and reactor composting. The objective of purification is to raise the purity of the recoverable components contained in the waste such that its economic value can be boosted. Main equipment used in purification consists of distillation, electrodialysis, chemical extraction, ion exchange, membrane separation and metallurgy, etc.

As domestic equipment manufacturers on incinerators are concerned, most companies produce medium- and small-scale industrial waste incinerators. Large incinerators are produced based on technical cooperation with European or Japanese companies. In recent years, conventional industries have been moved out of Taiwan.

Further, the policy of reducing domestic wastes in cities has been successfully implemented. Thus, the need of incinerator capacity is reduced. In recent years, the domestic market has shifted toward composting and companies have the capability of designing and manufacturing most equipment used in the composting system. As the purification equipment is concerned, although the process and equipment are mostly developed as for chemical engineering applications, the domestic companies invest in the manufacturing already.

### 3 、 Ultimate Treatment Equipment

The sanitary landfill is the ultimate disposal of general wastes. Its function is to separate wastes from the environment in a safe and sanitary manner. The wastes are converted into solid, liquid and gas by-products through the degradation by microorganisms contained in the wastes and the soil such that quantity reduction, stabilization of the wastes and safety are warranted.

Most cities and villages have built refuse incinerators. After resource recover, the remaining wastes are incinerated. The resulting fly ash and bottom ash are the target of resource recovery and reuse. Thus, the ultimate goal of zero discharge will be achieved.

Except the impermeable membrane and methane collector & burner, future ultimate disposal of wastes will be implemented via resources recovery and the equipment will be designed and constructed as a resources recovery plant instead of waste disposal facilities.

## YK-100 LOW TEMPERATURE SPRAY SOLID LIQUID SEPARATED MACHINE

### 1. Structure and Principle

At treatment processing, sewage liquid is continually pumped up to the nozzle installed at the top of the drying chamber, then is sprayed in the form of a fine droplet dispersion into a circulating current of air. The sewage solids may be dried at the drying chamber, water molecules will be condensed at cooling system. The processing outlet connected to two tanks. One tank contains water. One tank contains concentrated solid. The sewage treatment is accomplished at real-time.

### 2. Purpose

The solid and liquid separation processing of electroplate waste liquid, industrial waste liquid.

### 3. Features

A significant advantage of this type of technology is entirely different from so called traditional high temperature spray dryer. (normally above 100 °C) (212 °F). It provides a means of comparative low temperature (or be defined medium temperature / 30°C~60°C) . It is very energy efficient, no any impacts to the environment protect. It should become best, people-friendly solution of sewage treatment.

### 4. Specification and Functions

- (1) Operating temperature: 30 °C ~ 50 °C.
- (2) 1 ~ 5 liter per hour / process source.
- (3) according to the viscosity & density of material /product.

### 5. Product Photo



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## YK-111 LARGE SPACE LOW TEMPERATURE COOL WIND SOLID-LIQUID-SEPARATING MACHINE

### 1. Structure and Principle

The industrial waste is poured in the plate of the equipment. It would arise low / medium temperature air current at processing procedure.

The circulating air current arisen from the main machine would blow the liquid molecule to condense apparatus, then condense it and dilute it to be in conformity with legal standard. Then, retrieve or burry or emission it sees the after usage difference.

### 2. Purpose

The solid and liquid separation processing of the electroplate waste liquid, industrial waste liquid.

### 3. Features

A significant advantage of this type of equipment is entirely different from so called traditional high temperature spray dryer. (normally above 100 °C) ( 212 °F ).

It provides a means of comparative low temperature ( or be defined medium temperature / 20 °C ~ 50 °C ).

It is very energy efficient, no any impacts to the environment protect. It should become best, people-friendly solution of sewage treatment.

### 4. Specification and Functions

For example : the best seller model: YK-111-3.

- (1) Refrigeration Ton : 6 RT.
- (2) Outside dimension : L 350 cm × W 135 cm × H 258 cm.
- (3) temperature range :  $+20^{\circ}\text{C}$  ~  $+50^{\circ}\text{C}$ .
- (4) disposed capacity : 150~240kg ,depend on different material.
- (5) disposal time : depends on different material, thickness, temperature setting.
- (6) Power consumption: 15kw.
- (7) Cart : 3.
- (8) Tray : 120 (Size : 62 cm × 48 cm × 1.8 cm )

### 5. Product Photo



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## WASTE RECYCLE

### 1. Structure and Principle

Shredders are used to shred large wood wastes collected in urban cities into wooden blocks and if necessary, the blocks are shredded into mid-sized blocks by mid-sized shredders. Otherwise, the wooden blocks are directly shredded by fine shredders into fine and small debris for use as a type of fuel heating the boilers in place of petrol, thus lowering the heating cost. The wooden debris may also be used as fillings of the green wooden products.

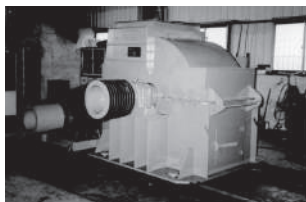
### 2. Purpose

- (1) Turn the recycled wastes into environmentally friendly regenerated items.
- (2) Used as a type of fuel for boilers instead of high cost petrol or coal.

### 3. Features

- (1) High investment yield.
- (2) Ability to solve wood wastes in urban cities.
- (3) Ability to achieve a green environment and waste recycle.

### 4. Product Photo



## REFRACTORY MATERIAL

### 1. Structure and Principle

High-temperature kiln lining and insulation.

### 2. Purpose

High-temperature kiln lining and insulation.

### 3. Features

- (1) Long equipment usage life.
- (2) Low energy loss.
- (3) Reasonable price.

### 4. Specifications and Functions

- (1) High-aluminum-content manufacturing : resistance against high temperature and corrosion, high machining.
- (2) Silicon carbon product manufacturing : excellent resistance against wear, chemical erosion, and high machining and thermal conduction.
- (3) Insulation product manufacturing : low thermal conduction, excellent thermal insulation.

友和耐火材料工業股份有限公司 YUHO REFRACTORIES CO., LTD

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## SMALL SCALE WASTE INCINERATOR

### 1. Structure and Principle

Water-Cooling the crematory mixes using the turbulent flow, Facilitates completely burns achieves the smokeless not smelly effect.

Small crematory in view of present enterprise reject more universal packing material, reverted, guarantees styrofoam, but designs may high calorific value of energy sufficient share use the above reject release to goal of the complete burning.

### 2. Purpose

The cremated processing coating, the sludge, the lumber, the kitchen -odd, the reverted, the rubber, guarantee styrofoam, soaks the cotton and kapok and so on to be ordinary or the enterprise reject.

### 3. Features

- (1) Easy to prate, manpower saving and no danger.
- (2) Complete combustion, no smoke and odor.
- (3) Discharge value is assured to meet the standard specification.

(4) Recovery large capacity of hot water, steam vapor.

(5) Stand-type design, only small space required.

(6) High perform an of incineration to be more than 99 %.

### 4. Specifications and Functions

The specification according to the field operation environment, the reject nature, the quantity makes the different design.

### 5. Product Photo



三鵬企業股份有限公司

SAN PERNG ENTERPRISE CO., LTD.

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## ALL-PURPOSE INCINERATOR

### 1. Structure and Principle

Adopting ox-reserve combustion theory, this system inducts flow to the second combustion chamber for recombustion and control temperature by burning off redundant fuel to achieve full incineration. used with a filter facility, this system is completed with three functions - incineration, filtering, and pollution control. The 3-in-1 feature enables space efficiency.

### 2. Purpose

- (1) General waste: mix rubbish from communities, offices and kitchen, etc.
- (2) Business waste: including packaging materials, separation sheets, plastics, etc.

### 3. Features

- (1) Complete incineration, no smoke or odor.
- (2) Unique reverse high-temperature incineration.
- (3) Low maintenance costs and long product life.

### 4. Specifications and Functions

- (1) Combustion capacity : 800kg/8hr.
- (2) Outer dimension : 3,635 mm x 2,190 mm x 2,130mm.
- (3) Feed opening size : 1,420 mm x 600 mm.
- (4) Grate surface : 1.8 m<sup>2</sup>.
- (5) Combustion chamber size : 1.7 m<sup>3</sup>.
- (6) Total height including stack : 5,000 mm.
- (7) Motor power requirement : one motor of 3 phase, 222V, 5hp.

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## SMALL WASTE INCINERATOR

### 1. Structure and Principle

#### (1) Water cooling incinerator

The furnace wall of the combustion chamber is composed of two layers of steel plates, and the middle part is filled with cooling water to form a water wall, so the inner furnace wall can withstand the high temperature when the garbage is burned, and the sturdy and durable will not be damaged.

#### (2) Injection gas combustion method:

The blower is used to supply the necessary combustion air. The air is discharged through hundreds of nozzles distributed through the inner furnace wall, and is mixed with the garbage to burn. The combustion temperature is high, so the combustion can be smokeless and odorless.

### 2. Purpose

- (1) General garbage, solid waste, waste paper, waste wood, wood dust, plant leaves.
- (2) Waste plastics, waste packaging materials, waste fibers, waste cloth strips, waste rubber, etc

### 3. Features

- (1) Simple operation, high sales performance, and widespread adoption by the factory.
- (2) The furnace wall does not require refractory bricks, and the structure is simple, durable and durable.
- (3) using 3T complete combustion principle design, smokeless and odorless when incineration.
- (4) It can burn at high temperature with garbage as fuel. It requires only a small amount of cooling water and blower power, so the operating cost is low.
- (5) There is a dust collector to collect fly ash after burning.
- (6) You can mix and burn various garbage together.
- (7) There is clean hot water for recycling.
- (8) The fuel chamber is designed for negative pressure to prevent backfire and increase safety.

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#### 4. Specifications and Functions

Model	Capacity kg/hr	Volume m <sup>3</sup>	Blower kw	Feed gate W×H(cm)	area L×W(cm)
NA-8003	30~40	0.63	1.5	60 × 60	200 × 120
NA-8005	50~65	1.11	2.2	65 × 65	250 × 150
NA-8008	80~95	1.53	3.7	70 × 70	300 × 200
NA-8010	100~125	2.17	3.7	70 × 70	335 × 220
NA-8012	150~180	3.20	5.5	100 × 75	350 × 230
NA-8015	180~220	4.58	7.5	120 × 80	365 × 240
NA-8020	250~300	6.17	7.5	130 × 80	400 × 250
NA-8025	300~350	7.69	11.0	140 × 150	400 × 250
NA-8030	350~400	8.50	11.0	140 × 150	450 × 360
NA-8050	400~800	11.35	15.0	160 × 150	970 × 480
NA-8080	800~1,200	20.40	37.0	180 × 150	1,200 × 750

#### 5. Product Photo



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## ROTARY KILN INCINERATOR

### 1. Structure and Principle

- (1) Rotary incinerator is a multi-functional incinerator that can treat wastes of different natures, including solid and liquid wastes, individually or at the same time.
- (2) The furnace body is in the shape of a horizontal conical straight barrel. When the waste is burned, it will move forward and mix due to the continuous rotation of the furnace body, which has a good uniform combustion effect.
- (3) The first part of the combustion process of the rotary incinerator is heating and volatilization, the middle and the latter part is high-temperature combustion, oxidizing and decomposing combustibles, and the latter part is the function of continuing to complete combustion and discharge bottom slag.
- (4) The secondary combustion chamber is equipped with an auxiliary burner, which can lead the combustion exhaust gas into the secondary combustion chamber for reburning, and it can also be injected into the waste liquid for combustion.

- (5) In order to achieve complete combustion during incineration, the operating temperature of the secondary combustion chamber is usually between 850 and 1,100 °C.

### 2. Purpose

- (1) The use of incineration of medical waste, sludge, waste solvents, waste solutions, solid waste, residues, and various wastes.
- (2) The purpose of drying and firing raw materials for reuse.

### 3. Features

- (1) It can be designed for various garbage characteristics.
- (2) It can process various solid, liquid and wet garbage in different forms at the same time.
- (3) The burning residence time of garbage in the furnace can be adjusted.
- (4) Continuous operation, automatic feeding and automatic ash discharging are possible.
- (5) Stirring combustion method, can burn completely, and has a good reduction effect.

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- (6) There are complete pollution prevention equipment, which meets environmental protection requirements.

#### 4. Specifications and Functions

Model	Capacity( kg / hr )	Heat load ( kcal / hr )	Continuous operation
FO-3	100~200	$50 \times 10^4$	can
FO-5	300~400	$100 \times 10^4$	can
FO-10	500~600	$150 \times 10^4$	can
FO-15	600~800	$200 \times 10^4$	can
FO-20	800~1,000	$250 \times 10^4$	can
FO-25	1,200~1,400	$350 \times 10^4$	can
FO-30	1,500~2,000	$500 \times 10^4$	can

#### 5. Product Photo



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## INCINERATOR FACILITY

### 1. Structure and Principle

For waste treatment of various types of factory, hospital, campsite, school, scenic area, waste disposal service industry, restaurant, community.

### 2. Purpose

- (1) Combustion chamber can be designed according to the types of wastes.
- (2) Complete compliance with emission standards by law.
- (3) Fully automatic control system.
- (4) Incinerator's backend air pollution prevention equipment can be selected for specific systems.

### 3. Features

- (1) Fix Bed Incinerator.
- (2) Rotary Kiln Incinerator.
- (3) Fluidized Bed Incinerator.
- (4) Coating Product Incinerator

### 4. Product Photo



Packaged Small-scale Incineration System  
Capacity : 500 kg / hr

銓風機械股份有限公司 CHUAN FENG MACHINERY CO.,LTD

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## HEAT PUMP VACUUM WASTE LIQUID EVAPORATION CONCENTRATION REDUCTION PROCESSOR

### 1. Structure and Principle

The main unit consists of a refrigerant compressor, a heat exchanger, a vacuum pump, etc. The concentrated waste liquid in the concentrated tank is repeatedly concentrated several times and stored in a concentrate tank. The vacuum distillation method is to automatically suck the waste liquid into the concentrating barrel, vaporize it by depressurizing the low temperature, and then turn it into condensed water through a cooling device. Using the working principle of the heat pump to heat the oil and water waste liquid, the vacuum pump draws a negative pressure to lower the boiling point and raises the evaporation amount, and the ice water system condenses and evaporates the vapor to reduce the effect, and then filters and condenses the condensed water for reuse.

### 2. Purpose

- (1) Metal processing cutting oil and water waste liquid concentration reduction.
- (2) Surface treatment, electroplating wastewater waste liquid concentration reduction.

- (3) Degreasing, leather industry, dyeing and finishing industry waste liquid concentration reduction.
- (4) Water-soluble paint, varnish washing, and dampening water waste liquid concentration reduction.
- (5) Inorganic and organic wastewater from organic pollutants and mixed wastewater containing inorganic substances.
- (6) Food processing waste liquid, chemical wastewater, and papermaking wastewater are concentrated..

### 3. Features

- (1) Use a vacuum pump to draw waste liquid into the waste liquid heater.
- (2) The water-sealed vacuum pump vacuums the internal pressure of the concentrated barrel to a negative pressure.
- (3) Heat the concentrated barrel to a low temperature boiling temperature ( 42 °C ~ 70 °C ).
- (4) Fully automatic and stable discharge of water quality is beneficial to “ zero emission” and environmental protection.

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#### 4. Specification performance

- (1) Low-temperature vacuum distillation operation mode, equipment footprint is small, minimum operating cost, and COD value is greatly reduced.
- (2) Recycling of reclaimed water not only greatly reduces the total amount of waste liquid discharge, but also greatly reduces the cost of discharge treatment. At the same time, condensed filtered water reuse also saves water resources.

#### 5. Product Photo



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## EXTRACTION AND WASHING SYSTEM FOR HEAVILY POLLUTED SOIL BY HEAVY METALS

### 1. Structure and Principle

Extraction and Washing System : The Extraction and Washing System separates the physical solid particles based on its size, weight or shapes by using the technique utilizing the driving force in liquid. The extraction system uses an extracting chemical to break the chain between pollutants and the soil in order to extract and separate the pollutant from the soil.

Sewage treatment plant: The Wet Process generally produces large amount of suspended solids and heavy metals, which are removed at the Sewage Treatment Plant by the chemical coagulation technique so as to comply with the wastewater standards.

Air Pollution Control System: Dusts and particle pollutants produced by the process are collected using the bag-filter dust collection equipment in an effectively way and the auto water spray is activated to prevent widespread of the air particles.

### 2. Purpose

This equipment can be used to treat the soil of the site polluted severely by heavy metals. The soil surface is contaminated by heavy metal pollutants due to absorption effect. Depending on the soil's surface area and electric charges, soils with smaller particles usually contain higher amount of heavy metals. With the processes provided by this equipment, most of the heavy metals contained in soils with smaller particles can be effectively removed, thereby increasing the efficiency of the pollution mitigation and decreasing the cost of the site maintenance.

### 3. Features

The Extraction and Washing Equipment uses liquid driving force and chemical extraction technique along with the Wet Process Equipment to separate pollutants from the soil. Then the soil is purified by extracting the soil's heavy metals to a liquid using an extracting chemical.

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#### 4. Specifications and Functions

Extraction and Washing System:  
Separator, feeder, washer (disintegration rate 20 - 35 ton/h), clay washer (capacity: 200 ton/h), sand separation machine (separates 0.1-10 mm soil particles), extraction tank (processing capacity of 320 CMD), metering pump, sieving machine (able to extract 0.05 - 0.1 mm soil particles) and centrifuge machine (processing capacity of 40 - 60 m<sup>3</sup>/h).

Sewage treatment plant:  
Equalization pond, air blower, sedimentation pond, reactor tank, soil scalper, discharge tank, recycle tank, disposal tank, and water dehydrator ( 944 L/batch).

Air Pollution Control System:

Bag-filter dust collector (air flow rate: 200 m<sup>3</sup>/min).

#### 5. Product Photo



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## REFRIGERANT RECYCLING AND LIQUEFACTION EQUIPMENT

### 1. Structure and Principle

**Recycling:** After processing the refrigerator in the disintegrator, the R-11 refrigerant contained in the foam is guided into the liquid recycling machine through the wind draft at the entrance, and then sent into the energy-saving system, where the outward cold wind and the inward hot wind perform heat exchange to accomplish energy saving; heat exchange is performed via condensation, which is then sent back into the recycling tank for the second recycling process. The wind after processing will enter the active carbon tank for absorption and emission after being heated by the energy-saving heating system.

**Desorption :** The wind draft and the steam propel the air to pass through the system via the active carbon tank, where the recycled refrigerant is sent into the separating system for separation, and then condensed into purified Freon for storage.

**Drying :** After the active carbon tank desorption , then treat and reduct activated carbon adsorption function through the specially-made drying system , extend the service life of activated carbon.

### 2. Purpose

Handles refrigerator's heat insulating foam refrigerant

Applicable to waste home appliances (refrigerator)

### 3. Features

- (1) The whole recycling system uses SUS-304 stainless steels, which is durable and will never rust or corrode.
- (2) It's thoughtfully-designed and more convenient for you to maintain and to replace activated carbon, reduce the time cost.
- (3) Liquefy Freon by condensation system, and then purify the recycled Refrigerant,make them more pure.
- (4) PLC automatic controlling system,real-time monitoring,quick maintenance, saves time and labor both.
- (5) Equipped with energy-saving heat exchanger which is environmentally friendly and helps with energy conservation and carbon emissions reduction.
- (6) Professional design and manufacture, convenient maintenance, and not easily damaged.
- (7) The simultaneous process of recovery and desorption helps to save time and double efficiency.
- (8) Refrigerant recovery has a efficiency of more than 95 %.

堯銓實業有限公司 YAO CHUAN ENTERPRISE CO., LTD

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## REFRIGERANT RECYCLING EQUIPMENT FR-999

### 1. Structure and Principle

- (1) Once the recycle process is finished, machine will stop, unload automatically.
- (2) During recycle process that impurity, vapor, oil air, acid material can be separated and exhausted automatically.
- (3) Special regeneration treatment system, using the latest distillation of refrigerant processing technology, the quality of recycled refrigerant is more pure.
- (4) Liquid Storage Tank, Oil Separator and Heat Exchanger are made of galvanized iron material to guarantee rust-free and longer life of Recovering Equipment.

### 2. Purpose

- (1) Recycle refrigerant of air conditioning, refrigerator and automotive. (R-22, R-12, R-134a)
- (2) Appliance Sites :
  - A. Waste home appliances, automobiles, refrigerant recycling plants.
  - B. Large Refrigeration and air conditioning repair assembly plant.
  - C. The refrigerant-packing plants.

### 3. Features

- (1) Simple operation, just need to turn on the machine to work.
- (2) Three-stage - vacuum recovery, recycling, purification.
- (3) Auto-exhausting and dewatering devices, Manual and automatic emptying devices.
- (4) Recycling process, the impurities, water, oil, acid separated out side by side, the air will be discharged automatically.
- (5) Liquid storage tank, oil separators and heat exchangers all use Stainless material, never rust, lengthen the life span of recycling machines.
- (6) Equipped with senior globe valve switch and a number of protection measures, strong and safe, the machine would be more durable.
- (7) Equipped with automatic compressor cooling device, it can be used to protect the compressor operation from overheating damage even for a long time using.
- (8) Equipped with lubricator, make oil change more convenient.
- (9) Suitable for a long time operation, refrigerant purification, trace of refrigerant recovery, quick recovery.

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## TITANIUM EQUIPMENT – TITANIUM HEAT EXCHANGERS, STORAGE TANK, A VARIETY OF TOWER TYPE, KETTLE-TYPE, REACTOR, MMO ANODE

### 1. Structure and Principle

In Conformity Standard Jb/T4745-2002.

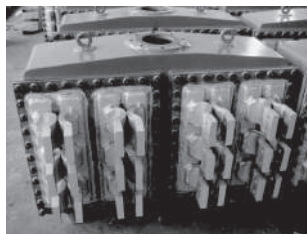
### 2. Purpose

Petroleum industry 、 chemical engineer 、 pharmaceutical 、 Chlor-Alkali chlorate electrolytic tank 、 chemical fertilizer 、 electroplating 、 spend recovery equipment.

### 3. Features

Provided with powerful technical force, compete and adequate processing equipment, superior detecting means and advanced manufacturing technology.

### 4. Product Photo



昶昕實業股份有限公司 AMIA CO., LTD.

新北市土城區永豐路 195 巷 19 號 No. 19, Lane 195, Yongfong Rd., Tucheng District, New Taipei City, Taiwan  
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## WASTE AND BIOMASS THERMAL TREATMENT & ENERGY RECOVERY PLANT

### 1. Structure and Principle

Organic wastes are incinerated / oxidized. The process generates thermal energy for electricity generation or induces thermal exchange to produce heated water. The steam generated from thermal exchange will be recycled for reuse.

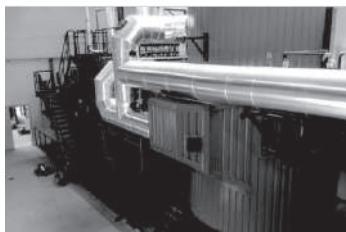
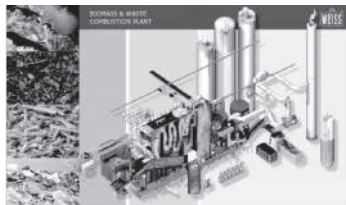
### 2. Purpose

Produce fossil fuels that contain combustible organic materials such as used wood, sawdust, straw, bark, solid fuel and etc., other industrial and urban wastes are incinerated and the thermal energy released therefrom is recycled and reused for heating purpose, steam generation or electricity generation.

### 3. Features

- ( 1 ) Provided more than 1,000 waste thermal treatment/Energy recycling plants for biomass, municipal and industrial waste.
- ( 2 ) Proven technology, high performance and profitable solutions.

### 4. Product Photo



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