## COMPOSITE POROUS FILTER

## 1. Structure and Principle

With ExtreMem, Inc.'s breakthrough heat treatment technology, a ceramic selective porous layer with uniform, smaller pores is created on the surface filter media. and also exceeds competitions' filtration performance and efficiency by folds. ExtreMem, Inc. has a wide selection of filter products targeted for different environment usages, (ie: high temperature, corrosion, viscosity, etc.), and has proved to high performance maintain precision under environmental stress..

## 2. Purpose

- (1) Wastewater management
- (2) Powder recycling/collection
- (3) Heavy metal recycling/collection
- (4) Precious metal recycling/collection
- (5) Cutting fluid/oil recycling/collection
- (6) Purification
- (7) High-temperature exhaust gas recycling/collection
- (8) Other membrane filtration operation (solid-liquid separation or solid-gas separation).

## 3. Specification and Functions

- Base Filter Media: Titanium alloy, Hastelloy series, Inconel series, polymer, etc.
- (2) Selective Layer: Ceramics, catalysts
- (3) Pore Size: 1μm, 0.45 μm, 0.2 μm (Absolute filtration @ 99% retention rate)

## 4. Product Photo





# 承鴻工業股份有限公司 EXTREMEM, INC.

桃園市龍潭區工二路一段 211 號 No.211, Sec. 1, Gong 2nd Rd., Longtan Dist., Taoyuan City, Taiwan TEL:+886-3-480-1798 FAX:+886-3-499-1729

E-mail: Simon.Chen@extremem.com http://www.extremem.com

# INNO-ULTRA HIGH EFFICIENCY GREEN ENERGY HYDROLYSIS SYSTEMS

## 1. Structure and Principle

Normally, the sludge generated by wastewater treatment plants contains materials having cell walls that are difficult to decompose, which blocks biological decomposition. However, the Inno-Ultra hydrolysis system resolve this problem because of its application of high-energy physical waves. This quickly produces huge positive pressure and negative pressure oscillations in the wastewater. producing high temperatures and high pressures resulting in cell destruction.

## 2. Purpose

- (1) Reduce sludge
- (2) Increase biomass production.

## 3. Features

- (1) Improve water quality and nitrogen removal rate.
- (2) Reduce costs in wastewater treatment plant of construction and operation.
- (3) Reduction in digested sludge mass, up to 30 %.
- (4) Decrease in digested time, up to 60%.
- (5) Increase biogas produced by sludge, up more than 50 %.
- (6) Improve ammonia and nitrogen reduction's processing performance, up more than 20 %.
- (7) No chemicals. Extremely efficient sludge hydrolysis.
- (8) Improve dewatering, up to 15%.
- (9) Commercialization sucess cases in advanced countries.
- (10) Small size.
- (11) Easy to install. (Plug & Play).
- (12) Module structure design.
- (13) High intensity horns.
- (14) Stainless steel structure.
- (15) Low maintenance costs.

# 高識能股份有限公司

HIGH VIEW INNOVATION CO., LTD.

新竹市牛埔路 251 號 No.251, Niupu Road, Hsinchu City, Taiwan

TEL: +886-3-538-4063 FAX: +886-3-538-9467 E-mail: wisdom@hviglobal.com http://www.global.com

## 4. Specifications and Functions

- (1) Reactor container with oscillating unit: The reactor container includes oscillating units each equipped with an aerating pipe. The oscillating units move the ultrasound energy onto the streaming medium (sewage sludge, biomass).
- (2) Rack with five generators KS1000/2000: The energy for the oscillating units is produced these five generator modules. The supply voltage of 230 V / 50 - 60 Hz is transformed into an electrical sinusoidal oscillation of 20 kHz and applied via the HF-line to the oscillating units. Each generator produces continuous output of up to 1.000 Watts.

## 5. Product Photo



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## **BIO-MEMBRANE CONTACTOR**

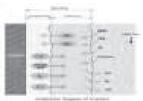
## 1. Structure and Principle

By submerged the bio-film contactor under the wastewater with aeration, the micro-organisms will adhere and grow on the surface of contactor then decompose organic substances in the wastewater. Durable material, easy adhesion of micro-organism, high strength and back wash system are the key features of the treatment efficiency of this system.

## 2. Purpose

Wastewater treatment.

- (1) Domestic wastewater treatment.
- (2) Low concentration wastewater treatment.
- (3) Tertiary treatment.
- (4) Small scale wastewater treatment.
- (5) Low bio-degradable wastewater treatment.



### 5. Award (Certification) Project

Taiwan Environmental Manufacturers Association certified the product for environmental protection quality standard in 1999.

#### 3. Features

- (1) No return sludge required; easy operation and maintenance.
- High micro-organism retaining capability; high treatment capability.
- (3) Can decompose low bio-degradable substances efficiently.
- (4) High adaptability of fluctuation in temperature.
- (5) High adaptability of fluctuation in influent rate and content.
- (6) Aerobic and anaerobic decomposition processed simultaneously.
- (7) Low sludge generation.
- (8) High transparency of treated water.
- (9) No sludge bulking trouble.

4. Specifications and Functions

Model	(mm) L×W×H		Specific Surface (m²/m³)	Strength (kg/m²)
W-60	1,160×5 80 ×550	58	135	900

6. Product photo



# 健鑫環境工程股份有限公司

## H PLUS R ENVIRONMENTAL ENGINEERING CO., LTD

桃園市楊梅區高青路 39 號 No.39, Gaocing Rd., Yangmei Dist., Taoyuan City, Taiwan TEL: +886-3-478-5478 FAX: +886-3-478-5537

## JET AERATION AND MIXING SYSTEM

## 1. Structure and Principle

- (1) Jet aeration system: Consisted of jet aerator, recirculation pump and blower, the recirculation pump transferred the liquid through the liquid pipe, inner nozzle to the mixing chamber, homogenized with the air then discharge the jet plume horizontally. For maintaining the high efficiency, the liquid and air inlets were separated and one air manifold is matched with one liquid manifold.
- (2) Jet aspiration system: Consisted of jet aspirator and recirculation pump, the function is same as the jet aerator but the air is not forced supplied.
  The program will be covered by
  - The vacuum will be caused by different nozzles and high velocity of circulation liquid, sucking air through air pipe from atmosphere.
- (3) Jet mixing system: Consisted of jet mixer and recirculation pump, by double nozzle educator technology, the liquid in the basin will be sucked into the mixer and discharged after well mixing in the mixing chamber.

## 2. Purpose

- (1) For equalization tank and aerobic treatment facilities such as activated sludge process, oxidation ditch, oxidation pond or SBR; moreover through control of air volume, nitrification and de-nitrification can be carried out.
- (2) For equalization tank, flash mixing tank, coagulation tank, neutralization tank, chemical oxidation tank, disinfection tank, sludge storage tank, de-nitrification tank, chemical reactor, air stripping system and heat exchanger system.

#### 3. Features

- (1) High oxygen transfer rate.
- (2) Complete mixing function: can be used in standard or extended SRT, high MLSS and activated sludge process.
- (3) Oxygen supply and mixing function can be controlled separately.
- (4) Low power consumption.
- (5) The inner and outer nozzle were all constructed in one piece by molding to ensure the smooth plume.

# 健鑫環境工程股份有限公司

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- (6) Can be used in deep basin and high MLSS for space saving.
- (7) All fittings were corrosion resistant.
- (8) Low maintenance cost because of no rotation part submerged in water except submersible pump.
- (9) Low installation cost.
- (10) Can be self-cleaned by flushout system.
- (11) Conserve the thermal energy by submerged installation.
- (12) Can be wet installation.

## 4. Product Photo



## 5. Award (Certification) Project

- (1) The product is ISO-9001: 2000 certified for design, manufacturing and installation.
- (2) Taiwan Environmental Manufacturers Association certified the product for environmental protection quality standard in 1999.

## 6. Specifications and Functions

Material: SUS304 stainless steel or FRP

Main Nozzle Spec

Model	HR1	HR2	HR4
Internal nozzle (inch)	> 1	> 1.5	> 2
Liquid flow rate (GPM)	90 ~ 100	183	366
Air flow rate (SCFM)	10 ~ 30	20 ~ 60	40 ~ 120

Remark: External nozzle diameter varies according to specific system.

# 健鑫環境工程股份有限公司

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# HOLLOW FIBER MEMBRANE FILTER

## 1. Structure and Principle

ZISECO **PVDF** Hollow fiber membrane is formation via NIPS method. The pores are present near the outer surface of the fibers, while sponge-like structures are possessed by the center of the fiber and the inner walls. ZISECO Hollow fiber membrane filter (CMF) can be substitue to the conventional sand filter and be the guard filter for RO system to extend the life time of RO modual. And, due to the chemial resistance of PVDF material, it can also be used for chamical purification or concentration process. filtration principle of CMF is to remove or retain the insolubles from the liquid by the porouse surface. And the filtration efficiency of SS, Coliform could be > 99%, so it can be used for waste water, drinking water, swimming pool water, reclaimed water treatment.

### 2. Purpose

Removal all insoluble, for example: Turbidity, Suspend Solid. Bacteira, ... etc., in liquid

#### 3. Features

Uniform Pore Size, High flux effluent, Trans-membrane pressure. Effectively remove bacteria, Turbidity

## 4. Specifications and Functions

- (1) Pore size: 0.05 um.
- (2) Membrane area: 2 / 10 / 41 / 51 m<sup>2</sup> (per customer requested)

## 5. Product Photo





# 集盛實業股份有限公司

ZIG SHENG INDUSTRIAL CO., LTD.

台北市大同區西寧北路 70號 3樓 TEL: 02-2555-7151 FAX: 02-2559-1357 E-mail: laker wu@zigsheng.com http://www.zigsheng.com

3F, 70, Xi Ning N. Rd., Datong Dist., Taipei 103, Taiwan

# ROUND DISK-PLATE UF-MBR MODULE

## 1. Structure and Principle

- The format flat round disk of membrane, welded for each pair, mounted on a horizontal permeation shaft with patented mutual lock.
- (2) Permeate flow is from the outside of the double - sheet discs and into the central shaft, which is hollow to provide permeate off-take flow.
- (3) Low fouling hydrophilic PVDF membrane ( 0.03 μm ) provided good mechanical strength and high chemical tolerance results inlong membrane life.

## 2. Purpose

Wide space ( 7.0~mm ) between membranes, typically operation MLSS are  $8,000\sim15,000~\text{mg/L}$ . Biosolids up to 30,000~mg/L can be treated without fouling.

#### 3. Features

- (1) High flux (30 ~ 35 LPM) allows competitive design with smaller foot print, low aeration (SAD < 15:1) and low capital cost.
- (2) Flux rates at peak flow can increase to 50LMH.
- (3) Low chemical consumption, simple cleaning procedure. Low flow path reduces filtrate pressure drop and allows low vacuum operation.
- (4) Inside the UPVC vessel, a stream of water generated upward as scouring air is diffused below membrane disk. This mechanism provides extremely stable filtration as the membrane does not allow sludge to adhere to membrane surface.
- (5) Once or twice daily backwash with 50 ppm NaOCl prevent from biomass on to membrane surface.
- (6) Gravity system can be provided with tank depths > 3 m liquid depth

# 新世膜科技股份有限公司 NEW CENTURY MEMBRANE CO., LTD

台中市西屯區甘肅路二段 110 號 No.340, Futian 2nd St., South District, Teaching City, Taiwan TEL:+886-4-2315-5828 FAX:+886-4-2315-5228 E-mail:ivan@ncm.com.tw http://www.ncm.com.tw

## 4. Specifications and Functions

Module No	NHV1-185-MBR	NHV2-185-MBR	NHV3-185-MBR	NHV4-185-MBR		
Peak, Flux(LPH) @minus 15cm-Hg,25°C	250	500	750	110		
Element No.	M 125 × 1	M 125 × 2	M 125 × 3	M 58 × 1		
Membrane Area, M2(ft2)	5.6 (60)	11.2 (120)	16.8 (0)8	2.5 (27)		
Membrane Material		PVDF(Polyviny	lidene Fluoride)			
Membrane Nominal Pore Size		0.3	μm			
Vessel Material		UF	VC			
Net Operation Flux, LPH(CMd)2	150~250(3.5~6)	300~500(7~12)	450~750(10~18)	65~110(1.6~2.8)		
Scrubbing Air Flow (LPM)3	50 ~ 80	100 ~ 160	150 ~40	30 ~ 50		
Per Backwash Volume(L)	15 ~ 18	30 ~ 35	45 ~ 50	78-		
Operation Mode		Suction 15'30 mi	n, Backwash once			
Operation TMP cm/Hg(Bar)		<b>-</b> 10 ∼ <b>-</b> 25	(-0.15 ~ -0.3)			
Max, Backwash Pressure		0.5	Bar			
PH		2 ~	- 11			
Daily Chemical Backwash	50~100ppm Naoci by Backwash2time/day					
Cleaning	1.01 ~ 2 % citric acid (for inorganic fouling)					
Module Dimensions(mm)	Φ216×L950	Φ216×L1900	Φ216×L2850	Φ216×L508		
Weight(kg)	8	16	24	6		

## 5. Product Photo



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## PTFE MEMBRANE BIOREACTOR

## 1. Structure and Principle

The hydrophilic Teflon (PTFE) film which is produced by EFM has the structure of nodes interconnected by fibrils which can effectively block the impurities and biological bacteria in the water. Therefore it can reach the emission standard of drainage water.

The MBR module is consisted of frame placing area (upper side) and air-liquid mixed area (lower side.) Air is spurted to the air-liquid mixed area after sent to the air diffuser by the blower. The bubble will accelerate after mixed uniformly and can clean up the sludge on the membrane surface in order to stabilize the volume of drainage water.

## 2. Purpose

MBR treating technology can simplify the procedure in the conventional treatment by taking place of the activated sludge tank, final sedimentation tank, sludge digestion and disinfection, hence increase the efficiency of land using.

#### 3. Features

Advantages of Hydrophilic PTFE for industrial wastewater:

- (1) Resist all kinds of corrosive chemicals → ph range: 1 14.
- (2) Anti-biotic.
- (3) Higher Porosity  $\rightarrow$  Higher Flux.

- (4) Low Surface Energy and Low Coefficient of Friction

  → Non-adhesive, Easy to Clean
- (5) Good Mechanical Properties

  → Long service life
- (6) Excellent Weather ability.
  The structure and characteristic of MBR
- (1) The MBR system has the on-line automatic backwash function to keep it from scaling.
- (2) Comparing with the conventional method, the MLSS of MBR system is much higher.
- (3) It can speed up the decomposition of microorganism and can withstand different water pollutions.
- (4) The bio-bacteria phase is rich and the sludge retention time (SRT) is long due to the membrane's capability of keeping the microorganism in the sludge tank so that it is able to decompose pollutant and reduce the amount of waste sludge.
- (5) The module is easy to install. Each frame can be replaced individually. It is easy to maintain and operate.
- (6) Expansion of the system is flexible.

## 群揚材料工業股份有限公司 EF-MATERIALS INDUSTRIES INC.

桃園市中壢區長春六路 1 號 No.1, Changchun 6th Rd., Zhongli Dist., Taoyuan City, Taiwan TEL:+886-3-4513736 FAX:+886-3-4513353 Email: Sharon@efmi.com.tw http://www.efmi.com.tw

## 4. Specifications and Functions

Membrane frame specification table

Item	EFM-80			
Membrane Area (m <sup>2</sup> /Piece)	0.3	8		
Dimensions: W×H×T (mm)	490 × 1,	000 × 6		
Weight (kg)	2.4	15		
Membrane Average Pore Size (µm)	0.1	1.0		
Membrane Material	Hydrophilic ePTFE			
Scrubbing Air Flow (L/min.Piece)	≧ 10	≥ 10		
pН	1 ~ 14			
Turbidity (NTU)	< 0.5	< 1.0		
Suspension [SS] (mg/L)	ND ≦ 1			

<sup>\*\*</sup> For different water quality, the volume of drainage water will be different. Complete test is needed. The data was collected initially from single membrane frame under 25°C,-30 kPa.

## MBR System specification table

Item	EFM-	80-150		
Membrane Average Pore Size (µm)	0.1	1.0		
Quantity (Piece)	1:	50		
Membrane Area(m <sup>2</sup> )	12	20		
Dimensions: W×H×D (mm)	$2,650 \times 620 \times 2,200$			
Weight (kg)	780			
Support Plate	ABS			
Frame Material	SUS 304			
Diffuser Pipe	PVC			
Collect Water Pipe	PVC & SUS 304			

## .5. Product Photo



## 群揚材料工業股份有限公司 EF-MATERIALS INDUSTRIES INC.

桃園市中壢區長春六路 1 號 No.1, Changchun 6th Rd., Zhongli Dist., Taoyuan City, Taiwan TEL:+886-3-4513736 FAX:+886-3-4513353 Email: Sharon@efmi.com.tw http://www.efmi.com.tw

# HIGH RATE ANAEORBIC BIOLOGICAL TREATMENT SYSTEM

## 1. Structure and Principle

The containing organic matter is bio-degraded anaerobically into the biogas which is containing methane and a renewable energy.

## 2. Purpose

Wastewater treatment.

## 3. Features

- (1) Compact design.
- (2) No odor emmision.
- (3) Stable and reliable treatment performance.

## 4. Product Photo





# 環鼎國際股份有限公司 EIGENGREEN INTERNATIONAL INC.

台北市中山區松江路 237 號 9 樓 9F., No. 237, Songjiang Rd., Zhongshan Dist., Taipie 10483, Taiwan TEL:+886-2-2518-1517 FAX:+886-2-2518-5769

E-mail: murphyyclin@eigengreen.com http://www.eigengreen.com

## **AUTOMATIC SKIMMER**

## 1. Structure and Principle

- The skimmer is vertical on the surface of wastewater, and moves forth smoothlyon the tracks by coil chain.
- (2) When the skimmer go to the end of basin, it scrapes the scum into the drain –pipe,then the turns 90° and makes it parallel to surface of wastewater and go backwards.

## 2. Purpose

It is suitable to be equiped in sediment basin for scraping the grease and scum.

#### 3. Features

- (1) Stainless steel structure is enough to against corrosion.
- (2) Automatic operation by means of programmed logic control.
- (3) Driven by coil chain, easy to maintain.
- (4) No movable mechanism under wastewater that make it is safe while the machine is been fixing.

## 4. Product Photo





# 山亞環境科技股份有限公司

SHAN YA ENVIRONMENTAL TECHNOLGY CO., LTD.

台中市北區忠明二街 39 號 No.39, Zhongming 2nd St., North Dist., Taichung City, Taiwan TEL:+886-4-2203-5967 FAX:+886-4-2205-4588 E-mail:shanya.eco@msa.hinet.net

# SLUDGE COLLECTOR OF RECTANGULAR SEDIMENT BASIN

## 1. Structure and Principle

- This machine consists of scraper suction modules with three tracks, driving unit and control panel.
- (2) The scraper –suction modules move stably on tracks. The module is equiped low and with inclined planes so that it doesn't disturb sludge when it moves.
- (3) V-shape scraper lead the sludge go to suction holes that drive the sludge out of basin effectively.
- (4) The driving unit is equiped coil chain that push the scraper-suction modules to move.
- (5) Each force of suction holes is the same so that scraper-suction modules can exclude the sludge smoothly.
- (6) The control panel with programmed logic controller ( PLC ) makes the machine go automatically. According to the concentraction or height of sludge blanket, it can be set the operation conditions in PLC.

## 2. Purpose

The machine is widely applied to rectangular sediment basin for driving the sludge out of the basin.

#### 3. Features

- Simple mechanical structure, easy operation and less maintaining cost over 50% than other kinds of sludge scrapers.
- Save more than 80 % in electrical consumption.All PLC automatic control.
- (3) All made with stainless steel.It is throught designs of three-track, special wheels and coil chain that keep sludge collector move smoothly.

#### 4. Representative Attainments

Style	Pool Width	Pool length	Reducer power	Suction pipe diameter	Suction sets
SY-400	4m 以下	below 4m	1/4 hp	65 mm	1 set
SY-400L	4m 以下	below 4m	1/2 hp	65 mm	2 set
SY-400XL	4m 以下	below 4m	1/2 hp	65 mm	Depend on the length of basin
SY-600	6m以下	below 6m	1/2 hp	65 mm	1 set
SY-600L	6m 以下	below 6m	1/2 hp	65 mm	2 set
SY-600XL	6m以下	below 6m	1/2 hp	93 mm	Depend on the length of basin
SY-800	8m 以下	below 8m	1/2 hp	65 mm	1 set
SY-800L	8m 以下	below 8m	1/2 hp	65 mm	2 set
SY-800XL	8m 以下	below 8m	1/2 hp	93 mm	Depend on the length of basin

# 山亞環境科技股份有限公司

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# HIGH EFFICIENCY PRESSURIZATION FLOATATION (AIR FLOATATION) EQUIPMENT

## (CIRCULAR BARREL/RECTANGULAR TANK/SHALLOW TYPE)

## 1. Structure and principle

Pressurized flotation equipment is a kind of air flotation separation equipment for dissolved air, combined with the functions of suspended solids condensation, gas flotation, and scum scraping. The pressurized flotation equipment injects high-pressure air into the gas tank, dissolves the air saturated in pressurized water, and releases the saturated liquid in the pressure tank into the inlet pipe. After decompression. the air-dissolved mixture will release fine bubbles, which adhere to the surface of the gel plume in the water, forming a scum with a specific gravity less than water, which drives the gel plume to float to the surface of the water, achieving the effect of solid-liquid separation.

## 2. Purpose

- (1) Solid/liquid separation for chemical coagulation treatment of various industrial wastewater.
- (2) Oil/water separation in the treatment of grease-containing wastewater.
- (3) The thickening treatment of sludge effectively increases the concentration and reduces the treatment cost.

- (4) The cleaning water is filtered and recycled for reuse.
- (5) Paper, leather, pharmaceutical, steel, oil refining, ship power, chemical industry, electroplating, food processing, beer, municipal sewage, textile, printing and dyeing, starch and other industries are recycled and reused.

#### 3. Features

- Continuous operation, large processing capacity, complete specifications, meeting the needs of all walks of life.
- (2) The residence time is short, so the equipment is small in size, the floor space is small, the installation land is extremely flexible, and the use space is saved.
- (3) The scum concentration is high, which is conducive to subsequent dehydration operations. The air flotation machine is collected into a combined structure design, which can effectively reduce the space requirement, the overall beauty is exquisite, and the energy consumption is low.

# 元錩工業股份有限公司

YUAN CHANG TSAY INDUSTRY CO., LTD.

台中市梧棲區向上路九段 382 巷 106 號

No. 106, Lane 382, Sec. 9, Xiangshang Rd., Wu-Chi District, Taichung City, TAIWAN

TEL: +886-4-2630-5899 FAX: +886-4-2630-8299 E-mail: ycicl@ycicl.com http://www.ycicl.com

(4) High dissolved gas efficiency and stable treatment effect. The pressure of dissolved gas and the reflux ratio of dissolved gas to water can be adjusted as required.

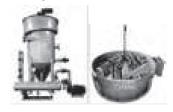
## 4. Specification and performance

- (1) The wetted part is made of SUS304 material, which is resistant to corrosion, acid and alkali, good chemical resistance, and durable.
- (2) Simple structure, easy maintenance, low operating cost, low maintenance cost and easy operation and maintenance.
- (3) The installation cost is low, and it is a whole set of package type, which is easy to install and saves time and wages.

## 5. Representative Performance

- (1) Vedan Enterprise Corp.2019.
- (2) Ministry of National Defense-Joint Logistics Dazhi Park 2012.
- (3) Saudi Arabia-Maqna Ind. & Dev. Co. 2015.

## 6. Product photo





## 7. Award (Certification) Project

- (1) ISO 9001:2015 Quality System Certificate.
- (2) CE Safety Certification.

# 元錩工業股份有限公司

YUAN CHANG TSAY INDUSTRY CO., LTD.

台中市梧棲區向上路九段 382 巷 106 號

No. 106, Lane 382, Sec. 9, Xiangshang Rd., Wu-Chi District, Taichung City, TAIWAN TEL: +886-4-2630-5899 FAX: +886-4-2630-8299 E-mail: ycicl@ycicl.com http://bttp://www.ycicl.com

# LONG FIBER FILTRATION EQUIPMENT

## 1. Structure and principle

Dissolved Air Flotation (DAF) is an effective method to use for the separation of solid and liquid, it's removed the suspended solids ' oils ' greases, and other insoluble impurities from water. In the process, pressurized water is saturated with dissolved air and is discharged into a flotation vessel. The microscopic air bubbles is attach to solids and float them to the surface forming a sludge blanket. A scraping assembly skims the sludge off the surface of the water and into a sump. From the sump, sludge is pumped to dewatering equipment. The treated water flows from the DAF vessel for discharge or an to other treatment processes.

## 2. Purpose

- (1) Removal the suspended solid.
- (2) Separate oil and water (removal oil and grease).
- (3) Pre-treatment of Wastewater.

#### 3. Features

- (1) Micro bubbles generating technology.
- (2) Subsurface capture technology.
- (3) Technology of automatic slag controlled by liquid level.
- (4) Non-clogging releasing technology with high efficiency.

## 4. Product photo



# 全澤股份有限公司 MOLYKEM CHEMICAL CORP.

高雄市大寮區和業六路 8 號 No. 8, Heye 6th Rd., Daliao Dist., Kaohsiung City, Taiwan TEL: +886-7-787-0024 FAX: +886-7-787-0026

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# **INCLINED TUBE SETTLER**

## 1. Structure and Principle

This product consists of oblique plastic sheets tilted at a 60° angle, which are configured into a rectangular module. The diameter of each cellular pipe is approximately 50mm, which is placed inside the sediment tank for expansion of effective sedimentation surface.

## 2. Purpose

Expedient sedimentation equipment

#### 3. Features

- (1) High strength.
- (2) Easy installation.
- (3) Convenient maintenance.
- (4) Aesthetic appearance.
- (5) Adoptable to any sludge collection facilities.
- (6) Impervious to external factors.
- (7) The flow rectification and second condensation effect ensure capturing of floating gel floes.

## 4. Specifications and Functions

Spec/Model	Pipe Diameter	A (mm)	B (mm)	I (mm)	W (mm)	H (mm)	L (mm)	Pipe Row	Sheet Gauge	Material
HCA-52	50	50	50	600	500	520	2,500	10	0.6/0.8/1.0	ABS
HCA-75	50	50	50	860	500	750	2,500	10	0.8/1.0	ABS

## 5. Product Photo



# 相同企業有限公司 SIMILAR ENTERPRISE CO.,LTD

台中市烏日區溪南路一段 506 巷 485 號

No. 485, Lane. 506, Sec. 1, His Nan Rd., Tong Yang Village, Wu Jih District, Taichung City, Taiwan TEL: +886-4-2335-2827FAX: +886-4-2335-2659 E-mail: same66@ms16.hinet.net http://www.similar.com.tw

## DISSOLVED AIR FLOTATION SYSTEM

### 1. Structure and Principle

Dissolved air flotation system is an advanced equipment combined flotation and settling functions. High surface loading, short retention time and shallow water depth were uniqueness of this system compared to the conventional designs.

The air is pressurized to be dissolved in the Air Dissolving Tube, and the fine bubbles will be released when it is discharged into the open basin.

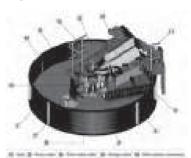
The diameter of fine bubble is  $1\mu$  m approximately and the flotation velocity is about 15cm/min. The flocs in the solution will be attached by fine bubbles and floated to the top of water.

The flotation process will be completed within 3 minutes and consistency of buoyant sludge is  $2 \sim 3\%$  solid content.

#### 2. Purpose

- (1) Grease and suspension solids removal.
- (2) Sludge thickening.
- 3. Features
  - (1) Short retention time.
  - (2) Low purchase cost.
  - (3) Low installation cost.
  - (4) Minimum space requirement.
  - (5) Thickened sludge consistency is  $2 \sim 3 \%$ .
  - (6) Easy to clean and maintain.

## 4. Specifications and Functions



- 1.Flotation cell
- 2. Central rotation bearing
- 3. Influent distributor
- 4. Distribution rack
- 5. Clear water discharge pipe
- 6. Clear water outlet tank

- 7. Discharge weir
- 8. Leveling facility
- 9. Operating platform
- 10 Surface scraper
- 11.Rotation driver
- 12.Sight glass
- 13.Slipring



# 健鑫環境工程股份有限公司

## H PLUS R ENVIRONMENTAL ENGINEERING CO., LTD

桃園市楊梅區高青路 39 號 No.39, Gaocing Rd., Yangmei Dist., Taoyuan City, Taiwan TEL: +886-3-478-5478 FAX: +886-3-478-5537

Model	Outline Di	mension	(mm)	Capacity	Civil block out (mm)			
	A	В	С	(m³/hr)	D	Е	F	
HRAF-32	3,200	600	850	60	700	2,000	1,400	
HRAF-39	3,900	650	950	90	800	2,350	1,600	
HRAF-45	4,500	650	950	120	1,000	3,250	2,000	
HRAF-55	5,500	650	950	180	1,300	3,500	2,600	
HRAF-61	6,100	650	950	219	1,300	3,650	2,600	
HRAF-67	6,700	650	950	264	1,400	4,000	2,800	
HRAF-72	7,200	650	950	305	1,400	4,100	2,800	
HRAF-81	8,100	650	950	386	1,500	4,700	3,000	
HRAF-90	9,000	650	950	477	1,600	5,000	3,200	
HRAF-100	10,000	650	950	588	1,600	5,200	3,200	

## 5. Product Photo



## 6. Award (Certification) Project

- (1) The product is ISO-9001: 2 000 certified for design, ma nufacturing and installation.
- (2) Taiwan Environmental Manu facturers Association certifie d the product for environm ental protection quality stan dard in 1999.

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## THE SCRAPER DRIVER

## 1. Structure and Principle

The scraper driver is applicable to circular sedimentation / thickening tank; the bridge can be half-bridge or full-bridge types. The scraper system is consisted of a driver, center column (for half-bridged type only), platform, walkway, torque cage, scrapping arms, feed well, scum box, overflow weir, Wastewater flows into the sedimentation tank through the feed well; the suspension solids coagulate and then settle to the bottom of tank. By scraper, the solids accumulated on the bottom of the tank shall be collected to the center sludge well for drawn out.

## 2. Purpose

Sedimentation tank or thickener sludge scrapping.

Sedimentation tank or sludge thickener.

## 3. Features

- (1) High Transmission Efficiency:

  The main reduction mechanism is composed-of planetary gear reducer, the transmission efficiency is high and space saving.
- (2) Manual Rotating System: Can be rotated manually for tank bottom finishing.

- (3) Overload Protection System: The operation torque is indicated on the indicator. Alarm and power shut-off system are equipped for overload protection.
- (4) Easy Installation and Maintenance: All installation and maintenance are completed on the operation floor easily and safely.

## 4. Specifications and Functions

	Туре										
Model	Туре	Tank Diameter	Operation Torque	Acceptable	Remark						
CD CDF	Half Bridge	8 m and above	1,250 ~ 20,000 kg-m	Sedimen- tation	Central Bottom Influent						
TD		3 ~ 8 m	200 ~ 800 kg-m	Sedimen-	Central						
TDH TDR	Full Bridge	8 m and above	1,200 ~ 6,000 kg-m	tation Thickener	Top Influent						

## 5. Product Photo



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## INCLINED TUBE SETTLER

## 1. Structure and Principle

- (1) Space saving: The precipitation distance of particles in inclined tube settler is shortened to be h, compared to the precipitation distance in empty tank H, H/h times of sedimentation tank surface area was saved.
- (2) The inclined tube settler was made of PVC or ABS.
- (3) Simply installed the individual module in sedimentation tank and function well.
- (4) The tube is formed at 60 angles versus horizontal and in reverse direction to neighboring tubes in forming criss-cross configuration in module.
- (5) The assembled module is rectangular and opening is 50

#### 2. Purpose

 Optimize efficiency of new sedimentation tank: For constricted space this system offers excellent sedimentation efficiency at tremendous cost saving.

# 4. Specifications and Functions

Model	Tube (mm)	Width (mm)	Height (mm)	Length (mm)	Tube Number	Thickness
HRST - 50	50×50	550	500	2,500	11×50	0.6/0.8/1.0

(2) Improvement of existent sedimentation tank: Increasing the sedimentation efficiency of existent tank by installation of this system.

## 3. Features

- Excellent water quality: By rectification of flow and secondary coagulation, all flocs were captured.
- (2) High strength: The assembled unit can withstand 2 kg/cm² jet pressure at 2m distance from top without damage.
- (3) Easy installation: Simply secure the modules on support frame.
- (4) Easy maintenance: No bend and surface smooth make cleaning and maintenance easy.
- (5) Aesthetic appearance : No hungers above tank. Easy monitoring from surface and neat looking.
- (6) Adaptable to any sludge collection facilities: As no barrier on tank bottom, there is no limitation in selection the sludge collection method

## 5. Product Photo



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# HEAT PUMP EVAPORATOR/CRYSTALLIZER

## 1. Structure and Principle

- (1) Any vessel containing the solution to be concentrated/crystallized can be connected to the inlet. The solution is then pumped into the evaporation tank.
- (2) The operating time can be set based on solution characteristics, desired concentration increase or volume reduction, etc.
- (3) It operates based on the energy amplification of a heat pump, consuming three to four times less energy than a traditional electric heater for the same amount of heat produced. Dry, low temperature air (40~60°C) is cycled through the solution. absorbing moisture. The moist air gets cooled in the condenser, releasing water as condensate, and is reheated for the next cycle. The water content and volume of the solution is consequently reduced, allowing the condensate or remaining solution to be disposed of or recycled.

## 2. Purpose

- Refining of desired products: tea, milk, traditional medicine, biotechnology applications, etc.
- (2) Water removal for purification of solutions, chemicals, organic solvents, etc.
- (3) Volume reduction for waste liquids, to reduce pollution and disposal costs.
- (4) Recycling of etching solutions, plating solutions, etc. to extend useful life and cut down on purchase costs.

## 3. Features

- (1) Modular design: A variety of customizable models are available based on processing volume, factory layout, process flow, etc.
- (2) Low process temperature, to conserve power usage.
- (3) No combustion is required, eliminating the risk of flammable or explosive fumes.

# 二方企業股份有限公司 DILEMMA CO., LTD.

- Hermetic circulation system: no exhaust is released, curtailing the release of odors.
- (2) Intelligent control system: temperature control, timer settings, error logs, process monitoring, etc.
- (3) Anti-corrosion treatment: corrosion protection techniques inhibit tubing degradation and leakage.

## 4. Specifications and Functions

- (1) Capacity: 800 kg/day.
- (2) Weight Reduction: 400 kg/day
- (3) Power Consumption: 15.0~18.3kw.
- (4) Material: SUS304.
- (5) Dimensions: 190x128x260 cm.
- (6) Compressor Unit: Scroll compressor, environmentally friendly refrigerant.
- (7) Auxiliary Radiator: High efficiency finned-tube heat exchanger (aluminum fins and copper tubes), anti-corrosion tubing, anti-corrosion resin coating, cooling fan.

(8) Heat Exchangers: High efficiency finned-tube heat exchanger (aluminum fins and copper tubes), anti-corrosion tubing, anti-corrosion resin coating.

## 5. Representative performance

MOUNTAIN RAINBOW TECH CO., LTD 2021.01.

## 6. Product Photo



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# NON-CLOG SEWAGE ( MUD ) PUMP

## 1. Structure and Principle

Different places require pumps with different impellers. The C-series products consists of different types of such as vertical pumps dry-pit, horizontal dry-pit, submersible or submersible dry-pit, and may also adopt impellers of different types such as non-clog, cutting knife or recess type according to the waste properties. Regarding cooling system of motors, there are options like water cooling. and oil cooling. Other functions are automatic control system, overload protection, leakage testing, temperature sensing, and anti-explosion motor and etc. The motor may be customized according the to customer requirements.

## 2. Purpose

- (1) Wastewater pump station
- (2) Domestic wastewater treatment plant
- (3) Agricultural and pasturage wastewater treatment system
- (4) Domestic wastewater process system for hospital, school, and residential community
- (5) Water treatment system for industries such as food, paper manufacturing, coalmining, textile, leather-making, and chemical factories.
- (6) Water purification system.

#### 3. Features

- (1) Submersible Motor
  - A. Performance in compliance with the standard (CNS9813: Low Pressure Three-Phase Sensing Motor for Submersible Pump) and qualified for a certified mark.
  - B. Class-F insulation and the protection level is IP68
  - C. Heat Sink Options:
    - (a) Water Cooling: the advantages: may be operated even at a low water level or installed on the ground, low noise.
    - (b) Oil cooling system: adopts insulating oil with the heat exchange system: the advantage: may be operated even at a low water level or installed on the ground, low noise.
    - (c) General cooling method uses the surrounding fluid to cool naturally.
  - D. Other functions such as overload protection, temperature sensing and etc may be customized in accordance with the customer requirements.

# 川源股份有限公司 GSD INDUSTRIAL CO., LTD

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## (2) Motor

- A. In compliance with the Fully-Sealed Fan-Cooling Three-Phase Squirrel Cage Sensing Motor of the CNS14400 Standard
- B. The parameter is 1.15, and other characteristics such as the insulation level, anti-explosion, frequency inversion, and etc may be provided according to the customer requirements.
- (3) Impellers
  - A. Precision process and balanced calibrations to ensure stable operations.
  - B. Types:
    - (a) Non-Clog Impellers: Special design to enlarge the water flow path; smooth water flow allows easy waste material passage thus consideration of clogging is not required.
- (b) Cutting Knife Impellers: impellers The semi-open non-clog type. Tungsten knife blade is embedded into impeller entrance and a long fiber object or soft object is designed based on the rubbing plate. (Rubbing plate: material is ball-shaped graphite cast iron, thus enhancing the resistance friction to and maintaining the performance)
- (c) Recess Impellers:
  Impellers are hidden outside of the flow way, and thus are capable of causing an eddy inside the pump, particularly useful for transmission of wastewater containing strands, pieces of debris and fibers.

#### 4. Product Photo



# 川源股份有限公司 GSD INDUSTRIAL CO., LTD

## HORIZONTAL SINGLE STAGE SCROLL PUMP

## 1. Structure and Principle

This pump is a single stage centrifugal pump designed in accordance with ISO2858. The pump has a superior performance, and high efficiency. It is primarily used for pure water or liquids that are chemically and physically similar to water. The structure is reasonable and may be reliably used.

## 2. Purpose

Domestic water supply, industrial water supply, factor process, agricultural irrigation, construction water supply, boiler water supply, air conditioner, cooling water.

#### 3. Features

(1) Pump Exterior: Casted using cast iron with holes for air evacuation; tested to be able to withstand 1.5 times of the maximum water pressure; there is no sign of leakage after 5 minutes of continuous pressurization. The standard material is grey cast iron, complying with CNS2472 G3038.

- (2) Impellers: Fully sealed with a balanced hole design and tightly locked on the axle after dynamic and static balance calibrations. The standard material is either grey cast iron or optional bronze cast, complying with CNS2472, G3038 or CNS4125, H3057.
- (3) Wear Ring: The pump exterior is installed with bronze wear rings that comply with CNS4125 and H3057 and are fixed using screws.
- (4) Main Shaft: The standard is stainless steel, complying with CNS3270 G3067 and comes with steel-made nut complies with CNS2473 G3039 so as to prevent loosening due to activation. The design of the strength of the shaft center is of a high standard. allowing threshold rotational speed of the shaft to be higher than 1.3 times of the normal operation speed.

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- (5) Seal: Internationally well-known mechanical seal; operating pressure is 0 10 kg / cm² and the operating temperature range is between -20 ~ 100 °C; may use filling seal as designated by customers.
- (6) Bearing: Adopts sealed self-lubricating ball bearing free of adding grease, thus complying with AFBMA B-10; life of the bearing is stated on the manual.
- (7) Seal Base and Seal Chamber: The structure is designed in accordance with the standard small scroll pump of CNS2138 B4004. Bolts can be unscrewed to remove shaft seal and the bearing base without uninstalling the pump exterior, thus facilitating maintenance work.
- (8) Shaft Coupler: Pump exterior comes with a supporting frame that is fixed on the steel base with the motor. Both are connected using a shaft coupler to be driven on the same shaft center. The exposed operating components are covered by protection masks.

#### 4. Product Photo



## 川源股份有限公司 GSD INDUSTRIAL CO., LTD

# AS TYPE APPARATUS USE SEWAGE SUBMERSIBLE PUMP

## 1. Structure and Principle

- Equipped with weatherproof and waterproof cable. Wiring and core wire are impregnated with EPOXY. Not only avoid the moist going into the motor, but also leakage-proof and moisture-proof.
- (2) All series motors are equipped with dry motor of 3-phase and 2 poles or 4 poles, coil of class Fisolation. It is the character of overheat-resistant and perfect isolation. Enclosure is IP68 grade of protection.
- (3) The material of silicon carbide has the character of mud-resistant and excellent lubrication system and is good for long-time running. The dual enclosed structure has a diaphragm; it is preventing strongly from leaking.
- (4) Pump is equipped with the motor overload protector and will shut itself off automatically to prevent from overheating whenever its voltage drop, impeller plugged, the draining line is below the pump's watermark and other unusual conditions.

- (5) Pump is coated with thick EPOXY. It is better corrosion-resisting and rust-resisting than common paint; prevent the surface of pump from rusting.
- (6) Fitted with vent valve at discharge side of pump casing to avoid air lock ensuring pumping system in steady operation.

## 2. Purpose

- (1) Building waste water treatment system, sewage treatment plant, community market, sanitary sewer.
- (2) Drainage waste water from paper industry, dyeing industry, foodstuff industry, leather industry and iron and steel industry.
- (3) Fishery, animal husbandry, dairy farm, piggery, fecal sewage tank and indu-stry water supply.

# 亨龍電機有限公司 HENG LONG ELECTRIC CO.,LTD.

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## 3. Features

- (1) Pump is equipped with the motor overload protector and will shut itself off automatically to prevent from overheating whenever its voltage drop, impeller plugged, the draining line is below the pump's watermark and other unusual conditions.
- (2) There are 3 kinds of impellers as the pictures. You can close semi-open, closed and non-clogging. Suitable model will help you to do with properly all kind drainage of waste water or sewage.
- (3) Equipped with automatic lifting frame device. By simply installation to fix the water pipe in the saddle of frame body. It is easy to maintain or replace the pump by loading & unloading, separation and combin-ation. It is not necessary for the operator to go into the tank and incr-ease effectively the safety and convenience.

## 4. Product Photo



## 5. Specifications and Functions

Model Type	Picture	Туре Ф	Power hp	Caliber inch	Pole P	Head M	Flow m³/min	Solid Passage mm
AS Type Apparatus Use Pump	Semi-open Channel Non-clog	3	2 ~ 20	3~8	2或4	5 ~ 23	0.5 ~ 4.5	32 ~ 80

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# B TYPE NON-CLOG SEWAGE SUBMERSIBLE PUMP

## 1. Structure and Principle

- (1) For preventing moisture from gaps of cable or wire into motor, The cable base and wire are dealt with EPOXY
- (2) Non-clog Impeller design allows to discharge 35mm solid passage and long fiber.
- (3) Vortex Impeller and taper flowing route improve the performance of pump and decrease the abrasion to extend the durability.
- (4) Fitted with vent valve at discharge side of pump casing to avoid air lock ensuring pumping system in steady operation.
- (5) Equipped with high quality dual mechanical seal or with SIC mechanical seal.
- (6) Motor is E (120 °C) class insulation, enclosure IP 68. The thermal protector is optional to secure the protection of motor, which against overload & overheating.
- (7) Simplifying the structure (Bearing and Mechanical Seal) of the inside of Motor for improving the operation of Motor.

(8) Pump is equipped with the motor overload protector and will shut itself off automatically to prevent from overheating whenever its voltage drop, impeller plugged, the draining line is below the pump's watermark and other unusual conditions.

## 2. Purpose

- (1) Wastewater lift station municipal wastewater treatment plant.
- (2) Builbing wastewater treatment system.
- (3) For using to drawing out piggery's excrement, animal & poultry farm.
- (4) School, hospital, community wastewater treatment system.
- (5) Food, Paper, mining, textile, leather industry wastewater treatment system.

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#### 3. Features

- (1) Pump is equipped with the motor overload protector (TEXAS Instrument) and will shut itself off automatically to prevent from overheating whenever its phase failure, voltage drop, impeller plugged, the draining line is below the pump's watermark and other unusual conditions.
- (2) The non-clog design is fitted to 35mm solid passages and the liquid with long Fiber; Impeller doesn't touch the liquid so reduce Impeller's abrasion.
- (3) Uipped with automatic lifting frame device. By simply installation to fix the water pipe in the saddle of frame body. It is easy to maintain or replace the pump by loading & unloading, separation and combin-ation. It is not necessary for the operator to go into the tank and incr-ease effectively the safety and convenience.

## 4. Product Photo



## 5. Specifications and Functions

	odel pe	Picture	Туре Ψ	Power hp	Caliber inch	Pole P	Head M	Flow m³/min	Solid Passage mm
Non	ype -clog mp	Non-clog	1 & 3	1/2 ~ 10	2 ~ 4	2	5 ~ 20	0.17 ~ 0.78	35 ~ 50

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# P TYPE STAINLESS STEEL ENVIRONMENTAL PUMP

## 1. Structure and Principle

- (1) Pump cover made from SUS#316 resists wastewater with weak-acid and weak-alkalinity.
- (2) For preventing moisture from gaps of cable or wire into motor, The cable base And wire are dealt with EPOXY.
- (3) Non-clog Impeller design allows to discharge 35 mm solid passage and long fiber.
- (4) Vortex Impeller and taper flowing route improve the performance of pump and Decrease the abrasion to extend the durability.
- (5) Fitted with vent valve at discharge side of pump casing to avoid air lock ensuring pumping system in steady operation.
- (6) Equipped with high quality dual mechanical seal or with SIC mechanical seal.
- (7) Motor is E (120 °C) class insulation, enclosure IP 68. The thermal protector is optional to secure the protection of motor, which against overload & overheating.
- (8) Simplifying the structure (Bearing and Mechanical Seal) of the inside of Motor for improving the operation of Motor.

(9) Pump is equipped with the motor overload protector and will shut itself off automatically to prevent from overheating whenever its voltage drop, impeller plugged, the draining line is below the pump's watermark and other unusual conditions.

## 2. Purpose

- Wastewater lift station municipal wastewater treatment plant.
- (2) Builbing wastewater treatment system.
- (3) For using to drawing out piggery's excrement, animal & poultry farm.
- (4) School, hospital, community wastewater treatment system.
- (5) Food, Paper, mining, textile, leather industry wastewater treatment system.

#### 3. Features

(1) Pump is equipped with the motor overload protector (TEXAS Instrument) and will shut itself off automatically to prevent from overheating whenever its phase failure, voltage drop, impeller plugged, the draining line is below the pump's watermark and other unusual conditions

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- (2) The non-clog design is fitted to 35mm solid passages and the liquid with long Fiber; Impeller doesn't touch the liquid so reduce Impeller's abrasion.
- (3) Uipped with automatic lifting frame device. By simply installation to fix the water pipe in the saddle of frame body. It is easy to maintain or replace the pump by loading & unloading, separation and combin-ation. It is not necessary for the operator to go into the tank and incr-ease effectively the safety and convenience.

## 4. Product Photo



## 5. Specifications and Functions

Model Type	Picture	Туре	Power hp	Caliber inch	Pole P	Head M	Flow M³/min	Solid Passage mm
P Type Stainless Steel Pump	Non-clog	1 & 3	1/2 ~ 10	2~4	2	5~20	0.17 ~ 0.78	35 ~ 50

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# AF SERIES - SUBMERSIBLE SEWAGE / WASTEWATER PUMPS

## 1. Structure and Principle

Auto-cut Protector: Automatic On/Off motor protector to prevent motor burn out due to high temperature and excess amperage draw. The Protector can revert when the motor temperature returns to normal. Auto-cut Protector is a standard component for pump 10HP or below.

High Efficiency Dry Motor: All stator coils are treated with insulating vanish procedures to achieve the best insulation, efficiency and durability.

Double Mechanical Seals: Superior abrasion resistant mechanical seal is manufactured with silicon carbide to ensure the best seal effect.

Epoxy Cable Base: An epoxy resin seal cable base prevents moisture from entering the motor through the core wires.

High Solids Epoxy Coating: High Solids Epoxy Coating greater than  $100\mu m$ , provides resistance to salty sea water, industrial wastewater, and chemical fluids, creating an anti-corrosion layer on metal surface that prevents corrosion.

## 2. Purpose

- Residential buildings, hospitals, commercial buildings and household uses.
- (2) Livestock farming, pig farming, dairy farming and sewage treatment.
- (3) Food industry, pulp and paper industry, mining, dyeing and finishing factory, leather factory, steel manufacturer, electronics industry and wastewater treatment.
- (4) Hydraulic engineering and flood control.
- (5) Sanitary sewer pumping..

#### 3. Features

- Pump body is made of cast iron and with high solids epoxy coating which offers the highest quality and performance.
- (2) Triangular handle is designed for easy handling on Guide Rail System (model above 5HP).
- (3) Oil Elevation Disk design in the oil chamber to ensure the mechanical seals lubrication and to extend the service life of pump.
- (4) Eco-friendly Food Grade Lubricant to keep wastewater applications a toxic free environment.

# 河見電機工業股份有限公司

HCP PUMP MANUFACTURER CO., LTD

屏東市屏東加工出口區經建路 33 號

No.33, Jingjian Rd., Export Processing Zone of Pingtung, Ping Tung City, Taiwan

TEL: +886-8-756-2345 FAX: +886-8-756-0927 E-mail: sales@hcppump.com.tw http://www.hcppump.com.tw

- (5) Non-clogging impeller designs:
  - A. U Type Vortex Impeller U type non-clogging impeller produces a vortex (whirlpool effect) which allows slurry, long fibrous materials and solid waste to pass through, without contact with the impeller.
  - B. P Type Vortex Impeller P type impeller is open and comes with one or two vanes. The impeller is excellent to use for waste materials to prevent clogging.
  - C. E Type Vortex
    Impeller –Enclosed channel
    impeller features high efficiency,
    large capacity, large solid
    passage and non-clogging.

### 4. Representative Performance

The Emergency Project of Seawater Desalination Plant, Hsinchu, Taiwan

## 5. Product Photo



6. Award (Certification) Project



## 7. Specifications and Functions

Model	Output	Discharge	Head	Standard
Model	HP(kW)	Inch(mm)	m	m <sup>3</sup> /min
AFx2.4x/4.4	0.5(0.4)	2"(50)	3.5~6.0	0.15~0.23
AFx2.8x/4.8	1(0.75)	2"(50)	5~8	0.2~0.3
AFx21.5x/41.5	2(1.5)	2"(50)~3"(80)	3.5~14	0.2~0.6
AFx22.2x/42.2	3(2.2)	2"(50)~3"(80)	5.5~17.5	0.2~0.6
AFx23.7xA/43.7	5(3.7)	3"(80)~ 4"(100)	10~20.5	0.5~1.0
AFx25.5x/45.5	7.5(5.5)	3"(80)~ 6"(150)	11~26.5	0.6~1.5
AFx27.5x/47.5	10(7.5)	3"(80)~ 6"(150)	14.5~34.5	0.6~1.5
AFx211x/411 AF-815A	15(11)	3"(80)~ 8"(200)	8.5~46	0.6~4.5
AFx415 AF-820	20(15)	4"(100)~ 8"(200)	13~28	1.0~4.5
AFx422 AF-1030S/1430	30(22)	4"(100)~ 14"(350)	6.5~37	1.0~14.0
AFx430 AF-1040/1440	40(30)	4"(100)~ 14"(350)	8.5~44.5	1.0~14.0
AF-1050/1650	50(37)	10"(250)~ 16"(400)	7.5~22	7.0~18.0
AF-1060/1660	60(45)	10"(250)~ 16"(400)	10~24	7.0~18.0
AF-1075	75(55)	10"(250)	30	7.0

# 河見電機工業股份有限公司

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TEL:+886-8-756-2345 FAX:+886-8-756-0927 E-mail:sales@hcppump.com.tw http://www.hcppump.com.tw

# SF/SA SERIES - SUBMERSIBLE STAINLESS STEEL PUMPS

#### 1. Structure and Principle

Auto-cut Protector: Automatic On/Off motor protector to prevent motor burn out due to high temperature and excess amperage draw. The Protector can revert when the motor temperature returns to normal. Auto-cut Protector is a standard component for pump 10HP or below.

High Efficiency Dry Motor: All stator coils are treated with insulating vanish procedures to achieve the best insulation, efficiency and durability.

Double Mechanical Seals: Superior abrasion resistant mechanical seal is manufactured with silicon carbide to ensure the best seal effect.

Epoxy Cable Base: An epoxy resin seal cable base prevents moisture from entering the motor through the core wires...

## 2. Purpose

- (1) Wastewater treatment in food and wine-making industry.
- (2) Wastewater treatment of acid fluid in gold mining, petroleum industry and dyeing industry.
- (3) Chemicals, low pH, corrosive and sea water applications.

#### 3. Features

- (1) Precision casting with the use of an advanced stainless investment casting method, produces the highest quality with a smooth surface finish.
- (2) Standard accessories include: cable with an epoxy resin sealed water-resistant cable base, Auto-cut motor protector, dual mechanical seals and lip seal design.
- Chemically protected Viton
   O-rings to handle acidic and corrosive fluids.
- (4) Pump hydraulic body made of corrosion resistant SUS316/SCS14 stainless steel material, to handle low pH value chemical media and/or seawater applications.

# 河見電機工業股份有限公司

HCP PUMP MANUFACTURER CO., LTD

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TEL: +886-8-756-2345 FAX: +886-8-756-0927 E-mail: sales@hcppump.com.tw http://www.hcppump.com.tw

- (5) Austenitic Stainless Steel (SUS300 series) is used in SF / SA series. SUS316 / SCS14 is better than SUS304 / SCS13 in water application of light acid-base.
- (6) pH4  $\sim$  10 (As reference at operating temperature range 0 -40°C).

#### 4. Representative Performance

Terminal KHH Wastewater Submersible Pump Replacement Project.

#### 5. Product Photo



6. Award (Certification) Project









## 7. Specifications and Functions

Model	Output HP(kW)	Discharge Inch(mm)	Head m	Standard m3/min
SFx/SA2.4A	0.5(0.4)	2"(50)	5.5~6.5	0.15
SFx/SA2.8A	1(0.75)	2"(50)	8~10	0.17~0.2
SFx/SA21.5	2(1.5)	3"(80)	8	0.4~0.6
SFx/SA22.2	3(2.2)	3"(80)	12.5	0.4~0.6
SFx/SA23.7	5(3.7)	3"(80)	17.5~20.5	0.5~0.6
SFx/SA25.5	7.5(5.5)	3"(80)~ 4"(100)	20~26.5	0.6~1.0
SFx/SA27.5	10(7.5)	3"(80)~ 4"(100)	27~35	0.6~1.0
SFx/SA211	15(11)	3"(80)~ 4"(100)	36~47	0.6~10

# 河見電機工業股份有限公司

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TEL:+886-8-756-2345 FAX:+886-8-756-0927 E-mail:sales@hcppump.com.tw http://www.hcppump.com.tw

## AR SUBMERSIBLE AERATOR

#### 1. Structure and Principle

The aerator makes use of the motor to directly drive the rotation of impellers, so as to induce a centrifugal force to suck in water at a low pressure. Vacuum is created at the impeller entrance to suck the air into the air-mixing chamber. After mixing water with the air, water is ejected at a fast speed due to the centrifugal force. In addition to causing effective convection loop, many fine air bubbles are also generated and the oxygen is dissolved into water while the air bubbles rise up slowly.

#### 2. Purpose

Water purification, water and sewage treatment, public hazard handling, oxygen supply for agricultural cultivation, and other various aerations of industrial wastewater.

#### 3. Feature

- (1) Directly driven by submersible motor, low noise and high efficiency.
- (2) Unique air-mixing chamber design, high air suction capacity, good mixing effect, aeration with the stirring function.

- (3) Adopts double layer mechanical seal, thus extending the motor life.
- (4) 12-way water radiator (14-way water radiator requires greater power) generates massive amount of air bubbles.
- (5) Meshed water entrance prevents the impellers from being jammed by foreign particles.
- (6) Guide rails may be installed for easier installation and maintenance.

#### 4. Product photo



# 川源股份有限公司 GSD INDUSTRIAL CO., LTD

新北市汐止區壞河街 206 號 No. 206, Huanhe St., Sijhih District, New Taipei City, Taiwan TEL: +886-2-2694-2732 FAX: +886-2-2694-2088 E- mail: gsd@gsd-pumps.com http://www.gsd-pumps.com

# JET AERATOR (JAX)

## 1. Structure and Principle

This jet aerator allows the water to flow through the nozzle base, which connect with the pump outlet, and be ejected into the air-mixing chamber at a high speed. As the water flows through the nozzle at a high speed, a negative pressure is generated to guide the air into the air-mixing chamber via the air guide tube to combine with the water flow. Subsequently, prior to ejecting as water, a patented static stirring device stirs and cuts the air bubbles into finer bubbles, which are emitted via an expansion tube, thus causing the stirring and aeration effects.

## 2. Purpose

Water purification, water and sewage treatment, public hazard handling, oxygen supply for agricultural cultivation, and other various aerations of industrial wastewater.

#### 3. Feature

 Highly efficient oxygen dissolving: unique air-mixing chamber and static stirring device design; high air suction capacity; well mixed with water; many fine air bubbles generated; high air dissolving rate.

- (2) Sufficient stirring: impellers generate pressures and eject strong water flow via the nozzle cause air-mixing, allowing the oxygen to move in the water with high efficiency and achieving a good stirring effect at the same time; the required flow speed of the active mud flow mav also maintained.
- (3) Quiet and noiseless: this set of machine is designed to operate in water at a low rotational speed and with low noise; the air entrance guide tube above the ground may be equipped with a silencer, other than that, no other silencer is required to reduce the cost.
- (4) Easy installation and maintenance: auto setter can be requested is available; easy installation and maintenance thus saving the operation cost...

#### 4. Product photo



# 川源股份有限公司 GSD INDUSTRIAL CO., LTD

新北市汐止區壞河街 206 號 No. 206, Huanhe St., Sijhih District, New Taipei City, Taiwan TEL:+886-2-2694-2732 FAX:+886-2-2694-2088 E- mail: gsd@gsd-pumps.com http://www.gsd-pumps.com

## SURFACE AERATOR

#### 1. Structure and Principle

This aerator makes use of the motor to directly drive the rotation of axial impellers so as to eject wastewater using guide tubes via guiding boards such that a thin water curtain (or water droplets) is formed. In addition to being in contact with the air while floating, water flow and massive amount of air bubbles are also generated when the water curtain drops to hit the liquid surface so as to increase the oxygen concentration in the water. Also, the water at the bottom is sucked to form a water loop, which serves as a stirring purpose.

#### 2. Purpose

Water purification, water and sewage treatment, public hazard handling, oxygen supply for agricultural cultivation, and other various aerations of industrial wastewater.

#### 3. Feature

- (1) Motor: motor is installed above the water ejection region; sealed fan cooling and class-F insulation.
- (2) Shaft: stainless steel.
- (3) Impeller: made of stainless steel.
- (4) Floating units: The casing of floating unit is composed of strengthened glass fibers and the inside of the unit is filled with high density polyethylene foam.

### 4. Product photo



# 川源股份有限公司 GSD INDUSTRIAL CO., LTD

新北市汐止區環河街 206 號 No. 206, Huanhe St., Sijhih District, New Taipei City, Taiwan TEL:+886-2-2694-2732 FAX:+886-2-2694-2088 E- mail: gsd@gsd-pumps.com http://www.gsd-pumps.com

# CAST MONO & MULTI-SECTION CENTRIFUGAL BLOWER

#### 1. Structure and Principle

A type of air machinery that utilises centrifugal compression to compress air to the required pressure.

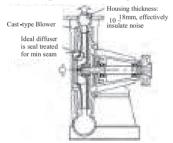
## 2. Purpose

High efficiency, low noise, no pulsation, air conveyed carrying no fuel, marginal vibration.

Applicable for incinerator air supply, flue-gas equipment air supply, mechanical processing, manufacturing, and various factory emissions.

## 3. Specifications and Functions

- (1) Air supply: over  $1 \sim 300 \text{ m}^3/\text{min}$ .
- (2) Pressure : up to  $500 \sim 9,000$  mmAq.
- (3) Horsepower :  $1 \sim 50 \text{ hp}$ .



#### 4. Product Photo



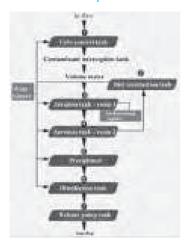
# 達晟工業股份有限公司 DA SHENG INDUSTRIALS CO., LTD

桃園市蘆竹區五福一路 50 巷 32 號 No.32, Ln. 50, Wufu 1st Rd., Luzhu Dist., Taoyuan City 338, Taiwan TEL:+886-3-352-8511 FAX:+886-3-352-2833

E - mail: mass.winner@msa.hinet.net http://www.dacheng.com.tw

# FRP PREFABRICATED WASTE-WATER TREATMENT EQUIPMENT

#### 1. Structure and Principles



#### 2. Features

(1) It enables you to shorten construction time in large scale and save space. This product can be completely assembled in factory. Only simple assembly is needed after at the installation site. Compared to traditional RC tanks, it saves 1/3 to 1/4 construction time.

- (2) It is easy to assemble and operate. Machine equipments used in this unit are also automatic; no manual operation is needed. Only simple regular maintenance is needed to maintain the quality of water to the release standard.
- (3) The whole unit can be installed underground. The unit can be placed on a RC structure platform before piping and earth filling works are carried out. After installation is completed, only a man-hole needs to be left on the surface of the ground. Therefore, the land-surface above can be landscaped or used for other purposes like parking for maximum land utilization.

#### 3. Product Photo



FRP Combo Settling Separation Type Waste-Water Treatment Tank

# 昇鴻國際開發有限公司

## SUN HOME INTERNATIONAL DEVELOPMENT CO., LTD

彰化縣溪湖鎮員鹿路 4 段 535 巷 29 號 No.29,Lane 535 Sec.4,Yuanlu Rd.,Shihu Jen,Changhua,Taiwan TEL:+886-4-882-9186 FAX:+886-4-882-5809

E-mail:sunhome.cl@msa.hinet.net http://www.fargreen.com.tw

# CAST RC, FRP SEWAGE TREATMENT FACILITY & SEWAGE, WASTEWATER EQUIPMENT

## 1. Structure and Principle

The product is a class 2 sewage treatment, employing aeration to purify water for building sewage to meet the legal release standards. The product is made of RC and FRP.

#### 2. Purpose

Building sewage treatment facility.

#### 3. Features

- (1) Easy installation, time and labor saving.
- (2) Low breakdown rate.
- (3) Easy to clean.

- (4) This product is designed with auto cleaning function that enables regular in-house cleaning without professional service.
- (5) The product is designed with a manhole for monitoring.
- (6) The facility requires only regular drain-off in every 6 ~ 12 months as required by law to restore the treatment efficiency to over 90 %.

#### 4. Specifications and Functions

Material: The product is made of RC and FRP.

Structure	Spec Daily Capacity CMD (n³/day)	L (cm)	W (cm)	H (cm)
RC sewage/10-person load	2.5	299	120	150
RC sewage/20-person load	5.0	600	120	150
RC sewage/6-person load	1.5	162	120	150
RC sewage/10-person load	2.5	280	120	150
RC sewage/15-person load	3.75	445	150	200
RC sewage/20-person load	5	396	160	150
RC sewage/40-person load	10	840	150	150
RC sewage/60-person load	15	ψ 250		
RC sewage/80-person load	20	ψ 250		
RC sewage/120-person load	30	ψ 250		
RC sewage/160-person load	40	ψ 250		

## 逢甲實業有限公司 FENG CHIA ENGINEERING CO.

台中市南屯區大正街 50 號 No. 50, Dajheng St., Nantun District, Taichung City , Taiwan TEL:+886-4-2462-1215 FAX:+886-4-2463-3312 E-mail:f4621215@ms36.hinet.net http://www.fgfg.com.tw

# PRE-FABRICATED FRP SEWAGE TREATMENT PLANT

#### 1. Structure and Principle

The vessels of FS serial products are made of Fiberglass-Reinforced Polyester (FRP), which include:

- (1) Primary Sedimentation Tank.
- (2) Contact Aeration Tank.
- (3) Settling Tank.
- (4) Disinfectant and Effluent Tank.

#### 2. Purpose

Applied to all kinds of buildings for treatment of domestic water. Reducing pollutions of effluent water in compliance with the Water Pollution Control Act.

#### 3. Features

- (1) Vessels, made of Fiberglass-Reinforced Polyester (FRP), this product is more stable, more convenient to use and safer compared to other wastewater treatment equipments.
- (2) Using the Contact Aeration Process to reduce water pollution speedily through the Bio-Film in the biofilter, which has higher specific surface area.

- (3) Reduce construction time and land area needed.
- (4) Corrosion-free all component are prefabricated in the factory.
- (5) Reduce pollution to domestic water stably and efficiently.

### 4. Specifications and Functions

4. Specifications and Functions						
Certification	Model	User	Capacity			
Yu-Chien No:0918	FS-AB10	10	2.5 CMD			
Yu-Chien No:0919	FS-AB20	20	5 CMD			
Yu-Chien No:0556	FS-AB30	30	7.5 CMD			
Yu-Chien No:0200	FS-AB40	40	10 CMD			
Yu-Chien No:0557	FS-AB50	50	12.5 CMD			
Yu-Chien No:0201	FS-BB100	100	25 CMD			
Yu-Chien No:0016	FS-B-B-30	120	30 CMD			
Yu-Chien No:0202	FS-BB160	160	40 CMD			
Yu-Chien No:0017	FS-B-B-50	200	50 CMD			

# 福崧實業股份有限公司 FU SUNG ENTERPRISE CO., LTD

台中市西屯區府會園道 169 號 5 樓之一

5F.-1, No.169, Fuhuiyuan Blvd., Xitun Dist., Taichung City, Taiwan

TEL: +886-4-2251-2222 FAX: +886-4-2251-3000 E-MAIL: service@f-s.com.tw http://www.f-s.com.tw

# CTO FILTER

#### 1. Structure and Principle

Natural coconut shell undergoes carbonization and high temperature activation treatment, so that the activated carbon is filled with pores, resulting in a lot of micropore volume and high surface area. Activated carbon particles with a large surface area have enough space for adsorbing pollutants. The size and distribution of the pores determine the activity. The strength of carbon's ability to remove pollutants.

## 2. Purpose

Remove peculiar smell in water, remove impurities, residual chlorine, trihalomethanes, pesticides and volatile organic compounds.

#### 3. Features

Natural coconut shell is an excellent material for manufacturing high-quality activated carbon, and has been certified by NSF.

- 4. Specifications and Functions 10"/20", Iodine value above 1,000.
- 5. Representative Performance
  - (1) Spain HIDRO 2021.04.
  - (2) U.S. ISPRING 2021.03.
  - (3) Taiwan Tianhe Drinking Water 2021.04.

#### 6. Product Photo



# 凡事康流體科技股份有限公司

#### FLUXTEK INTERNATIONAL CORP.

屏東市前進里屏東加工出□區經建路 21 號 No.21,Jingjian Road, Pingtung City, Taiwan TEL: +886-8-755-8557 FAX: +886-8-755-5055 E-mail: jacklan@fluxtek.com https://www.fluxtek.com

# 10"/20" BIG BLUE HOUSING

#### 1. Structure and Principle

- Cap: made of food grade material with selection of pressure release button and metal joint.
  - a. Pressure release button: help to release the water pressure and make it easier to separate the cap and cup.
  - b. Metal thread: Make the thread fitting tighter when assembly with metal connector.
- (2) Filter housing: Made of food grade material with reinforced design to provide higher strength.
  - a. Double seal (O-Ring): more efficiency in prevent leakage.

#### 2. Purpose

Household filtration, water tower filtration, water filling station and other large water consumption filtration

#### 3. Features

Withstand pressure of 375PSI, suitable for large water consumption.

4. Specifications and Functions 10"/20"

Maximum flow 50G.P.M

Maximum temperature resistance: 50

°C

Import and export: 1 inch

Material: PP

Maximum withstand pressure: 375PSI.

## 5. Representative Performance

- (1) Spain HIDRO 2021.04.
- (2) United States ISPRING 2021.03.
- (3) Taiwan Ruitong Water Technology 2021.03.

#### 6. Product Photo



# 凡事康流體科技股份有限公司

#### FLUXTEK INTERNATIONAL CORP.

屏東市前進里屏東加工出口區經建路 21 號 No.21,Jingjian Road, Pingtung City, Taiwan TEL:+886-8-755-8557 FAX:+886-8-755-5055 E-mail:jacklan@fluxtek.com https://www.fluxtek.com

## FRP SCRUBBER/TANK

#### 1. Structure and Principle

The method employs resin as the base material and glass as reinforcement in forming barrel tank via winding; resin is selected according to the intended liquid property. The barrel interior is built with anticorrosion coating and additional reinforcement; the former is capable of withstanding any chemical, whereas the latter is to bolster barrel strength.

## 2. Purpose

- (1) Tank.
- (2) Reactive tank.
- (3) Delivery tank.
- (4) Wastewater tank.
- (5) Suction tank.
- (6) Cleaning tank.
- (7) Electrolysis tank.
- (8) Neutralization tank.
- (9) Mixing tank.
- (10 Pure water tank.

#### 3. Features

- (1) Capable of resisting strong acids and alkalis.
- (2) Super strength.
- (3) Light weight.
- (4) Can be customized to client's requirement.
- (5) Anti-corrosion, cold and hot temperature resistant.

#### 4. Specifications and Functions

The product comes in vertical and horizontal varieties in the range of  $500\text{-}4,000\,\text{V}$  diameter and 0.5-150 tons. Function: Distinguished for storing water and chemicals.

#### 5. Product Photo



# 良機實業股份有限公司 LIANG CHI INDUSTRY CO., LTD.

## CHEMICALS TANK

#### 1. Structure and Principles

- Fabricated by machine winding The tank is light-weight with smooth internal surface. It has stable quality and high strength.
- (2) The strengthened layer is fabricated with the best resin construction. It is durable, heat-resistant, and coldness-resistant no distortion under high temperature and no cracking in low temperature.

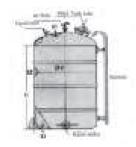
_`	cracking in low temperature.					
	(a) Weight ratio	1.7~1.8				
Г	(b) Tensile strength	8.0~18kg/mm				
	(c) Tensile elasticity rate	750~1,500kg/mm				
	(d) Compression strength	12~22kg/mm				
	(e) Bend strength	20~30kg/mm				
ſ	(f) Bend elasticity rate	650~1,500kg/mm				

(a) Normal temperature range	-50~+120 °C
(b) Heat ratio	0.29~0.32kcal/kg °C
(c) Heat conductivity	0.2~0.3kcal/kg°C
(d) Linear expansion coefficient	(15~30)*10 /°C

#### 2. Purpose

- General chemical industry: storage tank, reaction tank, transfer tank, waste-water tank.
- (2) Steel industry: soaking tank, washing tank.
- (3) Non-metal industry: electrolytic cell, electrolyte adjustment tank, washing tank, waste-liquid tank, paper pulp.
- (4) Fiber industry: bleaching tank, washing-liquid tank, material tank, neutralization tank, washing tank, cleaning tank, soaking tank.
- (5) Food, medical material industry: material storage tank, transfer tank, material-mixing tank, pure-water tank.

## 3. Specifications and Functions



FRP Horizontal-type Anti-corrosion Tank

# 昇鴻國際開發有限公司

## SUN HOME INTERNATIONAL DEVELOPMENT CO., LTD.

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E-mail:sunhome.cl@msa.hinet.net http://www.fargreen.com.tw

## OCTAGONAL PLASTIC SEWAGE WELL

#### 1. Structure and Principle

The well is made by special injection moulding. It is designed with multiple pipe connection for leakage prevention. It is light and easy to install.

## 2. Purpose

Sewer system, telecommunication and power manhole, community sewer pipe connection, roof corner catchments.

#### 3. Features

- (1) One-piece compounded mounding of plastic.
- (2) The well is one-piece mounded with pipe apertures shields, which may be knocked off for connection as required. Installation is done by layer and secured with stainless steel It is fitted with leak bolts. prevention rubber for flow adjustment that enables smooth flow. Therefore. it more convenient to install than RC.
- 5. Product Photo



- (3) Manually transportable.
- (4) The lightweight design enables easy manual transport installation and is not constrained bv narrow passages, hence cuts down labor and time costs Moreover, rubbers are fitted between the well and the waste water pipes to prevent leakage.

## 4. Specifications and Functions

Inner diameter 600mm(height of assembly model may be adjusted).

I	Cover		Adjustable	4"	8"	Base	Adjustable	Adjustable
I		Layer	Layer				Layer	Layer
	150	150	50	300	300	80	20	30

# 相同企業有限公司 SIMILAR ENTERPRISE CO.,LTD

台中市烏日區溪南路一段 506 巷 485 號

No. 485, Lane. 506, Sec. 1, His Nan Rd., Tong Yang Village, Wu Jih District, Taichung City, Taiwan TEL: +886-4-2335-2827 FAX: +886-4-2335-2659 E-mail: same66@ms16.hinet.net http://www.similar.com.tw

## KITCHEN SEWAGE PIPING BOX

#### 1. Structure and Principle

Formed by plastics injection, able to connect to sewage pipeline in diverse direction; use leak-proof connector to keep from leakage; light in weight and easy in construction.

#### 2. Purpose

Sewage system, telecommunication and power cable maintenance conduit, connection of community home sewage and rainwater ditch.

#### 3. Features

Complex plastics are sued: great strength. Its resistance to pressure is tested up to reach 12 tons. The design has 4" \(\psi\) and 8" \(\psi\) bearings on all its sides So that the housing can vertically be connected to the water pipes on all of its sides and the connecting pipes do not need to bent or processed.

## 4. Specifications and Functions

Pavement layer	Pavement layer		Ø100mm 6 hole, mid layer	Ø200mm 4 hole, mid layer
25	100	300	150	255

#### 5. Product Photo



## 相同企業有限公司 SIMILAR ENTERPRISE CO.,LTD

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# OZONE GENERATOR & HIGH-PERFORMANCE MIXING FACILITIES

#### 1. Structure and Principle

The primary function of ozone is for bacteria extermination. advanced oxidation. discoloration and preservation. The bacteria killing strength of ozone is 2000 times higher than that of chlorine. In general advanced oxidation, ozone is only second to F2. OH and O. ranking number four; the half-life cycle is approximately 22 minutes with benefits of no residue, no accumulation and can be produced at any given time. It is extensively applied in water treatment such as cooling tower, swimming pool, drinking water. industrial wastewater, domestic wastewater, semiconductor wafer washing and air cleaning.

#### 2. Features

Applied in various types of water and air treatment.

#### 3. Purpose

- (1) Ozone generator
  - A. Unique double quartz tube design

- a. High-voltage discharge. Ozone produced not only has high purity and stability, it does not yield any impurities and can be continuously used for long duration without having to clean the tubes.
- Module design. Modular numbers can be adjusted to needs for power saving, and require no operation halting for repair. It saves a lot of costs to buy another machine for standby.
- c. Self-owned patent right
- B. Complete ozone generator models
  - a. Ozone production range from 2g/hr to over kilograms.
  - b. The gas-fed can be from air or oxygen. Under the same gas flow rate; AirTree can produce more ozone than the other makers

# 愛樹科技股份有限公司

AIRTREE OZONE TECHNOLOGY CO., LTD.

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- c. Provide the most complete system design and install the related accessories. To achieve the stable output and safe operation.
- d. Acquire the international certificate CE and SEMI.

  The best quality is no doubt.
- C. Simple operation design
  - a. Built-in communication interface : 4-20mA signal output can be connected to central control for remote controlling.
  - b. Touch-screen man/machine interface: easy to operate and configure; bilingual panel displays in Chinese and English.

- (2) High-performance mixer
  - A. Negative pressure sucks in ozone, dissolving evenly in water to form 0.2mm micro bubbles that float in water to attain 90% dissolution rate.
  - B. Gas-liquid separator: Separate the undissolved ozone and water, and then recycle ozone for remixing to bolster efficiency; prevent end dispersion to save the costs for additional devices ofozone destructor

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