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# **Total Solution** Provider

in environmental equipment

**Decanter Type Centrifuge** (Dehydrator, Thickener, Separator) **Multi-Stage Chemical Wet Scrubber** 



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Adding value to precious environment

Company specialized in the environmental machine field promoting **the Excellent Quality** with 21st century's advanced technology and **the Supreme After Service.** 

Ewha Eco System Co.,Ltd is a manufacturing company built in 1997 and the we are specialized in the Decanter Type centrifuge and Multi-Stage Chemical Wet Scrubber. We have technology accumulated through continuous research and development and rich site supply performance.

We integrate such technology to our product and provide it to every key environment industry fields. We are also acknowledged of our capability through vast amount of export to the technology leading nations such as Germany, Japan, and Singapore.

Ewha Eco System Co., Ltd. will be with customer as the 'Total Solution Provider' responsible for technology development, designing, construction, test operation, and thorough follow-up management. We will do our best to become a reliable company under the goal of manufacturing and supplying the products superior to any other companies in the world.

## EWHA (쭈)이와에코시스템

EWHA ECO SYSTEM CO., LTD.

## introduce

## Management Philosophy

Becoming **the Excellent Company** with constant technology development and customer satisfaction.

-Ewha Eco System will put top priority on the customer satisfaction through constant technology development and thorough after service and will contribute to society as the reliable company.

### Core Value

## Core Competency Cultivation, Continuous Innovation, Trust Based Management

### Strategic Objective

Arranging the cornerstone of the medium-and long-term development technology based on **"Standardization, Simplification, and Quality Improvement"** and focusing on cultivating the development model for value creation.

# **Major History**

## WHA (꾸)이와에코시스템 EWHA ECO SYSTEM CO., LTD.

#### 2017

- Acquired CEP performance certification (Simultaneous Multi-Stage Chemical Wet Scrubber from Ministry of SMES and Startups) 2016
- Awarded by the Minister of Ministry of Land, Infrastructure and Transport (Water supply and sewage business development contribution)
- Awarded by the mayor of Yangsan (Fundamental environment facility's odor improvement contribution)
- Extended NEP certificate on the Chemical Wet Scrubber issued by the Ministry of Trade, Industry and Energy

#### 2015

- Certification of Quality Management System ISO 9001
- Certification of Environment Management System ISO 14001
- Acquired excellent product designation (Internal gear box type) by the Public Procurement Service
- Awarded by the Minister of the Ministry of Trade, Industry and Energy (New technology commercialization contribution)

#### 2013

- Acquired NEP certificate on the Chemical Wet Scrubber by the Ministry of Trade, Industry and Energy
- Acquired performance certificate (Screw Decanter) by the Ministry of SEMS and Startups and Ministry of Trade, Industry and Energy 2009
- Increased the capital to 960 million won
- Acquired construction business registration certificate of mechanical facility business.
- Acquired performance certificate (Multi-Stage Chemical Wet Scrubber) by the Ministry of SEMS and Startups
- Established affiliated research facility

#### 2008

- Acquired NEP certificate on the Screw Decanter by the Ministry of Knowledge Economy

## 2007

- Acquired certificate on INNOBIZ for technology innovation

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- Acquired performance certificate on the Screw Decanter by the Ministry of SEMS and Startups

#### 2006

- Moved head office and factory(Yanggam-myeon, Hwaseong)
- Awarded on good business man (Chairman award by the Korea Federation of SEMS)
- Acquired certificate on excellent supply product (Public Procurement Service)

#### 2005

- Acquired quality certificate on environmental facility by the Ministry of Trade, Industry and Energy (Screw Decanter)
- Awarded by the Minister of Ministry of Trade, Industry and Energy(New technology development contribution)

#### 2001

- Changed corporate body to Ewha Eco System Co., Ltd.

#### 1999

- Registered patent on the centrifugal separator
- Jointed the machinery association in Incheon and Gyeonggi

#### 1998

- Contracted OEM export with BAUER in Germany on the centrifugal separator for civil engineering
- Designated as the new technology by the Ministry of Land, Intrastructure and Transport (Centrifugal separator)
- Increased the capital to 500 million won

#### 1997

- Designated as the new technology of the centrifugal separator for civil engineering (Korean Society of Civil Engineers)
- Completed development of the centrifugal separator for civil engineering
- Awarded bronze prize on South Korean Patent Contest (Centrifugal separator for civil engineering)

# Screw Decanter



Performance Certificate by Ministry of SEMS and Startups, No. 15-1052

Excellent Supply Product Certificate by Public Procurement Service No. 2015160

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# **Decanter Type Centrifuge**

(Dehydrator, Thickener, Separator)

## What is Decanter Type Centrifuge?

Decanter Type Centrifuge is a device designed to separate the suspending solids contained in various sewage and wastewater from the liquid by centrifugal force and density difference of the subject. It is divided into decanter type centrifuge (dehydrator, thickener, and separator) depending on the purpose and performance.



**Basic structure and principle** 

Decanter Type Centrifuge is a device for solid-liquid separation of the sludge which is a mixture of different matters with different density.

Sludge flows into the high-speed rotating inner bowl shell through inlet pipe. By the powerful centrifugal force acting on the bowl shell, the heavy density matter moves to bowl shell and the lighter density matter moves to inside.

The Filtrate is discharged from the Filtrate Discharge Dam which is within the diameter range of bowl, not exceeding the separation layer. Cake is transferred to cake discharge bush and is discharged due to difference of speed in scroll.







### Application

#### 1. Sludge Dehydration – Solid-liquid separation for dehydration (Screw decanter)

Applied to dehydrating sludge of the sewage, wastewater treatment plant/ Dehydrating sludge of excreta and livestock wastewater/ Dehydrating the solid of food wastewater

#### 2. Sludge Concentration – Solid-liquid separation for concentration (Screw Thickener)

Applied to sludge concentration in the sewage, wastewater treatment plant in order to increase solid concentration.

#### 3. Sludge Separation- Solid-liquid Separation depending on purpose (Screw Separator)

#### \*Common Solid-liquid Separation

-A wet distribution method. Applied to ultrafine solids such as calcium carbonate sludge and various pigment sludge in manufacturing process.

#### \*Pure Solid-liquid Separation

-Removes fine suspended particle. Applied to solid-liquid separation for the pure solid-liquid separation utilization.

### Feature

#### 1. Processing Large Amount

Possession of various model capable of processing maximum amount of 70m<sup>3</sup> per hour.

## 2. High Efficiency/ High Performance

Accomplishment of solid-liquid separation performance for the purpose through highly efficient dehydration and accurate polarization point operation.

#### 3. Small Installation Area and Simple installation

Convenient and easy installation process through small installation area with compact device and integrated component

#### 4. Convenient Maintenance

Does not use filtering medium and no time or money is wasted on maintaining it. Convenient maintenance without cleaning process during operation.

#### 5. Reliable Serial Autonomous Operation

Available of serial autonomous operation as it can obtain constant level of solid-liquid separation result from the selfregulating feature even in the circumstance of changing inflow sludge.

#### 6. Long Lifespan and Reduced Maintenance Cost

Reduced maintenance cost for the long lifespan through application of the best structure and corresponding material for the wear and corrosion

# Screw Decanter



Performance Certificate by Ministry of SEMS and Startups, No. 15-1052

Excellent Supply Product Certificate by Public Procurement Service No. 2015160

# **Decanter Type Centrifuge**

(Dehydrator, Thickener, Separator)

## **01/ Horizontal Structure**

The horizontal structure screw decanter is a new concept screw decanter newly developed in 2016. It arranges main driving motor and speed motor in horizontally intensive structure to minimize the occurrence of noise and vibration.



## **Strength of Horizontal Structure**

\*Lowers the center of load of the device by arranging main drive motor and back drive motor in horizontally intensive structure. It enables stable operation and also improves operation environment with less noise and vibration.

\*Enhanced stability and durability through low frame height and improved solidity.

\*Enhanced cake dehydration efficiency through extended torque value regulating range for scroll through tension dispersion of the driving part.

\*Enhanced lifespan through minimized bending load between axes with left and right placement of reduction gear and pulley part.





Invention Patent No. 10-0740608 Invention Patent No. 10-0974949 Invention Patent No. 10-0993173 Invention Patent No. 10-1209520

Invention Patent No. 10-1321078 Invention Patent No. 10-1433308 Invention Patent No. 10-0948462 Invention Patent No. 10-0974951 Invention Patent No. 10-1008516 Invention Patent No. 10-1231066 Invention Patent No. 10-1422567



## Vertical Structure Screw Decanter VS Horizontal Structure Screw Decanter







Classificat	ion Item	Vertical Structure Type	Horizontal Structure Type	Features of Horizontal Structure Type Screw Decanter
Stability	Frame Height	High	Low	Minimized noise/ vibration through low central structure
	Frame Extent	Narrow	Wide	Stable operation through wide frame structure with distant weight load point
	Frame Intensity and Natural Frequency	Low	High	Safety and minimized possibility of resonance through improved solidity and natural frequency
	Connecting Structure of Driving Pulley	Up and Down	Left and Right	Minimized bending load between axes with left and right placement of reduction gear and pulley part.
	Motor Type	Flange Type	Foot Type	Changed to Foot Type to prevent motor deflection
Usability	Motor Arrangement Method	Vertical Assembly	Horizontal Assembly	Easy maintenance of driving part
	Maximum Facility Height	High	Low	Minimized structure and required space

# Screw Decanter



Performance Certificate by Ministry of SEMS and Startups, No. 15-1052

Excellent Supply Product Certificate by Public Procurement Service No. 2015160

# **Decanter Type Centrifuge**

(Dehydrator, Thickener, Separator)

## 02/ Internal reduction gear box type



Built-in reduction gear type decanter (Patent No. 10-0974949) Miniaturized screw decanter (Patent No. 10-0974951)

Internal reduction gear box type decanter is a high-tech screw decanter developed in 2010. The external gear box, source of vibration in the existing screw decanter, is directly attached to the bowl and it prevents the vibration occurrence. It also prevents the malfunctioning in advance and has compact size.

\*Development of internal gear box type decanter, vibration of cantilever structured external reduction gear.

\*Weight lightening and improved durability of reduction gear through development of reduction gear for screw decanter.

\*Enhanced dehydration performance through stable high-speed operation by the improved structural vibration.



## Difference from the Existing Screw Decanter and Strength

\*No reduction gear influencing the external vibration of the supporting bearing.

\*Reduction gear is built in the bowl and it allows for the precise correction of dynamic balance and minimizes vibration during the high-speed rotation.

\*Minimized vibration allows for increased speed of screw scanter and improves the performance of the decanter.

\*The solution for vibration increase source drastically extends the device lifespan.

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*Compact device with built-in reduction gear
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Invention Patent No. 10-0740608 Invention Patent No. 10-0974949 Invention Patent No. 10-0993173 Invention Patent No. 10-1209520 Invention Patent No. 10-1321078 Invention Patent No. 10-1433308 Invention Patent No. 10-0948462 Invention Patent No. 10-0974951 Invention Patent No. 10-1008516 Invention Patent No. 10-1231066 Invention Patent No. 10-1422567



## 03/ External Exchanging Multiple Bush

## Extended lifespan and improved performance by changing the cake discharge caliber and exchanging the bush on site according to sludge characteristic

-Discharge caliber is changed by exchanging liner and bush within the same bush housing



## Importance of Solid's Discharge Bush

\*Among the screw decanter parts, discharge bush has the most wear

\*Uneven wear of discharge bush causes vibration of high-speed bowl and causes malfunctioning

\*Constant operation in the excessive vibration state caused by the unavailable on-site bush exchange leads to increased number of malfunctioning and accidents.



# Screw Decanter

# **Decanter Type Centrifuge**

(Dehydrator, Thickener, Separator)



Screw decanter equipped with distribution room of blockage prevention structure (Invention Patent No. 1231066)

Performance Certificate by Ministry of

Excellent Supply Product Certificate by Public Procurement Service No. 2015160

SEMS and Startups, No. 15-1052

## 04/ Sludge Inflow Hub of Blockage Prevention Structure

\*Sludge discharge is easy since hub structure is free from blockage and vortex.

\*Since there is no sludge back-streaming, hub is not damaged by the eccentricity of feed pipe.

\*Short feed pipe allows for the least damage in feed pipe during operation.



## 05/ Improved Wear-Resistance Performance of Scroll (Tungsten Powder Thermal Spray, Super Hard Tile)

In ordinary sludge, tungsten powder thermal spray is practiced to improve the wear-resistance performance of scroll. When inflowing vast amount of highly worn out sand, the interlocking method technology of attaching the super hard tile to prevent wear is applied.





Invention Patent No. 10-0740608 Invention Patent No. 10-0974949 Invention Patent No. 10-0993173 Invention Patent No. 10-1209520 Invention Patent No. 10-1321078 Invention Patent No. 10-1433308 Invention Patent No. 10-0948462 Invention Patent No. 10-0974951 Invention Patent No. 10-1008516 Invention Patent No. 10-1231066 Invention Patent No. 10-1422567



## **Specification**

## Screw Decanter (Dehydrator)

\*Processing capacity may vary according to inflow concentration

Standard	Capacity(m³/h)	G-force	Motor(kw)	Size(L x W x H mm)	Weight(Kg)
EWHA 250MTDI	2~5	2,000~2,500G	7.5/(1.5)	2,200×750×800	2,000
EWHA 300MTDI	5~8	2,000~2,500G	15/(2,2)	2,500×870×830	2,500
EWHA 350MTDI	8~15	2,000~2,500G	18,5/(3,7)	2,800×1,000×950	3,200
EWHA 400MTDI	15~20	2,000~2,500G	30/(7.5)	3,300×1,150×1,100	4,000
EWHA 450MTDI	20~25	2,000~2,500G	45/(11)	3,500×1,250×1,180	5,000
EWHA 500MTDI	25~30	2,000~2,500G	55/(15)	3,850×1,400×1,420	5,500
EWHA 550MTDI	30~40	2,000~2,500G	55/(15)	4,500×1,420×1,420	6,500
EWHA 620MTDI	40~50	2,000~2,500G	75/(22)	4,900×1,720×1,600	7,500
EWHA 650MTDI	45~55	2,000~2,500G	75/(22)	5,050×1,800×1,650	8,500
EWHA 720MTDI	55~70	2,000~2,500G	90/(22)	5,400×1,900×1,700	9,500

## **Screw Decanter (Thickener)**

\*Processing capacity may vary according to inflow concentration

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Standard	Capacity(m³/h)	G-force	Motor(kw)	Size(L x W x H mm)	Weight(Kg)
EWHA 250MTTI	2~5	2,000~2,500G	7.5/(1.5)	2,200×750×800	2,000
EWHA 300MTTI	5~8	2,000~2,500G	15/(2.2)	2,500×870×830	2,500
EWHA 350MTTI	8~15	2,000~2,500G	18.5/(3.7)	2,800×1,000×950	3,200
EWHA 400MTTI	15~20	2,000~2,500G	30/(7.5)	3,300×1,150×1,100	4,000
EWHA 450MTTI	20~25	2,000~2,500G	45/(11)	3,500×1,250×1,180	5,000
EWHA 500MTTI	25~30	2,000~2,500G	55/(15)	3,850×1,400×1,420	5,500
EWHA 550MTTI	30~40	2,000~2,500G	55/(15)	4,500×1,420×1,420	6,500
EWHA 620MTTI	40~50	2,000~2,500G	75/(22)	4,900×1,720×1,600	7,500
EWHA 650MTTI	45~55	2,000~2,500G	75/(22)	5,050×1,800×1,650	8,500
EWHA 720MTTI	55~70	2,000~2,500G	90/(22)	5,400×1,900×1,700	9,500

### Screw Decanter (Separator- Fine Concomitant Processor)

		FIOCESSING	capacity may vary a		cosity, pressure, weight)
Standard	Capacity(m³/h)	G-force	Motor(kw)	Size(L x W x H mm)	Weight(Kg)
EWHA 250MTS	5~8	1,800~2,500G	5,5/(1,5)	1,850×550×450	1,800
EWHA 300MTS	8~15	1,800~2,200G	7.5/(2.2)	2,000×600×500	2,000
EWHA 350MTS	15~20	1,800~2,200G	18,5/(3,7)	2,500×855×825	2,500
EWHA 400MTS	20~25	1,800~2,200G	30/(7.5)	2,900×1,150×1,100	3,500
EWHA 450MTS	25~30	1,800~2,200G	45/(11)	3,550×1,400×1,450	5,000
EWHA 500MTS	30~40	1,800~2,200G	45/(11)	4,600×1,700×1,450	5,500
EWHA 600MTS	40~50	1,800~2,200G	55/(15)	5,200×1,900×1,720	7,000
EWHA 720MTS	50~60	1,800~2,200G	75/(22)	5,400×2,050×1,850	8,000

\*Above specification may change from our company's constant research and development activity.

\*For small and large model not specified in above data, please contact the company.





Invention Patent No. 10-1032596 Invention Patent No. 10-1006479 Invention Patent No. 0740608

Thickened sludge decanter is a device which is able to directly dehydrate the excess sludge of low concentration generated in the sewage and wastewater treatment plant without separating sludge thickener. It is a high-tech device available of drastically decreasing the expense for the excess sludge facility and device.

## **Structure and Principle**

\*Adds cohesive agent to inflow sludge of low concentration in the thickener and condenses the solid to make it flock \*The flocked sludge is condensed on a proper concentration suitable for screw decanting. The condensed sludge is supplied to screw decanter by the feeder attached to the side \*Overall dehydration performance is enhanced since the sludge inflow

into screw decanter in condensed state and skipping the condensation action is possible

## Feature

1. Largely improved process through making binary condensation and dehydration process into single process

\*One-step condensation and dehydration process leads to largely improved process

\*Expenses for installing the facilities such as civil engineering structure, transfer pump, and pipe are reduced since there is no sludge thickening impound process

\*Minimized installation space since the space for mechanical thickener is not needed due to the single process

\*Convenient maintenance and improved efficiency with single process \*Minimized power consumed for sludge processing process \*Innovative process improvement

#### 2. Energy cost reduction

\*Power consumption is largely decreased since condensation device needs little power and the decanter capacity is under 50%.



Utility Model No. 20-0354977 (None-stop thickened sludge decanter)

## EWHA (쭈)이와에코시스템 EWHA ECO SYSTEM CO., LTD.

#### 3. Enhanced dehydration efficiency of screw decanter

\*The percentage of moisture content in dehydration cake is improved by 2~5 % compared to other type of thickened sludge. Since it inflows to decanter in solid flock state during the submerged condensation process, the efficiency of solid-liquid separation by centrifugal force is enhanced leading to higher decanter



**Condensation Flock State** 

Thickened sludge state which flocked in thickening tank and overflows into decanter



**Dehydration Cake** 

Guarantees less than 80 % of moisture content in dehydration cake in advance treatment pure excess sludge



Supernatant Liquid of Decanter

98% of solid recovery rate in screw decanter by applying thickener. Discharges clear supernatant liquid

## **Application**

\*Advance treatment of wastewater treatment plant. Direct dehydration of excess sludge \*Improved performance (percentage of moisture content) of the existing screw decanter \*Dehydration of waste liquid from the food treatment plant

\*Direct dehydration of various low concentration sludge

## **Specification**

Standard	Capacity(m <sup>*</sup> /h)	Motor(kw)	Size(L x W x H mm)	Weight(Kg)
EWHA NTD-10	5~10	11.5 (2.5 / 9)	3,400 x 1,200 x 1,200	3,200
EWHA NTD-20	10~20	16.2 (3.0 / 13.2)	3,700 x 2,000 x 1,600	4,600
EWHA NTD-30	20~30	41.2 (3.7 / 37.5)	4,200 x 2,400 x 1,600	5,200
EWHA NTD-40	30~40	48.9 (4.4 / 44.5)	4,800 x 2,700 x 1,700	6,500
EWHA NTD-50	40~60	77.4 (7.4 / 70)	5,700 x 3,300 x 1,950	8,600

\*Processing capacity is based on approximately 1 % of inflow concentration.

\*Above specification is the standard and it may vary depending on the performance improvement.

Multi-Stage Gas Absorption Device



NEP certificate (NEP-MOTIE-2013-012, Ministry of Trade, Industry and Energy)

# **Multi-Stage Chemical Wet Scrubber**



## Differentiated highly efficient Chemical Wet Scrubber with NEP certificate from the Ministry of Trade, Industry and Energy

- \*Accomplished under 150 complex odor
- \*Excellent conformability for odor gas purification
- \*Reduced pharmaceutical spending on neutral reaction
- \*Minimization of installation place





Invention Patent No. 10-1203420 Invention Patent No. 10-1232603 Invention Patent No. 10-123725 Invention Patent No. 10-1354444 Invention Patent No. 10-1485320 Invention Patent No. 10-1555672 Invention Patent No. 10-1587597 Invention Patent No. 10-1587598 Invention Patent No. 10-0820845



Performance certificate No.15-1052, Ministry of SEMS and Startups)



## Feature

It is a highly efficient Wet Scrubber technology which turns single stage to multi-stage and circulates more than two cleaning solutions separately and purifies the solutions through neutralization and oxidation reaction with odor gas. (Guarantees 200~300 dilution rate for complex odor)



# 1. Maximizes Deodorization efficiency with powerful vortex and bubbling from submerged jet nozzle and collision plate



\*Increases efficiency through maximized bubble effect caused by jet nozzle and collision plate

\*Prevents nozzle blockage with powerful vortex caused by the collision to collision plate.

\*By submerged spray, it eliminates foreign substance and dust within odor gas

# 2. Technology for reducing cleaning chemical expense and enhancing efficiency through chemical dosing conducted by pH control program





Invention Patent No. 10-1237725

\*Injects chemical intermittently with time difference and matches pH value to actual value. Reduces chemical expense and solves side effect caused by excessive dosing



NEP certificate (NEP-MOTIE-2013-012, Ministry of Trade, Industry and Energy)

# **Multi-Stage Chemical Wet Scrubber**

## 3. Perfect separation technology of cleaning solution (one-liquid and two-liquid)

#### Perforated plate spray feature of one-stage cleaning solution

\*The circulating cleaning solution spray implements one-stage secondary deodorization by using the Full Cone nozzle at the opening of perforated plate

\*The foam is removed by the cleaning solution spray in order to prevent the foam generated during the onestage jet nozzle cleaning from spraying in two stages and mixing with second-stage cleaning solution



Invention Patent No. 10-1232603





#### One-stage cleaning solution mist overflow prevention feature of collision type demister

\*Collision type mist collecting facility which prevents the cleaning solution within the mist caused by the bubbling and spray of one-stage cleaning part from overflowing to second stage.

\*In collision type mist collecting facility, the collecting efficiency is over 95% within the particles over 20um.

#### Second-stage cleaning solution drop prevention feature of eaves type cleaning solution collecting ditch

\*Eaves type two-stage cleaning solution collecting structure and baffle technology for vortex prevention are applied. The two-stage liquid prevents from running downward through gas passage





Invention Patent No. 10-1203420 Invention Patent No. 10-1232603 Invention Patent No. 10-123725 Invention Patent No. 10-1354444 Invention Patent No. 10-1485320 Invention Patent No. 10-1555672 Invention Patent No. 10-1587597 Invention Patent No. 10-1587598 Invention Patent No. 10-0820845



Performance certificate No.15-1052, Ministry of SEMS and Startups)



## Application



## Performance

Application	Inflow Odor Concentration (Air Dilution)	Gas Absorption Device Outlet Concentration (Air Dilution)	Discharge Criteria (Air Dilution)
Wastewater Treatment Plant	1,000~-2,000	Less than 200	Less than 500
Sanitary Treatment Plant	1,500~3,000	Less than 200	Less than 500
Excreta and livestock- wastewater treatment plant	2,000~4,000	Less than 200	Less than 500
Waste Collection System	1,000~1,500	Less than 200	Less than 500
Food Treatment Plant	2,000~4,000	Less than 300	Less than 500

## **Specification**

Standard	Capacity (m³/min)	Installation Area(mm)	Cycle Quantity(m <sup>*</sup> /min)
MSAT050S	50	1,300 x 1,800	Each Stage 0.2
MSAT100S	100	1,800 x 2,300	Each Stage 0.4
MSAT200S	200	2,500 x 3,000	Each Stage 0.8
MSAT300S	300	3,000 x 3,500	Each Stage 1.2
MSAT400S	400	3,500 x 4,000	Each Stage 1.6
MSAT500S	500	3,900 x 4,400	Each Stage 2.0
MSAT600S	600	4,300 x 4,800	Each Stage 2.4
MSAT800S	800	4,800 x 5,300	Each Stage 3.2
MSAT1000S	1,000	5,000 x 6,000	Each Stage 4.0
MSAT1500S	1,500	7,000 x 10,000	Each Stage 6.0
MSAT2000S	2,000	10,000 x 15,000	Each Stage 8.0

After Service and Repair Service

# **A/S & MAINTENANCE**

## **Differentiated Test Operation before Releasing**



Ewha Eco System Co., Ltd. with unfailing after service self-developed 'Simulation Machine' to ensure thorough after service for the product. The simulation machine is designed to be 'Adjustable Frame', and the frame can be adjusted in various sizes. Through thorough test operation, the simulation machine verifies the performance of the product and identifies noise and vibration for high-quality product release.

## After Service of Ewha Eco System



No-Load Test before Releasing



Alignment Adjustment



\*Ehwa Eco System Co., Ltd. will do our best to provide '**Cost Reduction**' and '**Keep the Delivery Date**' to compensate the trust.

## EWHA (꾸)이와에코시스템 EWHA ECO SYSTEM CO., LTD.



## Site Inspection and After Service

NO	Inspection Content	Corrective Measure	Notes
1	-Grease amount inspection	-Replenishment for insufficient grease	
2	-Grease injection hose inspection	-Removal of hose if air exists between damaged part and middle part of hose	
3	<ul> <li>-Vibration inspection on main body</li> <li>-Noise inspection</li> <li>-Abnormal current figure inspection</li> <li>-Main motor's RPM, back reduction motor's</li> <li>RPM, speed value</li> </ul>	-Main bearing inspection -Screw blade wear check -Inflow concentration check -Tension check on motor connecting belt	
4	-Raw water inflow flux inspection	-Adjustment of pump's RPM	-Inflow influx should be constant during operation
5	-Wash water flux inspection	-Adjustment of influx adjustment valve (same as inflow influx)	
6	-Rinsing water flux inspection	<ul> <li>-Adjustment of influx adjustment valve</li> <li>(less than 5m<sup>3</sup>/h)</li> </ul>	

## **Repair Process for Factory Receiving**

ltem	Repair Content	Purpose
Bowl Repair	Processing and balancing Bowl	Restoration of Bowl imbalance
Conveyor Repair	Screw cultivation initial thermal spray	Restoration of imbalance caused by screw wear
Bearing and Consumable Replacement	-	Procurement of safety in revolving matter
Installation and Test Operation	-	Performance assurance



## Installation Area

# **Multi-Stage Chemical Wet Scrubber**



Miryang Joint Livestock Excretion Treatment Plant (2014)



Ansan Food Waste Resource Recovery Plant (2016)



Buan Wastewater Sewage Treatment Plant (2016)



Gonjiam Sewage Treatment Plant (2014)



Yangsan Public Sewage Treatment Plant (2015)



Ansan Domestic Waste Treatment Plant (2014)



Ansan Sewage 1 Treatment Plant (2017)



Jeongeup Joint Livestock Excretion Treatment Plant (2014)



Sejong-si Happiness City Blue Green (2011)

# **Certificate and Awards**



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### 서울사무소 SEOUL OFFICE

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