



# KUKJAE

## ENVIRONMENTAL TECHNOLOGY Co., Ltd

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Technology to create a green planet

# TECHNOLOGY TO CREATE A GREEN PLANET





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- Vortex Sprinkler
- Submersible Agitator
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WE REFUSE TO BE  
COMPARED WITH OTHERS.  
KUKJAE ENVIRONMENTAL  
TECHNOLOGY CO., LTD.  
WITH 30 YEARS OF  
TRADITION AND  
EXPERTISE



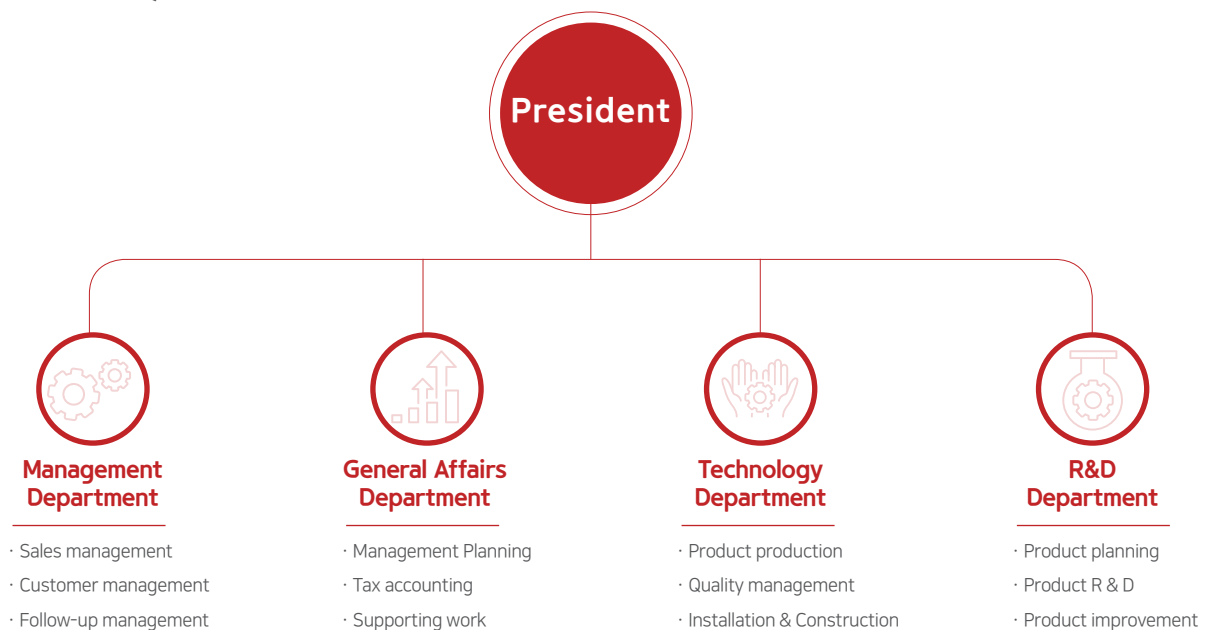
2nd Generation President  
Ph.D. Lee Jin-seok



Founder & Chairman  
Lee Soon-Ho



## Organization System





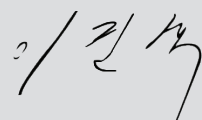
As a specialized environmental engineering corporation in constructing organic waste recycling facilities, Kukjae Environmental Technology Co.,Ltd. first self-developed and successfully commercialized a livestock manure liquid/solid separator and a food waste dehydrator in 1990 in Korea. By 2021, we at Kukjae Environmental Technology became equipped with a wide range of solid/liquid separation technologies that can apply to all sorts of livestock manure from pigs, cows, chickens, etc. After developing an organic waste material dehydrator in 2011, we provided and installed it in Korea's largest slaughterhouse, the National Agricultural Cooperative Federation's Livestock Product Sales Center located in Eumseong, Chungcheongbuk-do, and in the LPC Construction of Dodram, the first key Korean slaughterhouse.

In addition, we were first awarded the Certificate of Green Technology for our self-developed autothermal Bacillus liquid fertilizer process (A2B process) in Korea. Currently, the autothermal anaerobic-aerobic digestion process (A3 process) is under research and developed based on our original technology.

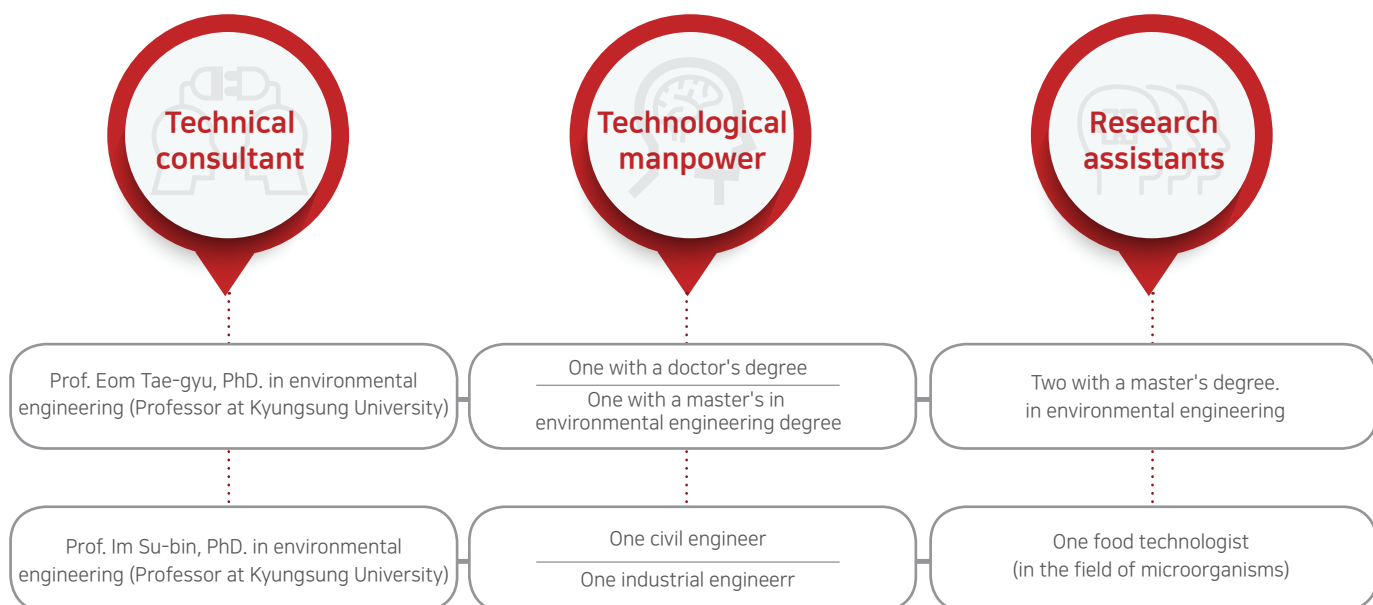
The second-generation management based on combined 1st-generation experiences and 2nd-generation expertise indicates our endeavor to keep our promise with our customers to develop into a Korea's topnotch company by passing workmanship on to the next generations with belief and trust. Since setting up Vision 2021 of growing as one of Korea's top three vendors by 2021, we at Kukjae Environmental Technology armed with self-esteem have put all our enthusiasm into achieving that goal and furthermore, developing into a world-class company.

Thank you.

President Ph.D.  
Lee Jin-seok



>> **Engineer** ※A license for designing and constructing livestock waste processing facilities: #1 Gangseo-gu, Busan



# GLOBAL NETWORK

### AGENT

#### HISTA ENVIRONMENTAL CORPORATION

Address : No.4, Street No.9, Quarter 4, Hiep Binh Phuoc Ward,  
Thu Duc Dist, HCM City, VIETNAM

Website : [www.hista.vn](http://www.hista.vn) email: [info@hista.vn](mailto:info@hista.vn)

### ASIA

Japan  
China  
Vietnam  
Cambodia  
Malaysia

### NORTH AMERICA

U.S.A



## History



1989

Founded as Kukjae Machinery.



1990

First developed and supplied a solid/liquid separator for livestock waste and a food waste dehydrator in Korea.



1998

Renamed Kukjae Environmental Machinery.



2007

Developed and supplied a drum screw press type solid/liquid separator.



2020

Export to HAGL Group, Vietnam  
Export to GREEN FEED CBD, Cambodia  
Established Laboratory (Daeyeon-dong, Nam-gu)



2019

"Export to AISIN Group, Japan and GREEN FEED, Vietnam  
Acquired ISO 9001:2015KS Q"



2018

Designated as Promising Export Firm  
Moved head office (Noksan-dong, Gangseo-gu)



2017

Achieved export to HISTA, Vietnam, ECOLOCAP, USA and JK Engineering, Malaysia  
Awarded by Mayor of Busan and Korea SMEs and Startups Agency



**2010**

Re-founded as Kukjae Environmental Technology Co.,Ltd.. specializing in designing and constructing livestock waste processing facilities.



**2011**

Developed and supplied an organic waste dehydrator.



**2012**

First received the Certificate of Green Technology for liquefied livestock waste based fertilizer technology in Korea; acquired certificates: ISO 14001:2009, KSI 7001:2011, and KSI 7002:2011.



**2016**

First export to PMJ, Japan  
Acquired Busan Export Club membership



**2015**

SME Industry-University Cooperation  
Technology development business  
Excellent Project Award



**2014**

Certified as an INNO-BIZ  
enterprise; developed and supplied a  
drum taper, screw press type solid/  
liquid separator.



**2013**

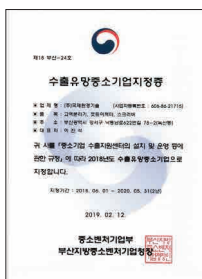
Recognized as a venture business,  
launched a research and  
development division.  
registered as a company specializing  
in installing new/renewable energy  
equipment.



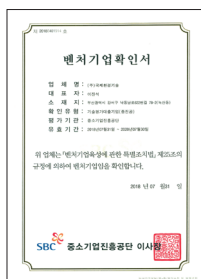


## Certificate

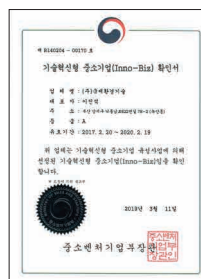
### >Certifications and Licenses



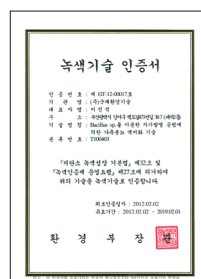
[Promising Export Firm Designation Certificate]



[Certificate of Venture Business]



[INNO-BIZ Certificate]



[Certificate of Green Technology]



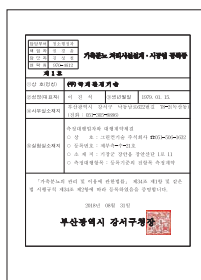
[ISO 9001]



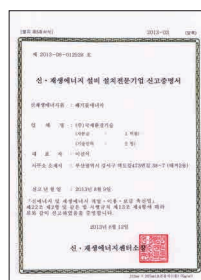
[ISO 14001]



[IQNET]



[Registration of a treatment facility design]



[New and Renewable Energy Equipment Certificate]



[Unique Trade Business Number Certificate]



[Korea International Trade Association Membership Certificate]

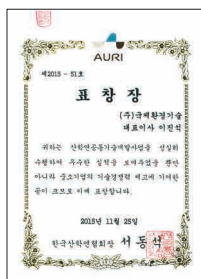


[R&D department recognition letter]

### >Awards



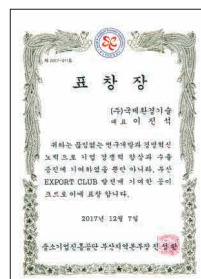
[Excellence Award, Korea International Livestock Expo]



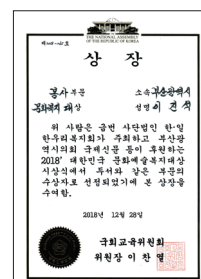
[Award Certificate, Korea Association of University, Research Institute and Industry]



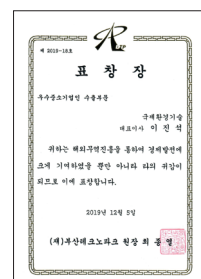
[Award Certificate, Busan]



[Award Certificate, Korea SMEs and Startups Agency]



[Grand Prize, Korea Culture and Art Welfare]



[Award Certificate, Busan Technopark]

## Related Organization



## Clients



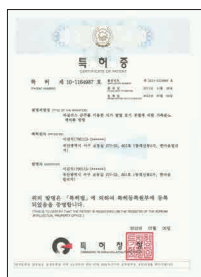
## >Patents



[Patent for Circular Type Liquid Fertilizer Production Device]



[Patent for Biogas]



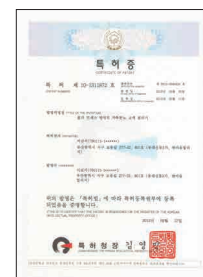
[Patent for Liquid Fertilizer Production using Livestock Waste]



[Patent for Vortex Air Diffuser]



[Patent for Vortex Air Diffuser]



[Patent for Roller Press Separator]



[Patent for Drum-Screw Press Separator]



[Patent for Organic Sludge Dehydrating Device]



[Patent for Screw Press Separator]



[Patent for 2 Stage Dehydrating Separator]



[Certificate of Trademark Registration]



[Certificate of Design Registration]



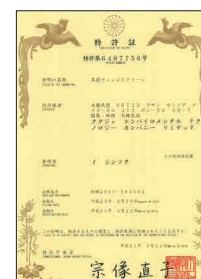
[Patent for Deodorant]



[Patent for External Jet Ejector]



[Chinese Patent for Drum-Screw Press Separator]



[Japanese Patent for Multi-Screen]



# TECHNOLOGICAL DEVELOPMENT

## Separator&Dehydrator

### >Solid/liquid separators



1991 First solid/liquid separator



1992 Second development of the solid/liquid separator



1994 Third development of the solid/liquid separator



1996 Rapid centrifugal solid/liquid separator



1997 Solid/liquid separator equipped with a vibrating screen



1998 Vibrating screw press type solid/liquid separator



2006 Vibrating churning solid/liquid separator



2007 Drum screen type solid/liquid separator



2007 All-in-one type solid/liquid separator



2007 Drum screw press type solid/liquid separator



2012 Roller press type solid/liquid separator



2014 An entry-level solid/liquid separator



2014 High-volume solid/liquid separator



2016 Belt press type solid-liquid separator



2016 All stainless solid-liquid separator



2016 Post-treatment solid-liquid separator



2017 Multi-Screen Separator



2018 Mobile Separator



2019 Screw Press Selector



### >Dehydrator



2011 Cylinder type dehydrator



2012 Cylinder type dehydrator



2013 Taper type dehydrator



2014 Taper type dehydrator



## >Other Plant



1996 Fog sprayer



2006 Rapid fermenter



2009 Microjet aeration pump



2010 Vortex aerator



2010 Vortex sprinkling system



2014 Vortex aerator



2016 Heat-resistant Jet Ejector



2016 External Jet Ejector



2016 Odor remover



2018 Food Dryer



2018 Microbial Incubator



2018 Complex Deodorizer



2019 Multistage Deodorizer

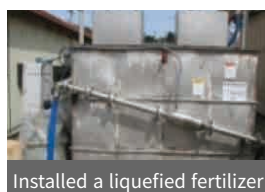


2019 High Speed Fermenter

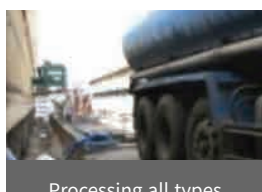


KOM

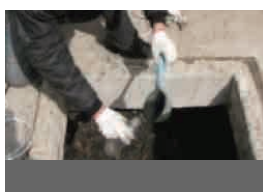
## Liquid Fertilizer Plant



Installed a liquefied fertilizer plant capable of handling 10 tons per day



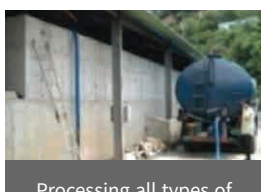
Processing all types of sludge



On-site operations



Installed a liquefied fertilizer plant capable of handling 15 tons per day



Processing all types of sludge



On-site operations



Installed a liquefied fertilizer plant capable of handling 50 tons per day



Product installation



Product installation



KOM

## Biogas Plant



Produced a pilot



Installed the pilot reactor



Operated the pilot reactor



Sampling



Sample analysis

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# PRODUCT INTRODUCTION

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**SEPARATOR&DEHYDRATOR**

A red circular icon, resembling a stylized 'C' or a partial circle, is positioned to the left of the text.

**LIQUID FERTILIZER PLANT**

A red circular icon, resembling a stylized 'C' or a partial circle, is positioned to the left of the text.

**BIOGAS PLANT**



# SEPARATOR & DEHYDRATOR

### Major Processes

01

Core  
components

The application of the slot screen type wedge wire screen and metal lath ensures a semi-permanent lifespan and strong dehydration.



02

Driving  
components

The use of highly durable components contributes to more optimized performance even in poor operating environmental conditions.



03

Safety  
systems

Safety systems are fitted to prevent the risk of secondary contamination that may caused by of excessive inflow.



04

Automatic  
cleaning

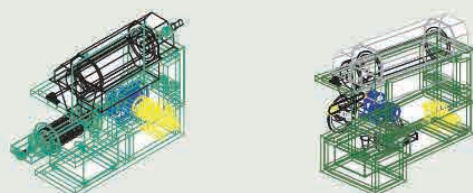
The product is fitted with an automatic cleaning system to minimize blockage.



05

Optimal  
designs

We have minimized the occurrence of after-sales service by designing an optimal plant based on 30 years of our own expertise.



## Fine Drum Screen - Screwpress Separator

- > High performance for post treatment!
- > Superior Performance!
- > Strong durability!



### >> Design specification

Model	Capacity	Moisture content	Power	Size (L*W*H)
KJP2-2556	10~20 m <sup>3</sup> /hr	70±3%	5.25 kw	3,050X1,000X1,980 mm
KJP2-2558	15~30 m <sup>3</sup> /hr		7.75 kw	3,350X1,200X2,230 mm

※Product specifications can be changed without prior notice for quality improvement and performance improvement.

## Drum Screen-Screwpress Separator

- > High capacity processing!
- > Superior Performance!
- > Strong durability!



### >> Design specification

Model	Capacity	Moisture content	Power	Size (L*W*H)
KJ2-2016	10~20 m <sup>3</sup> /hr	70±3%	3.0 kw	2,750X700X1,650 mm
KJ2-2556	15~30 m <sup>3</sup> /hr		4.5 kw	2,950X750X1,850 mm
KJ2-2558	20~40 m <sup>3</sup> /hr		7.0 kw	3,250X950X2,230 mm
KJ2-3009	30~60 m <sup>3</sup> /hr		9.0 kw	3,950X1,050X2,380 mm

※Product specifications can be changed without prior notice for quality improvement and performance improvement.



# SEPARATOR & DEHYDRATOR

## Multi-Screen Screwpress Separator

- > Superior performance!
- > Strong durability!
- > More economical!



### >> Design specification

Model	Capacity	Moisture content	Power	Size (L*W*H)
KJP-2016(M)	4~15 m <sup>3</sup> /hr (M : 3~12 m <sup>3</sup> /hr)	70±3% (M : 75±3%)	2.2 kw	2,300X650X1,950 mm
KJP-2556(M)	6~25 m <sup>3</sup> /hr (M : 5~20 m <sup>3</sup> /hr)		3.75 kw	2,500X750X2,000 mm
KJP-2557(M)	8~30 m <sup>3</sup> /hr (M : 6~25 m <sup>3</sup> /hr)		3.75 kw (M:5.5kw)	2,600X750X2,000 mm (M : 2,650X750X2,000 mm)
KJP-2558(M)	10~35 m <sup>3</sup> /hr (M : 7~30 m <sup>3</sup> /hr)		5.5 kw	2,700X750X2,000 mm
KJP-3009(M)	15~45 m <sup>3</sup> /hr (M : 10~35 m <sup>3</sup> /hr)		7.5 kw	2,950X850X2,100 mm

※Product specifications can be changed without prior notice for quality improvement and performance improvement.

## Vibrating Screen / Vibrating Screen-Screwpress Separator



KJV-Series



KJV2-Series

### >> Design specification

Model	Capacity	Moisture content	Power	Size (L*W*H)
KJV-600	3~5 m <sup>3</sup> /hr	80±3 %	0.4 kw	2,150X1,200X1,500 mm
KJV-800	4~10 m <sup>3</sup> /hr			2,150X1,400X1,500 mm
KJV2-2016	7~15 m <sup>3</sup> /hr	70±3 %	2.6 kw	2,750X1,200X1,650 mm
KJV2-2556	10~20 m <sup>3</sup> /hr		4.1 kw	2,950X1,200X1,700 mm

※Product specifications can be changed without prior notice for quality improvement and performance improvement.



## Rollerpress Separator

- > Optimized for low moisture livestock waste (cattle and poultry)!



### >> Design specification

Model	Capacity	Moisture content	Power	Size (L*W*H)
KJR-500	3~10 m <sup>3</sup> /hr	73±3%	3.0 kw	1,800X1,300X1,300 mm
KJR-600	5~15 m <sup>3</sup> /hr		4.5 kw	1,900X1,400X1,400 mm

※Product specifications can be changed without prior notice for quality improvement and performance improvement.

## Drum Screen Separator

- > Optimized for SS concentration!



### >> Design specification

Model	Capacity	Moisture content	Power	Size (L*W*H)
KJD-500	3~10 m <sup>3</sup> /hr	80±3%	3.0 kw	2,500X750X1,100 mm
KJD-600	5~15 m <sup>3</sup> /hr		4.5 kw	2,600X850X1,200 mm

※Product specifications can be changed without prior notice for quality improvement and performance improvement.

# SEPARATOR & DEHYDRATOR

## Cylinder Type Screen Screwpress Dehydrator

- > Large capacity processing!
- > Strong durability!
- > Maximized recovery rate by micro-screen processing!



### >> Design specification

Model	Capacity	Moisture content	Power	Size (L*W*H)
KJCD-2508	2 m <sup>3</sup> /hr	70~80%	5.5 kw	2,800X750X2,500 mm
KJCD-3009	3 m <sup>3</sup> /hr		7.5 kw	3,000X800X2,550 mm
KJCD-35010	4 m <sup>3</sup> /hr		11 kw	3,150X850X2,600 mm
KJCD-40012	5 m <sup>3</sup> /hr		15 kw	3,350X900X2,650 mm

※Product specifications can be changed without prior notice for quality improvement and performance improvement.

## Tapered Type Screen Screwpress Dehydrator

- > Large capacity processing!
- > Strong durability!
- > Perfect dehydration!



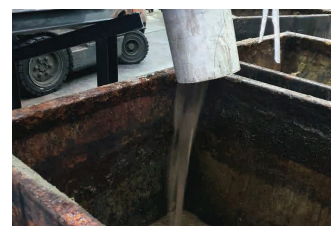
### >> Design specification

Model	Capacity	Moisture content	Power	Size (L*W*H)
KJTD-2545	3 m <sup>3</sup> /hr	70~80%	7.5 kw	3,450X900X2,700 mm
KJTD-3050	5 m <sup>3</sup> /hr		11 kw	3,550X950X2,750 mm

※Product specifications can be changed without prior notice for quality improvement and performance improvement.

## Screwpress Separator

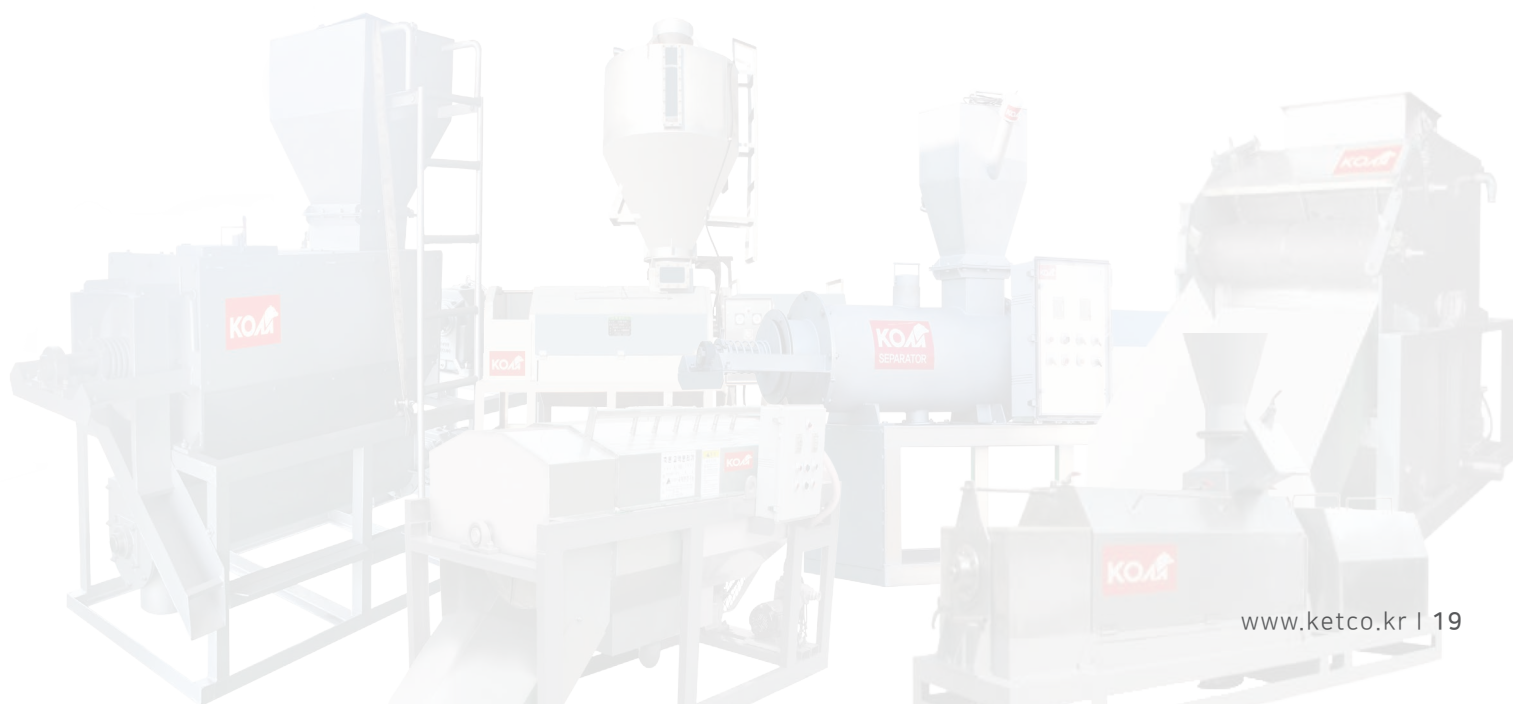
- > Handles large capacity!
- > Strong durability!
- > Excellent sorting ability!



### >> Design specification

Model	Capacity	Power	Size (L*W*H)
KJS-40030	2 m <sup>3</sup> /hr	15 kw	5,500X1,100X3,000 mm

※Product specifications can be changed without prior notice for quality improvement and performance improvement.

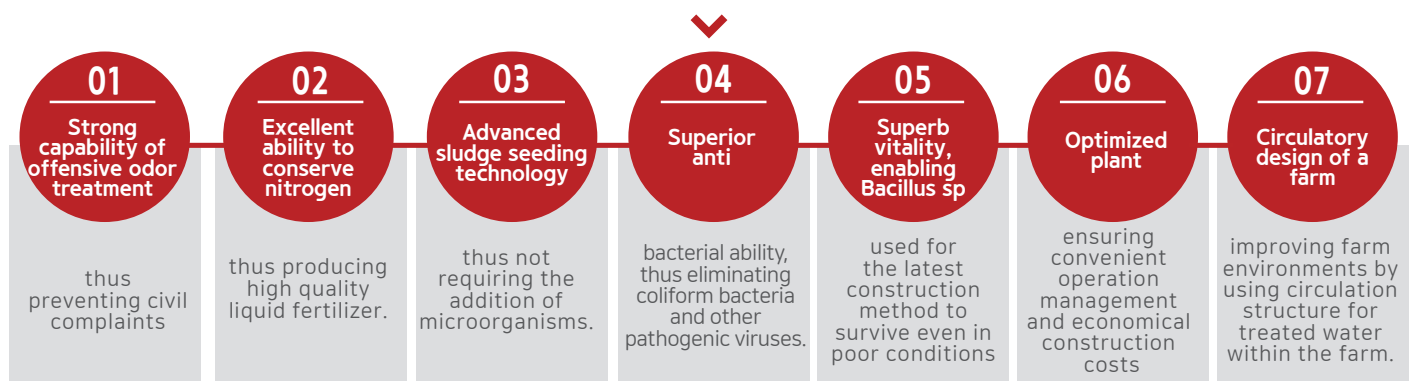


## LIQUID FERTILIZER PLANT

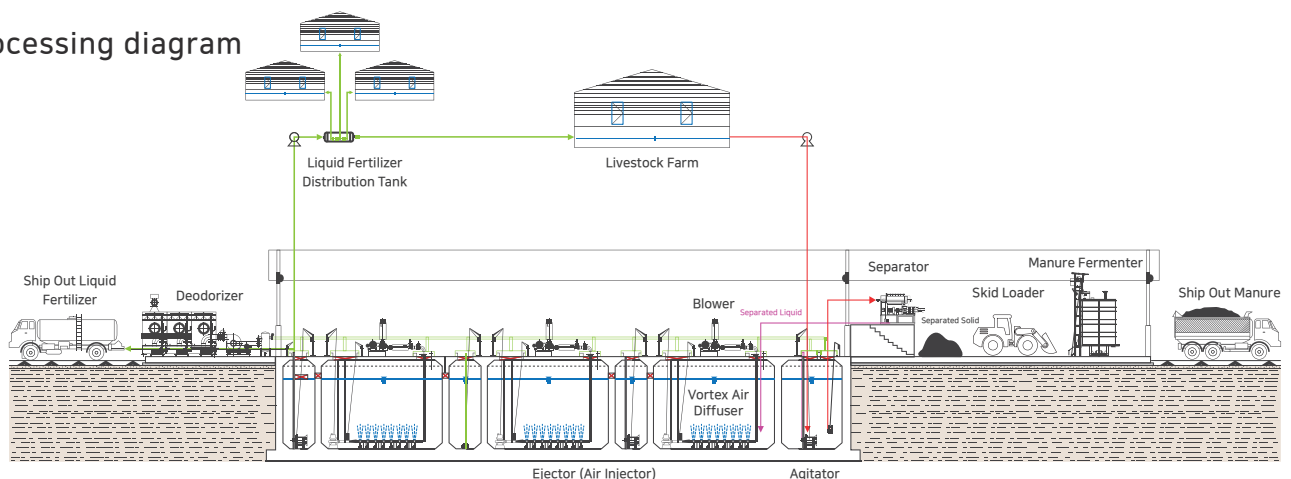
### Major Processes

### Liquid fertilizer process 'A2B'

Korea's first certified technology as green technology developed in collaboration between Kukjae Environmental Technology and Kyungsung University!



### >> Processing diagram





## >> Color changes specific to fermentation stages



## >> On-site installation photos



## Submersible Jet Ejector

- > Powerful aeration capacity !
- > Heat resistance: 80℃



## >> Design specification

Model	Air supply capacity	Heat resistant temperature	Power	Capacity	Max. depth
KJA-50	4.5±0.5 m <sup>3</sup> /min	80℃	3.7 kw	150 m <sup>3</sup>	5 m
KJA-75	5.0±0.5 m <sup>3</sup> /min	80℃	5.5 kw	200 m <sup>3</sup>	5 m
KJA-100	5.5±0.5 m <sup>3</sup> /min	80℃	7.5 kw	300 m <sup>3</sup>	5 m

※This data is derived from the measurements of excretions of pigs actually separated at a depth of 3 meters in water.

# LIQUID FERTILIZER PLANT

## External Jet Ejector

- > Novel external jet ejector!
- > High efficiency, performance, and durability!



### >> Design specification

Model	Air supply capacity	Power	Capacity	Max. depth
KJA-1000	6.5±0.5 m <sup>3</sup> /min	7.5 kw	300 m <sup>3</sup>	5 m

※This data is derived from the measurements of excretions of pigs actually separated at a depth of 3 meters in water.

## High speed fermenter

- > Enhance fermenting speed!
- > Reduce sludge!



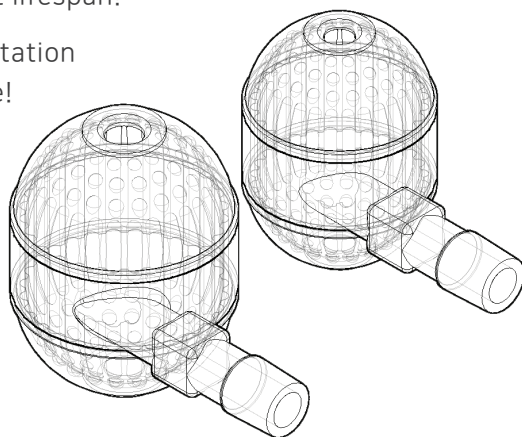
### >> Design specification

Model	Capacity	Power	Size (L*W*H)
KJHSF-1000	1 m <sup>3</sup> /min	7.5 kw	3,500X1,500X2,600 mm

※Product specifications can be changed without prior notice for quality improvement and performance improvement.

## Vortex Diffuser

- > Semi-permanent lifespan!
- > Aeration and agitation at the same time!



### >> Design specification

Model	Size	Standard aeration	SOTE(150ℓ/minX5m depth)	Material	Connector size
KJVD-15	Ø60X10mmX15pt	150~200 ℓ /min	16%	ABS	PT 15A (Nipple)
KJVD-20	Ø70X14mmX20pt	200~400 ℓ /min	16%	ABS	PT 20A (Nipple)

※Product specifications can be changed without prior notice for quality improvement and performance improvement.

## Vortex Sprinkler

- > Effective bubble (scum) removal!
- > Seamless design, convenient maintenance!



### >> Design specification

Model	Size	Capacity	Connector size
KJVS	Ø75X100mmX32 pt	0.2 m <sup>3</sup> /min	PT 32A (Nipple)

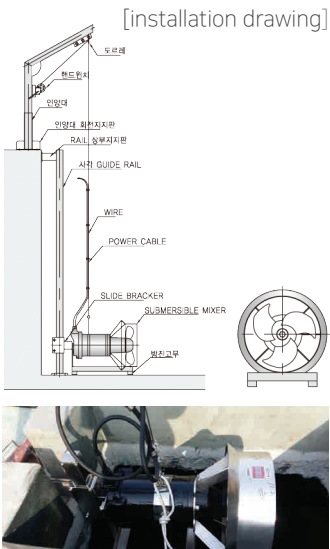
※Product specifications can be changed without prior notice for quality improvement and performance improvement.



# LIQUID FERTILIZER PLANT

## Submersible agitator

- > Enhance separation and liquid fertilizer production efficiency!



### >> Design specification

Model	Capacity	Power	Revolution (rpm)
KJSM 15-8F	6.0 m <sup>3</sup> /min	1.5 kw	875 (8P)
KJSM 22-8F	10.0 m <sup>3</sup> /min	2.2 kw	
KJSM 37-8F	11.0 m <sup>3</sup> /min	3.7 kw	
KJSM 55-8F	16.0 m <sup>3</sup> /min	5.5 kw	

※Product specifications can be changed without prior notice for quality improvement and performance improvement.

## Complex Deodorizer

- > Advanced double deodorizing method!
- > Stable processing with biodeodorizing technology!



### >> Design specification

Model	Capacity	Power	Size (L*W*H)
KJCD-100	10 m <sup>3</sup> /min	8.1 kw	4,200X1,800X4,300 mm
KJCD-200	20 m <sup>3</sup> /min	11.9 kw	4,600X2,000X4,800 mm

※Product specifications can be changed without prior notice for quality improvement and performance improvement.



## Multistage Deodorizer

- > Advanced multistage deodorizing method!
- > Stable processing with Bio + Chemical + UV deodorizing technology!



### >> Design specification

Model	Capacity	Power	Size (L*W*H)
KJMD-400	40 m <sup>3</sup> /min	16.3 kw	4,600X2,800X3,800 mm
KJMD-600	60 m <sup>3</sup> /min	17.9 kw	6,300X2,800X3,800 mm
KJMD-800	80 m <sup>3</sup> /min	28.2 kw	6,600X3,400X3,800 mm

※Product specifications can be changed without prior notice for quality improvement and performance improvement.

## Microbial Incubator

- > Excellent complex microbial incubation!
- > Selection of anerobic and aerobic fermentation!



### >> Design specification

Model	Capacity	Power	Size (L*W*H)
KJMI-100	1 m <sup>3</sup>	11 kw	2,800X1,800X3,000 mm

※Product specifications can be changed without prior notice for quality improvement and performance improvement.

# BIOGAS PLANT



### | Major Processes

## Biogas process 'A3'

Kukjae Environmental Technology has developed a novel hybrid biogas plant based on its original ideas



01

An environmentally friendly construction method

An epoch-making environmentally friendly construction method that minimizes energy usage.

02

An immense reduction in operating costs

Saving more than 30% of maintenance - costs required to maintain temperature in winter

03

Economical installation costs

There is no need to install a heat exchanger, minimizing an installation site

04

Zero waste

The entire waste products are recycled as resources.

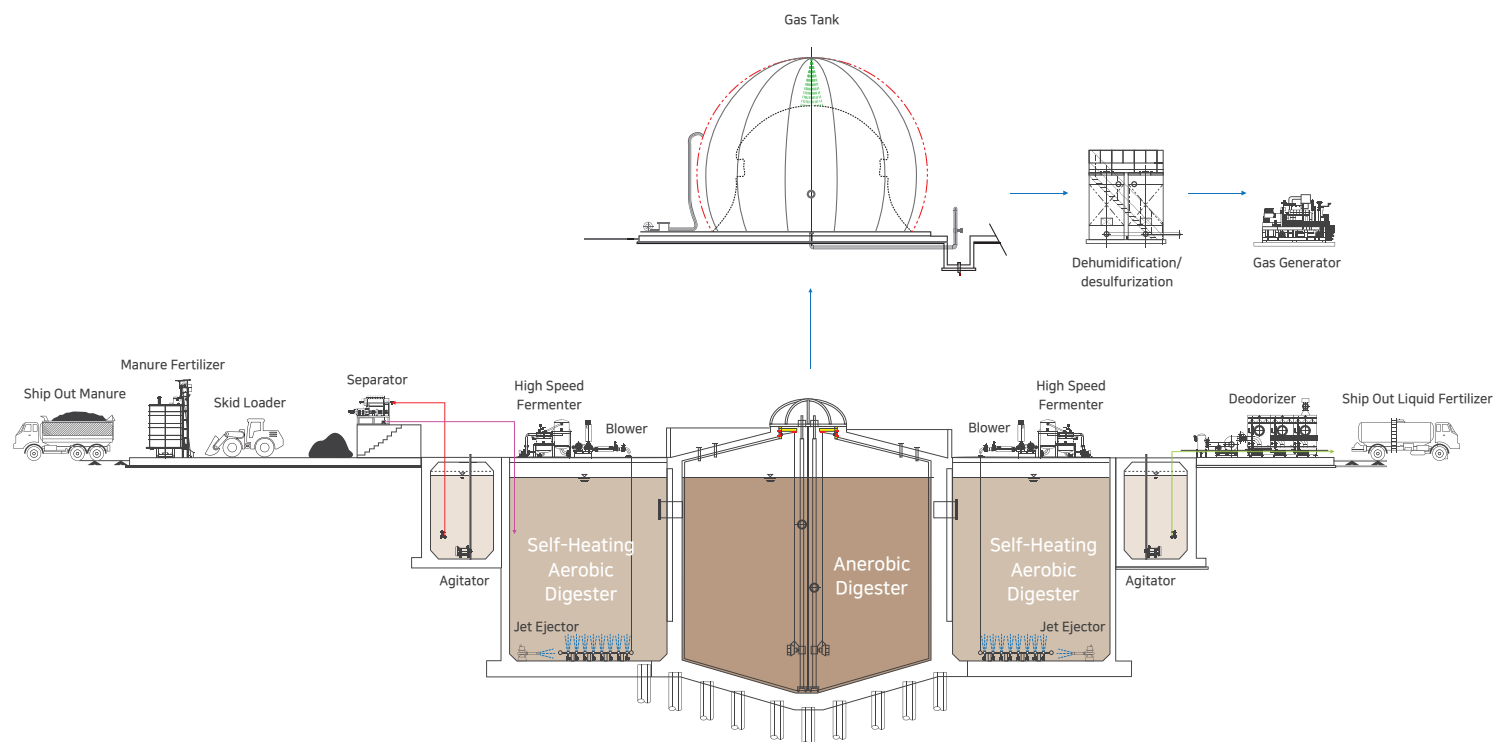
05

Maximized use of energy

The increased usage of biogas leads to the maximization of utilization efficiency of new and renewable energy



## >> Processing diagram



## >> Pilot scale reactor operation





MADE IN KOREA



|주| 국제환경기술

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