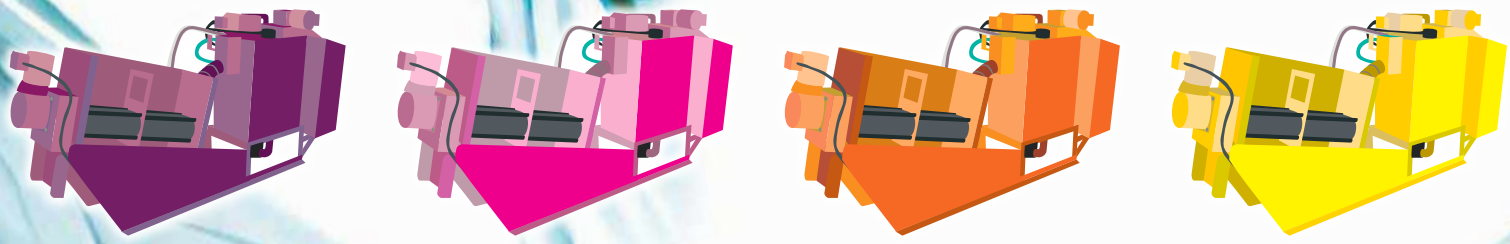
Amenity Convenience

AMCON®

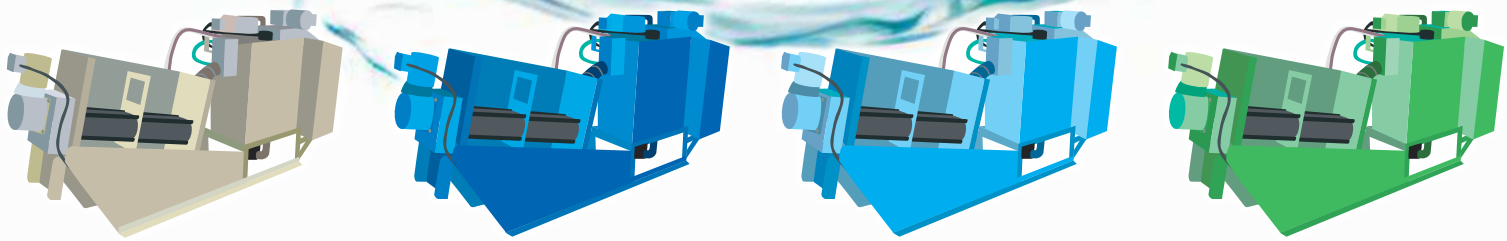
SLUDGE TREATMENT EQUIPMENT

CATALOG



VOLUTE™

Invented by AMCON in 1990.



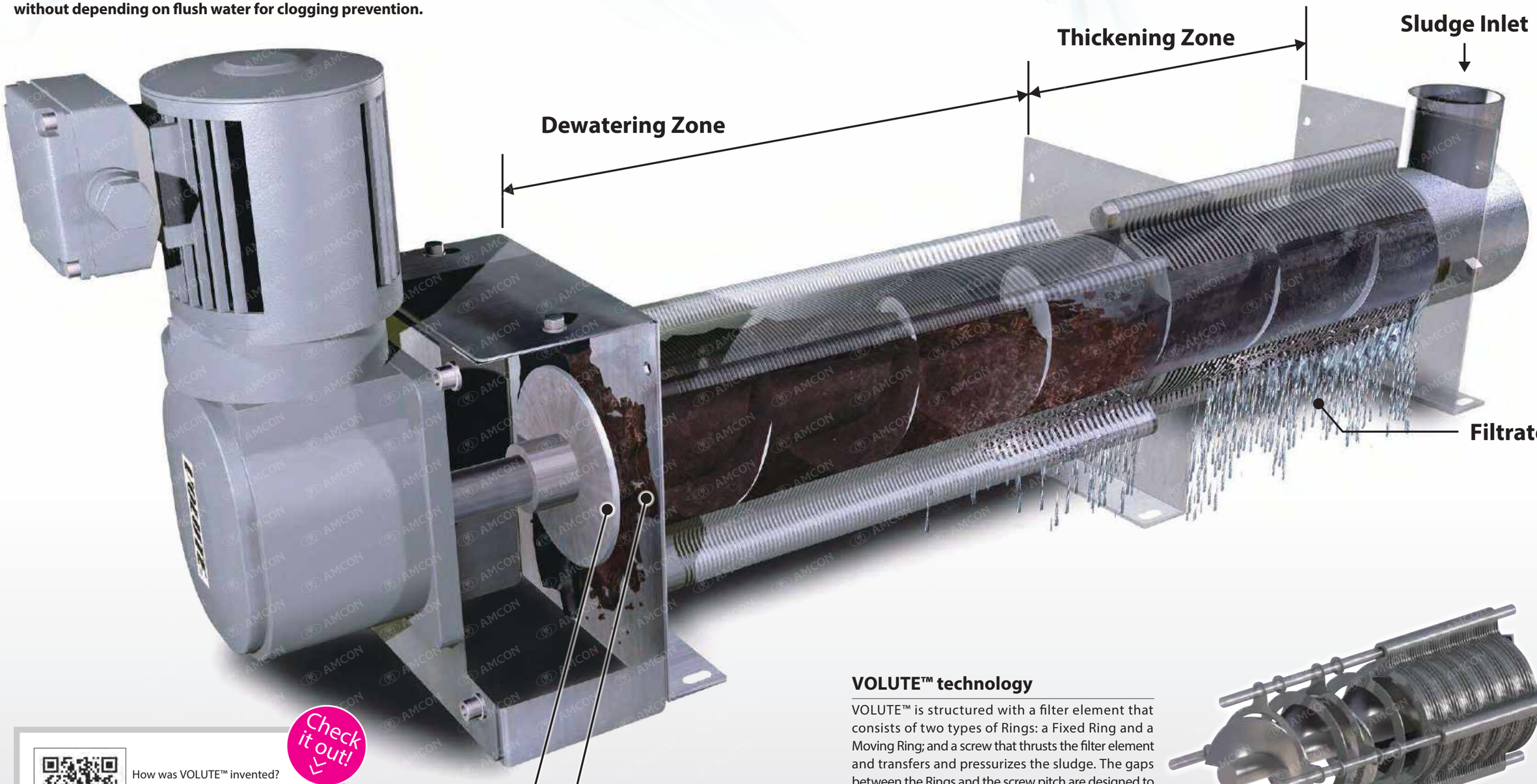
VOLUTE™ Dewatering Press Unlike Any Other

The performance of dewatering equipment is enhanced by removing clogging which could considerably block the discharge of the filtered liquid.
AMCON's dewatering press is equipped with unique VOLUTE™ technology, which allows dewatering sludge while automatically self-cleaning the filter mesh. This enables stable and constant dewatering without depending on flush water for clogging prevention.

Check it out!

Our job is to
"Providing amenity and convenience beyond expectation."

In 1991, AMCON brought VOLUTE™ into the world where nobody had ever seen such a unique filter element.
AMCON's previous experience as an operator of sludge dewatering equipments and wastewater treatment plants urged us to develop a user-friendly machine.
After 10 years, we completed the development of VOLUTE™ technology, the filter elements with multiple layered Rings.
Continuous efforts for development and improvement of the technology are being made to make the facilities more user-friendly and convenient.



Check it out!

How was VOLUTE™ invented?
For more information, please click the following link.
http://en-special.amcon.co.jp

VOLUTE™ technology

VOLUTE™ is structured with a filter element that consists of two types of Rings: a Fixed Ring and a Moving Ring; and a screw that thrusts the filter element and transfers and pressurizes the sludge. The gaps between the Rings and the screw pitch are designed to gradually get narrower towards the direction of sludge cake outlet and the inner pressure of the filter element increases due to the volume compression effect, which thickens and dewaters the sludge.

* VOLUTE™ is a trademark of AMCON products.

Advantages of VOLUTE™

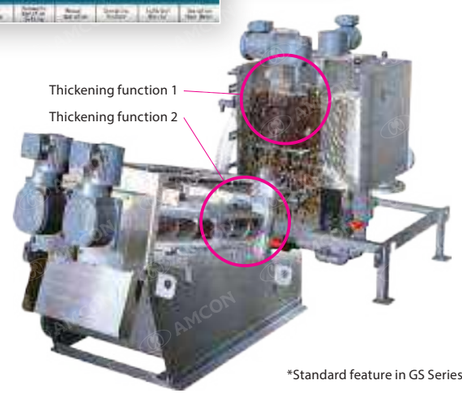
Easy operation and maintenance

Intuitively understandable operation system adopted. Monitoring of the operation settings is made very easy (GS·FS Series). 24 hour unattended operation is possible with no daily maintenance.

*Graphics of the GS Series control panel

No pre-thickening required

There is no need to pre-thicken the sludge as it has got 2 built-in thickening functions, first in the Thickening Flocculation Tank and then in the VOLUTE™ cylinder. One compact unit can thicken and dewater the sludge all at once.



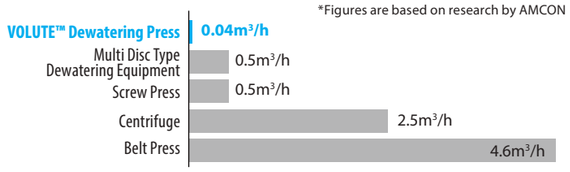
*Standard feature in GS Series

Water-saving

VOLUTE™ prevents filter mesh from clogging with its unique self-cleaning mechanism, removing the need for huge amounts of water for clogging prevention.

Comparison of spray washing water consumption among dewatering equipments (throughput 45 kg-DS/h)

*Figures are based on research by AMCON

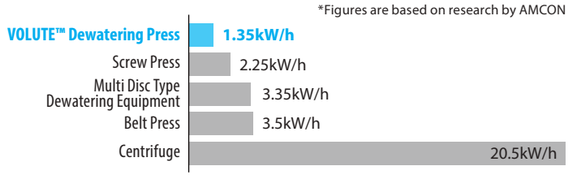


Power saving

The screw which is the main component of VOLUTE™ rotates very slowly at a rate of 2 to 4 rpm, so that it consumes very low power and thus economical.

Comparison of power consumption among sludge dewatering equipments (throughput 45 kg-DS/h)

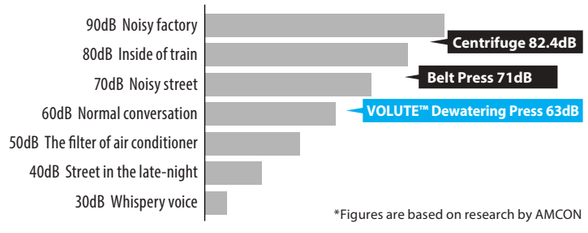
*Figures are based on research by AMCON



Low noise / Low vibration

Because VOLUTE™ has no rotating body with high speed, there is no concern about noise and vibration.
A comfortable work environment can be secured.

Comparison between noise of dewatering equipment and daily life noise



*Figures are based on research by AMCON

High Resistance to Oily Sludge

The self-cleaning mechanism enables VOLUTE™ to be ideal to dewater oily sludge, which easily causes clogging and is difficult to treat with other types of dewatering equipments.

Small Footprint

VOLUTE™ can be installed in places where placement would not be possible with other technologies.
This makes VOLUTE™ suitable to customers who are considering the replacement of existing dewatering equipment.

Two-year Warranty

AMCON products are warrantied for two years as standard. There is also an option to extend it up to 4 years.

Applicable for Various Applications

Municipal water and wastewater treatment plants, Industrial waste treatment plants, Food/beverage production plants, Dairy farming, Meat processing plants, Chemicals manufacturing plants, Machinery manufacturing plants, Metal processing plants, Laundry wastewater, etc.

Expandable throughput

The throughput of VOLUTE™ can be easily expanded with its Cylinder Unit.
We are ready to meet your expectation, "We want to be prepared for the increase of sludge in the future, but without too much increase in the initial cost..."

Additional cylinder (image)

Revolution in sludge treatment VOLUTE™ introduced - Direct dewatering from oxidation ditch* -

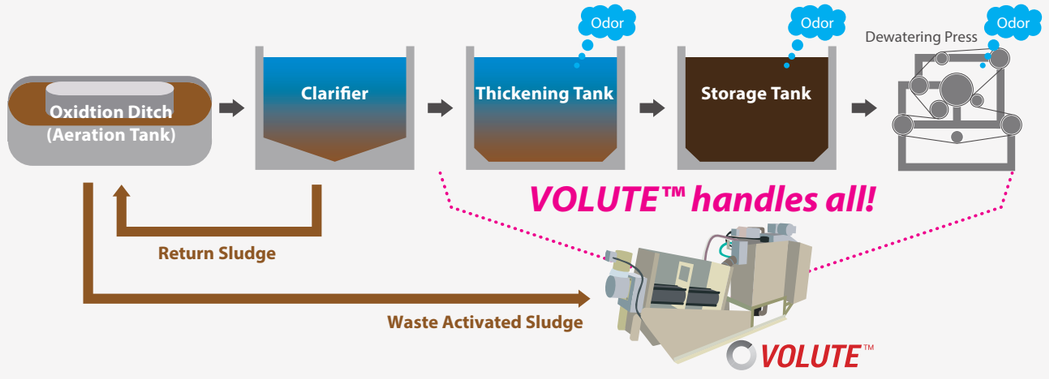
In the past times, sludge was commonly thickened before dewatering, but the development of VOLUTE™ Dewatering Press, consisting of a filtering drum with both thickening and dewatering zone, changed this notion.
Thanks to the unique structure, VOLUTE™ Dewatering Press can handle low concentrated sludge at 0.2% directly without any pre-thickening stage and is used in a great number of small-scale sewage treatment plants in Japan for dewatering sludge directly from oxidation ditch.

Advantages of direct dewatering from oxidation ditch

1, Reduction of investment costs for thickening and storage equipment and operation costs

2, Removing odor by dewatering fresh aerobic sludge

3, Reduction of the load of phosphorus in the wastewater treatment



*Demonstrated for the first time ever in the world as a result of the joint research of AMCON and Japan Sewage Works Agency in 1998.

Process Flow

According to customer requirements, two types of main body configurations (with/without sludge conditioning tank) are available.

Model without sludge conditioning tank (GS·FS Series)

3 Cylinder Unit

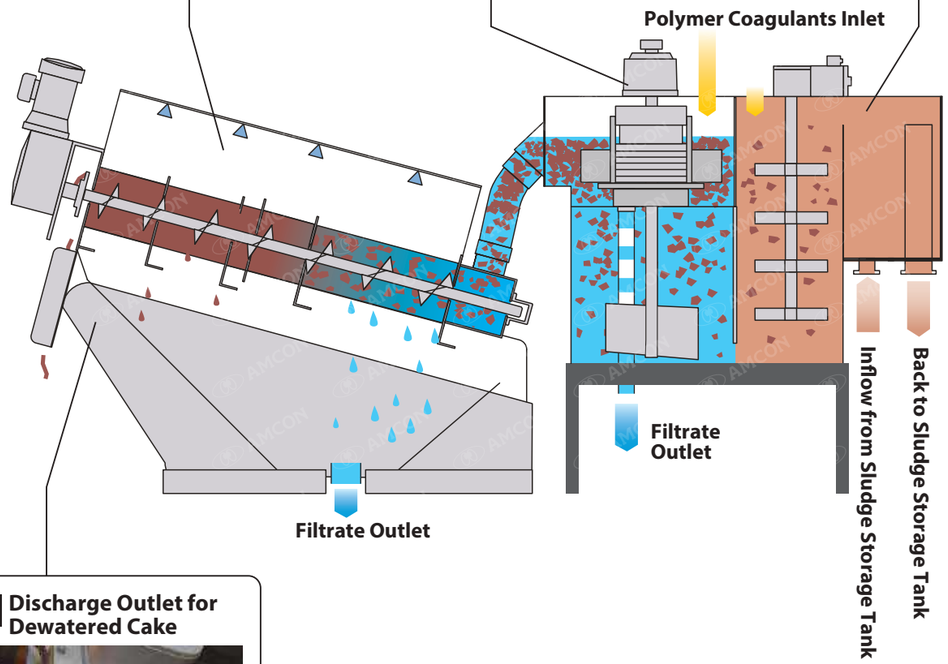
Sludge is further thickened in the thickening zone of the cylinder, and then the inner pressure increased at the dewatering zone helps sludge being dewatered well.

2 Thickening Flocculation Tank (Installed in GS series)

Polymer flocculant and sludge are stirred and mixed, forming floccs suitable for VOLUTE™. Then, the built-in thickener in the tank instantly thicken the sludge.

1 Flow Control Tank

Sludge feed is regulated with the overflow pipe, returning excess volume to the sludge storage tank.



4 Discharge Outlet for Dewatered Cake

Further pressure is applied from the outlet side with the End Plate, discharging dewatered cake with better than 15% dry solids content.

Check it out!

For process flow animation, please click the following link.

http://goo.gl/zRVK9e

VOLUTE™

Model with sludge conditioning tank (EC Series)

4 Cylinder Unit

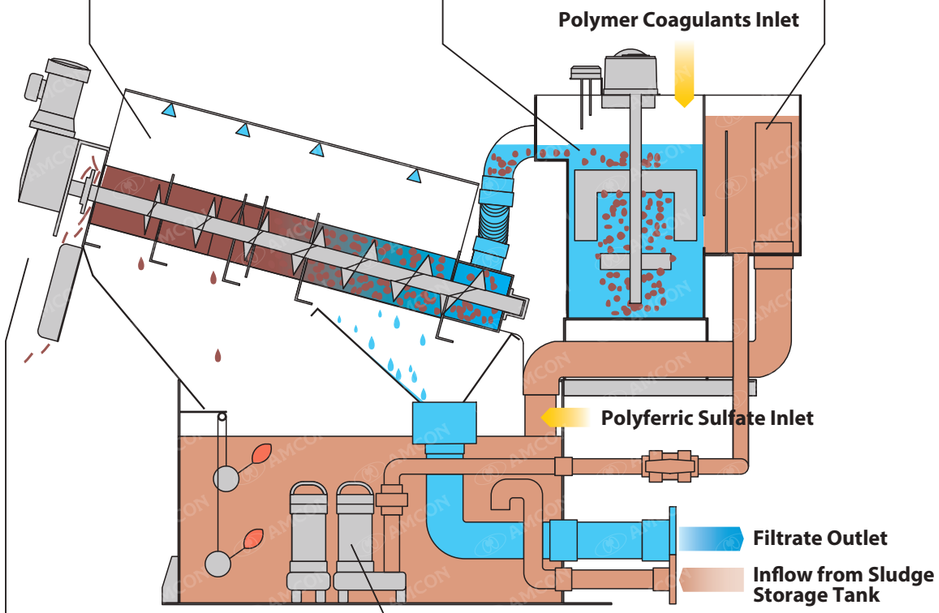
Sludge is instantly thickened at the thickening zone in the precedent stage, and dewatered at the dewatering zone in the subsequent stage under increasing inner pressure.

3 Flocculation Tank

Polymer and sludge are stirred and mixed, forming flocks suitable for VOLUTE™.

2 Flow Control Tank

Sludge feed is regulated with the overflow pipe, returning excess volume to the sludge conditioning tank.



5 Discharge Outlet for the Dewatered Cake

Further pressure is applied from the outlet side with the End Plate, discharging dewatered cake with better than 15% dry solids content.

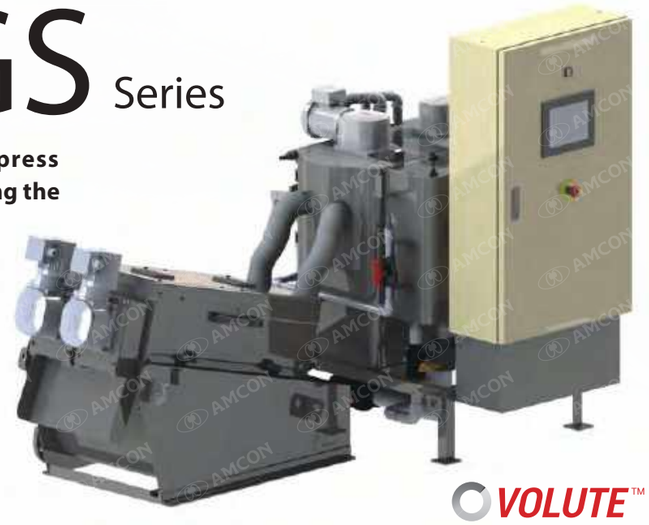
1 Sludge Conditioning Tank

A sludge conditioning tank temporarily stores sludge before it is dewatered. The model with a sludge conditioning tank realizes a high solid capture rate higher than 95%. When required, the conditioning tank can be used as a reactor tank for inorganic flocculant.

Model without sludge conditioning tank | VOLUTE™ technology | VAS (VOLUTE™ Antilock system)

Sludge Dewatering Press VOLUTE™ GS Series

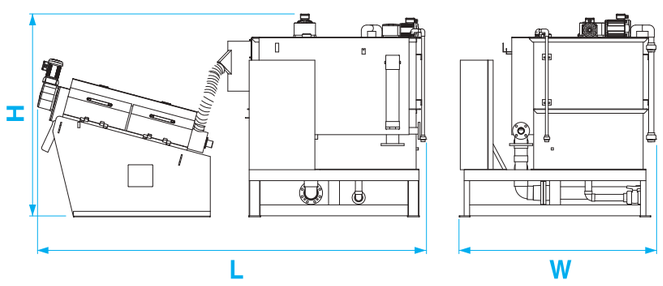
GS series is the high-end dewatering press equipped with various functions. Applying the new pre-thickening mechanism in the flocculation tank, maximum 1.5 times throughput is achieved comparing with FS series.
Also, 'VAS (VOLUTE™ Antilock System)' is normally loaded, which supports the stable operations continuously to achieve a far more User-Friendly model for any operators.



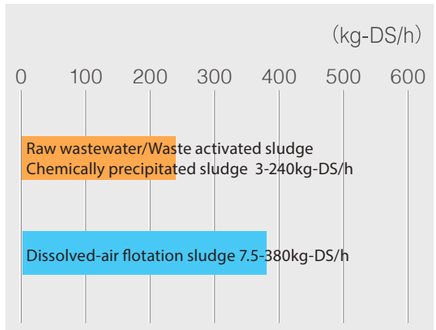
Specifications List

Model	Dimensions(mm)			Total Power Consumption(kW)	Weight(kg)	
	L	W	H		Empty	Operation
GS-101	2045	1236	1440	0.40	330	546
GS-131	2190	1236	1440	0.40	340	556
GS-132	2190	1236	1440	0.50	390	676
GS-201	2581	1236	1440	0.50	500	736
GS-202	3165	1465	1855	1.35	1260	1885
GS-301	3765	1415	1855	1.35	1240	1890
GS-302	3985	1700	1855	1.75	1775	2775
GS-351	4500	1665	2250	2.45	2135	3105
GS-352	5180	1910	2255	5.95	4100	6730
GS-401	5870	1905	2250	4.45	3200	5730
GS-402	6170	2305	2250	5.95	4830	8700

Layout Drawings



Throughput Range



VOLUTE™

Throughput

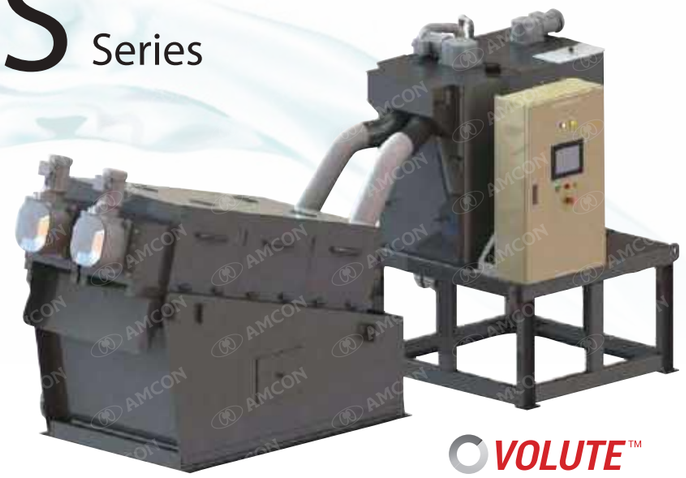
Model \ Sludge Concentration(TS)	Raw Wastewater /Waste Activated Sludge / Chemically Precipitated Sludge		Dissolved-air Flotation Sludge
	0.2%	1.0%	2.0%
GS-101	~ 3kg-DS/h (~ 1.5m³/h)	~ 4.5kg-DS/h (~ 0.45m³/h)	~ 7.5kg-DS/h (~ 0.37m³/h)
GS-131	~ 6kg-DS/h (~ 3.0m³/h)	~ 9kg-DS/h (~ 0.9m³/h)	~ 15kg-DS/h (~ 0.75m³/h)
GS-132	~ 12kg-DS/h (~ 6.0m³/h)	~ 18kg-DS/h (~ 1.8m³/h)	~ 30kg-DS/h (~ 1.5m³/h)
GS-201	~ 13kg-DS/h (~ 6.5m³/h)	~ 20kg-DS/h (~ 2.0m³/h)	~ 33kg-DS/h (~ 1.67m³/h)
GS-202	~ 26kg-DS/h (~ 13.0m³/h)	~ 40kg-DS/h (~ 4.0m³/h)	~ 66kg-DS/h (~ 3.3m³/h)
GS-301	~ 30kg-DS/h (~ 15.0m³/h)	~ 45kg-DS/h (~ 4.5m³/h)	~ 75kg-DS/h (~ 3.75m³/h)
GS-302	~ 60kg-DS/h (~ 30.0m³/h)	~ 90kg-DS/h (~ 9.0m³/h)	~ 150kg-DS/h (~ 7.5m³/h)
GS-351	~ 60kg-DS/h (~ 30.0m³/h)	~ 90kg-DS/h (~ 9.0m³/h)	~ 150kg-DS/h (~ 7.5m³/h)
GS-352	~ 120kg-DS/h (~ 60.0m³/h)	~ 180kg-DS/h (~ 18.0m³/h)	~ 300kg-DS/h (~ 15.0m³/h)
GS-401	~ 80kg-DS/h (~ 40.0m³/h)	~ 120kg-DS/h (~ 12.0m³/h)	~ 190kg-DS/h (~ 9.5m³/h)
GS-402	~ 160kg-DS/h (~ 80.0m³/h)	~ 240kg-DS/h (~ 24.0m³/h)	~ 380kg-DS/h (~ 19.0m³/h)

* Throughput above is calculated as approximate and may vary depending on sludge condition. For model selection, please contact us.
* Throughput of each model is based on dewatered cake with better than 15% dry solids content.
* There is no certain upper limitation on inlet sludge concentration, however, the target sludge must be flowable.
* Throughput of DAF Sludge is based on sludge containing much fat, oil, and grease such as meat processing applications etc.

Model without sludge conditioning tank | VOLUTE™ technology

Sludge Dewatering Press VOLUTE™ FS Series

FS series is the basic dewatering press equipped with every advantage such as water-saving, power-saving, low noise, and others. In the control panel, PLC touch-screen is applied the same as GS high-end model so that any operators can not only see the current operation of each equipment at a sight but also take easy handling of a machine by finger-touching.

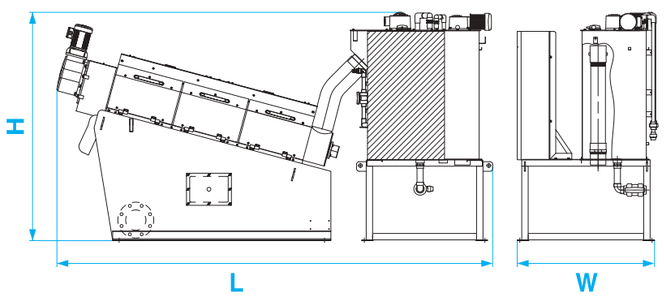


Specifications List

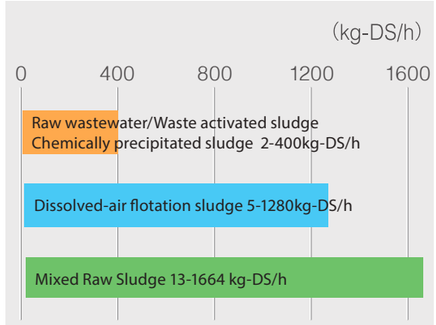
Model	Dimensions(mm)			Total Power Consumption(kW)	Weight(kg)	
	L	W	H		Empty	Operation
FS-101	2131	911	1300	0.3	230	360
FS-131	2276	911	1300	0.3	240	370
FS-132	2361	1027	1300	0.4	320	510
FS-201	2806	1034	1450	0.4	430	620
FS-202	2876	1205	1555	1.0	890	1370
FS-301	3395	1150	1825	1.0	910	1325
FS-302	3890	1470	1890	1.4	1510	2270
FS-351	4114	1325	2250	2.1	1800	2550
FS-352	4775	1645	2250	3.95	2780	3960
FS-401	5400	1630	2250	2.45	2190	3440
FS-402	5775	2075	2250	4.9	4050	6200
FS-403	6350	2600	2250	7.45	5990	9990
FS-404	6670	3200	2250	8.95	7750	13700

* The above figures are for the models with two chemical inlets. Also, it is possible to provide one chemical inlet models, so please contact us for details.

Layout Drawings



Throughput Range



VOLUTE™

Throughput

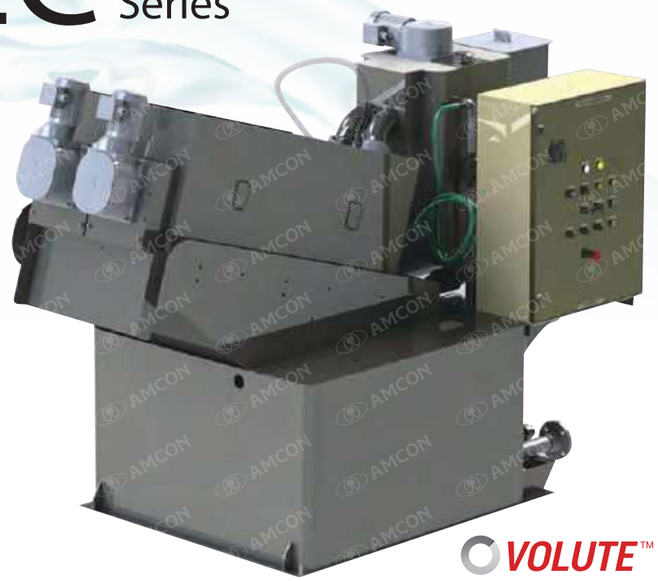
Model \ Sludge Concentration(TS)	Raw Wastewater /Waste Activated Sludge / Chemically Precipitated Sludge		Dissolved-air Flotation Sludge		Mixed Raw Sludge
	0.2%	1.0%	2.0%	5.0%	3.0%
FS-101	~ 2kg-DS/h (~ 1.0m³/h)	~ 3kg-DS/h (~ 0.3m³/h)	~ 5kg-DS/h (~ 0.25m³/h)	~ 10kg-DS/h (~ 0.2m³/h)	~ 13kg-DS/h (~ 0.43m³/h)
FS-131	~ 4kg-DS/h (~ 2.0m³/h)	~ 6kg-DS/h (~ 0.6m³/h)	~ 10kg-DS/h (~ 0.5m³/h)	~ 20kg-DS/h (~ 0.4m³/h)	~ 26kg-DS/h (~ 0.87m³/h)
FS-132	~ 8kg-DS/h (~ 4.0m³/h)	~ 12kg-DS/h (~ 1.2m³/h)	~ 20kg-DS/h (~ 1.0m³/h)	~ 40kg-DS/h (~ 0.88m³/h)	~ 52kg-DS/h (~ 1.74m³/h)
FS-201	~ 8kg-DS/h (~ 4.0m³/h)	~ 12kg-DS/h (~ 1.2m³/h)	~ 20kg-DS/h (~ 1.0m³/h)	~ 44kg-DS/h (~ 0.88m³/h)	~ 57kg-DS/h (~ 1.9m³/h)
FS-202	~ 16kg-DS/h (~ 8.0m³/h)	~ 24kg-DS/h (~ 2.4m³/h)	~ 40kg-DS/h (~ 2.0m³/h)	~ 88kg-DS/h (~ 1.76m³/h)	~ 114kg-DS/h (~ 3.8m³/h)
FS-301	~ 20kg-DS/h (~ 10.0m³/h)	~ 30kg-DS/h (~ 3.0m³/h)	~ 50kg-DS/h (~ 2.5m³/h)	~ 100kg-DS/h (~ 2.0m³/h)	~ 130kg-DS/h (~ 4.33m³/h)
FS-302	~ 40kg-DS/h (~ 20.0m³/h)	~ 60kg-DS/h (~ 6.0m³/h)	~ 100kg-DS/h (~ 5.0m³/h)	~ 200kg-DS/h (~ 4.0m³/h)	~ 260kg-DS/h (~ 8.67m³/h)
FS-351	~ 40kg-DS/h (~ 20.0m³/h)	~ 60kg-DS/h (~ 6.0m³/h)	~ 100kg-DS/h (~ 5.0m³/h)	~ 200kg-DS/h (~ 4.0m³/h)	~ 260kg-DS/h (~ 8.67m³/h)
FS-352	~ 80kg-DS/h (~ 40.0m³/h)	~ 120kg-DS/h (~ 12.0m³/h)	~ 200kg-DS/h (~ 10.0m³/h)	~ 400kg-DS/h (~ 8.0m³/h)	~ 520kg-DS/h (~ 17.3m³/h)
FS-401	~ 65kg-DS/h (~ 32.5m³/h)	~ 100kg-DS/h (~ 10.0m³/h)	~ 160kg-DS/h (~ 8.0m³/h)	~ 320kg-DS/h (~ 6.4m³/h)	~ 416kg-DS/h (~ 13.8m³/h)
FS-402	~ 130kg-DS/h (~ 65.0m³/h)	~ 200kg-DS/h (~ 20.0m³/h)	~ 320kg-DS/h (~ 16.0m³/h)	~ 640kg-DS/h (~ 12.8m³/h)	~ 832kg-DS/h (~ 27.7m³/h)
FS-403	~ 195kg-DS/h (~ 97.5m³/h)	~ 300kg-DS/h (~ 30.0m³/h)	~ 480kg-DS/h (~ 24.0m³/h)	~ 960kg-DS/h (~ 19.2m³/h)	~ 1248kg-DS/h (~ 41.6m³/h)
FS-404	~ 260kg-DS/h (~ 130.0m³/h)	~ 400kg-DS/h (~ 40.0m³/h)	~ 640kg-DS/h (~ 32.0m³/h)	~ 1280kg-DS/h (~ 25.6m³/h)	~ 1664kg-DS/h (~ 55.4m³/h)

* Throughput above is calculated as approximate and may vary depending on sludge condition. For model selection, please contact us.
* Throughput of each model is based on dewatered cake with better than 15% dry solids content.
* There is no certain upper limitation on inlet sludge concentration, however, the target sludge must be flowable.
* Throughput of DAF Sludge is based on sludge containing much fat, oil, and grease such as meat processing applications etc.
* Throughput of Mixed Sludge (Primary Sludge and Waste Activated Sludge) is based on sludge containing 20% fiber (150 micron mesh clearance) against Total Solids. Specifications shall be changed depending on Sludge conditions.

Model with sludge conditioning tank | VOLUTE™ technology

Sludge Dewatering Press VOLUTE™ EC Series

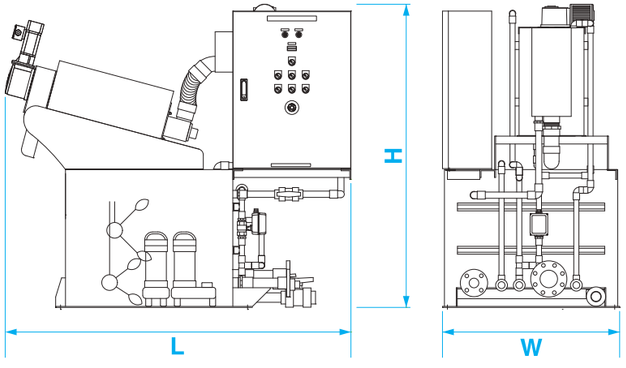
EC series has been evaluated higher in the long-run since it launched in 2001. Having a sludge conditioning tank which enables not only more than 95% solids-capture-rate in filtrate water but also easy installation on site, this model acquires by a lot of customers even now.



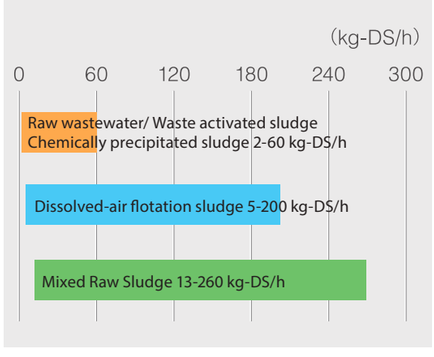
Specifications List

Model	Dimensions(mm)			Total Power Consumption(kW)	Weight(kg)	
	L	W	H		Empty	Operation
EC-101	1757	700	1705	0.7	270	670
EC-102	1757	900	1705	0.8	320	820
EC-131	1757	700	1705	0.7	285	685
EC-132	1757	900	1705	0.8	350	850
EC-133	1847	1100	1705	0.9	420	1070
EC-202	2485	1180	1728	1.45	870	1820
EC-203	2591	1495	1728	1.8	1075	2375
EC-204	2665	1780	1728	2.7	1470	3120
EC-205	2741	2085	1728	2.9	1820	3720

Layout Drawings



Throughput Range



VOLUTE™

Throughput

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	0.2%	1.0%	2.0%	5.0%	3.0%
EC-101	~ 2kg-DS/h (~ 1.0m³/h)	~ 3kg-DS/h (~ 0.3m³/h)	~ 5kg-DS/h (~ 0.25m³/h)	~ 10kg-DS/h (~ 0.2m³/h)	~ 13kg-DS/h (~ 0.43m³/h)
EC-102	~ 4kg-DS/h (~ 2.0m³/h)	~ 6kg-DS/h (~ 0.6m³/h)	~ 10kg-DS/h (~ 0.5m³/h)	~ 20kg-DS/h (~ 0.4m³/h)	~ 26kg-DS/h (~ 0.87m³/h)
EC-131	~ 4kg-DS/h (~ 2.0m³/h)	~ 6kg-DS/h (~ 0.6m³/h)	~ 10kg-DS/h (~ 0.5m³/h)	~ 20kg-DS/h (~ 0.4m³/h)	~ 26kg-DS/h (~ 0.87m³/h)
EC-132	~ 8kg-DS/h (~ 4.0m³/h)	~ 12kg-DS/h (~ 1.2m³/h)	~ 20kg-DS/h (~ 1.0m³/h)	~ 40kg-DS/h (~ 0.8m³/h)	~ 52kg-DS/h (~ 1.73m³/h)
EC-133	~ 12kg-DS/h (~ 6.0m³/h)	~ 18kg-DS/h (~ 1.8m³/h)	~ 30kg-DS/h (~ 1.5m³/h)	~ 60kg-DS/h (~ 1.2m³/h)	~ 78kg-DS/h (~ 2.6m³/h)
EC-202	~ 16kg-DS/h (~ 8.0m³/h)	~ 24kg-DS/h (~ 2.4m³/h)	~ 40kg-DS/h (~ 2.0m³/h)	~ 80kg-DS/h (~ 1.6m³/h)	~ 104kg-DS/h (~ 3.47m³/h)
EC-203	~ 24kg-DS/h (~ 12m³/h)	~ 36kg-DS/h (~ 3.6m³/h)	~ 60kg-DS/h (~ 3.0m³/h)	~ 120kg-DS/h (~ 2.4m³/h)	~ 156kg-DS/h (~ 5.2m³/h)
EC-204	~ 32kg-DS/h (~ 16m³/h)	~ 48kg-DS/h (~ 4.8m³/h)	~ 80kg-DS/h (~ 4.0m³/h)	~ 160kg-DS/h (~ 3.2m³/h)	~ 208kg-DS/h (~ 6.93m³/h)
EC-205	~ 40kg-DS/h (~ 20m³/h)	~ 60kg-DS/h (~ 6.0m³/h)	~ 100kg-DS/h (~ 5.0m³/h)	~ 200kg-DS/h (~ 4.0m³/h)	~ 260kg-DS/h (~ 8.67m³/h)

*Throughput above is calculated as approximate and may vary depending on sludge condition. For model selection, please contact us.
*Throughput of each model is based on dewaterd cake with better than 15% dry solids content.
*There is no certain upper limitation on inlet sludge concentration, however, the target sludge must be flowable.
*Throughput of DAF Sludge is based on sludge containing much fat, oil, and grease such as meat processing applications etc.
*Throughput of Mixed Sludge (Primary Sludge and Waste Activated Sludge) is based on sludge containing 20% fiber (150 micron mesh clearance) against Total Solids. Specifications shall be changed depending on sludge conditions.

VOLUTE™ technology

Sludge Thickener VOLUTE™ VT Series

Thickener VT series thickens sludge with concentration of 1% or less to that with a concentration of 4 to 6%.

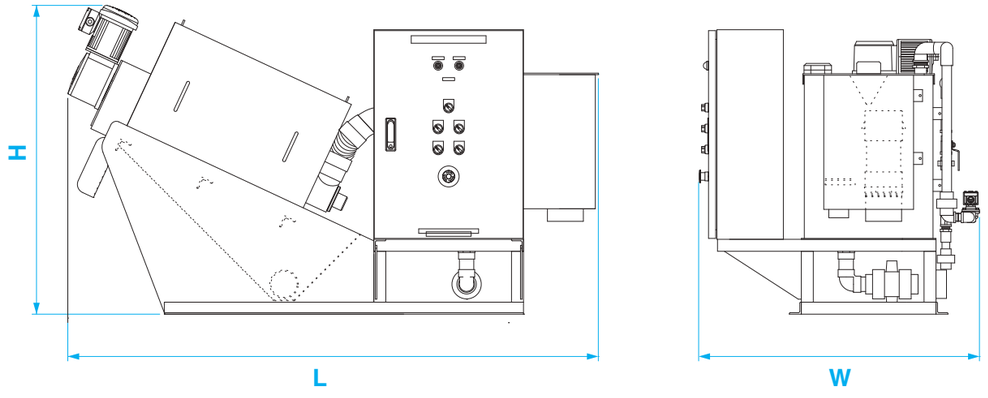
This mechanical thickening will constantly produce stable thickened sludge, which is difficult with gravity thickening.
It is possible to install as pre-thickener for your existing belt press or centrifuge to improve their dewatering performance.
Furthermore, even in some facilities where the dewatered cakes are not easily transported, the volume of sludge to be disposed of can be reduced by thickening and yet it is still easily transported (pumped) as it is still in liquid form.

Specifications List

Model	Capacity(Inflow) (m^3/h)	Dimensions(mm)			Total Power Consumption(kW)	Weight(kg)	
		L	W	H		Empty	Operation
VT-101	～1	1772	901	1250	0.3	160	290
VT-131	～3	1772	901	1250	0.3	170	300
VT-201	～10	2436	901	1737	1.15	360	680
VT-301	～30	3463	1320	2026	1.5	840	1650
VT-302	～60	4778	1685	2026	3	1500	4200
VT-303	～90	4978	1930	2026	4.45	1950	5550

* Capacity is based on waste activated sludge from biological treatment with TS 0.4% and thickening up to 4% with polymer.
* Figures above is calculated as approximate and may vary depending on sludge condition. For model selection, please contact us.

Layout Drawings



Model without sludge conditioning tank | VOLUTE™ technology

Sludge Dewatering Press VOLUTE™ ES-051

ES-051 is the smallest dewatering press in the world which is appropriate for installing in the small scale wastewater treatment plants. This is suitable not only for installing in sewage system, but also for installing in other small facilities such as industrial laundry, vehicle-maintenance factories, and others.

Specifications List

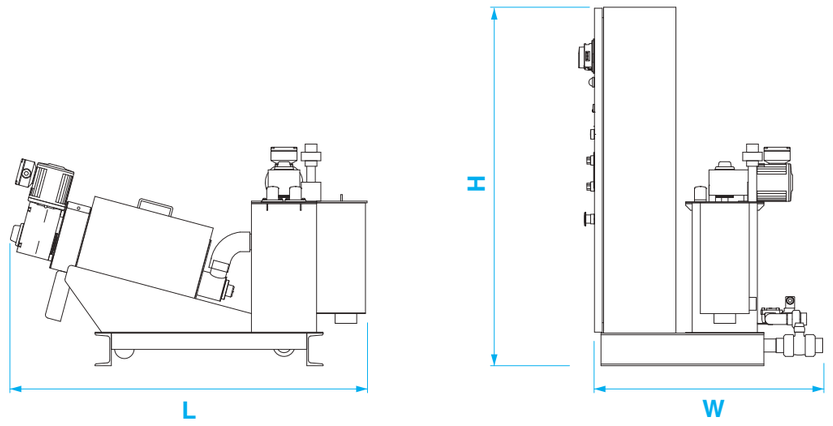
Model	Dimensions(mm)			Total Power Consumption(kW)	Weight(kg)	
	L	W	H		Empty	Operation
ES-051	1095	749	1100	0.2	160	180

Throughput

Sludge Concentration(TS) / Model	Raw Wastewater /Waste Activated Sludge / Chemically Precipitated Sludge		Dissolved-air Flotation Sludge
	0.2%	1.0%	2.0%
ES-051	～0.5kg-DS/h (～0.25m^3/h)	～1kg-DS/h (～0.1m^3/h)	～2kg-DS/h (～0.1m^3/h)

* Throughput above is calculated as approximate and may vary depending on sludge condition. For model selection, please contact us.
* Throughput of each model is based on dewaterd cake with better than 15% dry solids content.
* There is no certain upper limitation on inlet sludge concentration, however, the target sludge must be flowable.
* Throughput of DAF Sludge is based on sludge containing much fat, oil, and grease such as meat processing applications etc.

Layout Drawings

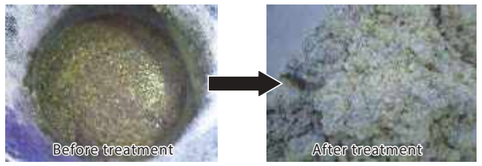


Waste Dry Film Photoresist Dewatering Press TV-50F

TV-50F is designed to dewater waste photoresist generated from photoresist patterning processes, such as PCB manufacturing. Today, one of the key challenges with business management is reduction of waste generated from production process. TV-50F reduces waste photoresist with high dewatering capacity and helps reduce disposal cost. TV-50F is compact: 844 mm long, 363 mm wide and 555 mm high. It does not require large space.

Easier handling of waste photoresist

Before dewatered, waste dry film photoresist is mixed with photoresist remover and the water content is very high. The waste is a strong alkali. It is hazardous and it must be handled carefully in transport and disposal not to spill it. The waste, after dewatered by TV-50F, is like grated cheese and it won't drip the remover solution. That will improve the working environment for transport and disposal.



Case Study

Production capacity	360,000 m²/year (30,000 m²/month)
Waste generation	60 t/year
Waste disposal cost	100 yen/kg or 20,000 yen/drum

Waste reduction by dewatering	50%
Dewatering capacity	30 kg-WET/h max.

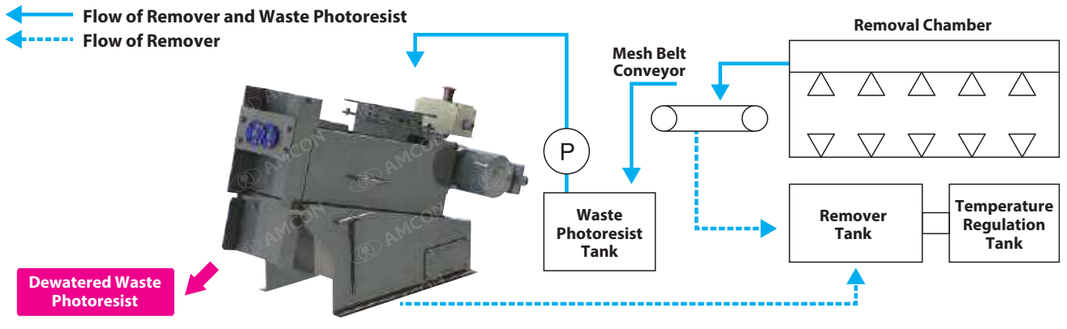
*This cost does not include transport, equipment maintenance, operation and running costs.

Specifications List

Model	Input (kg-WET/h)	Dimensions(mm)			Total Power Consumption(kW)	Weight(kg)
		L	W	H		
TV-50F	～30	844	363	555	0.1	60

* The hopper for feeding material is optional.

Example of use of TV-50F



Steam heat source

VOLUTE™

Sludge Dryer K Series

Sludge dryer, K series is capable of decreasing a great amount of sludge-discharging with Steam-Heating Drum. Using after the sludge process of VOLUTE™ dewatering press, it can make sludge cake (Assuming activated-sludge or chemically precipitated sludge) further drier one which has 10% ~ 40% solids content.

Sludge Dewatering and Drying System

1 Discharge of dewatered cake

The dewatered cake with dry solid content of about 17%, discharged from the sludge dewatering press, is in turn fed into the dryer.

2 Drying Drum

Sludge is dropped onto the drum surface, and it gets dried daring one rotation.

3 Dried cake

Dried cake with solid content of 60 to 90% is discharged.

Specifications List

Model	Throughput (kg-WET/h)	Dimensions(mm)			Required Amount Steam (kg/h)	Total Power Consumption (kW)	Weight (kg)
		L	W	H			
K-510C	～9kg-DS/h(～60kg-WET/h)	2300	1300	1060	70.3	0.8	1500
K-515C	～14kg-DS/h(～93kg-WET/h)	2800	1300	1060	109.0	0.8	1900
K-810C	～15kg-DS/h(～100kg-WET/h)	2600	1950	1215	117.2	1.5	3000
K-815C	～22kg-DS/h(～146kg-WET/h)	3100	1950	1215	171.1	1.5	3500
K-820A	～28kg-DS/h(～186kg-WET/h)	3500	1950	1215	218.0	1.5	4000
K-12520A	～44kg-DS/h(～293kg-WET/h)	4130	2900	2000	383.4	3.0	9000

* Mentioned throughput above is under the standard case ; dewatered cake with better than 15% dry solids content is into dried cake with better than 60% dry solids content.
* Mentioned throughput above may vary depending on the conditions of treated sludge or dry solids content of the dewatered cake to be fed into the drier. Please contact us for further information.
* Dimension and weight above are for each single drier.
* K series is a product of kankyo Setsubi Co., Ltd.

Polymer Make-up System

Liquid Type

AF Series

Powder Type

AP Series

AP Series and AF Series are designed to dissolve polymer, which are used for sludge dewatering and various other wastewater treatment systems, automatically to the specified concentrations of polymer. Automation of dissolving work will drastically save labor cost.

Save labor by fully automatic operation
Just refill the stock solution tank / the hopper with polymer, and the device will do the rest from measurement to dissolution.

Constant concentration
The concentration of the diluted polymer is kept consistent as the device automatically measures the stock solution and dilution water.

Interlocked operation with sludge dewatering press or another machine
The device keeps monitoring the dissolving tank and the stock solution tank / the hopper using sensors. When the level of the polymer is low or when supply of dilution water is inadequate, the device automatically stops and sends a warning signal to external equipment.

Specifications List

AF Series

Model	Dissolving Capacity (L/h)	Stock Solution Tank(L)		Dimensions (mm)			Total Power Consumption(kW)	Weight (kg)	
		Effective Capacity	Operating Capacity	L	W	H		Empty	Operation
AF-50SG	600	40	30	890	730	1165	0.35	175	315
AF-70SG	1350	100	80	1335	1030	1365	0.70	240	780

* Polymer dosing pump is not included within the scope of supply of this product. We will select the corresponding pump based on your requirement. Please consult us.

AP Series

Model	Dissolving Capacity (L/h)	Hopper Capacity (L)	Dimensions (mm)			Total Power Consumption (kW)	Weight (kg)	
			L	W	H		Empty	Operation
AP-S01	150	10	785	925	1280	0.30	130	290
AP-S03	150	30	785	985	1440	0.30	135	310
AP-M03	500	30	1150	1260	1645	0.50	250	785
AP-M05	500	50	1150	1260	1755	0.50	255	800

* Polymer dosing pump is not included within the scope of supply of this product. We will select the corresponding pump based on your requirement. Please consult us.

Water Treatment Chemicals

ハイブリッドV HYBRID V®

Polymer Hybrid V has great flocculation efficiency. They are suitable for various types of wastewater treatment systems, such as sludge dewatering presses, dissolved-air floatation (DAF) systems, and chemical precipitation systems. Hybrid V has anionic, cationic, non-ionic and zwitterionic coagulants.
The coagulants also come in two different forms: emulsion and Powder.
※Various products are available. Please contact us for more detailed information.

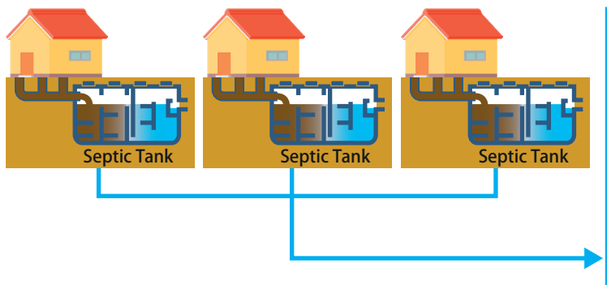
Emulsion

Powder

Case Study:

Mobile VOLUTE™ dewatering press installing in a truck

At Metro Manila district in the Philippines, septic tanks had important roles for the process of WWT to collect wastewater from each area due to lack of the vacant sites and the budget for construction of WWTP. However, there was a great concern for the residents there that was about the pollution of groundwater attributed to the penetrating unclean process-water from underground due to lack of the appropriate management such as the sludge drawing and cleaning of the septic tanks, and others. In terms of this, the appropriate process of the sludge coming from the septic tanks was the urgent issue needed to be dealt with.



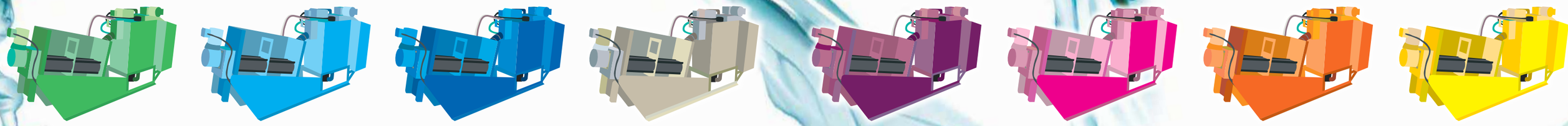
The ALL-IN-ONE mobile dewatering truck enables each household's septic tank to be dewater directly!

Therefore, we AMCON proposed Mobile VOLUTE™ dewatering press installing in a truck toward government agency (Department of Public works and Highways) which administered the sewage systems and septage-process facilities in the Philippines in order to procure and provide the best solutions by utilizing ODA budget it financed .
VOLUTE™ Mobile dewatering press installed in truck visited each house to make the whole process for the sludge evacuated from the septic tanks appropriately. The dewatered sludge became a fertilizer after processing in a composting facility at Metro Manila district. Since then, VOLUTE™ dewatering press has been contributing greatly to not only recycling the sludge but also the living environment there.

Amenity Convenience
AMCON®

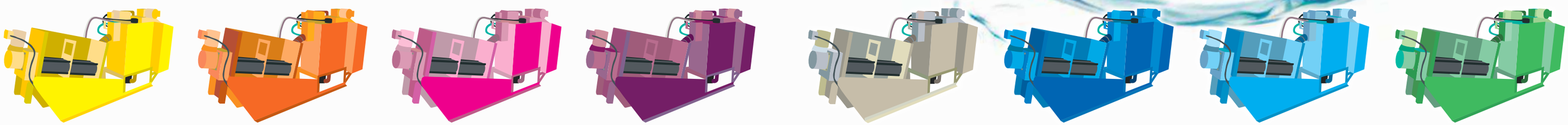
SLUDGE TREATMENT EQUIPMENT

CATALOG



VOLUTE™

Invented by AMCON in 1990.



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