



VOLUTE™ Dewatering Press

“Change the sludge management”

“Squeeze sludge, squeeze costs”

AMCON INC.

Company Profile



Company Profile

Address : 1926 Nippa-cho, Kohoku-ku,
Yokohama, Kanagawa 233-0057 JAPAN

Foundation : November 22, 1974
CEO : Shoichi Sasaki

URL : <http://en.amcon.co.jp/>

Subsidiary : Czech Republic, China,
Germany

Business Type :

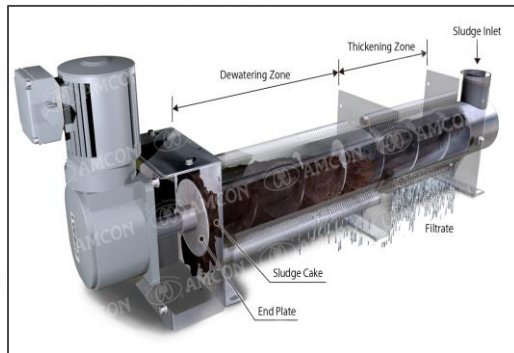
- Manufacturing and Sales of Wastewater Treatment Systems
- Water and Wastewater Analysis
- Maintenance Service for Residential and Commercial Buildings

AMCON provides AMenity & **CON**venience by
VOLUTE™ Technology



VOLUTE™ Technology Information.

VOLUTE™ Dewatering Press is Multi-Disk-Plates Screw Press with unique technology developed by AMCON, enabling stable SLUDGE dewatering with less operational cost. As of now, installation records are more than 4600 units in 76 countries worldwide, covering both municipal and industrial sector. (As of 2020 August)



Advantages

1. Ideal for oily sludge with clog-free and self-cleaning mechanism
2. Small footprint
3. Easy operation/Easy maintenance
4. Environment friendly(power saving/water saving design)
5. Low noise/low vibration
6. Warranty and reliable after-sales service

- █ Energy
- █ Water
- █ Space

Energy saving



Comparison image of VOLUTE™



Centrifuge



Belt Filter Press

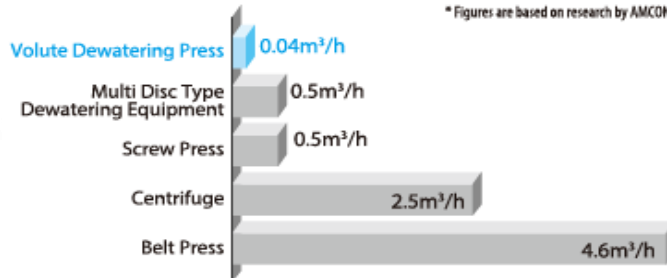


Filter Press



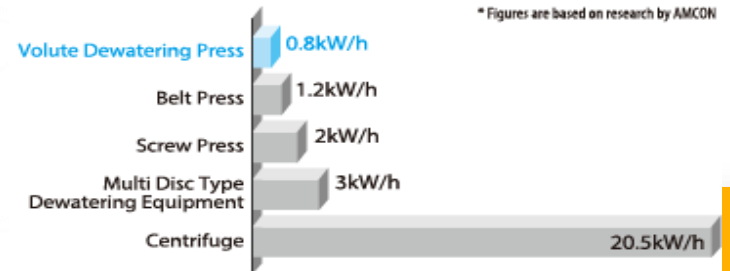
Comparison of spray washing water consumption among dewatering equipments (throughput 30 kg-DS/h)

* Figures are based on research by AMCON








Comparison of power consumption among sludge dewatering equipments (throughput 30 kg-DS/h)

* Figures are based on research by AMCON



Cost Comparison



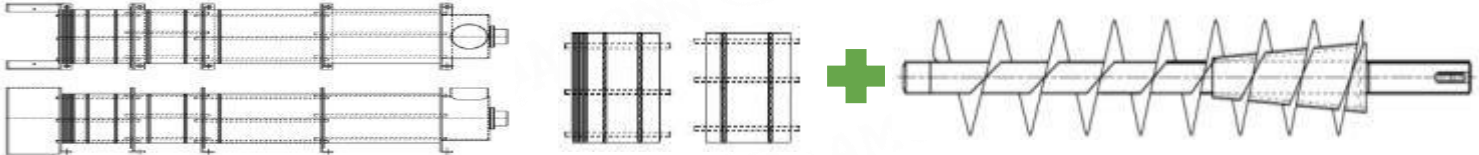
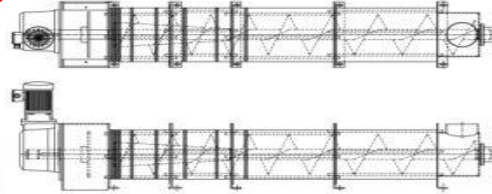
		Volute Dewatering Press	Screw Press	Centrifuge	Belt Press	Filter Press
Overall Image						
Model (Throughput - 30kg-DS/h)		ES-301	Inner Diameter : 500mm	Inner Diameter : 800mm	Standard Model : Belt 1m wide	Standard Model : Belt 1m wide
Principle		<ul style="list-style-type: none"> ➤ The main body are composed of accumulated Rings and Screw. ➤ The accumulated Rings work as filter. The solids and the liquid are separated by the pressure caused by the Screw. ➤ The Screw pushes the edge of the Moving Rings (diameter smaller than the Screw) so that they move continuously in the gaps between the Fixed Rings as it rotates. This cleans the gaps and prevents from clogging. 	<ul style="list-style-type: none"> ➤ The main body is composed of punching metal or wedge wire and screw. ➤ The punching metal or wedge wire works as filter. The solids and the liquid are separated by the pressure caused by the Screw. ➤ The gravity dehydration and the pressuring dehydration are done to the floc made by the coagulant. 	<ul style="list-style-type: none"> ➤ The screw is built in the closure body. ➤ It separates by the specific gravity difference of liquid and solids. ➤ The sludge is introduced into a bowl rotating at high speed. Centrifugal force causes liquid-solid separation. 	<ul style="list-style-type: none"> ➤ The main body is composed of filter cloth. ➤ After gravity dewatering, the sludge is sandwiched between two filter cloths. Dewatering is carried out by compression and application of pressure, using rollers and belts. 	<ul style="list-style-type: none"> ➤ The main body is composed of filter cloth. ➤ After gravity dewatering, the sludge is sandwiched between two filter cloths. Dewatering is carried out by compression and application of pressure, using rollers and belts.
Dewatering Performance (sludge cake solids content)		★★★★★ 15 - 20 %	★★★ 10 - 15 %	★★★ 10 - 15 %	★★★ 10 - 15 %	★★★ 20 - 25 %
Installation	Footprint	★★★★★ 3260 mm × 940 mm (Including control panel and flocculation tank)	★★★★★ 3182 mm × 630 mm (Excluding control panel and flocculation tank)	★★★ 2910 mm × 1485 mm (Excluding control panel and flocculation tank)	★ 3150 mm × 1950 mm (Excluding control panel and flocculation tank)	★ 3000 mm × 1500 mm (Excluding control panel and flocculation tank)
		★★★★★	★★★	★	★★	★★
Noise and Vibration		★★★★★	★★★	★	★★	★★
Oily Sludge		★★★★★	★★★	★★	★	★
Daily Maintenance		★★★★★	★★★	★★	★	★
*Power Consumption		0.8kW	4kW	20.5kW	1.20kW	6.5kW
Cost for Power/year		22,255 PHP	4,690,795 PHP	24,040,329 PHP	1,407,261 PHP	181,162 PHP
Water Consumption		0.04m³/h	0.5m³/h	2.5m³/h	4.6m³/h	2.0 m³/h (Operation)
Cost for Water/year		3,435 PHP	2,931,465 PHP	14,656,245 PHP	26,967,839 PHP	171,852 PHP
Total Consumption		25690 PHP	7,622,260 PHP	38,696,574 PHP	28,375,100 PHP	353,014 PHP

Overhaul



**Recommended
Replacement Part is...**

"Volute Cylinder Unit"



- VOLUTE™ Dewatering Press does not require to be replaced whole parts for Overhaul.
- Maintenance Cost can be reduced because VOLUTE™ can be replaced necessary parts ONLY.
- Overhaul takes only few days which is much shorter than other equipment.

Solution for thin sludge



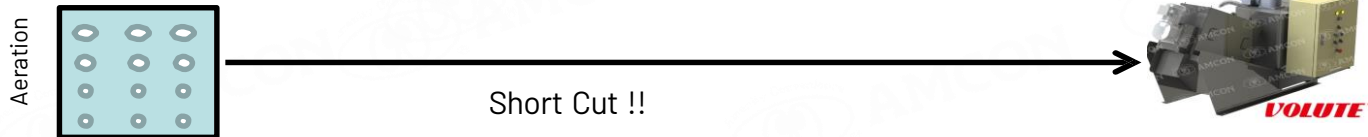
● Problem

Conventional Biological Treatment Process requires us to take care of complicated operation and maintenance.







● Solution

VOLUTE™ can treat thin sludge so sludge in the aeration tank can be fed directly so Construction and Maintenance cost can be reduced by using VOLUTE™



VOLUTE™ system x thin sludge VOLUTE™

Image				
Technology	VOLUTE™	Screw Press	Belt Press	Filter Press
Minimum SS	2,000 mg / L	10,000 mg / L		
Facility	Volute Only	Thickener will be required when sludge is thin		
Maintenance	Easy	More Complicated		

Case Study - Textile Factory -

Problem

The Client had been using a Belt Press for their Dewatering Process but it was not successful because the sludge was too thin for the Press and water content of Sludge cake was more than 90%.

Solution

After the installation of VOLUTE™ Technology, the situation was dramatically changed. Because VOLUTE™ has Thickening Process and Dewatering Process in one component, it separates Water and Solid immediately and dewateres sludge even if its concentration is low. Through the treatment, we got better water content than Belt Press and the client was satisfied with the result very much.

Result

Industry	Textile
Sludge Type	WAS
Sludge Concentration	SS 6,000 mg/L
Water Content / Dry Solid Content	85 % / 15%



Copy Products



The image features a modern glass skyscraper facade on the left side. The right side is a white background with a repeating watermark of the AMCON logo, which consists of a stylized 'A' inside a circle, followed by the word 'AMCON' and the tagline 'Amnity Convenience'.

Comparison ~Company



	Original	Copy Makers		
	AMCON	Kintep	Techase	Boeep
Product	Invented VOLUTE™ Technology as an original product in 1991 with know-how and research	Copy products without any research and know-how		
Experience with wastewater treatment	Since 1974	Since 2011	Since 2008	Since 1995
Experience with sludge handling	Over 30 years	Low experience		
Global Market Share in category of multi-disc screw press	Largest in the world	Mainly Active in China		
Number of Installation	Over 4600 units in 76 countries	N/A		
Oldest machine running	Over long run without any problems	N/A		
Number of applications	Over 100 different applications	N/A		
Service network	Production bases across the world with partners covering over 100 countries	Based in China and some partners in Europe		
Investment risk	Low	Extremely high		

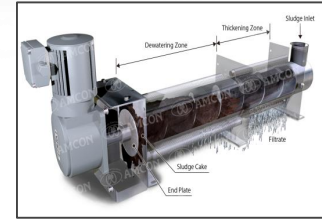
We use Selected Materials to provide products which can be used for years



Manufacturing



Supply



After 1 year

They use Unknown Materials to cut manufacturing cost



Manufacturing



Supply



After 1 year