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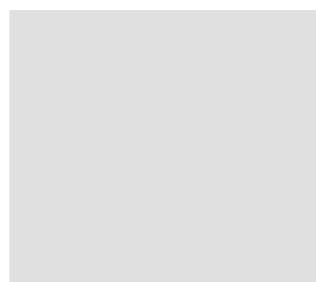
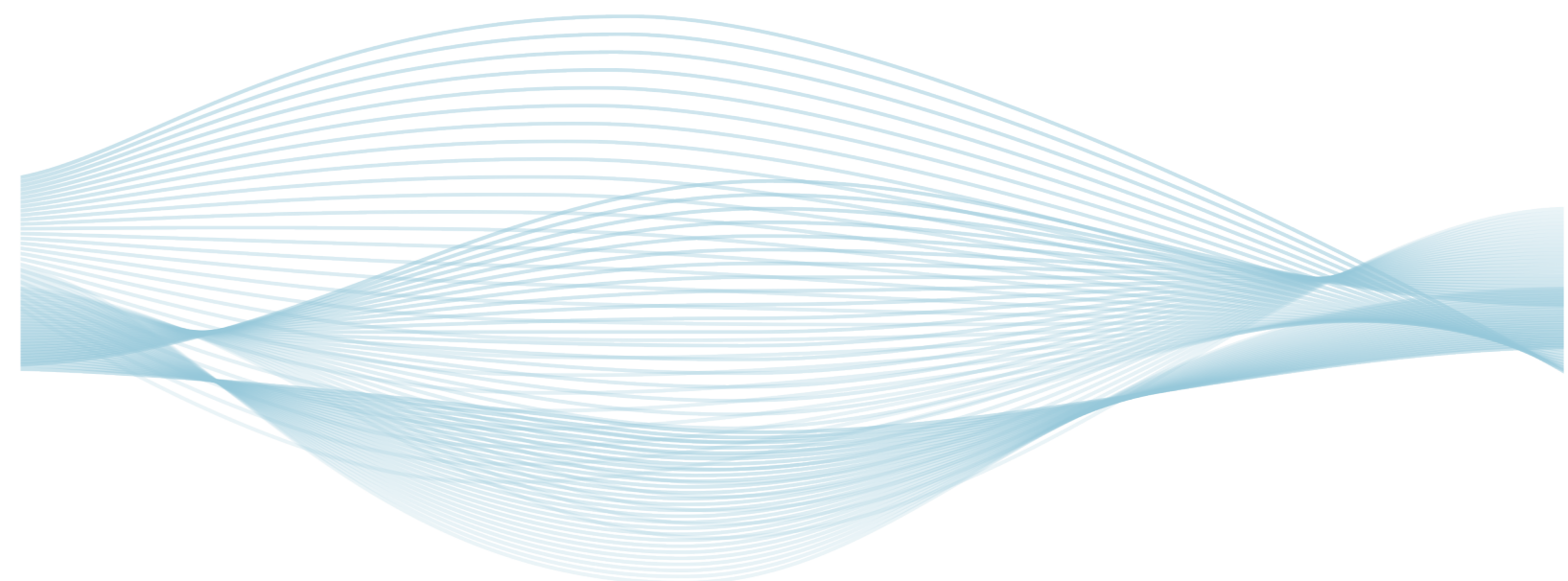
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M 疊螺式污泥脱水機

Multi-plate Screw Press



Concept

設備理念



Content

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Introduction

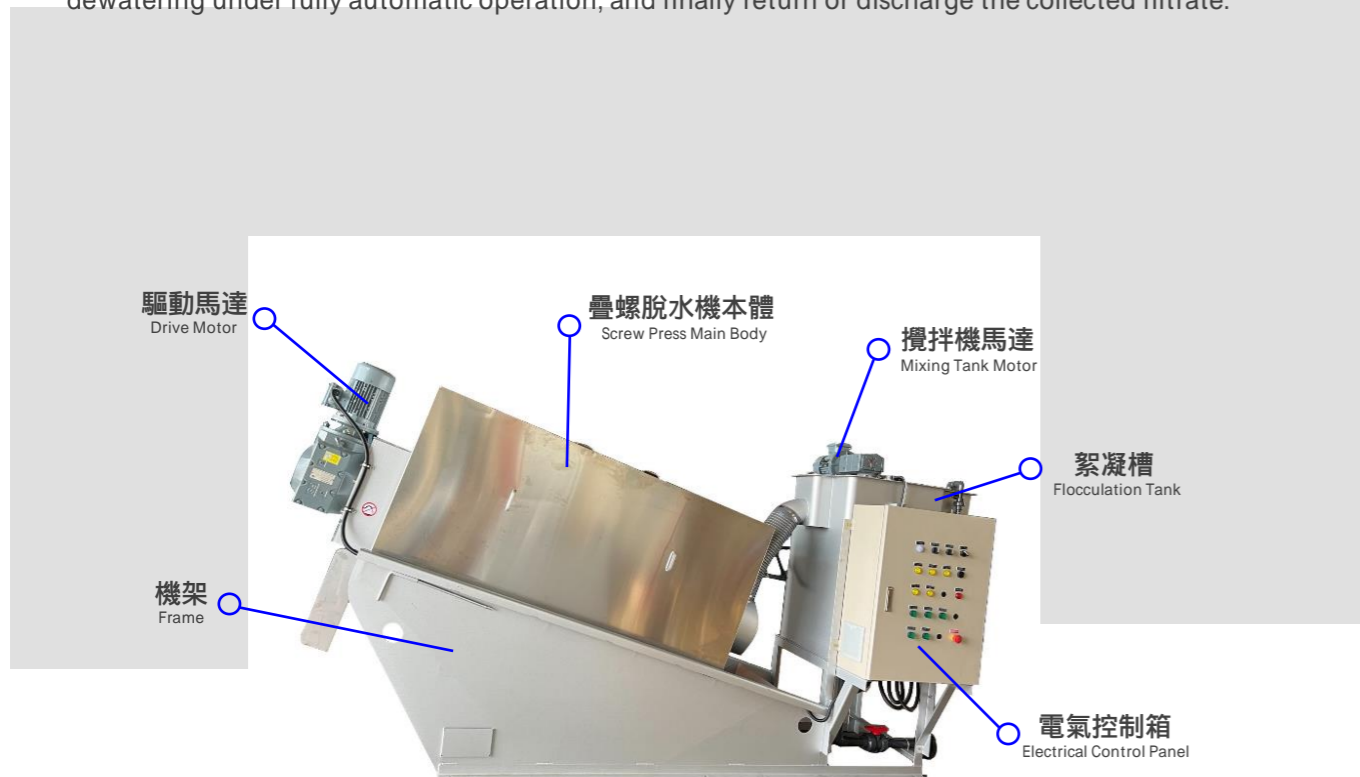
設備介紹

啟碩生產的疊螺式污泥脫水機在脫水原理上遵循力水同向、薄層脫水、適當施壓及延長脫水路徑等原則，解決了傳統污泥脫水設備易堵塞、無法處理低濃度污泥、能耗高、操作複雜等技術難題，實現高效節能的脫水目標。

疊螺式污泥脫水機可在全自動運行的條件下，實現高效絮凝、並連續完成污泥濃縮脫水的工作，最終將收集的濾液回流或排放。

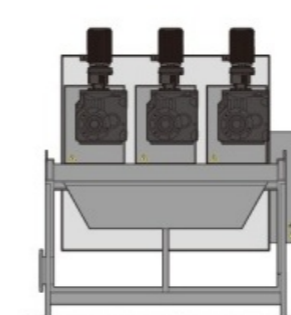
Chi-Shun Screw Press follows the principles of co-directional force and water flow, thin-layer dewatering, appropriate pressure application and extended dewatering path. It solves the technical problems of traditional sludge dewatering equipment, such as easy clogging, inability to handle low-concentration sludge, high energy consumption and complex operation, and achieves the goal of high-efficiency and energy-saving dewatering.

The screw press can achieve efficient flocculation and continuously complete the sludge concentration and dewatering under fully automatic operation, and finally return or discharge the collected filtrate.

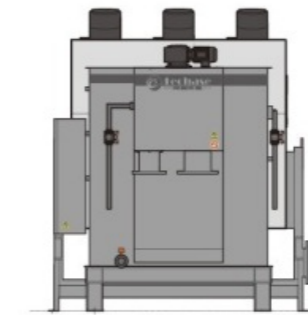


Introduction

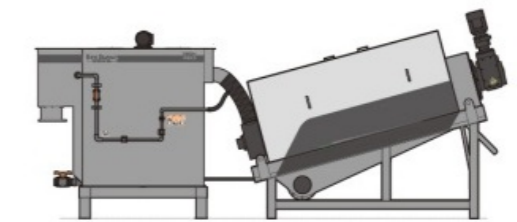
設備介紹



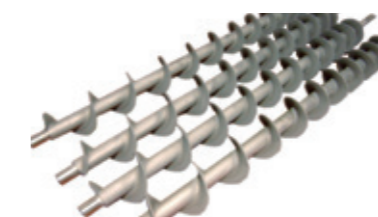
左視圖
Left View



右視圖
Right View



後視圖
Back View

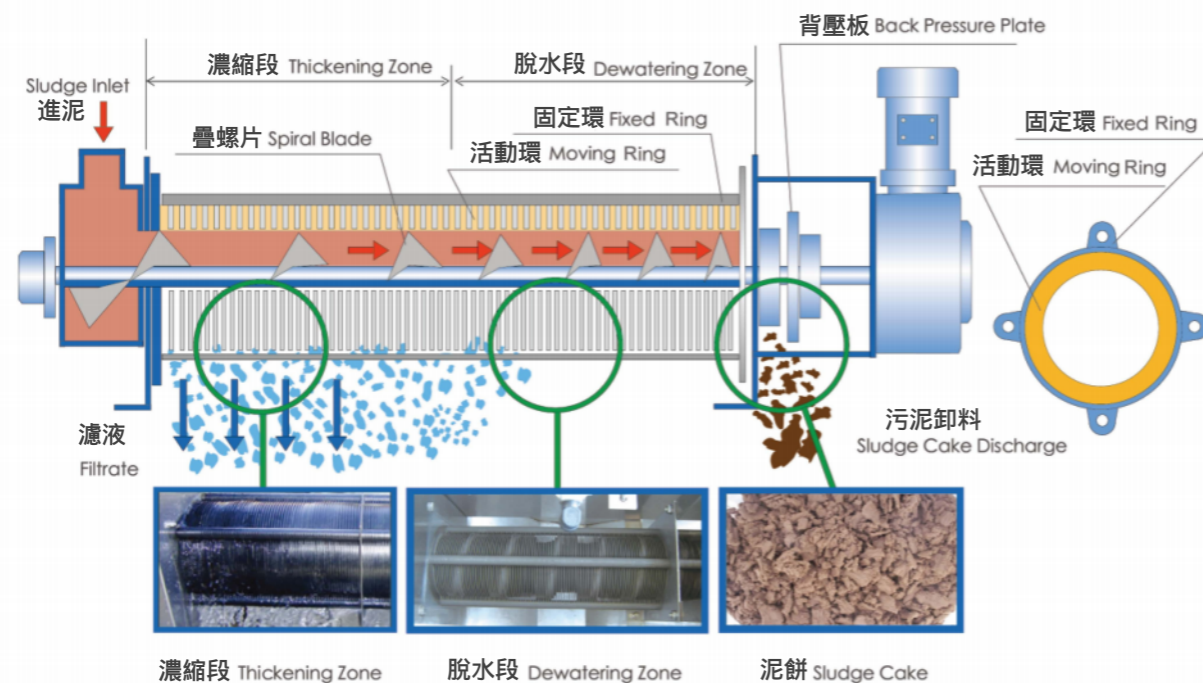


Principle

運作原理

設備運轉時，污泥從進料口進入滾筒後受到螺旋軸片的推送而向卸料口移動，隨著螺旋軸片之間的螺距逐漸縮小，污泥所受的壓力也不斷增大，污泥在壓差作用下開始脫水，水分從固定環與活動環的過濾間隙流出，同時設備靠固定環和活動環之間的自清洗功能，自動清洗過濾間隙以防止堵塞，泥餅經過充分的脫水後在螺旋軸的推進下從卸料口排出。

When the equipment is running, the sludge enters the drum from the feed port and be pushed towards the discharge port by the screw shaft. As the pitch between the screw shafts gradually decreases, the pressure on the sludge also increases. Under the action of pressure difference, the sludge begins to dewater, and the water flows out from the filter gap between the fixed ring and the moving ring. Meanwhile, the equipment automatically cleans the filter gap to prevent clogging by relying on the self-cleaning function between the fixed ring and the moving ring. After being fully dewatered, the sludge cake is discharged from the discharge port under the propulsion of the screw shaft.



Advantage

技術優勢

適用濃度5000mg/L ~ 50000mg/L

Applicable concentration 5000mg/L ~ 50000mg/L

疊螺式污泥脫水機不僅可以處理高濃度污泥，且可對低濃度污泥直接進行濃縮脫水，其適用污泥濃度的範圍可達5000mg/L~50000mg/L。

The screw press sludge dewatering machine can not only process high-concentration sludge, but also directly concentrate and dewater low-concentration sludge. Its applicable sludge concentration range is 5000mg/L ~ 50000mg/L.

24小時自動化連續運行，無須人工操作

24-hour automated continuous operation, no manual operation required.



固定/活動環取代傳統濾布，實現設備自清洗、無堵塞、可處理含油污泥多效一體

Fixed and moving rings replace filter plates, enabling the equipment to achieve self-cleaning, clogging-free operation, and multi-functionality in handling oily sludge.

疊螺式污泥脫水機在螺旋軸的旋轉作用下，活動環相對固定環不斷錯動從而實現了設備的自清洗功能，解決了傳統脫水機普遍存在的堵塞問題。具有抗含油能力強、易分離、不堵塞等特點，且無需外接高壓水泵進行反沖洗，自來水壓力即可滿足設備自清洗。

The screw press achieves self-cleaning by causing the moving rings to constantly shift relative to the fixed rings as the screw shaft rotates, thus solving the clogging problem commonly found in traditional dewatering machines. It features strong resistance to oil, easy separation, and non-clogging properties, and requires no external high-pressure water pump for backwashing, also tap water pressure is sufficient for self-cleaning.



- 自清洗 Self-Cleaning
- 無堵塞 Clogging-Free
- 易處理含油污泥 Handle Oily Sludge

Introduction

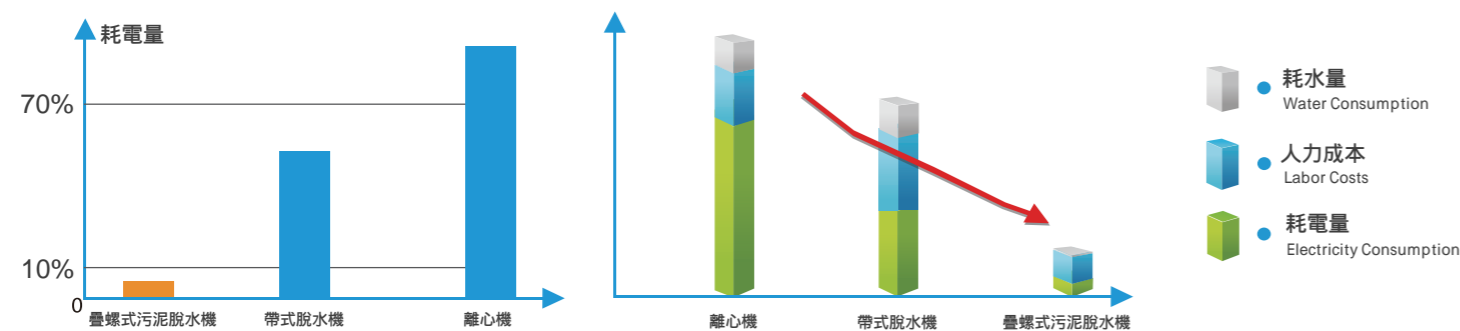
技術優勢

低速運轉、無噪音、低能耗，平均能耗僅為帶式脫水機的1/8、離心機的1/20

Low running speed, low noise, low power consumption - 1/8 of Belt Press and 1/20 of Centrifuge

疊螺式污泥脫水機以容積內壓進行脫水，無需滾筒等大型機體，且轉速低(僅為2~4轉/分)，因此具有節水、節能、低噪音等特點，平均能耗為帶式脫水機的1/8、離心機的1/20，其單位電耗僅為0.01~0.1kwh/kg DS，直接降低了污水處理系統的運轉成本。

The screw press sludge dewatering machine uses internal pressure for dewatering, eliminating the need for large machines like drums. Its low rotational speed (only 2-4 rpm) results in water conservation, energy saving, and low noise. Its average energy consumption is 1/8 that of a belt dewatering machine and 1/20 that of a centrifuge, with a unit power consumption of only 0.01-0.1 kWh/kg DS, directly reducing the operating costs of wastewater treatment systems.



降低建設成本、提高處理效果

Less capital construction cost, more excellent working performance

疊螺式污泥脫水機由於可直接對曝氣池和二沉池污泥進行處理，無需額外設置污泥濃縮池，因此降低了基本建設的成本，且能避免傳統污泥濃縮池中磷釋放的問題，大大提升污水處理系統中的脫磷功能。

Since the screw press can directly treat sludge from aeration tanks and secondary sedimentation tanks without the need for an additional sludge thickening tank, it reduces the cost of basic construction and avoids the phosphorus release problem in traditional sludge thickening tanks, thus greatly improving the phosphorus removal function of the sewage treatment system.

- 節省濃縮池等建築物的建設及攪拌機、空壓機、清洗泵等配套設備的成本
It saves on the construction costs of buildings such as thickening tanks and the costs of supporting equipment such as mixers, air compressors, and cleaning pumps.
- 設備占地面積小，降低脫水機區域的建設成本
The equipment has a small footprint, reducing the construction cost of the dewatering area.

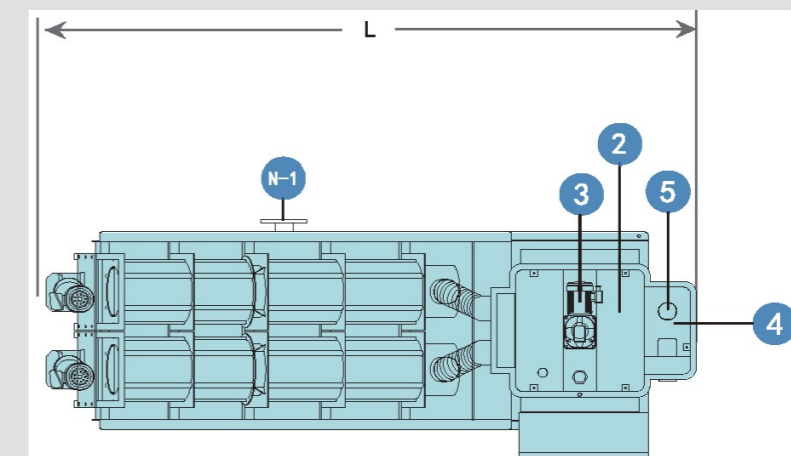
Structure

產品結構

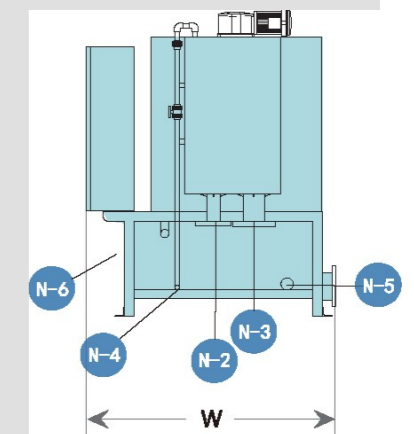
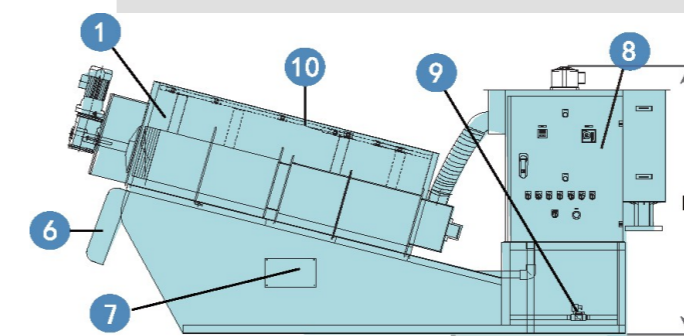
整體構造

Overall Structure

主要部件表	
1	疊螺機主體
2	絮凝槽
3	絮凝槽攪拌馬達
4	藥液入口
5	水位調整器
6	泥餅卸料斗
7	濾液收集槽
8	電氣控制箱
9	清洗電動閥
10	清洗裝置



接口表	
N-1	濾液排放口
N-2	污泥進料口
N-3	溢流口
N-4	藥液入口
N-5	清洗水入口
N-6	污泥排空口



Characteristic

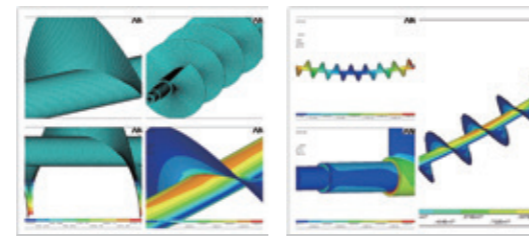
產品特點

特殊螺桿軸

Specially screw shaft

根據污泥性質調整螺旋軸參數，確保產品運行效果，並針對不同行業特性使用專用軸心(石化、果蔬、造紙、河湖、污泥濃縮、澱粉、蛋白、藻類、養殖、自來水、礦井水等)

Adjust the screw shaft parameters according to the properties of the sludge to ensure product performance, and use specialized shafts for different industries (petrochemical, fruit and vegetable, paper-mill, river and lake, sludge thickening, starch, protein, algae, aquaculture, tap water, mine water, etc.)

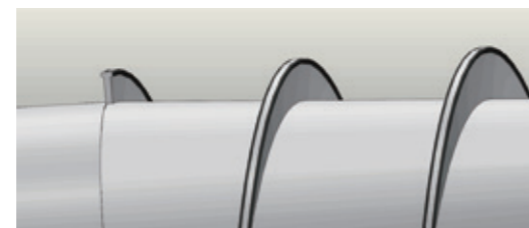


表面包覆150倍厚度的堆焊碳化鎢硬質合金

Surface coating with 150 times thick tungsten carbide hard alloy for welding.

螺桿軸耐磨層堆焊碳化鎢硬質合金，合金層厚度增加150倍，耐磨腐蝕，使用壽命更長。

The wear-resistant layer of the screw shaft is overlaid with tungsten carbide cemented carbide, increasing the thickness of the alloy layer by 150 times, making it more resistant to wear and corrosion and extending its service life.



獨特的CFRP環片，耐磨、耐腐蝕性能更優

Unique CFRP ring with superior wear and corrosion resistance

環片採用獨特的CFRP材質，耐磨、耐腐蝕性能更優，使用壽命延長一年以上。

The ring is made of a unique CFRP material, which has better wear resistance and corrosion resistance, and extends its service life by more than one year.



Characteristic

產品型號

SP型疊螺式污泥脫水機型號表

Screw Press Model List

型號 Model	污泥總乾量	尺寸			重量		馬達功率
	Dry Sludge	Dimension (mm)			Weight (kg)		Power (kW)
	(kg DS/hr)	長(L)	寬(W)	高(H)	淨重(net)	運轉重(run)	總功率(total)
SP-051	0.4-0.8	900	360	570	50	65	0.20
SP-151	4-10	1950	950	1170	240	340	0.44
SP-201	6-20	2750	1070	1350	380	730	0.63
SP-251	15-35	2910	1070	1400	450	800	0.70
SP-252	30-70	2910	1260	1400	600	1050	0.95
SP-301	20-60	2900	1050	1600	700	1100	1.00
SP-302	40-120	3100	1330	1610	1050	1700	1.73
SP-351	40-100	3460	1100	1800	1000	1600	1.38
SP-352	80-200	3600	1500	1800	1500	2300	2.13
SP-401	80-160	4000	1200	2000	1300	2200	1.73
SP-402	160-320	4200	1600	2000	2150	3800	2.83
SP-403	240-480	4500	2000	2000	2900	5600	4.21
SP-451	120-240	5100	1500	2400	1800	3300	1.93
SP-452	240-480	5100	1650	2400	2800	5200	3.03
SP-453	360-720	5400	2150	2400	4300	8000	4.21
SP-454	480-960	5550	2750	2400	5300	9900	5.31

SP
型號表

註：泥餅含水率約80%，受污泥性質、進泥含水率、絮凝效果等影響會略有不同，具體以現場實際狀況為主。



Application

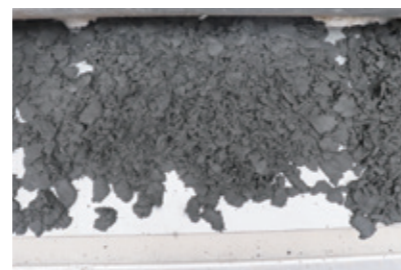
產業應用

為了滿足不同行業的需求，啟碩憑藉公司的技術創新優勢及多年實績經驗，為不同用戶打造客製化的解決方案，並推出專用機型，包括市政、石化、造紙、藻類、蔬果加工、養殖及自來水廠等。

To meet the needs of different industries, we leverage our technological innovation advantages and years of practical experience to create customized solutions for different users and launch special models, including those for municipal, petrochemical, paper-mill, algae, fruit and vegetable processing, aquaculture and waterworks.

市政污水廠

Municipal Sewage Treatment Plant



自來水廠

Waterworks



Application

產業應用

餐廚廢棄物

Kitchen Waste



蔬果加工

Fruit and Vegetable Processing



藻類脫水

Blue-green Algae Dehydration



Application

產業應用

化工製藥

Chemical Pharmaceuticals



垃圾滲濾液

Landfill Leachate



食品飲料

Food and Beverage



Application

產業應用

石化

Petrifaction



農牧

Farming



半導體

Semiconductor

