PRODUCT CATALOG　產品型錄

FULLY AUTOMATIC BACKWASHING DRUM FILTER

全自動逆洗過濾機

CHIN HSIEH HSIN
TECHNOLOGY CO., LTD.　金協鑫科技股份有限公司

COMPANY PROFILE

As a premier leader in professional surface treatment equipment and turnkey solutions, we are dedicated to providing global clients with comprehensive, one-stop services–ranging from factory layout planning and custom manufacturing to on-site installation and commissioning. With deep-rooted industry expertise, we understand that production stability and high yield rates are the absolute cornerstones of your profitability. Therefore, we engineer every gantry plating line, automatic dip coating centrifuge, and automated drying system to the highest national-level craftsmanship standards.

We deliver more than just machinery; we deliver seamless system integration. From the core plating processes to peripheral support equipment like industrial chillers, rectifiers, and automated conveyors, our systems feature modular and intelligent designs. By integrating user-friendly interfaces and intuitive troubleshooting mechanisms, we empower on-site engineers to maintain operations at peak efficiency, drastically minimizing downtime and maintenance costs.

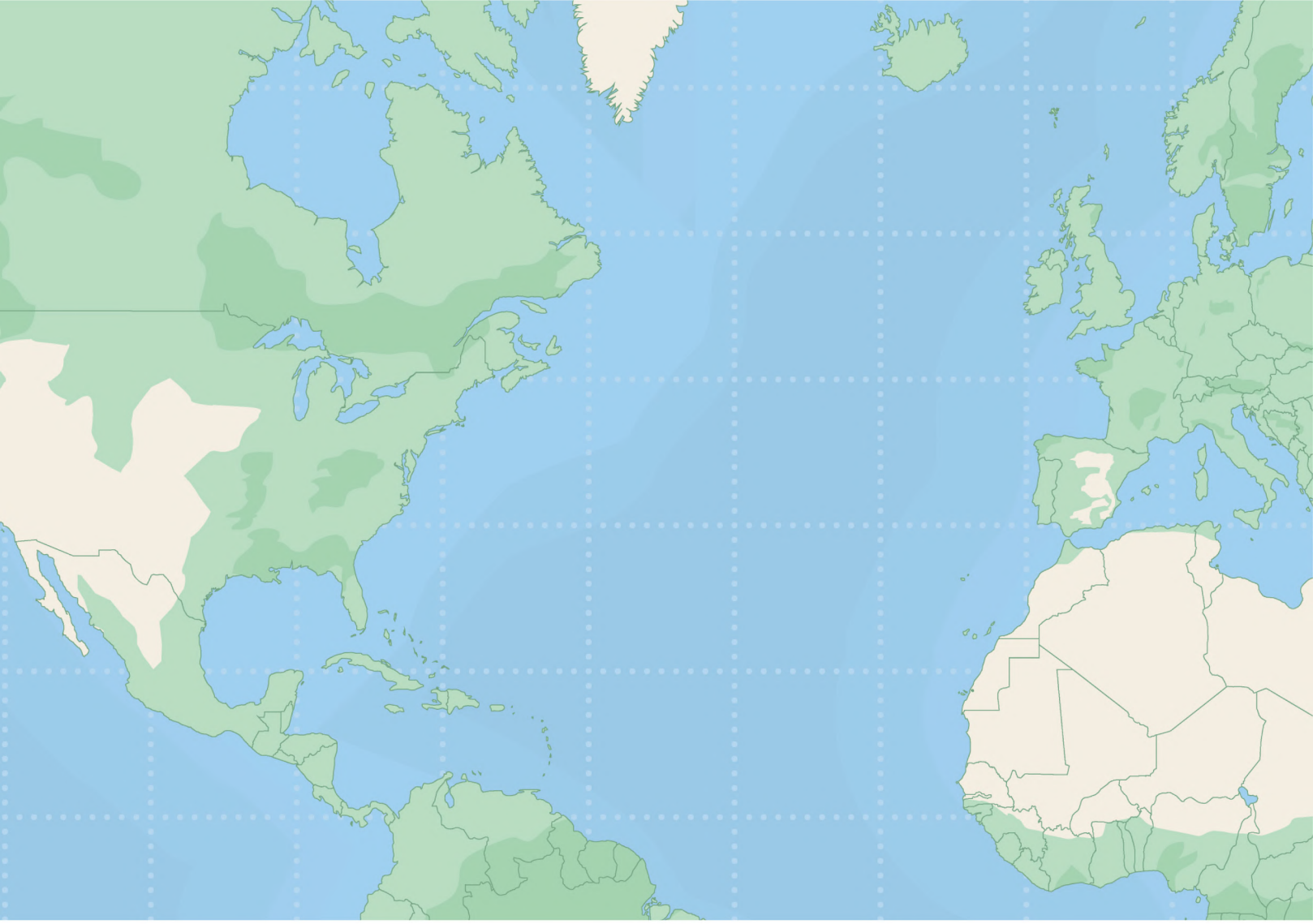
Looking forward, we will continue to leverage our robust engineering foundation and innovative technology to be your most reliable partner in upgrading surface treatment processes and expanding your presence in the global market.

公司簡介

作為專業表面處理設備與整廠輸出解決方案的領導者，我們致力於為全球客戶提供從廠房動線規劃、客製化設備製造，到現場安裝試車的一條龍完整服務。深耕業界多年，我們深知產線的穩定性與高良率是企業獲利的關鍵。因此，我們始終以近乎苛求的國家級頂尖工藝標準，精心打造每一套龍門式電鍍線、自動浸漆離心系統與乾燥自動化設備。

我們交付的不僅僅是單一機台，而是具備高度協作力的無縫系統整合。從核心主製程，到冷凍機、整流器與自動化搬運等周邊附屬設備，我們全面導入模組化與智慧化設計。透過直覺化的人機介面與防呆故障排除機制，我們確保現場工程師能以最高效率進行日常維護，將意外停機成本降至最低。

放眼未來，我們將持續以深厚的工程底蘊與創新技術，成為您升級表面處理工藝、拓展全球市場的最強後盾。



核心競爭力
CORE COMPETENCIES

全方位整廠整合能力
Comprehensive Turnkey Integration

我們具備卓越的系統整合實力，能將複雜的化學電鍍、塗裝製程與周邊溫控、電力、自動化搬運系統完美串聯，提供客戶「開箱即用」的高效率產線。

智慧化監控與防呆維護
Smart Monitoring & Intuitive Maintenance

導入直覺化人機介面（HMI），不僅即時監控生產數據，更具備完善的自我診斷與報警機制。當周邊設備（如冷凍機）異常時，系統能精準指示故障代碼與維護點位，大幅降低停機檢修的時間成本。

國家級頂尖工藝標準
National-Level Craftsmanship

機台結構採用耐酸鹼、高剛性的頂級材質，關鍵零組件經過嚴格選用與精密組裝，確保設備在嚴苛的高溫、腐蝕性環境下，依然能維持長年穩定的精準度與耐用度。

彈性客製化與外銷實績
Flexibility & Global Track Record

無論是空間受限的既有廠房改造，或是高難度的特殊製程需求，我們皆能提供靈活的模組化配置，並擁有豐富的外銷實績與跨國技術支援能力。

傳統過濾機煩惱無節制怎麼辦？

HOW TO DEAL WITH TOO MUCH TROUBLE WITH TRADITIONAL FILTERS?

01
過濾效果差
Poor Filtering Effect

02
有安全隱患
The existence of security risks

03
固廢處理成本
Solid waste treatment cost

04
鍍液損耗成本
Cost of plating bath loss

05
耗水電大
High consumption of water and power

06
人工操作成本
High manual cost

用途 Usage	表面處理：鍍鋅溶液、硫酸銅、硫酸鎳、硬鉻、裝飾鉻 水處理域：RO預處理、冷卻水、工業用水、中水處理 Surface Treatment：Zinc Solution,Copper Sulfate, Nickel Sulfate, Hard Chromium, Decorative Chromium Water Treatment： RO Pretreatment, Cooler Water, Industrial Water, Reclaimed Water Treatment

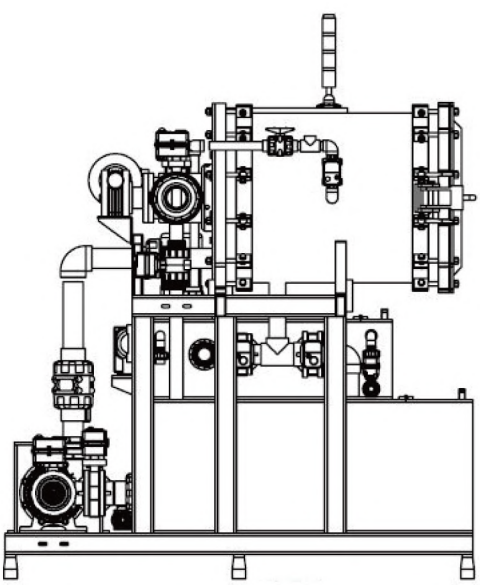
產品展示
PRODUCT DISPLAY

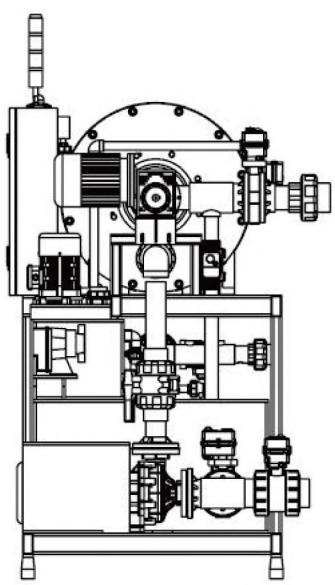
產品特點

① 不需要更換棉芯，經濟划算。
② 因不需更換濾芯，防止二次污染，節省排污費用。
③ 耐酸耐鹼性能優秀，經久耐用。
④ 利用助濾劑的投加量，可調整過濾精度。
⑤ 投加助濾劑、粉末活性碳等吸附有機物，提高工作效率。
⑥ 如用於鍍鋅，可以更容易處理鋅粉末。
⑦ 一鍵啟動就能控制設備的預塗處理、過濾、反沖洗等運轉。
⑧ 觸控螢幕控制，數位化顯示。

① No need to replace filters, cost-effective
② Prevent 2nd environmental contamination and reduce waste treatment cost
③ Filtration, resistant to both acid and alkali, ensures its long life span
④ Can adjust filtration accuracy according to the input amount of filtering material
⑤ Filtering materials, Sio2, powdered activated charcoal can absorb organic materials
⑥ Very easy to treat zinc dust in case of using filtration in coating zinc
⑦ One switch functions for precoating, filtering, and reverse washing
⑧ Touch screen control, digital display

全自動逆洗過濾機外尺寸圖
DIMENSIONAL DRAWING





全自動逆洗過濾機參數表

PARAMETER TABLE

型號 / 規格說明		DJT-25	DJT-30	DJT-40
最大泵浦流量 Max Capacity		30000L/h	39600L/h	51600L/h
主體材質 Main Material		Ti	Ti	Ti
最高工作壓力 Maximum Working Pressure		0.35MPa	0.35MPa	0.35MPa
最高工作溫度 Maximum Operating Temperature		80°c	80°c	80°c
閥門材質及樣 Material And Style Of Valve		SUS316L	SUS316L	SUS316L
電源及容量 Horse Power	泵浦馬達 Pump Motor	2.2kW	3.7kW	3.7kW
	鼓風機馬達 Air Blower Motor	1.5kW	1.5kW	1.5kW
	逆洗馬達 Backwash Motor	1.5kW	1.5kW	1.5kW
管路管徑 Diameter Of Water Pipe	進水口管道 Inlet pipe	DN65	DN65	DN65
	出水口管道 Outlet Pipe	DN65	DN65	DN65
	排汙口管道 Sewage Pipe	DN50	DN50	DN50
外型尺寸 Dimensions	長度 Length	1796	1796	1796
	寬度 Width	1422	1422	1422
	高度 Height	2110	2110	2110

全自動逆洗過濾機與傳統過濾機性能分析

編號	項目	全自動逆洗過濾機
01	過濾精度	採用德國 PTFE 技術，1μm 的過濾孔徑不僅能耐高溫，還具有良好的過濾效果。過濾後的電鍍液不留痕跡，這是傳統濾紙難以達到的。
02 03	過濾介質比較與性能	槽內 99.99% 的懸浮雜質可被過濾掉。1μm 的過濾孔徑具有良好的過濾效果，至少是傳統過濾機的三倍。 同質膜複合過濾材料能承受高壓和表面摩擦而不破壞整體結構，並對高溫具有很強的耐化學性。
04	能耗	全自動逆洗過濾機的能耗較低，低於傳統過濾機的能耗。
05	槽液處理比較	1μm 的過濾孔徑效果良好。 槽內懸浮雜質的攔截率達 99.99%，能有效防止微小碳粉進入電鍍液。
06	操作人員失誤	人機介面及智能化設計使過濾材料免於人工拆裝和清洗。 自動反洗技術不僅為您節省人工成本，還避免了人為失誤造成的品質事故。
07	化學液回收率	使用全自動逆洗過濾機可以直接去除電鍍液中的有機分解物，無需額外成本和時間，大幅延長電鍍液的使用壽命並降低生產成本。
08	環境污染	智能設計、封閉式清潔濾芯、節能減排、自動清洗，獨立排污管路設計使分流更容易。全自動逆洗過濾機更節能環保。

傳統過濾機	結論
纏繞棉芯 (或熔噴 PP) 的過濾孔徑精度不高， 傳統過濾機即使過濾多次化學液體也難以達到理想效果。	高精度過濾技術不僅彌補了因過濾不佳導 致電鍍件品質不穩定的問題，還能提高生 產效率並節省時間，這是一個飛躍！
PTFE 是一種高分子過濾材料，耐強酸、強鹼和強氧化。由 於競爭激烈，多數濾芯製造商不得不降低品質，這導致易 堵塞、過濾效果和穩定性差、易污染電鍍液、對環境造成二 次污染等問題。槽內液體過濾一次，僅能過濾 3% 到 5% 的懸浮雜質；循環過濾 20 次後僅去除 70% 的懸浮雜質， 難以達到滿意效果。	全自動逆洗過濾機透過一種新型薄 膜材料來過濾液體。智能過濾機的過 濾效果清晰可見。
纏繞棉芯的大過濾孔徑和電鍍槽的大容量，需要在 過濾過程中同時運行多台過濾機，產生大流量循環， 導致泵浦能耗高。	全自動逆洗過濾機的能耗低於傳統過濾機。
傳統過濾機只能在碳粉堵塞濾孔時啟動。 然而，微小的碳粉可能會進入槽液造成污染 (內部循環增加了時間成本)。	當使用活性碳處理電鍍液時，需要長時間的 內部循環。智能過濾機的功能可以消除碳粉 造成的電鍍瑕疵，讓您的工作更輕鬆。
在安裝過程中，人為失誤可能導致濾芯密封不良、 過濾效果差，甚至導致碳粉洩漏，影響電鍍品質。	全自動逆洗過濾機的智能操作設計 有助於減少人為失誤。
電鍍液中的有機分解物無法直接去 除，處理過程複雜且耗時。	全自動逆洗過濾機能大幅延長電鍍液的 使用壽命，有效提升電鍍品質。
廢棄危險廢物量大，且能耗高。 增加了污染源排放和污水處理的成本，是一種 資源浪費。	這是企業利益與國家利益的選擇。

PERFORMANCE ANALYSIS

No.	Item	Full Automatic Back Washing Drum Filter
01	Filtration Precision	Utilizing German PTFE technology, the 1μm filtration pore size not only withstands high temperatures but also delivers exceptional filtration efficiency. The filtered plating solution leaves zero traces, a level of performance that traditional filter paper can hardly achieve.
02 03	Filter Media Comparison & Performance	99.99% of suspended impurities in the bath can be filtered out. The 1μm filtration pore size provides excellent filtration efficiency, which is at least three times that of traditional filters. The homogeneous membrane composite filter media can withstand high pressure and surface friction without damaging its overall structure, while offering exceptional chemical resistance to high temperatures.
04	Energy Consumption	The full automatic back washing drum filter features low energy consumption, operating at a lower level compared to traditional filtration systems.
05	Bath Solution Processing Comparison	The 1μm filtration pore size delivers outstanding results. With a 99.99% retention rate of suspended impurities in the bath, it effectively prevents micro-carbon powder from entering the plating solution.
06	Operator Error Prevention	The HMI (Human-Machine Interface) and intelligent design eliminate the need for manual disassembly and cleaning of the filter media. Automated back washing technology not only reduces labor costs but also prevents quality incidents caused by human error.
07	Chemical Solution Recovery Rate	Utilizing the full automatic back washing drum filter allows for the direct removal of organic decomposition products from the plating solution without extra cost or time, drastically extending the service life of the plating bath and reducing manufacturing costs.
08	Environmental Pollution Control	Features intelligent design, enclosed filter element cleaning, energy conservation, emission reduction, and automatic self-cleaning. The independent drainage piping design makes wastewater diversion much easier, making the full automatic back washing drum filter more energy-efficient and environmentally friendly.

Traditional Filter	Conclusion
The filtration pore size accuracy of wound cotton elements (or melt-blown PP) is insufficient. Traditional filters struggle to achieve ideal results even after multiple filtrations of chemical solutions.	High-precision filtration technology not only compensates for unstable plating quality caused by poor filtration but also boosts production efficiency and saves time–representing a true quantum leap!
PTFE is a polymer filtration material resistant to strong acids, alkalis, and oxidizers. Due to fierce competition, most element manufacturers compromise on quality, leading to frequent clogging, poor stability, bath contamination, and secondary environmental pollution. A single pass filters only 3% to 5% of suspended impurities; even after 20 cycles, only 70% is removed, making satisfactory results hard to achieve.	The full automatic back washing drum filter utilizes an innovative membrane material for solution filtration. The superior performance of this intelligent filtration system is clearly visible.
Due to the large pore size of wound cotton elements and high-capacity plating baths, multiple filters must run simultaneously. This generates excessive flow circulation, resulting in high pump energy consumption.	The energy consumption of the full automatic back washing drum filter is significantly lower than that of traditional filters.
Traditional filters are typically only activated when carbon powder clogs the pores. However, micro-carbon particles can still bypass and contaminate the bath solution, while extended internal circulation increases time costs.	Active carbon treatment in electroplating solutions usually demands prolonged internal circulation. The advanced functionality of this intelligent filter effectively eliminates plating defects caused by carbon powder, streamlining your operations.
During installation, human error can easily lead to poor element sealing, subpar filtration performance, or even carbon powder leakage, severely compromising plating quality.	The smart operational design of the full automatic back washing drum filter significantly minimizes the risk of human error.
Organic decomposition products in the plating solution cannot be directly removed, making the treatment process highly complex and time-consuming.	The full automatic back washing drum filter drastically extends the service life of the plating solution while effectively upgrading plating quality.
Generates a high volume of hazardous waste and consumes substantial energy. This increases pollution emissions and wastewater treatment costs, representing a severe waste of resources.	This is the definitive choice for aligning corporate profitability with environmental stewardship.

一台全自動逆洗過濾機 VS 三台傳統過濾機（2018年款）成本對比

一年可節省成本 NT$ 932,484 元

編號	項目特徵	全自動逆洗過濾機
01	過濾耗材成本	採用德國技術 PTFE 薄膜，表面光滑。 這種膜鍵合工藝使用壽命可達 3 至 10 年。
02	人工成本低	智能設計，具備自動密封反洗設備，無需人力。
03	污水處理成本	智能設計，封閉式清潔濾芯，節能減排，自動清洗， 每年的排放處理費用約為：4 噸 × 510 元 = NT$ 2,040
04	危險固廢處理成本	無固體危險廢物，處理成本為零：3-10 年無需更換。
05	液體流失成本	特殊材料製成的 PTFE 薄膜表面光滑， 水分難以殘留在材料內，因此液體流失率極低。
06	電費成本	3.7 kw × 5.6 元/度 × 20 小時 × 30 天 × 12 個月 = NT$ 149,184
07	用水成本	反洗用水約 NT$ 1,110元/年
08	總節約成本	-

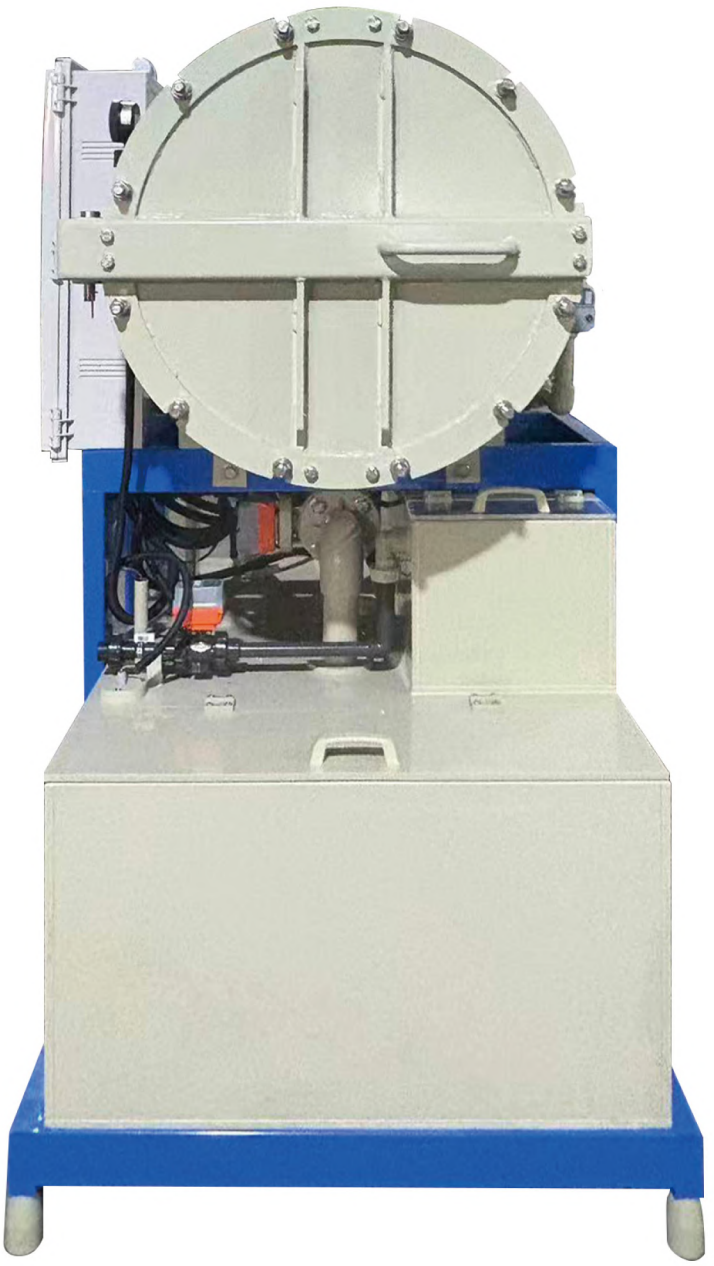
傳統過濾機	結論
使用傳統濾芯、濾布和濾紙；在功能性行業（如 PCB、水暖等）使用後只能一次性廢棄。過濾耗材的更換週期通常為一到兩週。假設更換週期為 5 天（即每月 4 次），3 台普通的 2018 過濾機有 18×3=54 支濾芯，每支成本 15 元。年成本約為：54 支 × 70 元/支 × 4 次/月 × 12 個月 = NT$ 181,440	與 3 台 2018 過濾機相比， 一台全自動逆洗過濾機僅在濾芯上 就能節省 NT$ 181,440
3 台 2018 過濾機需要約 2 名工人來更換、清洗和重新安裝濾芯。 以每人每月 18,500元工資計算， 公司年度支出為：2 × 18500 × 12 = NT$ 444,000	全自動逆洗過濾機能為您 節省 NT$ 444,000的人工成本。 此外，還能節省如五險一金、餐補 以及停產造成的損失等其他開支。
人工清洗會產生大量污水。清洗過濾機每天需要 20 噸水，其中污水排放量約為 0.4 噸，每噸污水處理費用約為 510元。 以 4 台過濾機計算，每月需更換 4 支濾芯。 每年污水處理費約為： 0.4 噸 × 510元/噸 × 3 台 × 4 次/月 × 12 個月 = NT$ 29,376	節省：NT.$ 27,336
定期丟棄被視為固體危險廢物的濾材（如濾芯），需向相關具備資質的公司支付高額處理費，平均每年約花費NT$ 92,610	節省：NT$ 92,610
槽液流失率高，每次清洗或更換濾芯都會帶出大量液體。 例如，每支濾芯平均流失的鎳和銅廢液成本為25元，3 台普通 2018 過濾機有 18×3=54 支濾芯，每月更換 4 次。 年成本為：25 元/支 × 54 支 × 4 次/月 × 12 個月 = NT$ 64,800	節省：NT$ 64,800
以 3 台過濾機計算，年耗電量為： 2.2 kw × 3 台 × 5.6 元/度 × 20 小時 × 30 天 × 12 個月 = NT$ 266,112	節省：NT$116,928
以 3 台過濾機計算，年用水量成本為： 5 元 × 18 支 × 2 次 × 3 台 × 12 個月 = NT$ 6,480	節省：NT$ 5,370
-	181440+444000+27336+92610+ 64800+116928+5370=NT$ 932,484

COST COMPARISON

Annual Cost Savings: NT$ 932,484

No.	Item	Full Automatic Back Washing Drum Filter
01	Filtration Consumables Cost	Utilizing German PTFE membrane technology with a smooth surface. This advanced membrane bonding process offers an extended service life of 3 to 10 years.
02	Labor Cost	Intelligent design featuring automatic sealed backwashing equipment, requiring zero manual labor.
03	Wastewater Treatment Cost	Intelligent design with enclosed filter element cleaning, energy savings, emission reduction, and automatic self-cleaning. The annual discharge treatment cost is approximately: 4 tons × NT$ 510 = NT$ 2,040.
04	Hazardous Solid Waste Disposal Cost	Zero solid hazardous waste, resulting in zero disposal costs; no replacement needed for 3 to 10 years.
05	Solution Loss Cost	The smooth surface of the specialized PTFE membrane prevents solution from getting trapped within the material, resulting in an exceptionally low solution loss rate.
06	Electricity Cost	3.7 kW × NT$ 5.6/kWh × 20 hours × 30 days × 12 months = NT$ 149,184
07	Water Cost	Backwash water cost is approx. NT$ 1,110 / year.
08	Total Cost Savings Summary	-

Traditional Filter	Conclusion
Uses traditional cartridge elements, filter cloths, and filter papers, which must be disposed of after a single use in functional industries (such as PCB and plumbing). The replacement cycle for filter media is typically 1 to 2 weeks. Assuming a replacement cycle of 5 days (4 times per month), three conventional 2018 filters require 18×3=54 elements at a cost of NT$70 per element. The annual cost is approximately: 54 elements × NT$70/element × 4 times/month × 12 months = NT$ 181,440.	Compared to three 2018 filters, a single DZT full automatic back washing drum filter saves NT$ 181,440 on filter elements alone.
Three 2018 filters require approximately 2 operators for element replacement, cleaning, and reinstallation. Based on a monthly wage of NT$ 18,500 per person, the company's annual expenditure is: 2 operators × NT$ 18,500 × 12 months = NT$ 444,000.	The full automatic back washing drum filter saves you NT$ 444,000 in labor costs. Furthermore, it eliminates additional expenses such as social benefits, meal allowances, and production downtime losses.
Manual cleaning generates a large volume of wastewater. Cleaning the filters requires 20 tons of water per day, with a wastewater discharge of approximately 0.4 tons, and wastewater treatment costs around NT$ 510 per ton. Based on 3 filters, requiring element replacements 4 times per month, the annual wastewater treatment cost is: 0.4 tons × NT$ 510/ton × 3 units × 4 times/month × 12 months = NT$ 29,376.	Savings: NT$ 27,336
Regularly discarding spent filter media (such as filter elements) classified as hazardous solid waste requires high disposal fees paid to qualified environmental companies, averaging around NT$ 92,610 annually.	Savings: NT$ 92,610
High bath solution loss rate, as a massive volume of liquid is dragged out during each cleaning or element replacement. For instance, the average cost of nickel and copper waste solution lost per element is NT$ 25. Three conventional 2018 filters have 18×3=54 elements, replaced 4 times a month. The annual cost is: NT$ 25/element × 54 elements × 4 times/month × 12 months = NT$ 64,800.	Savings: NT$ 64,800
Based on 3 filters, the annual power consumption cost is: 2.2 kW × 3 units × NT$ 5.6/kWh × 20 hours × 30 days × 12 months = NT$ 266,112.	Savings: NT$ 116,928
Based on 3 filters, the annual water consumption cost is: NT$ 5 × 18 elements × 2 times × 3 units × 12 months = NT$ 6,480.	Savings: NT$ 5,370
-	181440+444000+27336+92610+64800+116928+5370=NT.$ 932,484



全自動逆洗過濾機操作說明

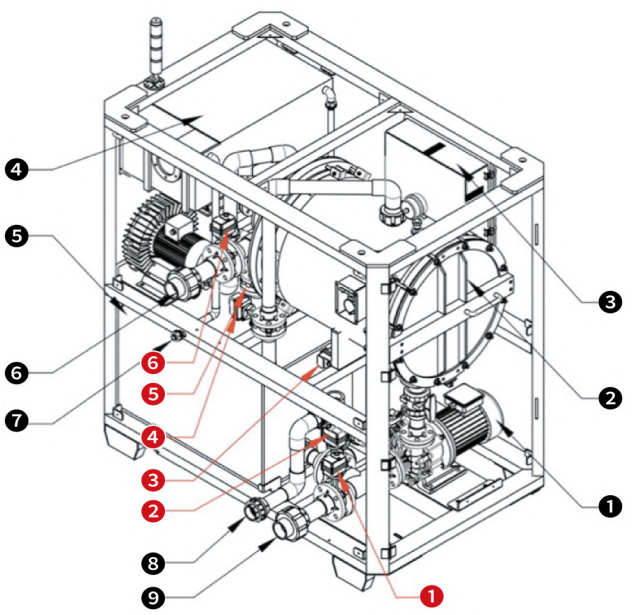
FULLY AUTOMATIC BACKWASHING DRUM FILTER - OPERATING INSTRUCTIONS

全自動逆洗過濾機操作說明

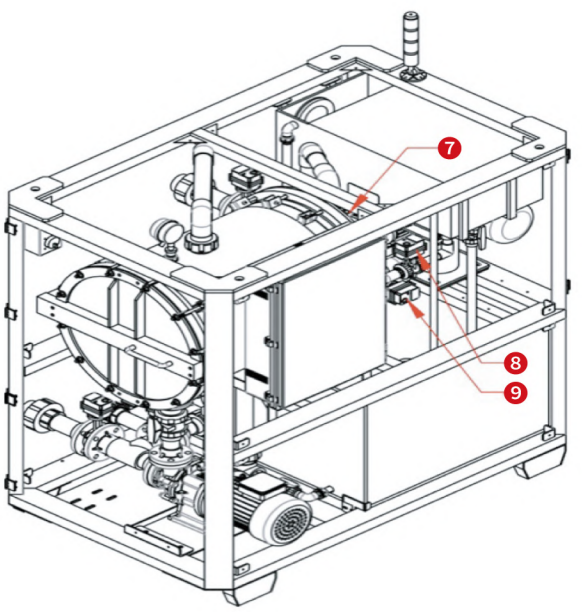
01. 概述

過濾機是利用多孔性過濾機實現固體液體分離的設備，而全自動逆洗過濾機具有智能設計，全自動清洗功能，是一種新型的過濾系統，結構新穎，體積小，操作簡便靈活，高效率，密閉工作，適用性強的多用途過濾設備，應用於化工，石油，製藥，輕工業，食品，選礦，煤炭和水處理等部門。

02. 主要結構



(圖一)



(圖二)

| 全自動逆洗過濾機部品明細 |

❶ 泵浦　❷ 過濾桶　❸ 配電盤　❹ 自來水箱　❺ 循環水箱

❻ 出水口　❼ 自來水進水口　❽ 排汙口　❾ 進水口

| 全自動逆洗過濾機閥門明細 |

❶ V1進水閥　❷ V3內循環進水閥　❸ V5排汙閥　❹ V7排氣閥　❺ V4內循環出水閥

❻ V2出水閥　❼ V6進風閥　❽ V9放水閥　❾ V8自來水進水閥

03. 外形尺寸及安裝場地要求

型號	DZP-40 Pro, DZP-60 Pro (高配款)			DZL-30, DZL-40, DZL-60 (標準款)		
	長	寬	高	長	寬	高
外型尺寸 (mm)	1825	1160	2145	1960	890	2070
安裝場地要求 (mm)	3000	2500	2200	3000	2000	2200

*注意
設備操作、維護前後門開門需求，以及管路安裝需要空間，安裝場地的空間大小要比設備外型在大一些。

04. 電源參數及電線和管路配置安裝要求

| 電源參數及電線配置 |
電壓等級/頻率：3相4線-380V/60HZ。
DZL-30(標準款)、DZL-40(標準款)、DZP-40 Pro(高配款) ：配置2.5平方銅線。
DZL-60(標準款)、DZP-60 Pro(高配款) ：配置４平方銅線。

| 管路配置 |
DZL-30(標準款)：進出水主管路63mmPVC/PP管，常溫用PVC管，溫度高用PP管。
DZL-40(標準款)、DZP-40 Pro(高配款)：進出水主管路75mmPVC/PP管，常溫用PVC管，溫度高用PP管。
DZP-60(標準款)、DZP-60 Pro(高配款)：進出水主管路90mmPVC/PP管，常溫用PVC管，溫度高用PP管。排污管63mmPVC管，自來水25mmPVC管。

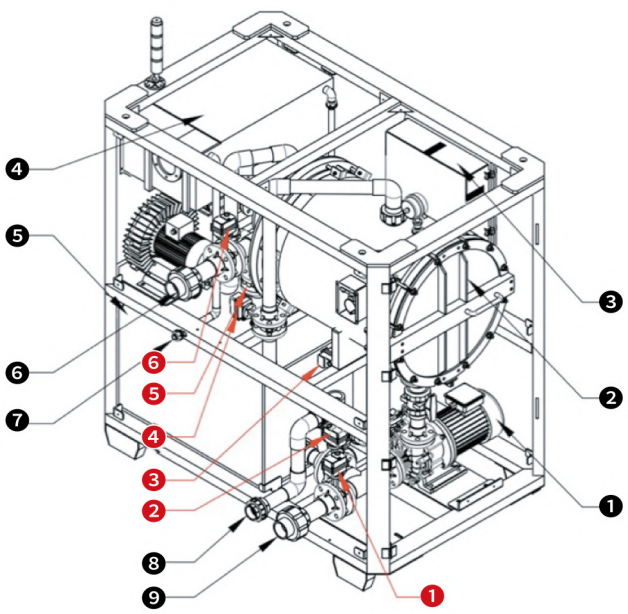
| 球閥配置 |
出水管路應配置對應的球閥，方便以後管路檢修和更換。進水管靠設備一個，槽邊一個。
出水管靠設備一個，槽邊一個，自來水管路一個。

| 虹吸桶、增壓泵、斷電關閉閥門配置 |
設備擺放位置比鍍槽高很多，需要配置增壓泵和虹吸桶來滿足進水量。
安裝在低處進出水管則需要配置斷電關閉電動閥門。

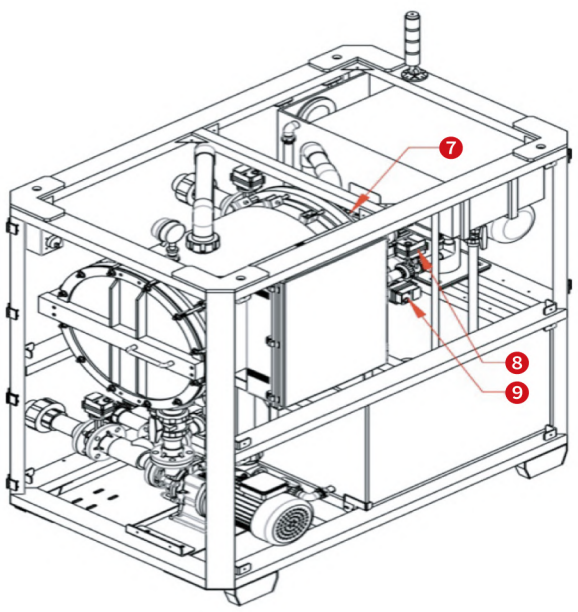
01. Overview

A filtration machine is a device that utilizes porous media to achieve solid-liquid separation. The full automatic back washing drum filter features an intelligent design and automated self-cleaning capabilities. As an innovative filtration system, it offers a novel structure, compact footprint, simple and flexible operation, high efficiency, and fully enclosed execution. It is a highly adaptable, multi-purpose filtration equipment widely applied across sectors such as chemical processing, petroleum, pharmaceuticals, light industry, food, mineral processing, coal, and water treatment.

02. Main Structure



(Figure 1)



(Figure 2)

[Fully Automatic Backwashing Drum Filter Components List]

❶ Pump ❷ Filter Vessel ❸ Control Pane ❹ Tap Water Tank ❺ Circulation Water Tank

❻ Outlet Port ❼ Tap Water Inlet Port ❽ Drain Port ❾ Inlet Port

[Fully Automatic Backwashing Drum Filter Valves List]

❶ V1 Inlet Valve ❷ V3 Internal Circulation Inlet Valve ❸ V5 Drain Valve

❹ V7 Air Release Valve ❺ V4 Internal Circulation Outlet Valve ❻ V2 Outlet Valve

❼ V6 Air Inlet Valve ❽ V9 Water Release Valve ❾ V8 Tap Water Inlet Valve

03. Dimensions and Installation Site Requirements

Model	DZP-40 Pro, DZP-60 Pro (Premium Model)			DZL-30, DZL-40, DZL-60 (Standard Model)		
	Length	Width	Height	Length	Width	Height
Dimensions (mm)	1825	1160	2145	1960	890	2070
Installation Site Requirements (mm)	3000	2500	2200	3000	2000	2200

*Note
Considering the clearance required for opening the front and rear doors during equipment operation and maintenance, as well as the space needed for piping installation, the actual installation site area must be slightly larger than the physical dimensions of the equipment.

04. Power Parameters, Wiring, and Piping Configuration Requirements

[Power Parameters & Wiring Configuration]

Voltage Rating / Frequency: 3-Phase 4-Wire, 380V / 60Hz
DZL-30 (Standard), DZL-40 (Standard), DZP-40 Pro (Premium): Configured with 2.5mm² wire
DZL-60 (Standard), DZP-60 Pro (Premium): Configured with 4mm² wire

[Piping Configuration]

DZL-30 (Standard): Main inlet/outlet piping uses 63mm PVC/PP pipe. Use PVC pipe for ambient temperatures and PP pipe for elevated temperatures.
DZL-40 (Standard), DZP-40 Pro (Premium): Main inlet/outlet piping uses 75mm PVC/PP pipe. Use PVC pipe for ambient temperatures and PP pipe for elevated temperatures.
DZP-60 (Standard), DZP-60 Pro (Premium): Main inlet/outlet piping uses 90mm PVC/PP pipe (PVC for ambient, PP for elevated temperatures). Main drain piping uses 63mm PVC/PP pipe, and tap water piping uses 25mm PVC/PP pipe.

[Ball Valve Configuration]

Corresponding ball valves should be installed on the inlet and outlet piping to facilitate future pipeline maintenance and replacement. For the inlet piping: one near the equipment and one near the bath. For the outlet piping: one near the equipment, one near the bath, and one on the tap water pipeline.

[Siphon Tank, Booster Pump, and Power-Off Shut-Off Valve Configuration]

If the equipment installation location is significantly higher than the plating bath, a booster pump and a siphon tank must be configured to ensure adequate water inlet volume. Conversely, if installed at a lower level, the inlet and outlet piping must be equipped with motorized valves that automatically shut off upon power failure.

05. 調適指南

| 調適前提 |

1、鍍槽必須有水或者鍍液。
2、全自動逆洗過濾機已接通自來水。
3、3相4線電源已接好。

| 調適步驟 |

1、打開進出水管路的所有手動球閥。
2、合上電箱無熔絲開關4P開關給全自動逆洗過濾機通電，按下門板啟動按鈕確認泵浦方向為順時針再點動風機和馬達方向為順時針。

* 提示
電源接線：R、S、T 火線，N 中性線（設備外殼請確實接至廠區地線 G）。
泵浦 U1, V1, W1, G、鼓風機 U2, V2, W2, G、減速機 U3, V3, W3, G。
轉向以順時針為正方向，若馬達轉向相反，請將任意兩條火線對調即可。

3、放自來水到循環水箱，放到3/4位置。
4、設定循環時間600 (PS：用户名10，密碼1010)。

| 系統出廠參數設置 |

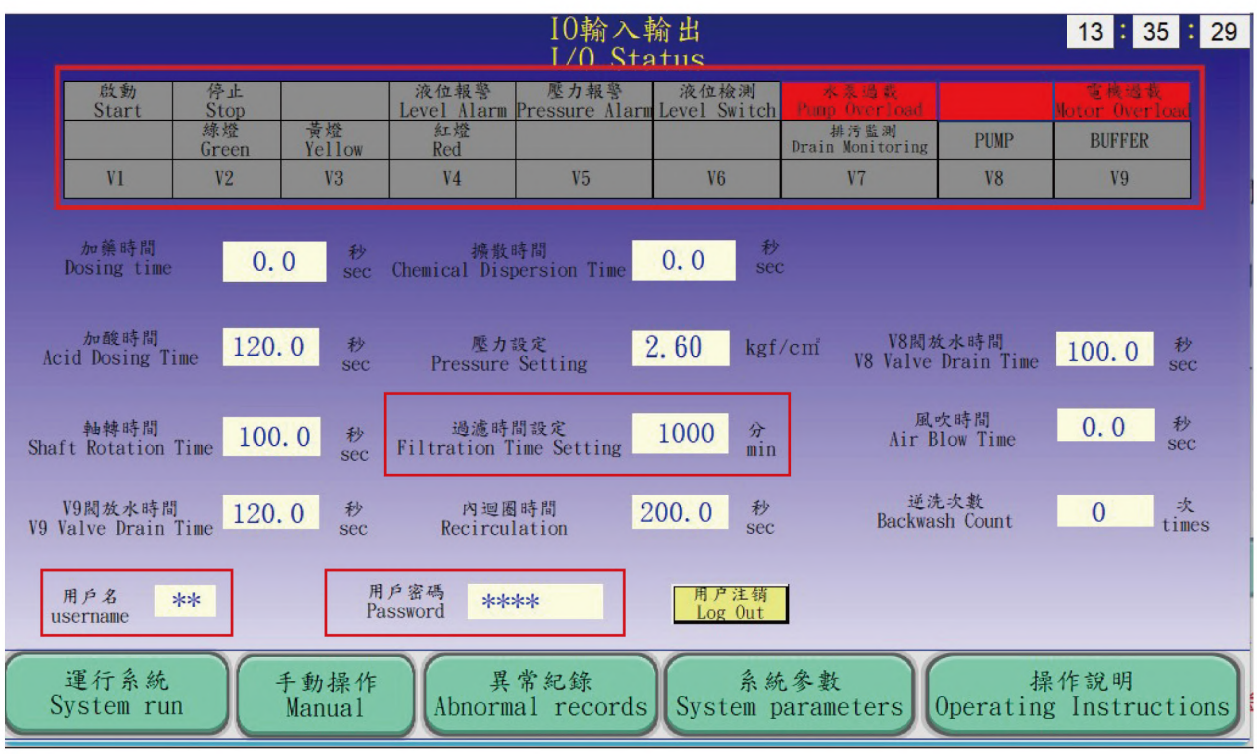
加酸時間：60秒 (或120秒)　　壓力設定：2.8kgf/cm² (不建議修改)　　V8閥放水時間：100秒 (不建議修改)

軸轉時間：180秒 (不建議修改)　　過濾時間設定：1000分 (不建議修改)　　風吹時間：140秒 (不建議修改)

V9閥放水時間：120秒 (不建議修改)　　內迴圈時間：300秒　　逆洗次數：

用戶名：10　　用戶密碼：1010

*注意調適前檢查閥門是否正常



05. Commissioning & Commissioning Guide

[Prerequisites for Commissioning]

1. The plating bath/tank must be filled with water or plating solution.
2. The Fully Automatic Backwashing Drum Filter must be properly connected to the tap water supply.
3. The 3-phase 4-wire power supply has been fully connected.

[Commissioning Steps]

1. Open all manual ball valves on the inlet and outlet piping.
2. Switch on the 4P Molded Case Circuit Breaker (MCCB/No-Fuse Breaker) in the control panel to power up the Fully Automatic Backwashing Drum Filter. Press the start button on the door panel to confirm that the pump rotates clockwise, then jog the blower and motor to verify their clockwise rotation.

*Tips
Power Wiring: R, S, T Live/Phase lines, N Neutral line. (Ensure the equipment enclosure is securely and reliably connected to the factory ground/earth line G).
Pump: U1, V1, W1, G; Blower: U2, V2, W2, G; Gear Motor/Reducer: U3, V3, W3, G.
Clockwise rotation is defined as the correct/forward direction. If any motor rotates in the reverse direction, simply swap any two of the live/phase lines.

3. Fill the circulation water tank with tap water until it reaches the 3/4 level mark.
4. Set the cycle/circulation time to 600. (P.S. Username: 10, Password: 1010)

[System Factory Parameter Settings]

Acid Dosing Time:
60 sec (or 120 sec)

Pressure Setting:
2.8 kgf/cm²
(Modification not recommended)

V8 Valve Water Release Time:
100 sec
(Modification not recommended)

Shaft Rotation Time:
180 sec
(Modification not recommended)

Filtration Time Setting:
1000 min
(Modification not recommended)

Air Blow Time:
140 sec
(Modification not recommended)

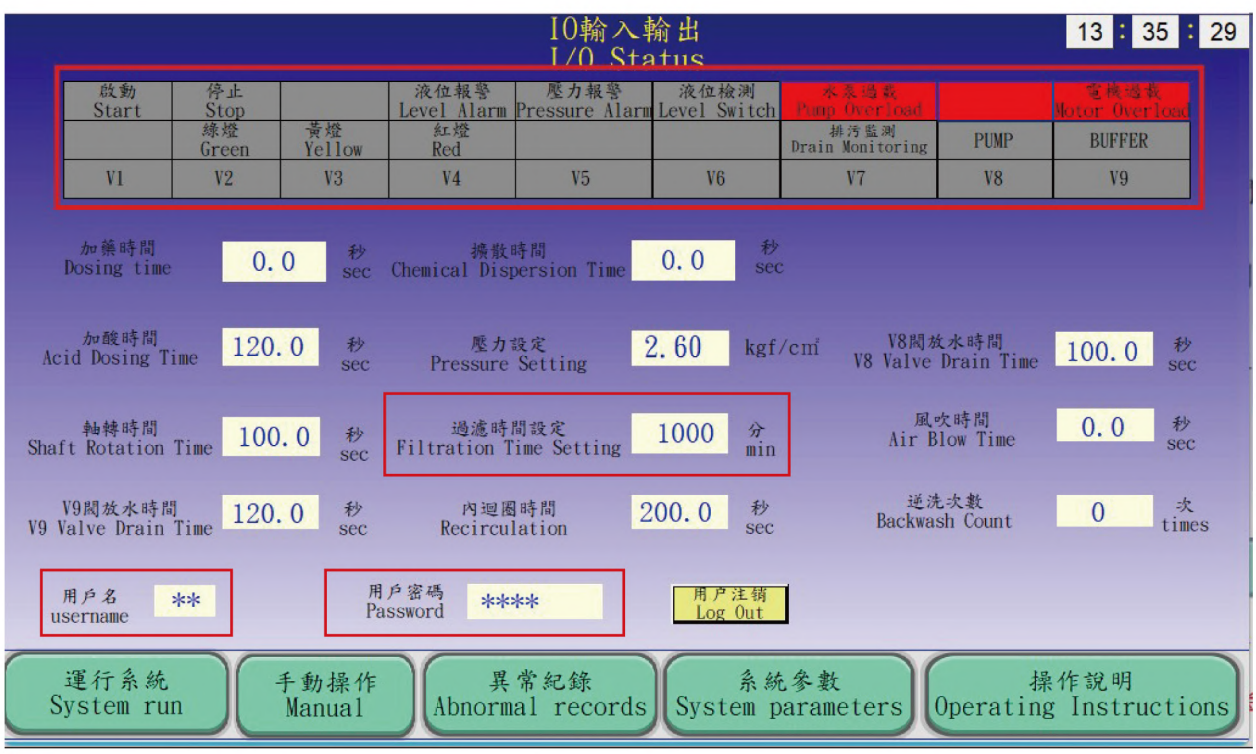
V9 Valve Water Release Time:
120 sec
(Modification not recommended)

Internal Circulation Time:
300 sec

Back Washing Cycles

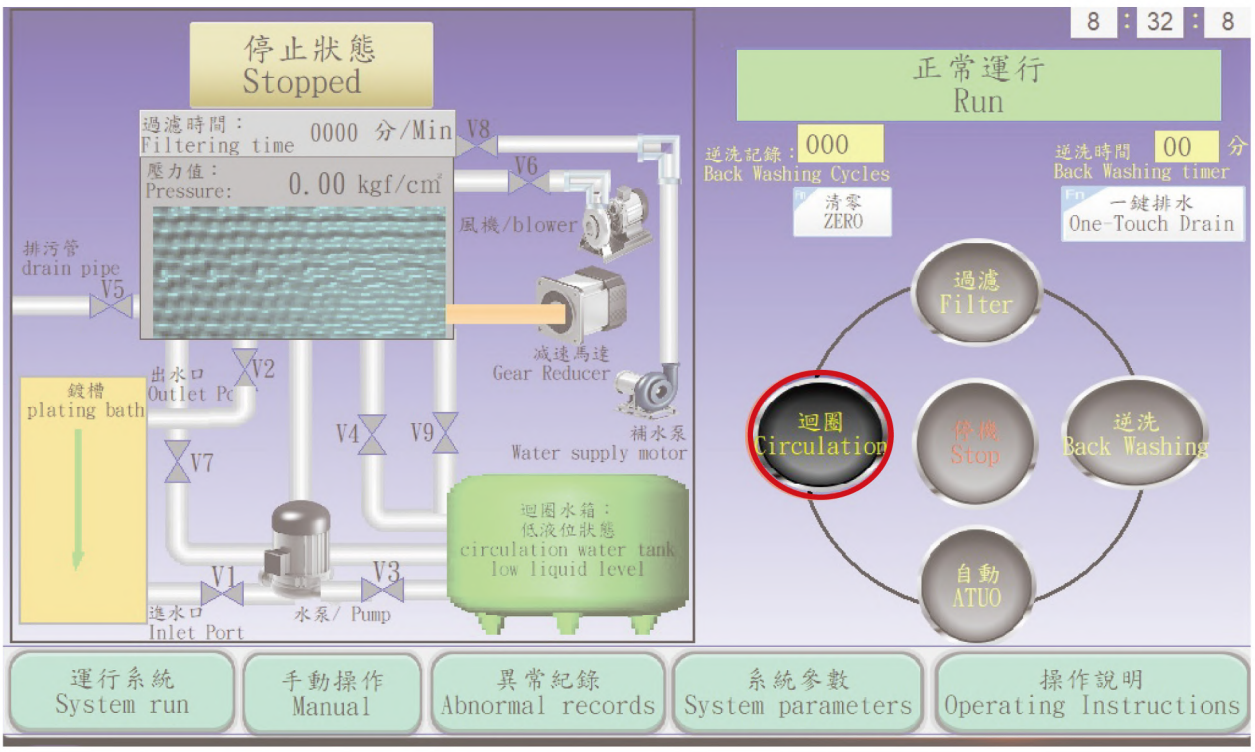
Username: 10 Password: 1010

*Note
Check and ensure all valves are functioning properly before commissioning.

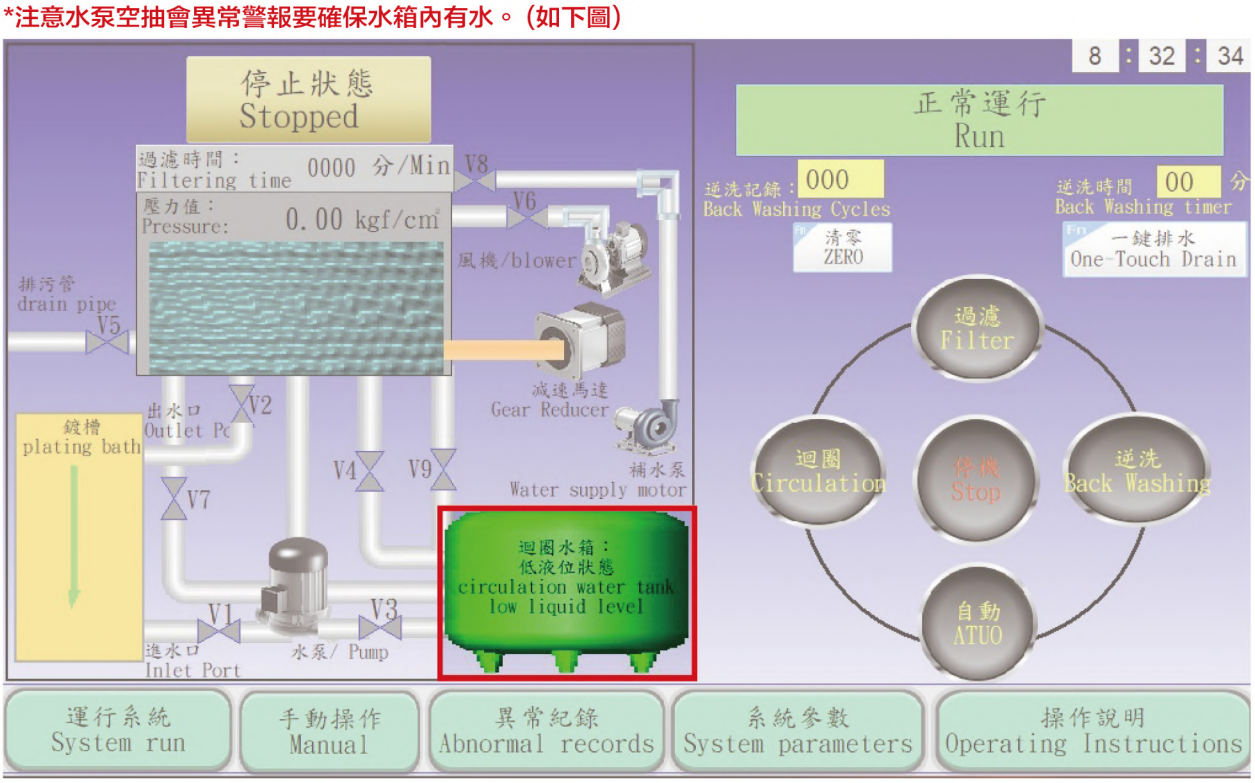


全自動逆洗過濾機操作說明

5、點擊循環，運轉正常後打開 1 電動閥反覆作排氣，直到藥水被吸過來。

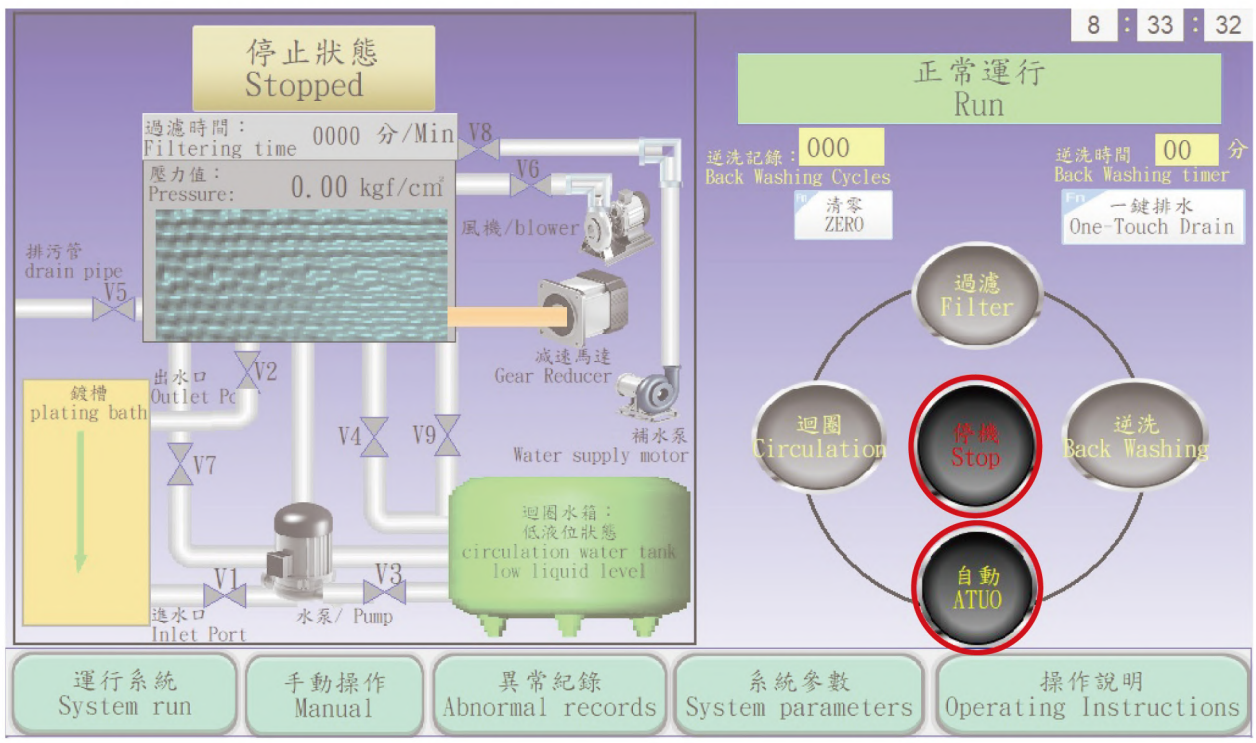


***注意水泵空抽會異常警報要確保水箱內有水。（如下圖）**

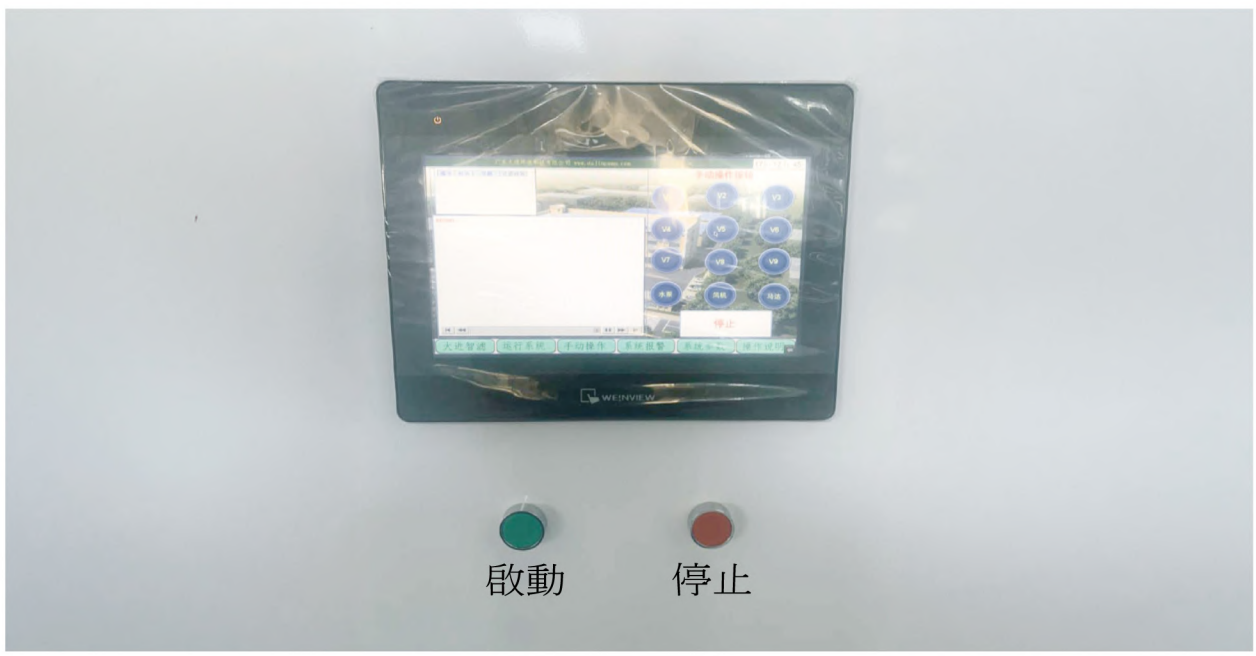


6、開機和關機

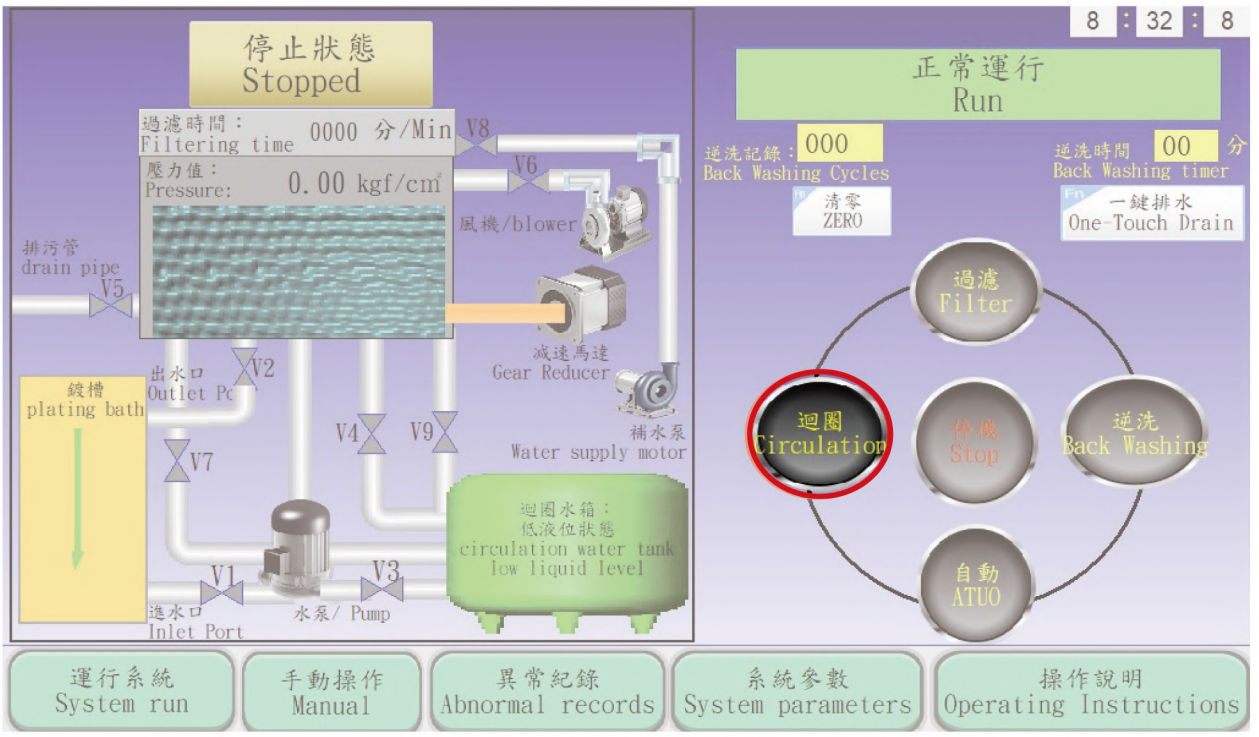
方法一：開機，按顯示人機介面“自動”；關機，按人機介面“停止”。



方法二：開機，按電控箱“”綠色按鈕“啟動；關機，按門板“”紅色按鈕“停止。

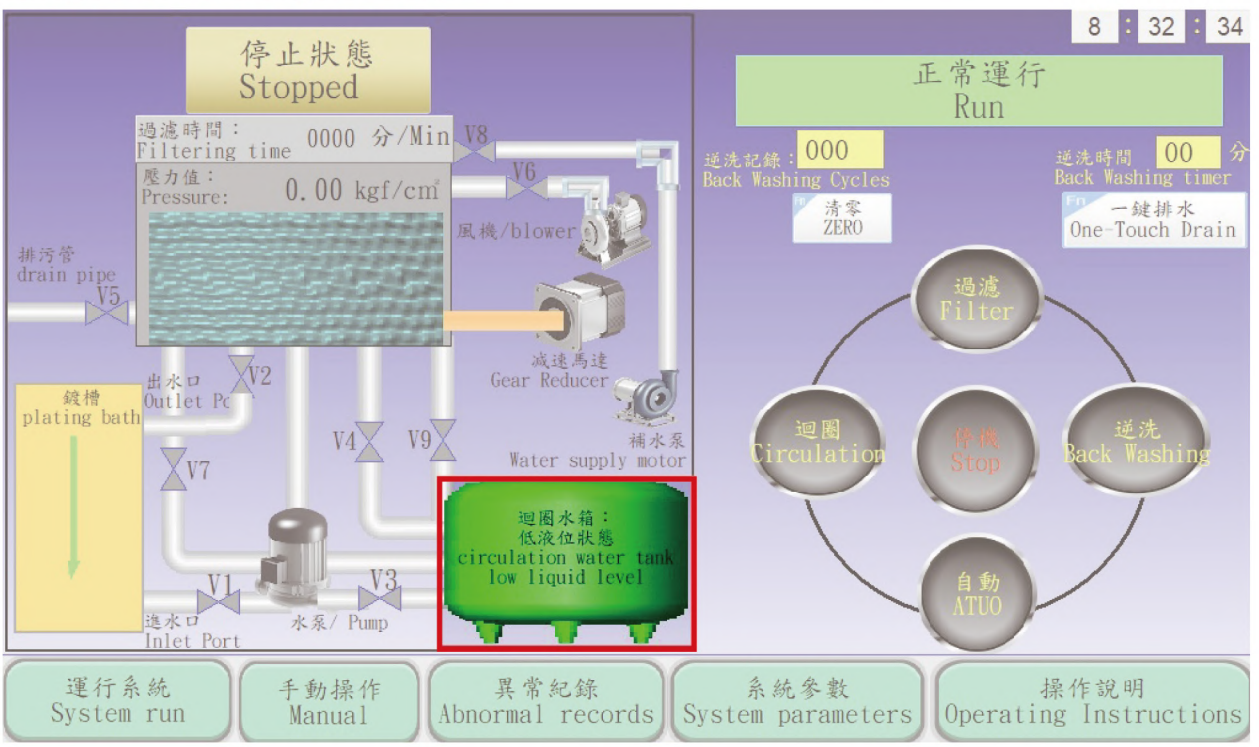


5. Click "Circulation" (Internal Circulation). Once operation normalizes, open motorized valve 1 repeatedly to bleed/exhaust air until the chemical solution is successfully drawn in.



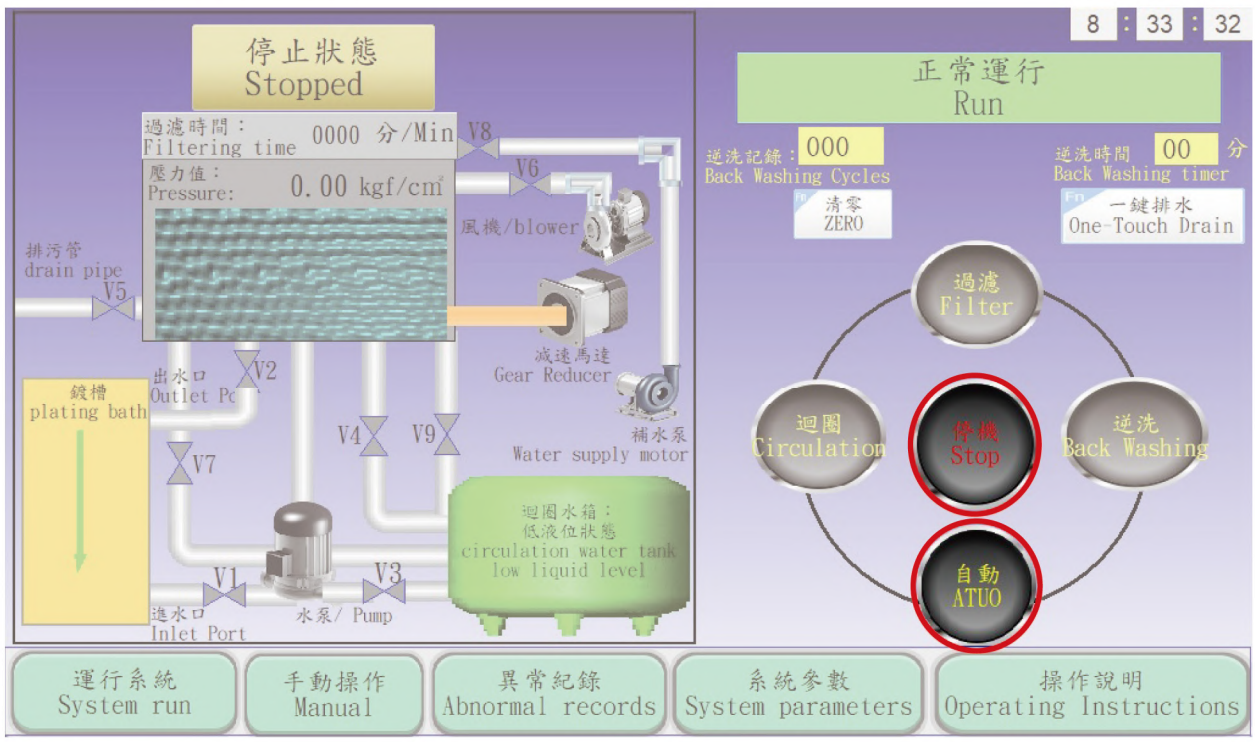
***Note**

Dry running of the water pump will trigger an abnormal alarm. Ensure there is water in the water tank (as shown in the figure below).



6. Startup and Shutdown

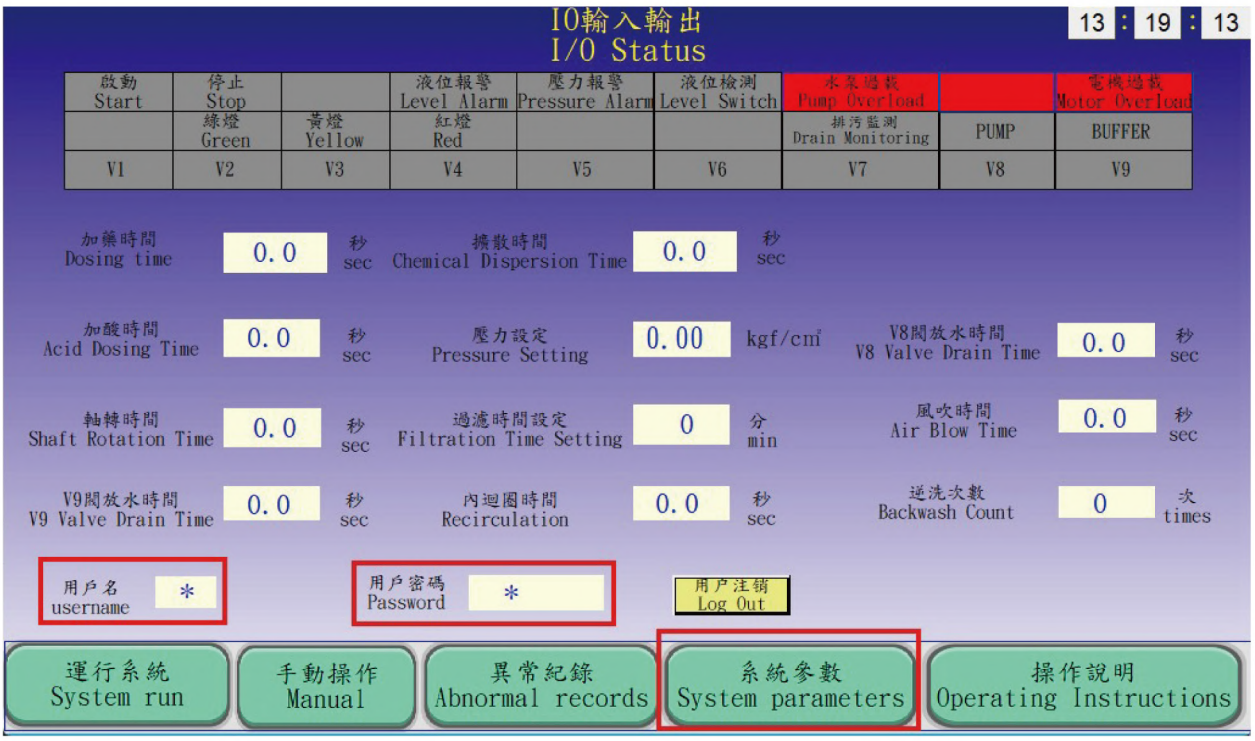
Method 1: For startup, press "Auto" on the HMI screen; for shutdown, press "Stop" on the HMI screen.



Method 2: For startup, press the green "Start" button on the control panel; for shutdown, press the red "Stop" button on the panel door.

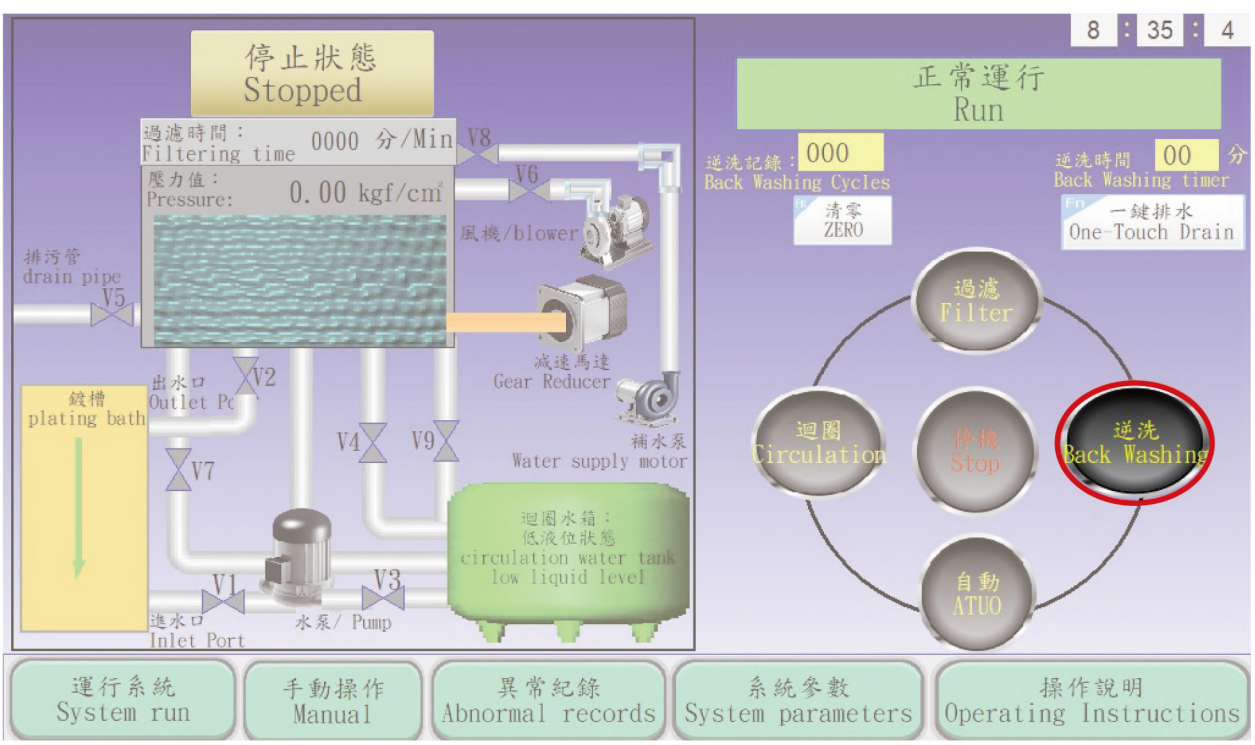
全自動逆洗過濾機操作說明

7、用戶名和用戶密碼 (用戶名10 密碼1010)



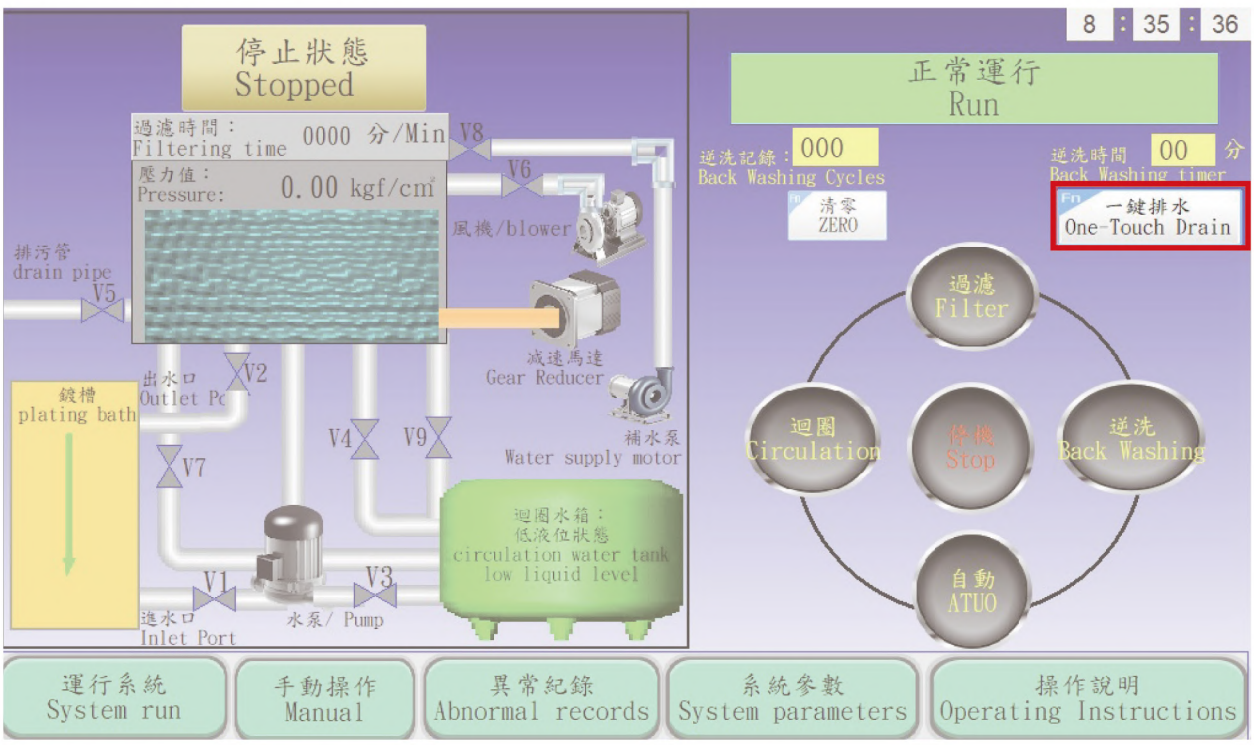
8、手動逆洗

按人機介面“逆洗”。注意循環水箱要在低液位狀態才可以逆洗。



9、循環水箱抽到液位及循環水箱滿水報警

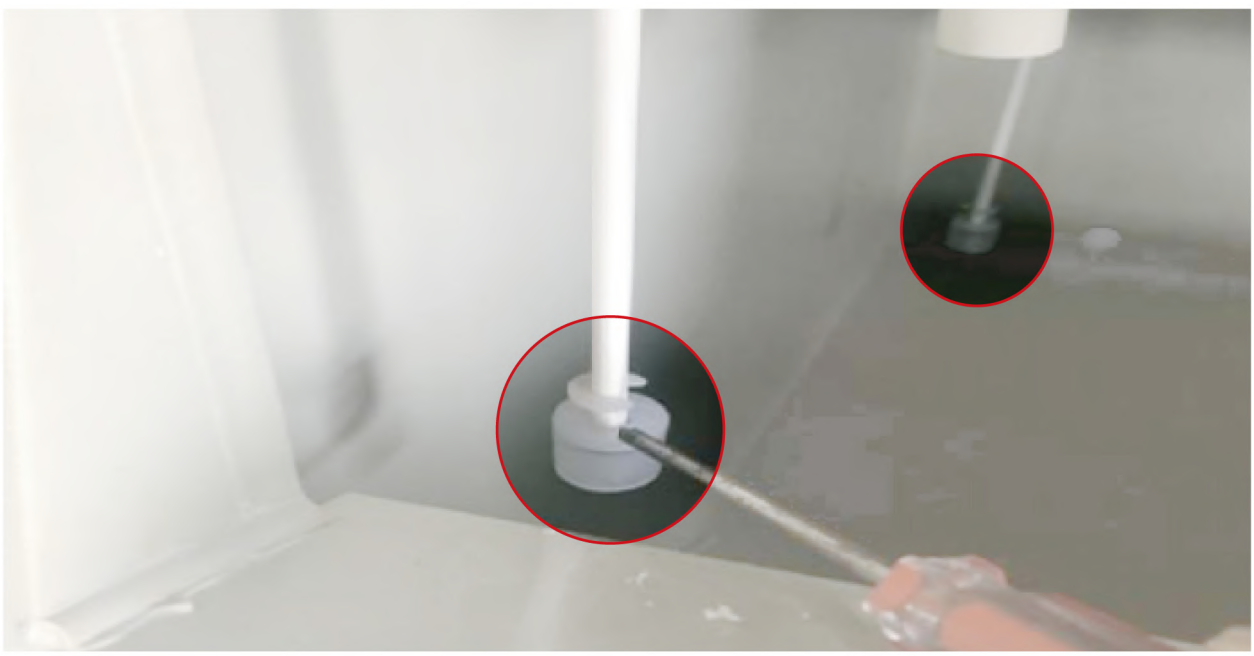
解決方法：在人機介面上按一鍵排水。



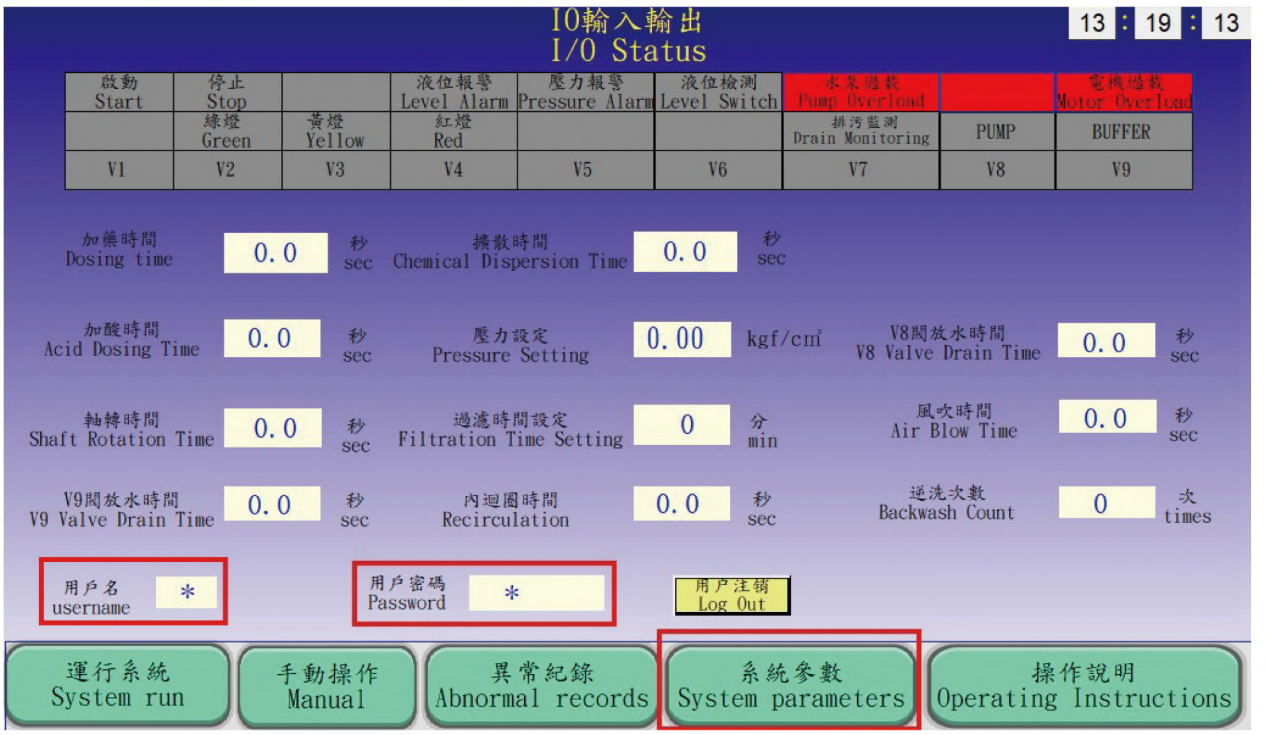
***注意觀察液位**

❶ 按下一鍵排水後循環自動到低液位狀態。

❷ 檢查液位感應器是否正常預防再次滿出。

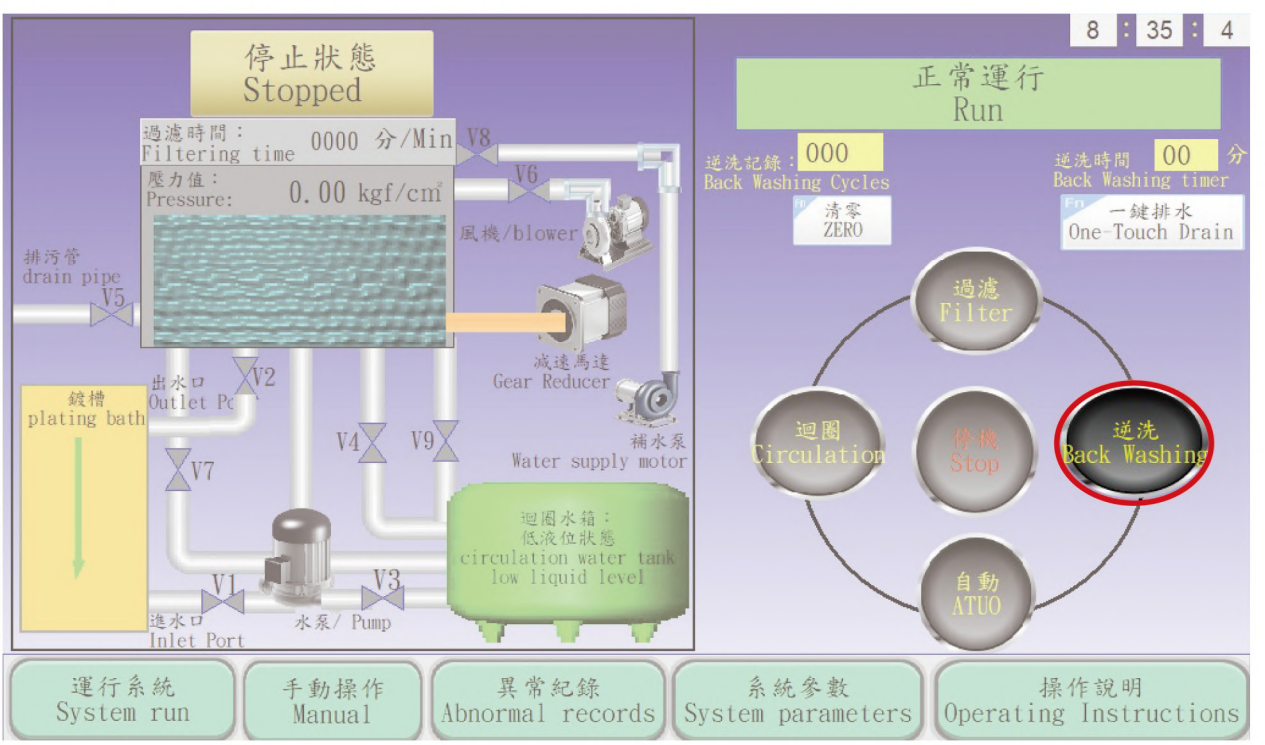


7. Username and Password (Username: 10, Password: 1010)



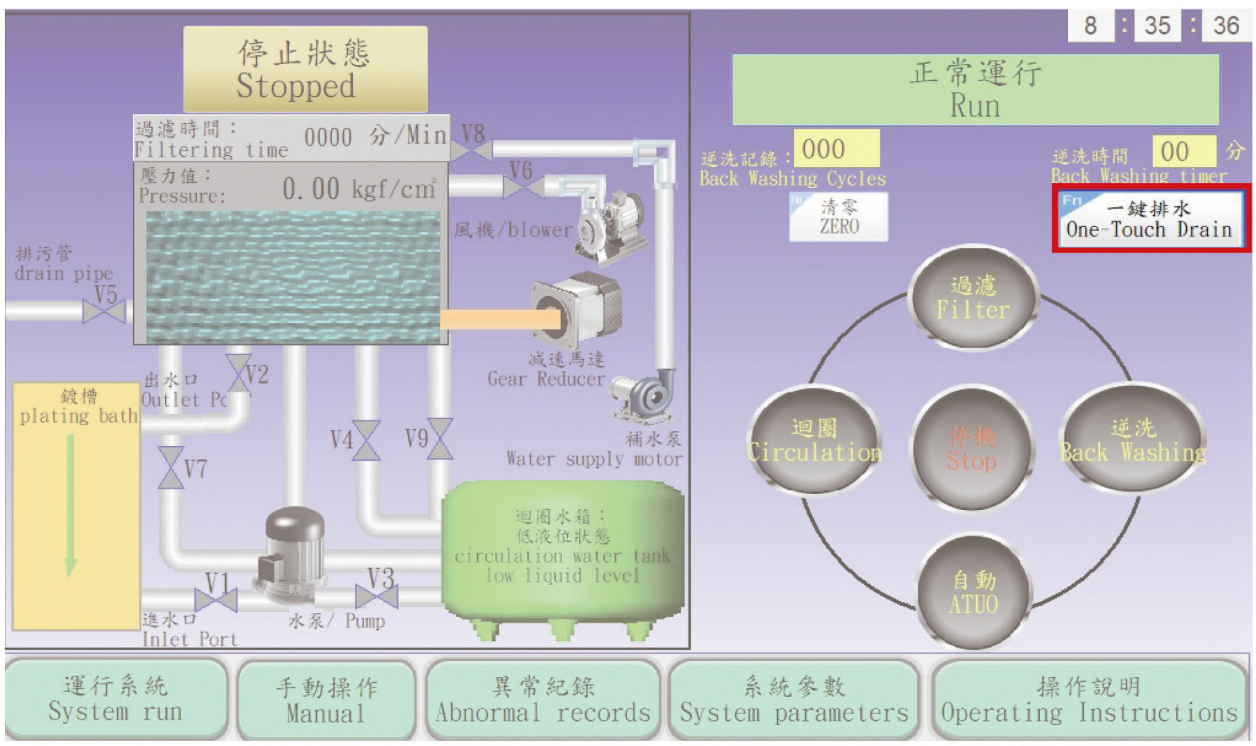
8. Manual Backwashing

Manual Backwashing Press "Backwashing" on the HMI. Note: Backwashing can only be performed when the circulation water tank is in a low liquid level status.



9. Circulation Water Tank Low/Full Level Alarm

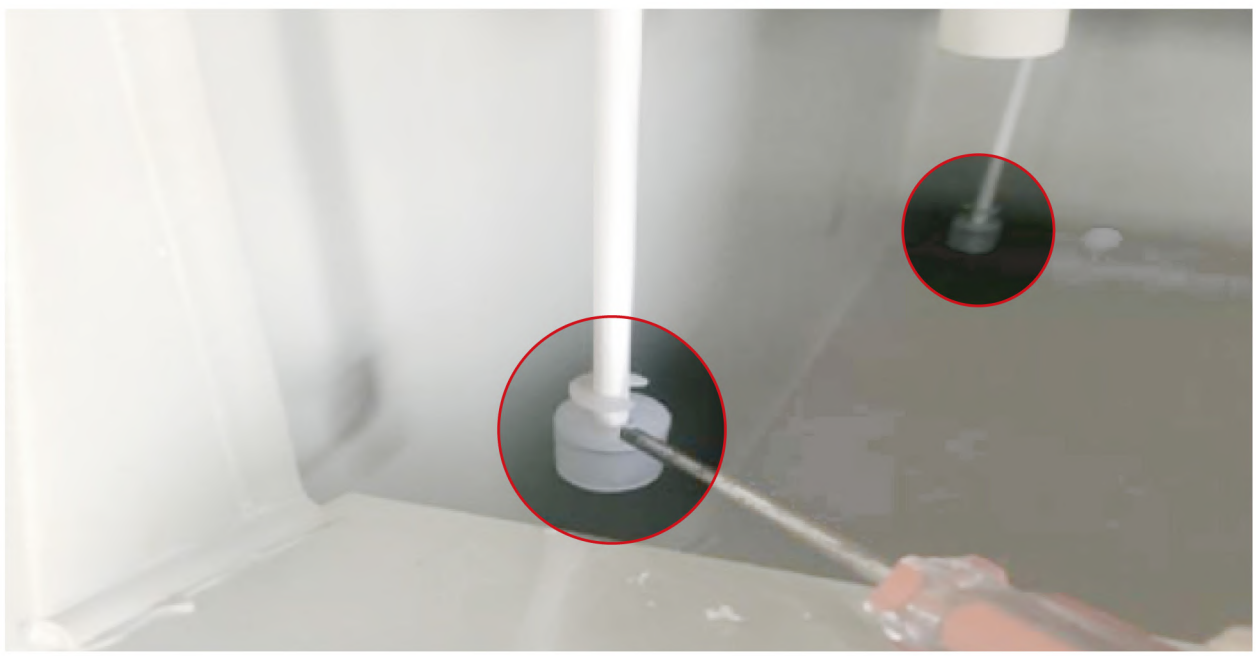
Solution: Press "One-Touch Drain" on the HMI.



*Note: Monitor Liquid Level

❶ After pressing "One-Touch Drain", the circulation system will automatically drop to a low liquid level status.

❷ Check whether the liquid level sensor functions properly to prevent subsequent overflowing.



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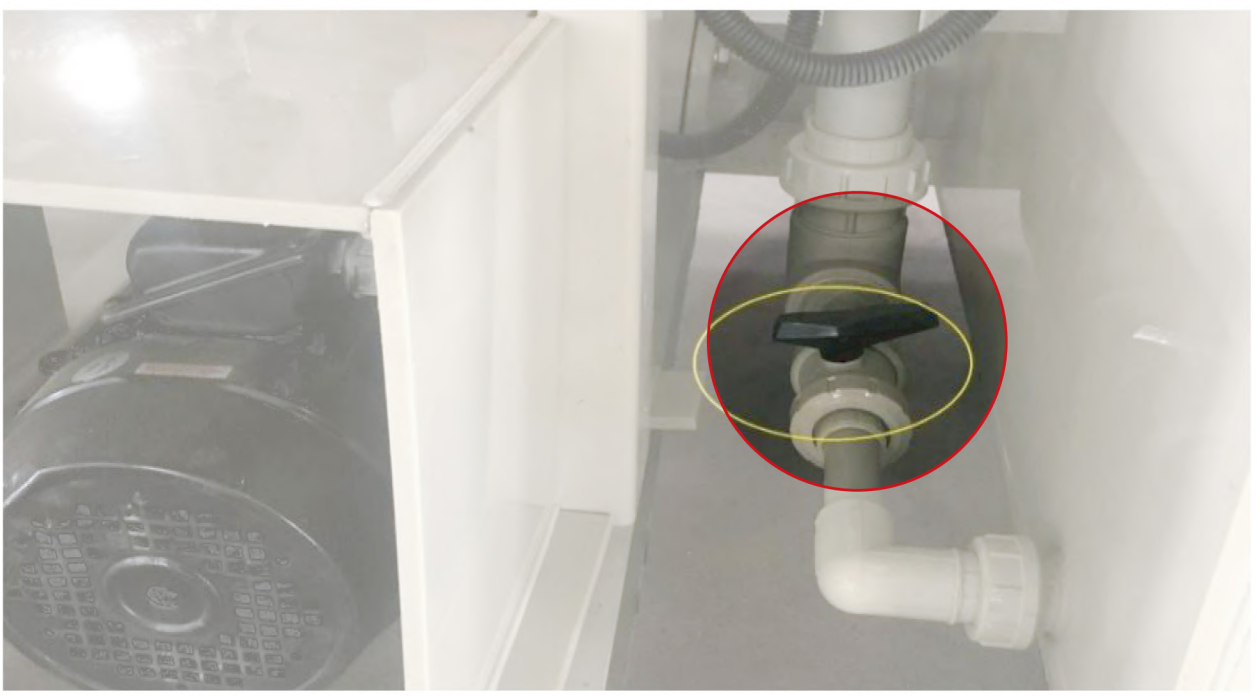
10、水泵故障，異常

❶ 先檢查水泵是否卡死。
❷ 檢查馬達是否燒毀。
❸ 檢查線路是否短路。
❹ 檢查完後按中間復歸按鈕。

11、排污管檢測異常：排污管內部有積水，打開小球閥左邊反而把積水排掉。



| 初始值 |

加酸時間：120秒　　壓力設定：2.6kgf/cm²　　V8閥放水時間：100秒

軸轉時間：100秒　　過濾時間設定：1000分　　風吹時間：140秒

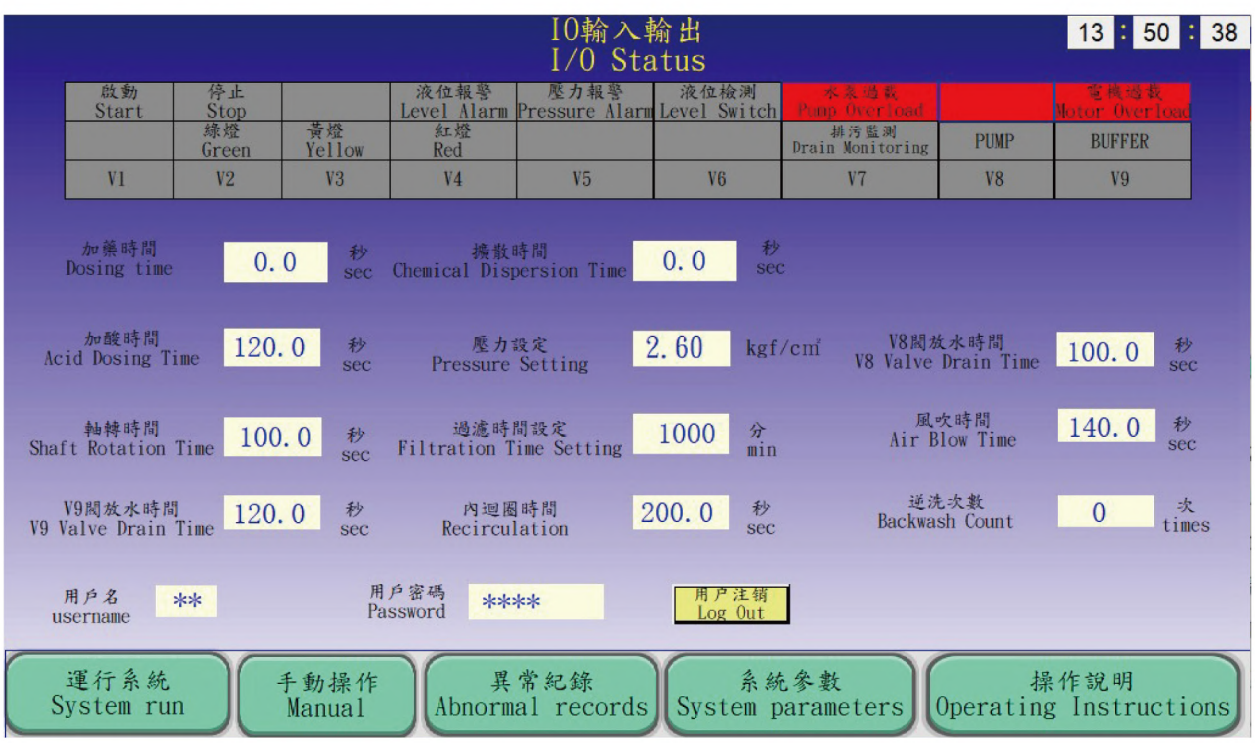
V9閥放水時間：120秒　　內迴圈時間：200秒　　逆洗次數：

(首次啟用內迴圈請設定300秒)

用戶名：10　　用戶密碼：1010

***壓力調整與助濾粉操作告示**

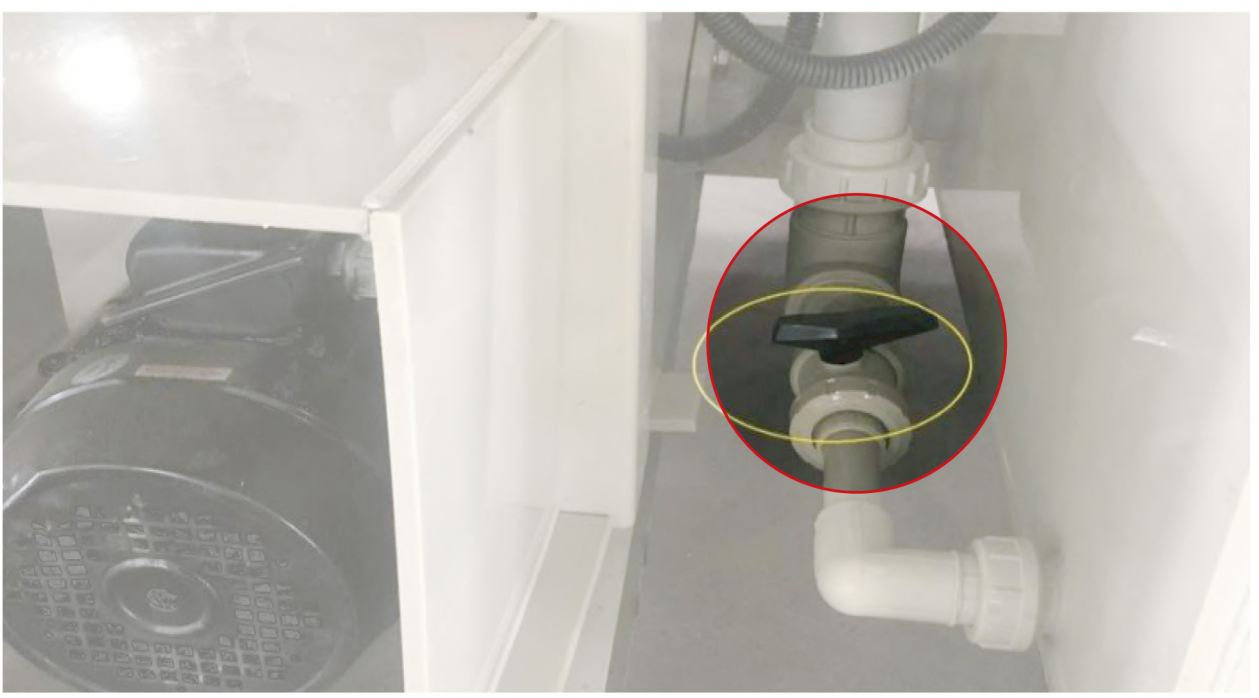
壓力值設定2.90kgf/cm²，反洗次數1個小時超過2次，設定至3.10kgf/cm²，並倒入助濾粉5公斤，一天可以加入助濾粉1至3次(初期藥水較髒時)，2-3天後，一天加入1公斤即可。



10. Water Pump Fault / Abnormality

❶ First, check whether the water pump is jammed/seized.
❷ Check whether the motor is burnt out.
❸ Check whether the wiring/circuit is shorted.
❹ After the inspection, press the middle "Reset" button.

11. Drain Pipe Detection Abnormality:
Trapped water inside the drain pipe. Open the small ball valve on the left to drain out the accumulated water.



[Initial Values]

Acid Dosing Time:
120 sec

Pressure Setting:
2.6 kgf/cm²

V8 Valve Water Release Time:
100 sec

Shaft Rotation Time:
100 sec

Filtration Time Setting:
1000 min

Air Blow Time:
140 sec

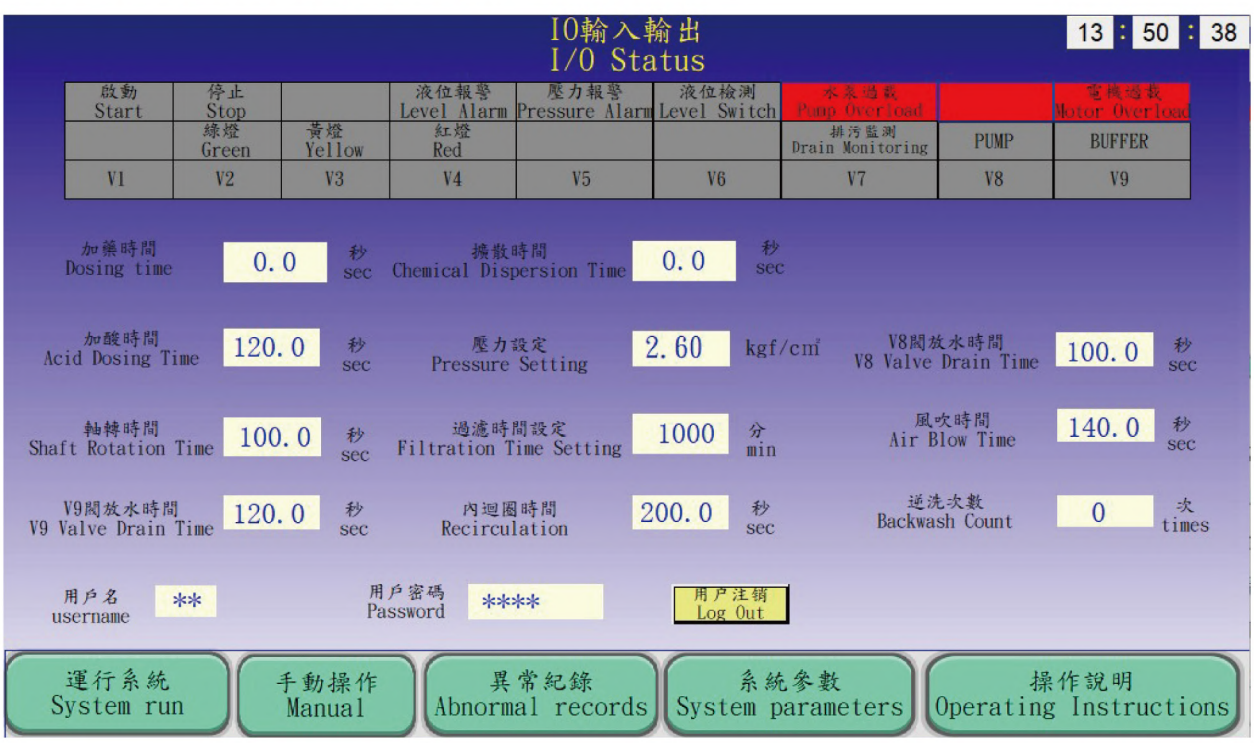
V9 Valve Water Release Time:
120 sec

Internal Circulation Time:
200 sec
(Set to 300 sec for initial startup)

Backwashing Cycles

Username: 10 **Password: 1010**

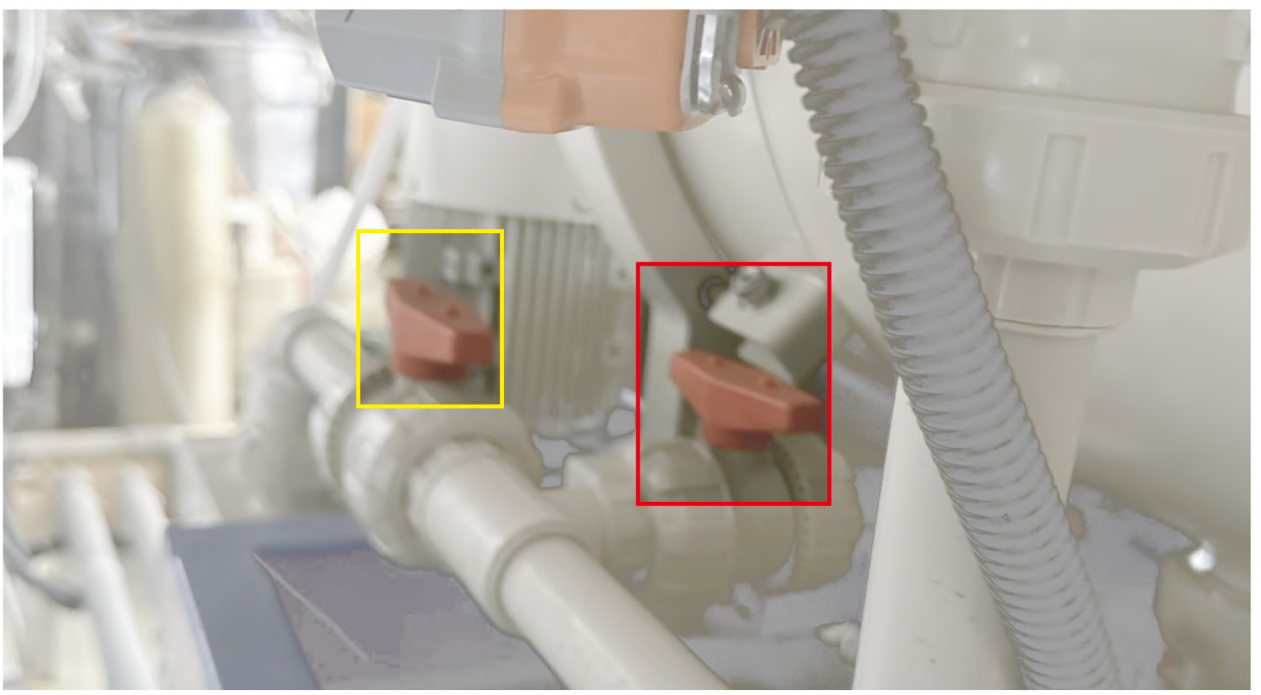
*Pressure Adjustment & Filter Aid Instructions
If the pressure value is set to 2.90 kgf/cm² and the backwashing frequency exceeds 2 times per hour, adjust the setting to 3.10 kgf/cm² and pour in 5 kg of filter aid powder. The filter aid powder can be added 1 to 3 times a day (when the chemical solution is relatively dirty in the initial stage). After 2 to 3 days, adding 1 kg per day will be sufficient.



全自動逆洗過濾機操作說明

第一次放水請開啟 自來水泵、V8、V9。
請確保自來水來源球閥有開啟。

並將左邊(黃框)球閥關閉，開啟右邊(紅框)球閥，讓自來水流入水箱，至迴圈水箱水量達1/2，
再將球閥復位，並手動操作關閉 自來水泵、V8、V9。

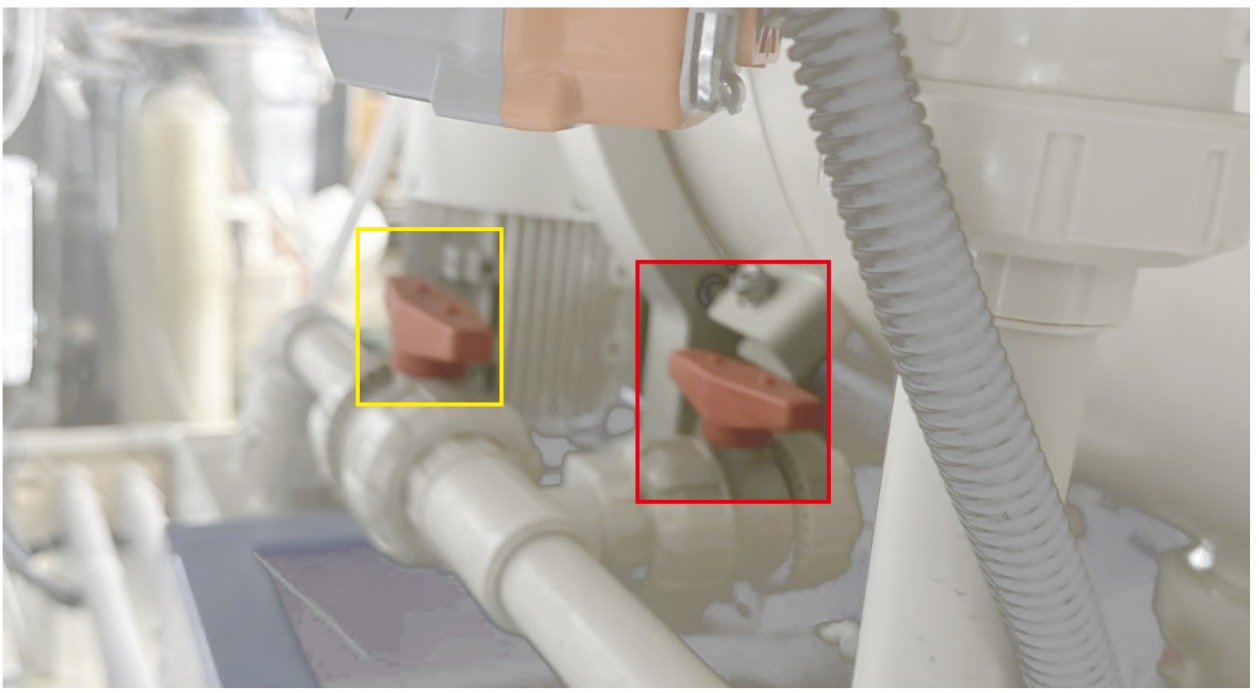


迴圈水箱水位達1/2之後，
開啟V1、V3、V4，並寸動水泵直至空氣排出。
(鍍槽至過濾機入水管，切記需要灌水防止空抽)

做完以上步驟，關閉V1、V3、V4，
按下運行系統，自動鍵，過濾機即可開始過濾。
迴圈水箱內的抽屜式濾布，請記得每天都要清洗，防止堵塞。

For the initial water filling, please turn on the tap water pump, V8, and V9. Ensure that the main tap water supply ball valve is fully open.

Close the left ball valve (indicated by the yellow box) and open the right ball valve (indicated by the red box) to allow tap water to flow into the tank. Once the water level in the circulation water tank reaches 1/2, reset the ball valves to their original positions and manually turn off the tap water pump, V8, and V9.



After the water level in the circulation water tank reaches 1/2:

Open V1, V3, and V4, and jog the water pump until the air is fully purged/exhausted.
(Note: The inlet piping from the plating bath to the filter must be primed with water to prevent dry running.)

Upon completing the steps above, close V1, V3, and V4.
Press "Operating System" and then the "Auto" button on the HMI; the filter will then commence the filtration process.
Please remember to clean the drawer-type filter cloth inside the circulation water tank daily to prevent clogging.

06. 注意事項

1、水泵故障報警原因：缺液或超載

超載原因：電機實際電流大於設定的上限保護電流，把保護電流設大解除報警。

缺液原因：電流低，進空氣或者有空氣，管路活接沒擰緊，迴圈水箱有泡沫，水箱探頭誤感應。

2、堵膜報警

原因：反洗不乾淨，大處理沒有加助濾劑。

沒有自來水，沒有鹽酸，鹽酸抽得不夠多，活性炭堵膜，油泥堵膜。

活性炭堵膜和油泥堵膜只能拆出來用高壓槍沖洗。

3、滿水報警

原因：堵膜造成或者是4閥、7閥、9閥漏水造成。

4、過濾不乾淨

原因：沒有加助濾劑，濾桶裏面濾膜鬆動，或者濾膜破損以及軸棒鬆動損壞。

5、反洗頻繁

原因：反洗效果不好。

6、閥門報警

原因：閥門沒有完全關閉，有東西卡住了。

7、排汙管檢測報警

原因：排汙管有積水，5閥漏水或者堵膜，酸鋅有可能出現排汙管堵死情況。

8、風機報警

原因：超載保護，風機過熱，先複位，再測試，再報警就是風出不去，堵排汙管了。

9、減速機報警

原因：有東西卡住小變頻器風扇，或者濾桶裏面有泥，導致帶不動及毛刷損壞，助力過大。

10、拆膜清洗

原因:在迴圈水箱低液位時逆洗，16分鐘後打開7閥跟9閥觀察9閥是否還有藥液，如無藥液即可拆卸濾膜，打開過濾機後蓋板可看到過濾主桶，把主桶後蓋的 (24) 螺絲拆完，打開桶蓋後可看到支撐板，拆卸支撐板之後，拆卸大螺母，卸完即可將膜取出。

07. 機器保養

進水管底閥檢查是否漏氣、結晶堵塞。
*處理方案：將介面處和球閥緊固，清理乾淨結晶疏通。

迴圈水箱內進水管底閥檢查是否有結晶堵塞，高低液位感應頭是否結晶卡住或者掉落現象，導致機器出現故障。
*處理方案：清理乾淨水進管底閥結晶並疏通，將感應頭結晶清理乾淨，活動檢查複位。

如機器需停機，必須將機器反沖洗後才能停機。

檢查排汙管或者V5電子閥是否排汙順暢，如有堵塞現象，須檢查V5電子閥是否堵塞或者損壞，充分清理乾淨後才能使用。

濾膜需定期保養檢查，濾膜拆下來用高壓水槍充分清洗後重新安裝，安裝必須將濾膜緊固密封好。

06. Troubleshooting & Fault Analysis

[1. Water Pump Fault Alarm Causes: Liquid Shortage or Overload]

Overload Cause: The actual motor current exceeds the set upper limit protection current. Increase the protection current setting value to clear the alarm.

Liquid Shortage Cause: Low current, air intake or trapped air in the system, loose piping unions, foam presence in the circulation water tank, or false triggering of the water tank level probe.

[2. Filter Membrane Clogging Alarm]

Cause: Incomplete/ineffective backwashing, or failure to add filter aid during large-scale treat ment batch operations.

Contributing Factors: No tap water supply, no hydrochloric acid (HCl), insufficient hydrochloric acid suction, membrane clogging due to activated carbon, or membrane clogging due to sludge/oily residue.

Note: Membrane clogging caused by activated carbon or sludge can only be resolved by removing the membrane and cleaning it thoroughly with a high-pressure water gun.

[3. High Water Level / Overflow Alarm]

Cause: Caused by filter membrane clogging or water leakage through valve V4, V7, or V9.

[4. Incomplete / Poor Filtration Quality]

Cause: No filter aid added; loose filter membrane inside the filter housing; or membrane damage due to a loose or damaged shaft/rod.

[5. Frequent Backwashing Cycles]

Cause: Poor or ineffective backwashing performance.

[6. Valve Fault Alarm]

Cause: The valve is not fully closed, typically due to foreign objects jammed inside.

[7. Drain Pipe Detection Alarm]

Cause: Water accumulation in the drain pipe, leakage through valve V5, or membrane clogging. In acid zinc plating processes, there is a risk of the drain pipe becoming completely blocked.

[8. Blower Fault Alarm]

Cause: Overload protection tripped due to blower overheating. First reset the fault, then test run. If the alarm recurs, it indicates the air cannot exhaust properly, likely due to a blockage in the drain pipe.

[9. Gear Reducer Alarm]

Cause: Foreign object jamming the small VFD cooling fan; or sludge accumulation inside the filter housing causing excessive resistance that stalls the system and damages the brush.

[10. Membrane Disassembly and Cleaning]

Procedure: Perform a backwash when the circulation water tank is at a low liquid level. After 16 minutes, open valve V7 and V9 to observe if any chemical solution is still draining from V9. If no solution remains, disassembly can proceed. Remove the rear cover plate of the filter unit to access the main filtration vessel. Remove all twenty-four (24) screws from the rear cover of the main vessel. Open the vessel cover to expose the support plate. After disassembling the support plate, unscrew the main large retaining nut. Once removed, the membrane can be pulled out.

7. Equipment Maintenance

Check the foot valve of the inlet pipe for air leakage or crystallization blockages.
Corrective Action: Tighten the interfaces and ball valves, clear away all crystallization, and ensure the line is fully unobstructed.

Check the foot valve of the inlet pipe inside the circulation water tank for crystallization blockages. Check whether the high/low liquid level sensor probes are jammed by crystallization or have dropped off, which can cause equipment malfunctions.
Corrective Action: Clean and clear all crystallization from the water inlet foot valve. Completely remove crystallization from the sensor probes, verify their freedom of movement, and ensure they are reset correctly.

If the equipment needs to be shut down, a full backwashing cycle must be executed prior to shutdown.

Check whether the drain pipe or electronic valve V5 discharges smoothly. In the event of a blockage, inspect valve V5 for clogging or damage. Thoroughly clean the component before putting it back into operation.

The filter membrane requires periodic maintenance inspection. Remove the membrane and wash it thoroughly with a high-pressure water gun before reinstallation. During installation, the filter membrane must be securely tightened and hermetically sealed.

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聯絡我們
Contact Us

金協鑫科技股份有限公司
CHIN HSIEH HSIN TECHNOLOGY CO., LTD.

【 新市廠 】
TEL:+886-6-598-8989
FAX:+886-6-598-3838
ADD:744 台南市新市區永就里永就68-40號

【 XINSHI FACTORY 】
NO. 68-40, YONGJIU, XINSHI DIST.,
TAINAN CITY 744, TAIWAN (R.O.C.)

【 仁德廠 】
TEL:+886-6-271-3356
FAX:+886-6-271-3358
ADD:台南市仁德區太乙路 115 號

【 RENDE FACTORY 】
NO. 115, TAIYI RD., RENDE DIST.,
TAINAN CITY 717, TAIWAN (R.O.C.)

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FAX:+886-6-598-3838
ADD:744 台南市新市區永就里永就68-40號

【仁德廠】
TEL:+886-6-271-3356
FAX:+886-6-271-3358
ADD:台南市仁德區太乙路 115 號

【XINSHI FACTORY】
NO. 68-40, YONGJIU, XINSHI DIST.,
TAINAN CITY 744, TAIWAN (R.O.C.)

【RENDE FACTORY】
NO. 115, TAIYI RD., RENDE DIST.,
TAINAN CITY 717, TAIWAN (R.O.C.)

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