CHI-SHUN
啓碩機械廠有限公司
CHI-SHUN MACHINERY PLANT CO.,LTD.

ADD : No.306,Dashun St,Gueiren Township,Tainan County 71148,Taiwan
TEL : + 886 6 2392501 FAX : + 886 6 2391759
E-mail : chishun.com@msa.hinet.net
Web site : www.chishun.com.tw

代理/經銷商 DISTRIBUTOR

Watch Water (S) Pte Ltd

25 International Business Park
#01-26/29 German Centre
Singapore 609916
Tel: +65 6581 9300
enquiry@watchwater.com.sg

CHI-SHUN
啓碩機械廠有限公司
CHI-SHUN MACHINERY PLANT CO.,LTD.

# FILTER PRESSES | 全自動板框廂式污泥脫水機

MAWS SERIES

# CHI-SHUN

## 關於啓碩

1983年，**台灣啓碩機械廠有限公司**創立於台灣的台南縣，二十多年來致力於高質量廢水處理設備，集研發、設計、製造、銷售及服務於一體，生產各種廢水處理設備；包括了污泥濃縮機、污泥濃縮脱水一體機、板框式污泥脱水機、粉體自動泡藥機、加壓快速浮除設備、自動攔污柵、污泥焚化乾燥系統…等。

爲提升污泥脱水設備的品質及效能，並在設備各方面取得突破性發展，啓碩於1988年領先同業引進德國優秀的固液分離技術，結合啓碩自身先進的機械制作與精密加工不斷求新求變，研發出新一代的NBD系列--全自動滚筒式/帶濾式污泥調理．濃縮．脱水．三機一體系列及**全自動板框廂式污泥脱水機系列**，躍身成爲污水處理設備之領導廠商。在公司持續不斷的研發中，產品多次獲得台灣經濟部及工業部所頒發的優質環保設備獎，並取得多項設計專利。

因應專業性與國際性共通的標準化，爲滿足顧客要求和適用法規的能力，啓碩更於2000年通過ISO 9001國際質量認證。所生產的設備行銷到世界各國，如美國、加拿大、英國、澳大利亞、西班牙、墨西哥、中國、印度、新、馬、印、泰、越等二十多個國家並獲得良好口碑，同時也得到如豐田汽車、雀巢公司、統一企業、奧林巴斯、日月光…等世界知名企業的一致好評。

啓碩機械所生產的各類廢水處理設備，應用範圍廣泛能適用於各種產業廢水，如紙漿業、印染業、電鍍業、皮革業、金屬加工業、石材業、城市混合污泥、城市剩餘活性污泥、混合污泥…等。

創新、質量、效能和安全是我們的基本原則，而對於品質的嚴格要求，一直是啓碩對客户的承諾與驕傲所在，未來我們也將持續不斷的突破與創新，與世界各地朋友合作爲環境保護和社會進步盡一份心。

Since founded in 1983, **CHI SHUN MACHINERY PLANT CO., LTD.** has devoted to the professional manufacturing of sludge and wastewater treatment. With over 20 years of design, manufacturing and marketing experience, our products and services have throughout the world and are enjoying a good reputation.

Our products including DRUM THICKENER SYSTEM , BELT FILTER PRESSES , FILTER PRESSES , POLYMER PREPARATION SYSTEM , DISSOLVED AIR FLOTATION , BAR SCREEN and SLUDGE DRYER.

For breakthrough in high quality, efficiency and good shape of wastewater treatment ; **CHI SHUN** adopted newest skills from Germany, and than we created the whole new belt filter presses.

Continuous improvements of product quality and reliability have always been our first priority. In 2001, **CHI SHUN** is Taiwan's first manufacturer in the industry to be certified by AFAQ-EAQA to comply with Quality Management System requirements of ISO 9001:2000. We also obtain the Taiwan excellence product and patent licenses from economic Ministry. Now **CHI SHUN** has become the leading manufacturer of wastewater treatment systems throughout Asia.

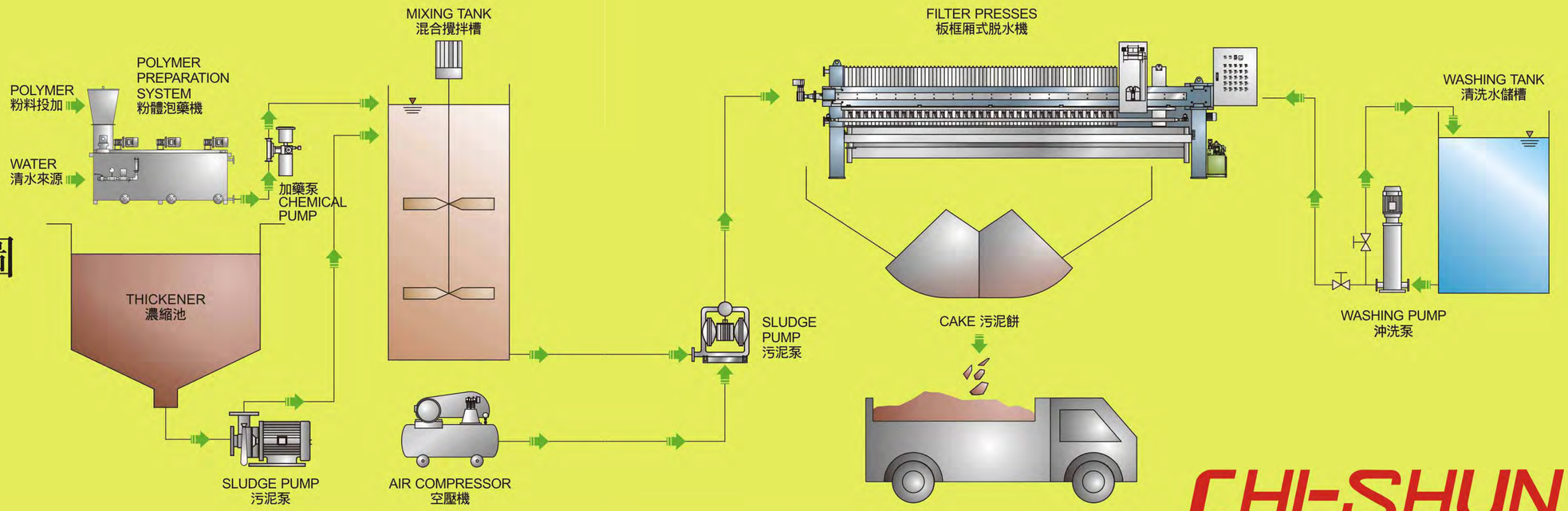
Furthermore, we are an international provider of integrated wastewater treatment solutions, offering equipment, systems and services throughout the world.

Equipment can be provided either standard-alone or as part of complete system to treat municipal, industrial and any process wastewater.

Innovating, high quality, high efficiency and use friendly are our features. We strive to produce high quality machines and maintain its low cost. Our onsite services and warranty will provide you with complete peace of mind and absolute satisfaction. With us, you are in good hands. Please do not hesitate to contact us if you have any questions or require any additional information.

FLOW SHEET

# 系統處理流程圖




CHI-SHUN

Innovation · Quality · Efficiency · Safety

## 板式簡介

板框式脱水機是利用進泥壓力及擠壓壓力來將污泥中的固體及液體分離，以降低污泥中之含水率。

爲了提升板框脱水機的效能及品質，啓碩採用了最新的技術及能力，並確保操作時的安全。

啓碩的板框式脱水機可適用於各種產業：如食品、皮革、金屬、電子業、造紙及染整等，我們提供了各式各樣及多種尺寸的板框式脱水機，濾板尺寸從470x470到2000x2000mm。

現場安裝定位

側面內軌道

## INTRODUCTION

Filter presses are liquid/solid separation devices that utilize feed pressure and squeeze pressure to reduce the liquid content in process.

We adopting all of the latest technologies capable of improving the reliability and quality, with special attention to operator safety.

CHI SHUN filter presses are used in variety applications in the following industries: Food processing, Leather, Metals, Electroplating, Paper Mill, Dyeing and so on. We offer a wide assortment of CHI SHUN Filter presses, plate size from 470x470 to 2000x2000mm.

## 污泥脱水實例 FILTRATION PERFORMANCE

## 污泥處理實例 DEHYDRATION PERFORMANCE

## 機械特點

2米機座

1. 啓碩板框式污泥脱水機配備了各種安全保護裝置，以確保操作人員的安全。
2. 特殊高壓過濾程序產生低含水率的污泥餅。
3. 高效能的强力濾布清洗裝置可避免濾布阻塞。
4. 獨特的濾板移動及震動裝置確保污泥餅自動掉落。
5. 高强度負荷框架結構，並配合三道epoxy噴漆。
6. 濾板採用100%耐腐蝕POLYPROPYLENE材質。
7. 含多重完整的功能，如吹氣系統以達到最低含水率之污泥餅。
8. 利用油壓系統控制濾板自動擠壓及開板動作。
9. 全自動板框脱水機含自動開板，濾板震動及濾布自動清洗系統。
10. 生產各種處理量之板式脱水機，同時也有隔膜板可供選擇。
11. 簡易操作，低電力及低維護成本，機械式結構穩定性高。

## FEATURES

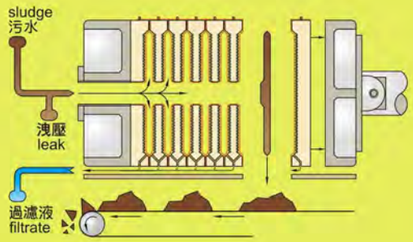
1. Our filter presses are equipped with all of the protections required by safety regulations, and the electrical system is built according to the strictest current standards.
2. High pressure filtration produces a filter cake of low moisture content.
3. The powerful and effective filter cloth washing system prevents clogging of the filter cloth.
4. Unique plates shifting and shaking device provides convenient and safe cake discharge from the filter press.
5. Heavy duty steel construction with twice epoxy coated for maximum chemical resistance.
6. Filter plates are corrosion resistant 100% polypropylene.
7. Complete manifold including air blow down feature to assure driest possible cake.
8. Hydraulic oil system for automatic press opening and closure.
9. Fully automatic filterpress with automatic plates shifting, plates shaking and cloths washing system.
10. Fully automatic filterpress with variable volume plates chamber plates and membrane plate.
11. Power saving, free trouble, low operation and maintenance cost.



CHI-SHUN

# ACS

## 全自動開板機種
## Automatic Chamber Filter Press




### ACS-機型　技術規格參數 ACS-TYPE Technology

| 濾板尺寸 Plate Size (mm) | 機型 Model | 濾板數量 Pieces | 過濾容積 Volume (L/cycle) | 過濾面積 Filter Area ($m^2$/cycle) |
|---|---|---|---|---|
| □800 x 65T | ACS-800-20 | 20 | 304 | 20.9 |
| | ACS-800-25 | 25 | 384 | 26.4 |
| | ACS-800-30 | 30 | 464 | 31.9 |
| | ACS-800-35 | 35 | 544 | 37.4 |
| | ACS-800-40 | 40 | 624 | 42.9 |
| | ACS-800-50 | 50 | 784 | 53.9 |
| | ACS-800-60 | 60 | 944 | 64.9 |
| □1000 x 65T | ACS-1000-40 | 40 | 1053 | 66.3 |
| | ACS-1000-50 | 50 | 1323 | 83.3 |
| | ACS-1000-60 | 60 | 1593 | 100.3 |
| | ACS-1000-70 | 70 | 1863 | 117.3 |
| | ACS-1000-80 | 80 | 2133 | 134.3 |
| □1200 x 68T | ACS-1200-60 | 60 | 2360 | 147.5 |
| | ACS-1200-70 | 70 | 2760 | 172.5 |
| | ACS-1200-80 | 80 | 3160 | 197.5 |
| □1500 x 80T | ACS-1500-60 | 60 | 3835 | 224.2 |
| | ACS-1500-70 | 70 | 4485 | 262.2 |
| | ACS-1500-80 | 80 | 5135 | 300.2 |
| □2000 x 80T | ACS-2000-60 | 60 | 7021 | 407.1 |
| | ACS-2000-70 | 70 | 8211 | 476.1 |
| | ACS-2000-80 | 80 | 9401 | 545.1 |

以上機型代號注解 Ordering Code
範例：ACS-800-20 **ACS**(機型代號 Type of equipment)
**800**(濾板尺寸mm Plate Size) **20**(濾板數量Plate Quantity)

### ACS- 全自動開板機種 TYPE FLOW CHART

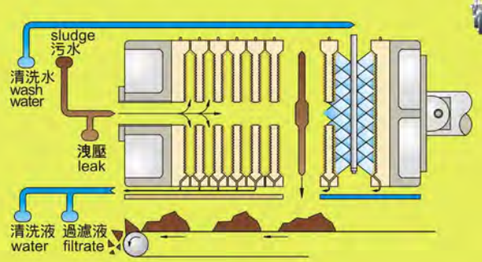
- 系統開始 Start
- 濾板自動關閉 Automatic press closing
- 污泥進入 Feed of slurry
- 過濾 Filtration
- 達到設定壓力或時間 Attain enactment pressure or timer
- 自動洩壓 Automatic air leak out
- 擠壓板自動打開 Automatic press opening
- 自動逐一震動開板 Automatic plate shaking and shifting
- 泥餅掉落 Cake discharge
- 泥餅輸送集中 Conveying by convey belt
- 泥餅運棄處理 Cake abandon



# AWS

## 全自動清洗機種
## Automatic Chamber Filter Press with cloth washing system

CHI-SHUN
Innovation · Quality · Efficiency · Safety




### AWS-機型　技術規格參數 AWS-TYPE Technology

| 濾板尺寸 Plate Size (mm) | 機型 Model | 濾板數量 Pieces | 過濾容積 Volume (L/cycle) | 過濾面積 Filter Area ($m^2$/cycle) |
|---|---|---|---|---|
| □800 x 65T | AWS-800-20 | 20 | 304 | 20.9 |
| | AWS-800-25 | 25 | 384 | 26.4 |
| | AWS-800-30 | 30 | 464 | 31.9 |
| | AWS-800-35 | 35 | 544 | 37.4 |
| | AWS-800-40 | 40 | 624 | 42.9 |
| | AWS-800-50 | 50 | 784 | 53.9 |
| | AWS-800-60 | 60 | 944 | 64.9 |
| □1000 x 65T | AWS-1000-40 | 40 | 1053 | 66.3 |
| | AWS-1000-50 | 50 | 1323 | 83.3 |
| | AWS-1000-60 | 60 | 1593 | 100.3 |
| | AWS-1000-70 | 70 | 1863 | 117.3 |
| | AWS-1000-80 | 80 | 2133 | 134.3 |
| □1200 x 68T | AWS-1200-60 | 60 | 2360 | 147.5 |
| | AWS-1200-70 | 70 | 2760 | 172.5 |
| | AWS-1200-80 | 80 | 3160 | 197.5 |
| □1500 x 80T | AWS-1500-60 | 60 | 3835 | 224.2 |
| | AWS-1500-70 | 70 | 4485 | 262.2 |
| | AWS-1500-80 | 80 | 5135 | 300.2 |
| □2000 x 80T | AWS-2000-60 | 60 | 7021 | 407.1 |
| | AWS-2000-70 | 70 | 8211 | 476.1 |
| | AWS-2000-80 | 80 | 9401 | 545.1 |

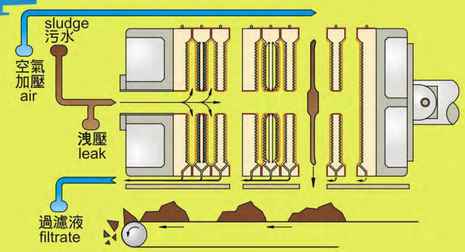
以上機型代號注解 Ordering Code
範例：AWS-800-20 **AWS**(機型代號 Type of equipment)
**800**(濾板尺寸mm Plate Size) **20**(濾板數量Plate Quantity)

### AWS- 全自動清洗機種 TYPE FLOW CHART

- 系統開始 Start
- 濾板自動關閉 Automatic press closing
- 污泥進入 Feed of slurry
- 過濾 Filtration
- 達到設定壓力或時間 Attain enactment pressure or timer
- 自動洩壓 Automatic air leak out
- 擠壓板自動打開 Automatic press opening
- 自動逐一震動開板 Automatic plate shaking and shifting
- 泥餅掉落 Cake discharge
- 泥餅輸送集中 Conveying by convey belt
- 全自動逐一濾布清洗 Automatic cloths washing
- 泥餅運棄處理 Cake abandon

# MACS

全自動膜片機種
Automatic Membrane Filter Press




## MACS-機型　技術規格參數 MACS-TYPE Technology

| 濾板尺寸 Plate Size (mm) | 機型 Model | 濾板數量 Pieces | 過濾容積 Volume (L/cycle) | 過濾面積 Filter Area ($m^2$/cycle) |
|---|---|---|---|---|
| □800 x 65T | MACS-800-21 | 21 | 320 | 22.0 |
| | MACS-800-25 | 25 | 384 | 26.4 |
| | MACS-800-31 | 31 | 480 | 33.0 |
| | MACS-800-35 | 35 | 544 | 37.4 |
| | MACS-800-41 | 41 | 640 | 44.0 |
| | MACS-800-51 | 51 | 800 | 55.0 |
| | MACS-800-61 | 61 | 960 | 66.0 |
| □1000 x 65T | MACS-1000-41 | 41 | 1080 | 68.0 |
| | MACS-1000-51 | 51 | 1350 | 85.0 |
| | MACS-1000-61 | 61 | 1620 | 102 |
| | MACS-1000-71 | 71 | 1890 | 119 |
| | MACS-1000-81 | 81 | 2160 | 136 |
| □1200 x 68T | MACS-1200-61 | 61 | 2400 | 150 |
| | MACS-1200-71 | 71 | 2800 | 175 |
| | MACS-1200-81 | 81 | 3200 | 200 |
| □1500 x 80T | MACS-1500-61 | 61 | 3900 | 228 |
| | MACS-1500-71 | 71 | 4550 | 266 |
| | MACS-1500-81 | 81 | 5200 | 304 |
| □2000 x 80T | MACS-2000-61 | 61 | 7140 | 414 |
| | MACS-2000-71 | 71 | 8330 | 483 |
| | MACS-2000-81 | 81 | 9520 | 552 |

以上機型代號注解 Ordering Code
範例：MACS-800-21 **MACS**(機型代號 Type of equipment)
**800**(濾板尺寸mm Plate Size)　**21**(濾板數量Plate Quantity)

### MACS- 全自動膜片機種 TYPE FLOW CHART

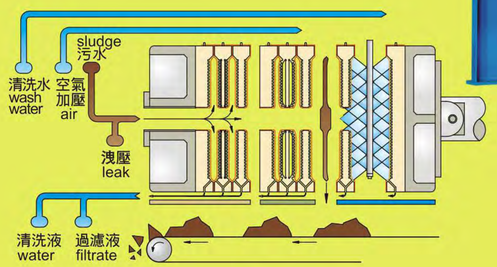
- 系統開始 Start
- 濾板自動關閉 Automatic press closing
- 污泥進入 Feed of slurry
- 過濾 Filtration
- 達到設定壓力或時間 Attain enactment pressure or timer
- 自動洩壓 Automatic air leak out
- 隔膜濾板吹氣加壓 Air blow press of membrane plates
- 隔膜濾板洩壓 Air leak out of membrane
- 擠壓板自動打開 Automatic press opening
- 自動逐一震動開板 Automatic plate shaking and shifting
- 泥餅掉落 Cake discharge
- 泥餅輸送集中 Conveying by convey belt
- 泥餅運棄處理 Cake abandon



# MAWS

全自動膜片清洗機種
Automatic Membrane Filter Press
with cloth washing system

CHI-SHUN
Innovation · Quality · Efficiency · Safety




## MAWS-機型　技術規格參數 MAWS-TYPE Technology

| 濾板尺寸 Plate Size (mm) | 機型 Model | 濾板數量 Pieces | 過濾容積 Volume (L/cycle) | 過濾面積 Filter Area ($m^2$/cycle) |
|---|---|---|---|---|
| □800 x 65T | MAWS-800-21 | 21 | 320 | 22.0 |
| | MAWS-800-25 | 25 | 384 | 26.4 |
| | MAWS-800-31 | 31 | 480 | 33.0 |
| | MAWS-800-35 | 35 | 544 | 37.4 |
| | MAWS-800-41 | 41 | 640 | 44.0 |
| | MAWS-800-51 | 51 | 800 | 55.0 |
| | MAWS-800-61 | 61 | 960 | 66.0 |
| □1000 x 65T | MAWS-1000-41 | 41 | 1080 | 68.0 |
| | MAWS-1000-51 | 51 | 1350 | 85.0 |
| | MAWS-1000-61 | 61 | 1620 | 102 |
| | MAWS-1000-71 | 71 | 1890 | 119 |
| | MAWS-1000-81 | 81 | 2160 | 136 |
| □1200 x 68T | MAWS-1200-61 | 61 | 2400 | 150 |
| | MAWS-1200-71 | 71 | 2800 | 175 |
| | MAWS-1200-81 | 81 | 3200 | 200 |
| □1500 x 80T | MAWS-1500-61 | 61 | 3900 | 228 |
| | MAWS-1500-71 | 71 | 4550 | 266 |
| | MAWS-1500-81 | 81 | 5200 | 304 |
| □2000 x 80T | MAWS-2000-61 | 61 | 7140 | 414 |
| | MAWS-2000-71 | 71 | 8330 | 483 |
| | MAWS-2000-81 | 81 | 9520 | 552 |

以上機型代號注解 Ordering Code
範例：MAWS-800-21 **MAWS**(機型代號 Type of equipment)
**800**(濾板尺寸mm Plate Size)　**21**(濾板數量Plate Quantity)

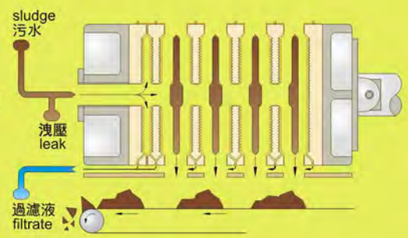
### MAWS- 全自動膜片清洗機種 TYPE FLOW CHART

- 系統開始 Start
- 濾板自動關閉 Automatic press closing
- 污泥進入 Feed of slurry
- 過濾 Filtration
- 達到設定壓力或時間 Attain enactment pressure or timer
- 自動洩壓 Automatic air leak out
- 隔膜濾板吹氣加壓 Air blow press of membrane plates
- 隔膜濾板洩壓 Air leak out of membrane
- 擠壓板自動打開 Automatic press opening
- 自動逐一震動開板 Automatic plate shaking and shifting
- 泥餅掉落 Cake discharge
- 泥餅輸送集中 Conveying by convey belt
- 全自動逐一濾布清洗 Automatic cloths washing
- 泥餅運棄處理 Cake abandon

CHI-SHUN

# MCS

手動開板機種
Manual Chamber Filter Press




## MCS-機型　技術規格參數 MCS-TYPE Technology

| 濾板尺寸 Plate Size (mm) | 機型 Model | 濾板數量 Pieces | 過濾容積 Volume (L/cycle) | 過濾面積 Filter Area ($m^2$/cycle) |
|---|---|---|---|---|
| □470 x 50T | MCS-470-10 | 10 | 40 | 3.4 |
| | MCS-470-15 | 15 | 63 | 5.3 |
| | MCS-470-20 | 20 | 85 | 7.2 |
| | MCS-470-25 | 25 | 108 | 9.1 |
| □630 x 60T | MCS-630-15 | 15 | 126 | 9.3 |
| | MCS-630-20 | 20 | 171 | 12.7 |
| | MCS-630-25 | 25 | 216 | 16.1 |
| | MCS-630-30 | 30 | 261 | 19.4 |
| □800 x 65T | MCS-800-20 | 20 | 304 | 20.9 |
| | MCS-800-25 | 25 | 384 | 26.4 |
| | MCS-800-30 | 30 | 464 | 31.9 |
| | MCS-800-35 | 35 | 544 | 37.4 |
| | MCS-800-40 | 40 | 624 | 42.9 |
| | MCS-800-50 | 50 | 784 | 53.9 |
| | MCS-800-60 | 60 | 944 | 64.9 |
| □1000 x 65T | MCS-1000-40 | 40 | 1053 | 66.3 |
| | MCS-1000-50 | 50 | 1323 | 83.3 |
| | MCS-1000-60 | 60 | 1593 | 100.3 |
| | MCS-1000-70 | 70 | 1863 | 117.3 |
| | MCS-1000-80 | 80 | 2133 | 134.3 |

以上機型代號注解 Ordering Code
範例：MCS-470-10 **MCS**(機型代號 Type of equipment)
**470**(濾板尺寸mm Plate Size) **10**(濾板數量Plate Quantity)

## MCS- 手動開板機種 TYPE FLOW CHART

- 系統開始 Start
- 濾板半自動關閉 Press closing
- 污泥進入 Feed of slurry
- 過濾 Filtration
- 達到設定壓力 Attain enactment pressure
- 手動洩壓 Air leak out
- 擠壓板半自動打開 Press opening
- 手動逐一開板 Manual plate shifting
- 泥餅掉落 Cake discharge
- 泥餅輸送集中 Conveying by convey belt
- 泥餅運棄處理 Cake abandon



CHI-SHUN

Products
# 各項生產設備介紹

1. 全自動板框廂式污泥脫水機 Filter presses
2. 加壓快速浮除設備 Dissolved air flotation
3. 全自動滾筒式/帶濾式污泥調理·濃縮·脫水·三機一體 Automatic belt press with rotary drum screen
4. 粉體自動泡藥機 Polymer preparation systems
5. 自動攔污柵 Bar screen

ISO 9001

## 實力認證 Qualit Certification

84年專利證書
Patent license in 1995

87年專利證書
Patent license in 1998

90年專利證書
Patent license in 2001

92年專利證書
Patent license in 2003

優良環保設備證書
Obtain the taiwan excellence product from economic ministry

優良環保設備獎牌
Obtain the taiwan excellence product from economic ministry

大陸證書
Obtain the environmental protection equipment from china

ISO 9001證書
Obtain ISO 9001 certification