

**YANGTECH®**

**EMP - 3706 / 4210 / 5320**

**電磁驅動多功能定量幫浦**

Multifunctional Electromagnetic Metering Pump



**小型 • 精準 • 多功能**

COMPACT • PRECISE • MULTIFUNCTIONAL

CE IP65  
ISO 9001

**YANGTECH TECHNOLOGY CO., LTD. (TAIWAN)**

[www.yangtechpump.com.tw](http://www.yangtechpump.com.tw)



## 液態藥劑添加首選

EMP-系列電磁驅動定量幫浦結合微處理器控制技術，具有體積小、精準與多功能之特性。適合各行業需精密添加液體藥劑之場合。

## 適用場合

環保工程、空調、冷卻、鍋爐、游泳池、化工、食品、消毒等等



## 特點

- 1 多功能LED可顯示衝頻 / 衝頻比率 / 流量 / 時間等多種資訊
- 2 100V~240V泛用電壓設計，使用最方便
- 3 標準配備液位計接點，加裝液位計後當藥品達低液位時可自動停機
- 4 標準配備電磁鐵溫度保護開關，使用最安全
- 5 外部類比訊號(4~20mA or 0~10V)控制機能(可選配)
- 6 外部數位訊號(PLC/計數器等脈衝訊號)控制機能(可選配)
- 7 脈衝/時間批次執行功能(可選配)
- 8 定時開機/關機功能
- 9 外部偵測器/繼電器電源供應接點(5V, <500mA) (可選配)
- 10 提供控制開關及液位、批次完成警報接點(可選配)

## THE FIRST CHOICE IN CHEMICAL DOSING PROCESS

EMP- Series electromagnetic metering pumps feature microprocessor control technology. They are compact, precise and multifunctional and suitable for precise liquid chemical dosing process.

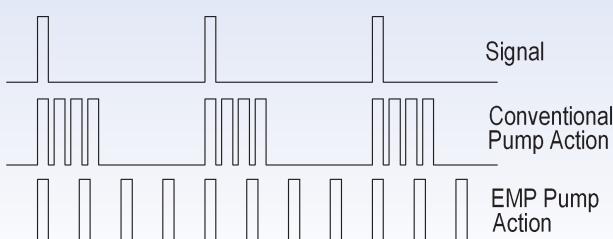
## APPLICATIONS

Environmental protection engineering, Cooling tower, Boiler, Swimming pool, Chemical industry, Food processing and Disinfection,etc.

## FEATURES

- 1 Multi-functional LED displays various information, Such as pulse rate / pulse rate percentage / flow rate / time, etc.
- 2 100V~240V wide range of source power voltage makes more convenient installation.
- 3 Equipped with liquid level sensor contacts. When a level switch is applied, the pump stops automatically when reach the lowest level.
- 4 The electro-magnetic driver equipped with an temperature protector , which secure from high temperature damage.
- 5 External analog signal (4~20mA or 0~10V) control function (optional) .
- 6 External digital signal (PLC/counter pulse signal) control function (optional).
- 7 Batch function for both pulse and time count-down (optional).
- 8 Time control on/off function (optional).
- 9 Power supply contact (5V,<500mA) for external sensor/relay (optional).
- 10 Various contacts for external control switches, low level and batch finish alarm (optional).

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### 智慧型加藥量均勻化

輸入脈衝時間變化時可自動調整加藥點平均分配，使加藥量平均化(如左圖)

### Automatic Dosing Pulse Equalization

The smart dosing pulse equalization function ensures maximum uniformity in dosing.

## 機型編號 MODEL IDENTIFICATION

**EMP - 42 10 - AC H - U AD**

**A**

- A** = 輯浦系列別
- B** = 隔膜直徑
- C** = 流量代碼
- D** = 材質代碼
- E** = 接頭型式代碼
- F** = 電源規格代碼
- G** = 特殊代碼

**B C**

**D E**

**F G**

- (幫浦系列代號)
- (37=φ37mm, 42=φ42mm, 53=φ53mm)
- (06=60毫升/分鐘, 10=100毫升/分鐘, 20=200毫升/分鐘)
- (請參考材質代碼表)
- (H=軟管式, U=由令式, F=法蘭式)
- (U=通用電壓100~240V, 2=220V 單相, 1=110V 單相)
- (Null=標準品, A=類比功能, D=數位功能, B=批次功能, T=定時功能)

**A = Series Code**

(Pump Series Code)

**B = Diaphragm Diameter**

(37=φ37mm, 42=φ42mm, 53=φ53mm)

**C = Flow Rate Code**

(06=60ml/min, 10=100ml/min, 20=200ml/min)

**D = Material Code**

(Consult the Material Code List)

**E = Joint Code**

(H=Hose Type ,U=UnionType , F=FlangeType)

**F = Power Source Code**

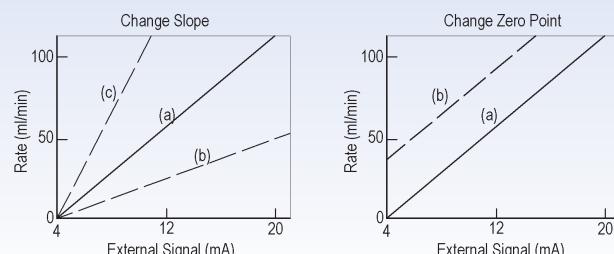
(U=Universal 100~240V / ø1, 2=220V / ø1, 1=110V / ø1)

**G = Special Code**

(Null =Standard Product, A=Analog Function. , D=Digital Function. ,

B=Batch Function. T=Timer Function)

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### 自由化的輸出量調整

外部類比訊號與輸出量之比例可自由設定，包括零點及斜率皆可改變，如此可以精確配合加藥量之需求(如左圖)

### Free Adjustment of Pumping Rate

The ratio between analog signal and pumping rate can be set as desired to meet the requirement of accurate dosing.



### 符合IP65防護等級

特殊的保護設計及材料使整體達到IP65防水防塵等級，因此可以直接戶外安裝使用

### IP65 Protection Degree Certified

The special design and material of this pump, which makes IP65 degree of ingress protection. The pump can be mounted at outdoor.



### 大型自發光LED顯示幕

採用大型自發光LED顯示面板，夜晚及昏暗處依然可清晰辨識

### Large-Scale LED Display

The oversized illuminated LED display provides excellent identification at dark places.



### 電磁式驅動最省電

採用電磁鐵直接驅動設計，耗電功率低於25W，最省電環保

### Electro-Magnetic Drive Design

Direct electro-magnetic drive mechanism. The power consumption is only 25Watts, which makes more energy saving.



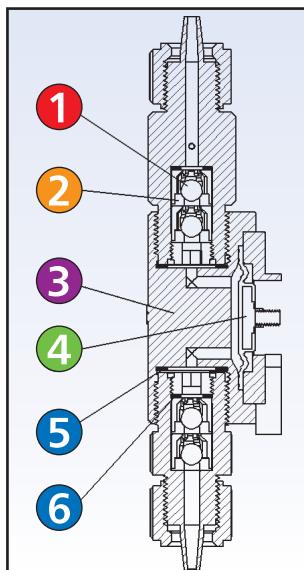
### 標準配備面板保護蓋

面板保護蓋可以避免化學液體、油、灰塵，雨水等侵害操作面板，延長壽命

### Standard Equipped with Panel Protective Cover

A panel protective cover prevents from corrosive chemical, oil, dust, rain, which extend pump's life.

## 接液部件材質代碼表 WET-END MATERIAL CODE LIST



接液部構造圖  
Wet-end Structure

材質代號 Material Code	AC	AF	BS	VS	SS
應用 Application	常用酸液 General Acid	強(氧化性)酸液 Strong Oxidative Acid	常用鹼液 General Base	黏性液體 Thick fluid	溶劑液體 Solvent
① 閥珠 Valve Ball	Ceramic	Ceramic	SUS316	SUS316	SUS316
② 門座 Valve Seat	PVC	PVDF/PTFE	PVC	PVC	SUS316
③ 幫浦頭 Pump Head	PVC	PVDF/PTFE	PVC	PVC	SUS316
④ 隔膜 Diaphragm		PTFE + EPDM + SUS304 + Nylon Fiber			
⑤ ⑥ O型環 O-Ring	Viton	Viton	EPDM	EPDM	PTFE

註 : PVC : 聚氯乙烯 Polyvinyl chloride  
 SUS304/316 : 不锈鋼 Stainless Steel  
 Viton : 氟素橡膠 Fluoro Rubber  
 EPDM : 乙烯丙烯非共軛二烯橡膠 Ethylene Propylene Rubber  
 PVDF : 聚偏二氟乙烯 Polyvinylidene fluoride  
 Ceramic : 氧化鋁/陶瓷 Al<sub>2</sub>O<sub>3</sub>  
 PTFE : 聚四氟乙烯 Polytetrafluoro Ethylene



### 精準流量控制

標準配備衝程調整功能，與衝頻調整配合可達到最精確流量控制

### Precise Flow Rate Control

The precise stroke adjust mechanism ensure accurate control of flow rate.

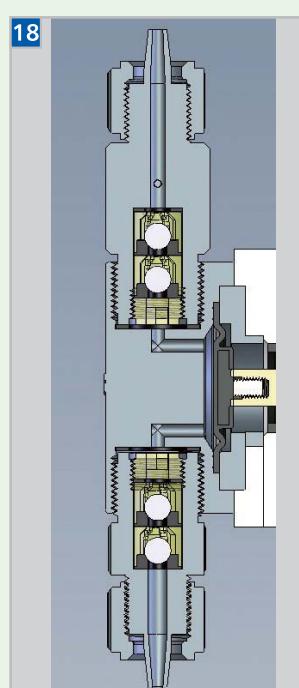


### 超厚幫浦頭設計

幫浦頭採用厚達34mm實心材料製作(非一般射出品)，高壓時絕不裂開

### Extra-thick Pump Head Design

The pump head is made of 34mm thickness of solid material to eliminate cracking problem.

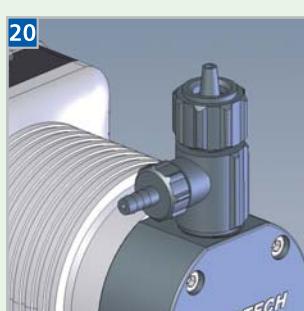


### 雙逆止球閥設計

進出口端皆採雙逆止球閥設計，確保最低之逆流量，流量精度可達到±2%以內

### Double Check Valve Design

The inlet and outlet ports are equipped with double check valves. The flow rate precision is below ±2%.



### 標準配備手動排氣閥

手動排氣閥門可幫助排除幫浦頭內部積存氣體以提高加藥量穩定性

### Standard Equipped With Manual Exhaust Valve

Manual exhaust valve for releasing gas existed in the pump head, which keeps stable flow rate.



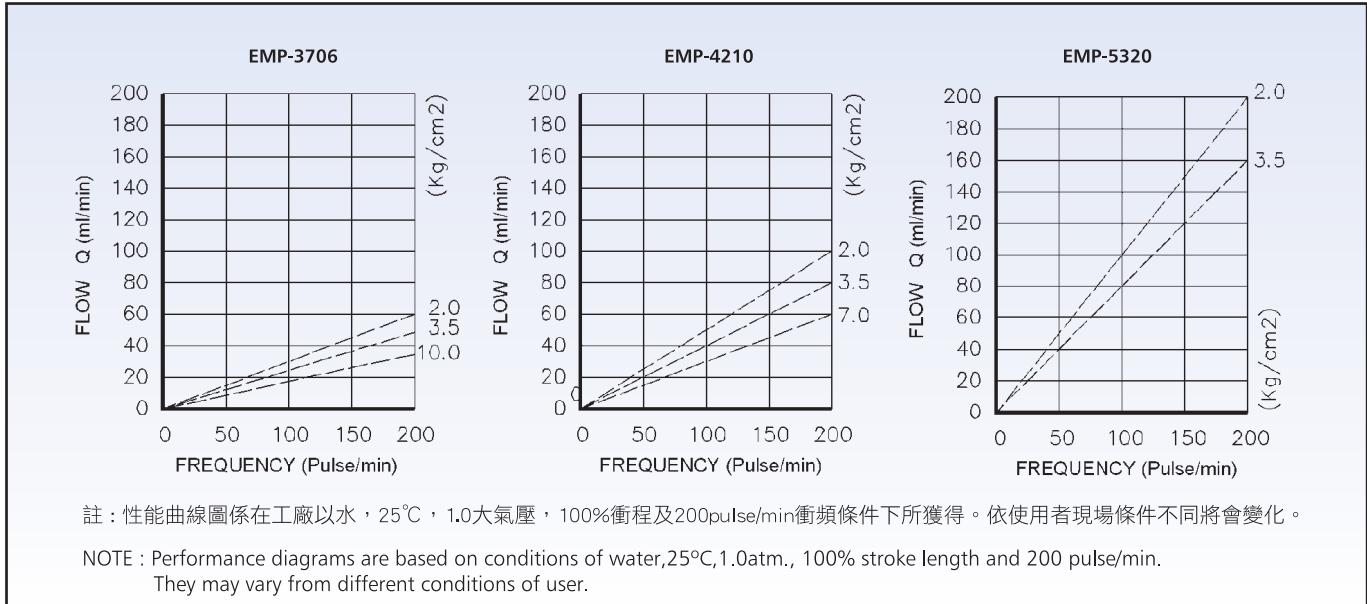
### 底座可自由旋轉

機體下方底座具有八向定位旋轉功能，安裝時可達最大自由度

### Swiveling Pump Base Design

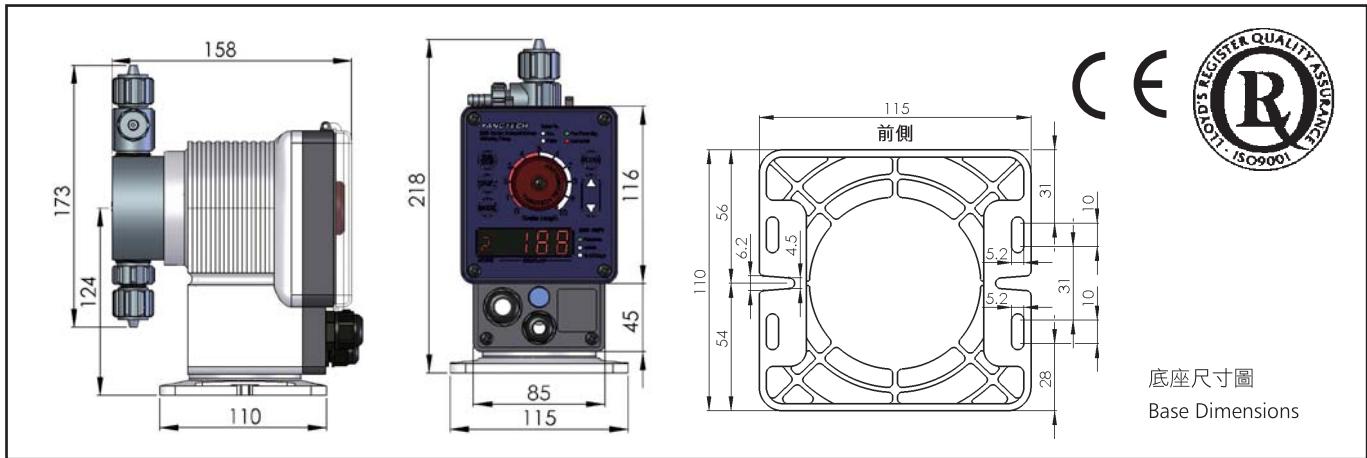
Swiveling pump base increases convenience in installation.

# 性能曲線圖 PERFORMANCE DIAGRAM



## 尺寸圖 DIMENSIONS

unit : mm



## 規格表 SPECIFICATIONS

規格名稱 / 機種 / 頻率 ITEM / MODEL / FREQ			EMP - 3706		EMP - 4210		EMP - 5320											
最大輸出能力 (ml/min) (H <sub>2</sub> O at 25°C)	PRESSURE Max.(Kg / cm <sup>2</sup> )	2.0	Kg / cm <sup>2</sup>	60	50	60	50	60	50									
		3.5		50	50	80	80	160	160									
		7.0		40	40	60	60	-	-									
		10.0		35	35	-	-	-	-									
最高輸出壓力 PRESSURE Max.(Kg / cm <sup>2</sup> )	PVC / PVDF			10.0		7.0		3.5										
	SUS																	
衝程 STROKE(mm)	0.0~1.0																	
脈衝速率 PULSE (pulse / min)	1~200																	
膜片直徑 DIAPHRAGM Dia. (mm)	37		42		53													
出入口接頭 / 管線 JOINT / HOSE	1/4" 斜面追緊軟管接頭 1/4" PVC軟質紗管，ø 6 x 11mm 長度3.0m 1/4" Indine Force Hose Connector 1/4" PVC Hose, ø 6 x ø 11mm Length of 3.0 meters																	
電源規格 POWER SUPPLY	100~240V(± 10%)/ φ 1/50 , 60Hz/消耗功率25W																	
淨重 NET WEIGHT (Kg)	PVC / PVDF		2.8															
	SUS		4.0															

規格表內容若有變更恕不另行通知

The above specifications are subject to change without prior notice.

# 包裝與內容物 PACKING DIMANTIONS AND CONTENTS

## 包裝資料 PACKING DIMENSIONS

機型 MODEL	外包裝尺寸 PACKING DIMENSIONS	淨重(Kg) NET WEIGHT (KG)	總重(Kg) GROSS WEIGHT (KG)
EMP-3706	(雙層瓦楞紙箱)		
EMP-4210	(Double layer corrugated paper carton)	2.8 / 4.0(sus)	3.8 / 5.0(sus)
EMP-5320	L260mm x W180mm x H253mm		

## 標準內容物 STANDARD CONTENTS

幫浦主機  	<p><b>基本進出管</b> (1/4" PVC軟質包紗管，Φ6 x Φ11mm 長度3.0m)</p> <p><b>Hose</b> (1/4"PVC / Ø6 x Ø11mm length 3.0m)</p> 	<p><b>固定螺絲組</b> (M5-25螺絲 x 2、M5螺母 x 2 及M5平滑司 x 4) + M24 備用墊片Viton x 1</p> <p><b>Screw Sets</b> (M5-25 screw x 2 + M5 nut x 2 + M5 plate washer x 4 + M24 washer Viton x 1)</p> 	<p><b>安裝及操作維護指導手冊</b> </p> <p><b>Operation / Installing Manual</b></p>	<p><b>底閥</b> (適用1/4"軟管，附過濾功能)</p> <p><b>Check Valve</b> (Filter function include)</p> 
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開箱後請先確認內容物規格與數量正確，若有缺損請洽購買經銷商補充/更換。

Note : Check all the contents are correct when you receive package of your order.

## 選購品 OPTIONAL

6接點接線盒  	<p><b>排氣閥用管</b> (PVC透明軟管，Φ6 x 9mm)</p> <p><b>Vent Valve Drain Hose</b> (1/4" PVC transparent hose, Ø6x9mm)</p> 	<p><b>管線注入器</b> (適用1/4"軟管+3/8"，1/2" R(PT)外牙，內含虹吸防止及1.0Kg/cm<sup>2</sup>背壓功能)</p> <p><b>Pipe Injector</b> (3/8"+1/2"PT/1/4"-hose, anti-siphon)</p> 
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訂購時若需另購選購品，請與訂單同時提出，以利處理。

Note : If Optional items are necessary, purchase them with pump in the same time.

## AGENT