

# 乳化機 Emulsifying Machine



# 應用環境

## Applicable Environment



專業的需求，永遠無可複製。

完美的運作，源自我們的專業技術。

Professional requirement, there is no duplication permanently.  
Perfect running comes from our professional technology.



再生能源 Recycle energy industry

改質瀝青 Polymer modified asphalt

生物科技 Biotechnology

電池漿料 Battery paste material

奈米科技 Nanotechnology

生質柴油 Biodiesel

石化產業 Petroleum chemical industry

光電材料 Photoelectric material

農化藥品 Agricultural chemical medicine

化工塗料 Chemical coating

化粧品 Cosmetics

食品製藥 Food pharmaceutical



# 應用功能

## Applicable function



攪拌混合 Mixing blending

均質乳化 Homogenized emulsifying

粉碎剪切 Crushing cutting

膠體研磨 Colloid grinding

均勻溶解 Uniform solute



# 升降乳化機架

## Lifting frame for Emulsifying machine

由於桶槽規格各異，本機架皆為客制規格，為確保桶槽能順利移入機架底座內，訂貨時請提供完整之桶槽尺寸。包括桶槽外徑、桶槽深度，桶口離地高度等資訊以便於規劃設計。當乳化槽體必須放置於台車或棧板上移入時，務必註明其尺寸。對於兩個以上不同容量之桶槽共用一機架時，亦應詳述其尺寸。

### 應用環境：

- 1、當一乳化機必須配用多個桶槽時。
- 2、桶槽太小無法架設適當之乳化機者。
- 3、桶槽本身不適合安裝乳化機時，如橡塑膠、玻璃、纖維類之易碎材質。
- 4、桶槽與乳化機必須作經常性之潔淨清洗者。

Due to each tank specification is different, all of these frames are custom-made, to ensure tank can be moved into bottom of frame without problem, please kindly supply completed dimension of tank when you purchase this item, including outer diameter of tank, depth of tank, height of tank from the ground, etc. information to enable planning design. When emulsifying tank body should be put on trolley or moved by pallet, mention its dimension is necessary. For more than 2 pcs of tank with different capacity to be put on same one lifting frame, mention its detailed dimension is also necessary.

### Applicable environment :

1. When one emulsifying machine should be worked with many tanks together.
2. Size of tank is too small, can not install with proper emulsifying machine.
3. Tank itself is not suitable for install emulsifying machine, such as rubber plastic, glass, fiber category which is based on fragile material.
4. Both tank and emulsifying machine should be cleaned washed regularly.

### 訂購時請提供之桶槽資訊：

桶槽直徑(D)：\_\_\_\_\_ (含棧板或推車寬度)

桶槽深度(L)：\_\_\_\_\_

桶槽高度(H)：\_\_\_\_\_ (含棧板或推車寬度)

現場限高(A)：\_\_\_\_\_

### Please supply information of tank when you purchase it :

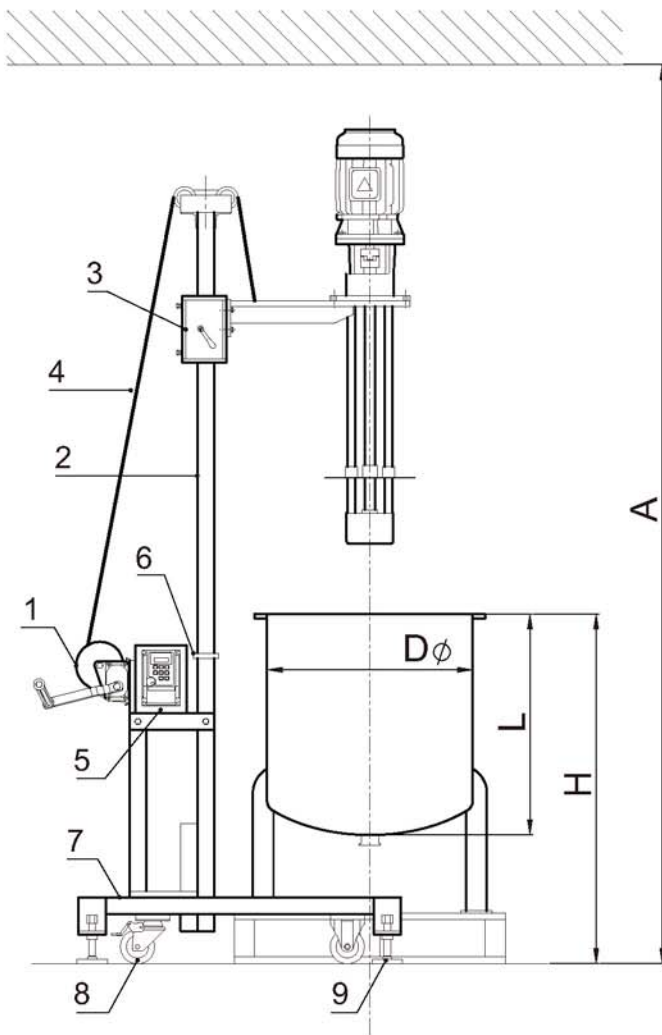
Diameter of tank (D) : \_\_\_\_\_ (including pallet or trolley width)

Depth of tank (L) : \_\_\_\_\_

Height of tank (H) : \_\_\_\_\_ (including pallet or trolley width)

Height limit at site (A) : \_\_\_\_\_

1. 捲揚機 Hoist
2. 滑軌 Track
3. 滑輪座 Pulley holder
4. 捲揚鋼索 Hoisting steel wire rope
5. 變頻器 inverter
6. 滑座下限定位器 Lower limit device of slider
7. 機架底座 Frame mount
8. 移動輪 Caster
9. 落地腳柱 Floor leg



- 機架之標準材質為鋼構塗裝，特殊環境須為不鏽鋼材質時，請另行提示。
- 機架之規格尺寸由本公司依吊掛機型載重設計之。

- Standard material of lifting frame is based on steel structure with painting, special environment needs stainless steel material should be mentioned it separately.
- Specification dimension of lifting frame will be designed by the manufacturer as per hanging model loading weight.





# 升降乳化機架

## Lifting frame for Emulsifying machine

機架尺寸完全依照客戶桶槽尺寸設計，手動、電動、氣動、油壓等升降均可配合製作。為了運輸之方便性，與高樓層貨梯之搬運，本機架採大部拆解組合設計。其他實驗室因出入口環境過小時，請另行提示，可做更細部之分解組合設計。

Frame dimension is completely designed as per tank dimension from customer, the manual, electrical, pneumatic, hydraulic, etc. lifting operation are can be made for customer. for convenient transportation and moving by elevator in high building, this frame is based on knock-down disassemble assemble design. If it will be used for laboratory with small inlet outlet status, please mention it separately, more detailed disassemble assemble design is available.



▲ CHL型-手搖升降機架  
CHL type Manual Lifting Frame



▲ CHL-R型-手搖升降機架  
CHL-R type Manual Lifting Frame



本結構配置桶槽自轉台與桶槽刮臂，係針對超高黏度專用之乳化設計。

The structure with self-rotate table of tank and scrape arm of tank, it is specially designed for emulsifying in ultra high viscosity product.



▲ CHU型-吊掛式機架  
CHU type Hanging Lifting Frame

可於中高黏度原料手持移動搖擺，均勻混合所有周邊死角。

Workable for middle high viscosity raw material in manual moving swing, uniform mixing all peripheral dead space.



▲ CHE型-電動螺桿升降機架  
CHE type Electrical Screw Lifting Frame



▲ CHO型-油壓升降機架  
CHO type Hydraulic Lifting Frame

# 桶槽 Tank

桶槽之形式、規格完全依客戶需求做設計，分別為開放槽與壓力容器。依需求可做單層與多層設計規劃。請提供完整需求條件，包括處理容量、材質、表面處理要求及各種配件規格需求等。

The type, specification of barrel tank is designed as per customer's requirement completely, it divided by open barrel tank and pressure container. As per demand, it is available for single layer and multi-layers design planning. Please supply required condition completely, including the mixing capacity, material, surface treatment required and various accessories specification requirement, etc.



單層底部端板槽，排料口置於端板底部，適用於幫浦輸送，可有助於原料之順利排放。

Single layer bottom dish plate tank, draining outlet located on bottom of dish plate, suitable for pump conveying, enable for draining of raw material smoothly.



單層斜端板槽，排料口置於端板側邊，應用於使用小桶槽接料時免於鑽入桶底狹小空間之苦。並可降低整體桶槽高度。

Single layer slant dish plate tank, draining outlet located on side of dish plate, to avoid suffered from to go to narrow space of barrel tank bottom which is applicable for collecting material in small barrel tank. Also available for reduce whole height of tank.



雙層、多層電熱恆溫控制槽，夾層可做冷卻液循環降溫、保溫功能。底部端板，斜端板皆可製作。

Double layer, multi-layers heater constant temperature controlled tank, layers within tank body can be made for cooling liquid circulating cooling, thermo-insulating function. Bottom is available for both dish plate and slant dish plate.



雙層、多層蒸氣加熱槽，可藉由鍋爐蒸氣蒸煮，外夾層可做冷卻、保溫、隔熱功能。

Double layer, multi-layers steam heating tank, it can be cooked by boiler with steam, outside layer within tank body can be made for cooling, thermo-insulating, heat insulation function.



# 桶槽 Tank

針對大容量之高黏度原料混合乳化時，常因原料之流動性不佳，造成處理時間過長或無法達到均質效果，本結構由一刮邊攪拌器葉板環繞於桶槽周邊，帶動原料循環於桶槽內部；再由乳化機高速乳化混合，即可快速完成混合效果。

For mixing emulsifying with high viscosity raw material in big capacity, it always caused by weak flow ability, made mixing in long time or unable to meet homogenize result, this structure with a edge scrape mixer blade to surround on circle of tank, drive raw material to circulate tank inside, then made by emulsifying machine in high speed emulsifying mixing, it will be able to make mixing result rapidly.

## ▼ 電熱預熱槽

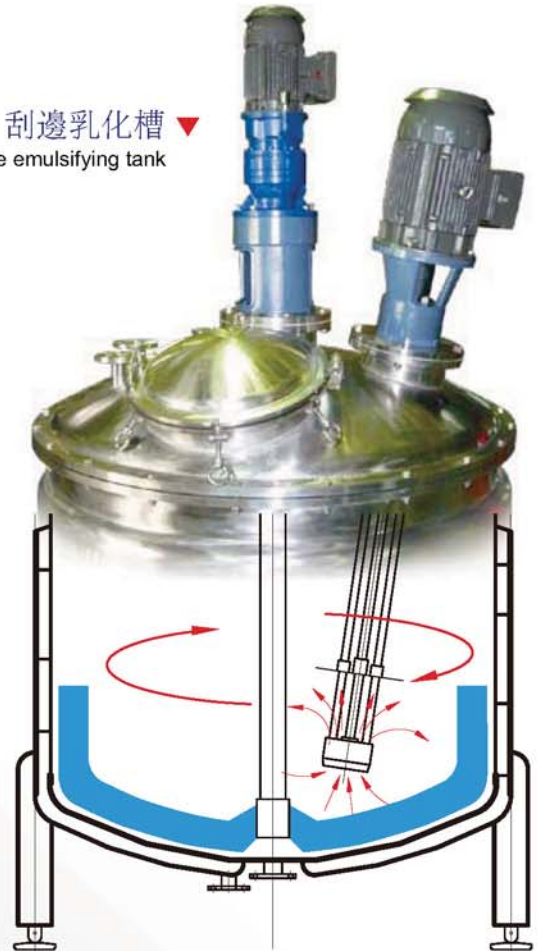
Heater Pre-heating Tank

藉由預熱儲備熱能，經輸送幫浦傳送至桶槽夾層，可節省加熱時間，同時可供給多個桶槽使用。

By pre-heating to store heat energy, passed through pump to convey for layers within tank body, to save heating time, it is able to supply for several tanks at the same time.

## 刮邊乳化槽 ▼

Edge scrape emulsifying tank



## ◀ 雙層加熱槽附雙主機乳化

Double layers heating tank with twin main unit for emulsifying.

# 高速乳化機 [ HM-H Type ]

## High Speed Emulsifying Machine

### 乳化原理：

本設備係專用於中高黏度原料乳化而設計，其特性係借由極為密合之轉子螺旋葉輪高速吸引乳化原料，高頻率加壓輸送剪斷；再經調節板衝擊的相互作用，瞬間使流體粒子剪切、撞擊而變細，高頻率循環乳化，發揮最大效果。由於原料黏度高低異同，單一葉輪設計並無法使其發揮最高之效能而造成浪費，因此針對處理原料之異同而設計多種葉輪選擇，使其發揮到最高之效率。

### Emulsifying Theory :

Design of this equipment is specially for emulsifying in middle high viscosity raw material, its character is by very closed rotor spiral blade wheel in high speed to attract emulsifying raw material, high frequency adds pressure convey cutting, then passed through adjusting plate impact each other, suddenly made fluid grain cutting, hitting become fine unit, high frequency circulating emulsifying, to perform the maximum efficiency. Due to raw material with high low different viscosity, single blade wheel is unable to perform its maximum efficiency and made waste, hence for mixing raw material with difference of viscosity to design several types blade wheel for choice, to enable it for perform the maximum efficiency.



▲ HM-H法蘭安裝型  
HM-H Flange installed Type



▲ HM-H(V)真空壓力型  
HM-H(V) Vacuum Pressure Type



▲ HM-H(B)架橋安裝型  
HM-H(B) Bridge installed Type

### 乳化機特性：

- 快速循環對流，乳化效率絕無浪費。
- 高速迴轉，產生強力剪切、衝擊及亂氣流。
- 乳化器定、轉子密合度高，吸引力強，高黏度液體處理效果佳。
- 乳化、均質、攪拌、分散、粉碎等可以同時在極短時間內迅速處理。
- 零件規格化，配合精密加工，操作簡單，耗材之保養更換容易。
- 搭配調速器自由調整迴轉速，能保護機器壽命，並保持最優良之攪拌效果。

### Character of Emulsifying Machine :

- Rapidly circulating convection, emulsifying efficiency absolutely without waste.
- High speed rotation, made strong cutting, impact and irregular airflow.
- Stator, rotor of emulsifying machine with high closed precision, with strong attraction, excellent mixing result for high viscosity liquid.
- Emulsifying, homogenizing, mixing, dispersing, crushing, etc. can be made synchronously within very short time rapidly.
- With standard parts list, it made by precise machining, operation is simple, maintenance of consumable parts can be changed easily.
- Applied with speed adjuster to regulate rotation speed as per demand freely, capable of protecting machine life, also keeps the most excellent mixing performance.



# [ HM-H Type ] 高速乳化機

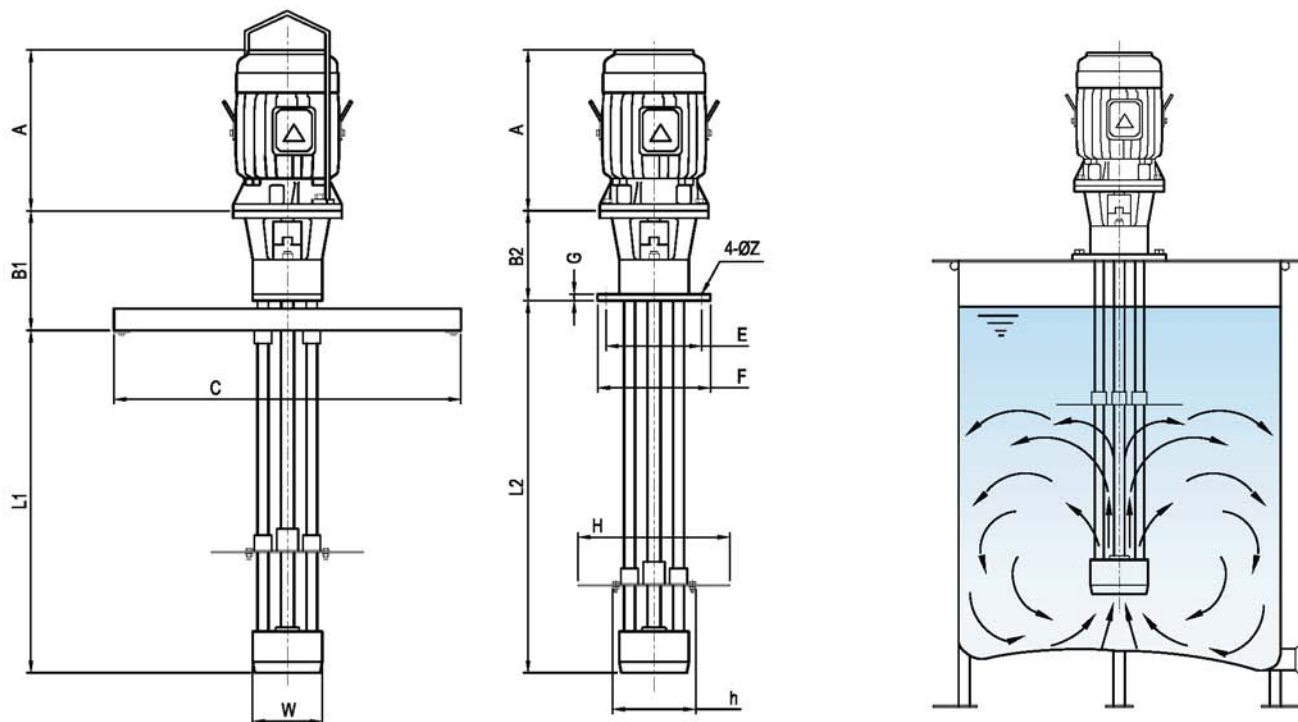
## High Speed Emulsifying Machine

### 乳化機功能：

對於食品類之乳品、果汁、酢醋、油脂、糖漿等。或塗料、化學藥品等之品質提昇，有很大的幫助；可使製品乳化，不沉澱、不分離、變細膩是本機的最大特色。

### Function of Emulsifying Machine :

It is capable of enhance quality in dairy product, fruit juice, vinegar, oil, syrup, etc. for food category, or paints, chemical medicine etc. with great assistance, it is able to make finished product with emulsifying, no precipitate, no separation, become fine and smooth which is the maximum character of this machine.



■ 尺寸規格表 Dimension List of Machine model

機 型 Model	容量 (L) Capacity	馬達 Motor 2極(2P)-60Hz		機 身 尺 寸 Dimension of Machine Body												
		HP	RPM	A	B1	B2	C	E	F	G	H	h	L1	L2	W	Z
HM-H020	100 (L)	2	3450	322	252	182	750	180	200	13	240	138	608	600	115	12
HM-H030	200 (L)	3	3450	322	255	185	800	210	235	15	265	165	708	700	140	12
HM-H050	300 (L)	5	3450	371	300	210	1000	235	260	16	350	190	808	800	159	14
HM-H075	600 (L)	7.5	3450	374	360	260	1200	260	300	16	360	200	908	900	160	14
HM-H100	1000 (L)	10	3450	374	400	280	1400	290	330	18	400	220	1012	1000	176	16
HM-H150	1500 (L)	15	3450	498	520	400	1600	350	400	20	600	285	1315	1300	218	20
HM-H200	2000 (L)	20	3450	498	520	400	1800	350	400	22	700	285	1615	1600	228	20

\* 圖表中之參考容量以水為介質，實際選型應依照物體黏度與原料特性決定。

\* 機械長度[L]與架橋寬[C]尺寸為標準庫存長度，為達到最佳效果，實際尺寸均配合客戶槽體設計。

\* The reference capacity shown on above chart is based on water as medium, actual selected model will be decided by object viscosity and character of raw material.

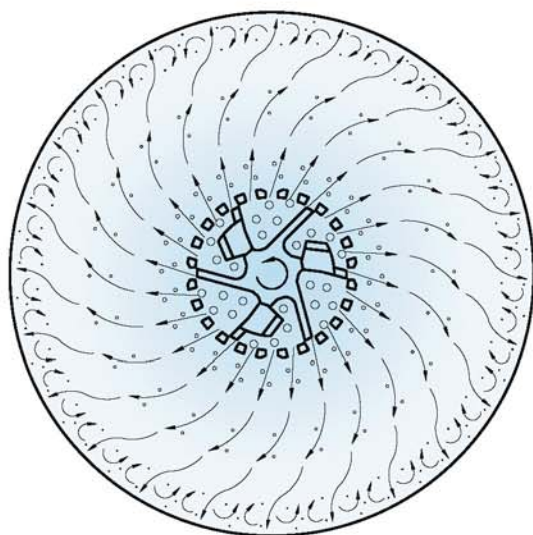
\* Mechanical dimension [L] and bridge width [C] dimension is based on standard product in stock, for meet the best performance, actual dimension will be designed as per size of customer's tank body.

# 渦流式乳化機 [HM-T Type]

## Turbine Emulsifying Machine

### 原理與功能：

本設備係針對中低黏度原料之乳化而設計。乳化框槽內之六翼轉子葉板高速運轉，將被處理物體由定子框槽上下兩側強力吸入環狀框槽內，借由翼輪板高速離心送出；轉子翼板連續高速轉動時，與定子框槽間極小之間隙產生剪切、粉碎後強力與桶壁產生高速撞擊，高頻率循環產生極佳之乳化效果。

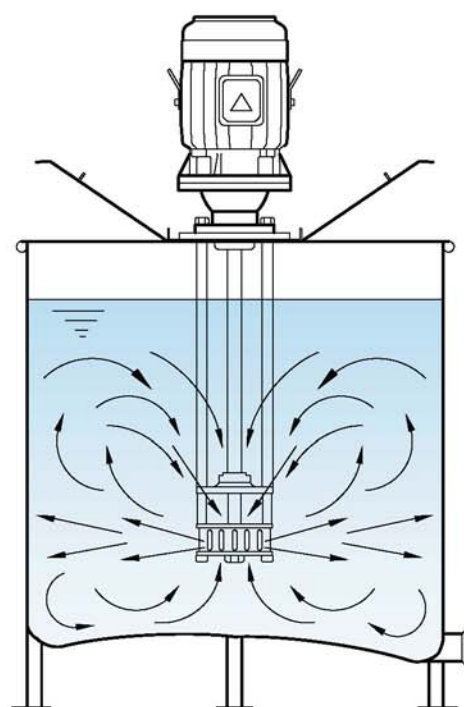


### 乳化機特性：

- 導流葉板設計，自吸能力超強。粉體瞬間吸入不漂浮於液面。
- 轉子葉板斜角向設計可減低阻力，吸入混合能力超強。
- 自吸、剪切、粉碎、撞擊，瞬間循環完成分散，乳化效果佳。
- 寬弧板葉式設計，不須超高轉速可達到均質效果，提高耗材壽命。
- 轉子葉輪與乳化框採精密脫臘鑄造，佐以精密加工，絕無斷裂之虞。
- 法蘭及接液材質採不鏽鋼結構，耗材耐腐蝕、無毒性，符合藥品、食品衛生級之要求。
- 本產品電動機採IEC國際標準規格，零配件標準化，更換、拆卸、組合容易。

### Theory and Function：

Design of this equipment is specially for emulsifying in middle low viscosity raw material, by high speed running with 6 pcs wings rotor blade plate inside emulsifying frame tank, made mixing object passed through stator frame tank upper lower both sides strong force to suck into circular frame tank, fed it out by high speed centrifugal force in wing wheel plate; when rotor wing plate running in high speed, there is very small gap between such device and stator frame tank to produce cutting, crushing function, made strong force to hit tank wall in high speed, high frequency circulation to produce the excellent emulsifying efficiency.



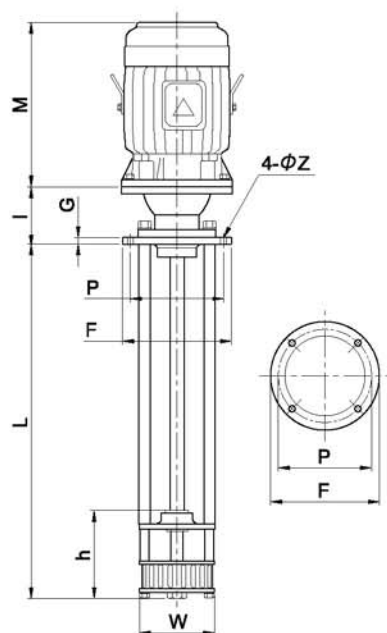
### Character of Emulsifying Machine：

- Based on design of flow guiding blade plate, with strong self-sucking ability. Powder sucked into tank suddenly without floating on liquid surface.
- Rotor blade plate with slant angle design, to reduce resistance, with ultra strong ability of sucked into tank for mixing.
- Self-sucking, cutting, crushing, hitting, sudden circulating to complete disperse, with excellent emulsifying result.
- Based on design of wide arc plate blade, no need ultra high running speed will be able to reach homogenize result, to enhance life of consumable material.
- Both rotor blade wheel and emulsifying frame are made from precision dewax casting, with precision machining, there is absolutely no worry of breaking problem.
- Both material of flange and liquid contacted section are made from stainless steel structure, consumable material is anti-corrosion, without toxic, meets requirement of pharmaceutical, food industry hygienic standard.
- Electrical system of this product is based on IEC international standard specification, parts accessories are standardized, it is easy to change, disassemble, assemble.



# [ HM-T Type ] 渦流式乳化機

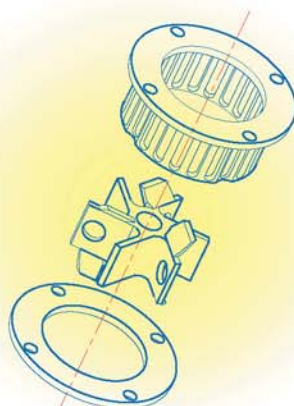
## Turbine Emulsifying Machine



■ 尺寸規格表 Dimension List of Machine model

機 型 Model	容 量 ( L ) Capacity	馬 達 Motor		機 體 Dimension of Machine Body					法 蘭 Flange			
		HP	RPM	M	I	L	h	W	F	P	G	Z
HM-T020	180 (L)	2	1750	322	94	550	150	140	210	180	10	11
HM-T050	400 (L)	5	1750	371	129	700	180	170	245	210	15	13
HM-T100	1000 (L)	10	1750	412	156	1100	210	205	280	245	15	15
HM-T200	1800 (L)	20	1750	542	180	1300	240	225	350	300	20	18
HM-T300	2500 (L)	30	1750	562	433	1800	320	260	400	350	23	20

- \* 圖表中之參考容量以水為介質，實際選型應依照物體黏度與原料特性決定。
- \* 機械長度[L]與架橋寬[C]尺寸為標準庫存長度，為達到最佳效果，實際尺寸均配合客戶槽體設計。
- \* The reference capacity shown on above chart is based on water as medium, actual selected will be decided by object viscosity and character of raw material.
- \* Mechanical dimension [L] and bridge width [C] dimension is based on standard product in stock, for meet the best performance, actual dimension will be designed as per size of customer's tank body.



# 實驗型乳化機 [HM-AM018]

## Laboratory Type Emulsifying Machine

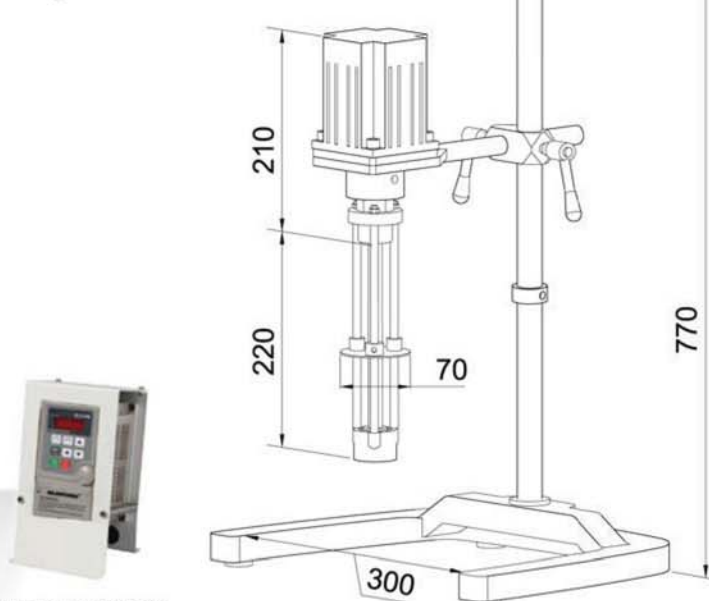


本機型適合實驗室與試驗工廠使用，採直流無碳刷馬達驅動，無段可調轉速0~10000rpm。LED數字顯示，具電子保護迴路，操作容易安全性高。針對不同處理目的需求及原料黏度各異，本公司設計多種不同功能之乳化器軸組以供選配，模組化組合設計，方便於更換與清洗。

This model is suitable for application of laboratory and test factory, based on DC non-carbon brush motor driving, variable speed adjustable within 0 - 10000 RPM. With LED digital display, with electronic protective circuit, operation is easy with high safety. For different required mixing purpose and various viscosity of raw material, the manufacturer design several different function emulsifier axle unit for optional demand, based on modularize assembly design, convenient for change and washing.



單相220V控箱  
Single phase 220V control panel



單相110V控箱  
Single phase 110V control panel

型號 Model	馬力 HP	電壓 Voltage	轉速rpm	乳化器軸組 Emulsifier axle unit		處理量 Mixing capacity
HM-AM018	200W (1/4HP)	單相(1PH) 110V	0~10000rpm	S-018H	S-018K	0.5~3L
		單相(1PH) 220V		S-018T		
重量 Weight		主機 Main unit (馬達 motor+乳化機 emulsifier) : 5.1 kgs		控箱 Control panel : 1.3 kgs		機架 Machine frame : 3.2 kgs

### 攪拌器軸組(選配) : Mixer Axle Unit (optional)



▲ S-018H 高速循環型乳化器  
S-018H High speed circulating type emulsifier  
適用於各種黏度均質乳化  
Suitable for various viscosity homogenize emulsifying



▲ S-018K 高剪切粉碎型乳化器  
S-018K High cutting crushing type emulsifier  
適用於中低黏度均質乳化  
Suitable for middle low viscosity homogenize emulsifying



▲ S-018T 分散混合型攪拌器  
S-018T Disperse mixing type emulsifier  
適用於各種黏度攪拌混合  
Suitable for various viscosity mixing blending



# [ HM-AM037 ] 高速乳化機

## High Speed Emulsifying Machine

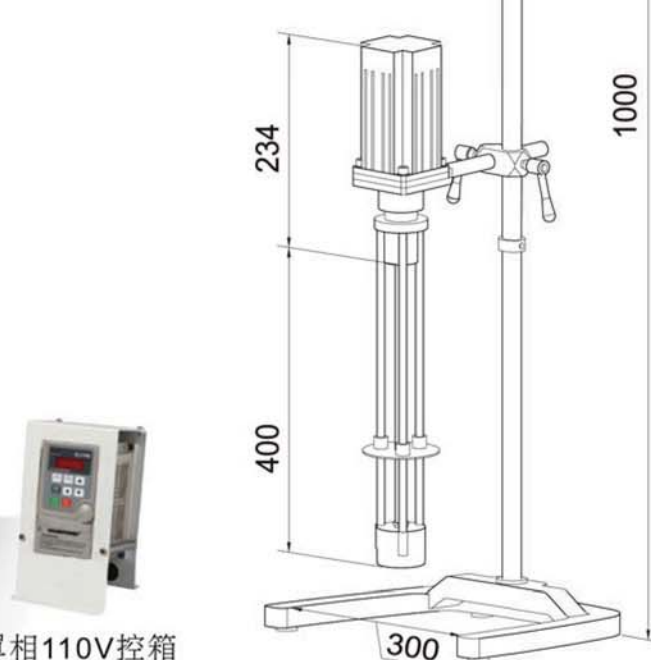
本機型適合小容量生產工廠使用，採直流無碳刷馬達驅動，無段可調轉速0~6000rpm。LED數字顯示，具電子保護迴路，操作容易安全性高。針對不同處理目的需求及原料黏度各異，本公司設計多種不同功能之乳化器軸組以供選配，模組化組合設計，方便於更換與清洗。

This model is suitable for application of small capacity production factory, based on DC non-carbon brush motor driving, variable speed adjustable within 0 - 6000 RPM. With LED digital display, with electronic protective circuit, operation is easy with high safety. For different required mixing purpose and various viscosity of raw material, the manufacturer design several different function emulsifier axle unit for optional demand, based on modularize assembly design, convenient for change and washing.



單相220V控箱

Single phase 220V control panel



單相110V控箱

Single phase 110V control panel

型號 Model	馬力 HP	電壓 Voltage	轉速rpm	乳化器軸組 Emulsifier axle unit		處理量 Mixing capacity
HM-AM037	370W (1/2HP)	單相(1PH) 110V	0~6000rpm	M-037H	M-037K	5~20L
		單相(1PH) 220V		M-037T		
重量 Weight		主機 Main unit (馬達 motor+乳化機 emulsifier) : 5.1 kgs		控箱 Control panel : 1.3 kgs		機架 Machine frame : 3.2 kgs

### 攪拌器軸組(選配) : Mixer Axle Unit (optional)



#### ▲ M-037H 高速循環型乳化器

M-037H High speed circulating type emulsifier  
適用於各種黏度均質乳化  
Suitable for various viscosity homogenize emulsifying



#### ▲ M-037K 高剪切粉碎型乳化器

M-037K High cutting crushing type emulsifier  
適用中低黏度均質乳化  
Suitable for middle low viscosity homogenize emulsifying



#### ▲ M-037T 分散混合型攪拌器

M-037T Disperse mixing type emulsifier  
適用於各種黏度攪拌混合  
Suitable for various viscosity mixing blending

# 直流高速型乳化機 [ HM-DCH Type ]

## DC High Speed Type Emulsifying Machine

本設備適用於較高速型中容量操作而設計，適合生產型工廠使用，採直流無碳刷馬達驅動，無段可調轉速，最高可達到8000rpm。LED數字顯示，具電子保護迴路，操作容易安全性高。針對不同處理目的需求，分別設計有循環均質式及粉碎剪切式乳化器。

This equipment design is suitable for operation with more higher speed middle capacity, suitable for application of production factory, based on DC non-carbon brush motor driving, variable speed adjustable, maximum speed is up to 8000 RPM. With LED digital display, with electronic protective circuit, operation is easy with high safety. For different required mixing purpose, it is available for circulating homogenize type and crushing cutting type emulsifier separately.



▲ A：循環均質標準型  
Circulating Homogenize Standard Type

▲ B：循環均質真空型  
Circulating Homogenize Vacuum Type

▲ C：粉碎剪切標準型  
Crushing Cutting Standard Type

▲ D：粉碎剪切真空型  
Crushing Cutting Vacuum Type

### ■ 型號規格表 Model List

型號 Model	馬力 Horse power	電壓 Voltage	操作容量 Mixing Capacity	控制器 Controller	轉速 Running speed
HM-AM200	2HP	單相(1PH)-220V	20~120 (L)	直流控制箱DC Control panel	0~6000rpm
HM-CM300	3HP	單相(1PH)-220V	20~180 (L)	直流控制箱DC Control panel	0~8000rpm



◀ 粉碎剪切型手搖升降機架  
Crushing Cutting Type Manual Lifting Frame

循環均質型手搖升降機架 ▶  
Circulating Homogenize Type Manual Lifting Frame







**A** 無段變速機



**B** 中空軸蝸輪減速機



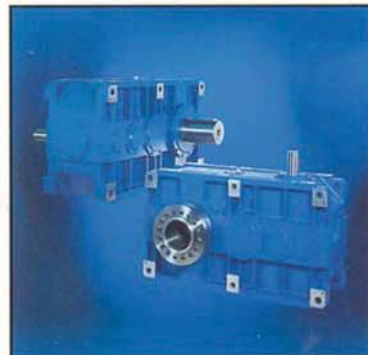
**C** 齒輪減速機



**D** 轉向器



**E** 平行軸  
交直軸 齒輪減速箱



**F** 大型齒輪減速箱



**G** 擺線型減速機



**H** 緩衝起動液力聯軸器



**I** 剎車離合器



**J** 三相馬達 變頻馬達



**K** D2G4 耐壓防爆馬達



**L** MGM 剎車馬達  
馬拉利剎車馬達



**摩托迪克股份有限公司**

公司：桃園縣龜山工業區興業路 27 號

電話：(03)319-1666 傳真：(03)320-8180