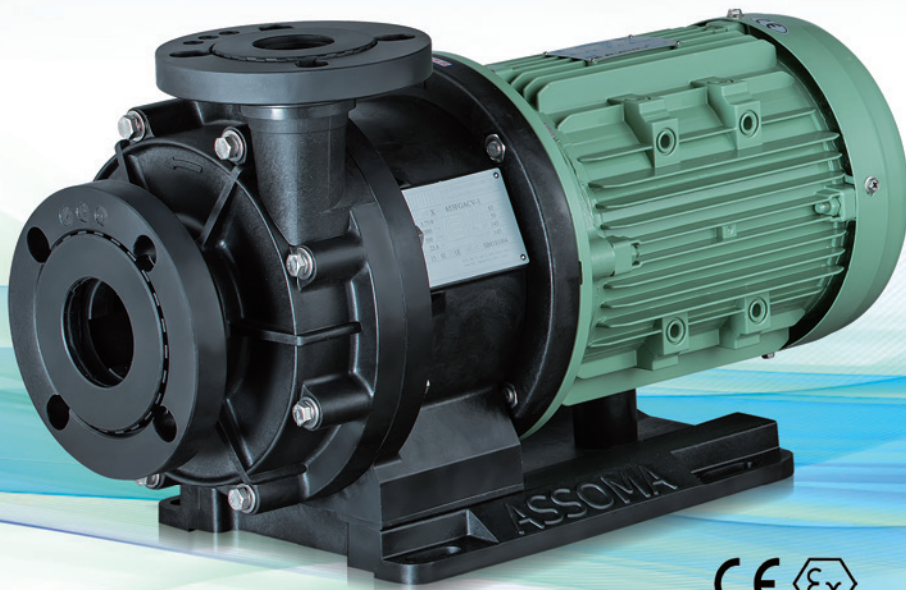


# AMX Series Magnetic Drive Pumps

## AMX 系列 磁力驅動泵浦



### Specifications

Horizontal, single-stage, centrifugal pump  
Magnetic drive, seal-less, close-coupled  
Wetted Material: PP+GF, ETFE+CF  
Power Range: 0.37 – 7.5 kW (0.5 to 10 hp)  
Maximum Capacity: 80 m<sup>3</sup>/h  
Maximum Head: 45 m

### 規格一覽表

臥式單段離心泵  
直接耦合，磁力驅動，無軸封  
接液材質：PP+GF，ETFE+CF  
馬力範圍：0.37 – 7.5 kW (0.5 – 10 hp)  
最大流量：80 m<sup>3</sup>/h  
最高揚程：45 m

## AMX-Series Pumps AMX 系列泵浦

AMX is a series of general purpose chemical resistant pumps made of engineering plastic materials. This series is designed to cover applications for a broad range of industries.

The AMX-Series pumps are magnetic-driven and seal-less, protecting against accidental exposure of potentially dangerous chemicals to the environment, and protecting pump operators from harm.

AMX 系列是工程塑膠材質，耐腐蝕的常用型泵浦，操作範圍符合廣泛的產業運用需求。

AMX 系列為磁力驅動泵浦構造，無軸封、零洩漏，能有效的隔離危險性藥水，不僅使操作人員遠離藥水威脅，也盡到保護環境的義務。

## How do magnetic drive pumps work? 磁力驅動泵浦操作原理

Magnetic pumps work by using a set of magnetic coupling to transfer the mechanical energy from the motor to the pump's impeller. A drive magnet is attached to the motor shaft. On the pump side, an inner magnet is attached to the pump impeller. The magnetic flux between the drive and inner magnets pass through the pump containment shell, forming the magnetic coupling. The magnetic coupling allows the pump to be hermetically sealed for leak-free operation.

磁力驅動泵浦是使用一組磁耦合器將動能從馬達傳送泵浦葉片。在馬達端，驅動磁鐵安裝在馬達軸心上。在泵浦端，內磁鐵與泵浦葉片相接。驅動磁鐵與內磁鐵的磁力線迴路穿透泵浦後蓋形成磁耦合器，達成泵浦無需軸封並能完全密封的運轉狀態。

## Where can I use AMX-Series pumps? AMX 系列的運用領域

- Chemicals where leakage must be avoided, including corrosive, toxic, and strong oxidizing agents.
- Potentially flammable and explosive chemicals.
- Highly volatile chemicals harmful to the environment.
- Chemicals that react when exposed to atmosphere or chemicals that can degrade with atmospheric exposure.
- Chemicals that are very expensive.
- 絕對不能洩漏之化學藥液，譬如：腐蝕性、有毒性以及強氧化劑
- 易燃或有爆炸可能性之化學藥液
- 對環境有害之高揮發性化學藥液
- 容易與空氣反應或暴露於空氣會造成裂解的化學藥液
- 昂貴之藥水

## Limitations of AMX-Series pumps? AMX 泵浦的注意事項

- Should not be used for chemicals with large amounts of solids.
- Dry-running should be avoided.
- Cavitation should be avoided.
- Operating temperature
  - PP+GF material: 0 - 80 °C
  - ETFE+CF material: 0 - 95 °C
- 不可用於含有大量雜質液體
- 嚴禁空轉
- 避免空蝕
- 操作溫度範圍
  - PP+GF 材質：0 - 80 °C
  - ETFE+CF 材質：0 - 95 °C

## Need something Different? 是否有其他需求？

### AVF-Series Pumps

AVF-Series pumps are canned motor in construction. This series has most of the same benefits as the AMX-Series pumps. Here are some additional benefits:

#### Fully Plastic Exterior with IP66 protection IP66 防護等級全塑膠外殼

Protected from drips and splashes  
保護泵浦不受噴濺藥水損壞

#### Inverter Driven for Process Control 變頻控制

Eliminate process wastes  
消除製程浪費

#### Fan-less 無冷卻風扇

Quiet operation, suitable for clean room  
超靜音運轉，適合無塵室



### AVF 系列泵浦

AVF 系列泵浦為罐裝構造，不儘有 AMX 系列大多數的優點，還提供了以下的益處：

#### IE4 or IE5 Motor IE4/IE5 馬達

Energy and cost savings  
節省能源及成本

#### Light Weight 重量輕

Easy to handle/maintain  
容易拆裝、保養

#### Compact 體積小

Space saving  
節省安裝空間、高坪效比

### AME-Series Pumps

AME-Series pumps are designed for high purity chemicals and heavy-duty applications. Some of the benefits of the AME-Series are as follows:

#### One-piece Formed Lining 與金屬一體內襯

Vacuum resistant  
結構具抗負壓操作設計

#### Armored 金屬外殼

Strong pressure containment  
可耐高壓

#### Rigid Shaft Support 高剛性軸心支撐

Temperature up to 150 °C  
耐溫高達 150 °C



### AME 系列泵浦

AME 系列泵浦是專為高純淨度藥水及高負荷製程需求而設計，可為使用者帶來以下益處：

#### Large Capacity 大流量

Capacity up to 3,000 lpm (180 m<sup>3</sup>/h)  
流量高達 3,000 lpm (180 m<sup>3</sup>/h)

#### High Head 高揚程

Head up to 72 m (60 Hz)  
揚程高達 72 m (60 Hz)

#### Pure PFA-Lining 高純度 PFA 內襯

No process contamination  
Ultimate Corrosion Resistance  
高純淨度藥水  
最佳耐腐蝕性

#### Standardized 標準化

ISO 2858, ISO 5199, ISO 15783

**A. Maintenance-Free Pump Casing 無需保養泵殼**

The flanges are socket welded to the pump casing, eliminating O-Rings, thus, requiring no maintenance. The flanges are adjustable to easily align with mating flanges for a secure and leak-free seal.

泵浦法蘭與泵前蓋套接為一體，去除了O形環，也省略了更換O形環的保養需求，配合可調整式的法蘭可輕鬆與配對法蘭對齊，實現安全無洩漏密封。

**B. Pump-Protection Buffer System 泵浦緩衝保護**

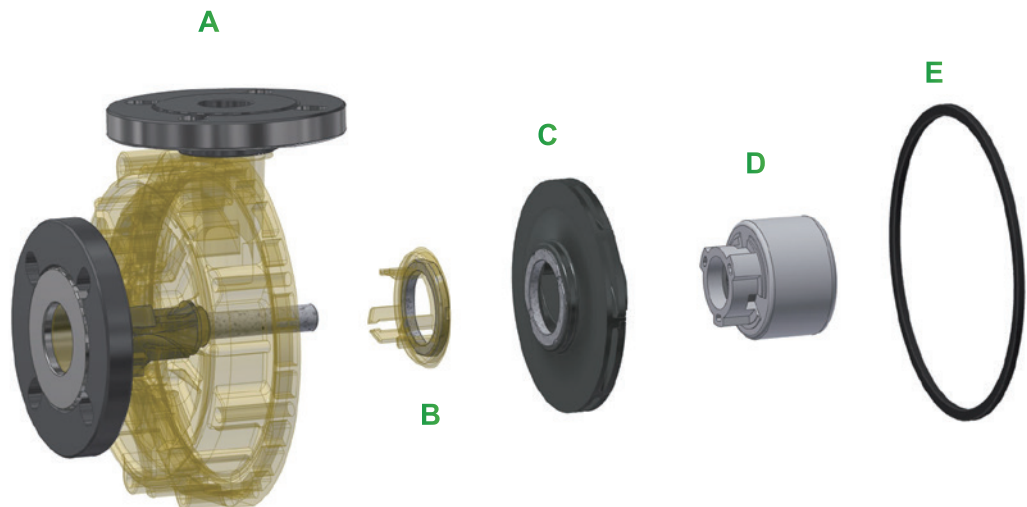
The unique buffer system absorbs shock generated during abnormal pump operation such as cavitation, protecting the pump from damage.

獨特的緩衝系統可吸收泵浦異常運轉時（如汽蝕）所產生的衝擊，防止泵浦受損。

**C. High-Efficiency Impeller 高效率葉輪**

Closed impeller precision designed to streamline flow dynamics, minimizing hydraulic loss and maximizing pump efficiency.

密閉式葉輪，結合最佳化流力設計，降低水力損失，提高泵浦效率。



**F. Plastic Containment Shell 全塑料泵浦後蓋**

The plastic containment shell does not generate any eddy current loss, therefore, no additional heating of the pumped chemical.

塑料後蓋無渦電流的產生，避免渦電流所產生的能量損失與對藥液加熱。

**G. Magnetic Coupling 磁耦合器**

Torque from the motor is transferred to the pump impeller through magnetic coupling. The seal-less design is leak-free and there is no seal maintenance necessary.

馬達扭矩透過磁耦合器傳動至泵浦葉輪，無軸封設計零洩漏，也減少保養、維修需求。

**D. Force-Cooled Bearing System 軸承強制冷卻系統**

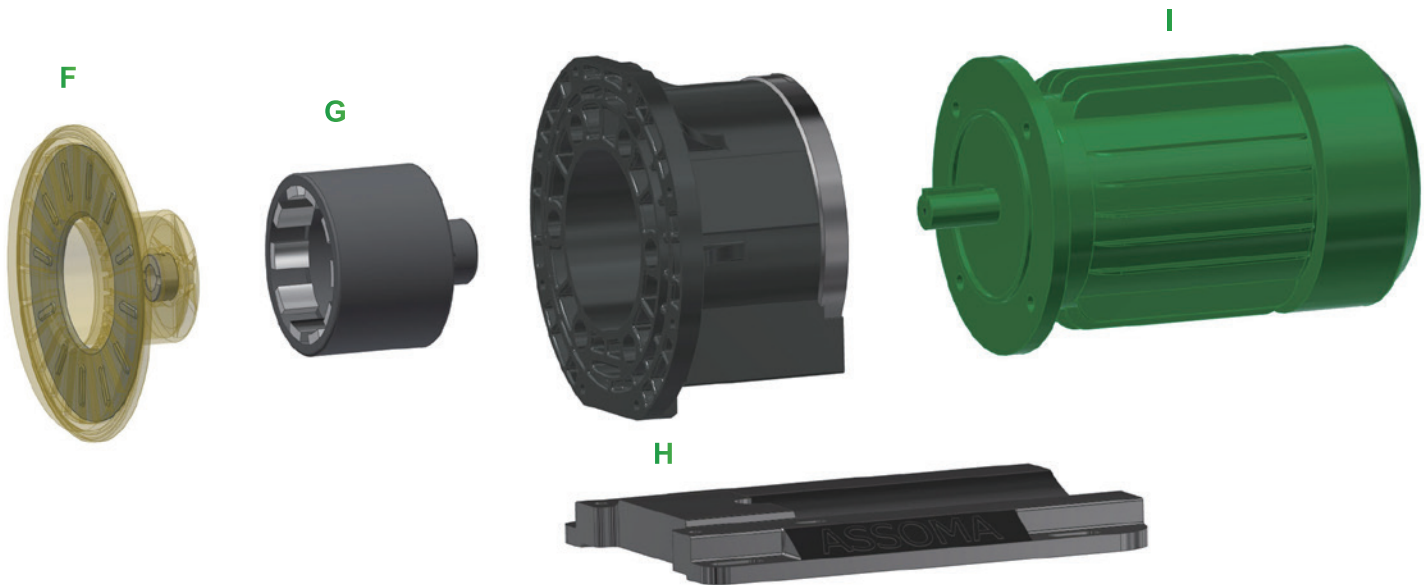
Specially designed flow channels force circulation through the bearing system, rapidly dissipating heat to prevent damage to the pump under dry-run conditions.

獨特對流冷卻設計，可快速帶走熱量。泵浦空轉時，可提高抗損壞的能力。

**E. Long-Service Gasket 長效密封墊片**

Strengthened gasket seal specially designed for extended leak-free service. Greatly reduces the need to service the pump.

強化的密封墊片設計可延長零洩漏的使用壽命，大幅減少維護泵浦的需求。



**H. Corrosion-Resistant Bracket and Base 抗腐蝕托架與底座**

Ideal for corrosive and saline environments. Protects against accidental chemical drips. Engineered to provide structural strength and long service life.

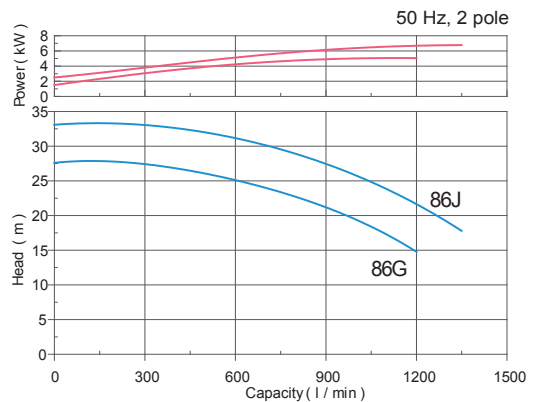
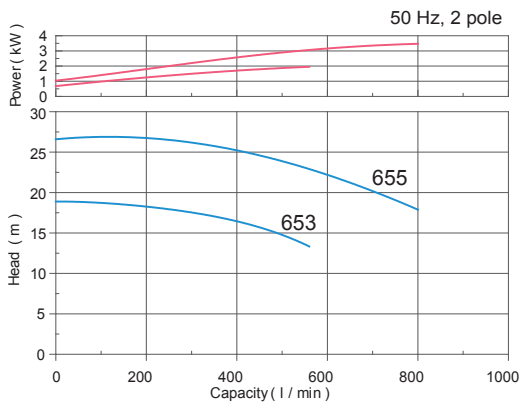
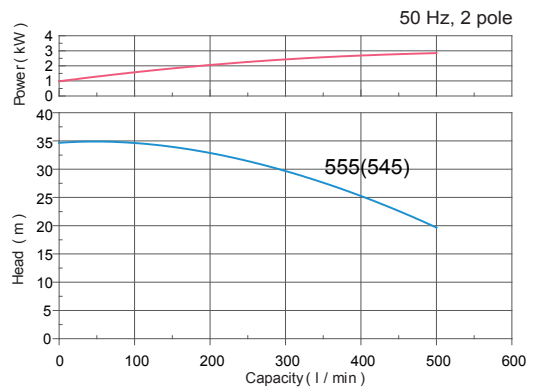
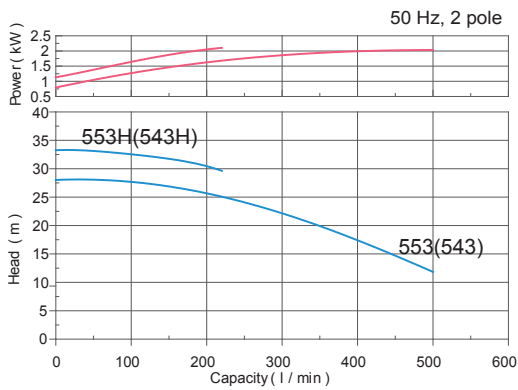
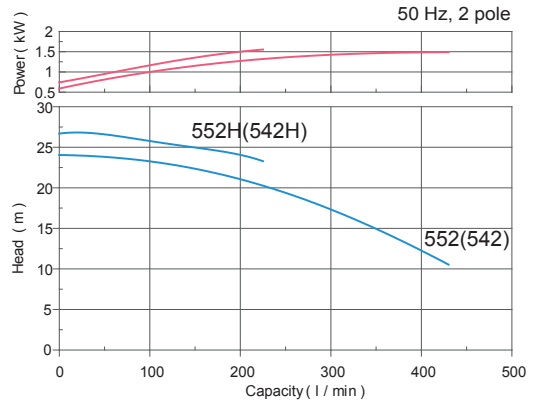
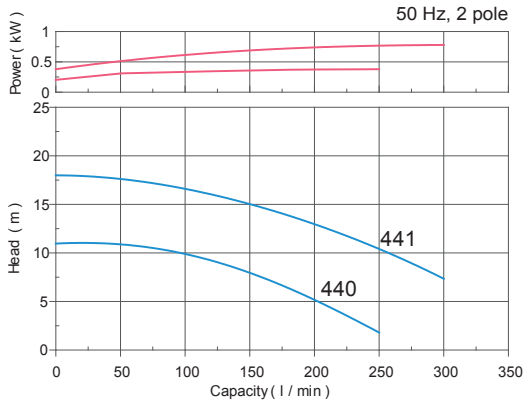
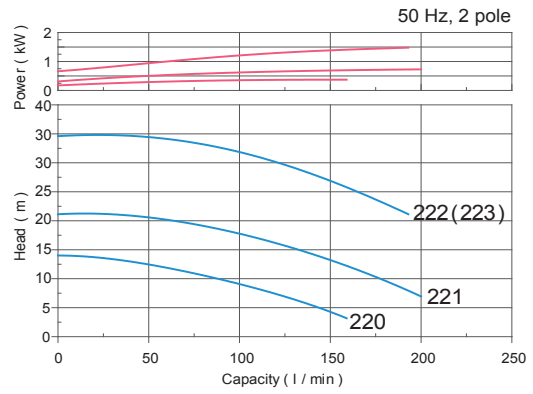
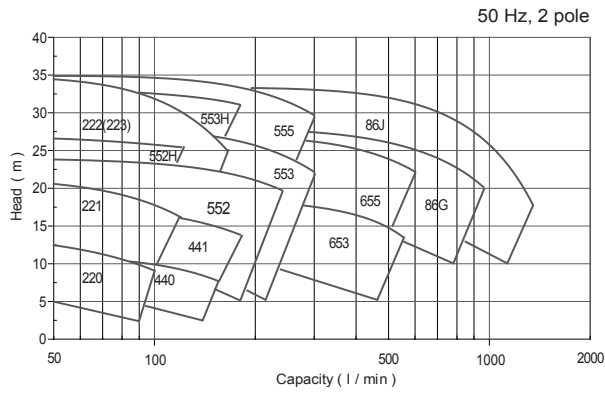
適合酸性環境與高鹽含量的環境使用，其抗腐蝕特性可避免意外被滴落藥水所損壞，加強結構設計可延長使用壽命。

**I. Standardized Motor 標準馬達**

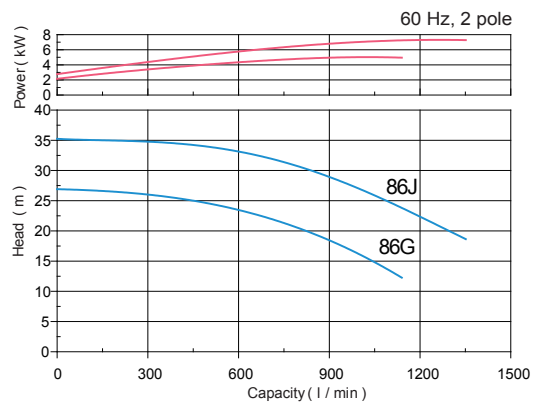
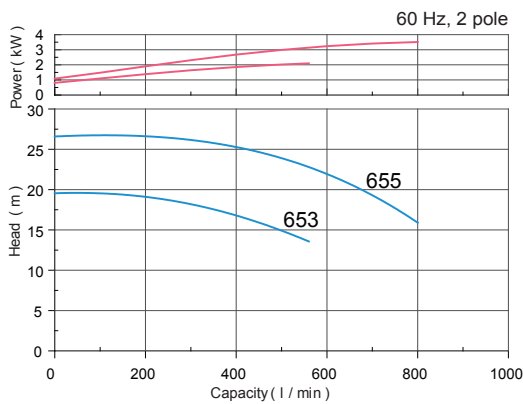
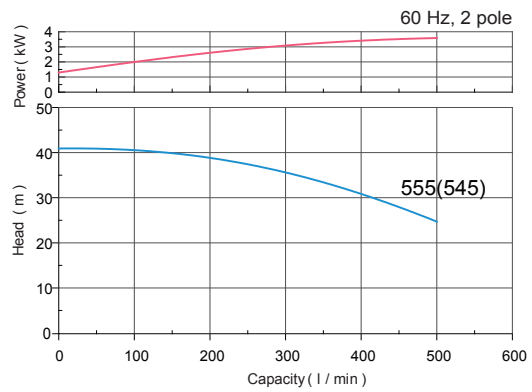
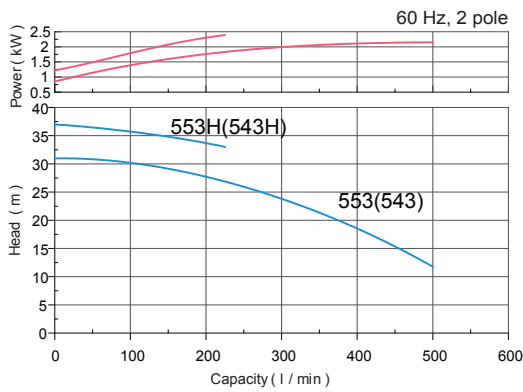
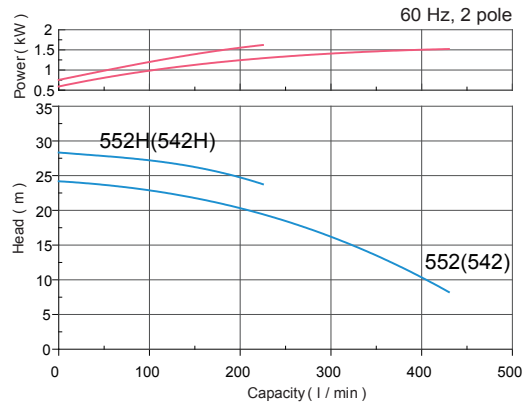
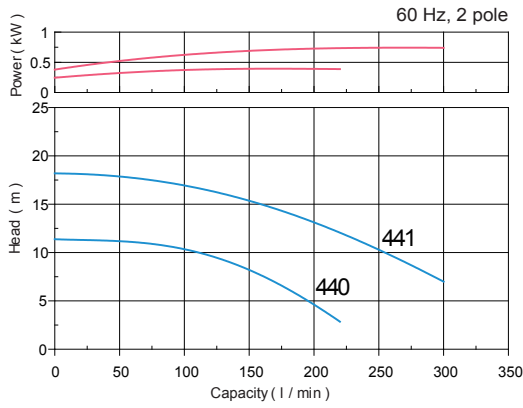
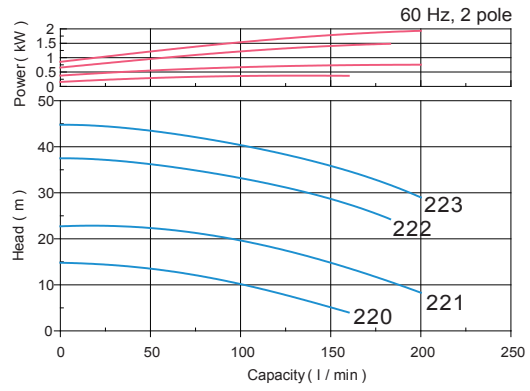
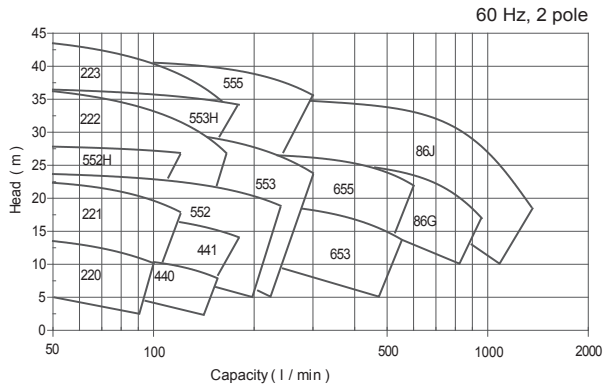
The pump bracket is designed to fit standard IEC motor frames. Easy to source a motor that conforms to regional standards. Closed-coupled design requires no shaft alignment.

泵浦托架尺寸可安裝標準 IEC 馬達框號，可採買符合顧客當地標準的馬達。直接耦合設計不需做對心校正。

Performance Curves 性能曲線圖

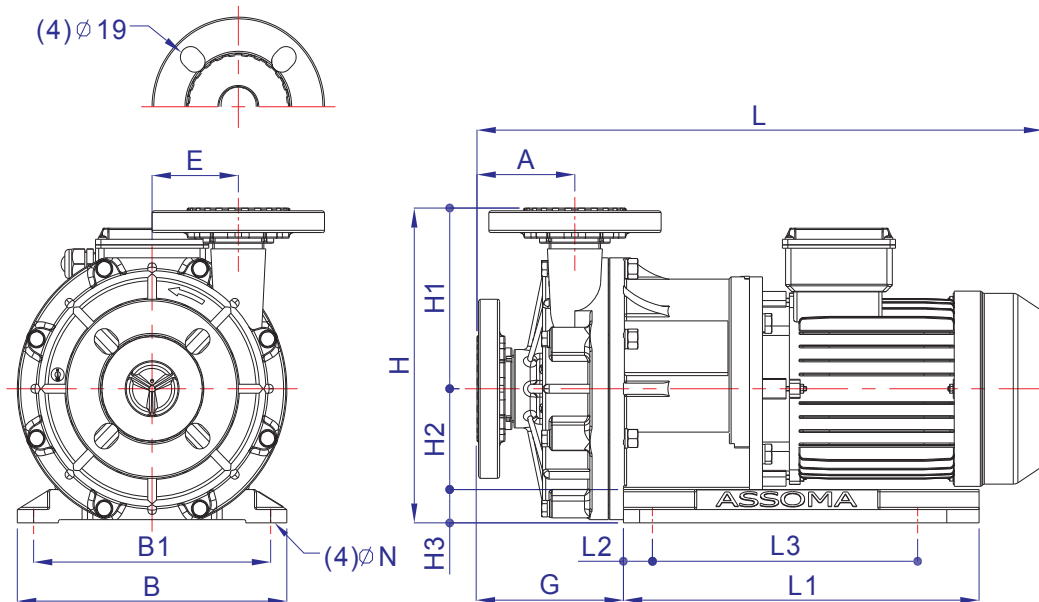


Performance Curves 性能曲線圖



Dimensions 外形尺寸圖

(PPG BRACKET AND BASE PPG托架及底座)



Item 項目	Dimension 尺寸 (mm)														Bore 口徑 (mm)		Flange 法蘭 (mm)		
	A	B	B1	E	G	H	H1	H2	H3	L*	L1	L2	L3	N	Inlet	Outlet	Inlet	Outlet	
AMX-220	90	225	195	65	138	255	140	85	30	449	203	35	128	12	21	21	25	25	
AMX-440	87.5			54	137	225.5	130.5	65		443					36	36	40	40	
AMX-221	90			65	138	255	140	85		474					21	21	25	25	
AMX-441	105.5			72	153.5	257.5	142.5	490		40					40	40	40		
AMX-222	85	250	220	0**	131	295	175	90	529	330	27	246	14	21	21	25	25		
AMX-223																			
AMX-542(H)	91	250	220	80	136	282.5	162.5	132	30	499	330	27	246	14	50	40	50	40	
AMX-552(H)						281.5	161.5			525								50	40
AMX-543(H)						282.5	162.5			532								50	40
AMX-553(H)						281.5	161.5			593								50	40
AMX-653	92	310	280	90	131	331	169	132	45	600	500***	30	440	14	65	50	65	50	
AMX-545	91				125	324.5	162.5			593					50	40	50		
AMX-555					323.5	161.5	65			50					50				
AMX-655	92				131	331	169			600					65	50	65	50	
AMX-86G	140	310	280	90	190	440	210	185	45	728	500***	30	440	14	78	65	80	65	
AMX-86J																			

Note : \* Dimension of the pump will differ depending on the brand and installation of the motor.

\*\* The AMX-222 and AMX-223 have top centerline discharge.

\*\*\* The material of the base of AMX-86G and 86J is SUS304.

備註 : \* 泵浦外形尺寸將因馬達供應商和安裝方式之不同而有所區別。

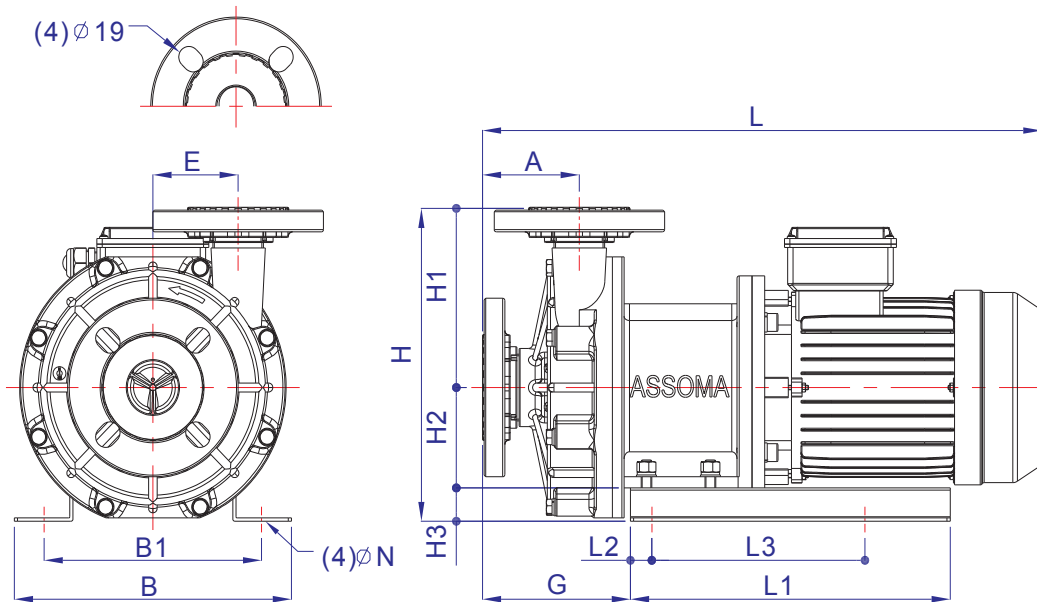
\*\* AMX-222/223 前蓋法蘭組為中間出口。

\*\*\* AMX-86G 及 AMX-86J 底座為不鏽鋼材質。



Dimensions 外形尺寸圖

(FC BRACKET AND SUS304 BASE 鑄鐵托架及不鏽鋼底座)



Item 項目	Dimension 尺寸 (mm)															Bore 口徑 (mm)		Flange 法蘭 (mm)					
	A	B	B1	E	G	H	H1	H2	H3	L*	L1	L2	L3	N	Inlet	Outlet	Inlet	Outlet					
AMX-220	90	160	130	65	136	255	140	85	30	449	210	35	130	12	21	21	25	25					
AMX-440	87.5	140	110	54	130.5	225.5	130.5	75	20	443	200	20	98		36	36	40	40					
AMX-221	90	160	130	65	136	255	140	85	30	474	210	35	130		21	21	25	25					
AMX-441	72			151.5	257.5	142.5	490			40					40	40	40						
AMX-222	85	260	204	0**	135	295	175			529	30	300	20	200	14	21	21	25	25				
AMX-223																							
AMX-542(H)	91	260	204	80	139	282.5	162.5	90	30	499						300	20	200	14	50	40	50	40
AMX-552(H)						281.5	161.5																50
AMX-543(H)						282.5	162.5				40	40											
AMX-553(H)						281.5	161.5				50	50											
AMX-653	92	250	220	80	126	331	169	132	30	532	360	30	300	14	65	50	65	50					
AMX-545																							
AMX-555	91				117	324.5	162.5			593					50	40	50	40					
AMX-655	92				123	331	169			600					65	50	65	50					

Note : \* Dimension of the pump will differ depending on the brand and installation of the motor.  
 \*\* The AMX-222 and AMX-223 have top centerline discharge.

備註：\* 泵浦外形尺寸將因馬達供應商和安裝方式之不同而有所區別。  
 \*\* AMX-222/223 前蓋法蘭組為中間出口。

Specifications 規格表

Model 機型	Suction x Discharge 入口 x 出口配管 (mm x mm)	Frequency 頻率	Rated Capacity 額定流量 (l/min)	Rated Head 額定揚程 (m)	Max. Capacity 最大流量 (l/min)	Max. Head 最高揚程 (m)	Motor output 馬達輸出功率 (kW)
AMX-220	25x25	50Hz 60Hz	80 80	10.6 11.8	150	14.0 14.8	0.37
AMX-440	40x40	50Hz 60Hz	100 100	9.9 10.3	240	11.0 11.4	0.37
AMX-221	25x25	50Hz 60Hz	80 80	19.2 21.1	200	21.1 22.7	0.75
AMX-441	40x40	50Hz 60Hz	150 150	15.0 15.4	300	18.0 18.2	0.75
AMX-222	25x25	50Hz 60Hz	80 80	33.2 36.0	200	34.6 38.9	1.5
AMX-223	25x25	50Hz 60Hz	80 80	33.2 41.7	200	34.6 44.8	2.2
AMX-542 AMX-552	50x40 50x50	50Hz 60Hz	200 200	21.1 20.3	430	24.1 24.4	1.5
AMX-542H AMX-552H	50x40 50x50	50Hz 60Hz	100 100	25.8 27.2	225	26.7 28.2	1.5
AMX-543 AMX-553	50x40 50x50	50Hz 60Hz	250 250	24.1 25.9	500	28.1 31.1	2.2
AMX-543H AMX-553H	50x40 50x50	50Hz 60Hz	150 150	31.7 34.8	220 225	33.3 37.1	2.2
AMX-545 AMX-555	50x40 50x50	50Hz 60Hz	250 250	31.4 37.4	500	34.7 40.9	3.75
AMX-653	65x50	50Hz 60Hz	450 450	15.7 15.9	560	18.9 19.6	2.2
AMX-655	65x50	50Hz 60Hz	500 500	23.9 23.9	800	26.9 26.8	3.75
AMX-86G	80x65	50Hz 60Hz	800 800	22.7 20.4	1140	27.6 26.9	5.5
AMX-86J	80x65	50Hz 60Hz	800 800	29.0 30.5	1350	33.1 35.2	7.5

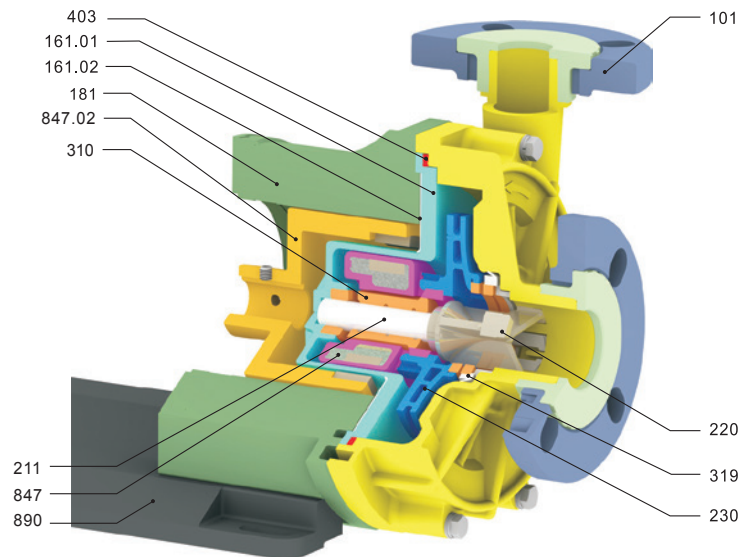
Pump identification 型式表示

AMX - 5 4 2 F E A C V - 0  
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Series 泵浦系列	AMX Series AMX 系列
② Suction Size 入口口徑	2 : 25A (1") 4 : 40A (1.5") 5 : 50A (2") 6 : 65A (2.5") 8 : 80A (3")
③ Discharge Size 出口口徑	2 : 25A (1") 4 : 40A (1.5") 5 : 50A (2") 6 : 65A (2.5")
④ Motor Power 馬力數	0 : 0.5 hp (0.37 kW) 1 : 1 hp (0.75 kW) 2 : 2 hp (1.5 kW) 3 : 3 hp (2.2 kW) 5 : 5.5 hp (3.75 kW) G : 7.5 hp (5.5 kW) J : 10 hp (7.5 kW)
⑤ Type of Connection 配管形式	F : Flange 法蘭 U : Union 由任

⑥ Casing Material 本體材質	E : ETFE+CF G : PP+GF
⑦ Shaft Material 軸心材質	A : 995 Al <sub>2</sub> O <sub>3</sub> S : SiC
⑧ Bearing Material 軸承材質	A : 995 Al <sub>2</sub> O <sub>3</sub> C : CARBON R : PTFE+CF S : SiC
⑨ Sealing Material 密封材質	E : EPDM V : FKM P : PTFE+FKM
⑩ Motor Type 馬達形式	0 : IP54 1 : IP55 2 : Explosion proof eG3 eG3 安全增防爆型 3 : Explosion proof d2G4 d2G4 耐壓防爆型 S : Special motor 特殊馬達

Material 材質構造圖



Part code 編號	Part name 名稱		Available Materials 可選用材質
101	Pump casing assembly *** 前蓋法蘭組 ***	Pump casing 前蓋	PP+GF / ETFE+CF
		Inlet adjustable flange 入口活動法蘭 **	PP+GF / ETFE+CF
		Outlet adjustable flange 出口活動法蘭 **	PP+GF / ETFE+CF
		Inlet flange adapter 入口法蘭連結件	PP+GF / ETFE+CF
		Outlet flange adapter 出口法蘭連結件	PP+GF / ETFE+CF
161.01	Rear casing / thrust ring 後蓋止推組	Rear casing 後蓋	PP+GF / ETFE+CF
		Rear thrust ring 後止推環	995 Al <sub>2</sub> O <sub>3</sub> / SSiC
161.02	Backup plate 後蓋背板		SUS304
181	Bracket 托架 *		PP+GF / FC
211	Shaft 軸心		995 Al <sub>2</sub> O <sub>3</sub> / SSiC
220	Front support, shaft 前軸心支撐		ETFE+CF
230	Impeller wear ring assembly 葉片磨損環組	Impeller 葉片組	PP+GF / ETFE+CF
		Front wear ring 前磨損環	CARBON / SSiC / PTFE+CF
310	Bearing 軸承		995 Al <sub>2</sub> O <sub>3</sub> / CARBON / SSiC / PTFE+CF
319	Thrust ring & buffer 止推環組	Front buffer 前緩衝座 ( Except 86G/J 86G/J 除外 )	ETFE
		Front thrust ring 前止推環	995 Al <sub>2</sub> O <sub>3</sub> / SSiC
403	Gasket 密封墊片		EPDM / FKM / PTFE+FKM
847	Magnet capsule 包膠內輪		PP / ETFE , Nd-Fe-B
847.02	Drive magnet 外輪 ****		Nd-Fe-B
890	Base plate 底座 *		PP+GF / SUS304

Note : \* Standard material of bracket and base of AMX series is PP+GF. FC brackets and SUS304 base are be offered in accordance with customer's requirement.  
 \*\* The AMX Series has a unique 2-piece flange design, the flange adaptor and adjustable flange. Since the flange itself is not a wetted part, we offer only PP+GF as material for the flange.  
 \*\*\* We offer only PP+GF as material for Pump casing assembly, Rear casing, Bracket, Front support, and Impeller, PP as material for Magnet capsule, and SUS304 as material for Base plate of 86G and 86J.  
 \*\*\*\* 1/2 and 1 hp pumps use Ferrite metals for the magnets.

備註 : \* AMX 系列托架及底座標準材質為 PP+GF，但可依客戶需求提供鑄鐵材質托架搭配不鏽鋼底座。  
 \*\* AMX 系列泵浦法蘭結構為一獨特結構設計 ( 含連結件及活動法蘭 )。因連結件是接液部件，活動法蘭為非接液部件，所以 AMX 系列活動法蘭標準材質均可為 PP+GF；但活動法蘭材質亦可依客戶需求選擇與泵殼本體相同的材質，詳情請洽協磁公司。  
 \*\*\* 86G 及 86J 前蓋法蘭組、後蓋、托架、軸心支撐及葉片組僅提供 PP+GF 材質；包膠內輪僅提供 PP 材質；底座僅提供 SUS304 材質。  
 \*\*\*\* 1/2 及 1 hp 的磁體材質為鐵氧體。



**ASSOMA INC.**

No. 10, Alley 14, Lane 15 Sande Street,  
Luzhu District Taoyuan City, 33842, Taiwan

Tel: +886-3-3547606

Website: [www.assoma.com](http://www.assoma.com)

**協磁股份有限公司**

33842 桃園市蘆竹區坑口里三德街  
15 巷 14 弄 10 號

Fax: +886-3-3547612

Email: [sales@assoma.com.tw](mailto:sales@assoma.com.tw)

