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AVF-C[®] Superior Efficiency Canned Motor Pump

AVF-C[®] 系列 超高效率罐裝泵浦



榮獲多國發明專利，請參閱協磁官網內容

Patented in Multiple Countries,
Please refer to our website for details.

Specifications

Horizontal, single-stage, centrifugal pump

Canned motor, seal-less

Wetted Material: PP+CF, PP+GF, ETFE+CF

Power Range: 1.1 – 7.5 kW (1.5 to 10 hp)

Maximum Capacity: 84 m³/h

Maximum Head: 37 m

規格一覽表

臥式單段離心泵

無軸封，罐裝結構

接液材質：PP+CF，PP+GF，ETFE+CF

馬力範圍：1.1 – 7.5 kW (1.5 – 10 hp)

最大流量：84 m³/h

最高揚程：37 m

AVF-C Series Pumps AVF-C 系列泵浦

The AVF-C Series of pumps is designed to handle corrosive chemicals for production processes. The sealless, canned-motor construction, is built to prevent chemical leakage and pollution of your work environment. The series covers a broad application range of up to 84 m³/h (370 gpm or 1400 lpm) flow capacity and up to 37 m (121 ft) head. These chemical pumps are specifically designed to be driven by variable frequency drives (VFDs) to achieve process automation.

The AVF-C Series of pumps have a proven track record of being highly durable. You have the option of purchasing the models* that pair with a pump monitor (GAPSM), allowing you to track the health of the pumps, schedule preventive maintenance, and avoid premature pump failures, making the AVF-C series the most reliable chemical pump on the market.

*Refer to our AVF-CM flyer.

AVF-C 系列泵浦是專為處理高腐蝕性化學藥液而設計，無軸封、罐裝結構能有效避免藥液洩漏造成您工作環境的汙染。此系列的操作流量高達 84 m³/h (370 gpm 或 1400 lpm)，揚程高達 37 m (121 ft)，符合一般產業製程需求。AVF-C 化學泵浦專為透過變頻控制，可響應生產製程快速的需求變化以實現製造自動化。

AVF-C 系列泵具有高度耐用的良好使用記錄。您可選購可搭配泵監視器 (GAPSM) 的機型* 以追蹤您泵浦的運轉狀況，讓您安排預防性保養，達到防止泵浦無預警損壞，實現工廠數位化、無人化。

* 請參閱 AVF-CM 型錄

How do canned motor pumps work? 罐裝泵浦操作原理

Canned motor pumps integrate the design of the electric motor and magnetic drive pumps into one. The stator of the motor directly drives the inner magnet of the pump, eliminating the motor rotor and the drive magnet. Like the magnetic drive pump, the magnetic flux between the stator and the inner magnet passes through the containment shell (can), allowing the pump to be hermetically sealed for leak-free operation.

罐裝泵浦的設計原理是將磁力驅動泵浦與永磁馬達結合為一體，由馬達線圈產生感應磁場直接與泵浦的內磁鐵耦合，省略了感應馬達的轉子與磁驅泵浦的驅動磁鐵。與磁驅泵浦相同的是馬達線圈與內磁鐵的磁力線通過泵浦後蓋（罐封）形成迴路，達到無需軸封並完全密封的狀態。

Where can I use AVF-C Series pumps? AVF-C 系列的運用領域

- Chemicals where leakage must be avoided, including corrosive, toxic, and strong oxidizing agents.
- 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.
- Process control is crucial.
- Long-term energy saving needs.
- Cleanroom environment.
- Environments with strict temperature and humidity control.
- 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
- 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
- 需精密的製程控制
- 有長期節能需求
- 潔淨室環境
- 嚴格溫、濕度控制環境

Pump Up Your Value™

提升您競爭力的價值夥伴™

協磁®

Benefits 特點

Built for the most corrosive environments

The corrosion-resistant exterior with IP66 enclosure protects your pump and motor from corrosive environments. No more corrosion damage!

Built for special enclosures

Quiet operation without cooling fans. No need to use additional energy for cooling. Ideal for cleanrooms, climate controlled environments, and enclosed areas.

Built to save you energy

Highest motor efficiency* (IE5 and GB1 equivalent). Highest pump efficiency** (Minimum Efficiency Index, MEI). Variable Frequency Drive. The smallest carbon emissions chemical pumps you will ever own.

* IEC TS 60034-30-2: 2016 and GB 18613-2020

** Commission Regulation (EU) No. 547/2012 of 25 June 2012

Built for the Factory of Tomorrow

No more unexpected pump failure. Install the optional GAPSM (Pump Smart Monitor) to see the health of your pump, schedule preventive maintenance, and protect against abnormal operations. Highest reliability for your AIoT and lights-out manufacturing implementation!

專為高腐蝕性場合設計

耐腐蝕外殼與 IP66 等級密封技術可保護您的泵浦和馬達不再因腐蝕損壞！

用於特殊環境

無冷卻風扇的超靜音運轉，無需耗費額外能源來冷卻，是用於無塵室、環境溫濕度嚴格控制與密閉空間的最好選擇。

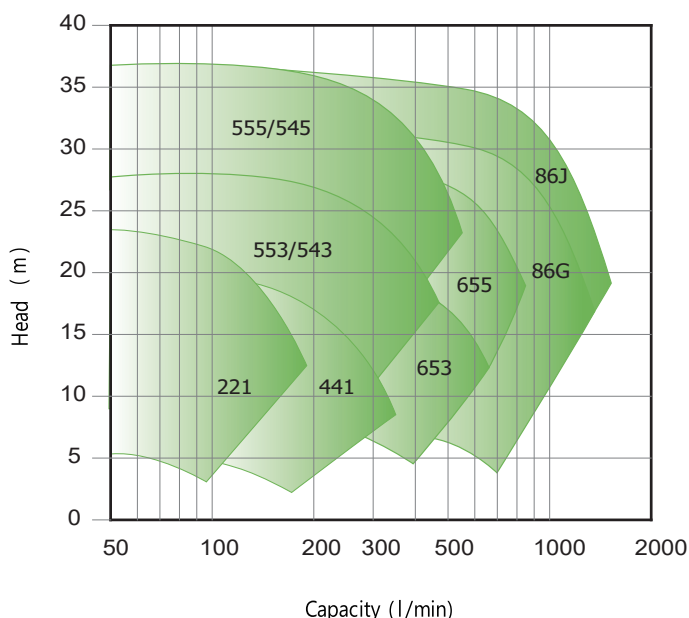
為您節省能源

最高效能馬達*（相當於歐盟 IE5 與中國新 GB1 等級）、最高泵浦效率**（最小效能指標 MEI），搭配變頻操作，將會是您擁有泵浦中最小碳排放又最節能的化工泵浦。

為明日的工廠而設計

安裝 GAPSM（泵浦智能監控器）讓您可以監控您的泵浦健康狀態、安排預防性保養並防止異常操作對泵浦造成的損害，達到實現全自動化生產與關燈工廠的高可靠度。

Performance Curve 性能曲線圖



Note : The performance curves are based on clean water at ambient temperature.
Chemical properties may affect your pump selection.
Please contact a qualified sales representative to verify the pump selection.

備註：此性能曲線圖是以清水在常溫的測試條件。
化學藥水的特性可能影響您的泵浦選型。
請聯絡合格的服務人員協助選型確認。

Specifications 規格表

AVF-C Model AVF-C 機型		221	441	543 553	653	545 555	655	86G	86J
Capacity range 流量範圍 (lpm)		10-180	20-350	40-450	60-650	60-550	80-850	80-1300	80-1400
Head range 揚程範圍 (m)		6-23	5-21	8-31	4-22	8 - 37	7 - 30	10-33	10-37
Max. motor output 馬達最大輸出 (kW)		1.1	1.1	2.2	2.2	4	4	5.5	7.5
Rated current 額定電流 (A)	220V	3.8	3.8	7.3	7.3	13	13	20	27
	380V	2.2	2.2	4.2	4.2	7.5	7.5	11.5	15.6
Rotation speed range 轉速範圍		1500 – 3000 RPM							
Temperature Range 操作溫度 (°C)		PP+CF / PP+GF: 0 - 80 ETFE+CF: 0 - 95							

Pump identification 型式表示

AVF - C * 6 5 5 D G A C V - 3 Q * * *

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① Series 泵浦系列	AVF-C Series AVF-C 系列	⑥ Casing Material 本體材質	C : PP+CF E : ETFE+CF G : PP+GF
② Suction Size 入口口徑	2 : 25A(1") 4 : 40A(1.5") 5 : 50A(2") 6 : 65A(2.5") 8 : 80A(3")***	⑦ Shaft Material 軸心材質	A : 995 Al ₂ O ₃ S : SSiC
③ Discharge Size 出口口徑	2 : 25A(1") 4 : 40A(1.5") 5 : 50A(2") 6 : 65A(2.5")***	⑧ Bearing Material 軸承材質	A : 995 Al ₂ O ₃ C : Carbon R : PTFE+CF S : SSiC
④ Motor Power 額定功率	1 : 1.5 hp (1.1 kW) 3 : 3 hp (2.2 kW) 5 : 5.5 hp (4 kW) G : 7.5 hp (5.5 kW)*** J : 10 hp (7.5 kW)***	⑨ Sealing Material 密封材質	E : EPDM V : FKM
⑤ Type of Connection 配管形式	D : Flange 法蘭 S : Stainless Flange 不鏽鋼法蘭 *** U : Union 由任 T : Thread 牙口 ***	⑩ Rated Voltage of Inverter 變頻器額定電壓	2 : 200V-240V 3 : 380V-480V
		⑪ Safety Standard ** 安全規範	Q: China CQC Certificate 中國 CQC 認證 Blank: US/CA ETL Certificate 空白 : 美國 / 加拿大 ETL 認證

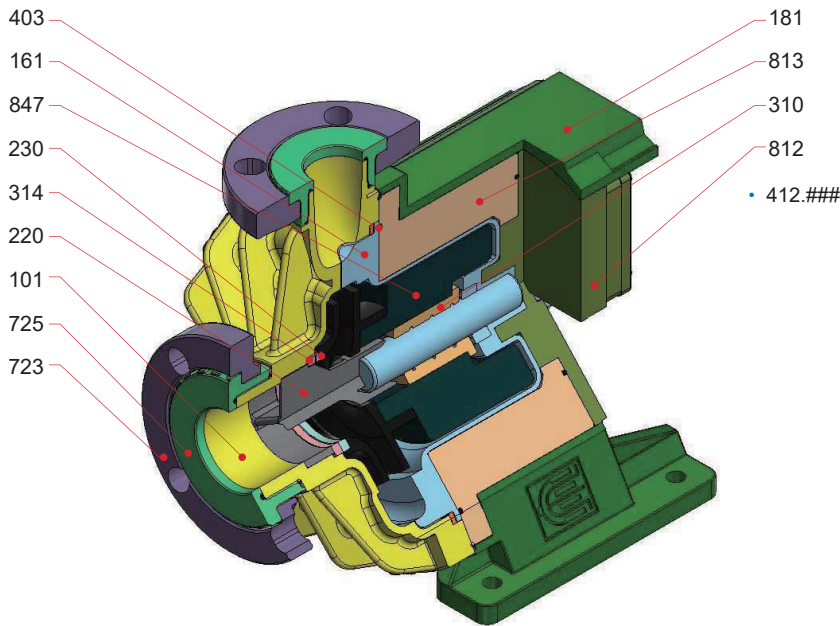
NOTES:

- * The pump with the model AVF-CM code is configured with sensors to work with the GAPSM pump monitor.
- ** The pump/motor adheres to high safety standards via ETL as a default.Pumps for the China market are certified according to the CQC standard, where applicable.
- *** Not within the scope of ETL certification.

備註：

- * 標有 AVF-CM 型號字樣是有加裝搭配 GAPSM 泵浦感測器配件的泵浦。
- ** 標準泵浦與馬達皆通過 ETL 嚴格的安全要求。中國大陸銷售的機型符合 CQC 相關的認證要求。
- *** 不在 ETL 認證範圍內

Material 材質構造圖



Part code 編號	Part name 名稱		Available Materials 可選用材質
101a	Pump casing assembly 前蓋法蘭組	101 Pump casing 前蓋	PP+CF / PP+GF / ETFE+CF
		723 Flange 法蘭*	PP+GF
		725 Flange adapter 法蘭連結件	PP+CF / PP+GF / ETFE+CF
		412.### O-ring O 形環**	EPDM / FKM
161	Rear casing assembly 後蓋軸心止推環組	Rear casing 後蓋	PP+CF / PP+GF / ETFE+CF
		Shaft 軸心	995 Al ₂ O ₃ / SSiC
		Rear thrust ring 後止推環	995 Al ₂ O ₃ / SSiC
181	Bracket 托架		PP+GF
220	Front support, shaft 軸心支撐		ETFE+CF
230	Impeller wear ring assembly 葉片磨損環組	Impeller 葉片組	PP+CF / PP+GF / ETFE+CF
		Front wear ring 前磨損環	Carbon / SSiC / PTFE+CF
310	Bearing 軸承		995 Al ₂ O ₃ / Carbon / SSiC / PTFE+CF
314	Front thrust ring 前止推環組		995 Al ₂ O ₃ / SSiC
403	Packing 迫緊**		EPDM / FKM
812	Rear frame 後框		Aluminum
813	Stator Assembly 定子組		Aluminum
847	Magnet capsule 包膠內輪		PP / ETFE
412.###	O-ring O 形環**		EPDM / FKM

Notes:

* The flange is not a wetted part, we offer PP+GF as the standard material. Contact us if you have other material needs.

** Alternative O-ring / Packing materials are available for critical applications. Please contact us for further information.

備註：

* 法蘭非接液部件，所以法蘭標準材質為 PP+GF，若有特殊需求請洽協磁公司。

** O 形環 / 迫緊尚有其他材質可供選擇，詳情可洽協磁公司。



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