

承認規格書

SPECIFICATION FOR APPROVAL

客戶:

CUSTOMER:

深圳元鼎智能創新有限公司

客戶料號:

CUS PART NO:

客戶文件/版次:

CSR FILE / REVISION:

N/A

品 名:

PART NAME:

MINI PUMP

品 番:

MODEL:

CJP37-C12D65

客戶簽認 CUSTOMER APPROVAL SIGNATURES:

批准 APPROVED	確認 CHECKED	品保確認 QC.CHECKED

註: 請在對應欄內簽字, 如無則填寫“NA”。

REMARKS: SIGN EVERY COLUMN AND STATE “NA” IF NOT APPLICABLE.

坤錦簽認 CONJOIN SIGNATURES:

品質 QUALITY	應用 APPLICATION	工程 ENGINEERING
		林明利

廈門坤錦電子科技有限公司

XIAMEN CONJOIN ELECTRONICS TECHNOLOGY CO., LTD

廈門坤錦電子科技有限公司 XIAMEN CONJOIN ELECTRONICS TECHNOLOGY CO., LTD				產品規格書 SPECIFICATION (CJP37-C12D65)		文件編號 Doc No	WIGCKF***
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- 1.目的：為了規範 PUMP 產品的技術要求和試驗方法及標誌、包裝、運輸及貯存要求。
Purpose: This specification is to regulate the technical requirements of pumps, as well as requirements of tests, labeling, packaging, transportation and storage.
- 2.適用範圍：本標準適用於 CJP37-C12D65。
Scope of application: This specification applies to CJP37-C12D65.
- 3.標準工作狀態：

Standard Operating Conditions:

3.1	額定電壓 Rated Voltage	12V DC
3.2	工作電壓範圍 Operating Voltage Range	9—12 DC
3.3	額定負載 Rated Load	300mmHg 300mmHg by pulley load
3.4	工作溫度範圍 Operating Temperature Range	溫度在 5℃—+45℃之間且相對濕度在 30%-80%之間 The temperature have to be between +5℃ and +45℃ and relative humidity between 30% and 80% to ensure the normal function of pump.
3.5	介質 Media	空氣（因使用其他非空氣介質或介質異常造成的產品不良和/或其他後果不屬於產品品質問題） Air (product failure and/or other results caused by media other than air or abnormal media should not be categorized into product quality issue)

- 4.測試條件：
Testing Conditions:

4.1	測試姿勢 Position	水平 horizontally
4.2	電源 Power Source	試驗電源的電壓穩定無異常 Regulated power supply
4.3	環境溫度濕度 Environmental Temperature and Humidity	測定時原則上溫度為+20℃，相對濕度為 65%，如無爭議時應在 (+5℃-+30℃,40%-85%RH)下進行測定。 Generally the test is carried out with temperature in the range of +20℃ and relative humidity of 65%. If there is no dispute, the test should be done under such condition(+5℃-+30℃, 40%-85%RH).
4.4	保存溫度 Preservation temperature range	在溫度-20℃到 60℃及相對濕度 30%到 80%之間 The temperature has to be between -20℃ and +60℃ and relative humidity has to be between 30% and 80%RH to keep the pump in good condition.

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5.電氣特性:

Electrical Characteristics:

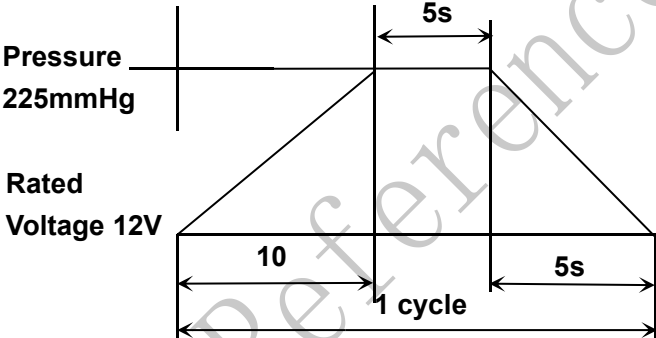
5.1	定格電流 Current	額定電壓下，在 500cc 容器中從 0~300mmHg 最大電流 The max current during pressurizing a 500cc tank from 0 to 300mmHg under rated voltage.	≤400mA
5.2	空載流量 Free flow	DC12V 電壓下，無負載條件下流量。 The free flow rate under DC 12V.	≥2.0L/min
5.3	噪音 Noise	背景噪音 35dB 下，將 pump 置於 5cm 厚的海 綿墊上，離噪音儀 30cm,在額定電壓下在 500cc 容器中從 0~300mmHg 所測得最大 dB 值 Under 35dB background noise, put a 5cm thick sponge under the pump and place it at a distance of 30cm away from noise meter. While inflating a 500cc tank from 0 to 300mmHg at rated voltage, test the noise value and record the largest value.	≤65dB(見附圖一) (see the attached one)
5.4	最大壓力 Maximum pressure	12V 電壓下，在 500cc 容器中從 0 到停止升壓的 最大壓力 Pressurize at a 500CC tank from 0 until the pressure does not rise. The maximum pressurization value is while the pump stop the inflation at DC12V.	>375mmHg

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6.環境試驗:在經過以下環境測試後，噪音應小於 71dB
 After following environmental tests, noise value less than 71dB.

6.1	低溫放置試驗 Low-temperature characteristic	在-20℃條件下放置 72H 後，取出置於 20℃±5℃條件下恢復 2H，測試 5-1，2，4 均在性能規格內。 Leave the pump at -20℃ for 72 hours and then return it to room temperature (20±5℃) for 2 hours. Examine it by tests 5-1, 2, 4 and should be within performance specification.
6.2	高溫放置實驗 High-temperature characteristic	在 60℃條件下放置 72H 後，取出置於 20℃±5℃條件下恢復 2H，測試 5-1，2，4 均在性能規格內。 Leave the pump at 60℃ for 72 hours and then return it to room temperature (20±5℃) for 2 hours. Examine it by tests 5-1, 2, 4 and should be within performance specification.
6.3	高溫高濕放置實驗 High-temperature & High humidity	放置在溫度 60℃，相對濕度 80~85%的條件下放置 72H 後，取出置於 20℃±5℃條件下回復 2H，測試 5-1，2，4 無異常 Leave the pump at 60℃, RH 80~85% for 72 hours and then return it to room temperature (20±5℃) for 2 hours. Examine it by tests 5-1, 2, 4 and no abnormality should be found.
6.4	溫濕度迴圈試驗 Temperature & humidity cycle test	<p>在溫度-20℃條件下放置 2H 後，取出置於 20℃±5℃條件下 1H，取出置於 60℃，相對濕度 85%的條件下放置 2H 後，取出置於 20℃±5℃條件下 2H，如此迴圈 12 次後，取出置於 20℃±5℃條件下回復 2H，測試 5-1，2，4 無異常</p> <p>Leave the pump at -20℃ for 2 hours, and return to room temperature (20±5℃) for 1 hours. Then change to the environment of 60℃, RH 85% for 2 hours, and return to room temperature for 2 hours. Repeat the cycle for 12 times and return to room temperature (20±5℃) for 2 hours and examine it by tests 5-1, 2, 4 and no abnormality should be found.</p> <div> <div> <div>+60℃ 85%RH</div> <div>20±5℃</div> <div>0℃</div> <div>-20℃</div> </div> <div> <div>2h</div> <div>1h</div> <div>2h</div> <div>2h</div> </div> <div>1 cycle</div> </div> <p>The diagram illustrates a temperature and humidity cycle test. It shows a horizontal timeline with four segments: 2h at -20℃, 1h at 20±5℃, 2h at +60℃ 85%RH, and 2h at 20±5℃. A bracket below the timeline indicates that these four segments constitute '1 cycle'. The temperature levels are marked on the left side of the diagram.</p>

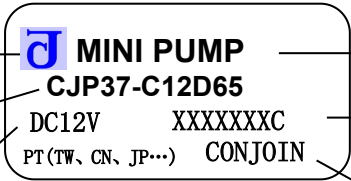
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6.5	壽命試驗 Life test :	<p>額定電壓下，背压 225mmHg，充氣 10S 停 5S 排氣 5S 爲一迴圈，測試 288, 000 次以後測試 5-1, 2, 4 性能衰減 30%之內。</p> <p>Under rated voltage, pressurizing 500cc tank for10s, stopping for 5s, and deflating for5s is as one cycle. doing it for288,000 times, then examine the pump by test 5-1, 2, 4 and performance degradation within 30%.</p> 
6.6	特殊環境測試 Thermal test performance :	<p>在經過以下特殊環境測試後，產品須滿足各項電氣特性，但消耗電流及噪音可被忽略不在保證範圍。</p> <p>After the pump goes through following tests, it must conform to the basic performance required. However the current and noise performance could be ignored.</p>
6.6-1	低溫測試 Low-temperature environment test	<p>在 5℃經五小時後，在此溫度測試 5-2, 4 均在性能規格內。</p> <p>Under a temperature of 5℃ for 5 hours ,then examining the pump by test 5-2, 4 and should be within performance specification.</p>
6.6-2	高溫測試 high-temperature environment test	<p>在 40℃經五小時後，在此溫度測試 5-2, 4 均在性能規格內。</p> <p>Under a temperature of 40℃ for 5 hours ,then examining the pump by test 5-2, 4 and should be within performance specification.</p>

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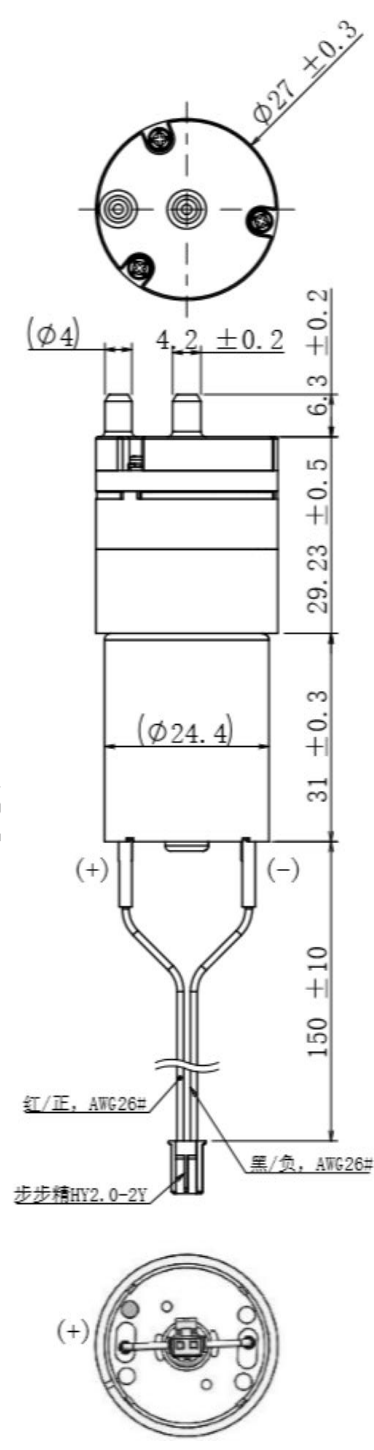
7.其他試驗:

Others:

7.1	端子強度: Terminal Tension	以 0.5Kg 砝碼與端子平行負載無異常 Hanging a 0.5Kg static load on the terminal of the pump should not cause damage to the pump.
7.2	馬達 Motor	氣泵之主要部件馬達不得接觸含矽、硫、磷等元素之物質以避免產生不良反應，如因接觸含有上述元素物質而造成馬達異常導致的氣泵無法正常工作和其他後果，不屬於產品品質問題。 As the main part of pump, the motor is prohibited from contacting with substances containing elements such as silicon, sulphur and phosphor, etc. to avoid negative reaction. Conjoin is not responsible for pump malfunction and other results caused by motor NG due to contact with above stated elements.
7.3	落下試驗 Fall test	使用標準的包裝方式，在水泥地上，距離 50cm 高度上分別從正面、側面及邊角落下性能及結構無異常。 Basic performance and the structure shall not be defected after following tests. Under standard packaging conditions, drop the carton at the height of 50cm on the concrete floor. Once against a corner, twice against edges and three times against faces.
7.4	異常試驗 Unusual test	以 DC12V，連續 8H 通電，無發煙，燃燒等現象 Connect the pump to 6V DC and work in continuation for 8 hours, and no smoke or ignition should occur.
7.5	外觀 Appearance	外觀無髒汙，刮傷等現象 For appearance, no contamination, scratches, etc. should be found.
7.6	標貼 Labeling	<div><div>Company LOGO</div><div>PRODUCT NAME</div><div>Conjoin's Part No.</div><div>LOT NO.</div><div>Rated voltage</div><div>COMPANY NAME</div></div> 
7.7	生產編號 Lot number display	xx xx xx x C 年 月份 日期 LINE 號 中國製造 year month date line No. Made in China (OS=2022 年, OT=2023 年, OU=2024 年...)
7.8	馬達端子 Motor terminal	馬達端子須在 380℃ 以下的烙鐵溫度下焊接，並要求在 3S 內操作完成。馬達腳作記號側（如紅點）接直流正極，正負極不可反接。 Motor terminal for soldering process the heat temp. is controlled by 380℃, and operating time is for 3S only. Motor terminal with marking (eg. red dot) connects to positive pole. Positive and negative pole connection not exchangeable.

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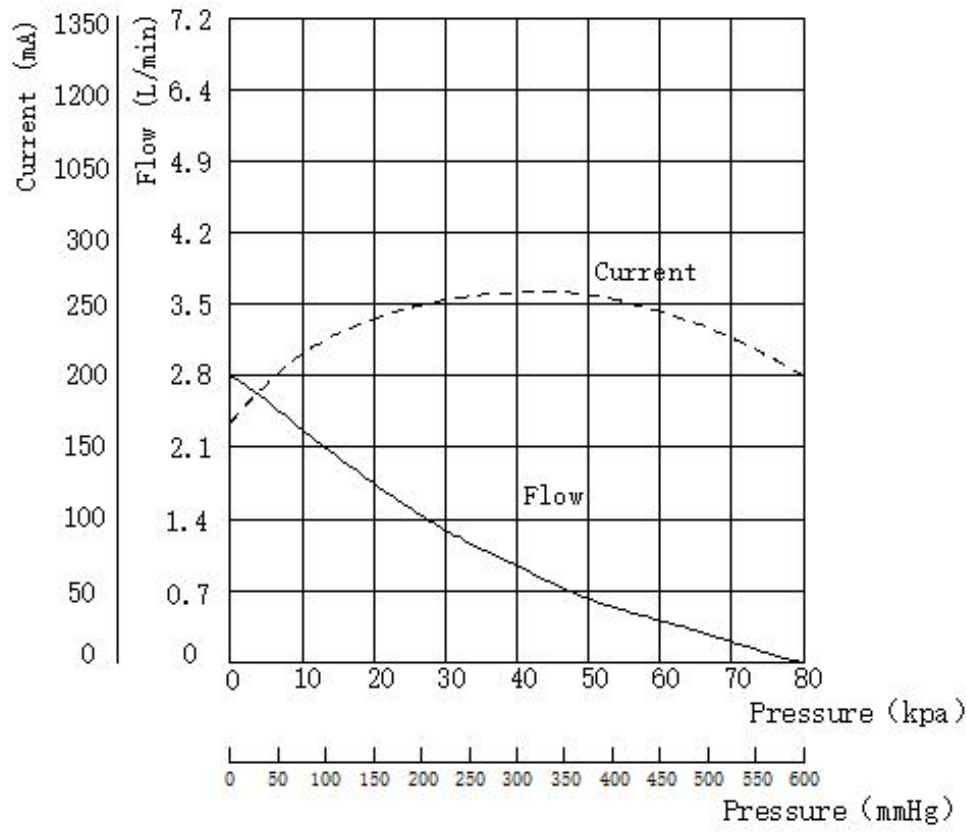
8.成品圖：
Finished product sought:



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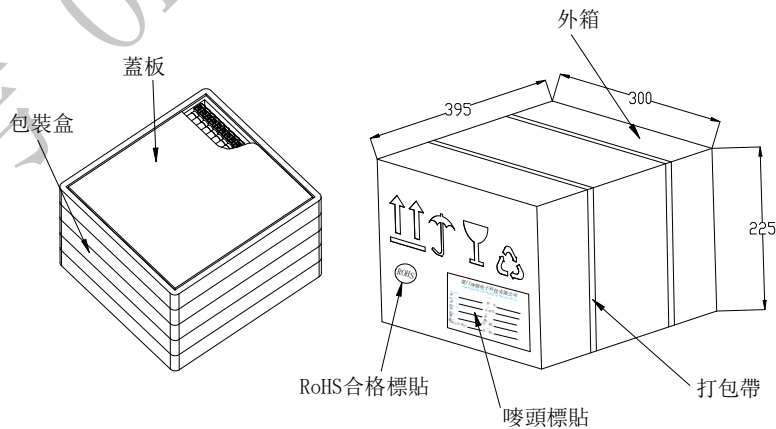
9.產品特性圖：

Product Feature Figure:



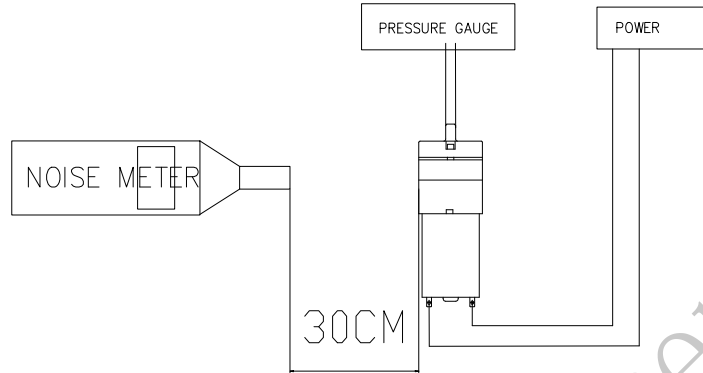
10.包裝圖：（待定）

Packaging Illustration:



包裝數量(Packing Qty)：30PCS/層*5 層(layers)/carton=150PCS/carton

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(附圖一)

11.生命週期終止或報廢時，按當地環保法律法規執行。

When the product life cycle is terminated or scrapped, it is implemented in accordance with local environmental laws and regulations.

12.說明:

Instruction:

如對於此份規格書有任何需修改，增加，或刪除的意見，須經客戶及我公司雙方協商。

In case of any necessary modifications, additions, or eliminations to this specification, implementation of such modifications should only come after negotiations between our customers and us.

13.使用注意事項（由以下禁止使用方法所造成泵產品功能性失效的，敝司不承擔責任。）

Notes about using (Conjoin is not responsible for any pump failure caused by below prohibited improper using):

13.1 出氣嘴等泵體外表面不可接觸乙醇、天那水、墨水稀釋液等腐蝕性化學液體。

Contact of pump body surface (for example outlet port) with corrosive chemical liquid such as ethanol, thinner, ink thinner etc. is prohibited.

13.2 出氣嘴不可長期與 PVC 材料及其它具有腐蝕性的套管接觸；建議測試及裝配時使用矽膠、EPDM 等材質的橡膠套管。

Outlet port cannot be connected to tubing of corrosive material such as PVC. For tubing used in testing and assembling, silicone rubber or EPDM material is recommended.

13.3 進氣口（見成品圖）必須保持進氣通暢，嚴禁異物堵塞等造成泵產品的損害。

Good ventilation of inlet port (see drawing of finished product) should be ensured and blocking of inlet by foreign material is prohibited.

13.4 嚴禁帶有腐蝕性的氣體進入泵體以免造成泵體損害。

Corrosive gas is prohibited from entering pump body to avoid damage to pump.

13.5 使用過程中，嚴禁任何液體與馬達底部端蓋（含電刷腳、电路板）相接觸以免造成泵產品損害。

During usage ,it is strictly forbided for any liquid to touch the bottom of motor(including terminal and PCB),so as not to damage the pump.

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14.馬達使用環境氣氛:

Surrounding Atmosphere:

14.1 正確使用和儲存馬達十分必要。使用和儲存環境禁止存在腐蝕性氣體(H₂S,PH₃, SO₂, NO₂, CL₂)或其他揮發性的腐蝕性氣體。此外，儲存環境或其他配套部品不能揮發或存在有機矽 SiO₂, SiC, 氰物質，福爾馬林，磷化物，苯酚等系列物質,否則會導致馬達不工作。

For proper operation,storage and operating environment should not contain corrosive gases e.g H₂S,PH₃,SO₂,NO₂,CL₂, and etc. In addition,storage environment should not have material that emit corrosive gases especially from silicic, cyanic,Formalin, phosphide and phenol group. In a mechanisim or a set,existence of corrosive gases may cause no rotation in motor.

14.2 如果含有低分子矽化合物和磷化合物材料附著在馬達的換向器、電刷或其他部件上，在換向電弧高溫作用下，矽化合物和磷化合物材料可能會分解成 SiO₂, SiC, P₄O₆, P₄O₁₀ 或其他成分的氧化物，這些物質使換向器和電刷之間的接觸電阻迅速增加，當矽/磷化合物材料用在整機上時應非常小心。務必仔細檢查所用粘合劑或密封材料不會產生上述揮發物質，不管是用在馬達安裝上或客戶整機產品上;特別是使用含有氰化物和硫化物氣體的粘合劑或密封材料時。

If material contain low molecular silicon and phosphide compounds, adhere to the motor's commutator, brush or other parts, then due to electric are reaction of the commutator and brush the materials breaks up into SiO₂/SiC/P₄O₆/P₄O₁₀ or other constituents which produce a rapid increase

In the contact resistance between the commutator and brush. Therefore grease should be taken when silicon material is used ina unit and check well at the same time that such binding agents or sealing material are not generating gases of detrimental nature,whether used for motor mounting or applied during your product assemblies. Care are must be taken for an optimum selection,especially when using those of cyanic adhesive and sulfur gas.

14.3 熏劑（消毒劑）和它的氣體將導致馬達不轉。因此，馬達不可暴露在熏劑（消毒劑）和它的氣氛中。如果包裝材料和運輸中使用熏劑，就必須採取特別的防護措施防止熏劑（消毒劑）和它的氣體進入到馬達內部。

Fumigant and its gas may cause no rotation in motor. Therefore motors should not be exposed to fumigant and its gas.Protection countermeasures must be taken,especially when using fumigant in packing material and transportation.

14.4 要預防極端溫度下的冷凝結露。馬達結構結露會引起短路或漏電，設計時，要考慮到冷凝結露現象。必要時設置冷凝結露傳感器來作切斷主電源的保護對策。

A motor should be protected from temperature extremes which could cause condensation. This might lead to short circuit or current leakage.Condensation should be considered in set design.A safety device, such as condensation sensor,is recommended to add on set to cut off power supply.