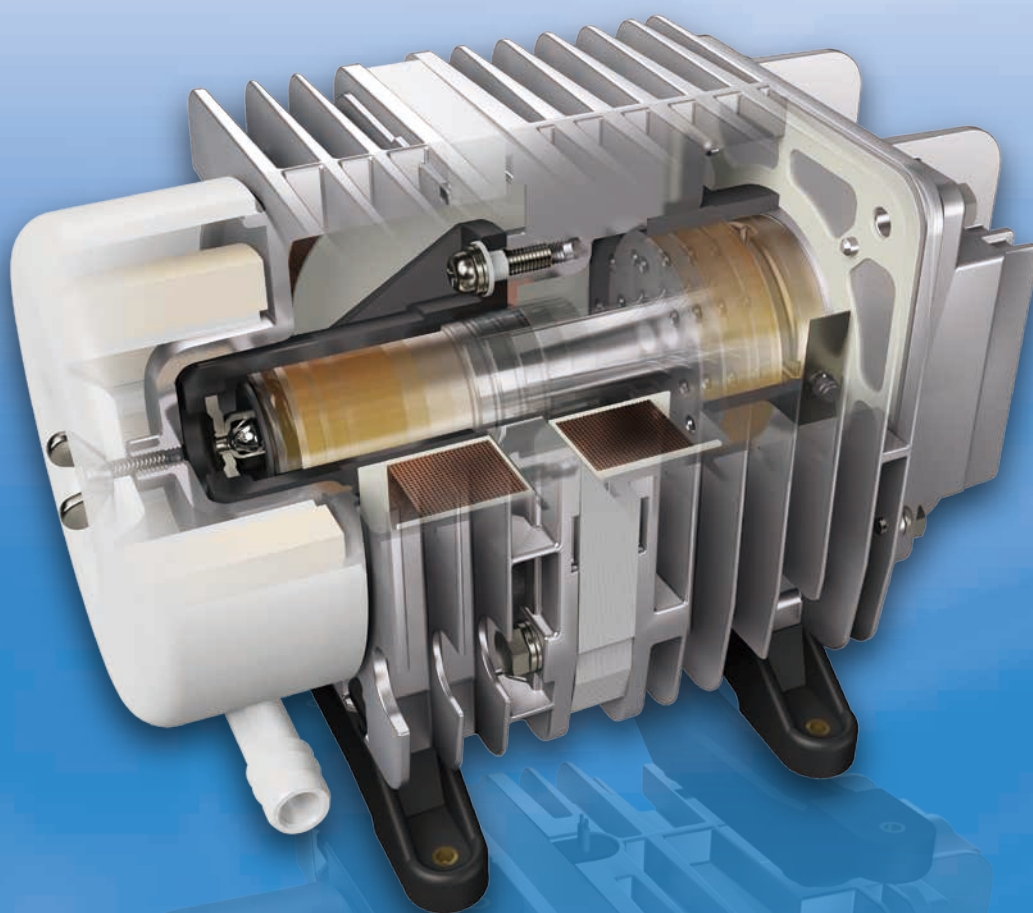


# 空气压缩泵, 真空泵 & 液体泵 综合样本



线性驱动活塞驱动方式活跃于压缩机、真空泵中、形成丰富多样的系列群。  
以先端产业中心，最适合组装各种装置、机器类的「压缩空气源」、「真空源」。  
作为各种领域产品「压缩、吸引空气」「搬送液体」的驱动源而被活用。

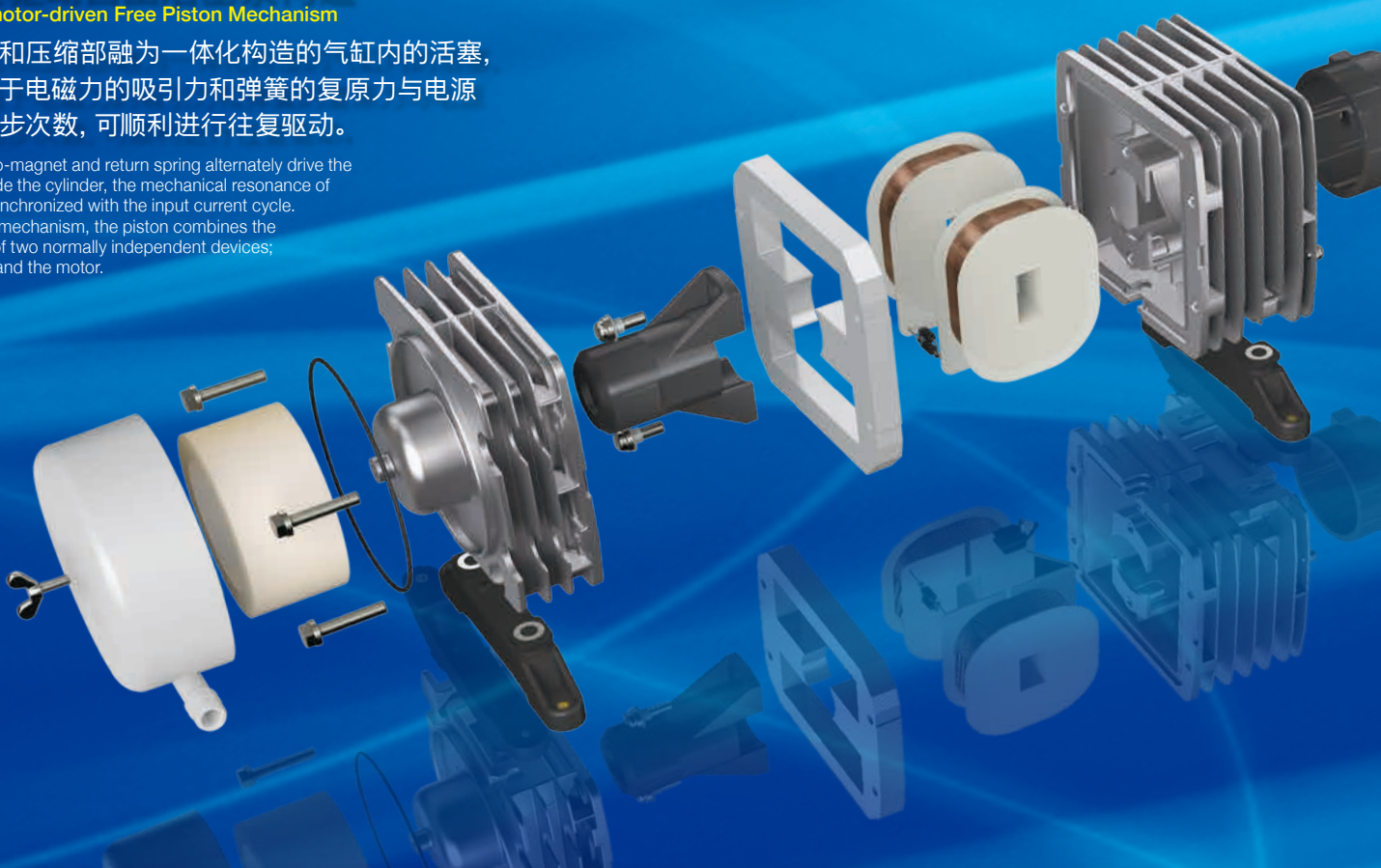
Our air compressors and vacuum pumps are unique products featuring a Linear-motor-driven Free Piston System. Nitto Kohki has made available a complete series of air compressors and vacuum pumps that incorporate this revolutionary mechanism. These are quite appropriate as air sources or vacuum units for various pneumatically operated equipment and apparatus in advanced industries.

## 线性驱动自由活塞泵构造

Linear-motor-driven Free Piston Mechanism

将马达和压缩部融为一体化构造的气缸内的活塞，  
利用由于电磁力的吸引力和弹簧的复原力与电源  
频率同步次数，可顺利进行往复驱动。

The Electro-magnet and return spring alternately drive the piston inside the cylinder, the mechanical resonance of which is synchronized with the input current cycle. In a single mechanism, the piston combines the functions of two normally independent devices; the pump and the motor.



## 工作原理 / Operating Principle

装入线圈间的硅二极管 \*1 和变换器对电流进行半波整流。\*2 实现无额外损耗，高效率的往复运动。

A silicon diode\*1 in between the coils or inverter\*2 converts the full-wave input current into half-rectified current. In turn this activates and deactivates the electro-magnet, producing a smooth mechanically resonating action.

在电磁力的作用下，活塞被吸引而弹簧受压，此时，空气从进气阀吸入气缸内。

The energized electro-magnet attracts the piston, compresses the return spring, and draws air into the cylinder through the opened inlet valve.

### AC(交流电源)时 (硅二极管效果)

AC Power The effect of using a silicon diode

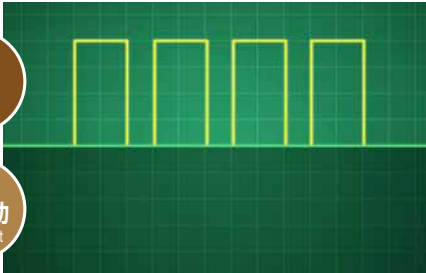
### DC(直流电源)时 (变压效果)

DC Power The effect of using an inverter

A



电流  
流动  
Current



电流  
不流动  
No Current

B

电磁力消失，活塞被复位弹簧的恢复力压回。此时，将压缩空气从排气阀排出气缸。

When the electro-magnet is de-energized, the return spring pushes the piston back, forcing the compressed air out of the cylinder through the now opened outlet valve.



活塞通过A和B的反反复作进行往复运动，发挥压缩泵与真空泵的功能。  
Repeating the movements of A and B delivers the function of compressor or vacuum pump.

\*1) AC驱动模型搭载 \*1) Incorporated in AC models

\*2) DC驱动模型搭载 \*2) Incorporated in DC models



## 小型一体化构造 / Compact Integrated Design

与可动铁芯为一体的活塞可直接往复运动的独特机械装置。马达和压缩部融为一体化构造，比其他的驱动方式更小型和轻量化。

This unique system enables the mechanical resonance of a single part. An incredibly compact, lightweight design is achieved by combining what are entirely independent functions in conventional pumps – the motor and the compressor – into a superior single, unified structure.

## 自我冷却系统 / Self-cooling Design

采用自我冷却系统将吸入的空气吹过线圈，因此，可以采用封闭式结构，运转时噪音很小。

Cool intake air passes over the coils to reduce and control the rise in the pump's internal temperature. As a result of this feature, it is possible to almost completely seal the unit, thus improving the suppression of internal operating noise.

## 过压防止功能 / Overpressure Control Mechanism

当压力超过额定压力时，活塞行程自动减少，以防止产生过压。此时，消耗功率和电流也会自动减少，无需担心一时的过载造成故障或烧毁。

Should the output pressure exceed the rated value, the piston will automatically adjust to a shorter stroke. Simultaneously, power consumption will automatically reduce to prevent the motor from failing or being burnt out.

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### 线性驱动自由活塞 / Linear Free Piston

#### AC线性 自由活塞 压缩泵 / AC Linear Free Piston Compressor

AC0102 / AC0201A / AC0301A / AC0401A / AC0602 / AC0901  
AC0902 / AC0105 / AC0110 / AC0207 / AC0410A / AC0610  
AC0910 / AC0920

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#### AC线性 自由活塞 真空泵 / AC Linear Free Piston Vacuum Pump

VP0125 / VP0140 / VP0435A / VP0450 / VP0625 / VP0660  
VP0940 / VP0940T

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#### DC线性 自由活塞 压缩泵 / DC Linear Free Piston Compressor

DAH102-X1 / DAH102-Y1 / DAH105-X1 / DAH105-Y1  
DAH110-X1 / DAH110-Y1

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#### DC线性 自由活塞 真空泵 / DC Linear Free Piston Vacuum Pump

DVH130-X1 / DVH130-Y1 / DVH145-X1 / DVH145-Y1

### 隔膜泵 / Diaphragm Pump

#### AC线性 隔膜泵(兼用,压缩泵) / AC Linear Diaphragm Pump (Dual Type, Blower Type)

Dual & Blower Type:  
VC0100 / VC0101 / VC0101S / VC0201B / VC0301B

44

### DC马达 / DC motor

#### DC马达 柱塞泵(压缩泵) / DC Piston Pump (Compressor)

#### DC马达 隔膜泵(压缩泵, 真空泵) / DC Linear Diaphragm Pump (Compressor / Vacuum Pump)

DP0105-X1 / DP0105-Y1 / DPA0105-X1 / DPA0105-Y1 / DP0410-X1  
DP0410-Y1 / DP0410-X2 / DP0410-Y2 / DP0410T-Y1 / DP0410T-Y2  
DP0125 / DP0140 / DP0102 / DP0102S / DP0102H-X1 / DP0102H-X2  
DP0110-X1 / DP0110-Y1 / DP0110-X3 / DP0110T-X1 / DP0110T-Y1  
DP0210TA-Y1

54

### 液体泵 / Liquid Pump

#### BIMOR泵(压电泵) / BIMOR PUMP (Piezoelectric Pump)

BPS / BPH / BPHS / BPF Type

70

#### DC 隔膜 液体泵 / DC Diaphragm Liquid Pump

DPE-100 / DPE-400 / DPE-400BL / DPE-800 / DPE-100BLC / DPE-200BLC

#### LA曝气机 (AC线性 自由活塞 曝气机) / LA BLOWER (AC Linear Free Piston Blower)

LA-28B / LA-45C / LA-60B / LA-80B / LA-100A / LA-120A / LAM-200

78

#### 定制 / Made to order

AC0210 / AC0610A / LAM-150 / BIMOR PUMP

84

#### 其他产品 / Other product

HK-400A / LV-125A and Vacuum Pen Assembly

90

#### 快速流体接头"CUPLA" / "CUPLA" Quick Connect Couplings

96

## 绿色筹备 / Green Procurement

为了进行环境保护事业活动，本公司通过了国际标准的ISO14001认证，推行全公司范围内的环境改善活动。作为环境改善活动的一个环节，依据RoHS指令为首的各种法规，将本公司产品作为环境对应制品（绿色筹备对应产品），废止、削减指定的环境管理物质。

Nitto Kohki has made every effort in developing "Environmental Improvement Plans" through the implementation of ISO14001, to execute environmentally conscious business activities on a company-wide basis. As a part of our ongoing commitment to the environment, we are also committed to reduce and/or exclude restricted substances from our products as designated by RoHS directives, laws and regulations of chemical substances.



# 性能区别索引 / Series Selection

## AC 线性 压缩泵 / AC Linear Free Piston Compressor

| 型 号 / Model    | 额定压力 / Rated Pressure |      | 最高压力 / Max. Pressure |      | 额定压力 & 最高压力 / Rated Pressure & Max. Pressure | 吐出空气量 / Rated Airflow |       | 吐出空气量 / Rated Airflow | 页 / Page |
|----------------|-----------------------|------|----------------------|------|----------------------------------------------|-----------------------|-------|-----------------------|----------|
|                | kPa                   | psig | kPa                  | psig |                                              | L/min                 | cfm   |                       |          |
| AC0102         | 20                    | 2.84 | 40                   | 5.69 |                                              | 5                     | 0.177 |                       | 13       |
| AC0201A        | 10                    | 1.42 | 20                   | 2.84 |                                              | 20                    | 0.71  |                       | 14       |
| AC0301A        | 10                    | 1.42 | 30                   | 4.27 |                                              | 28                    | 0.99  |                       | 15       |
| AC0401A        | 10                    | 1.42 | 35                   | 4.98 |                                              | 35                    | 1.24  |                       | 16       |
| AC0602         | 15                    | 2.13 | 35                   | 4.98 |                                              | 40                    | 1.41  |                       | 17       |
| AC0901         | 10                    | 1.42 | 40                   | 5.69 |                                              | 80                    | 2.83  |                       | 18       |
| AC0902         | 20                    | 2.84 | 45                   | 6.40 |                                              | 55                    | 1.94  |                       | 19       |
| AC0105         | 50                    | 7.11 | 80                   | 11.4 |                                              | 2.5                   | 0.088 |                       | 20       |
| AC0110         | 100                   | 14.2 | 120                  | 17.1 |                                              | 0.8                   | 0.028 |                       | 21       |
| AC0207         | 70                    | 9.96 | 100                  | 14.2 |                                              | 3.5                   | 0.124 |                       | 22       |
| AC0210         | 100                   | 14.2 | 120                  | 17.1 |                                              | 3.5                   | 0.124 |                       | 85       |
| AC0410A        | 100                   | 14.2 | 130                  | 18.5 |                                              | 5                     | 0.177 |                       | 23       |
| AC0610/AC0610A | 100                   | 14.2 | 150                  | 21.3 |                                              | 8                     | 0.283 |                       | 24/86    |
| AC0910         | 100                   | 14.2 | 150                  | 21.3 |                                              | 16                    | 0.57  |                       | 25       |
| AC0920         | 200                   | 28.4 | 350                  | 49.7 |                                              | 8                     | 0.283 |                       | 26       |

## AC 线性 真空泵 / AC Linear Free Piston Vacuum Pump

| 型 号 / Model | 达到真空度 / Attainable Vacuum |       | 吐出空气量 / Rated Airflow | 吐出空气量 / Rated Airflow | 页 / Page |
|-------------|---------------------------|-------|-----------------------|-----------------------|----------|
|             | kPa                       | in.Hg | L/min                 | cfm                   |          |
| VP0125      | -33.3                     | -9.84 | 7                     | 0.247                 | 29       |
| VP0140      | -53.3                     | -15.7 | 3                     | 0.106                 | 30       |
| VP0435A     | -46.7                     | -13.8 | 25                    | 0.88                  | 31       |
| VP0450      | -66.7                     | -19.7 | 18                    | 0.64                  | 32       |
| VP0625      | -33.3                     | -9.84 | 40                    | 1.41                  | 33       |
| VP0660      | -80                       | -23.6 | 25                    | 0.88                  | 34       |
| VP0940      | -53.3                     | -15.7 | 60                    | 2.12                  | 35       |
| VP0940T     | -53.3                     | -15.7 | 120                   | 4.24                  | 36       |

## DC 线性 压缩泵 / DC Linear Free Piston Compressor

| 型 号 / Model | 额定压力 / Rated Pressure |      | 最高压力 / Max. Pressure |      | 额定压力 & 最高压力 / Rated Pressure & Max. Pressure | 吐出空气量 / Rated Airflow |       | 吐出空气量 / Rated Airflow | 页 / Page |
|-------------|-----------------------|------|----------------------|------|----------------------------------------------|-----------------------|-------|-----------------------|----------|
|             | kPa                   | psig | kPa                  | psig |                                              | L/min                 | cfm   |                       |          |
| DAH102-X1   | 20                    | 2.84 | 50                   | 7.11 |                                              | 5                     | 0.177 |                       | 39       |
| DAH102-Y1   | 20                    | 2.84 | 50                   | 7.11 |                                              | 5                     | 0.177 |                       | 39       |
| DAH105-X1   | 50                    | 7.11 | 80                   | 11.4 |                                              | 2.5                   | 0.088 |                       | 40       |
| DAH105-Y1   | 50                    | 7.11 | 80                   | 11.4 |                                              | 2.5                   | 0.088 |                       | 40       |
| DAH110-X1   | 100                   | 14.2 | 120                  | 17.1 |                                              | 1.0                   | 0.035 |                       | 41       |
| DAH110-Y1   | 100                   | 14.2 | 120                  | 17.1 |                                              | 1.0                   | 0.035 |                       | 41       |

## DC 线性 真空泵 / DC Linear Free Piston Vacuum Pump

| 型 号 / Model | 达到真空度 / Attainable Vacuum |       | 吐出空气量 / Rated Airflow | 吐出空气量 / Rated Airflow | 页 / Page |
|-------------|---------------------------|-------|-----------------------|-----------------------|----------|
|             | kPa                       | in.Hg | L/min                 | cfm                   |          |
| DVH130-X1   | -40                       | -11.8 | 7                     | 0.247                 | 42       |
| DVH130-Y1   | -40                       | -11.8 | 7                     | 0.247                 | 42       |
| DVH145-X1   | -60                       | -17.7 | 3                     | 0.106                 | 43       |
| DVH145-Y1   | -60                       | -17.7 | 3                     | 0.106                 | 43       |

AC 线性 隔膜泵 ( 压缩泵专用 ) / AC Linear Diaphragm Pump (Blower Type)

| 型 号 / Model | 额定压力 / Rated Pressure |      | 最高压力 / Max. Pressure |      | 额定压力 & 最高压力 / Rated Pressure & Max. Pressure | 吐出空气量 / Rated Airflow |       | 吐出空气量 / Rated Airflow | 页 / Page |
|-------------|-----------------------|------|----------------------|------|----------------------------------------------|-----------------------|-------|-----------------------|----------|
|             | kPa                   | psig | kPa                  | psig |                                              | L/min                 | cfm   |                       |          |
| VC0100      | 4                     | 0.57 | 16                   | 2.28 |                                              | 6                     | 0.212 |                       | 46       |
| VC0101      | 10                    | 1.42 | 20                   | 2.84 |                                              | 10                    | 0.35  |                       | 48       |
| VC0101S     | 5                     | 0.71 | 26                   | 3.70 |                                              | 15                    | 0.53  |                       | 49       |
| VC0201B     | 10                    | 1.42 | 18                   | 2.56 |                                              | 20                    | 0.71  |                       | 51       |
| VC0301B     | 10                    | 1.42 | 20                   | 2.84 |                                              | 25                    | 0.88  |                       | 53       |

050100150200250300(kPa)

020406080100120(L/min)

AC 线性 隔膜泵 ( 压缩泵 / 真空泵 兼用 ) / AC Linear Diaphragm Pump (Dual Type)

| 型 号 / Model     | 达到真空度 / Attainable Vacuum |       | 达到真空度 / Attainable Vacuum |      | 定格压力 / Rated Pressure |      | 最高压力 / Max. Pressure |      | 额定压力 & 最高压力 / Rated Pressure & Max. Pressure | 吐出空气量 / Rated Airflow |       | 吐出空气量 / Rated Airflow | 页 / Page |
|-----------------|---------------------------|-------|---------------------------|------|-----------------------|------|----------------------|------|----------------------------------------------|-----------------------|-------|-----------------------|----------|
|                 | kPa                       | in.Hg | kPa                       | psig | kPa                   | psig | kPa                  | psig |                                              | L/min                 | cfm   |                       |          |
| VC0100          |                           | -14.7 | -4.33                     | 4    | 0.57                  | 16   | 2.28                 |      |                                              | 6                     | 0.212 |                       | 45       |
| VC0101<br>120 V |                           | -18.7 | -5.51                     | 10   | 1.42                  | 18   | 2.56                 |      |                                              | 10                    | 0.35  |                       | 47       |
| VC0101<br>230 V |                           | -10   | -2.95                     | 10   | 1.42                  | 15   | 2.13                 |      |                                              | 10                    | 0.35  |                       | 47       |
| VC0201B         |                           | -18.7 | -5.51                     | 10   | 1.42                  | 18   | 2.56                 |      |                                              | 20                    | 0.71  |                       | 50       |
| VC0301B         |                           | -21.3 | -6.30                     | 10   | 1.42                  | 20   | 2.84                 |      |                                              | 25                    | 0.88  |                       | 52       |

(kPa)-80-60-40-200

050100150(kPa)

0204060(L/min)

DC液体泵 / DC Liquid Pump

| 型 号 / Model | 使用压力范围 / Working Pressure Range |           | 使用压力范围 / Working Pressure Range | 流量 / Flow Rate | 流量 / Flow Rate | 自吸力 / Self-priming Pressure |      | 自吸力 / Self-priming Pressure | 页 / Page |
|-------------|---------------------------------|-----------|---------------------------------|----------------|----------------|-----------------------------|------|-----------------------------|----------|
|             | kPa                             | psig      |                                 |                |                | kPa                         | psig |                             |          |
| DPE-100     | 0 to 100                        | 0 to 14.2 |                                 | 100            |                | 20                          | 2.84 |                             | 73       |
| DPE-400     | 0 to 100                        | 0 to 14.2 |                                 | 400            |                | 40                          | 5.69 |                             | 73       |
| DPE-400BL   | 0 to 100                        | 0 to 14.2 |                                 | 400            |                | 40                          | 5.69 |                             | 73       |
| DPE-800     | 0 to 100                        | 0 to 14.2 |                                 | 800            |                | 40                          | 5.69 |                             | 73       |
| DPE-100BLC  | 0 to 100                        | 0 to 14.2 |                                 | 100            |                | 10                          | 1.42 |                             | 75       |
| DPE-200BLC  | 0 to 100                        | 0 to 14.2 |                                 | 200            |                | 20                          | 2.84 |                             | 75       |

(kPa)020406080100

(mL/min)0200400600800

(kPa)0204060

测试条件 : 25℃ 水 / Test conditions: Water at 25 degrees.

液体泵(BIMOR泵) / Liquid Pump (BIMOR PUMP)

| 型 号 / Model | 吐出压力 / Discharge Pressure |      | 吐出压力 / Discharge Pressure | 流量 / Flow Rate | 流量 / Flow Rate | 自吸力 / Self-priming Pressure |      | 自吸力 / Self-priming Pressure | 页 / Page |
|-------------|---------------------------|------|---------------------------|----------------|----------------|-----------------------------|------|-----------------------------|----------|
|             | kPa                       | psig |                           |                |                | kPa                         | psig |                             |          |
| BPS-215i    | 15                        | 2.13 |                           | 30             |                | 3                           | 0.43 |                             | 70       |
| BPS-235G    | 15                        | 2.13 |                           | 30             |                | 1.5                         | 0.21 |                             |          |
| BPH-214i    | 18                        | 2.56 |                           | 350            |                | 8                           | 1.14 |                             |          |
| BPH-214D    | 18                        | 2.56 |                           | 350            |                | 8                           | 1.14 |                             |          |
| BPH-214E    | 18                        | 2.56 |                           | 350            |                | 8                           | 1.14 |                             |          |
| BPH-214G    | 17                        | 2.41 |                           | 350            |                | 7                           | 1.00 |                             |          |
| BPH-414i    | 35                        | 4.98 |                           | 500            |                | 12                          | 1.70 |                             |          |
| BPH-414D    | 35                        | 4.98 |                           | 500            |                | 12                          | 1.70 |                             |          |
| BPH-414E    | 35                        | 4.98 |                           | 500            |                | 12                          | 1.70 |                             |          |
| BPH-414G    | 32                        | 4.54 |                           | 450            |                | 10                          | 1.42 |                             |          |
| BPH-474G    | 35                        | 4.98 |                           | 400            |                | 10                          | 1.42 |                             |          |
| BPH-474P    | 35                        | 4.98 |                           | 400            |                | 10                          | 1.42 |                             |          |
| BPHS-414i   | 35                        | 4.98 |                           | 700            |                | 12                          | 1.70 |                             |          |
| BPHS-414E   | 35                        | 4.98 |                           | 700            |                | 12                          | 1.70 |                             |          |
| BPHS-414G   | 35                        | 4.98 |                           | 700            |                | 12                          | 1.70 |                             |          |
| BPHS-474G   | 35                        | 4.98 |                           | 500            |                | 10                          | 1.42 |                             |          |
| BPHS-474P   | 35                        | 4.98 |                           | 500            |                | 10                          | 1.42 |                             |          |
| BPF-465P    | 35                        | 4.98 |                           | 400            |                | 10                          | 1.42 |                             |          |

(kPa)020406080100

(mL/min)0200400600800

(kPa)0204060

测试条件 : 25℃ 水 , 60Hz / Test conditions: 25℃ water at AC frequency 60 Hz.

DC 压缩泵 / 真空泵 (兼用) / DC Compressor and Vacuum Pump (Dual Type)

| 型 号 / Model | 达到真空度<br>/ Attainable Vacuum | 达到真空度<br>/ Attainable Vacuum |       | 最高压力<br>/ Max. Pressure |      | 吐出空气量<br>/ Free Air Displacement | 吐出空气量<br>/ Free Air Displacement |       | 页<br>/ Page |
|-------------|------------------------------|------------------------------|-------|-------------------------|------|----------------------------------|----------------------------------|-------|-------------|
|             |                              | kPa                          | in.Hg | kPa                     | psig |                                  | L/min                            | cfm   |             |
| DP0125      |                              | -33.3                        | -9.84 | 30                      | 4.27 |                                  | 2.5                              | 0.088 | 61          |
| DP0140      |                              | -53.3                        | -15.7 | 50                      | 7.11 |                                  | 4                                | 0.141 | 62          |
| DP0102      |                              | -26.7                        | -7.87 | 45                      | 6.40 |                                  | 5                                | 0.177 | 63          |
| DP0102S     |                              | -26.7                        | -7.87 | 45                      | 6.40 |                                  | 7                                | 0.247 | 63          |
| DP0102H-X1  |                              | -50.7                        | -15.0 | 80                      | 11.4 |                                  | 4                                | 0.141 | 64          |
| DP0110-X1   |                              | -66.7                        | -19.7 | 150                     | 21.3 |                                  | 7.5                              | 0.265 | 66          |
| DP0110-Y1   |                              | -66.7                        | -19.7 | 150                     | 21.3 |                                  | 7.5                              | 0.265 | 66          |
| DP0110-X3   |                              | -66.7                        | -19.7 | 150                     | 21.3 |                                  | 7.5                              | 0.265 | 67          |
| DP0110T-X1  |                              | -60                          | -17.7 | 150                     | 21.3 |                                  | 5.5                              | 0.194 | 68          |
| DP0110T-Y1  |                              | -60                          | -17.7 | 150                     | 21.3 |                                  | 5.5                              | 0.194 | 68          |
| DP0210TA-Y1 |                              | -60                          | -17.7 | 150                     | 21.3 |                                  | 10                               | 0.35  | 69          |
| DP0105-X1   |                              | -66.7                        | -19.7 | 250                     | 35.6 |                                  | 2.8                              | 0.099 | 55          |
| DP0105-Y1   |                              | -66.7                        | -19.7 | 250                     | 35.6 |                                  | 2.8                              | 0.099 | 55          |

(kPa)-80-60-40-200

050100150200250(kPa)

0204060(L/min)

DC 压缩泵 (压缩泵专用) / DC Compressor only

| 型 号 / Model | 达到真空度<br>/ Attainable Vacuum | 达到真空度<br>/ Attainable Vacuum |       | 最高压力<br>/ Max. Pressure |      | 吐出空气量<br>/ Free Air Displacement | 吐出空气量<br>/ Free Air Displacement |       | 页<br>/ Page |
|-------------|------------------------------|------------------------------|-------|-------------------------|------|----------------------------------|----------------------------------|-------|-------------|
|             |                              | kPa                          | in.Hg | kPa                     | psig |                                  | L/min                            | cfm   |             |
| DP0102H-X2  |                              |                              |       | 80                      | 11.4 |                                  | 4                                | 0.141 | 65          |
| DPA0105-X1  |                              |                              |       | 220                     | 31.3 |                                  | 2.8                              | 0.099 | 65          |
| DPA0105-Y1  |                              |                              |       | 220                     | 31.3 |                                  | 2.8                              | 0.099 | 66          |
| DP0410-X2   |                              |                              |       | 180                     | 25.6 |                                  | 18                               | 0.64  | 58          |
| DP0410-Y2   |                              |                              |       | 180                     | 25.6 |                                  | 18                               | 0.64  | 58          |
| DP0410T-Y2  |                              |                              |       | 150                     | 21.3 |                                  | 34                               | 1.2   | 60          |

(kPa)-80-60-40-200

050100150200250(kPa)

0204060(L/min)

DC 真空泵 (真空泵专用) / DC Vacuum Pump only

| 型 号 / Model | 达到真空度<br>/ Attainable Vacuum | 达到真空度<br>/ Attainable Vacuum |       | 最高压力<br>/ Max. Pressure |      | 吐出空气量<br>/ Free Air Displacement | 吐出空气量<br>/ Free Air Displacement |      | 页<br>/ Page |
|-------------|------------------------------|------------------------------|-------|-------------------------|------|----------------------------------|----------------------------------|------|-------------|
|             |                              | kPa                          | in.Hg | kPa                     | psig |                                  | L/min                            | cfm  |             |
| DP0410-X1   |                              | -77.3                        | -22.8 |                         |      |                                  | 18                               | 0.64 | 57          |
| DP0410-Y1   |                              | -77.3                        | -22.8 |                         |      |                                  | 18                               | 0.64 | 57          |
| DP0410T-Y1  |                              | -77.3                        | -22.8 |                         |      |                                  | 34                               | 1.2  | 59          |

(kPa)-80-60-40-200

050100150200250(kPa)

0204060(L/min)

# 单位换算表 / Conversion Tables

| 压力 / Pressure |                           |       |
|---------------|---------------------------|-------|
| kPa           | kgf/cm <sup>2</sup> (bar) | psig  |
| 300           | 3.0                       | 42.7  |
| 250           | 2.5                       | 35.6  |
| 220           | 2.2                       | 31.3  |
| 200           | 2.0                       | 28.4  |
| 180           | 1.8                       | 25.6  |
| 150           | 1.5                       | 21.3  |
| 130           | 1.3                       | 18.5  |
| 120           | 1.2                       | 17.1  |
| 100           | 1.0                       | 14.2  |
| 80            | 0.8                       | 11.4  |
| 70            | 0.7                       | 9.96  |
| 50            | 0.5                       | 7.11  |
| 45            | 0.45                      | 6.40  |
| 30            | 0.3                       | 4.27  |
| 26            | 0.26                      | 3.70  |
| 20            | 0.2                       | 2.84  |
| 18            | 0.18                      | 2.56  |
| 16            | 0.16                      | 2.28  |
| 15            | 0.15                      | 2.13  |
| 10            | 0.1                       | 1.42  |
| 7             | 0.07                      | 1.00  |
| 5             | 0.05                      | 0.71  |
| 4             | 0.04                      | 0.57  |
| 1             | 0.01                      | 0.142 |
| 0             | 0                         | 0     |

| 流量 / Flow Rate |       |       |       |
|----------------|-------|-------|-------|
| L/min          | cfm   | L/min | cfm   |
| 0.80           | 0.028 | 25.0  | 0.883 |
| 1.00           | 0.035 | 28.0  | 0.989 |
| 2.00           | 0.070 | 28.32 | 1.00  |
| 2.50           | 0.088 | 30.0  | 1.06  |
| 2.80           | 0.099 | 34.0  | 1.20  |
| 2.83           | 0.100 | 35.0  | 1.24  |
| 3.00           | 0.106 | 35.4  | 1.25  |
| 3.50           | 0.124 | 40.0  | 1.41  |
| 4.00           | 0.141 | 45.0  | 1.59  |
| 5.00           | 0.177 | 50.0  | 1.77  |
| 5.50           | 0.194 | 55.0  | 1.94  |
| 6.00           | 0.212 | 56.6  | 2.00  |
| 7.00           | 0.247 | 60.0  | 2.12  |
| 7.50           | 0.265 | 70.0  | 2.47  |
| 8.00           | 0.283 | 75.0  | 2.65  |
| 10.0           | 0.353 | 80.0  | 2.83  |
| 12.0           | 0.424 | 85.0  | 3.00  |
| 14.2           | 0.500 | 90.0  | 3.18  |
| 15.0           | 0.530 | 100   | 3.53  |
| 16.0           | 0.565 | 120   | 4.24  |
| 18.0           | 0.636 | 150   | 5.30  |
| 20.0           | 0.708 | 200   | 7.06  |

| 真空度 / Vacuum |      |       |       |
|--------------|------|-------|-------|
| kPa          | mmHg | mbar  | in.Hg |
| 0            | 0    | 0     | 0     |
| -13.3        | -100 | -133  | -3.94 |
| -26.7        | -200 | -267  | -7.87 |
| -33.3        | -250 | -333  | -9.84 |
| -40.0        | -300 | -400  | -11.8 |
| -44.0        | -330 | -440  | -13.0 |
| -45.3        | -340 | -453  | -13.4 |
| -46.7        | -350 | -467  | -13.8 |
| -53.3        | -400 | -533  | -15.7 |
| -60.0        | -450 | -600  | -17.7 |
| -66.7        | -500 | -667  | -19.7 |
| -73.3        | -550 | -733  | -21.7 |
| -80.0        | -600 | -800  | -23.6 |
| -93.3        | -700 | -933  | -27.6 |
| -100.0       | -750 | -1000 | -29.5 |
| -101.3       | -760 | -1013 | -29.9 |

| 压力 / Pressure       |     |                     |      |       |
|---------------------|-----|---------------------|------|-------|
| from \ to           | kPa | kgf/cm <sup>2</sup> | bar  | psig  |
| kPa                 | 1   | 0.01                | 0.01 | 0.142 |
| kgf/cm <sup>2</sup> | 100 | 1                   | 1    | 14.2  |
| bar                 | 100 | 1                   | 1    | 14.2  |
| psig                | 7   | 0.07                | 0.07 | 1     |

| 真空度 / Vacuum |        |       |        |         |
|--------------|--------|-------|--------|---------|
| from \ to    | kPa    | mmHg  | mbar   | in.Hg   |
| kPa          | -1     | -7.50 | -10    | -0.295  |
| mmHg         | -0.133 | -1    | -1.335 | -0.0394 |
| mbar         | -0.1   | -0.75 | -1     | -0.0295 |
| in. Hg       | -3.39  | -25.4 | -33.92 | -1      |

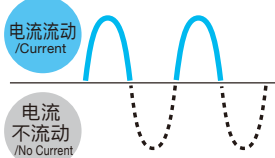
## 线性驱动/自由活塞系统 / Linear Motor Driven Free Piston System

通过电磁铁的吸力和弹簧的反作用力来推动活塞，从而产生压力。交流系统利用交流波形和硅二极管，DC系统利用直流波形和逆变器。

The attractive force of the electromagnet and the reaction force of the spring drive the piston to generate pressure.  
There are AC models that use AC waveform and a silicon diode, and DC models that use DC waveform and an inverter.

### [交流电源、硅二极管的效果]

/AC Power (The effect of using a silicon diode)

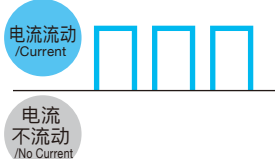


利用硅二极管的特性，开(电源流动)和关(电流不流动)反复进行半波整流。

By utilizing the characteristics of the silicon diode, it creates a half-rectified current that repeats ON (current flows) and OFF (no current).

### [直流电源、逆变器的效果]

/DC Power (The effect of using an inverter)



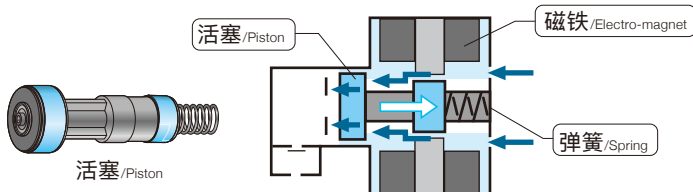
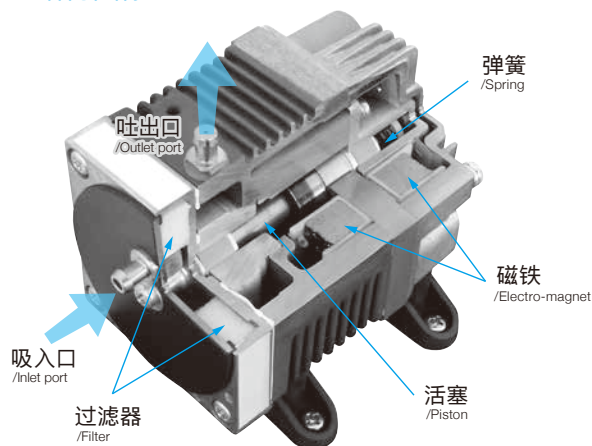
根据逆变器的能力，产生ON(电源流动)和OFF(电流不流动)。

The inverter creates a half-rectified current that repeats ON (current flows) and OFF (no current).

AC方式 / AC power

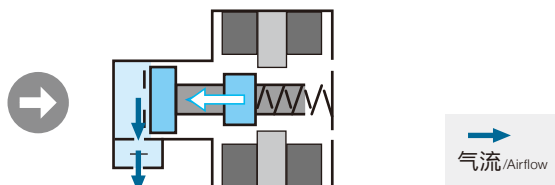
DC方式 / DC power

### <结构图像 / Structural image>



当电流流动时，产生磁力，吸引(拉伸)活塞，弹簧被压缩。

When electric current flows, a magnetic force is generated to pull the piston and the spring is compressed.



如果没有电流流动，则磁力消失，活塞被压缩的弹簧的复原力推回。

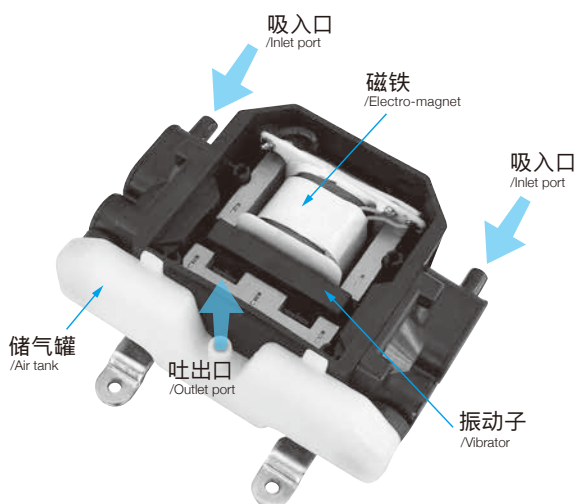
When the electric current stops, the magnetic force is lost and the piston is pushed back by the restoring force of the compressed spring.

## 电磁驱动/隔膜方式 / Electromagnetic Driven Diaphragm System

通过电磁铁和磁铁的吸引、排斥力使振子往复运动，通过移动隔膜产生压力。

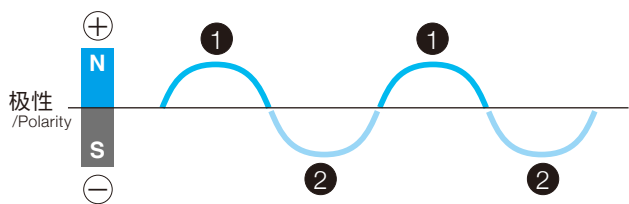
The attractive / repulsive force of the electromagnet reciprocates a vibrator that moves the diaphragm to generate pressure.

### <结构图像 / Structural image>



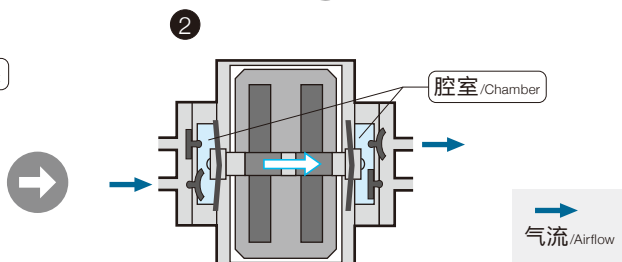
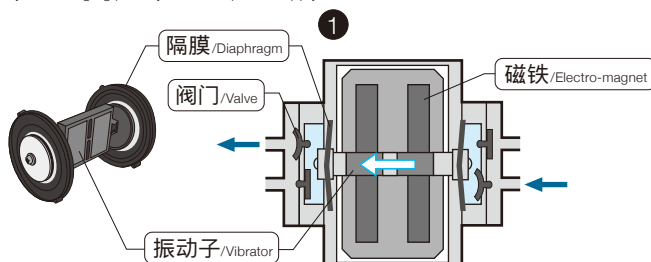
### [交流电源、隔膜的效果]

/AC Power (The effect of using a diaphragm)



因交流电源引起的极性变化而反复排斥，被压缩、吸引。

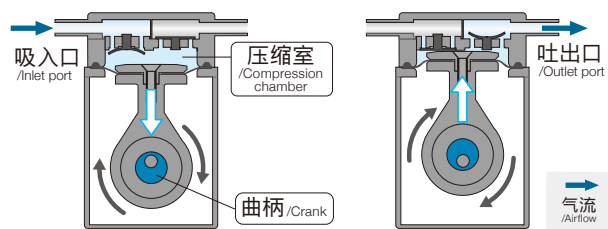
The air is drawn and discharged alternately by the changing polarity of the AC power supply



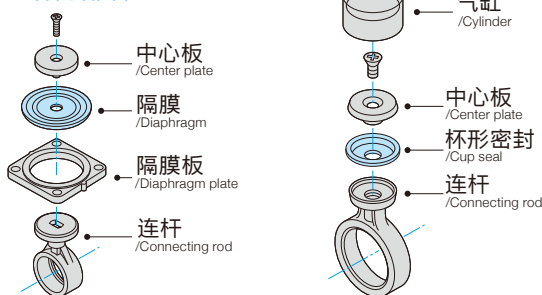
## DC泵/隔膜系统/DC Motor Driven Diaphragm System

通过曲柄将DC电机的旋转运动转换为往复运动，让安装在连杆上的隔膜动作产生压力。

The rotational motion of the DC motor is converted into a reciprocating motion by the crank, and moves the diaphragm attached to the connecting rod to generate pressure.



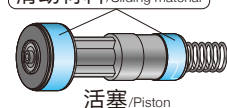
### <结构部件/Parts>



隔膜方式  
/Diaphragm pump

杯形密封系统  
/Piston pump (Cup seal system)

### 滑动材料/Sliding material



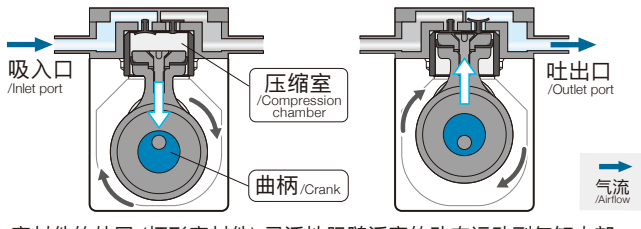
杯形密封利用了我们在线性压缩机和真空泵中使用的活塞滑动材料的专有技术。

The know-how of the piston sliding material used for Nitto Kohki linear compressor and vacuum pump is utilized for the cup seal.

## DC泵/杯形密封系统/DC Motor Driven Piston Pump (Cup seal system)

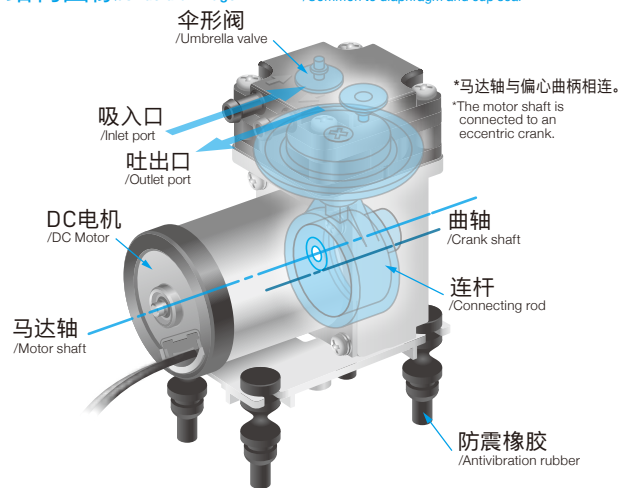
通过曲柄将DC电机的旋转运动转换为往复运动，让安装在连杆上的杯形密封动作产生压力。

The rotational motion of the DC motor is converted into a reciprocating motion by the crank, and moves the cup seal attached to the connecting rod to generate pressure.



密封件的外周 (杯形密封件) 灵活地跟随活塞的动态运动到气缸内部。  
The outer circumference of the seal part (cup seal) flexibly follows the inner wall of the cylinder against the dynamic movement of the piston.

### <结构图像/Structural image> (通用/Common to diaphragm and cup seal)

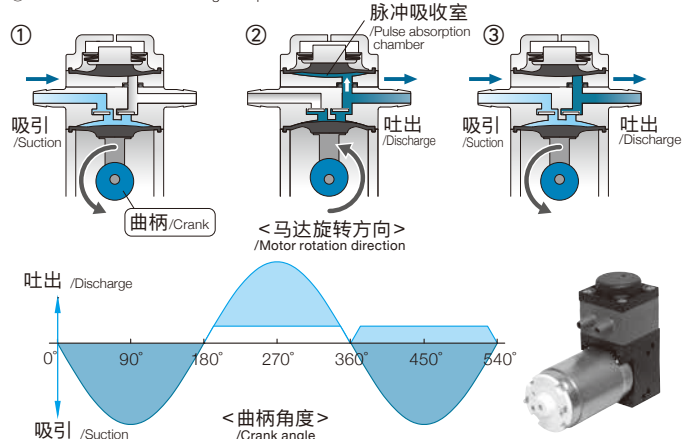


## 液体泵/隔膜方式/Liquid pump / Diaphragm System

### <脉冲吸收结构/Pulse absorption mechanism>

- 吸入。
- 吐出。部分液体被推到脉冲吸收室，因此不会直接流向吐出口。进入泵的循环吸入与吐出同步。
- 通过②和③的过程，可以减轻脉冲。

- Suction
- Discharge. Partial fluid delivery to pulse absorption chamber, not directly forced to outlet port. Cyclical suction drawn into pump is synchronized with the discharge.
- Pulses are attenuated through the process of 2 and 3.



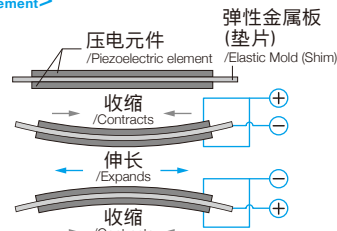
## 液体泵/压电泵/Liquid pump / Piezoelectric pump

### <压电元件/Piezoelectric element>

#### • 双晶片振动子 /Bimorph vibrator

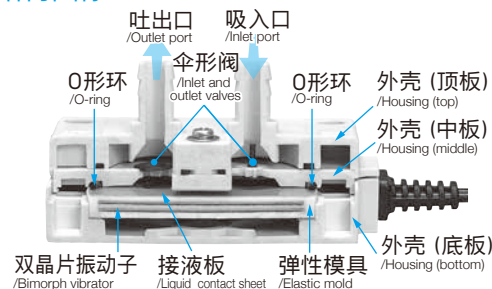
在两个压电元件的内部有粘贴弹性金属板 (垫片) 的结构。

BIMOR PUMP's driving force, the bimorph, comprises the elastic mold (Shim) between two parallel piezoelectric wafers.



双晶片是圆形的，在施加电压时变形为碗状。  
\*The shape of Bimorph is circular. It deforms when applied with electricity.

### <结构图像/Cross section>



## 型号表示及其含义 /Information found in the model name

以下所示的功耗，额定压力和到达真空度的指示仅用作大尺寸机型选择的指导。

The following indications of power consumption, rated pressure and attained vacuum should be used only as a general guideline for model selection.

**Ac0102**

额定压力: 20 kPa {0.2 kgf/cm<sup>2</sup>}  
/Rated Pressure: 20 kPa {0.2 kgf/cm<sup>2</sup>}

消耗功率: 10 W/Rated Consumption: 10 W

压缩机/Air compressor

**VP0125**

达到真空度: -33.3 kPa {-250 mmHg}  
/Attainable Vacuum: -33.3 kPa {-250 mmHg}

消耗功率: 10 W/Rated Consumption: 10 W

真空泵/Vacuum pump

# 技术术语解释 / Explanation of Technical Terms

在选择适合您的应用的型号之前, 请务必阅读以下“技术术语解释”。

Be sure to read the following “Explanation of Technical Terms” before selecting a model appropriate for your application.

## 压缩泵和真空泵的用途、适用流体 / Application Examples and Applicable Fluids for Compressors and Vacuum Pumps

用途: 设备置入用    适用流体: 空气 / Application: for incorporation into equipment    Applicable fluid: Air

## 关于压缩泵和真空泵 / For Compressors & Vacuum Pumps

**耐用时间**  
Rated performance

: 除维护过滤器外, 设备可以无需修理的平均累计时间。这表示额定风量降至规格值的80%所需的预计时间。实际使用寿命可能取决于实际运行和环境条件, 如输出压力设置, 维护计划, 通风, 环境温度, 工作周期等。

The average total accumulated time over which the unit can be used without repair, except the maintenance of the filter. This indicates the expected time required for the rated air flow to fall to 80% of the specification value. The actual life might vary depending on the actual operating and environmental conditions such as output pressure setting, maintenance schedule, ventilation, ambient temperature, duty cycle, etc.

**平均无故障时间**  
MTTF

: 无维修的累计可使用工作时间 (除过滤器的保养、点检)。这是在额定运转吐出的空气量的规格值到80%以下的目标时间。实际的耐用时间会随着使用条件和使用环境 (使用压力、维护计划、通风、额定时间等) 的不同而异。

MTTF (Mean Time to Failure) is the average time that the product will function before it fails. However, this time is reference only and does not guarantee. Since MTTF depends on your actual operating environment and conditions, conduct performance evaluation test with an actual product prior to use.

**额定时间**  
Duty cycle

: 可在线圈绝缘等级的温度范围内使用的时间。  
The period of operation under the condition that the coil temperature will not exceed the coil insulation class limit.

**额定电源**  
Rated voltage

: 两种主要类型: AC 115 V/60 Hz和AC 230 V/50 Hz。(DC马达除外)  
大部分机型为50 Hz、60 Hz同时工作, 也有一部分专用机型。(50 Hz和60 Hz的运转能力不同)  
The two major types are 115 V AC/60 Hz and 230 V AC/50 Hz (excluding DC motors). While most models can be operated at both 50 Hz and 60 Hz with different performance characteristics, there are some models that are frequency specific.

**额定频率**  
Rated frequency

: 采用AC驱动泵时, 额定频率随型号而不同。有50/60 Hz兼用机型和50 Hz以及60 Hz专用机型。  
In the case of AC drive pumps, the rated frequency will vary according to the model. While some are designed for only 50 Hz or for 60 Hz, some are designed for both 50 Hz and 60 Hz.

**线圈绝缘等级**  
Coil insulations

: 本公司的产品根据日本电气用品安全法, 相当于E类, 一部分除外。但是, 这些组装用的产品被看作为“组件”, 被分为完成品以及构造, 仅供参考。  
The suggested class, most bare units attaining “E” class, is based on Japanese electric regulations. They are merely suggestions since bare units are considered “components” and are not classified as complete products or systems.

| 绝缘等级 (参考)<br>Coil Insulation Class (for reference only) | (温度极限, °C)<br>(Temperature limit, degrees C) |
|---------------------------------------------------------|----------------------------------------------|
| A                                                       | 100                                          |
| E                                                       | 115                                          |
| B                                                       | 125                                          |
| F                                                       | 150                                          |

**控制方法**  
Control method

: 由于负荷功率的变动, 控制电子部品时请注意。  
Be careful when controlling compressors and vacuum pumps with electronic components because the power factor depends upon the load.

**外形以及安装尺寸图**  
Outside & mounting dimensions

: 确认组装时的设置空间及安装空间。  
Useful for assessing the required space for installation. Include sufficient space surrounding the pump when designing it into your application.

**使用环境温度**  
Operating ambient temperature

: 0 ~ 40°C  
0 to 40°C

**使用环境湿度**  
Operating ambient humidity

: 30 ~ 85% (不可凝结)  
30 to 85% non-condensing

**保存环境温度**  
Storage environment temperature

: -10 ~ 60°C  
-10 to 60°C

**保存环境湿度**  
Storage environment humidity

: 10 ~ 90% (不可凝结)  
10 to 90% non-condensing

## 改进建议 / Improvement Suggestion

虽然本公司的压缩泵和真空泵采用独特的线圈冷却功能, 可控制内部温度上升。

但在超过额定压力运转时, 可能会导致温度上升, 如果温度过高, 可能需要减少运转额定时间, 或考虑使用辅助冷却风扇。

Our compressors and vacuum pumps employ a unique internal coil cooling feature to reduce or control the rise in internal temperature. If they are operated at higher than rated pressures, elevated temperatures may result. Should these temperatures become excessive, operating duty cycles may need to be reduced, or the use of an auxiliary cooling fan should be considered.

## 关于压缩机 /For Compressors

|                                                      |                                                                                                                                                                                                                                                                                |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>额定压力</b><br>Rated pressure                        | :可发挥最大能力(性能, 寿命) 的压力值。与50Hz/60 Hz的额定频率无关, 空气量基本一致的设计。<br>This is the pressure point where you will get optimum capabilities for performance and service life and where the pump is designed to have almost the same airflow regardless of a rated frequency of 50 Hz or 60 Hz. |
| <b>吐出空气量</b><br>Rated airflow                        | :额定压力时的吐出流量。(工作后3分钟以内)<br>The discharge airflow volume at the rated pressure. (within three (3) minutes after starting).                                                                                                                                                       |
| <b>额定运转</b><br>Rated operation                       | :额定压力、额定电压、额定频率的运转状态。<br>Operating conditions regarding the rated pressure, rated voltage, and rated frequency.                                                                                                                                                                |
| <b>最高压力</b><br>Maximum pressure                      | :吐出空气量为0时, 设计泵的工作到达最高压力。(不是保证值, 只是参考值)<br>The highest obtainable pressure at which the pump is designed to operate while producing zero discharge airflow (not guaranteed; for reference only).                                                                                |
| <b>消耗功率</b><br>Power consumption                     | :以额定压力运转时的输入功率。<br>The wattage during operation at the rated pressure.                                                                                                                                                                                                         |
| <b>电流</b><br>Electric current                        | :以额定压力运转时的电流。(参考)<br>The electric current value when operated at rated pressure (for reference only).                                                                                                                                                                          |
| <b>空气量特性图</b><br>Airflow characteristics             | :空气量相对于压力的特性。(参考)<br>Discharge pressure-airflow curve (for reference only).                                                                                                                                                                                                    |
| <b>消耗功率特性图</b><br>Power consumption characteristics: | :消耗功率相对于压力的特性。(参考)<br>Discharge pressure-power consumption curve (for reference only).                                                                                                                                                                                         |

## 关于真空泵 /For Vacuum Pumps

|                                                      |                                                                                                                                                                                                                         |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>达到真空度</b><br>Attainable vacuum                    | :关闭泵吸入口后运转时的最高真空度。(部分专用机型除外)<br>The highest vacuum the pump can attain with the pump inlet closed (except some of the exclusive models).<br>*本商品目录采用计示压力 *The degree of vacuum shown in this catalog is gauge pressure. |
| <b>吐出空气量</b><br>Free air displacement                | :真空度0时的吐出流量。(运转后3分钟内)<br>The airflow volume at zero vacuum (within 3 minutes after starting).                                                                                                                           |
| <b>消耗功率</b><br>Power consumption                     | :达到真空度的范围内的最大输入功率。<br>The maximum wattage on the power consumption curve when measured against vacuum levels up to the pumps attainable vacuum.                                                                         |
| <b>电流</b><br>Electric current                        | :达到真空度的范围内的最大电流。(参考)<br>The maximum electric current on the current characteristics curve when measured against vacuum levels up to the pumps attainable vacuum. (for reference only).                                  |
| <b>流量特性图</b><br>Airflow characteristics              | :空气量相对于真空度的特性。(参考)<br>Vacuum-airflow curve (for reference only).                                                                                                                                                        |
| <b>消耗功率特性图</b><br>Power consumption characteristics: | :消耗功率相对于真空度的特性。(参考)<br>Vacuum-power consumption curve (for reference only).                                                                                                                                             |
| <b>排气特性图</b><br>Exhaust characteristics              | :将10升的容器抽成真空时的真空度的时间特性。(参考)<br>The time required to attain the respective vacuum in a 10 liter container (for reference only).                                                                                          |

## 关于DC泵 /For DC Pumps

|                                                                                                                                     |                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>吐出空气量</b><br>Free air displacement                                                                                               | :真空度0时的吐出流量。(运转后3分钟内)<br>The airflow volume at zero vacuum (within 3 minutes after starting). |
| <b>使用环境温度</b><br>Operating ambient temperature                                                                                      | :0 ~ 40°C (5 ~ 50°C, 仅限DP0105)<br>0 to 40°C (5 to 50°C for DP0105 only)                       |
| <b>使用环境湿度</b><br>Operating ambient humidity                                                                                         | :30 ~ 85 % (不可凝结)<br>30 to 85 % non-condensing                                                |
| 与气压同压力的状态下起动。(DPE系列也同样) Start-up the pump at the same level as the atmospheric pressure (Similarly in the case of DPE series pumps) |                                                                                               |

## 关于液体泵 /For Liquid Pumps

|                                     |                                                                                                                                                              |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>自吸力</b><br>Self-priming pressure | :泵将25°C的水抽起的能力。1 kPa相当于将25°C的水抽起10 cm。<br>The power the pump requires to draw up 25°C water. 1 kPa is equal to the power needed to draw up 25°C water 10 cm. |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|

本产品录可为用户指南, 以针对其用途确定合适的产品型号。在某些情况下, 用户可能需要更详细的信息, 本公司技术人员将会以规格表的形式提供各机型/型号的信息, 以进一步协助用户进行适当的选择。

This catalogue will give the guidelines needed to determine the appropriate model for your application(s). However, in certain cases you may need further detailed information, which will be provided in the form of a specifications sheet for each model/version by our technical staff who will further assist you in your selection.

规格及设计如有变更, 恕不另行通知。对于OEM用户, 在订购前必须以书面形式确认所需规格。

Specifications and designs are subject to change at any time without notice.

It is recommended that OEM customers confirm the required specifications in writing before placing orders.

凭借在众多用途中的设计，工程，制造以及对产品不断完善等方面积累的经验，向用户提供“智能化功能”包。

以下我们将介绍主要的设计特征，了解每个设计元素对开发优异的压缩泵或真空泵所发挥的作用。

Experience gained in designing, engineering, manufacturing and continually perfecting our products in thousands of applications has resulted in a “functionally intelligent” package. Please review these key design features and see how every design element contributes overall to the creation of a superior compressor or vacuum pump.

## 线性驱动活塞 / The Key Design Features of the Linear-motor-driven Free Piston System

### 小型·轻量 / Compact and Lightweight

马达和压缩部一体化  
/ with the motor and compressor  
combined into the single structure



只有活塞是可动部品，高效性的空间设计，比其他泵相比，实现小型，轻量化。因此，OEM设计时，也增加了机器壳内可收纳部品的选择项。

With the piston as the only moving part, efficient space utilization enables our pump to be considerably smaller and lighter than other pumps. This allows the OEM design engineer increased packaging options for other internal components.

### 低振動 / Low Vibration

活塞重量轻 / Using an ultra-lightweight piston



因为活塞是唯一可动部品，因此减少了往复时本体的反冲振动作用。另外采用防振橡胶脚垫，可吸收二次振动。

Reducing the moving parts to only the piston minimizes reactive force vibrations to the pump body. In addition, the secondary vibrations are isolated or absorbed through the anti-vibration rubber feet.

### 低噪音 / Low Noise Level

无动力传递音  
/ No transmission assemblies, means less noise



完全除去了复杂的动力传递结构，无旋转音及轴承音，实现了低噪音。另外，采用独特的自我冷却系统，实现了封闭式结构，从而避免了运转时噪音外泄。

With no need for complicated transmission mechanisms riding on ball bearings, or actuating linkages creating friction and noise, Nitto Kohki's pumps are inherently quieter. Additionally, the almost completely sealed configuration further suppresses secondary internal operating noises.

### 环保清洁 / Clean Operation – Clean Air

无油式构造 / Due to oil-less construction



不使用油分，润滑剂和其他不卫生的润滑油。此时，消耗功率和电流也会减少，无需担心一时的过载造成故障或烧毁。

All wearing surfaces use no oil, grease or other contaminating lubricants. The combination of a precision fluoropolymer sleeved piston assisted by an “air-bearing effect” made possible through a unique air path design, assures that the outlet air is completely free of oil.

### 低消耗功率 / Low Power Consumption

简单构造 / Truly energy efficient through integrated design



由于活塞是唯一的可动部品，比其他驱动方式相比，大幅度减少能耗，实现了优异的电气效率驱动。

Since the low mass piston is the only moving part, frictional losses are minimized, allowing lower starting and running current, and thus greater efficiency. Related benefits are realized through a lower rise in temperature, facilitating a longer operating life for the pump and the other components within your system.

### 防止过压 / Overload Protection Structure

自我压力控制功能 / protects against burnout



当压力过高时，活塞行程自动减少，以防止产生过压。此时，消耗功率和电流也会减少，无需担心一时的过载造成故障或烧毁。

As the pressure within the compressor increases, the piston stroke decreases. Along with this, electric current decreases. Thus a temporary overload will not cause a failure or the pump to burnout.

### 降低脉动 / Minimal Pulsating Effect

理想的活塞冲程 / due to the ideal piston stroke



无论有无负载，活塞都与电源频率同步运转，由于每分钟3000次/50 Hz或每分钟3600次/60 Hz的高速运转冲程，可极度减少脉冲，实现运转更顺畅，更线性。

The piston's mechanical resonance speed is synchronized with the input power frequency regardless of the load, i.e., 3000 strokes at 50 Hz, and 3600 strokes at 60 Hz per minute. This high speed produces shorter pulses which translate into a smoother, more uniform and “linear” motion.

### 起动快捷 / Instant Response

适应频繁的ON/OFF / enabling easy start-ups  
in frequent on-off short cycle applications



由于起动电流小，起动速度快，即使对于频繁的ON/OFF反复操作，也可即时应对。另外，可在加压状态下进行ON/OFF操作。

A very low starting current enables our pumps to produce immediate performance in quick short cycle applications, even in the presence of residual back pressure.

### 易维修 / Easy Maintenance

只需更换空气过滤器和活塞  
/ Only air filter and piston to change



无需给油的无油构造，可动部品（只有活塞）和简单的机械装置，无需担心由于过负荷而引起故障或者烧损，可长期发挥稳定的性能。

The oil-less construction requires no lubrication. A simple mechanism containing the piston as the only moving part causes no failure or burning due to an overload and provides stable performance over a long period of time.

### 长寿命 / Longer Lifetime

增加OEM价值 / increased OEM value



以下融合列举的所有主要特征，作为高价值泵，融合所有重要的一面，提供性能优异的泵。因此OEM设计工程师可以完全放心地将其组装到最先端的设备或装置中。

All key design features listed here combine to provide superior performance in all the important aspects of superior pump design. This enables the OEM engineer to have complete confidence in incorporating the unit into the most demanding systems, in the most advanced equipment.

# 空气压缩泵 / AIR COMPRESSOR

## AC线性自由活塞 压缩泵

/ AC LINEAR Free Piston Compressor

AC系列 低压  
AC series Low pressure

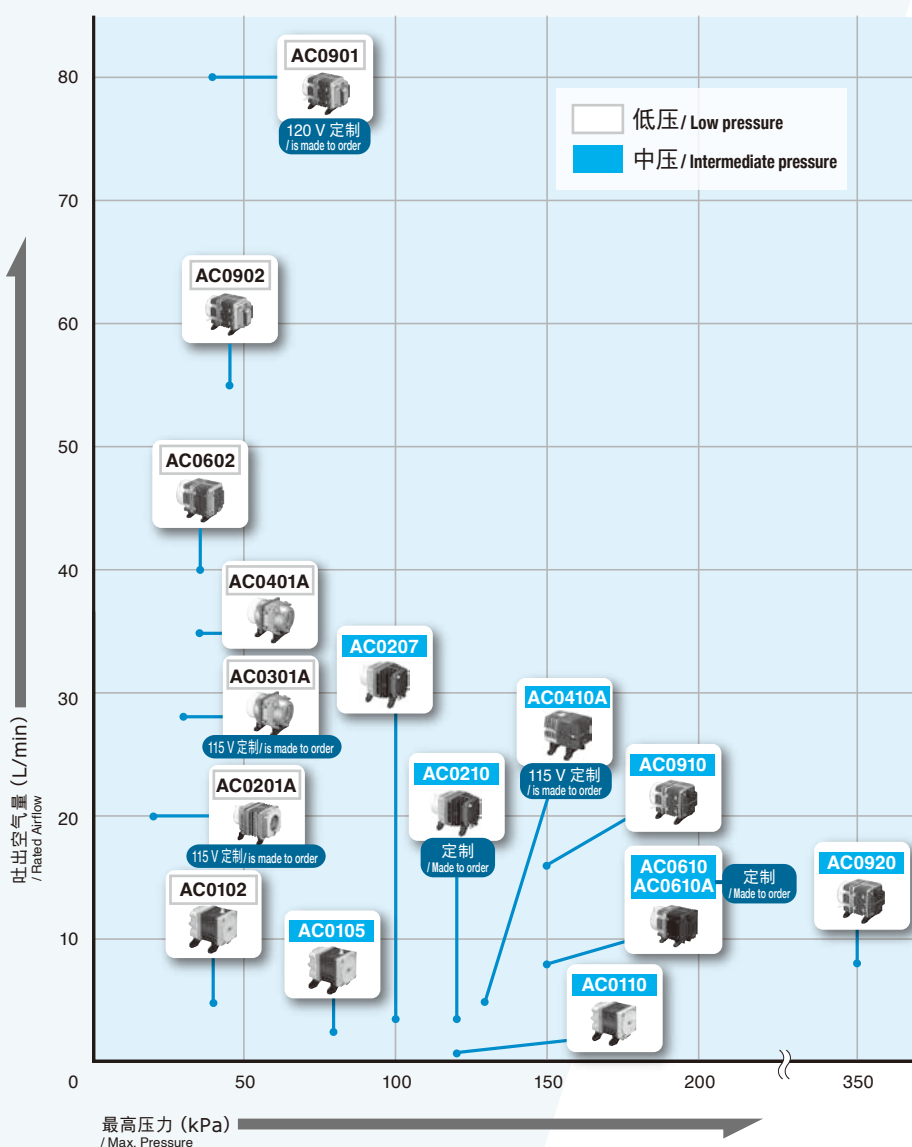
AC系列 中压  
AC series Intermediate pressure

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|--------------------|---|----|
| 定制 / Made to Order |   |    |
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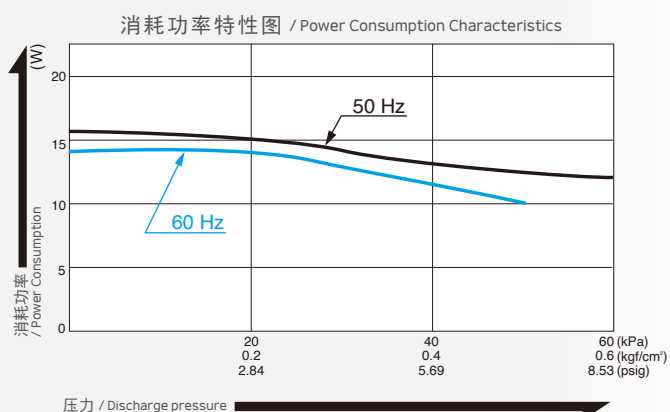
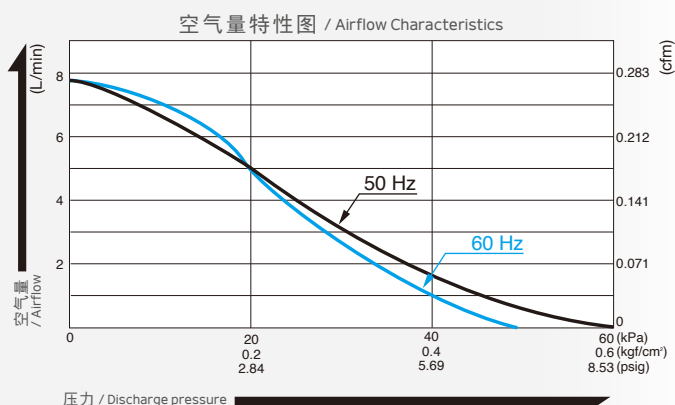


# 压缩泵 / Compressor

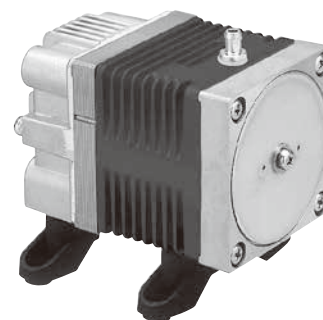
## 型号 AC0102



空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.



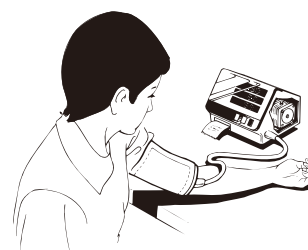
规格 / Specifications

|                                 |                                                        |
|---------------------------------|--------------------------------------------------------|
| 额定压力 / Rated Pressure           | 20 kPa (0.2 kgf/cm <sup>2</sup> )<br>0.2 bar 2.84 psig |
| 吐出空气量 / Rated Airflow           | 5 L/min<br>0.177 cfm                                   |
| 最高压力 / Maximum Pressure         | 40 kPa (0.4 kgf/cm <sup>2</sup> )<br>0.4 bar 5.69 psig |
| 额定电压 / Rated Voltage            | 115 V AC   230 V AC                                    |
| 额定频率 / Rated Frequency          | 50 Hz / 60 Hz                                          |
| 消耗功率 / Power Consumption        | 15 W / 14 W                                            |
| 耐用时间 (MTTF) / Rated Performance | 10,000 小时 / hours                                      |
| 吐出口尺寸 / Outlet                  | φ6 mm (外径) 软管接头 / 6 mm O.D. hose barb                  |
| 额定时间 / Duty Cycle               | 连续 / Continuous                                        |
| 线圈绝缘等级 / Coil Insulation Class  | UL 规格品：相当于 B 类<br>/ Class B for UL                     |
| 安装尺寸 / Mounting Dimensions      | 48 (L) x 62 (W) mm<br>1 - 57/64" (L) x 2 - 7/16" (W)   |
| 本体重量 / Weight                   | 0.7 kg 1.54 Lbs                                        |
| 导线长度 / Leadwire Length          | 200 mm<br>7 - 7/8"                                     |

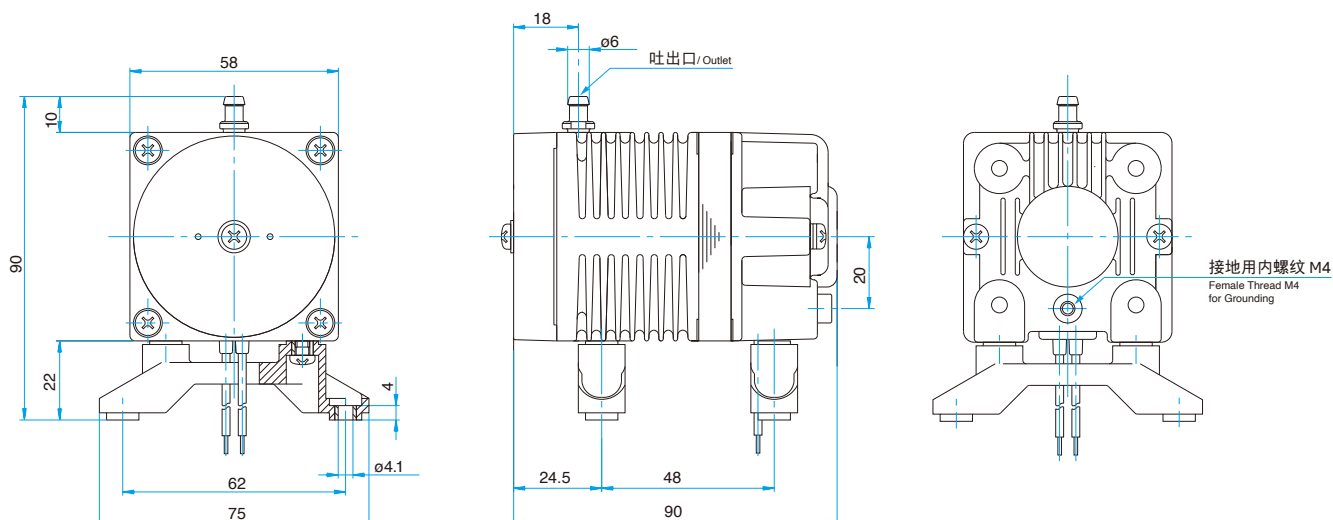
用途例 / Application Examples

滴水机 / Dripping Machine

血压计 / Blood Pressure Tester



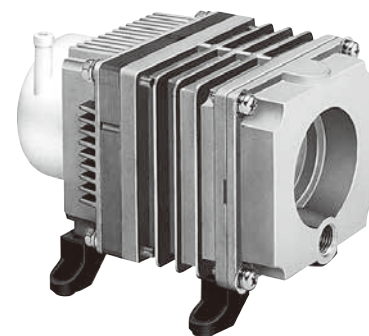
外形尺寸图 / External Dimensions (单位 / Unit : mm)



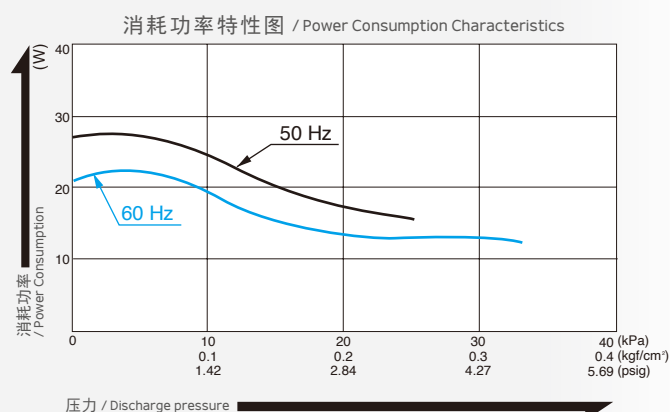
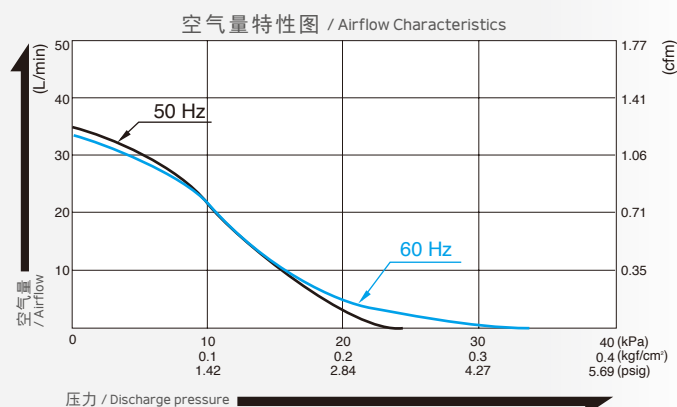
# 压缩泵 / Compressor

## 型号 AC0201A

115 V 定制 / 115 V is made to order



### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

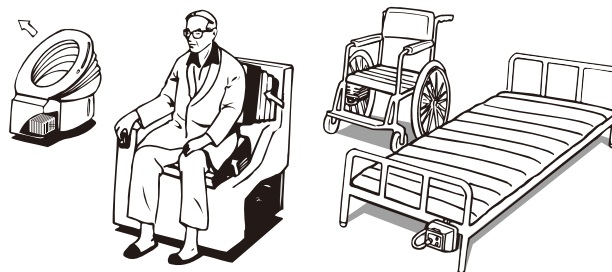
### 规格 / Specifications

|                                   |                                                        |                                 |
|-----------------------------------|--------------------------------------------------------|---------------------------------|
| 额定压力<br>/ Rated Pressure          | 10 kPa (0.1 kgf/cm <sup>2</sup> )<br>0.1 bar 1.42 psig |                                 |
| 吐出空气量<br>/ Rated Airflow          | 20 L/min<br>0.71 cfm                                   |                                 |
| 最高压力<br>/ Maximum Pressure        | 20 kPa (0.2 kgf/cm <sup>2</sup> )<br>0.2 bar 2.84 psig |                                 |
| 额定电压 / Rated Voltage              | 115 V AC                                               | 230 V AC                        |
| 额定频率 / Rated Frequency            | 50 Hz / 60 Hz                                          |                                 |
| 消耗功率 / Power Consumption          | 23 W / 19 W                                            |                                 |
| 耐用时间<br>/ Rated Performance       | 6,000 小时 / hours                                       |                                 |
| 吐出口尺寸 / Outlet                    | ISO Rc 1/4 (内螺纹 / internal thread)                     |                                 |
| 额定时间 / Duty Cycle                 | 连续 / Continuous                                        |                                 |
| 线圈绝缘等级<br>/ Coil Insulation Class | UL 规格品:<br>相当于 B 类<br>/ Class B for UL                 | 相当于 E 类<br>/ Class E equivalent |
| 安装尺寸<br>/ Mounting Dimensions     | 73 (L) x 88 (W) mm<br>2 - 7/8" (L) x 3 - 15/32" (W)    |                                 |
| 本体重量 / Weight                     | 1.5 kg 3.3 Lbs                                         |                                 |
| 导线长度 / Leadwire Length            | 200 mm<br>7 - 7/8"                                     |                                 |

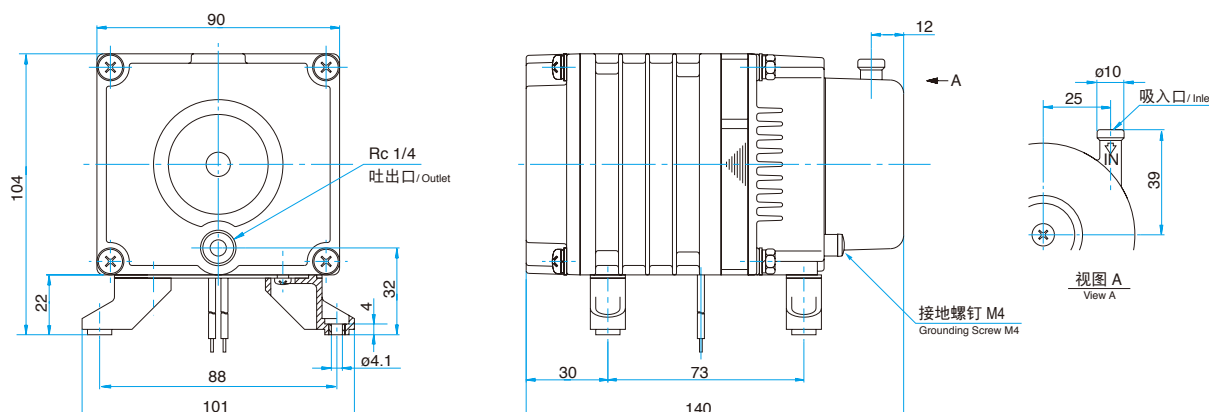
### 用途例 / Application Examples

空气式起立辅助器 / Seat Lifter Tester

防褥疮垫 / Bed Sore Prevention Mattress



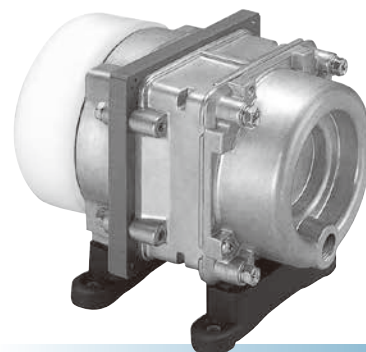
### 外形尺寸图 / External Dimensions (单位 / Unit : mm)



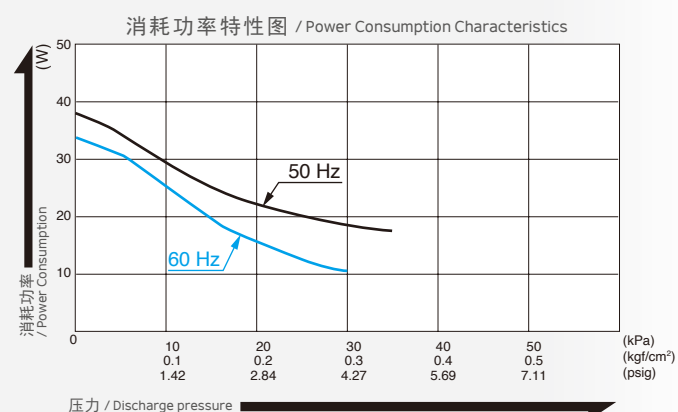
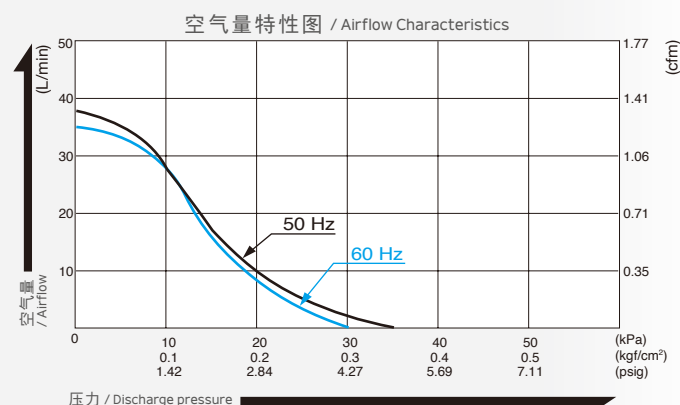
# 压缩泵 / Compressor

## 型号 AC0301A

115 V 定制 / 115 V is made to order



### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

### 规格 / Specifications

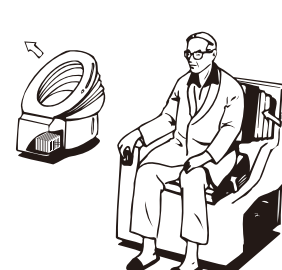
|                                |                                                        |                                 |
|--------------------------------|--------------------------------------------------------|---------------------------------|
| 额定压力 / Rated Pressure          | 10 kPa (0.1 kgf/cm <sup>2</sup> )<br>0.1 bar 1.42 psig |                                 |
| 吐出空气量 / Rated Airflow          | 28 L/min<br>0.99 cfm                                   |                                 |
| 最高压力 / Maximum Pressure        | 30 kPa (0.3 kgf/cm <sup>2</sup> )<br>0.3 bar 4.27 psig |                                 |
| 额定电压 / Rated Voltage           | 115 V AC                                               | 230 V AC                        |
| 额定频率 / Rated Frequency         | 60 Hz                                                  | 50 Hz                           |
| 消耗功率 / Power Consumption       | 25 W                                                   | 29 W                            |
| 耐用时间 / Rated Performance       | 10,000 小时 / hours                                      |                                 |
| 吐出口尺寸 / Outlet                 | ISO Rc 1/4 (内螺纹 / internal thread)                     |                                 |
| 额定时间 / Duty Cycle              | 连续 / Continuous                                        |                                 |
| 线圈绝缘等级 / Coil Insulation Class | UL 规格品:<br>相当于 B 类<br>/ Class B for UL                 | 相当于 E 类<br>/ Class E equivalent |
| 安装尺寸 / Mounting Dimensions     | 68 (L) x 84 (W) mm<br>2 - 43/64" (L) x 3 - 5/16" (W)   |                                 |
| 本体重量 / Weight                  | 1.9 kg 4.2 Lbs                                         |                                 |
| 导线长度 / Leadwire Length         | 200 mm<br>7 - 7/8"                                     |                                 |

### 用途例 / Application Examples

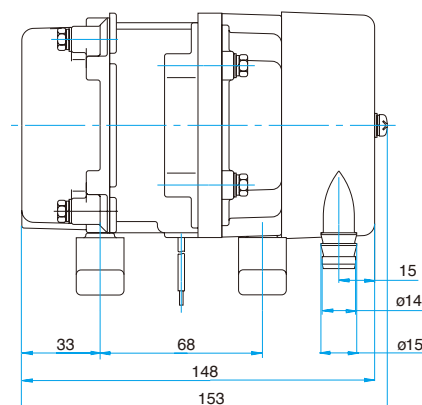
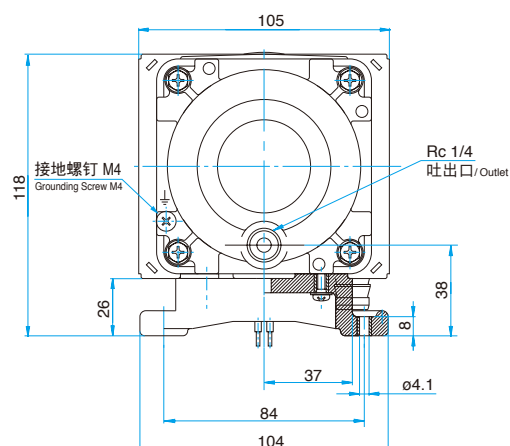
液体搅拌 / Liquid Mixer



空气式起立辅助器 / Seat Lifter Tester

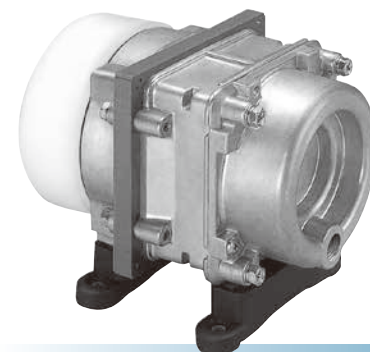


### 外形尺寸图 / External Dimensions (单位 / Unit : mm)

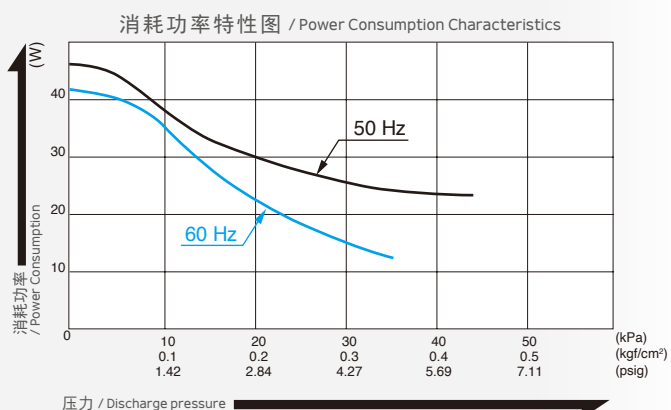
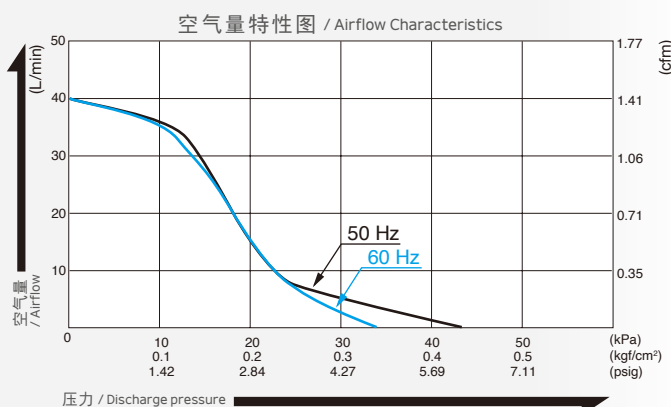


# 压缩泵 / Compressor

## 型号 AC0401A



### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

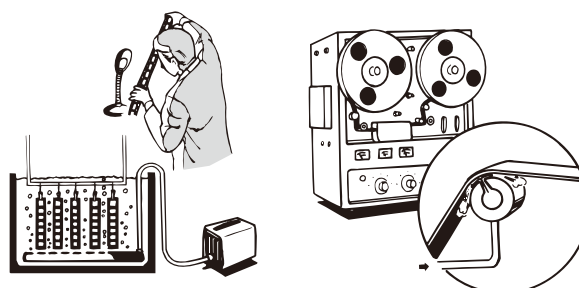
### 规格 / Specifications

|                                |                                                        |                                                          |
|--------------------------------|--------------------------------------------------------|----------------------------------------------------------|
| 额定压力 / Rated Pressure          | 10 kPa (0.1 kgf/cm <sup>2</sup> )<br>0.1 bar 1.42 psig |                                                          |
| 吐出空气量 / Rated Airflow          | 35 L/min<br>1.24 cfm                                   |                                                          |
| 最高压力 / Maximum Pressure        | 30 kPa (0.3 kgf/cm <sup>2</sup> )<br>0.3 bar 4.27 psig | 35 kPa (0.35 kgf/cm <sup>2</sup> )<br>0.35 bar 4.98 psig |
| 额定电压 / Rated Voltage           | 120 V AC                                               | 230 V AC                                                 |
| 额定频率 / Rated Frequency         | 60 Hz                                                  | 50 Hz                                                    |
| 消耗功率 / Power Consumption       | 35 W                                                   | 38 W                                                     |
| 耐用时间 / Rated Performance       | 10,000 小时 / hours                                      |                                                          |
| 吐出口尺寸 / Outlet                 | ISO Rc 1/4 (内螺纹 / internal thread)                     |                                                          |
| 额定时间 / Duty Cycle              | 连续 / Continuous                                        |                                                          |
| 线圈绝缘等级 / Coil Insulation Class | UL 规格品:<br>相当于 A 类<br>/ Class A for UL                 | 相当于 E 类<br>/ Class E equivalent                          |
| 安装尺寸 / Mounting Dimensions     | 68 (L) x 84 (W) mm<br>2 - 43/64" (L) x 3 - 5/16" (W)   |                                                          |
| 本体重量 / Weight                  | 1.9 kg 4.2 Lbs                                         |                                                          |
| 导线长度 / Leadwire Length         | 200 mm<br>7 - 7/8"                                     |                                                          |

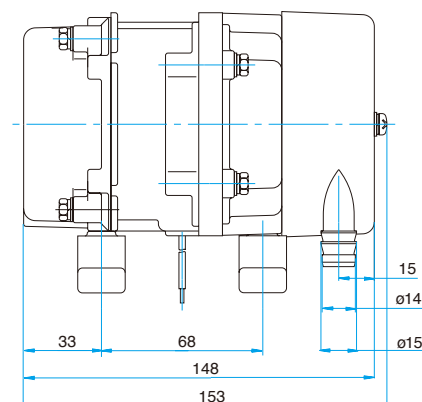
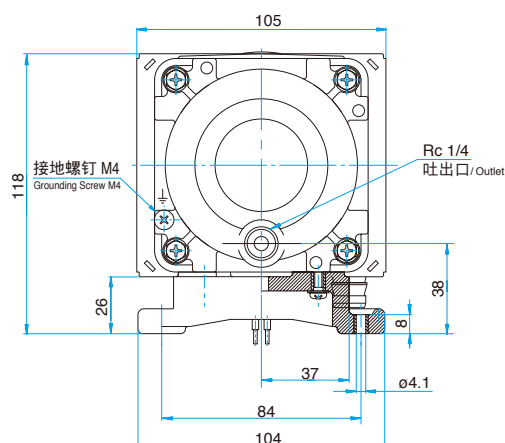
### 用途例 / Application Examples

液体搅拌 / Liquid Mixer

空气轴承 / Air Bearing

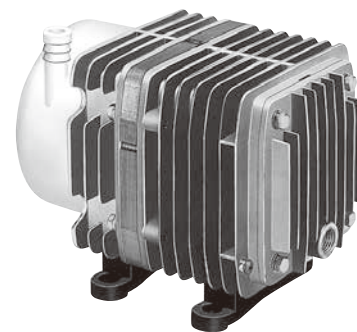


### 外形尺寸图 / External Dimensions (单位 / Unit : mm)

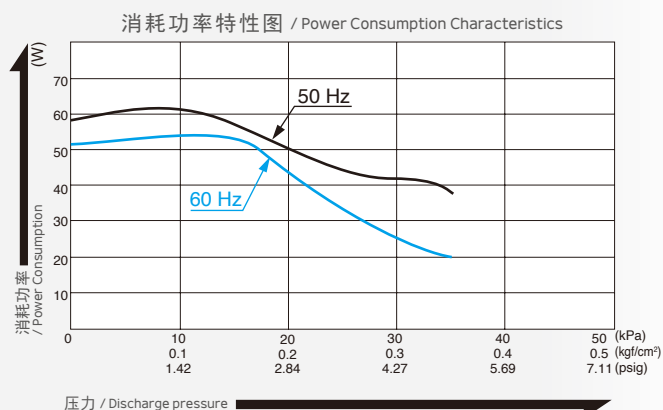
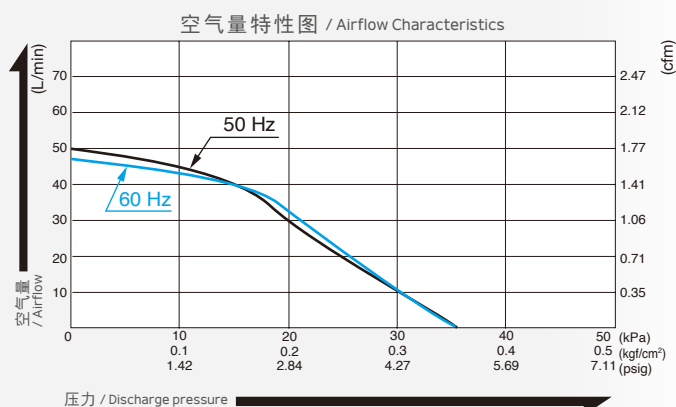


# 压缩泵 / Compressor

## 型号 AC0602



### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

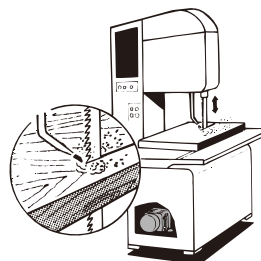
### 规格 / Specifications

|                                |                                                          |                                 |
|--------------------------------|----------------------------------------------------------|---------------------------------|
| 额定压力 / Rated Pressure          | 15 kPa (0.15 kgf/cm <sup>2</sup> )<br>0.15 bar 2.13 psig |                                 |
| 吐出空气量 / Rated Airflow          | 40 L/min<br>1.41 cfm                                     |                                 |
| 最高压力 / Maximum Pressure        | 35 kPa (0.35 kgf/cm <sup>2</sup> )<br>0.35 bar 4.98 psig |                                 |
| 额定电压 / Rated Voltage           | 115 V AC                                                 | 230 V AC                        |
| 额定频率 / Rated Frequency         | 50 Hz / 60 Hz                                            | 50 Hz                           |
| 消耗功率 / Power Consumption       | 58 W / 52 W                                              | 58 W                            |
| 耐用时间 / Rated Performance       | 10,000 小时 / hours                                        |                                 |
| 吐出口尺寸 / Outlet                 | ISO Rc 1/4 (内螺纹 / internal thread)                       |                                 |
| 额定时间 / Duty Cycle              | 连续 / Continuous                                          |                                 |
| 线圈绝缘等级 / Coil Insulation Class | UL 规格品：<br>相当于 A 类<br>/ Class A for UL                   | 相当于 E 类<br>/ Class E equivalent |
| 安装尺寸 / Mounting Dimensions     | 68 (L) x 84 (W) mm<br>2 - 43/64" (L) x 3 - 5/16" (W)     |                                 |
| 本体重量 / Weight                  | 3 kg 6.6 Lbs                                             |                                 |
| 导线长度 / Leadwire Length         | 235 mm<br>9 - 1/4"                                       | 235 mm<br>9 - 1/4"              |

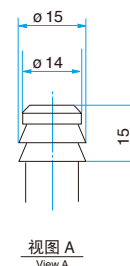
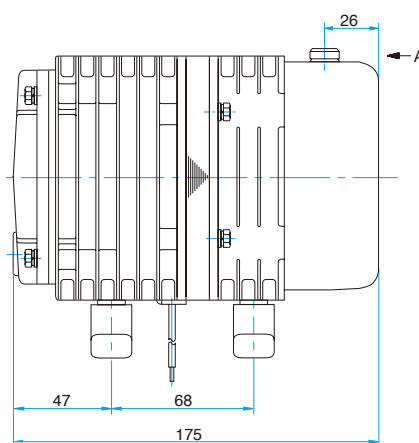
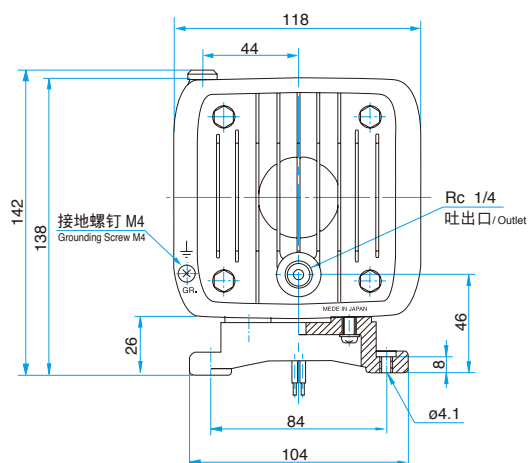
### 用途例 / Application Examples

带锯阻塞防止 / Air Blaster for Bandsaw

洁净空气工作室 / Clean Room Ventilation



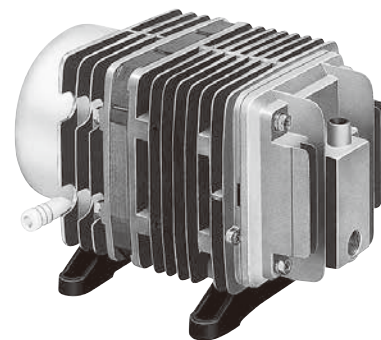
### 外形尺寸图 / External Dimensions (单位 / Unit : mm)



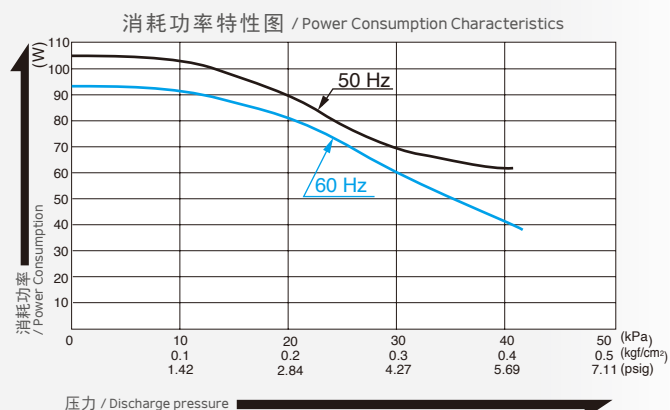
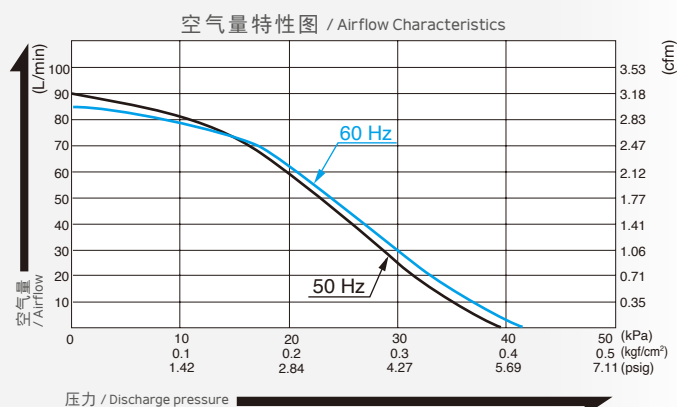
# 压缩泵 / Compressor

## 型号 AC0901

120 V 定制 / 120 V is made to order



### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

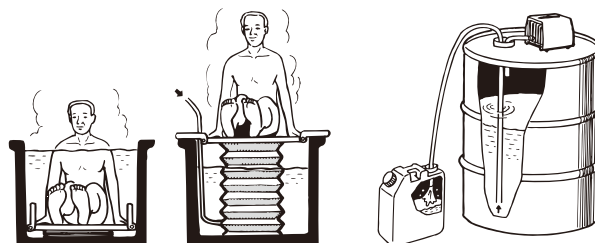
### 规格 / Specifications

|                                |                                                        |                                 |
|--------------------------------|--------------------------------------------------------|---------------------------------|
| 额定压力 / Rated Pressure          | 10 kPa (0.1 kgf/cm <sup>2</sup> )<br>0.1 bar 1.42 psig |                                 |
| 吐出空气量 / Rated Airflow          | 80 L/min<br>2.83 cfm                                   |                                 |
| 最高压力 / Maximum Pressure        | 40 kPa (0.4 kgf/cm <sup>2</sup> )<br>0.4 bar 5.69 psig |                                 |
| 额定电压 / Rated Voltage           | 120 V AC                                               | 230 V AC                        |
| 额定频率 / Rated Frequency         | 60 Hz                                                  | 50 Hz                           |
| 消耗功率 / Power Consumption       | 88 W                                                   | 99 W                            |
| 耐用时间 / Rated Performance       | 10,000 小时 / hours                                      |                                 |
| 吐出口尺寸 / Outlet                 | ISO Rc 3/8 (内螺纹 / internal thread)                     |                                 |
| 额定时间 / Duty Cycle              | 连续 / Continuous                                        |                                 |
| 线圈绝缘等级 / Coil Insulation Class | UL 规格品:<br>相当于 B 类<br>/ Class B for UL                 | 相当于 E 类<br>/ Class E equivalent |
| 安装尺寸 / Mounting Dimensions     | 102 (L) x 130 (W) mm<br>4 - 1/64" (L) x 5 - 1/8" (W)   |                                 |
| 本体重量 / Weight                  | 4.9 kg 10.8 Lbs                                        |                                 |
| 导线长度 / Leadwire Length         | 300 mm<br>11 - 13/16"                                  |                                 |

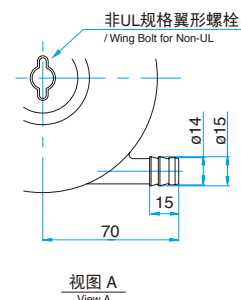
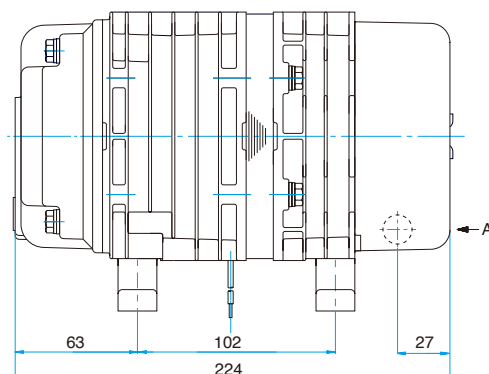
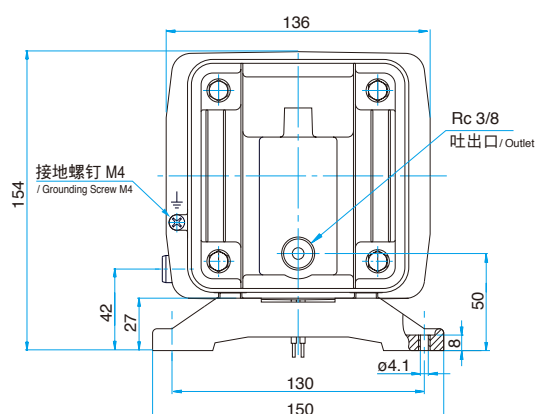
### 用途例 / Application Examples

浴缸用空气提升器 / Air Lifter for Bathtub

液体压送 / Liquid Dispenser



### 外形尺寸图 / External Dimensions (单位 / Unit : mm)

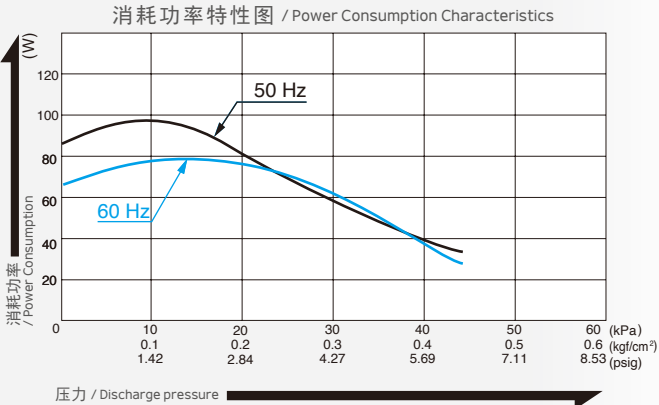
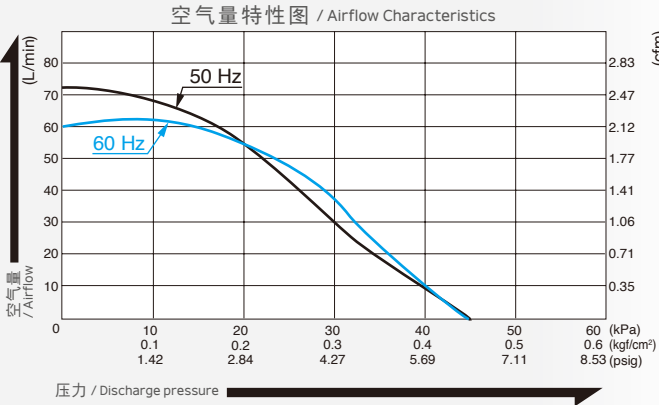


# 压缩泵 / Compressor

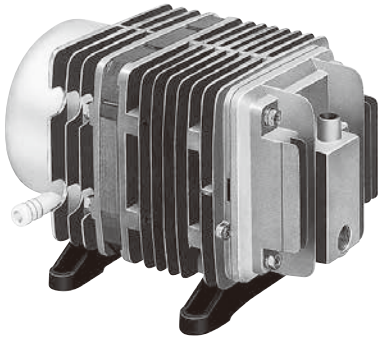
## 型号 AC0902



### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

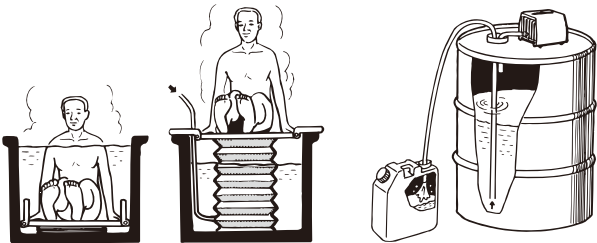


### 规格 / Specifications

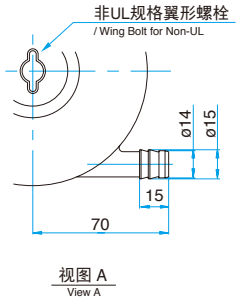
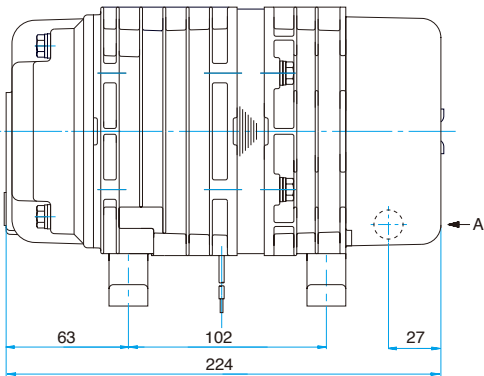
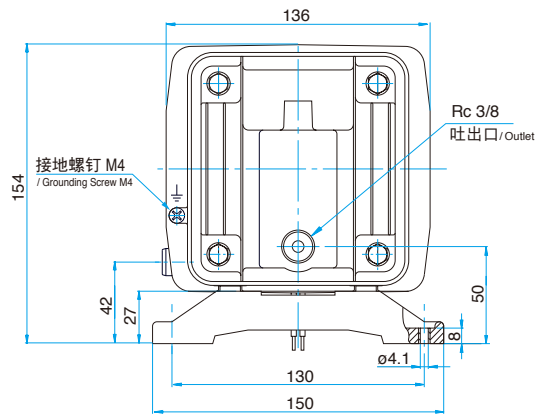
|                                |                                                          |                                 |
|--------------------------------|----------------------------------------------------------|---------------------------------|
| 额定压力 / Rated Pressure          | 20 kPa (0.2 kgf/cm <sup>2</sup> )<br>0.2 bar 2.84 psig   |                                 |
| 吐出空气量 / Rated Airflow          | 55 L/min<br>1.94 cfm                                     |                                 |
| 最高压力 / Maximum Pressure        | 45 kPa (0.45 kgf/cm <sup>2</sup> )<br>0.45 bar 6.40 psig |                                 |
| 额定电压 / Rated Voltage           | 115 V AC                                                 | 230 V AC                        |
| 额定频率 / Rated Frequency         | 60 Hz                                                    | 50 Hz                           |
| 消耗功率 / Power Consumption       | 75 W                                                     | 85 W                            |
| 耐用时间 / Rated Performance       | 10,000 小时 / hours                                        |                                 |
| 吐出口尺寸 / Outlet                 | ISO Rc 3/8 (内螺纹 / internal thread)                       |                                 |
| 额定时间 / Duty Cycle              | 连续 / Continuous                                          |                                 |
| 线圈绝缘等级 / Coil Insulation Class | UL 规格品：<br>相当于 B 类<br>/ Class B for UL                   | 相当于 E 类<br>/ Class E equivalent |
| 安装尺寸 / Mounting Dimensions     | 102 (L) x 130 (W) mm<br>4 - 1/64" (L) x 5 - 1/8" (W)     |                                 |
| 本体重量 / Weight                  | 4.9 kg 10.8 Lbs                                          |                                 |
| 导线长度 / Leadwire Length         | 300 mm<br>11 - 13/16"                                    | 320 mm<br>12 - 19/32"           |

### 用途例 / Application Examples

浴缸用空气提升器 / Air Lifter for Bathtub 液体压送 / Liquid Dispenser



### 外形尺寸图 / External Dimensions (单位 / Unit : mm)

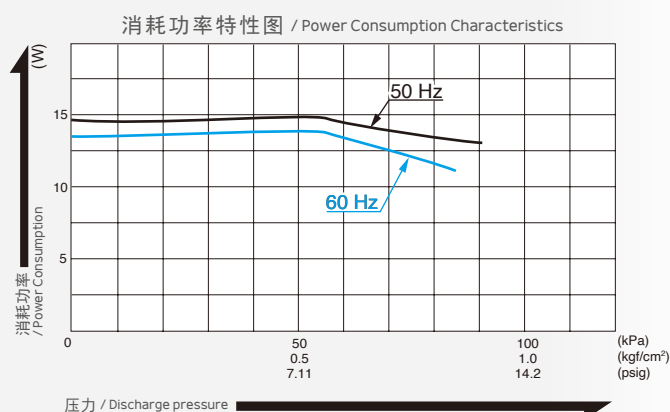
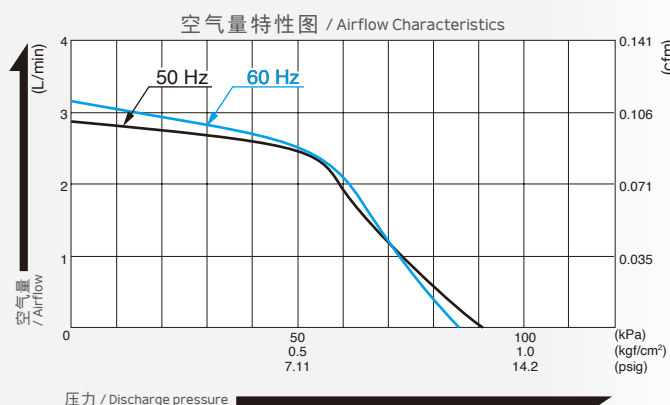


# 压缩泵 / Compressor

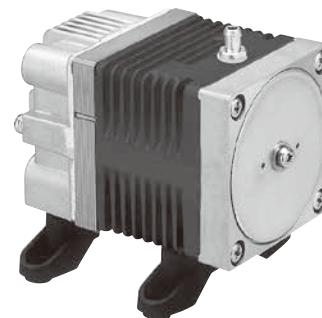
## 型号 AC0105



### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

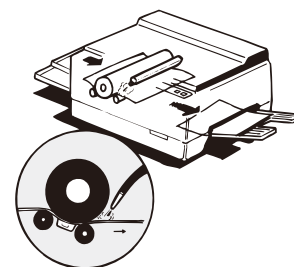
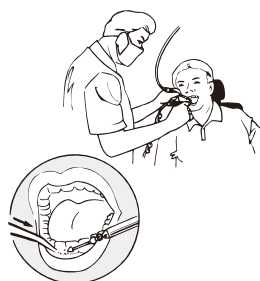


### 规格 / Specifications

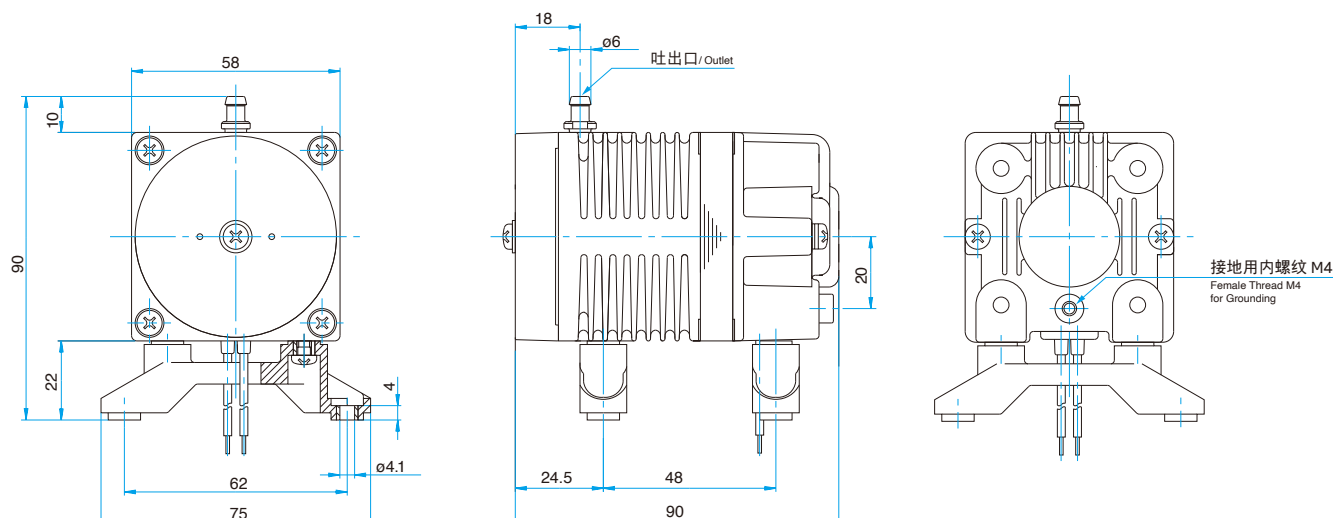
|                                    |                                                        |                                 |
|------------------------------------|--------------------------------------------------------|---------------------------------|
| 额定压力<br>/ Rated Pressure           | 50 kPa (0.5 kgf/cm <sup>2</sup> )<br>0.5 bar 7.11 psig |                                 |
| 吐出空气量<br>/ Rated Airflow           | 2.5 L/min<br>0.088 cfm                                 |                                 |
| 最高压力<br>/ Maximum Pressure         | 80 kPa (0.8 kgf/cm <sup>2</sup> )<br>0.8 bar 11.4 psig |                                 |
| 额定电压 / Rated Voltage               | 115 V AC                                               | 230 V AC                        |
| 额定频率 / Rated Frequency             | 50 Hz / 60 Hz                                          |                                 |
| 消耗功率 / Power Consumption           | 15 W / 14 W                                            |                                 |
| 耐用时间 (MTTF)<br>/ Rated Performance | 5,000 小时 / hours                                       |                                 |
| 吐出口尺寸 / Outlet                     | φ6 mm ( 外径 ) 软管接头 / 6 mm O.D. hose barb                |                                 |
| 额定时间 / Duty Cycle                  | 60 分钟 / minutes                                        |                                 |
| 线圈绝缘等级<br>/ Coil Insulation Class  | UL 规格品:<br>相当于 B 类<br>/ Class B for UL                 | 相当于 E 类<br>/ Class E equivalent |
| 安装尺寸<br>/ Mounting Dimensions      | 48 (L) x 62 (W) mm<br>1 - 57/64" (L) x 2 - 7/16" (W)   |                                 |
| 本体重量 / Weight                      | 0.7 kg 1.54 Lbs                                        |                                 |
| 导线长度 / Leadwire Length             | 200 mm<br>7 - 7/8"                                     |                                 |

### 用途例 / Application Examples

生理盐水喷射 / Saline Water Splasher    复印机 (复印纸的分离) / Copy Paper Separator



### 外形尺寸图 / External Dimensions (单位 / Unit : mm)

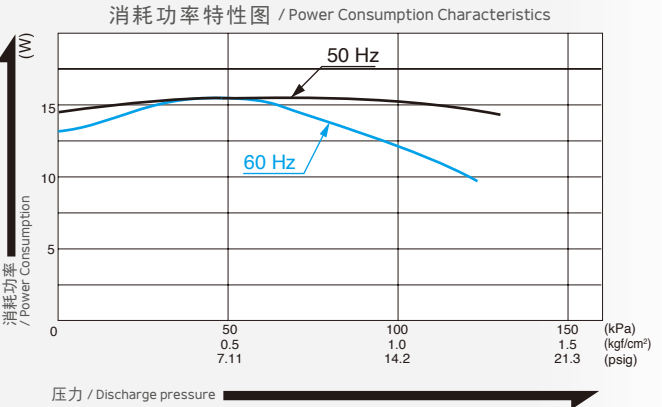
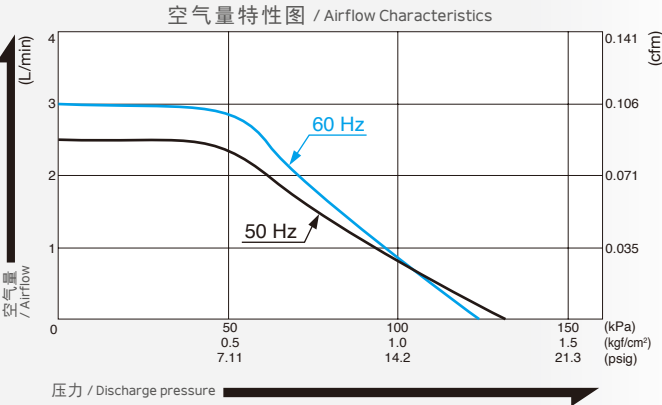


# 压缩泵 / Compressor

## 型号 AC0110

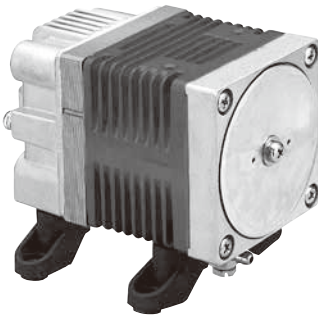
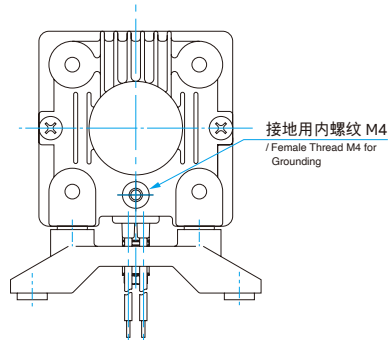
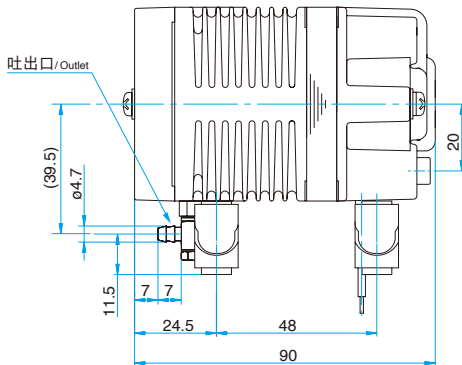
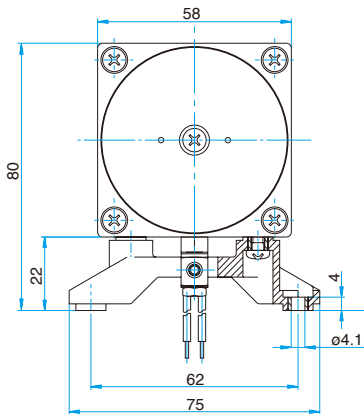


### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

### 外形尺寸图 / External Dimensions (单位 / Unit : mm)

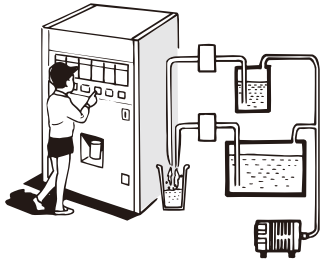


### 规格 / Specifications

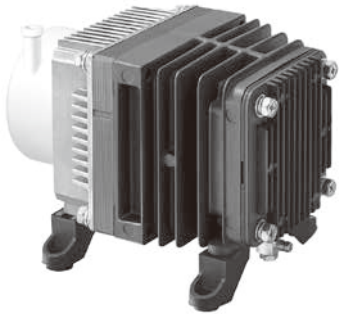
|                                        |                                                         |                                                         |
|----------------------------------------|---------------------------------------------------------|---------------------------------------------------------|
| 额定压力 / Rated Pressure                  | 100 kPa (1.0 kgf/cm <sup>2</sup> )<br>1.0 bar 14.2 psig |                                                         |
| 吐出空气量 / Rated Airflow                  | 1.0 L/min<br>0.035 cfm                                  | 0.8 L/min<br>0.028 cfm                                  |
| 最高压力 / Maximum Pressure                | 130 kPa (1.3 kgf/cm <sup>2</sup> )<br>1.3 bar 18.5 psig | 120 kPa (1.2 kgf/cm <sup>2</sup> )<br>1.2 bar 17.1 psig |
| 额定电压 / Rated Voltage                   | 115 V AC                                                |                                                         |
| 额定频率 / Rated Frequency                 | 50 Hz / 60 Hz                                           |                                                         |
| 消耗功率 / Power Consumption               | 15 W / 12 W                                             |                                                         |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 4,000 小时 / hours                                        |                                                         |
| 吐出口尺寸 / Outlet                         | φ6 mm (外径) 软管接头 / 6 mm O.D. hose barb                   |                                                         |
| 额定时间 / Duty Cycle                      | 30 分钟                                                   |                                                         |
| 线圈绝缘等级 / Coil Insulation Class         | UL 规格品:<br>相当于 B 类<br>/ Class B for UL                  | 相当于 E 类<br>/ Class E equivalent                         |
| 安装尺寸 / Mounting Dimensions             | 48.5 (L) x 62 (W) mm<br>1 - 29/32" (L) x 2 - 7/16" (W)  | 48 (L) x 62 (W) mm<br>1 - 57/64" (L) x 2 - 7/16" (W)    |
| 本体重量 / Weight                          | 0.7 kg 1.54 Lbs                                         |                                                         |
| 导线长度 / Leadwire Length                 | 200 mm<br>7 - 7/8"                                      |                                                         |

### 用途例 / Application Examples

#### 自动售货机 / Automatic Dispenser



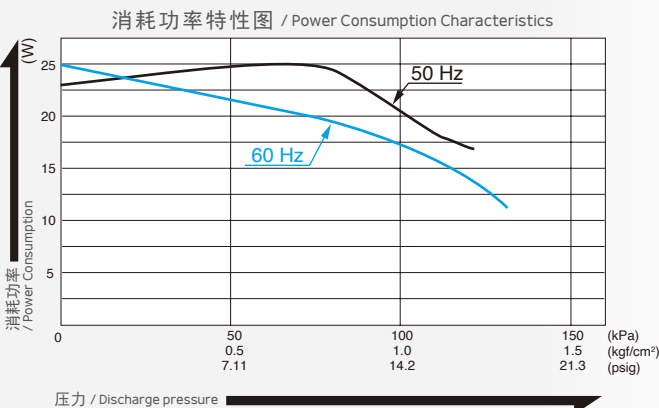
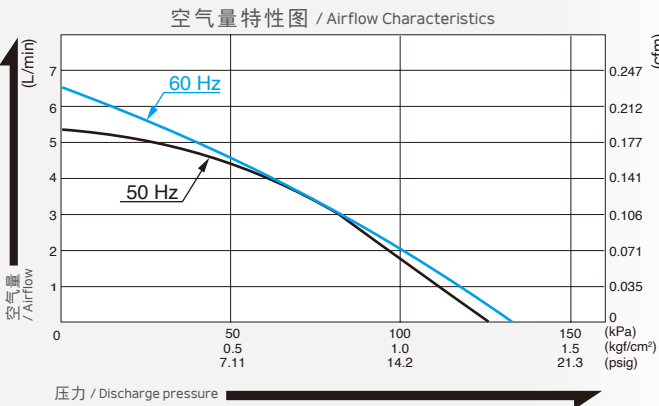
# 压缩泵 / Compressor



## 型号 AC0207



### 空气量和消耗功率 / Airflow & Power Consumption



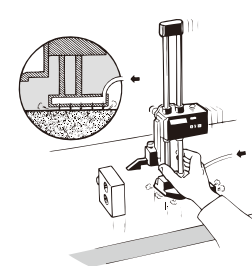
\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

### 规格 / Specifications

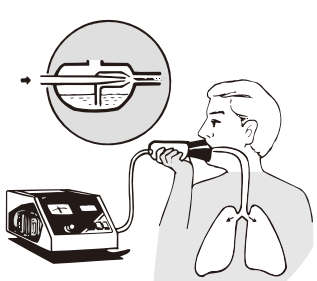
|                                |                                                       |                                 |
|--------------------------------|-------------------------------------------------------|---------------------------------|
| 额定压力 / Rated Pressure          | 70 kPa (0.7 kgf/cm²)<br>0.7 bar 9.96 psig             |                                 |
| 吐出空气量 / Rated Airflow          | 3.5 L/min<br>0.124 cfm                                |                                 |
| 最高压力 / Maximum Pressure        | 100 kPa (1.0 kgf/cm²)<br>1.0 bar 14.2 psig            |                                 |
| 额定电压 / Rated Voltage           | 115 V AC                                              | 230 V AC                        |
| 额定频率 / Rated Frequency         | 50 Hz / 60 Hz                                         |                                 |
| 消耗功率 / Power Consumption       | 25 W / 20 W                                           |                                 |
| 耐用时间 / Rated Performance       | 3,000 小时 / hours                                      |                                 |
| 吐出口尺寸 / Outlet                 | φ4.7 mm (外径) 软管接头 / 4.7 mm O.D. hose barb             |                                 |
| 额定时间 / Duty Cycle              | 连续 / Continuous                                       |                                 |
| 线圈绝缘等级 / Coil Insulation Class | UL 规格品:<br>相当于 B 类<br>/ Class B for UL                | 相当于 E 类<br>/ Class E equivalent |
| 安装尺寸 / Mounting Dimensions     | 75 (L) x 88 (W) mm<br>2 - 61/64" (L) x 3 - 15/32" (W) |                                 |
| 本体重量 / Weight                  | 1.7 kg 3.7 Lbs                                        |                                 |
| 导线长度 / Leadwire Length         | 200 mm<br>7 - 7/8"                                    |                                 |

### 用途例 / Application Examples

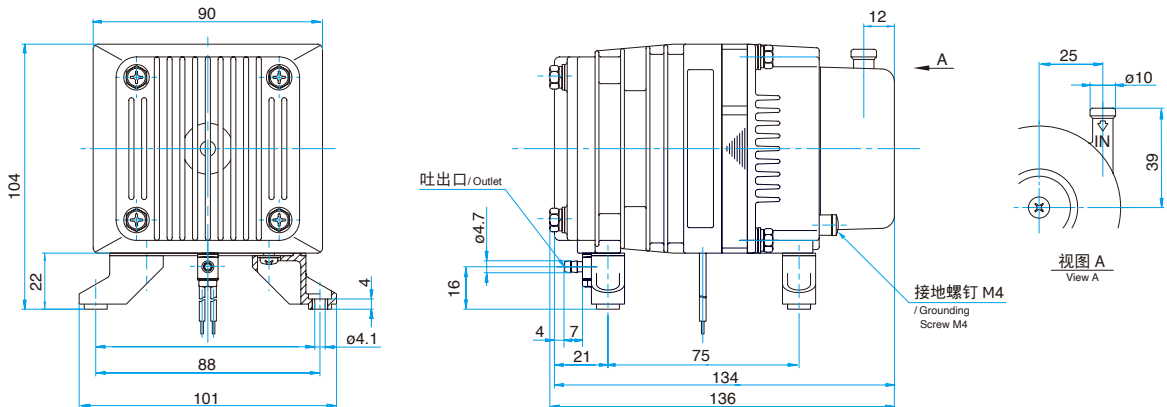
气浮式精密测量仪  
/ Air Bearing for Precision Machines



雾化器 / Nebulizer



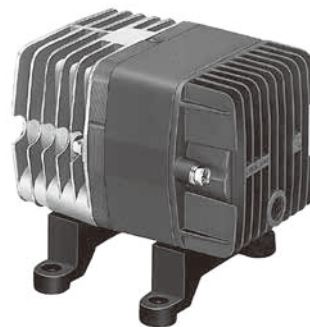
### 外形尺寸图 / External Dimensions (单位 / Unit : mm)



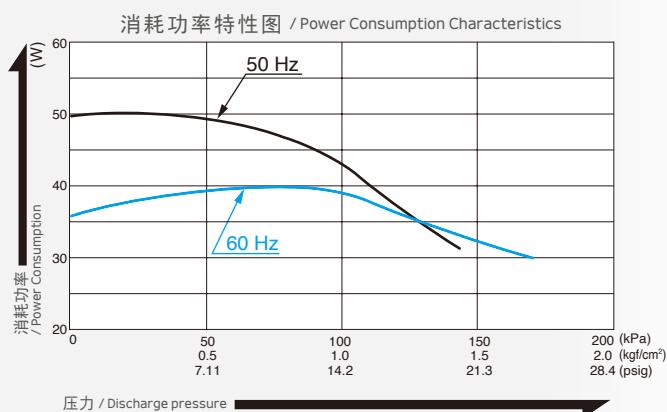
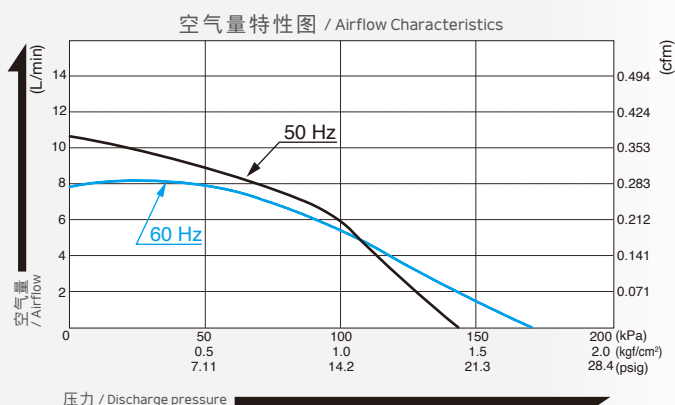
# 压缩泵 / Compressor

## 型号 AC0410A

115 V 定制 / 115 V is made to order



### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

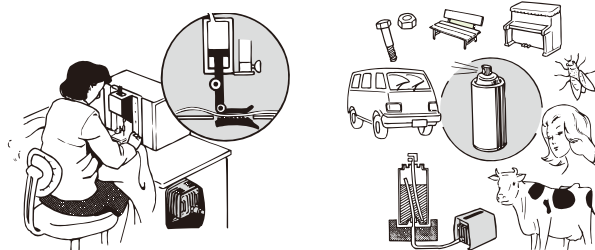
### 规格 / Specifications

|                                |                                                         |                      |
|--------------------------------|---------------------------------------------------------|----------------------|
| 额定压力 / Rated Pressure          | 100 kPa (1.0 kgf/cm <sup>2</sup> )<br>1.0 bar 14.2 psig |                      |
| 吐出空气量 / Rated Airflow          | 5 L/min<br>0.177 cfm                                    |                      |
| 最高压力 / Maximum Pressure        | 130 kPa (1.3 kgf/cm <sup>2</sup> )<br>1.3 bar 18.5 psig |                      |
| 额定电压 / Rated Voltage           | 115 V AC                                                | 230 V AC             |
| 额定频率 / Rated Frequency         | 60 Hz                                                   | 50 Hz / 60 Hz        |
| 消耗功率 / Power Consumption       | 39 W                                                    | 43 W / 39 W          |
| 耐用时间 / Rated Performance       | 3,000 小时 / hours                                        |                      |
| 吐出口尺寸 / Outlet                 | ISO Rc 1/4 (内螺纹 / internal thread)                      |                      |
| 额定时间 / Duty Cycle              | 连续 / Continuous                                         |                      |
| 线圈绝缘等级 / Coil Insulation Class | 相当于 B 类 / Class B equivalent                            |                      |
| 安装尺寸 / Mounting Dimensions     | 68 (L) x 98 (W) mm<br>2 - 43/64" (L) x 3 - 55/64" (W)   |                      |
| 本体重量 / Weight                  | 2.1 kg 4.6 Lbs                                          |                      |
| 导线长度 / Leadwire Length         | 220 mm<br>8 - 21/32"                                    | 170 mm<br>6 - 11/16" |

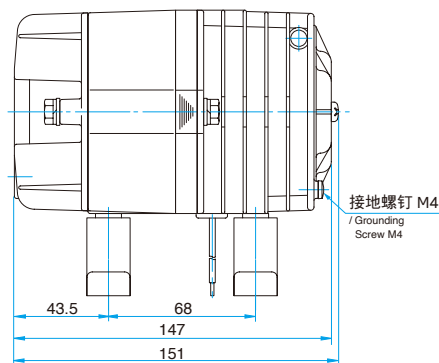
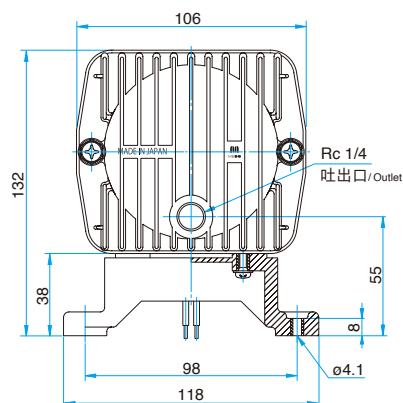
### 用途例 / Application Examples

工业缝纫机 / Industrial Sewing Machine

各种喷雾器 / Various Aerosol Sprays

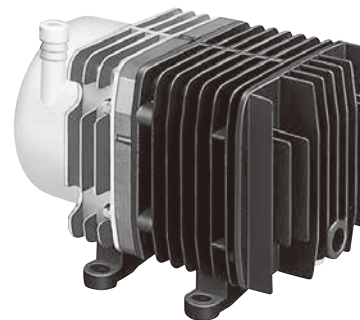


### 外形尺寸图 / External Dimensions (单位 / Unit : mm)

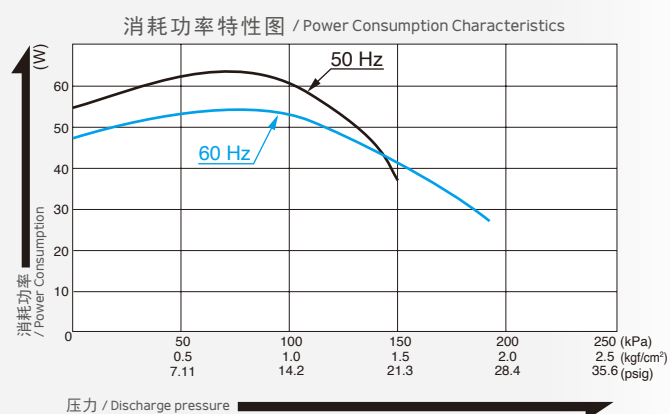
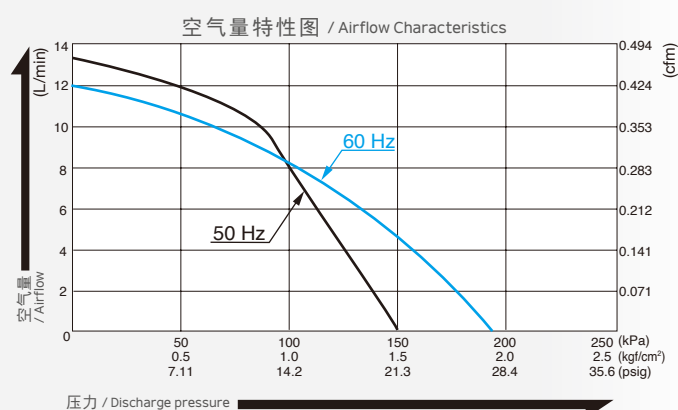


## 压缩泵 / Compressor

# 型号 AC0610



### 空气量和消耗功率 / Airflow & Power Consumption



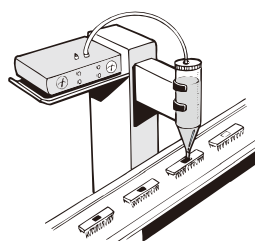
\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

## 规格 / Specifications

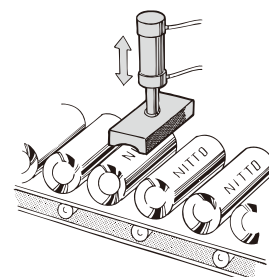
|                                   |                                                         |                                 |
|-----------------------------------|---------------------------------------------------------|---------------------------------|
| 额定压力<br>/ Rated Pressure          | 100 kPa (1.0 kgf/cm <sup>2</sup> )<br>1.0 bar 14.2 psig |                                 |
| 吐出空气量<br>/ Rated Airflow          | 8 L/min<br>0.283 cfm                                    |                                 |
| 最高压力<br>/ Maximum Pressure        | 150 kPa (1.5 kgf/cm <sup>2</sup> )<br>1.5 bar 21.3 psig |                                 |
| 额定电压 / Rated Voltage              | 115 V AC                                                | 230 V AC                        |
| 额定频率 / Rated Frequency            | 50 Hz / 60 Hz                                           |                                 |
| 消耗功率 / Power Consumption          | 60 W / 52 W                                             |                                 |
| 耐用时间<br>/ Rated Performance       | 3,000 小时 / hours                                        |                                 |
| 吐出口尺寸 / Outlet                    | ISO Rc 1/4 (内螺纹) / internal thread                      |                                 |
| 额定时间 / Duty Cycle                 | 连续 / Continuous                                         |                                 |
| 线圈绝缘等级<br>/ Coil Insulation Class | UL 规格品：相当于 B 类<br>/ Class B for UL                      | 相当于 E 类<br>/ Class E equivalent |
| 安装尺寸<br>/ Mounting Dimensions     | 68 (L) x 84 (W) mm<br>2 - 43/64" (L) x 3 - 5/16" (W)    |                                 |
| 本体重量 / Weight                     | 3.2 kg 7.1 Lbs                                          |                                 |
| 导线长度 / Leadwire Length            | 200 mm<br>7 - 7/8"                                      |                                 |

## 用途例 / Application Examples

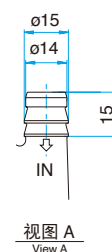
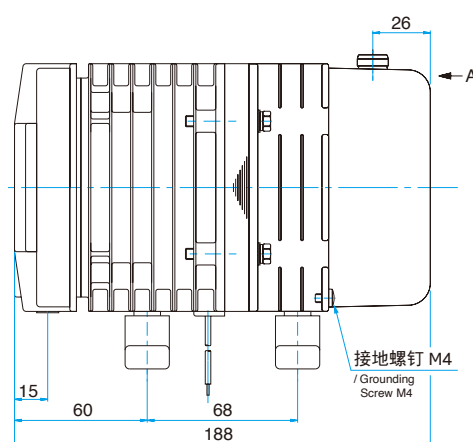
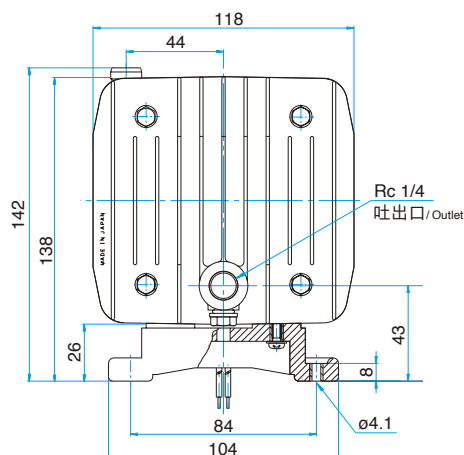
自动点胶机 / Dispenser



自动压印机, / Automatic Stamper

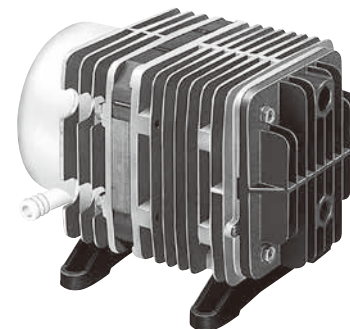


## 外形尺寸图 / External Dimensions (单位 / Unit : mm)

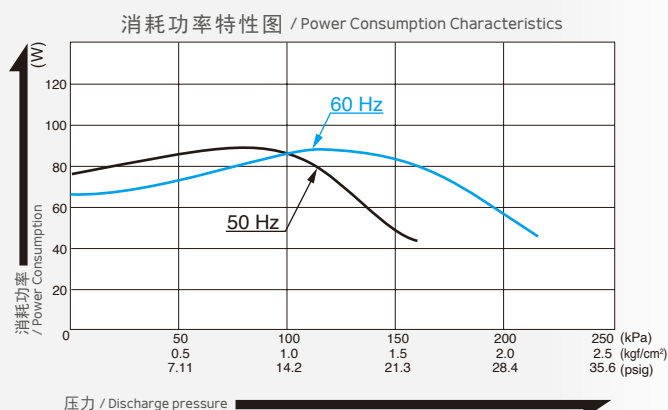
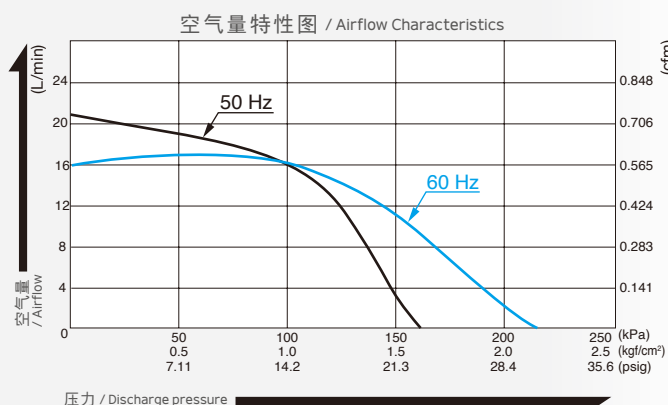


# 压缩泵 / Compressor

## 型号 AC0910



### 空气量和消耗功率 / Airflow & Power Consumption



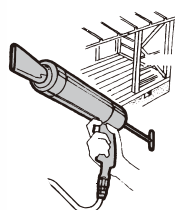
\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

### 规格 / Specifications

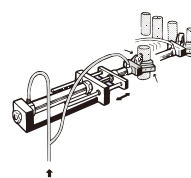
|                                |                                                         |                       |
|--------------------------------|---------------------------------------------------------|-----------------------|
| 额定压力 / Rated Pressure          | 100 kPa (1.0 kgf/cm <sup>2</sup> )<br>1.0 bar 14.2 psig |                       |
| 吐出空气量 / Rated Airflow          | 16 L/min<br>0.57 cfm                                    |                       |
| 最高压力 / Maximum Pressure        | 150 kPa (1.5 kgf/cm <sup>2</sup> )<br>1.5 bar 21.3 psig |                       |
| 额定电压 / Rated Voltage           | 115 V AC                                                | 230 V AC              |
| 额定频率 / Rated Frequency         | 60 Hz                                                   | 50 Hz / 60 Hz         |
| 消耗功率 / Power Consumption       | 85 W                                                    | 90 W / 85 W           |
| 耐用时间 / Rated Performance       | 3,000 小时 / hours                                        |                       |
| 吐出口尺寸 / Outlet                 | ISO Rc 1/4 (内螺纹 / internal thread)                      |                       |
| 额定时间 / Duty Cycle              | 连续 / Continuous                                         |                       |
| 线圈绝缘等级 / Coil Insulation Class | UL 规格品：相当于 B 类 / Class B for UL                         |                       |
| 安装尺寸 / Mounting Dimensions     | 102 (L) x 130 (W) mm<br>4 - 1/64" (L) x 5 - 1/8" (W)    |                       |
| 本体重量 / Weight                  | 4.9 kg 10.8 Lbs                                         |                       |
| 导线长度 / Leadwire Length         | 300 mm<br>11 - 13/16"                                   | 320 mm<br>12 - 19/32" |

### 用途例 / Application Examples

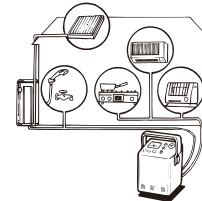
密封胶枪 / Sealant gun



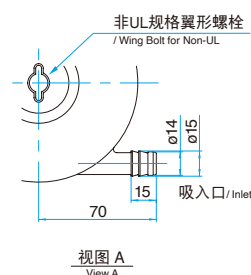
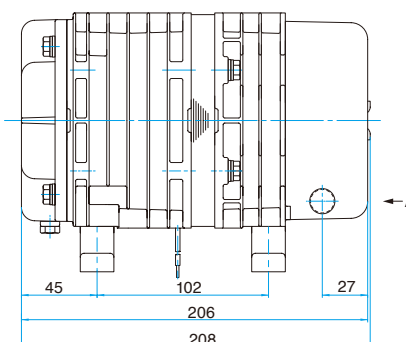
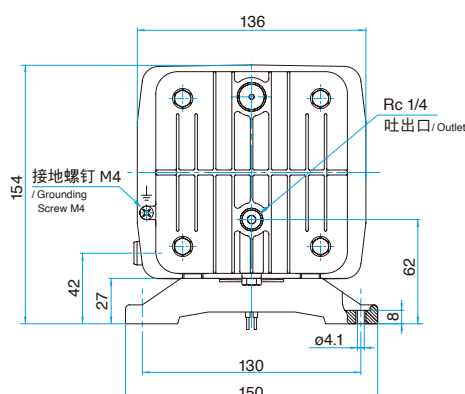
气缸 / 气动卡盘  
/ Air Cylinder/Chuck Driver



检漏机 / Leakage Tester

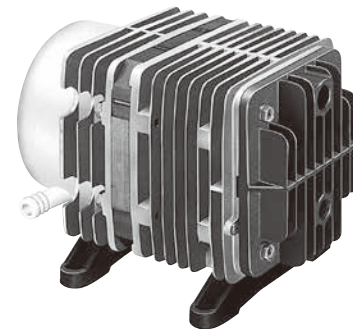


### 外形尺寸图 / External Dimensions (单位 / Unit : mm)

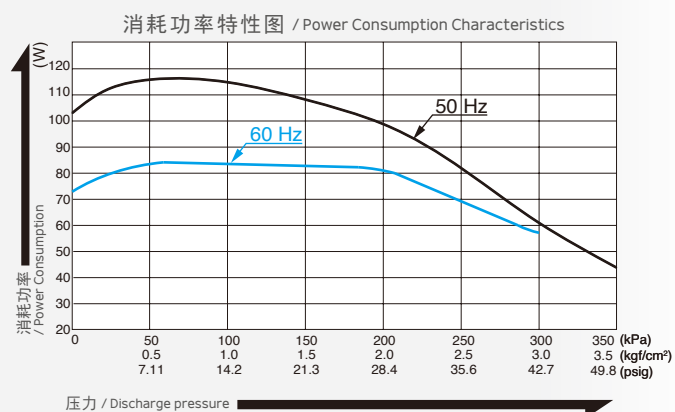
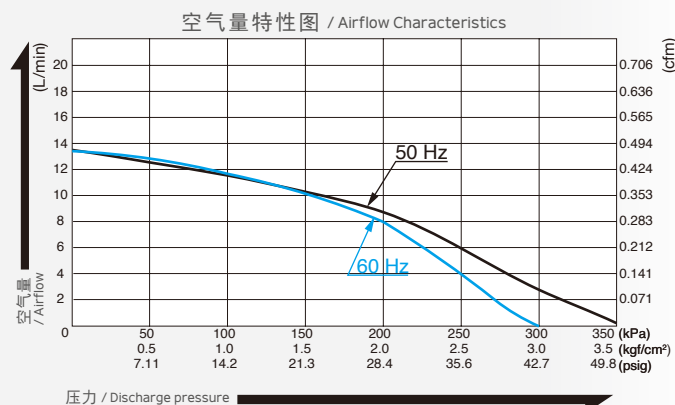


# 压缩泵 / Compressor

## 型号 AC0920



### 空气量和消耗功率 / Airflow & Power Consumption



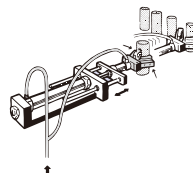
\* 特性图只是参考值，并不是保证值。  
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### 规格 / Specifications

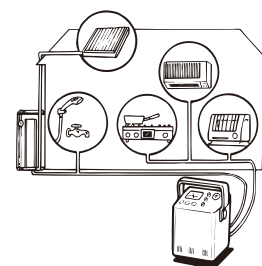
|                                |                                                         |                                                         |
|--------------------------------|---------------------------------------------------------|---------------------------------------------------------|
| 额定压力 / Rated Pressure          | 200 kPa (2.0 kgf/cm <sup>2</sup> )<br>2.0 bar 28.4 psig |                                                         |
| 吐出空气量 / Rated Airflow          | 8 L/min<br>0.283 cfm                                    |                                                         |
| 最高压力 / Maximum Pressure        | 280 kPa (2.8 kgf/cm <sup>2</sup> )<br>2.8 bar 39.8 psig | 350 kPa (3.5 kgf/cm <sup>2</sup> )<br>3.4 bar 49.7 psig |
| 额定电压 / Rated Voltage           | 115 V AC                                                | 230 V AC                                                |
| 额定频率 / Rated Frequency         | 60 Hz                                                   | 50 Hz                                                   |
| 消耗功率 / Power Consumption       | 81 W                                                    | 100 W                                                   |
| 耐用时间 / Rated Performance       | 3,000 小时 / hours                                        |                                                         |
| 吐出口尺寸 / Outlet                 | ISO Rc 1/4 (内螺纹 / internal thread)                      |                                                         |
| 额定时间 / Duty Cycle              | 30 分钟                                                   |                                                         |
| 线圈绝缘等级 / Coil Insulation Class | UL 规格品:<br>相当于 B 类<br>/ Class B for UL                  | 相当于 E 类<br>/ Class E equivalent                         |
| 安装尺寸 / Mounting Dimensions     | 102 (L) x 130 (W) mm<br>4 - 1/64" (L) x 5 - 1/8" (W)    |                                                         |
| 本体重量 / Weight                  | 4.9 kg 10.8 Lbs                                         | 5 kg 11 Lbs                                             |
| 导线长度 / Leadwire Length         | 300 mm<br>11 - 13/16"                                   | 320 mm<br>12 - 19/32"                                   |

### 用途例 / Application Examples

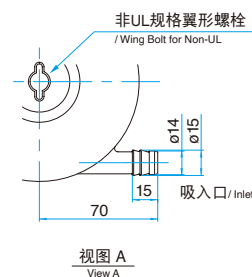
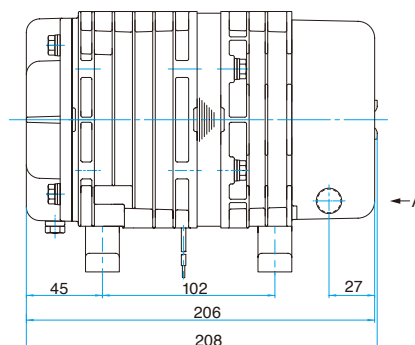
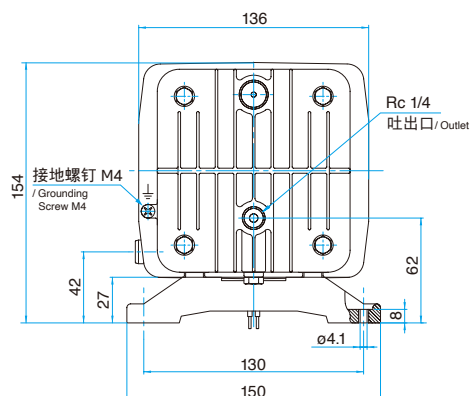
气缸 / 气动卡盘 / Air Cylinder/Chuck Driver



检漏机 / Leakage Tester



### 外形尺寸图 / External Dimensions (单位 / Unit : mm)





# 真空泵 / VACUUM PUMP

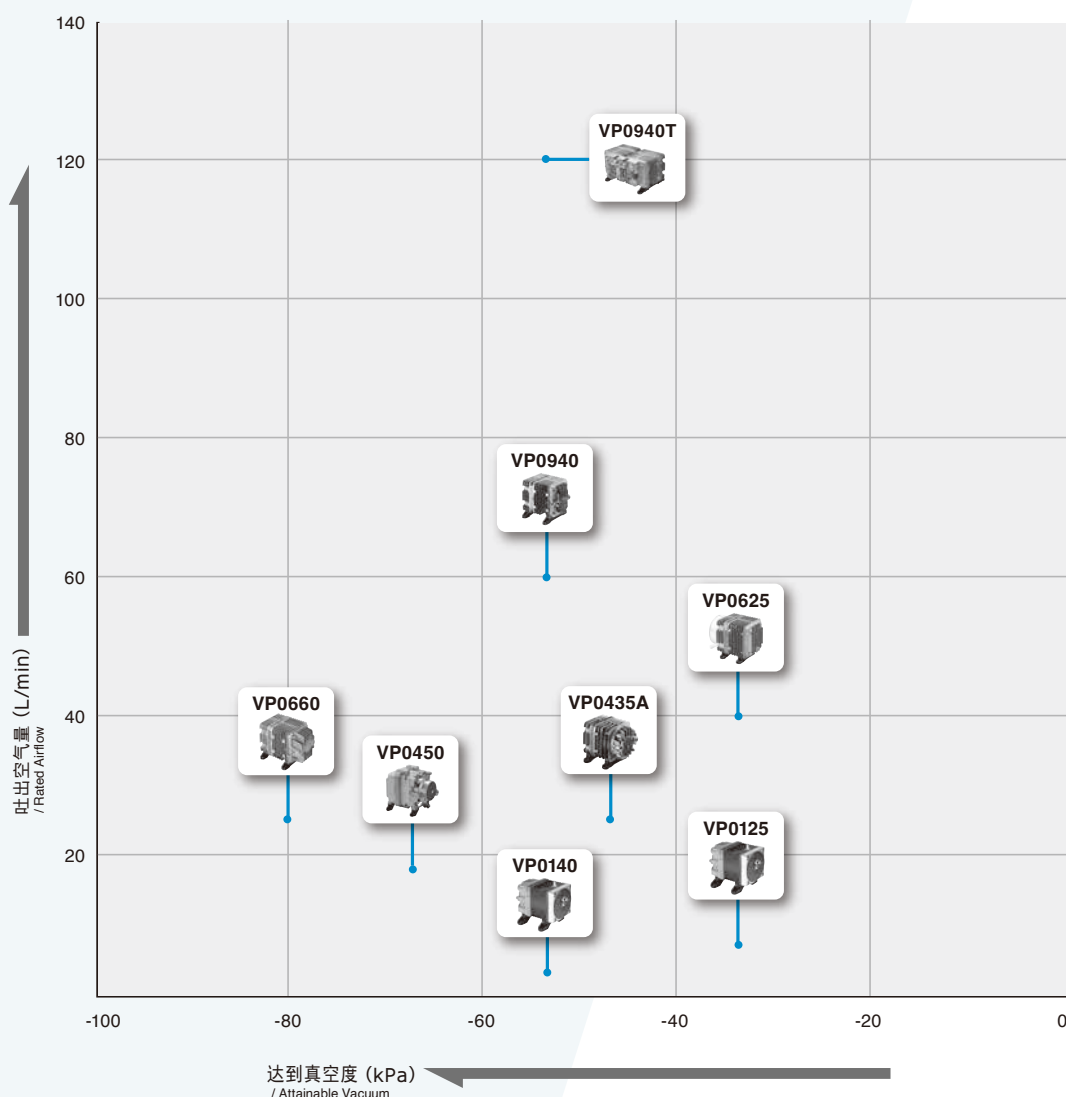
## AC线性自由活塞真空泵

/ AC LINEAR Free Piston Vacuum Pump

VP系列  
VP series

页  
Page

|         |   |    |
|---------|---|----|
| VP0125  | — | 29 |
| VP0140  | — | 30 |
| VP0435A | — | 31 |
| VP0450  | — | 32 |
| VP0625  | — | 33 |
| VP0660  | — | 34 |
| VP0940  | — | 35 |
| VP0940T | — | 36 |

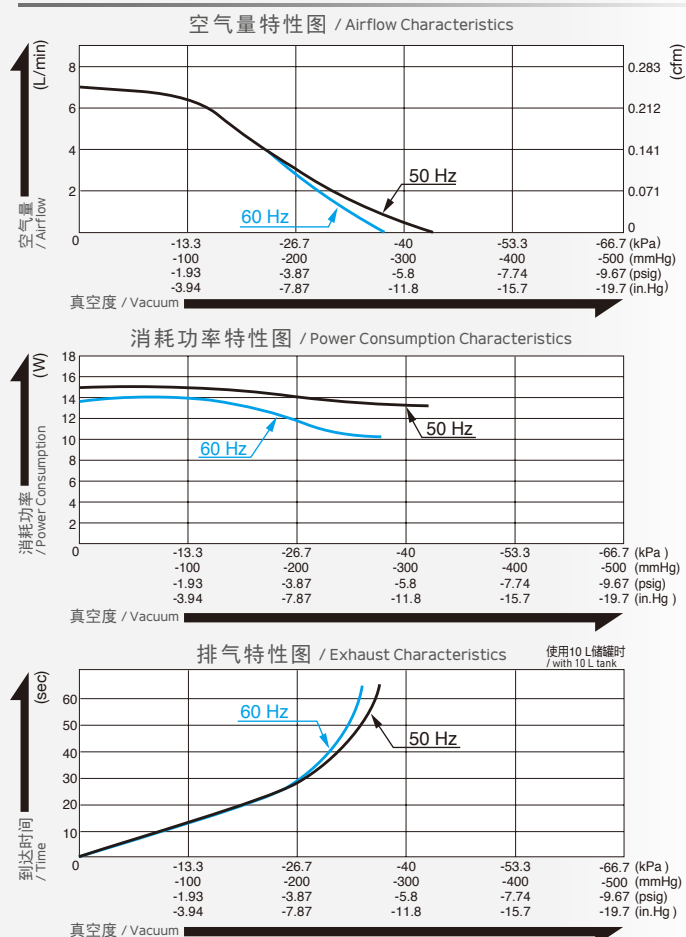


# 真空泵 / Vacuum Pump

## 型号 VP0125

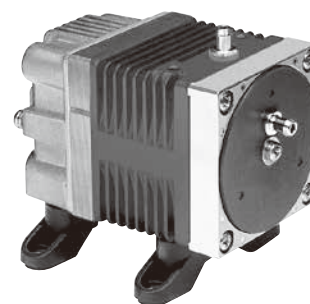
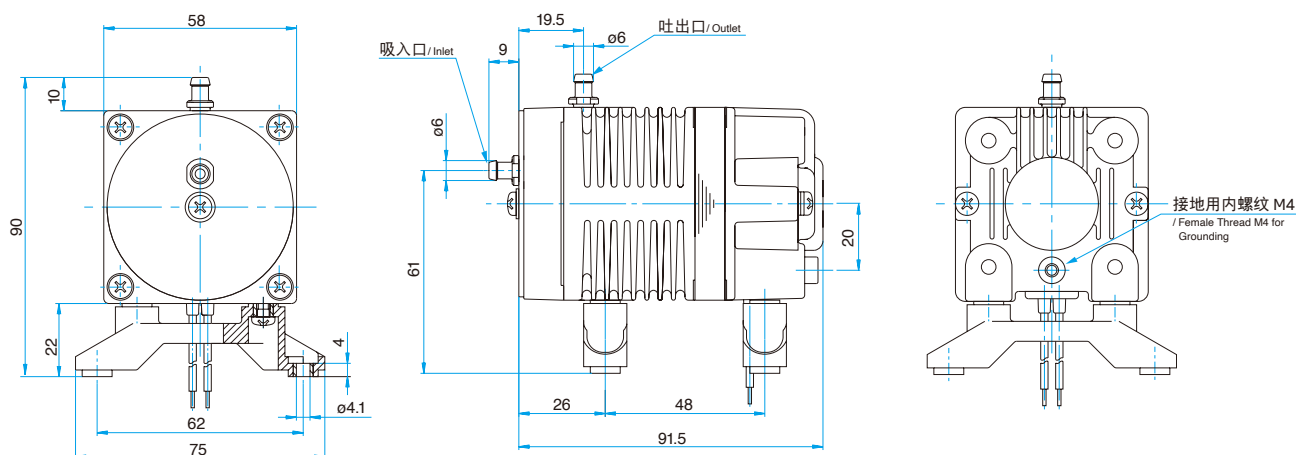


### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

### 外形尺寸图 / External Dimensions (单位 / Unit : mm)



### 规格 / Specifications

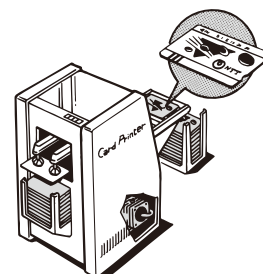
|                                        |                                                      |               |
|----------------------------------------|------------------------------------------------------|---------------|
| 达到真空度 / Attainable Vacuum              | -33.3 kPa (-250 mmHg)<br>-333 mbar -9.84 in. Hg      |               |
| 吐出空气量 / Free Air Displacement          | 7 L/min<br>0.247 cfm                                 |               |
| 额定电压 / Rated Voltage                   | 115 V AC                                             | 230 V AC      |
| 额定频率 / Rated Frequency                 | 60 Hz                                                | 50 Hz / 60 Hz |
| 消耗功率 / Power Consumption               | 14 W                                                 | 15 W / 14 W   |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 10,000 小时 / hours                                    |               |
| 吸入口尺寸 / Inlet                          | φ6 mm (外径) 软管接头 / 6 mm O.D. hose barb                |               |
| 吐出口尺寸 / Outlet                         | φ6 mm (外径) 软管接头 / 6 mm O.D. hose barb                |               |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                      |               |
| 线圈绝缘等级 / Coil Insulation Class         | UL 规格品: 相当于 B 类 / Class B for UL                     |               |
| 安装尺寸 / Mounting Dimensions             | 48 (L) x 62 (W) mm<br>1 - 57/64" (L) x 2 - 7/16" (W) |               |
| 本体重量 / Weight                          | 0.7 kg 1.54 Lbs                                      |               |
| 导线长度 / Leadwire Length                 | 200 mm<br>7 - 7/8"                                   |               |

### 用途例 / Application Examples

滴落式装置 / Dripping Machine



小型印刷机 / Paper Card Dispenser

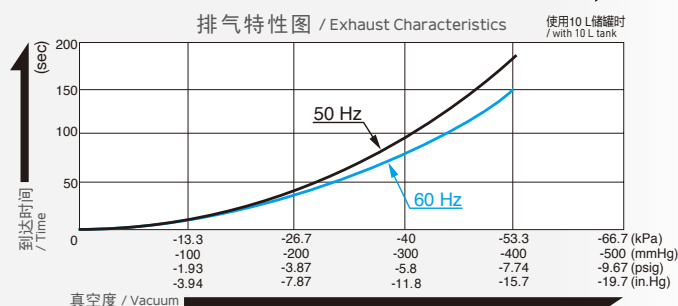
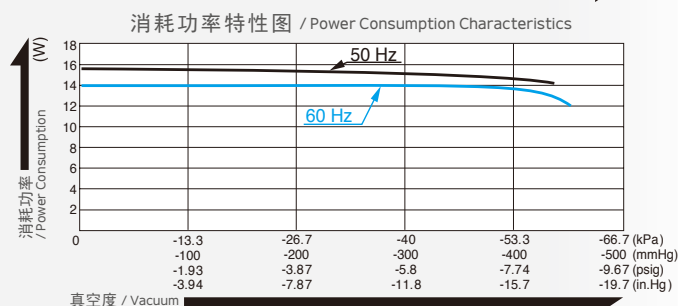
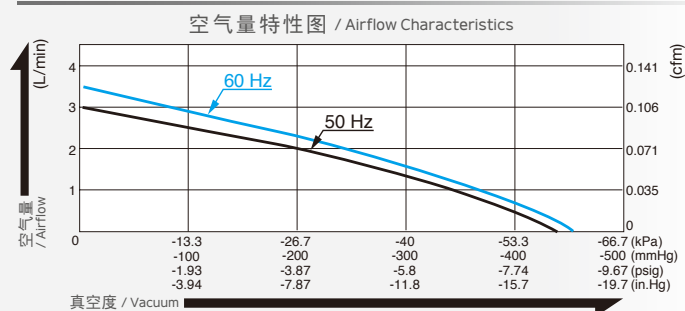


# 真空泵 / Vacuum Pump

## 型号 VP0140

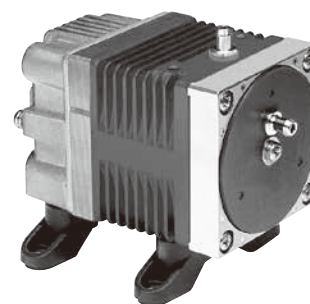
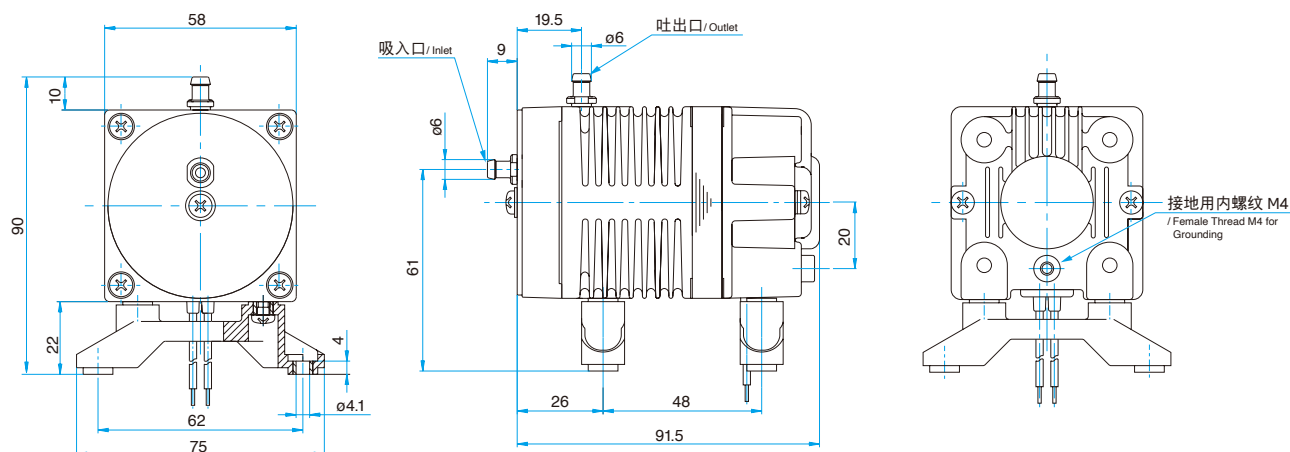


### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

### 外形尺寸图 / External Dimensions (单位 / Unit : mm)



### 规格 / Specifications

|                                           |                                                      |                                 |
|-------------------------------------------|------------------------------------------------------|---------------------------------|
| 达到真空度 *<br>/ Attainable Vacuum            | -53.3 kPa (-400 mmHg)<br>-533 mbar -15.7 in. Hg      |                                 |
| 吐出空气量<br>/ Free Air Displacement          | 3 L/min<br>0.106 cfm                                 |                                 |
| 额定电压 / Rated Voltage                      | 115 V AC                                             | 230 V AC                        |
| 额定频率 / Rated Frequency                    | 50 Hz / 60 Hz                                        |                                 |
| 消耗功率 / Power Consumption                  | 15 W / 14 W                                          |                                 |
| 耐用时间 (MTTF)<br>/ Rated Performance (MTTF) | 5,000 小时 / hours                                     |                                 |
| 吸入口尺寸 / Inlet                             | φ6 mm (外径) 软管接头 / 6 mm O.D. hose barb                |                                 |
| 吐出口尺寸 / Outlet                            | φ6 mm (外径) 软管接头 / 6 mm O.D. hose barb                |                                 |
| 额定时间 / Duty Cycle                         | 60 分钟                                                |                                 |
| 线圈绝缘等级<br>/ Coil Insulation Class         | UL 规格品：<br>相当于 B 类<br>/ Class B for UL               | 相当于 E 类<br>/ Class E equivalent |
| 安装尺寸<br>/ Mounting Dimensions             | 48 (L) x 62 (W) mm<br>1 - 57/64" (L) x 2 - 7/16" (W) |                                 |
| 本体重量 / Weight                             | 0.7 kg 1.54 Lbs                                      |                                 |
| 导线长度 / Leadwire Length                    | 200 mm<br>7 - 7/8"                                   |                                 |

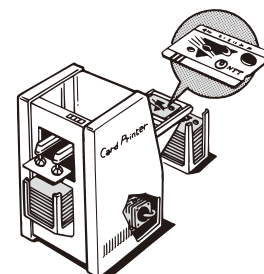
\* 高于 -53.5 kPa 运转时需要在进气管路上加装一个放气阀或泄压阀。  
/ Operations at higher than -53.5 kPa need an additional leak valve or relief valve on the inlet piping.

### 用途例 / Application Examples

滴落式装置 / Dripping Machine



小型印刷机 / Paper Card Dispenser

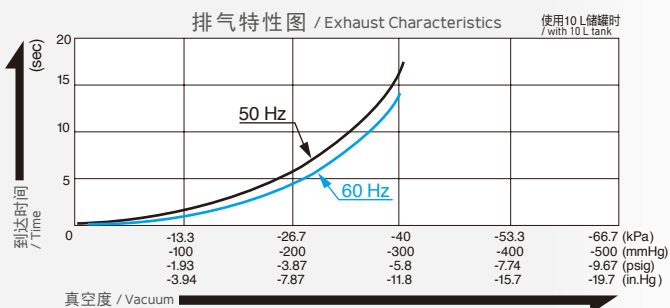
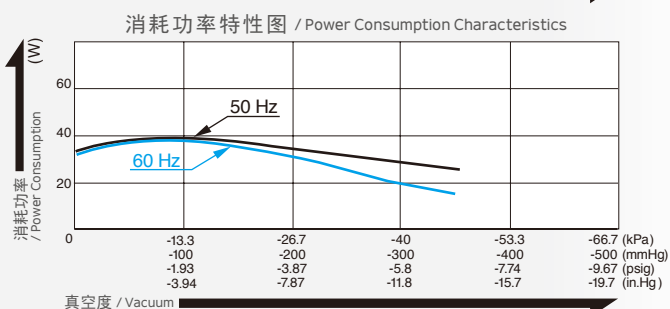
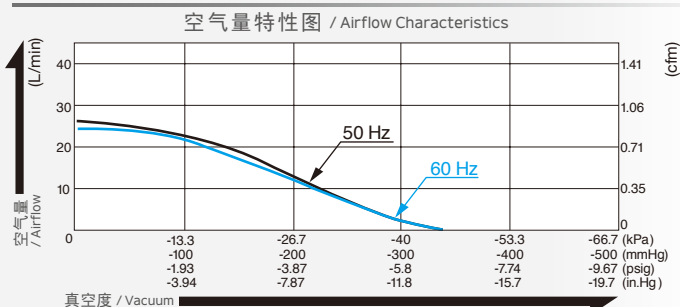


# 真空泵 / Vacuum Pump

## 型号 VP0435A

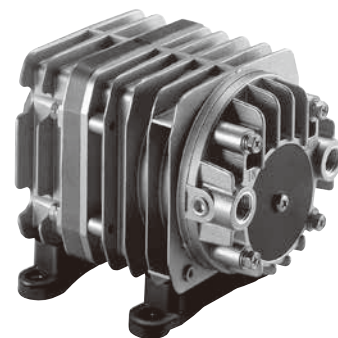
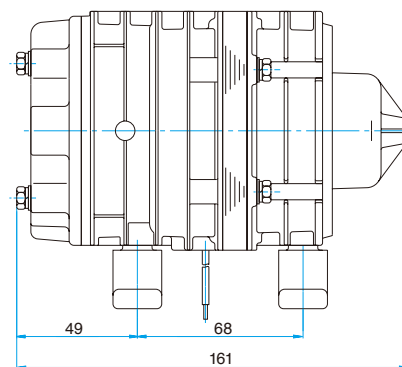
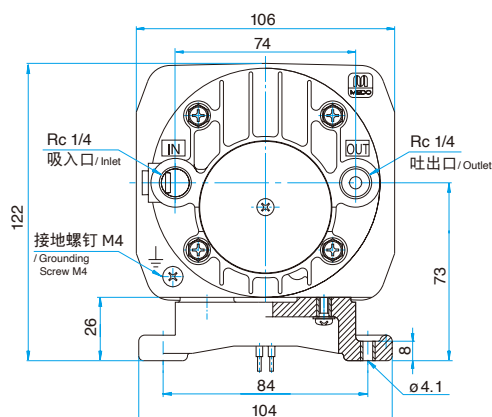


### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

### 外形尺寸图 / External Dimensions (单位 / Unit : mm)



### 规格 / Specifications

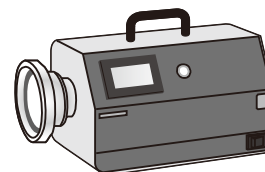
|                                |                                                      |                                 |
|--------------------------------|------------------------------------------------------|---------------------------------|
| 达到真空度 / Attainable Vacuum      | -46.7 kPa (-350 mmHg)<br>-467 mbar -13.8 in. Hg      |                                 |
| 吐出空气量 / Free Air Displacement  | 25 L/min<br>0.88 cfm                                 |                                 |
| 额定电压 / Rated Voltage           | 115 V AC                                             | 230 V AC                        |
| 额定频率 / Rated Frequency         | 50 Hz / 60 Hz                                        |                                 |
| 消耗功率 / Power Consumption       | 39 W                                                 |                                 |
| 耐用时间 / Rated Performance       | 3,000 小时 / hours                                     |                                 |
| 吸入口尺寸 / Inlet                  | ISO Rc 1/4 (内螺纹 / internal thread)                   |                                 |
| 吐出口尺寸 / Outlet                 | ISO Rc 1/4 (内螺纹 / internal thread)                   |                                 |
| 额定时间 / Duty Cycle              | 连续 / Continuous                                      |                                 |
| 线圈绝缘等级 / Coil Insulation Class | UL 规格品：<br>相当于 B 类<br>/ Class B for UL               | 相当于 B 类<br>/ Class B equivalent |
| 安装尺寸 / Mounting Dimensions     | 68 (L) x 84 (W) mm<br>2 - 43/64" (L) x 3 - 5/16" (W) |                                 |
| 本体重量 / Weight                  | 2.3 kg 5.1 Lbs                                       |                                 |
| 导线长度 / Leadwire Length         | 300 mm<br>11 - 13/16"                                | 550 mm<br>21 - 21/32"           |

### 用途例 / Application Examples

小螺丝、螺钉的吸附  
/ Machine Screw Feeder



空气采样器 / Air Sampler

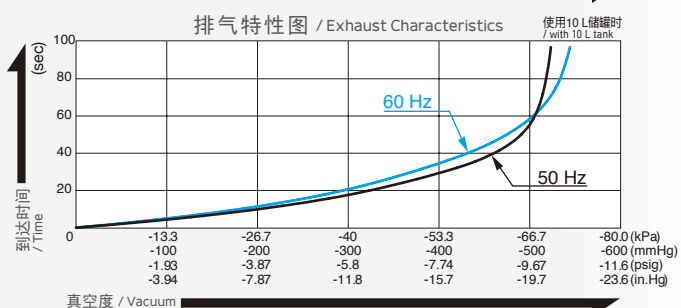
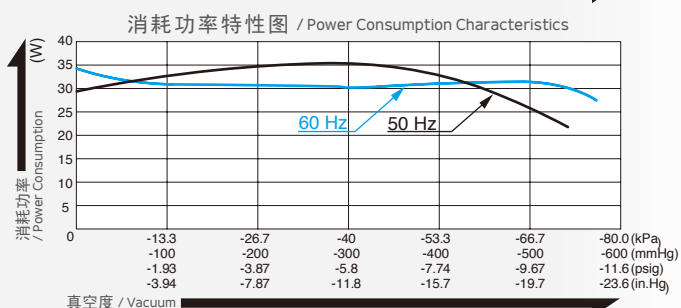
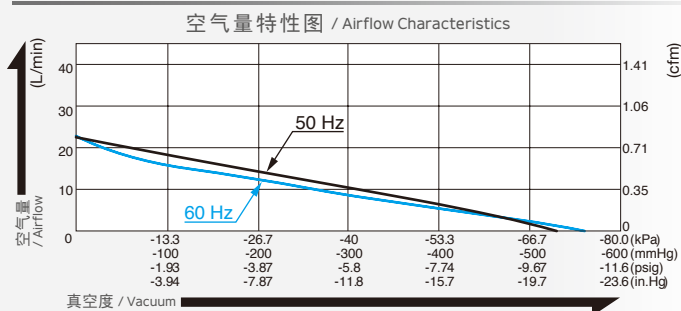


# 真空泵 / Vacuum Pump

## 型号 VP0450

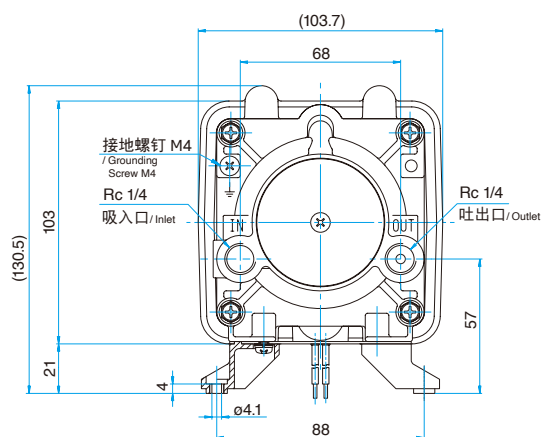


### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

### 外形尺寸图 / External Dimensions (单位 / Unit : mm)



### 规格 / Specifications

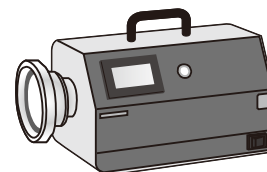
|                                |                                                       |                                 |
|--------------------------------|-------------------------------------------------------|---------------------------------|
| 达到真空度 / Attainable Vacuum      | -66.7 kPa (-500 mmHg)<br>-667 mbar -19.7 in. Hg       |                                 |
| 吐出空气量 / Free Air Displacement  | 18 L/min<br>0.64 cfm                                  |                                 |
| 额定电压 / Rated Voltage           | 120 V AC                                              | 230 V AC                        |
| 额定频率 / Rated Frequency         | 50 Hz / 60 Hz                                         |                                 |
| 消耗功率 / Power Consumption       | 35 W / 34 W                                           |                                 |
| 耐用时间 / Rated Performance       | 10,000 小时 / hours                                     |                                 |
| 吸入口尺寸 / Inlet                  | ISO Rc 1/4 (内螺纹 / internal thread)                    |                                 |
| 吐出口尺寸 / Outlet                 | ISO Rc 1/4 (内螺纹 / internal thread)                    |                                 |
| 额定时间 / Duty Cycle              | 连续 / Continuous                                       |                                 |
| 线圈绝缘等级 / Coil Insulation Class | UL 规格品：<br>相当于 A 类<br>/ Class A for UL                | 相当于 E 类<br>/ Class E equivalent |
| 安装尺寸 / Mounting Dimensions     | 85 (L) x 88 (W) mm<br>3 - 11/32" (L) x 3 - 15/32" (W) |                                 |
| 本体重量 / Weight                  | 2.2 kg 4.9 Lbs                                        |                                 |
| 导线长度 / Leadwire Length         | 300 mm<br>11 - 13/16"                                 |                                 |

### 用途例 / Application Examples

小螺丝、螺钉的吸附  
/ Machine Screw Feeder

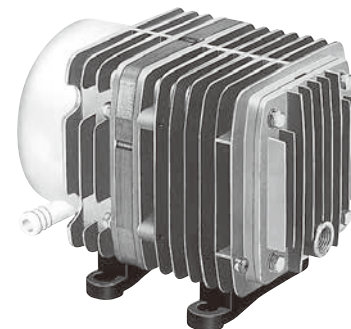


空气采样器 / Air Sampler

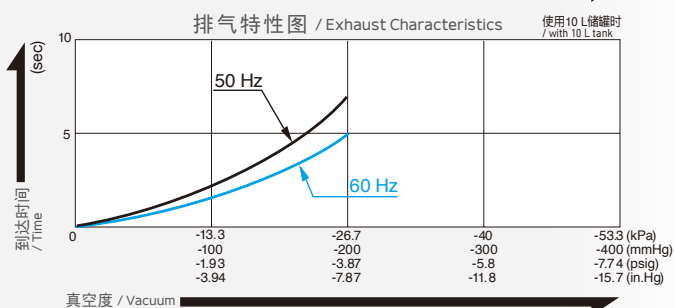
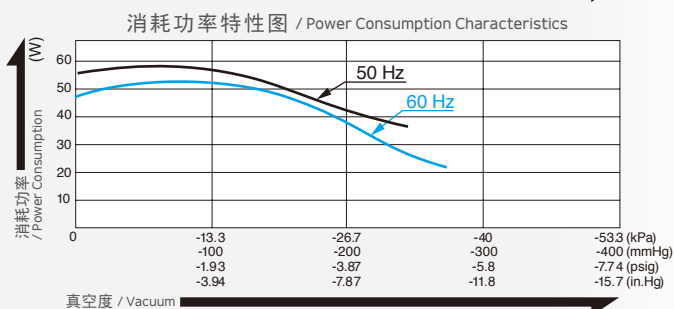
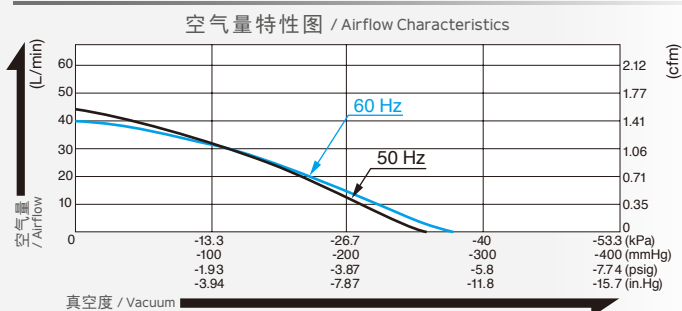


# 真空泵 / Vacuum Pump

## 型号 VP0625



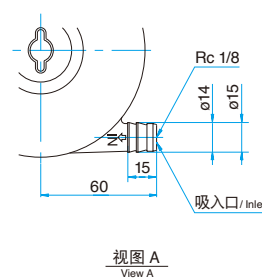
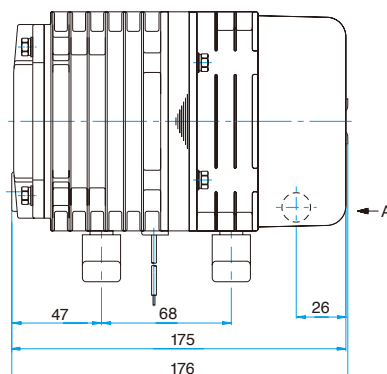
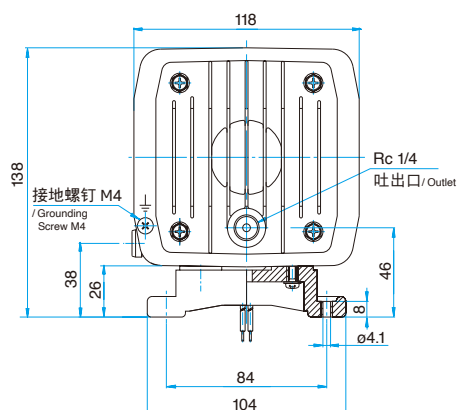
### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。

/The characteristic charts are for reference only and are not guaranteed.

### 外形尺寸图 / External Dimensions (单位 / Unit : mm)

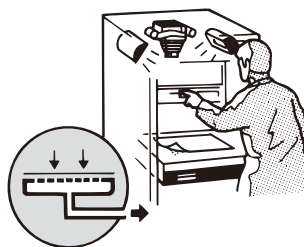


### 规格 / Specifications

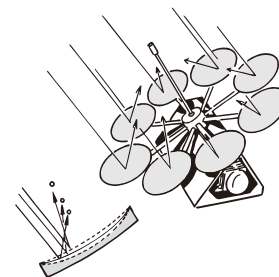
|                                |                                                      |                       |
|--------------------------------|------------------------------------------------------|-----------------------|
| 达到真空度 / Attainable Vacuum      | -33.3 kPa (-250 mmHg)<br>-333 mbar -9.84 in. Hg      |                       |
| 吐出空气量 / Free Air Displacement  | 40 L/min<br>1.41 cfm                                 |                       |
| 额定电压 / Rated Voltage           | 115 V AC                                             | 230 V AC              |
| 额定频率 / Rated Frequency         | 60 Hz                                                | 50 Hz / 60 Hz         |
| 消耗功率 / Power Consumption       | 60 W                                                 | 60 W / 56 W           |
| 耐用时间 / Rated Performance       | 10,000 小时 / hours                                    |                       |
| 吸入口尺寸 / Inlet                  | φ15 mm (外径) 软管接头 / 15 mm O.D. hose barb              |                       |
| 吐出口尺寸 / Outlet                 | ISO Rc 1/4 (内螺纹) / internal thread                   |                       |
| 额定时间 / Duty Cycle              | 连续 / Continuous                                      |                       |
| 线圈绝缘等级 / Coil Insulation Class | UL 规格品: 相当于 B 类 / Class B for UL                     |                       |
| 安装尺寸 / Mounting Dimensions     | 68 (L) x 84 (W) mm<br>2 - 43/64" (L) x 3 - 5/16" (W) |                       |
| 本体重量 / Weight                  | 3 kg 6.6 Lbs                                         |                       |
| 导线长度 / Leadwire Length         | 235 mm<br>9 - 1/4"                                   | 320 mm<br>12 - 19/32" |

### 用途例 / Application Examples

胶片洗印设备 / Microfiche Camera



聚光装置 / Solar Collection Screen

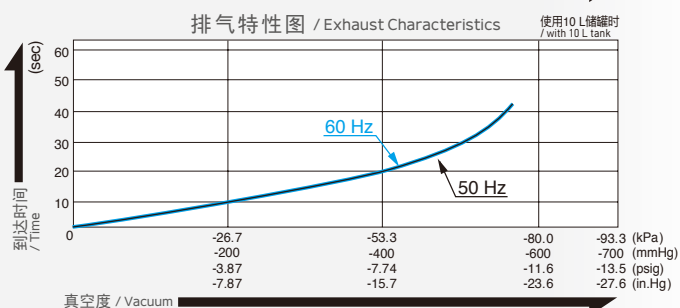
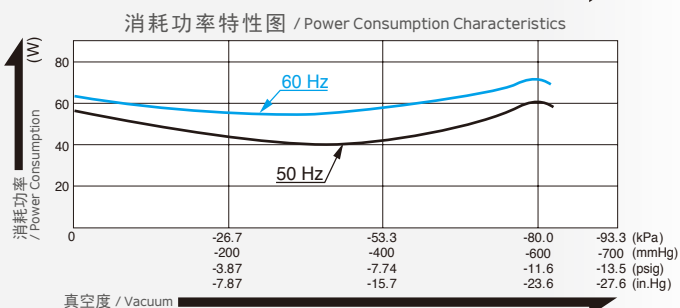
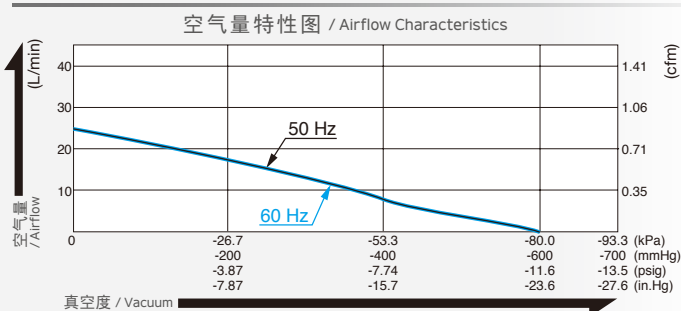


# 真空泵 / Vacuum Pump

## 型号 VP0660



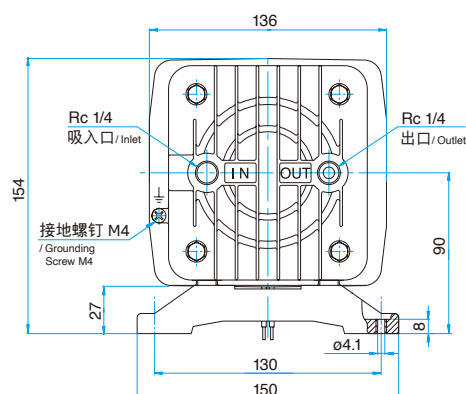
### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。

/The characteristic charts are for reference only and are not guaranteed.

### 外形尺寸图 / External Dimensions (单位 / Unit : mm)



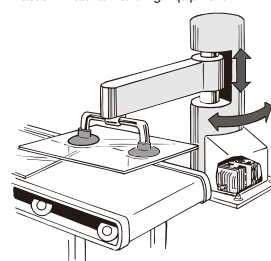
### 规格 / Specifications

|                                   |                                                      |                                 |
|-----------------------------------|------------------------------------------------------|---------------------------------|
| 达到真空度*<br>/ Attainable Vacuum     | -80 kPa (-600 mmHg)<br>-800 mbar -23.6 in. Hg        |                                 |
| 吐出空气量<br>/ Free Air Displacement  | 25 L/min<br>0.88 cfm                                 |                                 |
| 额定电压 / Rated Voltage              | 115 V AC                                             | 230 V AC                        |
| 额定频率 / Rated Frequency            | 60 Hz                                                | 50 Hz                           |
| 消耗功率 / Power Consumption          | 70 W                                                 | 60 W                            |
| 耐用时间<br>/ Rated Performance       | 6,000 小时 / hours                                     |                                 |
| 吸入口尺寸 / Inlet                     | ISO Rc 1/4 (内螺纹 / internal thread)                   |                                 |
| 吐出口尺寸 / Outlet                    | ISO Rc 1/4 (内螺纹 / internal thread)                   |                                 |
| 额定时间 / Duty Cycle                 | 连续 / Continuous                                      |                                 |
| 线圈绝缘等级<br>/ Coil Insulation Class | UL 规格品:<br>相当于 B 类<br>/ Class B for UL               | 相当于 E 类<br>/ Class E equivalent |
| 安装尺寸<br>/ Mounting Dimensions     | 102 (L) x 130 (W) mm<br>4 - 1/64" (L) x 5 - 1/8" (W) |                                 |
| 本体重量 / Weight                     | 5 kg 11 Lbs                                          |                                 |
| 导线长度 / Leadwire Length            | 300 mm<br>11 - 13/16"                                | 600 mm<br>23 - 5/8"             |

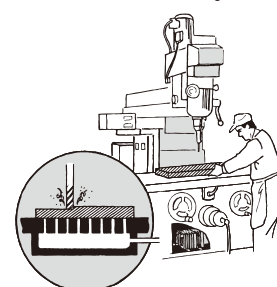
\* 高于 -80 kPa 运转时需要在进气管路上加装一个放气阀或泄压阀。/Operations at higher than -80 kPa need an additional leak valve or relief valve on the inlet piping.

### 用途例 / Application Examples

真空吸附材料搬运  
/ Vacuum Material Handling Equipment



真空吸盘 / Vacuum Chucking

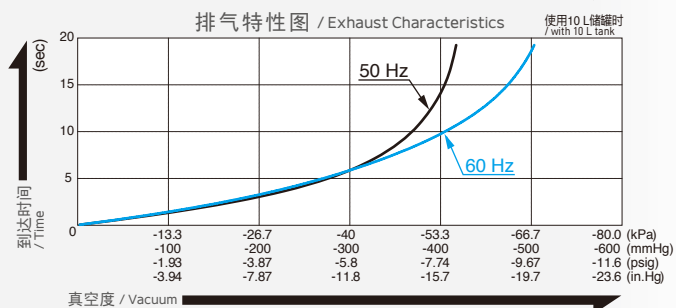
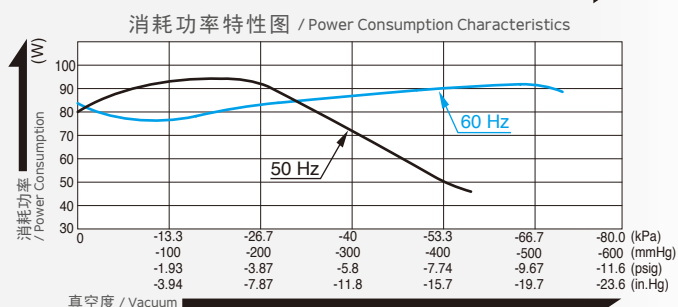
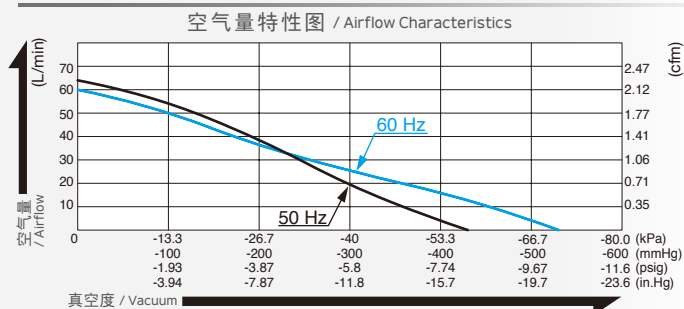


# 真空泵 / Vacuum Pump

## 型号 VP0940



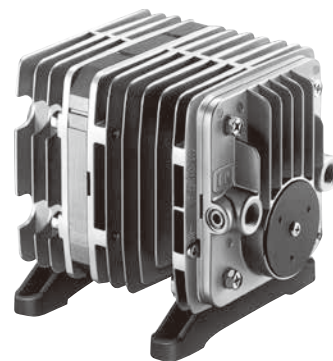
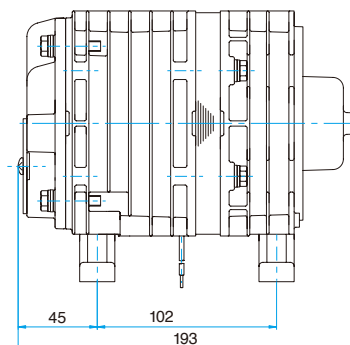
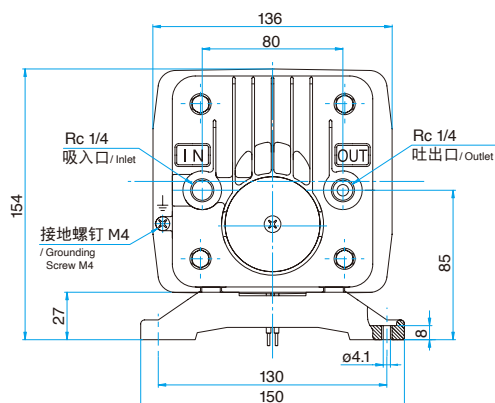
### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。

/The characteristic charts are for reference only and are not guaranteed.

### 外形尺寸图 / External Dimensions (单位 / Unit : mm)



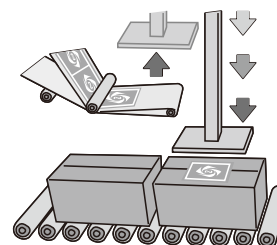
### 规格 / Specifications

|                                   |                                                      |                                 |
|-----------------------------------|------------------------------------------------------|---------------------------------|
| 达到真空度*<br>/ Attainable Vacuum     | -53.3 kPa (-400 mmHg)<br>-533 mbar -15.7 in. Hg      |                                 |
| 吐出空气量<br>/ Free Air Displacement  | 60 L/min<br>2.12 cfm                                 |                                 |
| 额定电压 / Rated Voltage              | 115 V AC                                             | 230 V AC                        |
| 额定频率 / Rated Frequency            | 50 Hz / 60 Hz                                        |                                 |
| 消耗功率 / Power Consumption          | 95 W                                                 |                                 |
| 耐用时间<br>/ Rated Performance       | 10,000 小时 / hours                                    |                                 |
| 吸入口尺寸 / Inlet                     | ISO Rc 1/4 (内螺纹 / internal thread)                   |                                 |
| 吐出口尺寸 / Outlet                    | ISO Rc 1/4 (内螺纹 / internal thread)                   |                                 |
| 额定时间 / Duty Cycle                 | 连续 / Continuous                                      |                                 |
| 线圈绝缘等级<br>/ Coil Insulation Class | UL 规格品:<br>相当于 B 类<br>/ Class B for UL               | 相当于 B 类<br>/ Class B equivalent |
| 安装尺寸<br>/ Mounting Dimensions     | 102 (L) x 130 (W) mm<br>4 - 1/64" (L) x 5 - 1/8" (W) |                                 |
| 本体重量 / Weight                     | 4.55 kg 10.0 Lbs                                     |                                 |
| 导线长度 / Leadwire Length            | 300 mm<br>11 - 13/16"                                | 320 mm<br>12 - 19/32"           |

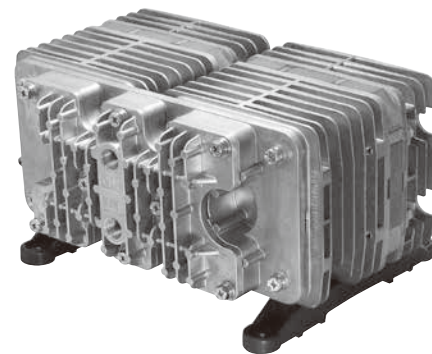
\* 高于 -53.3 kPa 运转时需要在进气管路上加装一个放气阀或泄压阀。/ Operations at higher than -53.3 kPa need an additional leak valve or relief valve on the inlet piping.

### 用途例 / Application Examples

#### 贴标机 / Label Sticking Machine



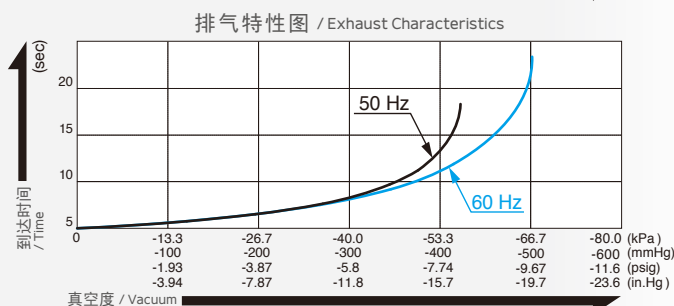
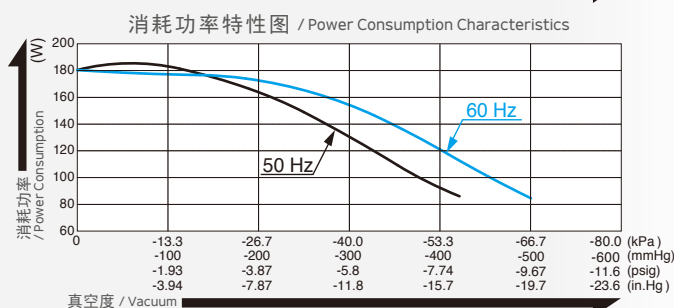
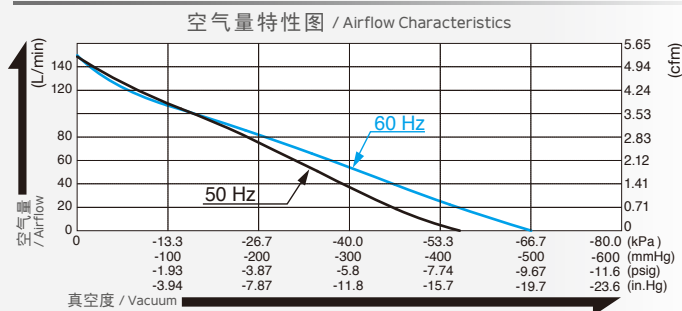
# 真空泵 / Vacuum Pump



## 型号 VP0940T

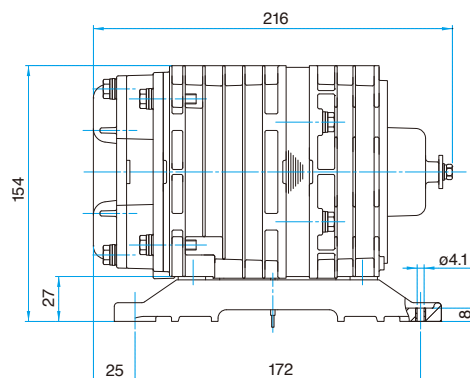
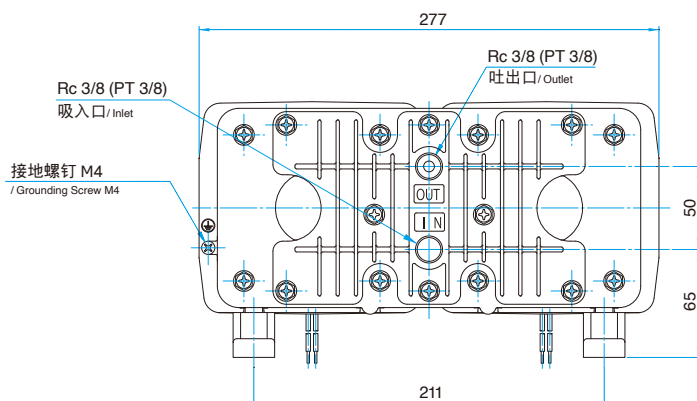


### 空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

### 外形尺寸图 / External Dimensions (单位 / Unit : mm)



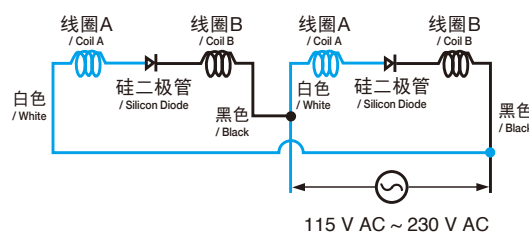
### 规格 / Specifications

|                                   |                                                        |
|-----------------------------------|--------------------------------------------------------|
| 达到真空度 *1<br>/ Attainable Vacuum   | -53.3 kPa (-400 mmHg)<br>-533 mbar -15.7 in. Hg        |
| 吐出空气量<br>/ Free Air Displacement  | 120 L/min<br>4.24 cfm                                  |
| 额定电压 / Rated Voltage              | 230 V AC*2                                             |
| 额定频率 / Rated Frequency            | 50 Hz / 60 Hz                                          |
| 消耗功率 / Power Consumption          | 185 W                                                  |
| 耐用时间<br>/ Rated Performance       | 10,000 小时 / hours                                      |
| 吸入口尺寸 / Inlet                     | ISO Rc 3/8 (内螺纹 / internal thread)                     |
| 吐出口尺寸 / Outlet                    | ISO Rc 3/8 (内螺纹 / internal thread)                     |
| 额定时间 / Duty Cycle                 | 连续 / Continuous                                        |
| 线圈绝缘等级<br>/ Coil Insulation Class | 相当于 B 类 / Class B equivalent                           |
| 安装尺寸<br>/ Mounting Dimensions     | 172 (L) x 211 (W) mm<br>6 - 49/64" (L) x 8 - 5/16" (W) |
| 本体重量 / Weight                     | 10 kg 22 Lbs                                           |
| 导线长度 / Leadwire Length            | 320 mm<br>12 - 19/32"                                  |

\*1: 高于 -53.3 kPa 运转时需要在进气管路上加装一个放气阀或泄压阀。/Operations at higher than -53.3 kPa need an additional leak valve or relief valve on the inlet piping.

\*2: 有关 115 V 规格的产品，请与我们联系。/Please contact us for 115 V AC model.

### 接线图 / Wiring diagram



\* 消音器，空气过滤器和管道不包含在产品中。

\* 管道和接线需要由用户完成。

\*The silencer, air filter, and pipe are not included with the product.

\*Piping and wiring need to be done by the user.



# DC LINEAR

Free Piston Compressor  
Free Piston Vacuum Pump

## 空气压缩泵, 真空泵 / AIR COMPRESSOR, VACUUM PUMP

### DC线性自由活塞压缩泵 / DC LINEAR Free Piston Compressor

DAH系列  
DAH series

### DC线性自由活塞真空泵 / DC LINEAR Free Piston Vacuum Pump

DVH系列  
DVH series

页  
Page

DAH系列 / DAH series

DAH102-X1 — 39

DAH102-Y1 — 39

DAH105-X1 — 40

DAH105-Y1 — 40

DAH110-X1 — 41

DAH110-Y1 — 41

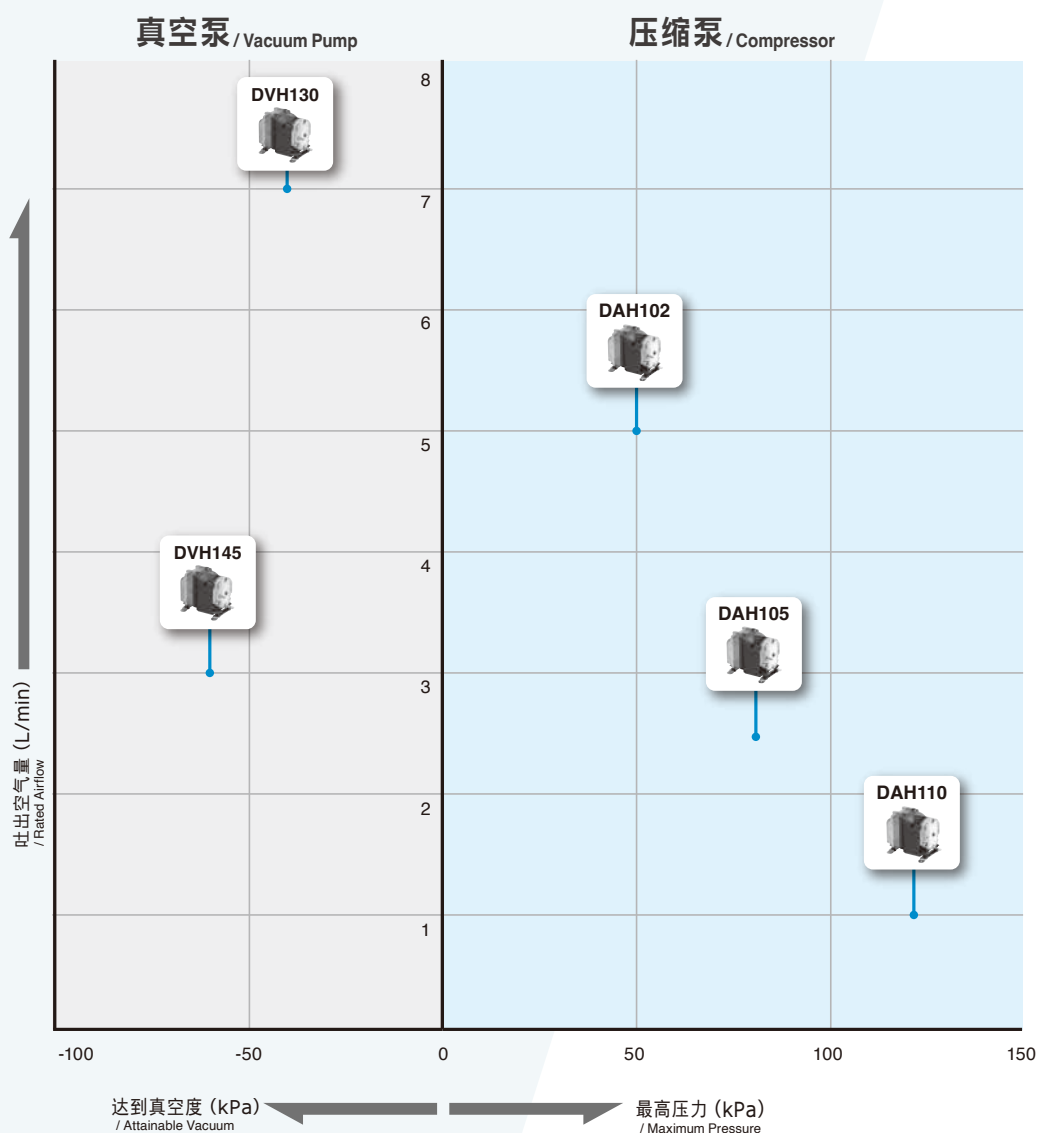
DVH系列 / DVH series

DVH130-X1 — 42

DVH130-Y1 — 42

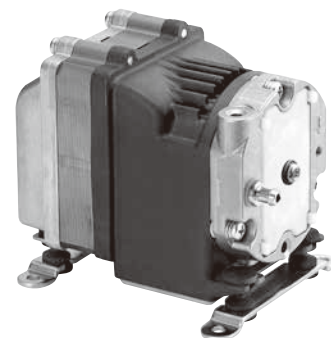
DVH145-X1 — 43

DVH145-Y1 — 43

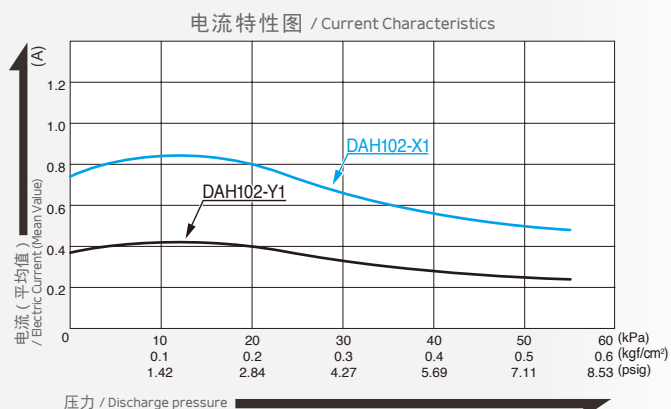
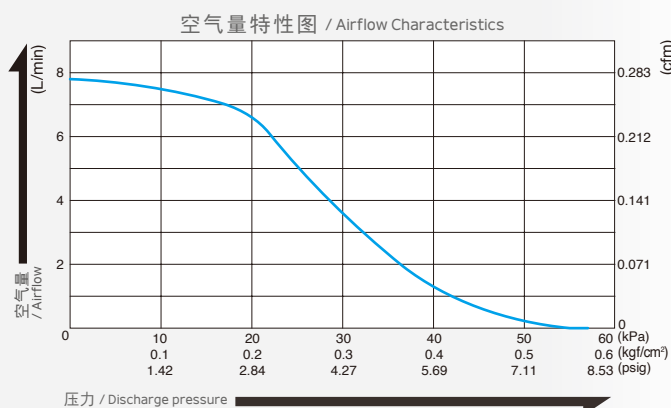


# 压缩泵 / Compressor

型号 **DAH102-X1** 12 V DC  
**DAH102-Y1** 24 V DC



## 空气量和电流 / Airflow & Electric Current



\* 特性图只是参考值，并不是保证值。  
 / The characteristic charts are for reference only and are not guaranteed.

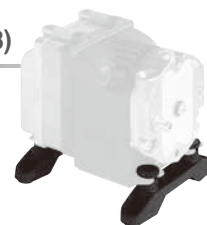
## 规格 / Specifications

| 型号 / Model                             | DAH102-X1                                           | DAH102-Y1   |
|----------------------------------------|-----------------------------------------------------|-------------|
| 额定压力 / Rated Pressure                  | 20 kPa (0.2 kgf/cm²)<br>0.2 bar 2.84 psig           |             |
| 吐出空气量 / Rated Airflow                  | 5 L/min*<br>0.177 cfm                               |             |
| 最高压力 / Maximum Pressure                | 50 kPa (0.5 kgf/cm²)<br>0.5 bar 7.11 psig           |             |
| 额定电压 / Rated Voltage                   | 12 V DC                                             | 24 V DC     |
| 电流 (平均值) / Current (Mean Value)        | 0.81 A                                              | 0.40 A      |
| 消耗功率 / Power Consumption               | 9.8 W                                               | 9.5 W       |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 10,000 小时 / hours                                   |             |
| 吐出口尺寸 / Outlet                         | φ6 mm (外径) 软管接头 / 6 mm O.D. hose barb               |             |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                     |             |
| 线圈绝缘等级 / Coil Insulation Class         | 相当于 A 类 / Class A equivalent                        |             |
| 安装尺寸 / Mounting Dimensions             | 76 (L) x 70 (W) mm<br>2 - 63/64" (L) x 2 - 3/4" (W) |             |
| 本体重量 / Weight                          | 0.91 kg                                             | 2.01 Lbs    |
| 导线长度 / Leadwire Length                 | 300 mm                                              | 11 - 13/16" |

\* 额定压力下的空气量。 / Airflow at rated pressure.

## 可选附件 / Optional Accessory (LB07793)

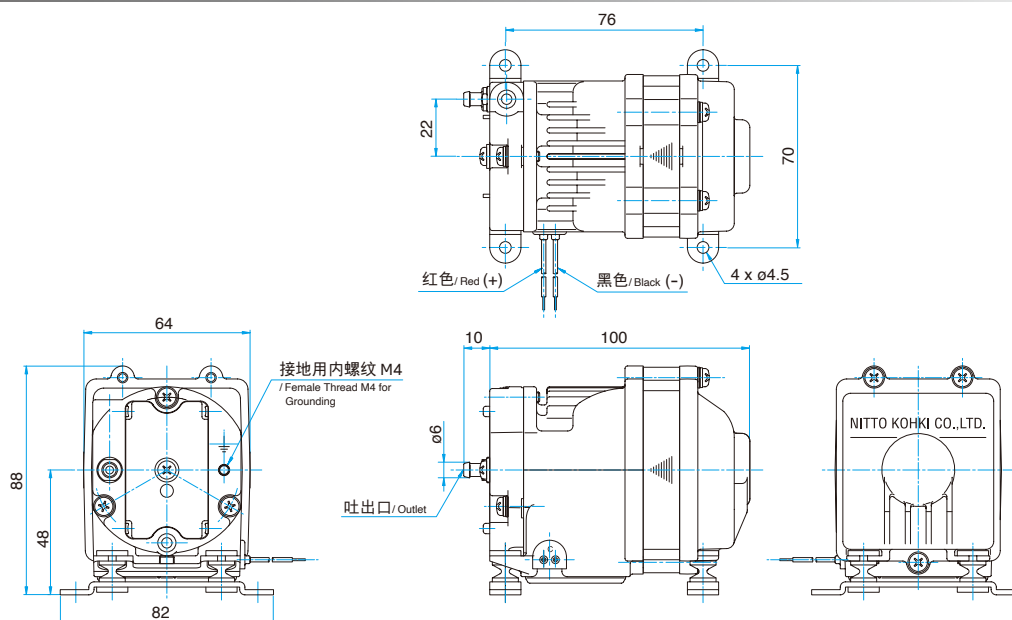
如有需要，可提供重载橡胶脚垫。  
 / Heavy duty rubber feet available on request.



## 用途例 / Application Examples

医疗设备、分析仪等  
 / Medical equipment, analyzers, etc.

## 外形尺寸图 / External Dimensions (单位 / Unit : mm)

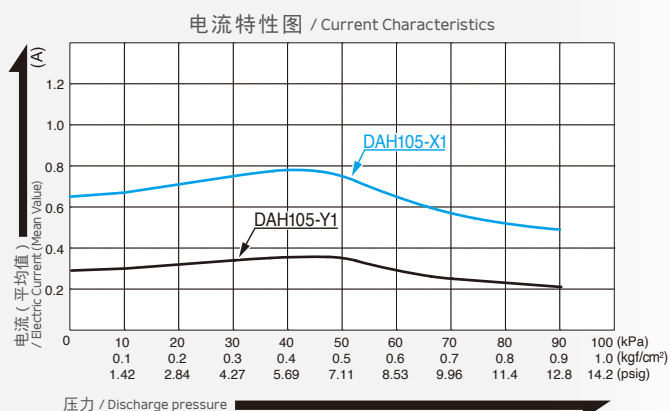
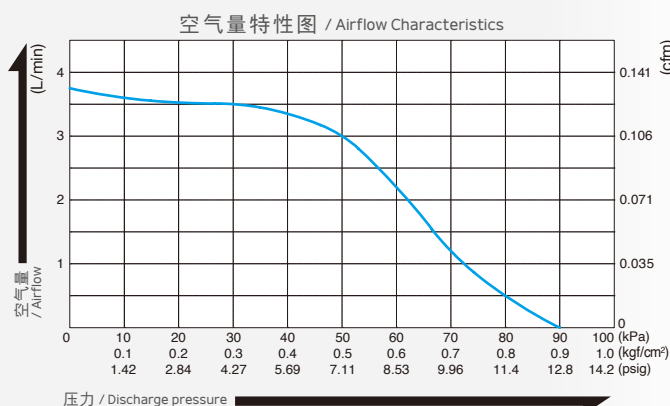


# 压缩泵 / Compressor

型号 **DAH105-X1** 12 V DC  
**DAH105-Y1** 24 V DC



## 空气量和电流 / Airflow & Electric Current



\* 特性图只是参考值，并不是保证值。  
 / The characteristic charts are for reference only and are not guaranteed.

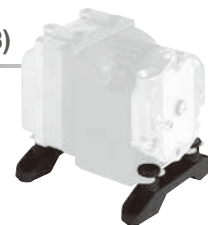
## 规格 / Specifications

| 型号 / Model                             | DAH105-X1                                              | DAH105-Y1 |
|----------------------------------------|--------------------------------------------------------|-----------|
| 额定压力 / Rated Pressure                  | 50 kPa (0.5 kgf/cm <sup>2</sup> )<br>0.5 bar 7.11 psig |           |
| 吐出空气量 / Rated Airflow                  | 2.5 L/min*<br>0.088 cfm                                |           |
| 最高压力 / Maximum Pressure                | 80 kPa (0.8 kgf/cm <sup>2</sup> )<br>0.8 bar 11.4 psig |           |
| 额定电压 / Rated Voltage                   | 12 V DC                                                | 24 V DC   |
| 电流 (平均值) / Current (Mean Value)        | 0.74 A                                                 | 0.35 A    |
| 消耗功率 / Power Consumption               | 9.2 W                                                  | 8.5 W     |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 10,000 小时 / hours                                      |           |
| 吐出口尺寸 / Outlet                         | φ6 mm (外径) 软管接头 / 6 mm O.D. hose barb                  |           |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                        |           |
| 线圈绝缘等级 / Coil Insulation Class         | 相当于 A 类 / Class A equivalent                           |           |
| 安装尺寸 / Mounting Dimensions             | 76 (L) x 70 (W) mm<br>2 - 63/64" (L) x 2 - 3/4" (W)    |           |
| 本体重量 / Weight                          | 0.91 kg 2.01 Lbs                                       |           |
| 导线长度 / Leadwire Length                 | 300 mm<br>11 - 13/16"                                  |           |

\* 额定压力下的空气量。 / Airflow at rated pressure.

## 可选附件 / Optional Accessory (LB07793)

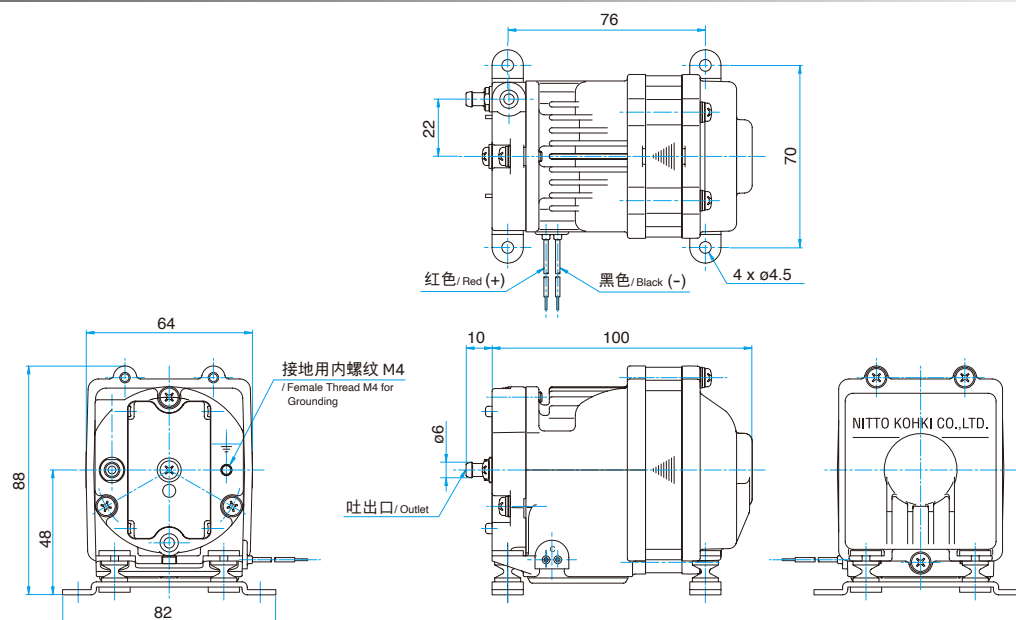
如有需要，可提供重载橡胶脚垫。  
 / Heavy duty rubber feet available on request.



## 用途例 / Application Examples

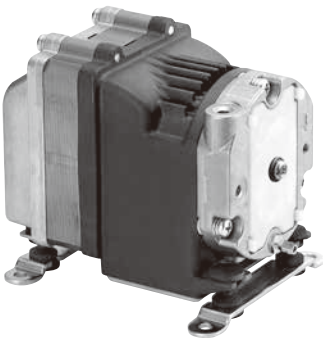
医疗设备、分析仪等  
 / Medical equipment, analyzers, etc.

## 外形尺寸图 / External Dimensions (单位 / Unit : mm)

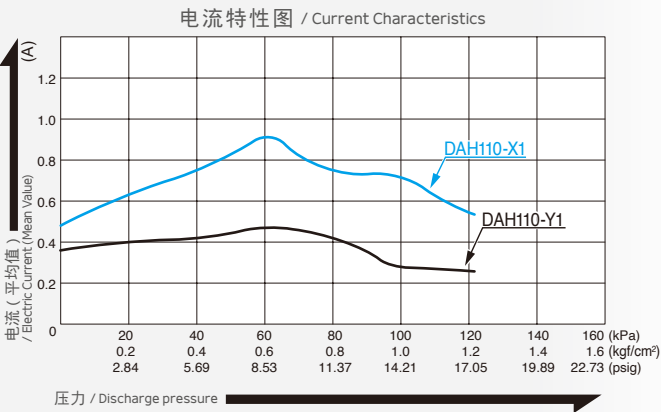
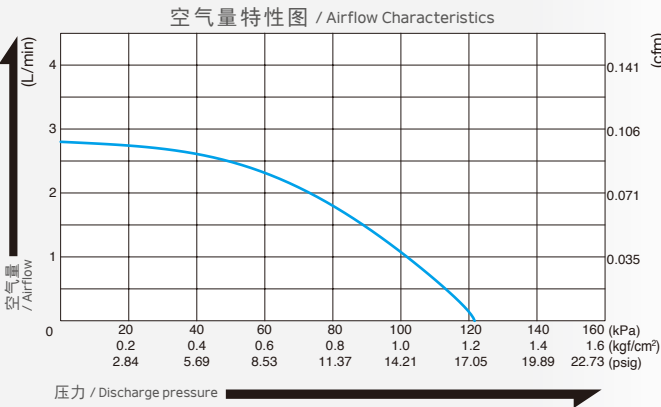


压缩泵 / Compressor

DAH110-X1 12 V DC  
型号 DAH110-Y1 24 V DC



空气量和电流 / Airflow & Electric Current



\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

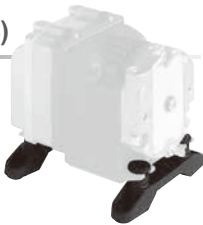
规格 / Specifications

| 型号 / Model                             | DAH110-X1                                               | DAH110-Y1 |
|----------------------------------------|---------------------------------------------------------|-----------|
| 额定压力 / Rated Pressure                  | 100 kPa (1.0 kgf/cm <sup>2</sup> )<br>1.0 bar 14.2 psig |           |
| 吐出空气量 / Rated Airflow                  | 1.0 L/min*<br>0.035 cfm                                 |           |
| 最高压力 / Maximum Pressure                | 120 kPa (1.2 kgf/cm <sup>2</sup> )<br>1.2 bar 17.1 psig |           |
| 额定电压 / Rated Voltage                   | 12 V DC                                                 | 24 V DC   |
| 电流 (平均值) / Current (Mean Value)        | 0.74 A                                                  | 0.27 A    |
| 消耗功率 / Power Consumption               | 8.5 W                                                   | 8.0 W     |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 10,000 小时 / hours                                       |           |
| 吐出口尺寸 / Outlet                         | φ4.7 mm (外径) 软管接头 / 4.7 mm O.D. hose barb               |           |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                         |           |
| 线圈绝缘等级 / Coil Insulation Class         | 相当于 A 类 / Class A equivalent                            |           |
| 安装尺寸 / Mounting Dimensions             | 76 (L) x 70 (W) mm<br>2 - 63/64" (L) x 2 - 3/4" (W)     |           |
| 本体重量 / Weight                          | 0.91 kg 2.01 Lbs                                        |           |
| 导线长度 / Leadwire Length                 | 300 mm<br>11 - 13/16"                                   |           |

\* 额定压力下的空气量。 / Airflow at rated pressure.

可选附件 / Optional Accessory (LB07793)

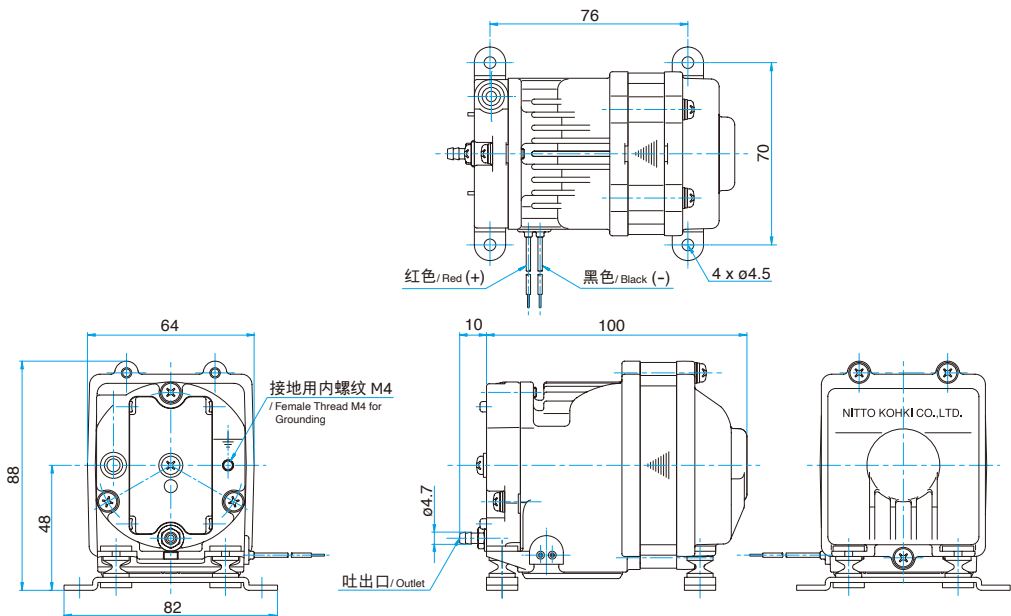
如有需要，可提供重载橡胶脚垫。  
/ Heavy duty rubber feet available on request.



用途例 / Application Examples

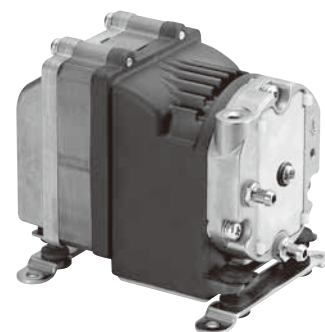
医疗设备、分析仪等  
/ Medical equipment, analyzers, etc.

外形尺寸图 / External Dimensions (单位 / Unit : mm)

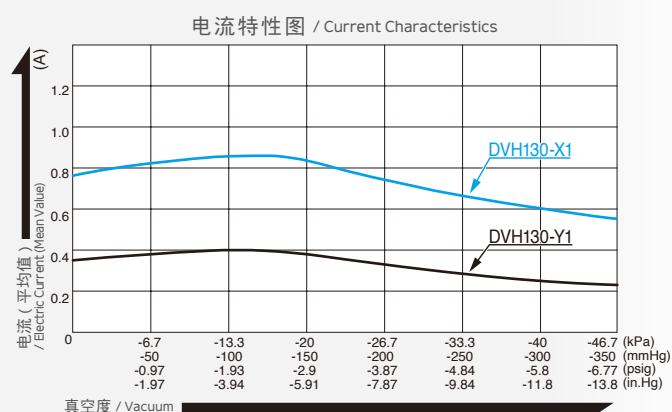
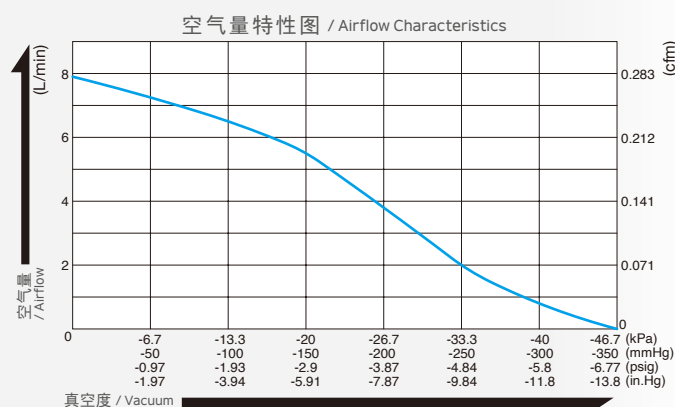


# 真空泵 / Vacuum Pump

**型号 DVH130-X1** 12 V DC  
**型号 DVH130-Y1** 24 V DC



## 空气量和电流 / Airflow & Electric Current



\* 特性图只是参考值，并不是保证值。  
 / The characteristic charts are for reference only and are not guaranteed.

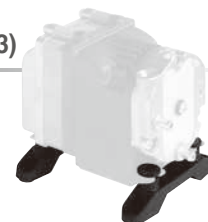
## 规格 / Specifications

| 型号 / Model                             | DVH130-X1                                           | DVH130-Y1 |
|----------------------------------------|-----------------------------------------------------|-----------|
| 达到真空度 / Attainable Vacuum              | -40 kPa (-300 mmHg)<br>-400 mbar -11.8 in. Hg       |           |
| 吐出空气量 / Rated Airflow                  | 7 L/min*<br>0.247 cfm                               |           |
| 额定电压 / Rated Voltage                   | 12 V DC                                             | 24 V DC   |
| 电流 (平均值) / Current (Mean Value)        | 0.86 A                                              | 0.41 A    |
| 消耗功率 / Power Consumption               | 10.3 W                                              | 10.0 W    |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 10,000 小时 / hours                                   |           |
| 吸入口尺寸 / Inlet                          | φ6 mm (外径) 软管接头 / 6 mm O.D. hose barb               |           |
| 吐出口尺寸 / Outlet                         | φ6 mm (外径) 软管接头 / 6 mm O.D. hose barb               |           |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                     |           |
| 线圈绝缘等级 / Coil Insulation Class         | 相当于 A 类 / Class A equivalent                        |           |
| 安装尺寸 / Mounting Dimensions             | 76 (L) x 70 (W) mm<br>2 - 63/64" (L) x 2 - 3/4" (W) |           |
| 本体重量 / Weight                          | 0.91 kg                                             | 2.01 Lbs  |
| 导线长度 / Leadwire Length                 | 300 mm<br>11 - 13/16"                               |           |

\* 空载运转时的空气量。  
 \* Free air displacement at no-load operation.

## 可选附件 / Optional Accessory (LB07793)

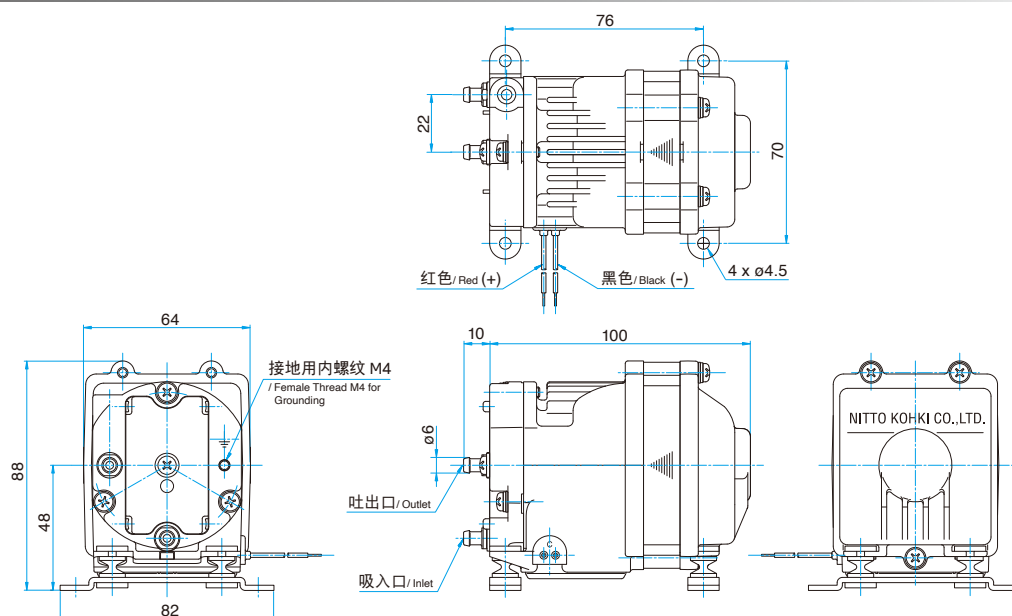
如有需要，可提供重载橡胶脚垫。  
 / Heavy duty rubber feet available on request.



## 用途例 / Application Examples

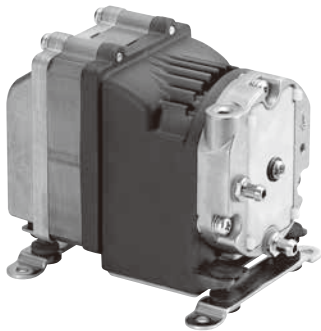
医疗设备、分析仪等  
 / Medical equipment, analyzers, etc.

## 外形尺寸图 / External Dimensions (单位 / Unit : mm)

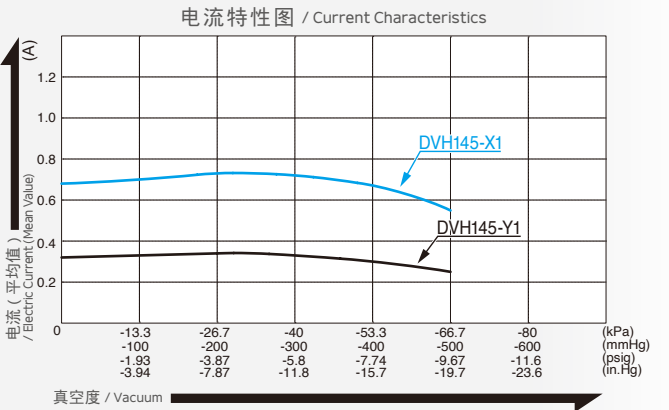
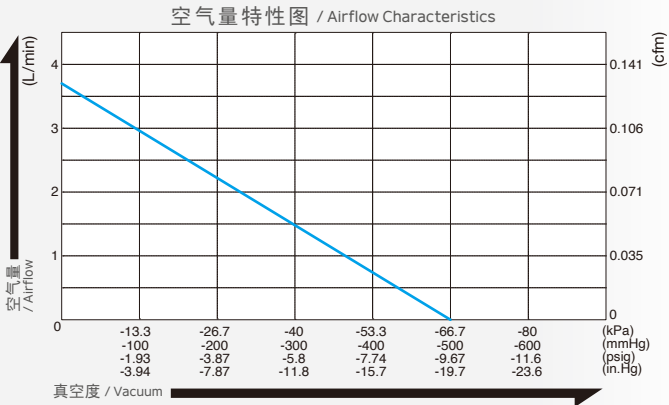


真空泵 / Vacuum Pump

型号 **DVH145-X1** 12 V DC  
**DVH145-Y1** 24 V DC



空气量和电流 / Airflow & Electric Current



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

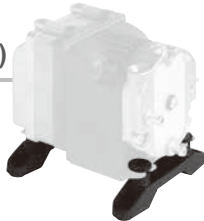
规格 / Specifications

| 型号 / Model                             | DVH145-X1                                           | DVH145-Y1 |
|----------------------------------------|-----------------------------------------------------|-----------|
| 达到真空度 / Attainable Vacuum              | -60 kPa (-450 mmHg)<br>-600 mbar -17.7 in. Hg       |           |
| 吐出空气量 / Rated Airflow                  | 3 L/min*<br>0.106 cfm                               |           |
| 额定电压 / Rated Voltage                   | 12 V DC                                             | 24 V DC   |
| 电流 (平均值) / Current (Mean Value)        | 0.73 A                                              | 0.34 A    |
| 消耗功率 / Power Consumption               | 8.9 W                                               | 8.6 W     |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 10,000 小时 / hours                                   |           |
| 吸入口尺寸 / Inlet                          | φ6 mm (外径) 软管接头 / 6 mm O.D. hose barb               |           |
| 吐出口尺寸 / Outlet                         | φ6 mm (外径) 软管接头 / 6 mm O.D. hose barb               |           |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                     |           |
| 线圈绝缘等级 / Coil Insulation Class         | 相当于 A 类 / Class A equivalent                        |           |
| 安装尺寸 / Mounting Dimensions             | 76 (L) x 70 (W) mm<br>2 - 63/64" (L) x 2 - 3/4" (W) |           |
| 本体重量 / Weight                          | 0.91 kg                                             | 2.01 Lbs  |
| 导线长度 / Leadwire Length                 | 300 mm<br>11 - 13/16"                               |           |

\* 空载运转时的空气量。  
\* Free air displacement at no-load operation.

可选附件 / Optional Accessory (LB07793)

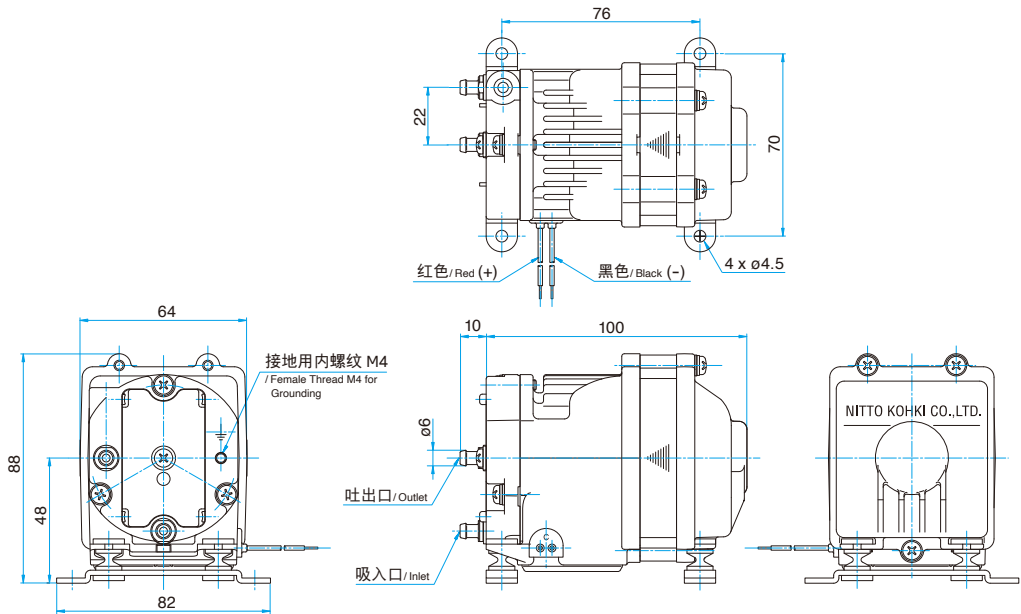
如有需要，可提供重载橡胶脚垫。  
/ Heavy duty rubber feet available on request.



用途例 / Application Examples

医疗设备、分析仪等  
/ Medical equipment, analyzers, etc.

外形尺寸图 / External Dimensions (单位 / Unit : mm)



# Diaphragm Pump

## 空气隔膜泵 / Air Diaphragm Pump

## 隔膜压缩泵&真空泵

/ Diaphragm Compressor and Vacuum Pump

VC系列  
VC series

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VC0100 压缩泵专用 / Blower Type — 46

VC0101 兼用 / Dual Type — 47

VC0101 压缩泵专用 / Blower Type — 48

VC0101S 压缩泵专用 / Blower Type — 49

VC0201B 兼用 / Dual Type — 50

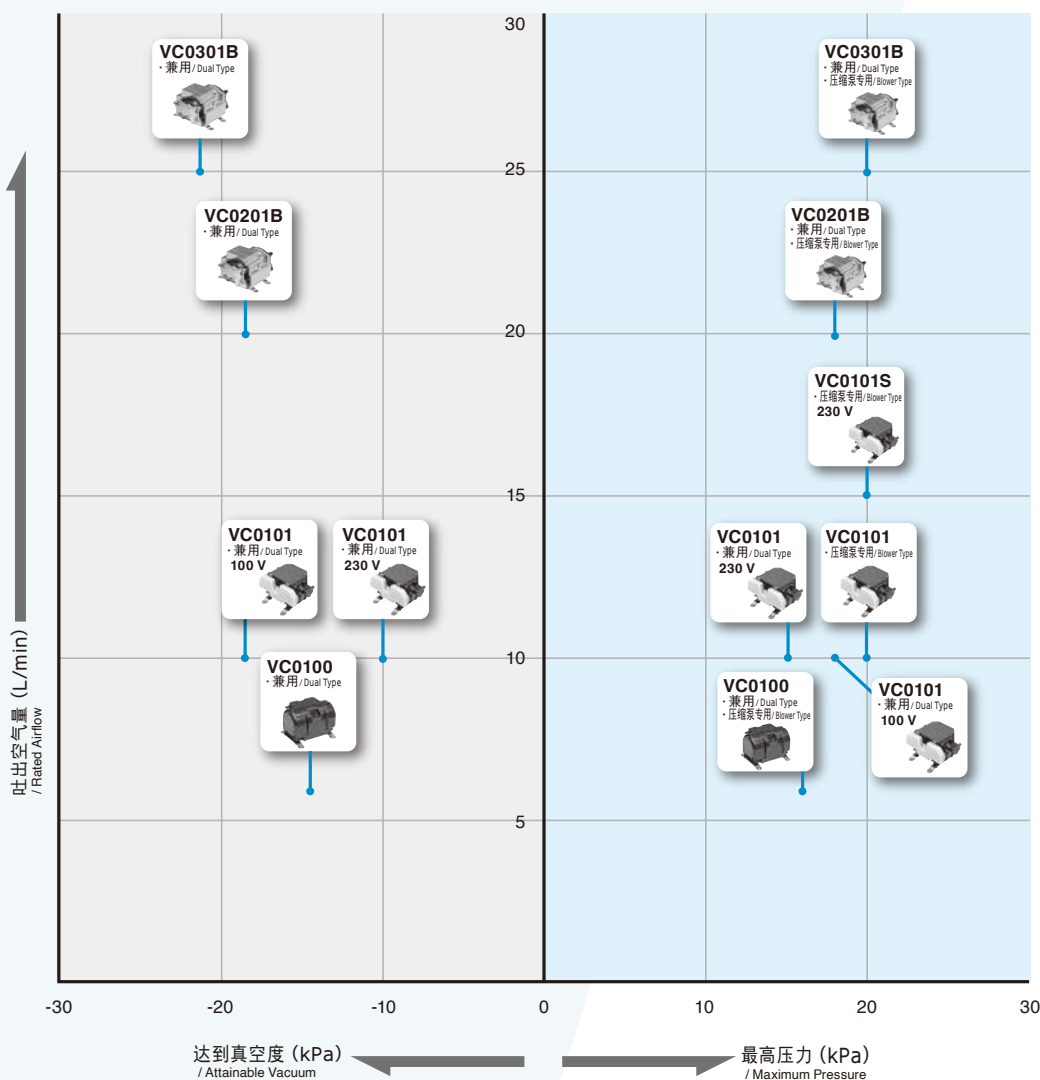
VC0201B 压缩泵专用 / Blower Type — 51

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真空泵 / Vacuum Pump

压缩泵 / Compressor



# 压缩泵 & 真空泵 / Compressor and Vacuum Pump

## 型号 VC0100

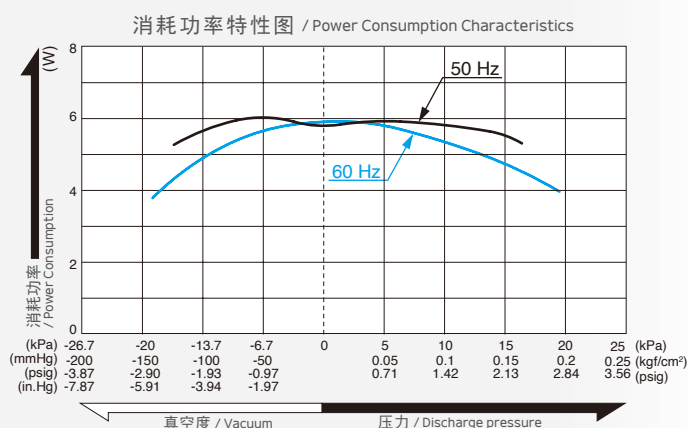
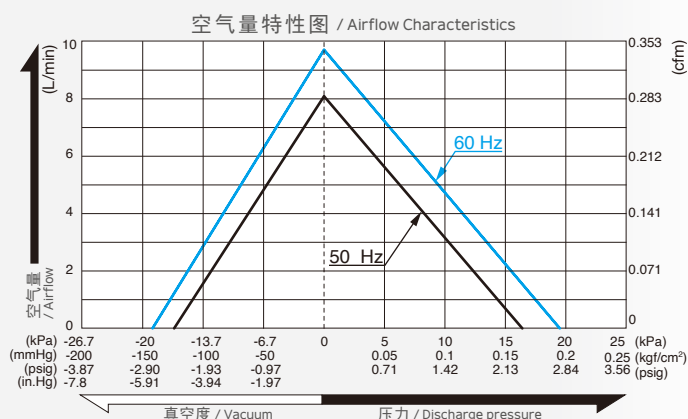


兼用 / Dual Type



空气量和消耗功率 / Airflow &amp; Power Consumption

规格 / Specifications



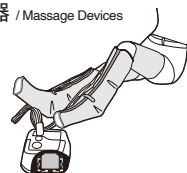
\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

|                                    |                                                                                                                  |                                 |
|------------------------------------|------------------------------------------------------------------------------------------------------------------|---------------------------------|
| 额定压力<br>/ Rated Pressure           | 4 kPa (0.04 kgf/cm <sup>2</sup> )<br>0.04 bar 0.57 psig                                                          |                                 |
| 吐出空气量<br>/ Rated Airflow           | 6 L/min<br>0.212 cfm                                                                                             |                                 |
| 最高压力<br>/ Maximum Pressure         | 16 kPa (0.16 kgf/cm <sup>2</sup> )<br>0.16 bar 2.28 psig                                                         |                                 |
| 达到真空度<br>/ Attainable Vacuum       | -14.7 kPa (-110 mmHg)<br>-147 mbar -4.33 in.Hg                                                                   |                                 |
| 额定电压 / Rated Voltage               | 120 V AC                                                                                                         | 230 V AC                        |
| 额定频率 / Rated Frequency             | 50 Hz / 60 Hz                                                                                                    |                                 |
| 消耗功率<br>/ Power Consumption        | 6 W                                                                                                              |                                 |
| 耐用时间<br>/ Rated Performance        | 5,000 小时 / hours                                                                                                 |                                 |
| 使用压力范围<br>/ Working Pressure Range | -14.7 kPa ~ 16 kPa<br>(-110 mmHg ~ 0.16 kgf/cm <sup>2</sup> )<br>-147 mbar ~ 0.16 bar<br>-4.33 in.Hg ~ 2.28 psig |                                 |
| 吸入口尺寸 / Inlet                      | φ6 mm ( 外径 ) 软管接头 / 6 mm O.D. hose barb                                                                          |                                 |
| 吐出口尺寸 / Outlet                     | φ6 mm ( 外径 ) 软管接头 / 6 mm O.D. hose barb                                                                          |                                 |
| 额定时间 / Duty Cycle                  | 连续 / Continuous                                                                                                  |                                 |
| 线圈绝缘等级<br>/ Coil Insulation Class  | UL 规格品：<br>相当于 A 类<br>/ Class A for UL                                                                           | 相当于 E 类<br>/ Class E equivalent |
| 安装尺寸<br>/ Mounting Dimensions      | 70 (L) x 72 (W) mm<br>2 - 3/4" (L) x 2 - 53/64" (W)                                                              |                                 |
| 本体重量 / Weight                      | 0.45 kg 0.99 Lbs                                                                                                 |                                 |
| 导线长度<br>/ Leadwire Length          | 300 mm<br>11 - 13/16"                                                                                            |                                 |

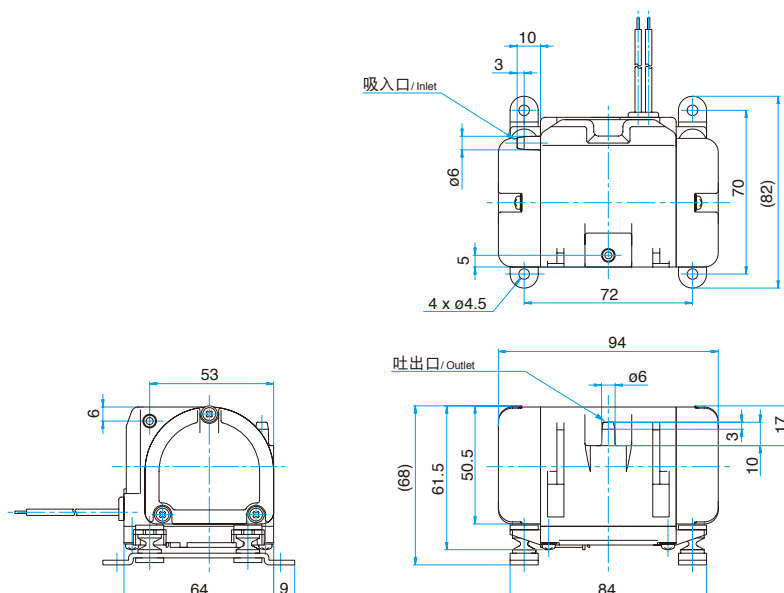
用途例 / Application Examples

按摩器 / Massage Devices

防褥疮垫 / Bedsore Prevention Mattress



外形尺寸图 / External Dimensions (单位 / Unit : mm)



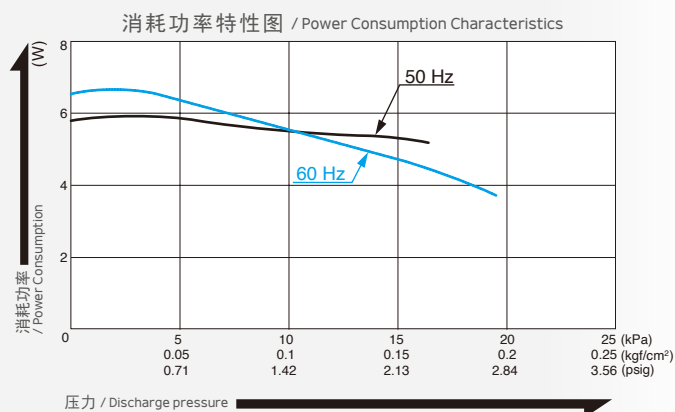
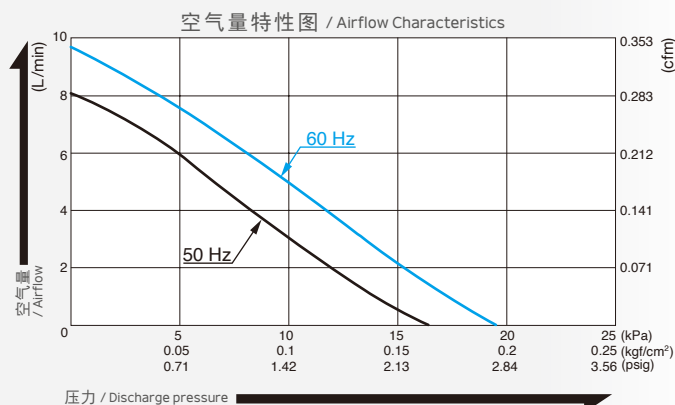
# 压缩泵 / Compressor

## 型号 VC0100



压缩泵专用 / Blower Type

空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

规格 / Specifications

|                                 |                                                                  |
|---------------------------------|------------------------------------------------------------------|
| 额定压力 / Rated Pressure           | 4 kPa (0.04 kgf/cm²)<br>0.04 bar 0.57 psig                       |
| 吐出空气量 / Rated Airflow           | 6 L/min<br>0.212 cfm                                             |
| 最高压力 / Maximum Pressure         | 16 kPa (0.16 kgf/cm²)<br>0.16 bar 2.28 psig                      |
| 额定电压 / Rated Voltage            | 120 V AC                                                         |
| 额定频率 / Rated Frequency          | 50 Hz / 60 Hz                                                    |
| 消耗功率 / Power Consumption        | 6 W                                                              |
| 耐用时间 / Rated Performance        | 10,000 小时 / hours                                                |
| 使用压力范围 / Working Pressure Range | 0 ~ 16 kPa<br>(0 ~ 0.16 kgf/cm²)<br>0 ~ .16 bar<br>0 ~ 2.28 psig |
| 吐出口尺寸 / Outlet                  | φ6 mm (外径) 软管接头 / 6 mm O.D. hose barb                            |
| 额定时间 / Duty Cycle               | 连续 / Continuous                                                  |
| 线圈绝缘等级 / Coil Insulation Class  | UL 规格品：<br>相当于 A 类 / Class A for UL                              |
| 安装尺寸 / Mounting Dimensions      | 70 (L) x 72 (W) mm<br>2 - 3/4" (L) x 2 - 53/64" (W)              |
| 本体重量 / Weight                   | 0.45 kg<br>0.99 Lbs                                              |
| 导线长度 / Leadwire Length          | 300 mm<br>11 - 13/16"                                            |
|                                 | 320 mm<br>12 - 19/32"                                            |

用途例 / Application Examples

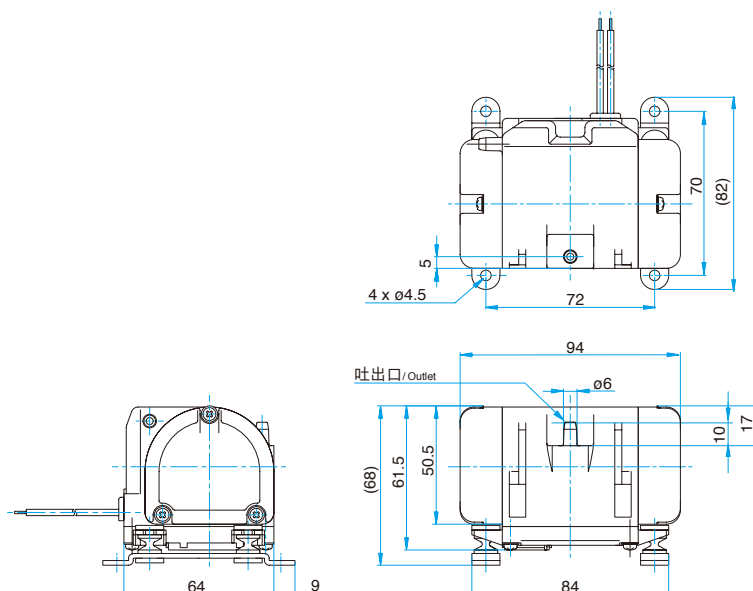
按摩器 / Massage Devices



防褥疮垫 / Bedsores Prevention Mattress



外形尺寸图 / External Dimensions (单位 / Unit : mm)



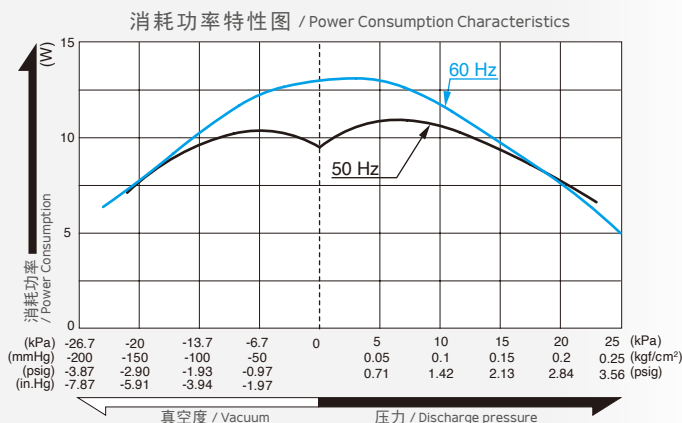
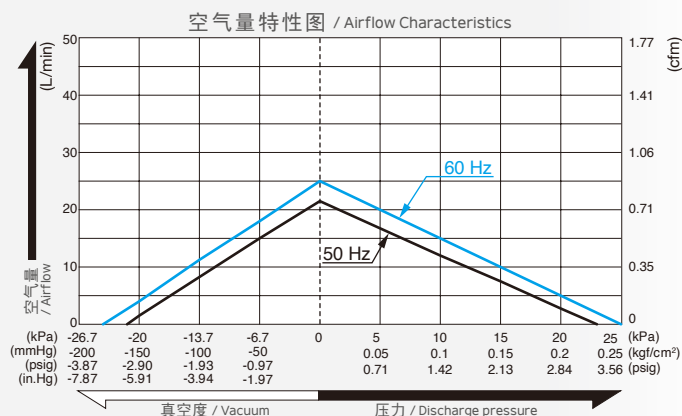
# 压缩泵 & 真空泵 / Compressor and Vacuum Pump

## 型号 VC0101

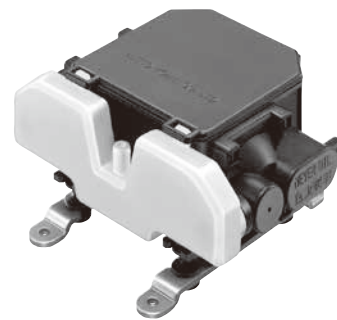


兼用 / Dual Type

空气量和消耗功率 / Airflow &amp; Power Consumption



\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

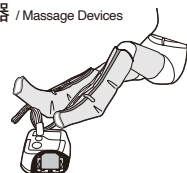


规格 / Specifications

|                                 |                                                                                                                  |                                                                                                               |
|---------------------------------|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| 额定压力 / Rated Pressure           | 10 kPa (0.1 kgf/cm <sup>2</sup> )<br>0.1 bar 1.42 psig                                                           |                                                                                                               |
| 吐出空气量 / Rated Airflow           | 10 L/min 0.35 cfm                                                                                                |                                                                                                               |
| 额定电压 / Rated Voltage            | 120 V AC                                                                                                         | 230 V AC                                                                                                      |
| 额定频率 / Rated Frequency          | 60 Hz                                                                                                            | 50 Hz                                                                                                         |
| 消耗功率 / Power Consumption        | 11 W                                                                                                             |                                                                                                               |
| 最高压力 / Maximum Pressure         | 18 kPa (0.18 kgf/cm <sup>2</sup> )<br>0.18 bar 2.56 psig                                                         | 15 kPa (0.15 kgf/cm <sup>2</sup> )<br>0.15 bar 2.13 psig                                                      |
| 达到真空度 / Attainable Vacuum       | -18.7 kPa (-140 mmHg)<br>-187 mbar<br>-5.51 in.Hg                                                                | -10 kPa (-76 mmHg)<br>-100 mbar<br>-2.95 in.Hg                                                                |
| 使用压力范围 / Working Pressure Range | -18.7 kPa ~ 18 kPa<br>(-140 mmHg ~ 0.18 kgf/cm <sup>2</sup> )<br>-187 mbar ~ 0.18 bar<br>-5.51 in.Hg ~ 2.56 psig | -10 kPa ~ 15 kPa<br>(-76 mmHg ~ 0.15 kgf/cm <sup>2</sup> )<br>-100 mbar ~ 0.15 bar<br>-2.95 in.Hg ~ 2.13 psig |
| 耐用时间 / Rated Performance        | 5,000 小时 / hours                                                                                                 |                                                                                                               |
| 吸入口尺寸 / Inlet                   | φ7.5 mm (外径) 软管接头 / 7.5 mm O.D. hose barb                                                                        |                                                                                                               |
| 吐出口尺寸 / Outlet                  | φ7.5 mm (外径) 软管接头 / 7.5 mm O.D. hose barb                                                                        |                                                                                                               |
| 额定时间 / Duty Cycle               | 连续 / Continuous                                                                                                  |                                                                                                               |
| 线圈绝缘等级 / Coil Insulation Class  | UL 规格品：相当于 B 类<br>/ Class B for UL                                                                               | 相当于 B 类<br>/ Class B equivalent                                                                               |
| 安装尺寸 / Mounting Dimensions      | 66 (L) x 100 (W) mm<br>2 - 19/32" (L) x 3 - 15/16" (W)                                                           |                                                                                                               |
| 本体重量 / Weight                   | 0.82 kg 1.81 Lbs                                                                                                 | 0.84 kg 1.85 Lbs                                                                                              |
| 导线长度 / Leadwire Length          | 300 mm<br>11 - 13/16"                                                                                            | 200 mm<br>7 - 7/8"                                                                                            |

用途例 / Application Examples

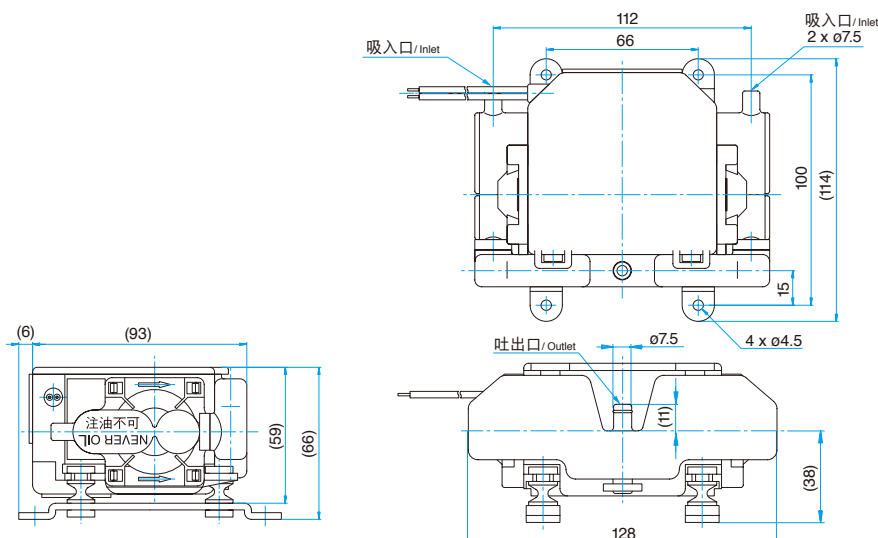
按摩器 / Massage Devices



防褥疮垫 / Bedsore Prevention Mattress



外形尺寸图 / External Dimensions (单位 / Unit : mm)



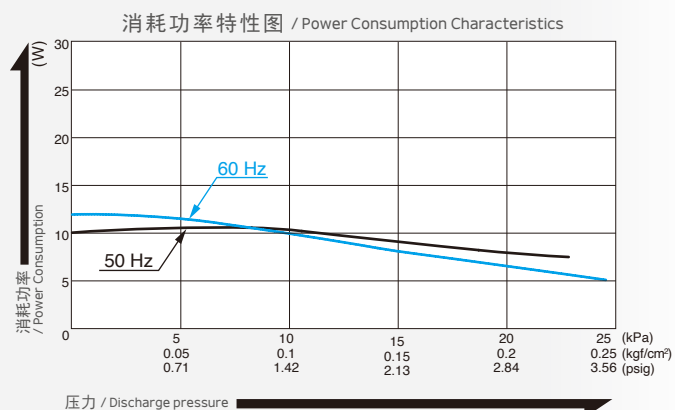
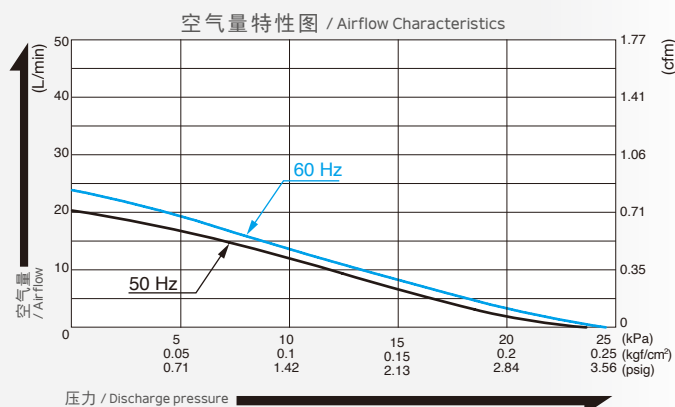
# 压缩泵 / Compressor

## 型号 VC0101



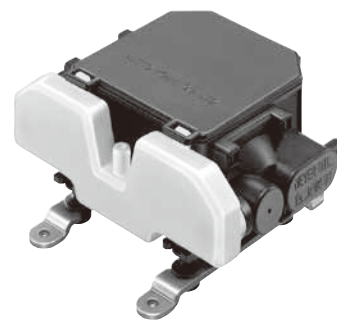
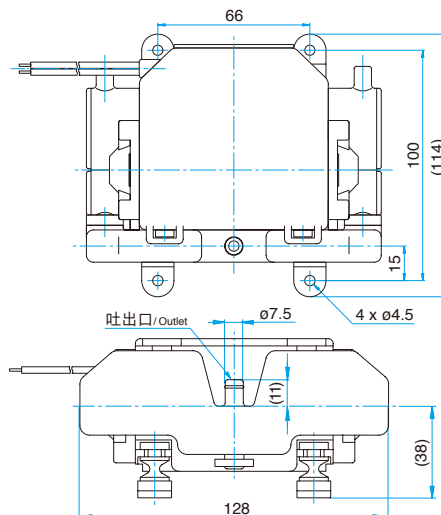
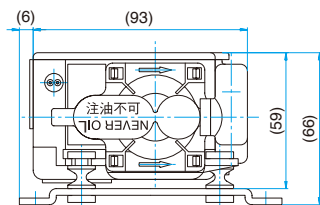
压缩泵专用 / Blower Type

空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

外形尺寸图 / External Dimensions (单位 / Unit : mm)

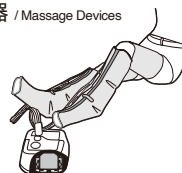


规格 / Specifications

|                                 |                                                                              |
|---------------------------------|------------------------------------------------------------------------------|
| 额定压力 / Rated Pressure           | 10 kPa (0.1 kgf/cm <sup>2</sup> )<br>0.1 bar 1.42 psig                       |
| 吐出空气量 / Rated Airflow           | 10 L/min<br>0.35 cfm                                                         |
| 最高压力 / Maximum Pressure         | 20 kPa (0.2 kgf/cm <sup>2</sup> )<br>0.2 bar 2.84 psig                       |
| 额定电压 / Rated Voltage            | 120 V AC      230 V AC                                                       |
| 额定频率 / Rated Frequency          | 50 Hz / 60 Hz                                                                |
| 消耗功率 / Power Consumption        | 11 W                                                                         |
| 耐用时间 / Rated Performance        | 10,000 小时 / hours                                                            |
| 使用压力范围 / Working Pressure Range | 0 ~ 20 kPa<br>(0 ~ 0.2 kgf/cm <sup>2</sup> )<br>0 ~ 0.2 bar<br>0 ~ 2.84 psig |
| 吐出口尺寸 / Outlet                  | φ7.5 mm (外径) 软管接头 / 7.5 mm O.D. hose barb                                    |
| 额定时间 / Duty Cycle               | 连续 / Continuous                                                              |
| 线圈绝缘等级 / Coil Insulation Class  | A 类 / Class A      相当于 B 类 / Class B equivalent                              |
| 安装尺寸 / Mounting Dimensions      | 66 (L) x 100 (W) mm<br>2 - 19/32" (L) x 3 - 15/16" (W)                       |
| 本体重量 / Weight                   | 0.82 kg 1.81 Lbs      0.84 kg 1.85 Lbs                                       |
| 导线长度 / Leadwire Length          | 300 mm<br>11 - 13/16"                                                        |

用途例 / Application Examples

按摩器 / Massage Devices

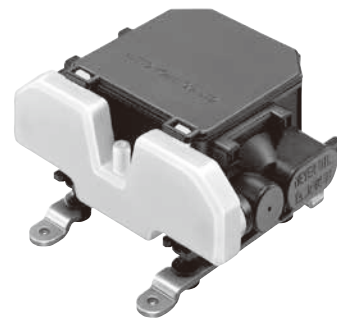


防褥疮垫 / Bedsores Prevention Mattress



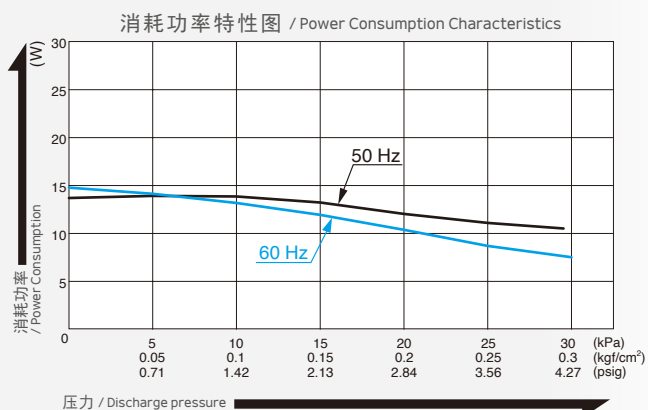
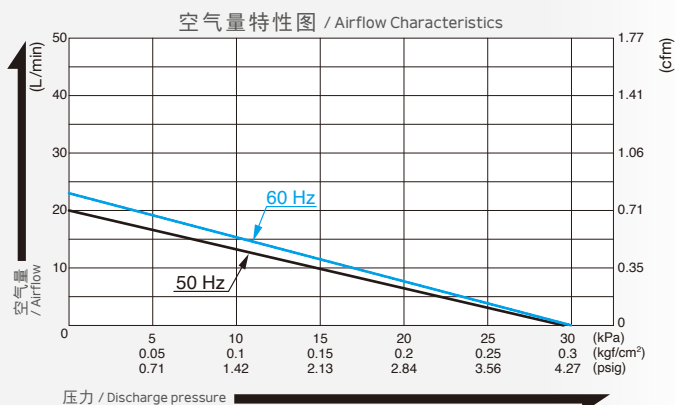
# 压缩泵 / Compressor

## 型号 VC0101S



压缩泵专用 / Blower Type

空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

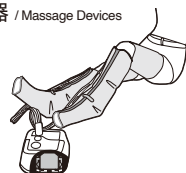
规格 / Specifications

|                                 |                                                                                 |
|---------------------------------|---------------------------------------------------------------------------------|
| 额定压力 / Rated Pressure           | 5 kPa (0.05 kgf/cm <sup>2</sup> )<br>0.05 bar 0.71 psig                         |
| 吐出空气量 / Rated Airflow           | 15 L/min<br>0.53 cfm                                                            |
| 最高压力 / Maximum Pressure         | 26 kPa (0.26 kgf/cm <sup>2</sup> )<br>0.26 bar 3.70 psig                        |
| 额定电压 / Rated Voltage            | 230 V AC*                                                                       |
| 额定频率 / Rated Frequency          | 50 Hz / 60 Hz                                                                   |
| 消耗功率 / Power Consumption        | 14 W                                                                            |
| 耐用时间 / Rated Performance        | 5,000 小时 / hours                                                                |
| 使用压力范围 / Working Pressure Range | 0 ~ 26 kPa<br>(0 to 0.26 kgf/cm <sup>2</sup> )<br>0 ~ 0.26 bar<br>0 ~ 3.70 psig |
| 吐出口尺寸 / Outlet                  | φ7.5 mm (外径) 软管接头 / 7.5 mm O.D. hose barb                                       |
| 额定时间 / Duty Cycle               | 60 分钟 / 60 minutes                                                              |
| 线圈绝缘等级 / Coil Insulation Class  | 相当于 B 类 / Class B equivalent                                                    |
| 安装尺寸 / Mounting Dimensions      | 66 (L) x 100 (W) mm<br>2 - 19/32" (L) x 3 - 15/16" (W)                          |
| 本体重量 / Weight                   | 0.83 kg 1.81 Lbs                                                                |
| 导线长度 / Leadwire Length          | 300 mm<br>11 - 13/16"                                                           |

\* 有关 120 V 规格的产品，请与我们联系。/Please contact us for 120 V AC model.

用途例 / Application Examples

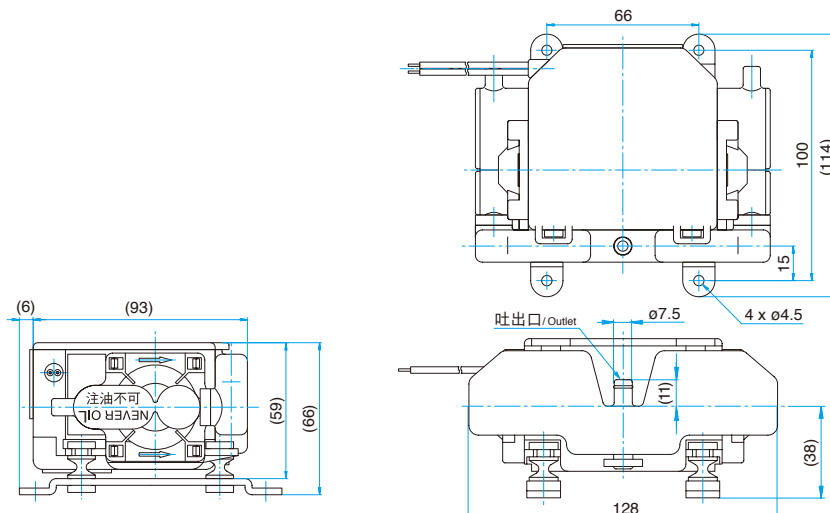
按摩器 / Massage Devices



防褥疮垫 / Bedsores Prevention Mattress

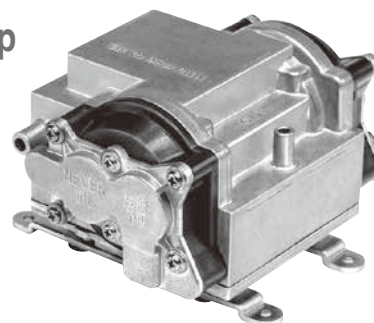


外形尺寸图 / External Dimensions (单位 / Unit : mm)



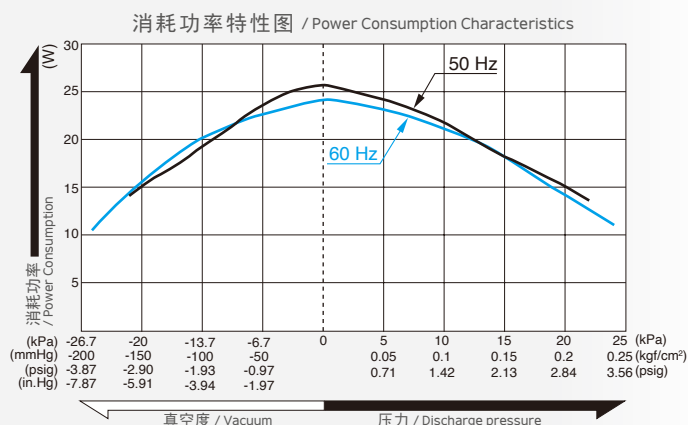
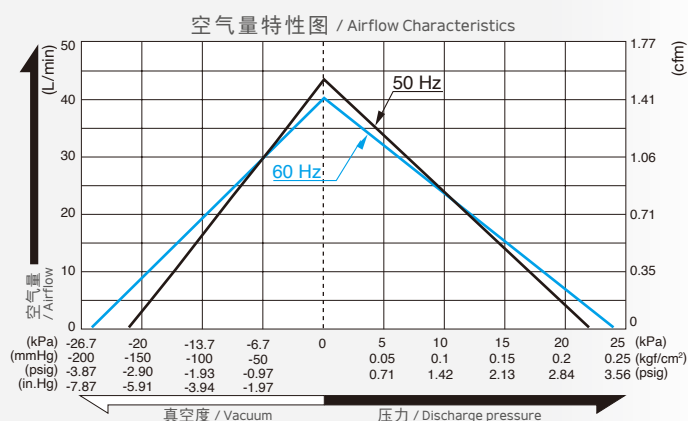
# 压缩泵 & 真空泵 / Compressor and Vacuum Pump

## 型号 VC0201B



兼用 / Dual Type

### 空气量和消耗功率 / Airflow & Power Consumption



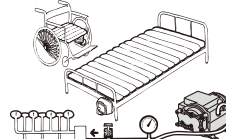
\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

### 规格 / Specifications

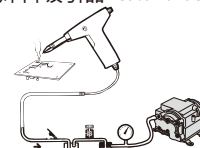
|                                    |                                                                                                                  |          |
|------------------------------------|------------------------------------------------------------------------------------------------------------------|----------|
| 额定压力<br>/ Rated Pressure           | 10 kPa (0.1 kgf/cm <sup>2</sup> )<br>0.1 bar 1.42 psig                                                           |          |
| 吐出空气量<br>/ Rated Airflow           | 20 L/min<br>0.71 cfm                                                                                             |          |
| 最高压力<br>/ Maximum Pressure         | 18 kPa (0.18 kgf/cm <sup>2</sup> )<br>0.18 bar 2.56 psig                                                         |          |
| 达到真空度<br>/ Attainable Vacuum       | -18.7 kPa (-140 mmHg)<br>-187 mbar -5.51 in.Hg                                                                   |          |
| 额定电压 / Rated Voltage               | 120 V AC                                                                                                         | 230 V AC |
| 额定频率 / Rated Frequency             | 50 Hz / 60 Hz                                                                                                    |          |
| 消耗功率<br>/ Power Consumption        | 21 W                                                                                                             |          |
| 耐用时间<br>/ Rated Performance        | 10,000 小时 / hours                                                                                                |          |
| 使用压力范围<br>/ Working Pressure Range | -18.7 kPa ~ 18 kPa<br>(-140 mmHg ~ 0.18 kgf/cm <sup>2</sup> )<br>-187 mbar ~ 0.18 bar<br>-5.51 in.Hg ~ 2.56 psig |          |
| 吸入口尺寸 / Inlet                      | φ10.5 mm (外径) 软管接头 / 10.5 mm O.D. hose barb                                                                      |          |
| 吐出口尺寸 / Outlet                     | φ8.5 mm (外径) 软管接头 / 8.5 mm O.D. hose barb                                                                        |          |
| 额定时间 / Duty Cycle                  | 连续 / Continuous                                                                                                  |          |
| 线圈绝缘等级<br>/ Coil Insulation Class  | UL 规格品：相当于 A 类<br>/ Class A for UL                                                                               |          |
| 安装尺寸<br>/ Mounting Dimensions      | 125 (L) x 56 (W) mm<br>4 - 59/64" (L) x 2 - 13/64" (W)                                                           |          |
| 本体重量 / Weight                      | 1.7 kg 3.7 Lbs                                                                                                   |          |
| 导线长度<br>/ Leadwire Length          | 300 mm<br>11 - 13/16"                                                                                            |          |

### 用途例 / Application Examples

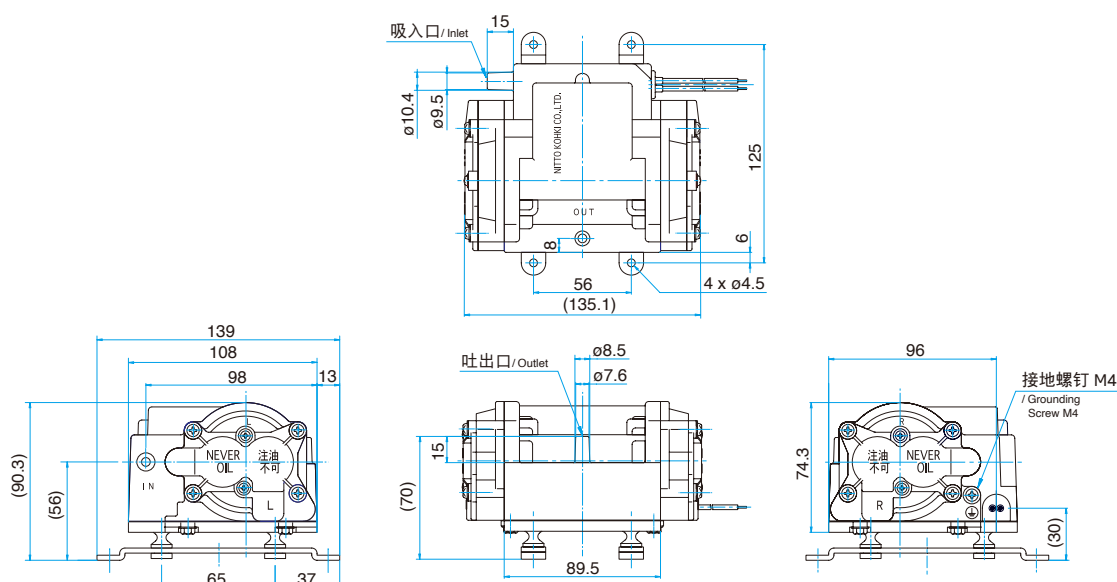
防褥疮垫 / Bedsore Prevention Mattress



焊料吸引器 / Solder Fume Suction

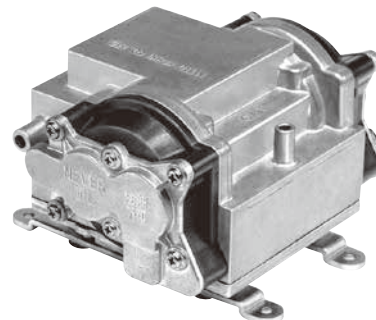


### 外形尺寸图 / External Dimensions (单位 / Unit : mm)



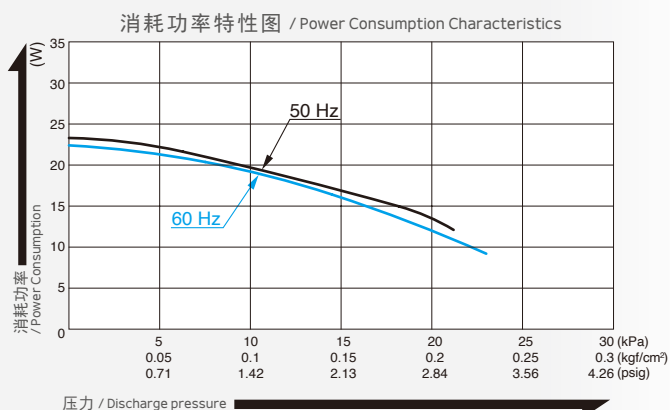
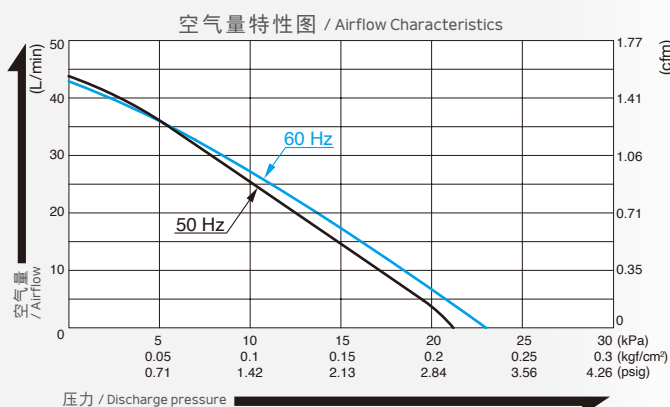
# 压缩泵 / Compressor

## 型号 VC0201B



压缩泵专用 / Blower Type

空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

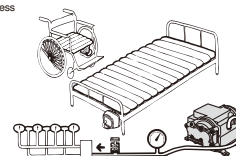
规格 / Specifications

|                                 |                                                                                |
|---------------------------------|--------------------------------------------------------------------------------|
| 额定压力 / Rated Pressure           | 10 kPa (0.1 kgf/cm <sup>2</sup> )<br>0.1 bar 1.42 psig                         |
| 吐出空气量 / Rated Airflow           | 20 L/min<br>0.71 cfm                                                           |
| 最高压力 / Maximum Pressure         | 18 kPa (0.18 kgf/cm <sup>2</sup> )<br>0.18 bar 2.56 psig                       |
| 额定电压 / Rated Voltage            | 230 V AC*                                                                      |
| 额定频率 / Rated Frequency          | 50 Hz / 60 Hz                                                                  |
| 消耗功率 / Power Consumption        | 21 W                                                                           |
| 耐用时间 / Rated Performance        | 10,000 小时 / hours                                                              |
| 使用压力范围 / Working Pressure Range | 0 ~ 18 kPa<br>(0 ~ 0.18 kgf/cm <sup>2</sup> )<br>0 ~ 0.18 bar<br>0 ~ 2.56 psig |
| 吐出口尺寸 / Outlet                  | φ8.5 mm (外径) 软管接头 / 8.5 mm O.D. hose barb                                      |
| 额定时间 / Duty Cycle               | 连续 / Continuous                                                                |
| 线圈绝缘等级 / Coil Insulation Class  | 相当于 E 类 / Class E equivalent                                                   |
| 安装尺寸 / Mounting Dimensions      | 125 (L) x 56 (W) mm<br>4 - 59/64" (L) x 2 - 13/64" (W)                         |
| 本体重量 / Weight                   | 1.7 kg 3.7 Lbs                                                                 |
| 导线长度 / Leadwire Length          | 300 mm<br>11 - 13/16"                                                          |

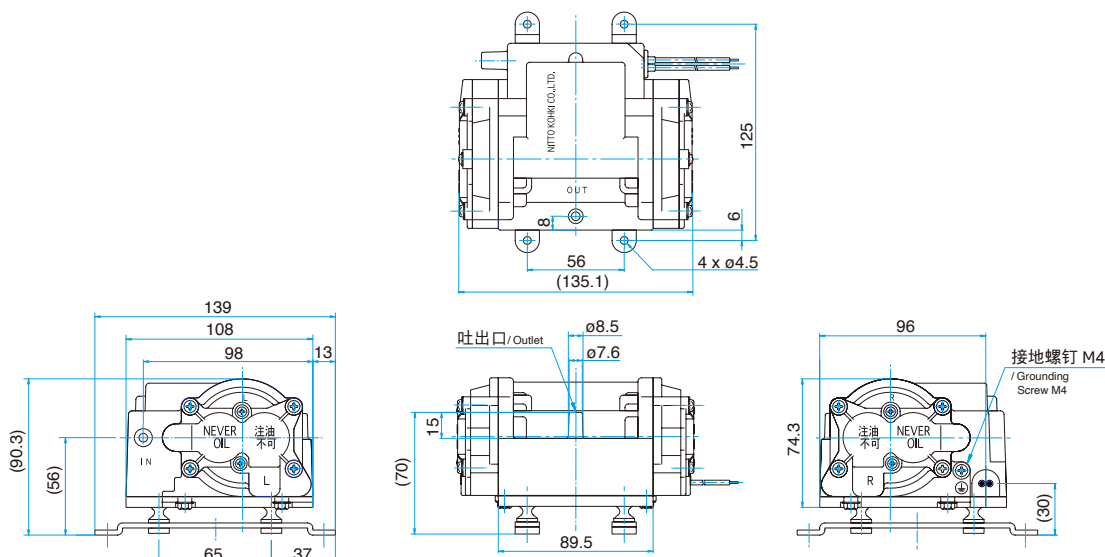
\* 有关 120 V 规格的产品，请与我们联系。/Please contact us for 120 V AC model.

用途例 / Application Examples

防褥疮垫 / Bedsores Prevention Mattress

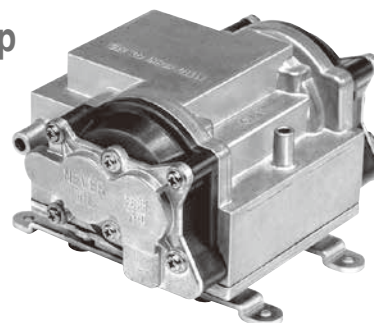


外形尺寸图 / External Dimensions (单位 / Unit : mm)



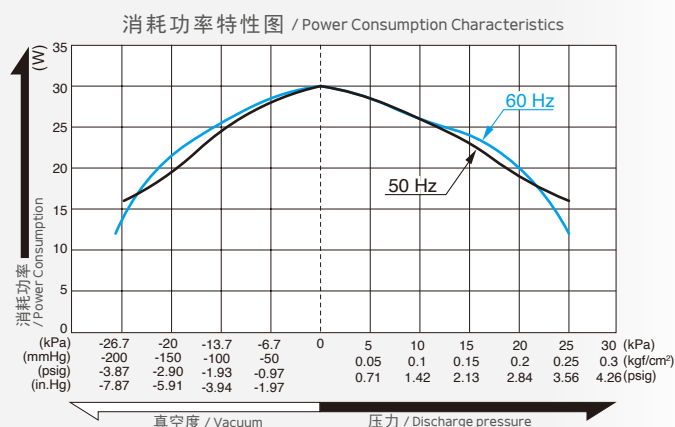
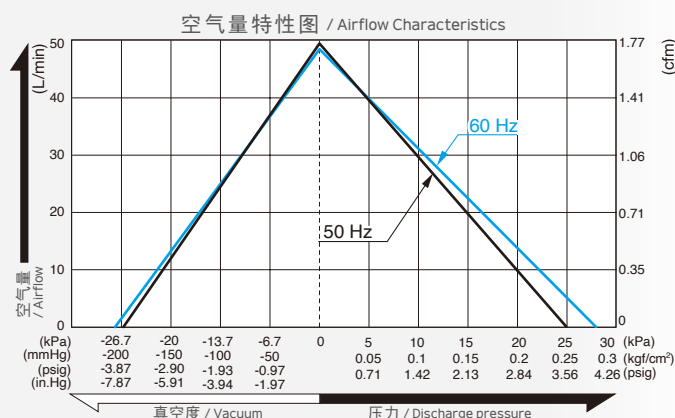
# 压缩泵 & 真空泵 / Compressor and Vacuum Pump

## 型号 VC0301B



兼用 / Dual Type

空气量和消耗功率 / Airflow & Power Consumption



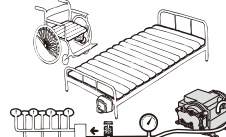
\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

规格 / Specifications

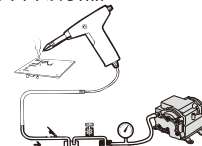
|                                 |                                                                                                               |
|---------------------------------|---------------------------------------------------------------------------------------------------------------|
| 额定压力 / Rated Pressure           | 10 kPa (0.1 kgf/cm <sup>2</sup> )<br>0.1 bar 1.42 psig                                                        |
| 吐出空气量 / Rated Airflow           | 25 L/min<br>0.88 cfm                                                                                          |
| 最高压力 / Maximum Pressure         | 20 kPa (0.2 kgf/cm <sup>2</sup> )<br>0.2 bar 2.84 psig                                                        |
| 达到真空度 / Attainable Vacuum       | -21.3 kPa (-160 mmHg)<br>-213 mbar -6.3 in.Hg                                                                 |
| 额定电压 / Rated Voltage            | 120 V AC 230 V AC                                                                                             |
| 额定频率 / Rated Frequency          | 50 Hz / 60 Hz                                                                                                 |
| 消耗功率 / Power Consumption        | 27 W                                                                                                          |
| 耐用时间 / Rated Performance        | 10,000 小时 / hours                                                                                             |
| 使用压力范围 / Working Pressure Range | -21.3 kPa ~ 20 kPa<br>(-160 mmHg ~ 0.2 kgf/cm <sup>2</sup> )<br>-213 mbar ~ 0.2 bar<br>-6.3 in.Hg ~ 2.84 psig |
| 吸入口尺寸 / Inlet                   | φ10.5 mm (外径) 软管接头 / 10.5 mm O.D. hose barb                                                                   |
| 吐出口尺寸 / Outlet                  | φ8.5 mm (外径) 软管接头 / 8.5 mm O.D. hose barb                                                                     |
| 额定时间 / Duty Cycle               | 连续 / Continuous                                                                                               |
| 线圈绝缘等级 / Coil Insulation Class  | UL 规格品: 相当于 B 类 / Class B for UL<br>相当于 B 类 / Class B equivalent                                              |
| 安装尺寸 / Mounting Dimensions      | 125 (L) x 56 (W) mm<br>4 - 59/64" (L) x 2 - 13/64" (W)                                                        |
| 本体重量 / Weight                   | 1.7 kg 3.7 Lbs                                                                                                |
| 导线长度 / Leadwire Length          | 300 mm<br>11 - 13/16"                                                                                         |

用途例 / Application Examples

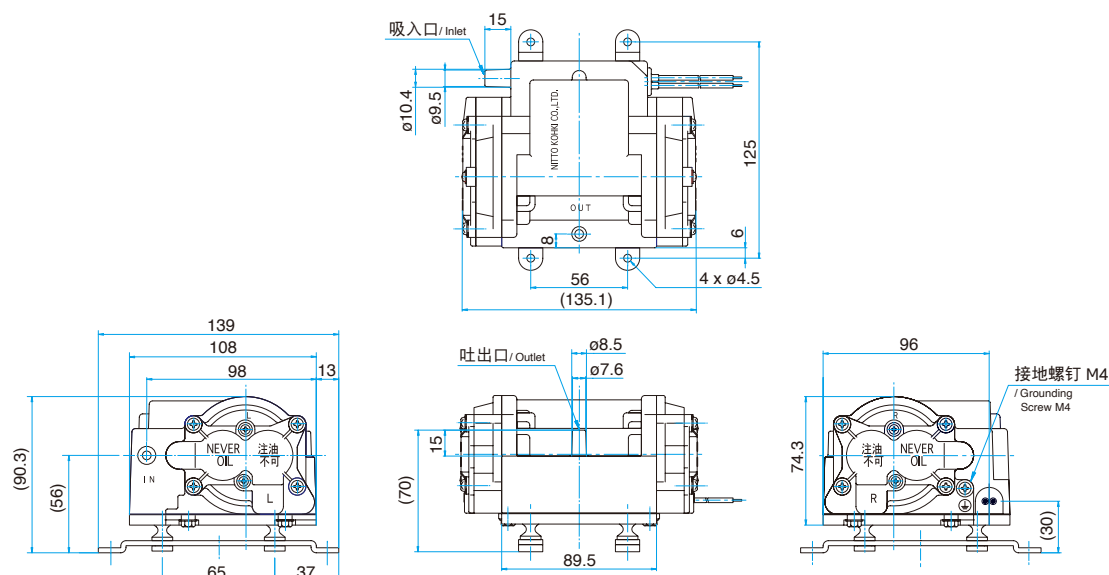
防褥疮垫 / Bedsores Prevention Mattress



焊料吸引器 / Solder Fume Suction

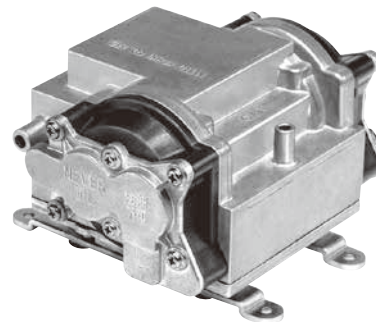


外形尺寸图 / External Dimensions (单位 / Unit : mm)



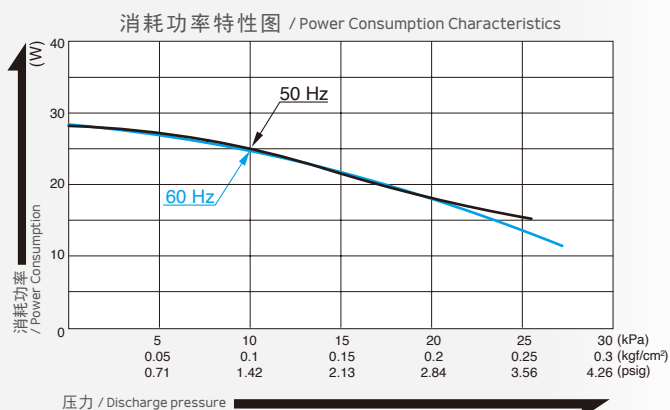
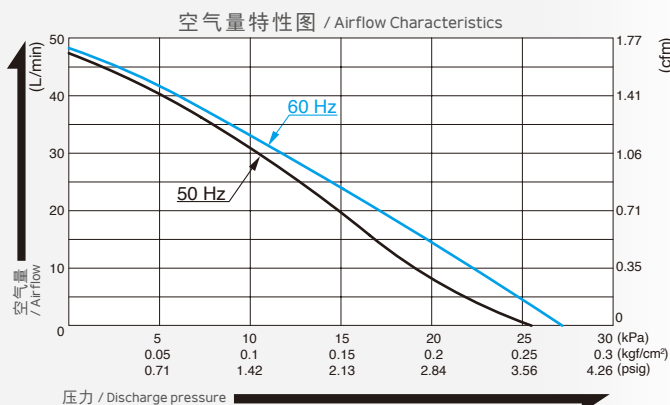
# 压缩泵 / Compressor

## 型号 VC0301B



压缩泵专用 / Blower Type

空气量和消耗功率 / Airflow & Power Consumption



\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

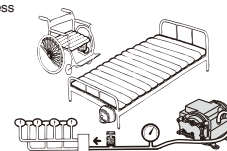
规格 / Specifications

|                                 |                                                                              |
|---------------------------------|------------------------------------------------------------------------------|
| 额定压力 / Rated Pressure           | 10 kPa (0.1 kgf/cm <sup>2</sup> )<br>0.1 bar 1.42 psig                       |
| 吐出空气量 / Rated Airflow           | 25 L/min<br>0.88 cfm                                                         |
| 最高压力 / Maximum Pressure         | 20 kPa (0.2 kgf/cm <sup>2</sup> )<br>0.2 bar 2.84 psig                       |
| 额定电压 / Rated Voltage            | 230 V AC                                                                     |
| 额定频率 / Rated Frequency          | 50 Hz / 60 Hz                                                                |
| 消耗功率 / Power Consumption        | 27 W                                                                         |
| 耐用时间 / Rated Performance        | 10,000 小时 / hours                                                            |
| 使用压力范围 / Working Pressure Range | 0 ~ 20 kPa<br>(0 ~ 0.2 kgf/cm <sup>2</sup> )<br>0 ~ 0.2 bar<br>0 ~ 2.84 psig |
| 吐出口尺寸 / Outlet                  | φ8.5 mm (外径) 软管接头 / 8.5 mm O.D. hose barb                                    |
| 额定时间 / Duty Cycle               | 连续 / Continuous                                                              |
| 线圈绝缘等级 / Coil Insulation Class  | 相当于 B 类 / Class B equivalent                                                 |
| 安装尺寸 / Mounting Dimensions      | 125 (L) x 56 (W) mm<br>4 - 59/64" (L) x 2 - 13/64" (W)                       |
| 本体重量 / Weight                   | 1.7 kg 3.7 Lbs                                                               |
| 导线长度 / Leadwire Length          | 300 mm<br>11 - 13/16"                                                        |

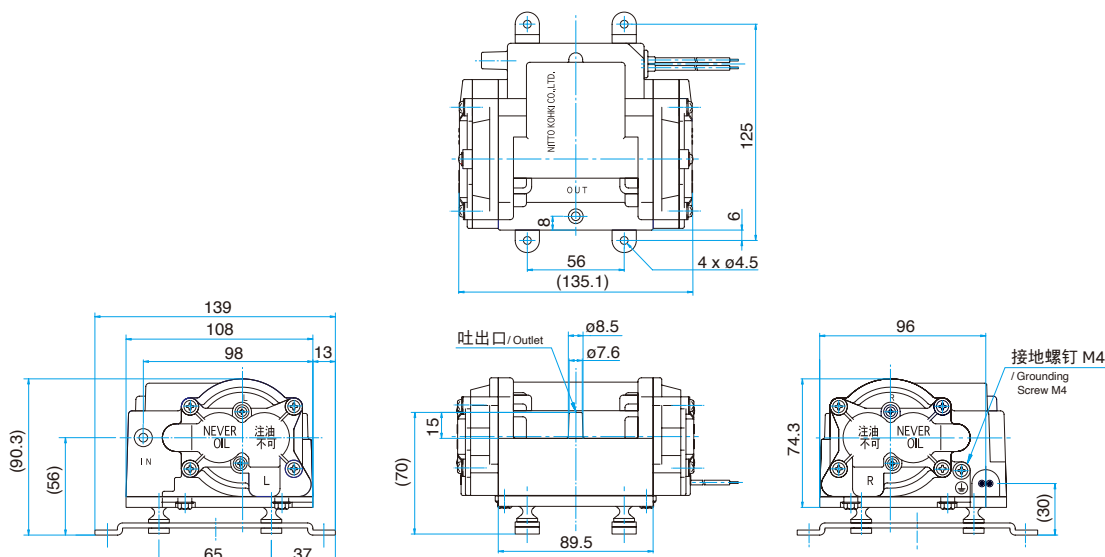
\* 有关 120 V 规格的产品，请与我们联系。/Please contact us for 120 V AC model.

用途例 / Application Examples

防褥疮垫 / Bedsore Prevention Mattress



外形尺寸图 / External Dimensions (单位 / Unit : mm)



DC Motor Driven  
Diaphragm Pump  
Piston Pump

# 空气 柱塞泵, 隔膜泵

/ Air Piston Pump, Diaphragm Pump

DC马达 / DC motor

空气压缩泵&真空泵

/ Air Compressor and Vacuum Pump

DP系列  
DP series

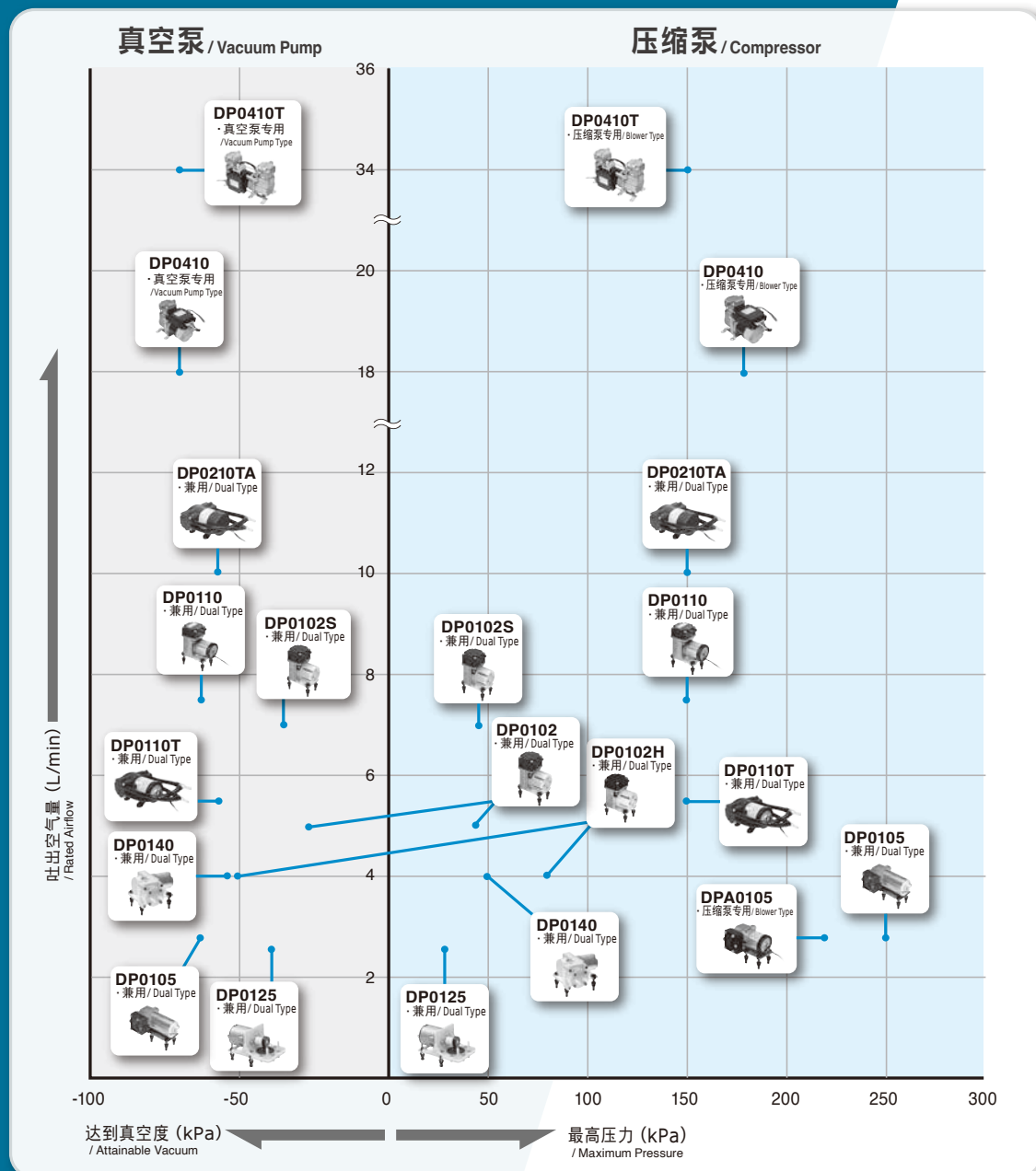
页  
Page

柱塞泵 / Piston Pump

|            |      |
|------------|------|
| DP0105-X1  | — 55 |
| DP0105-Y1  | — 55 |
| DPA0105-X1 | — 56 |
| DPA0105-Y1 | — 56 |
| DP0410-X1  | — 57 |
| DP0410-Y1  | — 57 |
| DP0410-X2  | — 58 |
| DP0410-Y2  | — 58 |
| DP0410T-Y1 | — 59 |
| DP0410T-Y2 | — 60 |

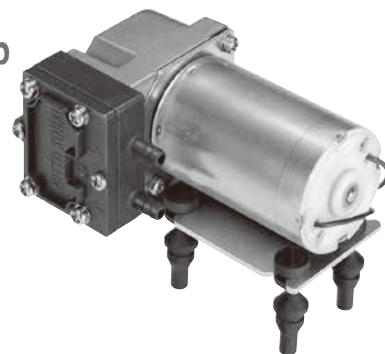
隔膜泵 / Diaphragm Pump

|             |      |
|-------------|------|
| DP0125      | — 61 |
| DP0140      | — 62 |
| DP0102      | — 63 |
| DP0102S     | — 63 |
| DP0102H-X1  | — 64 |
| DP0102H-X2  | — 65 |
| DP0110-X1   | — 66 |
| DP0110-Y1   | — 66 |
| DP0110-X3   | — 67 |
| DP0110T-X1  | — 68 |
| DP0110T-Y1  | — 68 |
| DP0210TA-Y1 | — 69 |



# 压缩泵 & 真空泵 / Compressor and Vacuum Pump

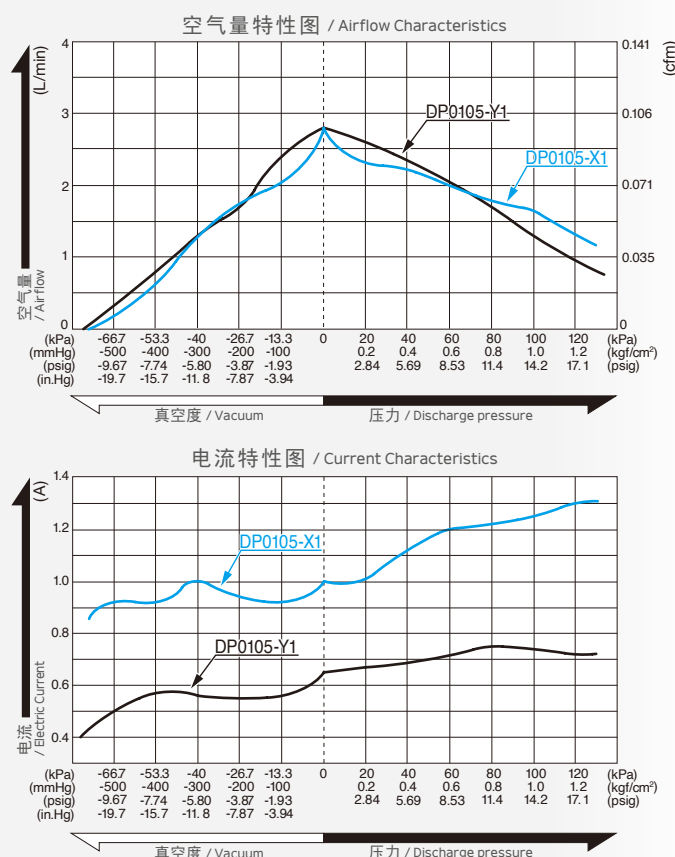
**型号 DP0105-X1** 12 V DC  
**型号 DP0105-Y1** 24 V DC



有刷马达  
/ Brush DC Motor

兼用 / Dual Type

## 空气量和电流 / Airflow & Electric Current



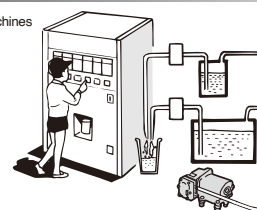
\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

## 规格 / Specifications

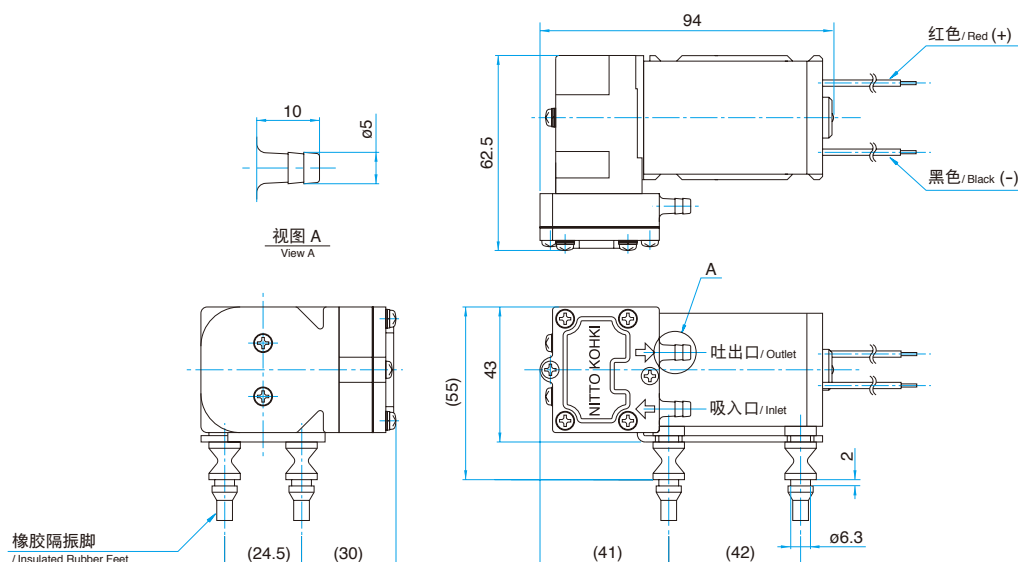
| 型号 / Model                                | DP0105-X1                                                                                               | DP0105-Y1 |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------|
| 达到真空度<br>/ Attainable Vacuum              | -66.7 kPa (-500 mmHg)<br>-667 mbar -19.7 in.Hg                                                          |           |
| 吐出空气量<br>/ Free Air Displacement          | 2.8 L/min<br>0.099 cfm                                                                                  |           |
| 额定电压 / Rated Voltage                      | 12 V DC                                                                                                 | 24 V DC   |
| 最大电流<br>/ Maximum Current                 | 1.9 A                                                                                                   | 0.95 A    |
| 最高压力<br>/ Maximum Pressure                | 250 kPa (2.5 kgf/cm <sup>2</sup> )<br>2.5 bar 35.6 psig                                                 |           |
| 额定时间 / Duty Cycle                         | 30 minutes                                                                                              |           |
| 使用压力范围<br>/ Working Pressure Range        | -66.7 ~ 100 kPa<br>(-500 mmHg ~ 1 kgf/cm <sup>2</sup> )<br>-667 mbar ~ 1 bar<br>-19.7 in.Hg ~ 14.2 psig |           |
| 耐用时间 (MTTF)<br>/ Rated Performance (MTTF) | 2,000 小时 / hours                                                                                        |           |
| 吸入口尺寸 / Inlet                             | φ5 mm (外径) 直管接头 / 5 mm O.D. straight barb                                                               |           |
| 吐出口尺寸 / Outlet                            | φ5 mm (外径) 直管接头 / 5 mm O.D. straight barb                                                               |           |
| 线圈绝缘等级<br>/ Coil Insulation Class         | 相当于 E 类 / Class E equivalent                                                                            |           |
| 安装尺寸<br>/ Mounting Dimensions             | 42 (L) x 24.5 (W) mm<br>1 - 21/32" (L) x 1 - 31/32" (W)                                                 |           |
| 本体重量 / Weight                             | 0.36 kg 0.79 Lbs                                                                                        |           |
| 导线长度<br>/ Leadwire Length                 | 360 mm<br>14 - 11/64"                                                                                   |           |

## 用途例 / Application Examples

自动售货机 / Vending Machines

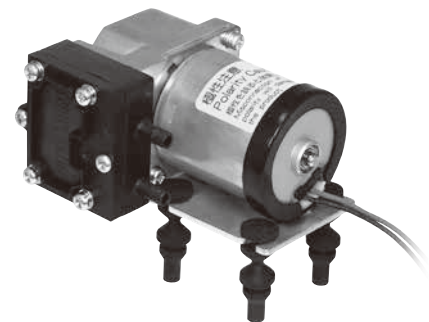


## 外形尺寸图 / External Dimensions (单位 / Unit : mm)



# 压缩泵 / Compressor

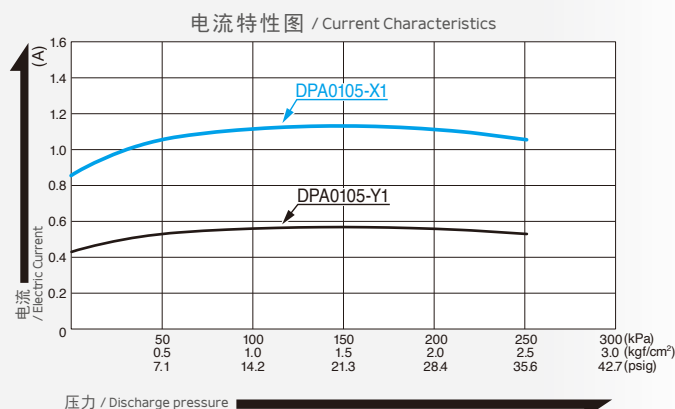
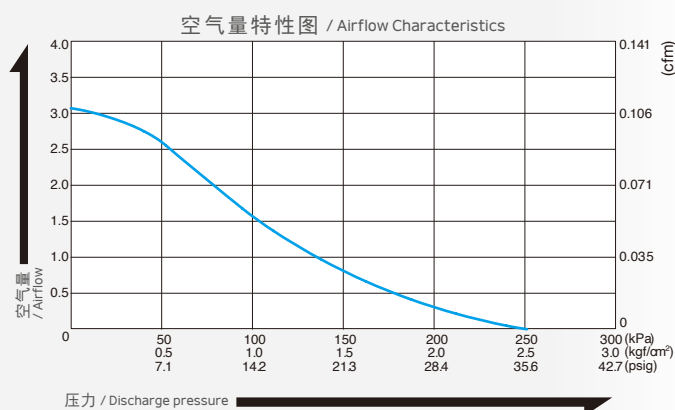
型号 **DPA0105-X1** 12 V DC  
 型号 **DPA0105-Y1** 24 V DC



采用无碳刷马达  
/ Brushless DC Motor

压缩泵专用 / Blower Type

## 空气量和电流 / Airflow & Electric Current



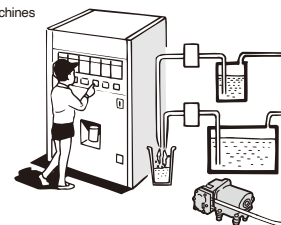
\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

## 规格 / Specifications

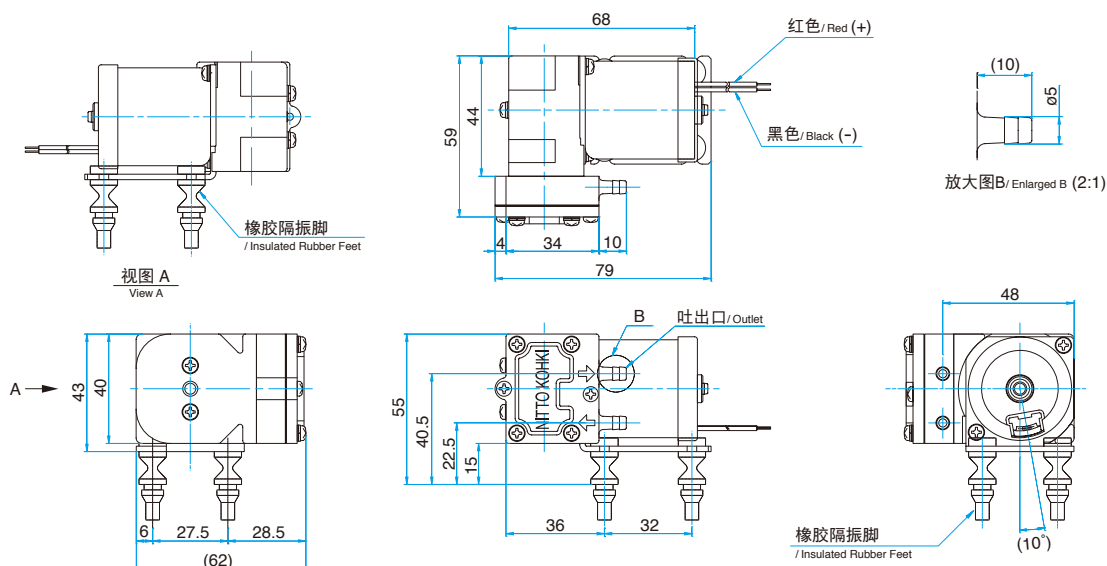
| 型号 / Model                             | DPA0105-X1                                                   | DPA0105-Y1 |
|----------------------------------------|--------------------------------------------------------------|------------|
| 吐出空气量 / Free Air Displacement          | 2.8 L/min<br>0.099 cfm                                       |            |
| 额定电压 / Rated Voltage                   | 12 V DC                                                      | 24 V DC    |
| 最大电流 / Maximum Current                 | 1.4 A                                                        | 0.7 A      |
| 最高压力 / Maximum Pressure                | 220 kPa (2.2 kgf/cm²)<br>2.2 bar 31.3 psig                   |            |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                              |            |
| 使用压力范围 / Working Pressure Range        | 0 ~ 100 kPa<br>(0 ~ 1 kgf/cm²)<br>0 ~ 1 bar<br>0 ~ 14.2 psig |            |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 5,000 小时 / hours                                             |            |
| 吸入口尺寸 / Inlet                          | φ5 mm (外径) 直管接头 / 5 mm O.D. straight barb                    |            |
| 吐出口尺寸 / Outlet                         | φ5 mm (外径) 直管接头 / 5 mm O.D. straight barb                    |            |
| 线圈绝缘等级 / Coil Insulation Class         | 相当于 A 类 / Class A equivalent                                 |            |
| 安装尺寸 / Mounting Dimensions             | 32 (L) x 27.5 (W) mm<br>1 - 17/64" x 1 - 5/64" (W)           |            |
| 本体重量 / Weight                          | 0.3 kg 0.66 Lbs                                              |            |
| 导线长度 / Leadwire Length                 | 360 mm<br>14 - 11/64"                                        |            |

## 用途例 / Application Examples

自动售货机 / Vending Machines



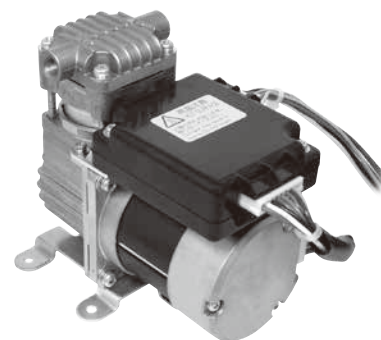
## 外形尺寸图 / External Dimensions (单位 / Unit : mm)



# 真空泵 / Vacuum Pump

型号 **DP0410-X1** 12 V DC  
**DP0410-Y1** 24 V DC

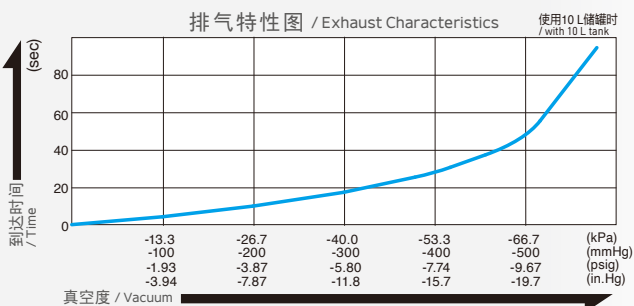
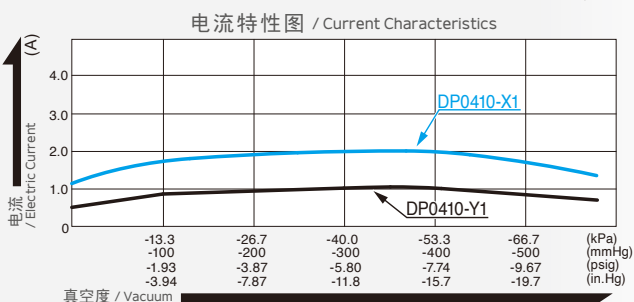
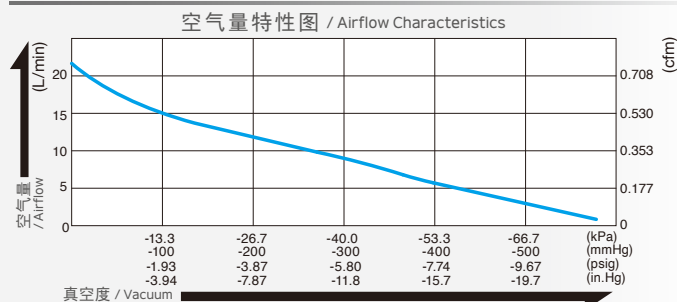
一般 / PWM  
 可控兼用机型  
 / PWM controllable



采用无碳刷马达  
 / Brushless DC Motor

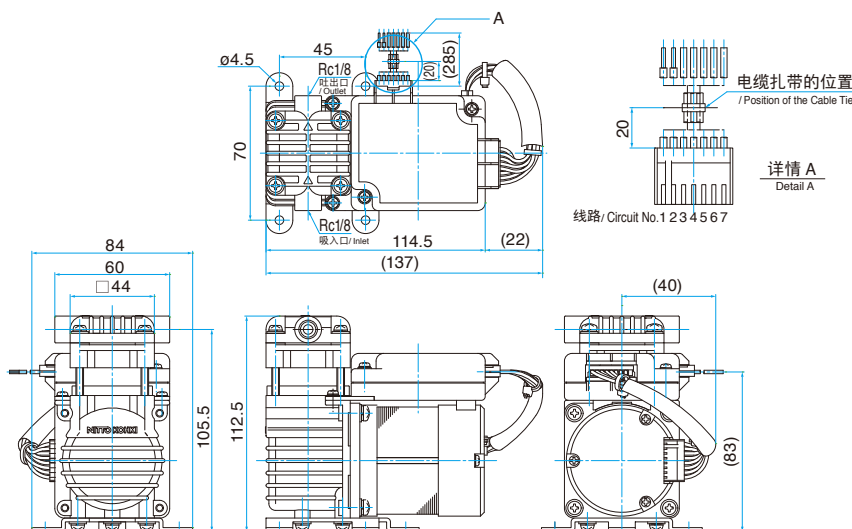
真空专用 / Vacuum Type

## 空气量和电流 / Airflow & Electric Current



\* 特性图只是参考值，并不是保证值。  
 / The characteristic charts are for reference only and are not guaranteed.

## 外形尺寸图 / External Dimensions (单位 / Unit : mm)

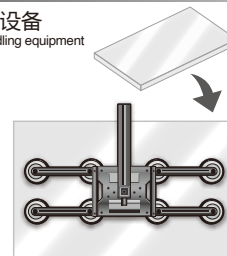


## 规格 / Specifications

| 型号 / Model                             | DP0410-X1                                                                | DP0410-Y1 |
|----------------------------------------|--------------------------------------------------------------------------|-----------|
| 达到真空度 / Attainable Vacuum              | -77.3 kPa (-580 mmHg)<br>-773 mbar -22.8 in.Hg                           |           |
| 吐出空气量 / Free Air Displacement          | 18 L/min<br>0.64 cfm                                                     |           |
| 额定电压 / Rated Voltage                   | 12 V DC                                                                  | 24 V DC   |
| 最大电流 / Maximum Current                 | 2.5 A                                                                    | 1.5 A     |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                                          |           |
| 使用压力范围 / Working Pressure Range        | 0 to -77.3 kPa<br>(0 to -580 mmHg)<br>0 to -773 mbar<br>0 to -22.8 in.Hg |           |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 10,000 小时 / hours                                                        |           |
| 吸入口尺寸 / Inlet                          | Rc1/8 (内螺纹 / internal thread)                                            |           |
| 吐出口尺寸 / Outlet                         | Rc1/8 (内螺纹 / internal thread)                                            |           |
| 线圈绝缘等级 / Coil Insulation Class         | 相当于 E 类 / Class E equivalent                                             |           |
| 安装尺寸 / Mounting Dimensions             | 70 (L) x 45 (W) mm<br>2 - 3/4" (L) x 1 - 49/64" (W)                      |           |
| 本体重量 / Weight                          | 1.1 kg 2.4 Lbs                                                           |           |
| 导线长度 / Leadwire Length                 | 285 mm<br>11 - 7/32"                                                     |           |

## 用途例 / Application Examples

真空玻璃板搬运设备  
 / Vacuum glass sheet handling equipment



## 连接表 / Connection Table

| 电源<br>/ Power Source |                           | 控制信号<br>/ Control Signal |               |                         |                |                |               |              |
|----------------------|---------------------------|--------------------------|---------------|-------------------------|----------------|----------------|---------------|--------------|
| 线路 / Circuit No.     |                           | 1                        | 2             | 3                       | 4              | 5              | 6             | 7            |
| 线色 / Cord Color      |                           | 红色<br>/ Red              | 黑色<br>/ Black | 褐色<br>/ Brown           | 橙色<br>/ Orange | 黄色<br>/ Yellow | 绿色<br>/ Green | 灰色<br>/ Gray |
| 机能 / Function        |                           | V+                       | V-            | 驱动 / 自由<br>DRIVE / FREE | 脉冲<br>/ PULSE  | 报警<br>/ ALARM  | 速度<br>/ SPEED | 报警<br>/ SGND |
| 选项<br>/ Option       | 无控制 Off<br>/ Function Off | ON                       |               |                         | OFF            |                |               |              |
|                      | 有控制 On<br>/ Function On   | ON                       |               |                         | ON             |                |               |              |
| 线尺寸 / Cord Size      |                           | AWG20                    |               |                         | AWG22          |                |               |              |
| 线路类型 / Line Type     |                           | UL1007                   |               |                         |                |                |               |              |

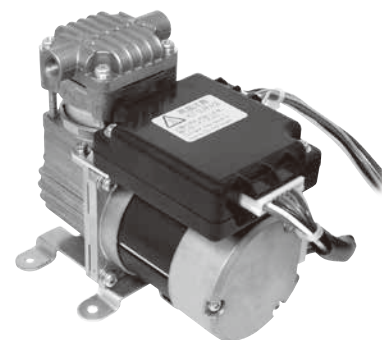
\* 控制功能默认情况下是“OFF”  
 / Control function is "OFF" by default.

- 务必使用扎带固定引线。(请参见细节 A。) 如果它们没有固定, 连接器可能会接触不良并导致故障。
- 有关接线的详细信息, 请参阅用户说明。
- Be sure to secure the lead wires with a cable tie. (See the detail A.) If they are not secured, poor contact of the connector may occur and result in failure.
- For the details of wiring, please see the user's instructions.

# 压缩泵 / Compressor

型号 **DP0410-X2** 12 V DC  
**DP0410-Y2** 24 V DC

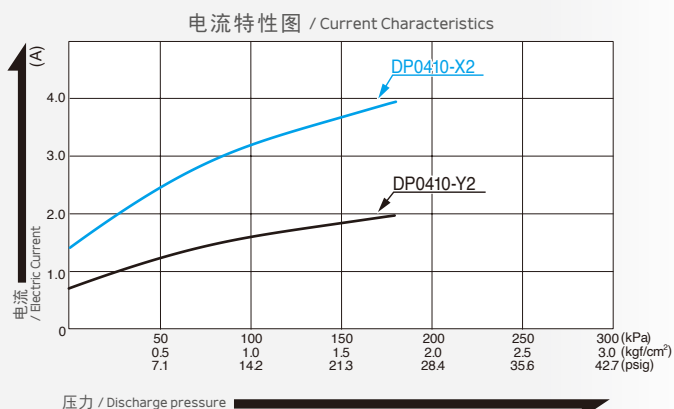
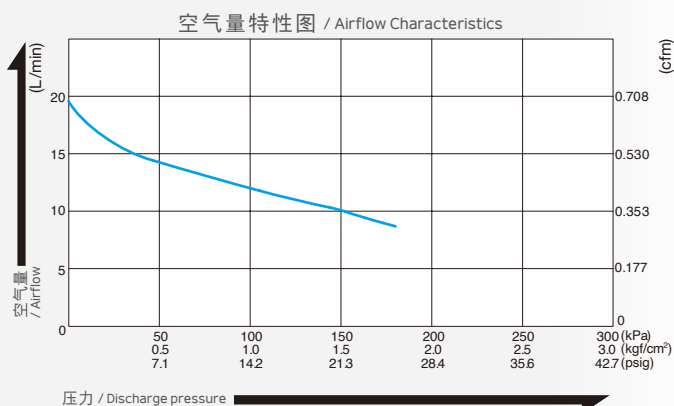
一般 / PWM  
 可控兼用机型  
 / PWM controllable



采用无碳刷马达  
 / Brushless DC Motor

压缩泵专用 / Blower Type

## 空气量和电流 / Airflow & Electric Current



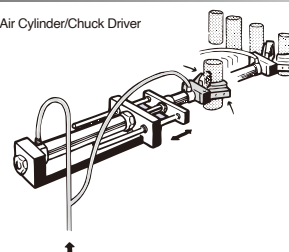
\* 特性图只是参考值，并不是保证值。  
 / The characteristic charts are for reference only and are not guaranteed.

## 规格 / Specifications

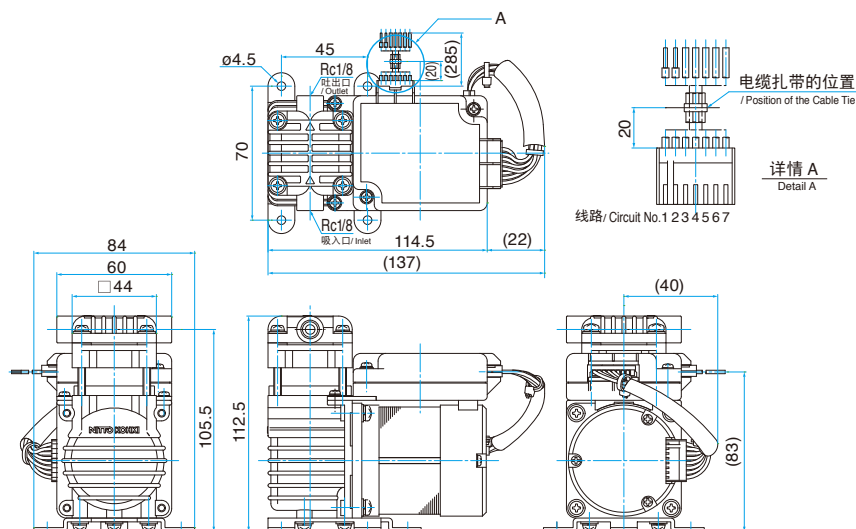
| 型号 / Model                             | DP0410-X2                                                        | DP0410-Y2 |
|----------------------------------------|------------------------------------------------------------------|-----------|
| 吐出空气量 / Free Air Displacement          | 18 L/min<br>0.64 cfm                                             |           |
| 额定电压 / Rated Voltage                   | 12 V DC                                                          | 24 V DC   |
| 最大电流 / Maximum Current                 | 5.0 A                                                            | 2.7 A     |
| 最高压力 / Maximum Pressure                | 180 kPa (1.8 kgf/cm²)<br>1.8 bar 25.6 psig                       |           |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                                  |           |
| 使用压力范围 / Working Pressure Range        | 0 ~ 180 kPa<br>(0 ~ 1.8 kgf/cm²)<br>0 ~ 1.8 bar<br>0 ~ 25.6 psig |           |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 10,000 小时 / hours                                                |           |
| 吸入口尺寸 / Inlet                          | Rc1/8 (内螺纹 / internal thread)                                    |           |
| 吐出口尺寸 / Outlet                         | Rc1/8 (内螺纹 / internal thread)                                    |           |
| 线圈绝缘等级 / Coil Insulation Class         | 相当于 E 类 / Class E equivalent                                     |           |
| 安装尺寸 / Mounting Dimensions             | 70 (L) x 45 (W) mm<br>2 - 3/4" (L) x 1 - 49/64" (W)              |           |
| 本体重量 / Weight                          | 1.1 kg 2.4 Lbs                                                   |           |
| 导线长度 / Leadwire Length                 | 285 mm<br>11 - 7/32"                                             |           |

## 用途例 / Application Examples

气缸 / 气动卡盘 / Air Cylinder/Chuck Driver



## 外形尺寸图 / External Dimensions (单位 / Unit : mm)



## 连接表 / Connection Table

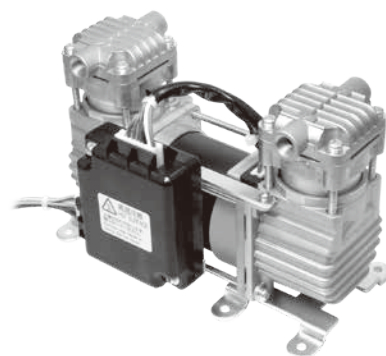
|                  |                           | 电源<br>/ Power Source |               | 控制信号<br>/ Control Signal |                |                |               |
|------------------|---------------------------|----------------------|---------------|--------------------------|----------------|----------------|---------------|
| 线路 / Circuit No. |                           | 1                    | 2             | 3                        | 4              | 5              | 6             |
| 线色 / Cord Color  |                           | 红色<br>/ Red          | 黑色<br>/ Black | 褐色<br>/ Brown            | 橙色<br>/ Orange | 黄色<br>/ Yellow | 绿色<br>/ Green |
| 机能 / Function    |                           | V+                   | V-            | 驱动 / 自由<br>DRIVE / FREE  | 脉冲<br>/ PULSE  | 报警<br>/ ALARM  | 速度<br>/ SPEED |
| 选项<br>/ Option   | 无控制 Off<br>/ Function Off | ON                   |               | OFF                      |                |                |               |
|                  | 有控制 On<br>/ Function On   | ON                   |               | ON                       |                |                |               |
| 线尺寸 / Cord Size  |                           | AWG20                |               |                          | AWG22          |                |               |
| 线路类型 / Line Type |                           |                      |               |                          | UL1007         |                |               |

\* 控制功能默认情况下是“OFF”  
 / Control function is "OFF" by default.

- 务必使用扎带固定引线。(请参见细节 A。) 如果它们没有固定, 连接器可能会接触不良并导致故障。
- 有关接线的详细信息, 请参阅用户说明。
- Be sure to secure the lead wires with a cable tie. (See the detail A.) If they are not secured, poor contact of the connector may occur and result in failure.
- For the details of wiring, please see the user's instructions.

## 真空泵 / Vacuum Pump

# 型号 DP0410T-Y1 一般 / PWM 可控兼用机型 / PWM controllable

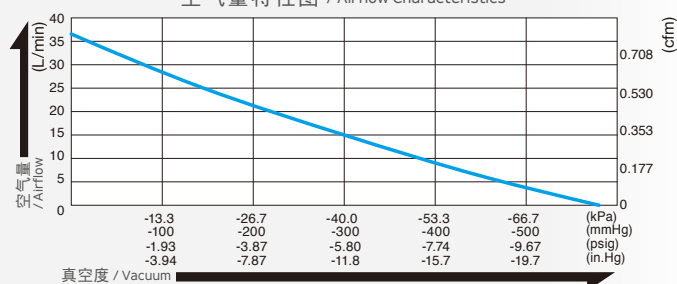


**采用无碳刷马达**  
/ Brushless DC Motor  
**(24VDC)**

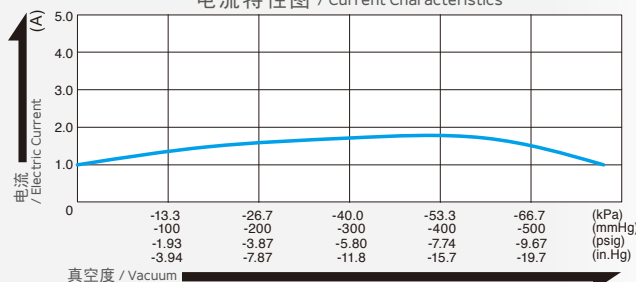
**真空専用**

## 空气量和电流 / Airflow &amp; Electric Current

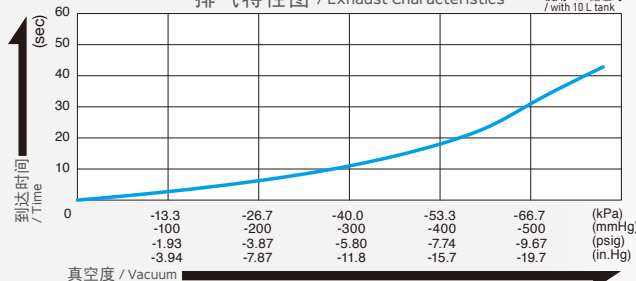
空气量特性图 / Airflow Characteristics



电流特性图 / Current Characteristics

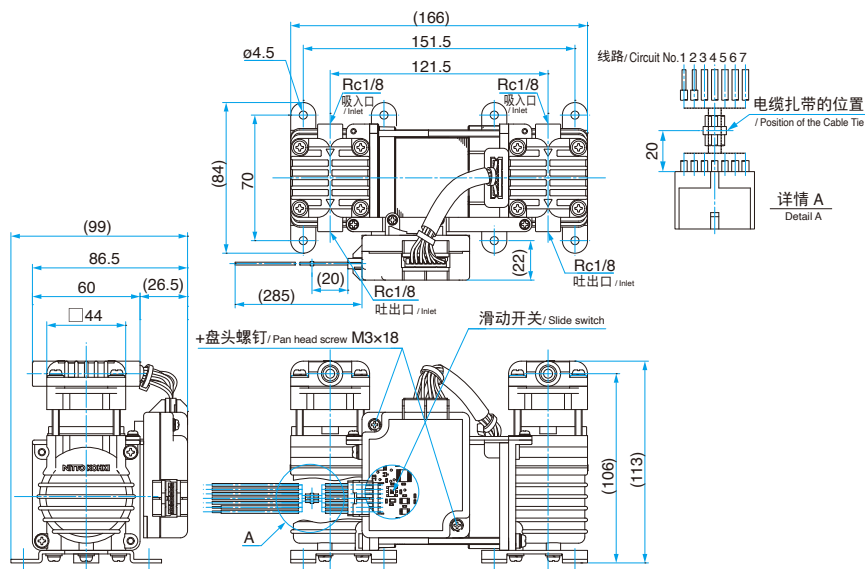


排气特性图 / Exhaust Characteristics 使用10 L储罐时



\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

## 外形尺寸图 / External Dimensions (单位 / Unit : mm)

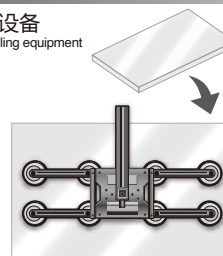


## 规格 / Specifications

|                                           |                                                                          |
|-------------------------------------------|--------------------------------------------------------------------------|
| 达到真空度<br>/ Attainable Vacuum              | -77.3 kPa (-580 mmHg)<br>-773 mbar -22.8 in.Hg                           |
| 吐出空气量<br>/ Free Air Displacement          | 34 L/min<br>1.2 cfm                                                      |
| 额定电压 / Rated Voltage                      | 24 V DC                                                                  |
| 最大电流<br>/ Maximum Current                 | 2.5 A                                                                    |
| 额定时间 / Duty Cycle                         | 连续 / Continuous                                                          |
| 使用压力范围<br>/ Working Pressure Range        | 0 to -77.3 kPa<br>(0 to -580 mmHg)<br>0 to -773 mbar<br>0 to -22.8 in.Hg |
| 耐用时间 (MTTF)<br>/ Rated Performance (MTTF) | 5,000 小时 / hours                                                         |
| 吸入口尺寸 / Inlet                             | Rc1/8 (内螺纹 / internal thread)                                            |
| 吐出口尺寸 / Outlet                            | Rc1/8 (内螺纹 / internal thread)                                            |
| 线圈绝缘等级<br>/ Coil Insulation Class         | 相当于 E 类 / Class E equivalent                                             |
| 安装尺寸<br>/ Mounting Dimensions             | 166 (L) x 84 (W) mm<br>6 - 17/32" (L) x 3 - 5/16" (W)                    |
| 本体重量 / Weight                             | 1.6 kg 3.5 Lbs                                                           |
| 导线长度<br>/ Leadwire Length                 | 285 mm<br>11 - 7/32"                                                     |

## 用途例 / Application Examples

**真空玻璃板搬运设备**  
/ Vacuum glass sheet handling equipment



### 连接表 / Connection Table

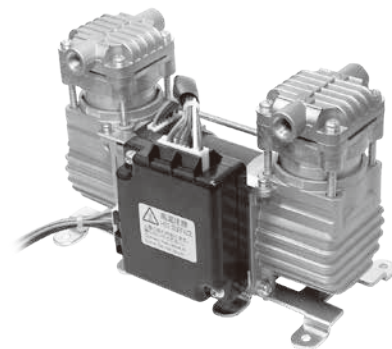
|                     |                           | 电源<br>/ Power Source |               | 控制信号<br>/ Control Signal |                |                |               |                |
|---------------------|---------------------------|----------------------|---------------|--------------------------|----------------|----------------|---------------|----------------|
| 线路 / Circuit No.    |                           | 1                    | 2             | 3                        | 4              | 5              | 6             | 7              |
| 线色 / Cord Color     |                           | 红色<br>/ Red          | 黑色<br>/ Black | 褐色<br>/ Brown            | 橙色<br>/ Orange | 黄色<br>/ Yellow | 绿色<br>/ Green | 灰色<br>/ Gray   |
| 机能 / Function       |                           | V+                   | V-            | 驱动 / 自由<br>DRIVE / FREE  | 脉冲<br>/ PULSE  | 报警<br>/ ALARM  | 速度<br>/ SPEED | 报警<br>/ SIGNAL |
| 选项<br>/ Option      | 无控制 Off<br>/ Function Off | ON                   |               |                          | OFF            |                |               |                |
|                     | 有控制 On<br>/ Function On   | ON                   |               |                          | ON             |                |               |                |
| 线尺寸<br>/ Cord Size  |                           | AWG20                |               |                          | AWG22          |                |               |                |
| 线路类型<br>/ Line Type |                           | UL1007               |               |                          |                |                |               |                |

\* 控制功能默认情况下是“OFF”  
/ Control function is “OFF” by default.

- 务必使用扎带固定引线。(请参见细节 A<sub>6</sub>) 如果它们没有固定, 连接器可能会接触不良并导致故障。
- 有关接线的详细信息, 请参阅用户说明。
- Be sure to secure the lead wires with a cable tie. (See the detail A<sub>6</sub>) If they are not secured, poor contact of the connector may occur and result in failure.
- For the details of wiring, please see the user's instructions.

# 压缩泵 / Compressor

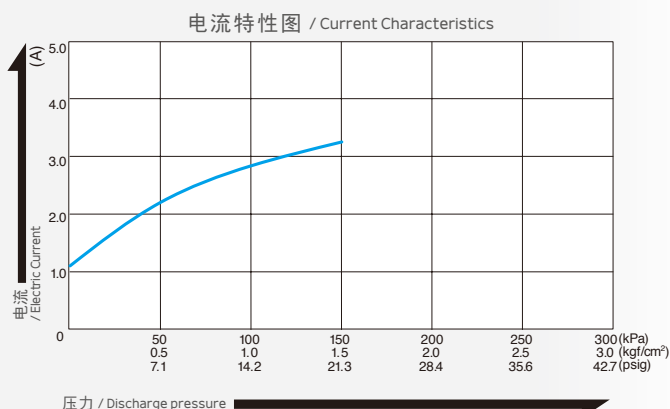
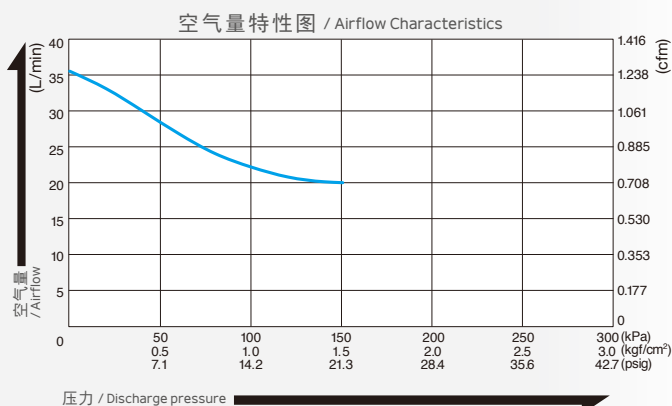
## 型号 DP0410T-Y2 一般 / PWM 可控兼用机型 / PWM controllable



采用无碳刷马达  
/ Brushless DC Motor  
(24 VDC)

压缩泵专用 / Blower Type

### 空气量和电流 / Airflow & Electric Current



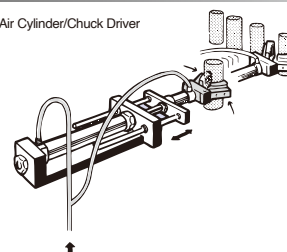
\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

### 规格 / Specifications

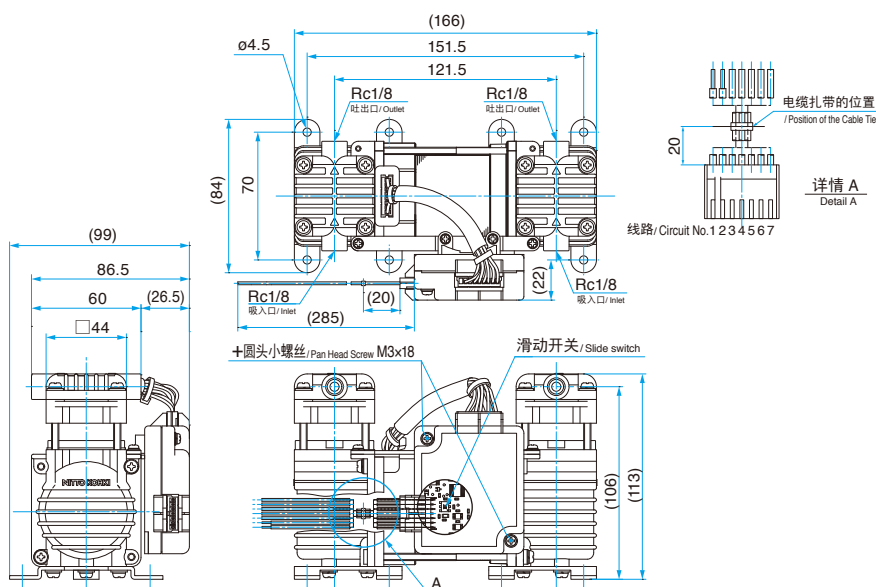
|                                           |                                                                               |
|-------------------------------------------|-------------------------------------------------------------------------------|
| 吐出空气量<br>/ Free Air Displacement          | 34 L/min<br>1.2 cfm                                                           |
| 额定电压 / Rated Voltage                      | 24 V DC                                                                       |
| 最高压力<br>/ Maximum Pressure                | 150 kPa (1.5 kgf/cm <sup>2</sup> )<br>1.5 bar 21.3 psig                       |
| 最大电流<br>/ Maximum Current                 | 4.0 A                                                                         |
| 额定时间 / Duty Cycle                         | 连续 / Continuous                                                               |
| 使用压力范围<br>/ Working Pressure Range        | 0 ~ 150 kPa<br>(0 ~ 1.5 kgf/cm <sup>2</sup> )<br>0 ~ 1.5 bar<br>0 ~ 21.3 psig |
| 耐用时间 (MTTF)<br>/ Rated Performance (MTTF) | 5,000 小时 / hours                                                              |
| 吸入口尺寸 / Inlet                             | RC 1/8 (内螺纹 / internal thread)                                                |
| 吐出口尺寸 / Outlet                            | RC 1/8 (内螺纹 / internal thread)                                                |
| 线圈绝缘等级<br>/ Coil Insulation Class         | 相当于 E 类 / Class E equivalent                                                  |
| 安装尺寸<br>/ Mounting Dimensions             | 166 (L) x 84 (W) mm<br>6 - 17/32" (L) x 3 - 5/16" (W)                         |
| 本体重量 / Weight                             | 1.6 kg 3.5 Lbs                                                                |
| 导线长度<br>/ Leadwire Length                 | 285 mm<br>11 - 7/32"                                                          |

### 用途例 / Application Examples

气缸 / 气动卡盘 / Air Cylinder/Chuck Driver



### 外形尺寸图 / External Dimensions (单位 / Unit : mm)



### 连接表 / Connection Table

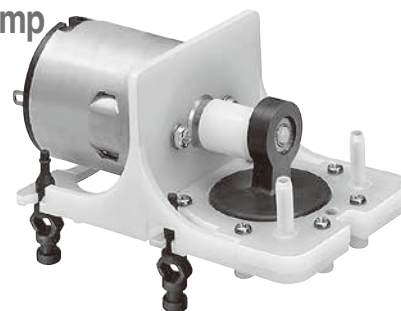
|                  |                           | 电源<br>/ Power Source |               | 控制信号<br>/ Control Signal |                |                |               |              |
|------------------|---------------------------|----------------------|---------------|--------------------------|----------------|----------------|---------------|--------------|
| 线路 / Circuit No. |                           | 1                    | 2             | 3                        | 4              | 5              | 6             | 7            |
| 线色 / Cord Color  |                           | 红色<br>/ Red          | 黑色<br>/ Black | 褐色<br>/ Brown            | 橙色<br>/ Orange | 黄色<br>/ Yellow | 绿色<br>/ Green | 灰色<br>/ Gray |
| 机能 / Function    |                           | V+                   | V-            | 驱动 / 自由<br>DRIVE / FREE  | 脉冲<br>PULSE    | 报警<br>ALARM    | 速度<br>SPEED   | 报警<br>SIGNAL |
| 选项<br>/ Option   | 无控制 Off<br>/ Function Off | ON                   |               |                          | OFF            |                |               |              |
|                  | 有控制 On<br>/ Function On   | ON                   |               |                          | ON             |                |               |              |
| 线尺寸 / Cord Size  |                           | AWG20                |               |                          | AWG22          |                |               |              |
| 线路类型 / Line Type |                           |                      |               |                          | UL1007         |                |               |              |

\* 控制功能默认情况下是“OFF”  
/ Control function is “OFF” by default.

- 务必使用扎带固定引线。(请参见细节 A。) 如果它们没有固定, 连接器可能会接触不良并导致故障。
- 有关接线的详细信息, 请参阅用户说明。
- Be sure to secure the lead wires with a cable tie. (See the detail A.) If they are not secured, poor contact of the connector may occur and result in failure.
- For the details of wiring, please see the user's instructions.

# 压缩泵 & 真空泵 / Compressor and Vacuum Pump

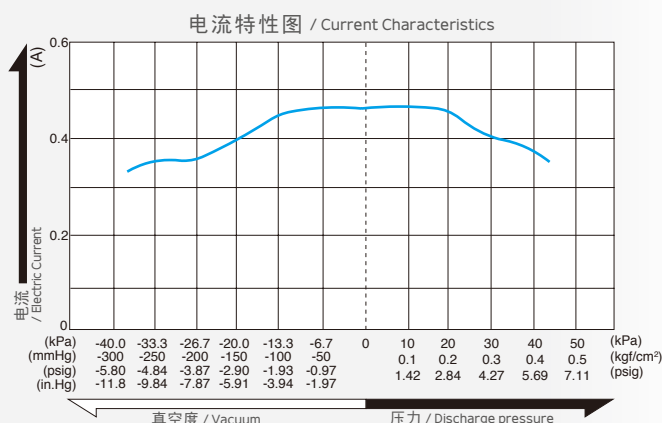
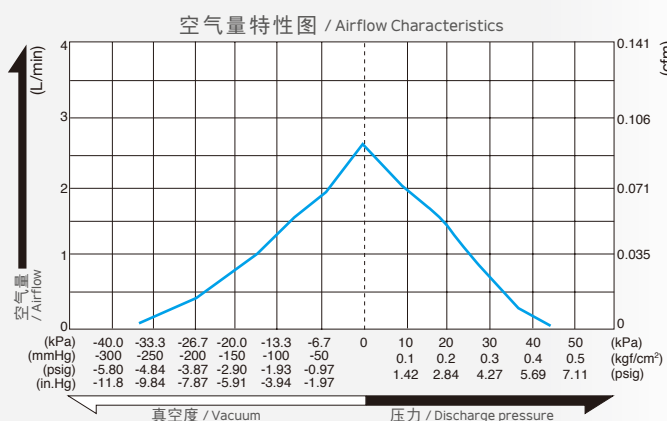
## 型号 DP0125



有刷马达  
/ Brush DC Motor  
(12VDC)

兼用 / Dual Type

空气量和电流 / Airflow & Electric Current



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

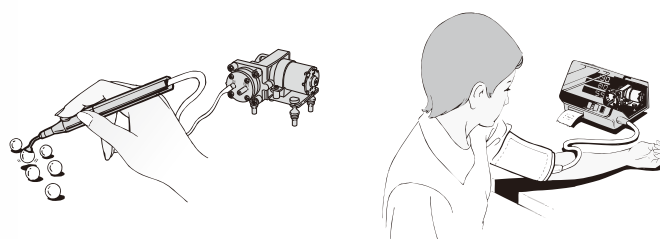
规格 / Specifications

|                                        |                                                        |
|----------------------------------------|--------------------------------------------------------|
| 达到真空度 / Attainable Vacuum              | -33.3 kPa (-250 mmHg)<br>-333 mbar - 9.84 in.Hg        |
| 吐出空气量 / Free Air Displacement          | 2.5 L/min<br>0.088 cfm                                 |
| 额定电压 / Rated Voltage                   | 12 V DC                                                |
| 最高压力 / Maximum Pressure                | 30 kPa (0.3 kgf/cm²)<br>0.3 bar<br>4.27 psig           |
| 最大电流 / Maximum Current                 | 0.5 A                                                  |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                        |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 400 小时 / hours                                         |
| 吸入口尺寸 / Inlet                          | φ3 mm (外径) 直管接头 / 3 mm O.D. straight barb              |
| 吐出口尺寸 / Outlet                         | φ3 mm (外径) 直管接头 / 3 mm O.D. straight barb              |
| 线圈绝缘等级 / Coil Insulation Class         | 相当于 E 类 / Class E equivalent                           |
| 安装尺寸 / Mounting Dimensions             | 32 (L) x 32.5 (W) mm<br>1 - 17/64" (L) x 1 - 9/32" (W) |
| 本体重量 / Weight                          | 0.08 kg 0.18 Lbs                                       |

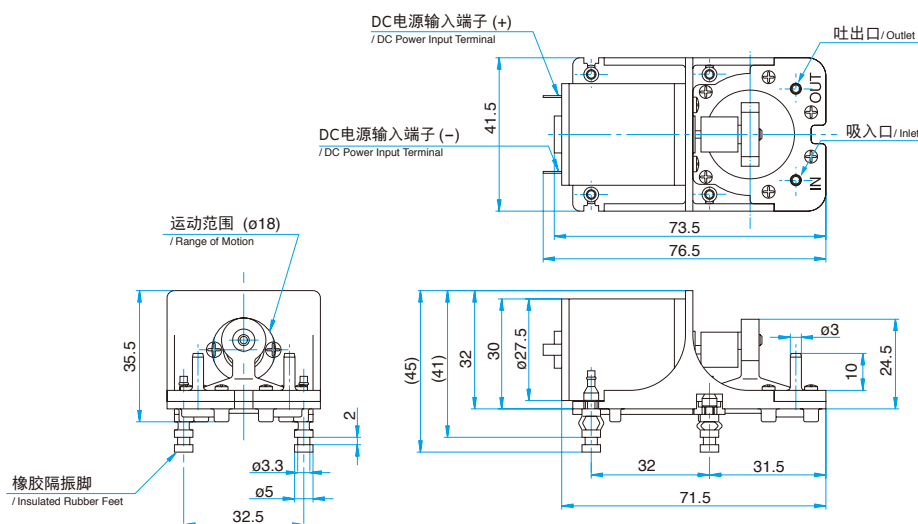
用途例 / Application Examples

真空镊子 / Vacuum Sucking Pen

血压计 / Blood Pressure Tester

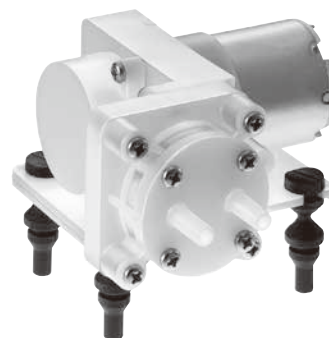


外形尺寸图 / External Dimensions (单位 / Unit : mm)

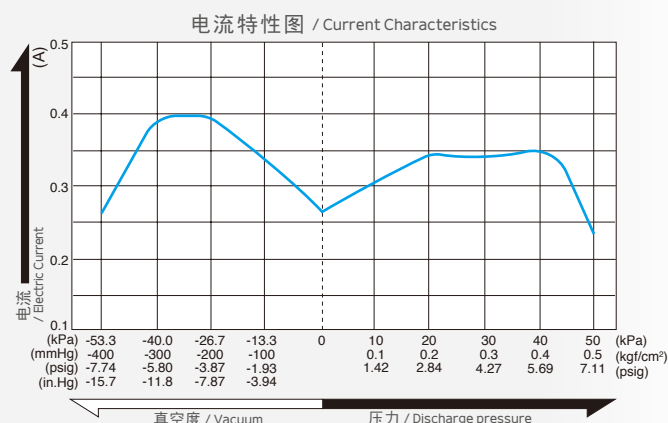
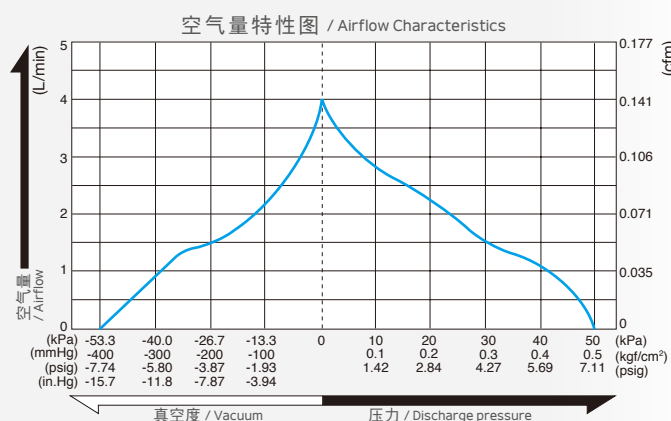




**兼用 / Dual Type**



## 规格 / Specifications

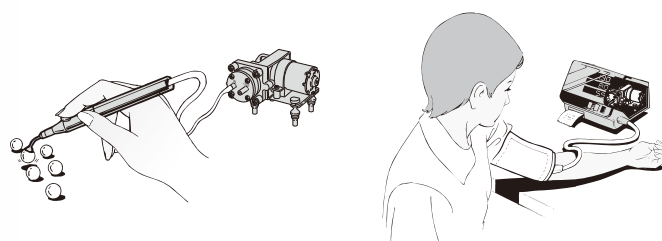


|                                           |                                                           |
|-------------------------------------------|-----------------------------------------------------------|
| 达到真空度<br>/ Attainable Vacuum              | -53.3 kPa (-400 mmHg)<br>-533 mbar -15.7 in.Hg            |
| 吐出空气量<br>/ Free Air Displacement          | 4.0 L/min<br>0.141 cfm                                    |
| 额定电压 / Rated Voltage                      | 12 V DC                                                   |
| 最高压力<br>/ Maximum Pressure                | 50 kPa (0.5 kgf/cm <sup>2</sup> )<br>0.5 bar<br>7.11 psig |
| 最大电流<br>/ Maximum Current                 | 0.5 A                                                     |
| 额定时间 / Duty Cycle                         | 连续 / Continuous                                           |
| 耐用时间 (MTTF)<br>/ Rated Performance (MTTF) | 800 小时 / hours                                            |
| 吸入口尺寸 / Inlet                             | φ5 mm ( 外径 ) 直管接头 / 5 mm O.D. straight barb               |
| 吐出口尺寸 / Outlet                            | φ5 mm ( 外径 ) 直管接头 / 5 mm O.D. straight barb               |
| 线圈绝缘等级<br>/ Coil Insulation Class         | 相当于 E 类 / Class E equivalent                              |
| 安装尺寸<br>/ Mounting Dimensions             | 52 (L) x 36 (W) mm<br>2 - 3/64" (L) x 1 - 27/64" (W)      |
| 本体重量 / Weight                             | 0.19 kg 0.42 Lbs                                          |

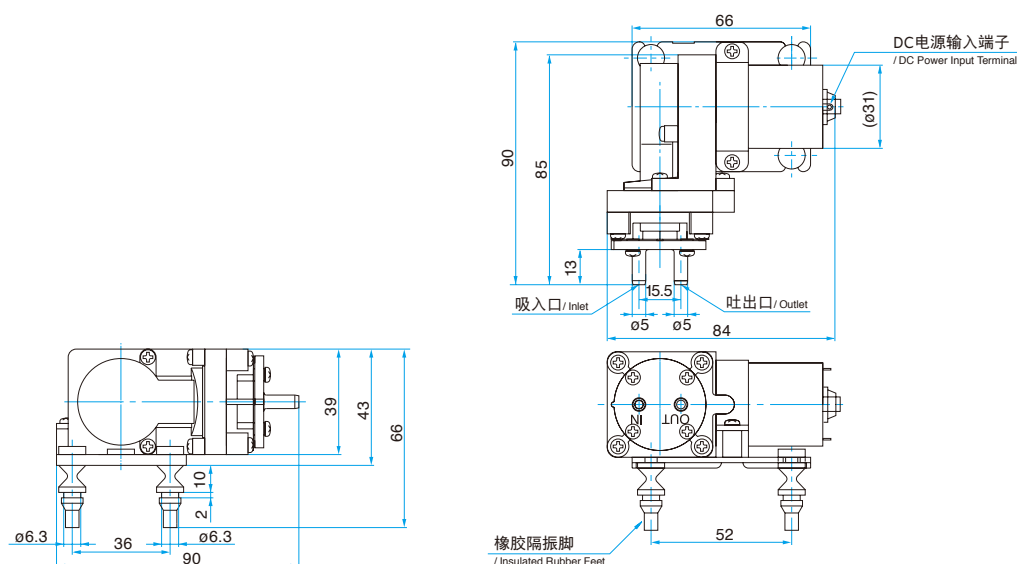
## 用途例 / Application Examples

真空镊子 / Vacuum Sucking Pen

血压计 / Blood Pressure Tester



## 外形尺寸图 / External Dimensions (单位 / Unit : mm)



# 压缩泵 & 真空泵 / Compressor and Vacuum Pump

型号 **DP0102**  
**DP0102S**

12 V DC

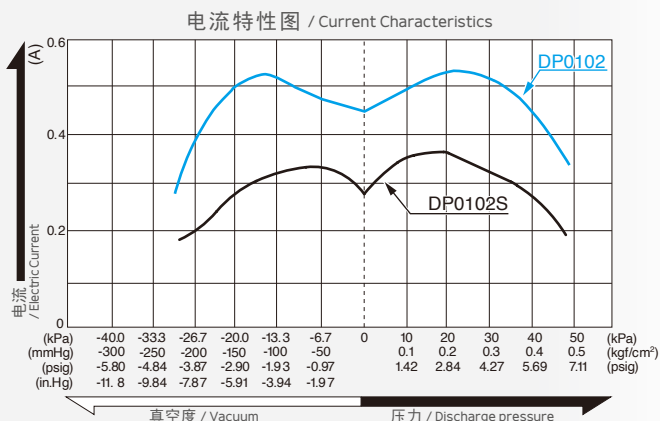
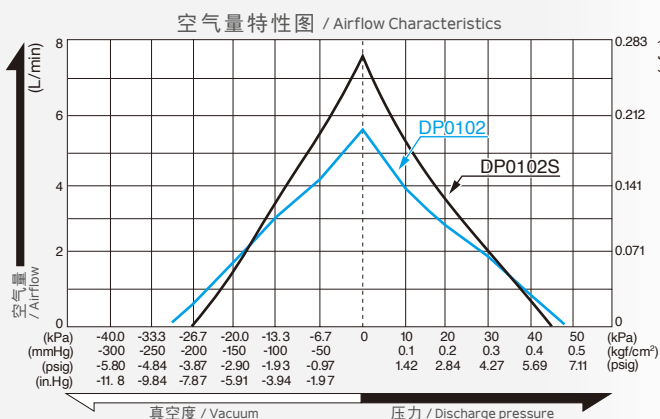
24 V DC



采用无碳刷马达  
/ Brushless DC Motor

兼用 / Dual Type

空气量和电流 / Airflow & Electric Current



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

规格 / Specifications

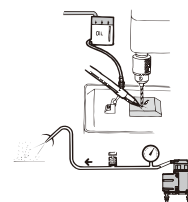
| 型号 / Model                                | DP0102                                                                                             | DP0102S                |
|-------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------|
| 达到真空度<br>/ Attainable Vacuum              | -26.7 kPa (-200 mmHg)<br>-267 mbar - 7.87 in.Hg                                                    |                        |
| 吐出空气量<br>/ Free Air Displacement          | 5.0 L/min<br>0.177 cfm                                                                             | 7.0 L/min<br>0.247 cfm |
| 额定电压 / Rated Voltage                      | 12 V DC                                                                                            | 24 V DC                |
| 最大电流<br>/ Maximum Current                 | 0.7 A                                                                                              | 0.5 A                  |
| 最高压力<br>/ Maximum Pressure                | 45 kPa (0.45 kgf/cm²)<br>0.45 bar 6.4 psig                                                         |                        |
| 额定时间 / Duty Cycle                         | 连续 / Continuous                                                                                    |                        |
| 使用压力范围<br>/ Working Pressure Range        | -26.7 kPa ~ 45 kPa<br>(-200 mmHg ~ 0.45 kgf/cm²)<br>-267 mbar ~ 0.45 bar<br>-7.87 in.Hg ~ 6.4 psig |                        |
| 耐用时间 (MTTF)<br>/ Rated Performance (MTTF) | 10,000 小时 / hours                                                                                  |                        |
| 吸入口尺寸 / Inlet                             | φ6 mm (外径) 直管接头 / 6 mm O.D. straight barb                                                          |                        |
| 吐出口尺寸 / Outlet                            | φ6 mm (外径) 直管接头 / 6 mm O.D. straight barb                                                          |                        |
| 线圈绝缘等级<br>/ Coil Insulation Class         | 相当于 E 类 / Class E equivalent                                                                       |                        |
| 安装尺寸<br>/ Mounting Dimensions             | 50 (L) x 30 (W) mm<br>1 - 31/32" (L) x 1 - 3/16" (W)                                               |                        |
| 本体重量 / Weight                             | 0.25 kg 0.55 Lbs                                                                                   |                        |
| 导线长度<br>/ Leadwire Length                 | 400 mm<br>15 - 3/4"                                                                                |                        |

用途例 / Application Examples

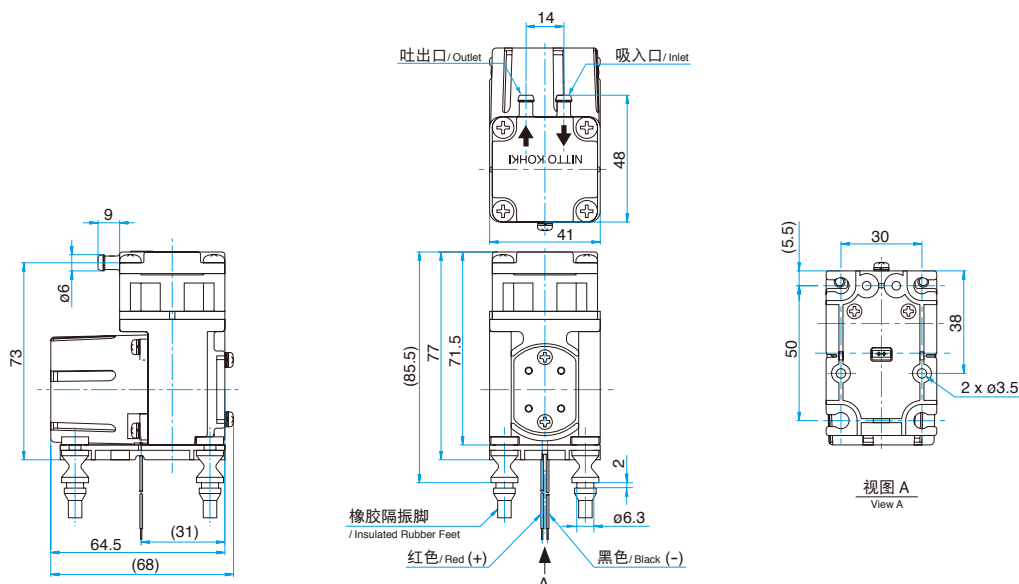
内窥镜 / Endoscopes



机械加工时的切屑去除  
/ Removal of micromachining chips

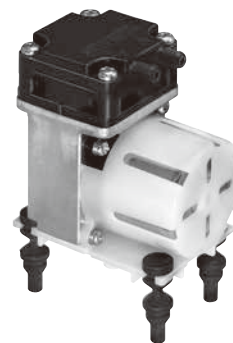


外形尺寸图 / External Dimensions (单位 / Unit : mm)



# 压缩泵 & 真空泵 / Compressor and Vacuum Pump

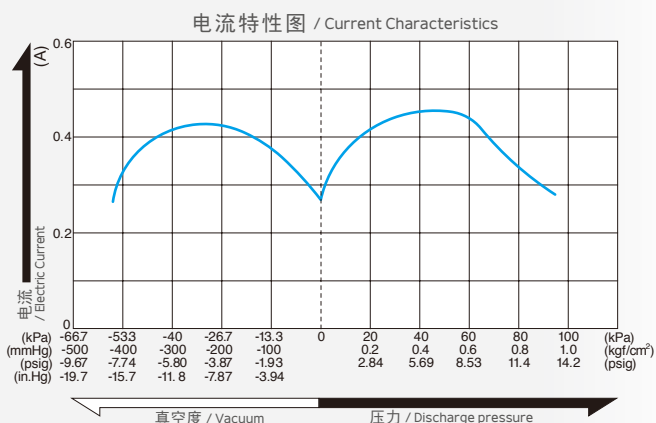
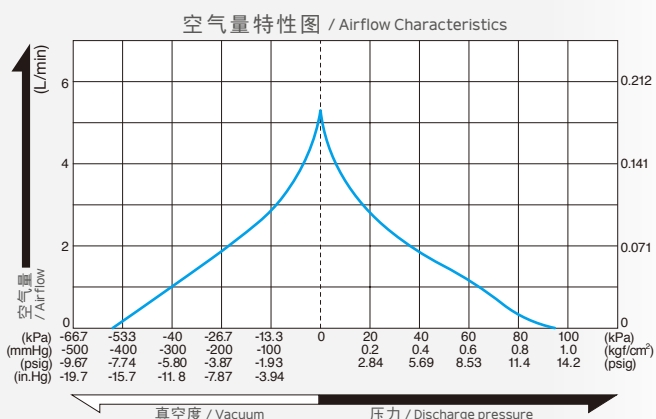
## 型号 DP0102H-X1



采用无碳刷马达  
/ Brushless DC Motor  
(12VDC)

兼用 / Dual Type

空气量和电流 / Airflow & Electric Current



\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

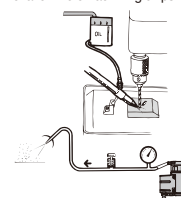
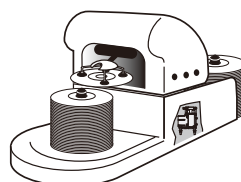
规格 / Specifications

|                                           |                                                                                                              |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 达到真空度<br>/ Attainable Vacuum              | -50.7 kPa (-380 mmHg)<br>-507 mbar -15 in.Hg                                                                 |
| 吐出空气量<br>/ Free Air Displacement          | 4.0 L/min<br>0.141 cfm                                                                                       |
| 额定电压 / Rated Voltage                      | 12 V DC                                                                                                      |
| 最高压力<br>/ Maximum Pressure                | 80 kPa (0.8 kgf/cm <sup>2</sup> )<br>0.8 bar 11.4 psig                                                       |
| 最大电流<br>/ Maximum Current                 | 0.7 A                                                                                                        |
| 额定时间 / Duty Cycle                         | 连续 / Continuous                                                                                              |
| 使用压力范围<br>/ Working Pressure Range        | -50.7 kPa ~ 80 kPa<br>(-380 mmHg ~ 0.8 kgf/cm <sup>2</sup> )<br>-507 mbar ~ 0.8 bar<br>-15 in.Hg ~ 11.4 psig |
| 耐用时间 (MTTF)<br>/ Rated Performance (MTTF) | 8,000 小时 / hours                                                                                             |
| 吸入口尺寸 / Inlet                             | φ6 mm (外径) 直管接头 / 6 mm O.D. straight barb                                                                    |
| 吐出口尺寸 / Outlet                            | φ6 mm (外径) 直管接头 / 6 mm O.D. straight barb                                                                    |
| 线圈绝缘等级<br>/ Coil Insulation Class         | 相当于 E 类 / Class E equivalent                                                                                 |
| 安装尺寸<br>/ Mounting Dimensions             | 50 (L) x 30 (W) mm<br>1 - 31/32" (L) x 1 - 3/16" (W)                                                         |
| 本体重量 / Weight                             | 0.25 kg 0.55 Lbs                                                                                             |
| 导线长度<br>/ Leadwire Length                 | 400 mm<br>15 - 3/4"                                                                                          |

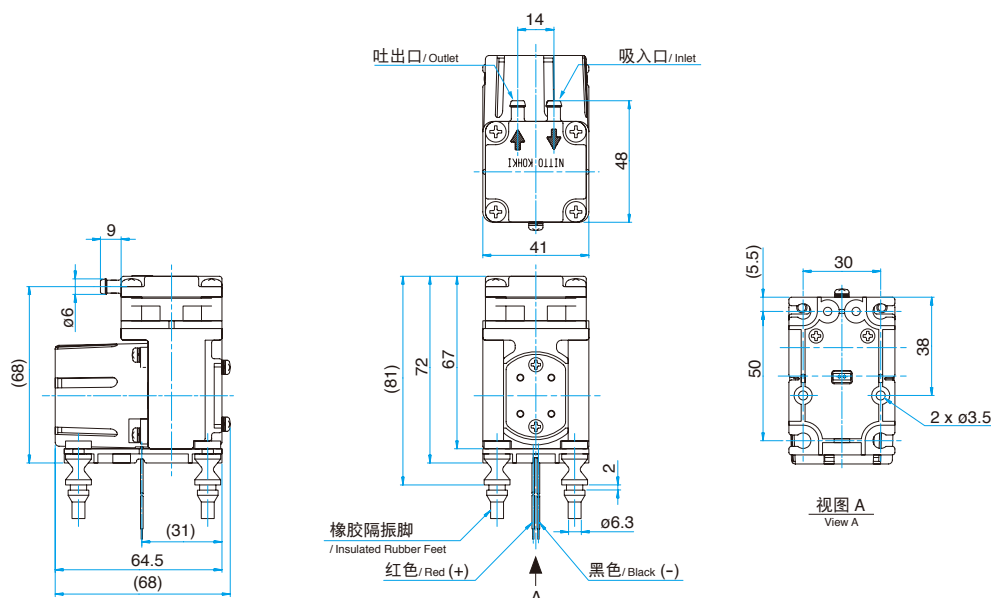
用途例 / Application Examples

CD、DVD 媒介印刷机 (搬送)  
/ Vacuum pick up and place devices for CD & DVD

机械加工时的切屑去除  
/ Removal of micromachining chips



外形尺寸图 / External Dimensions (单位 / Unit : mm)



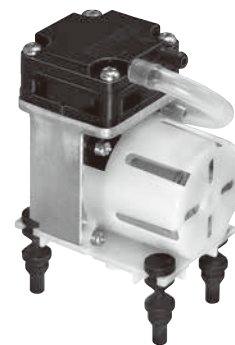
# 压缩泵 / Compressor

## 型号 DP0102H-X2

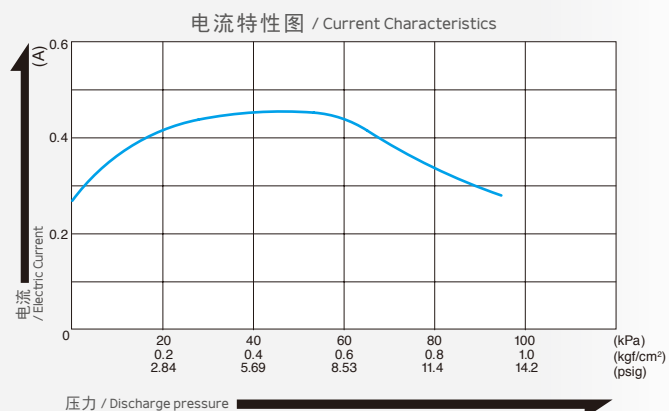
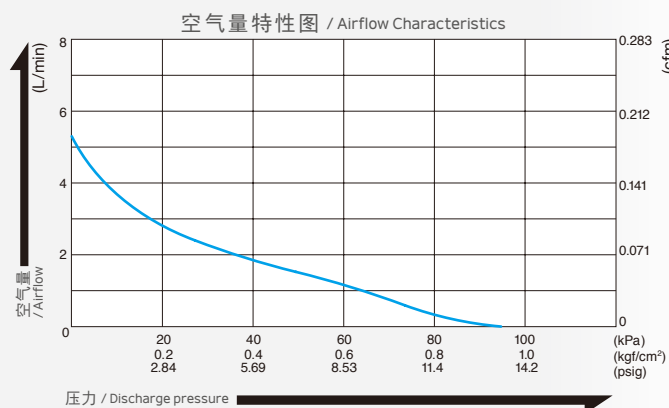


采用无碳刷马达  
/ Brushless DC Motor  
(12VDC)

压缩泵专用 / Blower Type



空气量和电流 / Airflow & Electric Current



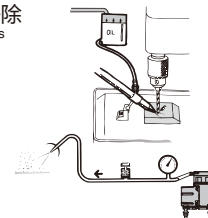
\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

规格 / Specifications

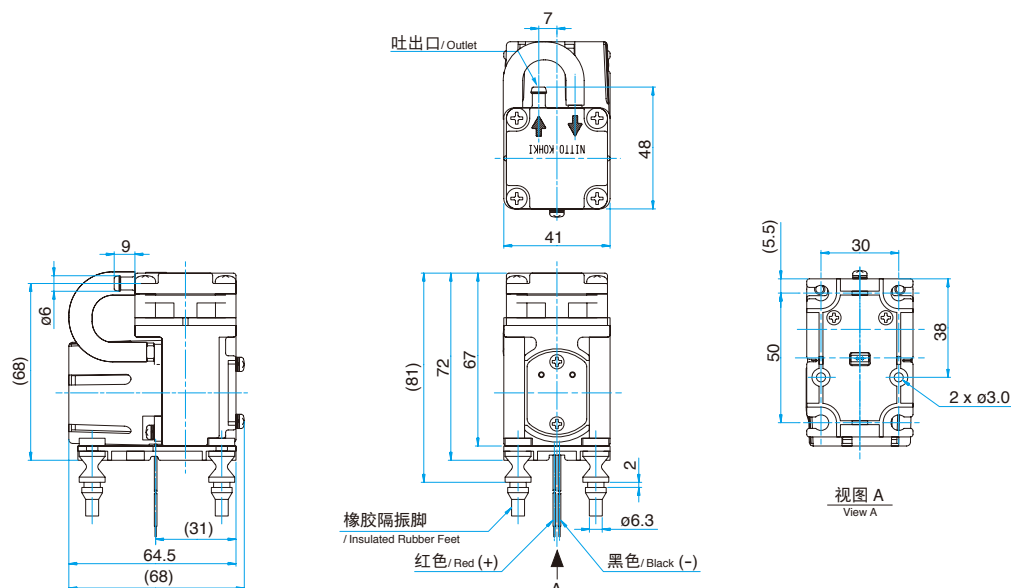
|                                           |                                                                              |
|-------------------------------------------|------------------------------------------------------------------------------|
| 吐出空气量<br>/ Free Air Displacement          | 4.0 L/min<br>0.141 cfm                                                       |
| 额定电压 / Rated Voltage                      | 12 V DC                                                                      |
| 最高压力<br>/ Maximum Pressure                | 80 kPa (0.8 kgf/cm <sup>2</sup> )<br>0.8 bar 11.4 psig                       |
| 最大电流<br>/ Maximum Current                 | 0.7 A                                                                        |
| 额定时间 / Duty Cycle                         | 连续 / Continuous                                                              |
| 使用压力范围<br>/ Working Pressure Range        | 0 ~ 80 kPa<br>(0 ~ 0.8 kgf/cm <sup>2</sup> )<br>0 ~ 0.8 bar<br>0 ~ 11.4 psig |
| 耐用时间 (MTTF)<br>/ Rated Performance (MTTF) | 8,000 小时 / hours                                                             |
| 吸入口尺寸 / Inlet                             | φ6 mm (外径) 直管接头 / 6 mm O.D. straight barb                                    |
| 吐出口尺寸 / Outlet                            | φ6 mm (外径) 直管接头 / 6 mm O.D. straight barb                                    |
| 线圈绝缘等级<br>/ Coil Insulation Class         | 相当于 E 类 / Class E equivalent                                                 |
| 安装尺寸<br>/ Mounting Dimensions             | 50 (L) x 30 (W) mm<br>1 - 31/32" (L) x 1 - 3/16" (W)                         |
| 本体重量 / Weight                             | 0.25 kg 0.55 Lbs                                                             |
| 导线长度<br>/ Leadwire Length                 | 400 mm<br>15 - 3/4"                                                          |

用途例 / Application Examples

机械加工时的切屑去除  
/ Removal of micromachining chips



外形尺寸图 / External Dimensions (单位 / Unit : mm)

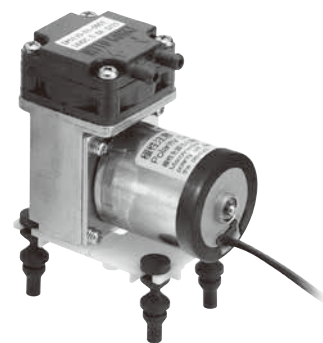


## 压缩泵 & 真空泵 / Compressor and Vacuum Pump

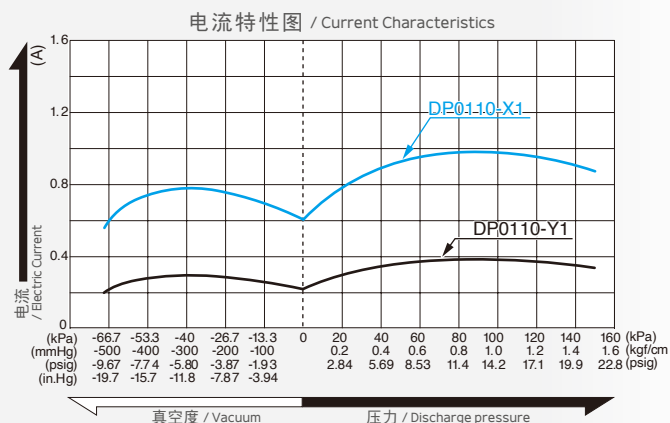
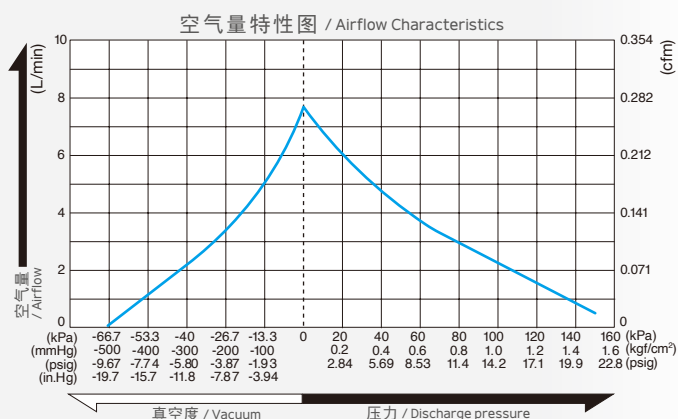
|    |           |         |
|----|-----------|---------|
| 型号 | DP0110-X1 | 12 V DC |
|    | DP0110-Y1 | 24 V DC |



**采用无碳刷马达**  
/ Brushless DC Motor

**兼用 / Dual Type**

## 空气量和电流 / Airflow &amp; Electric Current



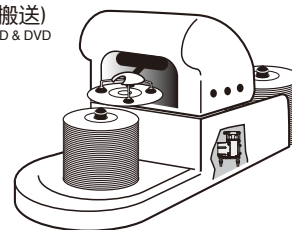
\* 特性图只是参考值，并不是保证值。  
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## 规格 / Specifications

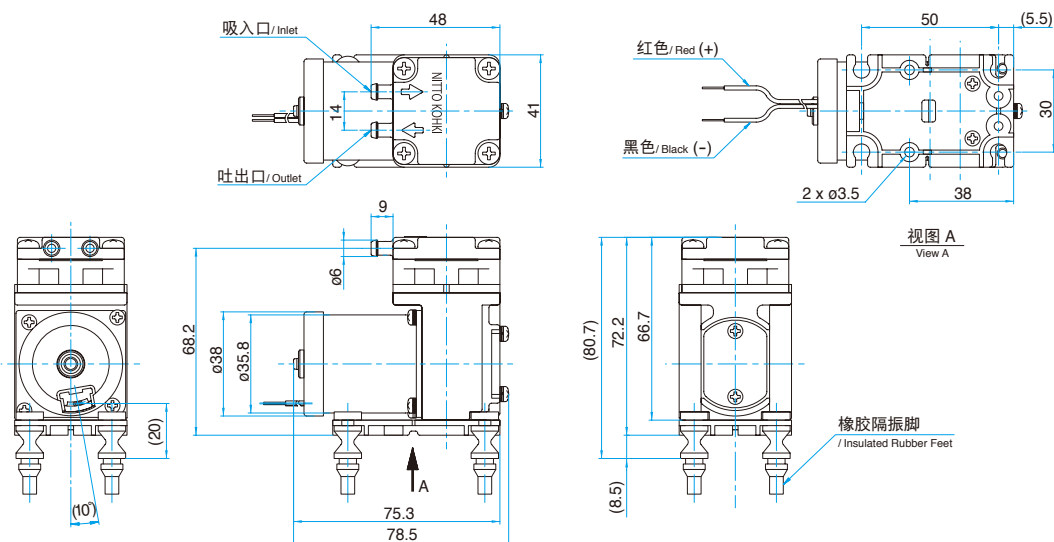
| 型号 / Model                                | DP0110-X1                                                                                                           | DP0110-Y1 |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------|
| 达到真空度<br>/ Attainable Vacuum              | -66.7 kPa (-500 mmHg)<br>-667 mbar -19.7 in.Hg                                                                      |           |
| 吐出空气量<br>/ Free Air Displacement          | 7.5 L/min<br>0.265 cfm                                                                                              |           |
| 额定电压 / Rated Voltage                      | 12 V DC                                                                                                             | 24 V DC   |
| 最大电流<br>/ Maximum Current                 | 1.2 A                                                                                                               | 0.6 A     |
| 最高压力<br>/ Maximum Pressure                | 150 kPa (1.5 kgf/cm <sup>2</sup> )<br>1.5 bar 21.3 psig                                                             |           |
| 额定时间 / Duty Cycle                         | 连续 / Continuous                                                                                                     |           |
| 使用压力范围<br>/ Working Pressure Range        | -66.7 kPa to 150 kPa<br>(-500 mmHg to 1.5 kgf/cm <sup>2</sup> )<br>-667 mbar to 1.5 bar<br>-19.7 in.Hg to 21.3 psig |           |
| 耐用时间 (MTTF)<br>/ Rated Performance (MTTF) | 8,000 小时 / hoursz                                                                                                   |           |
| 吸入口尺寸 / Inlet                             | φ6 mm (外径) 直管接头 / 6 mm O.D. straight barb                                                                           |           |
| 出口口尺寸 / Outlet                            | φ6 mm (外径) 直管接头 / 6 mm O.D. straight barb                                                                           |           |
| 线圈绝缘等级<br>/ Coil Insulation Class         | 相当于 A 类 / Class A equivalent                                                                                        |           |
| 安装尺寸<br>/ Mounting Dimensions             | 50 (L) x 30 (W) mm<br>1 - 31/32" (L) x 1 - 3/16" (W)                                                                |           |
| 本体重量 / Weight                             | 0.30 kg 0.66 Lbs                                                                                                    |           |
| 导线长度<br>/ Leadwire Length                 | 360 mm<br>14 - 11/64"                                                                                               |           |

## 用途例 / Application Examples

CD、DVD 媒介印刷机 (搬送)  
/ Vacuum pick up and place devices for CD & DVD



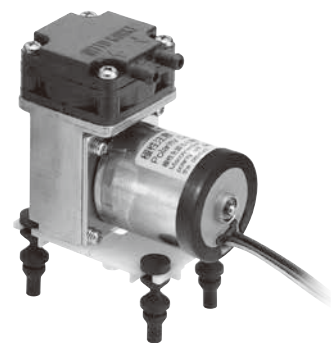
## 外形尺寸图 / External Dimensions (单位 / Unit : mm)



# 压缩泵 & 真空泵 / Compressor and Vacuum Pump

## 型号 DP0110-X3

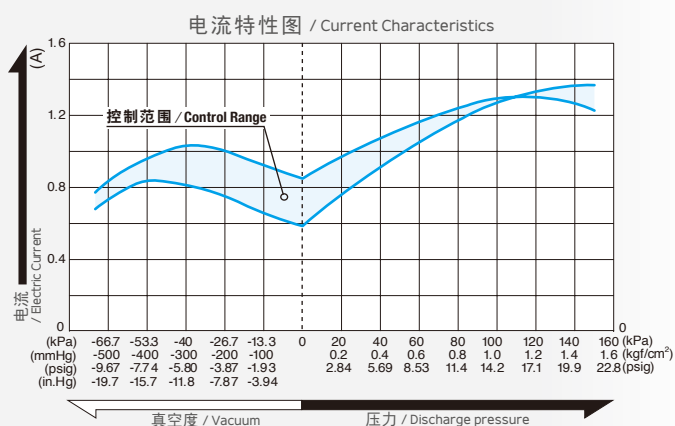
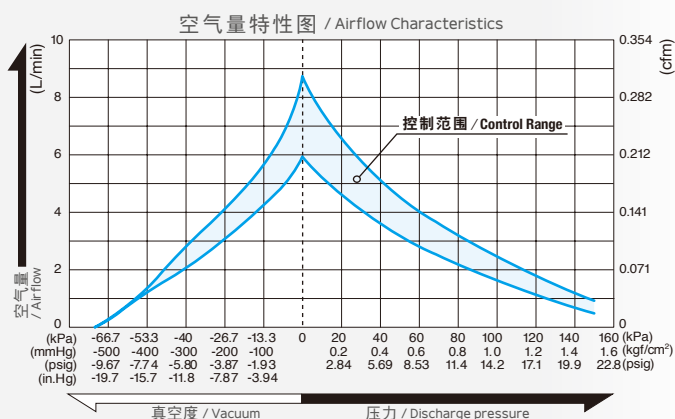
### PWM 控制专用机型 / PWM controlled model



采用无碳刷马达  
/ Brushless DC Motor  
(12VDC)

兼用 / Dual Type

空气量和电流 / Airflow & Electric Current



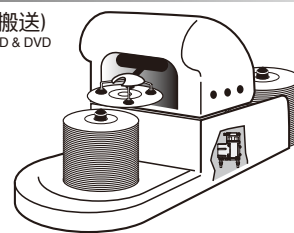
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规格 / Specifications

|                                        |                                                                                                                     |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| 达到真空度 / Attainable Vacuum              | -66.7 kPa (-500 mmHg)<br>-667 mbar -19.7 in.Hg                                                                      |
| 吐出空气量 / Free Air Displacement          | 7.5 L/min<br>0.265 cfm                                                                                              |
| 额定电压 / Rated Voltage                   | 12 V DC                                                                                                             |
| 最高压力 / Maximum Pressure                | 150 kPa (1.5 kgf/cm <sup>2</sup> )<br>1.5 bar 21.3 psig                                                             |
| 最大电流 / Maximum Current                 | 1.4 A                                                                                                               |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                                                                                     |
| 使用压力范围 / Working Pressure Range        | -66.7 kPa to 150 kPa<br>(-500 mmHg to 1.5 kgf/cm <sup>2</sup> )<br>-667 mbar to 1.5 bar<br>-19.7 in.Hg to 21.3 psig |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 8,000 小时 / hours                                                                                                    |
| 控制 (PWM) / Control (PWM)               | 2.5 - 5 V, 15-25 kHz, 占空比 / Duty cycle 80 - 100%                                                                    |
| 吸入口尺寸 / Inlet                          | φ6 mm (外径) 直管接头 / 6 mm O.D. straight barb                                                                           |
| 吐出口尺寸 / Outlet                         | φ6 mm (外径) 直管接头 / 6 mm O.D. straight barb                                                                           |
| 线圈绝缘等级 / Coil Insulation Class         | 相当于 A 类 / Class A equivalent                                                                                        |
| 安装尺寸 / Mounting Dimensions             | 50 (L) x 30 (W) mm<br>1 - 31/32" (L) x 1 - 3/16" (W)                                                                |
| 本体重量 / Weight                          | 0.30 kg<br>0.66 Lbs                                                                                                 |
| 导线长度 / Leadwire Length                 | 180 mm<br>7 - 3/32"                                                                                                 |

用途例 / Application Examples

CD、DVD 媒介印刷机 (搬送)  
/ Vacuum pick up and place devices for CD & DVD

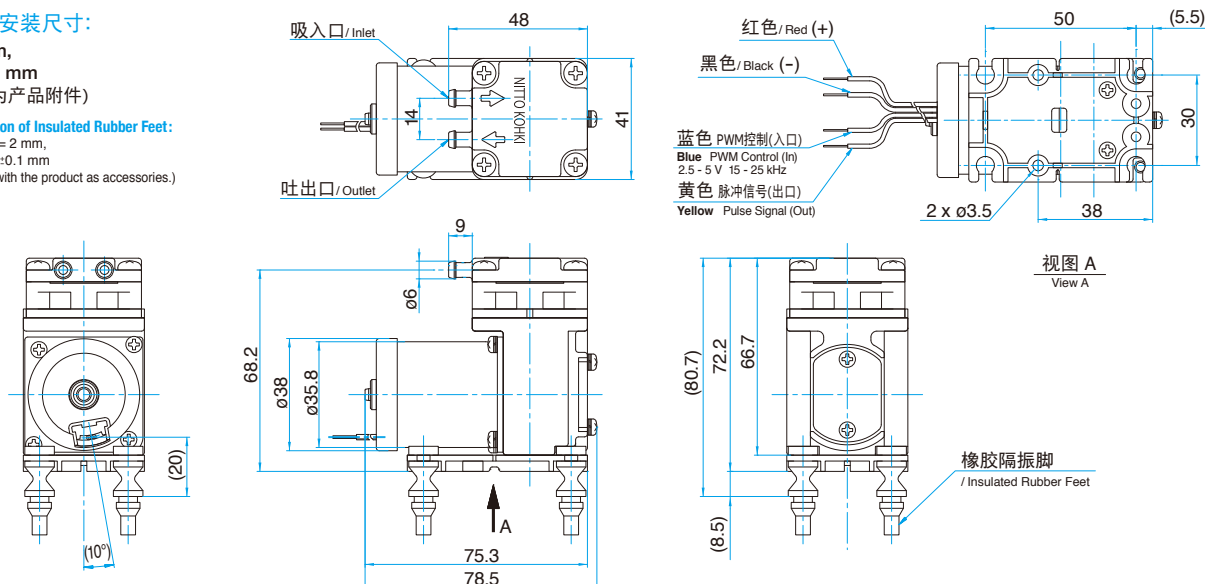


外形尺寸图 / External Dimensions (单位 / Unit : mm)

橡胶隔振脚安装尺寸:

板厚: t=2 mm,  
孔径: φ6±0.1 mm  
(橡胶隔振脚为产品附件)

Mounting Dimension of Insulated Rubber Feet:  
Plate thickness : t = 2 mm,  
Hole diameter : φ6±0.1 mm  
(Rubber feet come with the product as accessories.)



# 压缩泵 & 真空泵 / Compressor and Vacuum Pump

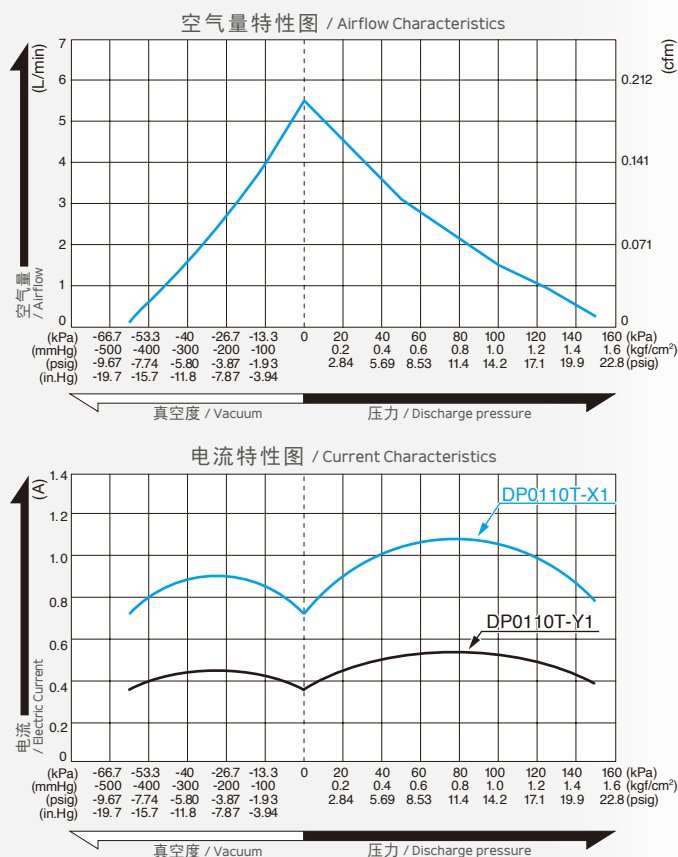
型号 **DP0110T-X1** 12 V DC  
**DP0110T-Y1** 24 V DC



采用无碳刷马达  
/ Brushless DC Motor

兼用 / Dual Type

## 空气量和电流 / Airflow & Electric Current

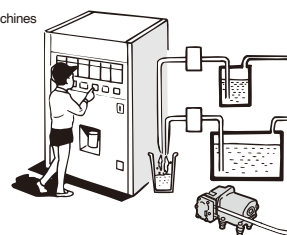


## 规格 / Specifications

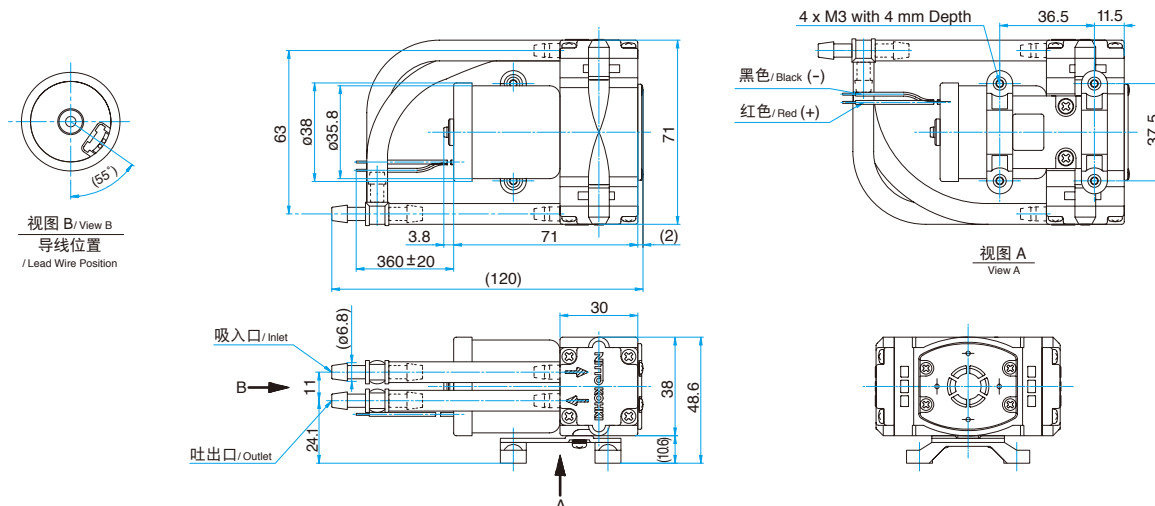
| 型号 / Model                                | DP0110T-X1                                                                                                          | DP0110T-Y1 |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------|
| 达到真空度<br>/ Attainable Vacuum              | -60.0 kPa (-450 mmHg)<br>-600 mbar -17.7 in.Hg                                                                      |            |
| 吐出空气量<br>/ Free Air Displacement          | 5.5 L/min<br>0.194 cfm                                                                                              |            |
| 额定电压 / Rated Voltage                      | 12 V DC                                                                                                             | 24 V DC    |
| 最大电流<br>/ Maximum Current                 | 1.2 A                                                                                                               | 0.6 A      |
| 最高压力<br>/ Maximum Pressure                | 150 kPa (1.5 kgf/cm <sup>2</sup> )<br>1.5 bar 21.3 psig                                                             |            |
| 额定时间 / Duty Cycle                         | 连续 / Continuous                                                                                                     |            |
| 使用压力范围<br>/ Working Pressure Range        | -60.0 kPa to 150 kPa<br>(-450 mmHg to 1.5 kgf/cm <sup>2</sup> )<br>-600 mbar to 1.5 bar<br>-17.7 in.Hg to 21.3 psig |            |
| 耐用时间 (MTTF)<br>/ Rated Performance (MTTF) | 5,000 小时 / hours                                                                                                    |            |
| 吸入口尺寸 / Inlet                             | φ6.8 mm (外径) 直管接头 / 6.8 mm O.D. straight barb                                                                       |            |
| 吐出口尺寸 / Outlet                            | φ6.8 mm (外径) 直管接头 / 6.8 mm O.D. straight barb                                                                       |            |
| 线圈绝缘等级<br>/ Coil Insulation Class         | 相当于 A 类 / Class A equivalent                                                                                        |            |
| 安装尺寸<br>/ Mounting Dimensions             | 36.5 (L) x 37.5 (W) mm<br>1 - 7/16" (L) x 1 - 15/32" (W)                                                            |            |
| 本体重量 / Weight                             | 0.27 kg<br>0.60 Lbs                                                                                                 |            |
| 导线长度<br>/ Leadwire Length                 | 360 mm<br>14 - 11/64"                                                                                               |            |

## 用途例 / Application Examples

自动售货机 / Vending Machines



## 外形尺寸图 / External Dimensions (单位 / Unit : mm)



# 压缩泵 & 真空泵 / Compressor and Vacuum Pump

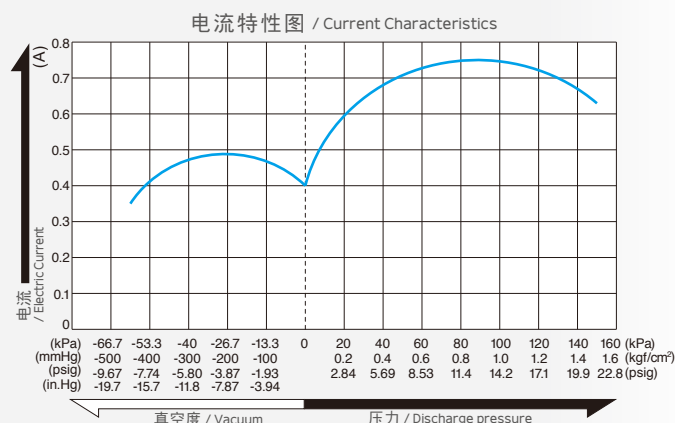
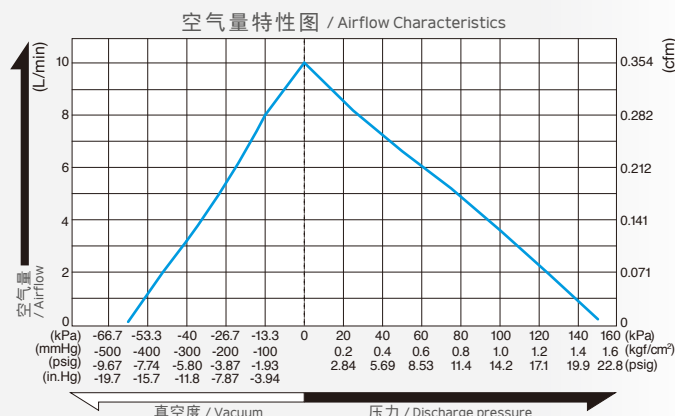
## 型号 DP0210TA-Y1 一般 / PWM 可控兼用机型 / PWM controllable



采用无碳刷马达  
/ Brushless DC Motor  
(24 VDC)

兼用 / Dual Type

### 空气量和电流 / Airflow & Electric Current



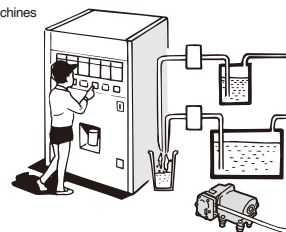
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/ The characteristic charts are for reference only and are not guaranteed.

### 规格 / Specifications

|                                        |                                                                                                                     |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| 达到真空度 / Attainable Vacuum              | -60.0 kPa (-450 mmHg)<br>-667 mbar -17.7 in.Hg                                                                      |
| 吐出空气量 / Free Air Displacement          | 10 L/min<br>0.35 cfm                                                                                                |
| 额定电压 / Rated Voltage                   | 24 V DC                                                                                                             |
| 最高压力 / Maximum Pressure                | 150 kPa (1.5 kgf/cm <sup>2</sup> )<br>1.5 bar 21.3 psig                                                             |
| 最大电流 / Maximum Current                 | 0.8 A                                                                                                               |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                                                                                     |
| 使用压力范围 / Working Pressure Range        | -60.0 kPa to 150 kPa<br>(-450 mmHg to 1.5 kgf/cm <sup>2</sup> )<br>-600 mbar to 1.5 bar<br>-17.7 in.Hg to 21.3 psig |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 5,000 小时 / hours                                                                                                    |
| 吸入口尺寸 / Inlet                          | φ6.8 mm (外径) 直管接头 / 6.8 mm O.D. straight barb                                                                       |
| 吐出口尺寸 / Outlet                         | φ6.8 mm (外径) 直管接头 / 6.8 mm O.D. straight barb                                                                       |
| 线圈绝缘等级 / Coil Insulation Class         | 相当于 B 类 / Class B equivalent                                                                                        |
| 安装尺寸 / Mounting Dimensions             | 36.5 (L) x 37.5 (W) mm<br>1 - 7/16" (L) x 1 - 15/32" (W)                                                            |
| 本体重量 / Weight                          | 0.32 kg 0.71 Lbs                                                                                                    |
| 导线长度 / Leadwire Length                 | 300 mm<br>11 - 13/16"                                                                                               |

### 用途例 / Application Examples

自动售货机 / Vending Machines

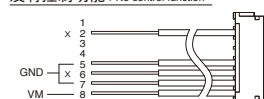


### 外形尺寸图 / External Dimensions (单位 / Unit : mm)

连接表 / Connection Table

| 线路 / Connection Rule |                       |             |   |   |            |           |                   |          |
|----------------------|-----------------------|-------------|---|---|------------|-----------|-------------------|----------|
| 线路 / Circuit No.     | 1                     | 2           | 3 | 4 | 5          | 6         | 7                 | 8        |
| 线色 / Cord Color      | —                     | 黄色 / Yellow | — | — | 白色 / White | 蓝色 / Blue | 黑色 / Black        | 红色 / Red |
| 连接 / Connection      | 控制信号 / Control Signal |             |   |   |            |           | 电源 / Power Source |          |
| 机能 / Function        | —                     | FG          | — | — | PWM        | BRAKE     | GND               | VM       |
| 线尺寸 / Cord Size      | AWG28                 |             |   |   |            |           | AWG26             |          |
| 线路类型 / Line Type     | UL1571                |             |   |   |            |           |                   |          |

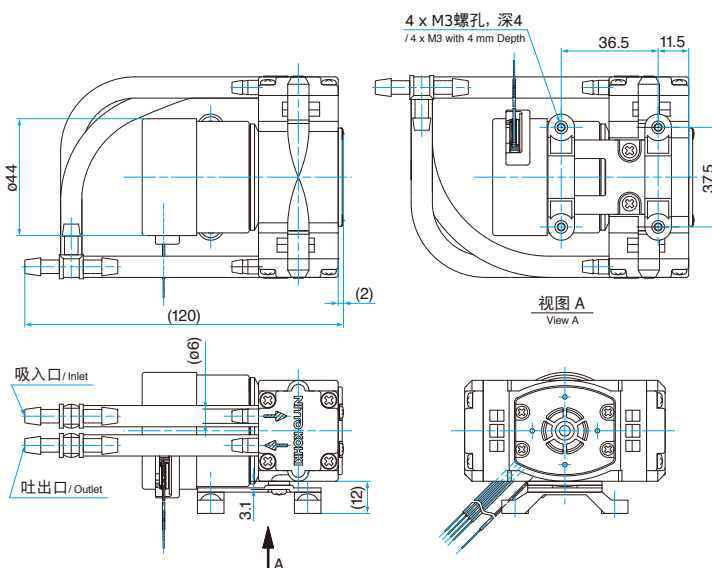
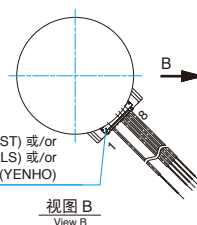
没有控制功能 / No control function



使用控制功能 / Use control function



S8B-ZR-SM4A(JST) 或/或  
1027-66208(CNPLS) 或/或  
15001WR-08A00(YENHO)



# LIQUID PUMP

Piezoelectric Pump  
DC Diaphragm Liquid Pump

## 液体泵 / LIQUID PUMP

### 压电泵

/ Piezoelectric Pump

#### BIMOR系列

BIMOR series

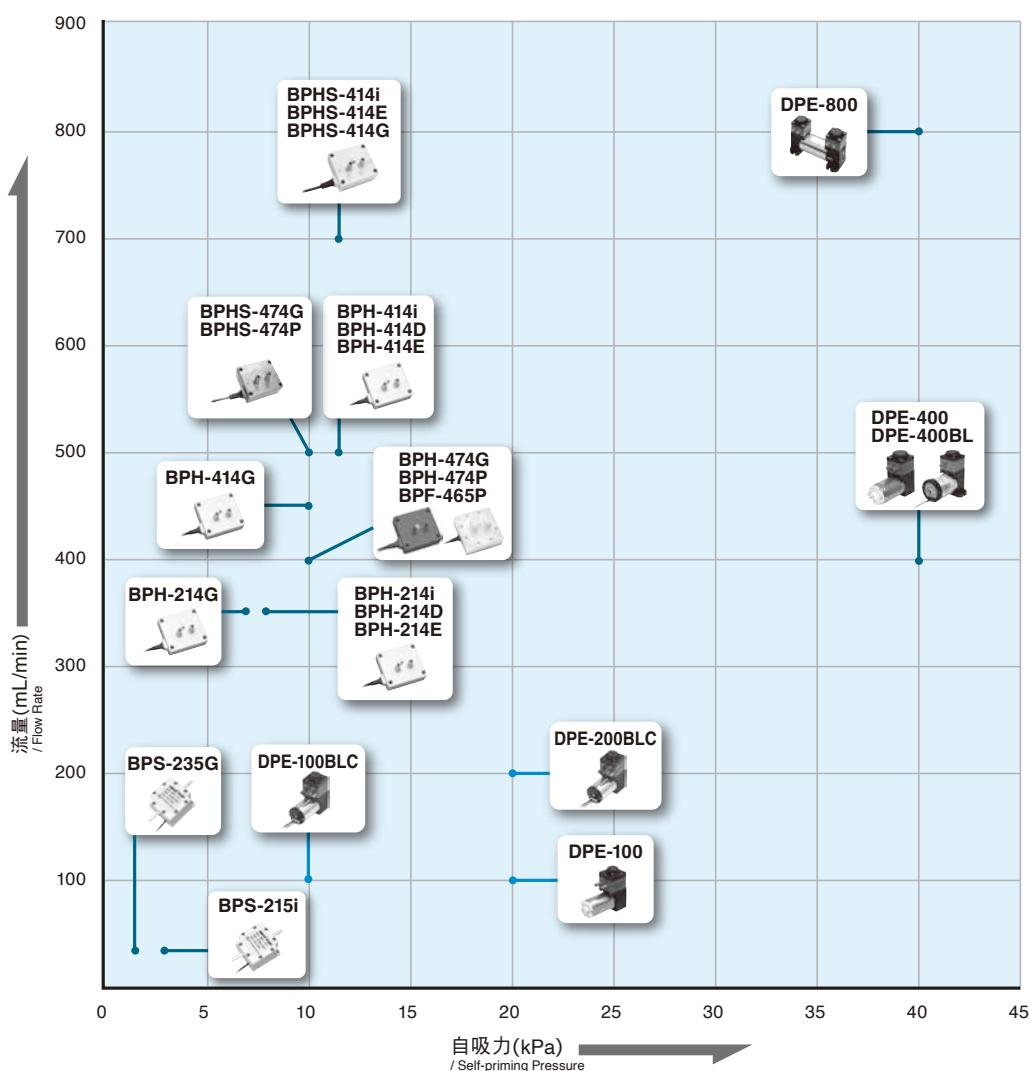
### DC隔膜液体泵

/ DC Diaphragm Liquid Pump

#### DPE系列

DPE series

#### 液体泵系列 / Liquid Pump series



- i ... 丁基橡胶  
Butyl Rubber
- G ... 氟素橡胶  
Fluorine Rubber
- D ... 二甲基橡胶  
Dimethyl Silicon Rubber
- E ... 乙丙橡胶  
Ethylene Propylene Rubber
- P ... Perfluoroelastomer

|                     |      |
|---------------------|------|
| BPS Type            |      |
| BPH Type            |      |
| BPHS Type           | — 71 |
| BPF Type            |      |
| Made to order model | — 88 |

|           |      |
|-----------|------|
| DPE-100   |      |
| DPE-400   | — 73 |
| DPE-400BL |      |
| DPE-800   |      |

|            |      |
|------------|------|
| DPE-100BLC | — 75 |
| DPE-200BLC |      |

# 压电泵 / Piezoelectric Pump

## BIMOR泵 / BIMOR PUMP



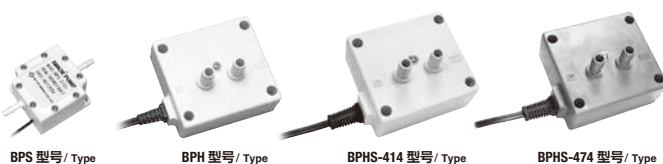
**液体可抽吸!**  
Suitable for pumping liquids

### 用途例 / Applications

- 供水、排水用 / For water supply and drainage
- 用于注入药液 / For chemical injection
- 冷却水循环用 / For cooling water circulation
- 取样 / For liquid sampling

| 使用条件 / Conditions of Use     | BIMOR泵 / BIMOR PUMP |
|------------------------------|---------------------|
| 使用环境温度 / Ambient temperature | 5~50°C*1            |
| 使用环境湿度 / Ambient humidity    | 35~85%*2            |
| 使用流体温度 / Fluid temperature   | 5~50°C              |

\*1) 不结冰 / No freezing \*2) 不结露 / No condensation



BPS 型号 / Type

BPH 型号 / Type

BPHS-414 型号 / Type

BPHS-474 型号 / Type

### 小型、轻量、长寿命、低噪音

由于压电双晶片也起到隔膜的作用，无马达、旋转轴和其他复杂机构，因此振动小、故障少。BIMOR泵比传统泵重量更轻、噪音更低、寿命更长。已实现60个月免维护连续运转。

### 低消耗功率、低电磁噪声

BIMOR泵由低耗能压电元件驱动。因此，运行成本低，几乎不会产生电磁噪声。

### 流量调节方便

BIMOR泵的流量与电压和频率成正比，因此调节流量与调节电压和频率一样方便。  
可在额定电压或更低的情况下使用本产品。

### 用途广泛

零部件可用几种材料制成，因此无论是用于液体还是气体，均可选择最适合要求的材料。目前BIMOR泵已广泛应用于医药、科研、计算机和化工等多种领域。

下表中的“适用介质”仅供参考。请确认它们是否适合所有使用条件。

### Compact, lightweight, durable & quiet

As BIMOR PUMP has no motors or shafts or other troublesome mechanisms, we have achieved maintenance free continuous operation for 60 months.

### Low power consumption & electromagnetic noise

BIMOR PUMP is driven by low energy consuming piezoelectric elements. Consequently it costs very little to run and emits virtually no electromagnetic noise.

### Simple flow rate adjustment

As the flow rate of BIMOR PUMP is proportional to the voltage and frequency, adjusting the flow rate is as simple as adjusting either one.

You may use the product at the rated voltage or lower.

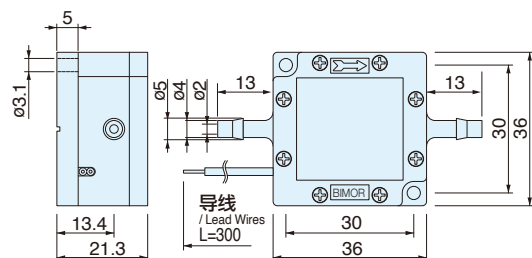
### Application versatility

The parts can be made of several different materials, so you can select the material appropriate to your needs, be it a liquid application. BIMOR PUMP is currently employed in a variety of different fields including medicine, scientific research, and the PC and chemical industries.

## 外形尺寸图 / External Dimensions (单位 / Unit : mm)

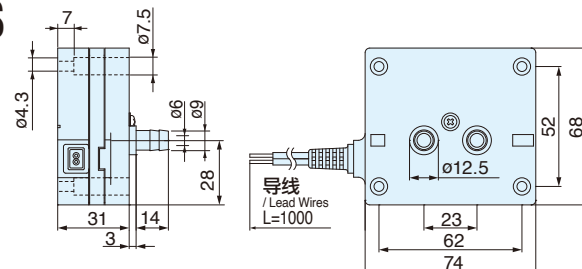
### BPS

型号 / type



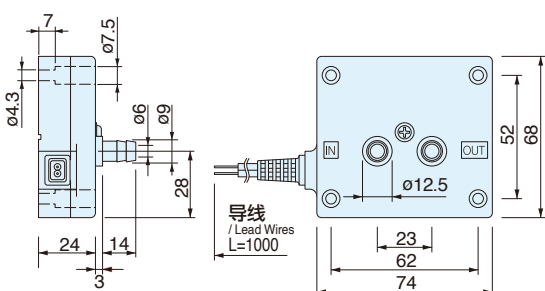
### BPHS

型号 / type



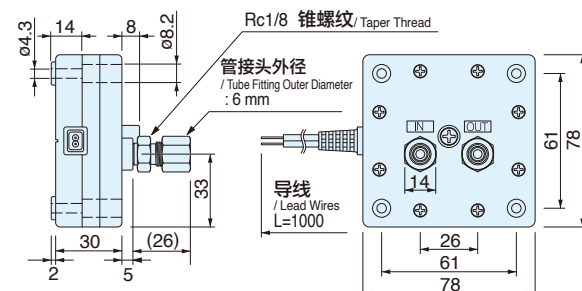
### BPH

型号 / type



### BPF

型号 / type



规格

Specifications

| 电压/Voltage(AC)—— 120 V *1 |                     |                                      |                           |                                 | 电压/Voltage(AC)—— 240 V *1 |                     |                                      |                           |                                 | 接液部材质 / Material of Wetted Parts |                            |                          | 本体重量 / Weight (g) |
|---------------------------|---------------------|--------------------------------------|---------------------------|---------------------------------|---------------------------|---------------------|--------------------------------------|---------------------------|---------------------------------|----------------------------------|----------------------------|--------------------------|-------------------|
| 型号 / Model                | 消耗电流 / Current (mA) | 自吸力 / Self-priming Pressure (kPa) *2 | 流量 / FlowRate (mL/min) *2 | 吐出压力 / Discharge Pressure (kPa) | 型号 / Model                | 消耗电流 / Current (mA) | 自吸力 / Self-priming Pressure (kPa) *2 | 流量 / FlowRate (mL/min) *2 | 吐出压力 / Discharge Pressure (kPa) | 壳体 / Housing                     | 接液板 / Liquid Contact Sheet | 止回阀/O形环 / Valve / O-ring |                   |
| BPS-215i                  | 3                   | 3                                    | 30                        | 15                              | —                         | —                   | —                                    | —                         | —                               | PP                               | PP                         | IIR                      | 40                |
| BPH-214E                  | 15                  | 8                                    | 350                       | 18                              | BPH-214E                  | 7.5                 | 8                                    | 350                       | 18                              | PP                               | PP                         | EPDM                     | 140               |
| BPH-214G                  | 15                  | 7                                    | 350                       | 17                              | BPH-214G                  | 7.5                 | 7                                    | 350                       | 17                              | PP                               | PTFE                       | FKM                      | 140               |
| BPH-414E                  | 30                  | 12                                   | 500                       | 35                              | —                         | —                   | —                                    | —                         | —                               | PP                               | PP                         | EPDM                     | 140               |
| —                         | —                   | —                                    | —                         | —                               | BPH-474G                  | 15                  | 10                                   | 400                       | 35                              | PPS                              | PTFE                       | FKM                      | 170               |
| —                         | —                   | —                                    | —                         | —                               | BPH-474P                  | 15                  | 10                                   | 400                       | 35                              | PPS                              | PTFE                       | FFKM/FEP                 | 170               |

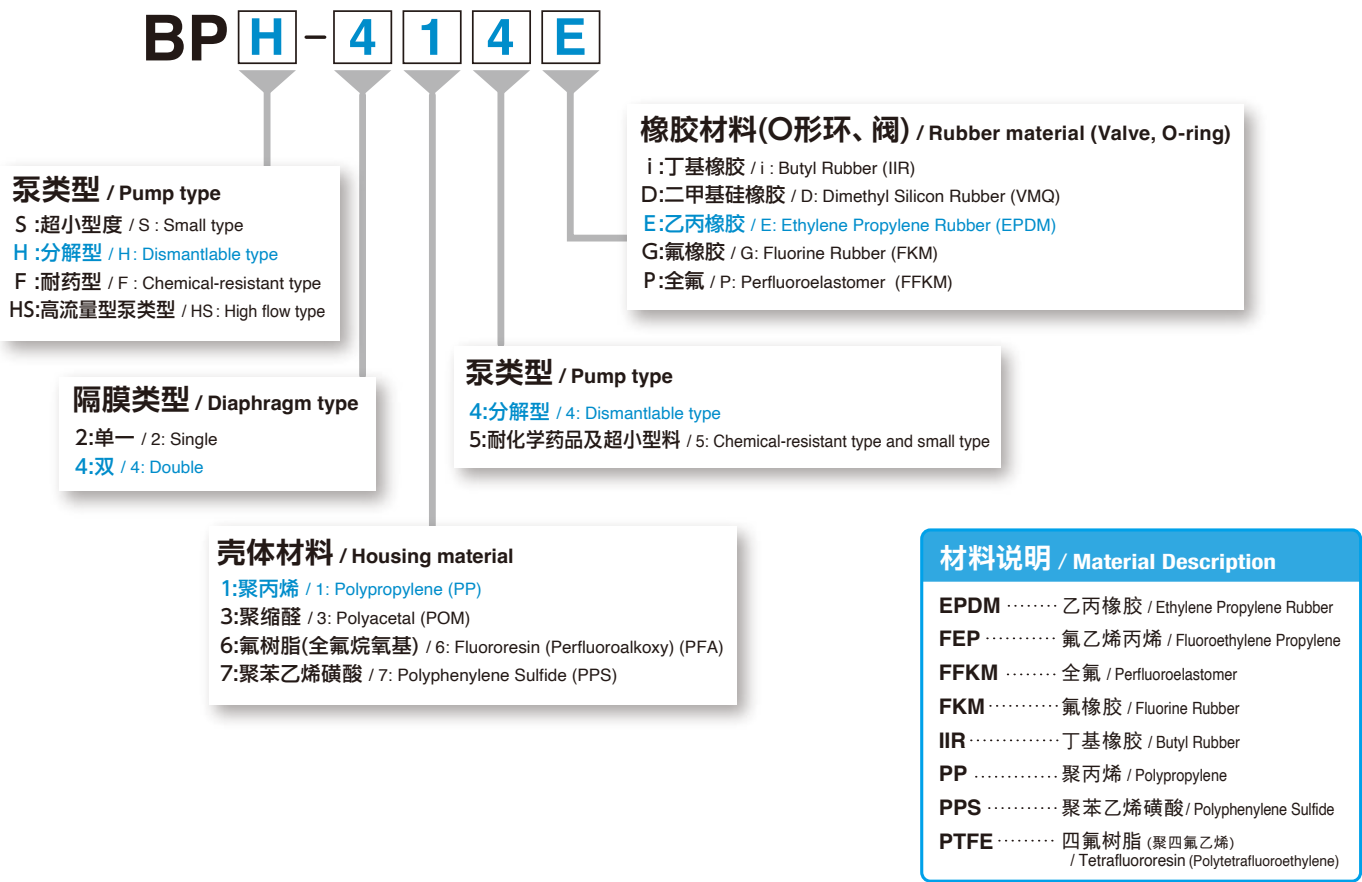
\*1) 记载为电源频率60 Hz时, 使用25℃水的性能, 50 Hz时流量减少20%。  
/ The above performance is obtained by using 25℃ water at AC frequency 60 Hz. When the pump is used at AC frequency 50 Hz, the flow rate will decrease by approximately 20%.

\*2) 液体在低温的情况下, 止回阀会硬化, 流量和自吸力会下降。特别是氟橡胶, 在5℃时流量会减半, 所以请选择比较宽裕的规格。粘度高的液体流量会降低, 请根据实际情况来确认。  
/ When the liquid temperature is low, the check valve will harden. As a result, the flow rate and the self-priming pressure will decrease. For fluorine rubber in particular, the flow rate will decrease by half at 5℃, so select a pump with sufficient allowance. Since highly viscous liquids decrease the flow rate, please check the flow rate with an actual pump before use.

\*3) 关于其他订货产品的型号, 请浏览88页。/ Please see page 88 for other made-to-order models.

制品型号的标示方法

The meaning of each letter in the model name



合适的/不合适的化学液体

Suitable / Unsuitable Chemical Liquids

| 型号 / Model          | 适用介质<br>/ Examples of suitable chemical liquids                                                                   | 不适用介质<br>/ Examples of unsuitable chemical liquids                                                                    |
|---------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| BPS-215i            | 乙醇、稀盐酸、碳酸钠、苯甲醛、甲醛水<br>Ethanol, Dilute hydrochloric acid, Sodium carbonate, Benzaldehyde, Formalin                 | 二甲苯、矿物油、四氯化碳、三氯乙烯、甲苯、苯<br>Xylene, Mineral oil, Carbon tetrachloride, Trichloroethylene, Toluene, Benzene              |
| BPH214E<br>BPH-414E | 氨水、乙醇、稀盐酸、苛性钾、苛性苏打、甲醇<br>Ammonia water, Ethanol, Dilute hydrochloric acid, Caustic potash, Caustic soda, Methanol |                                                                                                                       |
| BPH-214G            | 乙醇、过氧化氢、矿物油、次氯酸钠<br>Ethanol, Hydrogen peroxide, Mineral oil, Sodium hypochlorite                                  | 丙酮、氨水、冰醋酸、氟酸、甲醛水<br>Acetone, Ammonia water, Glacial acetic acid, Hydrofluoric acid, Formalin                          |
| BPH-474G            | 乙醇、二甲苯、四氯化碳、硅油、三氯乙烯<br>Ethanol, Xylene, Carbon tetrachloride, Silicone oil, Trichloroethylene                     | 丙酮、氨水、氯磺酸、冰醋酸、氟酸、甲醛水<br>Acetone, Ammonia water, Chlorosulfonic acid, Glacial acetic acid, Hydrofluoric acid, Formalin |
| BPH-474P            | 乙醇、三氯甲烷、冰醋酸、苯、甲基乙基酮<br>Ethanol, Chloroform, Glacial acetic acid, Benzene, Methyl ethyl ketone                     | 氯磺酸、氟油、氟磺致冷剂 R-112、氟磺致冷剂 R-113<br>Chlorosulfonic acid, Fluorine oil, CFC 112, CFC 113                                 |

\*本图表仅供参考。请在适用条件下确认后再使用。/ This chart is for reference only. Please confirm the suitability under the operating conditions before use.

# DC 液体泵空 / DC Liquid Pump

## DPE-100 / DPE-400 / 型号 DPE-400BL / DPE-800

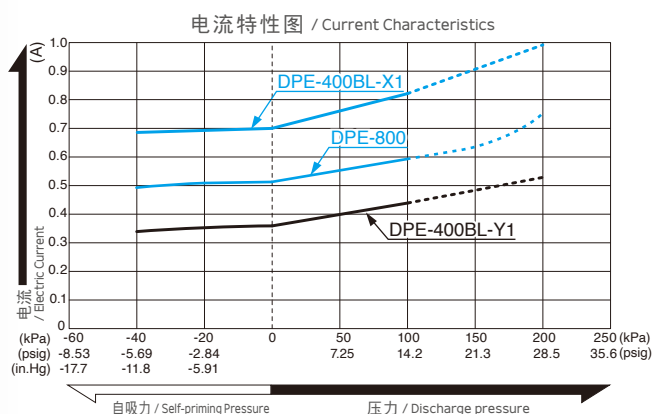
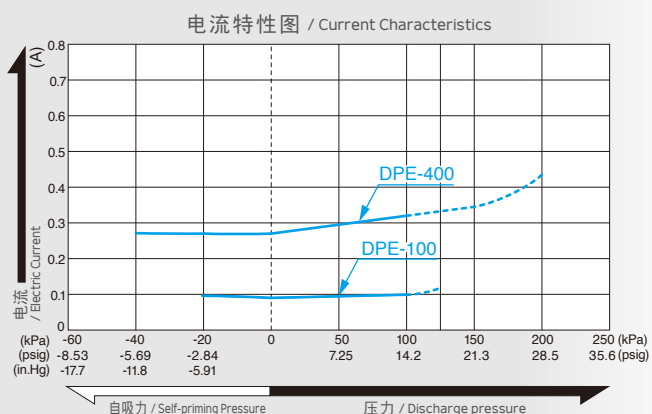
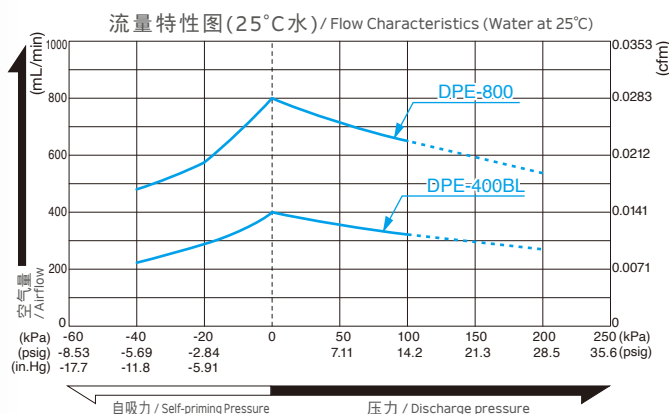
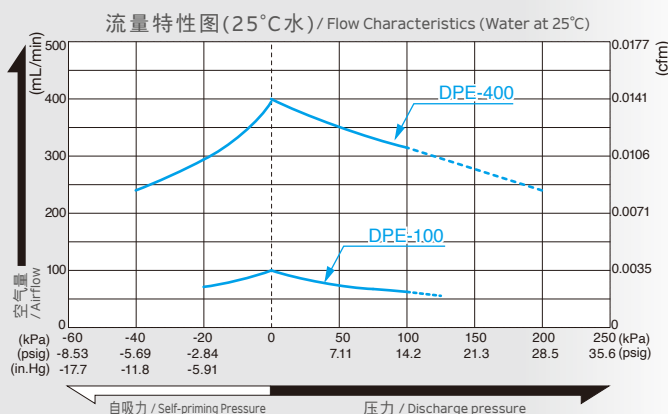
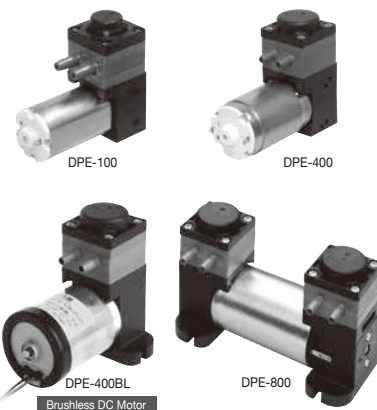


无碳刷马达 / Brushless DC Motor

有刷马达 / Brush DC Motor

12 V / 24 V DC

流量和电流 / Flow &amp; Electric Current



### 规格 / Specifications

| 型号 / Model                             | DPE-100                                                                | DPE-400                                        | DPE-400BL-X1                                  | DPE-400BL-Y1 | DPE-800                                                 |
|----------------------------------------|------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------|--------------|---------------------------------------------------------|
| 额定电压 / Rated Voltage                   | 24 V DC                                                                |                                                | 12 V DC                                       | 24 V DC      |                                                         |
| 流量 / Flow Rate *1                      | 100 mL/min<br>0.0035 cfm                                               |                                                | 400 mL/min<br>0.0141 cfm                      |              | 800 mL/min<br>0.0283 cfm                                |
| 使用压力范围 / Working Pressure Range        | 0 ~ 100 kPa (0 ~ 1 kgf/cm <sup>2</sup> )<br>0 ~ 1 bar<br>0 ~ 14.2 psig |                                                |                                               |              |                                                         |
| 最高压力 *2 / Maximum Pressure             | 300 kPa (3 kgf/cm <sup>2</sup> )<br>3 bar<br>42.7 psig                 |                                                |                                               |              |                                                         |
| 最大电流 / Maximum Current                 | 100 mA                                                                 | 345 mA                                         | 900 mA                                        | 450 mA       | 600 mA                                                  |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                                        |                                                |                                               |              |                                                         |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 500 小时 / hours                                                         |                                                | 6,000 小时 / hours                              |              | 600 小时 / hours                                          |
| 自吸力 *1 / Self-priming Pressure         | 20 kPa (150 mmHg)<br>0.2 bar<br>2.84 psig                              |                                                | 40 kPa (300 mmHg)<br>0.4 bar<br>5.69 psig     |              |                                                         |
| 吸入口尺寸 / Inlet                          | φ4.7 mm (外径) 直管接头<br>/ 4.7 mm O.D. straight barb                       |                                                | φ5.4 mm (外径) 直管接头 / 5.4 mm O.D. straight barb |              |                                                         |
| 吐出口尺寸 / Outlet                         | φ4.7 mm (外径) 直管接头<br>/ 4.7 mm O.D. straight barb                       |                                                | φ5.4 mm (外径) 直管接头 / 5.4 mm O.D. straight barb |              |                                                         |
| 线圈绝缘等级 / Coil Insulation Class         | 相当于 E 类 / Class E equivalent                                           | 相当于 F 类 / Class F equivalent                   | 相当于 A 类 / Class A equivalent                  |              | 相当于 E 类 / Class E equivalent                            |
| 安装尺寸 / Mounting Dimensions             | 9.5 (L) x 17 (W) mm<br>3/8" (L) x 43/64" (W)                           | 19 (L) x 26 (W) mm<br>3/4" (L) x 1 - 1/32" (W) | 41 (W) mm<br>1 - 39/64" (W)                   |              | 74.5 (L) x 41 (W) mm<br>2 - 15/16" (L) x 1 - 39/64" (W) |
| 本体重量 / Weight                          | 67 g<br>0.148 Lbs                                                      | 187 g<br>0.412 Lbs                             | 230 g<br>0.507 Lbs                            |              | 350 g<br>0.771 Lbs                                      |
| 马达 / Motor                             | 有刷马达 / Brush DC Motor                                                  |                                                | 无碳刷马达 / Brushless DC Motor                    |              | 有刷马达 / Brush DC Motor                                   |

\*1: 若止回阀因液体温度低而硬化, 自吸性能和流量将降低。/ When the check valve is hardened due to low liquid temperature, self-priming performance and flow rate will go down.

\*2: 流路关闭时无法重新启动泵。/ Restarting pumps with flow passage closed is impossible.

\*3: 两个泵压头之间的管路必须并联。两个泵压头之间的管路不可串联。否则, 会引起压力急剧上升, 导致零部件损坏、液体飞溅甚至起火。  
/ Tubing between two pumping heads must be done in parallel. Tubing in series between the two pumping heads should not be made. This may cause extreme pressure hike that will result in broken parts, liquid splash or possible ignition.

使用条件 / Condition of use

| 使用条件 / Conditions of Use     | 压电泵 / BIMOR PUMP |
|------------------------------|------------------|
| 使用环境温度 / Ambient temperature | 5~40°C*1         |
| 使用环境湿度 / Ambient humidity    | 35~85%*2         |
| 使用流体温度 / Fluid temperature   | 5~50°C           |

\*1) 不结冰 / No freezing \*2) 不结露 / No condensation

用途例 / Application Examples

- 液体分析仪 (例如, 医疗、食品、水处理和环境)。  
/Liquid analytical instruments e.g. medical, food, water treatment & environmental.
- 过滤、取样、灭菌器和洗涤剂中的液体输送。  
/Liquid transport within filtration, sampling, sterilizers and washers.
- 工业喷墨打印机中的墨水输送。  
/Ink transport within industrial ink-jet printers.

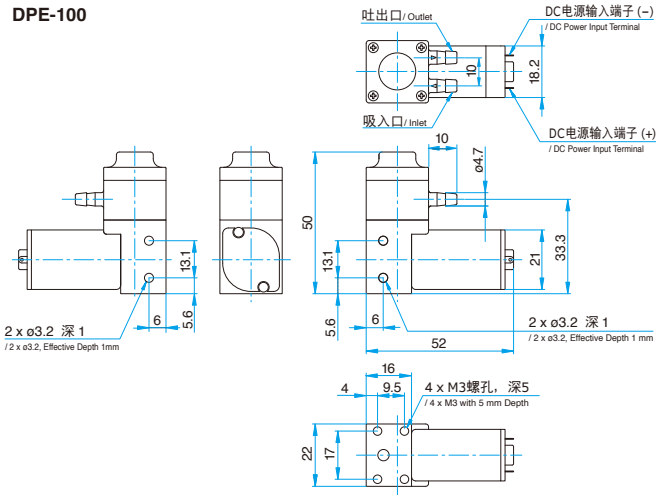
接液部材质和适用流体 / Material of wetted parts and applicable fluids

| 型号/Model                                               | 接液部材质 / Material of wetted parts      |                |                                           |                                            | 适用化学液体示例*<br>/Example of suitable chemical liquid*                                               | 不合适的化学液体示例<br>/Example of unsuitable chemical liquid                                                    |
|--------------------------------------------------------|---------------------------------------|----------------|-------------------------------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                                                        | 缸盖/Cylinder Head                      | 缸盖罩/Head Cover | 隔膜/Diaphragm                              | 阀/Valve                                    |                                                                                                  |                                                                                                         |
| DPE-100-2E<br>DPE-400-2E<br>DPE-400BL-2E<br>DPE-800-2E | PA<br>聚酰胺(尼龙)<br>/Polyamide(Nylon)    |                | PTFE<br>聚四氟乙烯<br>/Polytetrafluoroethylene | EPDM<br>乙丙橡胶<br>/Ethylene-propylene rubber | 苛性苏打、柠檬酸、氨水、苛性钾、乙醇<br>/Caustic soda, Citric acid<br>Ammonia water, Caustic potash, Ethanol       | 矿物油、三氯乙烯、苯甲醛、四氯化碳、甲苯<br>/Mineral oil, Trichloroethylene,<br>Benzaldehyde, Carbon tetrachloride, Toluene |
| DPE-100-2G<br>DPE-400-2G<br>DPE-400BL-2G<br>DPE-800-2G |                                       |                |                                           | FKM<br>氟橡胶<br>/Fluoro rubber               | 乙醇、乙二醇、碳酸钠、矿物油<br>/Ethanol, Ethylene glycol<br>Sodium carbonate, mineral oil                     | 氯磺酸、甲磺水、冰醋酸、甲基乙基酮<br>/Chlorosulfonic acid, Folmalin,<br>Glacial acetic acid, Methyl ethyl ketone        |
| DPE-100-7G<br>DPE-400-7G<br>DPE-400BL-7G<br>DPE-800-7G | PPS<br>聚苯硫醚<br>/Polyphenylene sulfide |                |                                           | FFKM<br>全氟橡胶<br>/Perfluoroelastomer        | 二甲苯、四氯化碳、三氯乙烯、硅油<br>/Xylene, Carbon tetrachloride<br>Trichloroethylene, Silicon oils, Ethanol    | 丙酮、氯磺酸、甲磺水、氨水、冰醋酸<br>/Acetone, Chlorosulfonic acid,<br>Formalin, Ammonia water,<br>Glacial acetic acid  |
| DPE-100-7P<br>DPE-400-7P<br>DPE-400BL-7P<br>DPE-800-7P |                                       |                |                                           |                                            | 乙醇、三氯甲烷、苯、冰醋酸、甲基乙基酮<br>/Ethanol, Chloroform, Benzene<br>Glacial acetic acid, Methyl ethyl ketone | 氯磺酸、氟油、CFC 112、CFC 113<br>/Chlorosulfonic acid, Fluorine oil,<br>CFC 112, CFC 113                       |

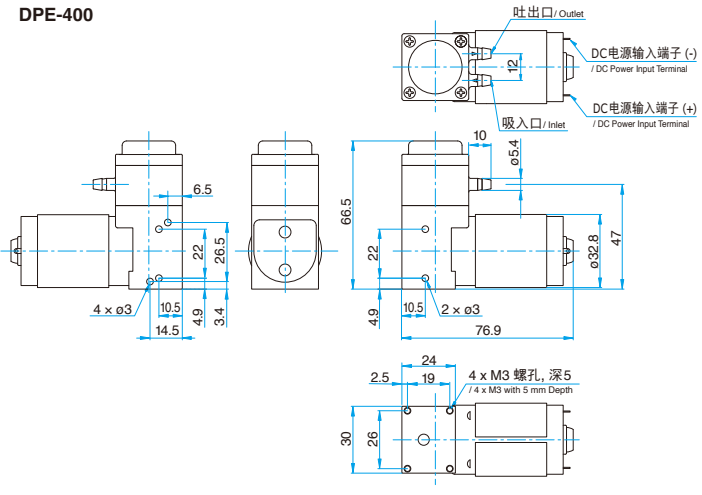
\*本图表仅供参考。请在使用条件下确认后再使用。 / \*This chart is for reference only. Please confirm the suitability under the operating conditions before use.

外形尺寸图 / External Dimensions (单位 / Unit : mm)

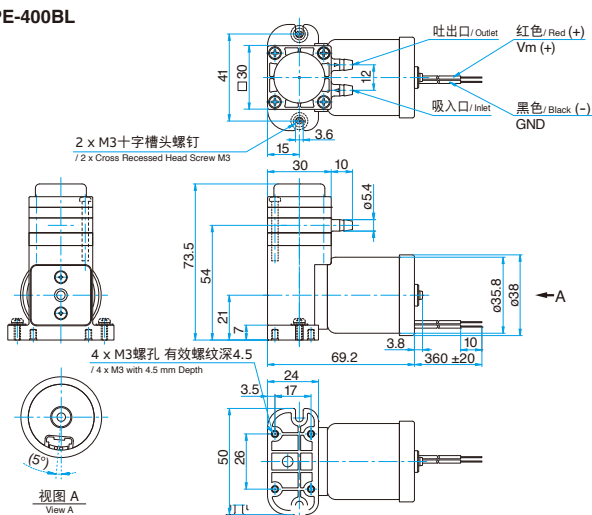
DPE-100



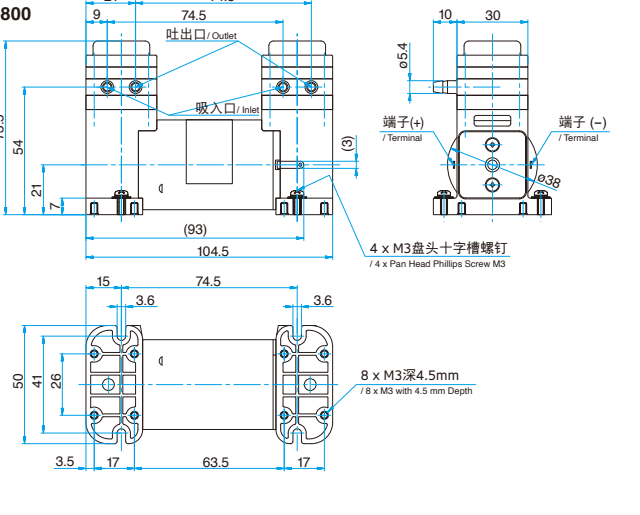
DPE-400



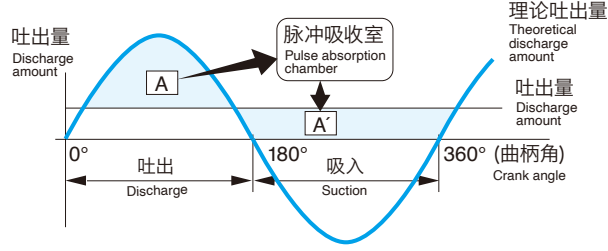
DPE-400BL



DPE-800



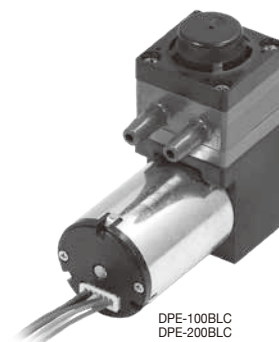
脉冲吸收机制 / Pulse Absorption Mechanism



- 脉动原因 (A) 进入吸收室并在吸气时被吐出 (A'), 实现降低脉动  
/The cause of pulsation (A) is taken into the pulse absorption chamber and discharged at the time of suction (A') to reduce pulse.
- 脉动: 压力和流量变化引起的振动  
/Pulsation: Vibration due to change in pressure and flow rate

# DC 液体泵空 / DC Liquid Pump

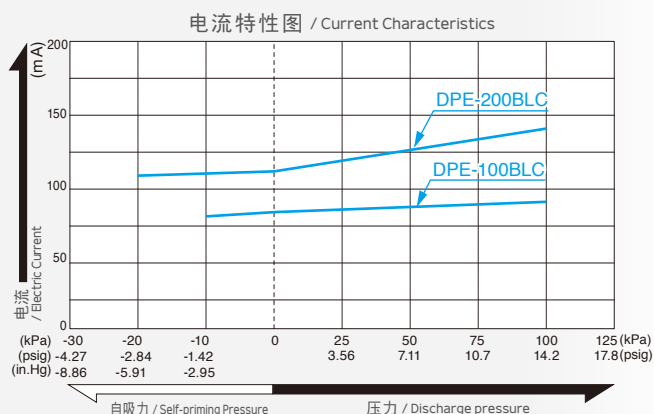
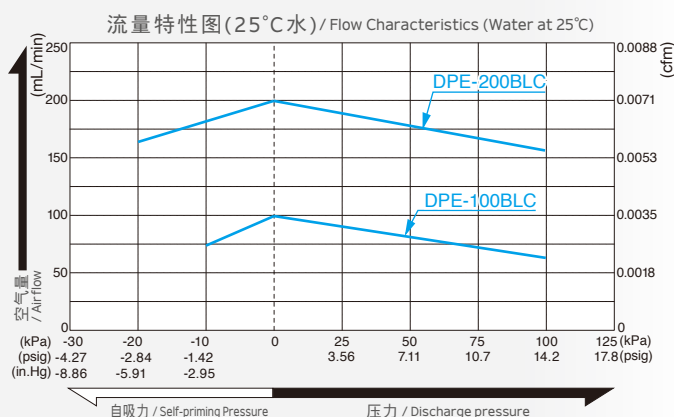
## 型号 DPE-100BLC / DPE-200BLC



无碳刷马达 / Brushless DC Motor

24 V DC

### 流量和电流 / Flow & Electric Current



### 规格 / Specifications

| 型号 / Model                             | DPE-100BLC                                                             | DPE-200BLC                                |
|----------------------------------------|------------------------------------------------------------------------|-------------------------------------------|
| 额定电压 / Rated Voltage                   | 24 V DC                                                                |                                           |
| 流量 / Flow Rate *1                      | 100 mL/min<br>0.0035 cfm                                               | 200 mL/min<br>0.0071 cfm                  |
| 使用压力范围 / Working Pressure Range        | 0 ~ 100 kPa (0 ~ 1 kgf/cm <sup>2</sup> )<br>0 ~ 1 bar<br>0 ~ 14.2 psig |                                           |
| 最高压力 *2 / Maximum Pressure             | 300 kPa (3 kgf/cm <sup>2</sup> )<br>3 bar<br>42.7 psig                 |                                           |
| 最大电流 / Maximum Current                 | 90 mA                                                                  | 140 mA                                    |
| 额定时间 / Duty Cycle                      | 连续 / Continuous                                                        |                                           |
| 耐用时间 (MTTF) / Rated Performance (MTTF) | 6000 小时 / hours                                                        |                                           |
| 自吸力 *1 / Self-priming Pressure         | 10 kPa (75 mmHg)<br>0.1 bar<br>1.42 psig                               | 20 kPa (150 mmHg)<br>0.2 bar<br>2.84 psig |
| 吸入口尺寸 / Inlet                          | φ4.7 mm (外径) 软管接头 / 4.7 mm O.D. hose barb                              |                                           |
| 吐出口尺寸 / Outlet                         | φ4.7 mm (外径) 软管接头 / 4.7 mm O.D. hose barb                              |                                           |
| 线圈绝缘等级 / Coil Insulation Class         | 相当于 E 类 / Class E equivalent                                           |                                           |
| 安装尺寸 / Mounting Dimensions             | 9.5(L) x 17(W) mm<br>3/8"(L) x 43/64"(W)                               |                                           |
| 本体重量 / Weight                          | 80 g<br>0.176 Lbs                                                      |                                           |

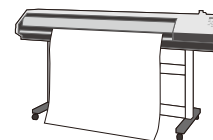
\*1. 若止回阀因液体温度低而硬化，自吸性能和流量将降低。  
/When the check valve is hardened due to low liquid temperature, self-priming performance and flow rate will go down.  
\*2. 在关闭压力状态下不可再次启动泵，另外，不可在最高压力下使用。  
/The unit cannot be restarted with flow passage closed. It cannot be used at the maximum pressure.

### 使用条件 / Condition of use

|                                        |           |
|----------------------------------------|-----------|
| 使用环境温度 / Operating Ambient Temperature | 5 to 40°C |
| 使用环境湿度 / Operating Ambient Humidity    | 30 to 85% |
| 使用流体温度 / Operating Fluid Temperature   | 5 to 50°C |

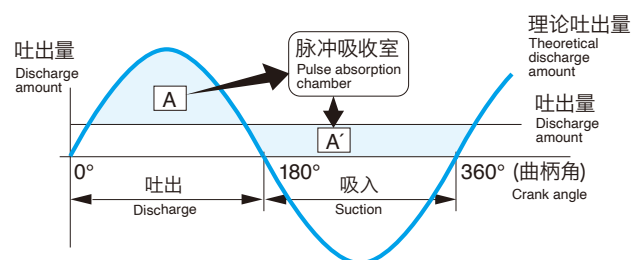
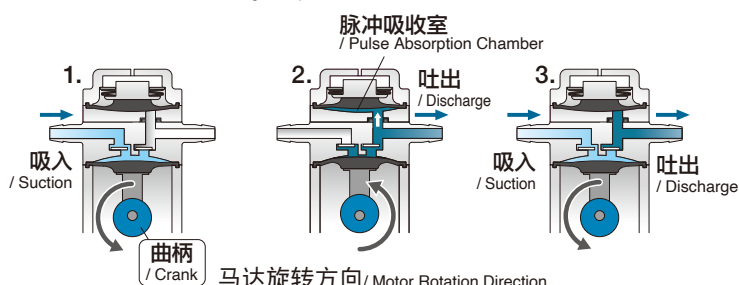
### 用途例 / Application Examples

1. 用于分析仪器的液体输送，例如医疗、食品、水处理和环境测量。  
/Liquid transport for analytical instruments e.g. medical, food, water treatment and environment measurement.
2. 过滤、取样、清洗器和灭菌器内的液体输送。  
/Liquid transport within filtration, sampling, washers and sterilizers.
3. 工业喷墨打印机中的墨水输送。  
/Ink transport within industrial ink-jet printers.



### 脉冲吸收机制 / Pulse Absorption Mechanism

1. 吸入。/Suction.
2. 吐出。部分液体被输送至脉冲吸收室，而不是直接强制进入吐出口。  
/Discharge. Partial fluid delivery to pulse absorption chamber, not directly forced to outlet port.
3. 进入泵的循环吸入与吐出同步。通过 2 和 3 的处理，脉冲得到衰减。  
/Cyclical suction drawn into pump is synchronized with the discharge. Pulses are attenuated through the process of 2 and 3.



- 脉动原因 (A) 进入吸收室并在吸气时被吐出 (A')，实现降低脉动。  
/The cause of pulsation (A) is taken into the pulse absorption chamber and discharged at the time of suction (A') to reduce pulse.
- 脉动：压力和流量变化引起的振动。  
/Pulsation: Vibration due to change in pressure and flow rate

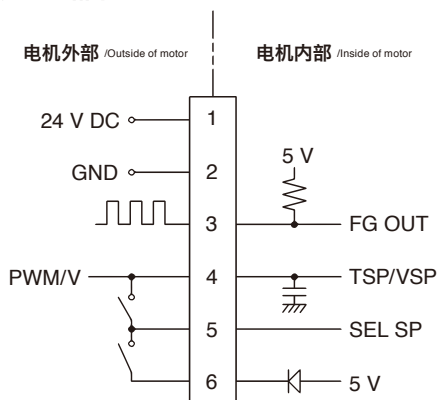
| 型号/Model                       | 接液部材质/Material of wetted parts        |                |                                           |                                            | 适用化学液体示例*<br>/Example of suitable chemical liquid                                              | 不合适的化学液体示例<br>/Example of unsuitable chemical liquid                                                 |
|--------------------------------|---------------------------------------|----------------|-------------------------------------------|--------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|                                | 缸盖/Cylinder Head                      | 缸盖罩/Head Cover | 隔膜/Diaphragm                              | 阀/Valve                                    | O形环/O-ring                                                                                     |                                                                                                      |
| DPE-100BLC-2E<br>DPE-200BLC-2E | PA<br>聚酰胺 (尼龙)<br>/Polyamide(Nylon)   |                | PTFE<br>聚四氟乙烯<br>/Polytetrafluoroethylene | EPDM<br>乙丙橡胶<br>/Ethylene-propylene rubber | 氨水、柠檬酸、苛性苏灰、乙醇、苛性钾<br>/Ammonia water, Citric acid, Caustic soda, Ethanol, Caustic potash       | 矿物油、三氯乙烯、苯甲醛、四氯化碳、甲苯<br>/Mineral oil, Trichloroethylene, Benzaldehyde, Carbon tetrachloride, Toluene |
| DPE-100BLC-7G<br>DPE-200BLC-7G | PPS<br>聚苯硫醚<br>/Polyphenylene sulfide |                |                                           | FKM<br>氟橡胶<br>/Fluoro rubber               | 乙醇、四氯化碳、三氯乙烯、二甲苯、硅油<br>/Ethanol, Carbon tetrachloride, Trichloroethylene, Xylene, Silicone oil | 丙酮、氯磺酸、甲醛水、氨水、冰醋酸<br>/Acetone, Chlorosulfonic acid, Formalin, Ammonia water, Glacial acetic acid     |
| DPE-100BLC-7P<br>DPE-200BLC-7P |                                       |                |                                           | FFKM<br>全氟橡胶<br>/Perfluoroelastomer        | 乙醇、冰醋酸、甲基乙基酮、三氯甲烷、苯<br>/Ethanol, Glacial acetic acid, Methyl ethyl ketone, Chloroform, Benzene | 氯磺酸、CFC 112、氟油、CFC 113<br>/Chlorosulfonic acid, CFC 112, Fluorine oil, CFC 113                       |

\*适用的化学液体只是参考,使用时请在使用条件下确认。/\*This chart is for reference only. Please confirm the suitability under the operating conditions before use.

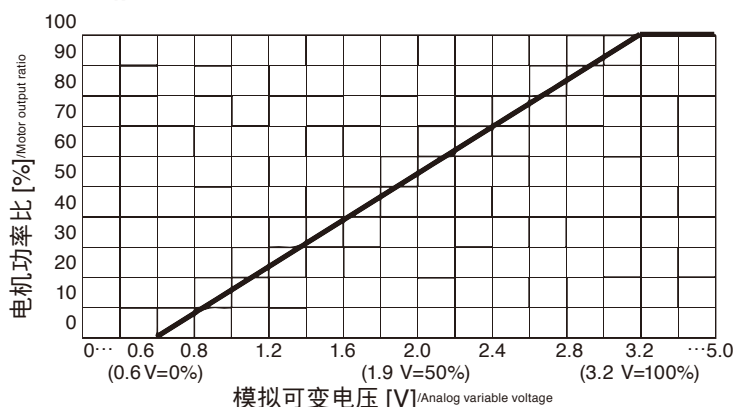
## 控制机能 / Control Function

| 型号 /No. | 机能 /Function                      | 规格值 /Specifications                            | 条件 /Conditions                                                                                             |
|---------|-----------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 1       | 电源 /Power source                  | DC 24 V/24 V DC                                | 开漏输出 /Open-drain output                                                                                    |
| 2       |                                   | GND                                            |                                                                                                            |
| 3       | FG(旋转)信号输出 /FG signal output      | 6 个脉冲 / 转 1 圈 /6 Pulse/1 Rotation              |                                                                                                            |
|         | 上拉电压 /Pull up voltage             | DC 5 V/5 V DC                                  |                                                                                                            |
| 4       | PWM 控制输入 /PWM control input       | 0 ~ 100% /0 to 100%                            | DC2 ~ 5 V (最大值 =DC 5 V) 建议频率 15 k ~ 25 kHz<br>/2 to 5 V DC (max=5 V DC) Recommended frequency 15 to 25 kHz |
|         | 电压控制输入 /Voltage control input     | DC 0~5 V 最大值 =DC 5V<br>/0 to 5 V DC max=5 V DC | 可变范围 =DC 0.6 ~ 3.2V(Dutycycle:0 ~ 100%)<br>/Variability range =0.6 to 3.2 V DC (Duty cycle: 0 to 100%)     |
| 5       | PWM 控制选择 /PWM control selection   | ON/OFF                                         | PWM 控制开启 /PWM control ON with open circuit                                                                 |
|         | 电压控制选择 /Voltage control selection | ON/OFF                                         | 电压控制输入 DC 2 ~ 5 V/Voltage control ON with 2 to 5 V DC input                                                |
| 6       | DC 5 V 输出 /5 V DC output          | ON/OFF                                         | 电机启动时始终输出 DC 5 V/5 V DC output during motor startup                                                        |

**参考电路图** /Reference circuit diagram



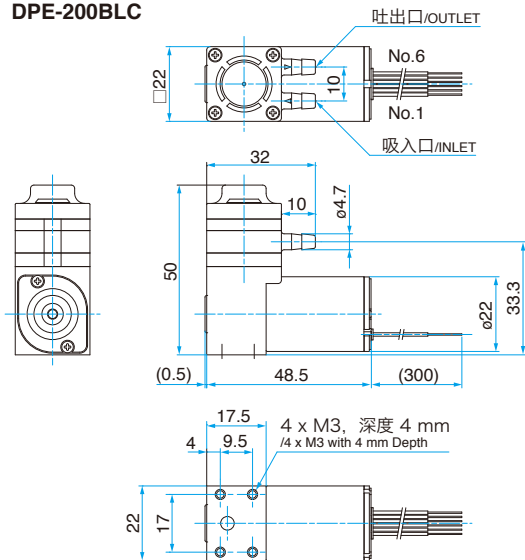
### 电压控制的标准 /Reference of voltage control



\* 实际的电动机输出取决于电源电压和泵负载状态。/The actual number of rotations of motor depends on the power supply voltage and load conditions of pump.  
请在实际使用条件下检查泵输出的可变状态。/Examine the variable state of pump output under the conditions of actual use.

## 外形尺寸图 / External Dimensions (单位 / Unit : mm)

DPE-100BLC  
DPE-200BLC



### 连接表 /Connection table

|                                         |                          | 电源 /Power Source |              | 控制信号 /Control Signal |                                                 |                             |                                   |
|-----------------------------------------|--------------------------|------------------|--------------|----------------------|-------------------------------------------------|-----------------------------|-----------------------------------|
| 线路编号 /Circuit No.                       |                          | 1                | 2            | 3                    | 4                                               | 5                           | 6                                 |
| 线色 /Cord Color                          |                          | 红色<br>/RED       | 黑色<br>/BLACK | 黄色<br>/YELLOW        | 蓝色<br>/BLUE                                     | 绿色<br>/GREEN                | 褐色<br>/BROWN                      |
| 机能 /Function                            |                          | V+               | V-           | 脉冲<br>/Pulse         | PWM<br>或电压<br>输入<br>/PWM or<br>voltage<br>input | 电压控制<br>/Voltage<br>control | DC 5 V<br>输出<br>/DC 5 V<br>output |
| 连接选择 /<br>Selection<br>of<br>connection | 无控制<br>/With no control  | ON               |              |                      | ON <sup>*1</sup>                                |                             | ON <sup>*1</sup>                  |
|                                         | PWM 控制<br>/PWM control   | ON               |              |                      | ON <sup>*2</sup>                                |                             |                                   |
|                                         | 电压控制<br>/Voltage control | ON               |              |                      | ON <sup>*3</sup>                                | ON <sup>*3</sup>            | ON <sup>*3</sup>                  |
| 线尺寸 /Cord Size                          |                          | AWG26            |              |                      | AWG28                                           |                             |                                   |
| UL 线种类 /Cord UL Style                   |                          | UL1061           |              |                      |                                                 |                             |                                   |

\*1 进行无控制驱动 (Duty cycle 100%) 时, 请连接短接 4 针和 6 针。

/For non-control (Duty cycle: 100%) drive, short-circuit pins 4 and 6.

\*2 进行 PWM 控制驱动时, 请在 5 针打开的状态下, 向 4 针输入 PWM 信号

/For PWM control drive, keep pin 5 in an open state and input PWM signal

(Duty cycle 0 ~ 100%、2 ~ 5 V DC、推荐频率数 15 k ~ 25 kHz)

/(Duty cycle: 0 to 100%, 2 to 5 V DC, and recommended frequency 15 to 25 kHz) to pin 4.

\*3 进行模拟电压控制驱动时，短接 5 针和 6 针，向 4 针施加电压（0 ~ 5 V DC、可变范围 0.6~3.2 V DC）

/For analog voltage control drive, short-circuit pins 5 and 6 and apply the voltage (0 to 5 V DC and variable r

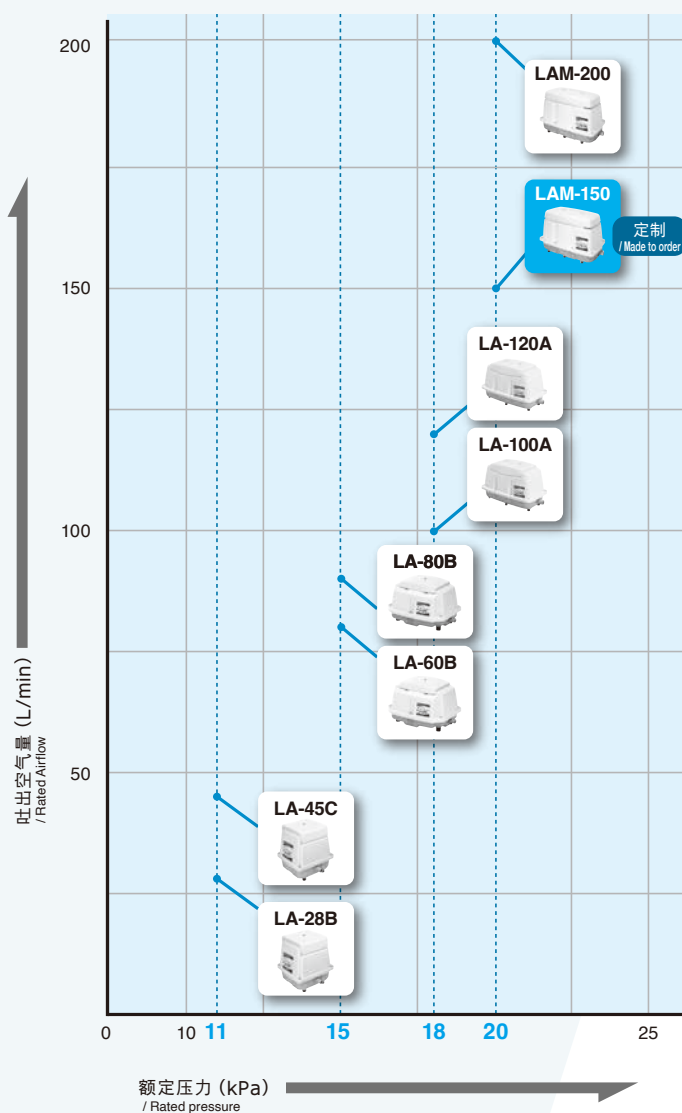
- 请根据需要对信号线实施噪音对策。/Take noise countermeasures for the signal wire if necessary.
- 请剪断不必要的导线，以免设备操作出现问题。/Please cut the unnecessary lead wires so that there is no trouble in operating the unit.



# MEDO BLOWER (曝气机/BLOWER)

## 曝气机 (AC线性 自由活塞 曝气机) / BLOWER (AC Linear Free Piston Blower)

### LA系列 LA series



|         |   |    |
|---------|---|----|
| LA-28B  | — | 79 |
| LA-45C  | — | 79 |
| LA-60B  | — | 80 |
| LA-80B  | — | 80 |
| LA-100A | — | 81 |
| LA-120A | — | 81 |
| LAM-200 | — | 82 |

定制 / Made to Order

|         |   |    |
|---------|---|----|
| LAM-150 | — | 87 |
|---------|---|----|

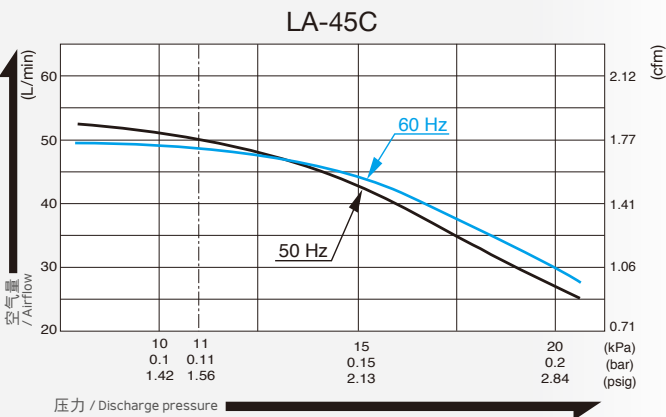
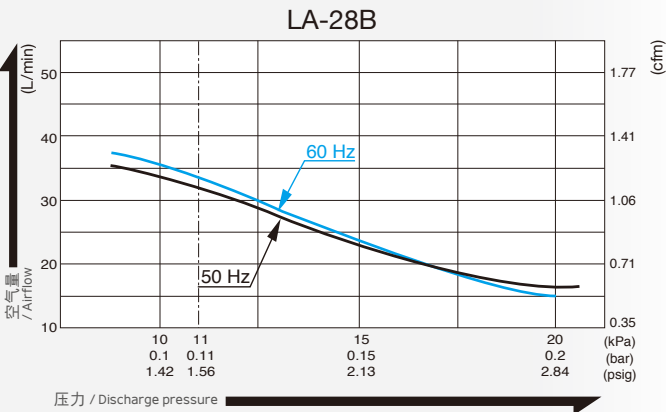
# MEDO BLOWER ( 曝气机 / Blower )



## 型号 LA-28B / LA-45C



### 空气量和消耗功率 / Airflow & Power Consumption



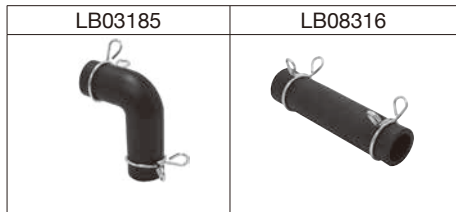
\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

### 规格 / Specifications

| 型号 / Model               | LA-28B                                                   |           | LA-45C               |           |
|--------------------------|----------------------------------------------------------|-----------|----------------------|-----------|
| 电源 / Power Supply        | 120 V AC                                                 | 230 V AC* | 120 V AC             | 230 V AC* |
| 额定频率 / Rated Frequency   | 60 Hz                                                    | 50 Hz     | 60 Hz                | 50 Hz     |
| 消耗功率 / Power Consumption | 25.5 W                                                   | 29 W      | 45 W                 | 47 W      |
| 额定压力 / Rated Pressure    | 11 kPa (0.11 kgf/cm <sup>2</sup> )<br>0.11 bar 1.56 psig |           |                      |           |
| 吐出空气量 / Rated Airflow    | 28 L/min<br>0.99 cfm                                     |           | 45 L/min<br>1.59 cfm |           |
| 本体重量 / Weight            | 2.9 kg 6.4 Lbs                                           |           | 3.2 kg 7.1 Lbs       |           |

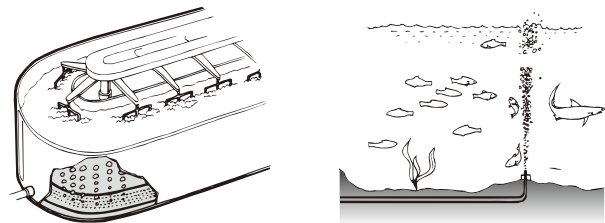
\* 有关 240 V 规格的产品，请与我们联系。/Please contact us for 240 V AC model.

### 可选的软管组件 / Optional Hose Assemblies



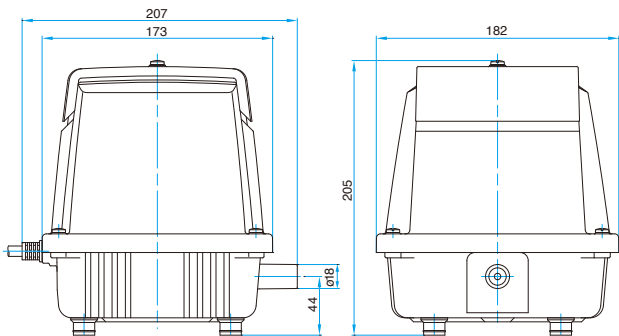
### 用例 / Application Examples

电镀液搅拌装置 / Liquid Mixer Bubbling      鱼缸隔离气幕 / Fish Farm Aquatic Fence

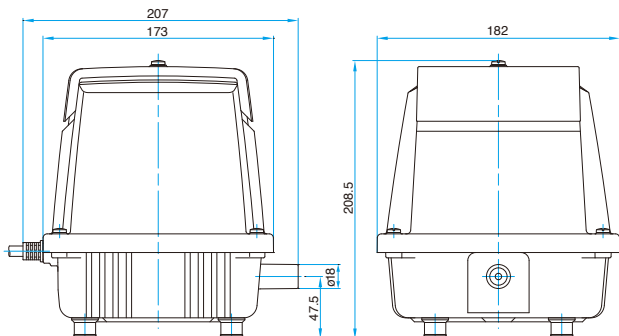


### 外形尺寸图 / External Dimensions (单位 / Unit : mm)

LA-28B



LA-45C

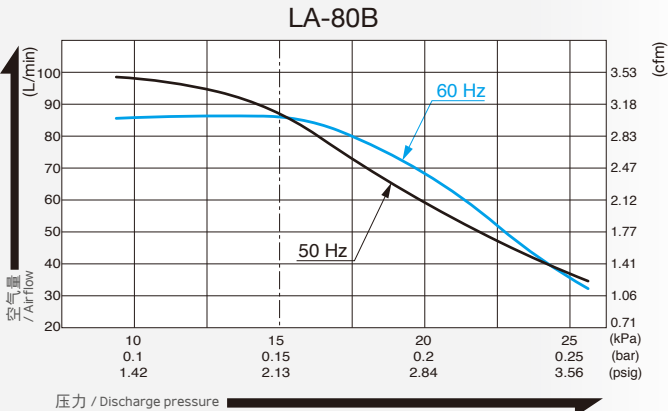
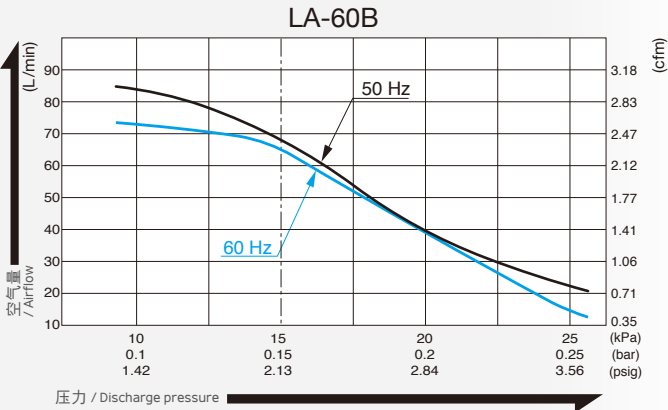


MEDO BLOWER (曝气机 / Blower)

型号 LA-60B / LA-80B



空气量和消耗功率 / Airflow & Power Consumption



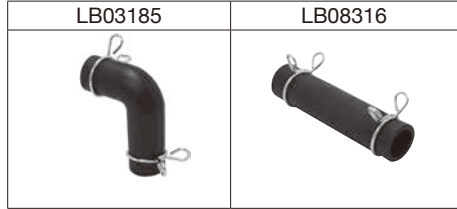
\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

规格 / Specifications

| 型号 / Model               | LA-60B                                                   |           | LA-80B               |              |
|--------------------------|----------------------------------------------------------|-----------|----------------------|--------------|
| 电源 / Power Supply        | 120 V AC                                                 | 230 V AC* | 120 V AC             | 230/240 V AC |
| 额定频率 / Rated Frequency   | 60 Hz                                                    | 50 Hz     | 60 Hz                | 50 Hz        |
| 消耗功率 / Power Consumption | 60 W                                                     | 64 W      | 80 W                 | 86 W         |
| 额定压力 / Rated Pressure    | 15 kPa (0.15 kgf/cm <sup>2</sup> )<br>0.15 bar 2.13 psig |           |                      |              |
| 吐出空气量 / Rated Airflow    | 60 L/min<br>2.12 cfm                                     |           | 80 L/min<br>2.83 cfm |              |
| 本体重量 / Weight            | 5.0 kg 11 Lbs                                            |           | 5.3 kg 11.7 Lbs      |              |

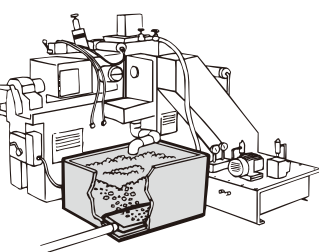
\* 有关 240 V 规格的产品，请与我们联系。/Please contact us for 240 V AC model.

可选的软管组件 / Optional Hose Assemblies

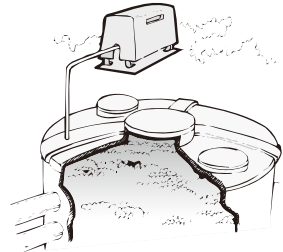


用例 / Application Examples

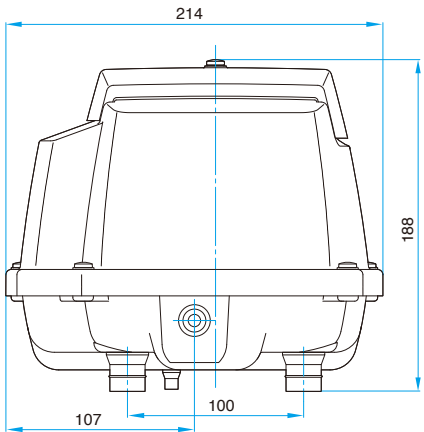
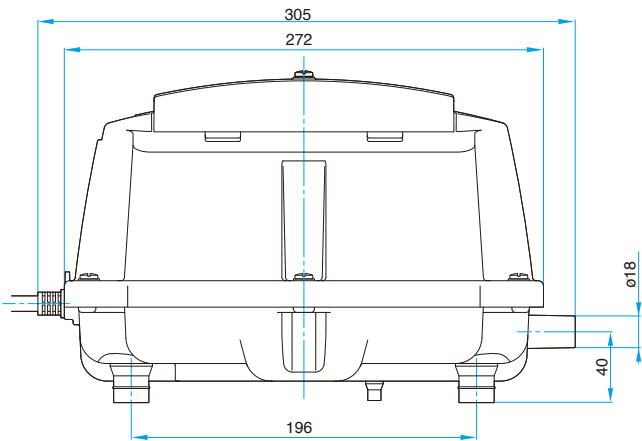
电镀液搅拌装置 / Liquid Mixer Bubbling



曝气式净化槽 / Home Aerobic Sewage Treatment System



外形尺寸图 / External Dimensions (单位 / Unit : mm)

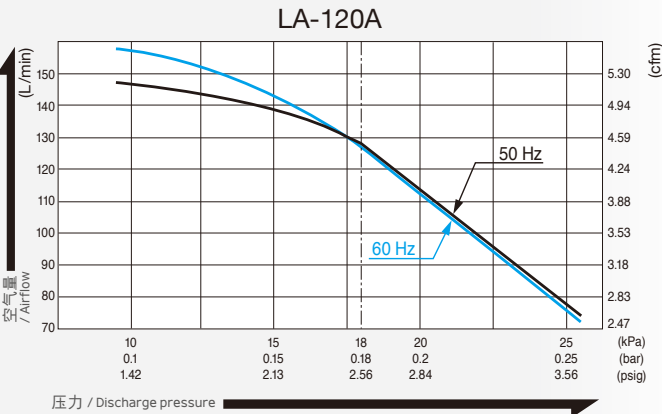
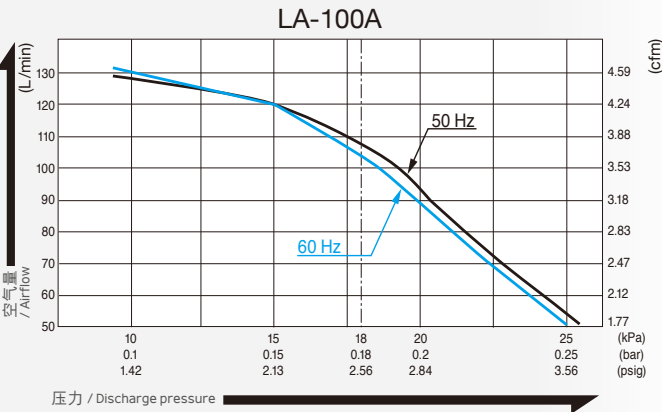


MEDO BLOWER (曝气机 / Blower)

型号 LA-100A / LA-120A



空气量和消耗功率 / Airflow & Power Consumption



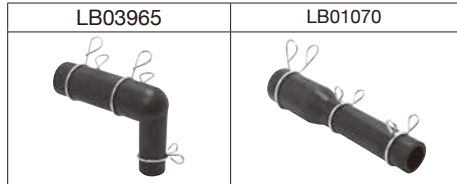
\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

规格 / Specifications

| 型号 / Model               | LA-100A                                                  | LA-120A               |
|--------------------------|----------------------------------------------------------|-----------------------|
| 电源 / Power Supply        | 230 V AC*1                                               | 230/240 V AC*2        |
| 额定频率 / Rated Frequency   | 50 Hz                                                    | 50 Hz                 |
| 消耗功率 / Power Consumption | 100 W                                                    | 130 W                 |
| 额定压力 / Rated Pressure    | 18 kPa (0.18 kgf/cm <sup>2</sup> )<br>0.18 bar 2.56 psig |                       |
| 吐出空气量 / Rated Airflow    | 100 L/min<br>3.53 cfm                                    | 120 L/min<br>4.24 cfm |
| 本体重量 / Weight            | 9.7 kg 21.4 Lbs                                          |                       |

\*1) 有关 120 V / 240 V 规格的产品，请与我们联系。/Please contact us for 120V AC model and 240 V AC model.  
\*2) 有关 120 V 规格的产品，请与我们联系。/Please contact us for 120 V AC model.

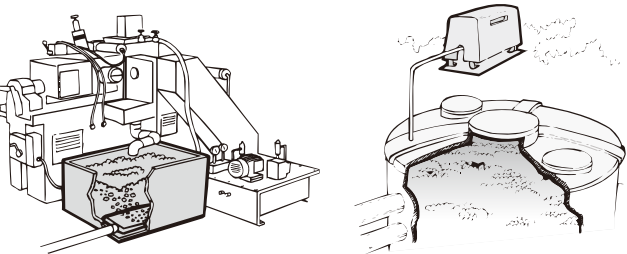
可选的软管组件 / Optional Hose Assemblies



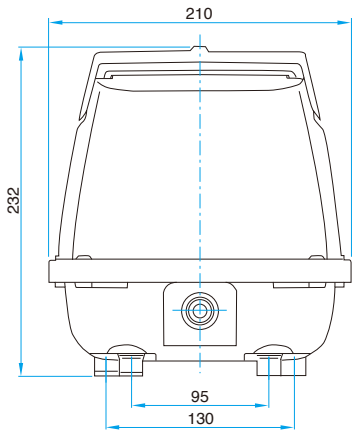
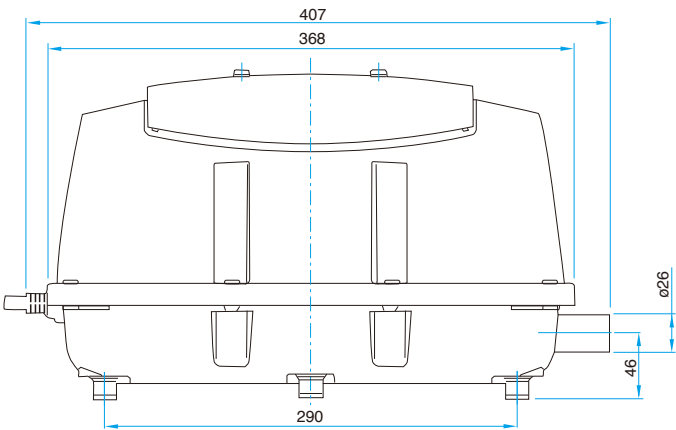
用途例 / Application Examples

电镀液搅拌装置 / Liquid Mixer Bubbling

曝气式净化槽 / Home Aerobic Sewage Treatment System



外形尺寸图 / External Dimensions (单位 / Unit : mm)

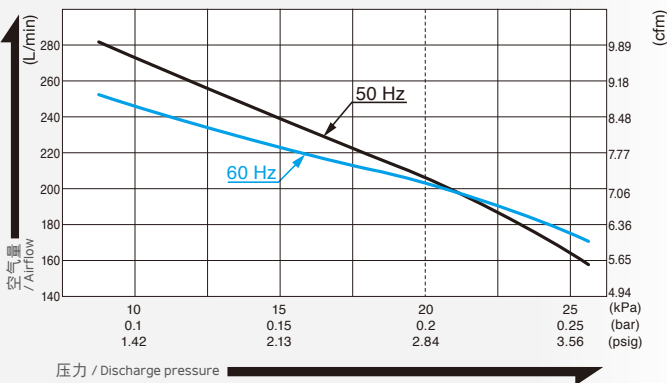


# MEDO BLOWER (曝气机 / Blower)

型号 **LAM-200**



空气量和消耗功率 / Airflow & Power Consumption



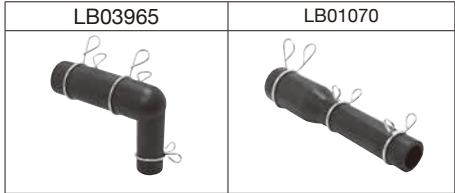
\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.



规格 / Specifications

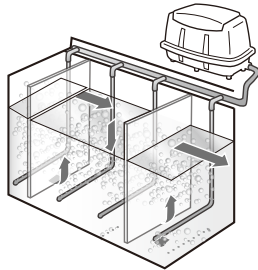
|                          |                                                        |              |
|--------------------------|--------------------------------------------------------|--------------|
| 电源 / Power Supply        | 120 V AC                                               | 230/240 V AC |
| 额定频率 / Rated Frequency   | 60 Hz                                                  | 50 Hz        |
| 消耗功率 / Power Consumption | 215 W                                                  |              |
| 额定压力 / Rated Pressure    | 20 kPa (0.2 kgf/cm <sup>2</sup> )<br>0.2 bar 2.84 psig |              |
| 吐出空气量 / Rated Airflow    | 200 L/min<br>7.06 cfm                                  |              |
| 本体重量 / Weight            | 12.3 kg 27.1 Lbs                                       |              |

可选的软管组件 / Optional Hose Assemblies

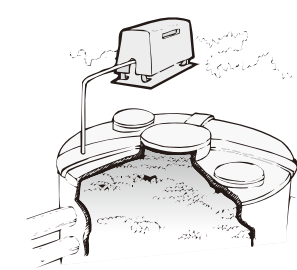


用途例 / Application Examples

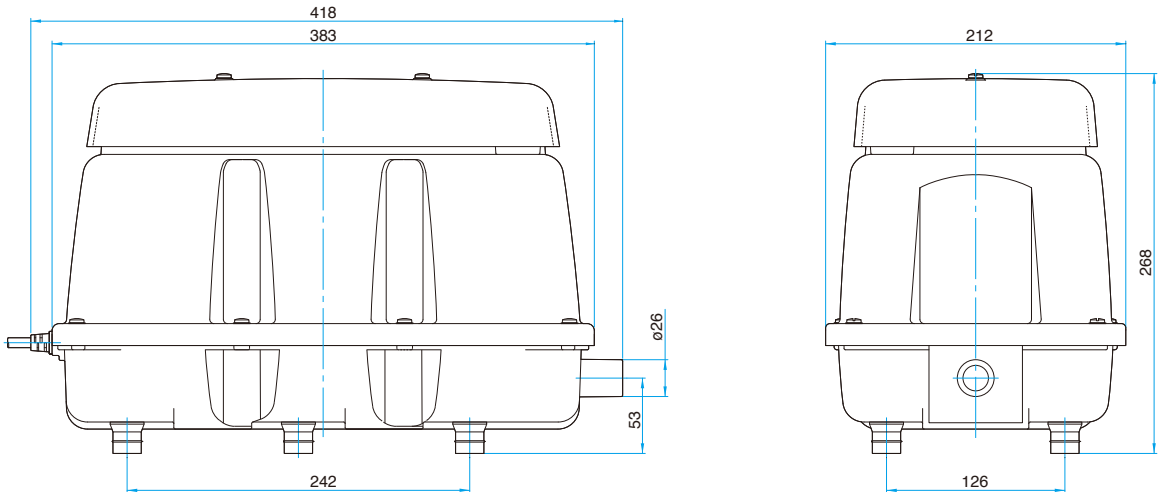
油分离分离器  
/ Grease Trap



曝气式净化槽  
/ Home Aerobic Sewage Treatment System



外形尺寸图 / External Dimensions (单位 / Unit : mm)





MADE TO ORDER

# 定制 / Made to order

## 压缩泵 / Compressor

|         |      |
|---------|------|
| AC0210  | — 85 |
| AC0610A | — 86 |

## 曝气机 / Blower

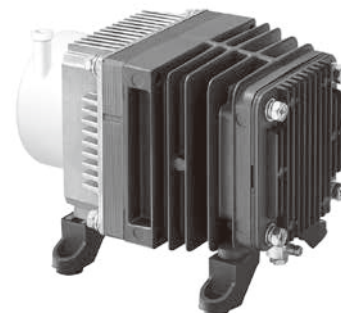
|         |      |
|---------|------|
| LAM-150 | — 87 |
|---------|------|

## 压电泵 / Piezoelectric Pump

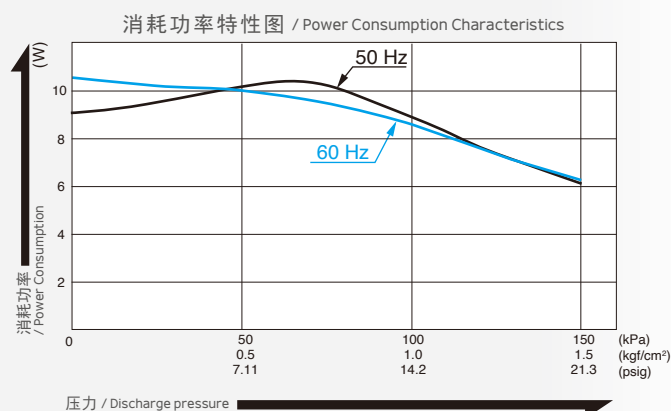
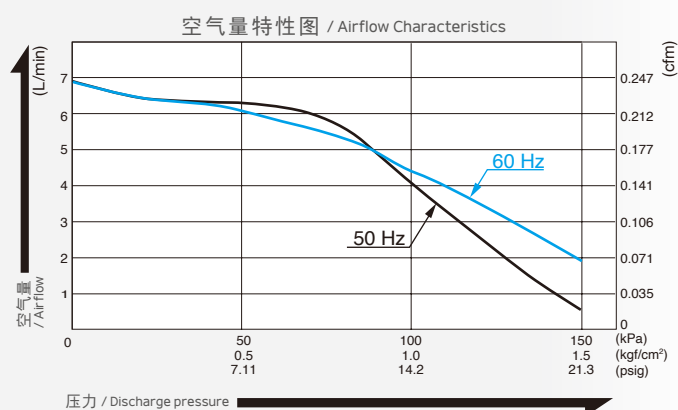
|                            |      |
|----------------------------|------|
| 定制模型 / Made to order model | — 88 |
|----------------------------|------|

## 压缩泵 / Compressor

# 型号 AC0210



### 空气量和消耗功率 / Airflow & Power Consumption



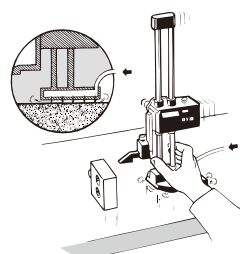
\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

## 规格 / Specifications

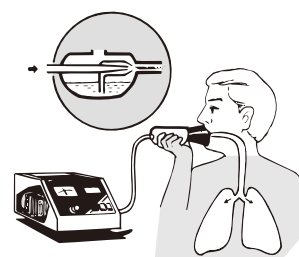
|                                           |                                                         |                                 |
|-------------------------------------------|---------------------------------------------------------|---------------------------------|
| 额定压力<br>/ Rated Pressure                  | 100 kPa (1.0 kgf/cm <sup>2</sup> )<br>1.0 bar 14.2 psig |                                 |
| 吐出空气量<br>/ Rated Airflow                  | 3.5 L/min<br>0.124 cfm                                  |                                 |
| 最高压力<br>/ Maximum Pressure                | 120 kPa (1.2 kgf/cm <sup>2</sup> )<br>1.2 bar 17.1 psig |                                 |
| 额定电压 / Rated Voltage                      | 115 V AC                                                | 230 V AC                        |
| 额定频率 / Rated Frequency                    | 60 Hz                                                   | 50 Hz                           |
| 消耗功率 / Power Consumption                  | 23 W                                                    | 24 W                            |
| 耐用时间 (MTTF)<br>/ Rated Performance (MTTF) | 5,000 小时 / hours                                        |                                 |
| 吐出口尺寸 / Outlet                            | φ4.7 mm ( 外径 ) 软管接头 / 4.7 mm O.D. hose barb             |                                 |
| 额定时间 / Duty Cycle                         | 连续 / Continuous                                         |                                 |
| 线圈绝缘等级<br>/ Coil Insulation Class         | UL 规格品：<br>相当于 B 类<br>/ Class B for UL                  | 相当于 E 类<br>/ Class E equivalent |
| 安装尺寸<br>/ Mounting Dimensions             | 76 (L) x 88 (W) mm<br>2 - 63/64" (L) x 3 - 15/32" (W)   |                                 |
| 本体重量 / Weight                             | 1.7 kg 3.7 Lbs                                          |                                 |
| 导线长度 / Leadwire Length                    | 300 mm<br>11 - 13/16"                                   |                                 |

## 用途例 / Application Examples

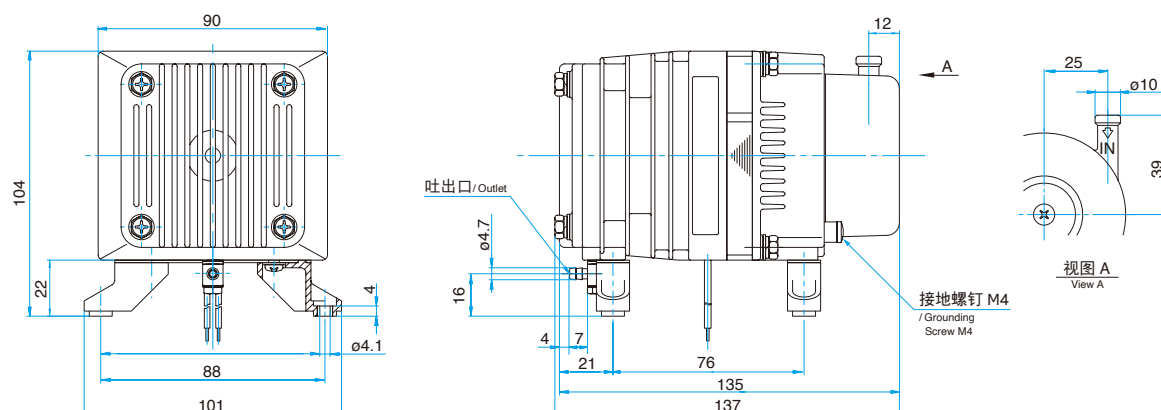
## 气浮式精密测量仪



霧化器 / Nebulizer



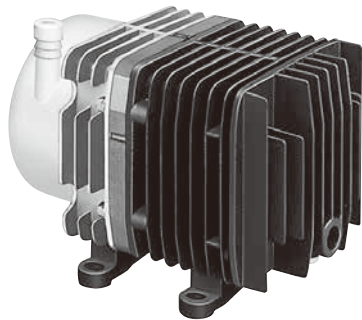
## 外形尺寸图 / External Dimensions (单位 / Unit : mm)



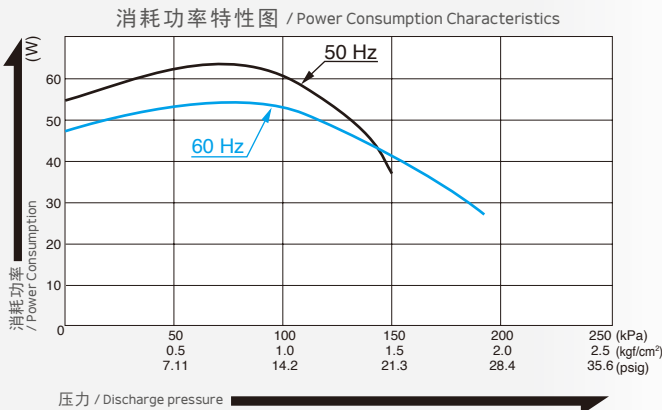
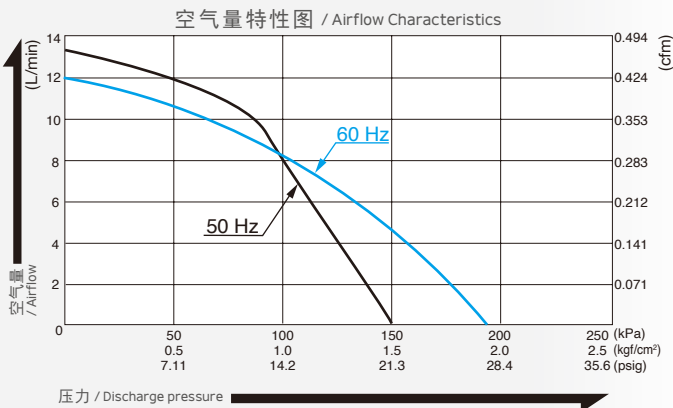
# 压缩泵 / Compressor

## 型号 AC0610A

定制 / Made to order



### 空气量和消耗功率 / Airflow & Power Consumption



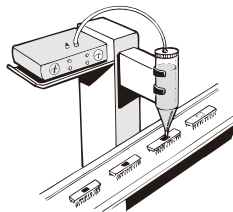
\* 特性图只是参考值，并不是保证值。  
/ The characteristic charts are for reference only and are not guaranteed.

### 规格 / Specifications

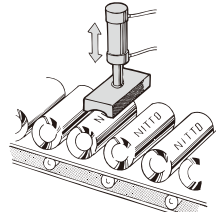
|                                |                                                         |          |
|--------------------------------|---------------------------------------------------------|----------|
| 额定压力 / Rated Pressure          | 100 kPa (1.0 kgf/cm <sup>2</sup> )<br>1.0 bar 14.2 psig |          |
| 吐出空气量 / Rated Airflow          | 8 L/min<br>0.283 cfm                                    |          |
| 最高压力 / Maximum Pressure        | 150 kPa (1.5 kgf/cm <sup>2</sup> )<br>1.5 bar 21.3 psig |          |
| 额定电压 / Rated Voltage           | 115 V AC                                                | 230 V AC |
| 额定频率 / Rated Frequency         | 60 Hz                                                   | 50 Hz    |
| 消耗功率 / Power Consumption       | 52 W                                                    | 60 W     |
| 耐用时间 / Rated Performance       | 10,000 小时 / hours                                       |          |
| 吐出口尺寸 / Outlet                 | ISO Rc 1/4 (内螺纹 / internal thread)                      |          |
| 额定时间 / Duty Cycle              | 连续 / Continuous                                         |          |
| 线圈绝缘等级 / Coil Insulation Class | 相当于 F 类 / Class F equivalent                            |          |
| 安装尺寸 / Mounting Dimensions     | 68 (L) x 84 (W) mm<br>2 - 43/64" (L) x 3 - 5/16" (W)    |          |
| 本体重量 / Weight                  | 3.2 kg 7.1 Lbs                                          |          |
| 导线长度 / Leadwire Length         | 200 mm<br>7 - 7/8"                                      |          |

### 用途例 / Application Examples

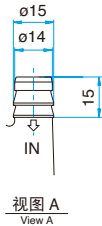
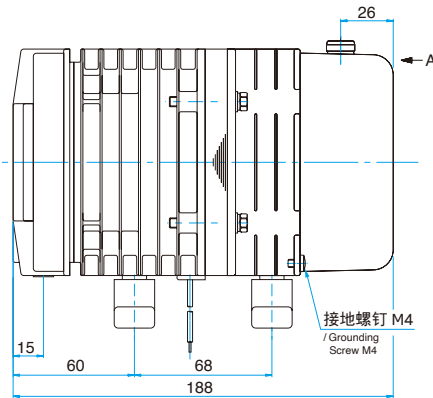
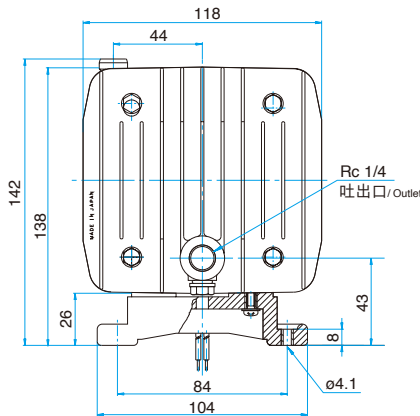
自动点胶机 / Dispenser



自动压机 / Automatic Stamper



### 外形尺寸图 / External Dimensions (单位 / Unit : mm)



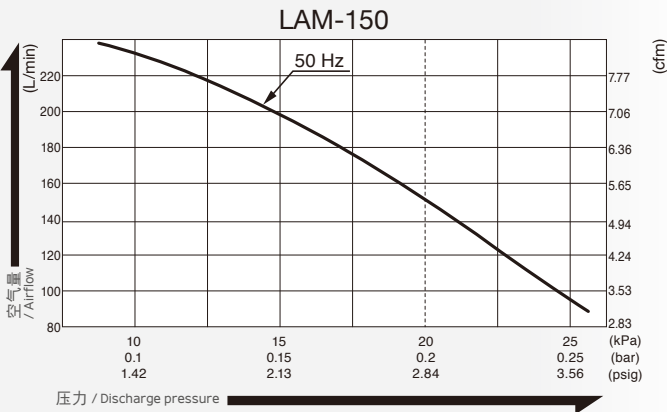
# MEDO BLOWER (曝气机 / Blower)

型号 **LAM-150**

定制 / Made to order



## 空气量和消耗功率 / Airflow & Power Consumption

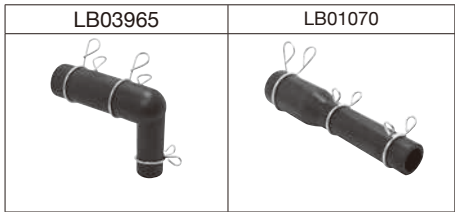


\* 特性图只是参考值，并不是保证值。  
/The characteristic charts are for reference only and are not guaranteed.

## 规格 / Specifications

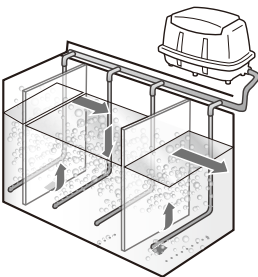
|                          |                                                        |
|--------------------------|--------------------------------------------------------|
| 电源 / Power Supply        | 230 V AC                                               |
| 额定频率 / Rated Frequency   | 50 Hz                                                  |
| 消耗功率 / Power Consumption | 140 W                                                  |
| 额定压力 / Rated Pressure    | 20 kPa (0.2 kgf/cm <sup>2</sup> )<br>0.2 bar 2.84 psig |
| 吐出空气量 / Rated Airflow    | 150 L/min<br>5.3 cfm                                   |
| 本体重量 / Weight            | 12.3 kg 27.1 Lbs                                       |

## 可选的软管组件

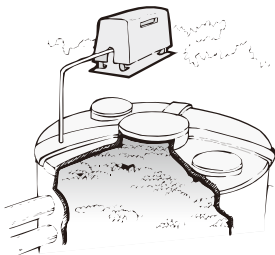


## 用途例 / Application Examples

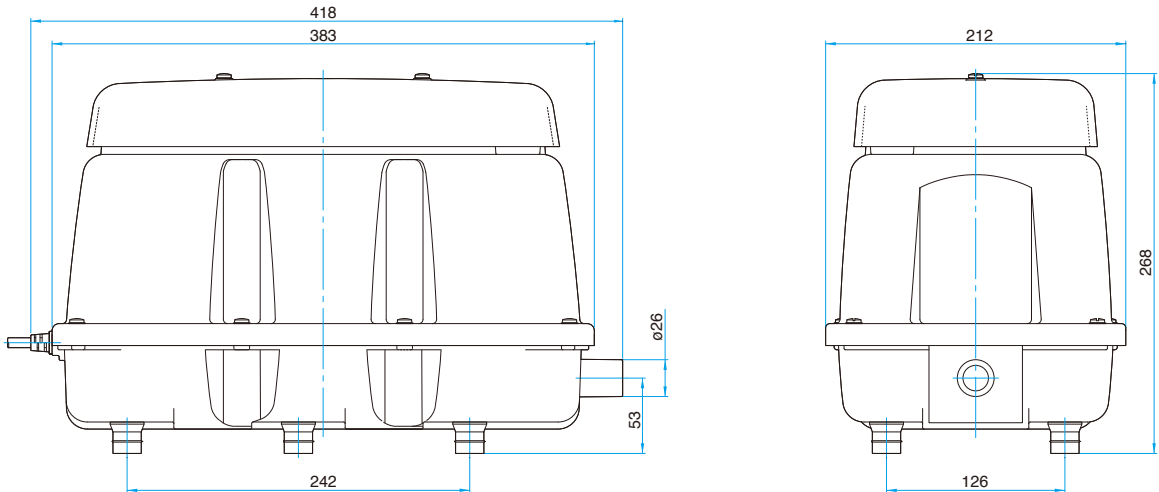
油分离分离器  
/ Grease Trap



曝气式净化槽  
/ Home Aerobic Sewage Treatment System



## 外形尺寸图 / External Dimensions (单位 / Unit : mm)



# 压电泵 / Piezoelectric Pump

## BIMOR PUMP

### 定制模型 / Made to order model

这些模型是按订单生产的模型。请委托附近的代理商报价。

These models are made-to-order models. Please send a request for quotation to your nearest distributor.

### 规格/Specifications

\*外观图请浏览71页。/ Please see page 71 for external dimensions.

| 电压/Voltage(AC) — 120 V *1 |                     |                                     |                          |                                 | 电压/Voltage(AC) — 240 V *1 |                     |                                     |                          |                                 | 接液材料 / Liquid Surface Materials |                            |                          | 本体重量 / Weight (g) |
|---------------------------|---------------------|-------------------------------------|--------------------------|---------------------------------|---------------------------|---------------------|-------------------------------------|--------------------------|---------------------------------|---------------------------------|----------------------------|--------------------------|-------------------|
| 型号 / Model                | 消耗电流 / Current (mA) | 自吸力*2 / Self-priming Pressure (kPa) | 流量*2 / FlowRate (mL/min) | 吐出压力 / Discharge Pressure (kPa) | 型号 / Model                | 消耗电流 / Current (mA) | 自吸力*2 / Self-priming Pressure (kPa) | 流量*2 / FlowRate (mL/min) | 吐出压力 / Discharge Pressure (kPa) | 壳体 / Housing                    | 接液板 / Liquid Contact Sheet | 止回阀/O形环 / Valve / O-ring |                   |
| —                         | —                   | —                                   | —                        | —                               | BPS-215i                  | 1.8                 | 3                                   | 30                       | 15                              | PP                              | PP                         | IIR                      | 40                |
| —                         | —                   | —                                   | —                        | —                               | BPS-235G                  | 1.8                 | 1.5                                 | 30                       | 15                              | POM                             | PTFE                       | FKM                      | 40                |
| BPH-214i                  | 15                  | 8                                   | 350                      | 18                              | BPH-214i                  | 7.5                 | 8                                   | 350                      | 18                              | PP                              | PP                         | IIR                      | 130               |
| —                         | —                   | —                                   | —                        | —                               | BPH-214D                  | 7.5                 | 8                                   | 350                      | 18                              | PP                              | PP                         | VMQ                      | 130               |
| —                         | —                   | —                                   | —                        | —                               | BPH-414i                  | 15                  | 12                                  | 500                      | 35                              | PP                              | PP                         | IIR                      | 140               |
| BPH-414D                  | 30                  | 12                                  | 500                      | 35                              | BPH-414D                  | 15                  | 12                                  | 500                      | 35                              | PP                              | PP                         | VMQ                      | 140               |
| —                         | —                   | —                                   | —                        | —                               | BPH-414E                  | 15                  | 12                                  | 500                      | 35                              | PP                              | PP                         | EPDM                     | 140               |
| BPH-414G                  | 30                  | 10                                  | 450                      | 32                              | BPH-414G                  | 15                  | 10                                  | 450                      | 32                              | PP                              | PTFE                       | FKM                      | 140               |
| BPH-474G                  | 30                  | 10                                  | 400                      | 35                              | —                         | —                   | —                                   | —                        | —                               | PPS                             | PTFE                       | FKM                      | 170               |
| BPH-474P                  | 30                  | 10                                  | 400                      | 35                              | —                         | —                   | —                                   | —                        | —                               | PPS                             | PTFE                       | FFKM/FEP                 | 170               |
| —                         | —                   | —                                   | —                        | —                               | BPHS-414i                 | 15                  | 12                                  | 700                      | 35                              | PP                              | PP                         | IIR                      | 160               |
| —                         | —                   | —                                   | —                        | —                               | BPHS-414E                 | 15                  | 12                                  | 700                      | 35                              | PP                              | PP                         | EPDM                     | 160               |
| —                         | —                   | —                                   | —                        | —                               | BPHS-414G                 | 15                  | 12                                  | 700                      | 35                              | PP                              | PTFE                       | FKM                      | 160               |
| —                         | —                   | —                                   | —                        | —                               | BPHS-474G                 | 15                  | 10                                  | 500                      | 35                              | PPS                             | PTFE                       | FKM                      | 180               |
| —                         | —                   | —                                   | —                        | —                               | BPHS-474P                 | 15                  | 10                                  | 500                      | 35                              | PPS                             | PTFE                       | FFKM/FEP                 | 180               |
| BPF-465P                  | 30                  | 10                                  | 400                      | 35                              | BPF-465P                  | 15                  | 10                                  | 400                      | 35                              | PFA                             | PTFE                       | FFKM/FEP                 | 350               |

\*1) 记载为电源频率60 Hz时, 使用25°C水的性能, 50 Hz时流量减少20%。  
/ The above performance is obtained by using 25°C water at AC frequency 60 Hz. When the pump is used at AC frequency 50 Hz, the flow rate will decrease by approximately 20%.

\*2) 液体在低温的情况下, 逆止阀会硬化, 流量和自吸力会下降。  
特别是氟橡胶, 在5°C时流量会减半, 所以请选择比较充裕的规格。  
粘度高的液体流量会降低, 请根据实际情况来确认。  
/ When the liquid temperature is low, the check valve will harden. As a result, the flow rate and the self-priming pressure will decrease. For fluorine rubber in particular, the flow rate will decrease by half at 5°C, so select a pump with sufficient allowance. Since highly viscous liquids decrease the flow rate, please check the flow rate with an actual pump before use.

### 材料说明 / Material Description

|                                                       |                                                                       |
|-------------------------------------------------------|-----------------------------------------------------------------------|
| EPDM ····· 乙丙橡胶 / Ethylene Propylene Rubber           | PP ····· 聚丙烯 / Polypropylene                                          |
| FEP ····· 氟乙丙烯 / Fluoroethylene Propylene             | PPS ····· 聚苯乙炔磺酸 / Polyphenylene Sulfide                              |
| FFKM ····· 全氟 / Perfluoroelastomer                    | PTFE ····· 四氟树脂 (聚四氟乙烯) / Tetrafluoro resin (Polytetrafluoroethylene) |
| FKM ····· 氟橡胶 / Fluorine Rubber                       | VMQ ····· 二甲基硅橡胶 / Dimethyl Silicone Rubber                           |
| IIR ····· 丁基橡胶 / Butyl Rubber                         |                                                                       |
| PFA ····· 氟树脂 (全氟烷氧基) / Fluororesin (Perfluoroalkoxy) |                                                                       |
| POM ····· 聚缩醛 / Polyacetal                            |                                                                       |

### 合适的/不合适的化学液体 / Suitable / Unsuitable Chemical Liquids

| 型号 / Model                                    | 适用介质<br>/ Examples of suitable chemical liquids                                                                                                            | 不适用介质<br>/ Examples of unsuitable chemical liquids                                                                            |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| BPS-215i<br>BPH-214i<br>BPH-414i<br>BPHS-414i | 乙醇、稀盐酸、碳酸钠、苯甲醛、甲醛水<br>Ethanol, Dilute hydrochloric acid, Sodium carbonate, Benzaldehyde, Formalin                                                          | 二甲苯、矿物油、四氯化碳、三氯乙烯、甲苯、苯<br>Xylene, Mineral oil, Carbon tetrachloride, Trichloroethylene, Toluene, Benzene                      |
| BPH-414E<br>BPHS-414E                         | 氨水、乙醇、稀盐酸、苛性钾、苛性苏打、甲醇<br>Ammonia water, Ethanol, Dilute hydrochloric acid, Caustic potash, Caustic soda, Methanol                                          | 二甲苯、矿物油、四氯化碳、三氯乙烯、甲苯、苯<br>Xylene, Mineral oil, Carbon tetrachloride, Trichloroethylene, Toluene, Benzene                      |
| BPS-235G                                      | 乙醇、二甲苯、硅油、煤油、甲苯、苯<br>Ethanol, Xylene, Silicone oil, Kerosene, Toluene, Benzene                                                                             | 氨水、盐酸、过氧化氢、次氯酸钠、硝酸、硫酸<br>Ammonia water, Hydrochloric acid, Hydrogen peroxide, Sodium hypochlorite, Nitric acid, Sulfuric acid |
| BPH-214D<br>BPH-414D                          | 氨水、乙醇、次氯酸钠、甲醇<br>Ammonia water, Ethanol, Sodium hypochlorite, Methanol                                                                                     | 苛性苏打、四氯化碳、硅油、三氯乙烯、甲苯、苯<br>Caustic soda, Carbon tetrachloride, Silicone oil, Trichloroethylene, Toluene, Benzene               |
| BPH-414G<br>BPHS-414G                         | 乙醇、过氧化氢、矿物油、次氯酸钠<br>Ethanol, Dilute hydrogen peroxide, Mineral oil, Sodium hypochlorite                                                                    | 丙酮、氨水、冰醋酸、氟酸、甲醛水<br>Acetone, Ammonia water, Glacial acetic acid, Hydrofluoric acid, Formalin                                  |
| BPH-474G<br>BPHS-474G                         | 乙醇、二甲苯、四氯化碳、硅油、三氯乙烯<br>Ethanol, Xylene, Carbon tetrachloride, Silicone oil, Trichloroethylene                                                              | 丙酮、氨水、氯磺酸、冰醋酸、氟酸、甲醛水<br>Acetone, Ammonia water, Chlorosulfonic acid, Glacial acetic acid, Hydrofluoric acid, Formalin         |
| BPH-474P<br>BPHS-474P                         | 乙醇、三氯甲烷、冰醋酸、苯、甲基乙基酮<br>Ethanol, Chloroform, Glacial acetic acid, Benzene, Methyl ethyl ketone                                                              | 氯磺酸、氟油、氟碳制冷剂 R-112、氟碳制冷剂 R-113<br>Chlorosulfonic acid, Fluorine oil, CFC 112, CFC 113                                         |
| BPF-465P                                      | 乙醇、王水、臭氧、四氯化碳、浓硝酸、浓硫酸、发烟硫酸<br>Ethanol, Aqua regia, Ozone, Carbon tetrachloride, Concentrated nitric acid, Concentrated sulfuric acid, Fuming sulfuric acid | 氟油、氟碳制冷剂 R-112、氟碳制冷剂 R-113<br>Fluorine oil, CFC 112, CFC 113                                                                  |

\*本图仅供参考。请在使用条件下确认后再使用。 / This chart is for reference only. Please confirm the suitability under the operating conditions before use.



# 其他产品 / Other Product

## 切削液收集装置

/ Cutting oil collecting unit

HK-400A

— 91

## Linicon® 真空泵

/ Vacuum Pump

LV-125A

— 93

# 切削液收集装置 / Cutting oil collecting unit

型号

# HK-400A



## HK-400A 用于收集机床溢出的少量切削液。

/ The HK-400A collects small amounts of cutting oil that spill from machine tools.

### \* 同时兼容油性和水溶性切削液

/ Compatible with oil-based cutting oils and water-soluble cutting oils

#### ● 用磁铁安装于设备的侧面。

/ Install on the side of machines with a magnet.

#### ● 无需空气管道。

/ No air piping required.

#### ● 替代真空喷射器，更省能源。

/ Save energy by switching from vacuum ejectors.

#### ● 配有过滤器，可防止吸入铝屑。

/ Comes with a strainer to prevent suction of cutting chips.

#### ● 可以进行气液混合吸引，

即使空转也不用担心马达烧毁。

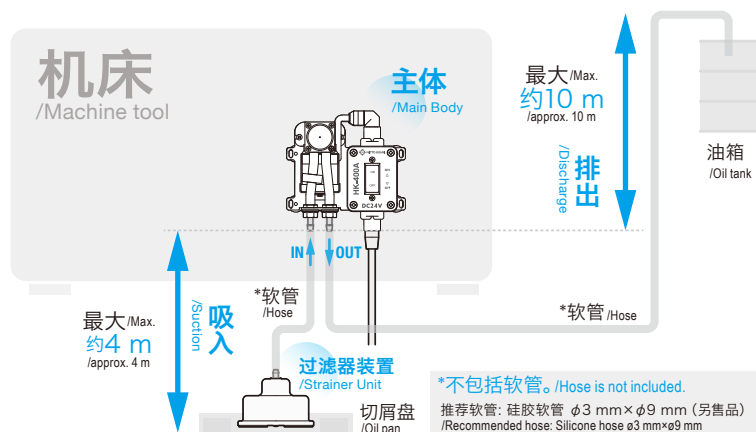
/ Capable of suction of gas & liquid mixture, no worry of motor burns even when idling.

### 规格 / Specifications

|                                                                                                              |                                                                              |                    |
|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------|
| 额定电压 / Rated Voltage                                                                                         | 24 V DC                                                                      |                    |
| 最大电流 (*1、作业压力范围、流体：<br>水 25℃) / Maximum current (*1, Operating<br>pressure range, Fluid: Water 25℃)          | 450 mA                                                                       |                    |
| 流量 (*1、*3、*4、开放式排放 (0 kPa)、流体：<br>水 25℃) / Flow rate (*1、*3、*4, open discharge<br>(0 kPa), Fluid: Water 25℃) | 400 mL/min<br>0.0141 cfm                                                     |                    |
| 作业压力范围 (*1、*2、流体：水 25℃)<br>/ Operating pressure range<br>(*1、*2, Fluid: Water 25℃)                           | 0 ~ 100 kPa (0 ~ 1 kgf/cm <sup>2</sup> )<br>0 ~ 1 bar<br>0 ~ 14.2 psig       |                    |
| 自吸力 (*1、*3、流体：空气 20℃)<br>/ Self-priming pressure (*1、*3, Fluid: Air 20℃)                                     | 40 kPa<br>0.4 bar<br>5.69 psig                                               |                    |
| 额定时间 (流体：水 25℃)<br>/ Duty cycle (Fluid: Water 25℃)                                                           | 连续 / Continuous                                                              |                    |
| 耐用时间 (*5) / Rated performance (*5)                                                                           | 6000 小时 (MTTF) / 6000 hours (MTTF)                                           |                    |
| 断路器额定电流<br>/ Circuit breaker rated current                                                                   | 1 A                                                                          |                    |
| 电源箱防尘防水防护等级<br>/ Circuit Breaker Box protection grade                                                        | IP65                                                                         |                    |
| 适用流体 / Applicable fluid                                                                                      | 切削液 (水溶性和非水溶性)<br>/ Cutting oil (water-soluble and water-insoluble)          |                    |
| 推荐流体粘度 (*4、*6)<br>/ Recommended fluid viscosity (*4、*6)                                                      | 30 mPa·s or less                                                             |                    |
| 使用场所 / Place of use                                                                                          | 室内 / Indoors                                                                 |                    |
| 外观尺寸 / External dimensions                                                                                   | 119 mm (L) × 118 mm (W) × 81 mm (H)<br>4-11/16" (L) x 4-41/64" (W) x 3-3/16" |                    |
| 重量<br>/ Weight                                                                                               | 主体 (泵、电源盒)<br>/ Main Body (Pump Unit,<br>Circuit Breaker Box)                | 0.6 kg<br>1.32 Lbs |
|                                                                                                              | 电源线<br>/ Power Cable                                                         | 0.3 kg<br>0.66 Lbs |
|                                                                                                              | 过滤装置<br>/ Strainer Unit                                                      | 0.3 kg<br>0.66 Lbs |



### 安装示例 / Installation examples



\*1: 该条件主要适用于额定电压、冷却装置及初始运行。/ Conditions are for rated voltage, cool unit, and initial operation.

\*2: 本产品不可从压力关闭状态重启或于工作压力范围外使用。/ The product cannot be restarted from the closed pressure state or used beyond the working pressure range.

\*3: 流体温度下降后，止回阀变硬，流量和自吸力随之降低。/ When the fluid reaches a low temperature, the check valve hardens and the flow rate and self-suction power will decrease.

\*4: 收集高粘度切削液 (2 mPa·s 或以上) 时，流量降低。尤其是在使用非水溶性切削液时，流体粘度会随温度变化剧烈波动，因此请检查泵是否可以在实际操作条件下使用。/ When highly viscous cutting oil (2 mPa·s or more) is collected, the flow rate decreases. Especially when using with water-insoluble cutting oil, the fluid viscosity fluctuates significantly according to temperature change, so check whether the pump can be used under actual operating conditions.

\*5: 耐用时间 (MTTF: 平均失效前时间) 是指在额定电压、开放式排放 (0 kPa) 和 25℃ 水温下，流量降低到规定值的 80% (320 mL/min) 或以下时已累积作业时间的平均值。耐用时间因作业条件 (作业压力、作业流体温度、作业流体粘度、作业环境等) 而异。/ Rated performance (MTTF: Mean Time to Failure) is the mean value of the accumulated operating time at the rated voltage, open discharge (0 kPa) and water temperature of 25℃ and when the flow rate becomes 80% (320 mL/min) or less of the specified value.

\*6: 动粘度 [mm<sup>2</sup>/s] 到粘度 [mPa·s] 的换算请参照以下公式。

粘度 [mPa·s] = 动粘度 [mm<sup>2</sup>/s] × 密度 [g/cm<sup>3</sup>] (动粘度 : 1 mm<sup>2</sup>/s = 1 cSt 粘度 : 1 mPa·s = 1 cP)

/The rated performance varies depending on the operating conditions (operating pressure, operating fluid viscosity, operating environment, etc.).

Refer to the following formula for conversion from Kinematic viscosity [mm<sup>2</sup>/s] to viscosity [mPa·s].

Viscosity [mPa·s] = Kinematic viscosity [mm<sup>2</sup>/s] × Density [g/cm<sup>3</sup>]

(Kinematic viscosity: 1 mm<sup>2</sup>/s = 1 cSt Viscosity: 1 mPa·s = 1 cP)

切削液收集能力 /Cutting oil collecting capability

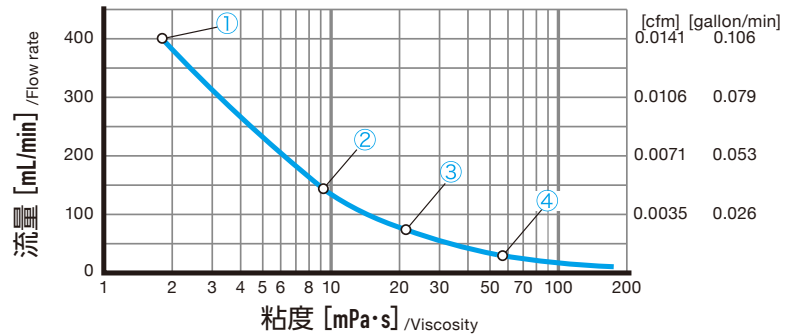
\* 请参考以下特性图和换算公式，确认产品是否适用。 /Refer to the characteristic diagram and conversion formula below and consider whether the product can be used or not.

粘度-流量特性图

/Viscosity vs. Flow Rate Characteristics

• 输入电源... 24 V DC 棕色线/Brown wire: +24 V  
/Input power 蓝色线/Blue wire: GND

• 配管条件... 硅胶软管内径/Silicone hose Inner diameter  
/Piping conditions :  $\phi 3$  mm, 长度/length: 4 m  
无扬程负荷/No lifting load



| 液体种类<br>Liquid type | 动粘度<br>Kinematic viscosity<br>[cSt] [mm <sup>2</sup> /s]<br>(40°C) | 粘度<br>Viscosity<br>[mPa·s]<br>(24±1°C) | 流量<br>Flow rate<br>[mL/min]<br>(24±1°C) |
|---------------------|--------------------------------------------------------------------|----------------------------------------|-----------------------------------------|
| ① 水<br>/Water       | —                                                                  | 1.9                                    | 400                                     |
| ② 样品A<br>/Sample A  | 7.0                                                                | 9.4                                    | 145                                     |
| ③ 样品B<br>/Sample B  | 15.0                                                               | 21.9                                   | 74                                      |
| ④ 样品C<br>/Sample C  | 32.5                                                               | 56.8                                   | 27                                      |

粘度换算公式 /Viscosity conversion formula

粘度 [mPa·s] = 动粘度 [mm<sup>2</sup>/s] × 密度 [g/cm<sup>3</sup>]  
(动粘度: 1 mm<sup>2</sup>/s = 1 cSt 粘度: 1 mPa·s = 1 cP)

Viscosity [mPa·s] = Kinematic viscosity [mm<sup>2</sup>/s] × Density [g/cm<sup>3</sup>]  
(Kinematic viscosity: 1 mm<sup>2</sup>/s = 1 cSt Viscosity: 1 mPa·s = 1 cP)

- 使用爱宕株式会社的数字粘度计VISCO低粘度样品适配器 (ULA) 的测量值。
- 动粘度到粘度的换算请参照上述公式。有关所用切削液动粘度和密度的相关信息，请联系切削油制造商。
- 特性图仅供参考，非保证值。
- 基于不同的作业条件 (作业环境、液体类型、管道材料)，可能无法达到上述性能。尤其是使用不溶性切削油时，流体粘度会随温度变化剧烈波动，因此请于实际作业条件下确认泵是否可用。
- Viscosity is measured with the digital viscometer VISCO Low Viscosity Sample Adapter (ULA) manufactured by Atago Co., Ltd.
- Refer to the above formula for conversion from kinematic viscosity to viscosity. For the kinematic viscosity and density of the cutting oil used, contact the cutting oil manufacturer.
- Characteristic diagrams are for reference only and are not guaranteed values.
- The above performance may not be attained depending on the operating conditions (operating environment, liquid type, piping material). Especially when using water-insoluble cutting oil, the fluid viscosity fluctuates significantly depending on the

更换部件一览 / List of replacement parts

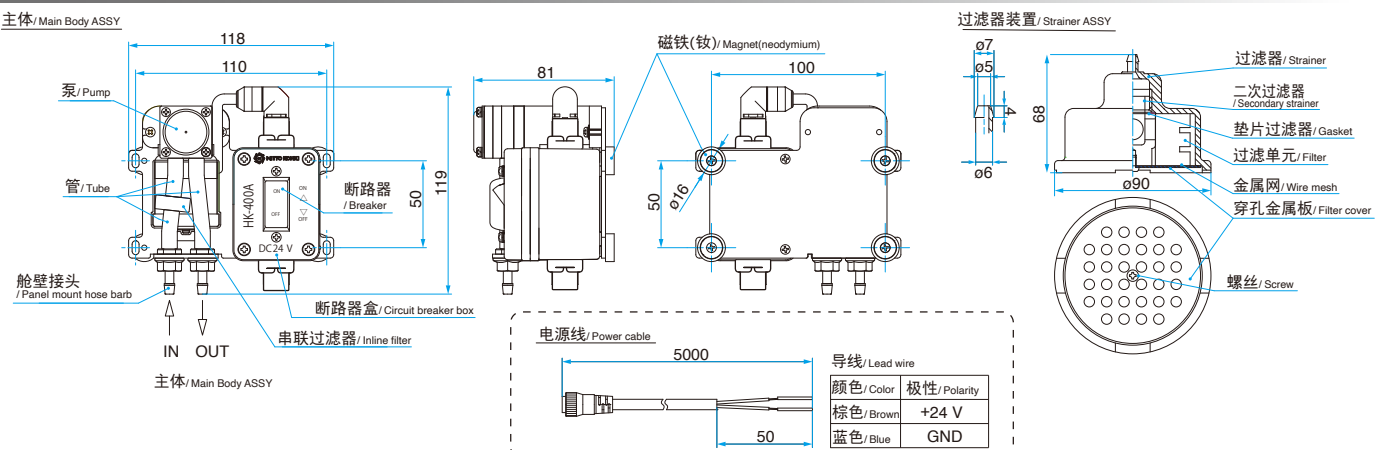
| 部件名称/Part Name                                                                                                                       | 部件编号/Part No. | 部件名称/Part Name                                                                   | 部件编号/Part No. |
|--------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------|---------------|
| 泵单元/Pump Unit                                                                                                                        | LB09133       | 串联过滤器/Inline Filter                                                              | LB09137       |
| 过滤单元/Filter Unit                                                                                                                     | LB09141       | 穿孔金属板/Filter Cover<br>[部件构成]<br>穿孔金属板、螺丝<br>/[Components]<br>Filter Cover, Screw | LB09139       |
| 电源线 (5 m)<br>/Power Cable (5 m)                                                                                                      | LB09140       | 断路器盒<br>/Circuit Breaker Box                                                     | LB09608       |
| 过滤器装置/Strainer Unit<br>[部件构成]<br>过滤器、过滤单元、<br>金属网、穿孔金属板、螺丝<br>/[Components] Strainer, Filter Unit,<br>Screw, Wire Mesh, Filter Cover | LB09134       | 金属网/Wire Mesh                                                                    | LB09138       |
| 连接器盖/Connector Cover                                                                                                                 | LB09994       |                                                                                  |               |

选购件 /Optional accessory

| 部件名称/Part Name                                                     | 部件编号/Part No. |
|--------------------------------------------------------------------|---------------|
| 硅胶软管<br>/Silicone Hose<br>( $\phi 3 \times \phi 9 \times 4000$ mm) | LB09135       |



外形尺寸图 / External Dimensions (单位 / Unit : mm)



# Linicon® ( 真空泵 / Vacuum Pump )

## 型号 LV-125A



无油压缩机 / Oil-less Compressor

- **AC 线性自由活塞真空泵**  
/ AC linear free piston vacuum pump
- **配备保险丝和可拆卸电源线**  
/ Equipped with fuse and removable power cable
- **小型/轻量** / Compact and lightweight
- **低噪音** / Low noise level
- **无油式结构** / Oil-less construction

### 规格 / Specifications

|                                |                                                                |                                                       |
|--------------------------------|----------------------------------------------------------------|-------------------------------------------------------|
| 额定电压 / Rated Voltage           | 115 V AC                                                       | 230 V AC                                              |
| 额定频率 / Rated Frequency         | 60 Hz                                                          | 50 Hz                                                 |
| 消耗功率 / Power Consumption       | 14 W                                                           | 15 W                                                  |
| 达到真空度 / Maximum Vacuum         | -33.3 kPa<br>(-250 mm Hg, -333 mbar, -9.84 in. Hg)             |                                                       |
| 安装尺寸 / Dimensions              | 135 (L) x 91 (W) x 146 (H) mm<br>(5-5/16" x 3-37/64" x 5-3/4") |                                                       |
| 额定时间 / Duty Cycle              | 连续 / Continuous                                                | ON: 10 min, OFF: 10 min or<br>ON: 15 min, OFF: 20 min |
| 线圈绝缘等级 / Coil Insulation Class | 相当于 B 类<br>Class B equivalent                                  | 相当于 E 类<br>Class E equivalent                         |
| 本体重量 / Weight                  | 1.5 kg (3.3 Lbs)                                               |                                                       |

### 可选配件 / Optional Accessories

- ① LB07629 镊子 / Vacuum pen assembly
- ② LQ01267 镊 3 x 5 x 2000 / Tube 3 x 5 x 2000
- ③ LA71242 吸针 1 x 1.5 x 40 (6 pcs/set) / Needle 1 x 1.5 x 40 (6 pcs/set)
- ④ LA71251 衬垫 6 mm dia. / Pad 6 mm dia.
- ⑤ LA71249 衬垫 4 mm dia. / Pad 4 mm dia.
- ⑥ LA71143 台架 / Pen stand

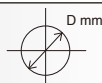
\*LA71069 真空拾取套装 P-100 包括 ① - ⑤  
LA71069 Vacuum Pick-Up Set P-100 includes ① - ⑤

### 出色的吸附力 / High Adsorption Power

真空度 -33.3 kPa{-250 mmHg}、表面为光滑平面的情况  
/ In the case that the depth of vacuum is -33.3 kPa (-250 mmHg) and the surface to be vacuumed is flat.

| 衬垫尺寸<br>/ Pad Diameter | A<br>将吸附面水平吊上的吸附力<br>/ Suction power when the adsorption face is placed<br>horizontally and moved upward. | B<br>将吸附面垂直吊上的吸附力<br>/ Suction power when the adsorption face is placed<br>vertically and moved laterally. |
|------------------------|-----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| 4 mm                   | 20 g                                                                                                      | 10 g                                                                                                       |
| 6 mm                   | 50 g                                                                                                      | 25 g                                                                                                       |

吸附力 / Adsorption power:  $W (g) = D^2 \times 7.85 \times 250 / 736$

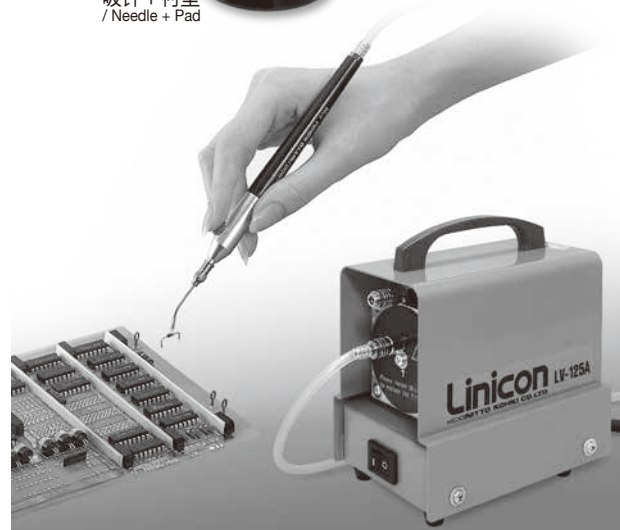
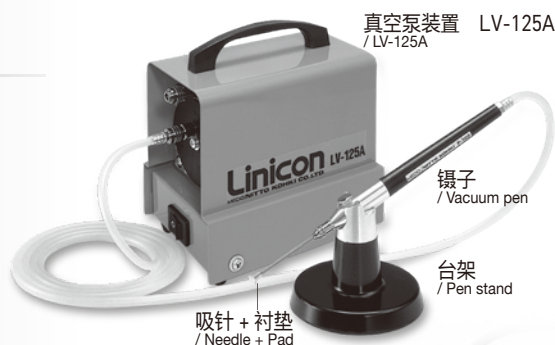


(A) 将吸附面水平吊上的时候：安全系数 0.5% 以下

A is calculated by multiplying the safety rate of 0.5 to the above equation, and then rounded.

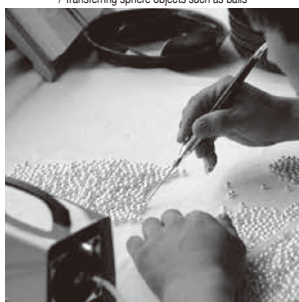
(B) 将吸附面垂直吊上的时候：安全系数 0.25% 以下

B is calculated by multiplying the safety rate of 0.25 to the above equation, and then rounded.

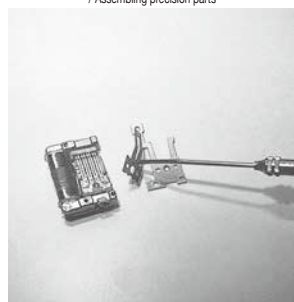


### 用途例 / Application Examples

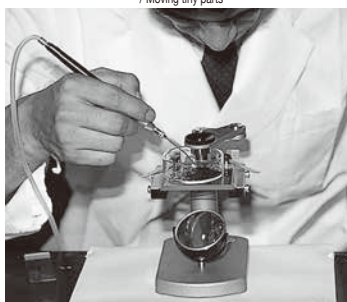
移送球形物体 (如圆珠)  
/ Transferring sphere objects such as balls



组装精密零件  
/ Assembling precision parts



移动微小零件  
/ Moving tiny parts



移送不平整零件  
/ Transferring uneven parts



适用于移动 IC 和 LSI 等电子部件。也适用于手表等精密微型零件、化学品和其他小零件。  
/ Most suitable for handling electronic parts such as ICs and LSIs. Also precise micro parts such as watches, chemicals and other small parts.

## 安全注意事项

使用产品前，请仔细阅读下述安全注意事项及产品附带的使用说明书。

### 压缩泵、真空泵的注意事项

| <b>注意</b>                                             |                                                         | <b>警告</b>                                                        |                                     |
|-------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------------------|-------------------------------------|
| 本机必须置入适当的壳体和有配线的机器内使用。若未置入就使用，可能会造成火灾、触电、烫伤。          |                                                         | 使用时，请勿进水或沾水。否则可能会导致漏电而引起火灾、触电。                                   |                                     |
| 请勿超出本机规定的电源电压范围使用。<br>否则可能会导致漏电而引起火灾、触电。              | 请勿置于完全密封的箱（盒）内。<br>否则可能会导致漏电而引起火灾、触电。                   | 请在使用环境温度范围内使用。<br>超出范围使用可能会导致火灾、触电。                              | 绝对不可对本机进行改造。<br>否则可能会导致火灾、触电。       |
| 请勿在本机附近置放可燃物。<br>否则可能会引起火灾。                           | 请进行接地。（置于双重绝缘的设备时除外）<br>若未接地可能会导致火灾、触电。                 | 用于产生气泡时，必须将本机安装在高于液面的位置。<br>若安装在低于液面的位置，可能会因液体流入而引起触电。           | 请勿将物品放置或掉落在导线上。<br>导线损伤可能会导致火灾、触电。  |
| 请勿拉伸、损伤、强行弯曲、扭转、加热本机导线。<br>导线损伤可能会导致火灾、触电。            | 请用焊接、压接、螺钉固定等方式，牢靠连接本机导线与置入设备之间的配线。<br>连接不牢靠可能会引起火灾、触电。 | 未接受过本公司技术指导的人员绝对不可进行拆解、修理。（按照使用说明书进行维护、检查除外）<br>否则可能会因异常动作而引起火灾。 | 清扫、更换过滤器时，请务必切断电源。<br>否则可能会导致触电、受伤。 |
| 吸入空气中的水分、粉末、灰尘时，请安装将其去除的装置。若吸入含有水分、粉末、灰尘等的空气，可能会导致触电。 |                                                         |                                                                  |                                     |

### 曝气机的注意事项

| <b>注意</b>                                        |                                              | <b>警告</b>                                               |                                             |
|--------------------------------------------------|----------------------------------------------|---------------------------------------------------------|---------------------------------------------|
| 请勿将曝气机设置在会进水和被雪埋没的场所。<br>否则可能会导致触电、火灾。           |                                              | 请勿吸入、排出空气以外的流体。否则可能会导致爆炸、火灾、触电。                         |                                             |
| 请使用装有漏电断路器、过流断路器的电源。<br>否则可能会导致触电、火灾。            | 请勿在高温、多湿环境下使用。<br>否则可能会导致触电、故障、火灾。           | 必须安装在高于水面的位置。<br>否则可能会导致触电、故障。                          | 曝气机的电源请使用防水型插座。<br>否则可能会导致触电、火灾。            |
| 请勿使用各机种的标牌或者使用说明书上记载规格以外的电源。<br>否则可能会导致触电、故障、火灾。 | 电气施工必须由专业施工公司进行。<br>否则可能会导致触电、火灾。            | 绝对不可对本机进行改造。<br>否则可能会导致触电、故障、火灾、事故。                     | 请勿在排出配管开放或闭锁的状态下使用。<br>否则可能会导致触电、故障、火灾。     |
| 请勿在曝气机附近（约 50 cm）放置物品。<br>否则可能会导致触电、火灾。          | 请勿湿手接触电源插头。<br>否则可能会导致触电。                    | 请勿湿手接触电源插头。<br>否则会导致触电。                                 | 请将电源插头牢固的插到最深根部。<br>否则会导致触电。                |
| 从电源插座拔出时，必须握住电源插头。<br>若抓住电源线拉拔，可能会导致触电、故障。       | 请勿在有汽油、稀释剂油漆，挥发油等可燃物场所使用本机。<br>否则可能会导致火灾、爆炸。 | 每年一次检查电源插头上是否附有灰尘。<br>否则可能会导致触电、火灾。                     | 清扫、更换过滤器前，必须先将电源插头从电源插座拔出。<br>否则可能会导致触电、受伤。 |
|                                                  | 再次启动运转，必须将拆下的过滤器外罩安装好。<br>否则可能会导致触电、故障。      | 请勿拆解、修理。<br>否则可能会导致触电、故障、火灾、受伤。<br>任何维修，必须由日东经商授权的电工进行。 | 请勿将箱子等物盖在曝气机上。<br>否则可能会导致故障、火灾。             |

### DC 驱动泵的注意事项

本端子的 + 端子或者红色导线连接到 DC 电源的 + 端子。相反连接时，可能会导致故障或工作不良，还有耐用时间会变短。

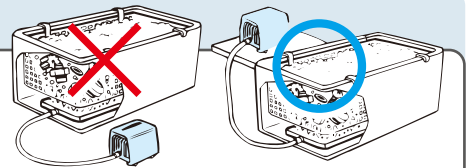
### 液体泵的注意事项

| <b>注意</b>                                                                  |  | <b>警告</b>                                                                                                         |  |
|----------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------|--|
| 请勿吸入灰尘等固体物混入的液体。<br>若阀门沾着垃圾或者灰尘，性能无法很好的发挥。<br>预测可能有垃圾或灰尘混入时，必须在吸入侧前端设置过滤器。 |  | 使用前，请确认通机器的药品是否适合。若没有确认就使用，可能会引起泄漏、爆炸、火灾、触电。                                                                      |  |
| 请勿吸入有结晶化的流体。<br>若阀门附着结晶，性能无法很好发挥。事前，推荐使用流体的预备测试。                           |  | 泵的性能值是在正确的安装方位（详见使用说明书）下测得的，因此可能会因安装方向，喷嘴朝向而略有变化。<br>由于虹吸现象，微小的液压液可能打开阀门。为了确保在泵停止时液体完全不流动，请将吐出口设置在供液箱的液面上，或安装止回阀。 |  |

### 压缩泵、真空泵使用时的注意事项

压缩泵，真空泵开放（压力 0 kPa）的状态下使用，真空泵吸入口关闭后使用，或在最高压力下使用压缩泵时，请垂询本公司。

- 压缩泵，真空泵都是使用「自我冷却系统」，所以当超过额定压力使用时，某些机型的额定时间可能会变短。
- 需要延长额定时间时，推荐使用风扇冷却。
- 请勿在有可燃性液体气体的场所使用。
- 请勿在雨中或在潮湿的场所使用。
- 请勿在吸入腐蚀性气体的场所使用。
- 压缩泵必须高出水面的位置使用。



### 异常时的措施

如发生以下情况，请马上停止使用并切断电源。确定停止工作后，请委托经销商进行维修。

- 不慎注入了润滑油等油时
- 不慎施加了强烈冲击（如掉落等）时
- 不慎流入了水时
- 发生冒烟、异臭、异音等异常状态时。

### 附带碳刷马达搭载机型的注意事项

伴随着工作时间的增加，绝缘抵抗值比初期值会下降。马达外围和电源 GND 共同使用时，必须要注意。

## 产品保证以及免除责任事项

本公司产品根据以下条件，保证附带限制保证（「保证」）。

1. 期间：根据每个产品和其规格
2. 保证内容：由本公司判断 修理或者更换。请知悉，无法用现金退还。
3. 对象：指从本公司指定的销售店的正规购入者。
4. 担保不适用。

故障的原因无论符合哪种情况，都不保证。

- 本公司产品的使用方法以外使用的
- 本目录书记载的「规格」，使用说明书的记载以外使用的
- 使用与本目录书记载的「安全注意事项」相反的
- 除本公司以外改造，修理的原因
- 从本公司出货时的技术水准无法预知的原因
- 不可阻力或不是本公司起因事态的原因
- 关于设计、材质、品质以外的原因

## 责任界限

关于本公司及本公司产品的销售店的特殊损害或结果上造成的损害，一概不负责任。还有，购买者的金钱上的责任也一概不负责。

## Precautions for Compressors and Vacuum Pumps

| <b>CAUTION</b>                                                                                                                                                                                                     |                                                                                                                                                                                                                                                           | <b>WARNING</b> Do not let the unit draw in or discharge any gas other than air. Avoid drawing in water and splashing any water on the unit.                                                                                                                                                     |                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| The unit must be incorporated into a device that has an appropriate case and wiring. Not doing so may cause a fire, electric shock or burns.                                                                       |                                                                                                                                                                                                                                                           | This may cause an explosion, fire or electric shock. Otherwise there is the risk of a short circuit causing a fire or electric shock.                                                                                                                                                           |                                                                                                                                                          |
| Do not use the unit with a power supply other than the voltage shown on the unit.<br>Doing so may cause a fire or electric shock.                                                                                  | Do not install the unit in a completely enclosed case (box) without proper or adequate ventilation.<br>This may cause a fire or electric shock.                                                                                                           | Use the unit within the proposed ambient temperature range.<br>Using it out of the range may cause a fire or electric shock.                                                                                                                                                                    | Units must not be modified.<br>Modifications may cause a fire or electric shock.                                                                         |
| Do not place combustible materials near the unit.<br>This may cause a fire.                                                                                                                                        | The grounding screw of the unit should be utilized, except when connected to a double insulation device. Not grounding the unit may result in a fire or electric shock.                                                                                   | The unit must be installed at a level higher than the water surface when it is used for bubbling.<br>If the unit is installed at a level lower than the water surface, fluid may flow into the unit and cause an electric shock.                                                                | Do not allow anything to be placed on or to fall onto the lead wires.<br>This may damage them and cause a fire or electric shock.                        |
| Do not pull, scratch, forcefully bend, twist or heat the lead wires.<br>This may damage them and cause a fire or electric shock.                                                                                   | When incorporating the unit into a device, the lead wires from the unit should be connected securely to the wiring of the device by means of soldering, crimping or by the use of screws.<br>Insufficient connections may cause a fire or electric shock. | The unit must not be disassembled or repaired by anyone other than a person who has received Nitto Kohki technical training. (Except in the case of filter and piston maintenance and inspection in accordance with the operation manual.) Otherwise it may result in a fire or electric shock. | The unit must be disconnected from its power source before cleaning or replacing filters.<br>Failure to do so may result in an electric shock or injury. |
| When drawing in air contaminated with moisture, powder, or dust, add an external device to the unit for removing them. If these contaminants are drawn in, it may cause an electric shock. *Only for vacuum pumps. |                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                          |

## Precautions for Blowers

| <b>CAUTION</b>                                                                                                                                                                            |                                                                                                                                                                                              | <b>WARNING</b> Do not let the unit draw in or discharge any gas other than air.                                                                  |                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Do not install the unit in a place where it may be soaked with water or covered with snow.<br>This may cause an electric shock or fire.                                                   |                                                                                                                                                                                              | This may cause an explosion, fire or electric shock.                                                                                             |                                                                                                                                                |
| Use a power supply equipped with a ground-fault interrupter and overcurrent breaker.<br>Failure to do so may cause an electric shock or fire.                                             | Do not use the unit in hot and humid conditions.<br>This may cause an electric shock, breakdown or fire.                                                                                     | Always place the unit above water level.<br>Failure to do so may result in an electric shock or breakdown.                                       | Use a waterproof wall outlet to supply power to the unit.<br>Failure to do so may cause an electric shock or fire.                             |
| The power supply voltage must be limited to the individual unit specifications as stated on the nameplate or instruction manual.<br>Failure to do so may cause an electric shock or fire. | Have a qualified electrician do the electrical work.<br>Failure to do so may cause an electric shock or fire.                                                                                | Never modify the unit.<br>This may cause an electric shock, breakdown, or fire.                                                                  | Do not use the unit with the outlet port closed or at free displacement.<br>This may cause an electric shock, breakdown, or fire.              |
| Do not place anything near the unit (within about 50cm).<br>Doing so may cause an electric shock or fire.                                                                                 | Never touch the power plug with wet hands.<br>This may cause an electric shock.                                                                                                              | Insert the power plug securely into the innermost position.<br>Failure to do so may cause an electric shock.                                     | Do not put anything on the power cable.<br>Doing so may cause a fire or electric shock.                                                        |
| Do not use the unit in a place where flammable materials, such as gasoline, thinner, lacquer, benzene, etc. are being used.<br>This may cause a fire or explosion.                        | Any removed air filter must be replaced before the operation is resumed.<br>Failure to do so may cause an electric shock or breakdown.                                                       | Check the power plug at least once a year for dirt and dust and clean if necessary.<br>Failure to do so may result in an electric shock or fire. | The power plug must be disconnected before the air filter is cleaned or replaced.<br>Failure to do so may cause an electric shock or accident. |
| Always grasp the power plug to disconnect the unit from the socket.<br>Pulling it out by the cord may cause an electric shock or breakdown.                                               | Never try to disassemble or repair the unit.<br>This may cause an electric shock, breakdown, fire or injury.<br>Any repairs must be done by an electrician authorized by Nitto distributors. | Do not cover the Blower with a box or the like without proper or adequate ventilation.<br>Doing so may cause a breakdown or fire.                |                                                                                                                                                |

## Precautions for DC-Motor Pumps

Connect the plus terminal (If there is no indication of the plus terminal, use the terminal with a red mark as the plus terminal.) or the red lead wire of the unit to the plus terminal of the DC power source. Reverse connection may cause a breakdown, malfunction, or reduced rated performance.

## Precautions for Liquid Pumps

|                                                                                                                                                                                                  |  |                                                                                                                                                                                             |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  <b>CAUTION</b>                                                                                               |  |  <b>WARNING</b>                                                                                          |  | <b>Confirm the suitability of the liquid that passes through the unit before use.</b><br>Failure to do so may cause a leak, explosion, fire or electric shock.                                                                                                                                                                                                                                                                                                                                                      |  |
| Avoid pumping liquids containing solid matter such as debris and dust.<br>If debris or dust is expected to get into the liquid, take countermeasures, such as using a filter on the intake side. |  | Do not pump liquids that may crystallize.<br>The valve will not perform as intended if crystals adhere to it.<br>Preliminary testing on the unit with the liquid to be used is recommended. |  | The performance of the unit is measured with the pump in its proper mounting position, which is described in the user's manual. Different mounting positions or nozzle directions may result in different performances.<br><br>Due to the siphon phenomenon, there is a risk the valve will open at even slight liquid pressures. To completely stop the flow when the pump is stopped, place the outlet port at a position higher than the level of the liquid in the liquid supply tank or install a check valve. |  |

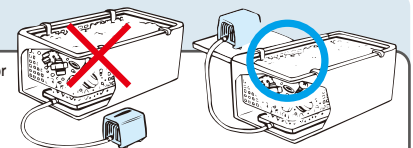
## When Using Compressors and Vacuum Pumps

Check with our distributor in advance if you plan to use the compressor/vacuum pump at free displacement (0 kPa), or the vacuum pump with inlet port closed, or the compressor at maximum pressure.

As compressors and vacuum pumps employ a self-cooling system, if the units are used at more than the rated pressure, the duty cycle of some of the models will need to be shortened.

- When wanting to increase the duty cycle, it is recommended to use a fan to cool the compressor.
- Do not use the compressor near flammable liquid gas.
- Do not use the compressor in the rain or in wet and damp places.
- Do not allow the pump to draw in corrosive gas.

- Be sure to install and use the compressor at a position higher than water level.



## Handling Problems

In any of the below cases, stop operation immediately, switch off the power and disconnect the unit from the power supply. Ask our distributor for repair.

- When oil such as a lubricant has been applied to the unit in error.
- When liquid such as water has entered into the unit by mistake.
- When the unit has suffered a severe impact such as being dropped.
- When an abnormal operation is observed, such as the emission of smoke, or an unusual smell or noise.

## Precautions for Pumps with Brush Motor

As operational time is increased, the value of insulation resistance becomes lower than that of the initial insulation resistance. If the outer surface of motor and the grounding of the power source are connected, do a preliminary check to assure no issues occur.

## Our Product Warranty

Our Products are covered by a limited warranty ("Warranty") under the following conditions.

1. Duration: depends on individual products and their specifications
2. Service: repair or replacement at our option  
Please be aware that a warranty claim will not be reimbursed with a cash payment.
3. Object Person: original purchaser from our designated distributors

### 4. Out of Warranty

The following conditions are not covered by Warranty

- purchaser improperly used our products.
- purchaser did not comply with specifications and instructions stipulated in this Catalog when using our products, or
- purchaser did not comply with Caution for Safety stipulated in this Catalog when using our products, or
- repairing of our products was done by someone other than us, or
- We are not able to anticipate or predict such defects or causes of failure based on general technical knowledge of the specific application before or at the time of shipment, or
- defects are caused by the force majeure or other situations not attributable to us, or
- defects are not clearly attributable to us and
- defects are not about design, material or workmanship.

## Limitation of Liability

We, including designated distributors, will not be liable for any special damages or consequential damages and will not have any monetary liability to purchasers.

## 小巧型 ZEROSPILL 快速接头

### /COMPACT ZEROSPILL CUPLA

#### 小型·大流量/冷却水配管用

/Small, high flow type for coolant piping

| 最高使用压力<br>/Working pressure          | 阀门构造<br>/Valve structure   | 适用流体<br>/Applicable fluids |
|--------------------------------------|----------------------------|----------------------------|
| 1.0 MPa<br>(10 kgf/cm <sup>2</sup> ) | 双路开关型<br>/Two-way shut-off | 空气/Air<br>水/Water          |



- 小巧型尺寸，省空间化。最大外径16mm(1/8")、18.5mm(1/4")
- 提高冷却效率，大流量。
- 单手操作(one-touch)，作业性强。
- 通过特有的“减低液体泄漏阀门构造”，大幅度降低连接时，分离时的空气混入量以及液体泄漏量。
- Compact size saves space. Outer diameters of 16 mm (CZL-1SM) and 18.5 mm (CZL-2SM)
- High flow rate for efficient cooling.
- Easy operation, push-to-connect function.
- Valve structure reduces air inclusion on connection and liquid spillage when disconnecting.

## 立方型快速接头 /CUBE CUPLA

#### 小型·轻量、空压机配管用

/Small and lightweight coupling for air supply lines.

| 最高使用压力<br>/Working pressure          | 阀门构造<br>/Valve structure   | 适用流体<br>/Applicable fluids |
|--------------------------------------|----------------------------|----------------------------|
| 1.0 MPa<br>(10 kgf/cm <sup>2</sup> ) | 双路开关型<br>/Two-way shut-off | 空气/Air<br>水/Water          |



- 通过共计5种颜色，防止配管连接错误。
- 树脂材质，超轻量。小巧型设计，可节省空间。
- 按入即可连接。分离时也只需按一下按钮。
- 产品序列包括在插塞和套筒两边都内置阀门型，以及降低压力损失的无阀型。
- 新出了适合狭小空间配管上的L型插塞。
- In all five color variations to prevent piping mistakes.
- Ultra-lightweight, made of polyacetal resin. Compact design for space saving.
- Just push plug into socket for connection.
- Simply press the button on the socket for disconnection.
- Two-way shut-off type with valve on both sides and straight through type with low pressure loss are available.
- L type plug ideal for piping in narrow spaces are available.

## 微型快速接头 /MICRO CUPLA

#### 空压控制器配管用

/For piping in pneumatic control devices

| 最高使用压力<br>/Working pressure          | 阀门构造<br>/Valve structure   | 适用流体<br>/Applicable fluids |
|--------------------------------------|----------------------------|----------------------------|
| 1.0 MPa<br>(10 kgf/cm <sup>2</sup> ) | 单路开关型<br>/One-way shut-off | 空气/Air<br>水/Water          |



- 在套筒上配有阀门，小型、套环外径9.5mm。
- 与套筒、插塞的连接只要插入即可One-Touch连接。
- 节省空间的设计，适合有限空间内的配管作业。
- 本体为黄铜和不锈钢材质电镀处理，有良好的耐腐蚀性。
- 各种标准化的安装形状，可满足多种多样的空压用途。
- Even though the valve is built in the socket, the sleeve outer diameter is confined to 9.5 mm.
- Push-to-connect design.
- Compact design for piping in narrow spaces.
- Plated brass and stainless steel bodies are available for excellent corrosion resistance.
- Available in various end configurations to satisfy a wide range of pneumatic applications.

## SUPER CUPLA

#### 轻量·小型空气配管用

/Light, compact for air piping connections

| 最高使用压力<br>/Working pressure          | 阀门构造<br>/Valve structure   | 适用流体<br>/Applicable fluids |
|--------------------------------------|----------------------------|----------------------------|
| 1.0 MPa<br>(10 kgf/cm <sup>2</sup> ) | 单路开关型<br>/One-way shut-off | 空气/Air                     |



- 部分主体材质为铝合金制，以实现轻量化。
- 插塞、套筒的连接只需插入即可One-Touch连接。
- 各种安装形状实现标准化，可用于广泛的空压用途。
- 也备有带TubeFitter的型号。
- Aluminum body is adopted for some models to reduce the weight.
- Just push the plug into socket for easy one hand connection.
- Available in various end configurations for a wide range of pneumatic applications.
- Also available with quick connect/disconnect Tube Fitter type.

## HI CUPLA

#### 通用型空气配管用

/Universal purpose couplings for air lines

| 最高使用压力<br>/Working pressure          | 阀门构造<br>/Valve structure             | 适用流体 (钢铁仅适于空气)<br>/Applicable fluids (Steel applies to air only) |
|--------------------------------------|--------------------------------------|------------------------------------------------------------------|
| 1.5 MPa<br>(15 kgf/cm <sup>2</sup> ) | 1.0 MPa<br>(10 kgf/cm <sup>2</sup> ) | 单路开关型<br>/One-way shut-off                                       |
|                                      |                                      | 空气/Air<br>水/Water                                                |



- 有优越通用性的快速接头，可用于从工厂的空气配管到空气工具的软管连接的各类用途。
- 钢铁材质适用于空气，黄铜、不锈钢材质适用于水。
- 钢铁材质的重要构成部件经过热处理增加了强度。有良好的耐磨损性和耐久性。
- 主体材质与尺寸种类丰富，安装形状标准化，可用于广泛的空压用途。
- An excellent general purpose coupling for connecting factory air supply to pneumatic tools.
- Steel coupling is suitable for air. Brass or stainless steel is suitable for water.
- Critical structural parts of steel models are heat-treated for increased strength giving greater durability and resistance to wear.
- Available in various body materials, sizes and end configurations applicable to a wide range of applications.

## 塑料快速接头 /HI CUPLA ACE

#### 轻量、带自动锁扣功能空气配管用

/Lightweight plastic coupling with automatic safety lock for air line applications

| 最高使用压力<br>/Working pressure          | 阀门构造<br>/Valve structure             | 适用流体<br>/Applicable fluids |
|--------------------------------------|--------------------------------------|----------------------------|
| 1.5 MPa<br>(15 kgf/cm <sup>2</sup> ) | 1.0 MPa<br>(10 kgf/cm <sup>2</sup> ) | 单路开关型<br>/One-way shut-off |
|                                      |                                      | 空气/Air<br>水/Water          |



- 具有与金属制同等的耐压性能。
- 在连接的同时，内置有“锁定结构”，可给套环上锁，防止意外脱离。
- 插塞、套筒的连接只需插入即可One-Touch连接。
- 重量仅有金属材质的约1/4，因此操作简便。
- 不仅适用于气流，也适用于水流。
- 流体可从插塞侧、套筒侧的双方向流动。
- Pressure ratings comparable to steel CUPLA.
- A built-in "lock mechanism" locks the sleeve upon connection, thus prevents accidental disconnection.
- Just push plug into socket for simple connection.
- The weight is a quarter of steel HI CUPLA for easy handling.
- Can be used for air and water.
- Air flows in either direction from plug or from socket side when coupled.

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