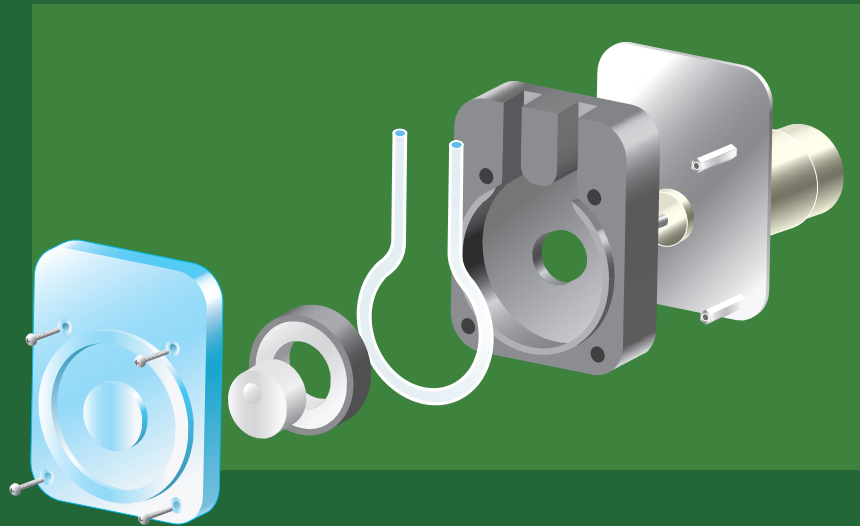


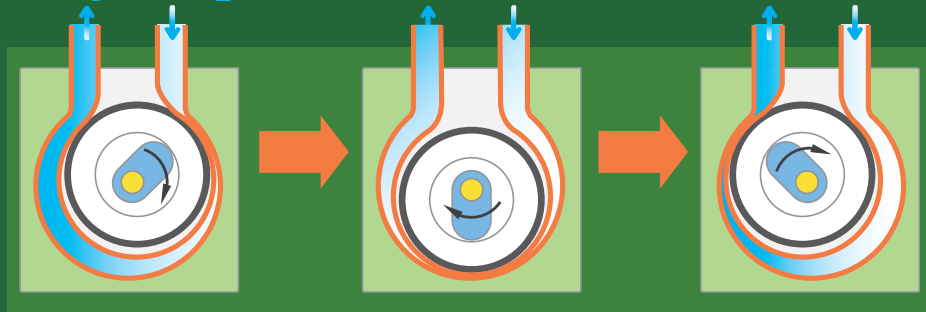
# Aquatech presents “Ring Pump”<sup>®</sup>

## Advanced peristaltic pump technology made available by AQUATECH.

**Ring Pump**<sup>®</sup> Its simple designing is gentle to tubing !!



**Ring Pump**<sup>®</sup> Its structure is so innovative !!



**Ring Pump**<sup>®</sup> Applications are unlimited !!



**Aquatech Co., Ltd.**

**Contact our export business agent**

**Ring Pump**<sup>®</sup>  
Aquatech Co., Ltd.

2-1-13, Ono, Daito City, Osaka 574-0042, Japan  
Phone: 81-72-806-3210 Fax: 81-72-806-3211

E-mail [info@ringpump-aquatech.co.jp](mailto:info@ringpump-aquatech.co.jp)  
URL <https://ringpump-aquatech.co.jp>










**TAKASAGO ELECTRIC, INC.**

66,KAKITSUBATA, NARUMI-CHO, MIDORI-KU, NAGOYA, 458-8522 JAPAN  
Phone 81-52-891-2301 Fax 81-52-891-7386  
E-mail: [info@takasago-elec.co.jp](mailto:info@takasago-elec.co.jp) URL: <http://www.takasago-fluidic.com>






# Ring Pump Lineup




Standard type [5 mL – 2500 mL/min]

| Type   | Flow rate (mL / min)             | Tubing  | Motor/Power                    | Appearance/Dimension (mm)   |
|--|----------------------------------|---|--------------------------------|---|
| <b>RP-M Series</b><br>DC Power type                              | 5 30<br>10 50<br>20 65           | ●Silicone<br>●PharMed BPT*<br>●Transmaster TM-15<br>●SWFT | DC geared motor<br>DC24V       |  L: 74.5<br>W: 74<br>D: Depend on motor  |
| <b>RP-M Series</b><br>AC Power type                              | 5<br>15<br>20<br>35<br>(at 60Hz) | ●Silicone<br>●PharMed BPT*<br>●SWFT                       | AC synchronous motor<br>AC100V |  L: 74.5<br>W: 74<br>D: 48               |
| <b>RP-K II Series</b><br>Tough & Economical                      | 50 200<br>100 250<br>150         | ●Silicone<br>●Tygon A-60-F**<br>●Transmaster TM-15        | DC geared motor<br>DC24V       |  L: 117.7<br>W: 79<br>D: Depend on motor |
| <b>RP-S Series</b><br>Big volume type                            | 500<br>700<br>800                | ●Tygon A-60-F**<br>●PharMed BPT*<br>●Transmaster TM-15    | DC geared motor<br>DC24V       |  L: 126<br>W: 81<br>D: Depend on motor   |
| <b>RP-2S Series</b><br>Big volume & Less pulsation               | 1000<br>1400<br>1600             | ●Tygon A-60-F**<br>●PharMed BPT*<br>●Transmaster TM-15    | DC geared motor<br>DC24V       |  L: 126<br>W: 81<br>D: Depend on motor   |
| <b>RP-3S Series</b><br>Easy flow volume control & Less pulsation | 2500<br>(Max)                    | ●PharMed BPT*   | Stepper motor<br>DC24V         |  L: 178<br>W: 81<br>D: 168.5             |
| <b>RP-W II Series</b><br>Tough & Less Pulsation                  | 350<br>500<br>700                | ●PharMed BPT*   | DC geared motor<br>DC24V       |  L: 148.3<br>W: 82<br>D: 143.5           |



Compact type [Motor-built-in box type]

| Type  | Flow rate (mL / min)                                  | Tubing  | Motor/Power                  | Appearance/Dimension (mm)   |
|---|---|---|------------------------------|---|
| <b>RP-G II Series</b><br>Small Box type             | 10 25<br>12 40<br>17 45<br>20                         | ●Silicone<br>●Tygon A-60-F**<br>●PharMed BPT*                             | DC geared motor<br>DC12V,24V |  L: 47.5<br>W: 74<br>D: 27 |
| <b>RP-2G II Series</b><br>Box type & Less Pulsation | 20 50<br>25 70<br>30 80<br>35                         | ●Silicone<br>●Tygon A-60-F**<br>●PharMed BPT*                             | DC geared motor<br>DC12V,24V |  L: 47.5<br>W: 74<br>D: 27 |
| <b>RP-G III Series</b><br>Box type small flow rate  | 2.5 6.5<br>3.0 7.0<br>3.2 8.0<br>4.5 10.0<br>5.0 12.0 | ●Silicone<br>●PharMed BPT*<br>●Versilon A-5500-F***<br>●Transmaster TM-15 | DC geared motor<br>DC3V,6V   |  L: 44<br>W: 65<br>D: 22.5 |

Super small type [0.2 mL – 3.0 mL/min]

| Type  | Flow rate (mL / min)   | Tubing  | Motor/Power                | Appearance/Dimension (mm)  |
|---|--|---|----------------------------|--|
| <b>RP-Q,QX Series</b><br>Super small type                                     | RP-Q: 0.20 0.45<br>RP-QX: 0.50 1.10  | ●Silicone<br>●Tygon A-60-F**<br>●SWFT               | DC geared motor<br>DC3V    |  L: 15.4<br>W: 11.9<br>D: 31.5  |
| <b>RP-Q II Series</b><br><b>RP-Q III Series</b><br>Pump head replaceable type | RP-Q II : 0.45 0.9<br>RP-Q II X: 1.2 2.2<br>RP-Q II A: 3.0<br>(same for RP-Q III series) | ●Silicone<br>●SWFT                                  | DC geared motor<br>DC3V    |  L: 17.0<br>W: 15.0 (24.3)<br>D: 32.7<br>RP-Q II Series RP-Q III Series ( ) Q III |
| <b>RP-C III Series</b><br>Pump head replaceable type                          | 1.6<br>2.8   | ●Silicone<br>●PharMed BPT*<br>●Versilon F-5500-A*** | DC geared motor<br>DC3V-5V |  L: 44.5<br>W: 26<br>D: 33.4  |

Micro type [nano L to μL / min]

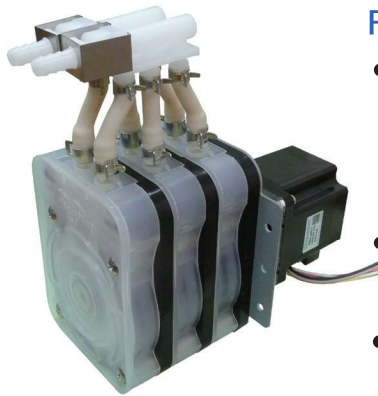
| Type  | Flow rate (mL / min) | Tubing                     | Motor/Power                    | Appearance/Dimension (mm)   |
|---|----------------------|----------------------------|--------------------------------|---|
| <b>RP-TX Series</b><br>Pump head replaceable type | 30nL-40 μL/min       | ●Silicone<br>●PharMed BPT* | Stepper motor<br>DC 3.0V       |  L: 33<br>W: 12<br>D: 21.5 |
| <b>RP-HX Series</b><br>Pump head replaceable type | 2 μL-1,000 μL/min    | ●Silicone<br>●PharMed BPT* | Stepper motor<br>DC 2.6 - 3.0V |  L: 32<br>W: 20<br>D: 46   |

\* Formerly described as PharMed.  
\*\* Formerly described as Norprene.  
\*\*\* Formerly described as Fluran.

# Ring Pump®

## RP-3S Series

### Stepper motor type



#### Features

- Having three pump parts of RP-S, it's the biggest flow volume pump among our lineup. You can also use each of three pump parts for flowing three different solutions.
- By adopting stepper motor, you can select flow volume freely up to 2.5 liters as maximum.
- Pulsation is largely decreased by shifting angle of rotor of each additional pumps by 120 degrees.

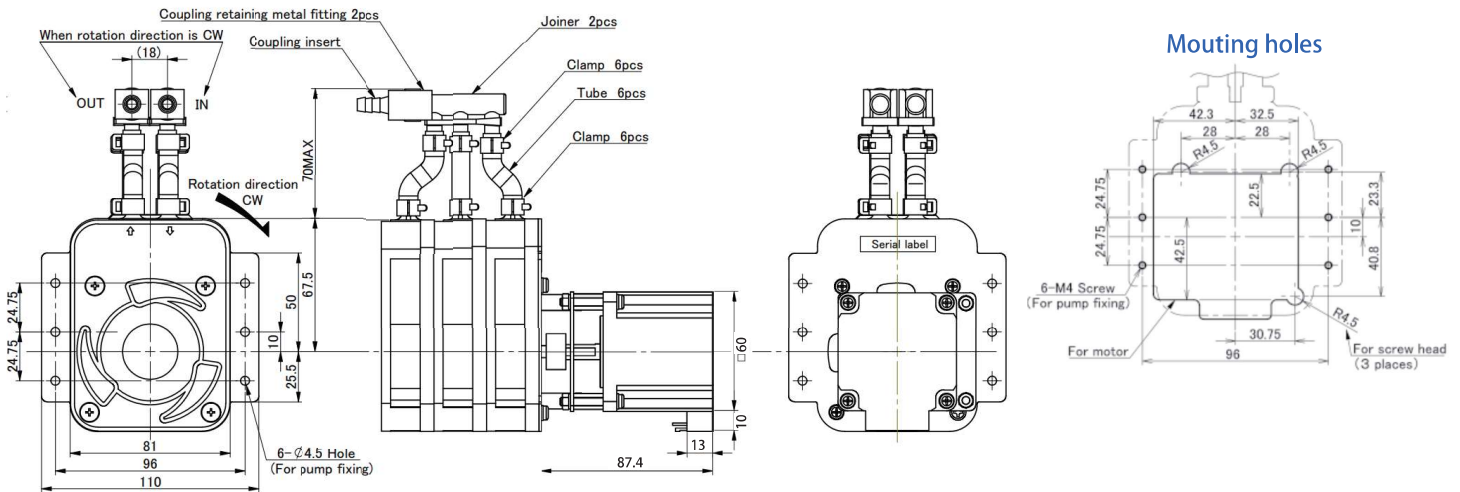
#### Main specifications

|                        |                     |
|------------------------|---------------------|
| Flow rate (mL/min)     | 2500 (Max.)         |
| Tubing                 | PharMed BPT         |
| Motor/Power source     | Stepper motor DC24V |
| Weight (for reference) | Approx. 1800g       |

#### Examples of application

Automatic car washing machine /  
Automatic cup coffee vender /  
Floor washer / Hand washer /  
Applications for detergent supply etc.

#### Outline view



#### Stepper motor controller and driver board

RP-3S pump is operated by a stepper motor. You need a controller or driver to drive it. We offer following dedicated controller and driver board which are sold separately as options. Please contact our sales office for purchasing them.



Stepper Motor Controller  
(option)



Stepper Motor Driver Board  
(option)

#### Model Lineup

| Model Lineup          | Voltage (DC/V) | Flow rate (mL/min)                          | Tubing      |            |
|-----------------------|----------------|---|-------------|------------|
|                       |                |   | Type        | ID/OD(mm)  |
| RP-3S07F-2500Z-DC24VS | 24             | Approx.9 at 1 rpm<br>Approx.2500 at 300 rpm | PharMed BPT | 7.0 / 10.0 |

\* PharMed BPT is product of Saint-Gobain SA. It was formerly described as PharMed in our brochure.

#### P-Q Characteristic Graph

Please refer to P-Q Characteristic Graph of RP-2S.

# Ring Pump®

## RP-2S Series



### Features

- Having two pump parts of RP-S pump, flow volume is doubled.
- Pulsation is decreased due to shifting angle of rotor of additional pump by 180 degrees.

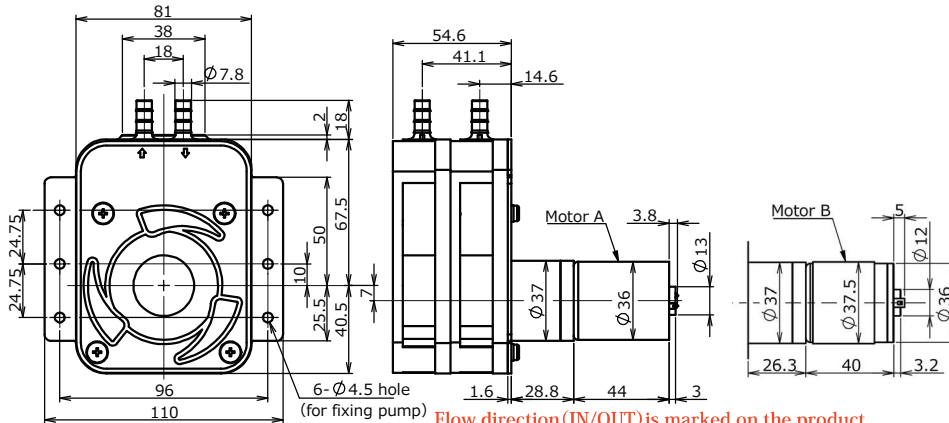
### Examples of application

Automatic washing machine  
Automatic cup coffee vender  
Floor washer, Hand washer  
Applications for detergent supply etc.

### Main specifications

|                        |                                 |
|------------------------|---------------------------------|
| Flow rate (mL/min)     | 1000 1400 1600                  |
| Tubing                 | TygonA-60-F/ PharMed BPT/ TM-15 |
| Motor/Power source     | DC geared motor DC24V           |
| Weight (for reference) | Approx. 900g                    |

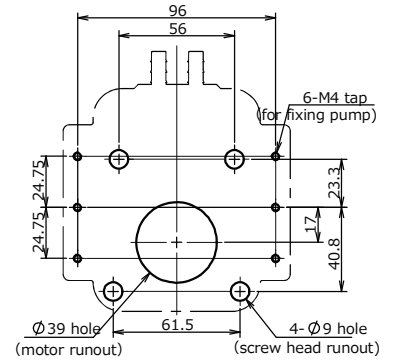
### 【Outline view】



Flow direction (IN/OUT) is marked on the product.

\*Flow direction (IN/OUT) is true when positive side is connected to the terminal marked ⊕ on the motor.

### 【Mounting plate view】



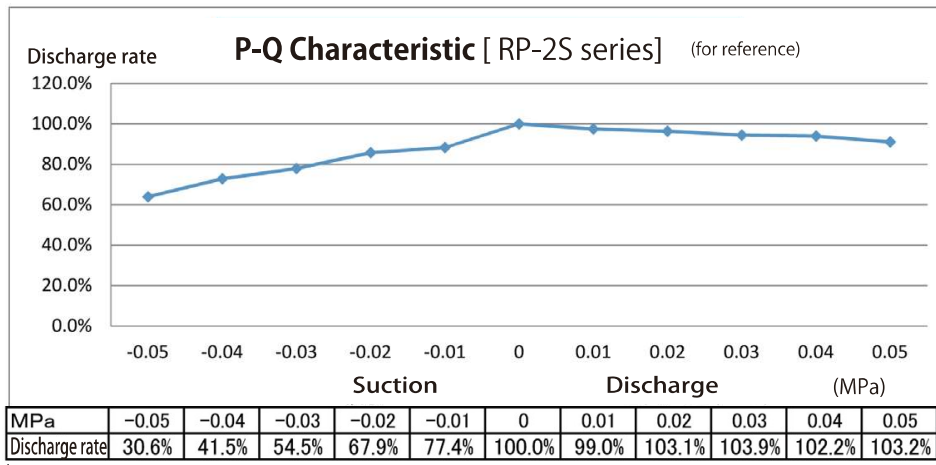
Be sure that the motor shaft position is horizontal.

### Model Lineup

| Model Lineup         | Voltage (DC/V) | Flow rate (mL/min) | Tubing            |              | Motor |
|----------------------|----------------|--------------------|-------------------|--------------|-------|
|                      |                |                    | Type              | ID x OD (mm) |       |
| RP-2S06N-1000Z-DC24V | 24             | 1000               | Tygon A-60-F      | 6.35 x 9.52  | A     |
| RP-2S06F-1000Z-DC24V | 24             | 1000               | PharMed BPT       | 6.35 x 9.52  | A     |
| RP-2S06W-1000Z-DC24V | 24             | 1000               | Transmaster TM-15 | 6.35 x 9.52  | A     |
| RP-2S06N-1400Z-DC24V | 24             | 1400               | Tygon A-60-F      | 6.35 x 9.52  | B     |
| RP-2S06F-1400Z-DC24V | 24             | 1400               | PharMed BPT       | 6.35 x 9.52  | B     |
| RP-2S07W-1600Z-DC24V | 24             | 1600               | Transmaster TM-15 | 7.0 x 10.0   | B     |

\* Tygone A-60-F and PharMed BPT are products of Saint-Gobain SA and formerly described as Norprene and PharMed in our brochure.

\* Transmaster TM-15 is product of Mitsubishi Co. Ltd.



※ Variable by material or ID of tubing.

# Ring Pump®

## RP-S Series



### Features

- Biggest flow rate pump among our lineup.  
You can have double flow rate with RP-2S series which combines two RP-S.

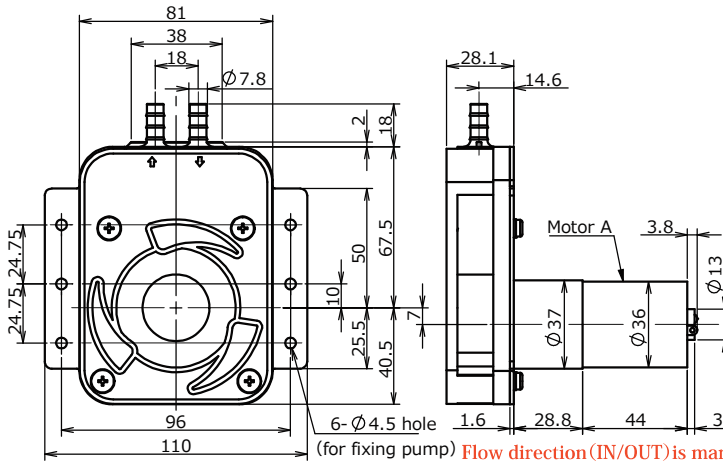
### Examples of application

Automatic washing machine  
Automatic cup coffee vender  
Floor washer, Hand washer  
Applications for detergent supply etc.

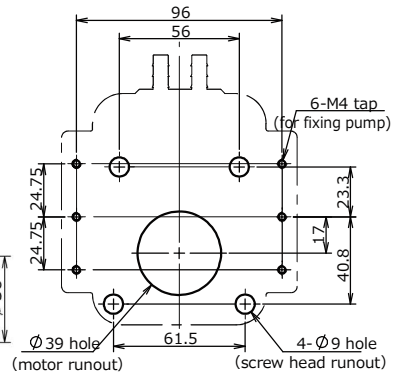
### Main specifications

|                        |                                 |
|------------------------|---------------------------------|
| Flow rate (mL/min)     | 500 700 800                     |
| Tubing                 | TygonA-60-F/ PharMed BPT/ TM-15 |
| Motor/Power source     | DC geared motor DC24V           |
| Weight (for reference) | Approx. 650g                    |

### [Outline view]



### [Mounting plate view]



Flow direction (IN/OUT) is marked on the product.

\*Flow direction (IN/OUT) is true when positive side is connected to the terminal marked ⊕ on the motor.

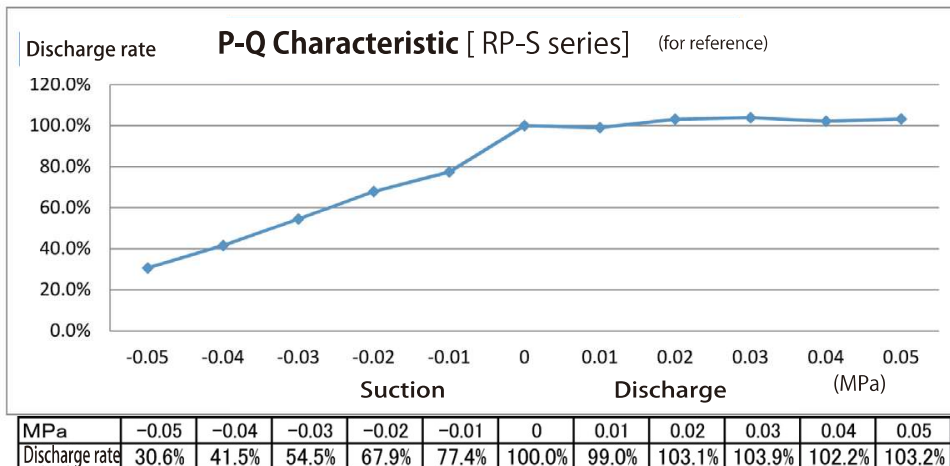
Be sure that the motor shaft position is horizontal.

### Model Lineup

| Model Lineup       | Voltage (DC/V) | Flow rate (mL/min) | Tubing                |              | Remarks |                |
|--------------------|----------------|--------------------|-----------------------|--------------|---------|----------------|
|                    |                |                    | Type                  | ID x OD (mm) | Motor   | Motor Rotation |
| RP-S06N-500Z-DC24V | 24             | 500                | Tygon A-60-F (N)      | 6.35 x 9.52  | A       | CW             |
| RP-S06F-500Z-DC24V | 24             | 500                | PharMed BPT (F)       | 6.35 x 9.52  | A       | CW             |
| RP-S06W-500Z-DC24V | 24             | 500                | Transmaster TM-15 (W) | 6.35 x 9.52  | A       | CW             |
| RP-S06N-700Z-DC24V | 24             | 700                | Tygon A-60-F (N)      | 6.35 x 9.52  | B       | CW             |
| RP-S06F-700Z-DC24V | 24             | 700                | PharMed BPT (F)       | 6.35 x 9.52  | B       | CW             |
| RP-S07W-800Z-DC24V | 24             | 800                | Transmaster TM-15 (W) | 7.0 x 10.0   | B       | CW             |

\* PharMed BPT and Tygon A-60-F are products of Saint-Gobain SA and formerly described as PharMed and Norprene in our brochure.

\* Transmaster TM-15 is product of Mitsubishi Co., Ltd., Japan.



※ Variable by material or ID of tubing.

# Ring Pump®

## RP-W II Series



### Features

- Toughest and long life pump among lineup of our ringpump.

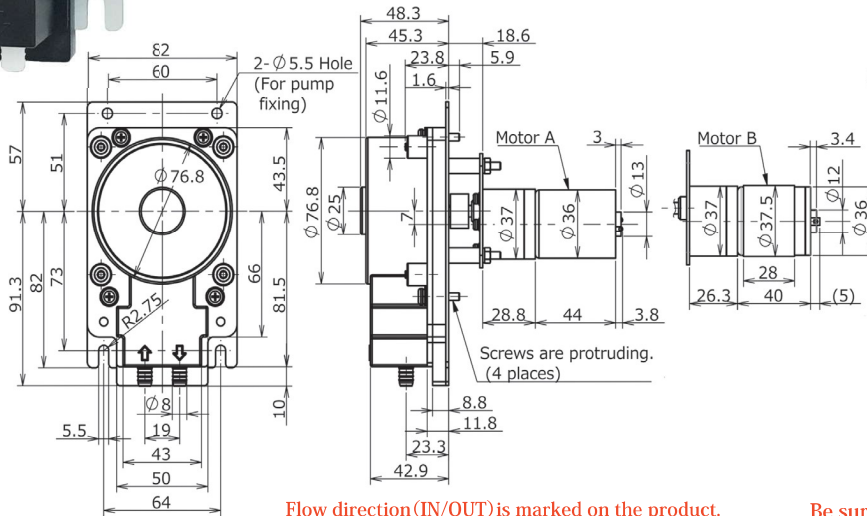
### Examples of application

Big sized printers and many other applications where toughness and long life is required.

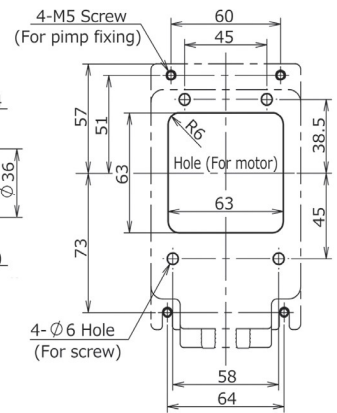
### Main specifications

|                        |                       |
|------------------------|-----------------------|
| Flow rate (mL/min)     | 350 500 700           |
| Tubing                 | PharMed BPT           |
| Motor/Power source     | DC geared motor DC24V |
| Weight (for reference) | Approx. 850g          |

### 【Outline view】



### 【Mounting plate view】

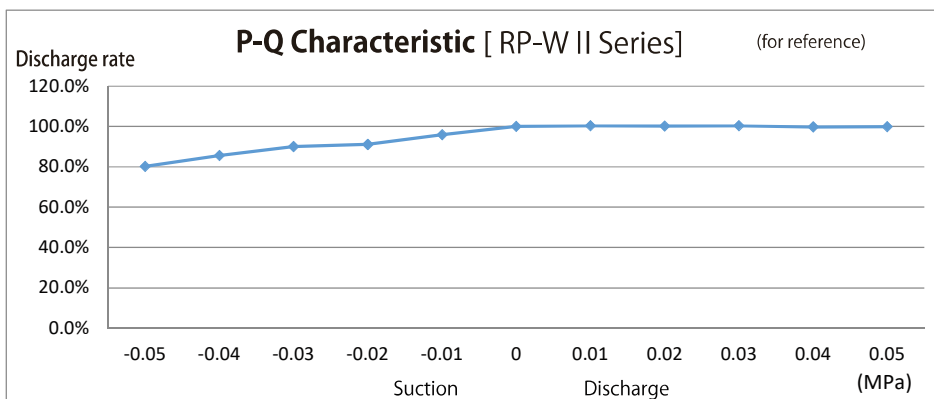


Be sure that the motor shaft position is horizontal.

## Model Lineup

| Model Lineup             | Voltage (DC/V) | Flow rate (mL/min) | Tubing      |              | Motor Type |
|--------------------------|----------------|--------------------|-------------|--------------|------------|
|                          |                |                    | Type        | ID x OD (mm) |            |
| RP-W II 04 F -350Z-DC24V | 24             | 350                | PharMed BPT | 4.0 x 8.0    | A          |
| RP-W II 04F-500Z-DC24V   | 24             | 500                | PharMed BPT | 4.0 x 8.0    | A          |
| RP-W II 04F-700Z-DC24V   | 24             | 700                | PharMed BPT | 4.0 x 8.0    | B          |

\* PharMed BPT is product of Saint-Gobain SA and formerly described as PharMed in our brochure.



| MPa            | -0.05 | -0.04 | -0.03 | -0.02 | -0.01 | 0      | 0.01   | 0.02   | 0.03   | 0.04  | 0.05  |
|----------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|-------|-------|
| Discharge rate | 80.2% | 85.6% | 89.9% | 91.0% | 95.9% | 100.0% | 100.3% | 100.1% | 100.3% | 99.7% | 99.9% |

※ Variable by material or ID of tubing.

# Ring Pump®

## RP-K II Series



### Features

- Simple design and tough pump.
- Since we have wide range of flow level, wide range of application can be expected.

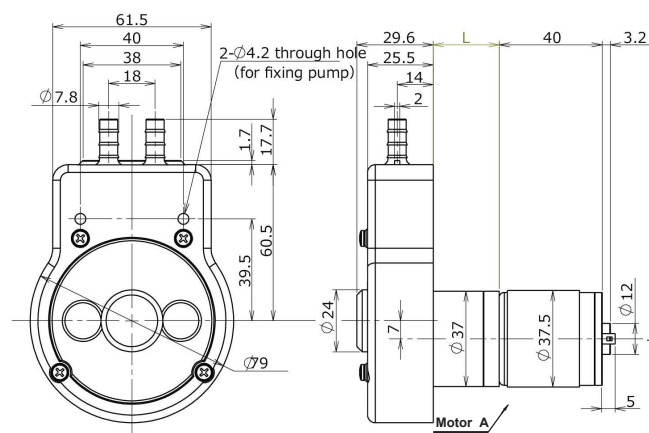
### Examples of application

Automatic washing machine  
Floor washer, Medical device and many applications for detergent supply etc.

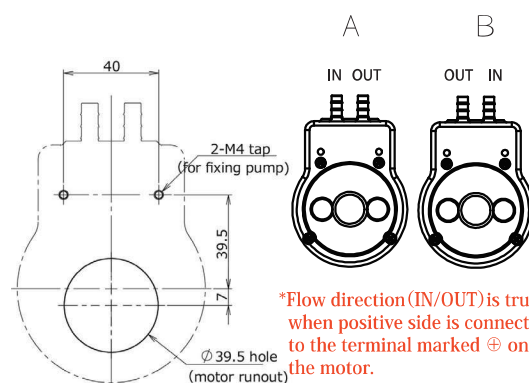
### Main specifications

|                        |  |
|------------------------|--|
| Flow rate (mL/min)     | 50 100 150 200 250                       |
| Tubing                 | Silicone/Taigon A-60-F/Transmaster TM-15 |
| Motor/Power source     | DC24V                                    |
| Material of main parts | Base : Steel Case:PP                     |
| Weight (for reference) | Approx. 400g                             |

### 【Outline view】



### 【Mounting plate view】 【Flow direction】

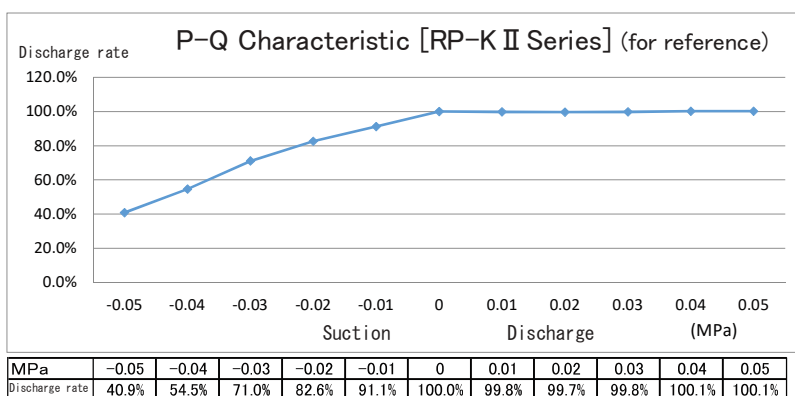


※L dimension = Refer to the table below. Be sure that the motor shaft position is horizontal.

### Model Lineup

| Model Lineup           | Voltage (DC/V) | Flow rate (mL/min) | Tubing            |              | Remarks |             |                |
|------------------------|----------------|--------------------|-------------------|--------------|---------|-------------|----------------|
|                        |                |                    | Type              | ID x OD (mm) | Motor   | L Dimention | Flow Direction |
| RP-K II 05S-50Z-DC24V  | 24             | 50                 | Silicone          | 4.8 x 8.0    | A       | 28.1        | B              |
| RP-K II 05N-50Z-DC24V  | 24             | 50                 | Tygon A-60-F      | 4.76 x 7.94  | A       | 28.1        |                |
| RP-K II 05W-50Z-DC24V  | 24             | 50                 | Transmaster TM-15 | 4.8 x 7.9    | A       | 28.1        |                |
| RP-K II 06S-100Z-DC24V | 24             | 100                | Silicone          | 6.5 x 9.9    | B       | 28.1        |                |
| RP-K II 06N-100Z-DC24V | 24             | 100                | Tygon A-60-F      | 6.35 x 9.52  | B       | 28.1        |                |
| RP-K II 06W-100Z-DC24V | 24             | 100                | Transmaster TM-15 | 6.35 x 9.52  | B       | 28.1        |                |
| RP-K II 06N-150Z-DC24V | 24             | 150                | Tygon A-60-F      | 6.35 x 9.52  | A       | 25.6        | A              |
| RP-K II 06W-150Z-DC24V | 24             | 150                | Transmaster TM-15 | 6.35 x 9.52  | A       | 25.6        |                |
| RP-K II 06N-200Z-DC24V | 24             | 200                | Tygon A-60-F      | 6.35 x 9.52  | A       | 25.6        |                |
| RP-K II 06W-200Z-DC24V | 24             | 200                | Transmaster TM-15 | 6.35 x 9.52  | A       | 25.6        |                |
| RP-K II 06N-250Z-DC24V | 24             | 250                | Tygon A-60-F      | 6.35 x 9.52  | A       | 25.6        |                |
| RP-K II 06W-250Z-DC24V | 24             | 250                | Transmaster TM-15 | 6.35 x 9.52  | A       | 25.6        |                |

\* Tygon A-60-F is product of Saint-Gobain SA and formerly described as Norprene in our brochure. \* Transmaster TM-15 is product of Mitsubishi Co., Ltd., Japan.



※ Variable by material or ID of tubing.

# Ring Pump®

## RP-2G II Series



### Features

- Compact box shape makes it possible to pile up plural G II pumps.
- Two different liquids can be flowed by a single pump, using two tubings.

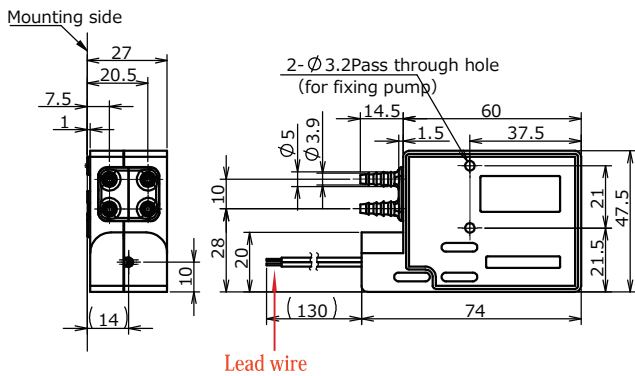
### Examples of application

Automatic washing machine  
Electrolytic water conditioner  
Applications for detergent supply etc.

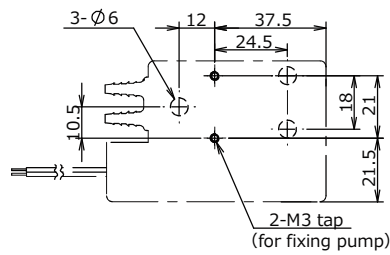
### Main specifications

|                        |                                     |
|------------------------|-------------------------------------|
| Flow rate (mL/min)     | 20 25 30 35 50 70 80                |
| Tubing                 | Silicone/ PharMed BPT/ Tygon A-60-F |
| Motor/Power source     | DC geared motor DC12V, 24V          |
| Weight (for reference) | Approx. 115g                        |

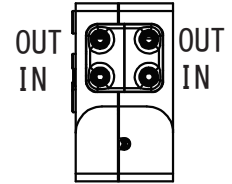
### 【Outline view】



### 【Mounting plate view】



### 【Flow direction】

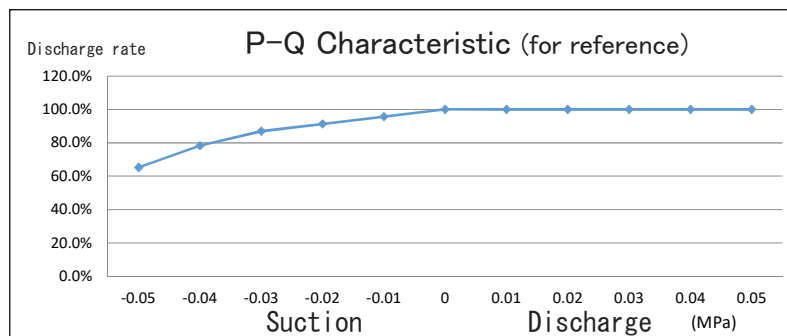


\*Flow direction (IN/OUT) is true when positive side is connected to the red lead wire.

### Model Lineup

| Model Lineup               | Voltage (DC/V) | Flow rate (mL/min) | Tubing       |           |
|----------------------------|----------------|--------------------|--------------|-----------|
|                            |                |                    | Type         | IDxOD(mm) |
| RP-2G II 02 S -25 Z -DC12V | 12             | 25                 | Silicone     | 2 X 4     |
| RP-2G II 02F -25Z -DC12V   | 12             | 20                 | PharMed BPT  | 2 X 4     |
| RP-2G II 02 S -50Z -DC24V  | 24             | 50                 | Silicone     | 2 X 4     |
| RP-2G II 02F -50Z -DC24V   | 24             | 50                 | PharMed BPT  | 2 X 4     |
| RP-2G II 2.5 S -35Z -DC12V | 12             | 30                 | Silicone     | 2.5 X 4.5 |
| RP-2G II 2.5 S -70Z -DC24V | 24             | 70                 | Silicone     | 2.5 X 4.5 |
| RP-2G II 2.8N -40Z -DC12V  | 12             | 35                 | Tygon A-60-F | 2.8 X 4.8 |
| RP-2G II 2.8N -80Z -DC24V  | 24             | 80                 | Tygon A-60-F | 2.8 X 4.8 |

\* PharMed BPT and Tygon A-60-F are products of Saint-Gobain SA and formerly described as PherMed and Norprene in our brochure.



| Discharge rate (MPa) | -0.05 | -0.04 | -0.03 | -0.02 | -0.01 | 0      | 0.01   | 0.02   | 0.03   | 0.04   | 0.05   |
|----------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| Discharge rate (%)   | 65.2% | 78.3% | 87.0% | 91.3% | 95.7% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

※ Variable by material or ID of tubing.



# Ring Pump®

## RP-M Series (DC type)



### Features

This is the only series among our product lineup that you can select DC or AC. You have wide range of application.

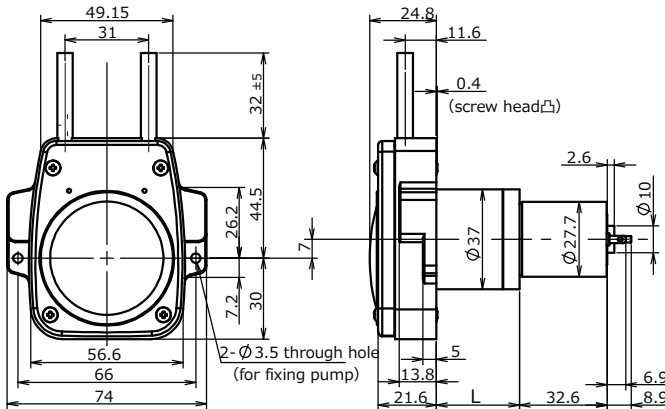
### Examples of application

Automatic washing machine, Electrolytic water conditioner, Air pressure adjuster, Automatic car washer and many other applications for detergent supply etc.

### Main specifications

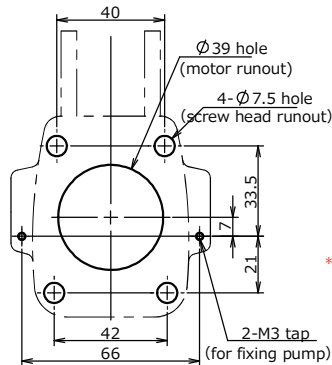
|                        |                                 |
|------------------------|---------------------------------|
| Flow rate (mL/min)     | 5 10 20 30 50 65                |
| Tubing                 | Silicone/PharMed BPT/TM-15/SWFT |
| Motor/Power source     | DC geared motor DC 24V          |
| Weight (for reference) | Approx. 260g (depends on motor) |

### [Outline view]



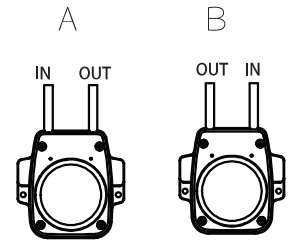
\*L dimension = Refer to the table below.

### [Mounting plate view]



\*Be sure that the motor shaft position is horizontal.

### [Flow direction]



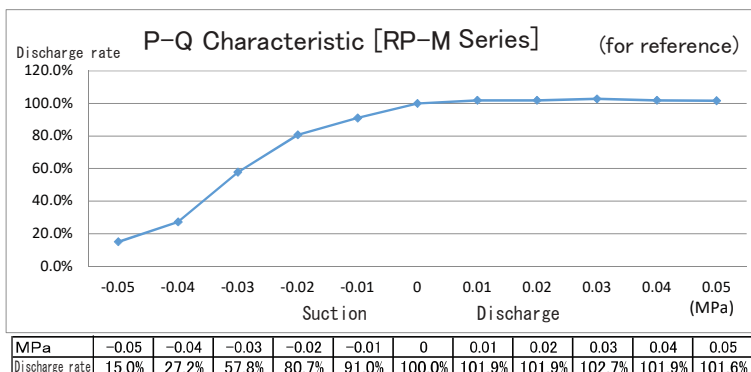
\*Flow direction (IN/OUT) is true when positive side is connected to the terminal marked ⊕ or red spot on the motor.

### Model Lineup

| Model Lineup      | Voltage (DC/V) | Flow rate (mL/min) | Tubing            |              | Remarks        |             |
|-------------------|----------------|--------------------|-------------------|--------------|----------------|-------------|
|                   |                |                    | Type              | ID x OD (mm) | Flow Direction | L Dimension |
| RP-M02S-5Z-DC24V  | 24             | 5                  | Silicone          | 2 x 4        | A              | 30.8        |
| RP-M02F-5Z-DC24V  | 24             | 5                  | PharMed BPT       | 2 x 4        | A              | 30.8        |
| RP-M02W-5Z-DC24V  | 24             | 5                  | Transmaster TM-15 | 2 x 4        | A              | 30.8        |
| RP-M03S-10Z-DC24V | 24             | 10                 | Silicone          | 3 x 5        | A              | 30.8        |
| RP-M03F-10Z-DC24V | 24             | 10                 | PharMed BPT       | 3 x 5        | A              | 30.8        |
| RP-M03W-10Z-DC24V | 24             | 10                 | Transmaster TM-15 | 3 x 5        | A              | 30.8        |
| RP-M03S-20Z-DC24V | 24             | 20                 | Silicone          | 3 x 5        | A              | 30.8        |
| RP-M03F-20Z-DC24V | 24             | 20                 | PharMed BPT       | 3 x 5        | A              | 30.8        |
| RP-M03W-20Z-DC24V | 24             | 20                 | Transmaster TM-15 | 3 x 5        | A              | 30.8        |
| RP-M03S-30Z-DC24V | 24             | 30                 | Silicone          | 3 x 5        | A              | 30.8        |
| RP-M03F-30Z-DC24V | 24             | 30                 | PharMed BPT       | 3 x 5        | A              | 30.8        |
| RP-M03W-30Z-DC24V | 24             | 30                 | Transmaster TM-15 | 3 x 5        | A              | 30.8        |
| RP-M04S-50Z-DC24V | 24             | 50                 | Silicone          | 4 x 6        | B              | 28.3        |
| RP-M04F-50Z-DC24V | 24             | 50                 | PharMed BPT       | 4 x 6        | B              | 28.3        |
| RP-M04W-50Z-DC24V | 24             | 50                 | Transmaster TM-15 | 4 x 6        | B              | 28.3        |
| RP-M04C-50Z-DC24V | 24             | 50                 | SWFT              | 3.9 x 5.8    | B              | 28.3        |
| RP-M04F-70Z-DC24V | 24             | 65                 | PharMed BPT       | 4 x 6        | B              | 28.3        |
| RP-M04W-70Z-DC24V | 24             | 65                 | Transmaster TM-15 | 4 x 6        | B              | 28.3        |
| RP-M04C-70Z-DC24V | 24             | 65                 | SWFT              | 3.9 x 5.8    | B              | 28.3        |

\* PharMed BPT & SWFT are products of Saint-Gobain SA and PharMed BPT was formerly described as PharMed in our brochure.

\* Transmaster TM-15 is product of Mitsubishi Co. Ltd., Japan.



※ Variable by material or ID of tubing.

# Ring Pump®

## RP-G II Series



### Features

- Compact box shape makes it possible to pile up plural G II pumps.
- We have 2G II series which can flow two different liquids by a single pump.

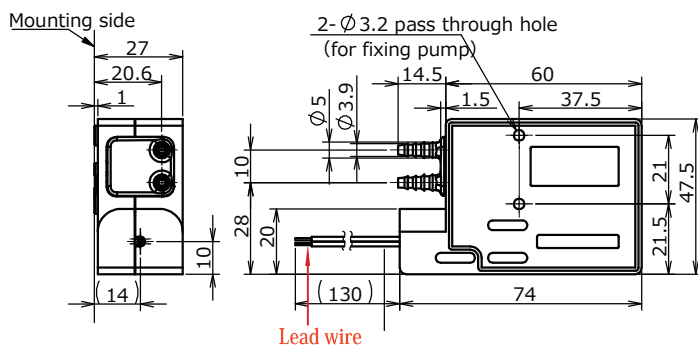
### Examples of application

Automatic washing machine  
Electrolytic water conditioner  
Applications for detergent supply etc.

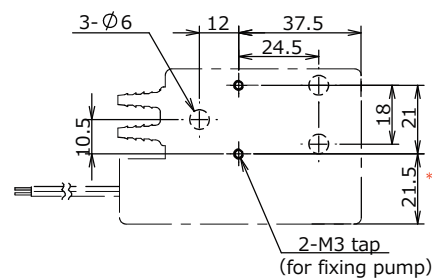
### Main specifications

|                        |                                     |
|------------------------|-------------------------------------|
| Flow rate (mL/min)※    | 10 12 17 20 25 40 45                |
| Tubing                 | Silicone/ PharMed BPT/ Tygon A-60-F |
| Motor/Power source     | DC geared motor DC12V, 24V          |
| Weight (for reference) | Approx. 90g                         |

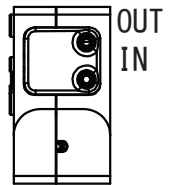
【Outline view】



【Mounting plate view】



【Flow direction】

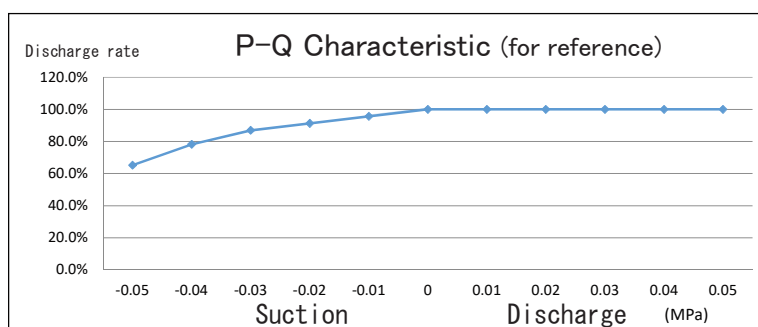


\*Flow direction (IN/OUT) is true when positive side is connected to the red lead wire.

### Model Lineup

| Model Lineup            | Voltage (DC/V) | Flow rate (mL/min) | Tubing       |             |
|-------------------------|----------------|--------------------|--------------|-------------|
|                         |                |                    | Type         | ID x OD(mm) |
| RP-G II 02 S -10Z-DC12V | 12             | 12                 | Silicone     | 2 x 4       |
| RP-G II 02F-10Z-DC24V   | 24             | 10                 | PharMed BPT  | 2 x 4       |
| RP-G II 02F-10Z-DC12V   | 12             | 10                 | PharMed BPT  | 2 x 4       |
| RP-G II 02 S -25Z-DC24V | 24             | 25                 | Silicone     | 2 x 4       |
| RP-G II 02F-25Z-DC24V   | 24             | 25                 | PharMed BPT  | 2 x 4       |
| RP-G II 2.5S-20Z-DC12V  | 12             | 20                 | Silicone     | 2.5 x 4.5   |
| RP-G II 2.5S-40Z-DC24V  | 24             | 40                 | Silicone     | 2.5 x 4.5   |
| RP-G II 2.8N-20Z-DC12V  | 12             | 20                 | Tygon A-60-F | 2.8 x 4.8   |
| RP-G II 2.8N-40Z-DC24V  | 24             | 40                 | Tygon A-60-F | 2.8 x 4.8   |

\* PharMed BPT and Tygon A-60-F are products of Saint-Gobain SA and formerly described as PharMed and Norprene in our brochure.



※ Variable by material or ID of tubing.

# Ring Pump®

## RP-M Series (AC type)



### Features

This is the only series among our product lineup that you can select DC or AC. You have wide range of application.

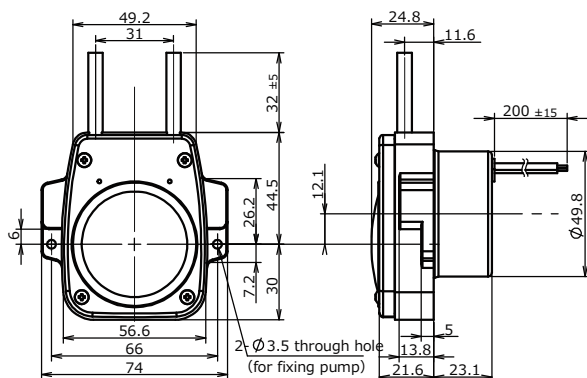
### Examples of application

Automatic washing machine, Electrolytic water conditioner, Air pressure adjuster, Automatic car washer and many other applications for detergent supply etc.

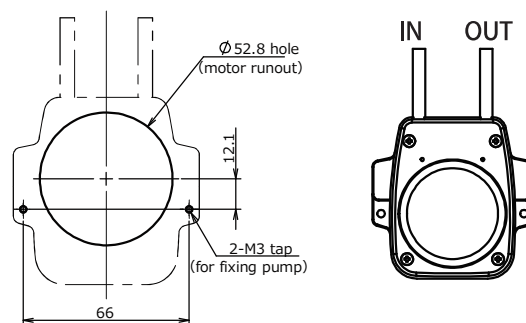
### Main specifications

|                        |                               |
|------------------------|-------------------------------|
| Flow rate (mL/min)     | 5 15 20 35 (at 60Hz)          |
| Tubing                 | Silicone / PharMed BPT / SWFT |
| Motor/Power source     | AC synchronous motor AC 100V  |
| Weight (for reference) | Approx. 200g                  |

### 【Outline view】



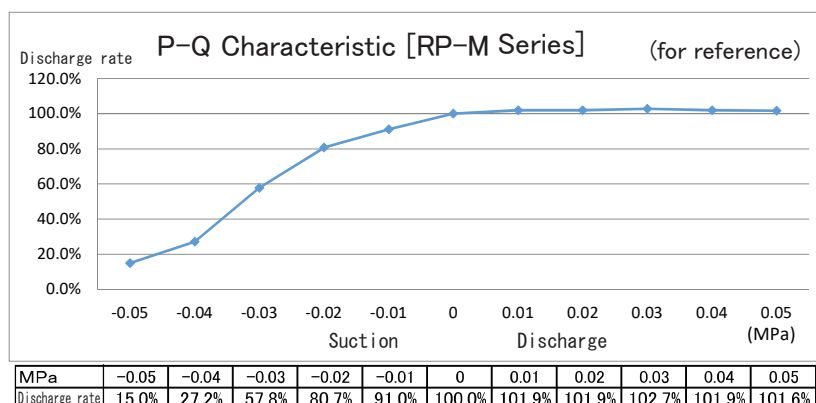
### 【Mounting plate view】 【Flow direction】



### Model Lineup

| Model Lineup       | Voltage (DC/V) | Flow rate (mL/min) |      | Tubing      |              |
|--------------------|----------------|--------------------|------|-------------|--------------|
|                    |                | 50Hz               | 60Hz | Type        | ID x OD (mm) |
| RP-M02S-5Z-AC100V  | 100            | 4.2                | 5    | Silicone    | 2 x 4        |
| RP-M02F-5Z-AC100V  | 100            | 4.2                | 5    | PharMed BPT | 2 x 4        |
| RP-M03S-15Z-AC100V | 100            | 12.5               | 15   | Silicone    | 3 x 5        |
| RP-M03F-15Z-AC100V | 100            | 12.5               | 15   | PharMed BPT | 3 x 5        |
| RP-M04S-20Z-AC100V | 100            | 17                 | 20   | Silicone    | 4 x 6        |
| RP-M04F-20Z-AC100V | 100            | 17                 | 20   | PharMed BPT | 4 x 6        |
| RP-M04C-20Z-AC100V | 100            | 17                 | 20   | SWFT        | 3.9 x 5.8    |
| RP-M04S-35Z-AC100V | 100            | 29                 | 35   | Silicone    | 4 x 6        |
| RP-M04F-35Z-AC100V | 100            | 29                 | 35   | PharMed BPT | 4 x 6        |
| RP-M04C-35Z-AC100V | 100            | 29                 | 35   | SWFT        | 3.9 x 5.8    |

\* PharMed BPT & SWFT are products of Saint-Gobain SA. PharMed BPT was formerly described as PharMed in our brochure.



※ Variable by material or ID of tubing.

# Ring Pump®

## RP-G III Series

### 特徴

#### Features

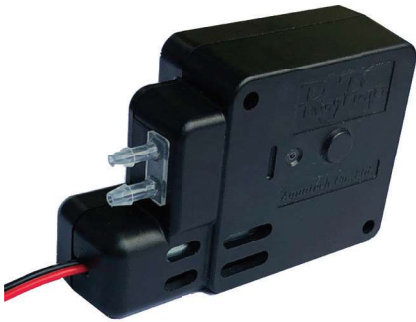
- Unique and compact box shape pump (Worm gear set is employed)
- Flow rate range is rather small and it is in near side to one for series of RP-Q and RP-CIII.
- More choices in selecting tubing.

#### Examples of application

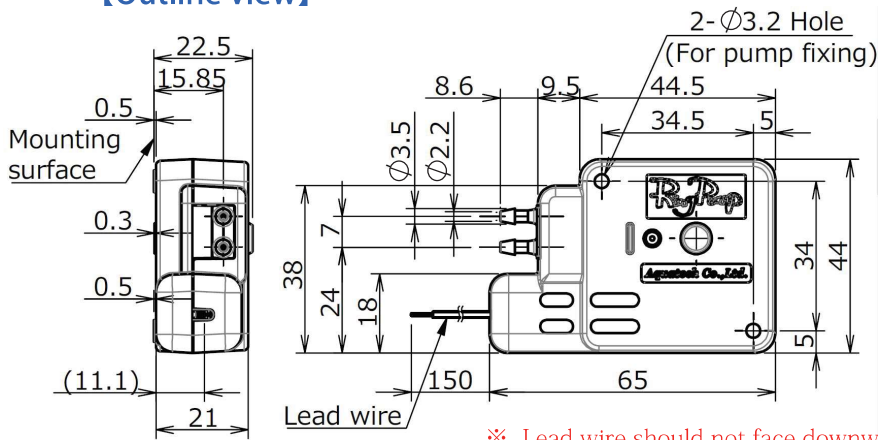
Automatic washing machine  
Electrolytic water conditioner  
Applications for detergent supply etc.

#### Main specifications

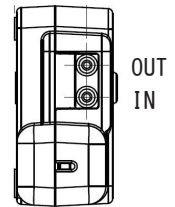
|                        |  |
|------------------------|--|
| Flow rate (mL/min)     | 2.5 - 12 (see Model Lineup)                  |
| Tubing                 | Silicone/PharMed BPT/Versilon F-5500-A/TM-15 |
| Motor/Power source     | DC geared motor DC 3 - 6V                    |
| Weight (for reference) | Approx. 62g                                  |



#### 【Outline view】



#### 【Flow direction】



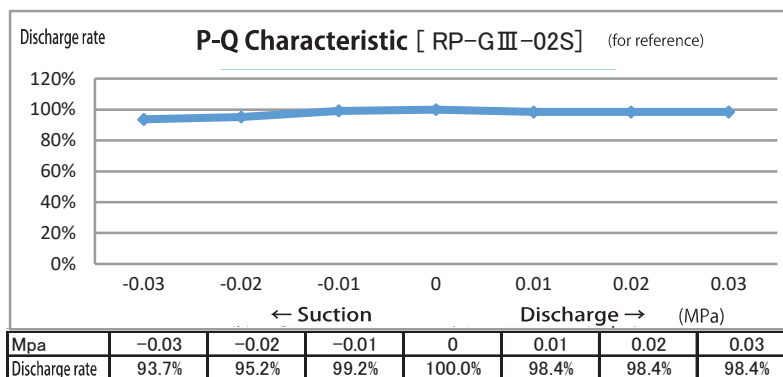
\*Flow direction (IN/OUT) is true when positive side is connected to the red lead wire.

#### Model Lineup

| Model Lineup          | Voltage (DC/V) | Flow rate (mL/min) | Tubing            |              |
|-----------------------|----------------|--------------------|-------------------|--------------|
|                       |                |                    | Type              | ID x OD (mm) |
| RP-GIII02S-12Z-DC6V   | 6              | 12                 | Silicone          | 2 x 4        |
| RP-GIII02S-5Z-DC3V    | 3              | 5                  | Silicone          | 2 x 4        |
| RP-GIII02F-10Z-DC6V   | 6              | 10                 | PharMed BPT       | 2 x 4        |
| RP-GIII02F-4P5Z-DC3V  | 3              | 4.5                | PharMed BPT       | 2 x 4        |
| RP-GIII1.6F-6P5Z-DC6V | 6              | 6.5                | PharMed BPT       | 1.6 x 3.2    |
| RP-GIII1.6F-2P5Z-DC3V | 3              | 2.5                | PharMed BPT       | 1.6 x 3.2    |
| RP-GIII1.6R-8Z-DC6V   | 6              | 8                  | Versilon F-5500-A | 1.6 x 3.2    |
| RP-GIII1.6R-3P2Z-DC3V | 3              | 3.2                | Versilon F-5500-A | 1.6 x 3.2    |
| RP-GIII1.6W-7Z-DC6V   | 6              | 7                  | Transmaster TM-15 | 1.6 x 3.2    |
| RP-GIII1.6W-3Z-DC3V   | 3              | 3                  | Transmaster TM-15 | 1.6 x 3.2    |

\* PharMed BPT and Versilon F-5500-A are products of Saint-Gobain SA and formerly described as PharMed and Fluran in our brochure.

\* Transmaster TM-15 is product of Mitsubishi Co., Ltd., Japan



※ Variable by material or ID of tubing.

**New !**

# Ring Pump®

## RP-H series

**Being compatible with various motors, wider variety of choices became available.**

### Features

- **High reliability specifications.**  
By adopting needle roller bearing for output shaft, we could achieve 5,000 hours of continuous operation.  
(5,000 hours is our experimental value, except for brushed DC motor, using water and it is not guaranteed value.)
- **Various motor specifications to suit your own application.**
  - Brushed DC motor
  - Brushless DC motor
  - Stepper motor
- **Pumphead is replaceable.**  
Docking of pumphead can be done quite easily in a single action by adopting strong magnet.
- **Pumphead can be sterilized.**
  - Autoclave sterilization 10 times at 121°C x 25 min.  
(Except pumphead with TM-15 tubing.)
  - γ ray sterilization (25kGy)
- **Tubings can be selected from 6 types.**

### Main specifications

| Motor type →           | Brushed DC  | Brushless DC   | Stepper                                |
|------------------------|---|--|--|
| Flow rate              | 2 - 10 mL /min  | 2 - 10 mL /min   | 20 μL-10mL/min                         |
| Motor / Power source   | DC24V<br>(Variable:DC6 - 24V)                                     | DC24V<br>(PWM-Duty cycle<br>30 - 100% variable)          | DC5V<br>(1 - 400PPS;<br>0.25 - 100rpm) |
| Tubing                 | Silicone<br>PharMed BPT<br>Versilon F-5500-A<br>Transmaster TM-15 | φ1.6 x φ3.2<br>φ1.6 x φ3.2<br>φ1.6 x φ3.2<br>φ1.6 x φ3.2 | φ2.0 x 4.0<br>φ2.0 x 4.0               |
| Weight (for reference) | approx. 350 g   | approx. 345 g  | approx. 285 g                          |

### Examples of application

Analytical instruments, medical devices, cell culturing experiments and many other usage where micro-fluidic control is needed.



RP-H pump with brush motor



RP-H pump with brushless motor



RP-H pump with stepper motor



Pumphead is detached from the pump with stepper motor.

We recommend to use **RE-C700** motor controller which is dedicated to use with RP-H pumps of stepper motor type.



### Lineup

|                    | Model Lineup       | Voltage (DC/V) | Flow rate (mL/min) | Tubing            |             | Model of pumphead |
|--------------------|--------------------|----------------|--------------------|-------------------|-------------|-------------------|
|                    |                    |                |                    | Type              | ID x OD(mm) |                   |
| Brushed DC motor   | RP-H02S-10Z-DC24V  | 24             | 3 - 10             | Silicone          | 2.0 x 4.0   | RK-H02S           |
|                    | RP-H02F-10Z-DC24V  | 24             | 3 - 10             | PharMed BPT       | 2.0 x 4.0   | RK-H02F           |
|                    | RP-H1.6S-7Z-DC24V  | 24             | 2 - 7              | Silicone          | 1.6 x 3.2   | RK-H1.6S          |
|                    | RP-H1.6F-7Z-DC24V  | 24             | 2 - 7              | PharMed BPT       | 1.6 x 3.2   | RK-H1.6F          |
|                    | RP-H1.6R-7Z-DC24V  | 24             | 2 - 7              | Versilon F-5500-A | 1.6 x 3.2   | RK-H1.6R          |
|                    | RP-H1.6W-7Z-DC24V  | 24             | 2 - 7              | TransmasterTM-15  | 1.6 x 3.2   | RK-H1.6W          |
| Brushless DC motor | RP-H02S-10Z-DC24VL | 24             | 3 - 10             | Silicone          | 2.0 x 4.0   | RK-H02S           |
|                    | RP-H02F-10Z-DC24VL | 24             | 3 - 10             | PharMed BPT       | 2.0 x 4.0   | RK-H02F           |
|                    | RP-H1.6S-7Z-DC24VL | 24             | 2 - 7              | Silicone          | 1.6 x 3.2   | RK-H1.6S          |
|                    | RP-H1.6F-7Z-DC24VL | 24             | 2 - 7              | PharMed BPT       | 1.6 x 3.2   | RK-H1.6F          |
|                    | RP-H1.6R-7Z-DC24VL | 24             | 2 - 7              | Versilon F-5500-A | 1.6 x 3.2   | RK-H1.6R          |
|                    | RP-H1.6W-7Z-DC24VL | 24             | 2 - 7              | TransmasterTM-15  | 1.6 x 3.2   | RK-H1.6W          |
| Stepper motor      | RP-H02S-10Z-DC5VS  | 5              | (30 μL) - 10       | Silicone          | 2.0 x 4.0   | RK-H02S           |
|                    | RP-H02F-10Z-DC5VS  | 5              | (30 μL) - 10       | PharMed BPT       | 2.0 x 4.0   | RK-H02F           |
|                    | RP-H1.6S-7Z-DC5VS  | 5              | (20 μL) - 7        | Silicone          | 1.6 x 3.2   | RK-H1.6S          |
|                    | RP-H1.6F-7Z-DC5VS  | 5              | (20 μL) - 7        | PharMed BPT       | 1.6 x 3.2   | RK-H1.6F          |
|                    | RP-H1.6R-7Z-DC5VS  | 5              | (20 μL) - 7        | Versilon F-5500-A | 1.6 x 3.2   | RK-H1.6R          |
|                    | RP-H1.6W-7Z-DC5VS  | 5              | (20 μL) - 7        | TransmasterTM-15  | 1.6 x 3.2   | RK-H1.6W          |

PharMed BPT, Versilon : Product of Saint-Gobain SA  
(Transmaster) TM-15 : Product of Mitsuboshi, Japan

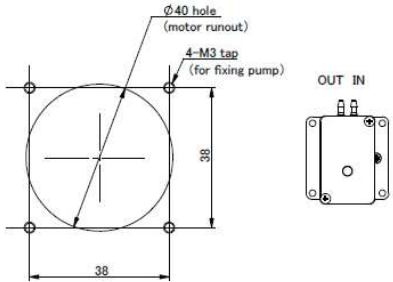
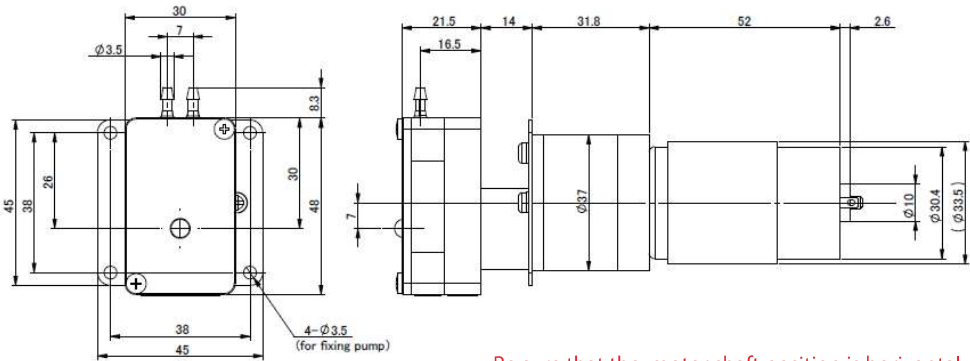
# Outline views of the pumps with different motors.

Outline view

Mounting plate view

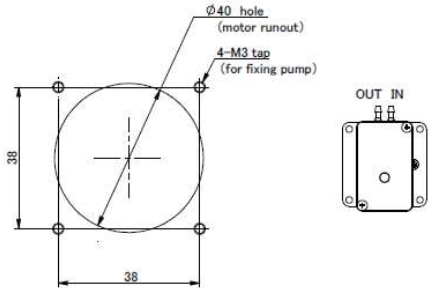
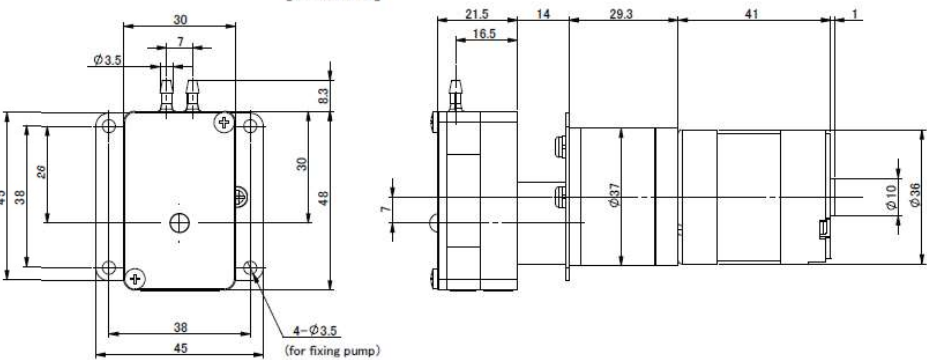
Flow direction  
in CW revolution

RP-H pump with  
brushed motor

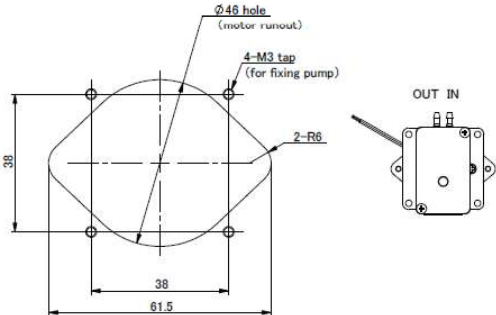
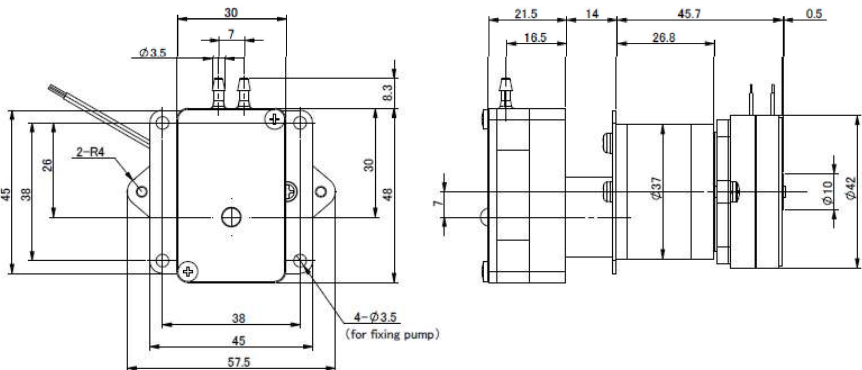


Be sure that the motor shaft position is horizontal.

RP-H pump with  
brushless motor



RP-H pump with  
stepper motor



# Ring Pump®

**Pumphead is detachable !**

## RP-Q II Series      RP-Q III Series



### Features

- We have newly developed new series of RP-Q series, which has replaceable pump head that has been requested by many customers.
- RP-QIII series has mounting holes.
- Newly added RP-Q II A and RP-Q III A achieved the highest flow rate as 3mL/min.

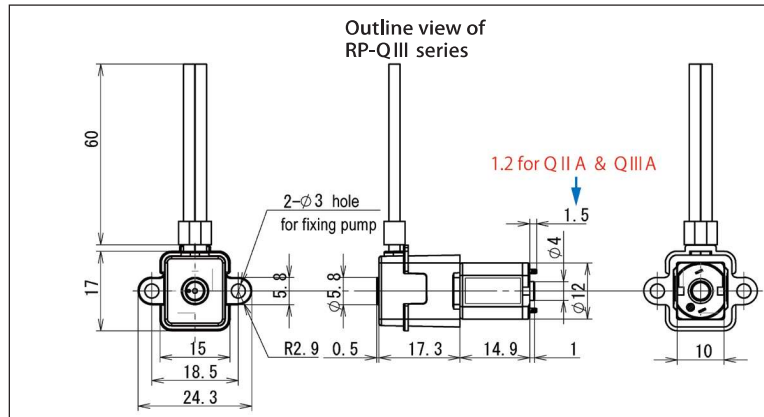
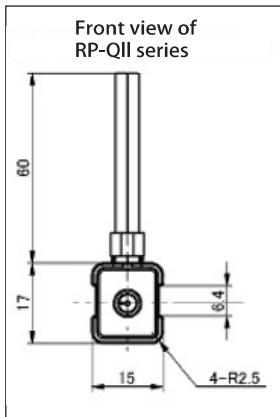
### Examples of application

Analytical instruments, medical devices, fuel cell and many other usage where micro-fluidic control is needed.

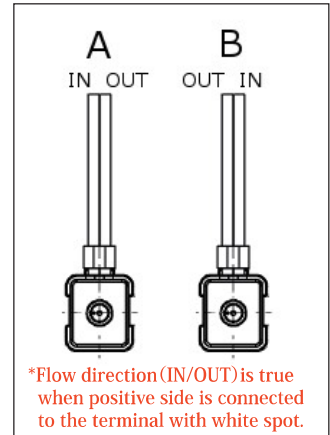
### Main specifications

|                        |  |
|------------------------|--|
| Flow rate (mL/min)     | Q II : 0.45 0.9    Q IIX: 1.2 2.2<br>Q II A: 3.0 (Same for Q III series) |
| Tubing                 | Silicone / SWFT  |
| Motor/Power source     | DC geared motor    DC 3V   |
| Weight (for reference) | Approx. 13g  |

### [Outline view]



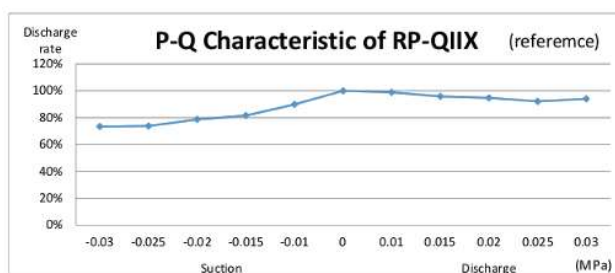
### [Flow direction]



### Model Lineup

| Model Lineup             | Voltage (DC/V) | Flow rate (mL/min) | Tubing   |              | Flow Direction |
|--------------------------|----------------|--------------------|----------|--------------|----------------|
|                          |                |                    | Type     | ID x OD (mm) |                |
| RP-Q II 1.5S-P90Z-DC3V   | 3              | 0.90               | Silicone | 1.5 x 2.5    | A              |
| RP-Q II 1.2C-P45Z-DC3V   | 3              | 0.45               | SWFT     | 1.2 x 2.5    |                |
| RP-Q II X1.5S-2P2Z-DC3V  | 3              | 2.20               | Silicone | 1.5 x 2.5    | B              |
| RP-Q II X1.2C-1P2Z-DC3V  | 3              | 1.20               | SWFT     | 1.2 x 2.5    |                |
| RP-Q III 1.5S-P90Z-DC3V  | 3              | 0.90               | Silicone | 1.5 x 2.5    | A              |
| RP-Q III 1.2C-P45Z-DC3V  | 3              | 0.45               | SWFT     | 1.2 x 2.5    |                |
| RP-Q III X1.5S-2P2Z-DC3V | 3              | 2.20               | Silicone | 1.5 x 2.5    | B              |
| RP-Q III X1.2C-1P2Z-DC3V | 3              | 1.20               | SWFT     | 1.2 x 2.5    |                |
| RP-Q II A 1.5S-3Z-DC3V   | 3              | 3.00               | Silicone | 1.5 x 2.5    | B              |
| RP-Q III A 1.5S-3Z-DC3V  | 3              | 3.00               | Silicone | 1.5 x 2.5    |                |

\* SWFT is product of Saint-Gobain SA



| Mpa            | Suction |        |       |        |       | Discharge |      |       |      |       |      |
|----------------|---------|--------|-------|--------|-------|-----------|------|-------|------|-------|------|
|                | -0.03   | -0.025 | -0.02 | -0.015 | -0.01 | 0         | 0.01 | 0.015 | 0.02 | 0.025 | 0.03 |
| Discharge rate | 73%     | 74%    | 79%   | 82%    | 90%   | 100%      | 99%  | 96%   | 95%  | 92%   | 94%  |

※ Variable by material or ID of tubing.

# Ring Pump®

## RP-C III Series

### Features

- Small in size and in flow rate among multi-purpose pumps in our lineup.
- Pump head including tube is replaceable and you have wide range of usage.

### Examples of application

Analytical instruments, medical devices, ink jet printer and many other usage where micro-fluidic control is needed.



### Main specifications

|                        |  |
|------------------------|--|
| Flow rate (mL/min)     | 1.6 2.8                                |
| Tubing                 | Silicone/PharMed BPT/Versilon F-5500-A |
| Motor/Power source     | DC geared motor DC3V 5V                |
| Weight (for reference) | Approx. 30g                            |

Pump head is replaceable easily without screw.

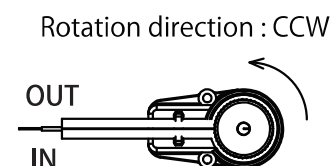
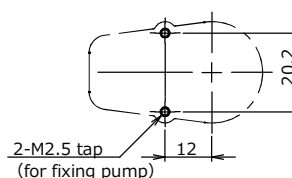
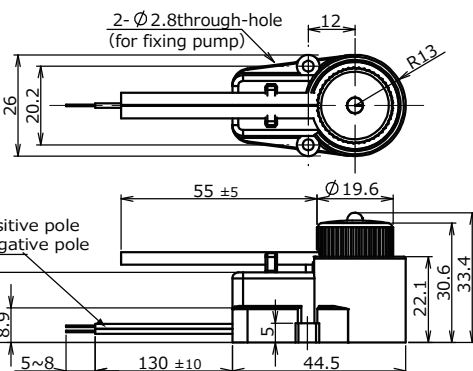
### 【Outline view】

### 【Mounting plate view】

### 【Flow direction】



Lead wire  
Red : Positive pole  
Black : Negative pole



### IMPORTANT !!

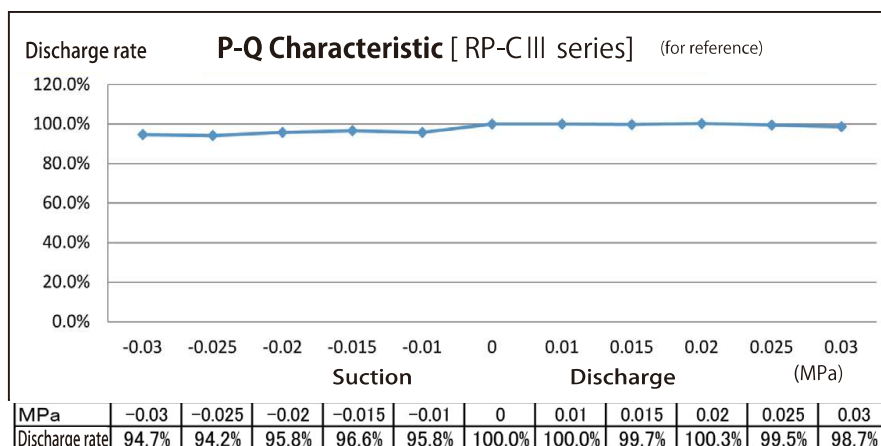
Connect "red" lead wire to positive pole and "black" one to negative pole. If you connect properly, flow direction is as shown in above illustration.

If you connect to opposite pole, it may cause troubles such as flow failure.

### Model Lineup

| Model Lineup          | Voltage (DC/V) | Flow rate (mL/min) | Tubing            |              | Variable range of voltage | Model of pump head |
|-----------------------|----------------|--------------------|-------------------|--------------|---------------------------|--------------------|
|                       |                |                    | Type              | ID x OD (mm) |                           |                    |
| RP-C III 1.6S-2Z-DC3V | 3              | 1.6                | Silicone          | 1.6 x 3.2    | 3V - 5V                   | RK-C III 1.6S      |
| RP-C III 1.6F-2Z-DC3V | 3              | 1.6                | PharMed BPT       | 1.6 x 3.2    |                           | RK-C III 1.6F      |
| RP-C III 1.6R-2Z-DC3V | 3              | 1.6                | Versilon F-5500-A | 1.6 x 3.2    |                           | RK-C III 1.6R      |
| RP-C III 1.6S-3Z-DC5V | 5              | 2.8                | Silicone          | 1.6 x 3.2    | 3V - 5V                   | RK-C III 1.6S      |
| RP-C III 1.6F-3Z-DC5V | 5              | 2.8                | PharMed BPT       | 1.6 x 3.2    |                           | RK-C III 1.6F      |
| RP-C III 1.6R-3Z-DC5V | 5              | 2.8                | Versilon F-5500-A | 1.6 x 3.2    |                           | RK-C III 1.6R      |

\* PharMed BPT and Versilon F-5500-A are products of Saint-Gobain SA and formerly described as PharMed and Fluran in our brochure.



\* Variable by material or ID of tubing.



## RP-Q & QX Series



### Features

- Very small and light weight peristaltic pump became available by our original and unique Ring Pump technology. Its applications are increasing rapidly even in the space developments such as in NASA, JAXA etc.

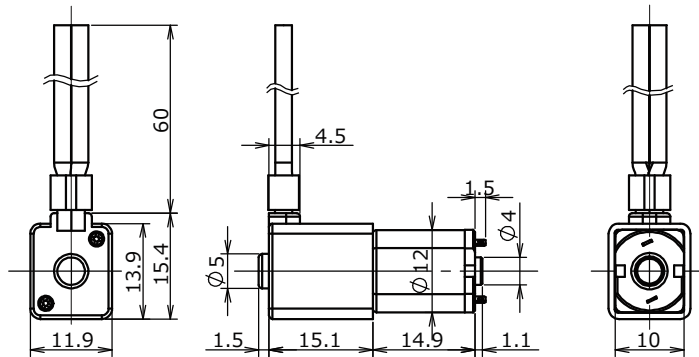
### Examples of application

Analytical instruments, medical devices, fuel cell and many other usage where micro-fluidic control is needed.

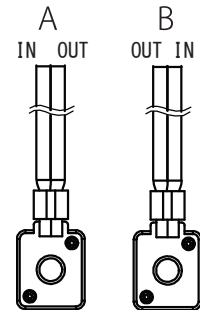
### Main specifications

|                        |                                |
|------------------------|--------------------------------|
| Flow rate (mL/min)     | Q: 0.20 0.45 QX: 0.5 1.1       |
| Tubing                 | Silicone / Tygon A-60-F / SWFT |
| Motor/Power source     | DC geared motor DC 3V          |
| Weight (for reference) | Approx. 11g                    |

### [Outline view]



### [Flow direction]

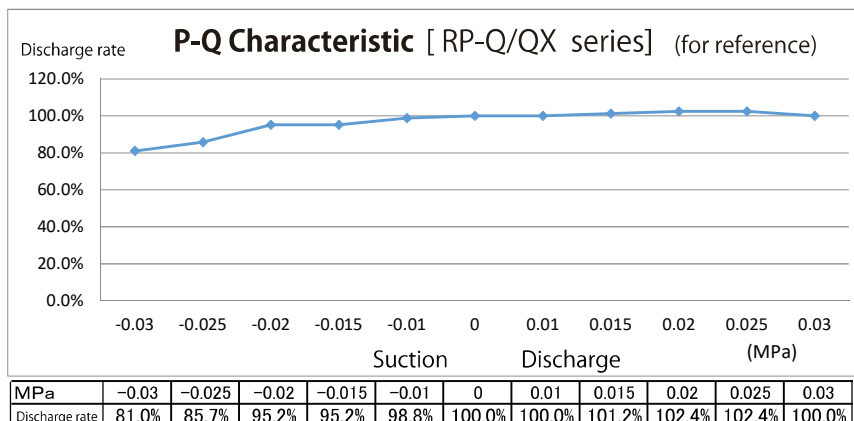


\*Flow direction (IN/OUT) is true when positive side is connected to the terminal with white spot.

### Model Lineup

| Model Lineup        | Voltage (DC/V) | Flow rate (mL/min) | Tubing       |              | Flow Direction |
|---------------------|----------------|--------------------|--------------|--------------|----------------|
|                     |                |                    | Type         | ID x OD (mm) |                |
| RP-Q1.5S-P45Z-DC3V  | 3              | 0.45               | Silicone     | 1.5 x 2.5    | A              |
| RP-Q1.2N-P20Z-DC3V  | 3              | 0.20               | Tygon A-60-F | 1.2 x 2.5    |                |
| RP-Q1.2C-P20Z-DC3V  | 3              | 0.20               | SWFT         | 1.2 x 2.5    |                |
| RP-QX1.5S-1Z-DC3V   | 3              | 1.10               | Silicone     | 1.5 x 2.5    | B              |
| RP-QX1.2N-P50Z-DC3V | 3              | 0.50               | Tygon A-60-F | 1.2 x 2.5    |                |
| RP-QX1.2C-P50Z-DC3V | 3              | 0.50               | SWFT         | 1.2 x 2.5    |                |

\* Tygon A-60-F and SWFT are products of Saint-Gobain SA. Tygon-A-60-F was formerly described as Norprene in our brochure.

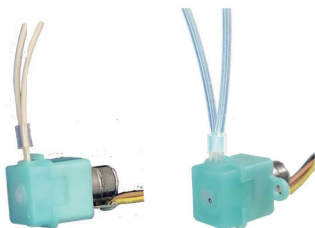


※ Variable by material or ID of tubing.

**New !!**  
**Stepper motor drive**

**Ring Pump®**

# Stepper motor type of RP-Q II / RP-Q III series



RP-Q II B/C series    RP-Q III B/C series

## Features

- We are introducing stepper motor type of RP-Q II and RP-Q III which are pump head replaceable, according to the strong requests from many of our customers.
- All the specifications and functions are same between RP-QII series and RP-QIII series. The only difference is that RP-QIII series has mounting holes which is useful for some customers.
- Pump head can be sterilized.  
 \* By autoclave : 121°C 25 minutes (Available only for silicone tubing)    \*By Gamma rays : 15 kGy etc.

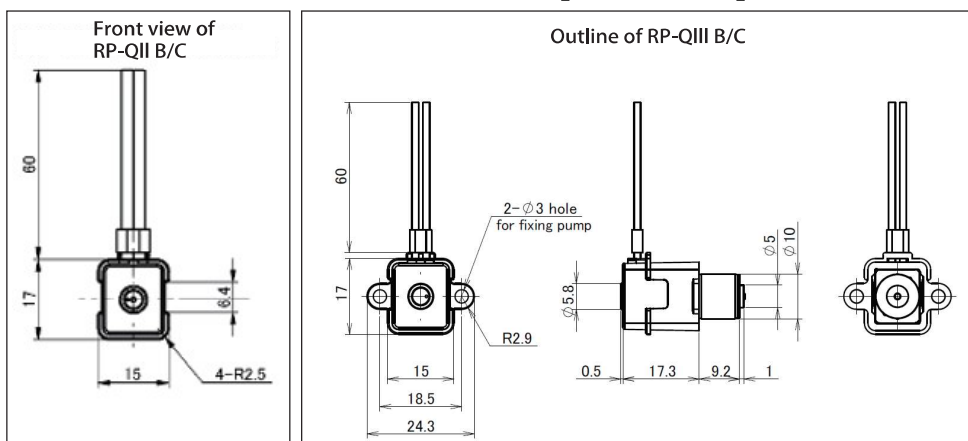


When the pump head is detached.

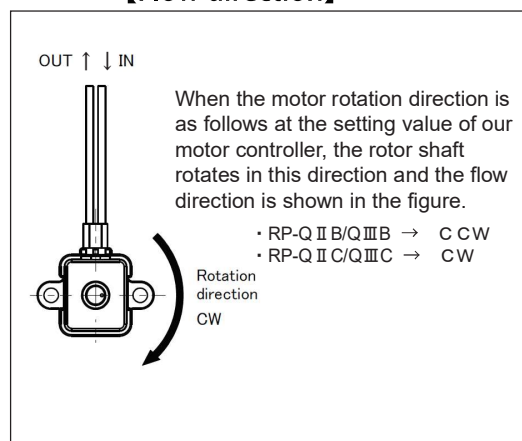
## Recommended application

Analytical instruments, medical devices, fuel cell and many other usage.  
 Recently, such applications as cell culturing are growing where micro-fluidic control is indispensable.  
 By using with our separately sold programmable motor controllers such as RE-C500/C501, and RE-C600, you can realize wide range of flow control.

### 【Outline view】



### 【Flow direction】

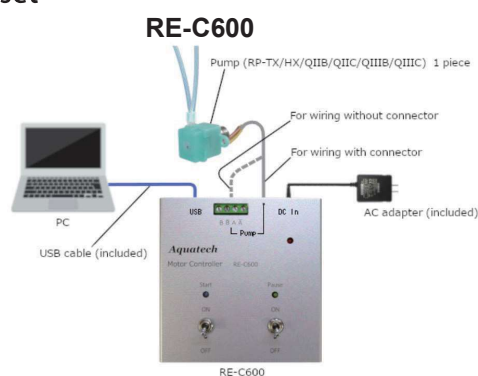
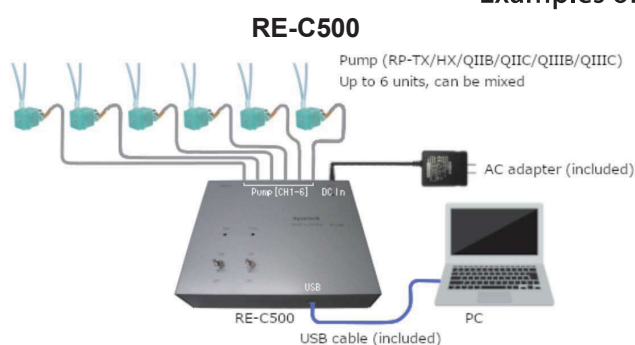


## Model Lineup

| Model Lineup              | Gear ratio                        | Voltage ( DC/V ) | Flow rate ( mL/min ) | Tubing      |              |
|---------------------------|-----------------------------------|------------------|----------------------|-------------|--------------|
|                           |                                   |                  |                      | Type        | ID x OD (mm) |
| RP-Q II C1.5S-1P1A-DC3VS  | 1/50                              | 2.6 - 3.3        | 3 - 1100             | Silicone    | 1.5 x 2.5    |
| RP-Q III C1.5S-1P1A-DC3VS | 1/50                              | 2.6 - 3.3        | 3 - 1100             | Silicone    | 1.5 x 2.5    |
| RP-Q II BP5S-P06A-DC3VS   | 1/150                             | 2.6 - 3.3        | 0.06 - 60            | Silicone    | 0.5 x 1.5    |
| RP-Q II BP5F-P06A-DC3VS   | 1/150                             | 2.6 - 3.3        | 0.06 - 60            | PharMed BPT | 0.5 x 1.5    |
| RP-Q III BP5S-P06A-DC3VS  | 1/150                             | 2.6 - 3.3        | 0.06 - 60            | Silicone    | 0.5 x 1.5    |
| RP-Q III BP5F-P06A-DC3VS  | 1/150                             | 2.6 - 3.3        | 0.06 - 60            | PharMed BPT | 0.5 x 1.5    |
| Motor controller          | RE-C200/C201 at: 1~1000 PPS Drive |                  |                      |             |              |

## PC controllable new motor controller

### Examples of application set





# Ring Pump®

## RP-TX Series



### Features

- The world smallest level flow rate.
- Wide range of flow levels are possible by using different pumpheads.
- Docking of the pumphead can be done easily by using three screws.
- Autoclave sterilizable pumphead is available.

### Examples of application

Analytical instruments, medical devices, cell culturing experiments and many other usages where micro-fluidic control is needed.

### Main specifications

|   |                              |
|---|------------------------------|
| Flow rate ( $\mu\text{L}/\text{min}$ )* | 0.03 - 40                    |
| Tubing                                  | Silicone, PharMed BPT        |
| Motor/Power source                      | Stepper motor DC 3V          |
| Weight (for reference)                  | Approx. 9g (Varies by motor) |

\* Flow rate is at revolution speed 1 - 1,000 pps (1/4 micro step).

### Replaceable Pumphead Motor Controller



Replaceable pumphead  
ARTBS0.5X1.5-K



Replaceable pumphead  
ARTBS0.5X1.5-K5  
**Autoclave sterilizable**



RE-F100  
RE-C100  
Motor controller and display  
for RP-TX pumps

### PC Programmable Motor Controller



RE-C200



RE-C500



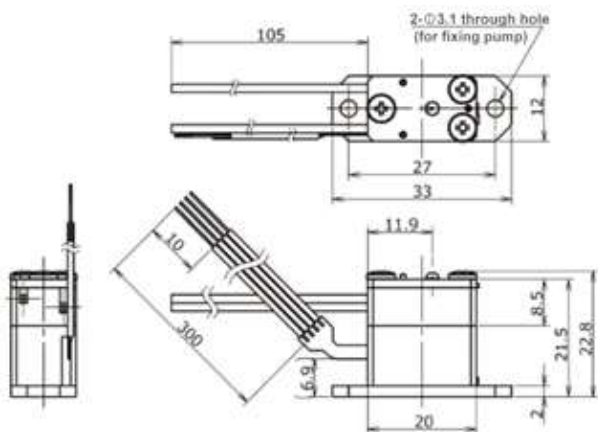
RE-C600

- \* You can control one pump with RE-C200.
- \* RE-C200 can be connected with two sets of slave controller RE-C201 and each set can control 4 pumps. Thus, maximum 9 pumps can be controlled by the set of one RE-C200 and two RE-201.
- \* Mixture of different pumps is possible.

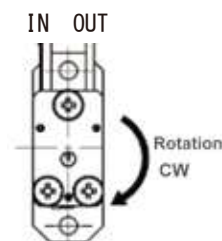
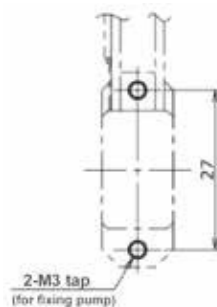
- \* You can control 6 pumps with RE-C500.
- \* RE-C500 can be connected with one set of RE-C501 which can control 6 pumps. Thus, maximum 12 pumps can be controlled by each one set of RE-C500 and RE-501.
- \* Each operation sequence of the pump can be programmed and by storing the program data in the RE-C500, the pump can be driven without a PC connection.
- \* Mixture of different pumps is possible.

- \* You can control one pump with RE-C600.
- \* Can be stopped at a specified number of revolutions up to 30 times, enabling fixed volume dispensing operation at a specified multiple of the dispensing volume per revolution.
- \* Each operation sequence of the pump can be programmed and by storing the program data in the RE-C600, the pump can be driven without a PC connection.
- \* Both pumps with and without connector of motor wiring are applicable.

### Outline view



### Mounting plate view Flow direction in CW revolution



### Model Lineup

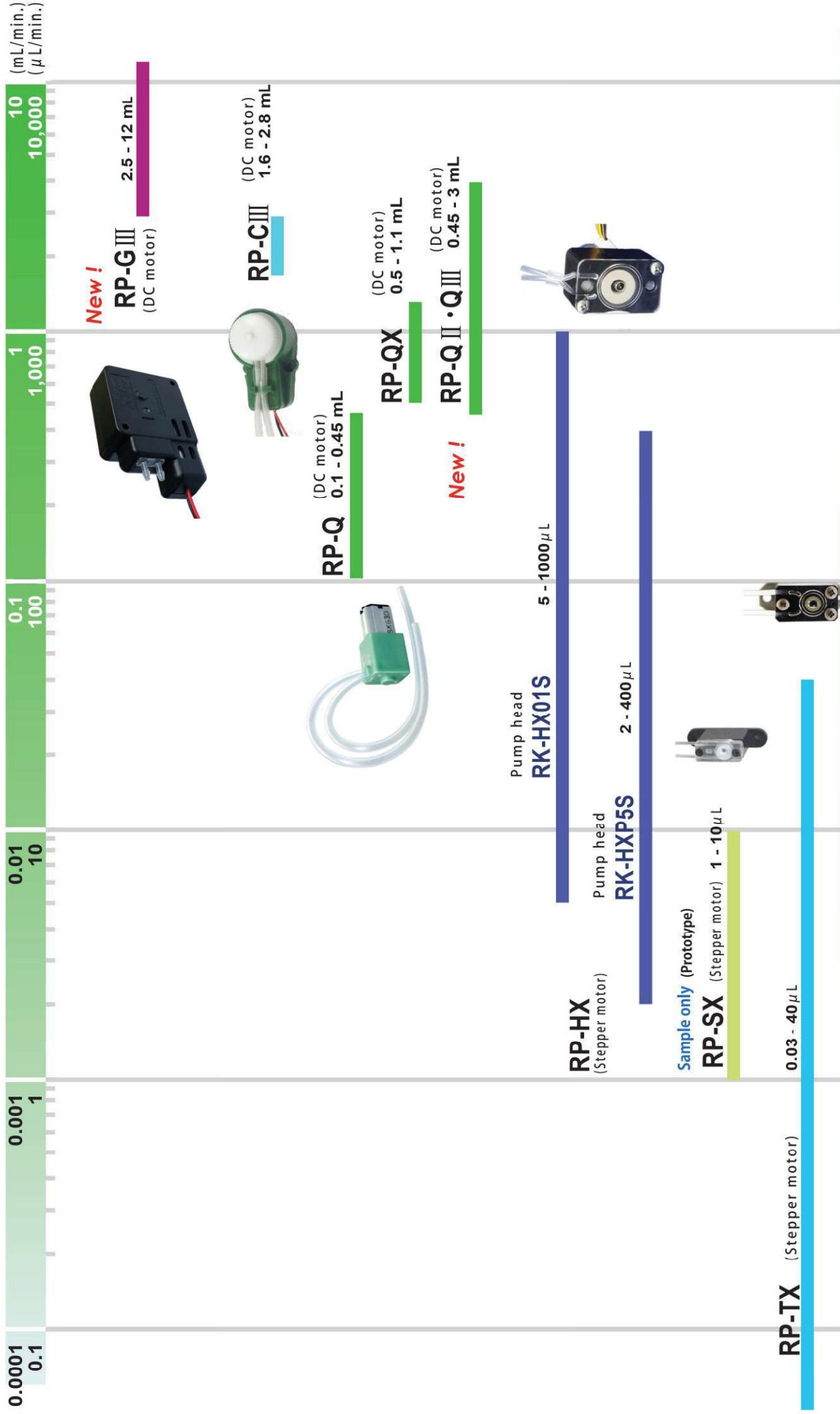
| Model Lineup        | Pumphead         | Autoclave sterilization | Connector      | Flow rate ( $\mu\text{L}/\text{min}$ ) | Tubing   |              |
|---------------------|------------------|-------------------------|----------------|--|----------|--------------|
|                     |                  |                         | Cord length    |  | Type     | ID x OD (mm) |
| RP-TXP5S-P04A-DC3VS | AR-TBS0.5X1.5-K  | No                      | No connector   | 0.03 - 40                              | Silicone | 0.5 x 1.5    |
| RP-TXP5F-P03A-DC3VS | AR-TBF0.5X1.5-K  |                         | No connector   |  |          |              |
| RP-TXP5S-P04L-DC3VS | AR-TBS0.5X1.5-K5 | Yes                     | No connector   | 0.03 - 40                              | Silicone | 0.5 x 1.5    |
| RP-TXP5S-P04Q-DC3VS | AR-TBS0.5X1.5-K  | No                      | With connector |  |          |              |
| RP-TXP5S-P04R-DC3VS | AR-TBS0.5X1.5-K  |                         | With connector | 0.03 - 40                              | Silicone | 0.5 x 1.5    |
| RP-TXP5S-P04S-DC3VS | AR-TBS0.5X1.5-K5 | Yes                     | With connector |  |          |              |

\* PharMed BPT is product of Saint-Gobain SA and formerly described as PharMed in our brochure.

- \* 1. Select pumps with connector when you wish to control them by motor controller RE-C500/C501.
- \* 2. Pumps without connector can be controlled by motor controller RE-C200/C201/C100.
- \* 3. Motor controller RE-C600 can control pumps both with and without connector.

# Line-up of Micro Ring Pump

(Customised products are included)



**New !!**

# Ring Pump®

## RP-K II Series For "Fixed Flow Rate" Pump System



### Features

- Simple design and tough pump.
- You can select fixed flow rate from 5mL to 150 mL and select tubing from 3 kinds of materials.

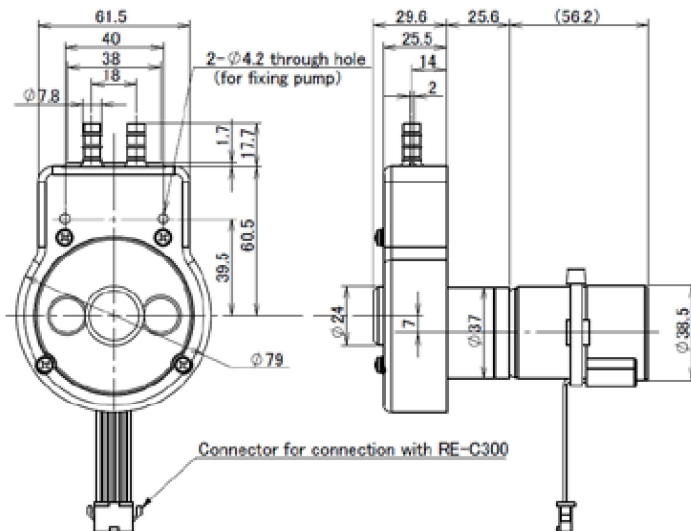
### Examples of application

Automatic washing machine, Electrolytic water conditioner, Air pressure adjuster, Automatic car washer and many other applications for detergent supply etc.

### Main specifications

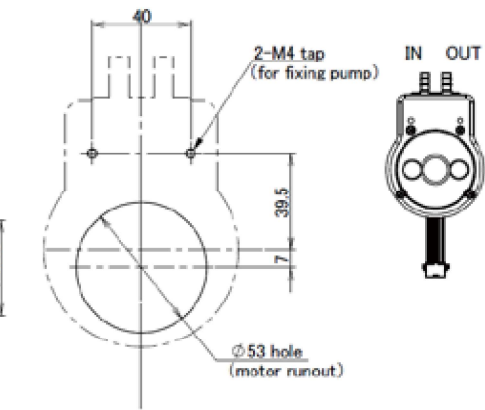
|                        |                           |
|------------------------|---------------------------|
| Flow rate              | Max. 150mL / 5mL - Step   |
| Tubing                 | Silicone/ Norprene/ TM-15 |
| Motor/Power source     | DC 24V                    |
| Material of main parts | Base : Iron Case : PP     |
| Weight (for reference) | Approx. 415g              |

【Outline view】



【Mounting plate view】

【Flow direction】



Be sure that the motor shaft position is horizontal.

### Model Lineup

| Model Lineup            | Voltage (DC/V) | Flow rate (Max. mL) | Tubing       |              | Product name of Pump system |
|-------------------------|----------------|---------------------|--------------|--------------|-----------------------------|
|                         |                |                     | Type         | ID x OD (mm) |                             |
| RP-K II 05S-150A-DC24VE | 24             | 150                 | Silicone (S) | 4.8 x 8.0    | RE-C300-K II 05S            |
| RP-K II 05N-150A-DC24VE | 24             | 150                 | Norprene (N) | 4.76 x 7.94  | RE-C300-K II 05N            |
| RP-K II 05W-150A-DC24VE | 24             | 150                 | TM-15 (W)    | 4.8 x 7.9    | RE-C300-K II 05W            |

Motor controller RE-C300



Display panel of PC software



**New !!**

# Ring Pump®

## RP-H II Series For "Fixed Flow Rate" Pump System



### Features

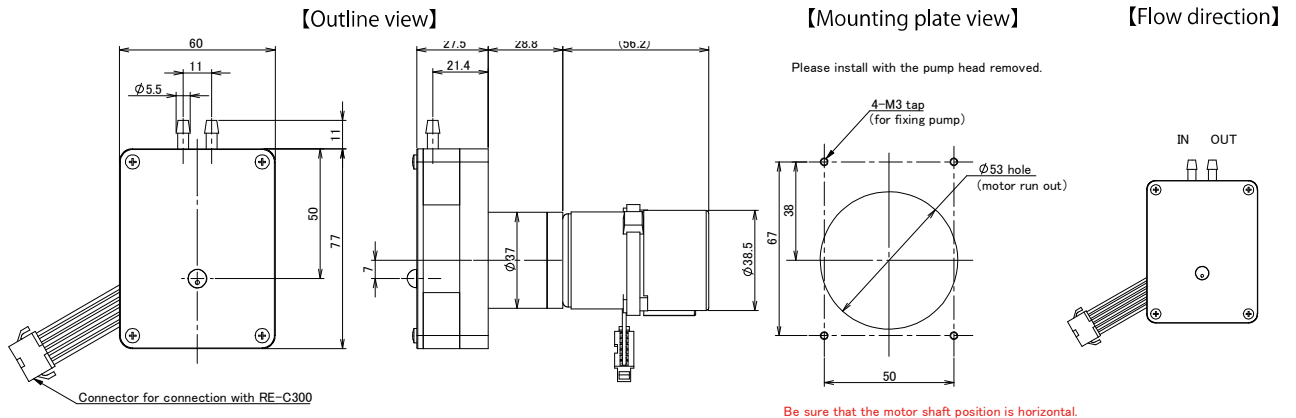
- High flow rate type
- Pump head is replaceable and the docking of pump head can be done in a single action. No screw bolt needed.
- Pump head can be sterilized.  
\* By autoclave : 121°C 25 minutes  
Gamma rays : 25 kGy etc.
- You can select tubing from 4 kinds of materials.

### Main specifications

|                        |                             |
|------------------------|-----------------------------|
| Flow rate              | Max. 70mL / 1.0mL - Step    |
| Tubing                 | Silicone/Pharmed/TM-15/SWFT |
| Motor/Power source     | DC 24V                      |
| Material of main parts | Base, Case, Cover : PBT     |
| Weight (for reference) | Approx. 360g                |

### Examples of application

Analytical instruments, medical devices, cell culturing experiments and many other usage where micro-fluidic control is needed.



### Model Lineup

| Model Lineup           | Voltage (DC/V) | Flow rate (Max. mL) | Tubing       |              | Product name of Pump system |
|------------------------|----------------|---------------------|--------------|--------------|-----------------------------|
|                        |                |                     | Type         | ID x OD (mm) |                             |
| RP-H II 04S-70A-DC24VE | 24             | 70                  | Silicone (S) | 4 x 6        | RE-C300-H II 04S            |
| RP-H II 04F-70A-DC24VE | 24             | 70                  | PharMed (F)  | 4 x 6        | RE-C300-H II 04F            |
| RP-H II 04W-70A-DC24VE | 24             | 70                  | TM-15 (W)    | 4 x 6        | RE-C300-H II 04W            |
| RP-H II 04C-70A-DC24VE | 24             | 70                  | SWFT (C)     | 3.9 x 5.8    | RE-C300-H II 04C            |

### Motor controller RE-C300



### Display panel of PC software



**New !!**

# Ring Pump®

## RP-M Series

## For "Fixed Flow Rate" Pump System



### Features

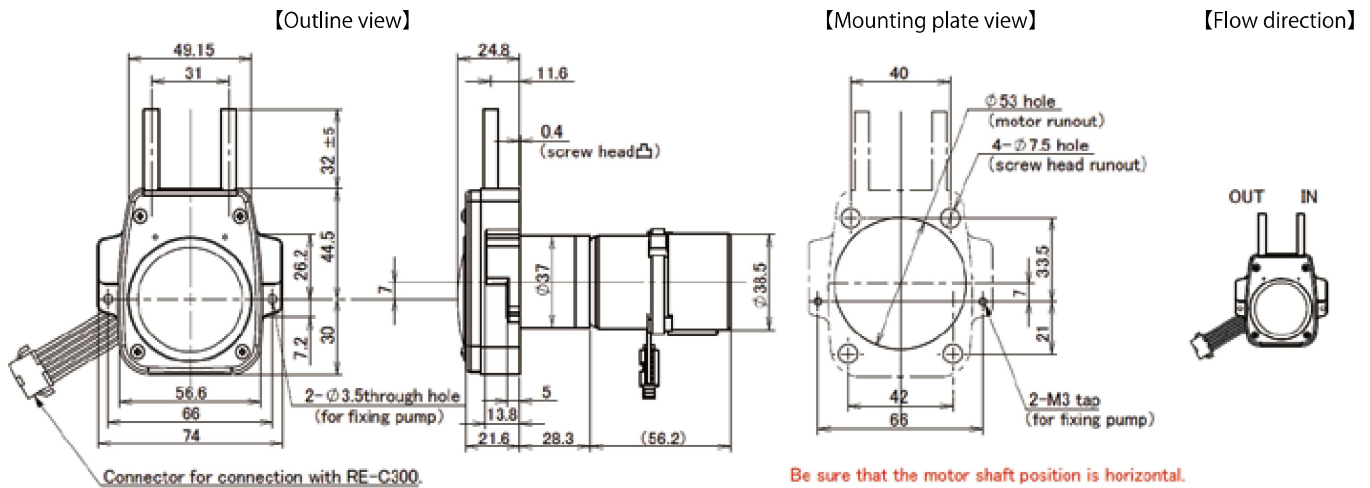
- For wide and general purpose usage, being a standard product with a proven sales track record.
- Tubing can be selected from 3 kinds of materials.

### Examples of application

Automatic washing machine, Electrolytic water conditioner, Air pressure adjuster, Automatic car washer and many other applications for detergent supply etc.

### Main specifications

|                        |                        |
|------------------------|------------------------|
| Flow rate              | Max. 25mL / 1mL - Step |
| Tubing                 | Silicone/Pharmed/TM-15 |
| Motor/Power source     | DC 24V                 |
| Material of main parts | Base : ABS Cover : PP  |
| Weight (for reference) | Approx. 355g           |



### Model Lineup

| Model Lineup       | Voltage (DC/V) | Flow rate (Max. mL) | Tubing       |              | Product name of Pump system |
|--------------------|----------------|---------------------|--------------|--------------|-----------------------------|
|                    |                |                     | Type         | ID x OD (mm) |                             |
| RP-M02S-25A-DC24VE | 24             | 25                  | Silicone (S) | 2 x 4        | RE-C300-M02S                |
| RP-M02F-25A-DC24VE | 24             | 25                  | PharMed (F)  | 2 x 4        | RE-C300-M02F                |
| RP-M02W-25A-DC24VE | 24             | 25                  | TM-15 (W)    | 2 x 4        | RE-C300-M02W                |

### Motor controller RE-C300



### Display panel of PC software





**New !!**

# Ring Pump®

## RP-H Series

## For "Fixed Flow Rate" Pump System



### Features

- Pump head is replaceable and the docking of pump head can be done in a single action. No screw bolt needed.
- Pump head can be sterilized. (121 degree C, 25 min. / Gamma rays)
- You can select tubing from 5 kinds of materials.

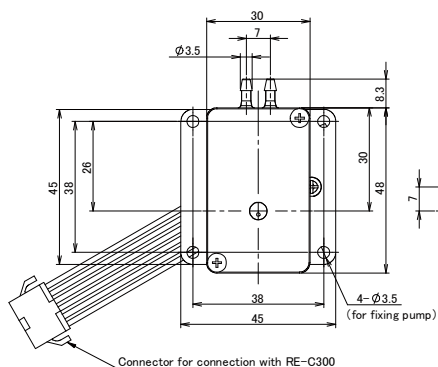
### Examples of application

Analytical instruments, medical devices, cell culturing experiments and many other usage where micro-fluidic control is needed.

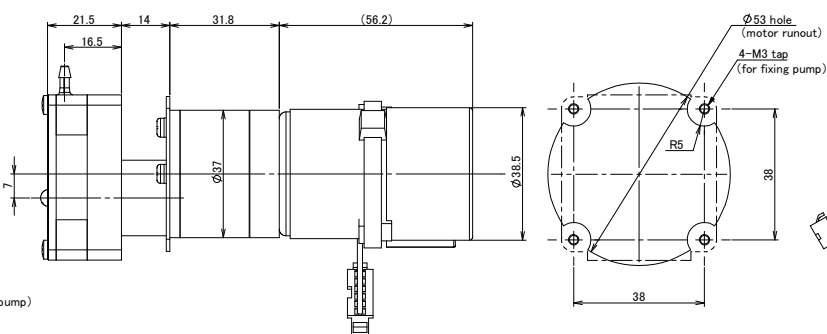
### Main specifications

|                        |                                      |
|------------------------|--------------------------------------|
| Flow rate              | Max. 7mL / 0.2mL - Step              |
| Tubing                 | Silicone/Pharmed/E-65-F/Fluran/TM-15 |
| Motor/Power source     | DC 24V                               |
| Material of main parts | Base, Case, Cover : PBT              |
| Weight (for reference) | Approx. 355g                         |

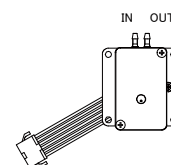
【Outline view】



【Mounting plate view】



【Flow direction】



Be sure that the motor shaft position is horizontal.

### Model Lineup

| Model Lineup       | Voltage (DC/V) | Flow rate (Max. mL) | Tubing       |              | Product name of Pump system |
|--------------------|----------------|---------------------|--------------|--------------|-----------------------------|
|                    |                |                     | Type         | ID x OD (mm) |                             |
| RP-H1.6S-7A-DC24VE | 24             | 7                   | Silicone (S) | 1.6 x 3.2    | RE-C300-H1.6S               |
| RP-H1.6F-7A-DC24VE | 24             | 7                   | PharMed (F)  | 1.6 x 3.2    | RE-C300-H1.6F               |
| RP-H1.6E-7A-DC24VE | 24             | 7                   | * E-65-F (E) | 1.6 x 3.2    | RE-C300-H1.6E               |
| RP-H1.6R-7A-DC24VE | 24             | 7                   | Fluran (R)   | 1.6 x 3.2    | RE-C300-H1.6R               |
| RP-H1.6W-7A-DC24VE | 24             | 7                   | TM-15 (W)    | 1.6 x 3.2    | RE-C300-H1.6W               |

\* Official name of E-65-F is Tygon E-65-F

### Motor controller RE-C300



### Display panel of PC software

