

**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 | φ 1.6 x φ 3.2<br>φ 1.6 x φ 3.2<br>φ 1.6 x φ 3.2<br>φ 1.6 x φ 3.2 | φ 2.0 x 4.0<br>φ 2.0 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 Mitsubishi, Japan

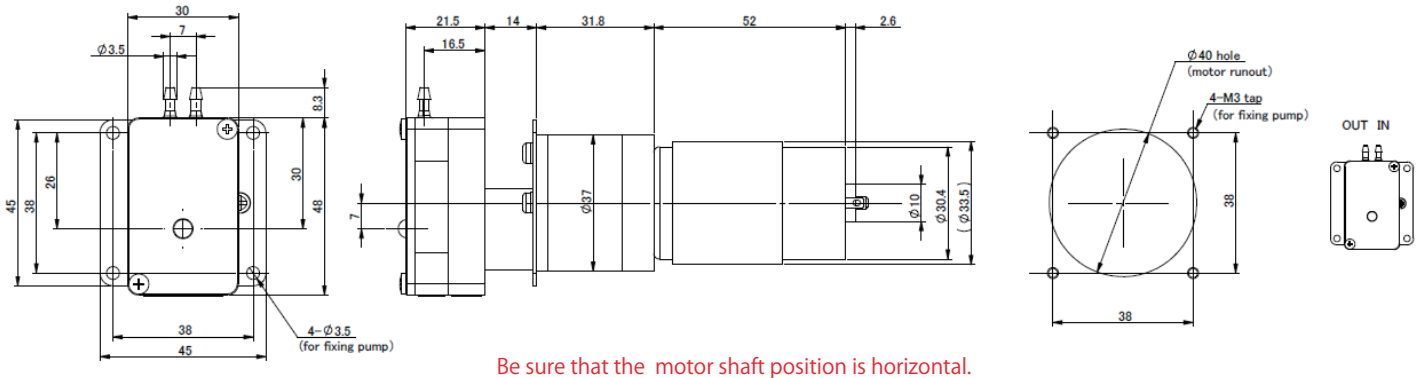
# Outline views of the pumps with different motors.

Outline view

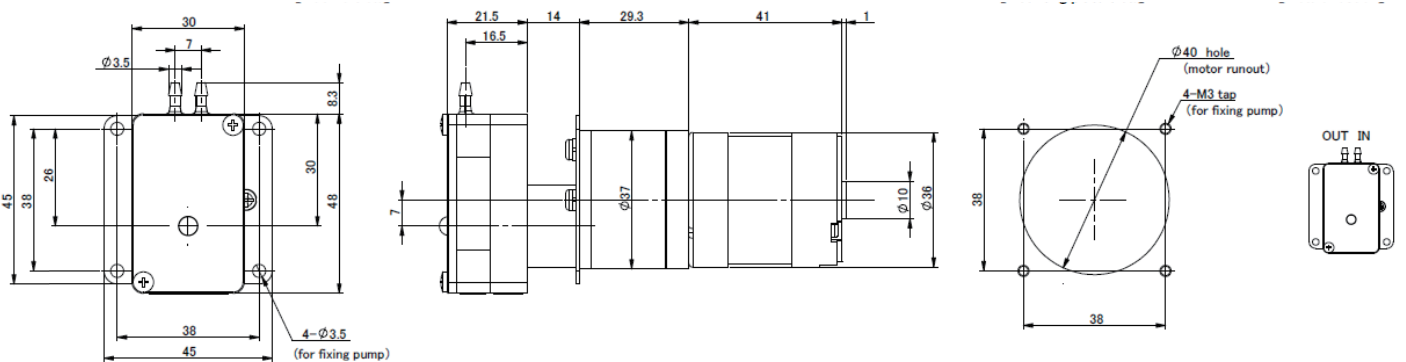
Mounting plate view

Flow direction  
in CW revolution

## RP-H pump with brushed motor



## RP-H pump with brushless motor



## RP-H pump with stepper motor

