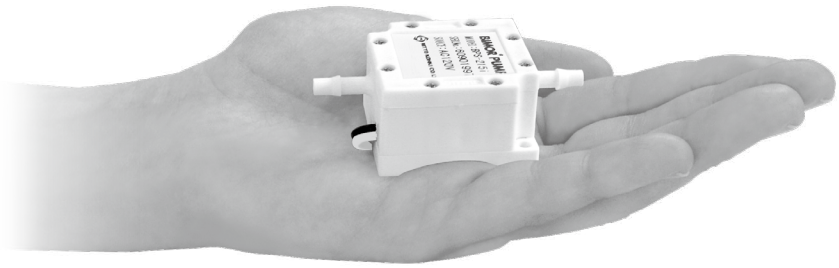
# BIMOR PUMP

## *Suitable for pumping liquids*



### *Applications*

- **For supply and drainage**
- **For cooling circulation**
- **For medical injection**
- **For liquid sampling**

### Compact, lightweight, durable & quiet

As the Bimorph has no motors or shafts or other troublesome mechanisms.
We have achieved maintenance free continuous operation for 60 months.

### Low power consumption & electromagnetic noise

The Bimor 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

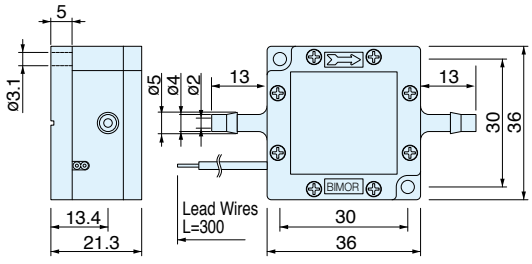
As the flow rate of the Bimor is proportional to the voltage and frequency, adjusting the flow rate is as simple as adjusting either one.
You may use the product at the rated voltage or lower.

### Application versatility

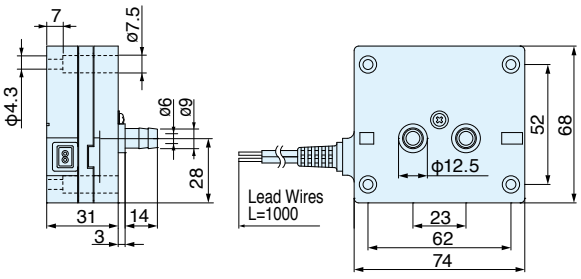
The parts can be made of several different materials, so you can select the material appropriate to your needs, be it a liquid application. The Bimor is currently employed in a variety of different fields including medicine, scientific research, and the PC and chemical industries.

## *Dimensional Outline Drawing* (Unit: mm)

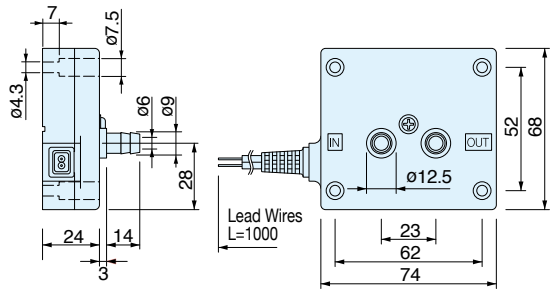
**BPS** type



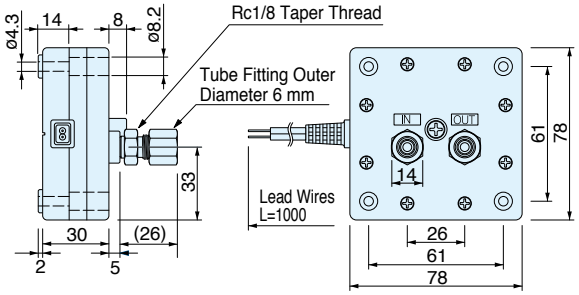

**BPHS** type

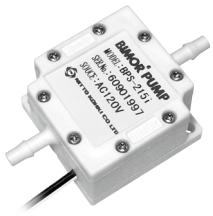



**BPH** type




**BPF** type

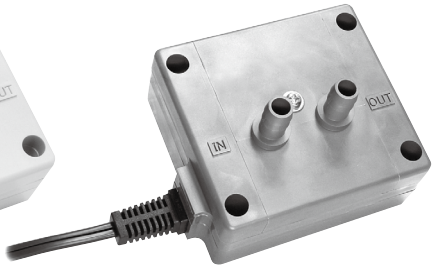





BPS Type


BPH Type


BPHS-414 Type




BPHS-474 Type

## Specifications

| Voltage(AC) — 120 V 60Hz | | | | | Voltage(AC) — 230 V 50Hz | | | | | Liquid Surface Materials | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | Current (mA) | Self-priming Pressure(kPa) | FlowRate (mL/min) | Discharge Pressure (kPa) | Model | Current (mA) | Self-priming Pressure(kPa) | FlowRate (mL/min) | Discharge Pressure (kPa) | Housing | Liquid Contact Sheet | Valve/O-ring | (g) |
| BPS-215i | 3 | 3 | 30 | 15 | — | — | — | — | — | PP | PP | IIR | 40 |
| BPH-214E | 15 | 8 | 350 | 18 | BPH-214E | 15 | 7 | 220 | 18 | PP | PP | EPDM | 140 |
| BPH-214G | | 7 | | 17 | BPH-214G | | | | 17 | | PTFE | FKM | |
| BPH-414E | 30 | 12 | 500 | 35 | — | — | — | — | — | | PP | EPDM | |
| — | — | — | — | — | BPH-274G | 15 | 7 | 250 | 35 | PPS | PTFE | FKM | 170 |
| — | — | — | — | — | BPH-274P | | | | | | | FFKM FEP | |

| Voltage(AC) — 100 V 60Hz | | | | | Liquid Surface Materials | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| Model | Current (mA) | Self-priming Pressure(kPa) | FlowRate (mL/min) | Discharge Pressure (kPa) | Housing | Liquid Contact Sheet | Valve | O-ring | (g) |
| BPHS-414i | 30 | 12 | 700 | 35 | PP | PP | IIR | | 150 |
| BPHS-414E | | | | | | | EPDM | | |
| BPHS-414G | | | | | | PTFE | FKM | | |
| BPHS-474G | | 10 | 500 | | PPS | | FKM | | 180 |
| BPHS-474P | | | | | | | FFKM | FFKM FEP | |

### Material Description

**EPDM**
Ethylene Propylene Rubber

**FEP**
Fluoroethylene Propylene

**FFKM**
Fluorine Rubber (Perfluoro)

**FKM**
Fluorine Rubber

**IIR**
Butyl Rubber

**PP**
Polypropylene

**PTFE**
Tetrafluororesin
(Polytetrafluoroethylene)

## Condition of Use

| | |
|---|---|
| Ambient temperature | 5～50°C *1 |
| Ambient humidity | 35～85% *2 |
| Fluid temperature | 5～50°C |

*1) No Freezing
*2) No condensation

## Suitable/unsuitable chemical liquids

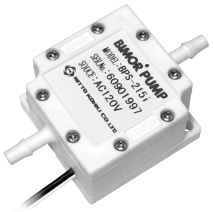
| Model | Examples of suitable chemical liquids | Examples of unsuitable chemical liquids |
|---|---|---|
| BPS-215i<br>BPHS-414i | Ethanol,Dilute hydrochloric acid,<br>Sodium carbonate,Benzaldehyde,Formalin | Xylene,Mineral oil,Carbon tetrachloride,<br>Trichloroethylene,Toluene,Benzene |
| BPH-214E<br>BPH-414E<br>BPHS-414E | Ammonia water, Ethanol, Hydrochloric acid,<br>Caustic potash, Caustic soda, Methanol | |
| BPH-214G<br>BPHS-414G | Ethanol, Dilute hydrogen peroxide, Mineral oil,<br>Sodium hypochlorite | Acetone, Ammonia water, Glacial acetic acid,<br>Hydrofluoric acid, Formalin |
| BPH-274G<br>BPHS-474G | Ethanol, Xylene, Carbon tetrachloride,<br>Silicone oil, Trichloroethylene | Acetone, Ammonia water, Chlorosulfonic acid,<br>Glacial acetic acid, Hydrofluoric acid, Formalin |
| BPH-274P<br>BPHS-474P | Ethanol, Chloroform, Glacial acetic acid,<br>Benzene, Methyl ethyl ketone | Chlorosulfonic acid, Fluorine oil,<br>CFC 112, CFC 113 |

# Piezoelectric Pump

# BIMOR PUMP

## *Made to order model*

These models are made-to-order model.
Please ask your nearest distributor about cost.
The minimum order quantity is 30 units.




BPS Type

BPH Type

BPF Type

## *Specifications*

| Voltage(AC) — 120 V 60Hz | | | | | Voltage(AC) — 230 V 50Hz | | | | | Liquid Surface Materials | | | Weight (g) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | Current (mA) | Self-priming Pressure(kPa) | FlowRate (mL/min) | Discharge Pressure (kPa) | Model | Current (mA) | Self-priming Pressure(kPa) | FlowRate (mL/min) | Discharge Pressure (kPa) | Housing | Liquid Contact Sheet | Valve/O-ring | |
| — | — | — | — | — | BPS-215i | 4 | 0.4 | 10 | 10 | PP | PP | IIR | 40 |
| BPH-214i | 15 | 8 | 350 | 18 | BPH-214i | 15 | 7 | 220 | 18 | PP | PP | IIR | |
| — | — | — | — | — | BPH-214D | | | | | | | VMQ | |
| BPH-414D | 30 | 12 | 500 | 35 | — | — | — | — | — | | | | 140 |
| BPH-414G | | 10 | 450 | 32 | — | — | — | — | — | | PTFE | FKM | |
| BPH-474G | | | 400 | 35 | — | — | — | — | — | PPS | | | 170 |
| BPH-474P | | | | | — | — | — | — | — | | | FFKM FEP | |
| BPF-465P | 30 | 10 | 400 | 35 | — | — | — | — | — | PFA | | | 350 |
| — | — | — | — | — | BPF-265P | 15 | 7 | 250 | 35 | | | | |

### Material Description

FFKM ···· Fluorine Rubber (Perfluoro)
FKM ····· Fluorine Rubber
IIR ····· Butyl Rubber
POM ····· Polyacetal
PFA ····· Fluororesin (Perfluoroalkoxy)
PP ····· Polypropylene
PTFE ····· Tetrafluororesin (Polytetrafluoroethylene)
VMQ ····· Dimethyl Silicon Rubber

## *suitable/unsuitable chemical liquids*

| Model | Examples of suitable chemical liquids | Examples of unsuitable chemical liquids |
|---|---|---|
| **BPS-215i**<br>**BPH-214i** | Ethanol,Dilute hydrochloric acid, Sodium carbonate, Benzaldehyde, Formalin | Xylene, Mineral oil, Carbon tetrachloride, Trichloroethylene, Toluene, Benzene |
| **BPH-214D**<br>**BPH-414D** | Ammonia water, Ethanol, Dilute hydrogen peroxide, Sodium hypochlorite, Methanol | Caustic soda, Carbon tetrachloride, Silicone oil, Trichloroethylene, Toluene, Benzene |
| **BPH-414G** | Ethanol, Hydrogen peroxide, Mineral oil, Sodium hypochlorite | Acetone, Ammonia water, Glacial acetic acid, Hydrofluoric acid, Formalin |
| **BPH-474G** | Ethanol, Xylene, Carbon tetrachloride, Silicone oil, Trichloroethylene | Acetone, Ammonia water, Chlorosulfonic acid, Glacial acetic acid, Hydrofluoric acid, Formalin |
| **BPH-474P** | Ethanol, Chloroform, Glacial acetic acid, Benzene, Methyl ethyl ketone | Chlorosulfonic acid, Fluorine oil, CFC 112, CFC 113 |
| **BPF-465P**<br>**BPF-265P** | Ethanol, Aqua regia, Ozone, Carbon tetrachloride, Concentrated nitric acid, Concentrated sulfuric acid, Fuming sulfuric acid | Fluorine oil, CFC 112, CFC 113 |