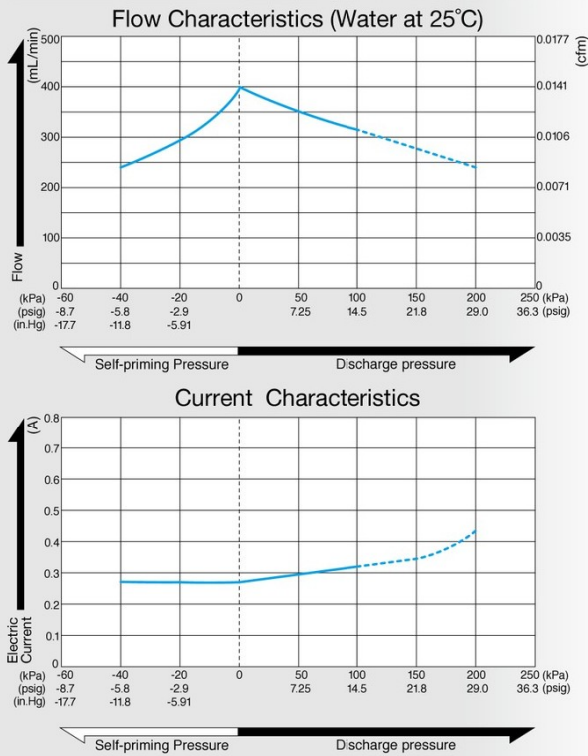


# DC Liquid Pump

## Model **DPE-400** Brush DC Motor 24 V DC



### Flow & Electric Current



### Specifications

Rated Voltage	24 V DC
Flow Rate *1	400 mL/min 0.0141 cfm
Working Pressure Range	0 to 100 kPa 0 to 1 bar 0 to 14.2 psig
Maximum Pressure *2	300 kPa 3 bar 42.7 psig
Maximum Current	345 mA
Duty Cycle	Continuous
Rated Performance (MTTF)	500 hours
Self-priming Pressure *1	40 kPa 0.4 bar 5.69 psig
Inlet	5.4 mm O.D. straight barb
Outlet	5.4 mm O.D. straight barb
Insulation Classification	F class equivalent
Mounting Dimensions	19 (L) x 26 (W) mm 3/4"(L) x 1-1/32"(W)
Weight	187 g 0.412 Lbs
Motor	Brush DC Motor

\*1. When the check valve is hardened due to low liquid temperature, self-priming performance and flow rate will go down.  
\*2. Restarting pumps with flow passage closed is impossible.

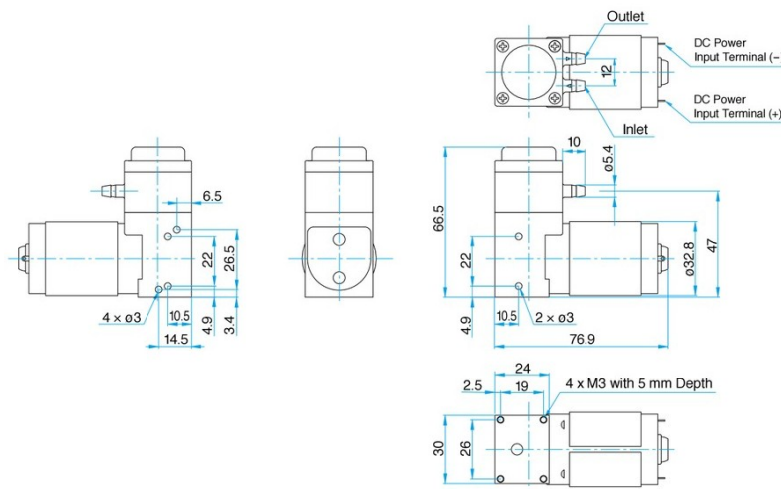
### Build materials and applicable fluids

Model	Cylinder Head	Head Cover	Diaphragm	Valve	O-ring	Applicable fluids
DPE-400-2E	PA Polyamide(Nylon)		PTFE Polytetrafluoroethylene	EPDM		Sodium hydroxide, Citric acid
DPE-400-2G				Ethylene-propylene rubber		Ammonia water, Caustic potash
DPE-400-7G	PPS Polyphenylene sulfide			FKM		Ethanol, Ethylene glycol
DPE-400-7P				Fluoro rubber		Sodium carbonate, mineral oil
				FFKM		Xylene, Carbon tetrachloride
				Perfluoroelastomer		Trichloroethylene, Silicon oils
						Chloroform, Benzene
						Glacial acetic acid, Methyl ethyl ketone

### Application Examples

- Liquid analytical instruments e.g. medical, food, water treatment & environmental.
- Liquid transport within filtration, sampling, sterilizers and washers.
- Ink transport within industrial ink-jet printers.

### Dimensional Outline Drawing (Unit : mm)

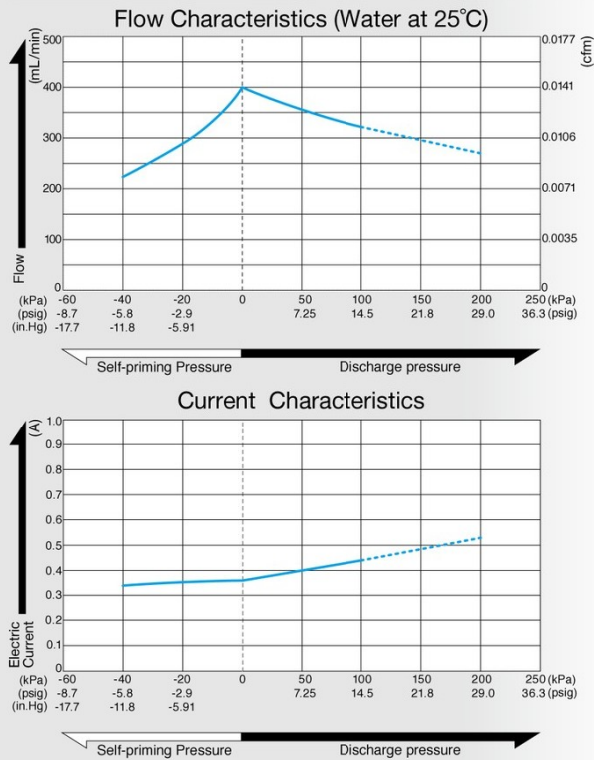


# DC Liquid Pump

## Model **DPE-400BL** Brushless DC Motor 24 V DC



### Flow & Electric Current



### Specifications

Rated Voltage	12 V / 24 V DC
Flow Rate *1	400 mL/min 0.0141 cfm
Working Pressure Range	0 to 100 kPa 0 to 1 bar 0 to 14.2 psig
Maximum Pressure *2	300 kPa 3 bar 42.7 psig
Maximum Current	900 / 450 mA
Duty Cycle	Continuous
Rated Performance (MTTF)	6,000 hours
Self-priming Pressure *1	40 kPa 0.4 bar 5.69 psig
Inlet	5.4 mm O.D. straight barb
Outlet	5.4 mm O.D. straight barb
Insulation Classification	A class equivalent
Mounting Dimensions	41 (W) mm 1-39/64 "(W)
Weight	230 g 0.507 Lbs
Motor	Brushless DC Motor

\*1. At low temperature, the performance may reduce.  
\*2. Pumps may not re-start against high backpressure.

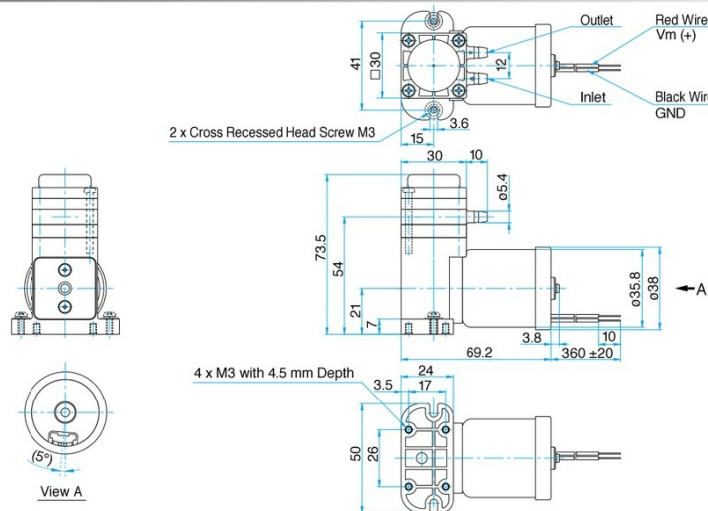
### Build materials and applicable fluids

Model	Cylinder Head	Head Cover	Diaphragm	Valve	O-ring	Applicable fluids
DPE-400BL-2E	FA		PTFE	EPDM		Sodium hydroxide, Citric acid
DPE-400BL-2G	Polyamide(Nylon)			Ethylene-propylene rubber		Ammonia water, Caustic potash
DPE-400BL-7G	PPS		Polytetrafluoroethylene	FKM		Ethanol, Ethylene glycol
DPE-400BL-7P	Polyphenylene sulfide			Fluoro rubber		Sodium carbonate, mineral oil
				FFKM		Xylene, Carbon tetrachloride
				Perfluoroelastomer		Trichloroethylene, Silicon oils
						Chloroform, Benzene
						Glacial acetic acid, Methyl ethyl ketone

### Application Examples

- Liquid analytical instruments e.g. medical, food, water treatment & environmental.
- Liquid transport within filtration, sampling, sterilizers and washers.
- Ink transport within industrial ink-jet printers.

### Dimensional Outline Drawing (Unit : mm)

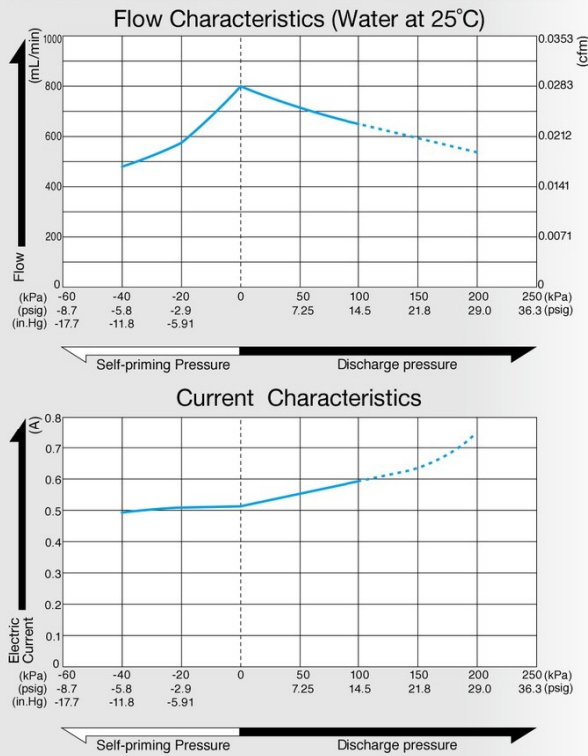


# DC Liquid Pump

## Model **DPE-800** Brush DC Motor 24 V DC



### Flow & Electric Current



### Specifications

Rated Voltage	24 V DC
Flow Rate *1	800 mL/min 0.0283 cfm
Working Pressure Range	0 to 100 kPa 0 to 1 bar 0 to 14.2 psig
Maximum Pressure *2	300 kPa 3 bar 42.7 psig
Maximum Current	600 mA
Duty Cycle	Continuous
Rated Performance (MTTF)	600 hours
Self-priming Pressure *1	40 kPa 0.4 bar 5.69 psig
Inlet	5.4 mm O.D. straight barb
Outlet	5.4 mm O.D. straight barb
Insulation Classification	E class equivalent
Mounting Dimensions	74.5 (L) x 41 (W) mm 2-15/16" (L) x 1-39/64" (W)
Weight	350 g 0.771 Lbs
Motor	Brush DC Motor

\*1. When the check valve is hardened due to low liquid temperature, self-priming performance and flow rate will go down.  
\*2. Restarting pumps with flow passage closed is impossible.  
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 out or possible ignition.

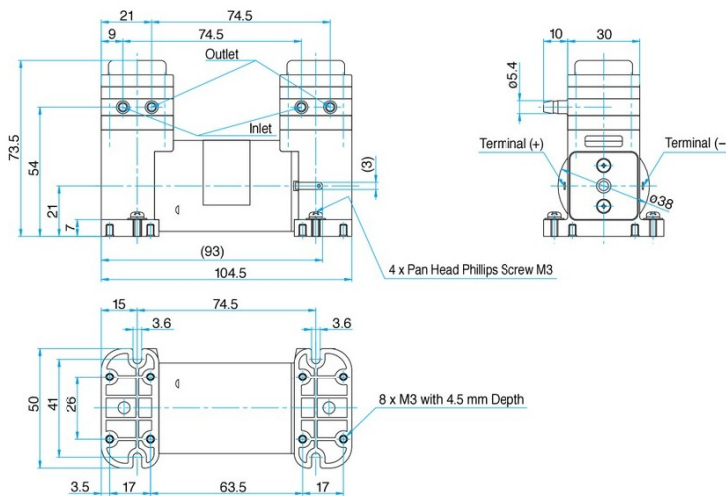
### Build materials and applicable fluids

Model	Cylinder Head	Head Cover	Diaphragm	Valve	O-ring	Applicable fluids
DPE-800-2E	PA Polyamide(Nylon)	PTFE Polytetrafluoroethylene	EPDM Ethylene-propylene rubber	FKM Fluoro rubber	FFKM Perfluoroelastomer	Sodium hydroxide, Citric acid Ammonia water, Caustic potash
DPE-800-2G						Ethanol, Ethylene glycol Sodium carbonate, mineral oil Xylene, Carbon tetrachloride Trichloroethylene, Silicon oils
DPE-800-7G	PPS Polyphenylene sulfide	PTFE Polytetrafluoroethylene	EPDM Ethylene-propylene rubber	FKM Fluoro rubber	FFKM Perfluoroelastomer	Ethanol, Ethylene glycol Sodium carbonate, mineral oil Xylene, Carbon tetrachloride Trichloroethylene, Silicon oils
DPE-800-7P						Chloroform, Benzene Glacial acetic acid, Methyl ethyl ketone

### Application Examples

- Liquid analytical instruments e.g. medical, food, water treatment & environmental.
- Liquid transport within filtration, sampling, sterilizers and washers.
- Ink transport within industrial ink-jet printers.

### Dimensional Outline Drawing (Unit : mm)





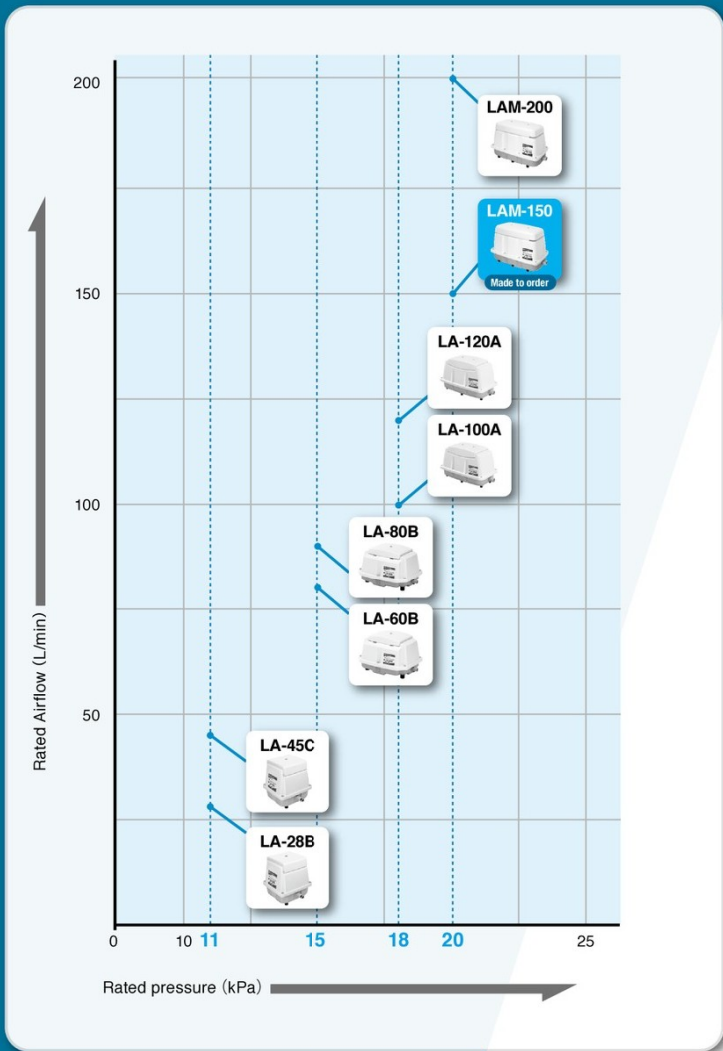


**AC LINEAR**  
Free Piston Blower

# LA BLOWER

Page

**LA series**



- LA-28B — 95
- LA-45C — 95
- LA-60B — 96
- LA-80B — 96
- LA-100A — 97
- LA-120A — 97
- LAM-200 — 98

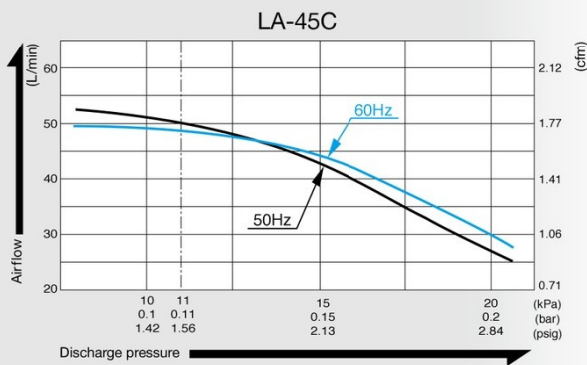
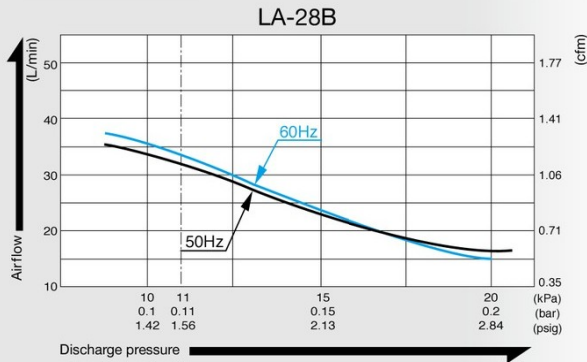
**Made to Order**  
LAM-150 — 110

# Blower

## Model LA-28B & LA-45C



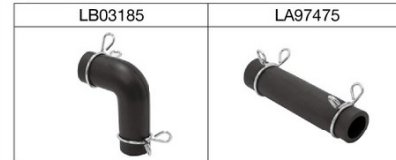
Airflow Characteristics



### Specifications

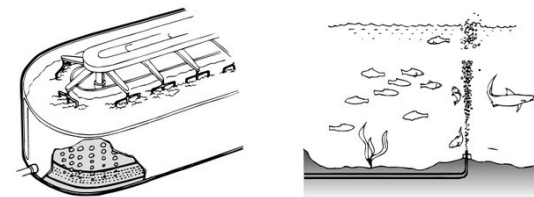
	LA-28B		LA-45C	
Power Supply	120 V AC	230/240 V AC	120 V AC	230/240 V AC
Rated Frequency	60 Hz	50 Hz	60 Hz	50 Hz
Power Consumption	25.5 W	29 W	45 W	47 W
Rated Pressure	11 kPa (0.11 kgf/cm <sup>2</sup> ) 0.11 bar 1.56 psig			
Rated Airflow	28 L/min 0.99 cfm		45 L/min 1.59 cfm	
Weight	2.9 kg 6.4 Lbs		3.2 kg 7.1 Lbs	

### Optional Hose Assemblies

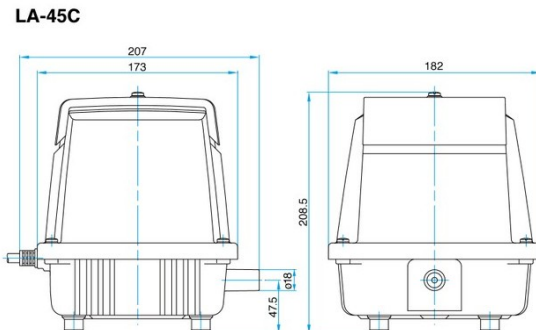
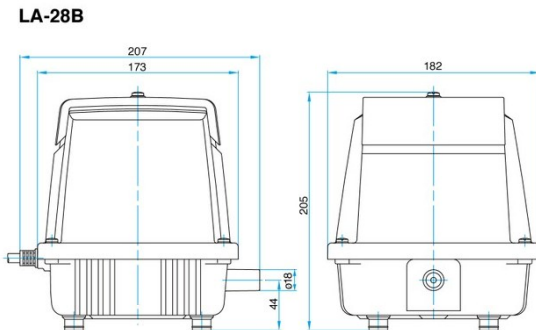


### Application Examples

#### Liquid Mixer Bubbling



### Dimensional Outline Drawing (Unit : mm)

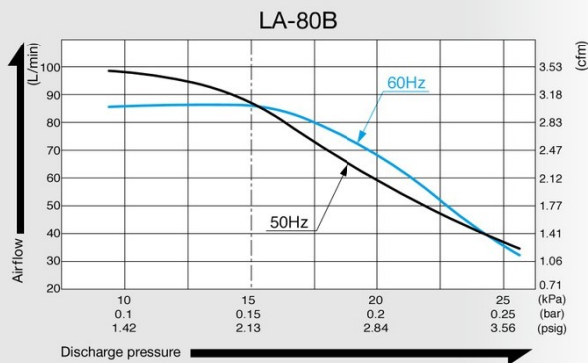
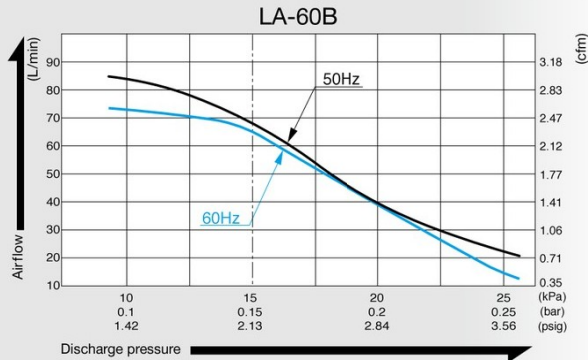


# Blower

## Model LA-60B & LA-80B



Airflow Characteristics



### Specifications

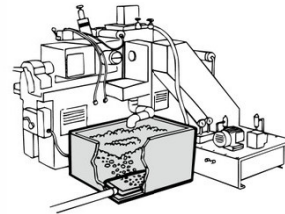
	LA-60B		LA-80B	
Power Supply	120 V AC	220/230/240 V AC	120 V AC	220/230/240 V AC
Rated Frequency	60 Hz	50 Hz	60 Hz	50 Hz
Power Consumption	60 W	64 W	80 W	86 W
Rated Pressure	15 kPa (0.15 kgf/cm <sup>2</sup> ) 0.15 bar 2.13 psig			
Rated Airflow	60 L/min 2.12 cfm		80 L/min 2.83 cfm	
Weight	5.0 kg 11 Lbs		5.3 kg 11.7 Lbs	

### Optional Hose Assemblies

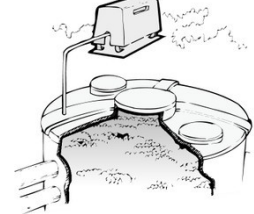


### Application Examples

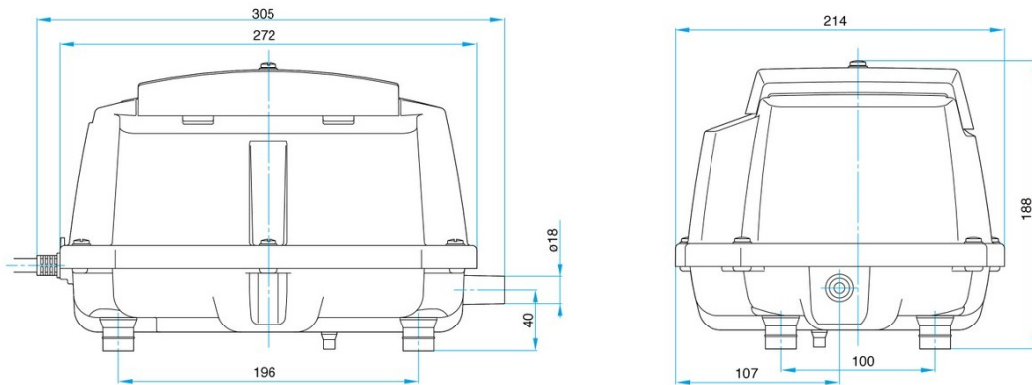
Liquid Mixer Bubbling



Home Aerobic Sewage Treatment System



### Dimensional Outline Drawing (Unit: mm)

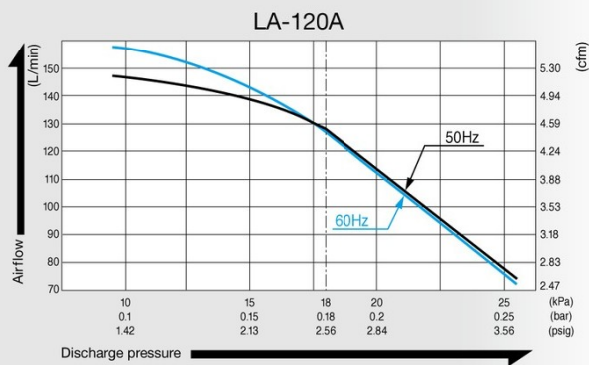
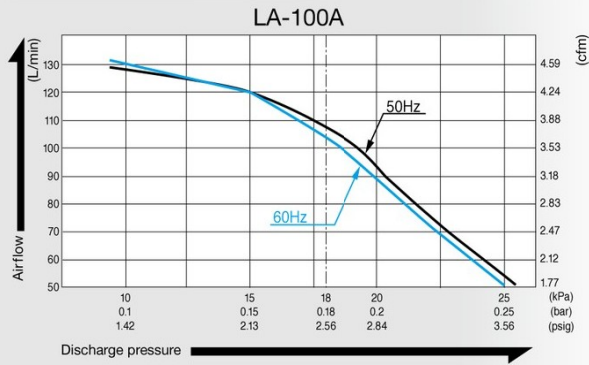


# Blower

## Model LA-100A & LA-120A



Airflow Characteristics



### Specifications

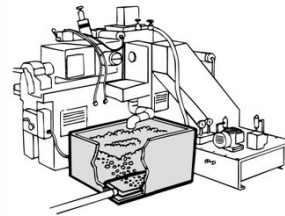
	LA-100A		LA-120A	
	120 V AC	230/240 V AC	120 V AC	230/240 V AC
Rated Frequency	60 Hz	50 Hz	60 Hz	50 Hz
Power Consumption	95 W	100 W	118 W	130 W
Rated Pressure	18 kPa (0.18 kgf/cm <sup>2</sup> ) 0.18 bar 2.56 psig			
Rated Airflow	100 L/min 3.53 cfm		120 L/min 4.24 cfm	
Weight	9.7 kg 21.4 Lbs			

### Optional Hose Assemblies

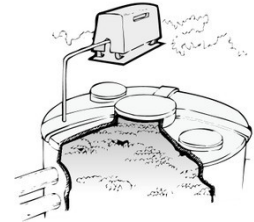


### Application Examples

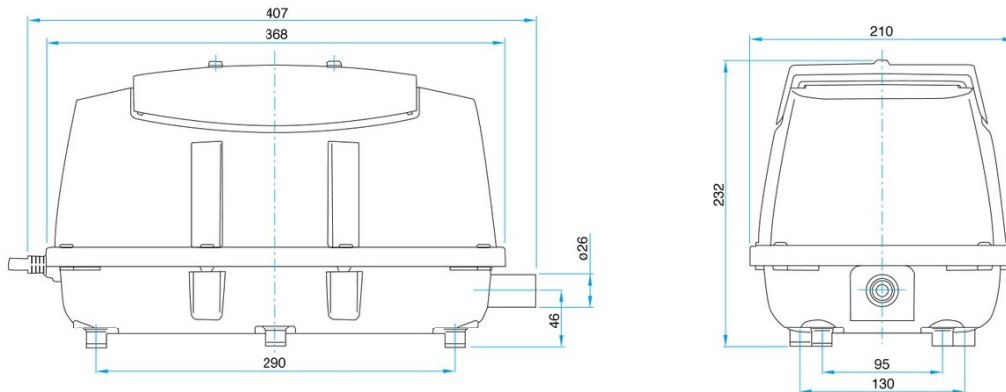
#### Liquid Mixer Bubbling



#### Home Aerobic Sewage Treatment System



### Dimensional Outline Drawing (Unit: mm)

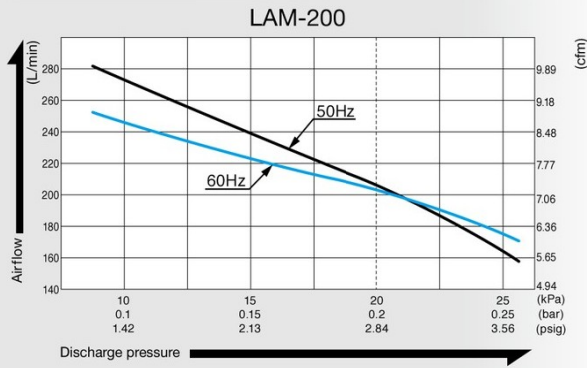


# Blower

## Model LAM-200



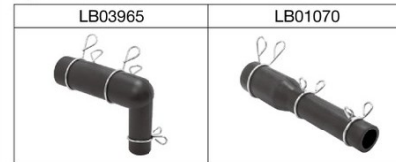
### Airflow Characteristics



### Specifications

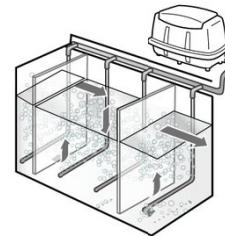
LAM-200	
Power Supply	120 V AC / 230/240 V AC
Rated Frequency	60 Hz / 50 Hz
Power Consumption	215 W
Rated Pressure	20 kPa (0.2 kgf/cm <sup>2</sup> ) / 0.2 bar / 2.84 psig
Rated Airflow	200 L/min / 7.06 cfm
Weight	12.3 kg / 27.1 Lbs

### Optional Hose Assemblies

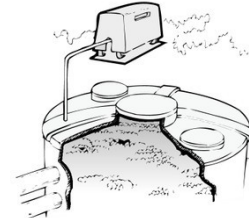


### Application Examples

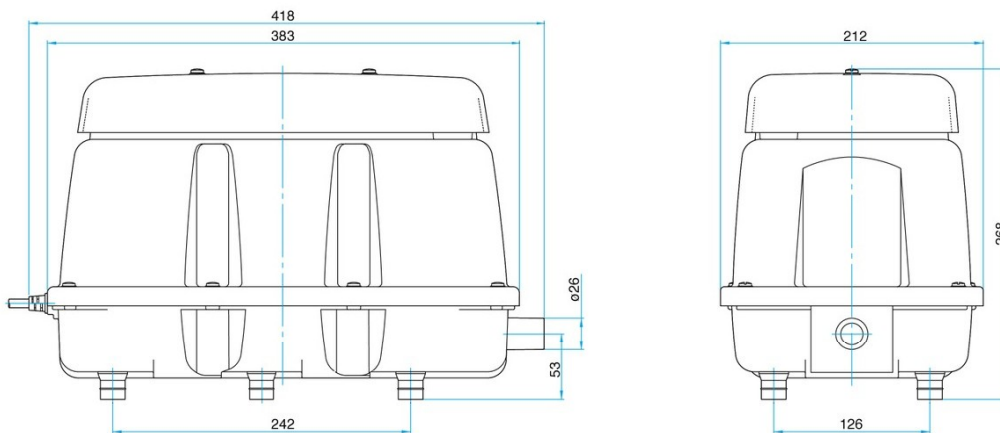
#### Grease Trap



#### Home Aerobic Sewage Treatment System



### Dimensional Outline Drawing (Unit : mm)





Other product: **Linicon (Vacuum Pump)**

Model **LV-125A**

Oil-less Compressor



- AC linear free piston vacuum pump
- Equipped with fuse and removable power cable
- Compact and lightweight
- Low noise level
- Oil-less construction

Specifications

Rated Voltage	115 V AC	230 V AC
Power Consumption	14 W	15 W
Rated Frequency	60 Hz	50 Hz
Maximum Vacuum	-33.3 kPa (-250 mm Hg, -333 mbar, -9.84 in. Hg)	
Dimensions	135 (L) x 91 (W) x 146 (H) mm (5-5/16" x 3-37/64" x 5-3/4")	
Duty Cycle	Continuous	
Coil Insulation Class	B or its equivalent	E or its equivalent
Weight	1.5 kg (3.3 Lbs)	

Vacuum Pick-Up Set

If the following options are prepared together with Model LV-125A, the Vacuum Pick-Up Set can be arranged.

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

The needle can be bent in accordance with applications.

\*LA71069 P-100 includes ① - ⑥



High Adsorption Power

In the case that the depth of vacuum is -33.3 kPa (-250 mmHg) and the surface to be vacuumed is flat.

Pad Diameter	A	B
	Suction power when the adsorption face is placed horizontally and moved upward.	Suction power when the adsorption face is placed vertically and moved laterally.
4 mm	20 g	10 g
6 mm	50 g	25 g

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

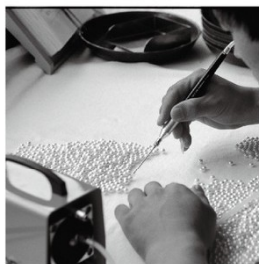


A is calculated by multiplying the safety rate of 0.5 to the above equation, and then rounded.

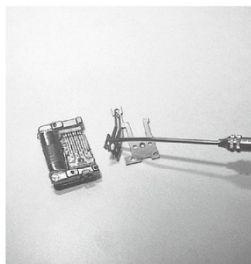
B is calculated by multiplying the safety rate of 0.25 to the above equation, and then rounded.

Application Examples

Transferring spherical objects such as balls



Assembling precision parts



Moving tiny parts



Transferring uneven parts



Most suitable for handling electronic parts such as ICs and LSIs. Also small parts, micro parts such as those in watches and chemicals.

MADE TO ORDER

## MADE TO ORDER

Page

## Compressor

AC0610A — 101

## Vacuum Pump

VP0645 — 102

VP0945 — 103

VP0925A — 104

VP0660 x 2 — 105

## Diaphragm Pump

VCK0120 VacuumPump Type — 106

VC0101E Dual Type — 107

VC0101E Blower Type — 108

VC0101S Dual Type — 109

## Blower

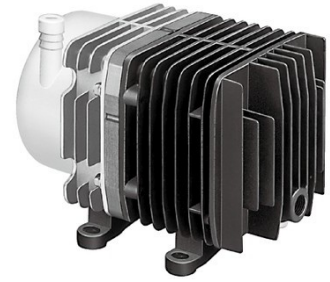
LAM-150 — 110

## Piezoelectric Pump

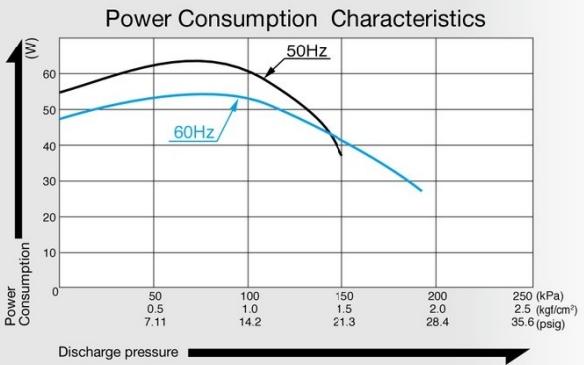
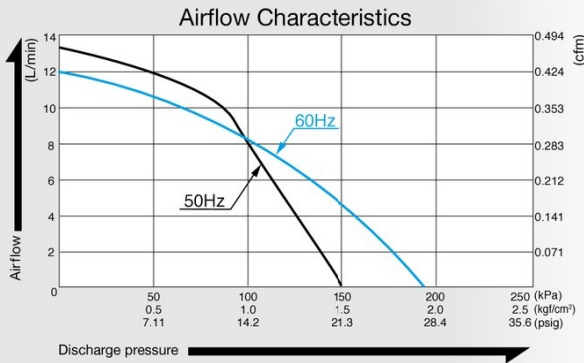
Made to order model — 111

# Compressor

## Model **AC0610A**



### Airflow & Power Consumption

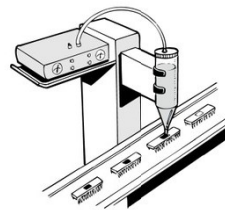


### Specifications

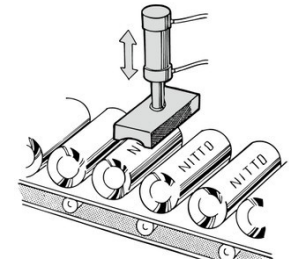
Rated Pressure	100 kPa (1.0 kgf/cm <sup>2</sup> ) 1.0 bar 14.2 psig	
Rated Airflow	8 L/min 0.283 cfm	
Maximum Pressure	150 kPa (1.5 kgf/cm <sup>2</sup> ) 1.5 bar 21.3 psig	
Rated Voltage	115 V AC	230 V AC
Power Consumption	52 W	60 W
Rated Frequency	60 Hz	50 Hz
Rated Performance	10,000 hours	
Outlet	ISO Rc 1/4	
Duty Cycle	Continuous	
Coil Insulation Class	F or its equivalent (JETL)	
Mounting Dimensions	68 (L) x 84 (W) mm 2-43/64" (L) x 3-5/16" (W)	
Weight	3.2 kg 7.1 Lbs	
Leadwire Length	200 mm 7-7/8"	

### Application Examples

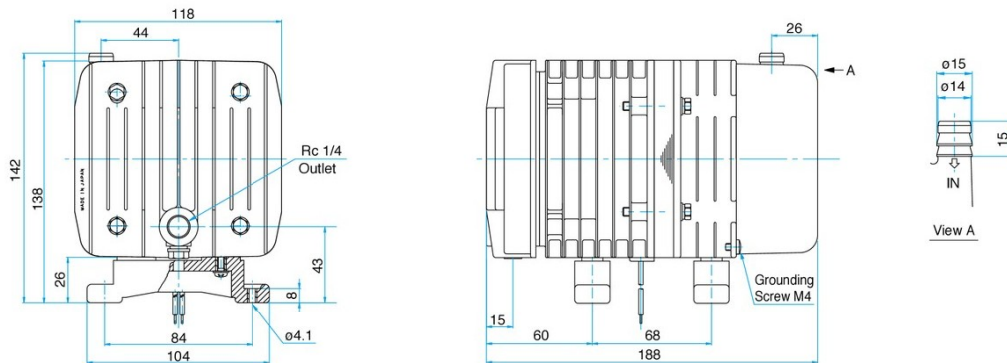
Dispenser



Automatic Stamper



### Dimensional Outline Drawing (Unit : mm)

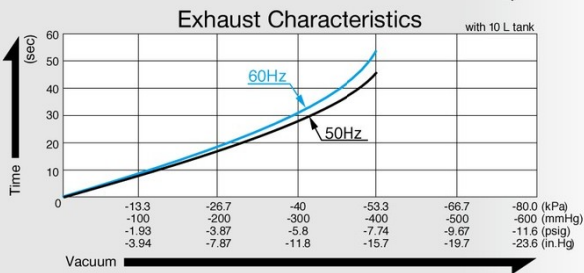
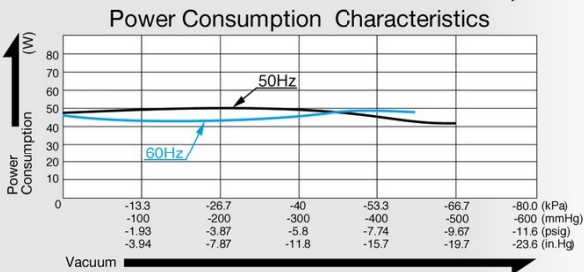
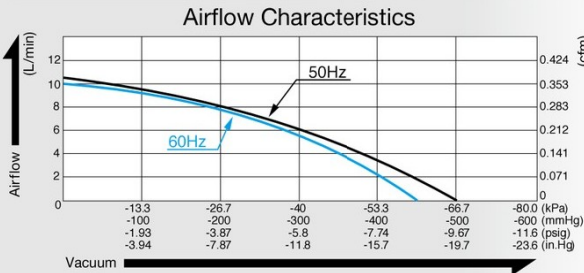


# Vacuum Pump

## Model VP0645



### Airflow & Power Consumption



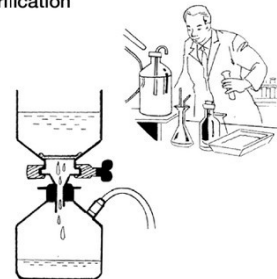
### Specifications

Attainable Vacuum *1	-60 kPa (-450 mmHg) -600 mbar -17.7 in. Hg	
Free Air Displacement	10 L/min 0.35 cfm	
Rated Voltage	115 V AC	230 V AC
Power Consumption	48 W	50 W
Rated Frequency	60 Hz	50 Hz
Rated Performance	3,000 hours	
Inlet	15 mm O.D. hose barb	
Outlet	ISO Rc 1/4	
Duty Cycle	Continuous	
Coil Insulation Class	E or its equivalent (JETL)	
Mounting Dimensions	68 (L) x 84 (W) mm 2-43/64" (L) x 3-5/16" (W)	
Weight	3.2 kg	7.1 Lbs
Leadwire Length	200 mm 7-7/8"	

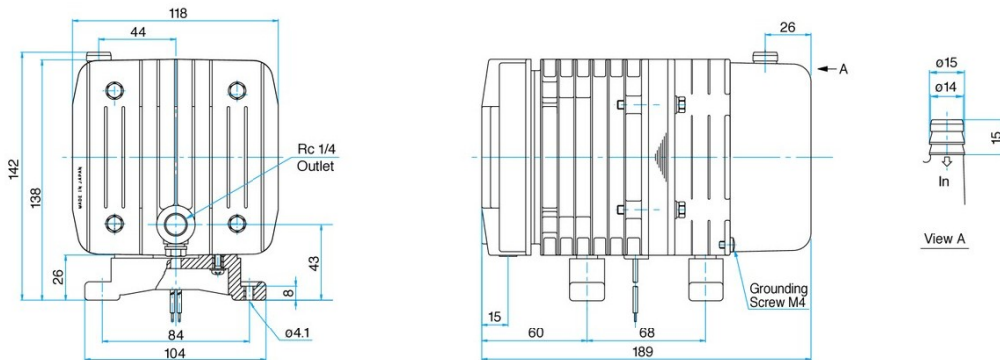
\*1: Operations at higher than -60kPa need an additional leak valve or relief valve on the inlet piping.

### Application Examples

#### Liquid Purification



### Dimensional Outline Drawing (Unit : mm)



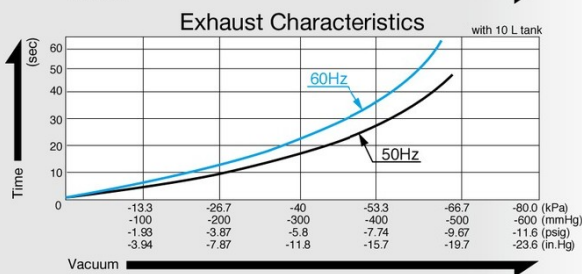
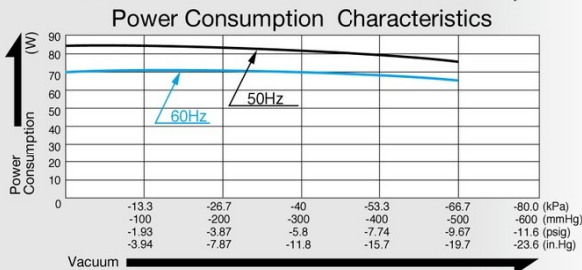
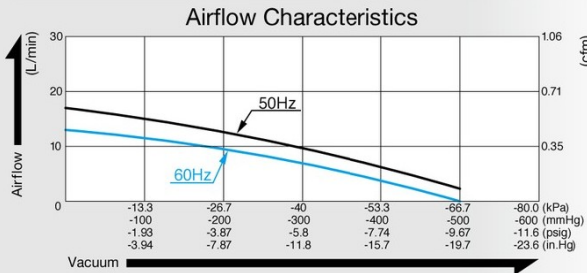


# Vacuum Pump

## Model VP0945



### Airflow & Power Consumption



### Specifications

Attainable Vacuum *1	-60 kPa (-450 mmHg) -600 mbar -17.7 in. Hg	
Free Air Displacement	12 L/min 0.42 cfm	
Rated Voltage	115 V AC	230 V AC
Power Consumption	70 W	85 W
Rated Frequency	60 Hz	50 Hz
Rated Performance	3,000 hours	
Inlet	15 mm O.D. hose barb	
Outlet	ISO Rc 1/4	
Duty Cycle	Continuous	
Coil Insulation Class	E or its equivalent (JETL)	
Mounting Dimensions	102 (L) x 130 (W) mm 4-1/64" (L) x 5-1/8" (W)	
Weight	4.9 kg 10.8 Lbs	
Leadwire Length	300 mm 11-13/16"	320 mm 12-19/32"

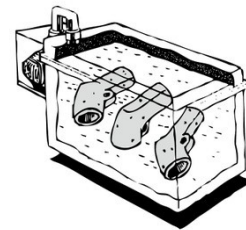
\*1: Operations at higher than -60kPa need an additional leak valve or relief valve on the inlet piping.

### Application Examples

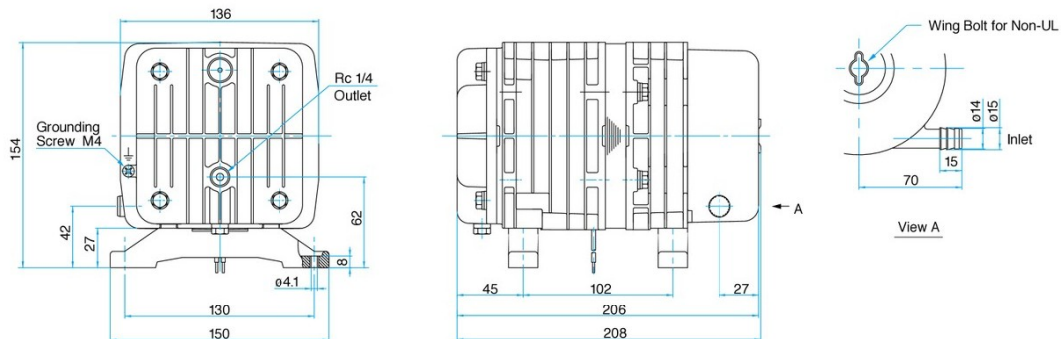
Vacuum Vice



Impregnation Depressurizer



### Dimensional Outline Drawing (Unit: mm)



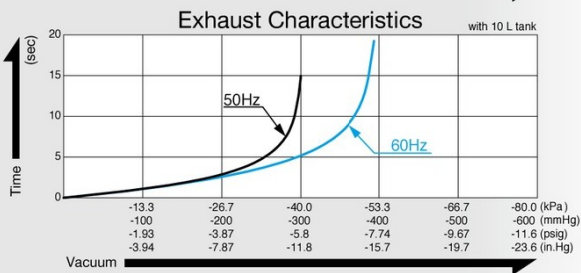
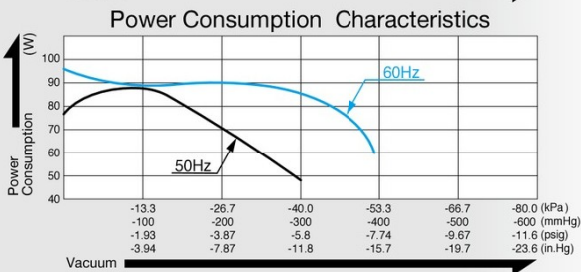
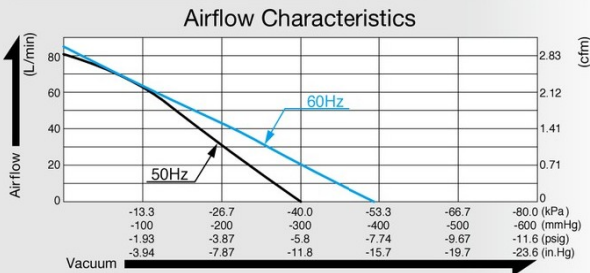


# Vacuum Pump

## Model VP0925A



### Airflow & Power Consumption



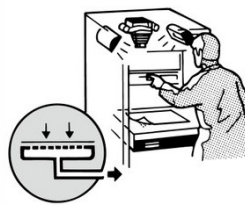
### Specifications

Attainable Vacuum *1	-33.3 kPa (-250 mmHg) -333 mbar -9.84 in. Hg	
Free Air Displacement	80 L/min 2.83 cfm	
Rated Voltage	115 V AC	230 V AC
Power Consumption	95 W	88 W
Rated Frequency	60 Hz	50 Hz
Rated Performance	10,000 hours	
Inlet	ISO Rc 1/4	
Outlet	ISO Rc 1/4	
Duty Cycle	Continuous	
Coil Insulation Class	B or its equivalent (JETL)	
Mounting Dimensions	102 (L) x 130 (W) mm 4-1/64" (L) x 5-1/8" (W)	
Weight	4.5 kg 9.9 Lbs	
Leadwire Length	300 mm 11-13/16"	320 mm 12-19/32"

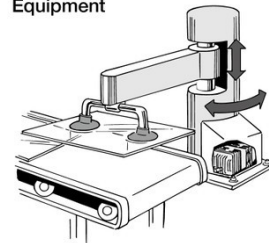
\*1: Operations at higher than -33.3kPa need an additional leak valve or relief valve on the inlet piping.

### Application Examples

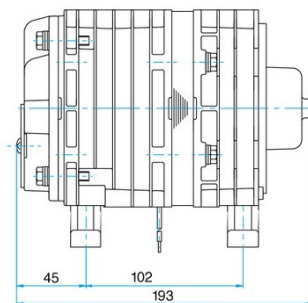
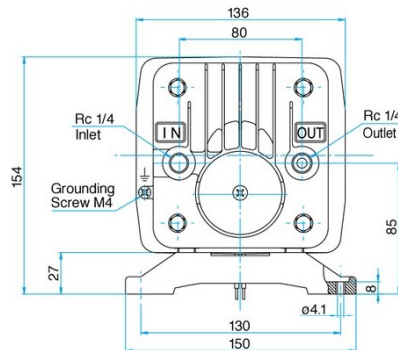
#### Microfiche Camera



#### Vacuum Material Handling Equipment

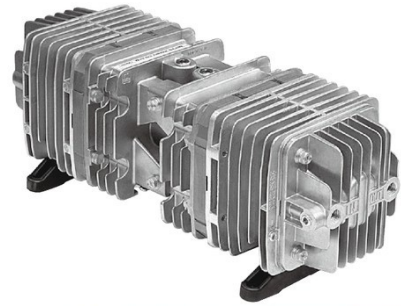


### Dimensional Outline Drawing (Unit : mm)

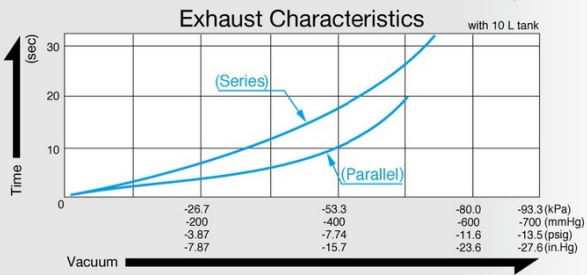
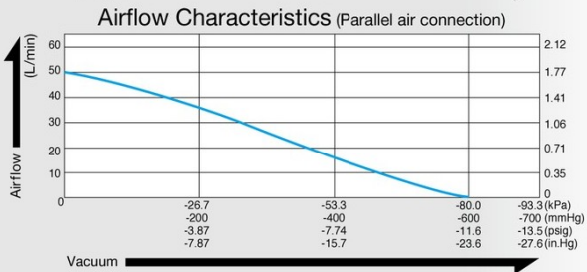
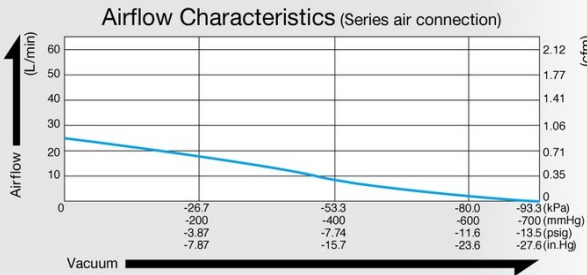


# Vacuum Pump

## Model VPO660x2



### Airflow & Power Consumption

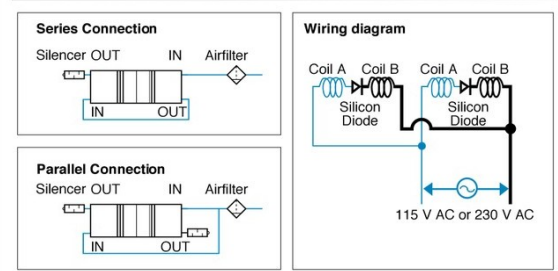


### Specifications

Attainable Vacuum *1	Series Connection -93.3 kPa (-700 mmHg) -933 mbar -27.6 in. Hg	Parallel Connection -80 kPa (-600 mmHg) -800 mbar -23.6 in. Hg
Free Air Displacement	25 L/min 0.88 cfm	50 L/min 1.77 cfm
Rated Performance	6,000 hours	
Rated Voltage	115 V AC	230 V AC
Power Consumption	125 W	100 W
Rated Frequency	60 Hz	50 Hz
Inlet	ISO Rc 1/4, 2 ports	
Outlet	ISO Rc 1/4, 2 ports	
Duty Cycle	Continuous	
Coil Insulation Class	B or its equivalent (JETL)	
Mounting Dimensions	280 (L) x 130 (W) mm 11-1/32" (L) x 5-1/8" (W)	
Weight	10 kg 22 Lbs	
Leadwire Length	150 mm 5-7/8"	600 mm 23-5/8"

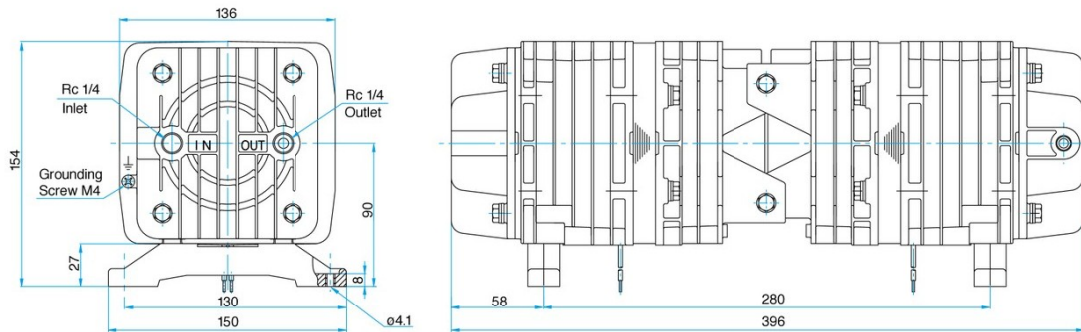
\*1: Operations at higher than -93.3kPa in series or -80kPa in parallel need an additional leak valve or relief valve on the inlet piping.

### Application Examples



\* Air line connection is required by the user.

### Dimensional Outline Drawing (Unit : mm)



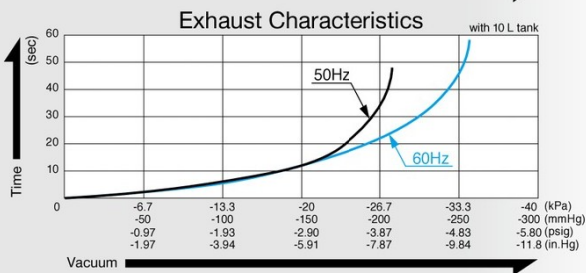
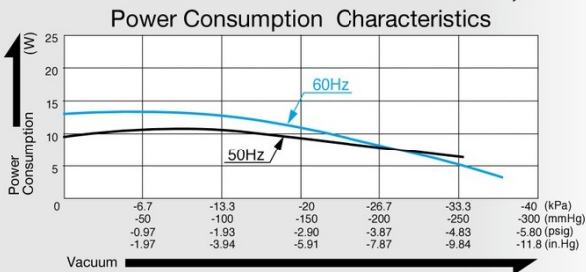
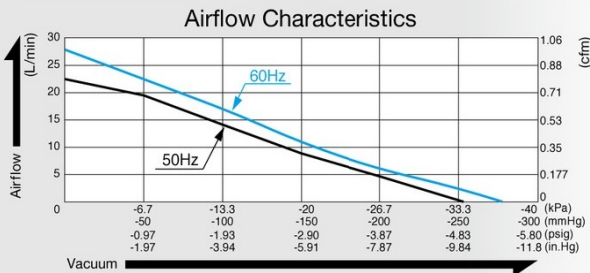
# Vacuum Pump

## Model VCK0120



\*Internal image

### Airflow & Power Consumption

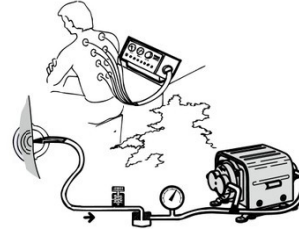


### Specifications

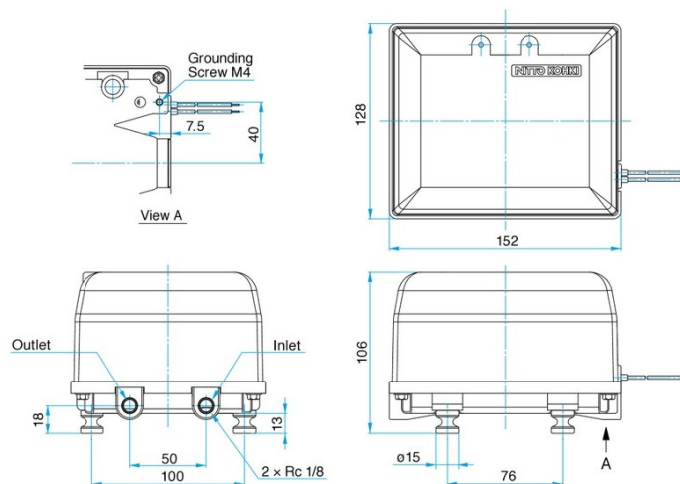
Attainable Vacuum	-26.7 kPa (-200 mmHg) - 267 mbar - 7.87 in.Hg	
Free Air Displacement	18 L/min 0.64 cfm	
Rated Voltage	120 V AC	230 V AC
Power Consumption	14 W	11 W
Rated Frequency	60 Hz	50 Hz
Rated Performance	5,000 hours	
Inlet	ISO Rc 1/8	
Outlet	ISO Rc 1/8	
Duty Cycle	Continuous	
Coil Insulation Class	B or its equivalent	
Mounting Dimensions	152 (L) x 128 (W) mm 5-63/64" (L) x 5-3/64" (W)	
Weight	1.9 kg	4.2 Lbs
Leadwire Length	300 mm 11-13/16"	

### Application Examples

#### Medical Cup Suction

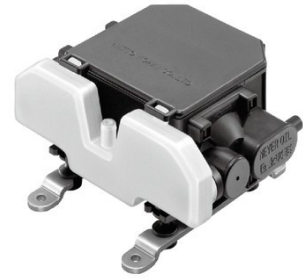


### Dimensional Outline Drawing (Unit : mm)

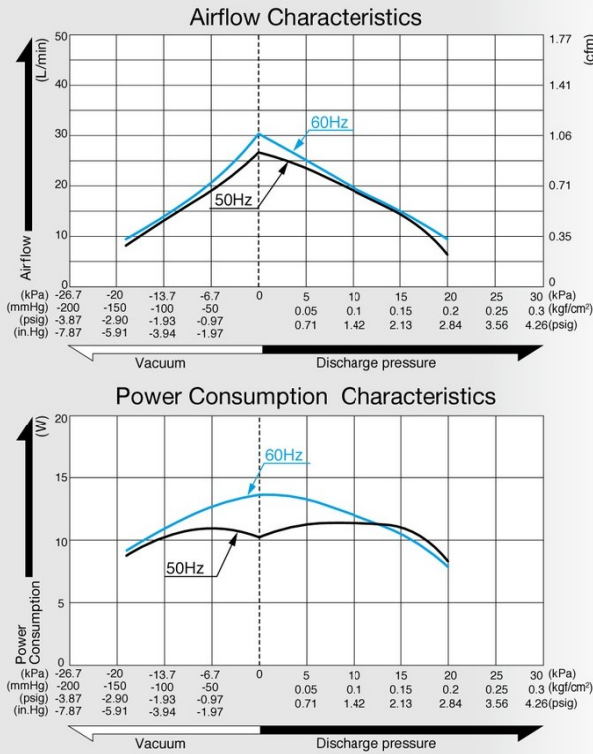


# Compressor and Vacuum Pump

## Model **VC0101E** Dual Type



### Airflow & Power Consumption



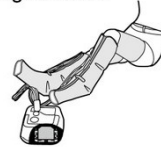
### Specifications

Rated Pressure	10 kPa (0.1 kgf/cm <sup>2</sup> ) 0.1 bar 1.42 psig	
Rated Airflow	15 L/min 0.53 cfm	
Maximum Pressure	20 kPa (0.2 kgf/cm <sup>2</sup> ) 0.2 bar 2.84 psig	
Attainable Vacuum	-18.7 kPa (-140 mmHg) -186 mbar -5.51 in.Hg	
Rated Voltage	120 V AC	230 V AC
Power Consumption	11.5 W	
Rated Frequency	60 Hz	50 Hz
Rated Performance	5,000 hours	
Working Pressure Range	-18.7 kPa to 20 kPa (-140 mmHg to 0.2 kgf/cm <sup>2</sup> ) -187 mbar to 0.2 bar -5.51 in.Hg to 2.84 psig	
Inlet	7.5 mm O.D. hose barb	
Outlet	7.5 mm O.D. hose barb	
Duty Cycle	Continuous	
Coil Insulation Class	E or its equivalent (JETL)	
Mounting Dimensions	66 (L) x 100 (W) mm 2-19/32" (L) x 3-15/16" (W)	
Weight	0.82 kg 1.81 Lbs	
Leadwire Length	300 mm 11-13/16"	

A UL approved model for 120V is available upon request.

### Application Examples

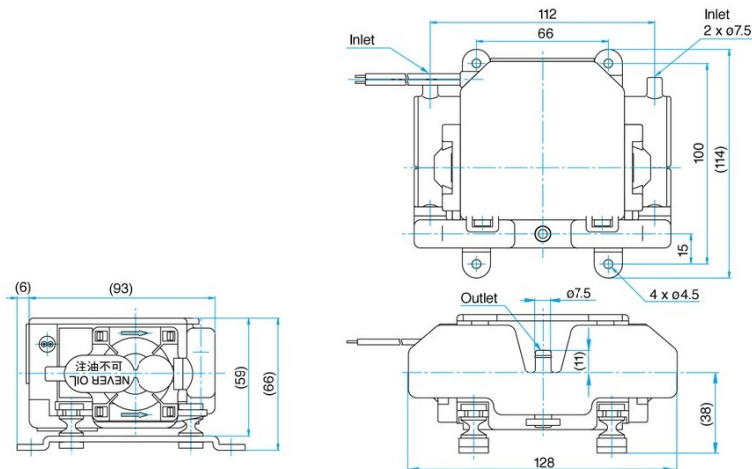
Massage Devices



Bedsores Prevention Mattress



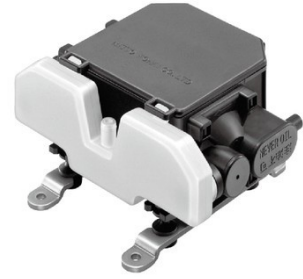
### Dimensional Outline Drawing (Unit : mm)



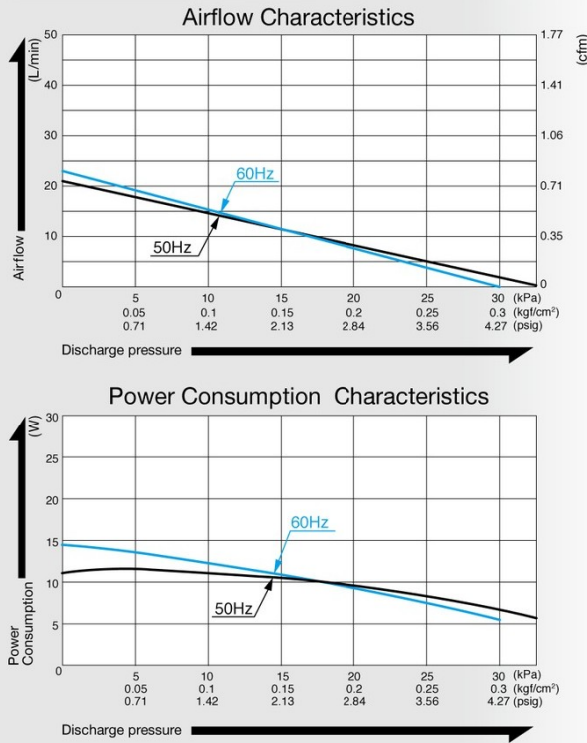


# Compressor

## Model **VC0101E** Blower Type



### Airflow & Power Consumption



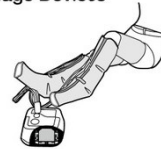
### Specifications

Rated Pressure	10 kPa (0.1 kgf/cm <sup>2</sup> ) 0.1 bar 1.42 psig	
Rated Airflow	15 L/min 0.53 cfm	
Maximum Pressure	20 kPa (0.2 kgf/cm <sup>2</sup> ) 0.2 bar 2.84 psig	
Rated Voltage	120 V AC	230 V AC
Power Consumption	11.5 W	
Rated Frequency	60 Hz	50 Hz
Rated Performance	5,000 hours	
Working Pressure Range	0 to 20 kPa (0 to 0.2 kgf/cm <sup>2</sup> ) 0 to 0.2 bar 0 to 2.84 psig	
Outlet	7.5 mm O.D. hose barb	
Duty Cycle	Continuous	
Coil Insulation Class	E or its equivalent (JETL)	
Mounting Dimensions	66 (L) x 100 (W) mm 2-19/32" (L) x 3-15/16" (W)	
Weight	0.82 kg 1.81 Lbs	
Leadwire Length	300 mm 11-13/16"	

A UL approved model for 120V is available upon request.

### Application Examples

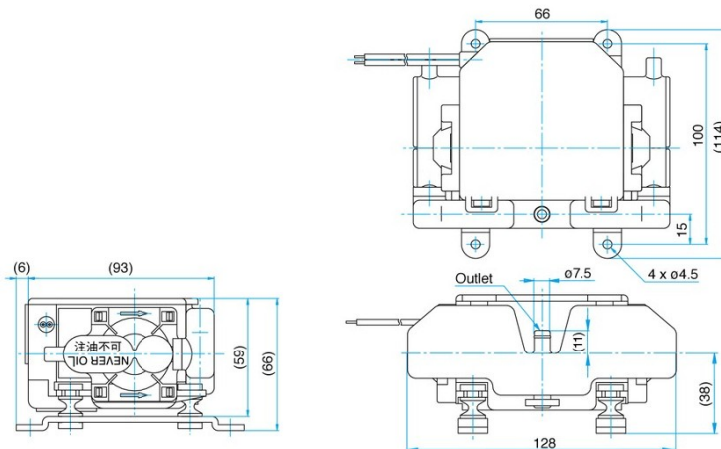
Massage Devices



Bedsores Prevention Mattress



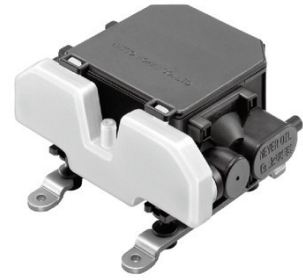
### Dimensional Outline Drawing (Unit : mm)



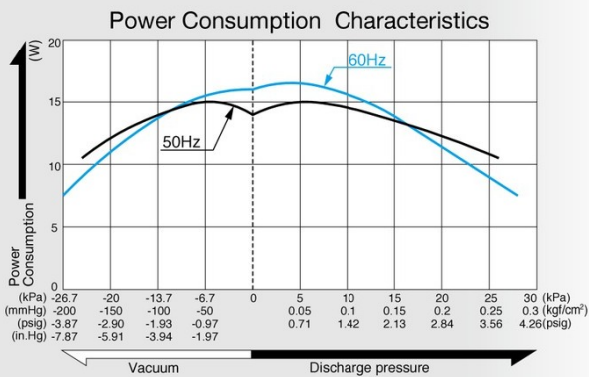
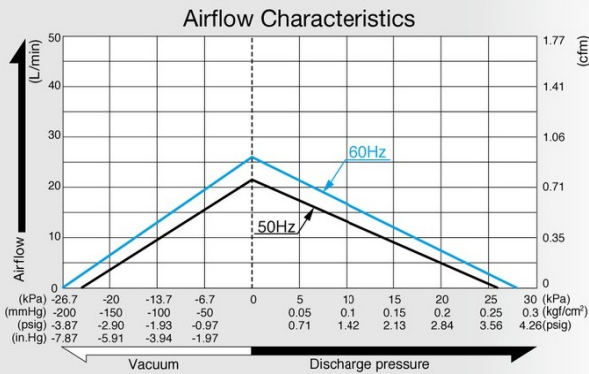


# Compressor and Vacuum Pump

## Model **VC0101S** Dual Type



### Airflow & Power Consumption



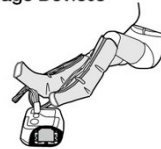
### Specifications

Rated Pressure	5 kPa (0.05 kgf/cm <sup>2</sup> ) 0.05 bar 0.71 psig	
Rated Airflow	15 L/min 0.53 cfm	
Maximum Pressure	26 kPa (0.26 kgf/cm <sup>2</sup> ) 0.26 bar 3.70 psig	
Attainable Vacuum	-24 kPa (-180 mmHg) -240 mbar -7.09 in.Hg	
Rated Voltage	120 V AC *1	230 V AC
Power Consumption	15 W	
Rated Frequency	60 Hz	50 Hz
Rated Performance	5,000 hours	
Working Pressure Range	-24 kPa to 26 kPa (-180 mmHg to 0.26 kgf/cm <sup>2</sup> ) -240 mbar to 0.26 bar -7.09 in.Hg to 3.70 psig	
Inlet	7.5 mm O.D. hose barb	
Outlet	7.5 mm O.D. hose barb	
Duty Cycle	60 minutes	
Coil Insulation Class	B or its equivalent (JETL)	
Mounting Dimensions	66 (L) x 100 (W) mm 2-19/32" (L) x 3-15/16" (W)	
Weight	0.82 kg 1.81 Lbs	
Leadwire Length	300 mm 11-13/16"	

\*1: 120V AC UL version is unavailable.

### Application Examples

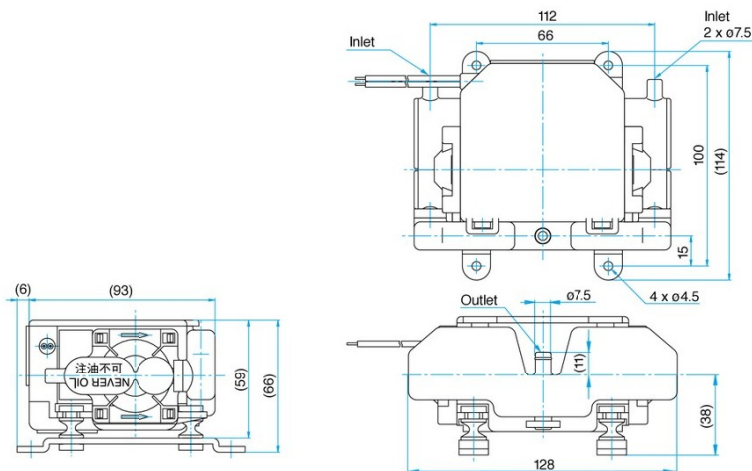
Massage Devices



Bedsores Prevention Mattress



### Dimensional Outline Drawing (Unit: mm)

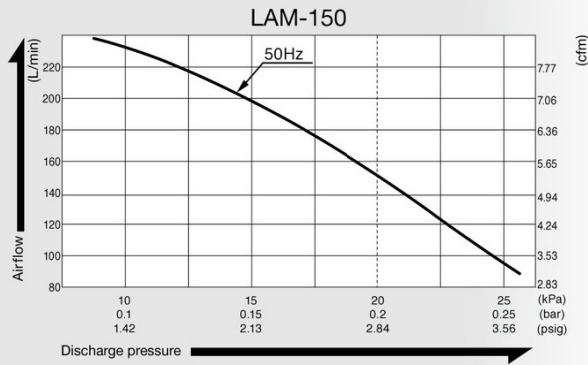


# Blower

## Model LAM-150



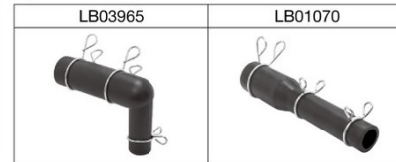
### Airflow Characteristics



### Specifications

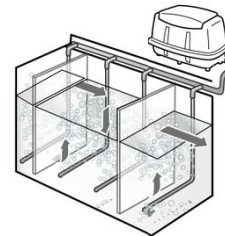
Power Supply	LAM-150 230 V AC
Rated Frequency	50 Hz
Power Consumption	140 W
Rated Pressure	20 kPa (0.2 kgf/cm <sup>2</sup> ) 0.2 bar 2.84 psig
Rated Airflow	150 L/min 5.3 cfm
Weight	12.3 kg 27.1 Lbs

### Optional Hose Assemblies

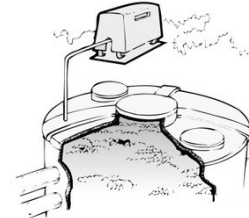


### Application Examples

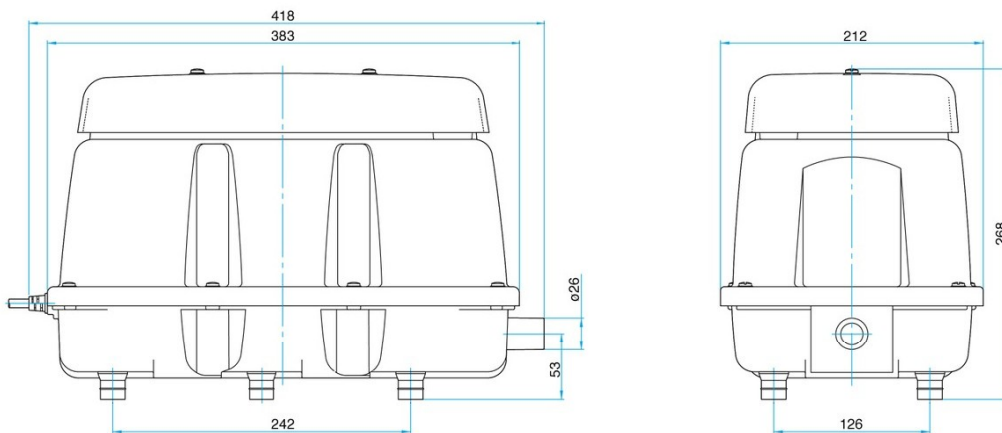
#### Grease Trap



#### Home Aerobic Sewage Treatment System



### Dimensional Outline Drawing (Unit : mm)

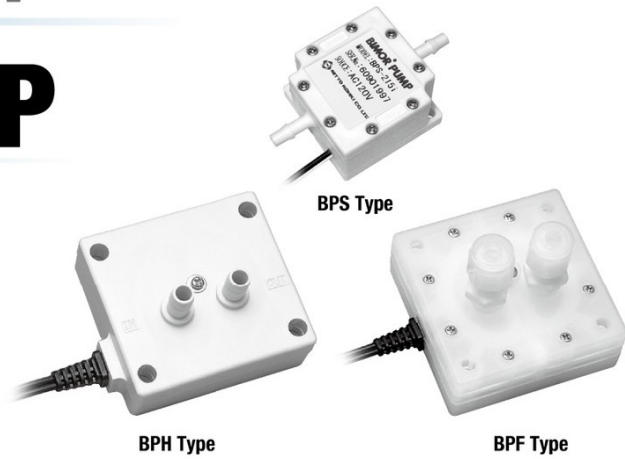


# Piezoelectric Pump

# 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.



## 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	—	—	—	—			PP	PP
BPH-414D	30	12	500	35	—	—	—	—	—	PPS	PTFE		
BPH-414G		10	450	32	—	—	—	—	—			PFA	FFKM FEP
BPH-474G		400	35	—	—	—	—	—	—	—	—		
BPH-474P	—	—	—	—	—	—	—	—	—	—	—	—	—
BPF-465P	30	10	400	35	—	—	—	—	—	—	—	—	—
—	—	—	—	—	BPF-265P	15	7	250	35	—	—	—	—

### Material Description

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

## suitable/unsuitable chemical liquids

Model	Examples of suitable chemical liquids	Examples of unsuitable chemical liquids
BPS-215i BPH-214i	Ethanol, Dilute hydrochloric acid, Sodium carbonate, Benzaldehyde, Formalin	Xylene, Mineral oil, Carbon tetrachloride, Trichloroethylene, Toluene, Benzene
BPH-214D 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 BPF-265P	Ethanol, Aqua regia, Ozone, Carbon tetrachloride, Concentrated nitric acid, Concentrated sulfuric acid, Fuming sulfuric acid	Fluorine oil, CFC 112, CFC 113



## Safety Guide

Be sure to carefully read the following precautions and the operation manual that comes with the product before use.

### Precautions for Compressors and Vacuum Pumps

<b>CAUTION</b> 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.		<b>WARNING</b> Do not let the unit draw in or discharge any gas other than air. This may cause an explosion, fire or electric shock.		Avoid drawing in water and splashing any water on the unit. Otherwise there is the risk of a short circuit causing a fire or electric shock.	
Avoid any strong impact to the unit as this may reduce the performance and durability of the unit.	Do not use the unit with a power supply other than the voltage shown on the unit. 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. This may cause a fire or electric shock.	Use the unit within the proposed ambient temperature range. Using it out of the range may cause a fire or electric shock.	Units must not be modified. Modifications may cause a fire or electric shock.	
Do not place combustible materials near the unit. 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. 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. This may damage them and cause a fire or electric shock.	The unit must be disconnected from its power source before cleaning or replacing filters. Failure to do so may result in an electric shock or injury.	
Do not pull, scratch, forcefully bend, twist or heat the lead wires. 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. 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.	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> Do not install the unit in a place where it may be soaked with water or covered with snow. This may cause an electric shock or fire.		<b>WARNING</b> Do not let the unit draw in or discharge any gas other than air. This may cause an explosion, fire or electric shock.			
Use a power supply equipped with a ground-fault interrupter and overcurrent breaker. Failure to do so may cause an electric shock or fire.	Do not use the unit in hot and humid conditions. This may cause an electric shock, breakdown or fire.	Always place the unit above water level. Failure to do so may result in an electric shock or breakdown.	Use a waterproof wall outlet to supply power to the unit. 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. Failure to do so may cause an electric shock or fire.	Have a qualified electrician do the electrical work. Failure to do so may cause an electric shock or fire.	Never modify the unit. This may cause an electric shock, breakdown, or fire.	Do not use the unit with the outlet port closed or at free displacement. This may cause an electric shock, breakdown, or fire.		
Do not place anything near the unit (within about 50cm). Doing so may cause an electric shock or fire.	Never touch the power plug with wet hands. This may cause an electric shock.	Insert the power plug securely into the innermost position. Failure to do so may cause an electric shock.	Do not put anything on the power cable. Doing so may cause a fire or electric shock.		
Always grasp the power plug to disconnect the unit from the socket. Pulling it out by the cord may cause an electric shock or breakdown.	Do not use the unit in a place where flammable materials, such as gasoline, thinner, lacquer, benzene, etc. are being used. This may cause a fire or explosion.	Check the power plug at least once a year for dirt and dust and clean if necessary. 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. Failure to do so may cause an electric shock or accident.		
	Any removed air filter must be replaced before the operation is resumed. Failure to do so may cause an electric shock or breakdown.	Never try to disassemble or repair the unit. This may cause an electric shock, breakdown, fire or injury. 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. 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> Avoid any liquid contaminated with solids such as debris or dust. If dust or debris sticks to the valve, the unit may not perform properly. When the intrusion of dust or debris is expected, be sure to place a filter on the inlet side of the unit.		<b>WARNING</b> Confirm the suitability of the liquid that passes through the unit before use. Failure to do so may cause a leak, explosion, fire or electric shock.			
Avoid any liquid that may crystallize. If crystals stick to the valve, the unit may not perform properly. A preliminary test 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.		There may be a risk that even a slight liquid pressure can open the valve due to siphon phenomenon. Place the outlet port at a position higher than the water level in the supply tank, or install a check valve if necessary to prevent water from being siphoned into the pump.		

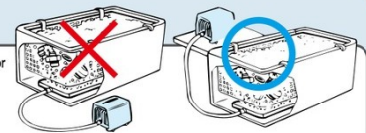
### When Using Compressors and Vacuum Pumps

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

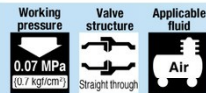
We, including designated distributors, will not be liable for any special damages or consequential damages and will not have any monetary liability to purchasers.

# CUPLA

CUPLA, Quick Connect Couplings, Enable Flexible, Fast, and Secure Connections in Various Fluid Lines.

## PLASTIC CUPLA BC Type Valveless

For low pressure air piping

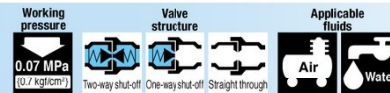


- To connect, just push the plug into the socket.
- Plastic makes this ideal for use in environment prone to rusting.
- Compact and light weight for easy handling.
- Valveless construction gives more stable flow.

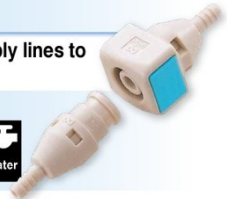


## CUBE CUPLA

Small and lightweight coupling for air supply lines to medical and/or scientific equipment

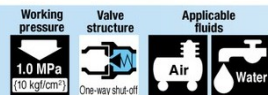


- Ultra-lightweight, made of polyacetal resin. Compact design for space saving.
- Just push plug into socket for connection. Simply press the button on the socket for disconnection.
- Both socket and plug have built-in valve types and valveless types. Valveless structure suits high viscosity fluids.
- Suitable for a wide range of applications from medical/scientific equipment to beverage machines or semiconductor manufacturing devices.



## MICRO CUPLA

For piping in pneumatic control devices

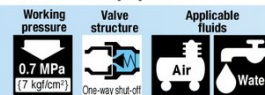


- Even though the valve is built in the socket, the sleeve outer diameter is confined to 9.5 mm.
- Compact design for piping in narrow spaces.
- Push-to-connect operation. Tube Fitter type for even easier tube insertion.
- Plated brass and stainless bodies are available for excellent corrosion resistance.
- Available in various end configurations to satisfy a wide range of pneumatic applications.



## SMALL CUPLA

Lightweight and compact for use on air lines and scientific equipment

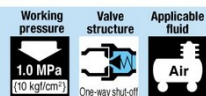


- Compact socket with built-in valve and 14 mm OD sleeve.
- Just push in the plug to the socket for connection.
- Also available with quick connect/disconnect Tube Fitter type.
- Chrome-plated brass for corrosion resistance adopted for the body.
- Available in various end configurations to satisfy a wide range of pneumatic applications.



## SUPER CUPLA

Light, compact for air piping connections

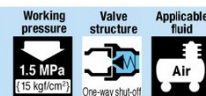


- Lightweight design suits direct connection to power tools.
- Push-to-connect for easy operation.
- Also available with quick connect/disconnect Tube Fitter type.
- Chrome-plated steel for corrosion resistance adopted for the body. (Partly aluminum)
- Available in various end configurations for a wide range of pneumatic applications.



## HI CUPLA 200

Push-to-connect type for air lines

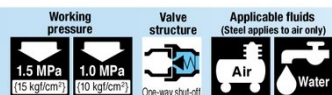


- Just push the plug into the socket for simple and secure connection.
- New valve design for low pressure loss to achieve flow rate increase (15% up over the conventional model).
- End-face seal is achieved when connected.
- Enhanced operability with low connection resistance.
- End-face seal design is superior to external seal with an O-ring due to no seal damage caused by exhausted lubrication.
- Also available with quick connect/disconnect Tube Fitter type.



## HI CUPLA

Universal purpose couplings for air lines

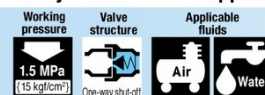


- An excellent general purpose coupling for connecting factory air supply to pneumatic tools.
- Steel coupling is suitable for air. Brass or stainless steel is suitable for water.
- Critical structural parts of steel models are heat-treated for increased strength giving greater durability and resistance to wear.
- Available in various body materials, sizes and end configurations applicable to a wide range of applications.



## HI CUPLA ACE

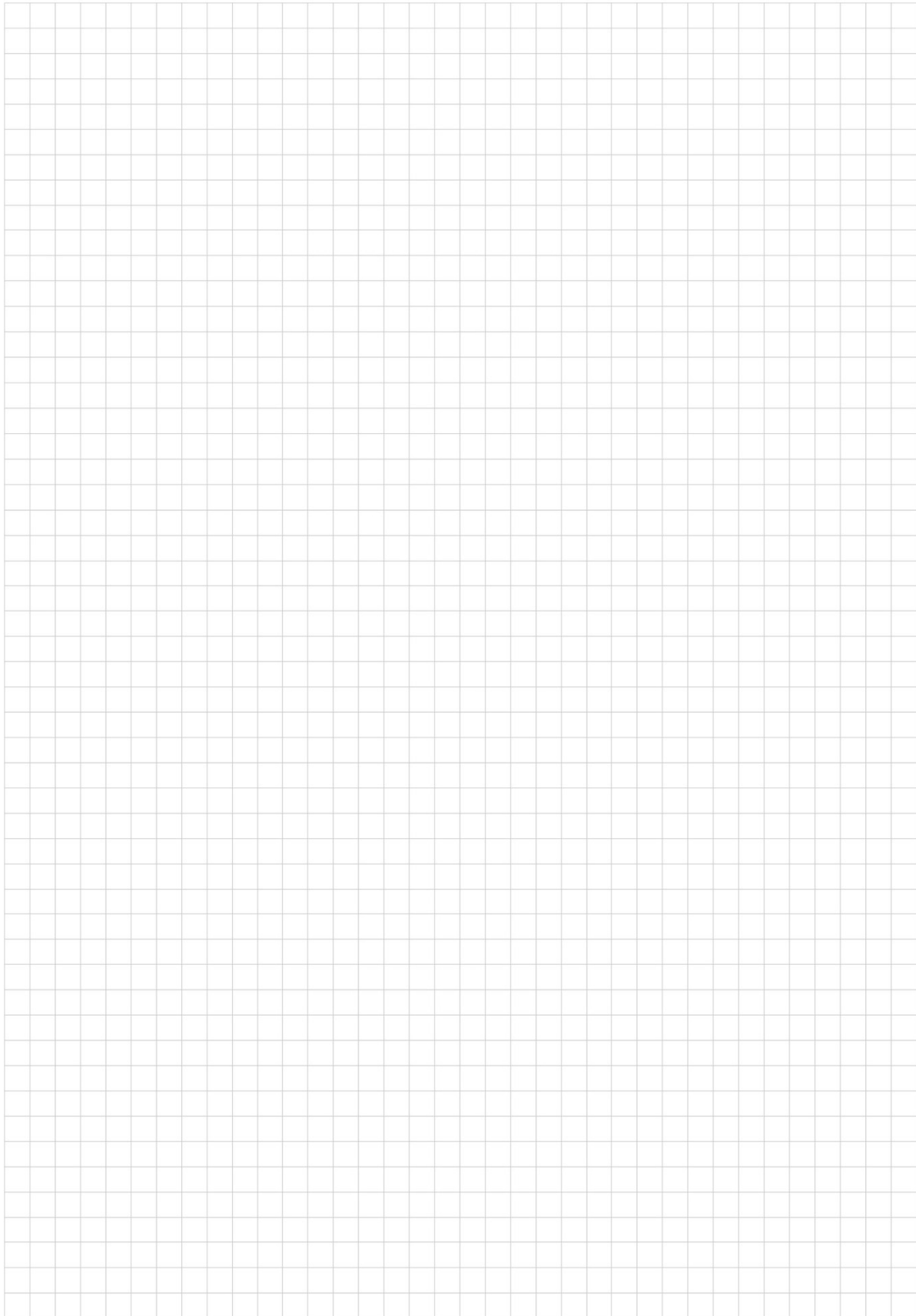
Lightweight plastic coupling with automatic safety lock for air line applications



- Pressure ratings comparable to steel Cuplas.
- A built in "automatic 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 COMPRESSOR, VACUUM PUMP & LIQUID PUMP

Focused on you

## NITTO KOHKI CO., LTD.

### Head Office

9-4, Nakaikogami 2-chome, Ohta-ku, Tokyo 146-8555, Japan

Tel : +81-3-3755-1111 Fax : +81-3-3753-8791 E-mail : overseas@nitto-kohki.co.jp

**Web** [www.nitto-kohki.co.jp/e](http://www.nitto-kohki.co.jp/e)



### Overseas Affiliates / Offices

#### NITTO KOHKI U.S.A., INC.

46 Chancellor Drive, Roselle, Illinois 60172, U.S.A.

For Pump

Tel : +1-630-924-8811 Fax : +1-630-924-0808

For Cupla

Tel : +1-630-924-5959 Fax : +1-630-924-1174

For Tool

Tel : +1-630-924-9393 Fax : +1-630-924-0303

[www.nittokohki.com/](http://www.nittokohki.com/)

#### NITTO KOHKI EUROPE GMBH

Gottlieb-Daimler-Str. 10, 71144 Steinenbronn, Germany

Tel : +49-7157-989555-0 Fax : +49-7157-989555-40

[www.nitto-kohki.eu/](http://www.nitto-kohki.eu/)

#### NITTO KOHKI EUROPE GMBH UK Branch

Unit A5, Langham Park Industrial Estate, Maple Road,

Castle Donington, Derbyshire DE74 2UT, United Kingdom

Tel : +44-1332-653800 Fax : +44-1332-987273

[www.nitto-kohki.eu/](http://www.nitto-kohki.eu/)

#### NITTO KOHKI AUSTRALIA PTY LTD

77 Brandt Street, Eight Mile Plains, Queensland 4113, Australia

Tel : +61-7-3340-4600 Fax : +61-7-3340-4640

[www.nitto-australia.com.au/](http://www.nitto-australia.com.au/)

#### NITTO KOHKI (SHANGHAI) CO., LTD.

Room1506, Suite C, Orient International Plaza,

No.85 Loushanguan Road, Shanghai 200336, China

Tel : +86-21-6415-3935 Fax : +86-21-6472-6957

[www.nitto-kohki.cn/](http://www.nitto-kohki.cn/)

#### NITTO KOHKI (SHANGHAI) CO., LTD. Shenzhen Branch

2005C Shenzhen ICC Tower, Fuhuasanlu 168,

Futian District, Shenzhen, Guangdong 518048, China

Tel : +86-755-8375-2185 Fax : +86-755-8375-2187

[www.nitto-kohki.cn/](http://www.nitto-kohki.cn/)

#### NITTO KOHKI CO., LTD. Singapore Branch

10 Ubi Crescent #01-62, Ubi Techpark Lobby D, Singapore 408564

Tel : +65-6227-5360 Fax : +65-6227-0192

[www.nitto-kohki.co.jp/e/nksb/index.html](http://www.nitto-kohki.co.jp/e/nksb/index.html)

#### NITTO KOHKI CO., LTD. Bangkok Representative Office

M&A Business Center, Q-House Convent Bldg.,

38 Convent Rd., Silom, Bangrak, Bangkok 10500, Thailand

Tel : +66-2632-0307 Fax : +66-2632-0308

[www.nittobkk.com/](http://www.nittobkk.com/)

#### NITTO KOHKI CO., LTD. India Liaison Office

3rd Floor, Building No.9-A DLF Cyber City, Phase-III,

Gurgaon, Haryana 122002, India

Tel : +91-124-454-5031 Fax : +65-6227-0192

#### NITTO KOHKI CO., LTD. Mexico Representative Office

Torre Corporativo 1 Piso 11 Central Park Armando Birlain Shaffler

#2001 Col Centro Sur, Queretaro, Qro, C.P. 76090, Mexico

Tel : +52-442-290-1234

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