

LINEAR AIR PUMP

HIBLOW[®]

GENERAL
CATALOG

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Introduction

Since the introduction of the first HIBLOW pump in 1967, we have established an unshakable market position as a pioneer in the air pump field. We introduced electromagnetically operated diaphragms into domestic market for the first time. Since then, we have endeavoured to develop unique products, and the SPP series is the latest result. More than 17million HIBLOW pumps have now been produced and found widespread applications. They are used in the medical field for scientific and chemical instruments, in industrial equipment, for aquaria, septic tanks and for many other purposes, HIBLOW air pumps employ electoromagnetically operated diaphragms, which makes it possible to supply a compact device at low cost, and besides, it offers simple maintenance and requires minimum power input, important requirements in the market today, Low noise operation and high durability are two more remarkable advantages of our products.

Business Location



By establishing affiliated offices in the Philippines, U.S.A. Spain, France, Australia and Vietnam, Techno Takatsuki Co.,Ltd. is steadily expanding its overseas network of companies. Currently HIBLOW air pumps are being exported to the U.S.A. and Europe, as well as Southeast Asia and Australia, totalling some 70 different countries. With a view toward enhancing the reliability of its products, positive efforts are being made to meet safety standards in each country. Company strategy is global, supported by abundant technical know-how to keep pace with the fast growing age of high technology.

Application Examples

HIBLOW® AIR PUMP Advantage & Working Principle

Here are examples of some typical applications of our products. There are many more than illustrated.

Industry

Industrial facilities

- Solder removers
- Absorption transport devices
- Packaging machines
- Gas burners

Physics & Chemistry

- Analyzing devices
- Stirring devices
- Floating germ measuring devices
- Washers

Environment

Waste water treatment

- Septic tanks
- Grease traps
- Other wastewater treatment plant functions

Energy

- Fuel cell systems

Food

- Vending machines
- Ozone deodorizers
- Vacuum sealers
- Rice cleaners

Fish breeding

- For fish preservers and fish tanks

Other

- Atmosphere analysis devices

Medical treatment

Medical treatment

- Low frequency therapeutic equipment
- Medical check-up machines
- Blood-drawing machines
- Blood pressure gauges

Nursing care & welfare

- Air mats that prevent bedsores
- Nursing care bathtubs

Health

- Massagers
- Cosmetic machines

Daily life

Home facilities

- Fuel cell systems
- Washing machines
- Jacuzzi baths
- Airbeds
- Kitchen garbage disposals

Hobby

- Bubbling display
- Air brush
- For aquarium

Advantage

1 Durability

The moving parts consist of an actuating rod supported by two special synthetic rubber diaphragms which vibrate laterally, permitting long-term continuous operation.

2 No Lubrication Necessary

There is no friction between moving parts and therefore no need for lubrication, An added advantage being that the exhausted air is always clean.

3 High Efficiency

Operation is based upon the principle of electromagnetic vibration which eliminates the need for sliding parts, thereby minimizing power consumption and offering high efficiency.

4 Compact and Powerful

"HIBLOW" air pumps incorporate two electromagnets, one to the front, the other to the rear, which act upon permanent magnets, providing perfectly-balanced vibration and allowing a compact but powerful device.

5 Low Noise

Sound insulation was of prime importance when designing the pneumatic circuit and vibrating section and as a result it is exceptionally quiet.

6 Smooth Air Flow

The exhaust rate is uniform and vibration minimal therefore it is ideally suited for applications which require consistent air pressure and supply.

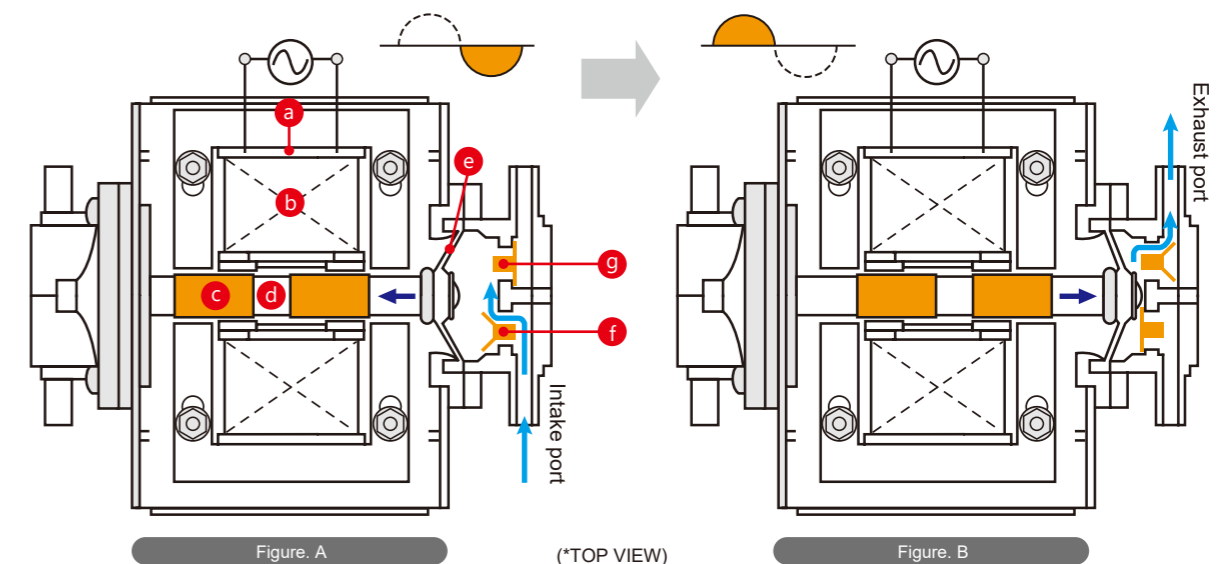
7 Easy Maintenance

Apart from the simple replacement of some components, such as a broken diaphragm, long-term, maintenance-free operation is possible. Replacement parts come in a cassette.

Working Principle

When the alternating current is applied to the electromagnet as in the figure below the actuating rod moves first in the direction of the arrow as shown in Fig. A and then in the direction of the arrow as shown in Fig. B, by the magnetic attraction and repellent forces exerted between the electromagnet and the permanent magnets attached to the rod. The rod vibrates at the same frequency as that of the power supply and changes the volume of the space enclosed between the casing and the diaphragm.

Thus, the air intake, compression and exhaust can be performed through the valves.



a Electromagnet b Coil c Permanent-magnet d Rod e Diaphragm f Intake valve g Exhaust valve

Small capacity air pump C-5BN / 15H



Pressure use

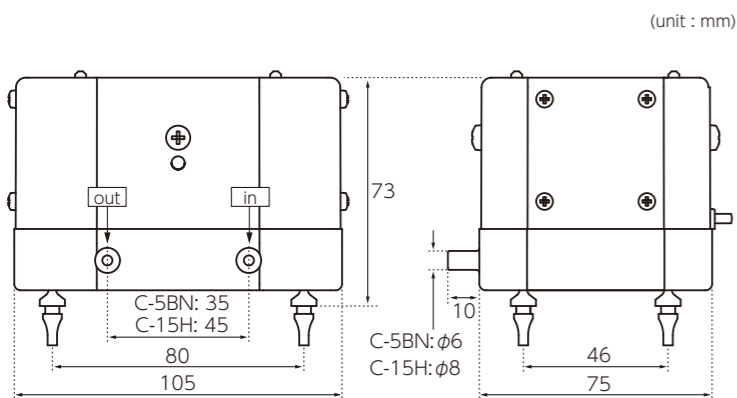
Built-in use

*No power plug included because it is designed for built-in use.
*Rubber-made legs are sharp-pointed. Not for self-standing installation.

Applications

- Air mat, air bed (continuous air exhaust)
- Air bearing
- For burner (air supply)
- Scientific & chemical instruments (analysis and agitation)

Dimensions

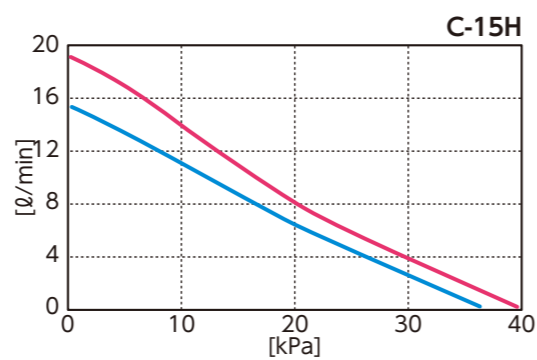
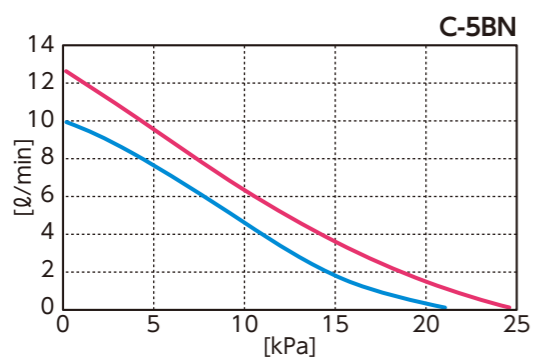


Specifications

	C-5BN		C-15H	
Rated voltage [V]	AC100 / 120 / 230			
Power frequency [Hz]	50	60	50	60
Max airflow volume [L/min]	10	13	15	19
Max power consumption [W]	8.5		15	17
Sound level [dBA]	31	34	40.5	42.5
Weight [kg]	0.69			

*Sound data shown is with pump operating at 4kPa(C-5BN) / 5kPa(C-15H).

Performance Curve



* All characteristics values are only for reference, and are not guaranteed values.
* Note that the operating temperature for our pumps is 41°F(5°C) to 104°F(40°C).

Small capacity air pump CD-8S



Pressure & vacuum use

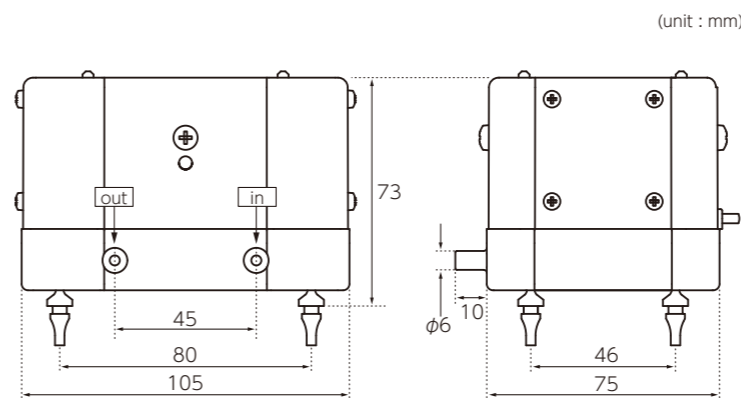
Built-in use

*No power plug included because it is designed for built-in use.
*Rubber-made legs are sharp-pointed. Not for self-standing installation.

Applications

- Air mat, air bed (continuous air exhaust)
- Air bearing
- For burner (air supply)
- Scientific & chemical instruments (analysis and agitation)

Dimensions

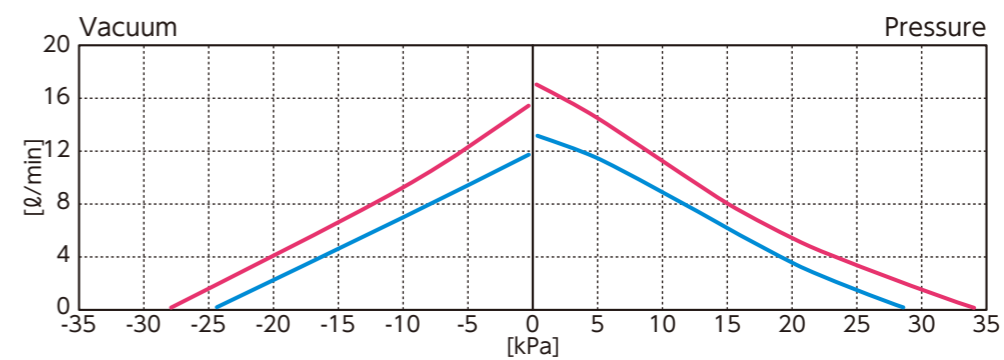


Specifications

	CD-8S	
Rated voltage [V]	AC100 / 120 / 230	
Power frequency [Hz]	50	60
Max airflow volume [L/min]	13 (-12)	17 (-16)
Max power consumption [W]	8	11
Sound level [dBA]	31	34
Weight [kg]	0.74	

*The value in parentheses represents vacuum.
*Sound data shown is with pump operating at -10kPa CD-8S.

Performance Curve



* All characteristics values are only for reference, and are not guaranteed values.
* Note that the operating temperature for our pumps is 41°F(5°C) to 104°F(40°C).

Small capacity air pump VP-4020 / 5030 / 6035



*The nozzle position of images are examples.

Pressure use

Numerous nozzle configurations available

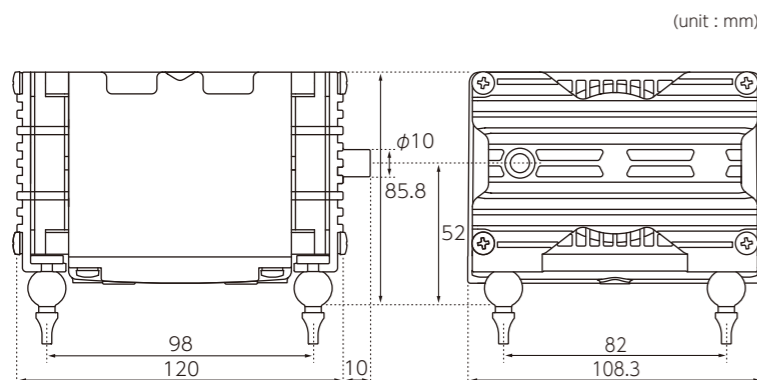
Built-in use

*No power plug included because it is designed for built-in use.
*Rubber-made legs are sharp-pointed. Not for self-standing installation.

Applications

- Air mat, Air bed (continuous air exhaust)
- Air bearing
- Air massager
- Scientific & chemical instruments (analysis and agitation)

Dimensions



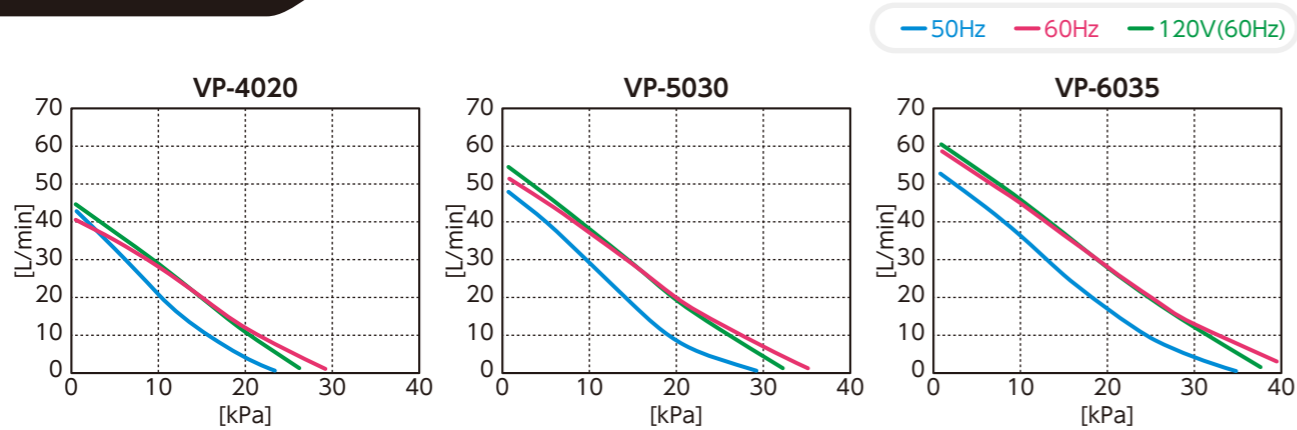
*The figure represents the standard configuration. Customization of nozzle position is available.

Specifications

	VP-4020			VP-5030			VP-6035		
Rated voltage [V]	AC100 / 120 / 230								
Power frequency [Hz]	50	60	120V/60	50	60	120V/60	50	60	120V/60
Max airflow volume [L/min]	42	40	43	46	50	54	52	59	60
Max power consumption [W]	16	17	18	23	26	27	30	36	35
Sound level [dBA]	41	42	43	41.5	42	44	42	43.5	45
Weight [kg]	1.95								

*Sound data shown is with pump operating at 10kPa and exhaust plumbed away from the unit.

Performance Curve



* All characteristics values are only for reference, and are not guaranteed values.
* Note that the operating temperature for our pumps is 41°F(5°C) to 104°F(40°C).

Small capacity air pump VP-4020S / 5030S / 6035S



*The nozzle position of images are examples.

Pressure & vacuum use

Numerous nozzle configurations available

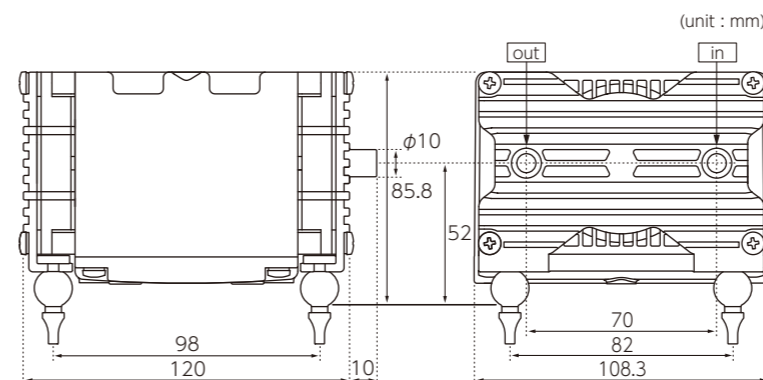
Built-in use

*No power plug included because it is designed for built-in use.
*Rubber-made legs are sharp-pointed. Not for self-standing installation.

Applications

- Air mat, Air bed (continuous air exhaust)
- Air bearing
- Air massager
- Scientific & chemical instruments (analysis and agitation)

Dimensions



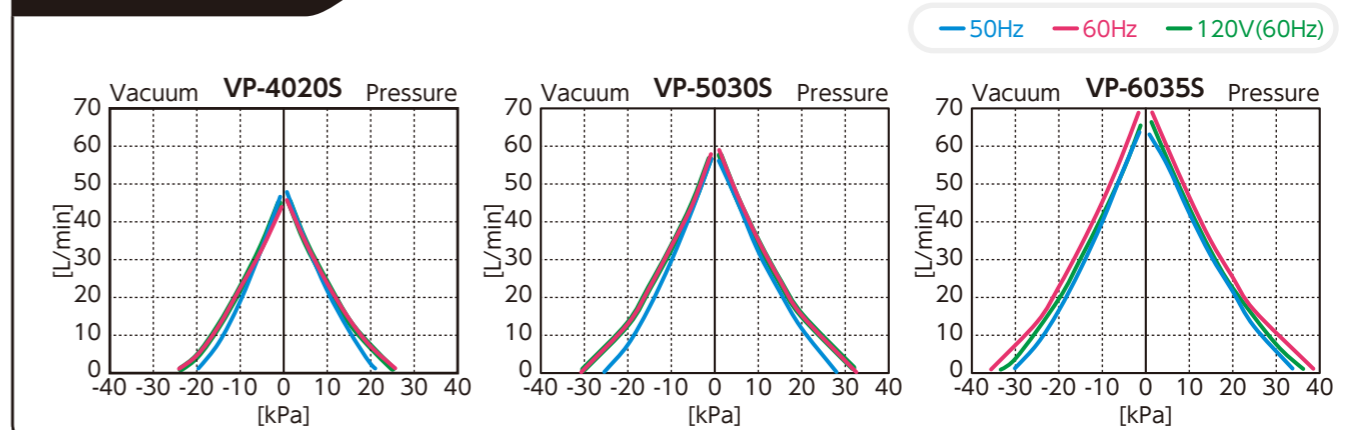
*The figure represents the standard configuration. Customization of nozzle position is available.

Specifications

	VP-4020S			VP-5030S			VP-6035S		
Rated voltage [V]	AC100 / 120 / 230								
Power frequency [Hz]	50	60	120V/60	50	60	120V/60	50	60	120V/60
Max airflow volume [L/min]	47	46	47	56	59	58	63	70	66
	(-47)	(-45)	(-46)	(-56)	(-58)	(-57)	(-63)	(-69)	(-65)
Max power consumption [W]	16	17	18	23	26	27	30	36	35
Sound level [dBA]	31.5	34.5	35	39	38	36.5	40.5	40	
Weight [kg]	1.95								

*The value in parentheses represents vacuum.
*Sound data shown is with pump operating at 10kPa and exhaust plumbed away from the unit.

Performance Curve



* All characteristics values are only for reference, and are not guaranteed values.
* Note that the operating temperature for our pumps is 41°F(5°C) to 104°F(40°C).

Small capacity air pump ML-6A / 6AS / 6B / 6BS



DC motor driven

ML-6A / 6B : Pressure use

ML-6AS / 6BS : Vacuum use

Built-in use

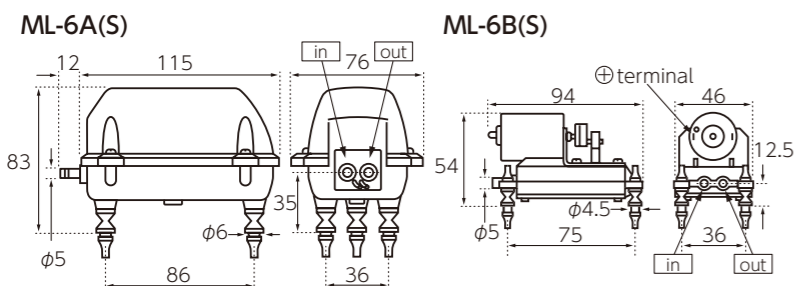
*No power plug included because it is designed for built-in use.
*Rubber-made legs are sharp-pointed. Not for self-standing installation.

Applications

- Supply and pressurization of air in air mats
- Extraction of air for vacuum packaging
- Suction means for air-tweezers
- Air sampling

Dimensions

(unit : mm)

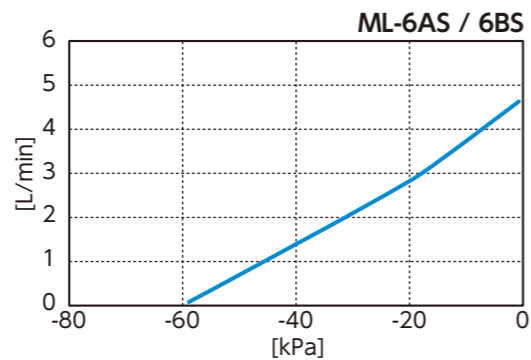
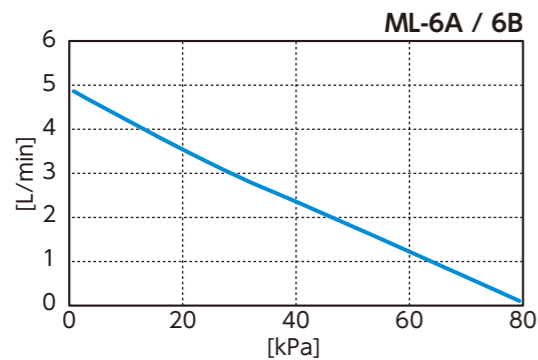


Specifications

	ML-6A/6AS	ML-6B/6BS
Rated voltage [V]	DC12	
Power current [mA]	450	
Airflow volume [L/min]	5 (-4.5)	
Sound level [dBA]	37	58
Weight [kg]	0.5	0.22

*The value in parentheses represents ML-6AS, ML-6BS vacuum.
*Sound data shown is with pump operating at 20kPa and exhaust plumbed away from the unit.

Performance Curve



* All characteristics values are only for reference, and are not guaranteed values.
* Note that the operating temperature for our pumps is 41°F(5°C) to 104°F(40°C).

Small capacity air pump MR-6B / 6BS



DC motor driven

MR-6B : Pressure use

MR-6BS : Vacuum use

Built-in use

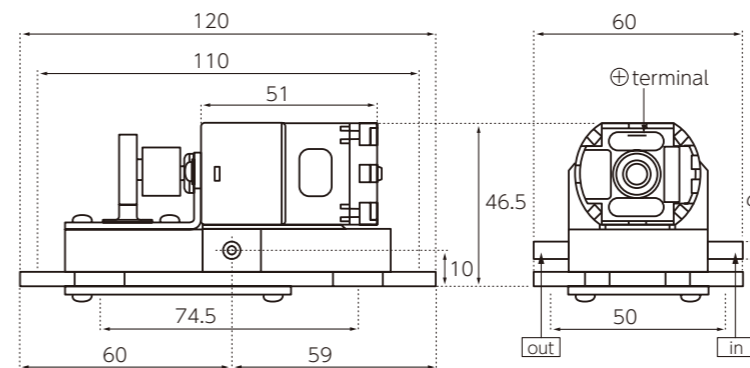
*No power plug included because it is designed for built-in use.
*Rubber-made legs are sharp-pointed. Not for self-standing installation.

Applications

- Supply and pressurization of air in air mats
- Extraction of air for vacuum packaging
- Suction means for air-tweezers
- Air sampling

Dimensions

(unit : mm)

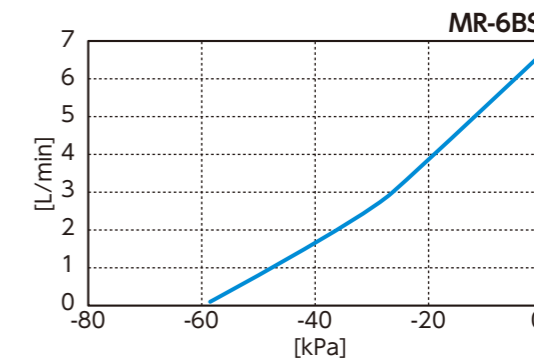
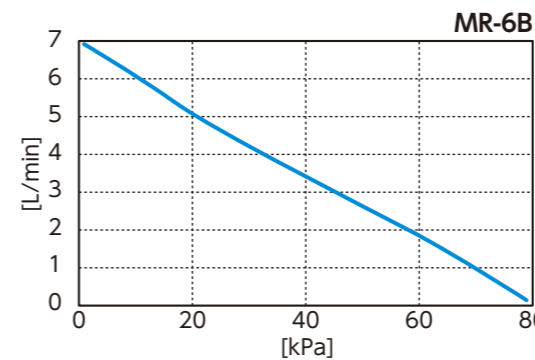


Specifications

	MR-6B / 6BS
Rated voltage [V]	DC24
Power current [mA]	500
Airflow volume [L/min]	7 (-6.5)
Sound level [dBA]	58
Weight [kg]	0.28

*The value in parentheses represents MR-6BS vacuum.
*Sound data shown is with pump operating at 20kPa and exhaust plumbed away from the unit.

Performance Curve



* All characteristics values are only for reference, and are not guaranteed values.
* Note that the operating temperature for our pumps is 41°F(5°C) to 104°F(40°C).

Small capacity air pump KP-4020 / 5030 / 6035



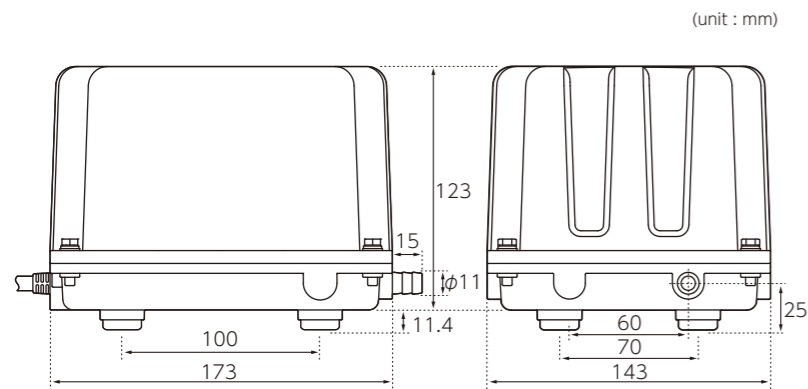
*The nozzle position of images are examples.

- Pressure use
- Numerous nozzle configurations available
- Hausing use (High noise reduction)
- Indoor use

Applications

- Air mat, Air bed (continuous air exhaust)
- Air bearing
- Air massager
- Scientific & chemical instruments (analysis and agitation)

Dimensions



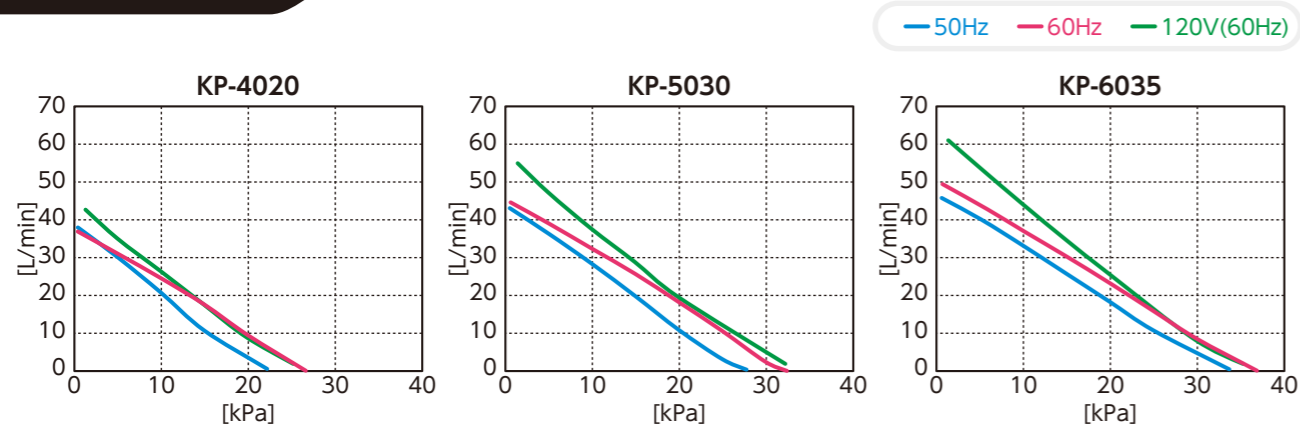
*The figure represents the standard configuration. Customization of nozzle position is available.

Specifications

	KP-4020			KP-5030			KP-6035		
Rated voltage [V]	AC100 / 120 / 230								
Power frequency [Hz]	50	60	120V/60	50	60	120V/60	50	60	120V/60
Max airflow volume [L/min]	37	43	44	45	49	50			
Max power consumption [W]	16	17	18	23	26	27	24	33	35
Sound level [dBA]	28	31		32	34		34	36	
Weight [kg]	3.8								

*Sound data shown is with pump operating at 10kPa and exhaust plumbed away from the unit.

Performance Curve



* All characteristics values are only for reference, and are not guaranteed values.
* Note that the operating temperature for our pumps is 41°F(5°C) to 104°F(40°C).

Small capacity air pump KP-4020S / 5030S / 6035S



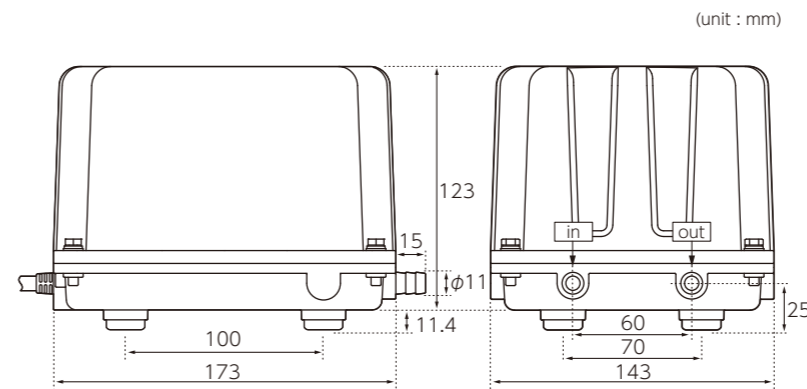
*The nozzle position of images are examples.

- Pressure & vacuum use
- Numerous nozzle configurations available
- Hausing use (High noise reduction)
- Indoor use

Applications

- Air mat, Air bed (continuous air exhaust)
- Air bearing
- Air massager
- Scientific & chemical instruments (analysis and agitation)

Dimensions



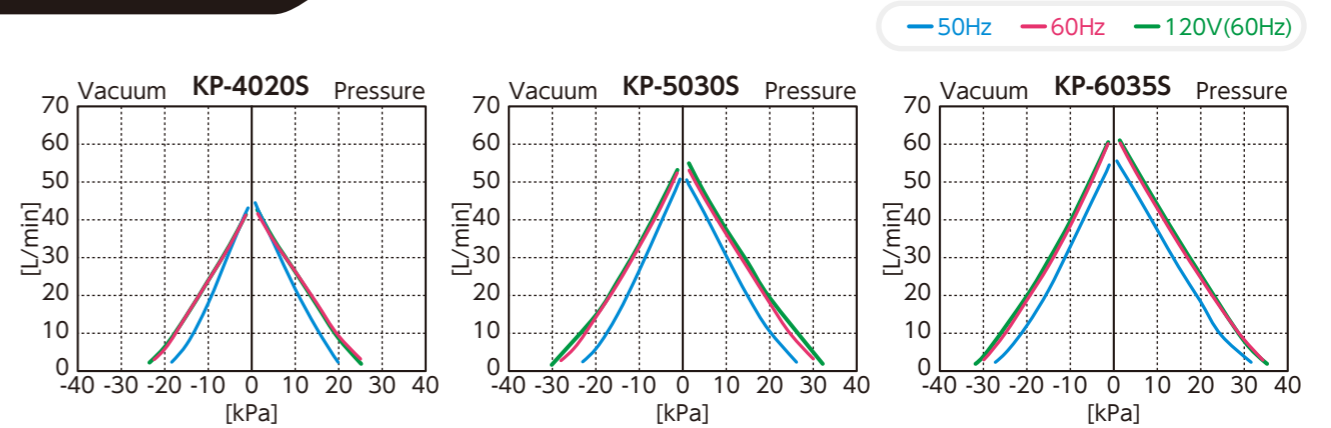
*The figure represents the standard configuration. Customization of nozzle position is available.

Specifications

	KP-4020S			KP-5030S			KP-6035S		
Rated voltage [V]	AC100 / 120 / 230								
Power frequency [Hz]	50	60	120V/60	50	60	120V/60	50	60	120V/60
Max airflow volume [L/min]	45	44		52	55		55	61	62
	(-45)	(-43)		(-51)	(-54)		(-55)	(-60)	(-61)
Max power consumption [W]	16	17	18	23	26	27	24	33	35
Sound level [dBA]	27.5	28.5		28	29		29.5	31.5	30
Weight [kg]	3.8								

*The value in parentheses represents vacuum.
*Sound data shown is with pump operating at 10kPa and exhaust plumbed away from the unit.

Performance Curve



* All characteristics values are only for reference, and are not guaranteed values.
* Note that the operating temperature for our pumps is 41°F(5°C) to 104°F(40°C).

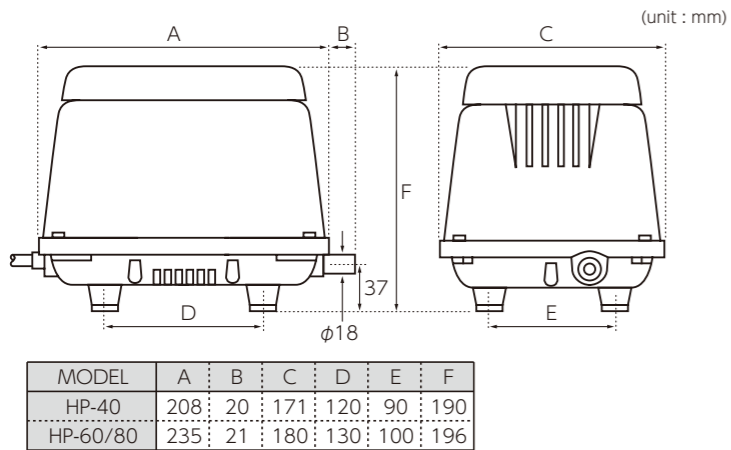
Small & medium capacity air pump HP-40 / 60 / 80



- Pressure use
- Outdoor (Rainproof) use

- Applications**
- Low frequency therapeutic equipment and other medical & scientific apparatus
 - Septic tank (biological contact aeration)
 - Bubble bath (air bubble injection)
 - Oxygen supply for fish breeding

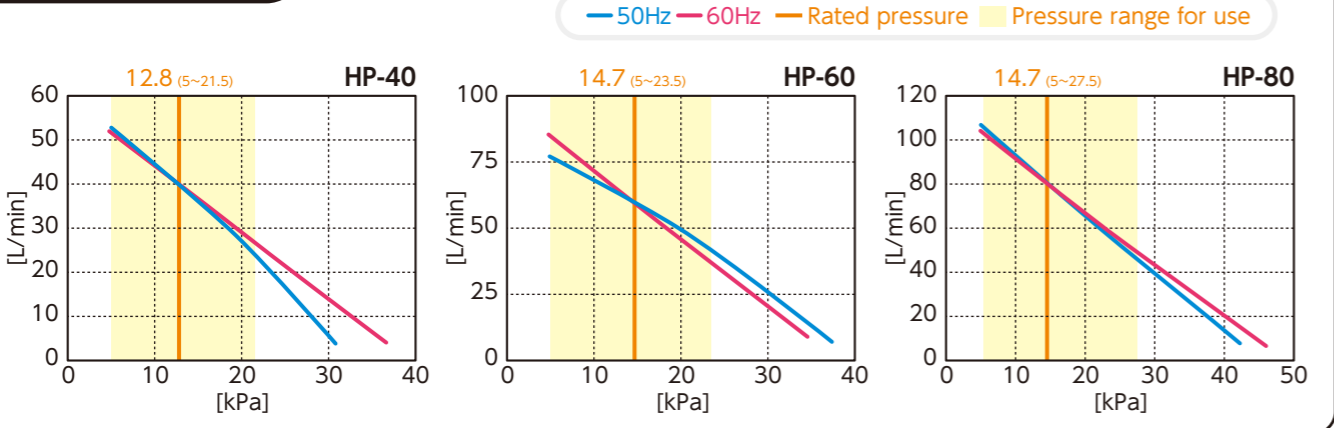
Dimensions



Specifications

	HP-40	HP-60	HP-80
Rated voltage [V]	AC120 / 230		
Power frequency [Hz]	50 60	50 60	50 60
Rated pressure [kPa]	12.8	14.7	
Airflow volume [L/min]	40	60	80
Power consumption [W]	38	51	71
Sound level [dBA]	32	35	39
Weight [kg]	5.7	7	

Performance Curve



* All characteristics values are only for reference, and are not guaranteed values.
* Note that the operating temperature for our pumps is 41°F(5°C) to 104°F(40°C).

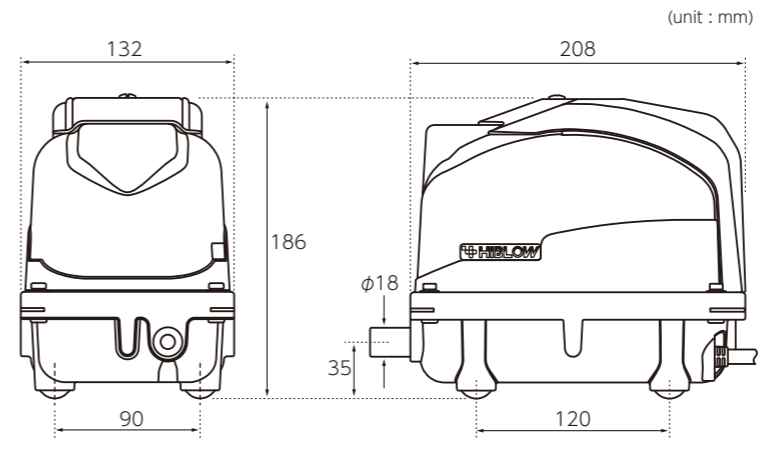
Small & medium capacity air pump XP-40 / 60 / 80



- Pressure use
- Dust control "Dust trap filter"
- Easy restart by micro switch (XP-60 / 80 only)
- No need of grounding
- Outdoor (Rainproof) use

- Applications**
- Septic tank (biological contact aeration)
 - Air injection for bubble bath
 - Small capacity compressor

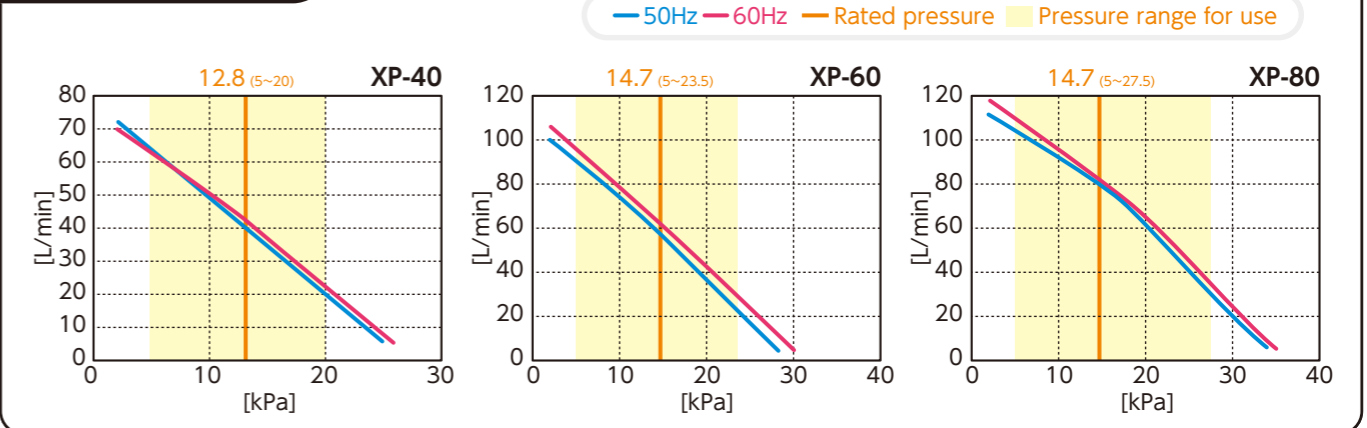
Dimensions



Specifications

	XP-40	XP-60	XP-80
Rated voltage [V]	AC100 / 120 / 230		
Power frequency [Hz]	50 60	50 60	50 60
Rated pressure [kPa]	12.8	14.7	
Airflow volume [L/min]	40	60	80
Power consumption [W]	24 30	32 39	51 58
Sound level [dBA]	33	35	36
Weight [kg]	4.1	4.3	

Performance Curve



* All characteristics values are only for reference, and are not guaranteed values.
* Note that the operating temperature for our pumps is 41°F(5°C) to 104°F(40°C).

Built-in use

Indoor use

Outdoor use (for wastewater treatment)

Built-in use

Indoor use

Outdoor use (for wastewater treatment)

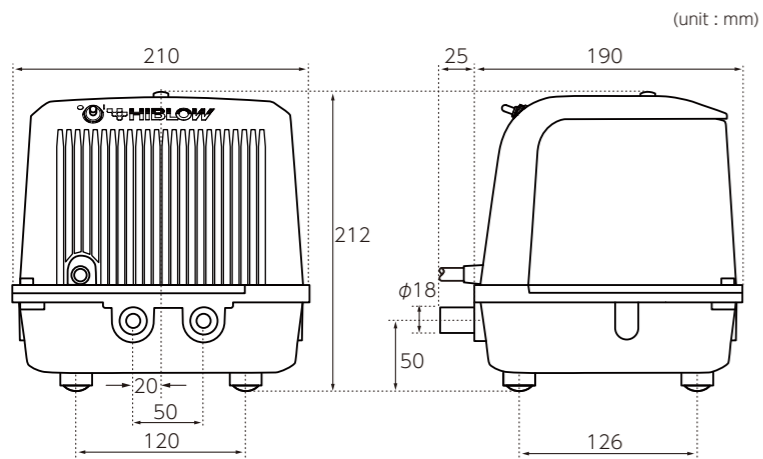
Medium capacity air pump DUO-60 / 80



- Pressure use
- Easy restart by micro switch
- Two directional control valve
- No need of grounding
- Outdoor (Rainproof) use

- Applications**
- Septic tank (biological contact aeration)
 - Air injection for bubble bath
 - Small capacity compressor

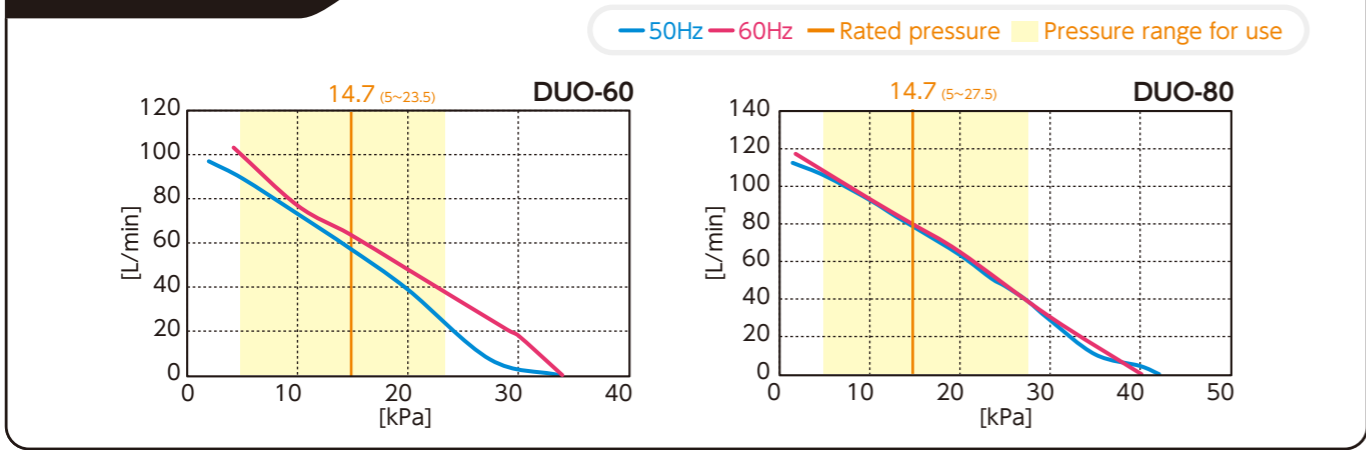
Dimensions



Specifications

	DUO-60	DUO-80
Rated voltage [V]	AC120 / 230	
Power frequency [Hz]	50	60
Rated pressure [kPa]	14.7	
Airflow volume [L/min]	60	80
Power consumption [W]	32	39
Sound level [dBA]	35	
Weight [kg]	6	

Performance Curve



* All characteristics values are only for reference, and are not guaranteed values.
* Note that the operating temperature for our pumps is 41°F(5°C) to 104°F(40°C).

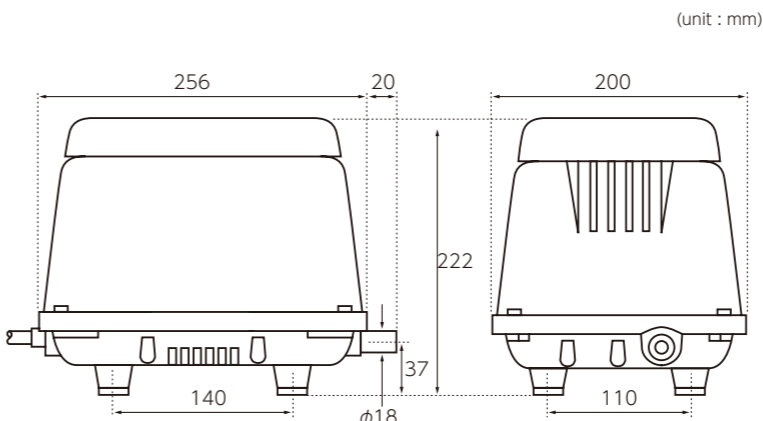
Large capacity air pump HP-100 / 120 / 150 / 200



- Pressure use
- Outdoor (Rainproof) use

- Applications**
- Septic tank (biological contact aeration)
 - Air injection for bubble bath
 - Small capacity compressor
 - Oxygen supply for fish breeding

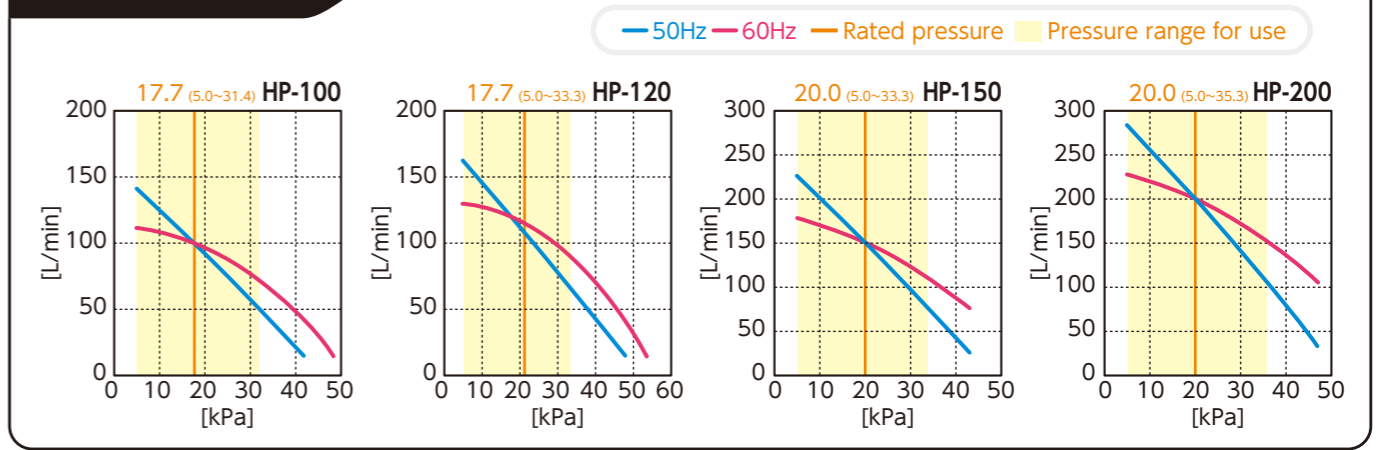
Dimensions



Specifications

	HP-100	HP-120	HP-150	HP-200
Rated voltage [V]	AC100 / 120 / 230			
Power frequency [Hz]	50	60	50	60
Rated pressure [kPa]	17.7		20	
Airflow volume [L/min]	100	120	150	200
Power consumption [W]	95	100	115	125
Sound level [dBA]	38	40	45	47
Weight [kg]	8.5		9	

Performance Curve



* All characteristics values are only for reference, and are not guaranteed values.
* Note that the operating temperature for our pumps is 41°F(5°C) to 104°F(40°C).



Things to be aware of when using HIBLOW air pump

- Our pumps are air pumps. Under no circumstance should the pumps be used in water or any other liquids as this could damage the pump.
- Note that the operating temperature for our pumps is 41°F (5°C) to 104°F (40°C).
- When using the pump to inject air into a liquid; make sure that the pump is higher than the surface level of the liquid, otherwise the liquid may flow back into the pump when the power is turned off.
- Do not use pump near volatile liquids such as gasoline, thinners etc., as this would create the danger of an explosion.
- Do not excessively block the quantity of discharged air, cover the pump so that heat cannot escape, or use in temperatures higher than 104°F (40°C) otherwise pump life may be shortened and malfunctions occur.
- If the pump sounds unusual or the amount of discharged air is greatly reduced, turn off the power immediately because this may indicate a damaged diaphragm.
-
- Do not touch the pump with wet hands as there is a possibility of you receiving an electric shock.

- The specifications given in this catalogue are subject to change without notice.
- Standard models are designed to operate on 100V AC, but 110V ~ 120V and 220V ~ 240V AC models are available on request, Please ask our sales department for further information.

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