



JQA-2160  
Linear Products Division  
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Headquarters  
Research Center

Cat.NO. **L-032**

*NITTO KOHKI's*

# Air Compressors & Vacuum Pumps

# MEDO

- Piston Compressors
- Piston Vacuum Pumps
- Piston Blowers
- Diaphragm Pumps
- DC Air Pumps



# Air Compressors & Vacuum Pumps

## Linear Motor Driven Free Piston System

### Air Compressor Low Pressure Series

※Mark: Made-to-order

Model	Rated Pressure MPa (kgf/cm <sup>2</sup> )	Max. Pressure MPa (kgf/cm <sup>2</sup> )	Rated Airflow ℓ/min	Page
AC 0102	0.02 {0.2}	0.04 {0.4}	5	7
AC 0201A	0.01 {0.1}	0.02 {0.2}	20	8
AC 0301A	0.01 {0.1}	0.03 {0.3}	28	9
AC 0401A	0.01 {0.1}	0.035 {0.35}	35	10
AC 0602	0.015 {0.15}	0.035 {0.35}	40	11
AC 0901	0.01 {0.1}	0.04 {0.4}	80	12
AC 0902	0.02 {0.2}	0.045 {0.45}	55	13
AC 0501 ※	0.01 {0.1}	0.035 {0.35}	45	35

### Air Compressor Intermediate Series

Model	Rated Pressure MPa (kgf/cm <sup>2</sup> )	Max. Pressure MPa (kgf/cm <sup>2</sup> )	Rated Airflow ℓ/min	Page
AC 0105	0.05 {0.5}	0.08 {0.8}	2.5	15
AC 0110	0.1 {1.0}	0.12 {1.2}	0.8	16
AC 0207	0.07 {0.7}	0.1 {1.0}	3.5	17
AC 0410	0.1 {1.0}	0.15 {1.5}	5	18
AC 0610	0.1 {1.0}	0.15 {1.5}	8	19
AC 0910	0.1 {1.0}	0.15 {1.5}	16	20
AC 0920	0.2 {2.0}	0.3 {3.0}	8	21

### Vacuum Pump

Model	Max Vacuum kPa (-mmHg)	Free Airflow ℓ/min	Page
VP 0125	-33.3 / {-250}	7	23
VP 0140	-53.3 / {-400}	3	24
VP 0435A	-46.7 / {-350}	25	25
VP 0450	-66.7 / {-500}	18	26
VP 0625	-33.3 / {-250}	40	27
VP 0660	-80 / {-600}	25	28
VP 0940	-53.3 / {-400}	60	29
VP 0645 ※	-60 / {-450}	10	36
VP 0935A ※	-44 / {-330}	60	37
VP 0945 ※	-60 / {-450}	12	38
VP 0660x2 ※	-93.3 / {-700} / -80 / {-600}	25 / 50	39

### LA Blower

Model	Rated Pressure MPa (kgf/cm <sup>2</sup> )	Rated Airflow ℓ/min	Page
LA 28B	0.011 {0.11}	28	31
LA 45B	0.011 {0.11}	45	31
LA 60B	0.015 {0.15}	60	32
LA 80B	0.015 {0.15}	80	32
LA 100	0.018 {0.18}	100	33
LA 120	0.018 {0.18}	120	33

Medo pumps are unique products that feature a patented linear-motor-driven free piston system. Utilised in varied applications, from life support systems to robotics, Nitto Kohki has developed a comprehensive series of precision air compressors and vacuum pumps that incorporate this uniquely functional design. Proven throughout the world for over two decades, we are proud to have been selected by many leading companies in advanced industries as their primary supplier of air compressor type equipment.

## CONTENTS

### Free Piston Pump

### Diaphragm Pump



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## Linear Motor Driven Diaphragm System

### Diaphragm Pump

Model	Max. Vacuum kPa (-mmHg)	Rated Pressure MPa (kgf/cm <sup>2</sup> )	Max. Pressure MPa (kgf/cm <sup>2</sup> )	Rated Airflow ℓ/min	Page
VC 0100		0.004 {0.04}	0.016 {0.16}	6	43
VC 0101	-10 / {-75}	0.01 {0.1}	0.02 {0.2}	10	44
VC 0101S	-24 / {-180}	0.005 {0.05}	0.026 {0.26}	15	44
VC 0201	-18.7 / {-140}	0.01 {0.1}	0.018 {0.18}	20	45
VC 0301	-21.3 / {-160}	0.01 {0.1}	0.02 {0.2}	25	45
VC 0201B	-18.7 / {-140}	0.01 {0.1}	0.018 {0.18}	20	46
VC 0301B	-21.3 / {-160}	0.01 {0.1}	0.02 {0.2}	25	46

## Brush-less and Brush Motor Driven System

### DC Pump

Model	Max. Vacuum kPa (-mmHg)	Max. Pressure MPa (kgf/cm <sup>2</sup> )	Free Airflow ℓ/min	Page
DP 0125	-33.3 / {-250}	0.03 {0.3}	2.5	47
DP 0140	-53.3 / {-400}	0.05 {0.5}	4	47
DP 0102	-26.7 / {-200}	0.045 {0.45}	5	48
DP 0102S	-26.7 / {-200}	0.045 {0.45}	7	48
DP 0102H		0.08 {0.8}	4	48
DP 0105	-66.6 / {-500}	0.25 {2.5}	2.8	49

# LINEAR MOTOR DRIVEN FREE PISTON MECHANISM

The Linear-motor-driven Free Piston System is not only ideal for upgrading existing systems but can also be used for future design improvement. Compact, quiet, and vibration free, the extremely reliable Free Piston Pump will enhance your system performance and extend its operating life.

The Electro-magnet and return spring alternatively drive the piston inside the cylinder, the mechanical resonance of which is synchronized with the input current cycle. In a single mechanism, the piston combines the functions of two normally independent devices; a pump and a motor.

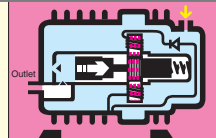
## Compact integrated design

This unique system enables the mechanical resonance of a single part. An incredibly compact, lightweight design is achieved by combining what are entirely independent functions in conventional pumps - the motor and the compressor - into a superior single, unified structure.

A silicon diode in between the coils converts the full-wave input current into half-rectified current. In turn this activates and deactivates the electro-magnet, producing a smooth mechanically resonating action.

## Operating Principle

A. The energised electro-magnet attracts the piston, compresses the return spring, and draws air into the cylinder through the opened inlet valve.



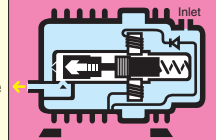
## Current



## No Current

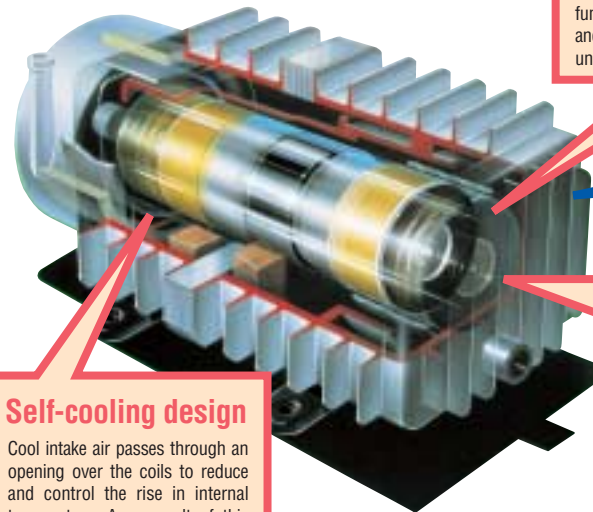


B. When the electro-magnet is de-energized, the return spring pushes the piston back, forcing the compressed air out of the cylinder through the now opened outlet valve.



## Fewer components

This uniquely simple and reliable design has no complicated transmission components such as crankshafts, connecting rods, ball bearings, etc. typically found in conventional pump designs. Fewer parts means fewer problems.

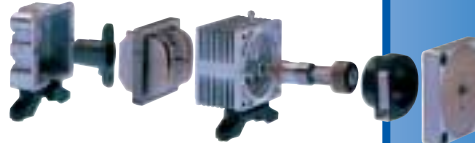


## Self-cooling design

Cool intake air passes through an opening over the coils to reduce and control the rise in internal temperature. As a result of this feature, it is possible to almost completely seal the unit, thus improving the suppression of internal operating noise.

## Hyper pressure control mechanism

Should the output pressure exceed the rated value, the piston will automatically adjust to a shorter stroke. Additionally, power consumption will automatically reduce, guarding against possible temperature overloads.



## Air Compressors & Vacuum Pumps



Air Brush



Soldering Fume Remover



Muscular Electro-Therapy Unit



Aquarium Aeration



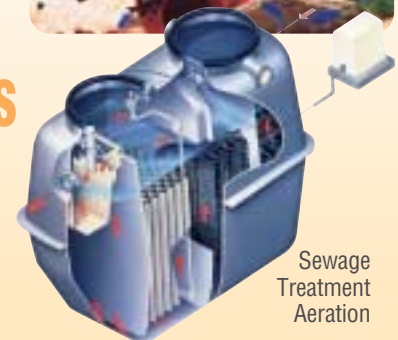
Coffee Maker



Pap-smear Tester



Nebulisers



Sewage Treatment Aeration

## Our Valued Customers & Applications

**Experience gained in well over two decades of designing, engineering, manufacturing and continually perfecting our products in thousands of applications has resulted in a “functionally intelligent” package. Please review these key design features and see how every design element contributes overall to the creation of a superior compressor or vacuum pump.**



**Compact and Lightweight with the motor and compressor combined into the single structure**

With the piston as the only moving part, efficient space utilisation enables our pump to be considerably smaller and lighter than other pumps. This allows the OEM design engineer increased packaging options for other internal components.



**Low Noise Level No transmission assemblies, means less noise**

With no need for complicated transmission mechanisms riding on ball bearings, or actuating linkages creating friction and noise, Nitto Kohki's pumps are inherently quieter. Additionally, the almost completely sealed configuration further suppresses secondary internal operating noises.



**Low Vibration using an ultra-lightweight piston**

The extremely low mass, short stroke, die cast piston minimises reactive force vibrations. Secondary vibrations are isolated or absorbed through the soft elastomeric mounting pads.



**Clean Operation - Clean Air due to oil-less construction**

All wearing surfaces use no oil, grease or other contaminating lubricants. The combination of a precision Teflon® sleeved piston assisted by an "air-bearing effect" made possible through a unique air path design, assures that the outlet air is completely free of oil.



**Instant Response enabling easy start-ups in frequent on-off short cycle applications**

A very low starting current enables our pumps to produce immediate performance in quick short cycle applications, even in the presence of residual back pressure.



**Minimal Pulsating Effect due to the high resonating speed**

The piston's mechanical resonance speed is synchronised with the input power frequency regardless of the load, i.e., 3000 strokes at 50Hz, and 3600 strokes at 60Hz per minute. This high speed produces shorter pulses which translate into a smoother, more uniform and "linear" motion.



**Automatic Pressure Adjustment with intelligent pressure monitoring**

Should an operating condition create excessive pressure, the piston stroke length proportionally reduces to accommodate the condition. Along with this adjustment, power consumption is correspondingly reduced, decreasing or eliminating the potential for system malfunctions or permanent damage.



**Low Power Consumption truly energy efficient through integrated design**

Since the low mass piston is the only moving part, frictional losses are minimized, allowing lower starting and running current, and thus greater efficiency. Related benefits are realised through a lower rise in temperature, facilitating a longer operating life for the pump and the other components within your system.



**Longer Durability increased OEM value**

All key design features listed here combine to provide superior performance in all the important aspects of superior pump design. This enables the OEM engineer to have complete confidence in incorporating the unit into the most demanding systems, in the most advanced equipment.



**Easy maintenance only air filter and piston to change**

Replacement of the piston can be easily performed by simply removing the four screws holding the head cover in place. A completely oil-less construction is achieved through the combination of two elements: the superior abrasion resistance of the Teflon® seals that cover the piston contact surfaces and the "air bearing effect" created by the unique air path design.

# How to use this Catalogue

*This catalogue is designed to aid you in selecting the most appropriate pump model for your specific application. The CONTENTS on page 1 and 2 show the corresponding pages of particular models. The page on which each model is shown consists of a specifications table, a performance chart, a power consumption chart, and an external/mounting dimensions diagram. It is necessary to read the explanation below in order to understand what these numbers/values mean for Linear Motor Driven Free Piston compressors and other mechanism pumps.*

## Explanation of Technical Terms

### For compressors

**Rated pressure:** This is the optimum pressure point, where you will get the best capabilities such as performance and service life, and where the pump is designed to have the same airflow regardless of whether the input cycle is 50Hz or 60Hz.

**Rated airflow:** The discharge airflow at the rated pressure point.

**Maximum pressure:** The highest obtainable pressure point for which the pump was designed given zero discharge airflow. (Not assured; referential value only)

**Power consumption:** The input wattage value during operation at the rated pressure point.

**Duty cycle:** The period of operation time in which the coil temperature will not exceed the coil insulation class limit for which it was designed.

### For vacuum pumps

**Maximum vacuum:** The highest vacuum the pump can attain with the pump inlet closed.

**Free air displacement:** Airflow at zero vacuum. (for reference only)

**Power consumption:** The maximum input wattage on the power consumption curve (up to the maximum vacuum).

**Duty cycle:** See "For compressors".

**Exhaustion characteristic curve:** Time required to attain the respective vacuum within a 10 litre container.

### For all compressors & pumps

Operating ambient temperature: 0 ~ 40°C

Operating ambient humidity: 30 ~ 85% non-condensing

### Improvement suggestion

While our compressors and vacuum pumps employ a unique internal coil cooling feature to reduce or control the rise in internal temperature, please be advised that operating at higher than rated pressures may result in elevated temperatures. Should these temperatures become excessive, operating duty cycles may need to be reduced, or the use of an auxiliary cooling fan should be considered.

### For both compressors & vacuum pumps

**Life expectancy:** Expected accumulated operating hours until the discharge airflow reduces by 20% under rated conditions. The actual life might vary in accordance with the actual operating conditions or environment. For example, the output pressure setting, the maintenance schedule, the ventilation, the ambient temperature, the duty cycle, etc.

**Please note that fluctuations of supply voltage will not only affect the pressure, the vacuum rate and the airflow but may also influence the life expectancy of the pump.**

**Rated power supply:** The two major types are 115VAC/60Hz and 230VAC/50Hz. However, most of the models, not all of them, can be used at both 50Hz and 60Hz with different performance characteristics.

**Coil insulations:** The suggested classes, most bare units attaining "E" class, are based on Japanese electric regulations. They are merely suggestions since bare units are considered components and are not classified as complete products or systems.

For reference; Class	(Temperature limit, degrees C)
A	100
E	115
B	125
F	150
H	170

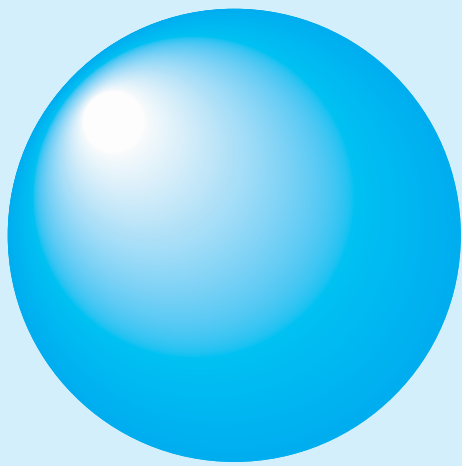
\*Outside & Mounting Dimensions: Useful for evaluating the required space for installation. Allow an extra 5-10 mm in order to prevent the pump from hitting its surroundings as it vibrates.

## Performance Specifications and Operating Parameter Suggestions

■ All numeric and graphic data provided in this catalogue is expressed as nominal values to serve as technical suggestions for selection and operation. Typical tolerances have been suppressed in this Catalogue for the purpose of clarity.

■ This catalogue will give you the guidelines for you to determine the appropriate model for your application(s). However, in certain cases you may need further detailed information, which will be provided in the form of a specifications sheet for each version by our technical staff who will assist you in selecting the optimum model/version to suit your needs.

*It is recommended for OEM customers to confirm the specifications in writing before placing orders.*



# Air Compressor

## Low Pressure Series

# LINEAR

AC 0102  
P7

AC 0201A  
P8

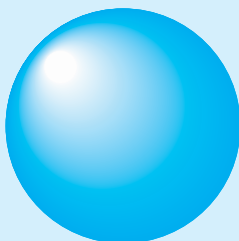
AC 0301A  
P9

AC 0401A  
P10

AC 0602  
P11

AC 0901  
P12

AC 0902  
P13

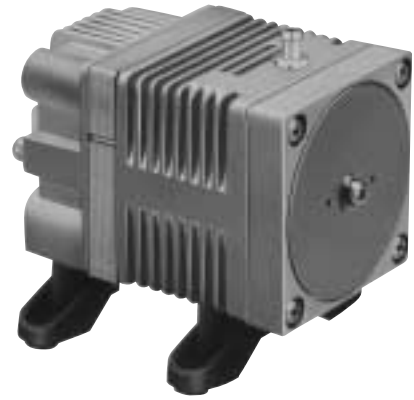


# LINEAR

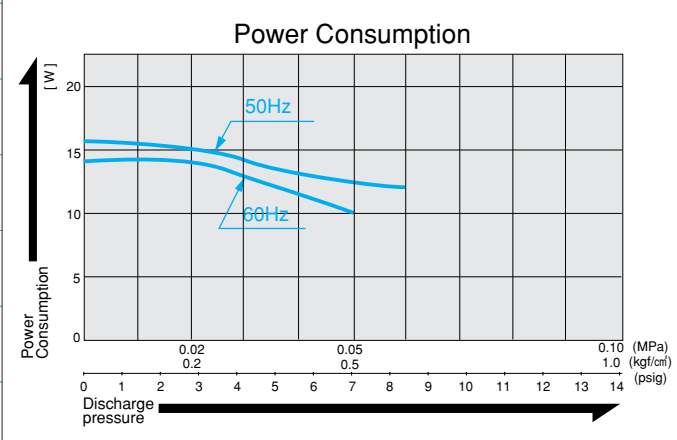
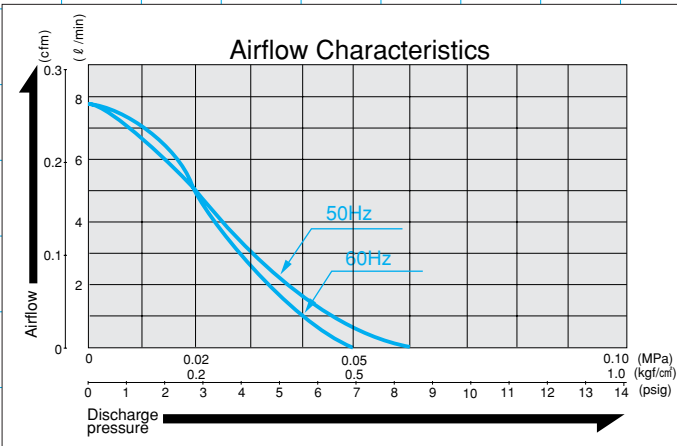
# Ac0102



MOTOR FREE  
PISTON SYSTEM



### Airflow & Power Consumption



### Specifications

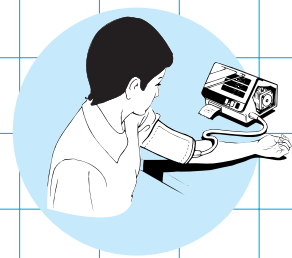
	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.02 MPa (0.2 kgf/cm <sup>2</sup> )	0.2 bar	2.84 psig
Rated Airflow	5 l/min		0.177 cfm
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.04 MPa (0.4 kgf/cm <sup>2</sup> )	0.4 bar	5.69 psig
Power Consumption	14 W or 15 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	3,000 hours		
Outlet	6 mm O.D. hose nipple		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL) and B for UL		
Mounting Dimensions	48 (L) x 62 (W) mm		
Gross Weight	0.7 kg	1.54 Lbs.	
Leadwire Length	200 mm	7-7/8"	

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

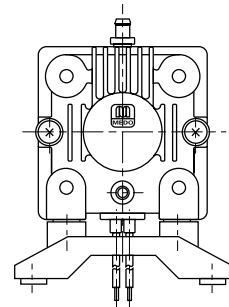
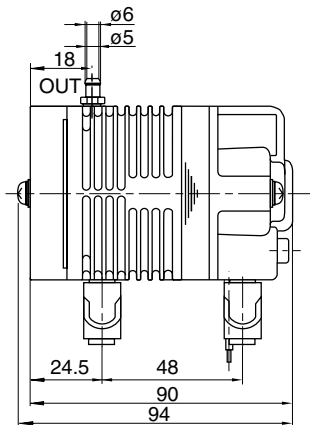
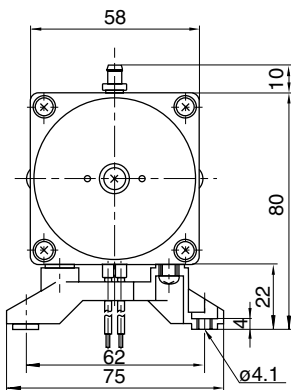


Endoscope



Blood Pressure Tester

### Sketch Drawing and Mounting Dimensions Diagram (mm)





# LINEAR

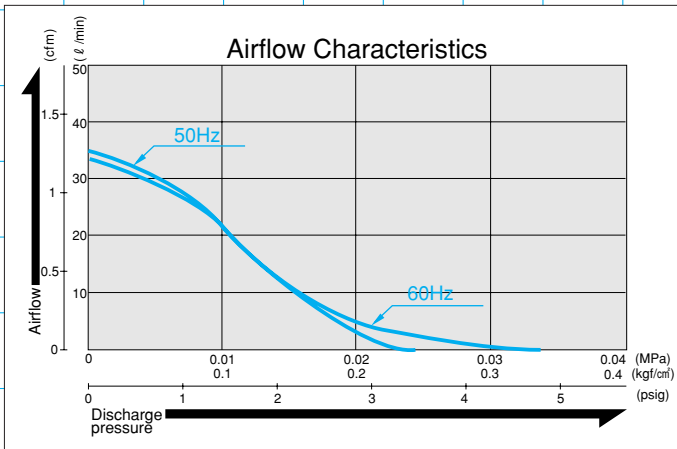
   
**MOTOR FREE  
 PISTON SYSTEM**



# Ac0201A

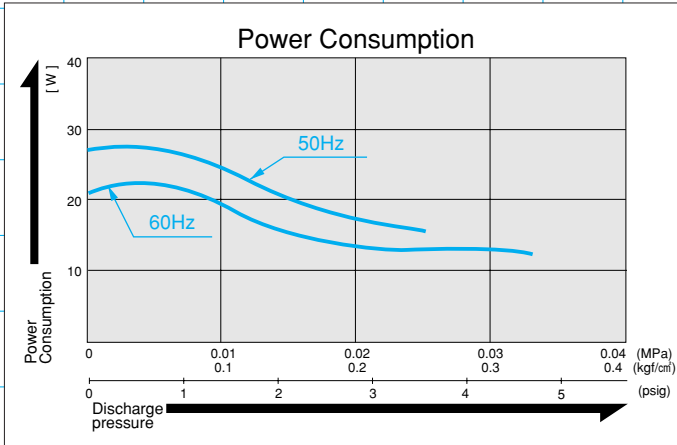
## Airflow & Power Consumption

## Specifications

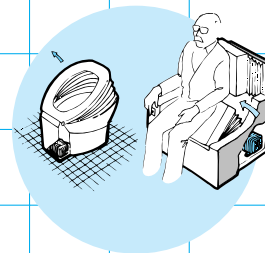


	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.01 MPa {0.1 kgf/cm <sup>2</sup> }	0.1 bar	1.42 psig
Rated Airflow	20 l / min		
Rated Airflow	0.71 cfm		
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.02 MPa {0.2 kgf/cm <sup>2</sup> }	0.2 bar	2.84 psig
Power Consumption	19 W or 23 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	6,000 hours		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL) and B for UL		
Mounting Dimensions	73 (L) x 88 (W) mm		
Gross Weight	1.5 kg	3.3 Lbs.	
Leadwire Length	200 mm	7-7/8"	

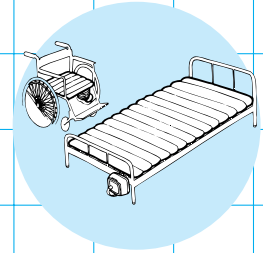
\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.



## Application Examples

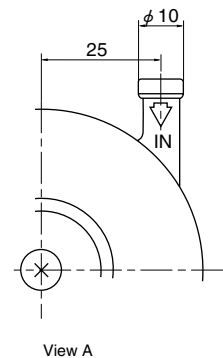
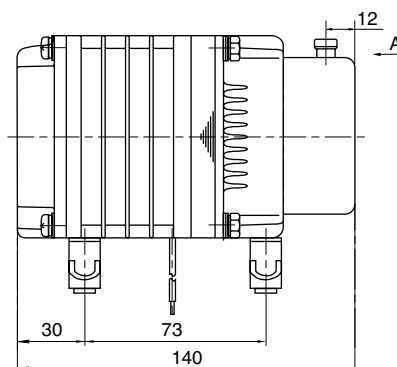
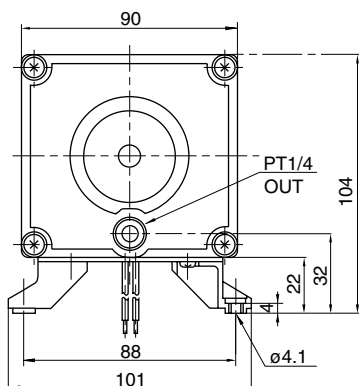


Seat Lifter



Bed Sore Prevention Mattress

## Sketch Drawing and Mounting Dimensions Diagram (mm)



# LINEAR

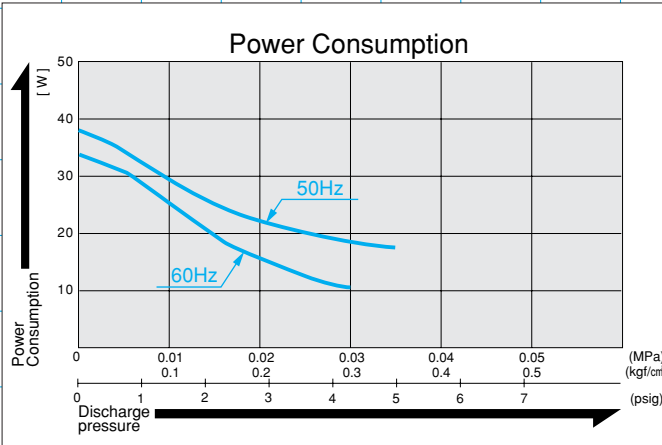
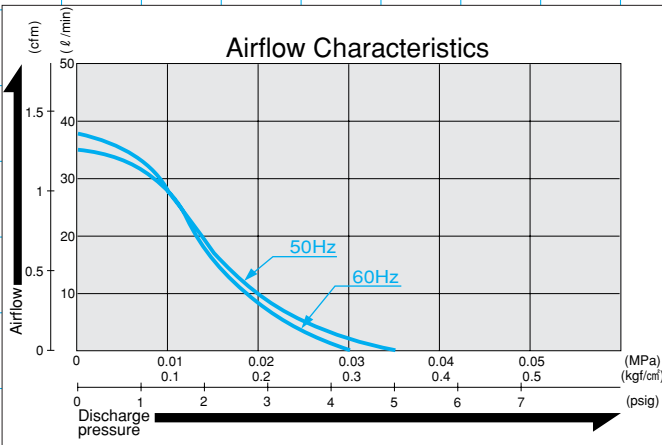
# AC0301A



MOTOR FREE  
PISTON SYSTEM



**Airflow & Power Consumption**

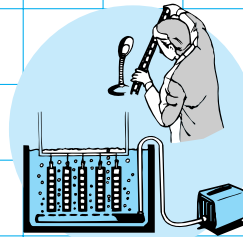


**Specifications**

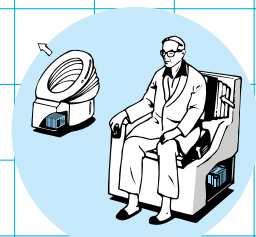
	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.01 MPa {0.1 kgf/cm <sup>2</sup> }	0.1 bar	1.42 psig
Rated Airflow	28 ℓ /min		
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.03 MPa {0.3 kgf/cm <sup>2</sup> }	0.3 bar	4.27 psig
Power Consumption	25 W or 29 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	10,000 hours		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL) or B for UL		
Mounting Dimensions	68 (L) x 84 (W) mm		
Gross Weight	1.9 kg	4.2 Lbs.	
Leadwire Length	200 mm	7-7/8"	

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

**Application Examples**

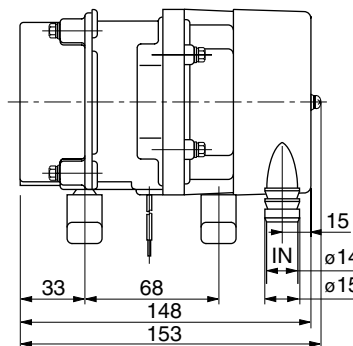
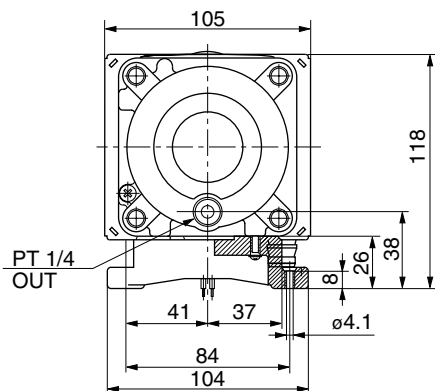


Liquid Mixer



Seat Lifter

**Sketch Drawing and Mounting Dimensions Diagram (mm)**



# LINEAR

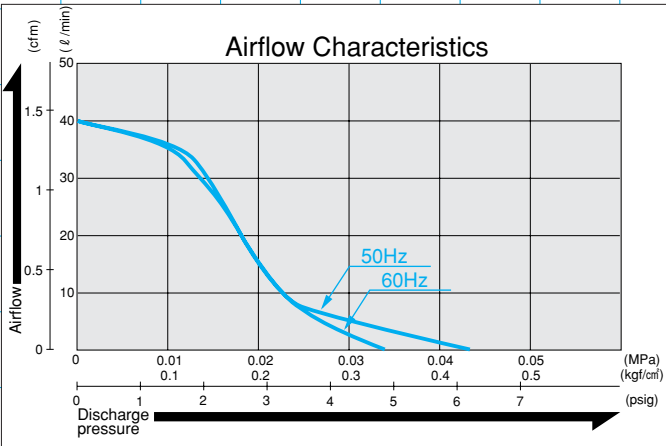
**Compressor** **LOW pressure**  
**MOTOR FREE PISTON SYSTEM**



# Ac0401A

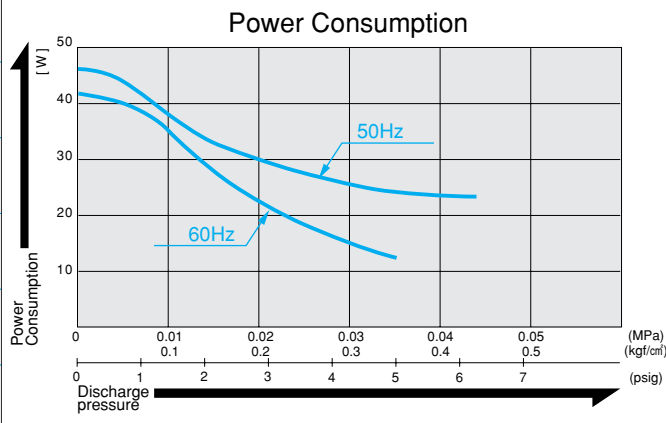
## Airflow & Power Consumption

## Specifications

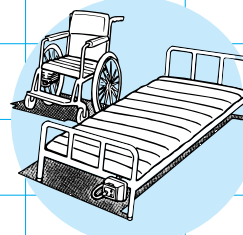


	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.01 MPa (0.1 kgf/cm <sup>2</sup> )	0.1 bar	1.42 psig
Rated Airflow	35 ℓ /min		
Rated Voltage	120 V, AC or 230 V, AC		
Maximum Pressure	0.035 MPa (0.35 kgf/cm <sup>2</sup> )	0.35 bar	4.98 psig
Power Consumption	35 W or 38 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	10,000 hours		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL) or B for UL		
Mounting Dimensions	68 (L) x 84 (W) mm		
Gross Weight	1.9 kg	4.2 Lbs.	
Leadwire Length	200 mm	7-7/8"	

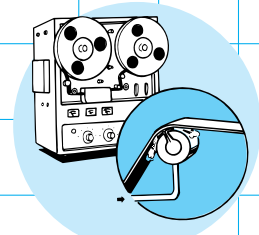
\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.



## Application Examples

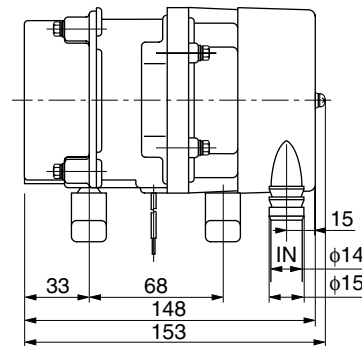
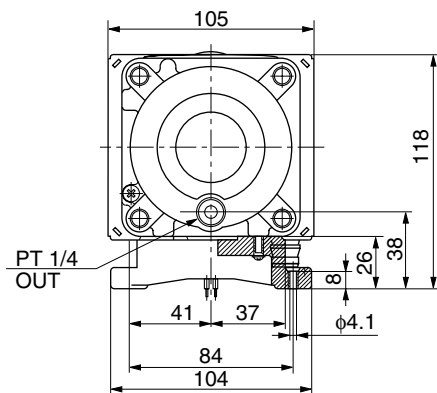


Bed Sore Prevention Mattress



Air Bearing

## Sketch Drawing and Mounting Dimensions Diagram (mm)



# LINEAR

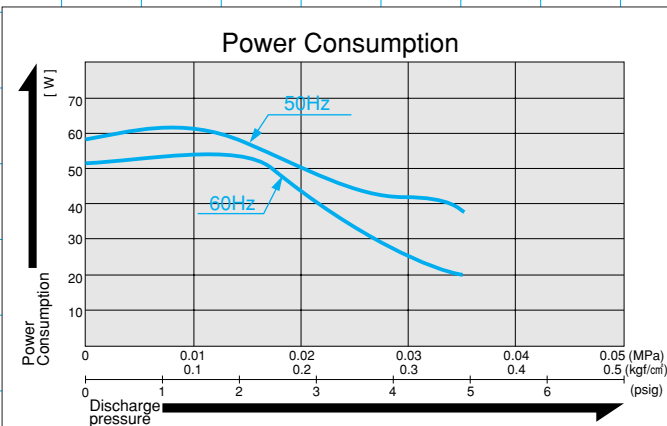
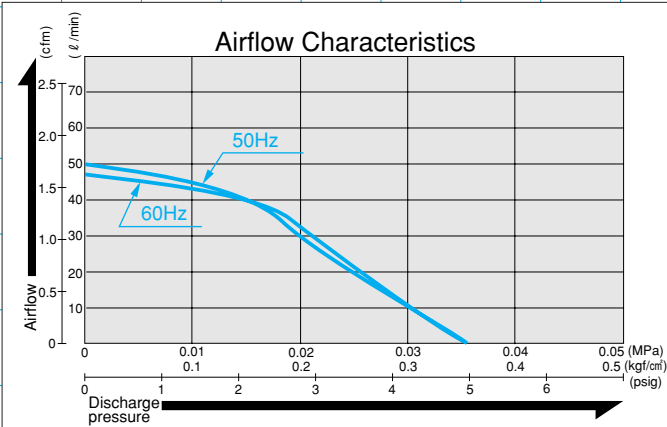
# Ac0602



MOTOR FREE  
PISTON SYSTEM



**Airflow & Power Consumption**

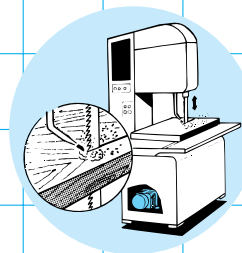


**Specifications**

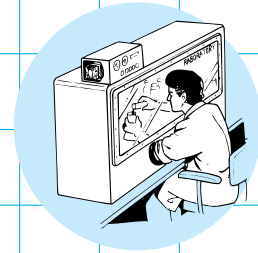
	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.015 MPa (0.15 kgf/cm <sup>2</sup> )	0.15 bar	2.13 psig
Rated Airflow	40 l/min		1.41 cfm
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.035 MPa (0.35 kgf/cm <sup>2</sup> )	0.35 bar	4.98 psig
Power Consumption	52 W or 58 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	10,000 hours		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL) or B for UL		
Mounting Dimensions	68 (L) x 84 (W) mm		
Gross Weight	3 kg		6.6 Lbs.
Leadwire Length	250 mm or 350 mm		9-13/16" for 115V

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

**Application Examples**

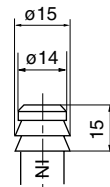
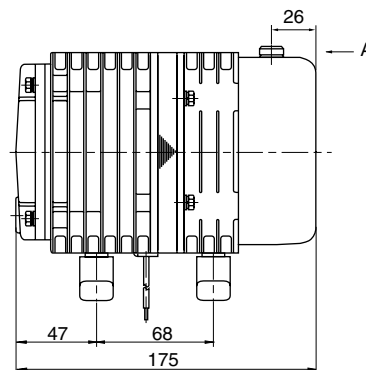
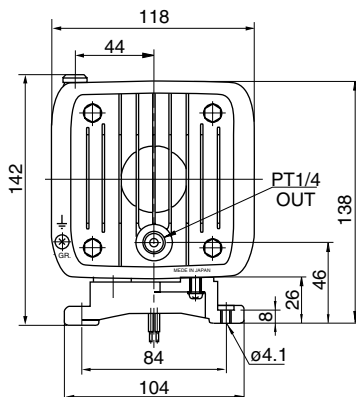


Air Blaster for Bandsaw



Clean Room Ventilation

**Sketch Drawing and Mounting Dimensions Diagram (mm)**

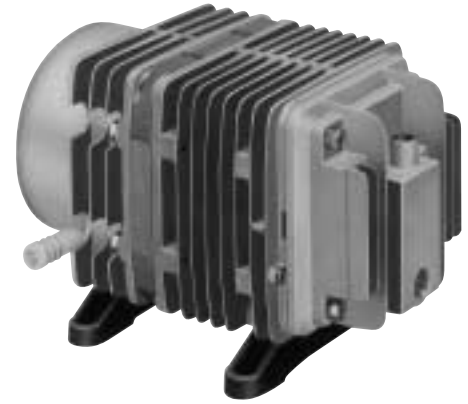


View A

# LINEAR

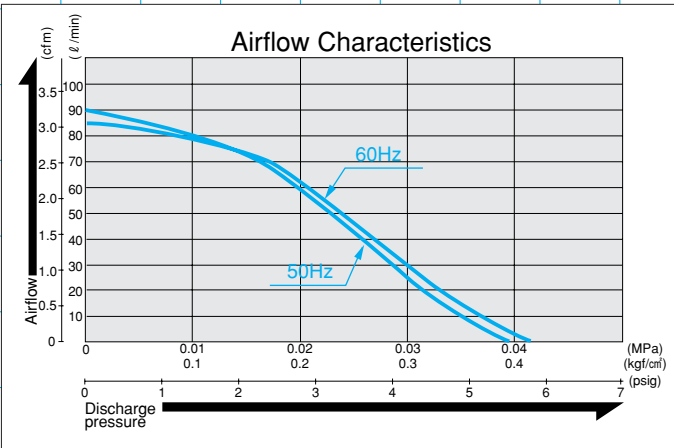
# Ac0901

   
**MOTOR FREE  
 PISTON SYSTEM**



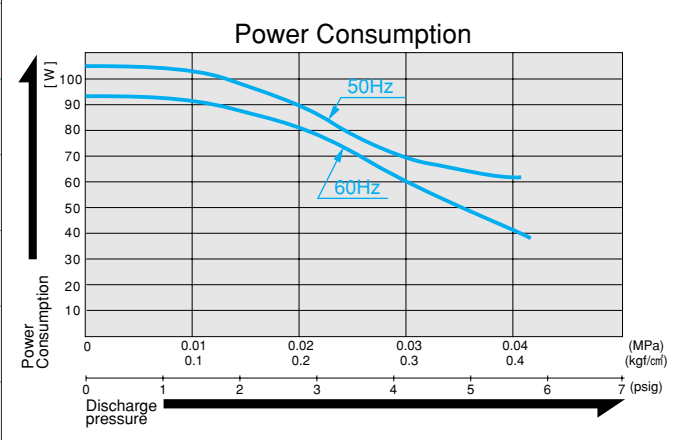
### Airflow & Power Consumption

### Specifications

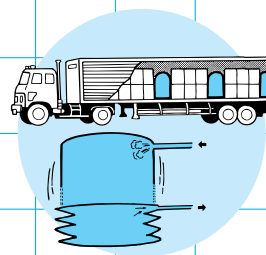


	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.01 MPa {0.1 kgf/cm <sup>2</sup> }	0.1 bar	1.42 psig
Rated Airflow	80 l/min 2.83 cfm		
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.04 MPa {0.4 kgf/cm <sup>2</sup> }	0.4 bar	5.69 psig
Power Consumption	88 W or 99 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	10,000 hours		
Outlet	ISO Rc 3/8 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL) or B for UL		
Mounting Dimensions	102 (L) x 130 (W) mm		
Gross Weight	4.9 kg	10.8 Lbs.	
Leadwire Length	300 mm	11-13/16" for 115V	

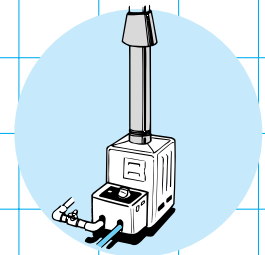
\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.



### Application Examples

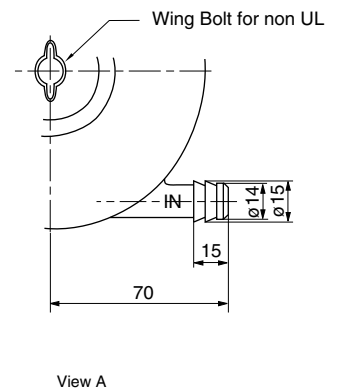
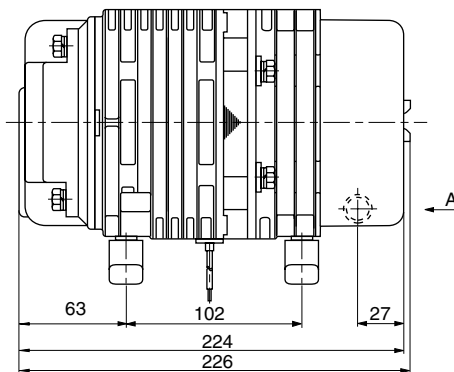
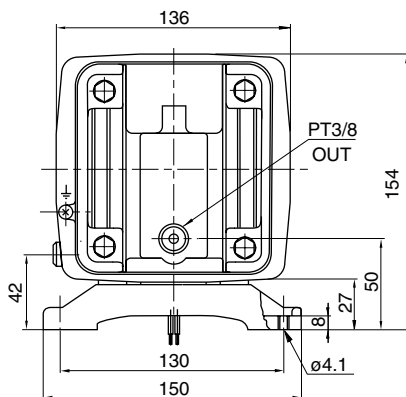


Pneumatic Jack



Gas Burner Booster

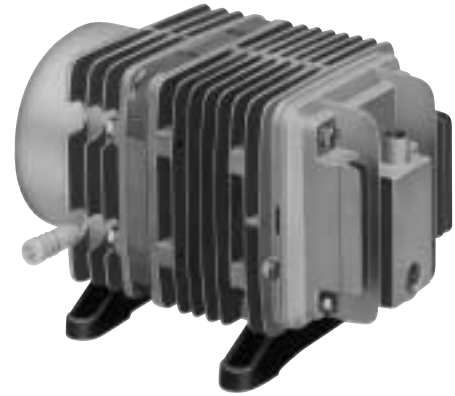
### Sketch Drawing and Mounting Dimensions Diagram (mm)



# LINEAR

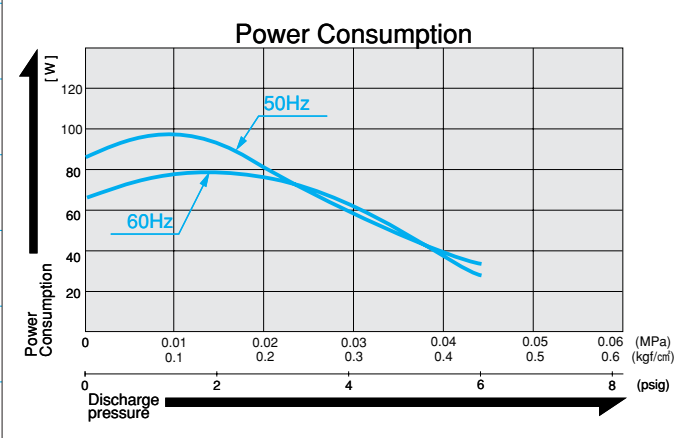
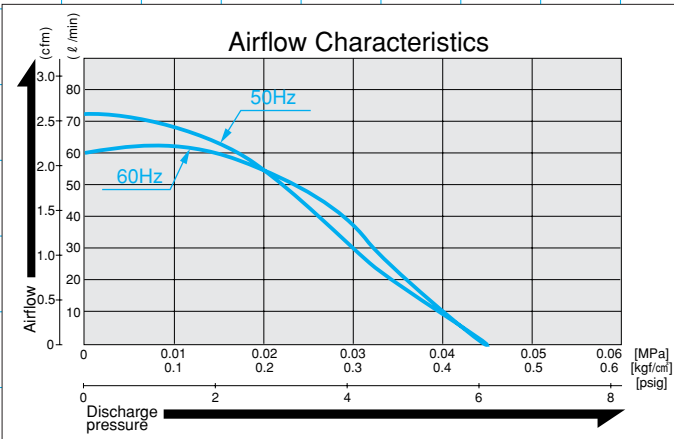


MOTOR FREE  
PISTON SYSTEM



# AC0902

## Airflow & Power Consumption

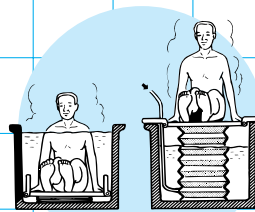


## Specifications

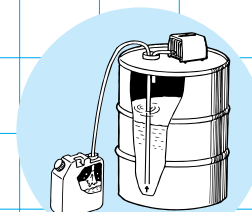
	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.02 MPa (0.2 kgf/cm <sup>2</sup> )	0.2 bar	2.84 psig
Rated Airflow	55 ℓ /min		
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.045 MPa (0.45 kgf/cm <sup>2</sup> )	0.45 bar	6.4 psig
Power Consumption	75 W or 85 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	10,000 hours		
Outlet	ISO Rc 3/8 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL) and B for UL		
Mounting Dimensions	102 (L) x 130 (W) mm		
Gross Weight	4.9 kg	10.8 Lbs.	
Leadwire Length	300 mm	11-13/16" for 115V	

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

## Application Examples

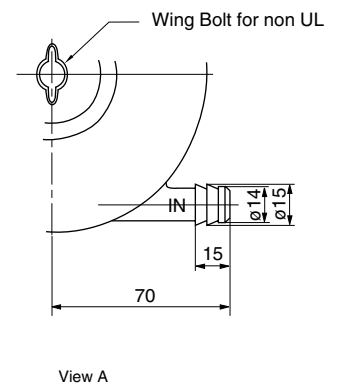
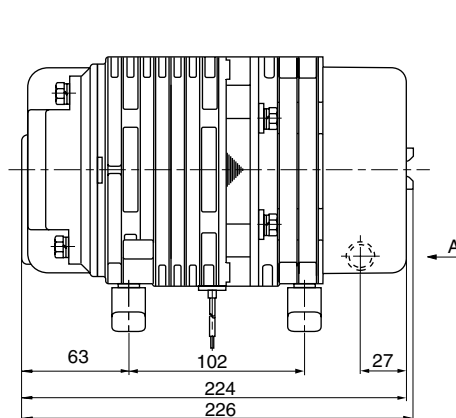
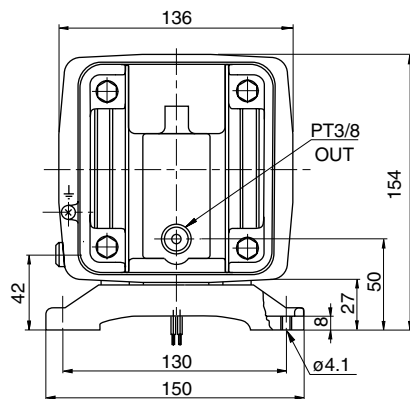


Air Lifter for Bathtub



Liquid Dispenser

## Sketch Drawing and Mounting Dimensions Diagram (mm)





# Air Compressor

## Intermediate Pressure Series

# LINEAR

AC 0105  
P15

AC 0110  
P16

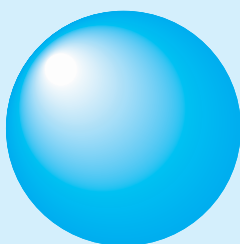
AC 0207  
P17

AC 0410  
P18

AC 0610  
P19

AC 0910  
P20

AC 0920  
P21

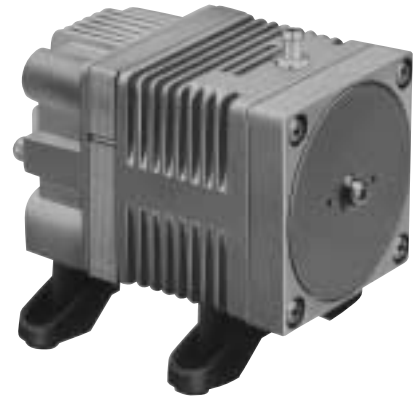


# LINEAR

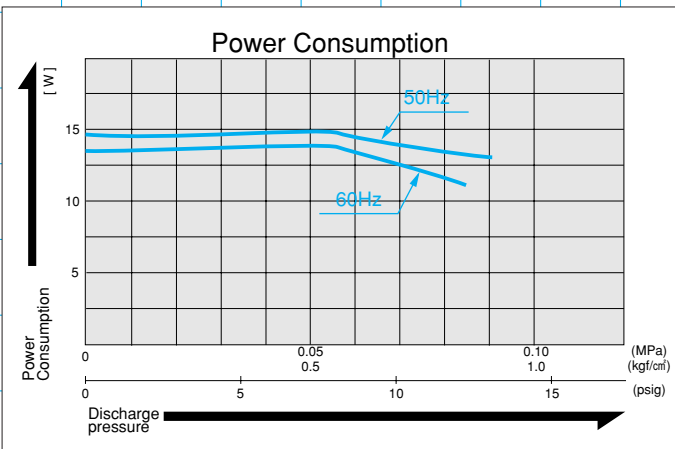
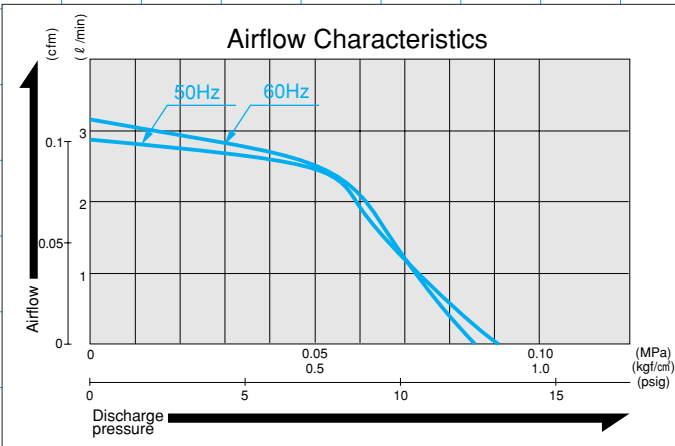
# Ac0105



MOTOR FREE  
PISTON SYSTEM



### Airflow & Power Consumption



### Specifications

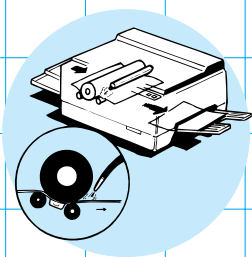
	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.05 MPa {0.5 kgf/cm <sup>2</sup> }	0.5 bar	7.1 psig
Rated Airflow	2.5 l /min		0.088 cfm
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.08 MPa {0.8 kgf/cm <sup>2</sup> }	0.8 bar	11.4 psig
Power Consumption	14 W or 15 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	3,000 hours		
Outlet	6 mm O.D. hose nipple		
Duty Cycle	60 minutes		
Coil Insulation Class	E or its equivalent (JETL) or B for UL		
Mounting Dimensions	48 (L) x 62 (W) mm		
Gross Weight	0.7 kg	1.54 Lbs.	
Leadwire Length	200 mm	7-7/8"	

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

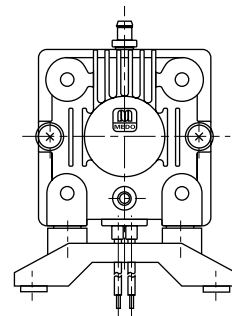
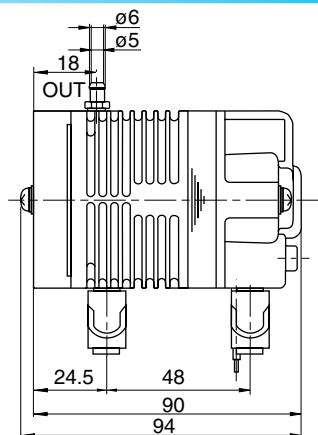
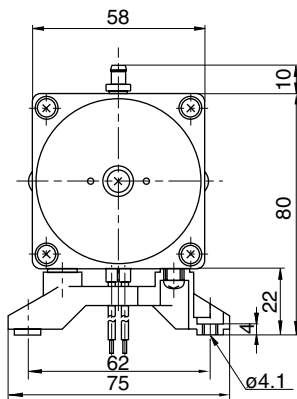


Saline Water Splasher



Copy Paper Separator

### Sketch Drawing and Mounting Dimensions Diagram (mm)





# LINEAR

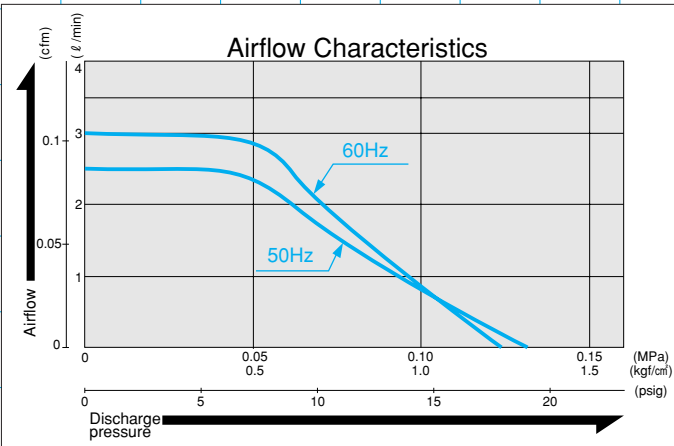
# Ac0110

   
**MOTOR FREE  
 PISTON SYSTEM**



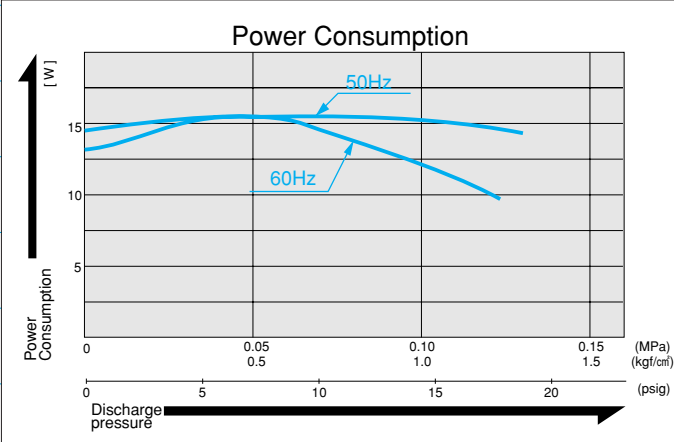
### Airflow & Power Consumption

### Specifications

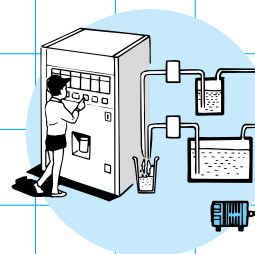


	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.1 MPa {1.0 kgf/cm <sup>2</sup> }	1.0 bar	14.2 psig
Rated Airflow	0.8 l /min		
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.12 MPa {1.2 kgf/cm <sup>2</sup> }	1.2 bar	17.1 psig
Power Consumption	12 W or 15 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	3,000 hours		
Outlet	6 mm O.D. hose nipple		
Duty Cycle	30 minutes		
Coil Insulation Class	E or its equivalent (JETL) and B for UL		
Mounting Dimensions	48 (L) x 62 (W) mm		
Gross Weight	0.7 kg	1.54 Lbs.	
Leadwire Length	200 mm	7-7/8"	

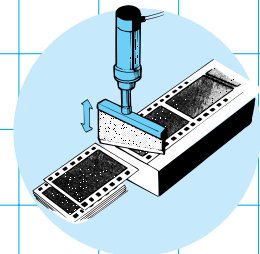
\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.



### Application Examples

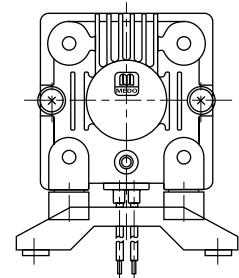
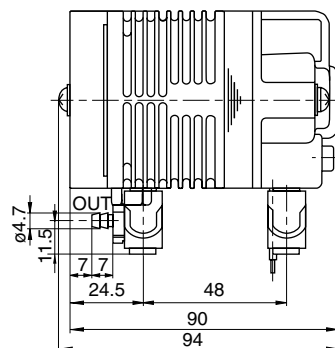
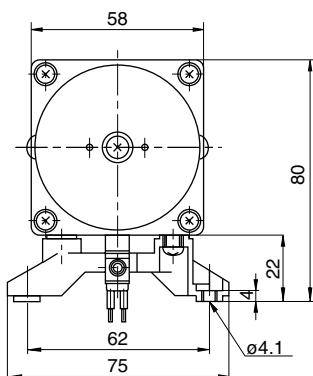


Automatic Dispenser



Film Cutter

### Sketch Drawing and Mounting Dimensions Diagram (mm)



# LINEAR

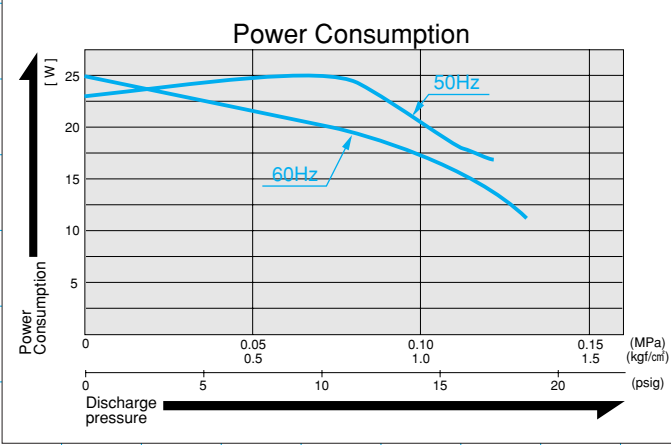
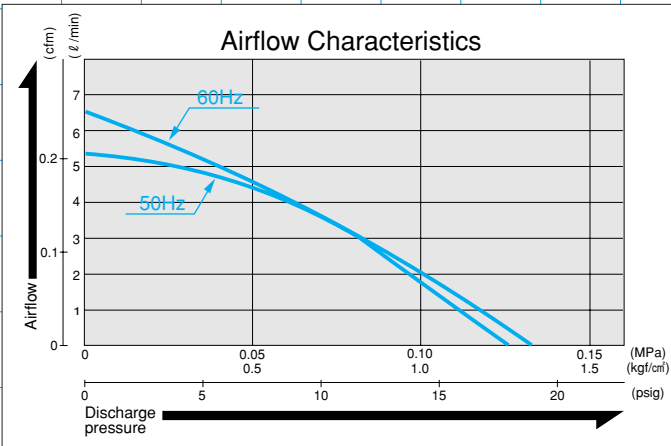
# Ac0207



MOTOR FREE  
PISTON SYSTEM



### Airflow & Power Consumption

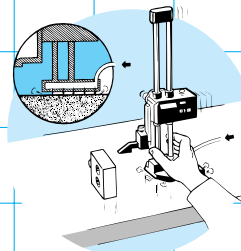


### Specifications

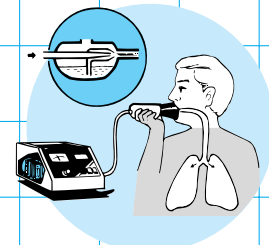
	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.07 MPa (0.7 kgf/cm <sup>2</sup> )	0.7 bar	9.96 psig
Rated Airflow	3.5 l / min		0.124 cfm
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.1 MPa (1.0 kgf/cm <sup>2</sup> )	1.0 bar	14.2 psig
Power Consumption	20 W or 25 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	3,000 hours		
Outlet	4.7 mm O.D. hose nipple		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL) or B for UL		
Mounting Dimensions	75 (L) x 88 (W) mm		
Gross Weight	1.7 kg	3.7 Lbs.	
Leadwire Length	200 mm	7-7/8"	

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

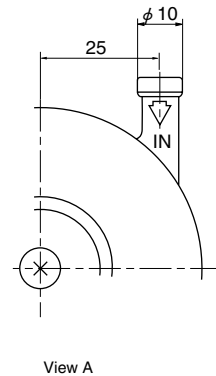
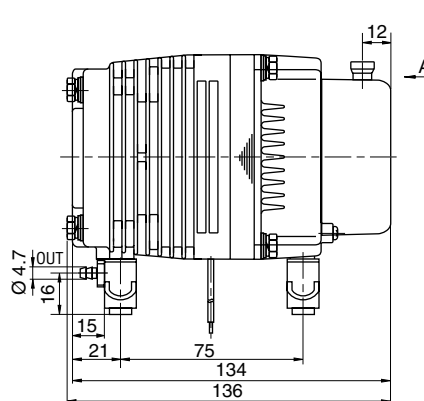
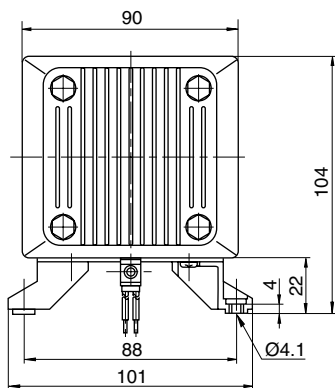


Air Bearing for Precision Machines



Nebulizer

### Sketch Drawing and Mounting Dimensions Diagram (mm)



# LINEAR

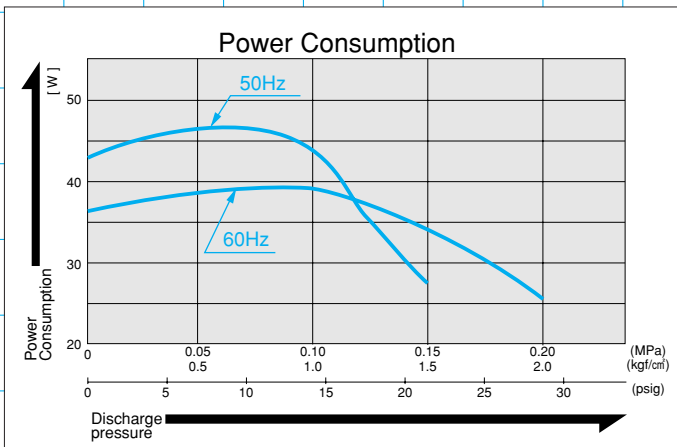
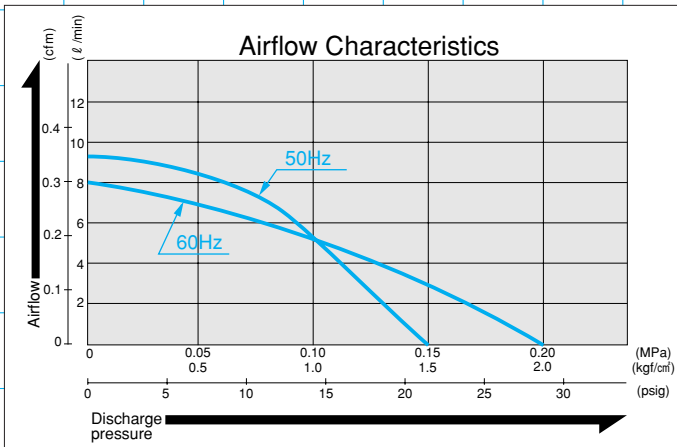
# AC0410

   
**MOTOR FREE  
 PISTON SYSTEM**



### Airflow & Power Consumption

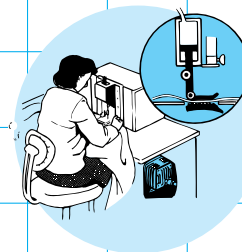
### Specifications



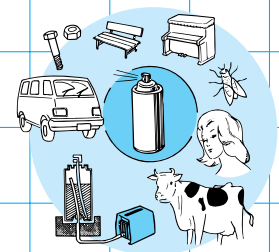
	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.1 MPa {1.0 kgf/cm <sup>2</sup> }	1.0 bar	14.2 psig
Rated Airflow	5 l/min or 0.18 cfm		
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.15 MPa {1.5 kgf/cm <sup>2</sup> }	1.5 bar	21.3 psig
Power Consumption	39 W or 43 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	500 hours		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	30 minutes		
Coil Insulation Class	E or its equivalent (JETL)		
Mounting Dimensions	68 (L) x 98 (W) mm		
Gross Weight	2.1 kg	4.6 Lbs.	
Leadwire Length	220 mm or 200 mm		8-5/8"

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

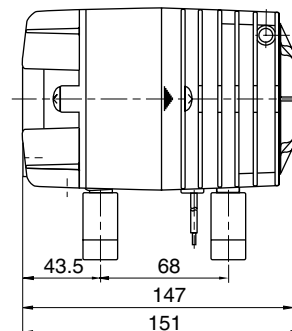
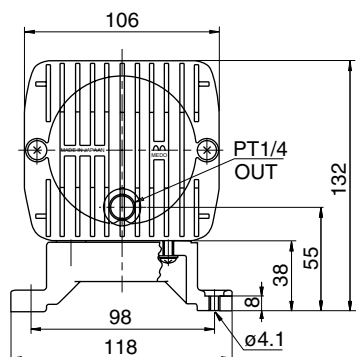


Industrial Sewing Machine



Various Aerosol Sprays

### Sketch Drawing and Mounting Dimensions Diagram (mm)



# LINEAR

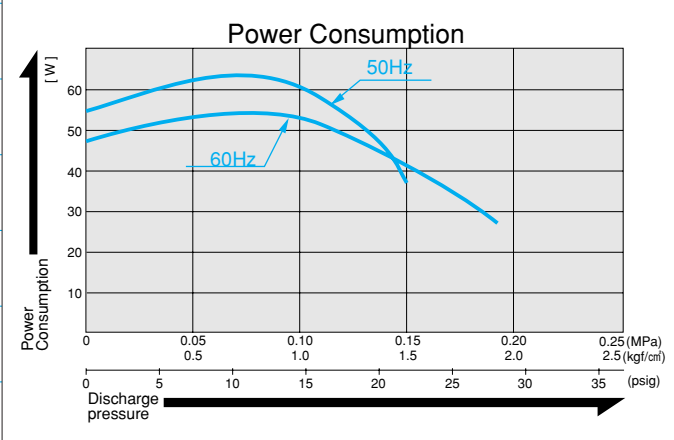
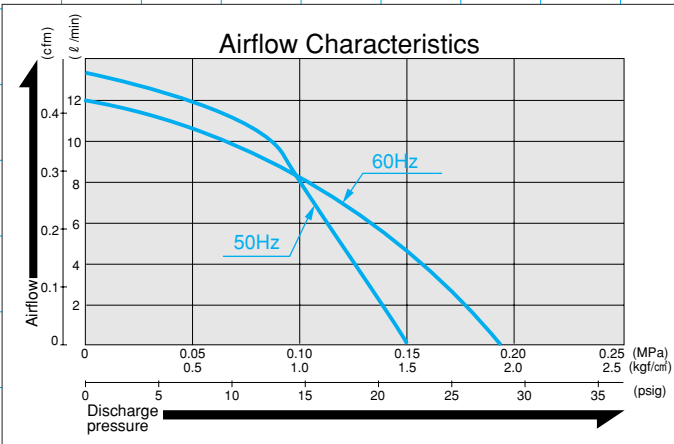
# Ac0610



MOTOR FREE  
PISTON SYSTEM



### Airflow & Power Consumption

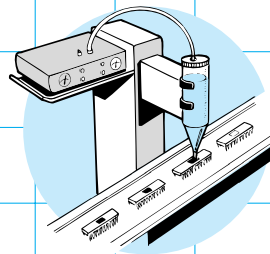


### Specifications

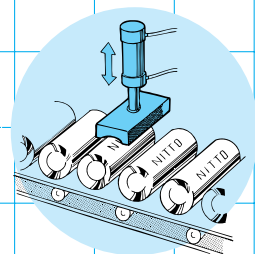
	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.1 MPa (1.0 kgf/cm <sup>2</sup> )	1.0 bar	14.2 psig
Rated Airflow	8 l/min		
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.15 MPa (1.5 kgf/cm <sup>2</sup> )	1.5 bar	21.3 psig
Power Consumption	52 W or 60 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	3,000 hours		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL) and B for UL		
Mounting Dimensions	68 (L) x 84 (W) mm		
Gross Weight	3.2 kg	7.1 Lbs.	
Leadwire Length	270 mm or 200 mm	7-7/8" for 115 V	

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

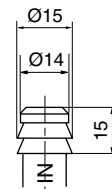
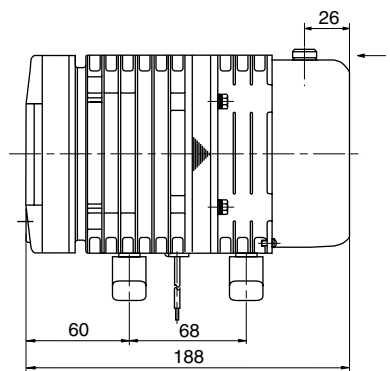
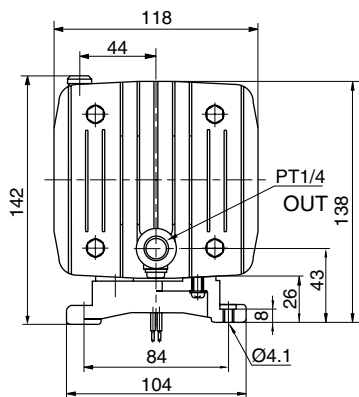


Dispenser



Automatic Stamper

### Sketch Drawing and Mounting Dimensions Diagram (mm)

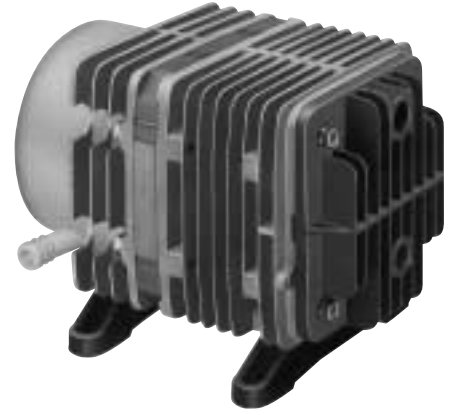


View A

# LINEAR

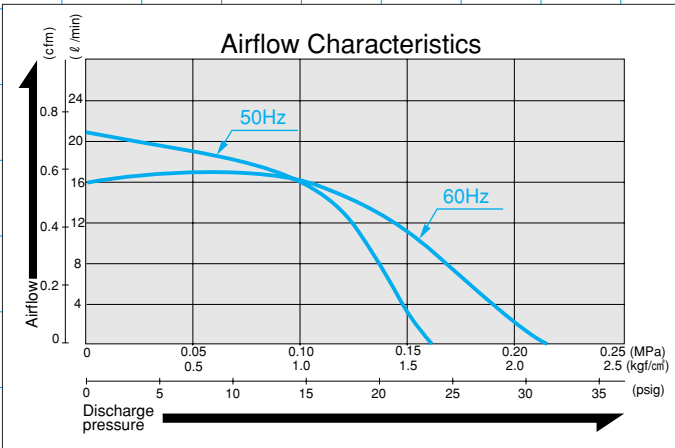
# Ac0910

   
**MOTOR FREE  
 PISTON SYSTEM**



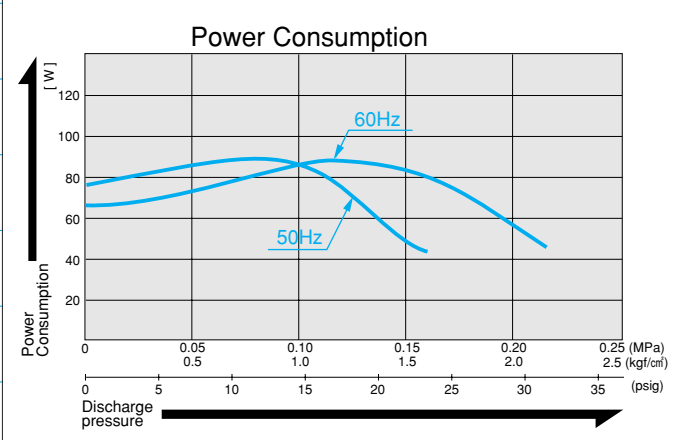
### Airflow & Power Consumption

### Specifications

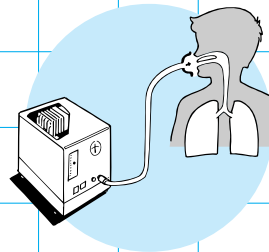


	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.1 MPa (1.0 kgf/cm <sup>2</sup> )	1.0 bar	14.2 psig
Rated Airflow	16 l/min		
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.15 MPa (1.5 kgf/cm <sup>2</sup> )	1.5 bar	21.3 psig
Power Consumption	85 W or 90 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	3,000 hours		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL) and B for UL		
Mounting Dimensions	102 (L) x 130 (W) mm		
Gross Weight	4.9 kg	10.8 Lbs.	
Leadwire Length	150 mm or 320 mm	5-7/8" for 115 V	

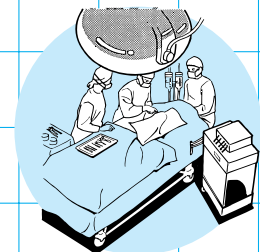
\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.



### Application Examples

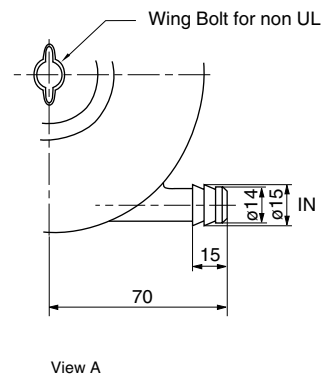
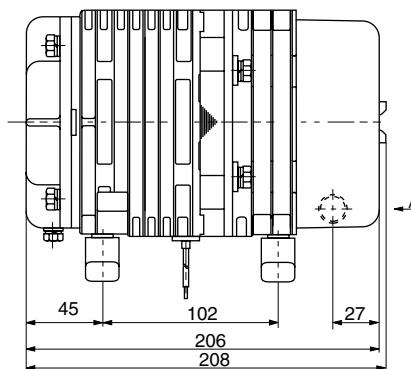
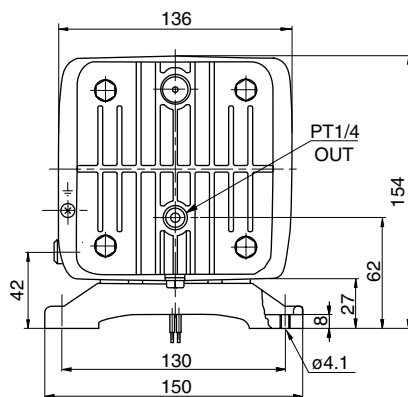


Oxygen Concentrator



I.V. Balloon Pump

### Sketch Drawing and Mounting Dimensions Diagram (mm)

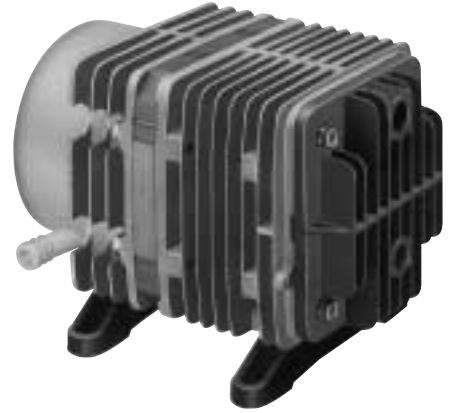


# LINEAR

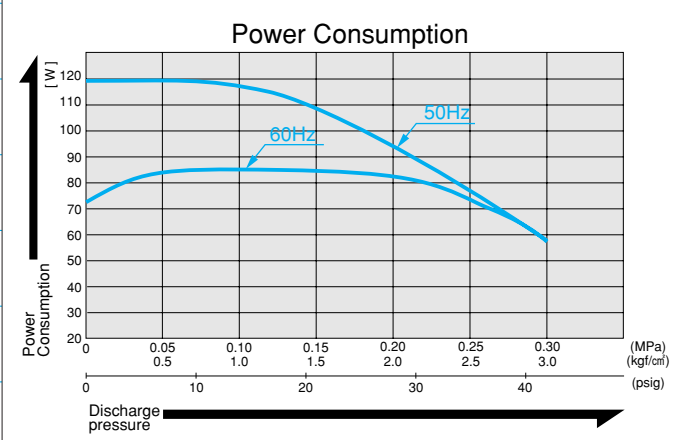
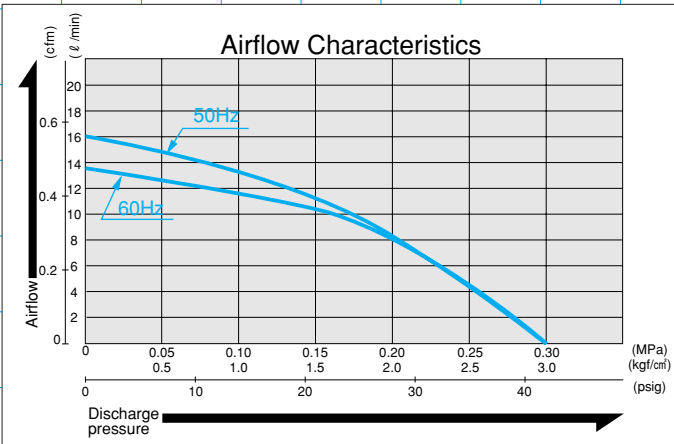
# Ac0920



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PISTON SYSTEM



### Airflow & Power Consumption

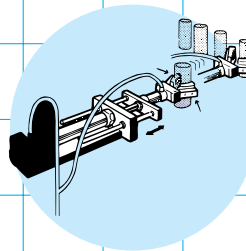


### Specifications

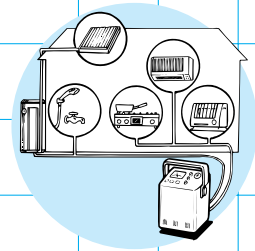
	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.2 MPa (2.0 kgf/cm <sup>2</sup> )	2.0 bar	28.4 psig
Rated Airflow	8 l/min		0.28 cfm
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.3 MPa (3.0 kgf/cm <sup>2</sup> )	3.0 bar	42.6 psig
Power Consumption	80 W or 100 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	3,000 hours		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	30 minutes		
Coil Insulation Class	E or its equivalent (JETL)		
Mounting Dimensions	102 (L) x 130 (W) mm		
Gross Weight	5 kg	11 Lbs.	
Leadwire Length	150 mm	5-7/8" for 115V	

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

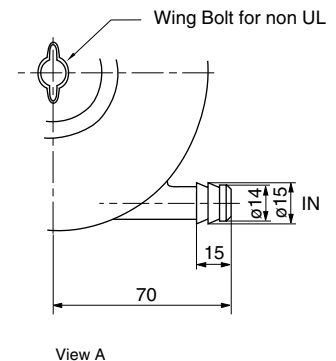
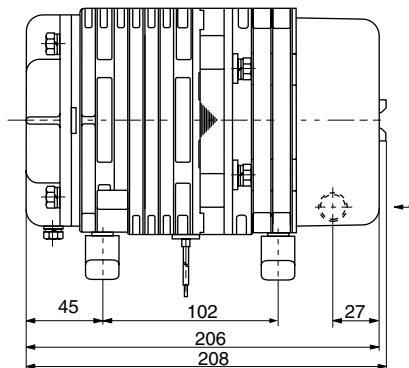
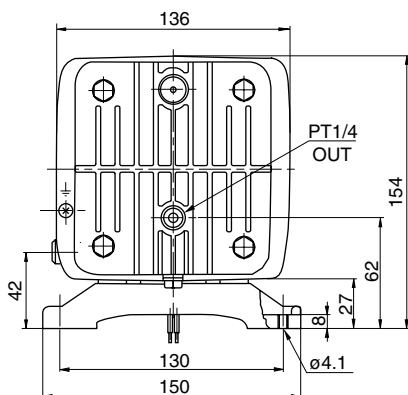


Air Cylinder/Chuck Driver



Leakage Tester

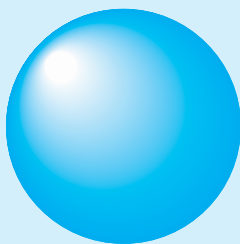
### Sketch Drawing and Mounting Dimensions Diagram (mm)





# Vacuum Pump

# LINEAR



VP 0125  
P23

VP 0140  
P24

VP 0435A  
P25

VP 0450  
P26

VP 0625  
P27

VP 0660  
P28

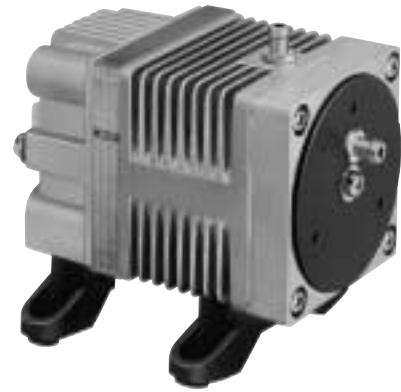
VP 0935A  
P29

# LINEAR

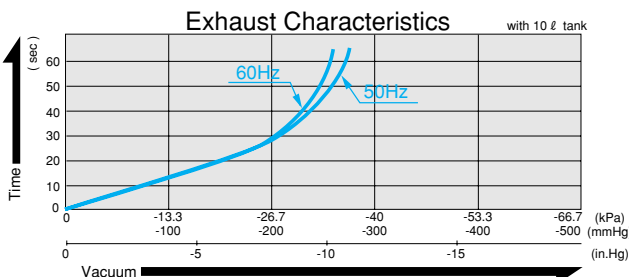
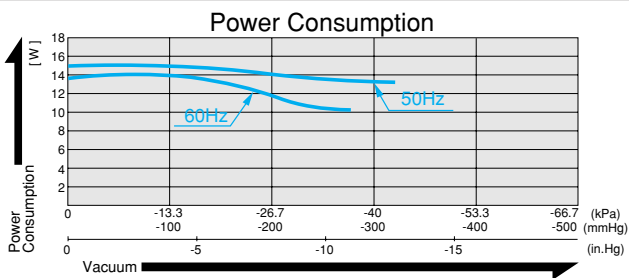
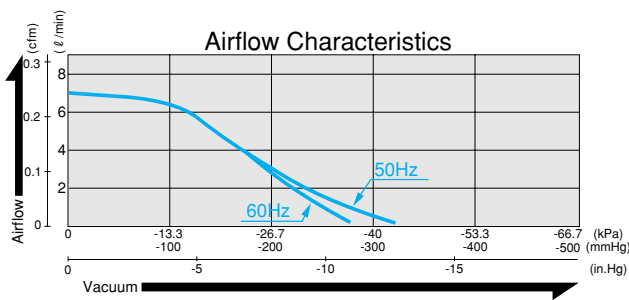
# VP0125



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PISTON SYSTEM



### Airflow & Power Consumption

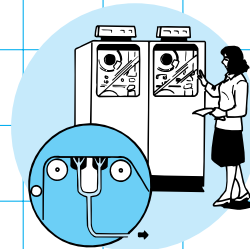


### Specifications

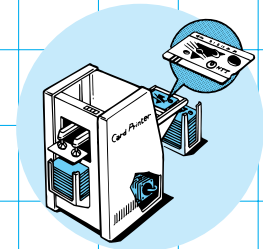
	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-33.3 kPa (-250 mmHg)	-333 mbar	-9.84 in.Hg
Free Air Displacement	7 ℓ /min		0.24 cfm
Rated Voltage	115 V, AC or 230 V, AC		
Power Consumption	14 W or 15 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	3,000 hours		
Inlet	6 mm O.D. hose nipple		
Outlet	6 mm O.D. hose nipple		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL) and B for UL		
Mounting Dimensions	48 (L) x 62 (W) mm		
Gross Weight	0.7 kg	1.54 Lbs.	
Leadwire Length	200 mm	7-7/8"	

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

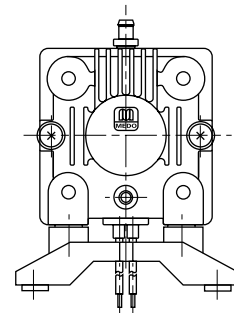
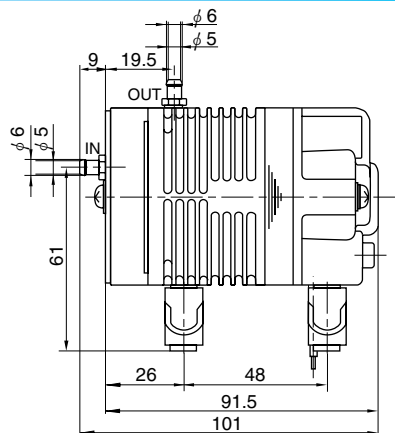
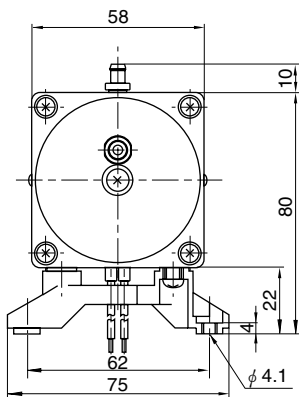


Tape Positioning



Paper Card Dispenser

### Sketch Drawing and Mounting Dimensions Diagram (mm)



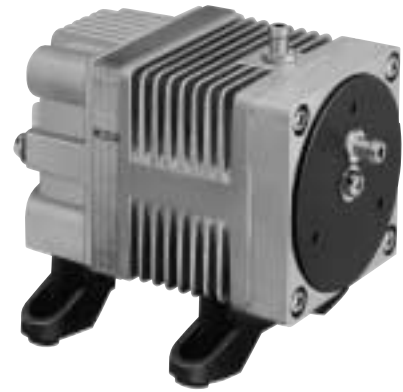


# LINEAR

# VP0140

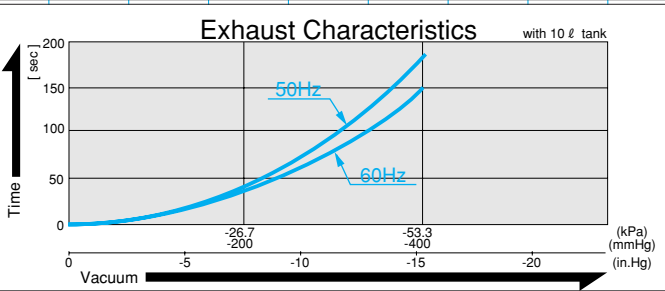
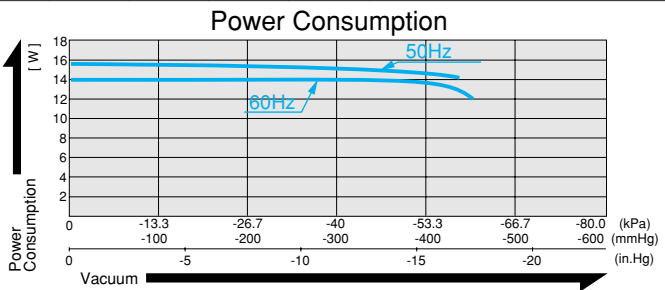
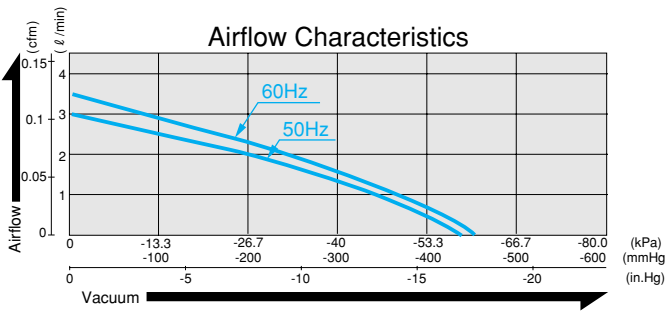


MOTOR FREE  
PISTON SYSTEM



### Airflow & Power Consumption

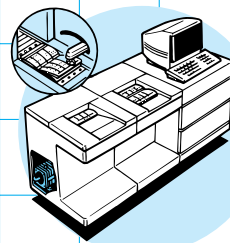
### Specifications



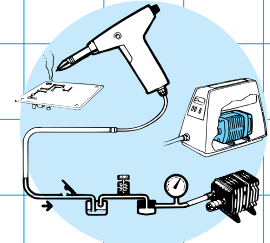
	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-53.3 kPa (-400 mmHg)	-533 mbar	-15.7 in.Hg
Free Air Displacement	3 l / min		0.106 cfm
Rated Voltage	115 V, AC or 230 V, AC		
Power Consumption	14 W or 15 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	3,000 hours		
Inlet	6 mm O.D. hose nipple		
Outlet	6 mm O.D. hose nipple		
Duty Cycle	60 minutes		
Coil Insulation Class	E or its equivalent (JETL) and B for UL		
Mounting Dimensions	48 (L) x 62 (W) mm		
Gross Weight	0.7 kg		1.54 Lbs.
Leadwire Length	200 mm		7-7/8"

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

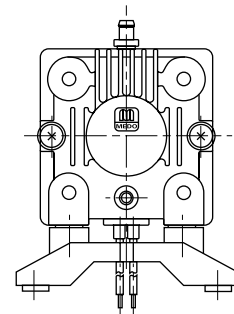
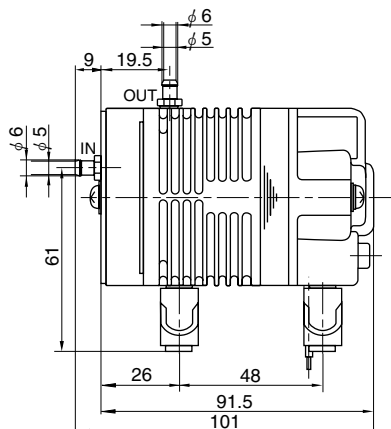
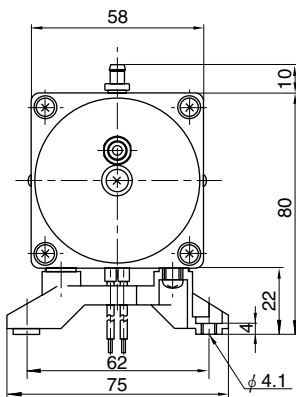


Page Scroller



Solder Fume Suction

### Sketch Drawing and Mounting Dimensions Diagram (mm)



# LINEAR

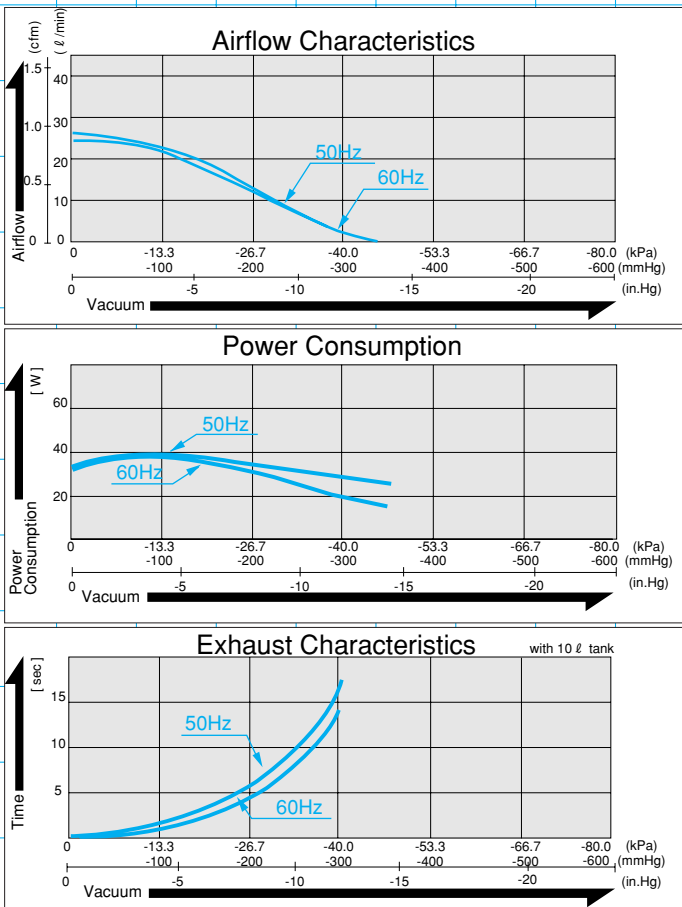


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PISTON SYSTEM



# VP0435A

## Airflow & Power Consumption

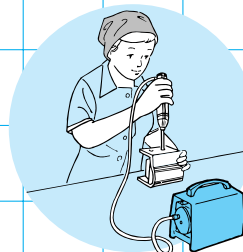


## Specifications

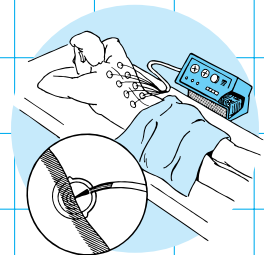
	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-46.7 kPa (-350 mmHg)	-467 mbar	-13.78 in.Hg
Free Air Displacement	25 l /min		0.88 cfm
Rated Voltage	115 V, AC or 230 V, AC		
Power Consumption	39 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	3,000 hours		
Inlet	ISO Rc 1/4 (female threaded)		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	B or its equivalent (JETL) / UL		
Mounting Dimensions	68 (L) x 84 (W) mm		
Gross Weight	2.3 kg		5.1 Lbs.
Leadwire Length	200 mm		7-7/8"

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

## Application Examples

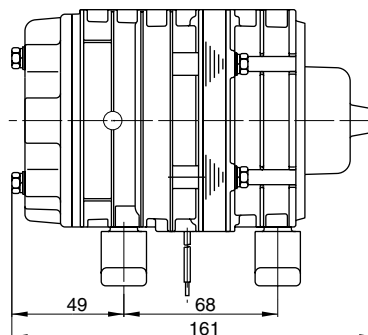
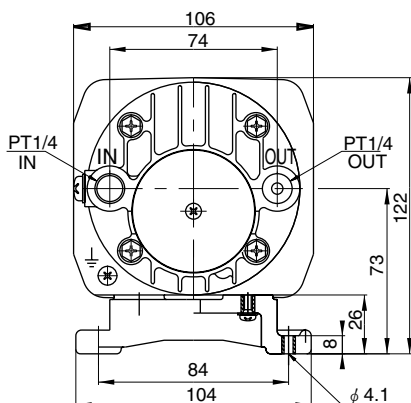


Machine Screw Feeder



Medical Cup Suction

## Sketch Drawing and Mounting Dimensions Diagram (mm)



# LINEAR

# VP0450

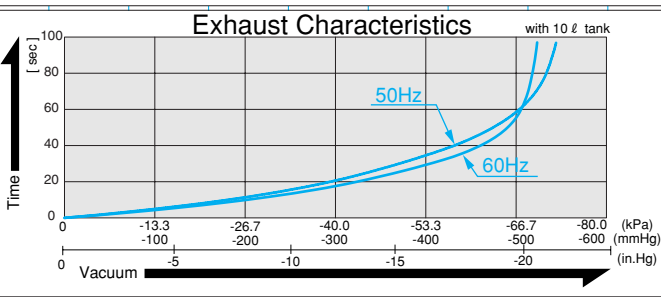
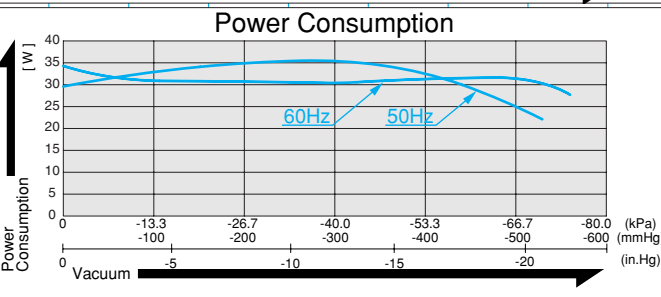
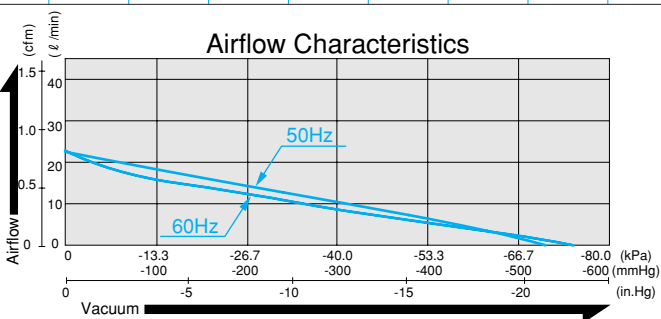


MOTOR FREE  
PISTON SYSTEM



### Airflow & Power Consumption

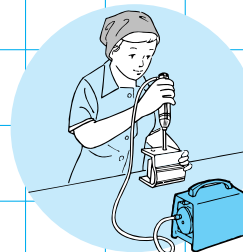
### Specifications



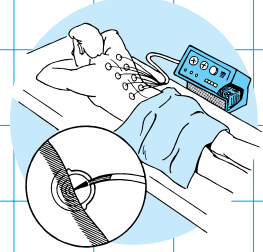
	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-66.7 kPa (-500 mmHg)	-667 mbar	-19.7 in.Hg
Free Air Displacement	18 l/min		0.64 cfm
Rated Voltage	120 V, AC or 230 V, AC		
Power Consumption	34 W or 35 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	10,000 hours		
Inlet	ISO Rc 1/4 (female threaded)		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL)		
Mounting Dimensions	85 (L) x 88 (W) mm		
Gross Weight	2.2 kg		4.8 Lbs.
Leadwire Length	300 mm		11-13/16"

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

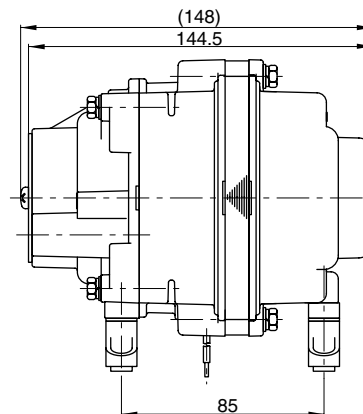
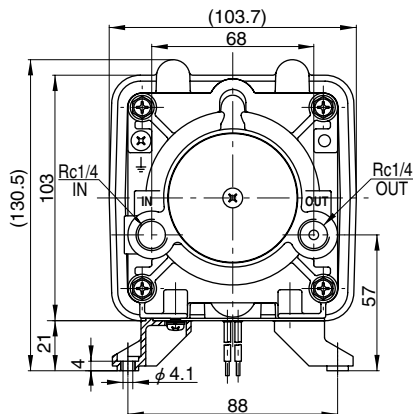


Machine Screw Feeder



Medical Cup Suction

### Sketch Drawing and Mounting Dimensions Diagram (mm)



# LINEAR

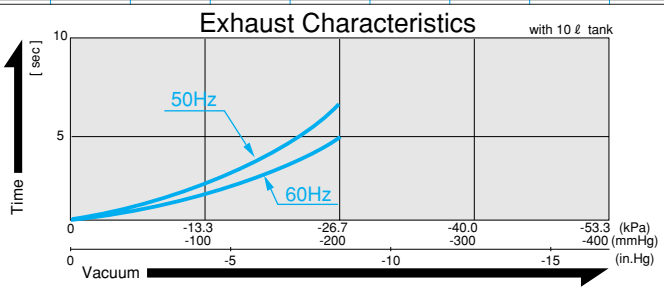
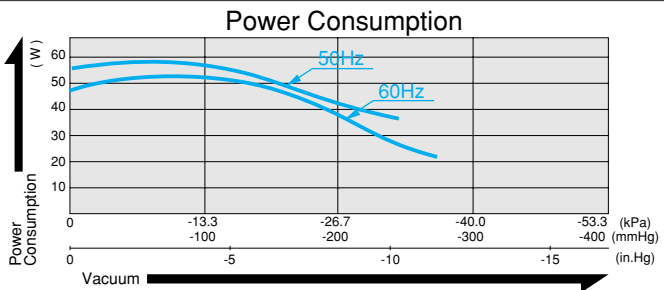
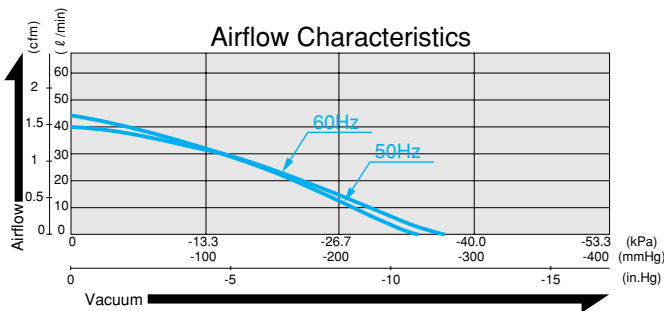
# VP0625



MOTOR FREE  
PISTON SYSTEM



### Airflow & Power Consumption

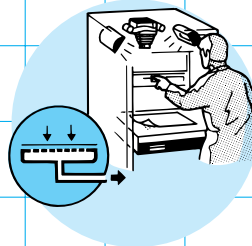


### Specifications

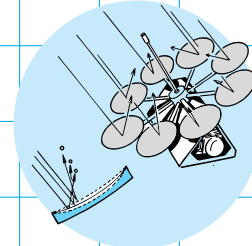
	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-33.3 kPa (-250 mmHg)	-333 mbar	-9.84 in.Hg
Free Air Displacement	40 l/min		1.41 cfm
Rated Voltage	115 V, AC or 230 V, AC		
Power Consumption	56 W or 60 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	10,000 hours		
Inlet	15 mm O.D. hose nipple		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL) or B for UL		
Mounting Dimensions	68 (L) x 84 (W) mm		
Gross Weight	3 kg		6.6 Lbs.
Leadwire Length	235 mm or 320 mm		9-13/16"

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

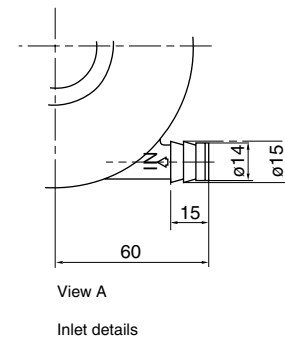
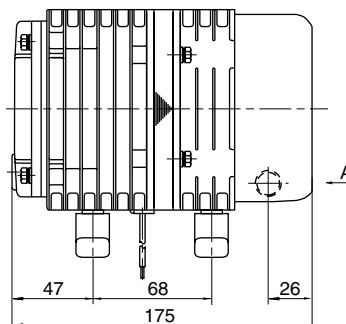
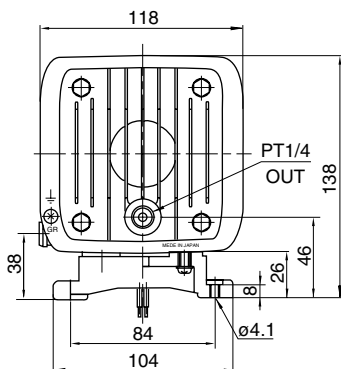


Microfiche Camera



Solar Collection Screen

### Sketch Drawing and Mounting Dimensions Diagram (mm)



# LINEAR

# VP0660

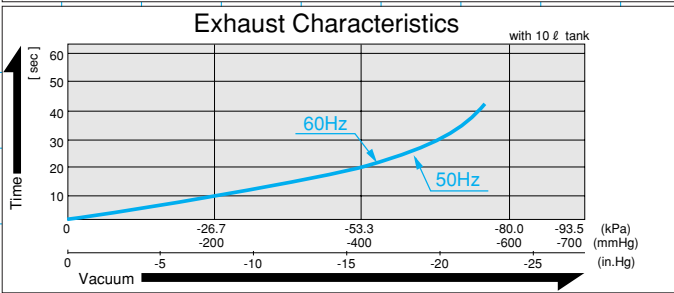
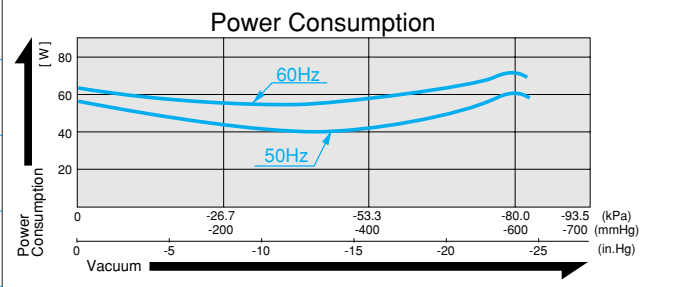
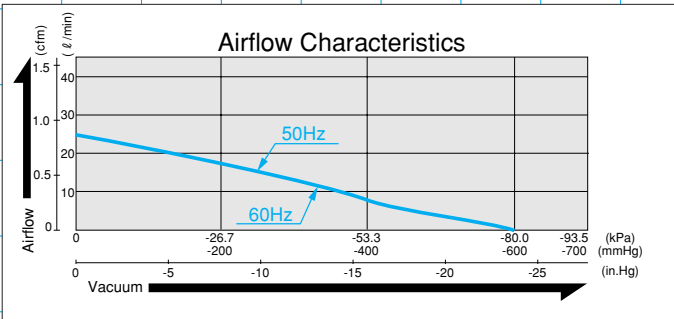


MOTOR FREE  
PISTON SYSTEM



### Airflow & Power Consumption

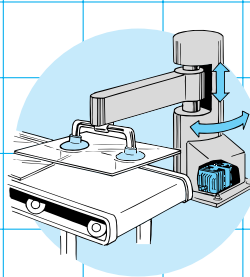
### Specifications



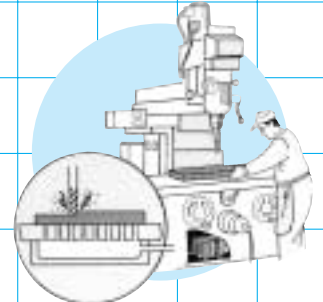
	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-80 kPa (-600 mmHg)	-800 mbar	-23.6 in.Hg
Free Air Displacement	25 l/min		0.88 cfm
Rated Voltage	115 V, AC or 230 V, AC		
Power Consumption	70 W or 60 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	6,000 hours		
Inlet	ISO Rc 1/4 (female threaded)		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL) or B for UL		
Mounting Dimensions	102 (L) x 130 (W) mm		
Gross Weight	5 kg		11 Lbs.
Leadwire Length	300 mm or 600 mm		5-7/8"

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

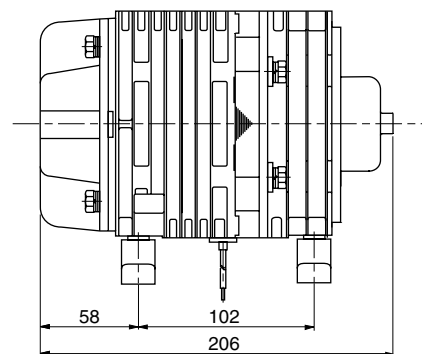
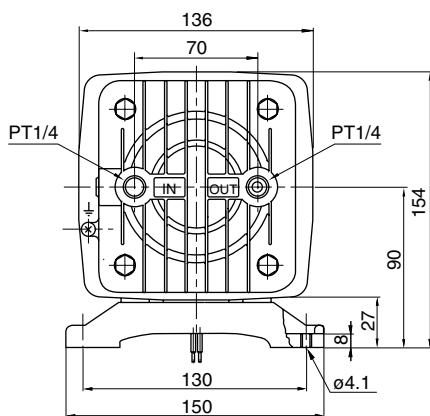


Material Handling Machine



Vacuum Chucking

### Sketch Drawing and Mounting Dimensions Diagram (mm)

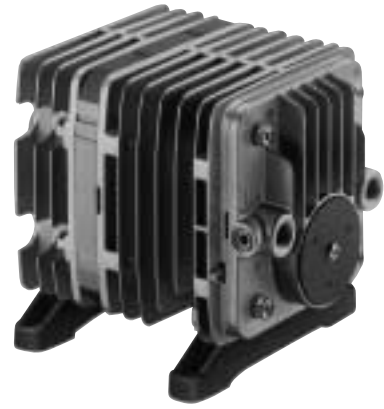


# LINEAR

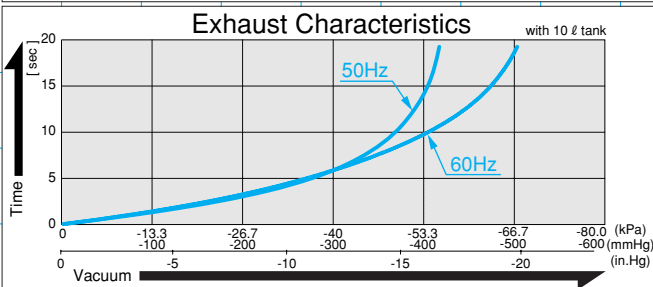
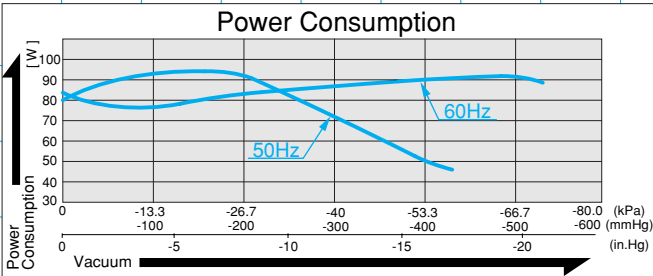
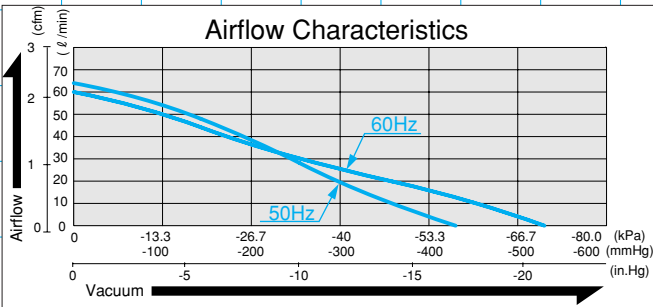
# VP0940



MOTOR FREE  
PISTON SYSTEM



### Airflow & Power Consumption



### Specifications

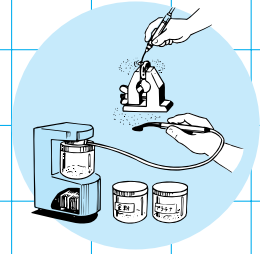
	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-53.3 kPa (-400 mmHg)	-533 mbar	-15.7 in.Hg
Free Air Displacement	60 l/min		2.12 cfm
Rated Voltage	120 V, AC or 230 V, AC		
Power Consumption	95 W		
Rated Frequency	60 Hz & 50 Hz		
Life Expectancy	10,000 hours		
Inlet	ISO Rc 1/4 (female threaded)		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	B or its equivalent (JETL)		
Mounting Dimensions	102 (L) x 130 (W) mm		
Gross Weight	4.55 kg		10.0 Lbs.
Leadwire Length	300 mm		11-13/16"

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

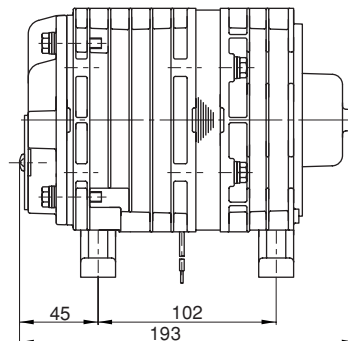
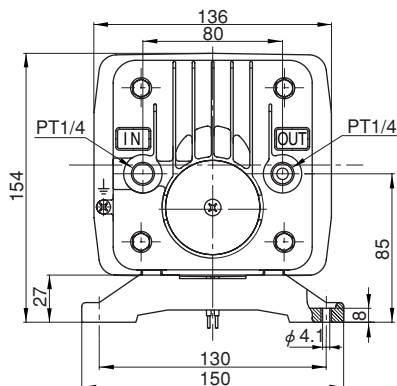


Drafter Sheet Suction



Metal Powder Recycling

### Sketch Drawing and Mounting Dimensions Diagram (mm)





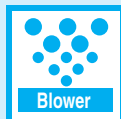
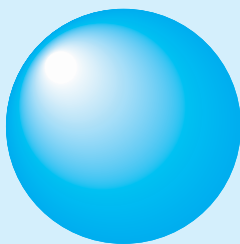
# LA Blower

# LINEAR

LA-28B  
LA-45B  
P31

LA-60B  
LA-80B  
P32

LA-100  
LA-120  
P33



# LINEAR



MOTOR FREE  
PISTON SYSTEM

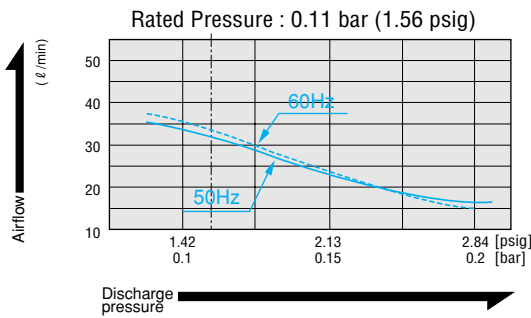
## LA-28B LA-45B

LA-28B  
LA-45B

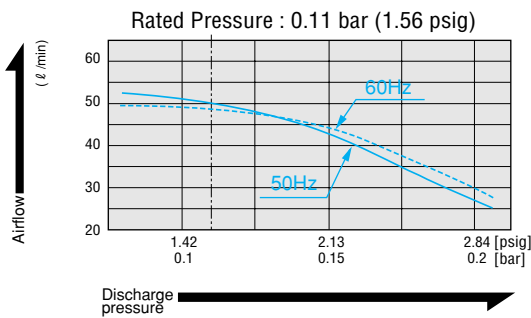


### Airflow Characteristics

#### LA-28B



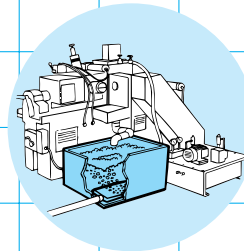
#### LA-45B



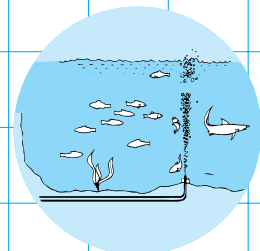
### Specification

	LA-28B	LA-45B
Power Supply	AC 120V, 220V, 230V, 240V	
Rated Frequency	50 Hz, 60 Hz	
Rated Pressure	0.011 MPa {0.11kgf/cm <sup>2</sup> }, 0.11 bar or 1.56 psig	
Rated Airflow	28 l /min {0.99 cfm}	45 l /min {1.59 cfm}
Power	29 W / 50 Hz	47 W / 50 Hz
Consumption	25.5 W / 60 Hz	45 W / 60 Hz
Weight	2.9 kg {6.4 lbs}	3.0 kg {6.6 lbs}

### Application Examples

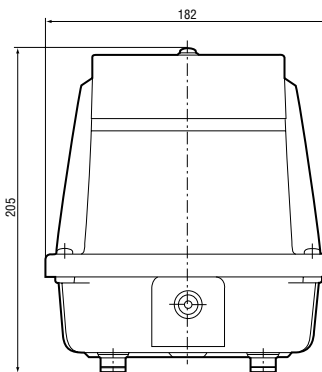
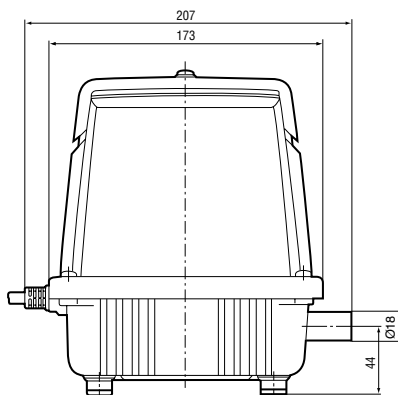


Liquid Mixer Bubbling



Fish Farm Aquatic Fence

### Sketch Drawing and Mounting Dimensions Diagram (mm)





# LINEAR



MOTOR FREE  
PISTON SYSTEM



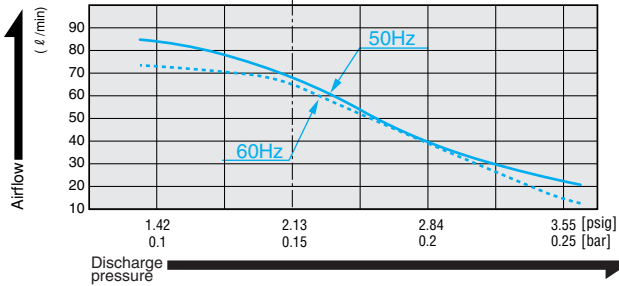
## LA-60B LA-80B

LA-60B  
LA-80B

### Airflow Characteristics

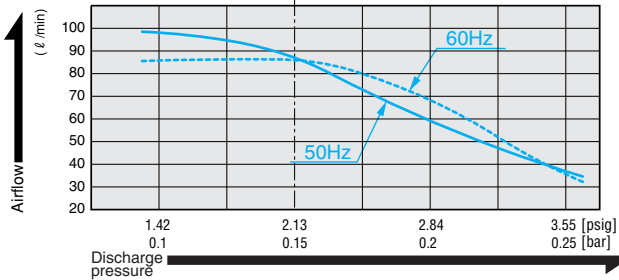
#### LA-60B

Rated Pressure : 0.15 bar (2.13 psig)



#### LA-80B

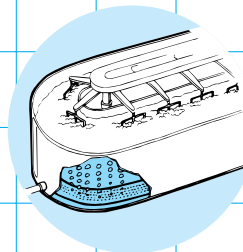
Rated Pressure : 0.15 bar (2.13 psig)



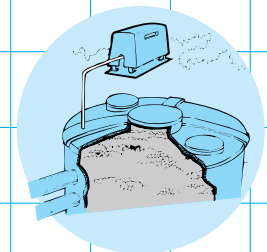
### Specifications

	LA-60B	LA-80B
Power Supply	AC 120V, 220V, 230V, 240V	
Rated Frequency	50 Hz, 60 Hz	
Rated Pressure	0.015 MPa {0.15kgf/cm <sup>2</sup> }, 0.15 bar or 2.13 psig	
Rated Airflow	60 l / min {2.12 cfm}	80 l / min {2.83 cfm}
Power Consumption	64 W / 50 Hz	86 W / 50 Hz
	60 W / 60 Hz	86 W / 60 Hz
Weight	5.0 kg {11 lbs}	5.3 kg {11.7 lbs}

### Application Examples

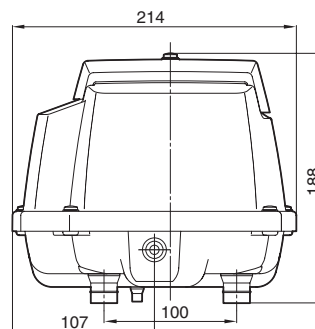
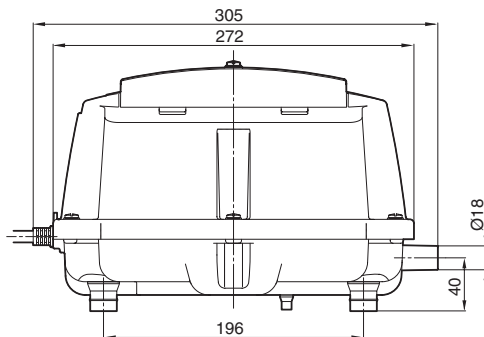


Liquid Mixer Bubbling



Home Aerobic Sewage Treatment System

### Sketch Drawing and Mounting Dimensions Diagram (mm)



# LINEAR



MOTOR FREE  
PISTON SYSTEM

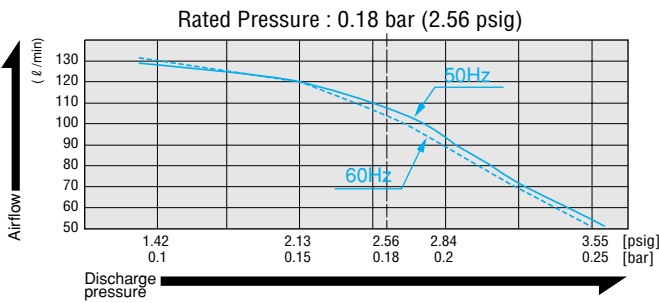
# LA-100 LA-120



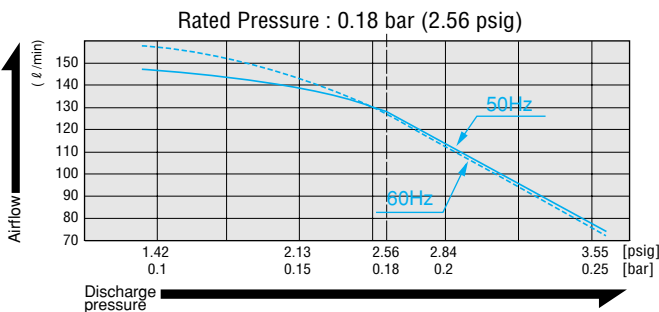
LA-100  
LA-120

### Airflow Characteristics

#### LA-100



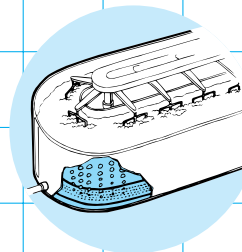
#### LA-120



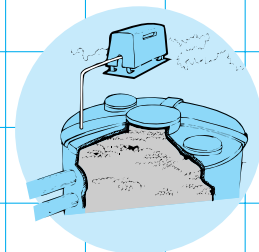
### Specifications

	LA-100	LA-120
Power Supply	AC 120V, 220V, 230V, 240V	
Rated Frequency	50 Hz, 60 Hz	
Rated Pressure	0.018 MPa (0.18kgf/cm <sup>2</sup> ), 0.18 bar or 2.56 psig	
Rated Airflow	100 l / m {3.53 cfm}	120 l / m {4.24 cfm}
Power Consumption	100 W / 50 Hz 95 W / 60 Hz	130 W / 50 Hz 118 W / 60 Hz
Weight	9.4 kg {20.7 lbs}	9.4 kg {20.7 lbs}

### Application Examples

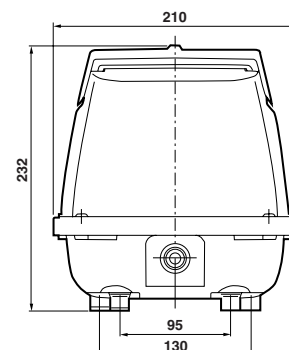
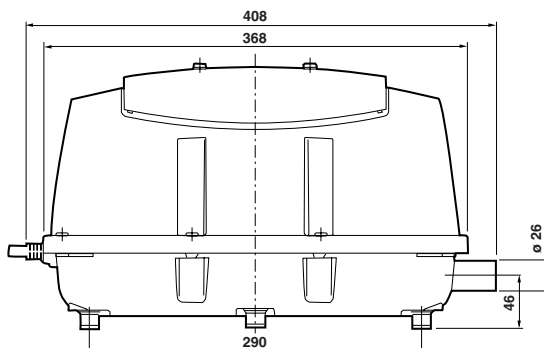


Liquid Mixer Bubbling



Home Aerobic Sewage Treatment System

### Sketch Drawing and Mounting Dimensions Diagram (mm)

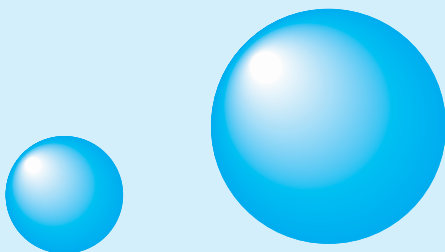




**Made-to-order Item**

# **L LINEAR**

**Air Compressor  
Vacuum Pump**



AC 0501  
P35

VP 0645  
P36

VP 0935A  
P37

VP 0945  
P38

VP 0660x2  
P39

# LINEAR

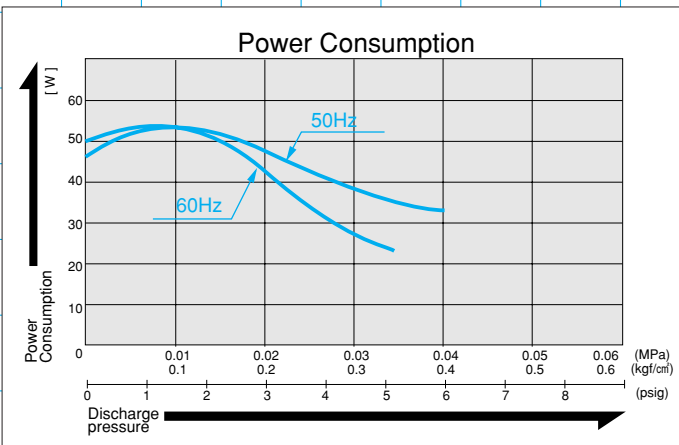
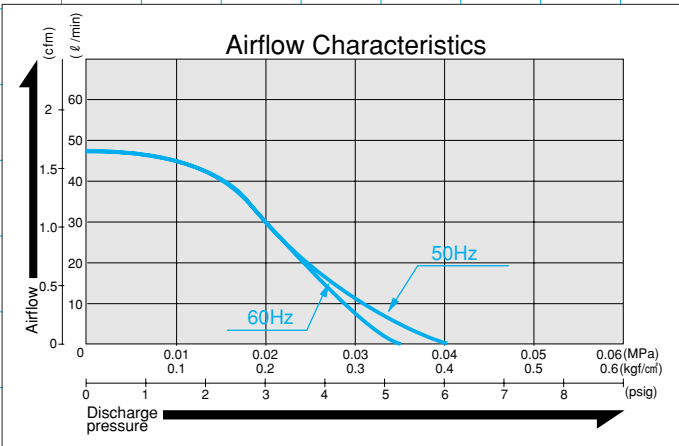
# Ac0501



MOTOR FREE  
PISTON SYSTEM



### Airflow & Power Consumption

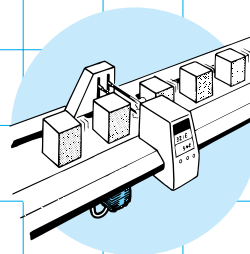


### Specifications

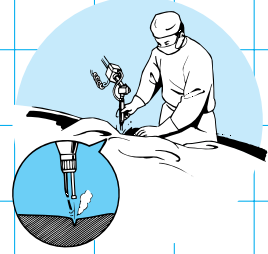
	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.01 MPa (0.1 kgf/cm <sup>2</sup> )	0.1 bar	1.42 psig
Rated Airflow	45 l/min		
Rated Voltage	115 V, AC or 230 V, AC		
Maximum Pressure	0.035 MPa (0.35 kgf/cm <sup>2</sup> )	0.35 bar	4.98 psig
Power Consumption	53 W		
Rated Frequency	60 Hz & 50 Hz		
Life Expectancy	10,000 hours		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL)		
Mounting Dimensions	68 (L) x 84 (W) mm		
Gross Weight	3 kg	6.6 Lbs.	
Leadwire Length	200 mm	7-7/8"	

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

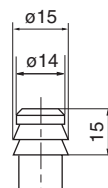
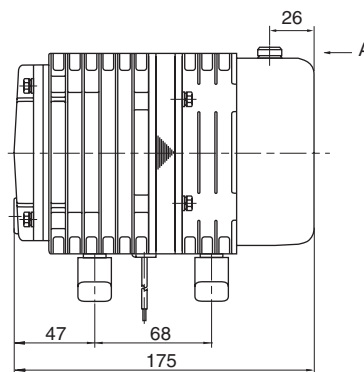
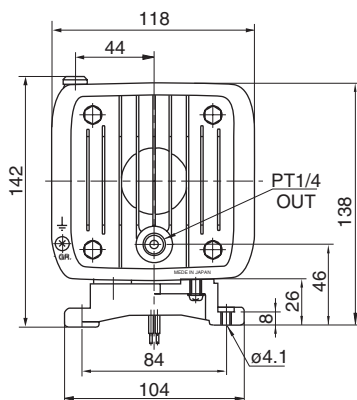


Pneumatic Sensor



Laser Air Ventilation

### Sketch Drawing and Mounting Dimensions Diagram (mm)



View A

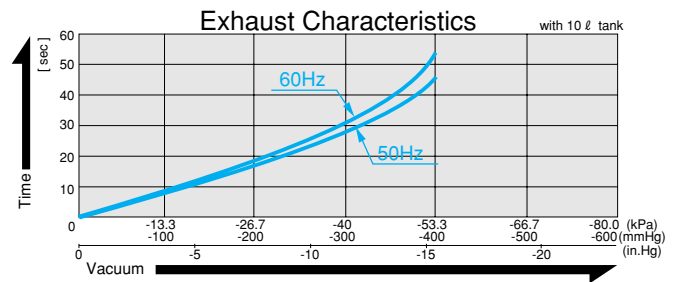
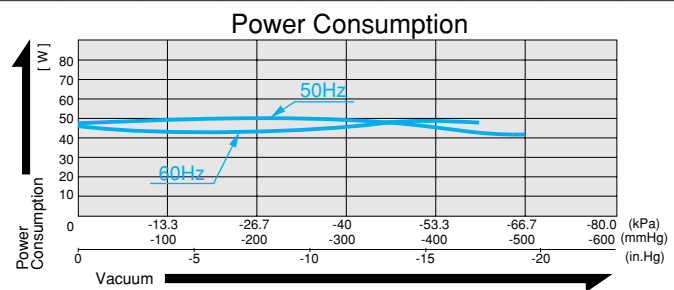
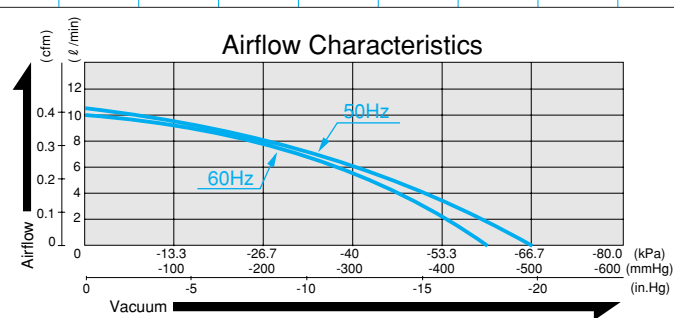
# LINEAR

# VP0645

   
**MOTOR FREE  
 PISTON SYSTEM**



### Airflow & Power Consumption

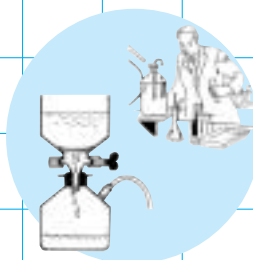


### Specifications

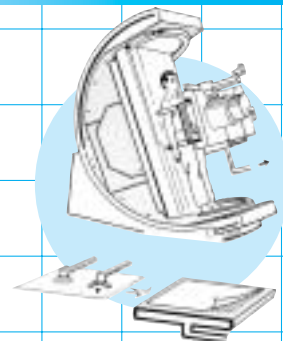
	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-60 kPa (-450 mmHg)	-600 mbar	-17.7 in.Hg
Free Air Displacement	10 l/min		0.28 cfm
Rated Voltage	115 V,AC or 230 V,AC		
Power Consumption	48 W or 50 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	3,000 hours		
Inlet	15 mm O.D. hose nipple		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL)		
Mounting Dimensions	68 (L) x 84 (W) mm		
Gross Weight	3.2 kg		7.1 Lbs.
Leadwire Length	200 mm		7-7/8"

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

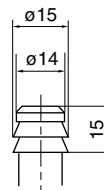
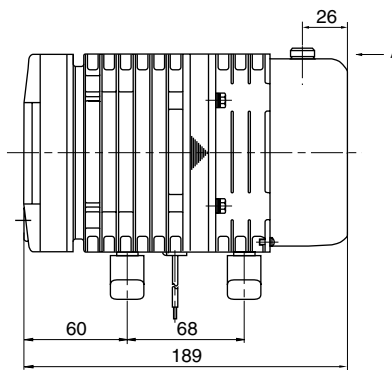
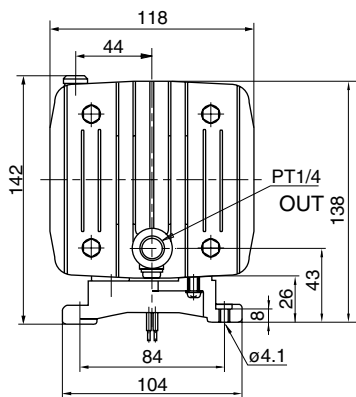


Liquid Purification



X-ray Film Positioning

### Sketch Drawing and Mounting Dimensions Diagram (mm)



View A  
Inlet details

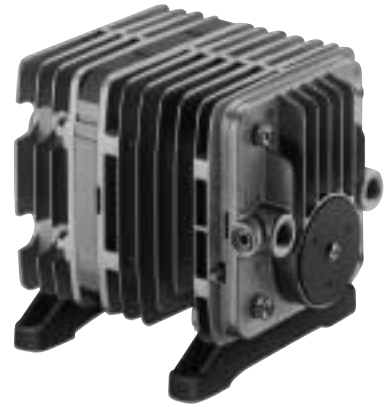
# LINEAR

# VP0935A

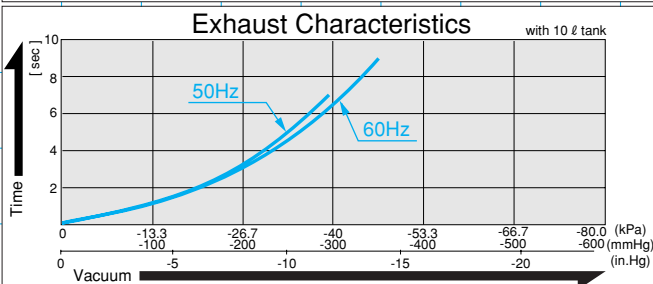
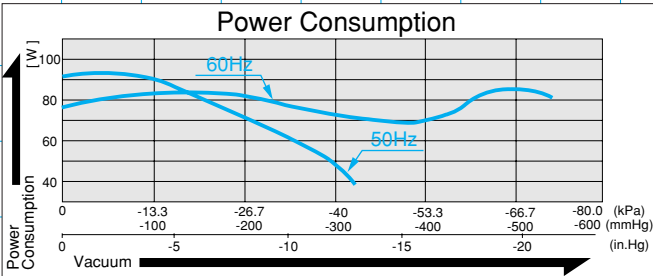
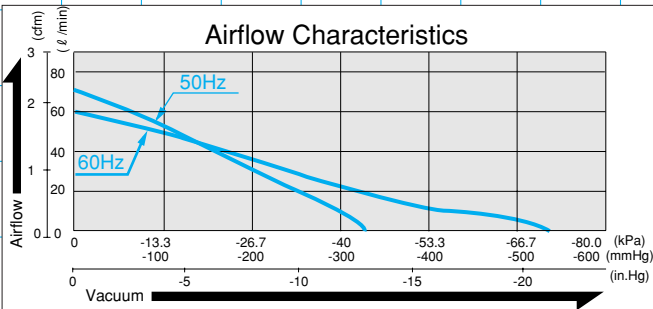


MOTOR FREE  
PISTON SYSTEM

Made-to-order VACUUM PUMP



## Airflow & Power Consumption



## Specifications

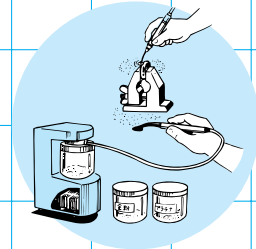
	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-44 kPa (-330 mmHg)	-440 mbar	-13 in.Hg
Free Air Displacement	60 l/min		2.12 cfm
Rated Voltage	115 V, AC or 230 V, AC		
Power Consumption	95 W		
Rated Frequency	60 Hz & 50 Hz		
Life Expectancy	10,000 hours		
Inlet	ISO Rc 1/4 (female threaded)		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	B or its equivalent (JETL) or B for UL		
Mounting Dimensions	102 (L) x 130 (W) mm		
Gross Weight	4.4 kg		9.7 Lbs.
Leadwire Length	200 mm		7-7/8"

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

## Application Examples

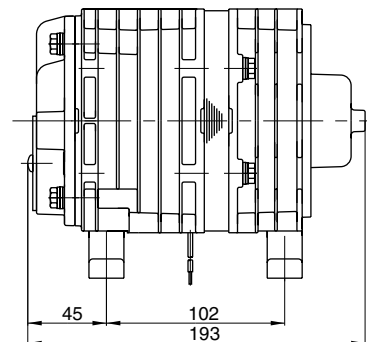
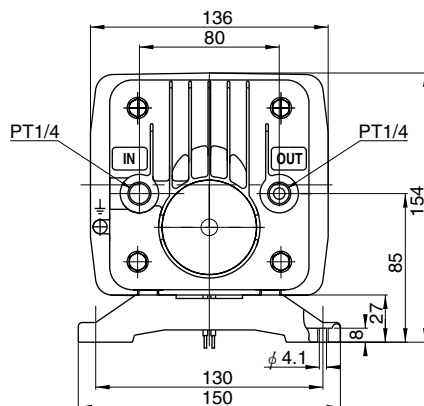


Drafter Sheet Suction



Metal Powder Recycling

## Sketch Drawing and Mounting Dimensions Diagram (mm)



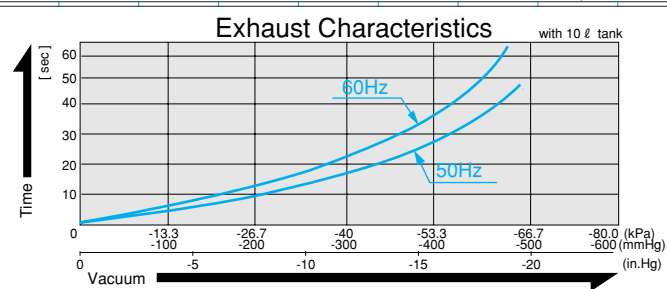
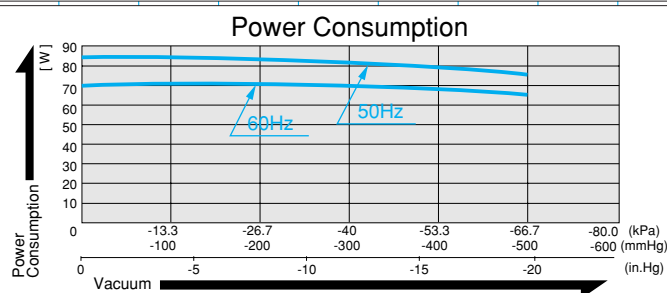
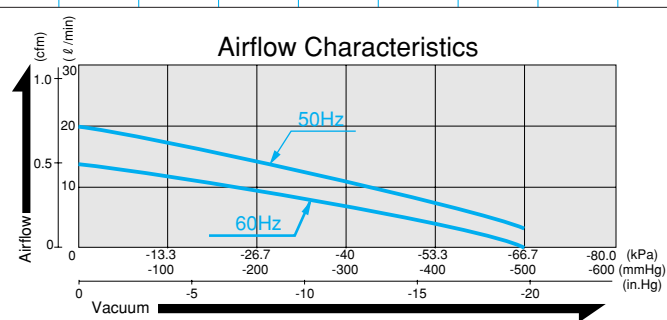
# LINEAR

# VP0945

   
**MOTOR FREE  
 PISTON SYSTEM**



### Airflow & Power Consumption



### Specifications

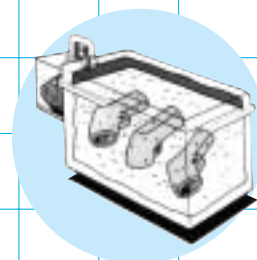
	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-60 kPa (-450 mmHg)	-600 mbar	-17.7 in.Hg
Free Air Displacement	12 l /min		0.423 cfm
Rated Voltage	115 V,AC or 230 V,AC		
Power Consumption	70 W or 85 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	3,000 hours		
Inlet	15 mm O.D. hose nipple		
Outlet	ISO Rc 1/4 (female threaded)		
Duty Cycle	Continuous		
Coil Insulation Class	E or its equivalent (JETL)		
Mounting Dimensions	102 (L) x 130 (W) mm		
Gross Weight	4.9 kg	10.8 Lbs.	
Leadwire Length	150 mm or 300 mm		5-7/8"

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Application Examples

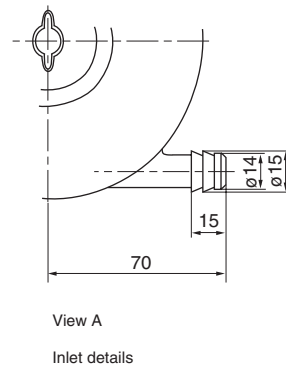
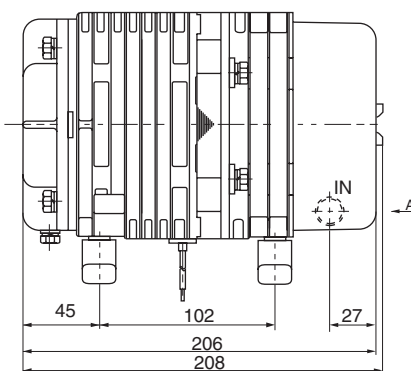
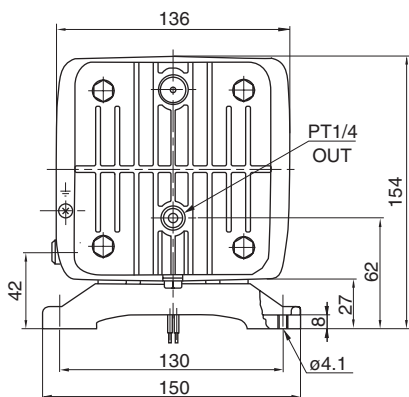


Vacuum Vice



Impregnation Depressurizer

### Sketch Drawing and Mounting Dimensions Diagram (mm)



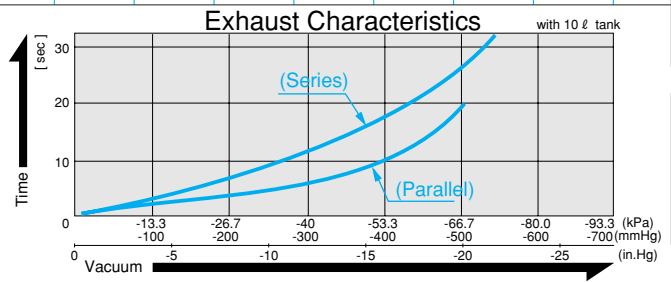
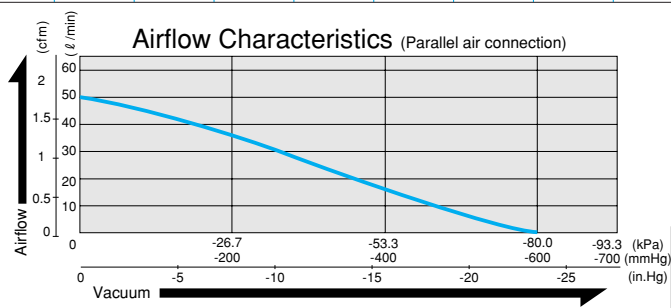
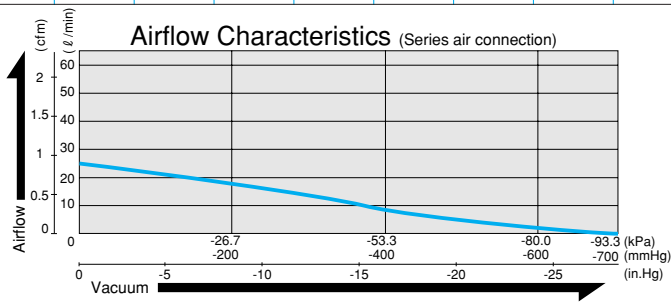
# LINEAR

**Compressor** **TWIN**  
**MOTOR FREE**  
**PISTON SYSTEM**



# VP0660x2

## Airflow & Power Consumption



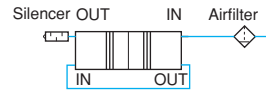
## Specifications

	Series Connection	Parallel Connection
Attainable Vacuum	-93.3 kPa (-700 mmHg) -933 mbar or -27.5 inHg	-80 kPa (-600 mmHg) -800 mbar or -23.6 inHg
Free Air Displacement	25 l/min or 0.88 cfm	50 l/min or 1.76 cfm
Rated Voltage	115 V, AC or 230 V, AC	
Power Consumption	125 W or 100 W	
Rated Frequency	60 Hz or 50 Hz	
Life Expectancy	6,000 hours	
Inlet	ISO Rc 1/4 (female threaded); 2 ports	
Outlet	ISO Rc 1/4 (female threaded); 2 ports	
Duty Cycle	Continuous	
Coil Insulation Class	B or its equivalent (JETL)	
Mounting Dimensions	280 (L) x 130 (W) mm	
Gross Weight	10 kg (22 Lbs.)	
Leadwire Length	150 mm (5-7/8")	

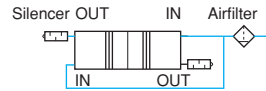
\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

## Application Examples

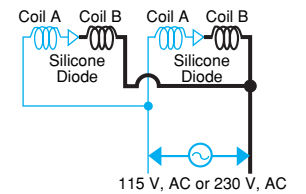
### Series Connection



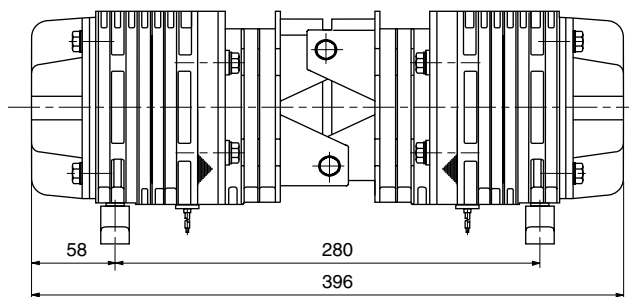
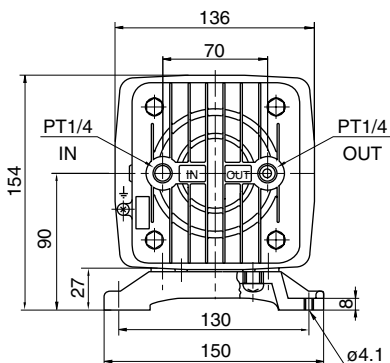
### Parallel Connection



Air line connection performed by user.



## Sketch Drawing and Mounting Dimensions Diagram (mm)





### Pressure

MPa	kgf/cm <sup>2</sup> (bar)	psig
0.30	3.0	42.7
0.28	2.8	39.8
0.25	2.5	35.6
0.20	2.0	28.5
0.18	1.8	25.6
0.15	1.5	21.3
0.12	1.2	17.1
<b>0.10</b>	<b>1.0</b>	<b>14.2</b>
0.08	0.8	11.4
0.07	0.7	9.96
0.05	0.5	7.11
0.045	0.45	6.40
0.04	0.4	5.69
0.035	0.35	4.98
0.034	0.34	4.84
0.03	0.3	4.27
0.02	0.2	2.84
0.018	0.18	2.56
0.015	0.15	2.13
0.011	0.11	1.56
0.01	0.1	1.42
<b>0.007</b>	<b>0.07</b>	<b>1.00</b>
0.005	0.05	0.71
* 0	0	0

### Flow Rate

CFM	LPM	CFM	LPM
<b>0.035</b>	<b>1.00</b>	2.12	60.0
0.070	2.00	2.25	63.7
0.100	2.83	2.47	70.0
0.105	3.00	2.50	70.8
0.177	5.00	2.65	75.0
0.250	7.08	2.75	77.9
0.353	10.0	2.83	80.0
0.500	14.2	3.00	85.0
0.530	15.0	3.18	90.0
0.708	20.0	3.25	92.0
0.750	21.2	3.50	99.1
0.883	25.0	3.53	100
<b>1.00</b>	<b>28.32</b>	3.75	106
1.06	30.0	3.89	110
1.24	35.0	4.00	113
1.25	35.4	4.24	120
1.41	40.0	4.50	127
1.50	42.5	5.00	142
1.59	45.0	5.30	150
1.75	49.6	6.00	170
1.77	50.0	7.00	198
2.00	56.6	7.06	200

### Vacuum

kPa	mmHg	mbar	in.Hg
* 0	0	0	0
-13.3	-100	-133	-3.94
-26.7	-200	-267	-7.87
-33.3	-250	-333	-9.84
-44.0	-330	-440	-13.0
-45.3	-340	-453	-13.4
-46.7	-350	-467	-13.8
-53.3	-400	-533	-15.7
-60.0	-450	-600	-17.7
-66.7	-500	-667	-19.7
-73.3	-550	-733	-21.7
-80.0	-600	-800	-23.6
-93.3	-700	-933	-27.6
-100	-750	-1000	-29.5
** -101.3	-760	-1013	-29.9

### Pressure

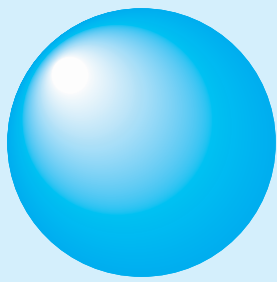
to \ from	MPa	kgf/cm <sup>2</sup>	bar	psig
MPa	1	10	10	142
kgf/cm <sup>2</sup>	0.1	1	1	14.2
bar	0.1	1	1	14.2
psig	0.007	0.07	0.07	1

### Vacuum

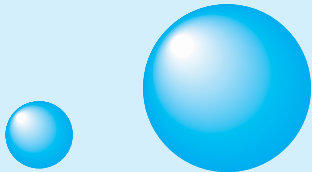
to \ from	kPa	mmHg	in.Hg	mbar
kPa	-1	-7.50	-0.295	-10
mmHg	-0.133	-1	-0.0394	-1.335
in. Hg	-3.39	-25.4	-1	-33.92
mbar	-0.1	-0.75	-0.0295	-1

\* Gauge pressure  
 \*\* Absolute vacuum





# DIAPHRAGM PUMP

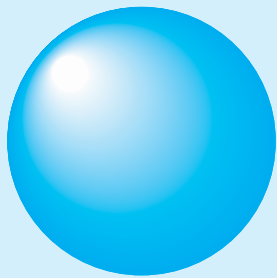


VC 0100  
P43

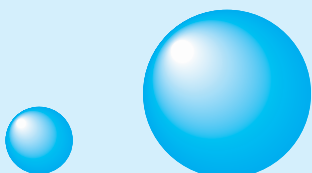
VC 0101  
VC 0101S  
P44

VC 0201  
VC 0301  
P45

VC 0201B  
VC 0301B  
P46



# DC AIR PUMP



DP 0125  
DP 0140  
P47

DP 0102  
DP 0102S  
DP 0102H  
P48

DP 0105  
P49

# DIAPHRAGM PUMP

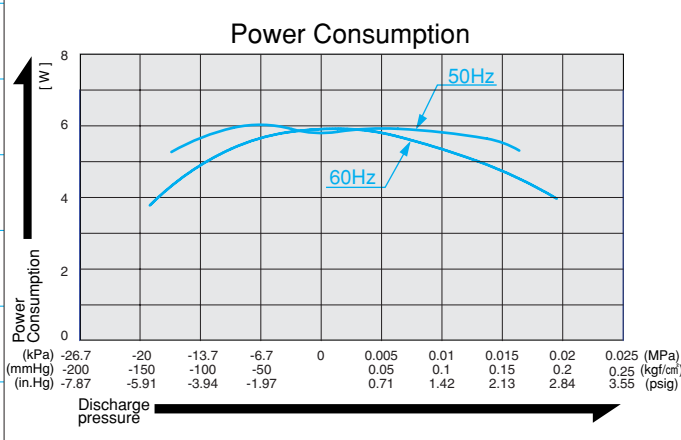
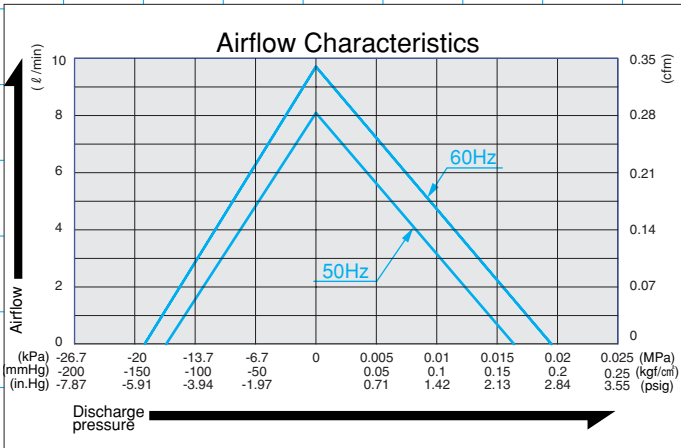
Diaphragm Pump



# vc0100



## Airflow & Power Consumption

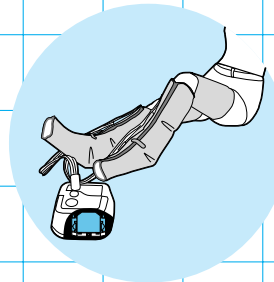


## Specifications

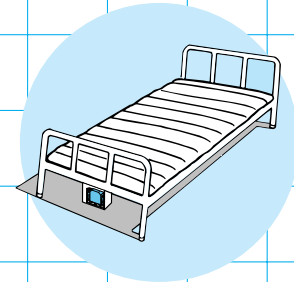
	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.004 MPa (0.04 kgf/cm <sup>2</sup> )	0.04 bar	0.57 psig
Rated Airflow	6 l/min		0.21 cfm
Rated Voltage	120 V, AC or 230 V, AC		
Maximum Pressure	0.016 MPa (0.16 kgf/cm <sup>2</sup> )	0.16 bar	2.27 psig
Maximum Vacuum	-14.76 kPa (-110 mmHg)	-147 mbar	-4.33 in.Hg
Power Consumption	6 W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	10,000 hours (Dual 5,000 hours)		
Working Pressure Range	-14.7 mbar~0.016 MPa (-110 mmHg~0.16 kgf/cm <sup>2</sup> )	-147 mbar~0.16 bar	-4.33 in.Hg~2.28 psig
Outlet (or Inlet)	5.8 mm O.D. hose nipple		
Duty Cycle	Continuous		
Coil Insulation Class	E for 230V & A for 120V or its equivalent		
Mounting Dimensions	70 (L) x 72 (W) mm		
Gross Weight	0.45 kg	0.99 Lbs.	
Leadwire Length	300 mm	11-13/16"	

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

## Application Examples

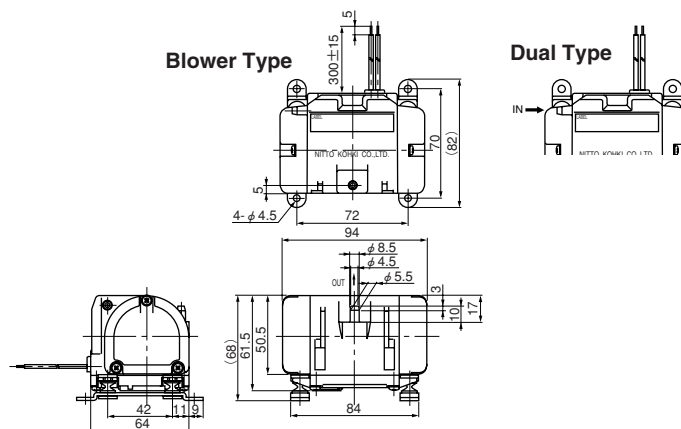


Massage Devices



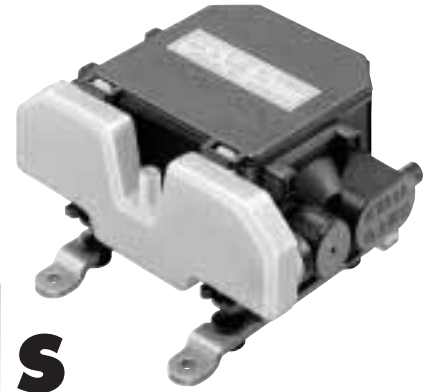
Bedsore Prevention Mattress

## Sketch Drawing and Mounting Dimensions Diagram (mm)



# DIAPHRAGM PUMP

Diaphragm Pump

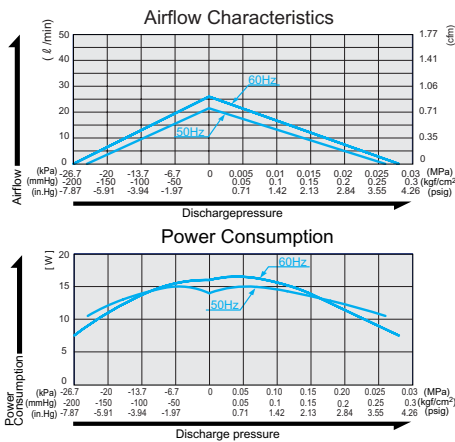


# vc0101/vc0101s

## Airflow & Power Consumption

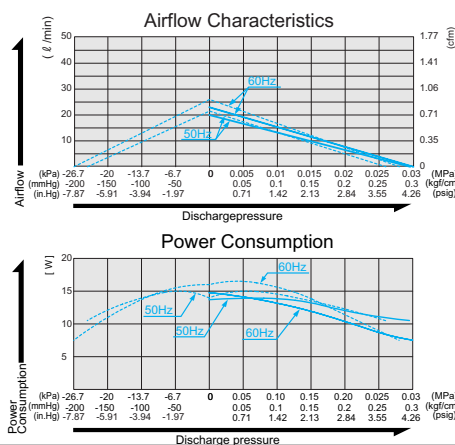
## Specifications

### VC0101



### VC0101S

VC0101S  
VC0101S-DUALTYPE



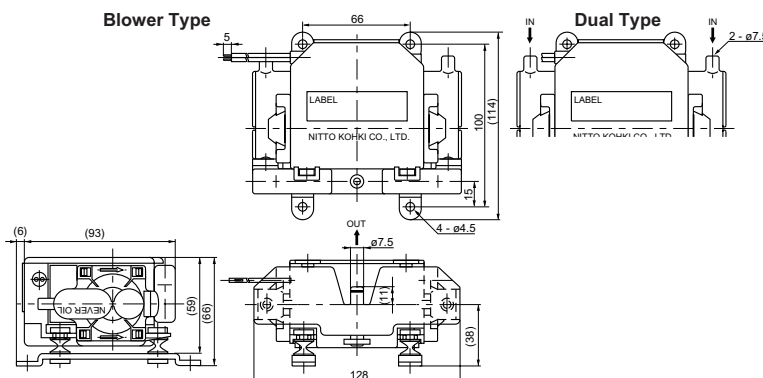
VC0101	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.01 MPa {0.1 kgf/cm <sup>2</sup> }	0.1 bar	1.42 psig
Rated Airflow	10 l/min		0.35 cfm
Rated Voltage	120 V, AC or 230 V, AC		
Maximum Pressure (Blower)	0.02 MPa {0.2 kgf/cm <sup>2</sup> }	0.2 bar	2.84 psig
Maximum Pressure (Dual)	0.018 MPa {0.18 kgf/cm <sup>2</sup> }	0.18 bar	2.56 psig
Maximum Vacuum	120V -18.7 kPa {-140mmHg}	-187 mbar	-5.52 in.Hg
Working Pressure Range	-18.7 kPa 0.018 MPa {-140 mmHg 0.18 kgf/cm <sup>2</sup> }	-187 mbar 0.18 bar	-5.52 in.Hg 2.56 psig
Maximum Pressure (Blower)	0.02 MPa {0.2 kgf/cm <sup>2</sup> }	0.2 bar	2.84 psig
Maximum Pressure (Dual)	0.015 MPa {0.15 kgf/cm <sup>2</sup> }	0.15 bar	2.13 psig
Maximum Vacuum	230V -10 kPa {-75mmHg}	-100 mbar	-2.95 in.Hg
Working Pressure Range	-10kPa 0.015 MPa {-75mmHg 0.15 kgf/cm <sup>2</sup> }	-100 mbar 0.15 bar	-2.95 in.Hg 2.13 psig
Power Consumption	11W		
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	10,000 hours (Dual 5,000 hours)		
Outlet (Inlet)	7.5 mm O.D. hose nipple		
Duty Cycle	Continuous		
Coil Insulation Class	B for 230V & A for 120V or its equivalent		
Mounting Dimensions	66 (L) x 100 (W) mm		
Gross Weight	0.82 kg		1.8 Lbs.
Leadwire Length	200 mm		7-7/8"

VC0101S	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.005 MPa {0.05 kgf/cm <sup>2</sup> }	0.05 bar	0.71 psig
Rated Airflow	15 l/min		0.53 cfm
Rated Voltage	120 V, AC ※ or 230 V, AC		
Maximum Pressure	0.026 MPa {0.26 kgf/cm <sup>2</sup> }	0.26 bar	3.69 psig
Maximum Vacuum	-24 kPa {-180mmHg}	-240 mbar	-7.08 in.Hg
Power Consumption	(Blower): 14W	(Dual): 15W	
Rated Frequency	60 Hz or 50 Hz		
Life Expectancy	5,000 hours		
Working Pressure Range	-24kPa 0.026 MPa {-180mmHg 0.26 kgf/cm <sup>2</sup> }	-240 mbar 0.26 bar	-7.08 in.Hg 3.69 psig
Outlet (Inlet)	7.5 mm O.D. hose nipple		
Duty Cycle	60 minutes		
Coil Insulation Class	B or its equivalent (JETL) or B for UL		
Mounting Dimensions	66 (L) x 100 (W) mm		
Gross Weight	0.82 kg		1.8 Lbs.
Leadwire Length	300 mm		11-13/16"

※ VC0101S (120V version) : UL Pending

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

## Sketch Drawing and Mounting Dimensions Diagram (mm)



# DIAPHRAGM PUMP

Diaphragm Pump

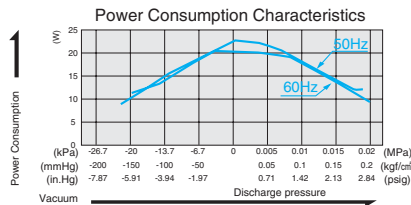
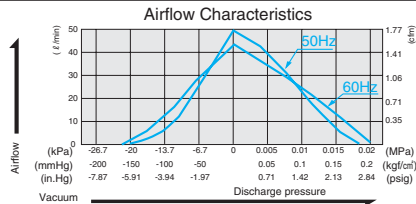


# vc0201/vc0301

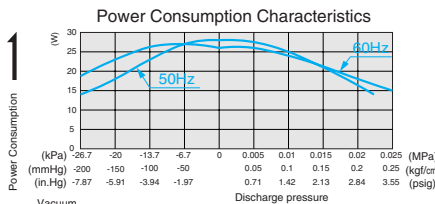
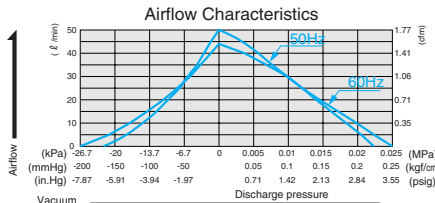
## Airflow & Power Consumption

## Specifications

### VC0201



### VC0301



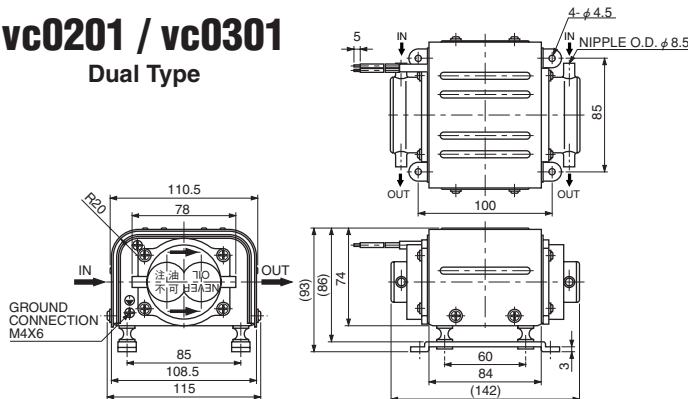
VC0201	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.01 MPa {0.1 kgf/cm <sup>2</sup> }	0.1 bar	1.42 psig
Rated Airflow	20 l /min		0.71 cfm
Rated Voltage	120 V, AC or 230 V, AC		
Maximum Pressure	0.018 MPa {0.18 kgf/cm <sup>2</sup> }	0.18 bar	2.56 psig
Max. vacuum*	-18.7 kPa {-140 mmHg}	-187 mbar	-5.5 in.Hg
Power Consumption	18 W or 19 W		
Rated Frequency	60 Hz or 50 Hz		
Working Pressure Range	-18.7kPa~0.018 MPa {-140mmHg~0.18 kgf/cm <sup>2</sup> }	-187 mbar ~	-5.5 in.Hg ~
Life Expectancy	10,000 hours		
Outlet (or Inlet)	Dia 8.5 mm OD hose nipple		
Duty Cycle	Continuous		
Coil Insulation Class	A for 120V B for 230V or its equivalent		
Mounting Dimensions	100 (L) x 85 (W) mm		
Gross Weight	1.8 kg	4 Lbs.	
Leadwire Length	200 mm	7-7/8"	

VC0301	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.01 MPa {0.1 kgf/cm <sup>2</sup> }	0.1 bar	1.42 psig
Rated Airflow 0301	25 l /min		0.88 cfm
Rated Voltage	120 V, AC or 230 V, AC		
Maximum Pressure	0.02 MPa {0.2 kgf/cm <sup>2</sup> }	0.2 bar	2.84 psig
Max. vacuum*	-21.3 kPa {-160 mmHg}	-213 mbar	-6.3 in.Hg
Power Consumption	24 W or 25 W		
Rated Frequency	60 Hz or 50 Hz		
Working Pressure Range	-21.3kPa~0.02 MPa {-160mmHg~0.2 kgf/cm <sup>2</sup> }	-213 mbar ~	-6.3 in.Hg ~
Life Expectancy	10,000 hours		
Outlet (or Inlet)	Dia 8.5 mm OD hose nipple		
Duty Cycle	Continuous		
Coil Insulation Class	A for 120V B for 230V or its equivalent		
Mounting Dimensions	100 (L) x 85 (W) mm		
Gross Weight	1.8 kg	4 Lbs.	
Leadwire Length	200 mm	7-7/8"	

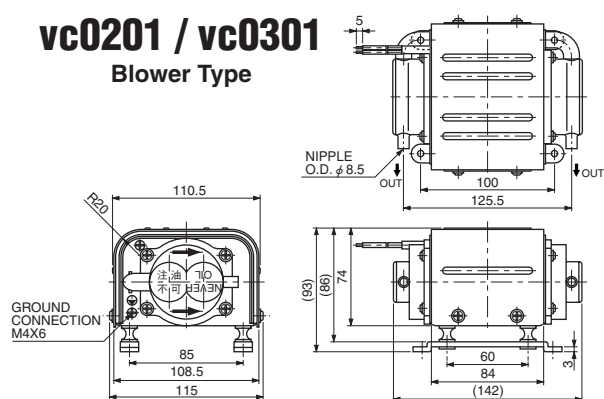
\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.  
\* Max. vacuum for Dual Type only.

## Sketch Drawing and Mounting Dimensions Diagram (mm)

### vc0201 / vc0301 Dual Type

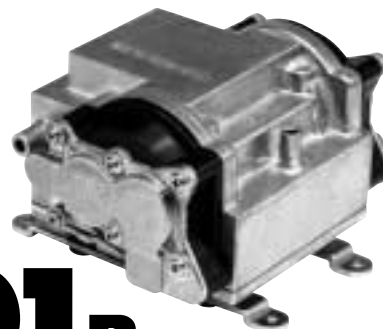


### vc0201 / vc0301 Blower Type



# DIAPHRAGM PUMP

Diaphragm Pump

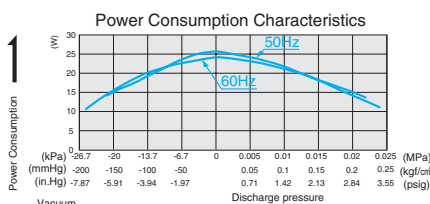
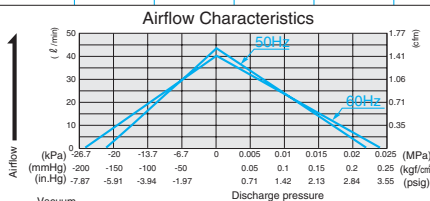


## vc0201B / vc0301B

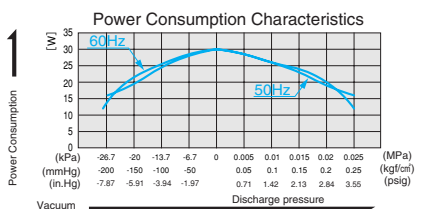
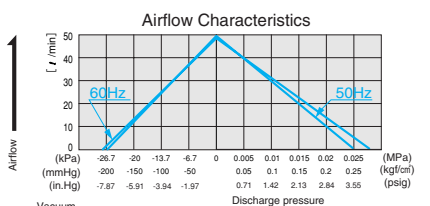
### Airflow & Power Consumption

### Specifications

#### VC0201B



#### VC0301B



VC0201B	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.01 MPa {0.1 kgf/cm <sup>2</sup> }	0.1 bar	1.42 psig
Rated Airflow	20 l /min		0.71 cfm
Rated Voltage	120 V, AC or 230 V, AC		
Maximum Pressure	0.018 MPa {0.18 kgf/cm <sup>2</sup> }	0.18 bar	2.56 psig
Max. vacuum*	-18.7 kPa {-140 mmHg}	-187 mbar	-5.5 in.Hg
Power Consumption	21 W		
Rated Frequency	60 Hz or 50 Hz		
Working Pressure Range	-18.7kPa~0.18 MPa {-140 mmHg~0.18 kgf/cm <sup>2</sup> }	-187 mbar ~ 0.18 bar	-5.5 in.Hg ~ 2.56 psig
Life Expectancy	10,000 hours		
Inlet	Dia 10.5 mm OD hose nipple		
Outlet	Dia 8.5 mm OD hose nipple		
Duty Cycle	Continuous		
Coil Insulation Class	A for 120V B for 230V or its equivalent		
Mounting Dimensions	125 (L) x56 (W) mm		
Gross Weight	1.7 kg	3.7 Lbs.	
Leadwire Length	300 mm	11-13/16"	

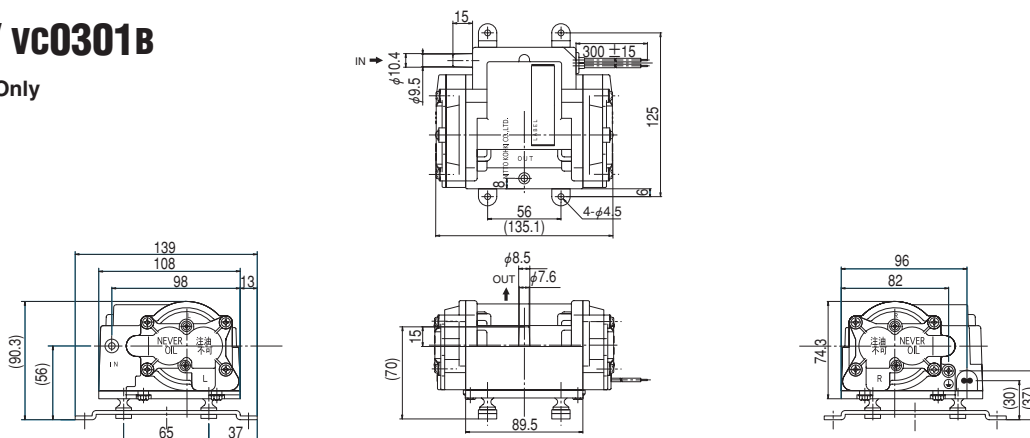
VC0301B	(SI)	(EURO)	(U.S.A.)
Rated Pressure	0.01 MPa {0.1 kgf/cm <sup>2</sup> }	0.1 bar	1.42 psig
Rated Airflow	25 l /min		0.88 cfm
Rated Voltage	120 V, AC or 230 V, AC		
Maximum Pressure	0.02 MPa {0.2 kgf/cm <sup>2</sup> }	0.2 bar	2.84 psig
Max. vacuum*	-21.3 kPa {-160 mmHg}	-213 mbar	-6.3 in.Hg
Power Consumption	27 W		
Rated Frequency	60 Hz or 50 Hz		
Working Pressure Range	-21.3kPa~0.02 MPa {-160 mmHg~0.2 kgf/cm <sup>2</sup> }	-213 mbar ~ 0.2 bar	-6.3 in.Hg ~ 2.84 psig
Life Expectancy	10,000 hours		
Inlet	Dia 10.5 mm OD hose nipple		
Outlet	Dia 8.5 mm OD hose nipple		
Duty Cycle	Continuous		
Coil Insulation Class	A for 120V B for 230V or its equivalent		
Mounting Dimensions	125 (L) x56 (W) mm		
Gross Weight	1.7 kg	3.7 Lbs.	
Leadwire Length	300 mm	11-13/16"	

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Sketch Drawing and Mounting Dimensions Diagram (mm)

#### vc0201B / vc0301B

Dual Type Only



# DC AIR PUMP

## Diaphragm Pump



DP0125

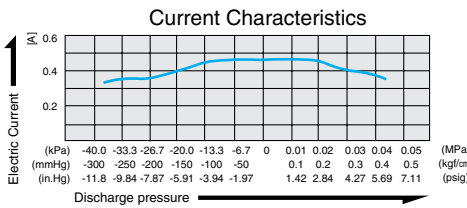
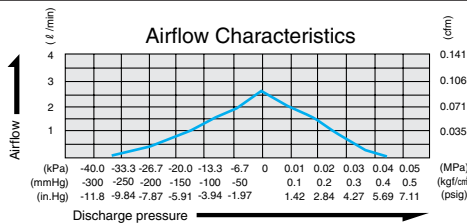


DP0140

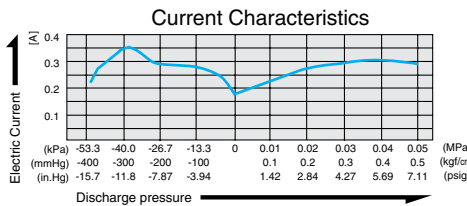
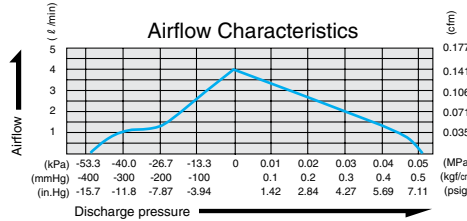
# DP0125/DP0140

### Airflow & Power Consumption

#### DP0125



#### DP0140



### Specifications

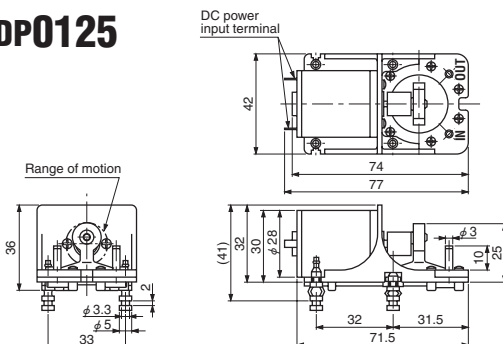
DP0125	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-33.3 kPa (-250 mmHg)	-333 mbar	-9.84 in.Hg
Free Air Displacement	2.5 l/min		0.088 cfm
Rated Voltage	12 V, DC		
Maximum Pressure	0.03 MPa {0.3 kgf/cm <sup>2</sup> }	0.3 bar	4.27 psig
Maximum Current	0.5A		
Duty Cycle	Continuous		
Life Expectancy	200 hours		
Inlet (or Outlet)	3 mm O.D. straight nipple		
Coil Insulation Class	E or its equivalent (JETL)		
Mounting Dimensions	32 (L) x 32.5 (W) mm	1 1/4 (L) x 1 1/8 (W) in.	
Gross Weight	0.08 kg		0.18 Lbs.

DP0140	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-53.3 kPa (-400 mmHg)	-533 mbar	-15.7 in.Hg
Free Air Displacement	4 l/min		0.141 cfm
Rated Voltage	12 V, DC		
Maximum Pressure	0.05 MPa {0.5 kgf/cm <sup>2</sup> }	0.5 bar	7.1 psig
Maximum Current	0.5A		
Duty Cycle	Continuous		
Life Expectancy	500 hours		
Inlet (or Outlet)	5 mm O.D. straight nipple		
Coil Insulation Class	E or its equivalent (JETL)		
Mounting Dimensions	52 (L) x 36 (W) mm	2 1/4 (L) x 1 1/4 (W) in.	
Gross Weight	0.19 kg		0.42 Lbs.

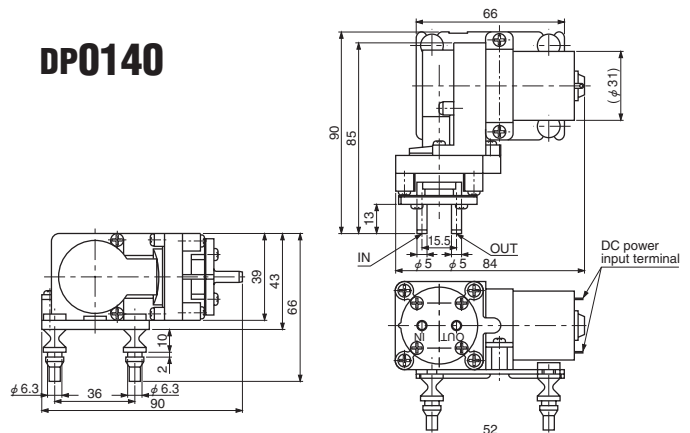
\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Sketch Drawing and Mounting Dimensions Diagram (mm)

#### DP0125



#### DP0140





# DC AIR PUMP

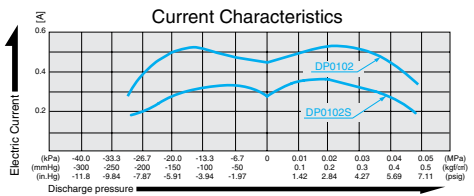
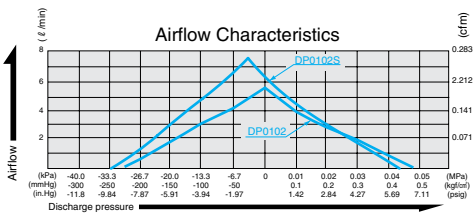
## Diaphragm Pump



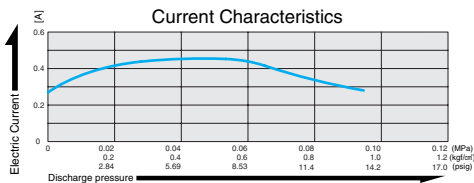
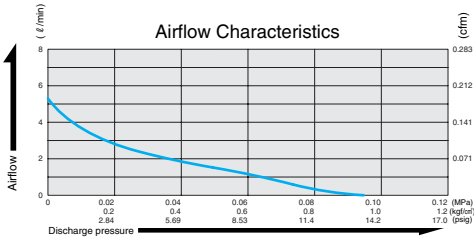
# DP0102 / DP0102S / DP0102H

### Airflow & Power Consumption

**DP0102  
DP0102S**



**DP0102H**



### Specifications

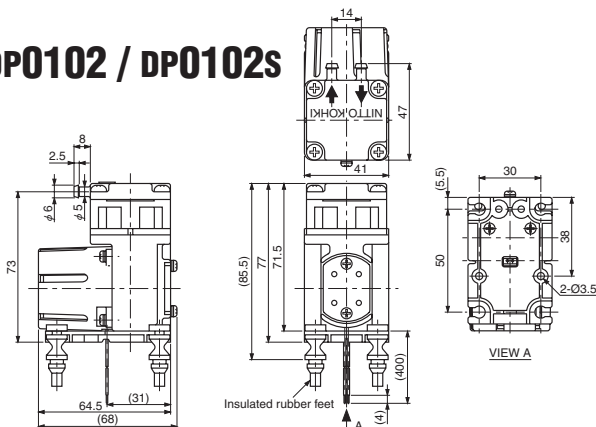
DP0102/0102S	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-26.7 kPa (-200 mmHg)	-267 mbar	-7.87 in.Hg
Free Air	DP0102	5.0 l/min	0.177 cfm
Displacement	DP0102S	7.0 l/min	0.247 cfm
Rated Voltage	DP0102 : 12 V, DC	DP0102S : 24 V, DC	
Maximum Pressure	0.045 MPa{0.45kg/cm <sup>2</sup> }	0.45 bar	6.4 psig
Maximum Current	DP0102 : 0.7 A	DP0102S : 0.5 A	
Rated Operating Time	Continuous		
Working Pressure Range	-26.7kPa~-0.045 MPa {-200mmHg~-0.45kg/cm <sup>2</sup> }	-267 mbar~ 0.45 bar	-7.9 in.Hg~ 6.4 psig
Life Expectancy	5000 hours		
Inlet and Outlet	6 mm O.D. straight nipple		
Coil Insulation Class	E or its equivalent (JETL)		
Mounting Dimensions	50 (L) x 30 (W) mm	1 <sup>3/32</sup> (L) x 1 <sup>3/16</sup> (W) in.	
Gross Weight	0.25 kg	0.55 Lbs.	

DP0102H	(SI)	(EURO)	(U.S.A.)
Free Air Displacement	4.0 l/min		0.14 cfm
Rated Voltage	12 V, DC		
Maximum Pressure	0.08 MPa{0.8kg/cm <sup>2</sup> }	0.8 bar	11.4 psig
Maximum Current	0.7 A		
Rated Operating Time	Continuous		
Working Pressure Range	0~0.08 MPa{0~0.8kg/cm <sup>2</sup> }	0~0.8 bar	0~11.4 psig
Life Expectancy	3000 hours		
Inlet and Outlet	6 mm O.D. hose nipple		
Coil Insulation Class	E or its equivalent (JETL)		
Mounting Dimensions	50 (L) x 30 (W) mm	1 <sup>3/32</sup> (L) x 1 <sup>3/16</sup> (W) in.	
Gross Weight	0.25 kg	0.55 Lbs.	

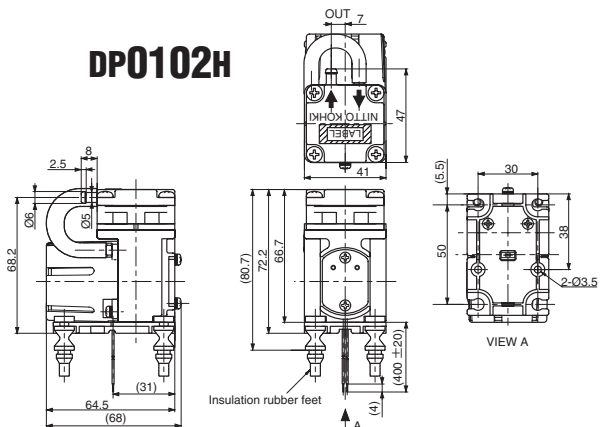
\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

### Sketch Drawing and Mounting Dimensions Diagram (mm)

**DP0102 / DP0102S**



**DP0102H**



# DC AIR PUMP

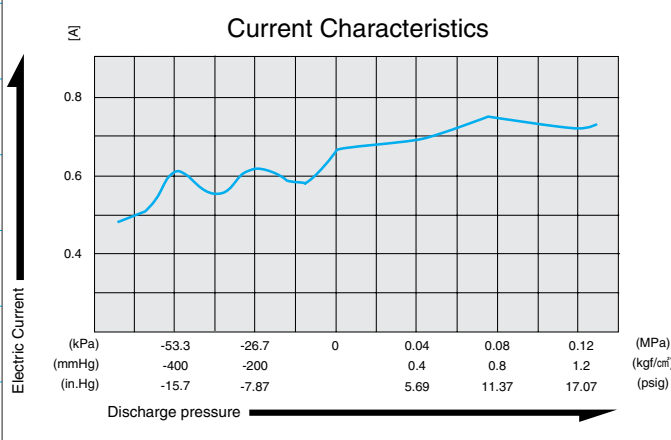
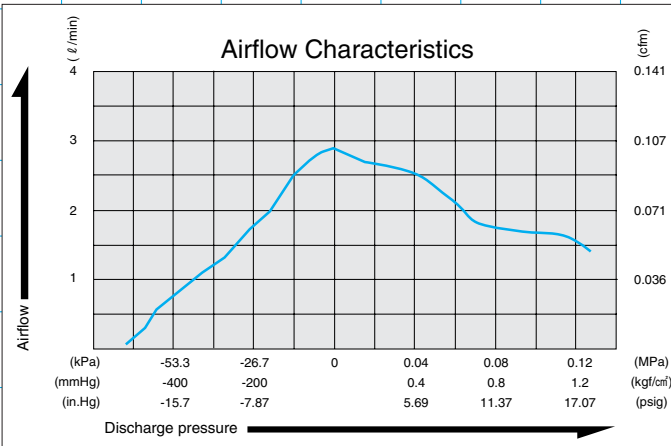
Piston Pump



# DP0105

Ask your distributor for appropriate operation of both compression and vacuum in the same one pump.

## Airflow & Power Consumption

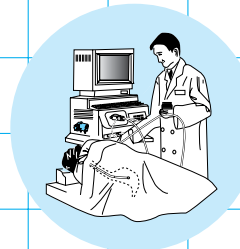


## Specifications

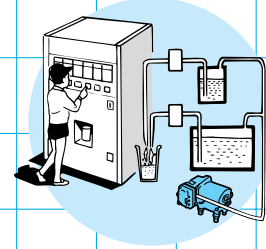
	(SI)	(EURO)	(U.S.A.)
Attainable Vacuum	-66.6 kPa (-500 mmHg)	-666 mbar	-19.7 in.Hg
Free Air Displacement	2.8 l /min		0.1 cfm
Rated Voltage	24 V, DC		
Maximum Pressure	0.25 MPa (2.5 kgf/cm <sup>2</sup> )	2.5 bar	35.6 psig
Maximum Current	0.95 A		
Rated Operating Time	30 minutes		
Working Pressure Range	-66.6 kPa ~ 0.1 MPa (-500mmHg~1 kgf/cm <sup>2</sup> )	-666 mbar ~ 1 bar	-19.7 in.Hg ~ 14.2 psig
Life Expectancy	1000 hours		
Inlet and Outlet	5 mm O.D. straight nipple		
Coil Insulation Class	E or its equivalent (JETL)		
Mounting Dimensions	42 (L) x 24.5 (W) mm	1 <sup>7/32</sup> (L) x 3 <sup>7/32</sup> (W) in.	
Gross Weight	0.36 kg	0.80 Lbs.	

\* Life expectancy is the expected accumulated period of time during which the compressor will maintain the above specifications. Contact your supplier for details of the conditions of use under which the values and numbers stated herein are maintained.

## Application Examples

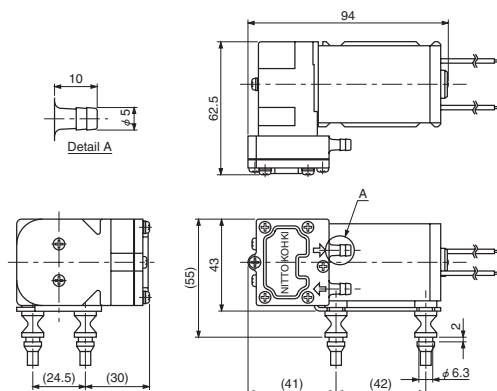


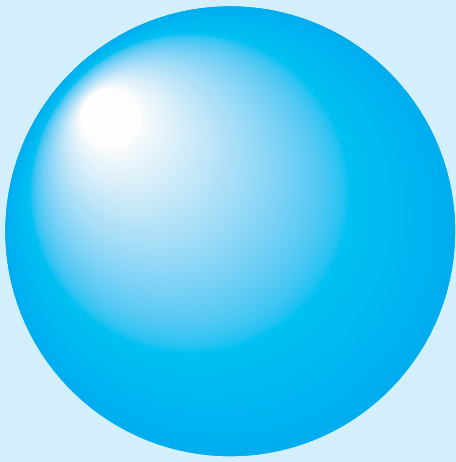
Endoscopes



Vending Machines

## Sketch Drawing and Mounting Dimensions Diagram (mm)





**NITTO KOHKI Group Profile**

# **NITTO KOHKI Group Profile**

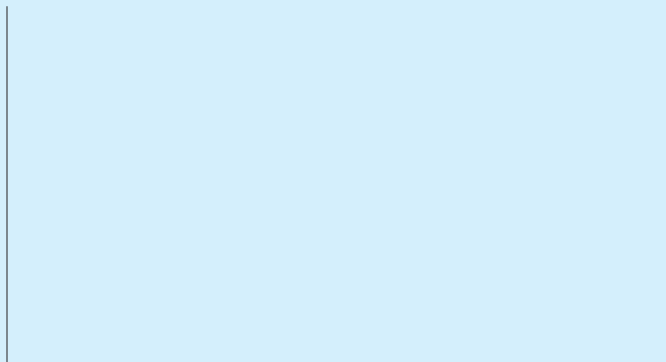
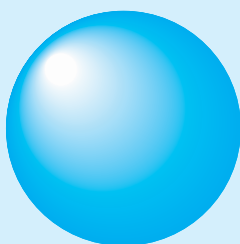
**Group Companies & World Network**

**Research & Development**

**Quality Control**

**Factory**

**Healthcare Products**



# Nitto Kohki Group Companies and Worldwide Network

## [Japan]

### 1 NITTO KOHKI CO., LTD.

9-4, Nakaikagami 2-chome,  
Ohta-ku, Tokyo 146-8555  
Japan  
Tel: +81-3-3755-1111  
Fax: +81-3-3753-8791  
<http://www.nitto-kohki.co.jp/e>  
[overseas@nitto-kohki.co.jp](mailto:overseas@nitto-kohki.co.jp)  
(Headquarters of Design, R&D, marketing and sales of all Nitto products).

### 2 MEDO INDUSTRIES CO., LTD.

Dempa Building  
1-11-15 Higashi Gotanda,  
Shinagawa-ku, Tokyo 141-0022  
Japan  
Tel: +81-3-3447-5521  
Fax: +81-3-3447-3570  
<http://www.medo.co.jp>  
[medo@tka.att.ne.jp](mailto:medo@tka.att.ne.jp)  
Osaka Branch: 10-10, Fukae-kita 2-chome  
Higashinari-ku, Osaka 537-0001  
Tel: +81-6-6976-3271  
(Marketing and sales of Air Compressors, Vacuum Pumps, Blowers and Healthcare Products in Japan).

### 3 TOCHIGI NITTO KOHKI CO., LTD.

3473-2 Ujiiie,  
Sakura-shi, Tochigi-ken 329-1311  
Japan  
Tel: +81-28-682-8851  
Fax: +81-28-681-7038  
(Production of pneumatic, hydraulic and gas quick connective couplings).

### 4 MEDOTECH CO., LTD.

1-1-36 Wakamiya,  
Yamagata-shi, Yamagata-ken 990-2453  
Japan  
Tel: +81-23-644-4363  
Fax: +81-23-644-6756  
(Production of pneumatic, hydraulic and electric type, labour saving machine tools, including fully automatic portable drilling machines, portable grinders/polishers, bevellers, shears, scalers and industrial cutters).

### 5 SHIRAKAWA NITTO KOHKI CO., LTD.

12 Yokomine, Kurabeishi,  
Shirakawa-shi  
Fukushima-ken, 961-0017  
Japan  
Tel: +81-248-22-5511  
Fax: +81-248-22-5512  
(Production of Electric Screwdrivers and Door Hinges).

## [North America]

### 6 MEDO USA., INC.

4525 Turnberry Drive,  
Hanover Park, IL 60133  
U.S.A.  
Tel: +1-630-924-8811  
Fax: +1-630-924-0808  
<http://www.medousa.com>  
[inquiry@medousa.com](mailto:inquiry@medousa.com)  
(Marketing and sales of Air Compressors, Vacuum Pumps and Blowers).

### 7 NITTO KOHKI U.S.A., INC. Head Office

4525 Turnberry Drive,  
Hanover Park, IL 60133  
U.S.A.  
Tel: +1-630-924-9393  
Fax: +1-630-924-0303  
<http://www.nittokohki.com>  
[info@nittokohki.com](mailto:info@nittokohki.com)  
(Marketing and sales of Fluid Couplings, Machinery and Tools).

## [Europe]

### 8 NITTO KOHKI EUROPE CO., LTD.

Unit 21, The Empire Centre  
Imperial Way  
Watford Herts, WD24 4TS  
United Kingdom  
Tel: +44-1923-239668  
Fax: +44-1923-248815  
<http://www.medo-europe.com>  
[info@nitto-europe.com](mailto:info@nitto-europe.com)  
(Marketing and sales of all Nitto Kohki products in the UK and Ireland).

### 9 UNIVERSAL DRILLING & CUTTING EQUIPMENT LTD.

43 Catley Road, Sheffield S9 5JF, United Kingdom  
Tel: +44-114-291-1000  
Fax: +44-114-242-5905  
(Manufacture and sales of portable magnetic drill machines and its annual cutters).

### NITTO KOHKI DEUTSCHLAND GMBH

10 Lerchenstr.47, D-71144 Steinerbronn,  
Germany  
Tel: +49-7157-22436  
Fax: +49-7157-22437  
[info@nitto.de](mailto:info@nitto.de)  
(Marketing and sales of all Nitto Kohki products in continental Europe).

## [Oceania]

### 11 NITTO KOHKI AUSTRALIA PTY. LTD.

(Marketing and sales of all Nitto products).

### 12 NITTO KOHKI AUSTRALIA MFG. PTY. LTD.

(Production of Industrial Cutters).  
77 Brandl Street, Brisbane Technology Park,  
Eight Mile Plains, Queensland 4113,  
Australia  
Tel: +61-7-3340-4600  
Fax: +61-7-3340-4640  
<http://www.nitto-australia.com.au>  
[sales@nitto-australia.com.au](mailto:sales@nitto-australia.com.au)

## [Asia]

### 13 NITTO KOHKI (THAILAND) CO., LTD.

64 Moo 9, Rojana Industrial Park,  
Thanu, Uthai District, Ayutthaya, 13210,  
Thailand  
Tel: +66-35-227-080  
Fax: +66-35-227-083  
(Production of Air Compressors, Vacuum Pumps and Blowers).

### 14 NITTO KOHKI COUPLING (THAILAND) CO., LTD.

64/1 Moo 9, Rojana Industrial Park,  
Thanu, Uthai District, Ayutthaya, 13210,  
Thailand  
Tel: +66-35-227-310  
Fax: +66-35-227-315  
(Manufacture of Couplings).

### 15 NITTO KOHKI CO., LTD.

**Bangkok Representative Office**  
38Q. House Convent Bldg., 7th Floor, Unit 7A,  
Convent Rd., Silom,  
Bangkok 10500  
Thailand  
Tel: +66-2-632-0307  
Fax: +66-2-632-0308  
[nittobkk@loxinfo.co.th](mailto:nittobkk@loxinfo.co.th)  
(Marketing and sales support for all Nitto products).

### 16 NITTO KOHKI CO., LTD.

**Singapore Branch**  
81 Anson Road, #08-39  
Singapore 079908  
Singapore  
Tel: +65-6227-5360  
Fax: +65-6227-0192  
[nittokohki@pacific.net.sg](mailto:nittokohki@pacific.net.sg)  
(Marketing and sales support for all Nitto products).

### 17 NITTO KOHKI CO., LTD. Shanghai Representative Office

#1117 Ruijin Building  
Maoming South Road  
Shanghai 200020  
China (People's Republic of China)  
Tel: +86-21-6415-3935  
Fax: +86-21-6472-6957  
[www.nitto-kohki.cn](http://www.nitto-kohki.cn)  
[sh-office@nitto-kohki.cn](mailto:sh-office@nitto-kohki.cn)  
(Marketing and sales support for all Nitto products).

### 18 NITTO KOHKI CO., LTD. Shenzhen Representative Office (South China)

#0726 International Culture Bldg.,3039,  
Shennan Zhong Rd., Futian District,  
Shenzhen 518033, China  
Tel: +86-755-8375-2185  
Fax: +86-755-8375-2187  
(Marketing and sales support for all Nitto products).

### 19 NITTO KOHKI-MIJIN CO., LTD.

53-1 Jeil-Ri, Yangji-Myun, Yongin-City,  
Kyonggi-Do, the Republic of Korea  
Tel: +82-31-335-8787  
Fax: +82-31-336-0821  
(Manufacture and sales of pneumatic tools, spring balancers, and electric drivers).

### 20 NITTO KOHKI CO., LTD. Seoul Representative Office

53-1 Jeil-Ri, Yangji-Myun, Yongin-City,  
Kyonggi-Do, the Republic of Korea  
(Marketing and sales support for all Nitto products).

# Worldwide Network

Nitto Kohki group overseas users' service has a high reputation in every country. Like Nitto products, which ensure superior quality regardless of work environment, full user services operate smoothly no matter where they are located.



- ⑥ MEDO USA., INC.
- ⑦ NITTO KOHKI U.S.A., INC.  
Head Office
- ⑧ NITTO KOHKI EUROPE CO., LTD.
- ⑨ UNIVERSAL DRILLING & CUTTING EQUIPMENT LTD.
- ⑩ NITTO KOHKI DEUTSCHLAND GMBH
- ⑪ NITTO KOHKI AUSTRALIA PTY. LTD.
- ⑫ NITTO KOHKI AUSTRALIA MFG. PTY. LTD.
- ⑬ NITTO KOHKI (THAILAND) CO., LTD.
- ⑭ NITTO KOHKI COUPLING (THAILAND) CO., LTD.
- ⑮ NITTO KOHKI CO., LTD.  
Bangkok Office
- ⑯ NITTO KOHKI CO., LTD.  
Singapore Branch
- ⑰ NITTO KOHKI CO., LTD.  
Shanghai Office
- ⑱ NITTO KOHKI CO., LTD.  
Shenzhen Office (South China)
- ⑲ NITTO KOHKI-MIJIN CO., LTD.
- ⑳ NITTO KOHKI CO., LTD.  
Seoul Office

## RESEARCH & DEVELOPMENT

### THE NITTO KOHKI GROUP

Our development teams are constantly conceiving original ideas for the creation of new products.

In addition to gathering and examining the most recent trends and analysing current user needs, they also consider the application environments from the user's perspective. They utilize their own accumulated experience and advanced technological knowledge in the pursuit of "invaluable labour saving technology".



(1)-(2) Development staff  
(3) Industrial standard certificates  
(4) Awards  
(5) Linear R&D department



## QUALITY CONTROL

### THE NITTO KOHKI GROUP

The making of high quality products is facilitated by numerous examinations, measurements and tests that are repeated day and night. One example is the endurance tests in which a product is not only submitted to continuous and rigorous use far in excess of normal service, but also subjected to harsh environmental conditions; from extreme cold to desert heat. Here we rely on innumerable routines and programs and carry out strict, multi-faceted checks of the basic performance of our products.



(1)-(5) Various quality control systems which ascertain the utmost limits



# FACTORIES & PRODUCTS

NITTO KOHKI GROUP

Six production bases support our flexible supply system with reliable quality and competitive costs.

TOCHIGI NITTO KOHKI CO., LTD.



Fluid Couplings



Healthcare Products

MEDOTECH CO., LTD.



Electric & Hydraulic Tools



Pneumatic Tools

SHIRAKAWA NITTO KOHKI CO., LTD.



Electric Screw Drivers



Door Hinges



UNIVERSAL DRILLING & CUTTING EQUIPMENT LTD.



Industrial Cutters



NITTO KOHKI (THAILAND) CO., LTD.



Air Compressors & Vacuum Pumps



NITTO KOHKI COUPLING (THAILAND) CO., LTD.



Fluid Couplings



## Healthcare Products

### *The art of medicine improving people's well-being*

The use of Linear Air Compressors in all sorts of therapeutic devices, and generally around the house, is helping people lead healthier lives.



#### **MEDOMER 2000 (Model MB-2000A)**

The Medo Air Massager is designed to massage the whole leg, and mimics the expansion/contraction function of the muscles during walking. The Medo Air Massager automatically sends compressed air around the foot, from the toes to the ankle, then to the calf and on to the thigh. This timer-controlled sequence repeats for up to 18 minutes.



#### **BUBBLE BATH (MA400)**

Medo Bubble Bath revitalises the body using bubbles, currents of water and the oscillating waves caused by the bubbles. These functions help provide a massaging effect, and a warming and cleansing action, so important to health and beauty.



#### **ROMOVER (ROM-100A)**

The Romover is a remedial device for hand insufficiency due to cerebral, spinal or peripheral nervous diseases and external injuries. By rhythmically increasing the pressure of the glove, the opening, extending, stretching and bending of the affected hand and joints are improved.



#### **DR. MEDOMER (Model DM-5000EX)**

Dr. Medomer effectively returns blood, lymph fluid and excess moisture accumulated in the legs to the main torso thus improving one's circulatory system. Dr. Medomer's effectiveness is confirmed by the changes observed in the cross section of a patient's calf and thigh or by the increase in their temperature after receiving a massage.

# Precautions for Use

Before using any of our products, please be sure to read the following precautions and the product's operation manual.

## Precautions for Compressors and Vacuum pumps

### **WARNING**

**Don't let the unit take in any gas other than air.**  
There is the risk of an explosion, fire or electric shock.

**Make sure the unit is operated in a completely dry area.**  
There is the risk of a short circuit causing a fire or an electric shock.

### **CAUTION**

**The unit must be used as assembled in a device that has the appropriate casing and wiring.**

Using it without may cause fire, electric shock or burns.

**Don't use the unit with a power supply other than the voltage shown on the unit.**

Negligence may cause a fire or an electric shock.

**Don't install the unit in a completely enclosed case (box)**

This may cause a fire or an electric shock.

**Use the unit within the proposed ambient temperature range.**

Using it out of the range may cause a fire or an electric shock.

**This unit must not be modified.**

Modification may cause a fire or an electric shock.

**Do not place flammable substances near the unit.**

This may cause a fire.

**Units with grounding screws should be earthed (grounded), except when connected to a double insulation device.**

Not earthing the unit may result in a fire or an electric shock.

**The unit must be installed at a level higher than the water surface when it is used for bubbling.**

If installed at a lower level, fluid may flow into the unit and cause an electric shock.

**Don't allow anything to be placed on or to fall onto the electric cable.**

The cable may be damaged, causing a fire or an electric shock.

**Don't pull, cut, twist, heat or unnecessarily bend the electric cable.**

The cable may be damaged, causing a fire or an electric shock.

**When installing the unit into another device, the cable for the unit should be connected securely to the wiring of the device in which it is to be used by a soldered, crimped or screwed connection.**

An insecure connection may cause a fire or an electric shock.

**The unit must not be disassembled or repaired by any person who has not received Nitto Kohki technical training. (Except in the cases of filter and piston maintenance and inspection in accordance with the operation manual.)**

This may result in a fire or an electric shock due to faulty operation.

**The unit must be disconnected from its power source before the cleaning or replacing of filters.**

Failure to do so may result in an electric shock or injury.

**In case air containing moisture, powder, dirt or dust is expected to be sucked in, an additional prevention device must also be installed**

Impure air may cause an electric shock.

## Precautions for Blowers

### **WARNING**

**Don't let the unit take in any gas other than air.**  
There is the risk of explosion, fire or electric shock.

**Make sure the unit is operated in a completely dry area.**  
There is the risk of a short circuit causing a fire or an electric shock.

### **CAUTION**

**Do not install the unit where flood or snow accumulation is anticipated.**

This may cause an electric shock or fire.

**Don't use the unit in a damp or wet place.**

This may cause an electric shock or fire.

**Always place the unit above water level.**

Failure to do so may result in an electric shock or fire.

**Use a waterproof wall outlet socket to supply power to the unit.**

Failure to do so may cause an electric shock or fire.

**Use a power supply equipped with a set of earth leakage and overcurrent breakers.**

Failure to do so may result in an electric shock or fire.

**Electric work must be done by a qualified electrician.**

Failure to do so may result in an electric shock or fire.

**Don't modify the unit.**

Modification may cause a fire or an electric shock.

**Don't use the unit for any purpose other than producing bubbles in a water tank.**

Other use may result in a fire or an electric shock.

**Don't use the unit with any voltage other than the rated AC voltage.**

Otherwise, it may cause a fire or an electric shock.

**Never touch the power plug with wet hands.**

This may cause an electric shock.

**Insert the power plug securely to the ends of the contact blades so that it does not wobble.**

Failure to do so may result in an electric shock.

**Don't place anything over the power cable.**

This may cause a fire or an electric shock.

**Don't place anything near the unit (within 50 cm)**

This may cause a fire or an electric shock.

**Don't use the unit where flammables, such as gasoline, solvents, lacquer, benzene, etc. are being used.**

This may cause a fire or an explosion.

**Check the power plug at least once a year for dirt and dust.**

Failure to do so may result in an electric shock or a fire.

**The power plug must be disconnected before the air filter is cleaned or replaced.**

Negligence may cause an electric shock or accident.

**Always pull on the power plug not on the cable when disconnecting the unit from the power socket.**

Pulling it out by the cable may cause an electric a shock or short circuit.

**If the air filter cover has been removed, it must be replaced.**

Negligence may cause a fire or an electric shock.

**Never try to disassemble or repair the unit.**

This may cause an electric shock or an injury. Any repairs must be done by an electrician authorised by Nitto distributors.

## Trouble-shooting

In any of these circumstances, stop operation immediately, switch off the power and disconnect the unit from the power supply. Ask your dealer for repair.

- 1 When oil such as lubricant has been applied to the unit in error.
- 2 When the unit has been subjected to severe impact, such as being dropped.
- 3 When water has entered into the unit by mistake.
- 4 When an abnormal operation has been found, such as the emission of smoke, or an unusual smell or noise.



**NITTO KOHKI's**

# **Air Compressors & Vacuum Pumps**

# MEDO



Head Office and Laboratory  
9-4 Nakaikegami 2-chome,  
Ohta-ku, Tokyo 146-8555  
Japan  
Tel: +81-3-3755-1111  
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