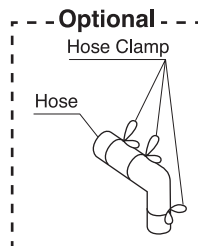
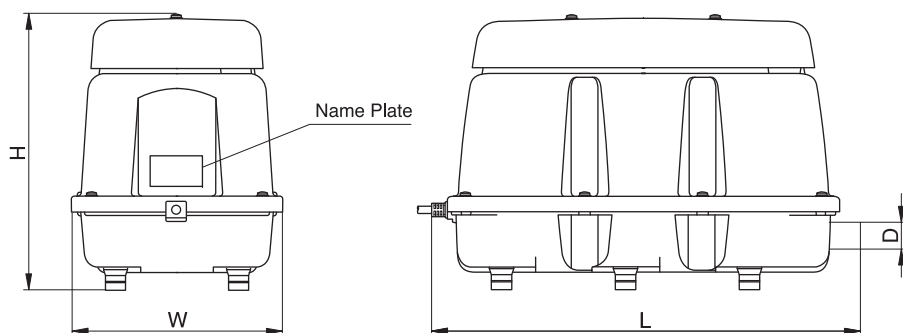


# Medo Brand Blowers for Aerobic Sewage Treatment Systems Installation Manual

Model : LAM-150, LAM-200



## Specifications

Model	LAM-150	LAM-200
Rated Voltage : V AC	220/230/240*	
Rated Frequency : Hz	50	
Rated Pressure : MPa(kgf/cm <sup>2</sup> )	0.02 (0.2)	
Operating Pressure Range : MPa(kgf/cm <sup>2</sup> )	0.005 ~ 0.025 (0.05 ~ 0.25)	
Rated Airflow : L/min	150	200
Power Consumption : W	140	215
External Dimension(L×W×H) : mm	418(L)×212(W)×268(H)	
Outlet Outside Diameter(D) : mm	26	
Weight : kg	12.3	


\* This unit must be operate only at the voltage indicated on the Name Plate.

## 1. For Safe Operation




Various symbols are used in this manual and on the product itself which are aimed at proper and safe operation in order to prevent injury to yourself or others or damage to property. The meanings of these symbols are explained below. Please be sure you understand their meanings before you read this manual.

## Explanation of Diagrammatic Expressions (terms and symbols)

The term "Attention" used in this manual is to alert you to dangers such as the following.

Term	Degree of Danger Indicated by The Term
 Attention	This term indicates the possibility that continuing to work while ignoring this Attention, or working incorrectly without full understanding, may cause personal injury or physical damage.

The following symbols are used in this manual.

Symbol	Meaning
	This symbol advises you of an item which should be Noted (including Danger and Warning). The symbol on the left is the general note but specific details to be noted will be shown by a picture, word or explanatory text inside or near to the triangle.
	This symbol advises you of an action which must not be taken (is prohibited) in order to avoid danger. The symbol on the left is a general prohibition but specific details of the action which must not be taken will be shown by a picture or explanatory text inside or near to the symbol.
	This symbol advises you of an action which must be taken (is mandatory) in order to avoid danger. The symbol on the left is a general emphasis but specific details of the action which must be taken will be shown by a picture or explanatory text inside or near to the symbol.



Attention

**Attention** This installation manual should be read and understood thoroughly before any installation is executed.

After reading this installation manual, please keep it handy for reference.

Manufacturer :  **NITTO**  
NITTO KOHKI CO.,LTD.

Nitto Kohki Co., Ltd.  
9-4, Nakaikagami 2-Chome, Ohta-Ku, Tokyo 146-8555, Japan  
Tel: (03) 3755-1111 Fax: (03) 3753-8791

## 2. Safety and Operating Instructions

The following safety precautions should always be followed to reduce the risk of breakdown and/or accident;

### Attention : Prevent Electric Shock and Fire



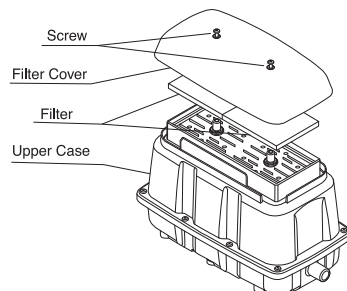
Attention

- (1) Don't install the blower where will be inundated with water.
- (2) Electrical work must be done by a qualified electrician.
- (3) The power supply should be the rated voltage shown on the Name Plate on the product and be fitted with earth leakage breaker and over-current breaker.
- (4) The power outlet used should be waterproof and include an earth connected to ground.
- (5) If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard. Ignoring any of above may cause an electric shock or fire.

- Check if the voltage and frequency on the Name Plate is suitable for the supply voltage and frequency.
- If the body, its cable, or plug is found to be damaged on receipt, do not use but contact the seller.
- Install the blower higher than the water level, which will prevent water siphoning when the blower is turned off.
- Clean the filter located on the top of the product approximately every 3 months. In dusty environment, more frequent cleaning will be necessary.

#### Maintenance of Filter

- ① Be sure to pull out the power supply plug from the power outlet.
- ② Loosen the screw, and remove the filter cover.
- ③ Remove the filter from the upper case.
- ④ Clean the filter or replace it with a new filter.
- ⑤ Install the filter in the upper case.
- ⑥ Attach the filter cover to the upper case, and tighten the screw.



- This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the product.

## 3. Installation

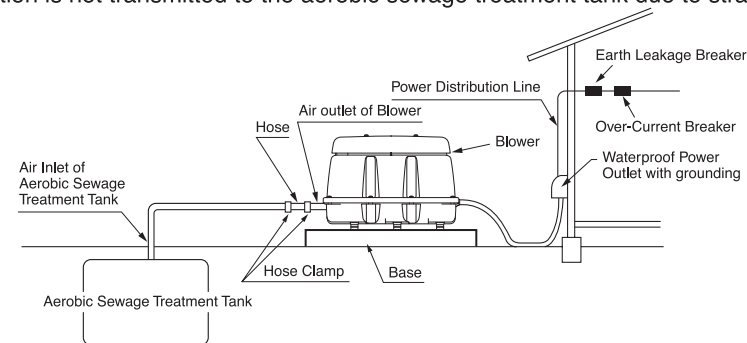
- (1) Check the contents of the package.

- Main Unit : Blower ... 1  
Installation Manual ... 1  
Optional : Hose ... 1, Hose Clamp ... 3

- (2) Installation site selection

- Install near the aerobic sewage treatment tank.  
If the air line is long, the aerobic sewage treatment system may not be able to perform due to an insufficient airflow.
- Install in a place which is convenient for maintenance.
- Don't install over a manhole or on soft ground.
- Consider ventilation in choosing the installation site for the blower.

- Install at least 30 cm away from a building.
  - Select a site as cool as possible.
  - Don't cover up the blower and avoid badly ventilated areas.
  - Avoid areas where wind-blown leaves and dusts gather.
  - Consider humidity in choosing the installation site for the blower.
  - Don't install the blower where will be inundated with water. ☹
  - Don't install where there is excess moisture or humidity.
  - Consider noise in choosing the installation site for the blower.
  - Avoid installing near bedroom or study windows.  
It may be a nuisance since the blower runs day and night.
- (3) Method of Installation
    - Recommend a concrete base.
    - The base should be made of concrete strong enough to bear the weight and block vibration from the blower unit.
    - The base should be at least 10 cm above the ground level and 5 cm larger than the external dimensions of the blower.
    - Provide a separate power outlet to be used only for the blower.
    - Electrical work must be done by a qualified electrician. ⚡
    - The power supply should be the rated voltage shown on the Name Plate on the product and be fitted with earth leakage breaker and over-current breaker. ⚡
    - Please use the earth leakage breaker of which the rated sensible current is not exceeding 30mA.
    - The power outlet used should be waterproof and include an earth connected to ground. ⚡
    - Place the blower horizontally on the base.
    - A soft rubber hose must be used to connect the air outlet of the blower to the air supply pipe which is going to the aerobic sewage treatment tank. It must be fastened with the hose clamps.
    - When making the connection, adjust the heights of the air outlet on the blower and the air intake on the aerobic sewage treatment tank to ensure the hose is not kinked or blocked.
    - Before starting the operation of the blower, check the following point:
      - Check if the water level inside the aerobic sewage treatment tank is appropriate and the valves on pipes are in proper positions.
    - Insert the power plug of the blower into power outlet with earth connection provided for its exclusive use.
      - Insert the power plug with its full contact into the power outlet so that the plug itself does not wobble. Incomplete connection may cause an electric shock or fire.
    - Before starting the operation of the blower, check the following points:
      - No air leakage from the hose and pipe connections.
      - The operating noise is normal.
 The vibration is not transmitted to the aerobic sewage treatment tank due to strained piping.



# MEDO LAM BLOWER MAINTENANCE MANUAL

## LAM-200

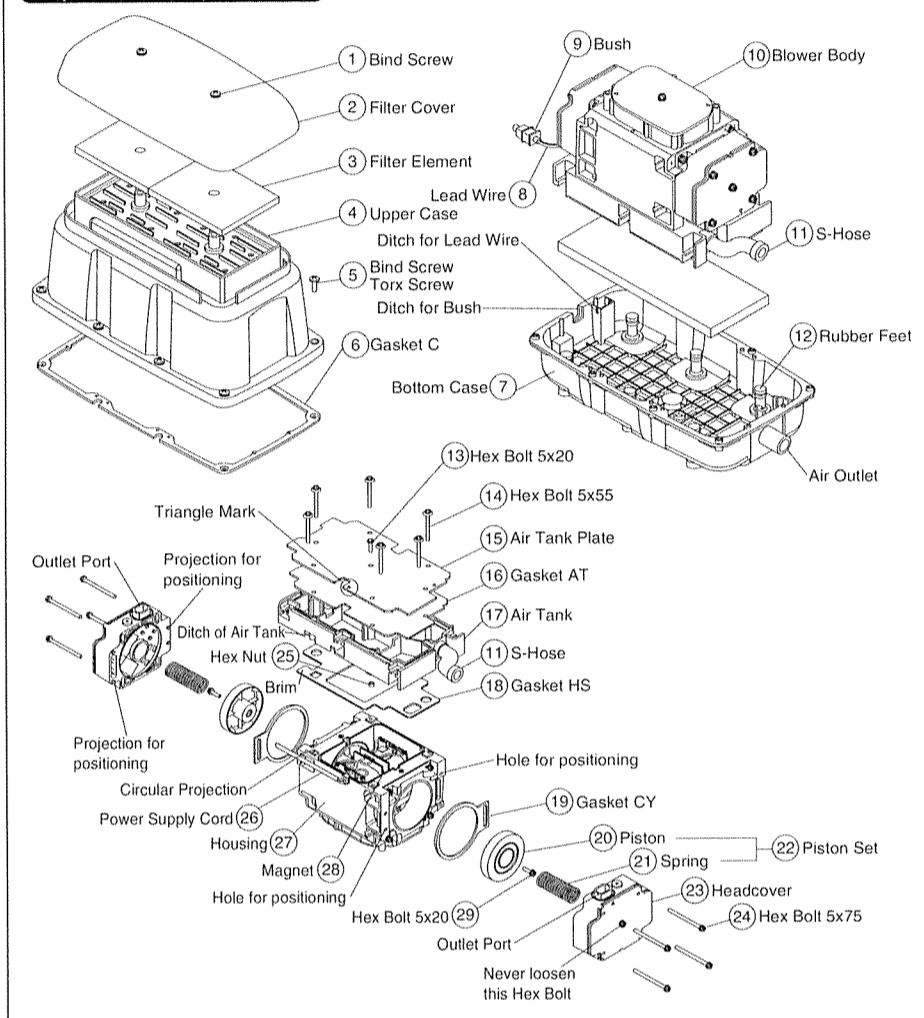


This instruction manual should be read and understood thoroughly before any maintenance work is executed.

### Contents of Repair parts kit

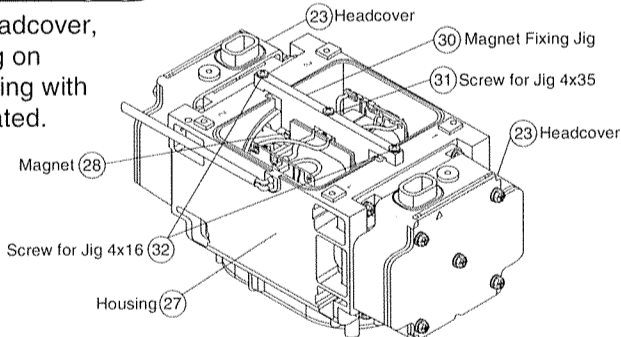
Model	Parts Name	Q'ty	Parts Name	Q'ty	Parts Name	Q'ty
LAM-200	Magnet Fixing Jig	1	Gasket AT	1	Piston Set	2
	Screw for Jig 4x35	1	Gasket CY	2	Filter Element	2
	Screw for Jig 4x16	2	Gasket HS	1	Instruction Manual	1

### Exploded View (LAM-200)



### Setting method of Magnet Fixing Jig

Before taking off 23 Headcover, fix 30 Magnet Fixing Jig on 28 Magnet and 27 Housing with 31 Screws, as illustrated.



### 1. Cautions

- MEDO blowers are OILLESS. Never lubricate them. ☹
- All blowers have already been precisely adjusted. Never disassemble them except for maintenance of Filter Element or replacement of Piston. ☹

### 2. Replacement of Filter Element

- Be sure to unplug the blower before starting the replacement work. ⚡
- Loosen 1 Bind Screw and remove 2 Filter Cover.
- Remove 3 Filter Elements from 4 Upper Case and replace it with new ones. At the same time, clean the air inlet of 2 Filter Cover and 4 Upper Case.
- Mount 2 Filter Cover on to 4 Upper Case, then tighten with 1 Bind Screws.
- Filter Element replacement period**

It is recommended that 3 Filter Elements is cleaned or replaced with a new ones depending on the extent of its deterioration as determined by the atmospheric conditions around the installation point.

- Filter Elements should be checked every three months.

### 3. Replacement of Piston Set

- Be sure to unplug the blower before starting the replacement work. ⚡
- Take off 4 Upper Case and 6 Gasket C and detach 9 Bush of 26 Power Supply Cord and 11 S-Hose from 7 Bottom Case.
- After detaching 12 Rubber Feet from 10 Blower Body, pick them off 7 Bottom Case. Be careful not to scar 12 Rubber Feet. We recommend using a flat driver.

- After turning 10 Blower Body upside down, loosen only 14 Hex Bolt 5 x 55 (6 pcs.) and detach 17 Air Tank. At this stage, never loosen 13 Hex Bolt 5 x 20. If 18 Gasket HS does not come off easily, insert a flat driver between 17 Air Tank and 27 Housing.
- Take off 18 Gasket HS.
- Fix 30 Magnet Fixing Jig on 28 Magnet and 27 Housing with two 31 Screws. Use 31 Screw to fasten 28 Magnet and 32 Screws to fasten 27 Housing.
- Put 10 Blower Body upright, so that 23 Headcover lies flat. Loosen 24 Hex Bolt 5 x 75 (4 pcs.) evenly until 23 Headcover comes up by approx. 5 mm. (Never remove 24 Hex Bolt 5 x 75. Just loosen them at this stage.) Never loosen the Hex Bolt in the center of 23 Headcover. Be sure that 23 Headcover comes off 27 Housing. (By recoil of 21 Spring, it will happen.) In case that 23 Headcover does not come off, insert a flat driver between 23 Headcover and 27 Housing. From this condition, loose 24 Hex Bolt 5 x 75 (4 pcs.) and take 23 Headcover off 27 Housing. Pick off 19 Gasket CY.
- Loosen 29 Hex Bolt 5 x 20. And pull off 22 Piston Set.
- Replace 22 Piston Set with a new one. Be sure that 21 Spring is securely fixed on 20 Piston. Be careful that dust or oil never adheres to the moving part (Black) of 20 Piston. Preferably avoid touching the surface of the moving part.
- Replace 19 Gasket CY with a new one. Paying attention to the direction of elliptic hole, place it securely on 27 Housing.
- Fix 23 Headcover, as if laying it on 21 Spring. Paying attention to the direction of Outlet Port of 23 Headcover, fit the thread part of 27 Housing to the hole position of 23 Headcover. Fasten 24 Hex Bolt 5 x 75 evenly and little dividing into several times. After making sure that Projections for positioning on 23 Headcover fit perfectly to Holes for positioning on 27 Housing, fasten them fast towards the end.
- Replace another 22 Piston Set and 19 Gasket CY in the same ways. Replace 22 Piston Set and 19 Gasket CY one side by one side without fail. (Never detach both the two 23 Headcovers at the same time.)
- Make sure to take out 30 Magnet Fixing Jig after replacement of both 22 Piston Sets.
- Unfasten 13 Hex Bolt 5 x 20 in the center of 17 Air Tank and replace 16 Gasket AT with a new one. Hold 25 Hex Nut in the back of 13 Hex Bolt 5 x 20 not to drop it. After replacing 16 Gasket AT, fasten again 13 Hex Bolt 5 x 20 in the center.
- Put a new 18 Gasket HS. Fit Brim of 18 Gasket HS to Circular Projection of 27 Housing.
- Place 17 Air Tank on 27 Housing with 14 Hex Bolt 5 x 55 (6 pcs.). Set Triangle Mark on 15 Air Tank Plate to the side of 26 Power Supply Cord. Insert 26 Power Supply Cord deep in Ditch of 17 Air Tank. Fasten 14 Hex Bolts 5 x 55 (6 pcs.) evenly and little by little dividing into several times. At the end fasten the Bolts and 13 Hex Bolt 5 x 20 fast.
- Place 10 Blower Body onto 12 Rubber Feet on 7 Bottom Case. Insert 12 Rubber Feet deep and securely.
- Insert 11 S-Hose deep and securely to the nipple inside 7 Bottom Case.
- Insert 8 Lead Wire of 26 Power Supply Cord and 9 Bush deep to 7 Bottom Case.
- After finishing assembly, connect the Power Supply and make trial operation. Block up Air Outlet by your finger and make sure that no leakage of air out from area of 18 Gasket HS and 19 Gasket CY.
- After making sure of no issues, place 6 Gasket C securely and cover 4 Upper Case on 10 Blower Body. Fasten 5 Bind Screw (8 pcs.) evenly and little by little dividing into several times to finish up the replacement work.

### Safety Instructions

#### Explanation of Diagrammatic Expressions

The term "Attention" as used in this manual is to alert you to dangers such as the following:

#### Clause

#### The degree of Danger Indicated by "Attention" clauses.



#### ATTENTION

Such clauses indicate the possibility that continuing to work while ignoring the "Attention" clause, or working with negligence, may cause personal injury or property damage.

#### The Meanings of the Symbols

#### Symbols



This symbol advises you of an item which should **BE NOTED** (including Danger or Warning). Accompanying notes may include a picture or explanatory text inside the triangle or next to the symbol mark.



This symbol advises you of an action which must **NOT BE TAKEN (IS PROHIBITED)** in order to avoid danger. The general actions which must not be taken will be shown by a picture or explanatory text inside or next to the symbol mark.



This symbol advises you of an action which **must BE TAKEN (IS MANDATORY)** in order to avoid danger. The action which must be taken will be shown by a picture or explanatory text inside the circle or next to the symbol mark.

#### Safety and Operating Instructions

The following safety precautions should always be followed to reduce the risk of breakdown and/or accidents.



#### ATTENTION • • • To Prevent Electric Shock And Fire

- Don't install the blower where it may be flooded with water and buried in snow. ☹
  - Electrical work must be done by a qualified electrician. ⚡
  - The power supply should be the rated voltage shown on the label on the blower and be fitted with earth leakage and over current breakers. ⚡
  - The power outlet used should be waterproof and include an earth connected to the ground. ⚡
  - If the power supply cord is damaged, it must be replaced by the manufacturer or its service agent or similarly qualified person in order to avoid a hazard. ⚡
  - Don't place any objects on the power supply cord. ☹
  - Be sure to unplug the blower before starting maintenance. ⚡
  - Be sure to replace the Upper Case and Filter Cover after maintenance. ⚡
- Ignoring any of the above 1-8 may cause an electric shock or a fire.
- Don't touch the metal part of the blower until it has cooled down as the blower runs very hot. ☹
- Ignoring the above 9 may cause a burn.