

MACBlowers

by FujiClean
of Japan

Installation - Operator Manual

MACBlower Model Number:

MAC60R

MAC80R

MAC40R

MAC100R

MAC120R

MAC150R

MAC 200R

Serial # _____



MACBlowers – The Intelligent Choice

Thank you for choosing a MACBlower by Fuji Clean. Your selection of a Fuji Clean product is a quality choice. You will benefit from a company focused on continual product improvement through relentless R&D and intelligent engineering innovation.

Our “R” Series of MACBlowers represents our commitment to manufacture the highest quality linear diaphragm blowers in the world. Incorporating electromagnets, smaller diaphragms and innovative compression chamber configuration, our state-of-the-art blowers offer top-in-class performance operating cooler, quieter, more efficiently than comparable competitive products.

SAFETY

Please read this manual before installing and operating your Fuji Clean MACBlower.

WARNING

Indicates a potentially hazardous situation which could result in death or serious injury.

Electrical Cord Inspection. Please inspect the electrical cord on this unit before operating. If the cord or connection to the MACBlower is damaged in any way, the cord must be replaced by the manufacturer, its service agent or a qualified technician.

Preventing Electrical Shock. Do not try to open or repair the pump yourself. Please contact your certified maintenance provider.

Electrical Cord Safety. Avoid placing objects on electrical cord. A damaged cord could result in a fire hazard or electrical shock.

This Product is Not a Toy. Please supervise children accordingly.

CAUTION

Indicates a potentially hazardous situation which could result in injury and/or property damage.

Working Blower is Hot. When in operation, the lower part of the blower gets hot. Do not touch directly.

Do Not Place Flammable Material Near Blower.

Do Not Stand or Place Objects on the Blower. Excessive weight may damage blower.

MACBlowers – Installation Notes

CAUTION

- For installations in water environments (i.e. wastewater, pond or aquaculture applications) the MACBlower must be installed in a location above water level.
- Install in a well-ventilated space out of direct sunlight and protected from elements such as direct rain or snowfall.
- Do not install in areas near grease exhaust fans.
- For residential installations (such as home wastewater treatment systems), be aware of quiet blower operational noise and avoid installing near bedroom windows and other locations where operational sounds may be a nuisance.
- Please install MACBlower in a location that allows unencumbered access for inspection and maintenance activity.
- MACBlowers are designed for use on a nominal 120V circuit and include a grounding plug. If a properly grounded outlet is not available, a temporary adaptor may be used to connect this plug to a 2-pole receptacle, but shall only be temporary until a properly grounded outlet is installed by a qualified electrician. Whenever an adaptor is used, it must be held in place by a security screw.

WARNING

- MACBlower's must be installed with proper electrical grounding.
- Wiring and electrical connections must be performed by a licensed electrician.
- Do not place objects on top of electrical cord.

Inspection and Maintenance Schedule

(1) Air Filter

Inspect and clean once every 3 or 4 months.

Replace every year

Frequency of filter cleaning will increase in high dust and debris environments.



Attention

Failure to clean and/or replace filter may result in abnormal heat generation, an air flow volume decrease and/or premature deterioration of the diaphragm.

(2) Diaphragm / Casing

Replace every year

If the diaphragm assembly is damaged, the automatic stop function engages and the blower will stop operating.



Attention

Failure to annually replace the diaphragm casing assembly raises the risk of blower breakdown.

(3) Pressure

High Pressure Operation is Prohibited

The accepted value for the working pressure between equipment and blower is $\pm 20\%$ of the normal pressure as specified on the blower data plate.



Attention

Operating with sustained, higher than specified pressure may result in irregular heat generation and premature diaphragm breakage.

(4) Power Plug



Warning

Fire Prevention

Check whether any dirt and/or dust has built up on the power plug at least once a year. Dirt/dust accumulation and/or a faulty connection may cause electric shock and/or a fire accident.

(5) Auto-stop Function

Test Auto-Stop Function When Diaphragm / Casing Assembly is Replaced

Remove the auto-stop piece and put in the plug to ensure the auto-stop function works properly. After checking, disconnect the plug from the power point and set the auto-stop piece in the right position. (See below)

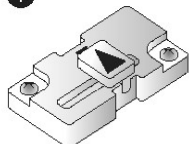


Warning

To avoid electric shock, power must be disconnected when replacing the diaphragm/casing assembly and/or handling the auto-stop piece.

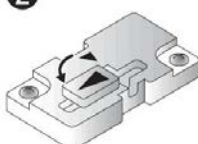
(1) How to remove an auto-stop piece

1



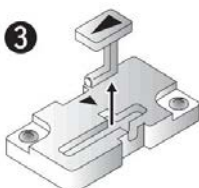
Normal position.

2



Turn auto-stop piece and face ▲ symbol along slot.

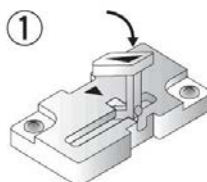
3



Remove auto-stop piece from blower auto-stop holder.

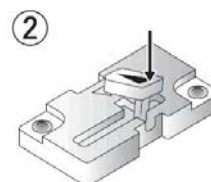
(2) How to set an auto-stop piece

1



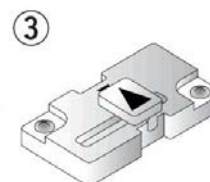
Face ▲ symbol from auto-stop piece towards ▲ symbol on auto stop holder and slide the piece into the holder.

2



Push in until it clicks.

3

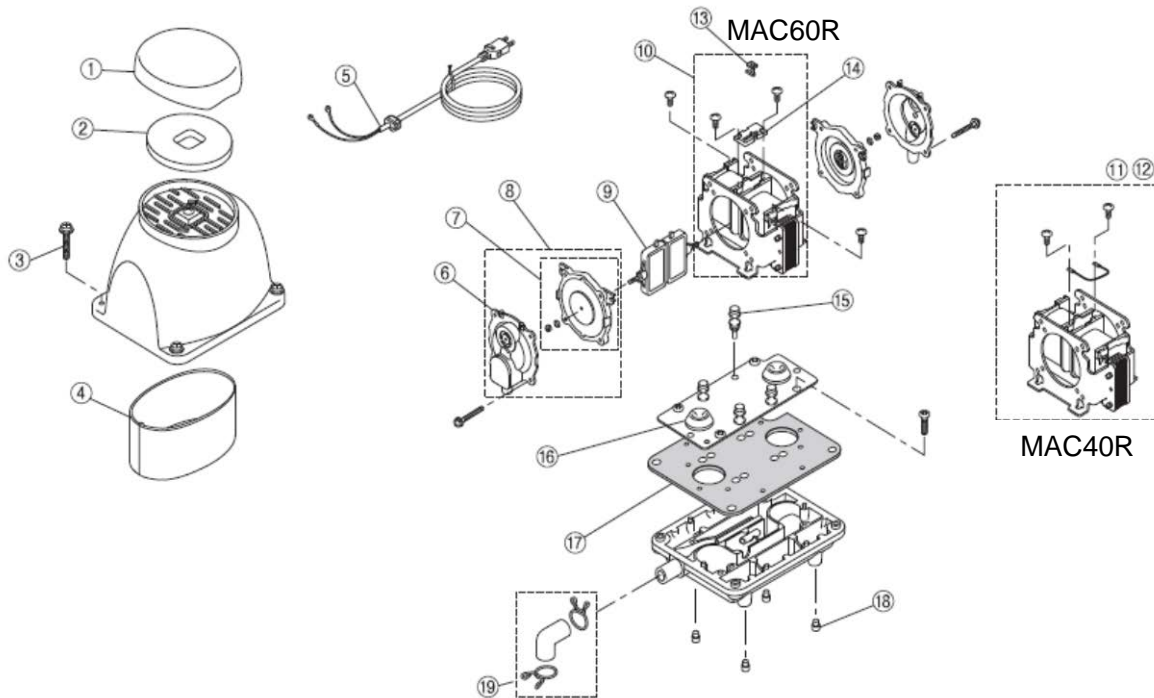


Ready for use.

MAC40R / 60R Blower

Service Manual and Parts Description

Exploded View and Parts List



MAC40R / 60R Repair Parts List

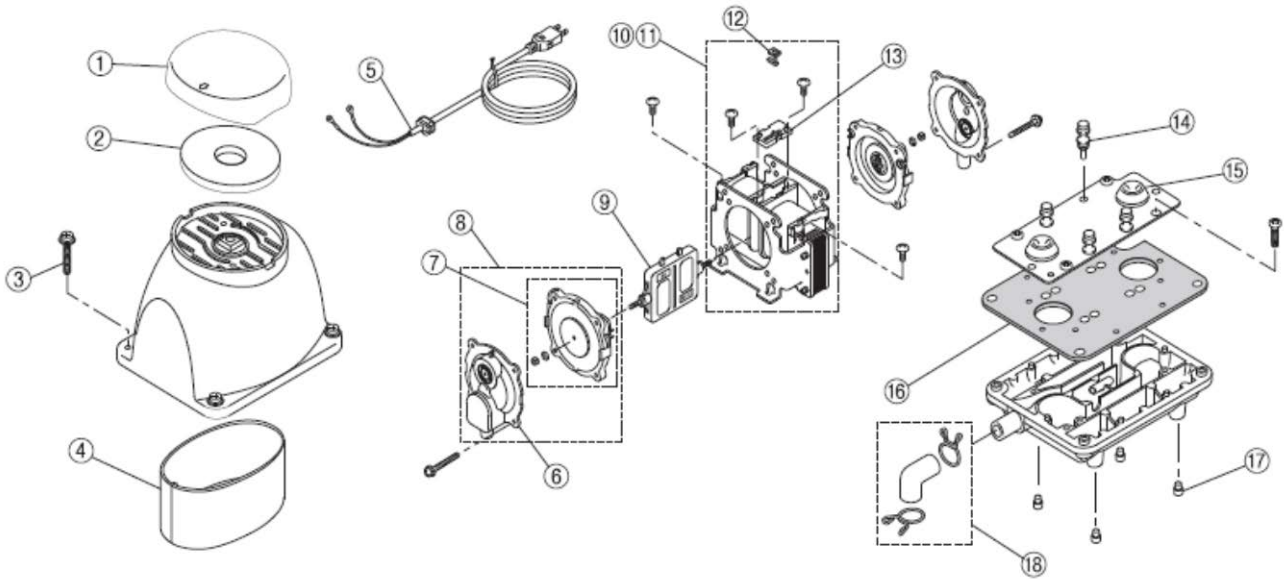
No	PN	Item Name	40R	60R
1	H612	N6 Filter cover	○	○
2	H507	N6 Air filter (white)	○	○
3	H684	M5-20 Cross recessed hexagonal head bolt (4 pcs.)	○	○
4	H657	N6 Sound absorbing filter	○	○
5	H706	N6 Power cable	○	○
6	H115	N6 Casing assembly	○	○
7	H012	N6 Diaphragm*	○	○
8	H150	N6 Diaphragm assembly*	○	○
9	H317	R10 Oscillator rod*	○	○
10	H4060R	R6 Solenoid (with Auto stop assembly / 8 Screws)	—	○
11	H4040R	R4 Solenoid (with Auto stop assembly / 8 Screws)	○	—
12	H4030R	R3 Solenoid (with Auto stop assembly / 8 Screws)	—	—
13	H256	N6 Auto-stop piece	—	○
14	H275	N6 Auto-stop holder	—	○
15	H658	N6 Shock absorbing rubber (4 pcs.)	○	○
16	H821	N6 Rubber grommet	○	○
17	H636	N6 Tank gasket	○	○
18	H659	N6 Rubber foot (4 pcs.)	○	○
19	H812	Exhaling rubber hose assembly	○	○

* Including nut and flat washer.

MAC80R / 100R Blower

Service Manual and Parts Description

Exploded View and Parts List



MAC80R / 100R Repair Parts List

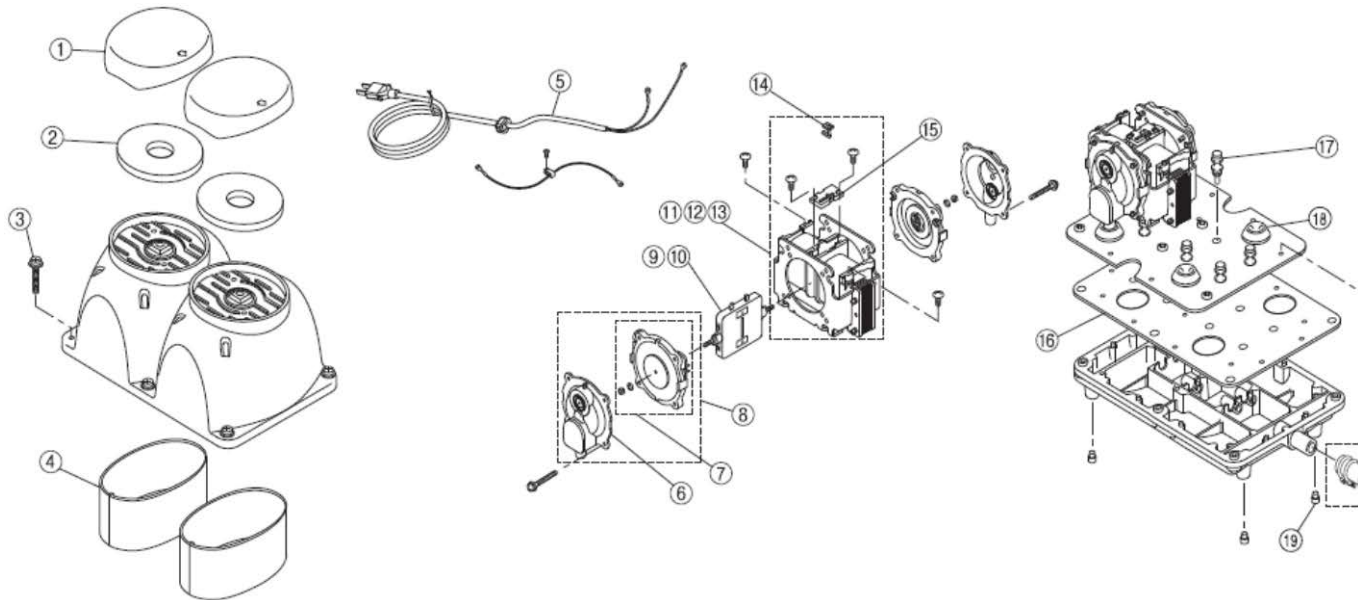
No	PN	Item Name	80R	100R
1	H613	N8 Filter cover	○	○
2	H508	N8 Air filter	○	○
3	H684	M5-20 Cross recessed hexagonal head bolt (4 pcs.)	○	○
4	H657	N6 Sound absorbing filter	○	○
5	H706	N6 Power cable	○	○
6	H116	N8 Casing assembly	○	○
7	H013	N8 Diaphragm *	○	○
8	H151	N8 Diaphragm assembly*	○	○
9	H317	R10 Oscillator rod*	○	○
10	H4080R	R8 Solenoid (with Auto stop assembly / 8 Screws)	○	—
11	H4100R	R10 Solenoid (with Auto stop assembly / 8 Screws)	—	○
12	H256	N6 Auto-stop piece	○	○
13	H275	N6 Auto-stop holder	○	○
14	H658	N6 Shock absorbing rubber (4 pcs.)	○	○
15	H821	N6 Rubber grommet	○	○
16	H636	N6 Tank gasket	○	○
17	H659	N6 Rubber foot (4 pcs.)	○	○
18	H812	Exhaling rubber hose assembly	○	○

* Including nut and flat washer.

MAC 120R / 150R / 200R Blower

Service Manual and Parts Description

Exploded View and Parts List



MAC120R/150R/200R Repair Parts List

No	PN	Item Name	120R	150R	200R
1	H613	N8 Filter cover	○	○	○
2	H508	N8 Air filter (white)	○	○	○
3	H685	M5-20 Cross recessed hexagonal head bolt (6 pcs.)	○	○	○
4	H657	N6 Sound absorbing filter	○	○	○
5	H708	N0 Power cable	○	○	○
6	H117	N0 Casing assembly	○	○	○
7	H014	N0 Diaphragm*	○	○	○
8	H152	N0 Diaphragm assembly*	○	○	○
9	H317	R10 Oscillator rod*	○	—	—
10	H318	R16 Oscillator rod*	—	○	○
11	H4120N	N2 Solenoid (with Auto stop assembly / 8 Screws)	○	—	—
12	H4150R	R15 Solenoid (with Auto stop assembly / 8 Screws)	—	○	—
13	H4200R	R20 Solenoid (with Auto stop assembly / 8 Screws)	—	—	○
14	H256	N6 Auto-stop piece	○	○	○
15	H275	N6 Auto-stop holder	○	○	○
16	H638	N0 Tank gasket	○	○	○
17	H658	N6 Shock absorbing rubber (4 pcs.)	○	○	○
18	H821	N6 Rubber grommet	○	○	○
19	H659	N6 Rubber foot (4 pcs.)	○	○	○
20	H814	E2 Exhaling rubber hose assembly	○	○	○

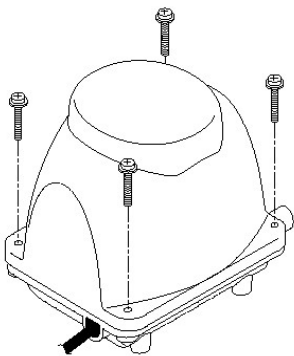
* Including nut and flat washer.

■ Specifications

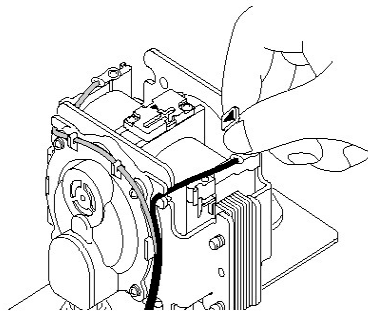
<i>Model</i>	MAC40R	MAC60R	MAC80R	MAC100R
<i>Air Flow Volume</i>	40 L/min	60 L/min	80 L/min	100 L/min
<i>Normal Pressure</i>	12kPa	15kPa		18kPa
<i>Rated Voltage</i>	120V			
<i>Frequency</i>	60Hz			
<i>Outlet Pipe Size</i>	13mm dia (external dia.18mm)			
<i>Weight</i>	4.5kg	5.0kg		
<i>Power Consumption</i>	34W	45W	54W	83W
<i>Power Cable</i>	3×18AWG×1.8m			
<i>Manufacturer</i>	Made in Japan by Fuji Clean			

Model	MAC120R	MAC150R	MAC200R
Air Flow Volume	120 L/min	150 L/min	200 L/min
Normal Pressure	18 kPa		
Rated Voltage and Current	120V		
Frequency	60Hz		
Outlet Pipe Size	20mm dia (external dia.26mm)		
Weight	8.5kg	9.0kg	
Power Consumption	98 W	120 W	170 W
Power Cable	3×18AWG×1.8m		
Manufacturer	Made in Japan by Fuji Clean		

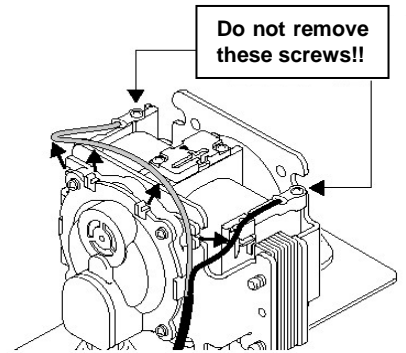
Diaphragm Replacement Procedure



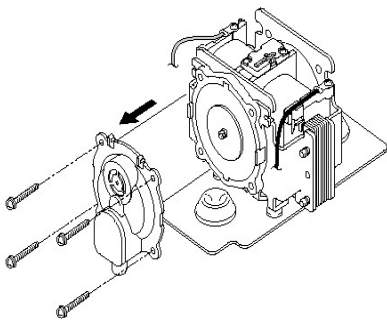
1. Unplug blower. Remove cover bolts using an 8mm-box



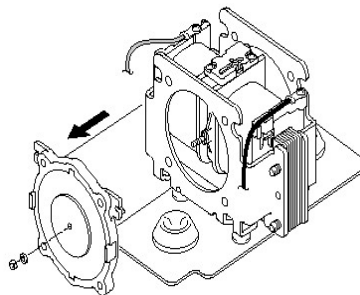
2. Remove an auto-stop piece as instructed above.



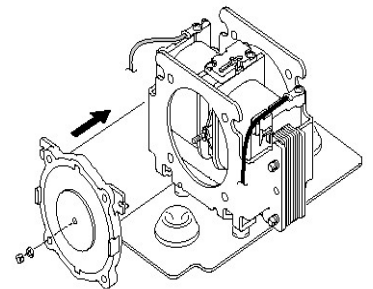
3. Remove a power cable from 4 hooks. **Do not remove screws!!**



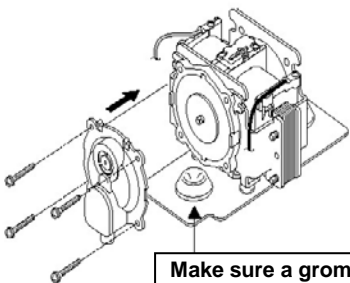
4. Remove 4 screws from a casing.



5. Remove Nylon nut and remove diaphragm from body.

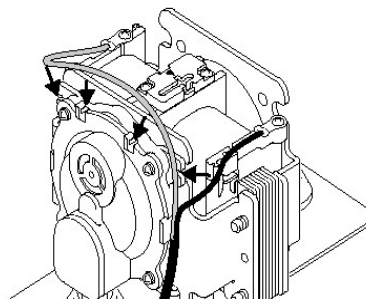


6. Install new diaphragm using new Nylon nut provided. *Tightening torque – about 1 Nm

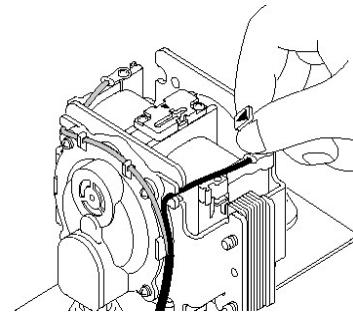


Make sure a grommet is not flipped over.

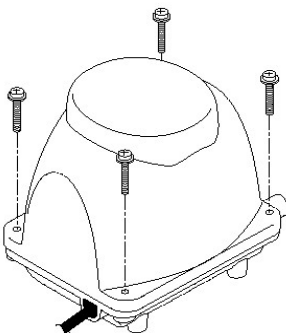
7. Insert casing air outlet into rubber grommet. Secure with 4 screws.



8. Fit power cable into 4 hooks.



9. Set auto-stop piece as instructed above.



10. Affix cover bolts using an 8mm-box wrench or screwdriver.



Warning

To avoid electric shock, power must be disconnected when replacing the diaphragm/valve assembly.



Attention

To avoid premature diaphragm breakage, replace both sides of diaphragm/casing assembly at the same time.



Attention

Please do not attempt to lubricate any internal blower components.

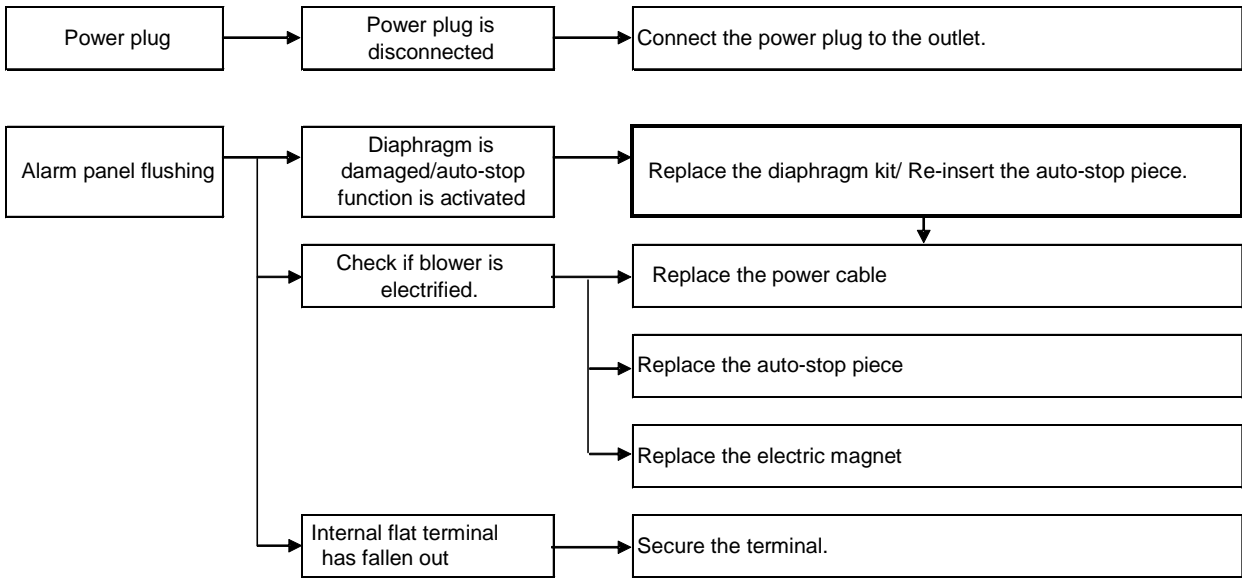
Troubleshooting Guide

<What to observe >

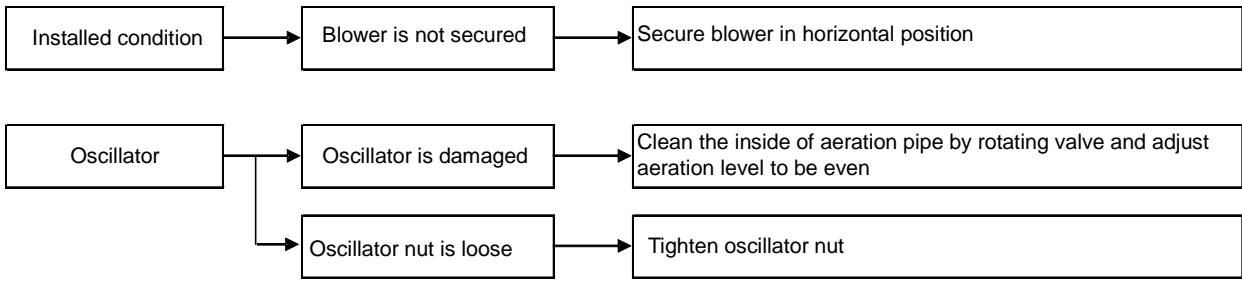
<Status>

< How to solve the problem >

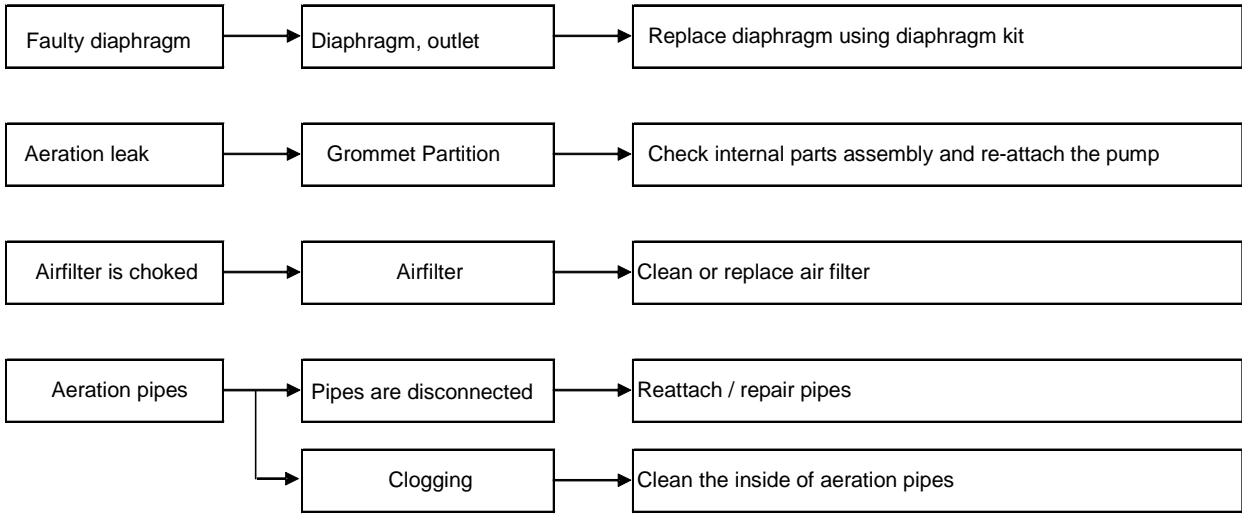
Blower is not working



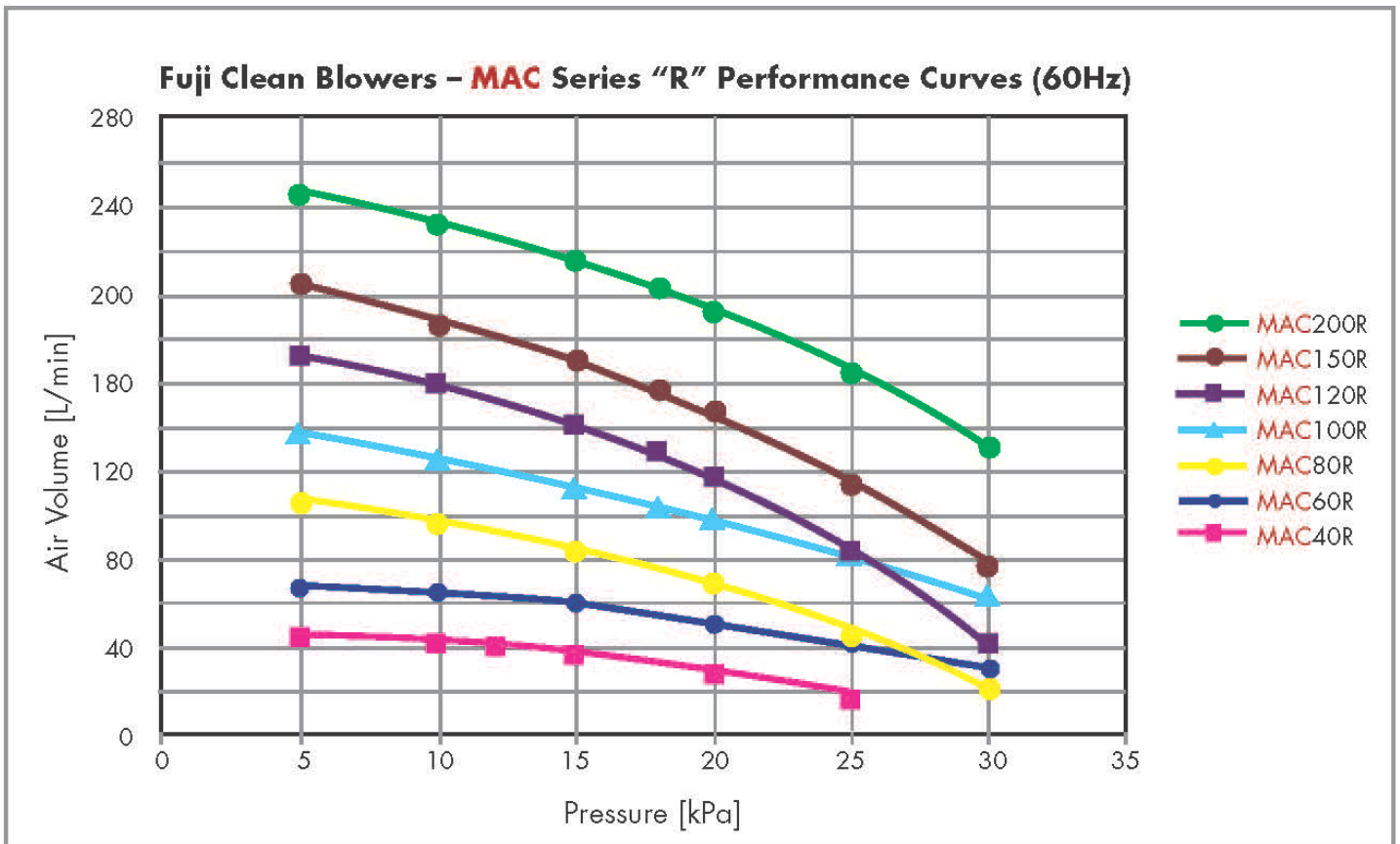
Blower is making an abnormal or excessive operating noise.



Low air volume or misplaced air from aeration pipes (treatment plant)



Performance Curves

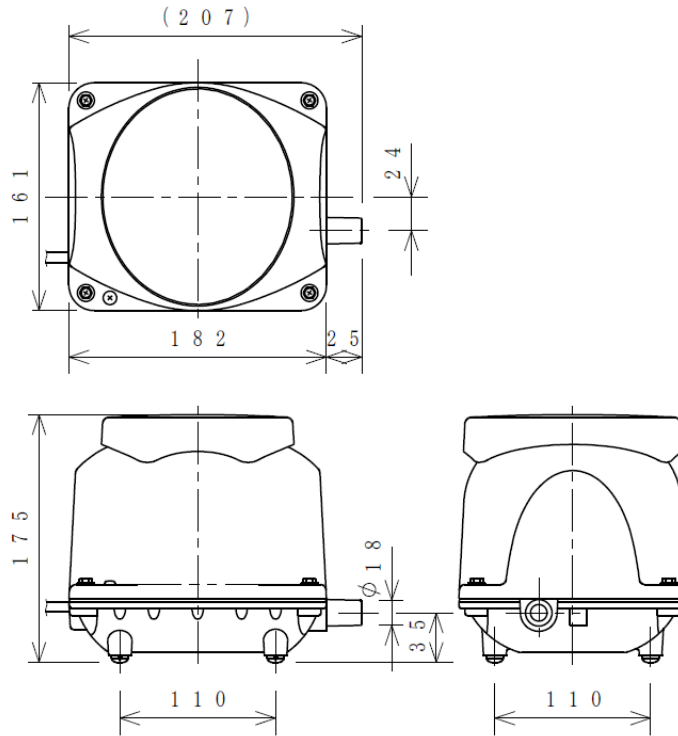


Please note: Individual MACBlower model performance curves are available on website, www.macblowers.com.

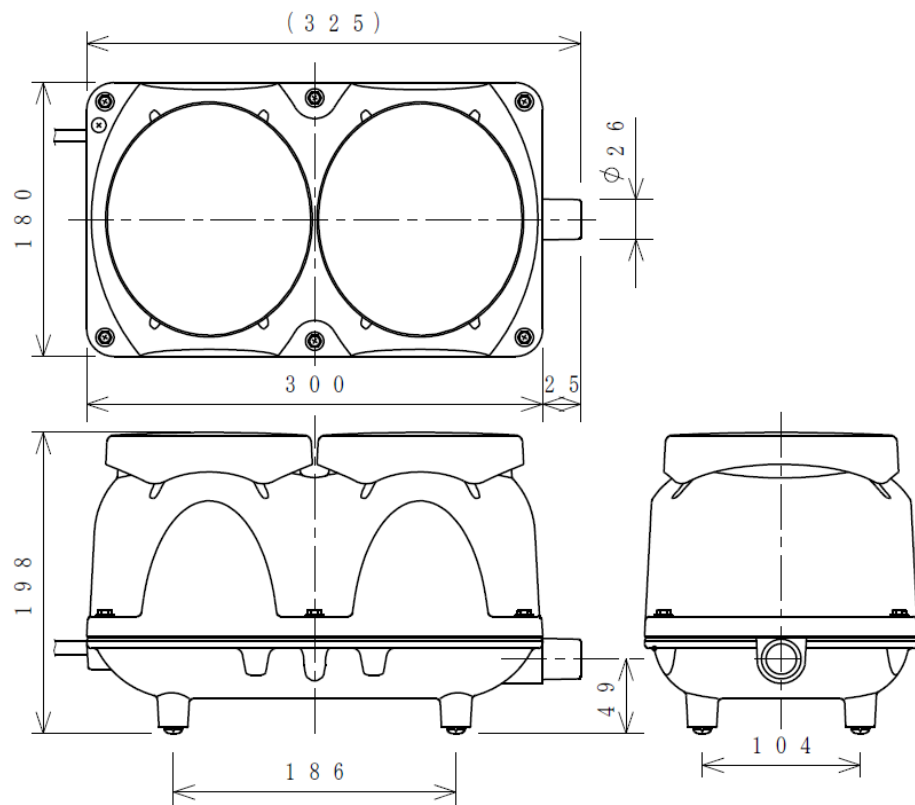
■ Overall View (all dimensions in millimeters)

□ MAC30R / 40R / 60R / 80R / 100R

*This figure is MAC80R and MAC100R. Please note that filter cover for MAC30R, MAC40R, and MAC60R is slightly different from that of MAC80R and MAC100R. Please note; drawings for specific models with U.S. standard dimensions are available on website, www.macblowers.com.



□ MAC120R / 150R / 200R



MACBlowers



Sales and Service

1-844-468-1344 (toll free)

Please call with any questions.
We're here to help *you!*

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