



MEDO LA BLOWER

INSTRUCTION MANUAL

INSTALLATION & MAINTENANCE



LA-28B/ LA-45B



LA-60B/ LA-80B



LA-100/ LA-120



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

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

CONTENTS

1. Model and Specifications	2
2. Dimensions	2
3. Safety Instruction	3
4. Installation (Septic tank application)	4
5. Maintenance	5
Parts List (LA-28B/ LA-45B).....	8
Parts List (LA-60B/ LA-80B).....	9
Parts List (LA-100/ LA-120).....	10

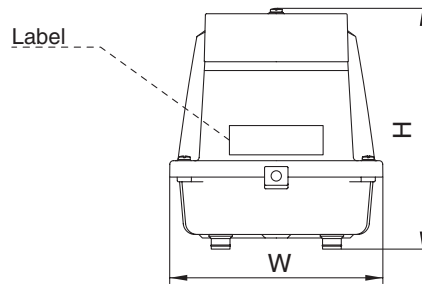
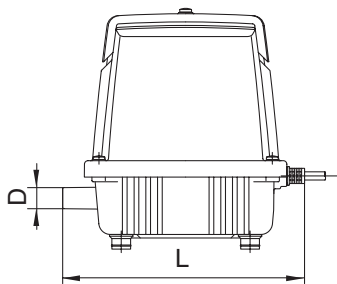
1. Model and Specifications

Model	LA-28B	LA-45B	LA-60B	LA-80B	LA-100	LA-120
Standard Voltage *	230V AC					
Rated Frequency	50Hz					
Rated Pressure	110mbar		150mbar		180mbar	
Operating Pressure	50 - 180mbar 0,05 - 0,18 bar		100 - 200mbar 0,1 - 0,2 bar		100 - 250mbar 0,1 - 0,25 bar	
Rated Airflow	28l/min.	45l/min.	60l/min.	80l/min.	100l/min.	120l/min.
Power Consumption	29 W	47 W	64 W	86 W	100 W	130 W
Weight	2.9kg	3.0kg	5.0kg	5.3kg	9.4kg	9.4kg
IP Class	55	55	55	55	55	55

* The unit must only be operated at the voltage as indicated on the outer casing of the blower.

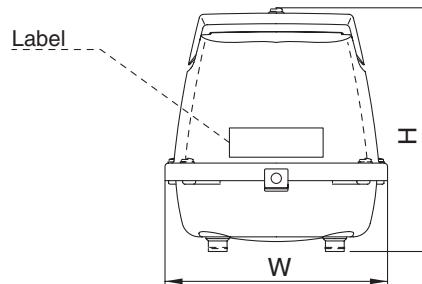
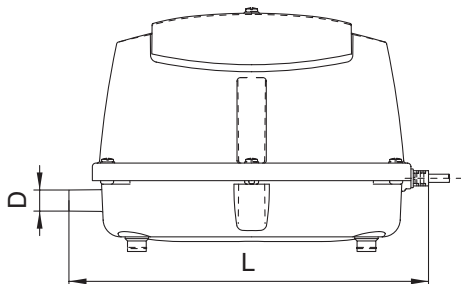
2. Dimensions

LA-28B/LA-45B



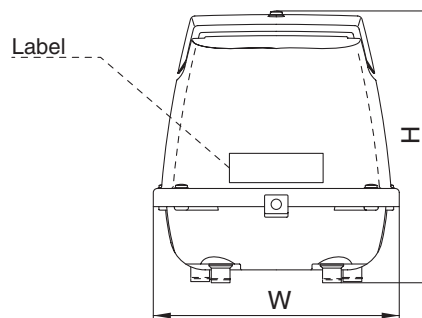
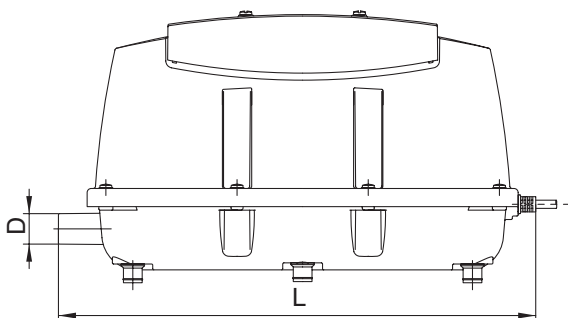
L=207mm
W=182mm
H=205mm
D=18mmOD

LA-60B/LA-80B



L=305mm
W=214mm
H=188mm
D=18mmAD

LA-100/LA-120




L=408mm
W=210mm
H=232mm
D=26mmAD

3. Safety Instruction




Explanation of Diagrammatic Expressions

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 Meaning of the Symbols












Symbols

-  This symbol advises you of an item which should BE NOTED (including Danger and Warning) and the general notes will be shown by a picture, word or explanatory text inside or along 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 along the symbol mark.
-  This symbol advises you of an action which must BE TAKEN (IS MANDATORY) in order to avoid danger and the general emphasis of the action which must be taken will be shown by a picture or explanatory text inside or along the symbol mark.

Safety and Operating Instructions

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

ATTENTION ●●● To Prevent Electric Shock And Fire

- ① Don't install the blower where it will be flooded with water. 
 - ② Electrical work must be done by a qualified electrician. 
 - ③ The power supply should be the rated voltage shown on the label on the blower and be fitted with an 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 similarly qualified person in order to avoid a hazard. 
 - ⑥ Don't place any objects on the electric cable. 
 - ⑦ Be sure to unplug the blower before starting maintenance.  
 - ⑧ Be sure to put the Upper Case back after maintenance.  
 - ⑨ Don't touch the metal part of the blower until it is cooled down as the blower runs very hot. 
- Ignoring any of the above may cause an electric shock, a fire or a burn.

4. Installation (Septic Tank Application)

1. Installation site selection

- ① Install our blower near the septic tank.
If the pipeline is long, the sewage treatment may not perform well due to an insufficient airflow. ⚠
- ② Install in a place which is convenient for maintenance. ⚠
- ③ Don't install over a manhole or on soft ground. ⚠
- ④ Avoid areas where wind-blown leaves and dust gathers. ⚠
- ⑤ Install in a well ventilated place. ⚠
- ⑥ Install at least 30cm away from the wall of a house. ⚠
- ⑦ Installation in the shade is recommended to suppress heat generation of the blower. ⚠
- ⑧ Don't install the blower where it will be flooded with water. Make sure that the blower is installed over the water level of the sewage tank/aquarium to avoid any backflow of the water.
If the blower is installed under the water level a backflow valve must be used. ⚠
- ⑨ Don't install where there is excess moisture or humidity. ⚠

2. Method of Installation

- ① The base should be made of concrete strong enough to bear the weight and block vibration from the blower. ⚠
- ② The base should be at least 10cm above the ground level and 5cm larger than the external dimensions of the blower. ⚠
- ③ Provide a separate power outlet to be only used for the blower. ⚠
- ④ Electrical work must be done by a qualified electrician. ⚠
- ⑤ The power supply should be the rated voltage shown on the label on the blower and be fitted with an earth leakage breaker and over-current breaker. ⚠
- ⑥ The power outlet used should be waterproof and include an earth connected to ground. ⚠
- ⑦ Place the blower horizontally on the base. ⚠
- ⑧ A soft rubber hose must be used for connection between the air outlet of the blower and the pipe. ⚠
- ⑨ The rubber hose must be fastened with hose clamps. ⚠
- ⑩ When making the connection, level the air outlet and the pipe to ensure the hose is not kinked or blocked. ⚠
- ⑪ Before starting the operation of the blower, ensure that the water level in the septic tank is appropriate and the valves on the pipeline are properly opened. ⚠

3. Start operation

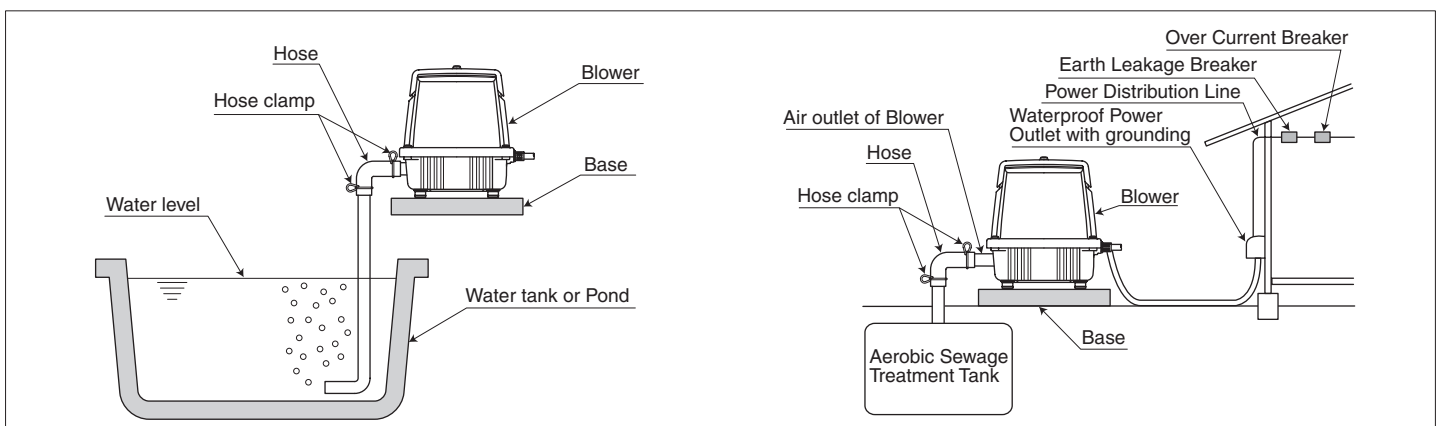
Insert the power plug into the power outlet with full contact so that the plug itself does not wobble. Incomplete connection may cause an electric shock or a fire.

After starting operation ensure that there is;

No air leakage from the hose and the pipe connection.

No abnormal noise from the blower.

No vibration transmitted to the ground due to strained piping.



5. Maintenance (Refer the sketches on the next page)

1. Cautions

- ① MEDO blowers are OILLESS. Never lubricate them. ⓧ
- ② All blowers have already been precisely adjusted. Never disassemble them. ⓧ
(Do not try to loosen the Hex. bolts on the Endcap)

2. Replacement of Filter Element

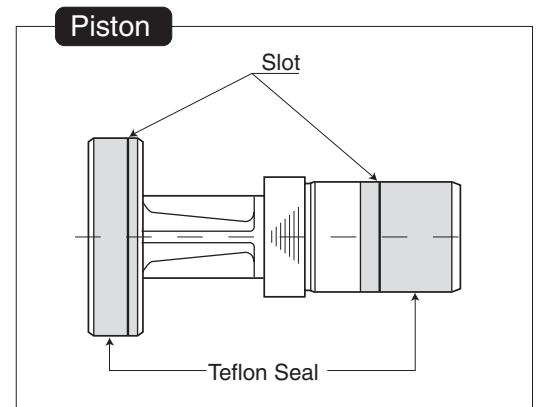
- ① Be sure to unplug the blower before starting the replacement work. ⓧ !
- ② Loosen the Bind Screw① and remove the Filter Cover④.
- ③ Remove the Filter Element(s)⑤ from the Upper Case⑥ and replace with new One(s). At the same time, clean the air inlet of the Filter Cover④ and the Upper Case⑥.
- ④ Assemble the Filter Cover④ with the Filter Cover Gasket③ securely positioned.
- ⑤ Mount the Filter Cover④ to the Upper Case⑥, then tighten with the Bind Screw(s)①.
- ⑥ Time to replace the Filter Element

It is recommended that the Filter Element(s) is cleaned or replaced with new one(s) depending on the extent of its deterioration as determined by the atmospheric conditions around the application. **The filter element(s) should be checked every three months and should be replaced yearly.**

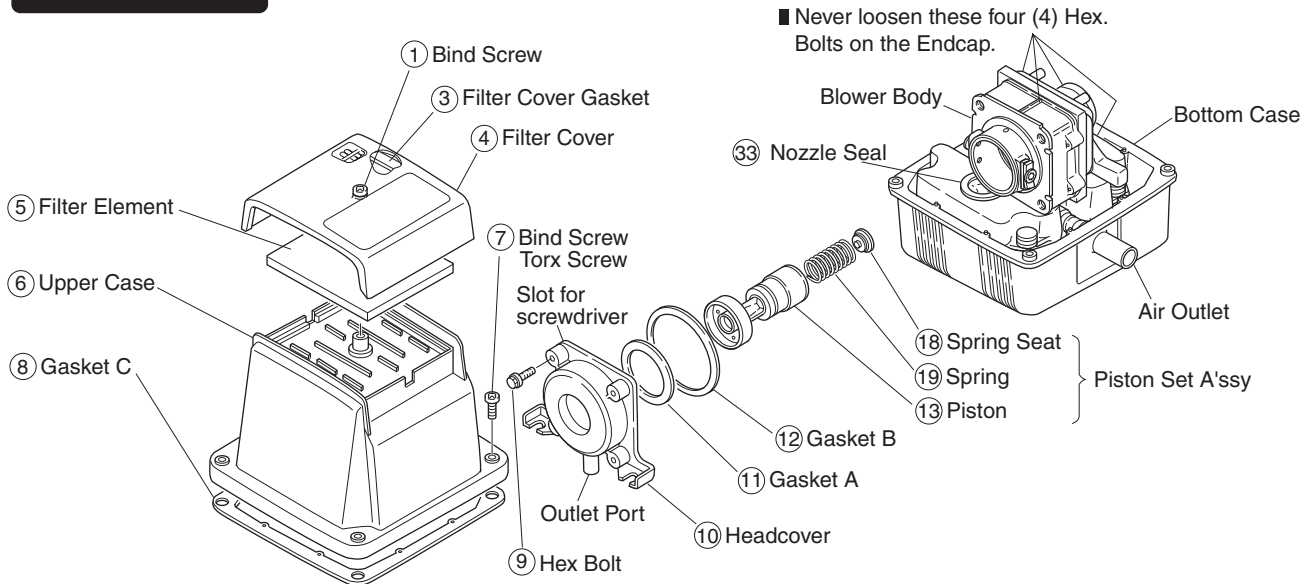
3. Replacement of Piston Set Assy

- ① Be sure to unplug the blower before starting the maintenance work. ⓧ !
- ② Remove the Upper Case⑥, loosen all the Hex. Bolts⑨ on the Headcover ⑩ and remove it. In case it is hard to remove the Headcover ⑩ insert a flat head screwdriver to the slot(s) on the edge of the Headcover ⑩ and twist the screwdriver gently to open.
- ③ Take out the Piston Set Assy(s).
- ④ Replace all Piston Set Assys, Gasket A ⑪ and Gasket B ⑫ with new ones. Be sure to keep the Teflon Seal of the Piston ⑬ away from any dust, swarf, water, oil or grease. Try not to touch the Teflon Seal of the Piston ⑬ with your fingers.
- ⑤ Insert the Piston Set Assy(s) into the Pump Body. Install Gasket A ⑪ on the Headcover ⑩ and Gasket B ⑫ on the Pump Body, then fasten the Headcover ⑩ with the Hex. Bolts⑨. Tighten the Hex. Bolts⑨ evenly and alternately then gradually fully tighten.
- ⑥ Before putting the Upper Case⑥ back, start the blower and check if there is any air leakage along the Headcover ⑩ or the Nozzle Seal(s)⑬ by briefly blocking the air outlet. In case there is an air leakage along the Headcover ⑩, re-position Gasket A ⑪ and Gasket B ⑫ then re-fasten the Hex Bolts⑨. In case there is an air leakage along the Nozzle Seal(s) ⑬ check if the nozzle seal is installed on the airtank properly and press the pump body down to allow the outlet port of the Headcover to catch the Nozzle Seal(s) correctly.
- ⑦ Put the Upper Case⑥ back after installing Gasket C⑧ on the Bottom Case properly. Fasten the Bind Screws/Torx Screws⑦ evenly and alternately.

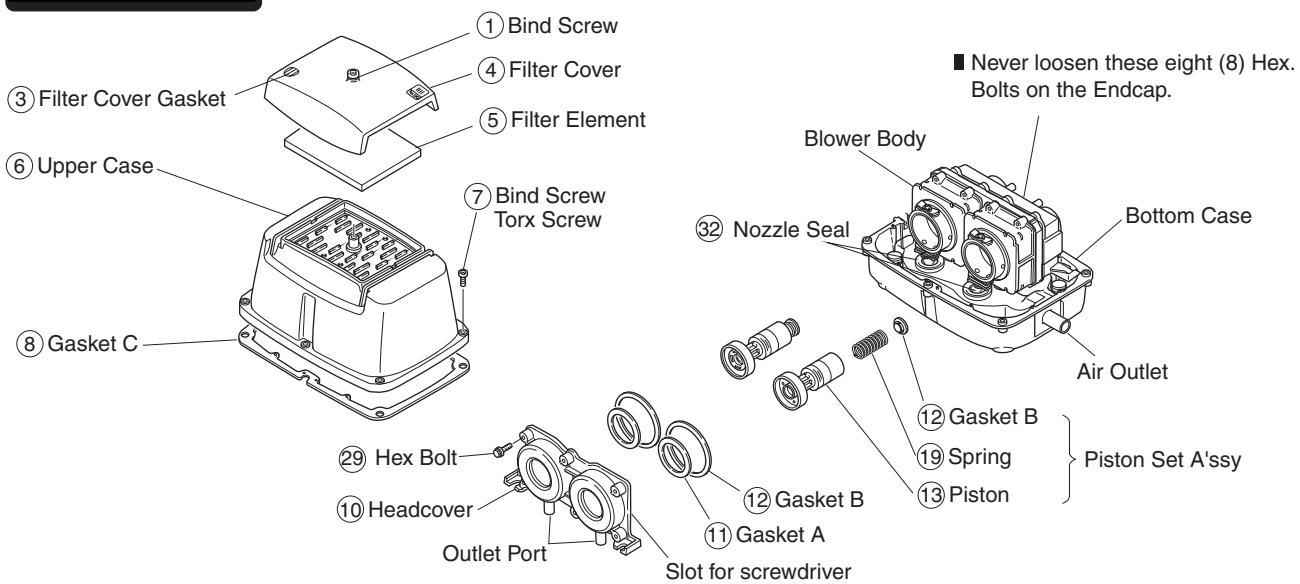
- ⑧ Piston Set Assembly replacement period
It is suggested that the Piston Set Assembly is replaced every 24 months resp. after 20.000 h depending on the extent of the blower's pressure and airflow deterioration. There is a groove on each Teflon Seal of the Piston indicating the degree of wear. If one or both grooves are worn away, replacement of the Piston Set Assembly is recommended.



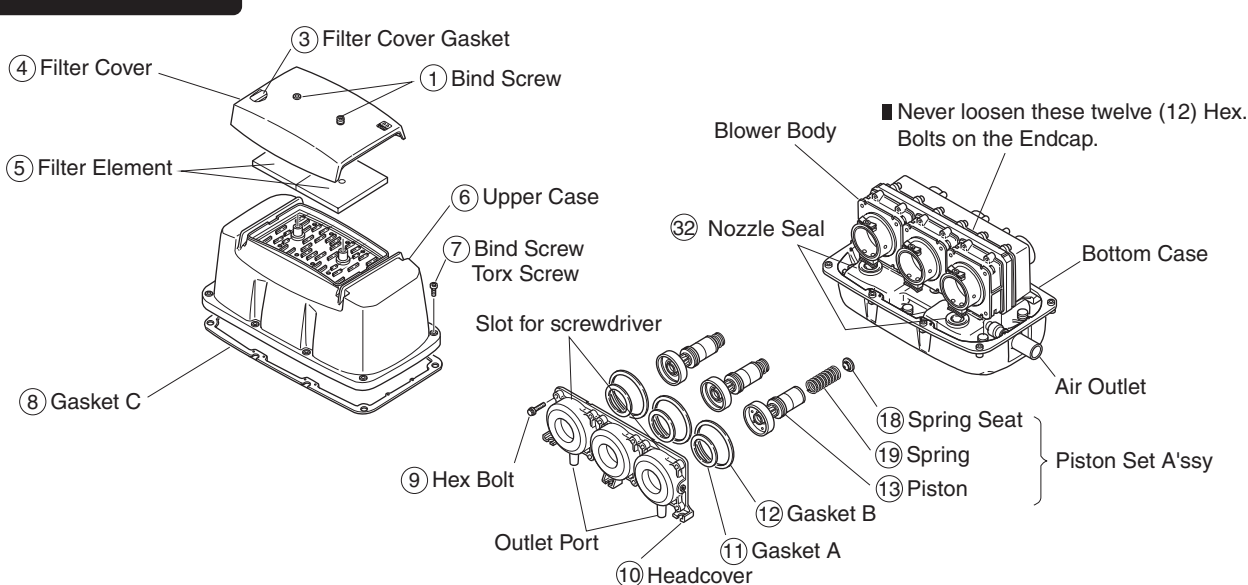
LA-28B/ LA-45B



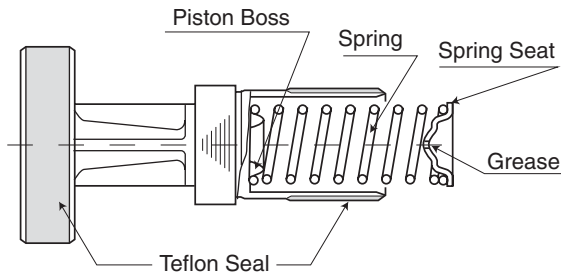
LA-60B/LA-80B



LA-100/ LA-120



Piston sectional view



Cautions

- Locat the spring into the piston by rotating it clockwise.
- Check that grease is present on the convex face of the spring seat.
- (If no grease is present, please contact your supplier)
- Never use standard grease as it may cause a malfunction.
- Keep the Teflon Seal away from any dust, swarf, water, oil or grease.

4. Purchasing suggestion for the maintenance parts

① Filter Element

Model	Part No.	Quantity
LA-28B/LA-45B/LA-100/LA-120	LB02369	10pcs.set
LA-60B/LA-80B	LB03937	10pcs.set

② Repair Parts Kit

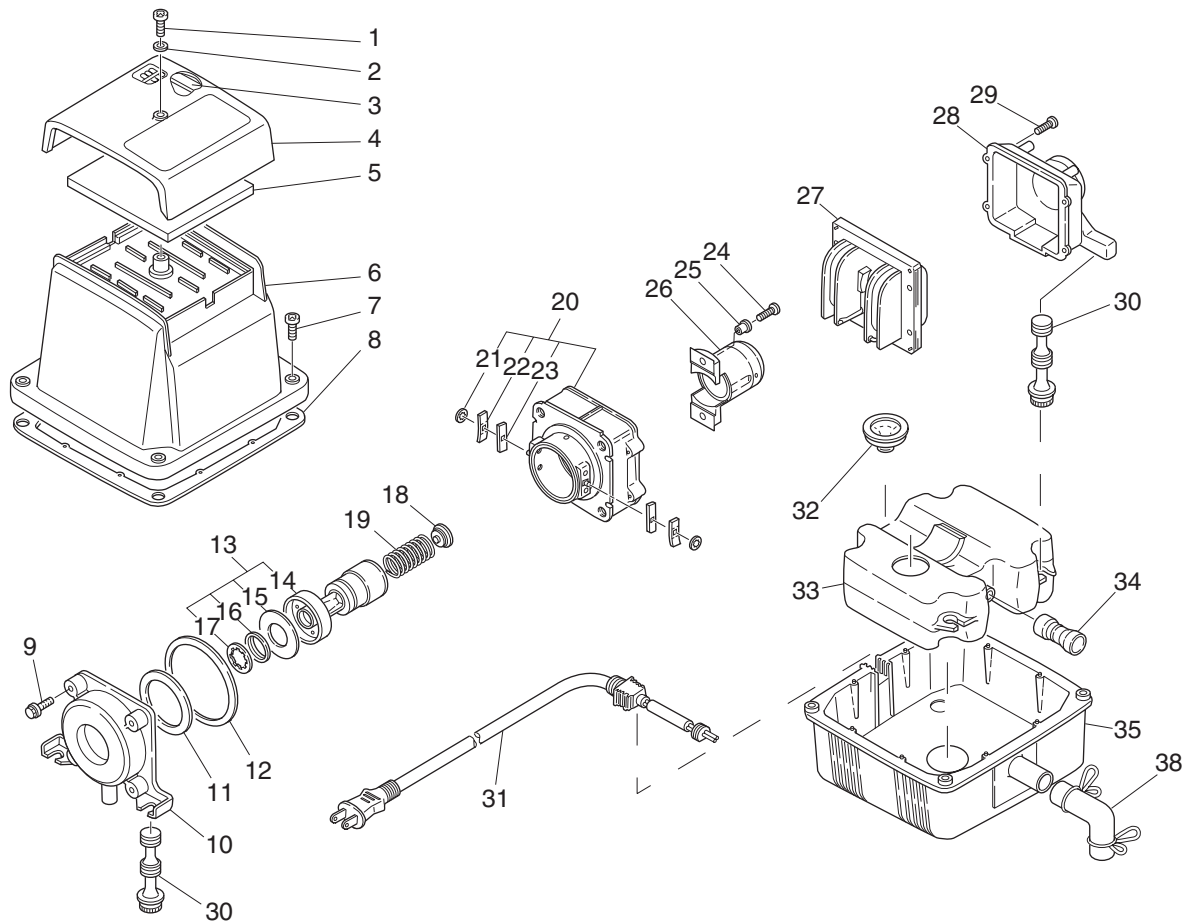
Model	Part No.	Quantity
LA-28B	LB01288	1 set
LA-45B	LB03514	1 set
LA-60B	LB03519	1 set
LA-80B	LB03517	1 set
LA-100/LA-120	LB04151	1 set

③ Contents of Repair Parts Kit



Parts Included	LA-28B/LA-45B	LA-60B/LA-80B	LA-100/LA-120
⑤ Filter Element	1	1	2
⑪ Gasket A	1	2	3
⑫ Gasket B	1	2	3
⑬ Piston	1	2	3
⑱ Spring Seat	1	2	3
⑲ Spring	1	2	3

Exploded View

LA-28B/ LA-45B

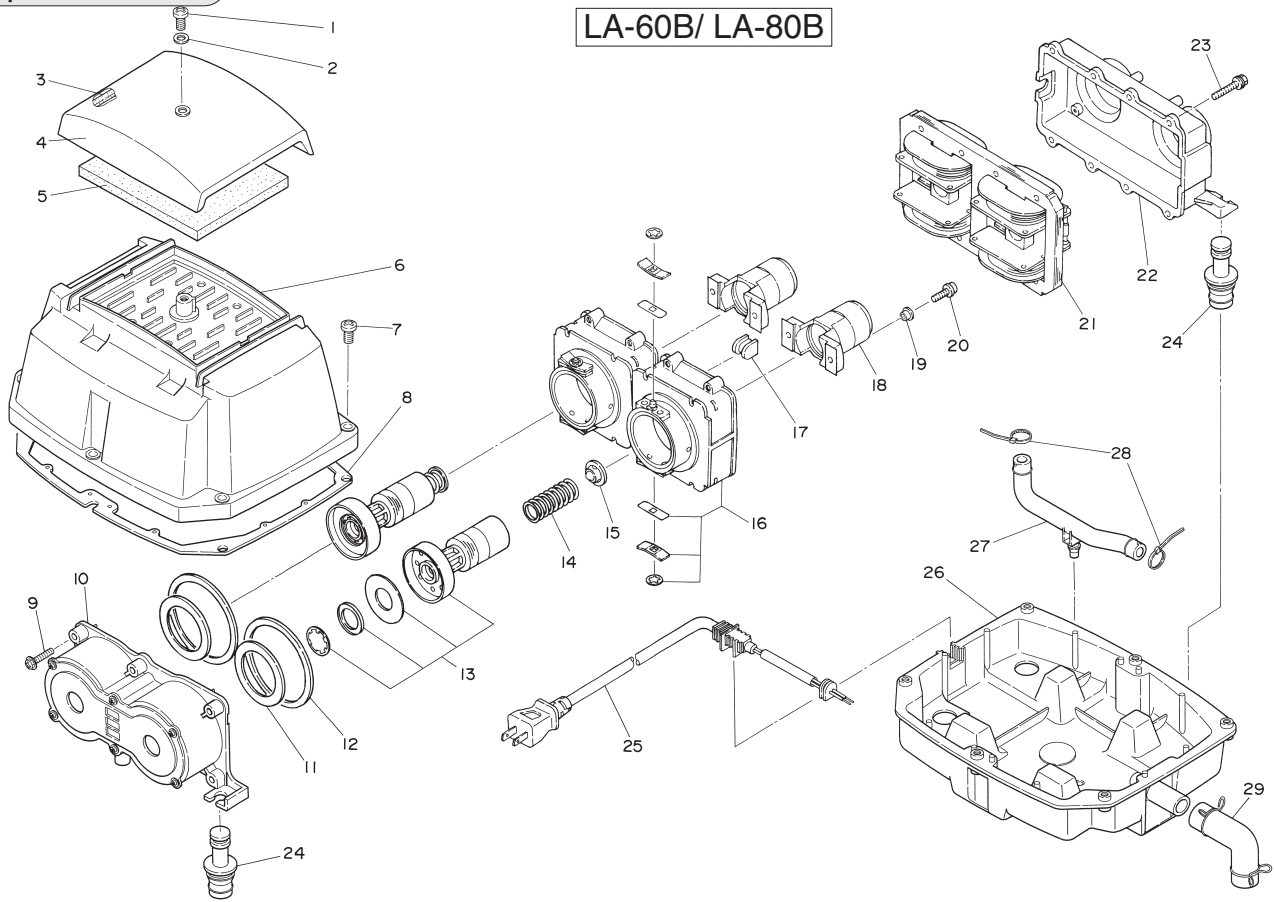


Parts List

No.	Part Name	LA28B	Q'ty	LA45B	Q'ty	No.	Part Name	LA28B	Q'ty	LA45B	Q'ty
1	Bind Screw	LP30581	1	LP30581	1	27	Field Core Assy P	LB01536	1	LB03466	1
2	Seal Washer	LP30635	2	LP30635	2		Field Core Assy Q				
3	Filter Cover Gasket	LQ02607	2	LQ02607	2		Field Core Assy E	LB04038	1	LB04028	1
4	Filter Cover	LQ02575	1	LQ02575	1	28	Endcap	LQ01052	1	LQ02892	1
5	Filter Element	LQ02605	1	LQ02605	1	29	Hex Bolt	LP31316	4	LP31316	4
6	Upper Case	LB02937	1	LB02937	1	30	Rubber Feet	LQ04256	4	LQ04256	4
7	Bind Screw UL	LP30581	4	LP30581	4	31	Cable Assy UK	LB05341	1	LB05341	1
	Torx Screw CE	LQ03082	4	LQ03082	4		Cable Assy D	LB05307	1	LB05307	1
8	Gasket C	LQ02601	1	LQ02601	1		Cable Assy A				
9	Hex Bolt	LP31316	4	LP31316	4		Cable Assy J	LQ01037	1	LQ01037	1
10	Headcover	LQ02567	1	LQ02063	1		Cable Assy UL	LB04770	1	LB04770	1
11	Gasket A	LQ01043	1	LQ01043	1	32	Nozzle Seal	LQ02598	1	LQ02598	1
12	Gasket B	LQ01042	1	LQ01042	1	33	Air Tank Assy	LB02987	1	LB02987	1
13	Piston	LA70625	1	LB03132	1	34	Joint Hose	LQ02602	1	LQ02602	1
⑭	Piston Sub Assy	LA70626	1	LB03133	1	35	Bottom Case	LB02938	1	LB02938	1
⑮	Inlet Valve	LP30916	1	LP30916	1	36	Cushion				
⑯	Valve Retainer A	LP11548	1	LP11548	1	37	Rubber Plug				
⑰	CS Ring	LP12948	1	LP12948	1	OPTION					
18	Spring Seat	LP12155	1	LP12155	1	38	Hose Assy				
19	Spring	LP30620	1	LQ02743	1		LA97475		LB03185		
20	Housing	LB03184	1	LB03184	1						
⑳	SE Ring	LP12475	2	LP12475	2						
㉑	Valve Retainer B	LP13735	2	LP13735	2						
㉒	Outlet Valve	LP10359	2	LP10359	2						
24	Screw 5 x 20	LP12599	2	LP12599	2						
25	Insulation Bush	LP10355	2	LP10355	2						
26	Rear Cylinder	LA71843	1	LA71843	1						

Exploded View

LA-60B/ LA-80B

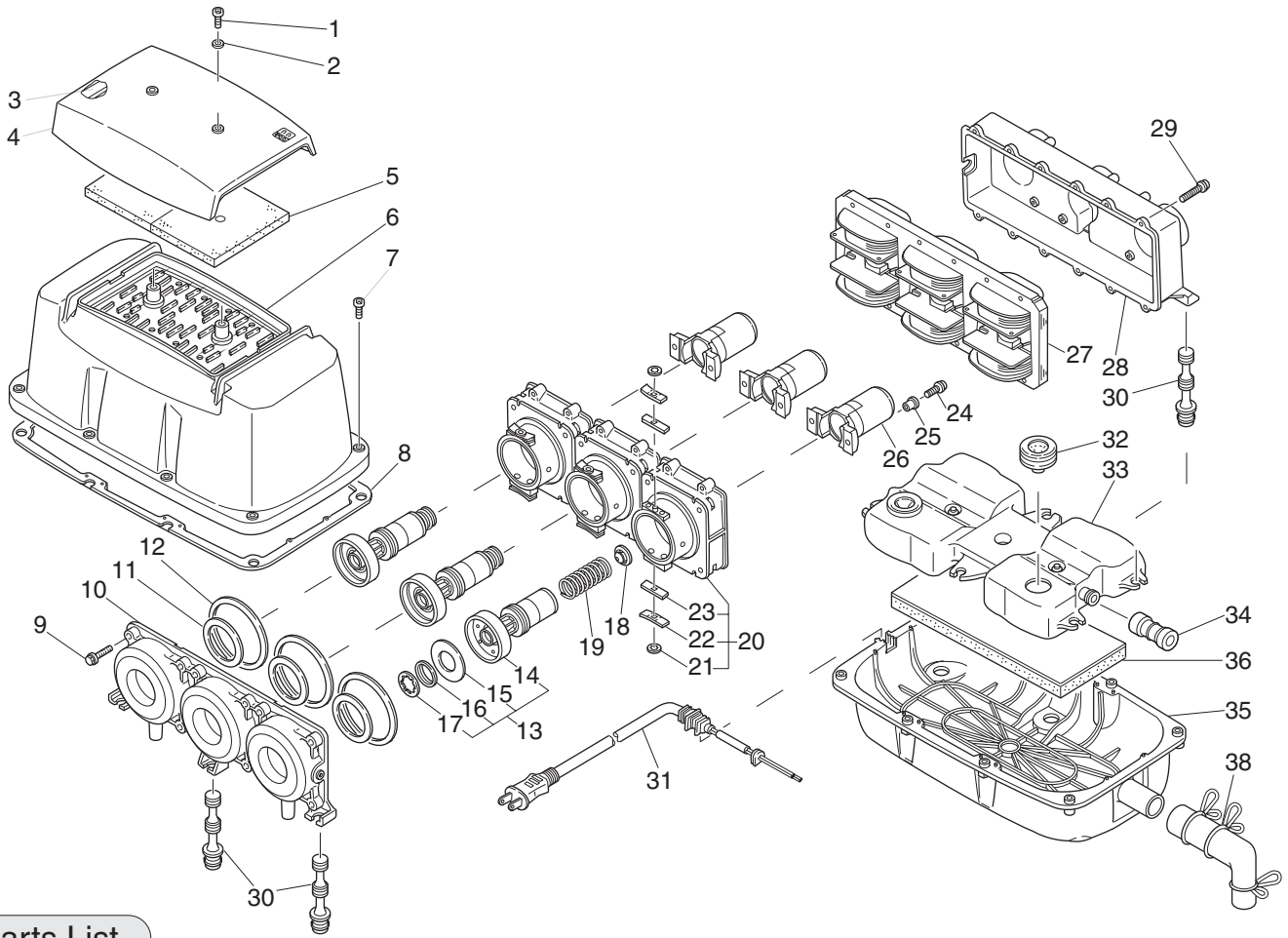


Parts List

No.	Part Name	LA-60B	Q'ty	LA-80B	Q'ty	No.	Part Name	LA-60B	Q'ty	LA-80B	Q'ty
1	Bind Screw	LP30581	1	LP30581	1	22	Endcap	LQ03767	1	LQ03767	1
2	Seal Washer	LP30635	2	LP30635	2		Endcap (Thermal)	LQ05321	1	LQ05321	1
3	Filter Cover Gasket	LQ02607	2	LQ02607	2	23	Hex Bolt	LP31316	8	LP31316	8
4	Filter Cover	LB06202	1	LB06202	1	24	Rubber Feet	LQ05143	4	LQ05143	4
5	Filter Element	LQ02730	1	LQ02730	1	25	Cable Assy UK	LB05341	1	LB05341	1
6	Upper Case	LB06203	1	LB06203	1		Cable Assy D	LB05307	1	LB05307	1
7	Bind Screw UL	LP30581	6	LP30581	6		Cable Assy A	LB06463	1	LB06463	1
	Torx Screw CE	LQ03082	6	LQ03082	6		Cable Assy J	LB00914	1	LB00914	1
8	Gasket C	LQ05144	1	LQ05144	1		Cable Assy UL	LB04770	1	LB04770	1
9	Hex Bolt	LP31316	6	LP31316	6	26	Bottom Case	LB06205	1	LB06205	1
10	Headcover Assy	LB06207	1	LB06207	1	27	Joint Hose	LQ05142	1	LQ05142	1
11	Gasket A	LQ01043	2	LQ01043	2	28	Clamp	LP13171	2	LP13171	2
12	Gasket B	LQ01042	2	LQ01042	2	OPTION					
13	Piston Assy	LB03132	2	LB03132	2	29	Hose Assy				
14	Spring	LP30585	2	LQ02743	2		LA97475		LB03185		
15	Spring Seat	LP12155	2	LP12155	2		LA97475		LB03185		
16	Housing Assy	LB03184	2	LB03184	2		LA97475		LB03185		
17	Rubber Plug	LQ03775	1	LQ03775	1		LA97475		LB03185		
18	Rear Cylinder	LB02443	2	LB02443	2		LA97475		LB03185		
19	Insulation Bush	LP10355	4	LP10355	4		LA97475		LB03185		
20	Screw 5 x 20	LP12599	4	LP12599	4		LA97475		LB03185		
21	Field Core Assy P	LB04901	1	LB04905	1		LA97475		LB03185		
	Field Core Assy Q	LB05126	1	LB05134	1		LA97475		LB03185		
	Field Core Assy E	LB05099	1	LB05048	1		LA97475		LB03185		

Exploded View

LA-100/ LA-120



Parts List

No.	Part Name	LA100	Q'ty	LA120	Q'ty	No.	Part Name	LA100	Q'ty	LA120	Q'ty
1	Bind Screw	LP30581	2	LP30581	2	27	Field Core Assy P	LB04855	1	LB04909	1
2	Seal Washer	LP30635	4	LP30635	4		Field Core Assy Q			LB04280	1
3	Filter Cover Gasket	LQ03101	2	LQ03101	2		Field Core Assy E	LB04180	1	LB04171	1
4	Filter Cover	LB30769	1	LB30769	1	28	Endcap	LQ03108	1	LQ03108	1
5	Filter Element	LQ02605	2	LQ02605	2	29	Hex Bolt	LP31316	12	LP31316	12
6	Upper Case	LB03763	1	LB03763	1	30	Rubber Feet	LQ03089	6	LQ03089	6
7	Bind Screw UL	LP30581	8	LP30581	8	31	Cable Assy UK	LB05341	1	LB05341	1
	Torx Screw CE	LQ03082	8	LQ03082	8		Cable Assy D	LB05307	1	LB05307	1
8	Gasket C	LQ03091	1	LQ03091	1		Cable Assy A			LB05220	1
9	Hex Bolt	LP31316	12	LP31316	12		Cable Assy J	LQ01037	1	LQ01037	1
10	Headcover	LB03834	1	LB03834	1		Cable Assy UL	LB04770	1	LB04770	1
11	Gasket A	LQ01399	3	LQ01399	3	32	Nozzle Seal	LQ02598	2	LQ02598	2
12	Gasket B	LQ01400	3	LQ01400	3	33	Air Tank Assy	LB03771	1	LB03771	1
13	Piston	LB03779	3	LB03779	3	34	Joint Hose	LQ03096	1	LQ03096	1
14	Piston Sub Assy	LB03780	3	LB03780	3	35	Bottom Case	LB03762	1	LB03762	1
15	Inlet Valve	LQ03230	3	LQ03230	3	36	Cushion	LQ03112	1	LQ03112	1
16	Valve Retainer A	LP11548	3	LP11548	3	37	Rubber Plug				
17	CS Ring	LP12948	3	LP12948	3	OPTION					
18	Spring Seat	LP10357	3	LP10357	3	38	Hose Assy				
19	Spring	LQ03117	3	LQ03117	3		LB04119	LB03965	LB01070		
20	Housing	LB03778	3	LB03778	3						
21	SE Ring	LP12475	6	LP12475	6						
22	Valve Retainer B	LP13735	6	LP13735	6						
23	Outlet Valve	LP10359	6	LP10359	6						
24	Screw 5 x 20	LP12599	6	LP12599	6						
25	Insulation Bush	LP10355	6	LP10355	6						
26	Rear Cylinder	LB01415	3	LB01415	3						

**Head Office**

9-4, Nakaikegami 2-chome,
Ohta-ku, Tokyo 146-8555 Japan
Phone:03(3755)9592 Fax:03(3753)8791
URL <http://www.nitto-kohki.co.jp>
e-mail:s-linear@nitto-kohki.co.jp

MEDO U.S.A., INC.

4525 TURNBERRY DRIVE, HANOVER PARK
IL 60103, U.S.A.
TEL(630)924-8811 FAX(630)924-0808

NITTO KOHKI EUROPE CO., LTD.

UNIT21 THE EMPIRE CENTRE IMPERIAL WAY
WATFORD, HERTS. WD24 4TS, U.K.
TEL(01923)239668 FAX(01923)248815

NITTO KOHKI DEUTSCHLAND GMBH.

LERCHENSTR.47,71144 STEINENBRONN, GERMANY
TEL(07157)22436, 22705 FAX(07157)22437

NITTO KOHKI AUSTRALIA PTY. LTD.

UNIT 1, 11 BOORAN DRIVE, UNDERWOOD
QUEENSLAND 4119, AUSTRALIA
TEL(07)3808-3422 FAX(07)3808-3146
