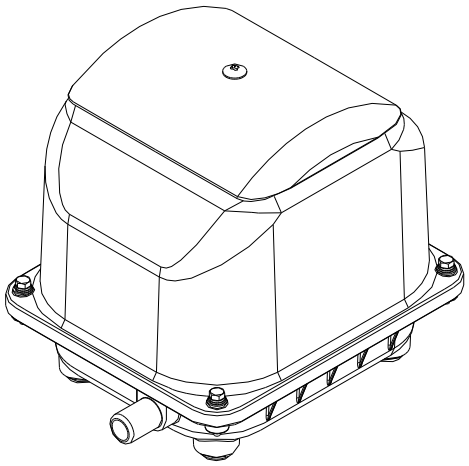
INSTRUCTION MANUAL
FOR
LINEAR COMPRESSORS

MODEL : JDK-60

JDK-80

JDK-100

JDK-120



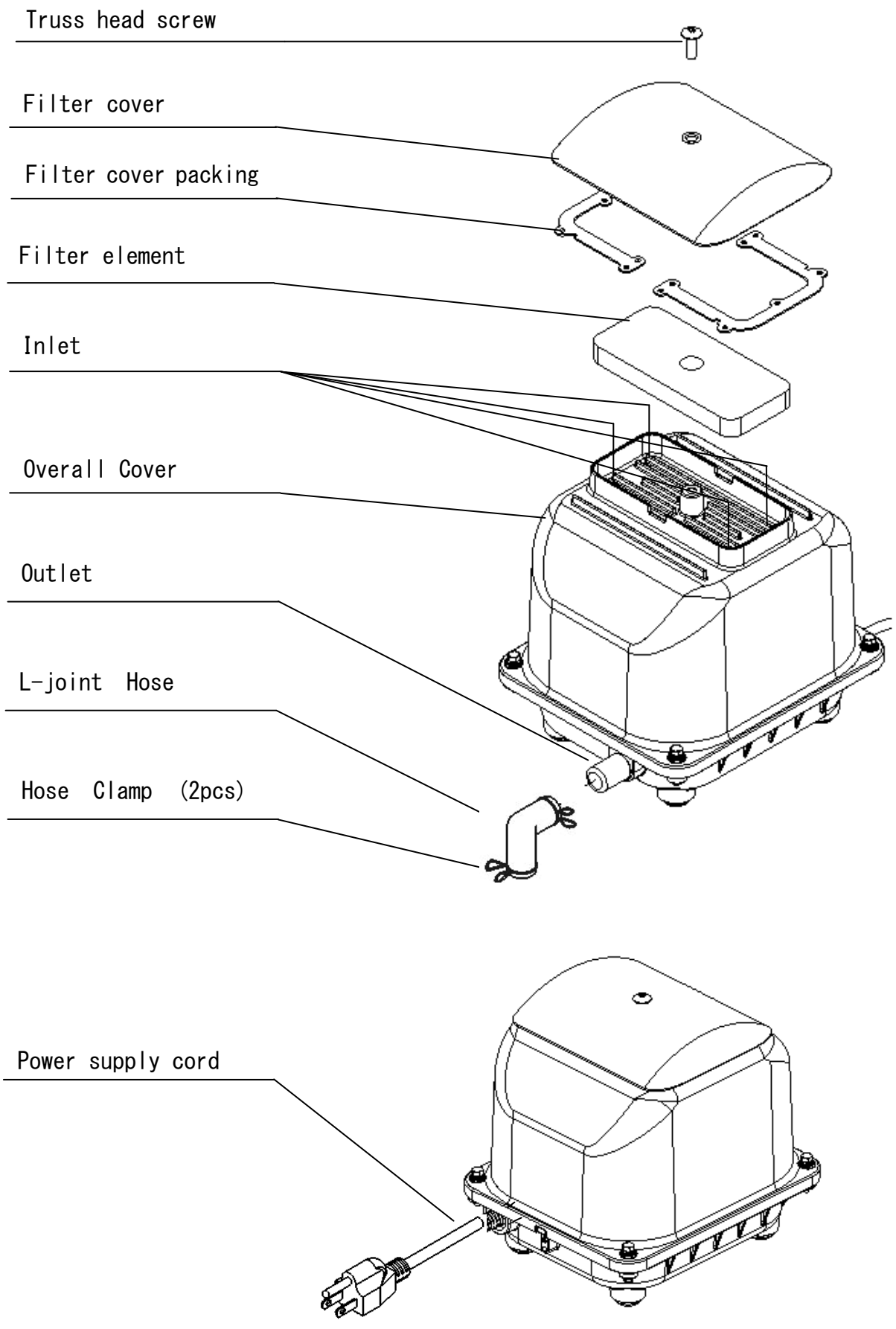
READ AND FOLLOW ALL SAFETY INSTRUCTIONS.
KEEP THIS MANUAL FOR FUTURE REFERENCE.

SECOH

SECOH SHANGHAI MEC LTD

CONTENTS

Parts name


Truss head screw
Filter cover
Filter cover packing
Filter element
Inlet
Overall Cover
Outlet
L-joint Hose
Hose Clamp (2pcs)
Power supply cord

2. Instructions

- ○ Read information carefully to ensure that this product operates correctly.
- ○ Follow the safety instructions.
- ○ Any servicing other than that recommended in this manual should be performed by an authorized service facility.

The following is an explanation of the three different types of hazards.

⚠ DANGER **Severe personal injury or death will occur if hazard is ignored.**

⚠ WARNING **Severe personal injury or death can occur if hazard is ignored.**

⚠ CAUTION **Minor injury or property damage can occur if hazard is ignored.**

2-1 Prior to operation

⚠ WARNING

- ○ This product is designed for air only.
  - ● To reduce the risk of ignition, electric shock or short circuit, do not pump flammable gas or liquid. Pumped fluid passes through the live parts.
- ○ To avoid electric shock or short circuiting, connect this product to the supply voltage specified on the name plate.
- ○ Close supervision is necessary when any appliance is used by or near children.

○ This product is not designed for mounting on a vehicle.

2-2 Storage and transfer

⚠ WARNING

- ○ Carry this product by both hands.
  - ● Do not carry this product by holding filter cover. The body which may slip from the filter cover can cause injure.
  - ● To avoid damage on wire, do not carry this product by holding the power supply cord.
- ○ Pump surfaces can get very hot during operation. Do not touch hot surfaces until they cool.

- Do not store this product in temperatures below 14°F (-10℃). Failure to do so could result in decrease of air flow due to magnet deterioration.
- Store this product indoors out of the weather to avoid the deterioration of rubber parts.

2-3 Installation

⚠ WARNING

- Installation of this product including wiring and plumbing should be done by our distributor or specialist.
- Carefully examine the pump after installation. It should no t be plugged in if there is water on parts not intended to be wet.

1) Location

⚠ WARNING

- To avoid short circuit or electric shock do not install this product in an area where it could be immersed in water or other liquids.
- Install this product above the water level to ensure no siphoning can occur if power should fail. Failure to do so will result in short circuit or electric shock from liquid running back into this product.

⚠ DANGER

- To avoid ignition do not install this product in an area where it could come in contact with flammable or explosive gas.

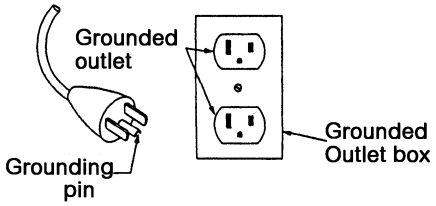
- Install this product in the shade and well-ventilated area.
  - The heat of sunlight may shorten diaphragm and valve life due to very high temperatures.
- Do not install this product in a humid or dusty area.
  - Overheating caused by a clogged filter may result in shortened diaphragm and valve life.
- Install this product in an area where maintenance can be easily performed.

2) Grounding

⚠ DANGER

- Improper installation of the grounding plug can result in a risk of electric shock. If repair or replacement of the cord or plug is necessary, do not connect the grounding wire to either flat blade terminal. The wire with insulation having an outer surface that is green, with or without yellow stripes, is the grounding wire.

- This product should be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with and electric cord having an equipment grounding conductor and a grounding type plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all appropriate codes and ordinances.
- This product is for use on a nominal 120V volt circuit, and has a grounding plug. Make sure that the product is connected to an outlet having the same configuration as the plug as follows. No adapter should be used with the product.



- Use only 3-wire outdoor use extension cord that has a 3-blade grounding plug, and a 3-slot receptacle that will accept the plug on the product. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. For lengths less than 50 feet, 16AWG extension cords should be used. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. The extension cord should be marked “for outdoor use”.

3) Mounting

⚠ WARNING

- This product must be weather protected to avoid risk of electric shock or short circuit if it is mounted in an area exposed to water or other liquids.
- Ensure this product is securely mounted prior to operation.

⚠ CAUTION

○The ambient temperature should not be over 104°F (40℃).
- ●Cooling fan is recommended to be installed when mounting in an area of higher temperature.

○This product should be mounted on a horizontal, stable and rigid surface for appropriate operation.

4) Plumbing

○Connect the pumps exhaust port and rigid plastic pipe VP13 (ID 13mm x OD 18mm) with an L-joint hose.
- ●Plumbing with smaller diameter pipe may cause excess pressure and heat which will shorten the diaphragm and valve life.
- ●Be sure to secure connection with a hose clamp (Ref.: Fig 1).
- ●Do not twist the hose elbow.

○ The length of plumbing should be as short and straight as possible.
- ●If the plumbing length is over 16.4ft. (5m), consult our distributor.

○Make sure that nothing remains in the pipe during plumbing.
- ●If foreign material is left, it may cause excess pressure and heat which will shorten the diaphragm and valve life.

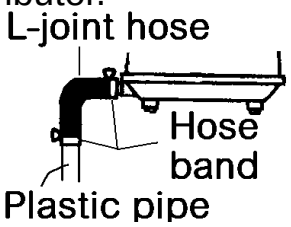


Fig.1

5) Operation

⚠ DANGER

○To avoid the risk of fire or electric shock do not modify, heat or pull the power cord.

○Do not put a heavy load on the power cord. The power cord may be damaged, if hazard is ignored.

○Clean electric source plug connectors once a year and plug in securely.
- ●Dust on source plug connectors or improper plugging can cause fire or electric shock.

⚠ WARNING

○ Do not touch the electric source plug with wet hands.

○ Grasp plug to remove power cord from the outlet. Do not remove by pulling on power cord.

○ Do not operate if the cord or plug is damaged or if this product is malfunctioning, dropped, or damaged in anyway.

3. Periodic maintenance

⚠ WARNING

- Always disconnect power before servicing. Failure to do so could result in electrical shock, personal injury or death.

⚠ CAUTION

- Clean the filter element quarterly. A clogged filter element can cause overheating or pump failure.

3-1 Filter element cleaning

- Undo the truss head screw. (Ref.:Fig.2-A)
- Remove the filter cover by pulling off in the direction shown.
- Take out the filter, and slap down dust hand. If it is heavily contaminated, wash it by rubbing using neutral detergent.Then,wash with water and dry it in the shade.
- Please confirm whether there is any sewage or dirt blocking the inlets (4 points).If yes, please clean it up.
- Reassemble the filter element back in place. Replace the filter cover packing and press in the filter cover. (Ref.:Fig.2-B)
- Secure the filter cover with truss head screw.

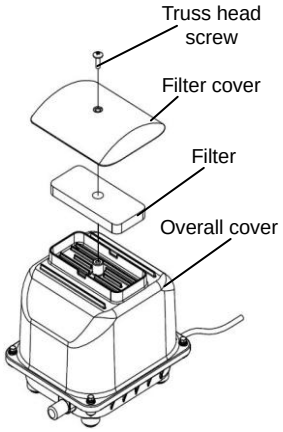


Fig 2-A

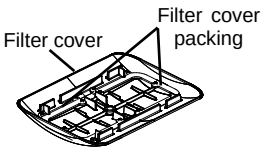


Fig 2-B

3-2 Replacement of filter element, valve box, diaphragm

- Replace the filter element following the procedure in 3-1 filter element cleaning.

- Undo the four corner blots and remove the overall cover. (Ref.: Fig 2-C)

● Use a screwdriver to pry the overall cover open when necessary. (Ref.: Fig 2-D)

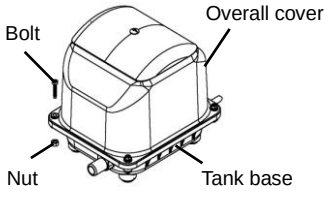


Fig 2-C

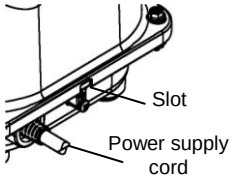


Fig 2-D

○ Remove the shock absorber.Undo the screws and remove the holder cover. (Ref.: Fig 2-E)

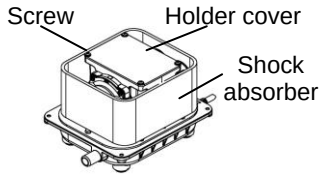


Fig 2-E

○ Undo the screws and loosen up the hose band. Remove the valve box. (Ref.: Fig 2-F)

○ Undo the nuts and remove diaphragm holders and diaphragms from the magnet holder. (Ref.: Fig 2-G)

● Magnetic force is very strong, please be careful during operation.

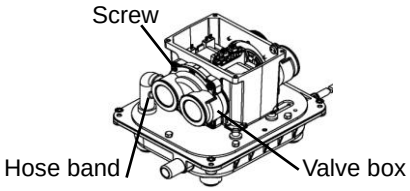


Fig 2-F

○ Insert the protrusion of the new diaphragm in the locating notch of the diaphragm holder. (Ref.: Fig 2-H)

○ Set the new diaphragm holder and diaphragm to the magnet holder and fix them,installing into the solenoid holder. (Ref.: Fig 2-I)

● Please replace the diaphragm and valve box for both sides.

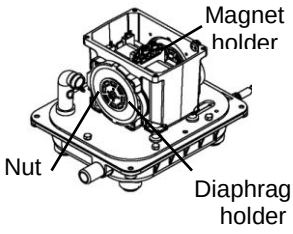


Fig 2-G

○ Replace the valve box.
Make sure the magnet holder is in the middle of the iron core. (Ref.: Fig 2-J)
If not, please reset the magnet holder.

○ Reset the auto-stopper,if necessary.
(Ref.:3-3Reset of auto-stopper).

○ Connect power, confirm whether the magnet holder is moving in the middle and whether air blowing out properly, then remove the plug and start next operation.

● Do not touch the live parts. (Ref.: Fig 2-K)

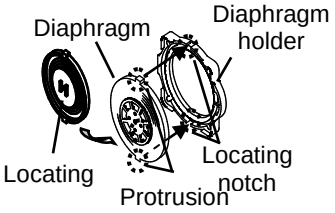


Fig 2-H

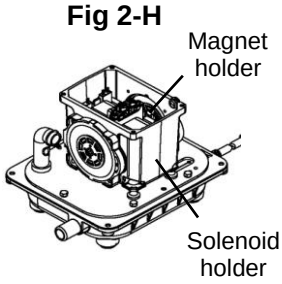


Fig 2-I

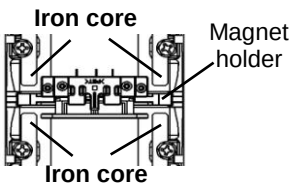


Fig 2-J

○ Fasten the holder cover with the screw, put the shock absorber back.

○ Keep the slot and power supply cord in the same side, use nuts and screw to fix carefully.

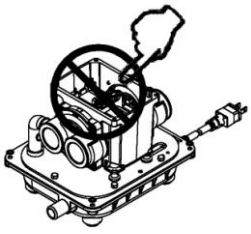


Fig 2-K

Notes:
Use the new nuts in the repair kit.

⚠ WARNING

○ If the magnet contacts the solenoids during operation, it will cause damage on parts, abnormal heat, and short circuiting.

⚠ DANGER

○ Do not touch live parts. Touching live parts will result in electric shock.

⚠ CAUTION

○ Improper setting of the rubber bush can result in electric shock, air leakage.

3-3 Reset of auto stopper

⚠ DANGER

○ Disconnect the power before servicing.
Do not touch the terminal of the switch. If hazard is ignored, electric shock is possible.
If not disconnected, magnet starts moving upon reset of auto stopper. Personal injury is possible.

If the diaphragm is broken, the magnet reciprocates with abnormal amplitude and projection hits the slider. The contact is interrupted and power is off.(Rer.:Fig.3-A)

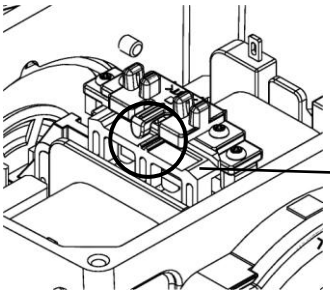


Fig.3-A

If the slider deviates from the middle, please set it back as the picture below. **(Rer.:Fig.3-A)**

Can hear the sound when adjust the slider to the middle as the picture below. **(Rer.:Fig.3-B)**

Note:models with “NS” labels are not equipped with the auto-stop device.

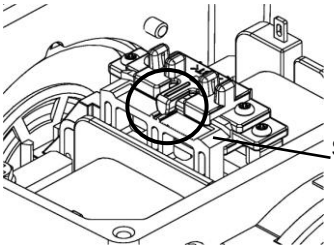


Fig.3-B

3-4 Automatically reset thermal protector

An automatically reset thermal protector installed on the solenoid stops pump operation if solenoid temperature becomes over 130 ± 5 ℃. When the solenoid temperature cools down to 85 ± 15 ℃, the protector is reset automatically and pump operation restarts.

4. Trouble shooting

Observation	Possible cause	Action
Pump does not operate.	· Improper electrical connection	· Check plug and outlet and plug completely.
Discharge air decreased. Pump surface is abnormally hot. Pump operates intermittently	· Pipe or diffuser clogged · Valve in plumbing shut · Filter element clogged	· Clean pipe or diffuser. · Open the valve · Clean filter element.
Pump operates but with abnormal noise.	· Faulty valve or diaphragm	· Replace valve and diaphragm.

5. Replacement parts

Kit name	Contained parts	Quantity (pcs)
Diaphragm repair kit for JDK(The valve box ,JDK – 60、80 different with JDK – 100、120)	Diaphragm	2
	Diaphragm holder	2
	Nut	2
	Valve box	2
	Filter element	1
	Filter cover packing	2

6. Specifications

Model		JDK-60	JDK-80	JDK-100	JDK-120
Voltage	V	120			
Frequency	Hz	60			
Rated pressure	psi	2.9			
	kPa	20			
Rated air flow	LPM	65	85	100	120
Amperage	Amp.	1.0	1.3	1.5	1.8
Bore diameter	mm	OD:19 ID:13			
Net weight	lbs.	14.3			
	kg	6.5			
Accessory		L-joint hose			

The information presented in the specification table is based on technical and test results of nominal units. It is believed to be accurate and is offered as an aid in the selection of the products. It is the user's responsibility to determine suitability of the product for intended use and the user assumes all risk and liability whatsoever in connection therewith. Environmental and application conditions may affect advertised life.

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