

OPERATION MANUAL Linear Diaphragm Pumps

Models:

AP-40
AP-60F
AP-80H
AP-100F
AP-120F

LP-150HN
LP-200HN

LW-150
LW-200
LW-240
LW-300
LW-400



Thank you for purchasing a YASUNAGA AIR PUMP INC. linear pump.
Before operating the pump please read this manual completely.
Important safety instructions are included.

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Declaration of conformity:

The casing pumps of the AP and LP and LW series are conform to the European security-standard (Machinery- and EMC-directive) and carry the CE label.

General Instruction

Please read this manual before operation of the pump, taking note of all instructions. Compliance with these instructions will ensure safe and reliable operation. Failure to comply with all the safety precautions can result in malfunction, risk of fire and endanger the health of people.

Any constructional change or misuse invalidates the product warranty and liabilities.

Please observe all instructions and keep this manual ready to hand.

This document, or parts thereof, may not be made available, directly or indirectly, to third parties, nor published or distributed in any manner without written consent.

Safety Instruction

Symbols Used



Warning instruction

Failure to comply can endanger the pump, the system or even the life and health of persons.



Caution – High Voltage

This symbol warns of dangerous high voltages.

Please read this manual before operation of the pump, taking note of all instructions. Compliance with these instructions will ensure safe and reliable operation. Failure to comply with all the safety precautions can result in malfunction, risk of fire and endanger the health of people.

Any constructional change or misuse by an end-user invalidates the product warranty and/or liabilities.



This appliance 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 appliance.



All AP, LP, LW models are equipped with an integrated thermal protective switch that activates (pump will not run) when overheated and deactivates (normal operation mode) after the pump has cooled. (The LP-150HN, LP-200HN, LW-300 and LW-400 models have a thermal fuse.)



Do not place anything on the electrical cable. Damaged cables can cause short circuits or electrical shock and must be repaired by trained service personnel.



Do not spill water or other liquids over the pump.



Work on electrical devices may only be carried out by skilled personnel in accordance with the applicable engineering regulations.

Installation Instruction

- The pump is suitable only for operation in dry rooms.
- The pump location should be well ventilated, positioned horizontally on its mounting feet and should not come in contact with other objects or installed in an area that is subject to explosion hazard.
- Ensure the pump is placed on a firm base with a suitable slip-free surface.
- Kinks or bends in hose can affect pump performance. Inside hose diameter should be a minimum equal to pump outlet outer diameter and its length should not exceed 10m.
- Ensure that the supply voltage and frequency corresponds to the pump label.
- Ensure that the pump socket is earthed.
- Ensure that the operating air temperature is within the range -10°C to +40°C and the air humidity does not rise above 90%.
- The diaphragm linear pump is designed for pumping air only. The following media must not be allowed to enter the air intake: dangerous gas mixtures (e.g. combustible gases, explosive gases or vapours), water vapour, any liquids, aggressive gases, or traces of oil or oil mist and grease.
- Pumps should be operated within specified pressure range only. Do not operate pump at zero pressure.



For pumps used to aerate water in aquariums, ponds or similar, avoid water entering the pump by ensuring that the pump is installed above the water level.



For proper grounding, do not defeat the ground pin.



If the supply cord is damaged, it must be replaced by trained service personnel in order to avoid a hazard

Maintenance Instruction



Any maintenance work to linear pump other than what is described within the table below must be undertaken by trained service personnel.

Recommended Filter Maintenance Schedule



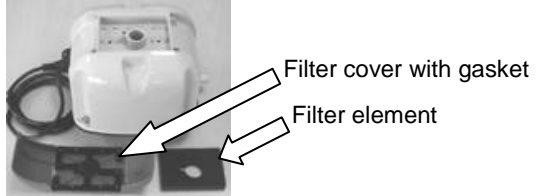
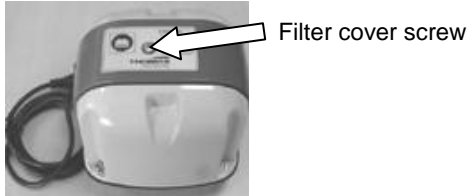
Make sure the main power cord is disconnected before performing maintenance.

	AP Series	LP Series	LW Series
Filter Cleaning / Replacement	The air filter element should be cleaned every three months and replaced every twelve months.		

AP Series Filter Element Replacement Instructions:

Disconnect power. Remove filter cover & screw.

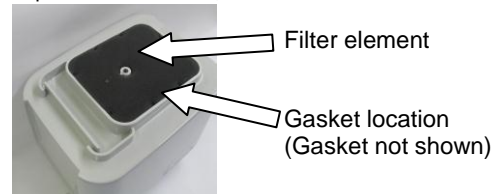
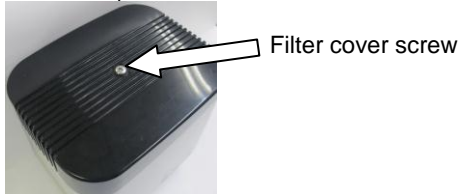
Replace filter element, reassemble cover & screw.



LP or LW Series Filter Element Replacement Instructions:

Disconnect power. Remove filter cover & screw.

Replace filter element, reassemble cover & screw.



For replacement filter element part numbers, see pertinent series datasheet on [yasunaga air pump.com](http://yasunagaairpump.com).

Integrated Diaphragm Protection Switch Instructions

Models AP-60F, AP-80H, LP-150HN, LP-200HN, LW-150, LW-200, LW-240, LW-300 and LW-400 are equipped with an integrated diaphragm protection switch that activates or turns off the pump in case of a diaphragm failure or external impact. This switch may be deactivated by performing the following instructions:



Make sure the main power cord is disconnected before performing switch deactivation.



If the diaphragm is damaged, have the pump serviced by trained service personnel. (Damage may be detected by little or no air flow or higher than normal sound level.)

