

Precautions for Compressors and Vacuum Pumps

CAUTION The unit must be incorporated into a device that has an appropriate case and wiring. Not doing so may cause a fire, electric shock or burns.		WARNING Do not let the unit draw in or discharge any gas other than air. This may cause an explosion, fire or electric shock.		Avoid drawing in water and splashing any water on the unit. Otherwise there is the risk of a short circuit causing a fire or electric shock.	
Do not use the unit with a power supply other than the voltage shown on the unit. Doing so may cause a fire or electric shock.	Do not install the unit in a completely enclosed case (box) without proper or adequate ventilation. This may cause a fire or electric shock.	Use the unit within the proposed ambient temperature range. Using it out of the range may cause a fire or electric shock.	Avoid any strong impact to the unit as this may reduce the performance and durability of the unit.		
Do not place combustible materials near the unit. This may cause a fire.	The grounding screw of the unit should be utilized, except when connected to a double insulation device. Not grounding the unit may result in a fire or electric shock.	The unit must be installed at a level higher than the water surface when it is used for bubbling. If the unit is installed at a level lower than the water surface, fluid may flow into the unit and cause an electric shock.	Units must not be modified. Modifications may cause a fire or electric shock.		
Do not pull, scratch, forcefully bend, twist or heat the lead wires. This may damage them and cause a fire or electric shock.	When incorporating the unit into a device, the lead wires from the unit should be connected securely to the wiring of the device by means of soldering, crimping or by the use of screws. Insufficient connections may cause a fire or electric shock.	The unit must not be disassembled or repaired by anyone other than a person who has received Nitto Kohki technical training. (Except in the case of filter and piston maintenance and inspection in accordance with the operation manual.) Otherwise it may result in a fire or electric shock.	Do not allow anything to be placed on or to fall onto the lead wires. This may damage them and cause a fire or electric shock.		
When drawing in air contaminated with moisture, powder, or dust, add an external device to the unit for removing them. If these contaminants are drawn in, it may cause an electric shock. *Only for vacuum pumps.					

Precautions for Blowers

CAUTION Do not install the unit in a place where it may be soaked with water or covered with snow. This may cause an electric shock or fire.		WARNING Do not let the unit draw in or discharge any gas other than air. This may cause an explosion, fire or electric shock.			
Use a power supply equipped with a ground-fault interrupter and overcurrent breaker. Failure to do so may cause an electric shock or fire.	Do not use the unit in hot and humid conditions. This may cause an electric shock, breakdown or fire.	Always place the unit above water level. Failure to do so may result in an electric shock or breakdown.	Use a waterproof wall outlet to supply power to the unit. Failure to do so may cause an electric shock or fire.		
The power supply voltage must be limited to the individual unit specifications as stated on the nameplate or instruction manual. Failure to do so may cause an electric shock or fire.	Have a qualified electrician do the electrical work. Failure to do so may cause an electric shock or fire.	Never modify the unit. This may cause an electric shock, breakdown, or fire.	Do not use the unit with the outlet port closed or at free displacement. This may cause an electric shock, breakdown, or fire.		
Do not place anything near the unit (within about 50cm). Doing so may cause an electric shock or fire.	Never touch the power plug with wet hands. This may cause an electric shock.	Insert the power plug securely into the innermost position. Failure to do so may cause an electric shock.	Do not put anything on the power cable. Doing so may cause a fire or electric shock.		
Always grasp the power plug to disconnect the unit from the socket. Pulling it out by the cord may cause an electric shock or breakdown.	Do not use the unit in a place where flammable materials, such as gasoline, thinner, lacquer, benzene, etc. are being used. This may cause a fire or explosion.	Check the power plug at least once a year for dirt and dust and clean if necessary. Failure to do so may result in an electric shock or fire.	The power plug must be disconnected before the air filter is cleaned or replaced. Failure to do so may cause an electric shock or accident.		
	Any removed air filter must be replaced before the operation is resumed. Failure to do so may cause an electric shock or breakdown.	Never try to disassemble or repair the unit. This may cause an electric shock, breakdown, fire or injury. Any repairs must be done by an electrician authorized by Nitto distributors.	Do not cover the Blower with a box or the like without proper or adequate ventilation. Doing so may cause a breakdown or fire.		

Precautions for DC-Motor Pumps

Connect the plus terminal (if there is no indication of the plus terminal, use the terminal with a red mark as the plus terminal,) or the red lead wire of the unit to the plus terminal of the DC power source. Reverse connection may cause a breakdown, malfunction, or reduced rated performance.

Precautions for Liquid Pumps

CAUTION Avoid any liquid contaminated with solids such as debris or dust. If dust or debris sticks to the valve, the unit may not perform properly. When the intrusion of dust or debris is expected, be sure to place a filter on the inlet side of the unit.		WARNING Confirm the suitability of the liquid that passes through the unit before use. Failure to do so may cause a leak, explosion, fire or electric shock.			
Avoid any liquid that may crystallize. If crystals stick to the valve, the unit may not perform properly. A preliminary test on the unit with the liquid to be used is recommended.	The performance of the unit is measured with the pump in its proper mounting position, which is described in the user's manual. Different mounting positions or nozzle directions may result in different performances.		There may be a risk that even a slight liquid pressure can open the valve due to siphon phenomenon. Place the outlet port at a position higher than the water level in the supply tank, or install a check valve if necessary to prevent water from being siphoned into the pump.		

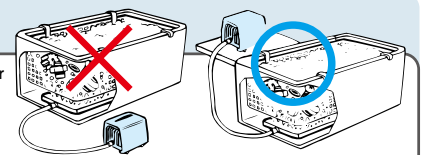
When Using Compressors and Vacuum Pumps

Check with our distributor in advance if you plan to use the compressor/vacuum pump at free displacement (0 kPa), or the vacuum pump with inlet port closed, or the compressor at maximum pressure.

As compressors and vacuum pumps employ a self-cooling system, if the units are used at more than the rated pressure, the duty cycle of some of the models will need to be shortened.

- When wanting to increase the duty cycle, it is recommended to use a fan to cool the compressor.
- Do not use the compressor near flammable liquid gas.
- Do not use the compressor in the rain or in wet and damp places.
- Do not allow the pump to draw in corrosive gas.

- Be sure to install and use the compressor at a position higher than water level.



Handling Problems

In any of the below cases, stop operation immediately, switch off the power and disconnect the unit from the power supply. Ask our distributor for repair.

- When oil such as a lubricant has been applied to the unit in error.
- When liquid such as water has entered into the unit by mistake.
- When the unit has suffered a severe impact such as being dropped.
- When an abnormal operation is observed, such as the emission of smoke, or an unusual smell or noise.

Precautions for Pumps with Brush Motor

As operational time is increased, the value of insulation resistance becomes lower than that of the initial insulation resistance. If the outer surface of motor and the grounding of the power source are connected, do a preliminary check to assure no issues occur.

Our Product Warranty

Our Products are covered by a limited warranty ("Warranty") under the following conditions.

1. Duration: depends on individual products and their specifications
2. Service: repair or replacement at our option

Please be aware that a warranty claim will not be reimbursed with a cash payment.

3. Object Person: original purchaser from our designated distributors

4. Out of Warranty

The following conditions are not covered by Warranty

- purchaser improperly used our products.
- purchaser did not comply with specifications and instructions stipulated in this Catalog when using our products, or
- purchaser did not comply with Caution for Safety stipulated in this Catalog when using our products, or
- repairing of our products was done by someone other than us, or
- We are not able to anticipate or predict such defects or causes of failure based on general technical knowledge of the specific application before or at the time of shipment, or
- defects are caused by the force majeure or other situations not attributable to us, or
- defects are not clearly attributable to us and
- defects are not about design, material or workmanship.

Limitation of Liability

We, including designated distributors, will not be liable for any special damages or consequential damages and will not have any monetary liability to purchasers.