

# Instruction Manual

**eco-ENERGY  
EFFICIENT**

With  
**3 YEAR**  
Warranty

## **eco-TWIST™ PUMP**

**POND & WATERFALL PUMP**

- PXX1500
- PXX3000
- PXX4000
- PXX5300
- PXX5300C

**INCLUDES INLINE CONTROLLER**  
Customize &  
Adjust Water Flow For  
Any Application



**180°**  
Rotating  
Adapters

**Alpine**  
CORPORATION





## Thank you for purchasing one of Alpine's Eco-Twist™ pumps.

At Alpine, our goal is to supply our customers with quality products that provide convenience and value to your life. We hope you enjoy your purchase and thank you for choosing Alpine: Your One Stop Shop for all your Solar, Gift, Garden and Pond Supplies.

Our Eco-Twist™ pumps are ideal for filtration systems, waterfalls, and ponds. Engineered to be highly energy efficient while maintaining maximum output. They are designed for continuous operation even in the harshest pond environments.

### TABLE OF CONTENTS

- Introduction..... 2
- Safety Information..... 2
- Components and Pump Parts..... 3
- Dismantling and Reassembling..... 4
- Pump Information and Installation..... 5
- Typical Pond Installation..... 6
- Operation and Maintenance..... 8
- Winter Pump Care..... 9
- Troubleshooting..... 9
- Replacement Parts List..... 10



### LIMITED 3 YEAR WARRANTY

At our discretion, Alpine Corporation™ will repair or replace any pump found to have manufacturer's defects as follows: pump body, cover, filter and accessories within three years of original purchase. Impeller and internal moving parts are warranted for one year of original purchase. This warranty does not cover any replaceable filtering material supplied with the pump or filter as it is considered expendable. Proof of purchase is required. Warranty does not cover damage resulting from negligent handling, misuse or lack of reasonable maintenance or care. Warranty is valid against defects due to material and the company's workmanship only. The sole obligation is at Alpine's discretion to replace/repair the defective unit with a suitable replacement part. Units should be checked for proper operation prior to returning as defective. No liability for loss or damage of any nature or kind, whether arising out of or from the use of the product, whether defective or not defective, is assumed by Alpine Corporation™ or its affiliates. Damaging, cutting or altering power cord, removing or defacing product labels voids any warranty consideration. Damages or injuries resulting from negligence or misuse of the product are not covered by warranty.

# INTRODUCTION

Alpine's Eco-Twist™ high performance pumps are ideal for filtration systems, waterfalls, and ponds. Engineered to be highly energy efficient while maintaining maximum output. Our durable "pre-filter" pump cage minimizes pump damage and clogging by selectively screening larger debris particles. Pumps feature a convenient carrying handle and 360° rotating adapters for easy placement. Includes "click fit" connectors to allow simple disassembly for routine maintenance and compatibility with other Alpine series pond systems. For select models, the precise controller enables pumps to customize and adjust water flow on any application.

For a car to stay in great condition, proper maintenance is required. Therefore, Alpine suggests that once a week, you verify that the pump is performing adequately. If you detect a drop in pump performance (such as a decrease in water flow from the pump or to the waterfall), first clean the pump's pre-filter cage and the tubing connected to the pump. If the water flow is still not fully restored to its original performance, simply clean the impeller and internal pump body. (See pages 3 & 4 for maintenance instructions)

## SAFETY INFORMATION

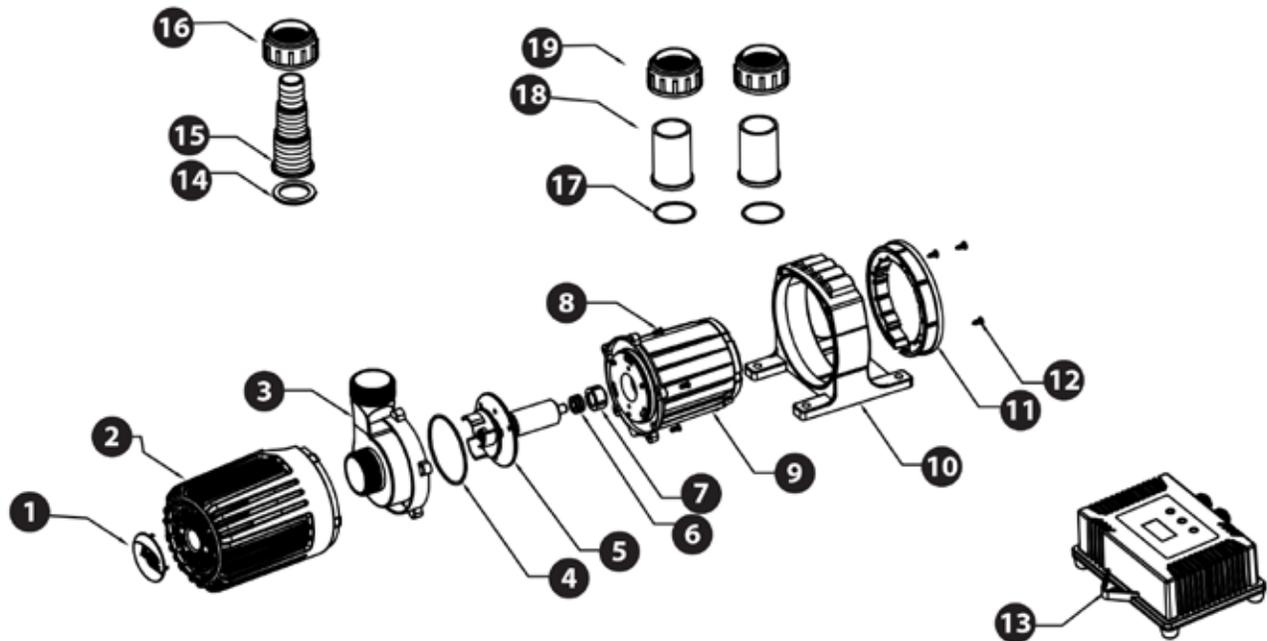
- ⚠ **WARNING:** Risk of electric shock – This pump has not been approved for use in swimming pool or marine areas-
- ⚠ **WARNING:** To provide continued protection against risk of electric shock, connect to properly grounded, ground fault circuit interrupter (GFCI) outlets only, using the following guidelines:
  - (A) Read and follow all safety instructions and all the important notices on the appliance before using the pump. Failure to do so may result in loss of fish life and/or damage to this appliance.
  - (B) Have a qualified electrician install a properly grounded receptacle outlet, acceptable for outdoor use and protected from snow and rain.
  - (C) Any wiring of pumps should be performed by a qualified electrician to ensure code compliance and user safety.
  - (D) This is a pond pump. This pump has been evaluated for use with water only. Do not use this pump for other than intended use (i.e.: Do not use in swimming pools, aquariums, etc. Not to be used as a sump pump).
  - (E) Do not use this pump in swimming pools or other situations where people are immersed
  - (F) If an extension cord is necessary, ensure connection is watertight and dust proof. A cord with proper rating should be used. A cord rated for less amps or watts than the appliance rating may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled. The connection should be carried out by a qualified electrical installer.
  - (G) Unplug pump at receptacle outlet when not in use or before removal from pond.
  - (H) To reduce risk of electrical shock, all wiring and junction connections should be made per local codes. Requirements may vary depending on usage and location.
  - (I) Inspect the power cable before using. The power cable should be protected at all times to avoid punctures, cuts, bruises and abrasions. Never cut the cord.
  - (J) Never handle power cords with wet hands.
  - (K) To avoid injury, do not touch moving or hot parts.
  - (L) Do not use power cable to lift pump. (**See figure 1.1**)



Figure 1.1

- ⚠ **IMPORTANT:** Alpine Corporation is not responsible for losses, injury, or death resulting from a failure to observe these safety precautions, misuse or abuse of pumps or equipment.

# COMPONENTS AND PUMP PARTS



(Figure 2.1)

## Parts List: (Figure 2.1)

KEY - Part #A designates PXX1500, PXX3000.

Part #B designates PXX4000, PXX5300, PXX5300C

No.	Description	No.	Description
1	Stainless Steel Alpine Logo Insert	14A	1.5" O-Ring
2	Pre-filter Cage	14B	2" O-ring
3	Pump Front Cover	15A	1.5" Hose Fitting
4	O-Ring	15B	2" Hose Fitting
5	Impeller	16A	1.5" Plastic Nut
6	Ceramic Bearing	16B	2" Plastic Nut
7	Rubber Bearing	17A	1.5" O-Ring
8	(6) Stainless Steel Screw 1	17B	2" O-Ring
9	Pump Body	18A	1.5" Fitting
10	Handle	18B	2" Fitting
11	Counter Ring	19A	1.5" Plastic Nut
12	(3) Stainless Steel Screw 2	19B	2" Plastic Nut
13	Controller (available on select models)		

Parts can be ordered from the store where the pump was originally purchased.

# DISMANTLING AND REASSEMBLING

**WARNING:** Always unplug or disconnect all appliances in the pond from the electrical supply before installing, repairing, maintaining or handling the equipment in the water.

## Dismantling (See Figure 2.1 on page 3):

- A. Follow the safety instructions. Unplug the power cord.
- B. Remove the pre-filter cage (2) from the pump front cover (3).
- C. Unscrew the three screws (12) from the counter ring (11).
- D. Remove the pump body (9) with the pump front cover (3) from the handle (10).
- E. Remove the six pump housing screws (8). **See figure 2.2**
- F. Remove the pump front cover (3) from the pump body (9).
- G. Remove the impeller (5) from the pump body (9). **Important Note:** The impeller magnet (5) is powerful and will be pulled back towards the pump body (9) with great force. Ensure your fingers do not get clamped in the process. Be careful to not lose the O-ring (4), it will be attached to the pump body (9).
- H. Clean all parts with clear water and a soft sponge or cloth. **See figure 2.3**
- I. Replace defective parts (if any).



(Figure 2.2)

## Reassemble (See Figure 2.1 on page 3):

- A. Insert the impeller (3) back into the pump body (9) **Important Note:** The impeller magnet (3) is powerful and will be pulled back towards the pump body (9) with great force. Ensure your fingers do not get clamped in the process. **See figure 2.4**
- B. Replace the O-ring (4) and properly fit to the pump body (9).
- C. Check whether the impeller (3) can rotate freely.
- D. Replace the pump front cover (3) on the pump body (9) and then evenly tighten the six pump casing screws (8).
- E. Replace the pump body (9) with the pump front cover (3) back in the handle (10).
- F. Place the counter ring (11) and screw it back in place using the three stainless steel screws (12).
- G. Place the pre-filter cage (2) back on the pump front cover (3).
- H. Restart the pump in water after properly reinstalling all the components



(Figure 2.3)



(Figure 2.4)

# PUMP INFORMATION

Eco-Pump	Eco-Twist				
					
Model	<b>PXX1500</b>	<b>PXX3000</b>	<b>PXX4000</b>	<b>PXX5300</b>	<b>PXX5300C</b>
Maximum Flow Rate	1500 GPH/ 5700 LPH	3000 GPH/ 12000 LPH	4000 GPH/ 15000 LPH	5300 GPH/ 200000 LPH	2000-5300 GPH / 7500-200000 LPH
Maximum Head	11.5'	17.5'	19.5'	22.5'	22.5'
Motor Type	Magnet	Magnet	Magnet	Magnet	Magnet
Wattage	35	80	145	200	200
Power Cord Length	33'	33'	33'	33'	33'
Pump Discharge Diameter	1.5"	1.5"	2"	2"	2"
Pump Dimensions	10"L x 5"W x 6"H	10"L x 5"W x 6"H	13"L x 6"W x 7"H	13"L x 6"W x 7"H	13"L x 6"W x 7"H
Controller Dimensions	NA	NA	NA	NA	7"L x 6"W x 3"H
Pump Flow 5'	1006 GPH/ 3808 LPH	1851 GPH/ 7007 LPH	2694 GPH/ 10198 LPH	3582 GPH/ 13559 LPH	3582 GPH/ 13559 LPH
Pump Flow 10'	357 GPH / 1351 LPH	1039 GPH/ 3933 LPH	1458 GPH/ 5519 LPH	2408 GPH/ 9115 LPH	2408 GPH/ 9115 LPH
Pump Flow 15'	-	-	602 GPH/ 2279 LPH	1584 GPH/ 5996 LPH	1584 GPH/ 5996 LPH
Pump Flow 20'	-	-	259 GPH/ 980 LPH	681 GPH/ 2578 LPH	681 GPH/ 2578 LPH

## INSTALLATION

- Only operate the pump when it has water running through it. Failure to do so will overheat the pump and cause it to fail, thus voiding the warranty. **DO NOT OPERATE DRY!** If you are going to use your Eco-Twist™ pump “in-line” or “out of the water,” you must prime the pump before turning it on. Priming a pump means to feed water into the tubing both in and out of the pump, to help create a suction effect to draw the water from the source. Failure to do so may cause your pump to run dry, because of air in the system- which could cause the pump to appear not to be working and will eventually burn out the pump altogether. Remember, running an Eco-Twist™ pump dry voids the warranty!

- Be sure that the pre-filter cage is fully snapped shut (*See figure 3.1*). Failure to operate the pump without the pre-filter cage on will allow large debris to enter the pump, causing the pump to fail and voiding the warranty. To protect your fish or other pond wildlife from being sucked into the pump, it is highly recommended to not operate the pump without the pre-filter cage on.

- For models that come with an inline controller, please plug into your local power supply. If desired, please hang onto the wall using the notch at the top of the controller. Use the plus and minus buttons to adjust water flow and power button to turn the pump on or off.

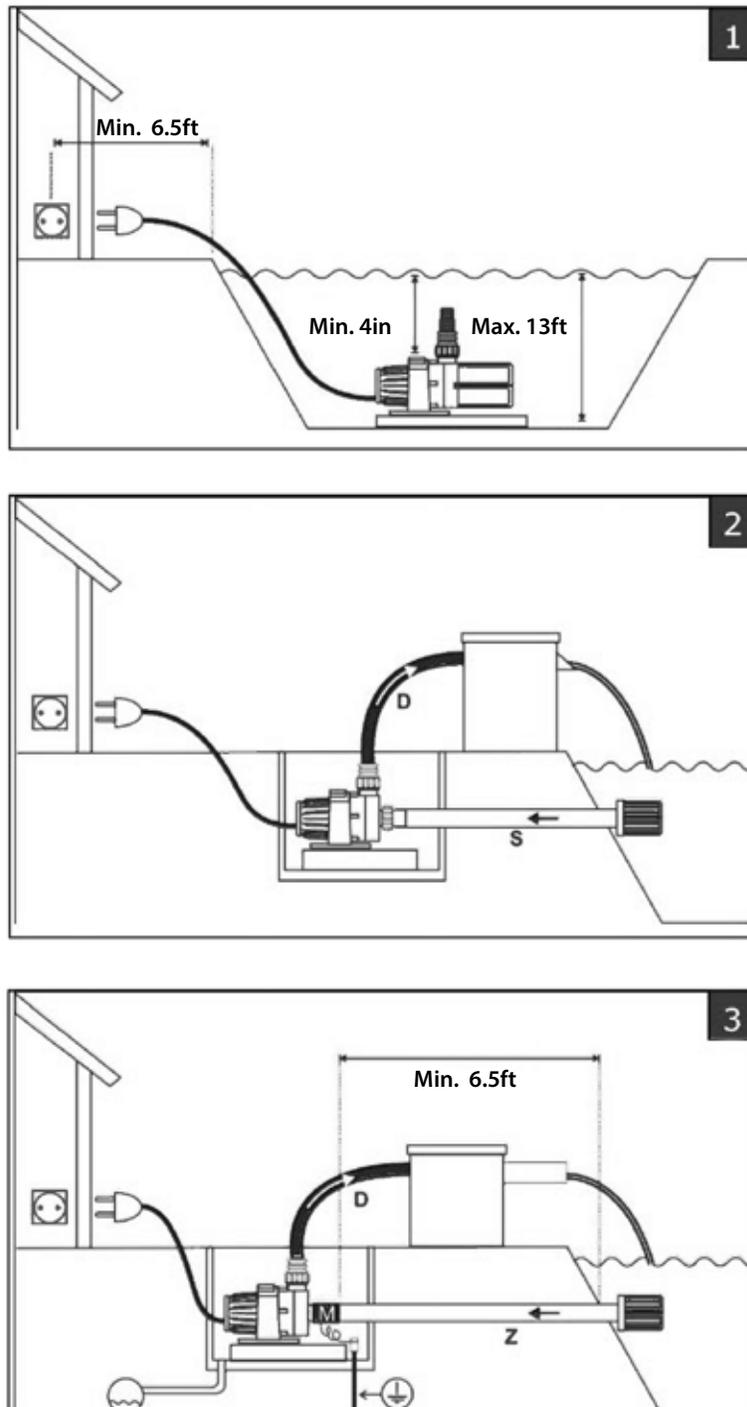
- Do not wear loose clothing that may become entangled in the impeller or other moving parts during installation.
- Keep clear of suction and discharge openings. **DO NOT** insert fingers in pump with power connected.
- Do not pump hazardous materials or liquids, such as oil, saltwater or organic solvents.
- Be sure no debris will block or restrict the pre-filter cage from water entering.



(Figure 3.1)

# TYPICAL INSTALLATION FOR YOUR POND

The Eco-Twist™ pump is designed to be submerged directly into the pond or out of the pond as long as water is running through the pump. To maximize pond circulation, locate the pump as far away as possible from the location of the water running into the water feature.



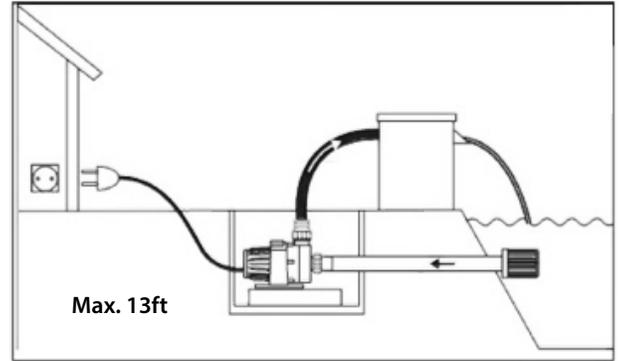
(Figure 4.1)

It is recommended that the pump is NOT positioned in the deepest area of the pond. This will protect the fish from suffocating by preventing the pond from completely draining in case of a leak in the tubing. Bricks or stones can be used, if needed, to raise the pump up off the bottom of the pond. The pump should be placed a maximum depth of 13 feet.

### Starting up Pumps Installed in Water (See Figure 4.1 on page 6)

**Important Note:** Do not run the pump dry as this can cause damage.

- A. Place the pump in the water and let it fill with water.
- B. To prevent unnecessary soiling, install the pump on a solid stone tile to ensure that it does not stand in sludge and suck it in.
- C. Ensure that there is at least 4 inches of water above the pump so that the pump cannot suck in air.
- D. The pump should not be immersed to a depth exceeding 13 feet under water.
- E. Turn the pump casing in the desired position and install the accessories on the threaded connection of the pump.
- F. Plug your pump into your local power supply and on select models you can control the flow rate from the controller. **See figure 4.2**



(Figure 4.2)



(Figure 4.3)

### Starting Pumps with Dry Installation (See Figure 4.1 on page 6)

The pump can also be installed outside the water.

- A. Remove the Pre-filter cage from the pump.
- B. Place the pump below the water level next to the pond, so that the water can flow into the pump (this pump is not self-priming).
- C. Turn the pump to the desired position and install a suction hose and output hose to the pump, to ensure air and water-tightness. **See figure 4.3**
- D. The suction hose must be completely filled with water before starting operation.
- E. Start the pump by plugging your pump into your local power supply and on select models you can control the flow rate from the controller.
- F. Tip: To protect the pump from soiling, the suction side must be provided with a pre-filter.

### Removal and Storage of Waste

Electrical home appliances should be disposed of according to US standards. The product should not be disposed of with normal household waste but should be collected separately. You are responsible to ensure that the appliance is returned to a specially designated collection point, to be dismantled and you're processed in an environmentally friendly manner.

For more information on local waste collection points, please contact the municipality under which your residence is covered.



# OPERATION AND MAINTENANCE

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**WARNING:** Always unplug or disconnect all appliances in the pond from the electrical supply before installing, repairing, maintaining or handling the equipment in the water.

## **To avoid shortening the life of the pump, follow these simple maintenance procedures:**

-Once a week, verify that the pump performance is satisfactory. If you detect a drop in pump performance (such as a decrease in water flow from the pump or to the waterfall) first clean the pump's pre-filter cage and tubing. If the water flow is still not fully restored to its original performance, clean the impeller and motor casing.

-The pump impeller includes a high quality ceramic shaft that provides long-lasting, reliable performance when properly maintained. However, extreme care should be taken when handling the shaft during maintenance. Avoid dropping or pressing too hard on it to avoid breakage or hairline fractures, which may cause the shaft to snap while in operation.

-This pump is suitable for use in water temperatures from 32 degrees Fahrenheit (0 degrees Celsius) to 95 degrees Fahrenheit (35 degrees Celsius).

-To keep the pump in long lasting working conditions, always replace any worn parts.

## **Pump Pre-Filter Cage**

Do not remove the pump's pre-filter cage while operating the pump. Failure to operate the pump without the pre-filter cage or operating the pump with a broken cage will allow large debris to enter the pump causing damage to the pump, thus voiding the warranty.



## **Pump Pre-Filter Cleaning**

We recommend inspecting your pump on a regular basis to ensure it is functioning properly. If you notice the water flow rate diminish, it may be due to the pump's pre-filter cage being blocked with debris. In many cases, the clogged filter cage can be cleaned by reaching into the pond and pulling the pump out of the water to remove the debris from the filter cage.

**Important Note:** Always disconnect the power before performing maintenance on the pump. Pull off any debris stuck to the pump pre-filter cage and/or use a garden hose to spray off any debris stuck to the filter cage.

# WINTER PUMP CARE

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In cold climates, Alpine highly recommends to store your pump inside during the coldest months of the year. You may still use your Eco-Twist™ pump during the winter time, but the Eco-Twist™ pump cannot be used in below freezing temperatures. This pump is suitable for use in water temperatures from 32 degrees Fahrenheit (0 degrees Celsius) to 95 degrees Fahrenheit (35 degrees Celsius).

Please follow the steps below:

1. Disconnect the plug cord from the power supply.
2. Disconnect the tubing connected to the fitting.
3. Clean the pump and pre-filter cage with fresh water and store the pump in a frost-free location in container full of water to prevent the O-rings from drying.



## TROUBLESHOOTING

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<b>Problem</b>	<b>Solutions</b>
1. If your pump has reduced water flow	<p>A. Pump or tubing may be clogged, check area around pump to be sure there is no debris blocking water from entering into the pump.</p> <p>B. It may be necessary to clean the pump pre-filter and impeller. For instructions on how to clean your pump please turn to page 4 &amp; 8.</p> <p>C. If none of the above solve your issue, the impeller needs to be replaced.</p>
2. If your pump hums and doesn't push water	<p>A. Pump or tubing may be clogged, check area around pump to be sure there is no debris blocking water from entering into the pump.</p> <p>B. It may be necessary to clean the pump pre-filter and impeller. For instructions on how to clean your pump please turn to page 4 &amp; 8.</p> <p>C. Make sure the pump is receiving the correct voltage.</p> <p>D. If none of the above solve your issue, the impeller needs to be replaced.</p>
3. If your pump has completely shut-off	<p>A. The ground-fault circuit interrupter (GFCI) may have tripped.</p> <p>B. Check the temperature of the water to ensure it's within the working temperatures.</p> <p>C. It may be necessary to clean the pump pre-filter and impeller. For instructions on how to clean your pump please turn to page 4 &amp; 8.</p> <p>D. If none of the above solve your issue, the impeller needs to be replaced.</p>
4. If your pump turns on and off	<p>A. Pump or tubing may be clogged, check area around pump to be sure there is no debris blocking water from entering into the pump.</p> <p>B. It may be necessary to clean the pump pre-filter and impeller. For instructions on how to clean your pump please turn to page 4 &amp; 8.</p> <p>C. Check the temperature of the water to ensure it's within the working temperatures.</p> <p>D. If none of the above solve your issue, the impeller needs to be replaced.</p>

# REPLACEMENT PARTS

Alpine Pump SKU#	Alpine Replacement Parts	Description
<b>Impeller</b>		
PXX1500	RPC118	Impeller for PXX1500
PXX3000	RPC120	Impeller for PXX3000
PXX4000	RPC124	Impeller for PXX4000
PXX5300	RPC126	Impeller for PXX5300
PXX5300C	RPC126	Impeller for PXX5300C
<b>O-Rings for Impeller</b>		
PXX1500	PXX1530-OR	O-Ring for PXX1500
PXX3000	PXX1530-OR	O-Ring for PXX3000
PXX4000	PXX4053-OR	O-Ring for PXX4000
PXX5300	PXX4053-OR	O-Ring for PXX5300
PXX5300C	PXX4053-OR	O-Ring for PXX5300C
<b>Fitting Set</b>		
PXX1500	PXX1530-FIT	Fitting for PXX1500 (includes (2) 1.5" plastic nuts, (2) 1.5" O-rings, 1.5" hose fitting, 1.5" fitting)
PXX3000	PXX1530-FIT	Fitting for PXX3000 (includes (2) 1.5" plastic nuts, (2) 1.5" O-rings, 1.5" hose fitting, 1.5" fitting)
PXX4000	PXX4053-FIT	Fitting for PXX4000 (includes (2) 2" plastic nuts, (2) 2" O-rings, 2" hose fitting, 2" fitting)
PXX5300	PXX4053-FIT	Fitting for PXX5300 (includes (2) 2" plastic nuts, (2) 2" O-rings, 2" hose fitting, 2" fitting)
PXX5300C	PXX4053-FIT	Fitting for PXX5300C (includes (2) 2" plastic nuts, (2) 2" O-rings, 2" hose fitting, 2" fitting)
<b>Pre-Filter Cage</b>		
PXX1500	PXX1530-PFC	Pre-Filter Cage for PXX1500
PXX3000	PXX1530-PFC	Pre-Filter Cage for PXX3000
PXX4000	PXX4053-PFC	Pre-Filter Cage for PXX4000
PXX5300	PXX4053-PFC	Pre-Filter Cage for PXX5300
PXX5300C	PXX4053-PFC	Pre-Filter Cage for PXX5300C
<b>Controller</b>		
PXX5300C	RPC122	Controller for PXX5300C