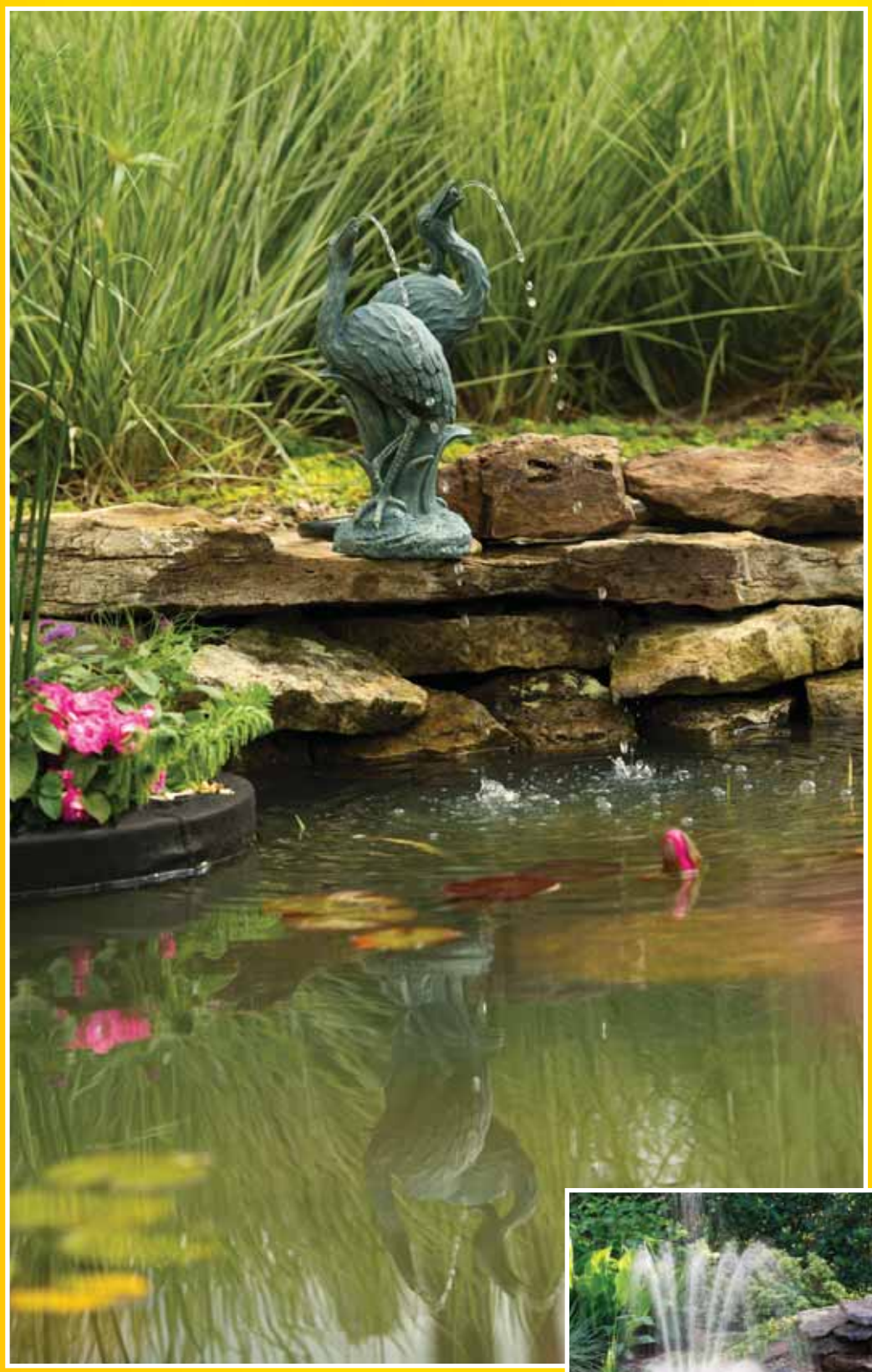


Laguna®

Beautifully simple water gardening

Guide to Water Gardening

Welcome to beautifully simple water gardening…

Water gardens are reflections of beauty that transform a backyard corner into a tranquil retreat. For many people there is great joy to be found in the process of creating a water garden.

The art of taking an area that consists of nothing more than dirt or grass and turning it into a beautiful wildlife habitat, lush garden that soothes the soul and tranquil paradise is nothing short of miraculous. **Water gardening reminds us to simplify.** Families can explore and get excited about nature together– it's part hobby, part meditative and part educational. Creating a tranquil paradise can be easy or very complex – the choices are endless.

Bring Home a Part of Nature

Today almost every homeowner can include some form of pond or water feature in their garden. But where does one start? The more information you have before you begin building your pond, the more pleasant the whole process becomes. To help you through the different options available, this guide walks you step-by-step though the entire process, from evaluating your needs and selecting the right equipment to adding plants & fish and maintaining a thriving eco-system. Be sure to look out for our "tip" icons throughout the guide that point out extra information.

With little effort, you too can easily create your own backyard oasis.

Table of Contents

Basic Principles

A successful pond relies on good planning right from the start. If you have never had a pond before, there are a few things to consider before rushing to the garden shed for your shovel. Where will it be located? How big will it be? Are you going to keep fish? Are there safety issues to consider? What pond equipment do you need to buy?

Taking a little time to familiarize yourself with the various types of water garden equipment, their purpose, and use can go a long way to ensuring a trouble-free water garden; problems can be avoided by carefully choosing the best range of equipment and materials for your needs.

Site Location

- The site should be shade free for about 5 to 6 hours per day. Too much shade will encourage algae growth.
- Avoid over hanging trees - decomposing leaves contaminate the pond; tree roots can potentially damage the liner and make digging more difficult.
- Avoid areas that always stay wet.
- Build as near as possible to a source of electricity and water.
- Position the pond where it can easily be observed and heard from the house.
- Use natural slopes in your yard to create waterfalls and other landscape designs.

Excavating

Depending on soil conditions and size, you may want to consider hiring a reputable contractor to excavate your pond area. Prior to excavating, contact your local utilities company to ensure that you do not disturb underground wiring or pipes. In the U.S. call 811 to contact your local DIG SAFE.

Safety

- Always use a circuit breaker with GFI rated electrical outlets with any pond equipment installation.
- Children are attracted to water - precautions should be taken to ensure your pond is safe for little visitors.
- Check with local building authorities about requirements for safety (fencing/depth), permits and inspection.

Pond Sizes

- **Up to 500 gallon ponds** let you get your feet wet by providing a serene area to enjoy small/medium pond plants. You can also have a small pump and maybe even a goldfish or two.
- **500 to 1500 gallon ponds** are a great place to start, not too big of a commitment. However, once you discover your enthusiasm for pond keeping, it won't be long before you're making plans to expand.
- **1500-3000 gallon ponds** will allow you to keep fish and a large variety of pond plants.
- **3000 gallon ponds and over** many people find water gardening and fish keeping to be the hobby of their dreams and will invest the time and money to get the maximum enjoyment out of their water garden.

POND SIZE BREAKDOWN	
S	**Small Pond** up to 500 U.S. gal (1890 L)
M	**Medium Pond** 500 to 1500 U.S. gal (1890 L to 5670 L)
L	**Large Pond** 1500 to 3000 U.S. gal (5670 L to 11350 L)
XL	**Extra-Large Pond** 3000 U.S. gal or more (11350 L or more)

Determine Your Pond Size

For Square or Rectangular Ponds (measurements in feet):

(Length x Width x Average Depth) x 7.5 = Total U.S. Gallons.

For Round Ponds (measurements in feet):

0.785 x (Top Dia. x Bottom Dia. x Depth) x 7.5 = Total U.S. Gallons.

To convert to liters, multiply U.S. gallons by 3.78

Pond *Style*

Water gardens can take whatever shape your imagination, site and budget allow. There are three basic style categories.

Container Gardens & Disappearing Fountains

Small features like these are exceptionally decorative additions to patio areas and existing gardens close to the house. They are the perfect choice for brightening up dark corners or dull spaces.

See pages 7, 21, 42 for related products.

Advantages:

- Minimal investment – can be created with any water tight container.
- Ideal for small spaces – patios, balconies, decks etc.
- Safer for households with young children.
- Can be set-up indoors or out.

Raised and Pre-Formed Ponds

Raised ponds add height and interest to flat areas in gardens, terraces and open patio spaces. Pre-Formed ponds are available in a variety of shapes and sizes and easily blend into both formal and natural garden settings. Choose a good quality one that comes with at least a 10 year guarantee.

See pages 8, 12, 13 for related products.

Advantages:

- Ideal for small or beginner ponds.
- Weekend project.
- Easy to install.
- Guaranteed to resist cracking, peeling and fading for ten years.

Flexible Liner Pond

Cost effective and long lasting, flexible EPDM liners allow maximum freedom when planning your water feature. Whether you want a natural pond or wish to create cascading waterfalls, liners offer near limitless design possibilities.

See pages 10, 12 for related products.

Advantages:

- Liner is flexible and allows more versatility in pond design; ideal for custom installations.
- UV stabilized.
- Excellent performance in cold climates.
- Ideal for making natural looking streams and waterfalls.
- Safe for fish and plants.

WATER GARDENING TIPS

Keep it natural – ensure that whatever style, size, and shape you decide on blends in with your landscape. Rocks should vary in size. Adding plants & fish will also bring an interest to a pond.

Building a Water Feature

Basic Principles

There are several construction options and a wide variety of equipment choices to be made when deciding to install a water feature or pond. The following DIY projects are intended to explain the process of installing the three main types of water features; container gardens, pre-formed and liner ponds. By visiting garden centers, talking to other pond enthusiasts and with careful planning and research you are sure of making a successful start with rewards that will last for years to come.

Project 1

Cultivate a Container Water Garden

You can experience the joys of a pond on your balcony or terrace with very little effort by creating a container water garden.

Begin by selecting a variety of plants and an interesting container. With the simple addition of a pump, you can create a customized water garden in any outdoor space. Ensure that the location receives five to six hours of sunlight every day.

- Ensure the container is water tight by using a sealant or liner.
- Fit pump with riser stem, fountain head and filter foam.
- Position the pump in the center of the container and add in the plants - use bricks or an old terracotta pot to prop plants and pump off the bottom, and so that the foliage and fountain head is above the waterline.
- Use planting bags to plant pond plants (as desired) – for plant types and planting instructions see page 34-36.
- Fill the container with water until the pump is completely submersed. Plug in the pump & adjust the flow of the fountain by turning the control on the riser stem.
- Finish off by adding floating plants.

Finished size:

- Varies due to container choice

Materials & equipment required:

- A container 12-to-24 inches wide by 12-to-16 inches deep or bigger.
- Laguna Starter Kit for Container Gardens PT8170.
- Flexible liner or sealant.
- Bricks.
- Decorative stones & pebbles.
- Laguna planting bags or baskets.
- Aquatic plants such as sweet flag, giant arrowhead, parrot feather & water lettuce.
- 5 to 6 hours of sunlight every day.

For product options be sure to visit www.lagunaponds.com.

WATER GARDENING TIPS

Top off with water every few days as water evaporates quickly.

Project 2

Installing a Pre-Formed Pond

Laguna pre-formed ponds are available in a wide variety of shapes, sizes and depths. These ponds can be installed in nearly any garden environment. Pre-forms are a quick and easy way to create a small tranquil pond that will last for years. Begin by choosing a pond style that best suits your garden and selected location.

Finished size and volume:

- Length: 90" (229 cm)
- Width: 58" (147 cm)
- Depth: 18" (46 cm)
- Capacity: 192 U.S. gal (727 L)

Materials & equipment required:

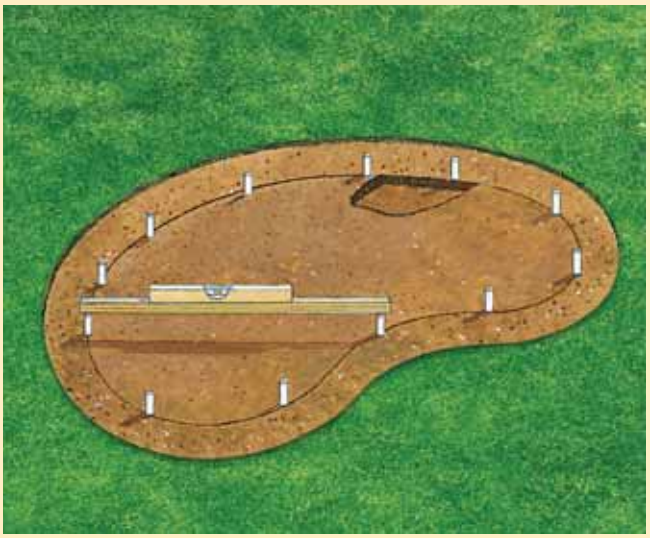
- Laguna Durashield Pre-Formed pond PT793* (or similar).
- Laguna PowerJet PT8204.
- Laguna Powerflo Max Underwater Biological Filter PT505.
- 1 ¼" Non Kink Tubing (4' +/-) (1.22 m +/-).
- Hose Clamps PT1354.
- Stone edging.
- Laguna submersible LED Pond Light Kit (optional).
- Pond plants such as sweet flag, giant arrowhead, parrot feather & water lettuce.

* Item number available in Canada only, visit www.lagunaponds to select different sizes to suit your application.

WATER GARDENING TIPS

Pre-formed ponds must have good all-round support. Be sure to tamp and compress the sand or soil between the hole and the sides of the pond.

- Place the pond in position and carefully mark out its shape with stakes. Don't turn the pond upside down to mark out the shape, as this give a mirror image of the pond and the hole will not match up.
- Position the pond right side up in the exact place you want it and use it as a guide or template while digging around the stakes. Make your outline 4 - 6 inches (10 - 15 cm) larger than the pond itself.



- Verify the first level and start digging down to the shelves.

- Reposition the pond, mark out the inner deeper section and continue digging out to the bottom. Be sure that the hole is slightly deeper than the actual depth of the preformed pond and verify that the bottom is level.
- Remove any loose stones or sharp objects from the hole and add about 2 inches (5.08 cm) of sand to the base level and shelves. This will protect the liner from damage due to exposed roots or rocks.

- Position the pre-formed into the hole and verify to ensure it is level.
- Back-fill any spaces left with sand or soil.
- Fill with water and leave to settle for at least a week before finishing off with your choice of edging.

Circulation & Filtration

With the pond installed it is time to connect the Powerjet pump to the Powerflo Max filter.

When initially installing the filter, remove and rinse all of its components. Cut desired length of flexible hosing. Cut the included Universal Click-Fit Connector to the correct size, then connect the hosing to the connector. Attach the Click-Fit to the filter coupling, it should click on securely. Place the pump in the pond ensuring that it is completely immersed in the water and securely installed on a level platform.

Maintenance is quick and easy because the filter can be conveniently located on one of the shallow shelves on the pond. It is easily accessed by disconnecting from the pump using the “Click-Fit” coupling. For complete installation instructions and for more pump and filter options visit www.lagunaponds.com

Project 3

Installing a Liner Pond

Because it offers an unlimited potential for design, durability, and low maintenance, installing a pond using a liner is one of the most popular construction methods. It is so easy to use that one person can install a small water garden with little effort. When choosing a liner for your pond, look for a high quality pond liner that is plant and fish safe and resistant to UV light.

Finished size and volume:

- Length: 10' (3.05 m)
- Width: 10' (3.05 m)
- Depth: 18" (46 cm)
- Capacity: 1,125 U.S. gal (4,259 L)

Time required:

- Approx. 8 to 10 hours

Materials & equipment required:

- Laguna EPDM Rubber Liner (15'x15' Boxed Liner) PT1475* (or similar). Laguna Geo Textile (15'x15') PT1458.
- Laguna ClearFlo kit 1400/5000 PT266.
- 1 ¼" Non-Kink tubing (25' +/-) (7.62 m +/-).
- Hose Clamps (2 pkgs) PT1354.
- Stone edging.
- Laguna submersible LED pond light kit (optional).
- Pond plants such as sweet flag, giant arrowhead, parrot feather & water lettuce.

* Item number available in USA only, visit www.lagunaponds to select different sizes to suit your application.

Calculating the size of liner you require:

It can be very easy to under estimate the size of the liner you require and it is worthwhile to outline the shape of your pond using string, wooden pegs or garden hose to help take accurate measurements. To allow for the slope of the sides, shelves and overlap needed, follow this simple formula to calculate your liner size requirements:

IN FEET: **Length** = (Depth x 2) + Length + 2' (for overlap)
Width = (Depth x 2) + Width + 2' (for overlap)

IN METERS: **Length** = (Depth x 2) + Length + 0.6m (for overlap)
Width = (Depth x 2) + Width + 0.6m (for overlap)

Use the provided notes page and graph on page 50 to help with your planning.

Excavating

Outline your pond shape; avoid sharp corners as they will impede optimum filtration.

Design a series of levels or shelves:

- A small shelf should be made around the same width as the stone being used for the edging of the pond. This can often be achieved by removing a layer of sod. This first shelf is used to hide the liner and allows for the water level to be above the first layer of rock: generally 4" (10 cm) deep and 8" to 10" (20 – 25 cm) wide.
- The next shelf is used for planting marginal and/or bog plants: generally 8"-12" (20 – 30 cm) deep, 8"-10" (20 – 25 cm) wide.
- A 12" (30 cm) steep step helps deter predators such as raccoons.
- You may want to create a step for pond access - the step does not need to be created around the entire pond.
- The sides of the pond should be kept at a 90 degree angle to the bottom and not sloped to avoid predators from entering the pond.
- Depending on the region you live in, fish can be kept in ponds as shallow as 18" (45.7 cm). Koi will require depths of 36" (91.4 cm) and more.

To make a liner more flexible and easy to handle, briefly let it warm in the sun. Do not lay the liner on your lawn to warm; the heat will quickly damage your grass.

Installing the liner

- Ensure that the plant shelves as well as the edges of the hole are level from side to side and end to end. Remove any stones or other sharp objects that may puncture the liner.
- Spread a layer of damp sand approximately 2" (5 cm) thick over the bottom and ledges and then cover with Geo Textile underlay (see page 12) – this will help protect the liner from sharp stones or tree roots.
- Position the liner evenly over the hole letting it warm in the sun briefly to make it more flexible and easier to handle. Ensure that the center touches the base of the excavated hole.
- Place brick around the overlap. Leave a minimum of 2' (0.6 m) of overlap around the outer edge of the pond. Begin filling the pond with water. The liner will stretch and mold itself to the shape of the pond. As the liner settles, adjust the bricks as needed.
- When the pond is full, trim off any excess liner leaving an overlap of at least 6" (15 cm). The surplus liner can be hidden beneath rocks or flat stones used to edge the pond. Paving slabs should protrude slightly over the pond to hide the liner from view.
- Finish it off with the ClearFlo Kit pump and filter system.

Circulation & Filtration

With the pond installed it is time to install the Clearflo kit.

Choose a suitable location for your Pressure-Flo filter, either above or in-ground. To avoid overheating do not cover the filter. Ensure you have full access to the lid of the unit for maintenance. Pressure-Flo filters are equipped with 3 Universal Click-Fit Couplings (see page 33), which makes connecting and disconnecting the hosing fast and easy. Connect flexible hosing to the Click-Fit Couplings and secure with hose clamps. Connect the outlet of the Max-Flo pump to the water inlet filter (where the water enters the filter). Hosing attached to the water outlet can be placed directly into the pond or used to create a waterfall. The end of the outlet hosing should be placed as far away from the pump inlet as possible to maximize water circulation in the pond.

For complete installation instructions and for more pump and filter options visit www.lagunaponds.com

Building a Waterfall

A waterfall will add a visual interest and the soothing sound of water. Build in layers or steps, using either a natural slope or the soil from digging out the pond.

Depending on the amount of space available or the desired effect, the steps can be long or short. In order to create a natural water flow toward the pond, ensure that the steps are level and have a slight pitch forward.

Position underlayment and pond liner over the waterfall and/or stream; two pieces of liner with Laguna Seaming Tape (see page 12) can be used if a single piece of liner for both the pond and waterfall is not an option. Place the pond liner in position, first making sure that a portion (1'-2') of the liner is covering the waterfall. A second piece of liner can then be used to cover the waterfall/stream overlapping the pond liner.

Position rocks on the waterfall, placing large flat rocks on the bottom to create a solid base. Continue stacking, keeping rocks level and staggered. Use Laguna Waterfall Foam to seal gaps between and behind the rocks in order force water over the top of the rocks.

Making The Right Choice

Choosing a liner or pre-form may be one of the most important decisions to make regarding the construction of a pond. Laguna liners and pre-forms are ideal for the do-it-yourselfer. Liners provide the most flexibility when designing a unique or custom shaped pond, while pre-formed ponds are a popular choice when space is limited and are best suited for small ponds and water features.

45 mil EPDM Liner

Laguna 45 mil EPDM pond liners by Firestone are specifically designed for pond use. Unlike roofing rubber liner which can contain harmful oils and fungicide, Laguna pond liner is safe and non-toxic for plant and fish, is excellent in cold climates and UV stabilized. Highly flexible, the liner easily conforms to pond curves and shelves. Laguna liners are available in pre-cut, mini and industrial rolls. Be sure to ask your Laguna retailer for sizing options.

GUARANTEED FOR 20 YEARS • 20 • fish & plant safe

Calculating a Pond Liner Size:

IN FEET:
Length = (Depth x 2)+ Length + 2' (for overlap).
Width = (Depth x 2) + Width + 2' (for overlap).

IN METERS:
Length = (Depth x 2) + Length + 0.6 m (for overlap).
Width = (Depth x 2) + Width + 0.6 m (for overlap).

When Shopping Don't Forget...

Seaming Tape Kit*

A leak proof and lasting way to seal overlapping liners

* USA ONLY

PT1414

Geo Textile

Ideal for protecting liner from damage due to exposed roots or rocks.

Liner Repair Kit*

Repairs liner if puncture or tear occurs.

PT1445

* USA ONLY

Black Waterfall Foam

Ideal for use when constructing a pond and/or waterfall. Use it to attach rocks to spillways and to direct water over the falls. Blends in with the pond setting.

fish & plant safe

PT590

Durashield

GUARANTEED FOR 10 YEARS • 10

Pre-Formed Ponds for In-Ground Installation**

Made of high molecular weight polyethylene, pre-formed ponds are UV stabilized and designed to withstand heavy water loads, hot summers and frigid winters. A wide range of shapes, sizes and depths are available. Many come with pre-contoured shelves and steps. All are resistant to cracking, peeling and fading and are safe for fish, plants and wildlife.

** Canada only

Basins

For In-Ground or Above-Ground Installations

Basin ponds are perfect for small spaces. Quick and easy to install they provide an attractive water display almost anywhere around the garden, porch and even indoors.

Ideal for overwintering fish

Reservoir for Decorative Water Feature

8 U.S. gal. (30 L).

The ideal in-ground water collection reservoir for fountains, ornaments and small pre-formed waterfall systems. Solid, heavy-duty construction supports ornamental fountains.

Removable lid and access points make installation and maintenance easy. Will not rust. Includes convenient carrying handles.

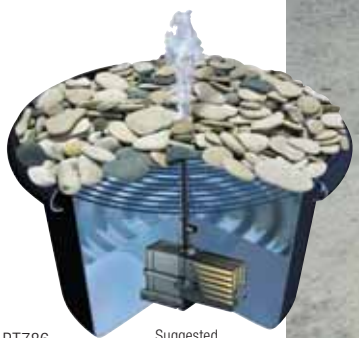
PT242

*Fountain and pump sold separately.

Round Water Basin

18 U.S. gallons (68 L).

Basin-type ponds are perfect when space is limited. Easy to install and can be set-up in minutes to showcase an attractive water feature almost anywhere around the house, garden, porch or deck. Ideal for apartments and condos.



PT786

Suggested installation. Pump and wire grill sold separately.

Pumps... the heart of your pond

Almost every form of water garden design begins with a pond pump. Several types of pond pumps exist, and you can be sure that there is a pump that will suit your particular needs. Whatever pump you decide is right for your pond, it is important to keep in mind that you select a pump suitable for pond use. Typically pumps not designed for ponds are not as efficient (costing you more money in the long run) and will burn out quickly.

Powerful, innovative and reliable, Laguna pumps have earned a reputation for energy efficiency, high performance and lasting durability.

Oil free magnetic drive pumps

POWERJET PUMPS

For fountains & waterfalls

Versatility is a key feature for the PowerJet range. Pump kits come complete with a riser stem, two fountain jets plus additional provisions to power filtration and other forms of pond equipment.

See page 16 for product information.

SKIMMER PUMP

For skimmers & waterfalls

Heavy duty pump designed for use inside a pond skimmer to continuously move large volumes of water efficiently through filtration systems, waterfalls, streams or fountains. Laguna's Skimmer Pumps' space saving vertical design allows it to fit in virtually any skimmer.

See page 23 for product information.

SUBMERSIBLE PUMPS

For fountains, statuary and hydroponics

Robust and reliable, very low electrical consumption, low profile and quiet operation.

See page 22 for product information.

MAX-FLO PUMPS

For waterfalls and filters

Max-Flo pond pumps provide the ultimate in solids handling technology. Designed for use with waterfalls and additional filtration, the Max-Flo passes solids up to 10 mm directly to your filter. High power specification and proven reliability makes the Max-Flo the ideal choice for any non-fountain system.

See page 18 for product information.

FOUNTAIN PUMP KITS

For fountains and waterfalls

Reliable and high performance at an affordable price. Pumps come with extendible riser stem and two interchangeable fountain heads.

See page 20 for product information.

STATUARY PUMPS

For statuary fountains

Small but mighty, these pumps generate an amazing amount of water circulation. For small indoor/outdoor fountains and waterfalls.

See page 22 for product information.

Working it out...

Before purchasing a pump, you must first determine how much work it will need to do. Will it just circulate water or will it pump water through a UV sterilizer, waterfall, fountain, ornament or filter (or a combination). By selecting a capacity slightly greater than your initial needs, you can build up a complete system bit by bit without needing to upgrade your pump.

WATER GARDENING TIPS

In order to **calculate the amount of electricity** needed and the approximate cost of running a pump (based on your local utility rates) use the following formula: **watts X 24 hours X 30 days ÷ 1000 = number of kilowatts per month X cost per kilowatt hour = your total monthly cost** of operating the pump.

STEP 1: Determine Head Height

A. Fountain
Distance in feet from pond surface to top of water fountain head.

A. Fountain = _____ ft

B. Waterfall
Distance in feet from pond surface to top of waterfall.

B. Waterfall = _____ ft

C. Hosing
Add 1 foot of head height for every 10 feet of hosing.

C. Hosing = _____ ft

Step 1: Total Head Height (A+B+C) = _____ ft

STEP 2: Determine Flow Rate - Gallons per Hour (GPH)

D. Calculate Pond Volume (average dimensions of your pond)

Square (or rectangle)

Length (ft.) _____ x Width (ft.) _____ x Depth (ft.) _____

x 7.5 = _____ Gal. ÷ 2 = _____ GPH

- OR -

Round

0.785 x Top Diameter (ft) _____

x Bottom Diameter (ft) _____ x Depth (ft) _____

x 7.5 = _____ Gal. ÷ 2 = _____ GPH

Subtotal (D) = _____ **GPH**

E. Width of Waterfall (at top of waterfall). A waterfall requires 75 to 100 GPH flow rate for every inch of width of waterfall*

Waterfall width _____ inches x 75 (GPH)

Total Waterfall GPH (E) = _____ **GPH**

Step 2: Total Flow Rate (D+E) = _____ **GPH**

STEP 3: Selecting a Pump

Depending on which type pump you choose, look at the Head Height Charts for each pump model (see pages 17 to 22). Find your total head height (from step 1). Move horizontally across the chart until the flow rate is equal or greater to the Total GPH (from step 2). This is the minimum size pump needed.

*Remember the figures are approximate and based on maximum output in ideal conditions. Extra wide waterfalls or additional spouting ornaments will require a more powerful pump.

Powerjet

Maximum performance
Beautiful water features

PowerJet pumps are powered by European-engineered, magnetic-driven motors that are unequaled in the market for their ability to generate large volumes of water movement at low energy costs. The pump rests inside a strainer cage that pre-filters and protects from clogging, reducing maintenance. Easy to install and operate, the pumps are completely submersible and have been engineered to run continuously.

Each of the PowerJet Fountain/Waterfall Pump Kits includes everything you need to create striking water features; an energy efficient PowerJet pump, riser stem, two fountain heads, and dual flow control valves that control water flow to the fountain head and waterfall.

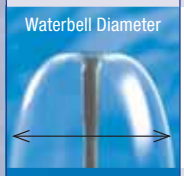
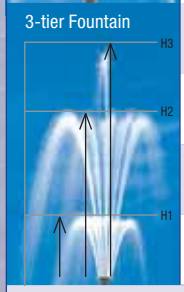
With Energy Saving Smart Pump Technology*

The pumps now feature a new generation of smart pump technology (SPT), an integrated self-regulating system that continuously monitors the pumps performance, impeller direction, hydraulics and force, resulting in one of the most powerful, energy efficient pumps you can buy.

Optional Foam Jet Fountain Head
S/M/L - PT670 • M/L - PT672

1. Two quality fountain head options 3-Tier & Waterbell style.
2. Extendable riser stem allows for multiple height options
3. Pivoting joint facilitates vertical leveling of riser stem/fountain head
4. Dual flow control diverter valve enables independent water flow adjustment between fountain head and waterfall.
5. Click-Fit coupling provides quick and easy hose connections.
6. Convenient keyhole cutouts allow cage to be easily affixed to flat surface for added stability.
7. Solid ergonomic handle for easy transportation and safe grip.
8. Large intake surface to reduce water speed & restrict clogging for maximum pump protection.

POWERJET PUMP SPECIFICATIONS - 60 Hz

	S	M L	L XL	XL	XL	XL
POWERJET	**600/2200 PT8200**	**960/4000 PT8204**	**1350/5000 PT8208**	**2000/7600 PT8212**	**2400/9000 PT8216**	**2900/11000 PT8220**
Maximum Flow Rate	600 US GPH (2200 LPH)	960 US GPH (3650 LPH)	1350 US GPH (5100 LPH)	2000 US GPH (7500 LPH)	2400 US GPH (9000 LPH)	2900 US GPH (11000 LPH)
Maximum Head Height	5'10" (1.8 m)	6'6" (2 m)	11'5" (3.5 m)	11'5" (3.5 m)	12' (3.7 m)	14'8" (4.5 m)
Maximum Pond Volume	1200 US gal (4400 L)	1920 US gal (7300 L)	2700 US gal (10200 L)	4000 US gal (15000 L)	4800 US gal (18000 L)	5800 US gal (22000 L)
Wattage	32 W	57 W	75 W	80 W	84 W	112 W
Voltage	120V/60Hz	120V/60Hz	120V/60Hz	120V/60Hz	120V/60Hz	120V/60Hz
Amperage	0.45 A	1.1 A	1.2 A	1.25 A	1.25 A	1.8 A
Power Cord Length	16' (5 m)	16' (5 m)	16' (5 m)	16' (5 m)	16' (5 m)	25' (7.5 m)
Outled Adapter Diameter	¾", 1", 1 ¼" (19, 25, 32 mm)	¾", 1", 1¼" (19, 25, 32 mm)	¾", 1", 1¼" (19, 25, 32 mm)	¾", 1", 1¼" (19, 25, 32 mm)	¾", 1", 1¼" (19, 25, 32 mm)	¾", 1", 1¼" (19, 25, 32 mm)
 Waterbell Diameter	27.56" (70 cm)	31.5" (80 cm)	35.43" (90 cm)	47.24" (120 cm)	51.18" (130 cm)	59.05" (150 cm)
 3-tier Fountain	H1 / 15.75" 40 cm	H1 / 27.56" 70 cm	H1 / 43.3" 110 cm	H1 / 35.43" 90 cm	H1 / 39.37" 100 cm	H1 / 47.24" 120 cm
	H2 / 29.53" 75 cm	H2 / 39.38" 100 cm	H2 / 63" 160 cm	H2 / 59.05" 150 cm	H2 / 64.96" 165 cm	H2 / 74.80" 190 cm
	H3 / 45.28" 115 cm	H3 / 55.12" 140 cm	H3 / 84.65" 215 cm	H3 / 78.74" 200 cm	H3 / 86.61" 220 cm	H3 / 98.43" 250 cm
	Max. diam. 23.62" / 60 cm	Max. diameter 27.56" /70 cm	Max. diameter 55.12" / 140 cm	Max. diameter 63" / 160 cm	Max. diameter 63" / 160 cm	Max. diameter 66.93" / 170 cm

HEAD HEIGHTS

HEAD HEIGHT	FLOW RATE (US GPH)					
15 ft						14' 8" (Max.)
14 ft						872
13 ft					12' (Max.)	1110
12 ft			11' 5" (Max.)	11' 5" (Max.)	132	1281
11 ft			190	518	660	1440
10 ft			269	779	924	1585
9 ft			436	943	1135	1717
8 ft			579	1110	1320	1862
7 ft		6' 6" (Max.)	618	1220	1479	1994
6 ft	5' 10" (Max.)	109	679	1360	1664	2140
5 ft	137	357	761	1442	1796	2245
4 ft	254	489	991	1553	1954	2385
3 ft	351	647	1062	1664	2060	2496
2 ft	433	819	1165	1775	2193	2636
1 ft	515	925	1300	1889	2298	2718
0 ft	600	960	1350	2000	2400	2900
POWERJET	**600/2200 PT8200**	**960/4000 PT8204**	**1350/5000 PT8208**	**2000/7600 PT8212**	**2400/9000 PT8216**	**2900/11000 PT8220**

*excluding model # PT8200 & PT8204

Max-Flo

Solids Handling Capability

Max-Flo Waterfall & Filter Pumps are designed to process water loaded with suspended solids (up to 10 mm) directly to a suitable external filter system; which then traps any debris that may potentially pollute pond water, effectively filtering the pond. Powered by European-engineered, magnetic-driven motors, Max-Flo pumps are completely submersible and generate an outstanding amount of water flow, reliably at low energy costs. Suitable for multiple fresh-water pond applications including pressurized filters, surface skimming filters, filter falls, and for creating waterfalls and watercourses.

With Energy Saving Smart Pump Technology*

The pumps now feature a new generation of smart pump technology (SPT), an integrated self-regulating system that continuously monitors the pumps performance, impeller direction, hydraulics and force, resulting in one of the most powerful, energy efficient pumps you can buy.

1. Strainer cage protects impeller, assures continuous waterflow, and reduces risk of clogging.
2. Cage openings up to 3/8" (9 mm)* in diameter for dependable solids handling capability. *(depending on the pump model).
3. Click-Fit coupling provides quick and easy hose connections.
4. Unique two-level suction capability, through upper and lower casing, for maximum water flow.
5. Convenient keyhole cutouts allow cage to be easily affixed to flat surface for added stability.
6. High stability as a result of extremely flat shape (low center of gravity).
7. Solid ergonomic handle for easy transportation and safe grip.

MAX-FLO PUMP SPECIFICATIONS - 60 Hz

	S	M L	L XL	XL	XL	XL	XL
MAX-FLO	**600/2200 PT8232**	**960/4000 PT8236**	**1350/5000 PT8240**	**2000/7600 PT8244**	**2400/9000 PT8248**	**2900/11000 PT8252**	**4280/16500 PT8256**
Maximum Flow Rate	600 US GPH (2200 LPH)	960 US GPH (3650 LPH)	1350 US GPH (5100 LPH)	2000 US GPH (7500 LPH)	2400 US GPH (9000 LPH)	2900 US GPH (11000 LPH)	4280 US GPH (16200 LPH)
Maximum Head Height	5'10" (1.8 m)	6'6" (2 m)	11'5" (3.5 m)	11'5" (3.5 m)	12' (3.7 m)	14'8" (4.5 m)	14'8" (4.5 m)
Maximum Pond Volume	1200 US gal (4400 L)	1920 US gal (7300 L)	2700 US gal (10200 L)	4000 US gal (15000 L)	4800 US gal (18000 L)	5800 US gal (22000 L)	8560 US gal (32400 L)
Wattage	32 W	57 W	75 W	80 W	84 W	112 W	160 W
Voltage	120V/60Hz	120V/60Hz	120V/60Hz	120V/60Hz	120V/60Hz	120V/60Hz	120V/60Hz
Amperage	0.45 A	1.1 A	1.2 A	1.25 A	1.25 A	1.8 A	3.2 A
Power Cord Length	16' (5 m)	16' (5 m)	16' (5 m)	16' (5 m)	16' (5 m)	25' (7.5 m)	25' (7.5 m)
Outlet Adapter Diameter	¾", 1", 1 ¼" (19, 25, 32 mm)	¾", 1", 1 ¼" (19, 25, 32 mm)	¾", 1", 1 ¼" (19, 25, 32 mm)	¾", 1", 1 ¼", 1 ½" (19, 25, 32, 38 mm)	¾", 1", 1 ¼", 1 ½" (19, 25, 32, 38 mm)	¾", 1", 1 ¼", 1 ½" (19, 25, 32, 38 mm)	1 ¼", 1 ½" (32, 38 mm)
Solids Handling Size	1/4" (6 mm)	1/4" (6 mm)	1/4" (6 mm)	5/16" (8 mm)	5/16" (8 mm)	5/16" (8 mm)	3/8" (10 mm)

HEAD HEIGHTS

HEAD HEIGHT	**FLOW RATE (US GPH) - 60Hz**						
15 ft						14' 8" (Max.)	14' 8" (Max.)
14 ft						872	925
13 ft					12' (Max.)	1110	1268
12 ft			11' 5" (Max.)	11' 5" (Max.)	132	1281	1530
11 ft			190	518	660	1440	1696
10 ft			269	779	924	1585	1968
9 ft			436	943	1135	1717	2219
8 ft			579	1110	1320	1862	2483
7 ft		6' 6" (Max.)	618	1220	1479	1994	2647
6 ft	5' 10" (Max.)	109	679	1360	1664	2140	2935
5 ft	137	357	761	1442	1796	2245	3223
4 ft	254	489	991	1553	1954	2385	3487
3 ft	351	647	1062	1664	2060	2496	3598
2 ft	433	819	1165	1775	2193	2636	3836
1 ft	515	925	1300	1889	2298	2718	3971
0 ft	600	960	1350	2000	2400	2900	4280
MAX-FLO	**600/2200 PT8232**	**960/4000 PT8236**	**1350/5000 PT8240**	**2000/7600 PT8244**	**2400/9000 PT8248**	**2900/11000 PT8252**	**4280/16500 PT8256**

*excluding model # PT8232 & PT8236

WATER GARDENING TIPS

In order to **calculate the amount of electricity** needed and the approximate cost of running a pump (based on your local utility rates) use the following formula: **watts X 24 hours X 30 days ÷ 1000 = number of kilowatts per month X cost per kilowatt hour = your total monthly cost of operating the pump.**

Cleaning the pump impeller regularly will extend pump performance and overall pump life.

Visit www.lagunaponds.com for more information.

PowerJet
Fountain/Waterfall Pump Kits

These pumps feature a European-engineered magnetic-drive motor for continuous and reliable water circulation at low energy costs. The pump comes complete with a riser stem and two interchangeable fountain heads and a diverter valve to create spectacular waterfalls.

1. Two fountain heads (3-tier & Waterbell).
2. Riser stem.
3. 1/2" (13 mm) diverter valve for waterfalls.
4. Strainer cage & foam.
5. Removable base.

PT322*

Fountain Pump Kits

For fountains and waterfalls

Reliable at an affordable price.
Pumps come with extendible riser stem, two interchangeable fountain heads and a 3/4" (19 mm) diverter valve for waterfalls.

1. Two fountain heads.
   - waterbell & 2-tier (PT8150)
   - waterbell & 3-tier (PT8155/PT8160)
2. Extendable riser stem.
3. Adjustable water flow. (PT8160 only)
4. Front strainer cage protects the impeller.
5. Removable suction cup base.

PT8155

POWERJET AND FOUNTAIN PUMP SPECIFICATIONS

	S	S	M	M
MODEL	**215/810 PT322***	**PT8150**	**PT8155**	**PT8160**
Maximum Flow Rate	215 US GPH (810 LPH)	185 US GPH (700 LPH)	400 US GPH (1500 LPH)	529 US GPH (2000LPH)
Maximum Head Height	4'3" (1.3 m)	3' (0.9 m)	5' 3" (1.6 m)	6' 6" (2.0 m)
Maximum Pond Volume	430 US gal (1620 L)	370 US gal (1400 L)	800 US gal (3000 L)	1058 US gal (4000 L)
Wattage	11 W	13.5 W	25 W	37 W
Voltage	120V/60Hz	120V/60Hz	120V/60Hz	120V/60Hz
Amperage	0.15 A	0.25 A	0.45 A	0.73 A
Power Cord Length	16' (5 m)	33' (10 m)	33' (10 m)	33' (10 m)
Inlet Diameter	3/4" (19 mm)	1" (25 mm)	1" (25 mm)	1 1/4" (32 mm)
Outlet Diameter	1/2" (13 mm)	5/8" (16 mm)	3/4" (19 mm)	3/4" (19 mm)
HEAD HEIGHT				
6 ft				72
5 ft			95	176
4 ft	21		148	246
3 ft	82	77	218	330
2 ft	132	120	276	392
1 ft	177	160	330	462
0 ft	215	185	400	550

*This item is only available in Canada

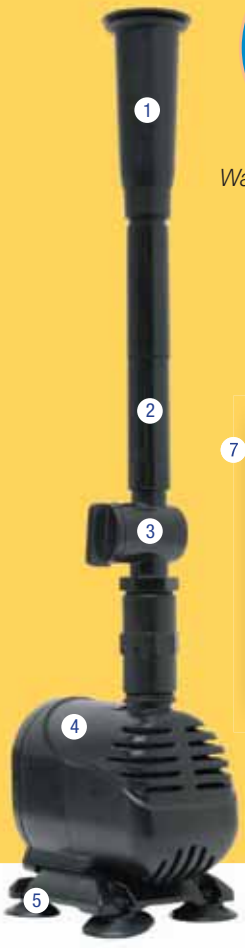
Starter Kit for Container Gardens and Small Ponds

Transform any watertight container into a mini pond with the Laguna Starter Kit for container gardens and small ponds. Easy to install, the kit comes complete with a pump, prefilter foam, and fountain head assembly. The pump features a flow control to alter the flow allowing you to create a customized look in your container garden. Can be used indoors and outdoors.
The kit is also ideal for small pre-formed ponds.

1. Waterbell fountain head.
2. Riser stem.
3. Flow control.
4. Stainer cage protects impeller.
5. Removable suction cup base.
6. Filter foam.
7. Inspirational project guide.

See page 7 for a quick and easy project

Waterbell Fountain Head



PT8170

IDEAL FOR

PT1130

Table Top Pump

Ideal for producing reliable water circulation in indoor tabletop fountains. This compact yet powerful pump consumes very little electricity. The pump includes an adjustable control to adjust waterflow. European-engineered, the motor is quiet, energy efficient and maintenance-free.

Statuary Pumps

Powerful water circulating pumps for small indoor/outdoor statuary fountains and waterfalls. European-engineered motors requiring low wattage, which translates into low electrical consumption. Small but mighty, these pumps generate an amazing amount of water circulation.

Submersible Pumps

For fountains, statuary and hydroponics

Robust and reliable, very low electrical consumption, low profile and quiet trouble free operation. Minimal maintenance required, oil free, magnetic driven motor and easy to install.

PT294

PT305

PT8120

MINI TABLE TOP, STATUARY & SUBMERSIBLE PUMP SPECIFICATIONS - 60 Hz

	S	S	S	S	S	S	S	S M	S M
	PT294	**PT305**	**PT310**	**PT8100**	**PT8105**	**PT8110**	**PT8115**	**PT8120**	**PT8125**
Maximum Flow Rate	80 US GPH (300 LPH)	214 US GPH (810 LPH)	384 US GPH (1454 LPH)	80 US GPH (300 LPH)	120 US GPH (454 LPH)	200 US GPH (760 LPH)	470 US GPH (1780 LPH)	660 US GPH (2500 LPH)	750 US GPH (2800 LPH)
Maximum Head Height	21.6" (55 cm)	51" (130 cm)	67" (170 cm)	28.7" (73 cm)	70" (178 cm)	90.5" (230 cm)	94.5" (240 cm)	114" (290 cm)	149.5" (380 cm)
Maximum Pond Volume	160 US gal (600 L)	428 US gal (1620 L)	768 US gal (2908 L)	160 US gal (600 L)	240 US gal (908 L)	400 US gal (1520 L)	940 US gal (3560 L)	1320 US gal (5000 L)	1500 US gal (5600 L)
Wattage	4.5 W	11 W	19 W	7.8 W	19 W	31 W	52 W	70 W	113 W
Voltage	120V/60Hz	115V/60Hz	115V/60Hz	115V/60Hz	115V/60Hz	115V/60Hz	115V/60Hz	115V/60Hz	115V/60Hz
Amperage	0.04 A	0.10 A	0.17 A	0.065 A	0.16 A	0.26 A	0.44 A	0.6 A	0.98 A
Power Cord Length	6' (1.8 m)	6' (1.8 m)	6' (1.8 m)	6' (1.8 m)	6' (1.8 m)	6' (1.8 m)	6' (1.8 m)	17.7' (5.4 m)	17.7' (5.4 m)
Inlet Diameter	NA	3/4" (19 mm)	3/4" (19 mm)	N/A	N/A	N/A	N/A	N/A	N/A
Outlet Diameter	3/8" & 1/2" (9 mm & 13 mm)	3/8" & 1/2" (9 mm & 13 mm)	3/8" & 1/2" (9 mm & 13 mm)	0.4" (10.5 mm)	0.4" (10.5 mm)	0.5" (12.5 mm)	0.79" (20.3 mm)	0.79" (20.3 mm)	0.79" (20.3 mm)

HEAD HEIGHTS

HEAD HEIGHT	**FLOW RATE (US GPH)**								
13 ft									
12 ft									22
11 ft									126
10 ft									226
9 ft								52	319
8 ft							18	161	404
7 ft						19	109	255	482
6 ft					8	71	180	344	556
5 ft					42	107	235	429	615
4 ft		26	158		68	135	282	517	672
3 ft		84	221		84	159	322	591	720
2 ft		132	285	28	99	178	356	651	760
1 ft	45	174	335	64	111	193	387	695	790
0 ft	80	214	384	83	122	204	410	735	830

Skimmer Pump

For Ponds up to 3000 U.S. gal (11400 L).

This heavy duty skimmer pump is designed to continuously move large volumes of water efficiently through filtration systems, a waterfall, or fountain. Laguna's Skimmer Pump space saving vertical design allows it to fit in virtually any skimmer. The pump will run at water levels as low as 0.08" (2 mm) without damage. It's virtually clog-free thanks to the vortex impeller assembly. The ceramic motor shaft and bearing mean that the pump is resistant to corrosion and wear. The Skimmer pump comes complete with two outlet adapters for easy assembly.

SKIMMER PUMP SPECIFICATIONS - 60 Hz

	M L
	PT362
Maximum Flow Rate	1500 GPH (5700 LPH)
Maximum Head Height	20' (6 m)
Maximum Pond Volume	3000 US gal (11400 L)
Wattage	190 W
Voltage	100-120V / 60 Hz
Amperage	1.75 A
Power Cord Length	32'8" (10 m)
Outlet Adapter Diameter	1 ¼" (∅ 32mm) / 1" (∅ 26mm)
Measures	6.9"x 4.9"x 8.7" (17.6 x 12.4 x 22.2 cm)

HEAD HEIGHTS

HEAD HEIGHT	FLOW RATE (US GPH)
24 ft	0
21 ft	2.6
18 ft	245
15 ft	492
12 ft	812
9 ft	1158
6 ft	1387
3 ft	1619
0 ft	1823

Running costs are a major consideration when buying a pump. Don't opt for a cheaper pump or you may get some nasty surprises with your electricity bill.

What do Filters do?

All ponds will benefit from the addition of a filtration system. A good filtration system ensures that the water quality of the pond will remain clear of impurities which can accumulate, creating a cloudy or toxic environment for pond plants and fish.

Filters perform three filtration functions: mechanical, biological and chemical.

Mechanical filtration refers to the process of removing debris and dissolved organic waste from the pond water. As dirty water flows through the filter foam or other mechanical media, dirt and debris is trapped.

Biological filtration refers to the process of providing an area where beneficial bacteria can grow and multiply. This is an important factor in the breakdown of harmful toxins such as ammonia. Once biological toxins are broken down, chemical filter media and pond plants can help control the resulting compounds.

Chemical filtration refers to the process of controlling and changing specific water conditions. This does not mean that the media is a chemical. Natural products can be considered chemical media.

SUBMERSIBLE

Submersible pond filters are simple to install and generally offer a combination of biological and mechanical filtration. The units are placed directly into your pond and are useful for smaller ponds. Water is drawn through submersible pond filters by a submersible pump, which can be attached to the filter either internally or externally, and then discharged into the pond. Because they tend to pick up all the debris from the pond bottom, submersible filters protect the pump from clogging and keep the water clean and clear.

See page 25 for product information.

EXTERNAL

External filters are very easy to install and clean, offer mechanical and biological filtration and most often incorporate a UV-C lamp to keep the pond water crystal clear. Pressurized filters are “out of the pond” filters. They can be partially buried in the landscaping around the pond and be easily cleaned.

See page 28 for product information.

WATERFALL AND SKIMMER

These two types of pond filters are most often used together with a circulation pump to create a more complete filtration system. Generally the skimmer is placed at the opposite end of the waterfall filter. The skimmer traps leaves and other surface debris before it can sink into the bottom of the pond, keeping the water much cleaner. A circulation pump housed in the skimmer sends water to the waterfall filter where it passes through biological filter media and then returns to the pond, cascading as a waterfall. An added benefit is that maintenance is easy since the skimmer and waterfall filter are outside of the pond, allowing easy access to everything (including the pump). Skimmer and Waterfall filters can easily be concealed with landscaping and rock work.

See pages 25 & 26 for product information.

PowerFlo Max

Biological Underwater Filter

For ponds up to 800 U.S. gallons (3028 L)

Laguna PowerFlo Max Biological Underwater Filter provides complete and efficient mechanical and biological filtration for ponds up to 800 US gallons (3028 L). As water is drawn into the filter, two foam filter pads inside the chambers filter out dirt and floating debris. The filters' third chamber performs added biological filtration with Laguna's BioMax filter media. BioMax's ceramic rings perform exceptional filtering action due to its large surface area that allows millions of beneficial bacteria to grow. The friendly bacteria help break down harmful toxins. The end result is that the filter protects the pump from clogging and reduces pump maintenance and keeps water clean and clear. The filter can be installed near the edge of the pond for quick and easy access and maintenance.

The filter comes with Laguna's unique Universal Click-Fit coupling, which allows connections to 3/4, 1 or 1 1/4 inch (19, 25 or 32 mm) hosing. Two foam filter pads and BioMax filter media are also included.

PT505

1. Biological chamber comes complete with Bio-Max (Biological Filter Media).
2. Expandable mechanical chambers allow for efficient removal of debris dramatically reducing pump maintenance.
3. Weighted base keeps filter anchored.

WATER GARDENING TIPS

Increase the filters capacity by as much as two times and reduce frequency of maintenance with PowerFlo Mechanical Add-On Filtration Chamber (PT509). Highly recommended for ponds with large amounts of debris.

Spillway

For ponds up to 1000 US gallons (4500 L).

The Laguna Filter Spillway can be installed in or above ground and is easy to use and maintain. A faceplate is included to allow easy liner attachment. Suitable for a pump range of 2000 – 4200 GPH. This Filter Spillway can be used on it's own or in combination with our PT495 Skimmer to create a more complete filtration system. The unit has a 1 1/2" (38 mm) threaded bulkhead for making a hose connection to a circulating pump, such as a Laguna Max-Flo pump (sold separately). As water flows through the Filter Spillway, it passes through filter foam and biomedia (sold separately), both providing mechanical and biological filtration. Completely filtered water then exits the unit over a 14 1/2" (37 cm) wide spillway in stunning waterfall fashion.

Made of solid, professional grade fiberglass that will provide lasting durability.

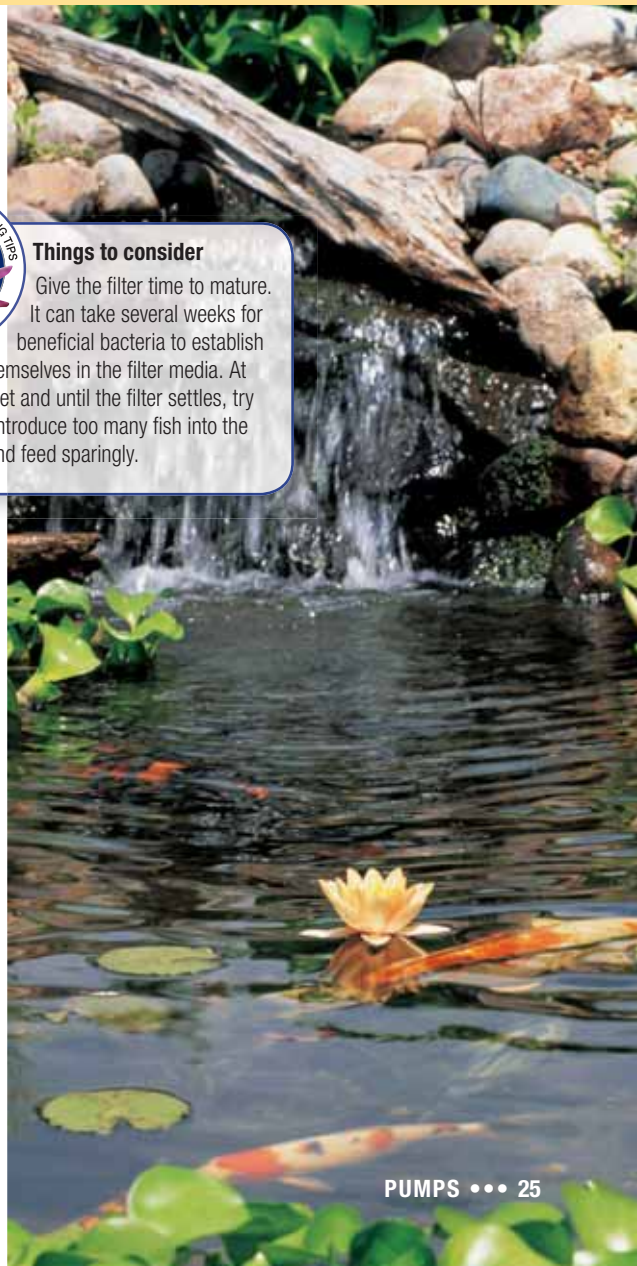
PT490


Ideal for PT495

WATER GARDENING TIPS

Things to consider

Give the filter time to mature. It can take several weeks for beneficial bacteria to establish themselves in the filter media. At the onset and until the filter settles, try not to introduce too many fish into the pond and feed sparingly.



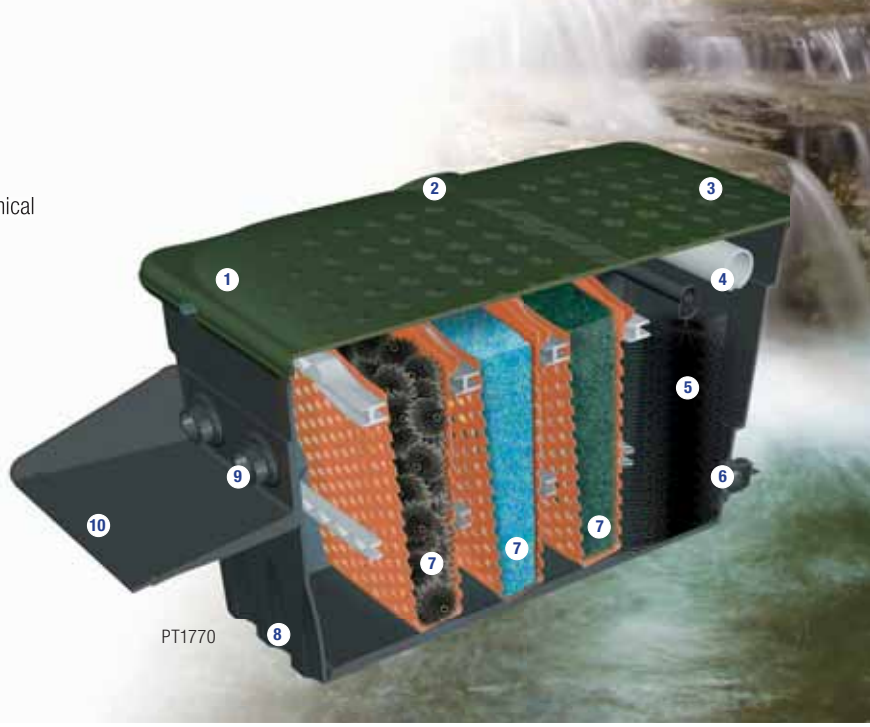
PowerFlo 5000

L XL

Powerflo Filter Falls is designed to provide mechanical, biological and chemical filtration for ponds up to 5000 U.S. gallons.

System includes:
- Biospheres biological filter media (120 spheres) - PT1785.
- One (1) coarse mechanical/biological filter media pad – PT1775.

1. Reinforced lid (supports up to 400 lbs/181 kg).
2. Lid handles and locks, with padlock holes.
3. Built-in safety overflow.
4. Spray bar for oxygenation of pond water.
5. Three mechanical hanging brush filters.
6. Drain fitting.
7. Large capacity chambers for mechanical, biological and chemical filter media. All chambers include a handle for easy removal and cleaning.
8. Heavy duty injection molded construction for durable performance.
9. Threaded bulkheads (4) allow additional hose connections for creation of waterfalls and streams or connecting to other pond equipment.
10. 19" (28 cm) wide spillway creates an attractive waterfall.



PT1770

Looking for a compatible skimmer pump? Flip to page 23 for full details on Laguna's Skimmer Pump (PT362).

Camouflage the top of your Filter Falls with our Laguna Rock Cover (PT1142)

Skimmer

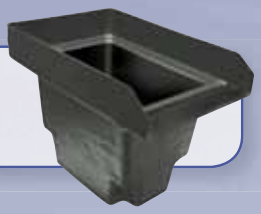
M L

For ponds up to 3000 U.S. gallons (11,340 L).
Recommended for pump range of:
2000 – 4200 U.S. GPH(7500 – 16,000 LPH).
Maximum pond area: 600 sq. ft. (56 m^2).

The Laguna Skimmer Filter features a heavy duty lift out skimmer net for trouble free maintenance. Complete with a large customizable media/pump chamber, weir door to regulate water intake, removable lid, four mechanical filter brushes and all the necessary installation hardware to make set-up easy.


PT495

Ideal for PT490



Things to consider

The size of the filter depends upon the pond size and the number of fish being kept. For ponds heavy with fish (especially koi) or that contain just a few plants, consider choosing a filter with extra capacity.

SkimAway

Skimmer Filter Fountain

For ponds up to 500 U.S. gal (1890 L).
Submersed in the pond, internal filter media provide pre-filtration for pond pumps and reduce the frequency of maintenance.

Laguna's SkimAway is a skimmer filter with integrated LED lighting, pump and geyser filter fountain that provides complete filtration for clear and healthy pond water. With 10 integrated super bright LEDs, accent lighting is incorporated into your water garden. The SkimAway features a "wire & tube free" removable lid which enables easy access to its filter media and pump for trouble free maintenance. The natural looking "faux wood" finish, uniquely designed planting basket and geyser style fountain will add an element of beauty to any water garden. For larger ponds multiple units can be used.

Includes integrated 200 U.S. GPH (757 LPH) pump.

Bonus Aquatic Planting basket!

- Removable.
- Continuous refill, plants never dry out!
- Unique translucent design allows LEDs to accent plants.


PT255


PT510

External Biological Filter 1000

For ponds up to 1000 U.S. gallons (4500 L).
Minimum flow rate: 500 U.S.GPH (2250 LPH).
Features a triple layered filtering system, providing complete mechanical and biological filtration.

- Top level - Phos-X, carbon, or zeolite (sold separately).
- Mid level - Filter pad (included).
- Bottom level - Lava rock Biological Filter Media (included).

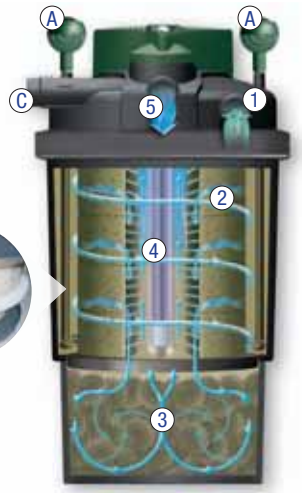
The External Biological Filter 1000 is designed to be installed outside the pond, allowing for trouble free access for maintenance. The trays have handles for easy removal. Connecting to other equipment or creating waterfalls is simple thanks to the built-in drain plug and two outlets. Comes complete with pumice filter material, foam filter media (PT555) and Laguna's unique Universal Click-Fit coupling.

Things to consider

By using a pond filter in-line with an UV sterilizer you can control green water achieving a natural balance.

Pressure-Flo

Laguna Pressure-Flo High Performance Pressurized Pond Filtration Systems provide the maximum in pond filtration in a compact unit that is easily hidden at the edge of your pond. The Laguna patent-pending Backwash-Cleaning System and a convenient cleaning indicator simplify maintenance by allowing you to clean your foam filter media without having to open the filter.



EPA Registered / EPA Est. No. 74504-ITA-001

3 Types of Filtration for Maximum Performance

Foam filter media removes large solid debris while Laguna Biospheres* promote the growth of beneficial bacteria which biologically filters your pond water (*except PT1500). A UV-C lamp then destroys single-celled algae organisms and eliminates green water.

Water Cleaning and Sterilization

1. Dirty pond water enters filter.
2. Mechanical filtration foam removes dirt and debris.
3. Water contacts Biospheres* (loaded with beneficial bacteria) in the filtration chamber.
4. High Power UV-C lamp destroys algae, eliminates green water.
5. Clean, filtered water returns to pond and the cycle starts again.

*except model PT1500

Backwash Cleaning

A. External cleaning handles move up and down - no need to open filter lid.

B. Two internal cleaning blades scrub and remove debris from filter foam.

C. Debris is expelled (into a bucket or garden).

Who says cleaning your pond filter has to be a long messy job? Our unique, backwash system enables you to perform routine cleaning in seconds, without opening the canister. The handy clogging indicator will tell you when cleaning is required.

Pressure-Flo Clean

Laguna Pressurized filters are easy to clean and simple to install. These filters can be partially buried and hidden within the landscaping around a pond. Pressure Flo-Clean filters provide mechanical and biological filtration; these filters can be used alone or integrated into an existing filtration system. Laguna Pressure Flo-Clean filters keep pond water clean and healthy.

2 Step Filtration

Foam filter media removes large solid debris while water contacts Lava Rock (loaded with beneficial bacteria) in the filtration chamber.

Water Cleaning

1. Dirty pond water enters filter.
2. Mechanical filtration foam removes dirt and debris.
3. Water contacts Lava Rock (loaded with beneficial bacteria) in the filtration chamber.
4. Clean, filtered water returns to pond and the cycle starts again.

Backwash Cleaning

A. External cleaning handles move up and down - no need to open filter lid.

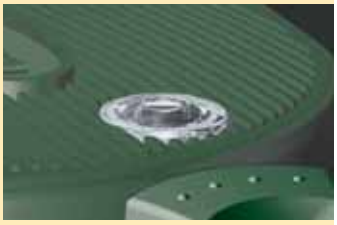
B. Two internal cleaning blades scrub and remove debris from filter foam.

C. Debris is expelled (into a bucket or garden).

Cleaning Indicator
Lets you know when cleaning is required.

Backwash System
Cleans foam surface by scrubbing foam without opening the filter.

Click-Fit System
For easy connection.



UV Indicator Lamp
Shows UV Sterilizer is working.
UV Models

	PRESSURE-FLO SPECIFICATIONS				PRESSURE-FLO CLEAN SPECIFICATIONS			
	S	M	L	XL	S	M	L	XL
	PT1500	PT1502	PT1504	PT1506	PT1686	PT1687	PT1688	PT1689
High load of fish in direct sunlight (For Ponds Up To)*	330 U.S. GPH (1250 LPH)	700 U.S. GPH (2500 LPH)	1050 U.S. GPH (4000 LPH)	1580 U.S. GPH (6000 LPH)	NA	NA	NA	NA
Low load of fish in shade (For Ponds Up To)*	700 U.S. GPH (2500 LPH)	1400 U.S. GPH (5000 LPH)	2110 U.S. GPH (8000 LPH)	3200 U.S. GPH (12000 LPH)	NA	NA	NA	NA
Unit Size (Diameter x Height)	Ø 11.2" x 13.7"H (Ø 28.5 x 35 cm H)	Ø 11.2" x 20"H (Ø 28.5 x 51 cm H)	Ø 14.3" x 20.6"H (Ø 36.5 x 52.5 cm H)	Ø 14.3" x 25.2"H (Ø 36.5 x 64 cm H)	Ø 11.2" x 13.7"H (Ø 28.5 x 35 cm H)	Ø 11.2" x 20"H (Ø 28.5 x 51 cm H)	Ø 14.3" x 20.6"H (Ø 36.5 x 52.5 cm H)	Ø 14.3" x 25.2"H (Ø 36.5 x 64 cm H)
Canister Height	9" (23 cm)	15.2" (38.5 cm)	15.7" (40 cm)	19.7" (50 cm)	9" (23 cm)	15.2" (38.5 cm)	15.7" (40 cm)	19.7" (50 cm)
Canister Volume	2.6 U.S. gal (10 L)	4.6 U.S. gal (17.5 L)	8.2 U.S. gal (31 L)	10.6 U.S. gal (40 L)	2.6 U.S. gal (10L)	4.6 U.S. gal (17.5 L)	8.2 U.S. gal (31 L)	10.6 U.S. gal (40 L)
UV Sterilizer*	11 W	11 W	20 W	25 W	NA	NA	NA	NA
Power Cord Length*	16' (4.8 m)	16' (4.8 m)	16' (4.8 m)	16' (4.8 m)	NA	NA	NA	NA
Pump Recommendation	Max-Flo 600/2200 PT8232	Max-Flo 960/4000 PT8236	Max-Flo 1350/5000 PT8240	Max-Flo 2000/7600 PT8244	Max-Flo 600/2200 PT8232	Max-Flo 960/4000 PT8236	Max-Flo 1350/5000 PT8240	Max-Flo 2000/7600 PT8244
Foam	PT1501 (x3)	PT1503 (x4)	PT1505 (x4)	PT1507 (x5)	PT1501 (x3)	PT1503 (x4)	PT1505 (x4)	PT1507 (x5)
Biomedia	NA	approx. 50pieces	approx. 150pieces	approx. 200pieces	NA	approx. 50pieces	approx. 150pieces	approx. 200pieces
Universal Fast Coupling	PT640 (x3)	PT640 (x3)	PT640 (x3)	PT640 (x3)	PT640 (x3)	PT640 (x3)	PT640 (x3)	PT640 (x3)
Hosing Connector	NA	NA	PT638 (x1)	PT638 (x1)	NA	NA	PT638 (x1)	PT638 (x1)
Replacement UVC Bulbs	PT1520	PT1520	PT1521	PT1522	NA	NA	NA	NA

ClearFlo **Complete Pump, UV, and Filter Kit**

For the ultimate combination in power and performance we have combined our industry leading Max-Flo solids handling pump (page 18) with our Pressure-Flo UV Filter (page 28).

CLEARFLO SPECIFICATIONS - 60 Hz				
	S M	M L	M L	L XL
CLEARFLO	CLEARFLO 700/2500 PT260	CLEARFLO 1400/5000 PT262	CLEARFLO 2100/8000 PT264	CLEARFLO 3200/12000 PT266
PUMP INCLUDED	Max-Flo 600 / 2200	Max-Flo 960 / 4000	Max-Flo 1350 / 5000	Max-Flo 2000 / 7600
FILTER IN-CLUDED	Pressure-Flo 700/2500	Pressure-Flo 1400/5000	Pressure-Flo 2100/8000	Pressure-Flo 3200/12000
FOR PONDS UP TO	700 US gal (2500 L)	1400 US gal (5000 L)	2100 US gal (8000 L)	3200 US gal (12000 L)

EPA Registered
EPA Est. No. 74504-ITA-001

CleanFlo **Complete Pump and Filter Kit**

CleanFlo kits provide a powerful combination of Max-Flo Pumps and Pressure Flo Clean filters. The available sizes are ideal for ponds from 700 U.S. gal (2500 L) to 3200 U.S. gal (12000 L).

CLEANFLO SPECIFICATIONS - 60 Hz				
	S M	M L	M L	L XL
CLEANFLO	CLEANFLO 700/2500 PT260	CLEANFLO 1400/5000 PT262	CLEANFLO 2100/8000 PT264	CLEANFLO 3200/12000 PT266
PUMP INCLUDED	Max-Flo 600 / 2200	Max-Flo 960 / 4000	Max-Flo 1350 / 5000	Max-Flo 2000 / 7600
FILTER IN-CLUDED	Pressure-Flo 700/2500	Pressure-Flo 1400/5000	Pressure-Flo 2100/8000	Pressure-Flo 3200/12000
FOR PONDS UP TO	700 US gal (2500 L)	1400 US gal (5000 L)	2100 US gal (8000 L)	3200 US gal (12000 L)

Keeping Pond Water Crystal Clear

Pond filter media is important to good filtration of your pond. Filter media will help keep your pond clear and healthy. There are three basic pond filter media types: mechanical, chemical and biological filtration.

To maintain ideal pond water conditions all three types of filter media should be used.

Pressure-Flo

Laguna Pressure-Flo Complete Replacement Foam Kits provide complete mechanical and some degree of biological filtration. Super porous foam material help keep pond water crystal clear while removing debris.

Pressure-Flo Service Kits include foams, UV bulb, O-rings, cleaning brushes and silicone lubricant.

Powerflo Max & External Biological Filter 1000

The coarse foam material performs mechanical filtration, capturing dirt and debris as water flows through it. The foam is also porous to allow some degree of biological filtration.

Spillway, Powerfalls & Powerflo 5000

Mechanical and Biological Fine Filter Pads are made of densely-packed and intricately-woven material and are extremely effective at filtering out particulate waste.

Bio-Max

Bio-Max promotes, protects and encourages beneficial bacteria in pond water resulting in a clean, clear pond. The filter media has a large surface area and a large number of perfectly sized pores to allow bacterial colonies to thrive which maintains a biological balance in pond water.

Biospheres

Biospheres provide a large living area for beneficial bacteria to thrive. Placed in a pond filter, Biospheres efficiently reduce ammonia and nitrite to help maintain healthy pond water conditions and overall well-being of pond fish and plants.

Filter Wool

Laguna Filter Wool is an effective mechanical filter media that removes fine particles and prevents pond filters and other filter media from clogging. The special filter wool cleans pond water and helps produce ultra clear conditions.

Biological Filter Media

Laguna Biological Filter Media (lava rock) is the ideal host for large populations of beneficial bacteria to grow. Placed in the appropriate pond filter media chamber, lava rock encourages the growth of friendly bacteria which is essential for biologically filtering out harmful toxins and creating the conditions for clean and clear pond water.

Advantages of UV Sterilizers

Eliminates green water guaranteed

Algae can be a major problem with some ponds. One way to help control algae growth is with the installation of a UV sterilizer.

A UV sterilizer uses powerful ultraviolet light to destroy algae cells (green water), reduce free flowing harmful bacteria and viruses, as well as help control certain parasites. UV light (radiation) is absorbed by algae cells and disrupts their DNA, preventing them from reproducing and eventually causes the cells to die. The same UV radiation helps to control parasites, bacteria and viruses which in-turn reduces the chances of fish disease.

- UV treatment does not adversely change the water chemistry of the pond.
- Easy to install.
- Treatment takes place outside of the pond, away from fish and plants.

Laguna's line of UV sterilizers/clarifiers provides an environmentally friendly approach to controlling green water by eliminating the need for harsh chemicals.

UV Sterilizer/Clarifier

1000 / 14 W — PT1671
For ponds up to 1000 U.S. gal (3785 L).
Flow Rate: up to 500 U.S. GPH (1893 L).

2000 / 28 W — PT1675
For ponds 1000 - 2000 U.S. gal (3785 - 7570 L).
Flow Rate: 500 - 1000 U.S. GPH (1893 - 3785 L)

5000 / 55 W — PT1680
For ponds 2000 - 5000 U.S. gal (7570 - 18927 L).
Flow Rate: 1000 - 1500 U.S. GPH (3785 - 5678).

THINGS TO CONSIDER

Exposure time and flow rate are crucial when it comes to UV-C lamps, the longer the contact time between the UV light and the pond water, the more algae spores will be treated.

A typical UV-C lamp will last approximately one year. You should consider replacing your bulb at the start of each season. If you unplug your UV during the winter months you can extend the life of the bulb. If the UV is no longer clearing up the free-flowing algae then it is time to replace the UV-C lamp.

Periodic cleaning of the quartz sleeve improves UV performance by stripping away the dirt that can block the ultraviolet rays and prevent them from penetrating the water and killing the algae. **CAUTION:** This sleeve and the bulb are extremely fragile. Utmost care should be taken when handling these parts.

Aeration

During the hot summer months oxygen levels in the pond decline. Aerating the water causes movement and the bubbles from the air pump expose the water to oxygen and help maintain clear water resulting in a healthy ecosystem.

Air Pump Kits

Laguna's air pump kits are designed to operate efficiently and save energy. The air pump kits include everything needed to help enhance the quality of pond water during the hot summer months by aerating the water which is crucial for healthier fish and aquatic plant life. Available in two sizes, the kits come complete with air stones, tubing, 12 outlet metal manifold, and check valve. Certified for outdoor use, no lubrication needed.

WATER GARDENING TIPS

Another important season to install an air pump is during the winter. It is important to not let your pond ice-over because the oxygen levels in the pond water can drop to dangerous levels for dormant fish. By using an air pump to keep the pond surface from freezing over, you will allow the toxic gases to escape eliminating or greatly reducing the chance of loss.
See page 47 for more winterizing options for your pond.

GUARANTEED FOR 2 YEARS • GUARANTEED FOR 2 YEARS • 2

Also available
Aeration kit
PT1630

AIR PUMP SPECIFICATIONS

	PT1620	PT1624
Air Volume	13 GPM (50 LPM)	18.5 GPM (70 LPM)
Maximum Operating Depth	9' (2.8 M)	11'5" (3.5 M)
Maximum Output	793 GPH (3000 LPH)	1110 GPH (4200 LPH)
Maximum Pressure	4.35 PSI	5.37 PSI
Air Outlets	12	12
Air Tube Length	16'4" (5M)	32'8" (10M)
Air Tube Diameter	0.16" (4 MM)	0.16" (4 MM)
Air Stone Size	2" (5 CM) x 2" (5 CM) H	2" (5 CM) x 2" (5 CM) H
Pump Rating	35W	50W
Power Cord Length	32.8 FT (10 M)	32.8 FT (10 M)
Noise Level	60 DB @ 12" (30 CM)	60 DB @ 12" (30 CM)
For Ponds up to	5000 U.S. GAL (18900 L)	7000 U.S. GAL (26500 L)

Non-Kink Tubing

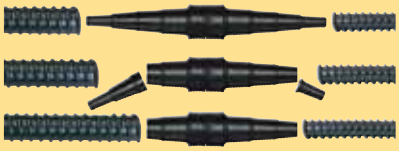
Thick yet flexible, Laguna tubing will not kink ensuring minimum water resistance and maximum water flow, even in the sharpest turns. Reinforced ribbing prevents collapse due to back-pressure or reasonable weight from gravel or cover material. The black color inhibits algae formation on the inner walls of the hose. Laguna tubing is non-toxic and is made from 100% fish safe PVC. Available in a variety of diameters ranging from 3/8" (1.27 cm) to 2" (5.08 cm) to meet specific pond requirements.

Visit www.lagunaponds.com for sizing options.

Multi-Hose Adapters

When you need to connect two hoses of different diameters together, the Laguna Multi-hose Adapter is the perfect solution. It is easy to install and provides a secure connection. The adapter is designed for both metric or imperial hose sizes. Fits hoses from 1/4" (6 mm) to 1 1/2" (38 mm) diameter.

½" HOSE **ADAPTER** **¾" HOSE**



The 'Click-Fit' Connection

'Click-Fit' describes the job of the patented Laguna couplings which enable quick and secure attachments to pumps, filters, UVs and other Laguna equipment that you add to your system. This do-it-yourself approach makes connections, installation and maintenance a snap! Designed to fit most Laguna equipment, Click-Fit connectors come in a variety of diameters and sizes.

Also available Laguna's Click-Fit Y-Connector. Choose from 1 1/4" (32 mm) or 1 1/2" (38 mm) Y-Connection with 3 patented Click-Fits, an easy way to split a water path. Avoid flow restricting t-connectors with Laguna's ClickFit Y-Connector. Allows for the connection of two hoses with different diameters or for the connection of one pump with multiple filtration.

When Shopping, Don't Forget...

Hose Clamps

Laguna hosing clamps enable tight and secure connections and are made from stainless steel, the smooth inner surface will not cut through the hosing and will not rust when used in or near water.

Pond Float Valve

Keeps pond water at desired level and replenishes water loss. Adjustable to various settings and easily connects to a garden hose.

Silicone Lubricant

Keeps O-rings on Click-Fit connectors lubricated, allowing easier attachments while prolonging the life of O-rings.

Rock Receptacle Covers

Ideal for covering unsightly power bars, keeping yards looking natural.

Planting — Cultivating Aquatic Plants

Creating a water garden is a great way for the plant lover to grow new and different types of plants. Plant varieties which require damp, wet or submerged conditions not only make a garden look great but with care will help to maintain healthy water conditions in the pond. When selecting pond plants, take time getting to know the specific requirements of each plant. Their lighting requirements, hardiness zone, maximum size, and growing habit. To determine what kind of growing conditions are present, first you need to determine your planting zone, visit **http://planthardiness.ars.usda.gov/PHZMWeb/Default.aspx** to download the plant hardiness zone map for your area. You should also pay attention to the amount of light the pond receives over the course of the day; this will help determine the ideal location for your new plants.

Oxygenating Pond Plants

Pond fish and water quality will benefit greatly from oxygenating plants (also called submerged or aerators). These plants use fish waste and decaying organics as fertilizer and provide oxygen to the water. Most importantly, they help to maintain a natural balance by competing with algae for nutrients, helping to reduce unsightly algae growth. Oxygenating plants grow entirely under water and may or may not be rooted to the bottom of the pond. You can help increase desired oxygen levels by adding numerous oxygenating plants in addition to aeration devices (see page 32), fountains and waterfalls.

Start with placing the plant in a planting basket (container size: minimum 4" (10.16 cm) wide or kidney shape and larger). Spread the roots out along the bottom. Gently cover the roots with some aquatic planting soil. Place the basket at a depth of about 12" (30.48 cm) below the water surface. If the plant ever grows enough to reach the surface of the pond, lower the basket another 6" (15.24 cm) inches deeper into the pond.

Free Floating Pond Plants

It is important to introduce floating plants when you are establishing a new pond. Floating water garden plants help cover the water surface providing much needed shade to the water below. The shade helps keep the water from overheating which in-turn protects your plants and fish. Shade also helps inhibit algae growth, since algae thrives in direct sunlight. Depending on the type of floaters, it is important to wait until the risk of frost is over before introducing them into your pond.

Floating plants can simply be placed on the surface of the pond by carefully spreading out the roots and leaves. Additional fertilizer isn't necessary for floaters to grow since these types of plants feed directly from the water through their roots. It is important to allow sunlight to reach other vegetation and fish in the pond by thinning out floating plants overtime so that no more than 50 to 60% of the ponds surface is covered.

Marginal Water Garden Plants

Marginal Plants are planted in pots or planting bags and placed on plant shelves in water deep enough to cover the pots by a couple of inches. These plants give a natural, soft appearance and add a splash of color. The base of the plant and its root structure like to remain submerged while the remainder of the plant grows up and out of the water.

Start by lining a planting basket or planting bag with aquatic planting soil followed by the plant itself and fill the bag to about 1" (2.54 cm) to the top. Top with a layer of pea gravel. Marginal plants should be placed in the pond so just the surface of the basket is covered, leaving the majority of the plant to be in open air above the water.

Deep Water Plants and Water Lilies

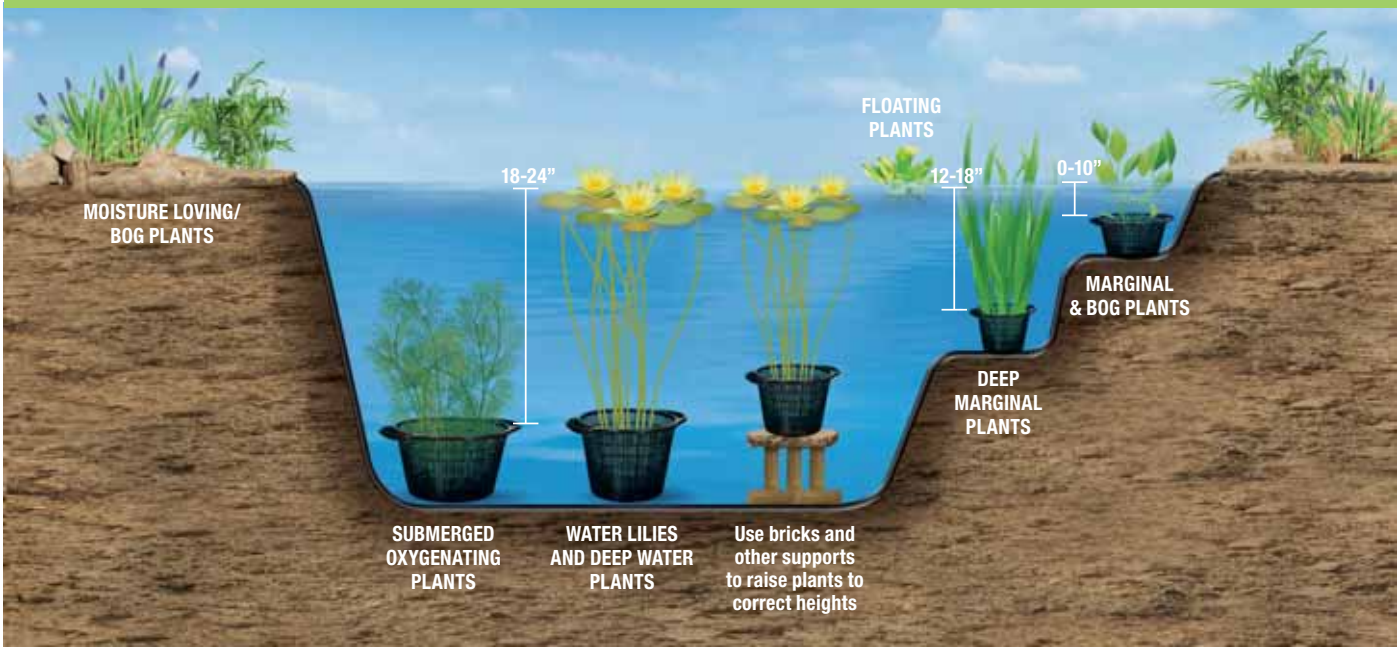
Typically the deeper areas of the pond are reserved for water lilies; however there are times when you should consider introducing other deep water plants. Water lilies have a more difficult time growing favorably when there is a fountain or waterfall (water splashes and current on and around the foliage can cause a rapid decline). Deep water plants such as lotus, water hawthorn or water poppies are more tolerant of both moving water and a little shade. Deep water plants also provide shade and shelter for pond inhabitants. Both water lilies and deep water plants are rooted in soil and then placed in water deeper than 11.8" (30 cm). The leaves and flowers grow on or above the water surface.

Water lilies are divided into two categories; hardy and tropical and are available in a wide range of colors and flower shapes. Hardy lilies are the easiest to keep and offer a vast selection to choose from. These types of lilies will only bloom in daylight. Tropical liles, on the other hand, require some additional care. But the extra attention is well worth the reward. In addition to the incredible flower colors they share with hardy lilies, tropical lilies can also be found in shades of blue lavender and deep reds. To tell if a water lily is hardy or tropical, look at the edge of its leaves, if it is smooth the lily is hardy. If the edge is turned up, textured or serrated the lily is tropical.

Lilies should be planted in large or extra-large baskets or tubs (container size: minimum 8-10" wide for dwarf lilies, 14" for regular). Remove any old leaves and roots before placing the plant in the pot. Place the roots of the plant in the lily tub, being sure to place the growing tips up. Gently cover the roots with some aquatic planting soil and top with a layer of pea gravel or rocks to prevent the soil from leaching and fish disturbance. Newly planted water lilies can be placed at the bottom of the pond in their final positions. They will rapidly establish themselves, producing roots and both submerged and floating foliage.

How to plant a Lily Tub

PLANT WATER DEPTHS FROM SURFACE TO POT RIM



Laguna offers a variety of products designed to make planting, growing and maintaining pond plants simple and convenient.

LAGUNA LILY TUBS are convenient for planting lilies, lotus or groupings of bog plants. The large deep tubs provide plenty of room for tropical and hardy lilies to expand. The earth is self-contained and will not leach back into the pond.

LAGUNA PLANTING BASKETS are available in five different shapes and sizes offering a variety of possibilities and an easy way to place plants in ponds. The baskets are made of study plastic material and are durable enough to be placed at the bottom of the pond. The unique lattice design allows the water to flow through providing ample water supply and prevention of compacting the plants' roots.

LAGUNA PLANTING BAGS can be used for almost all pond plants. The flexible material allows plants to be easily placed in small nooks or on narrow shelves. The finely woven material provides excellent water absorption and resists rotting. Fully submersible and Eco-friendly, they are available in 3 sizes.

If your pond doesn't have adequate shelf space, **LAGUNA FLOATING BASKETS** make planting and maintenance easy. The buoyant Styrofoam float ensures the basket will stay at the surface protecting plant roots from fish. Made of finely-woven fabric, they provide excellent soil containment. They also provide additional shade and protection for fish.

While most aquatic plants are quite vigorous, they do need an occasional check - usually to remove excess growth. This is easy using a handy tool such as the **LAGUNA PRUNING TOOL**. Simply use to snip and grasp unwanted growth, all without having to get your feet wet!

The enclosed nature of a pond means that some vital nutrients may be taken from the water to the plants and will require replenishing. **LAGUNA PLANT GRO** contains a complete range of nutrients and its use in the pond will soon show in the vibrant growth of the plants. Alternatively choose **LAGUNA PLANT GROW FERTILIZER POND SPIKES** to treat marginals and deep water aquatics individually. The spikes contain a slow release, well-balanced feeding formula which is low in phosphorus and will not impact the water quality, **plus you only need to dose once per year!** Available in mini and large sizes.

Only Treat Once per Year

WATER GARDENING TIPS

Use Laguna Plant Grow liquid fertilizer and Laguna Once-a-Year Fertilizer Pond Spikes to help provide essential nutrients and ensure your plants grow healthy and maximize flower production.

Stocking your pond

Fish add color, movement and grace to any water garden. The size of the pond and how much oxygen there is in the water will help determine the number of fish it can accommodate. It's worthwhile to have a little less fish than a little too many. Keep in mind that in the summer fish are more active and the warmer water contains less oxygen (which can influence unsightly water conditions) so it's important to resist any temptation to overstock. Fish will often reproduce and grow quickly in a pond environment. A general rule of thumb is to allow 1" (2.54 cm) of fish for every 13 U.S. gallons (50 liters) of water. Note: Koi are specialized fish and need more space in a pond than goldfish.

Types of Fish

There are a wide range of species of fish available but not all fish are meant for ponds nor will all pond fish types thrive in all ponds. Your pond size, type and climate zone need to be taken into account when choosing the type of fish to add to your pond.

Goldfish: Goldfish have been cultured for centuries and a variety of species are available from the more hardy common goldfish to a number of more delicate forms of fancy goldfish. Goldfish are generally very hardy and tolerant of a wide range of temperatures (32°F to 90°F (0°C to 32°C)). Their lifespan is between 15 to 25 years (fancy forms 8 to 12 years). Varieties include: common, comet, shubunkins, orandas, moors and lion heads.

Koi: The Japanese word for carp, koi are one of the most popular pond fish in recent years. They grow to be much larger than goldfish and will surface to be fed and "pet". Koi can grow to over 36" (90 cm) and live between 20-75 years. Koi varieties are distinguished by color, patterns and scales. The more common colors are white, black, red, yellow, blue, and cream. The most popular are Kohaku, Taisho Sanshoku, and Showa Sanshoku varieties.

Golden Orfe: Orfe are torpedo shaped fish, yellow orange in color, often with black spots on the head and silvery sides. They're very fast and feed primarily on the surface. They like to swim in groups and prefer well-oxygenated water, especially in hot weather. They grow to about 24" (60 cm) and have been known to live longer than 20 years. They are better suited to larger ponds as they can easily leap out of the water.

Golden Rudd: Ideal fish for an informal or natural pond, golden rudds are similar in shape to the orfe but the rudds' dorsal fin is set further back and they are slightly fatter than the orfe. Rudds can be recognized by the reddish color of their fins, deep burnt-gold sides and a unique protruding lower lip. Rudds grow to about 12" (30 cm) and can live 10 to 12 years. They are tolerant to a range of temperatures and feed at the surface of the pond.

Sticklebacks & Minnows: Ideal for small ponds, sticklebacks and minnows do not require much space; they prefer shallow, well oxygenated water. Sticklebacks can be somewhat aggressive so it is best to only introduce one to two pairs. During mating season the male will turn a reddish hue. Stickelbacks will typically grow to 3.5" (9 cm) while minnow's will grow slightly larger 3" to 6" (8 to 15 cm).

Tips for selecting healthy fish:

- Clear Eyes (not cloudy).
- Undamaged fins.
- Scales should be intact, parallel with body (not sticking outwards) and no red blotches.
- No holes, ulcerations, or lumps.
- Active, lively, normal swimming patterns.
- No white spots (salt grain size) or white cottony growths on the fins or body.
- Respiration rate should be regular and steady (in unstressed circumstances).
- Gills should be red inside, not faded or discolored, and not distended or puffy.
- Actively feeding.

Adding Fish to your Pond

Treat your pond fish with great care. Any handling or transportation, even introducing them to your pond will cause stress. If you have a long journey from the dealer, the air in the bag can be enriched with oxygen and insulated against changes in temperature – be sure to advise them of your travel time.



The bright colors of most ornamental pond fish put them at a cruel disadvantage against predators. Herons, raccoons, cats and foxes are all proficient of emptying a pond of its fish. Protect your fish with Laguna pond netting and bird scarers, see pages 40 & 45 for product information.

- Once home, it is important to acclimatize your new fish gradually to your pond's temperature. To introduce your fish to the pond slowly, float the bag in the pond for at least 20 minutes (up to 40 minutes for bags with large volumes of water). Keep the bag sheltered from the sun.
- Once ready, add a small amount pond water to the bag to help them get used to any differences there may be in the quality of water.
- After approximately 20 minutes of this gradual introduction process you may release your fish into their new home. Any handling of the fish should be minimal and only a soft net should be used. The fish will swim to the bottom and hide, over the course of a few days they will become more comfortable with their new surroundings – a limited amount of food can be given at this time.

Tips for Disease Prevention:

When shopping choose only healthy fish. Purchase fish in limited groups and slowly build fish populations. Follow proper acclimation of new specimens. Always condition new water properly, chlorine, chloramine, and metals are damaging to inhabitants.

Using Laguna Water Prep will neutralize these toxic metal ions before they can harm fish. Perform basic water tests and maintenance on a regular basis. If a medication has been used, after the treatment is complete, perform additional water changes and use carbon to remove residual traces. Supply regular feedings with a high quality diet such as Laguna Goldfish and Koi foods.

WATER GARDENING TIPS

Measure pond temperature with a thermometer (PT945) during the spring and fall seasons to ensure that the correct food and feeding frequencies are being followed.

Fish Food - Quality Nutrition

The main objective in feeding your fish pellets or sticks is to ensure they receive all the essential nutrients for a balanced diet. Laguna food formulations contain only select quality ingredients that provide pond fish with excellent nutrition for a long healthy life. Easily digested means less organic waste resulting in cleaner healthier pond water.

When to Feed

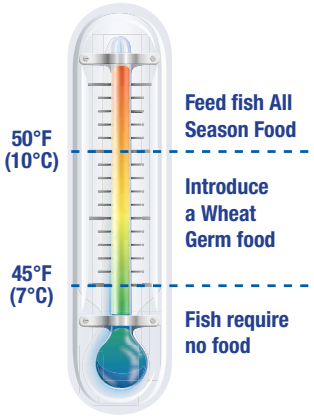
Feeding is only necessary between spring and fall. During the warmer months and especially when water temperatures reach in excess of 59°F (15°C) pond fish will feed most actively. It is wise to feed small amounts four to five times a day rather than feeding on a single occasion.

In the Fall

- Switch food source to Laguna Wheat Germ formula food when water temperature reaches 50°F (10°C).
- Digestion slows as the water temperature decreases - high protein foods can stay in the digestive tract and decay causing harm to the fish.
- When water temperature falls below 47°F (8°C), discontinue feeding completely.

In the Spring

- The fish will be lean and hungry, their metabolic rate will slowly increase with the water temperature.
- When a constant water temperature of 47°F (8°C) is achieved, start feeding with a Laguna Wheat Germ Food. As the temperature rises above 50°F - 54°F (10 -12°C), All season, or Color Enhancing Sticks are recommended.



Premium Koi & Goldfish Sticks

All Season, Spriulina & Wheat Germ and Color Enhancement Formulas

Unique formulation with superior ingredients such as wheat germ, kelp, spirulina, krill, multi-vitamins and stabilized vitamin C for a number of health benefits including higher disease resistance, better overall growth and brilliant colors. Laguna's exclusive formulation also contains special enzymes that help support good digestion and absorption of vital nutrients.

Help prevent over feeding and wasted food with the **Floating Feeding Station**. Fish will 'flock' to one area for easier viewing. Anchors easily to side or bottom of the pond.

Pond Lighting
Shine a light on your pond

Accessorizing your pond is one of the highlights of building a pond. One accessory that will make an enormous impact is lighting. Lighting will bring the pond to life at night. By illuminating the edges of the water and lighting pathways, pond lights not only provide ambiance, but ensure that family and friends will be safe while moving about the pond well into the evening. Lights can create dramatic effects and highlight certain features of a pond; if you have ornamental fish or wildlife you'll be able to see them past dusk. There are many different approaches to underwater lighting, the main idea is to illuminate focal points like plants, fountains, and/or waterfalls in order to obtain glittering and moving reflections.

PowerGlo Submersible LED Pond Lights add atmosphere to any night time setting. Available in 12 or 40 LED's, PowerGlo lights can easily be angled in the desired position. Very low operating costs, the lights can be used in or out of the water. Pre-wired for easy installation, the lights also come with an automatic on/off light sensor and transformer.

PowerGlo LED Ornament Accent Lights add the finishing touch to ornamental fountains. Installs in seconds, low operating costs and pre-wired for easy installation.

PowerGlo Mini Pond Light kits are ideal for small spaces. Compact they are designed for in/out of the water applications. Pre-wired for easy installation, simply place in the desired location and connect to the transformer. Kits include three 10 W halogen bulbs, 12 V transformer and 3 color lenses.

WATER GARDENING TIPS

LED bulbs can reduce energy consumption by 80-90%, and can last for at least 12 to 15 years. A clear advantage over halogen and compact fluorescent lighting (CFL).

Add some nighttime color to your pond. Specifically designed for Laguna PowerGlo light kits, **Laguna Color Lenses** are easy to use and simply snap in place. Available in red and blue.

Ornamental Spitters

What decorative touches can you add to your pond? One option that adds considerable appeal to a water garden is a pond spitter. Fountain pond spitters are a time-honored way to accentuate your pond and add a lot of character. In addition to incorporating soothing sounds of water trickling and gurgling into your pond, pond spitters serve as an essential solution to providing aeration to pond water, especially during the hot summer months, when pond oxygen levels are lower than normal.

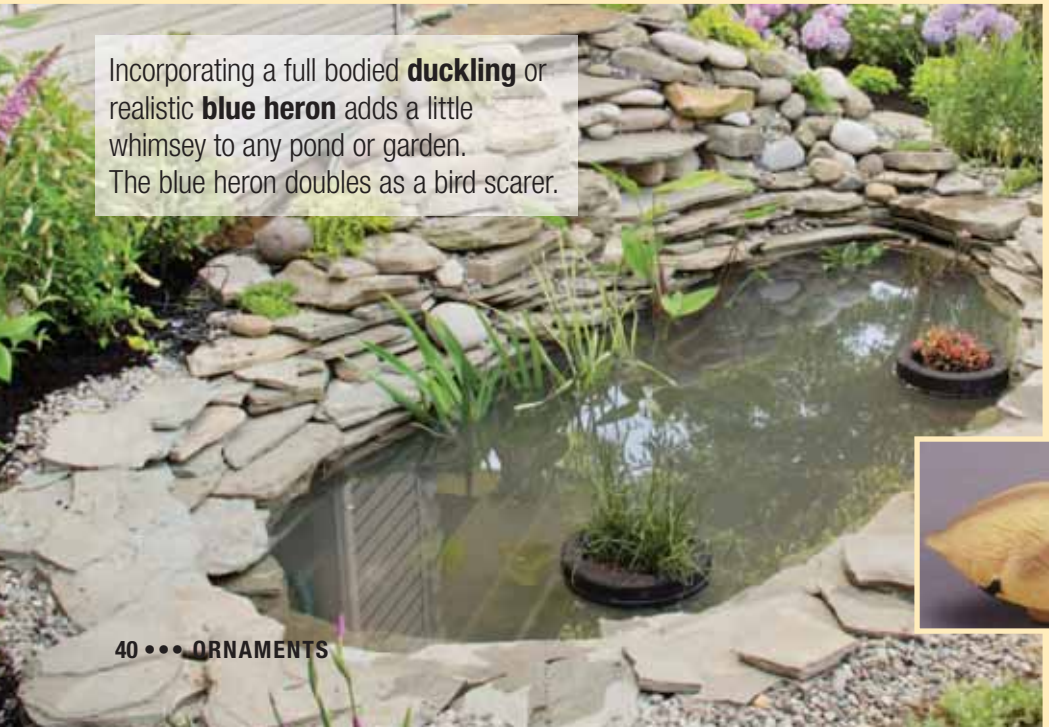
Made of durable poly-resin material and finished with crack-resistant paint, Laguna Pond Spitters are lightweight, cold-temperature safe and easy to install. The spitter kits come complete with an 80 US GPH (300 LPH) submersible water pump.

Crane and Heron Spitter Kit
PT1099
6.8" x 6" x 14"

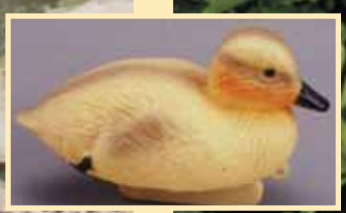
Duck Spitter Kit
PT1097
10" x 9" x 11.4"

Rolling Hippo Spitter Kit
PT1095
10.6" x 8" x 7"

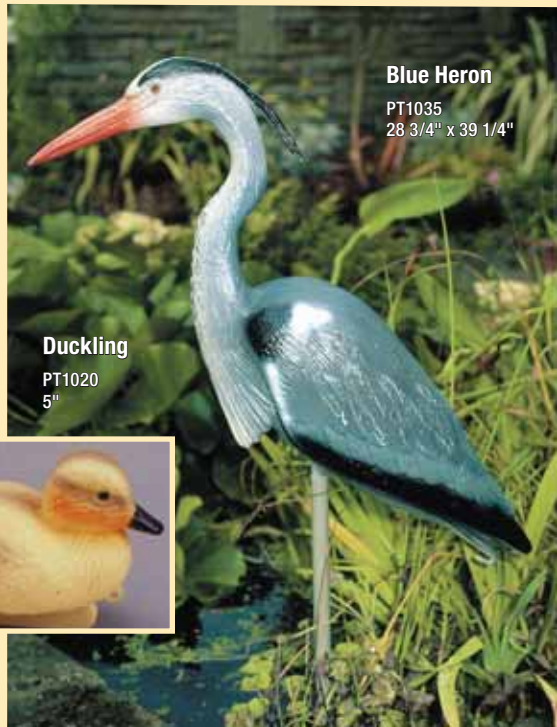
Frog Spitter Kit
PT1094
11" x 9.8" x 5.3"



Incorporating a full bodied **duckling** or realistic **blue heron** adds a little whimsey to any pond or garden. The blue heron doubles as a bird scarer.



Duckling
PT1020
5"



Blue Heron
PT1035
28 3/4" x 39 1/4"

Decor Ornaments

Laguna Decor ornaments are inspired from natural elements of water, earth, stone, wood and light. The contemporary and Urban style pieces are suitable on any level surface are lightweight and easy to install.

Made of poly-resin fiberglass mix they will not flake or chip due to UV or temperature exposure.

Urban Style Collection with faux slate finish

Makes a great planter

Osio

PT1104
15.7" x 15.7" x 16.1"

Beautiful indoors and out

Taira

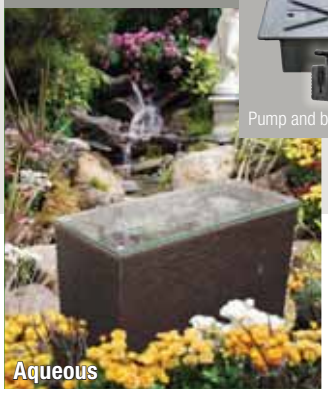
PT1105
15.7" x 15.7" x 16.1"

Contemporary Design Collection with faux wood finish

For a unique look

Kanji

PT1106
34" x 33.8" x 14.2"



Aqueous

PT1107
23.2" x 10.2" x 14.2"

Outdoor settings only

Pump and basin included

Shintu

PT1108
11.8" x 11.8" x 31.5"

Shimmering candlelight

Visio

PT1109
15.7" x 15.7" x 16.1"

Self-Contained and In-Ground Water Features

Whether it is a trickling stream or cascading waterfall, the self contained deck pond, patio pond and urban water garden bowls can be enjoyed in indoor or outdoor settings. Add plants or fish for a splash of color. Compact and stylish self-contained water features come complete with pump.

Deck Pond • PT1119
34" x 33" x 6"

Patio Pond • PT1124
14" x 36" x 18"

Orange Honeycomb • PT1130
29" x 6"

Sand Stone • PT1131
29" x 6"

When you establish one of these in-ground ornamental fountains into your favorite garden spot you will create a simple yet relaxing garden oasis. Crafted lightweight weather resistant fiberglass and poly-resin, these fountains feature old world styling that look like natural rock and stone.

Honeycomb
PT1120
24"

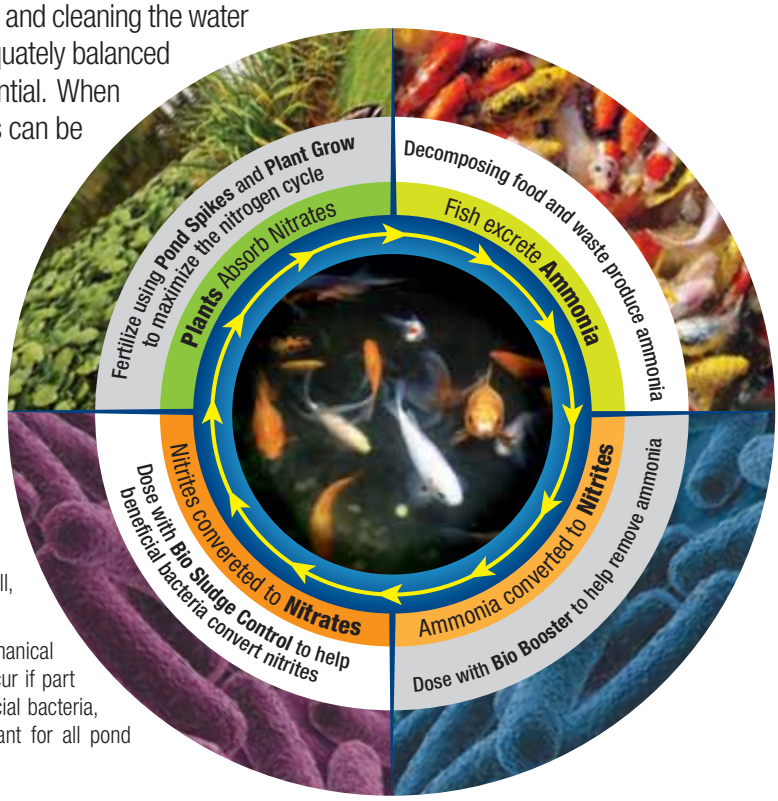
Sand Stone
PT1121
24"

Monaco
PT1148
10.6" x 10.6" x 16.1"

Available in stand alone or as a kit (kit includes water reservoir and pump)

The ABCs of Pond Care

Part of maintaining a pond usually means testing, treating, and cleaning the water from time to time. Testing to see if the pond water is adequately balanced and to see if the filtration system is doing its job is essential. When testing indicates problem areas, Laguna water treatments can be applied to restore a proper balance to the pond.



The Nitrogen Cycle Explained...

At it's most basic, the nitrogen cycle is important so that fish can get the nutrients they need to thrive and also allow the growth of plants. It is the biological interaction between plants, fish, and beneficial bacteria. This is a natural process which develops in time in any water garden.

Equipment technology and water treatments can reduce the time factor and help to achieve a healthy chemical balance in your water garden. The nitrogen cycle begins when fish eat food they find in the water and produce waste. The fish waste contains nitrogen in the form of ammonia (too much ammonia and nitrogen in the water can be deadly to fish). Beneficial bacteria convert waste into nitrites (a form plants absorb). Plants take up the nutrients and help produce clear water. Aquatic plants produce chlorophyll, which in turn is consumed by fish to continue the cycle again.

Generally the nitrogen cycle is encouraged with biological and mechanical filtration and with UV Sterilization/Clarification. However, problems can occur if part of the cycle is unbalanced; if the pond has too many fish, too little beneficial bacteria, or insufficient plants. Maintaining stable pH and water quality is important for all pond inhabitants, specifically large populations of beneficial bacteria.

Pond Health Matters!

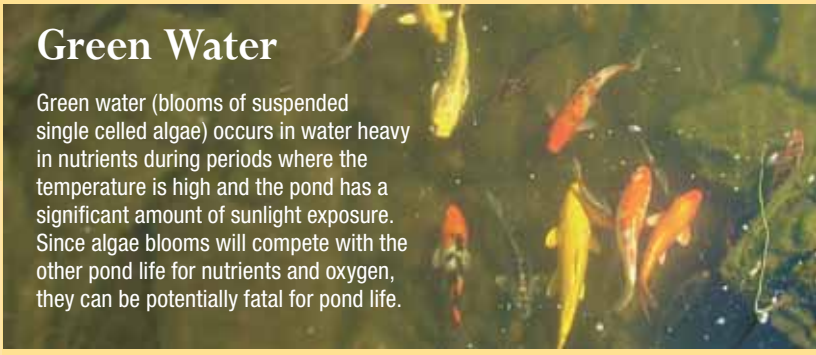
A water garden isn't a static feature, it's a small managed man-made ecosystem and requires routine care to enable it to continue to function. Thankfully managing a pond is fairly simple and there is a comprehensive range of Laguna pond friendly water treatments available to help create and sustain a healthy ecosystem.

Test first

A good indication of a healthy pond is the quality of the water, Laguna Quick Test Strips measure the water for pH, total hardness, total alkalinity, nitrite and nitrate levels.

String Algae

String algae (also known as blanket algae) are long fibrous strands which love moving water such as waterfalls. Small amounts can help with water clarity and provide natural food for fish and is often a good indication of a healthy water balance. However, when amounts become excessive, you should remove as much as possible as it can quickly take over the pond.



Green Water

Green water (blooms of suspended single celled algae) occurs in water heavy in nutrients during periods where the temperature is high and the pond has a significant amount of sunlight exposure. Since algae blooms will compete with the other pond life for nutrients and oxygen, they can be potentially fatal for pond life.

Cloudy Water, Sludge & Organic Waste

Cloudy unsightly water is often caused by an accumulation of suspended particles too fine for the filter system to remove from the water. Decaying leaves and plants as well as decomposed organic waste accumulated on the pond floor cause the pond to look cloudy and dirty and may cause foul odors and affect oxygen levels.

Water Treatments

When corrective action is required, there are ranges of traditional, biological and natural treatments to help in applying the appropriate treatment. One of the best things you can do to control and prevent unsightly water is to ensure that your filter is clean and working to capacity.

To increase the utility and productivity of your filter, adding filter media such as **Laguna Phos-X** will help absorb and trap phosphate, nitrite, nitrate and ammonia. Phosphate and nitrate in particular, are major nutrients that can lead to undesirable pond conditions. Phosphate Control is an excellent preventative measure against undesirable pond conditions, as it helps reduce phosphates naturally. It also adds beneficial microorganisms, improving biological filtration and water quality.

Consider adding barley straw to your pond to lessen algae blooms. **Laguna Barley Straw Pellets** naturally clarify pond water. Be sure to float the bag in the pond (do not let it sink to the bottom as it needs light and oxygen to break it down) and replace when black.

Laguna Peat Granules are a natural product that will help support excellent water quality. **Laguna Liquid Peat** produces a natural amber tint that acts as a light filter, which reduces the amount of sunlight penetrating the water surface. In addition, it contains acids that aid in lowering both KH and pH levels.

Introducing beneficial bacteria such as **Laguna Bio Booster** to compete with the algae for food, as well as introducing plant types such as lilies, oxygenators & floaters (that compete for the same food source and provide shade) will also help to keep water conditions clean.

Traditional Treatments

Laguna Water Prep makes tap water safe for fish by eliminating the chlorine and chloramines. It also neutralizes harmful metals and coats and protects fins and scales.

Laguna Clear Fast clears cloudy or discolored water and clump debris for easy removal by mechanical filtration. It also eliminates pea soup problems. Fast acting, it is safe for fish and plants.

Laguna Pond Clean uses a mix of bacteria that remove organic solids and pond sludge and replenishes beneficial bacterial colonies naturally. (This item is only available in Canada).

Biological Treatments

Laguna Bio Sludge Control is specifically formulated to break down organic solids and pond sludge. The water treatment activates immediately when added to the pond. Safe for fish and plants and benefits the entire pond environment.

Laguna Phosphate Control naturally improves pond water clarity and overall pond conditions. Phosphate is a major nutrient that can stimulate undesirable pond conditions resulting in unclear water. Micro-organisms in Phosphate Control quickly reduce the phosphate levels for clearer water conditions for pond inhabitants.

Laguna Bio Booster provides many benefits to the entire pond ecosystem. Providing millions of beneficial bacteria that boost the natural biological efficiency of ponds and reduces and controls toxic ammonia and nitrites. Also helps to mature filters and media, which is critical for the growth of beneficial bacteria.

Laguna Liquid Peat tints pond water preventing unsightly water conditions, quickly creating ideal conditions for plants and fish. Naturally filters sunlight and contains natural peat extract.

Laguna Pond Clean Granules clear cloudy or discolored water and clumps debris for easy removal by mechanical filtration. Will also eliminate pea soup problems, fast acting, it is safe for fish and plants. (This item is only available in Canada).

Before **After**

When Shopping, Don't Forget...

Filter Media Bags

Perfectly sized to fit most pond filters, **Laguna Filter Media Bags** provide a convenient way to contain loose filter media such as **Barley Straw**. The mesh material allows water to flow through naturally.

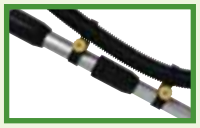
The Freedom to Clean

The **Laguna PowerClean Cordless Pond Cleaner** takes cleaning out a pond to a whole a new level. Designed with convenience and freedom to move and clean, the removal of sludge, scum, and debris has never been easier. Lightweight and balanced the Cordless Pond Cleaner is easy to control. An attached shoulder strap adds portability and comfort, while the handle is ergonomically designed with an incorporated safety trigger. The Laguna PowerClean Cordless Pond Cleaner unit is powered by a rechargeable lithium battery (included), and also includes a shoulder strap, debris bag, tubing and hose clips. - **PT840**

Brush attachment loosens caked on debris making it easier for removal

18 Volt battery provides up to 30 minutes of continuous operation

Rotating blades break up debris to allow easy, smooth pick-up



Telescopic reaches up to 92.5 inches

Recycles filtered water to your pond or garden. Collected debris can be used as compost and fertilizer.

Another clever handy cleaning tool for fast and convenient pond maintenance, the **Laguna Pond Vac** is powered by flowing water and does not require electricity. Simply attach to a garden hose. The kit includes a power vac attachment for collecting dirt and debris from the pond bottom and a hydro brush for scrubbing and cleaning. Comes complete with a filter bag and extension pole. - **PT831**

Nets and Pond Skimmers

Unique design allows easy access to all areas of your pond. Soft netting, durable construction with telescopic handles and “click” collapsible for easy storage. Available in a range of sizes and styles.

PT829

PT814

PT818

Keep It Covered

Pond netting protects valuable fish from predators who are looking for a meal. It keeps leaves and debris out of ponds reducing the possibility of clogging in the pump and other pond equipment. Comes complete with stakes to secure it in place. Available in a range of sizes.

Fall & Winter Preparing your Pond

Fish

As the temperature of the water drops, your fish will require less food. Watch their food intake and adjust your feeding. Stop feeding your fish completely when the water temperature of your pond reaches an average of 45°F (7°C). At 47-50°F (8-10°C) the fish will begin to hibernate at the bottom of the pond. Regardless of the outside temperature or if your fish come to the surface during the winter do not feed them. They might be surfacing for oxygen not food. If you feed them during this period, the food will not be digested.

In most regions your fish are capable of wintering-over right in the pond. However, if your pond is not large enough, deep enough or is overpopulated with fish you may have to consider moving them indoors for the winter months; this will require setting up an indoor pond or an aquarium. You will have to pay close attention to the care given to the fish while they are inside during the winter months. For more information on setting up and caring for your fish indoors during the winter visit www.lagunaponds.com.

Plants

Tropical plants will not survive the winter if left in the pond (in zones 1 to 6a, for plant hardiness zones visit **http://planthardiness.ars.usda.gov/PHZMWeb/Default.aspx**). As soon as the water temperature drops below 15°C (60°F), they should be removed. Some types can thrive indoors during the winter. Hardy plants should be cut down to about an inch above the root stem and sunk to the bottom most level. However don't let them cramp the entire floor bottom as the fish will need room too. While cutting back the plants, remove the build up of debris and string algae which may have accumulated on the pots and stems.

WATER GARDENING TIPS

A patch of leaves left in the deepest part of the pond can help to provide shelter when fish are being kept in the pond for the winter.

Maintenance

The fall brings about a change in weather that signals the need for winter preparation in colder climate zones. Skim your pond at least once a week, removing any leaves or plant matter. Ponds should be covered with netting in order to catch the leaves and make them easier to remove. Leaves or plant matter left in the pond will deteriorate over the winter producing organic waste.

It is also important to continue dosing your pond water regularly with **beneficial bacteria** to ensure that there is sufficient bacteria to handle the increase in organic pollution due to decomposing leaves. Small, partial water changes are a good idea to help dilute any problem that may exist. It is always a good idea to add a full dose of **Water Prep** when performing water changes or adding water. It eliminates harmful chlorine or chloramines from newly added tap or well water, immediately making pond water safe.

Depending on the climate zone you live in, late fall is when you will start to see the water temperature of your pond drop below 6˚C (43˚F). When the water reaches this temperature, submersible pumps should be removed, cleaned and stored for the winter. Completely take apart and clean your pump, especially the impeller. Storing your equipment without cleaning it could result in damaged equipment or a broken impeller shaft when you restart in the spring.

If you are using a secondary smaller water pump ensure that it has been thoroughly cleaned before use. Your pump should be installed close to the surface of your pond or on bricks to prevent cooling of the lower water levels. This should be done even in climates where the pond freezing over is not an issue. It is important not to leave the pump in the deep area of the pond where fish will be hibernating for the winter. You will also need to disconnect, clean and store pond equipment such as UV sterilizers and external filters. If you have a waterfall you will have to disconnect it for the winter months.

In colder climate zones a de-icer and/or aeration kit should be added to keep a hole open to allow water circulation and oxygenation throughout the winter and allow for proper oxygen/carbon dioxide gas exchange for fish to survive the winter.

Aeration Kit

Enhances pond water quatlity all year round. Prevents pond surfaces from completely freezing over in winter. Allows proper oxygen/ gas exchange for fish to survive. Enhances oxygen levels in water gardens and ponds. Beneficial for any size pond. See page 32 for more product information.

PT1630

PT1620

PT1624

Power Heat

Pond heaters will keep an area thawed and open in the pond, allowing the release of toxic gases from fish respiration and decomposing organic matter to escape. At the same time it allows oxygen to re-enter the pond. Safe for plastic and liner ponds, the pond heater will not harm fish or plants.

PT1643
500 watts

PT1642
315 watts

WATER GARDENING TIPS

If the ice has completely frozen over, don't panic and try to break through it. Simply fill a metal pot with boiling water and let it melt through the ice, reopening the hole.

Winterizing Kit

Laguna's Winterizing Kit includes all the necessary products you will need for protecting and keeping goldfish and koi alive during the winter months. Kit includes a 500 watt Power Heat, 15 x 20 pond netting and Laguna aeration kit PT1630.

PT1648

Pond De-Icer

Easily attaches to most pump outlets allowing for winter water circulation. The high density Styrofoam float keeps ponds open during winter to allow oxygen / gas exchange for fish safety.

PT1645

Pond Closing Kit

Laguna's Fall/Winter Kit includes all the necessary products you will need for transitioning from the fall to winter water gardening season as well as for protecting and keeping goldfish and koi alive during the winter months. Kit includes a 315 watt Power Heat, 15 x 20 pond netting, Laguna aeration kit PT1630, Goldfish and Koi Fall/Winter formula food, and a Floating Thermometer.

PT1649

Spring Opening

Clean up

The first thing you will need to do is clean up the mess left over during the course of the previous fall and winter. Use a **pond net, skimmer** or **pruning tool** to remove leaves, twigs and debris in, around, and at the bottom of the pond. Use your **pond vacuum** to suck up dirt and plant matter from the base of the pond. Make sure your thermometer is working properly, if it isn't, install a new one.

Refilling

Early spring is a good time to do a water change of up to 50%-75%, depending on the pond's condition (and what was done in the fall). Winter run-off may contain pollutants that may have seeped into the pond, use a pump to partially drain the pond. Before refilling the pond, let the water run a few minutes to flush the pipes. After replenishing the water, add **Laguna Water Prep** to eliminate chlorine and chloramine as well as to neutralize harmful metals.

Starting the equipment

Pond equipment should have been cleaned and packed away for winter; if it wasn't, make sure that you clean them thoroughly before restarting. Take your filter apart and thoroughly rinse all media in a bucket of water (use pond water taken from the pond - never use tap water as the chlorine will kill off the beneficial bacteria that keep your pond water in biological balance). Replace filter foams if required before reinstalling your filtration systems. If pumps were in operation over the winter, remove and clean them. Reassemble any hoses and other water runs and inspect for damage. Repair and replace as required, then test to ensure that everything works. If you have a waterfall, use **waterfall foam** to fill in gaps and openings in waterfall area. If you have a **UV sterilizer** or if your filter contains a **UV-C lamp**, early spring is a good time to replace the bulb as its effectiveness dramatically reduces after 12 months. When the water temperature remains above 7ºC / 45ºF, start the filter and the UV sterilizer to maintain clear water. To help achieve optimum water conditions, add in **barley straw** and **peat granules** to the filter's biochamber or directly into the pond (using a **mesh bag** to contain the product).

Adding fish

Fish that have been kept indoors for the winter will need time to adjust to the pond's environment. A sudden change in temperature and pH level can harm them. Ensure that the water temperature is a minimum 15°C /60°F before relocating the fish back into the pond. Allow them to acclimatize gradually. Never pour or drop them into the pond. Gently net and place them in a plastic bag for transportation.

If you have purchased new fish, put the bag in the pond and let it float untied on the water surface. Wait about 10 minutes or until the temperature of the bag and the water are about equal, then untie the bag and add a small amount of pond water to the bag and leave for another 10 minutes. Repeat the process once or twice more, then add ½ a cap of **Water Prep** pond water neutralizer before gently allowing the fish to swim out of the bag and into the pond. Moving can be traumatic for fish, so watch them carefully to ensure that they're adjusting to their new surroundings and that there are no losses. Also check ammonia and nitrite readings regularly, using a **pond test kit**, to ensure that the biological filter is establishing rapidly and effectively.

Fish should be fed only when the water temperature is consistently above 8°C/46.4º F. Once above 8°C/46.4ºF, begin feeding a **spring/fall formula** food enriched with wheat germ, it is low in protein, easier to digest, and helps minimize waste. When the water temperature stays above 10ºC/50º F, switch to an **all season formula**. Feed amounts that fish can eat within a few minutes and remove any uneaten food.

When Shopping, Don't Forget...

Be sure to visit **www.lagunaponds.com** for a complete list of products and to locate the dealer nearest to your location.

Basic Essentials:

Pond Liner Size: _____ Geo Textile Size: _____

Preformed Pond Size and Style: _____

Pump Model #: _____ Air pump Model: _____

Filter Model #: _____

UV Sterilizer Model #: _____

Tubing Required Size: _____ Length: _____

Hardware - Clamps, Connectors, etc.: _____

Fish Food Required: _____ Floating Feeding Station: _____

Water Treatments Required: _____

Winterizing Kits & Essentials: _____

Accessories:

Lighting: _____

Pond Vac: _____

Nets: _____

Planting Baskets: _____

Fertilizer or Fertilizer Sticks: _____

Fountain Spitters: _____

Rock Covers: _____

Decor Ornaments: _____

Questions:

_____

_____

Dealer Information

Store Name: _____

Employee Name: _____

Phone Number: _____ Email: _____

Notes

Planning

Laguna is Connected

We're making a big effort towards using social media to interact with water gardeners, outdoor hobbyists and friends.

We are very excited to engage with the water gardening community and inspire individuals to get into pond keeping.
Connect with us for contests, to share photos, stories & ideas, tips & tricks and to stay up to date on what we're doing here at Laguna.

We invite you to "Like" the Laguna Facebook page, watch Laguna videos on YouTube and to stay in touch via Twitter.

We are looking forward to meeting you there!

www.lagunaponds.com

For more information on Laguna products or to find a dealer nearest you, go to www.lagunaponds.com

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