

▶ installing an efficient system

In order to keep your pond clear and healthy, you will need to install a system incorporating a pump, filter and a UV clarifier. Depending on the size of your pond and the type of water features you want to incorporate, there are a number of different combinations that will fit your needs. The following section makes it easy to build your own backyard oasis with examples of complete systems, information on getting started and handy reference charts.

▶ here are some examples:

1200 gallon pond system

DynaMag 750 Pump – flow @ 2 ft. high approx. 650 gph

UV1 Clarifier – Max. flow 900 gph

PF1 Gravity Flow BioFilter – Max. flow 500 gph
Use 1" inside diameter tubing to connect all components.

Flow control valve



About 150 gallons are diverted to fountain or waterfall

Restrict flow to UV clarifier and filter to about 500 gph

DynaMag 750

1800 gallon pond system

DynaTec 2250 Pump – flow @ 2 ft. high approx. 2000 gph

UV1 Clarifier – Max. flow 900 gph

PF2 Gravity Flow BioFilter – Max. flow 750 gph
1 1/4" and 1' inside diameter tubing to connect these components.



Use 1 1/4" inside diameter tubing to connect these components

T-Fitting

DynaTec 2250

2500 gallon pond system

OFX4000 Pump – flow @ 2 ft. high approx. 3500 gph

PUV2500 Pressure Filter With Built-In UV Clarifier – Max. flow 1250 gph
1 1/2" inside diameter tubing to connect these components.



Use 1 1/2" ID tubing

T-Fitting

OFX4000

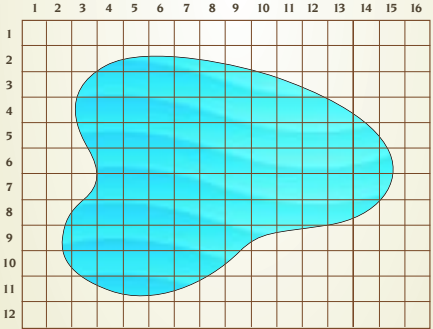




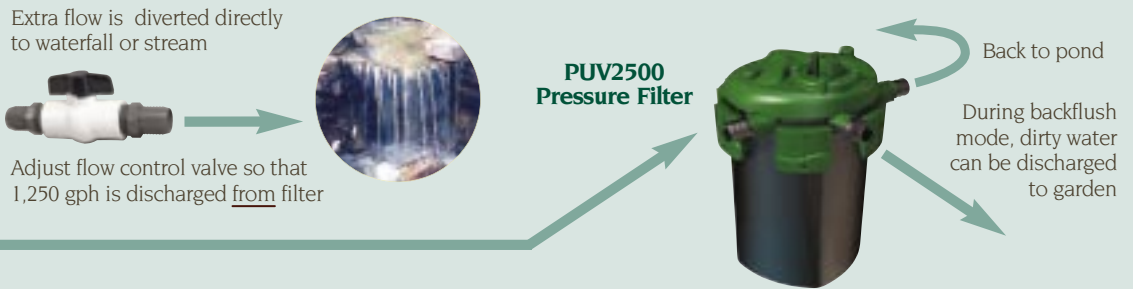
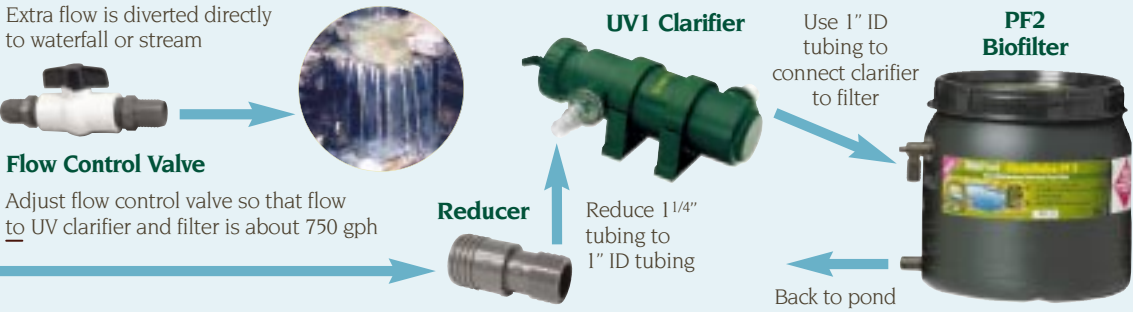
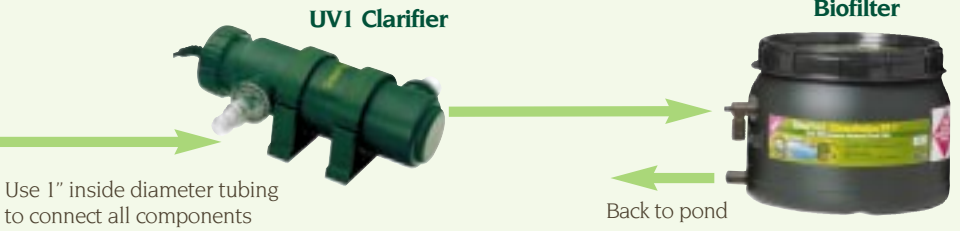
► to figure area and volume

This grid may be used to determine the surface square footage and the volume which you will need to determine the size of your pump.

1. Measure the length and width of your pond, and sketch the approximate shape on the grid. Each square represents 1 square foot.
2. Total the squares for your square footage.
3. Multiply square footage by the average depth (ft.) This is your cubic footage.
4. Multiply cubic footage by 7.5. The result is your liquid volume in gallons.



The pond sketched into the grid is approximately 105 sq. ft with an average depth of 1 1/2'. It will contain 1182 gallons of water.



▶ guide to building your own system



- 1. How many gallons your pond holds** (see “to figure area and volume” on page 13).
- 2. Choose the proper size pump – three considerations:**
 - a. The 50% circulation rule – choose a pump that circulates a minimum of 50% of the pond volume per hour.
 - b. Determine the height and width of desired waterfall spillover (see page 17).
 - c. Choose a pump large enough to power your filter and UV clarifier (see page 17).
- 3. Measuring flow** - An easy way to check flow volume: simply time how long it takes (total seconds) to fill a 5-gallon bucket. Divide 3,600 by the total seconds, then multiply result by 5.
Example: $3600 \text{ (seconds in an hour)} \div 15 \text{ seconds (fill time)} \times 5 \text{ gallons (bucket size)} = 1200 \text{ gph (flow rate)}$
- 4. Choose biofilter type and size** - Gravity Flow or Pressure Filter (see “keeping your pond clean” on page 22 for more information on filter types).
- 5. Choose the proper size UV clarifier** (see chart on page 15).
- 6. Choose the proper hose diameter** - Use the largest inside diameter that equipment can accommodate to connect equipment. Equipment inlet/outlet sizes are listed right on the packaging. If you are in the pre-planning stages, visit our Web site at www.tetra-fish.com for a complete listing of all TetraPond equipment specifications and capacities.
- 7. Determine hose length** - An easy way to determine length of tubing is to use a string to consecutively link the equipment (pump, filter, clarifier, etc.), follow the terrain and make the most direct path. Measure string for length. Always purchase an extra foot or two.
- 8. Determine if flow control valve, T-fittings and/or reducers will be needed** (see “tying it all together” at right).

▶ tying it all together

These essential items are readily available at your local hardware store or water garden center.

Tubing

Flexible, kink-resistant tubing available in a variety of diameters to connect pump, biofilters, UV clarifiers, waterfalls and other water features.



Hose clamps

to secure your hose connections.

Teflon tape

To ensure a good seal on threaded connections.



T-fitting

To divert water flow to a waterfall or piece of equipment.

Reducer fitting

To connect hoses of different inside diameters.




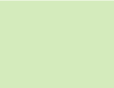



























Flow control valve

Adjustable valve used to increase or reduce water flow volume.

► matching the right equipment


Use this handy reference chart to help you match the proper pump to the proper filter/UV clarifier for your pond. Although your pond application may vary, this will give you the guidelines and ranges to help you make the combination that's right for you. If you are matching a pump with a flow greater than the flow of the other components, a control valve is recommended to reduce flow, or use in conjunction with a T-fitting to divert excess flow to a water feature.

		RECOMMENDED PUMPS							
									
GRAVITY FILTER & UV CLARIFIER COMBINATIONS	Recommended Pond Range	DynaMag 500 500 gph max	DynaMag 750 750 gph max	DynaTec 1100 1100 gph max	DynaTec 1500 1500 gph max	DynaTec 2250 2250 gph max	OFX2000 2000 gph max	OFX3000 3000 gph max	OFX4000 3870 gph max
PF1 Filter & UV mini Clarifier Filter: max flow 500 gph UV Max. flow 330 gph	100-660								
PF1 Filter & UV1 Clarifier Filter: max flow 500 gph UV Max flow 900 gph	660-1200								
PF2 Filter & UV1 Clarifier Filter: max flow 750 gph UV Max. flow 900 gph	1200-1800								
PF3 Filter & UV2 Clarifier Filter: max flow 1000 gph UV Max. flow 2200 gph	1800-2400								
PRESSURE FILTER COMBINATIONS									
PRF1500 Filter or PUV1500 *Filter: Max flow 750 gph	300-1500								
PRF2500 Filter or PUV2500 *Filter: Max flow 1250 gph	1500-2500								
PRF4000 Filter or PUV4000 *Filter: Max flow 2000 gph	2500-4000								

*Expect approximately 40% flow loss through the pressure filter.

 No flow control valve needed

 Use the DynaMag flow control valve with these combinations

 Use an auxiliary flow control with these combinations