



International Manufacturers & Suppliers

Sixth
Edition

Aquatic Filtration Systems



Cloverleaf
Simply The Best



Adtec Filter Systems
Multi Bay Filters
Answer Product Range
Stainless Steel U/V Clarifiers
Specialist Foods
Fluidised Bed Filters
Ozone Fractioners

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Cloverleaf

Introduction To Cloverleaf

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Cloverleaf Simply The Best

Established since 1981, this British based family run company has succeeded in making the "Cloverleaf" brand a name that is internationally acknowledged by Koi and pond enthusiasts around the globe. Design, innovation, focus on fish health, quality of construction, flexibility, reliability, low maintenance, and good value is what sets the "Cloverleaf" products apart from its competitors.

Research and development, together with manufacturing techniques beat at the heart of the organisation. With the commitment to offer "simply the best" these processes are constantly ongoing, and extend into ozone technologies and advanced filtration mediums.

The "CL" Professional Range" is the front runner in the multi bay vortex market, and offers the flexibility and scope rightly demanded by the Koi enthusiast or pondkeeper. Quality products need full professional backup and technical support, and the Cloverleaf team are fully committed to offering such services.

Cloverleaf HELPLINE
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One Of Many Cloverleaf Commercial Projects

Customer Pond With Cloverleaf Professional CL2 Filter



Cloverleaf - The Solution To Tackle Pollution

Adtec Filters And Particle Separation

The clever but uncomplicated design for the Particle Separation System (PSS), can be used in a stand alone situation to provide mechanical and biological filtration, or put in the front of an existing system where it would replace a vortex, which could then be converted into an additional biological bay. Key design concept of the PSS is to remove or trap suspended particles / solids from the water, which many vortex bays may struggle to remove, such particles will clog biological media, reducing oxygen levels and reduce growth of good bacteria.



Top View of PSS

The PSS system works by using an inner chamber mounted into a vortex, this still allows settlement of larger solids via vortex action before entering the PSS chamber in which a specially designed plastic media (made in our own factory in Essex) is kept suspended by the water flow (held in place by a baffle as seen in the picture above). The media groups together and stops particles from finding their way through, when the media needs cleaning the water can be seen coming up the pipe in the centre of the chamber, this also acts as a bypass. If the media blocks while away from home the flow will remain unaffected. Cleaning is very easy, simply switch of the supply pump then close the valve on the inlet (valve included) then lowering the water level so it is only just visible, remove the top plate, then turn on an air supply, this buffets the plastic media and will dislodge the particles that have been trapped. Approx 5 minutes of air flow is required. To complete the cleaning switch off the air pump and open the waste valve to flush away the dirty water, replace the top, open the inlet valve and re-start the pump.



PSS Media

The "ADTEC" complete filter system combines the latest in technology including tried and tested conventional filter media. "ADTEC" models also incorporate the PSS system. "ADTEC" models come with the "PSS" system in the first chamber, the second and third is of either brushes or a Japanese matting, in the final chamber is the "Cloverleaf Active Bed" a rotating Bed of specially designed media which is kept rotating by air along with the incoming water movement, this media has a surface area of up to 15 times that of other media available on the market today, giving a dramatic boost to that normally achieved from the biological side of a standard filter media, this greatly reduces the risk of nitrite and ammonia within the pond. With the combination of the PSS system and the use of conventional filtration media it makes obtaining good water quality simple. Some models come complete with the air pump. All are supplied with waste control valves for simple cleaning of all chambers. All models are designed to be pump fed.



Active Bed Media

Models include

PSS1 - PSS2 (Stand Alone Filters)

Genesis - Genesis MK2

CL2 - CL3 - CL4 (Complete Systems)



Adtec Filter System Model CL2

Below the Cloverleaf Air Pump, this is supplied with CL2 -CL3 -CL4 and Genesis MK2 full Adtec systems

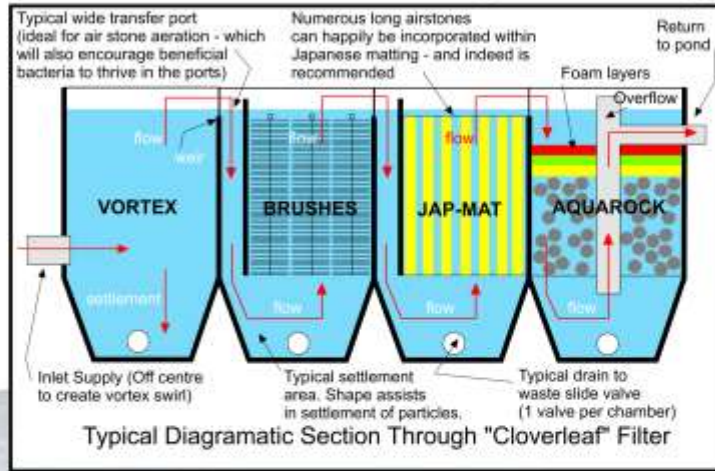


Type CL2

PSS2 stand alone or add on Particle Separation Filter

Cloverleaf Professional CL Range

Few manufacturers in the world have put as much effort into designing a flexible and good value range of multi-bay filters suitable for the Koi pond as Cloverleaf. Key features of the well constructed compact "CL" range are the options of most being pump or gravity feed (excludes CL1 pump fed only) whilst meanwhile being very simple to maintain. The incorporation of vortex bays, and skilful use of mechanical and biological bays and good water flows are further attributes that make the range a superb and sound investment. For very large ponds all filters can be happily installed as pairs - linked to separate pumps or bottom drains.



CL2/CL3 AND CL4 ALSO AVAILABLE IN THE "ADTEC" ADVANCED DESIGN

CL1

Size 660 x 660 x 560mm high. Suitable for Koi ponds up to 1,250 gallons (5,625 litres), or Goldfish ponds up to 2,500 gallons (11,250 litres). The 4 Bay CL1 unit comprises of the first bay a vortex, Bay 2 with brushes, Bay 3 with Japanese Matting, and Bay 4 serving as the final biological/mechanical stage with foam & Aquarock. Note:- Pipe inlet size 82 mm (3") - Outlet 50mm (2").

CL2

Size 990 x 990 x 760mm high, Suitable for Koi ponds up to 2,500 gallons (11,250 litres), or Goldfish ponds up to 5,000 gallons (22,500 litres). This 4 Bay unit comprises of a first stage vortex bay, with Bay 2 being fitted with mechanical brushes, Bay 3 acting as a main biological bay with Japanese Matting, and Bay 4 serving as the secondary and final biological/mechanical stage - incorporating foam and the highly proclaimed Aquarock. Note:- Pipe inlet size 110mm (4") - Outlet 82mm (3").

CL3

Size 1220 x 1220 x 860mm. Suitable for Koi ponds up to 3,750 gallons (16,875 litres), or Goldfish ponds up to 7,500 gallons (33,750 litres). General description as for "CL2" filter. Note:- Pipe inlet size 110mm (4") - Outlet 110mm (4"). Note: CL1, CL2, & CL3 are supplied complete with heavy duty lid, together with waste valves and pipes.

CL4

Adtec Model shown
Size 1600 x 1600 x 1200mm high. Suitable for Koi ponds up to 5,000 gallons (22,500 litres), or Goldfish ponds up to 10,000 gallons (45,000 litres). As standard this system is supplied without a lid, and without any mediums - thus giving the pondkeeper full flexibility in choice. General description as for "CL2" & "CL3" filters. Note:- Pipe inlet multi size 160mm (6") or 110mm (4") - Outlet 100mm (4").

Plastic Pipe Fittings



Large flanged tank or bulkhead connectors are available up to 110mm dia, with variants to suit flat or curved surfaces. Smaller tank connectors with gasket and nut compression are available up to 50mm diameter, and ideal for those constructing small DIY filters. Specialist fittings include straight connector couplings going from welded to push fit joints or visa versa.



Cloverleaf produce a range of over 70 different types of plastic pipe connectors, bends, tees, hoesetails, ring seal adaptors, converters, flanged tank connectors, rigid pipe etc, all in numerous sizes - with the option of pushfit or solvent joints.

Cloverleaf Genesis Mark 2 Range

"Cloverleaf" multi bay filters are sturdily constructed. With the range being suitable for large ponds special design multi bay configurations are available on request. The Mark 2 bays are often used by Cloverleaf on commercial projects.

ALL MODELS AVAILABLE IN THE "ADTEC" DESIGN
"SIMPLY THE BEST"



G2/4

Illustrated here is the Genesis Mk 2 - 4 Bay system. Size 2480 x 620 x 860mm high. This unit will cater for Koi ponds up to 4,000 gallons (18,000 litres) or Goldfish ponds up to 8,000 gallons (36,000 litres). Concept of design, function, and filtration mediums, is generally all as specified for the "Genesis" and "CL" range (as specified elsewhere). Note:- Pipe inlet size 110mm (4") - Outlet 110mm (4").

Other models include the 1860mm long G2/3 bay and the 3100mm long G2/5 bay. G2 models can be built to other configurations i.e. L shape or a cube please ask your dealer for details.



G2/6

Above is the Genesis Mk 2 - 6 Bay system. Size 3520 x 620 x 860mm high. This unit will cater for Koi ponds up to 5,000 gallons (22,500 litres) or Goldfish ponds up to 10,000 gallons (45,000 litres). Concept of design is again generally all as specified for the "Genesis" and "CL" range. Mediums can be to the customers specifications. Note:-Pipe inlet size 110mm (4") - Outlet 110mm (4").

Also Available
G2/3
3 Bay
Goldfish
5000 Gallons
Koi
2500 Gallons



Commercial Projects

It is not just pond keepers around the world who appreciate the "Cloverleaf" name and reputation, but also many designers, engineers, and commercial clients who seek a top quality product with a first class design and install package. The **BioCone 4** range frequently forms the basis for many of these projects - some of which are noted below.

Also Available
G2/5
5 Bay
Goldfish
9000 Gallons
Koi
4500 Gallons



BioCone 4

Commercial Projects Include :-

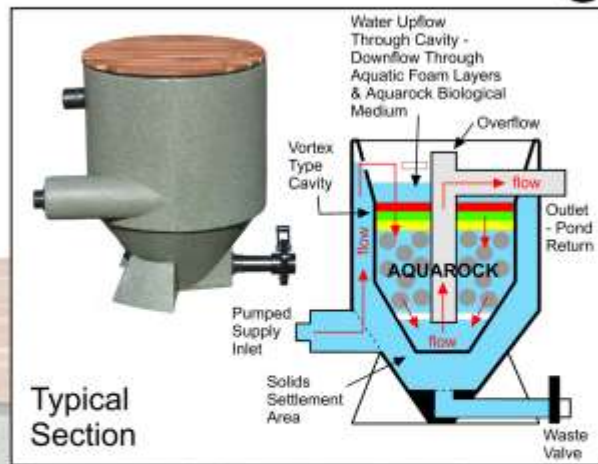
- 1: Royal Windsor Castle.
- 2: Royal St James Park
- 3: Royal Palace Malaysia
- 4: National Exhibition Centre Denmark
- 5: Numerous Hotels In Cyprus
- 6: Chessington Theme Park
- 7: The Eden Project
- 8: World Health Organisation (Research)

Compact Filter Series

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Features of the "Compact Series" are a small footprint for when space is restricted, coupled with an innovative design concept of incorporating an integral vortex style cavity for the settlement of solids – thereby reducing maintenance. Filtration mediums comprise of multi foam layers offering both mechanical and biological attributes, with high performance "Aquarock" forming the foundation for a biological bed for colonisation from beneficial bacteria.

This range can also be used as a superb separate system for connecting to a skimmer unit. All units are supplied with a timber slatted lid, together with waste valve set.



VH2/1

Illustrated above is the VH2/1, size 510 diameter x 630mm high, which is suitable for Koi ponds up to 750 gallons (3,375 litres) or Goldfish ponds up to 1,500 gallons (6,750 litres). Note:- Pipe inlet size 40mm (1.5") - Outlet 50mm (2").

VH4/1

Illustrated above is The VH4/1 suitable for Koi ponds up to 1,875 gallons (8,430 litres), or Goldfish ponds up to 3,750 gallons (16,875 litres). Size is 810mm diameter x 1200mm high. Pipe inlet size 160mm (6") - Outlet 110mm (4"). This unit can hold approx 1 ton of water, and needs support via part concrete casing or partly sunk into the ground.

VH3/1

The VH3/1 illustrated here, is suitable for Koi ponds of 1,000 gallons (4,500 litres), or Goldfish ponds up to 2,000 gallons (9,000 litres). Size is 620mm diameter x 860mm high. Note:- Pipe inlet size 110mm (4") - Outlet 82mm (3").

Unique Space Saving Design

Cloverleaf Power Pumps



Cloverleaf's submersible "Power Pump" range incorporate a safety feature float switch. These heavy duty pumps are capable of high flow rates up to a maximum of 16,800 LPH (3733 GPH). Pumping up to good "head" heights (up to 9 metres) is also possible. The PPS models are able to handle very large solids up to 24mm diameter.



Cloverleaf Auto Fish Feeders



Cloverleaf's electronic computerised auto fish feeders are a breakthrough in both sophistication and exceptional value for money, and will be appreciated by all pond keepers who either have frequent holidays, or by those who are away from their ponds during most of the day. Feeding small amounts at frequent intervals is scientifically known to be the best of techniques, and the computer controller with digital display allows just this. Up to 8 feeds a day over any given period are possible, with full control over the exact amount being fed. Models are available in three sizes - the **Small** (5 litre pellets), **Medium** (10 litre), and **Large** (20 litre as photograph), with the largest model measuring approx 530mm high x 275 dia the autofeeders have a minimum feed period of 1 second making them also ideal for the small pond.

LOW VOLTAGE OPERATION FOR GREATER SAFETY

Smartstart Stainless Steel UVs

The energy efficient System

The unique energy efficient "Smartstart" lamp is rated for up to 9,000 hours of use, and with Cloverleaf's spiral flow chamber optimum performance is achieved. With an improved efficiency of up to 35% above plastic body UVs combined with up to 25% saving on running costs against that of conventional ballast run bulbs.



High Performance Cloverleaf "Smartstart" Lamps With Built In Ballast Unit

Single cell algae forming green water are not just unpleasant to look at, but contribute to lowering the "kh" value which is so important to fish health, and to the nitrification process within the filter system. Algae can also lower oxygen levels, whilst also increasing "ph" levels - both of which are not desirable. The use of UV is the safest of techniques for improving the quality of pond water.

Smartstart Stainless Steel UV Clarifiers	
Sizing Chart Guide	
Max 1800 Gallons (8100 Litres)	24 Watt
Max 3000 Gallons (13200 Litres)	48 Watt (2 Lamp)
Max 7000 Gallons (31500 Litres)	72 Watt (2 Lamp)
Max 9000 Gallons (40500 Litres)	144 Watt (4 Lamp/2B)

Please refer to back page when calculating pond gallowage

CSP Surface Pumps

Designed and built for durability and reliability the Cloverleaf surface pump range comprise of the CSP1 1/4 h.p. model rated at 10,800 lph (2,400gal ph) and the CSP2 1/3 h.p. model rated at 13,500 lph (3,000gal ph). Both are ideal for gravity fed filter installations and are ideal for the Cloverleaf "CL" or "Genesis" range. Both pumps are to IP55 specification (weatherproof for external use) but are not suitable for use as a submersible, and come with an internal strainer basket to catch larger solids. Inlet and outlet size 38mm (1.5")



Stainless Steel hose Clips



Standard metal hose clips will rust and seize due to corrosion now it can be avoided by using our 100% 316L rust proof clips

Cloverleaf Stainless Steel hose clips are available in a "Wireclip" and "Wideclip" and are packed in two's in a handy blister pack in all popular diameters



Smartstart Plastic Body UVs

Key features include a ballast unit built into the lamp, which offers a constant light performance for up to twelve months, and up to 25% more energy efficient than a conventional ballast.

The Energy Efficient
"Smart" Way To Clear Water



The standard "Smartstart" UVs range from 24w up to 144w and combine innovation with sleek design with great value for money

Standard Smartstart UV Clarifiers	
Max 1200 Gallons (5280 ltr)	24 Watt
Max 1500 Gallons (6600 ltr)	36 Watt
Max 2000 Gallons (8800 ltr)	48 Watt
Max 3000 Gallons (13200 ltr)	72 Watt
Max 4000 Gallons (17600 ltr)	96 Watt
Max 6000 Gallons (26400 ltr)	144 Watt

Please refer to back page when calculating pond gallowage

Job Done Filter Range

The Job Done range consists of 3 models. The models are the J4 with a 24w Smartstart UV built into the inlet spraybar with foams and Alfragrog Rock this is suitable for ponds of up to 2,200ltr (500gal) containing goldfish.

Next in the range is the J20 this has a set of foams and Flocore Plastic Media for the biological side. It also has a discharge valve for easy cleaning, this is suitable for ponds up to 3,960ltr (900gal) for Koi and 6,600ltr (1,500gal) for goldfish.

And the F20D36w with a 36w Smartstart UV built into the inlet spraybar, this is a three bay filter with a Brush chamber with a discharge valve the next chamber houses Flocore plastic media, with a foam set and Alfragrog Rock in the last chamber, for ponds up to 9,800ltr (2,200gal) consisting of goldfish and 5,350ltr (1,200gal) with koi.

Both the J4 /24watt and F20/36watt above are available without the UV model numbers are the F4D and the F20D

Cloverleaf Pond Filter Kits

Shopping around for a small pond filter with a suitable pump and UV clarifier to match is not an easy task for everyone, and with this in mind "Cloverleaf" have put together 3 different off the shelf kits with fully matched components. Kits include Filter -Ultraviolet- and Pump,

To complete installation the required lengths of inlet and outlet pipe need to be obtained either at the time of purchase or once the position of the box components has been decided.

Box kits are designed to give peace of mind, but also to provide sound design and very good value.



The Package Solution To Tackle Pollution



Above is the **F20 Pond Filter Set**

Contents F20D Deluxe BioClear Filter, 24w Stainless Steel U/V and submersible pump. Suitable for goldfish ponds up to 9,800ltr (2,200 gal) or Koi Ponds of up to 5,350ltr (1,200 gal).

Below is the **CL1 Pond Filter Set**

Contents CL1 Professional Multi Bay Filter, 24w Stainless Steel U/V And Submersible pump. Suitable for goldfish ponds up to 11,250 ltr (2,500 gal) or Koi Ponds of up to 5,625 ltr (1,250 gal).



To the left is the **F4 Pond Filter Set**

Ideal for the smaller ornamental pond the Box contains the F4 Bioclear Pond Filter with a SmartStart U/V bulb built into the inlet spray bar making a very compact design.

Suitable for goldfish ponds up to 2,250 ltr (500gal)



Fluidised Filters And Fractioners



Cloverleaf FB's are produced in three varying sizes, and are available in two designs:-
 (1) Pumped with gravity return
 (2) Pumped with pressurised return. Unlike some other manufacturers products, the Cloverleaf range has non return valves to prevent the loss of biomass via siphoning actions.

Cloverleafs "Foam Fractioner" offers very good value, and a high spec incorporating the addition of a Biological Media. This is ideal for those experiencing the foam that can build up on the surface of ponds which is a result of excess protein or dissolved organic compounds. In addition the option of "Ozone" is available, not only will this help with obtaining very high water quality but also helps to prevent the spread of parasites and the bacteria that can infect open wounds on damaged fish. Cloverleaf have made this a simple and cost efficient unit by developing a "Smart Start" bulb to produce an average output of 600mg of Ozone per hour, also the need for an additional air pump to run either of the units is overcome by the use of a venturi, shown in the picture to the right is the Ozone Foam Fractioner, and below the standard Foam Fractioner



The dilemma of very high fish stocks overloading an existing filter system has frequently meant replacing the entire system or adding to it in a conventional manner, but often the case is that there is insufficient floor space. This is where the Fluidised Bed filter fully comes into its own, and providing that the existing system can adequately cater for mechanical filtration, then a vast improvement in water quality parameters will be evident. As a guide to flow rates and application of use, approximately 10% of the ponds volume should be directed through the Fluidised Bed filter.



The ability of Fluidised Bed filters to biologically cater for extremely high level fish loads has been well documented, Cloverleaf offer the very best in FB's – assisted greatly by the unique specification of biomass used, and which is scientifically known to offer superior bacteria colonisation than that achieved by coral sand and other common types. Put into perspective, studies would indicate that the unique Cloverleaf biomass media has such impressive properties that 3kg will support the same volume of beneficial bacteria that might otherwise only be achievable if using 50 sacks of average filter rock or gravel. FB's should only be installed on existing mature ponds where adequate mechanical filtration also exists.



The M25P pressurised throughput FB unit will cater for heavy stocked ponds up to 2,500 gallons (11,250 litres), – with an ideal final operational flow rate of around 200/250gph. This unit is approx 600mm high (24") with a 110mm (4") diameter core containing 3kg of biomass, together with standard 38mm (1.5") pipe manifolds including 2 ball valves. The M25P will support up to 50kg (110lb) of fish load.



The M70P pressurised throughput FB unit will cater for heavy stocked ponds up to 7,000 gallons (31,500 litres), – with an ideal final operational flow rate of around 700gph. This unit is approx 1000mm high (40") with a 110mm (4") diameter core containing 6kg of biomass. The superb 2000mm high M140P will support up to 200kg (440lb) of fish load in ponds up to 14,000 gallons (63,000 litres).

Quality Fish Food And Treats

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With the Cloverleaf range of 4 different fish food treats, available in 5ltr buckets, your fish can enjoy a truly good quality alternative to basic staple foods, which will also help to improve the colour and health of your fish, all these foods can either be used as a supplement or mixed with your daily feed.



Cloverleaf freshwater shrimp (dried in their shells) are of the "Gammarus Pulex" variety that are selectively used in the factory farming of Trout, Sturgeon and Carp due to their ease of digestibility, known purity and vitamin content. That level of purity comes about in the knowledge that this variety of shrimp will only survive in exceptionally clean water with a good level of oxygen saturation.

Cloverleaf Freshwater Shrimp Content:
 Protein 46% Fibre 6.2% Calcium 3.9% Phosphor 0.3%
 Water 10.8% Fat 8.5% Vitamin A and its provitamins



Orange Vitamin Sticks are a High Quality floating stick containing real fruit and Vitamin C plus Vitamin A.

A treat with a difference, with its natural attractors is also ideal for encouraging sick fish back to feeding. Ingredients include rice flour, soybean meal, fish meal, ground dried oranges, brewers yeast, vitamin B12 and riboflavin supplement. Ideal for use above 42deg F.

Cloverleaf Orange Stick Content:
 Vitamin A 25,000lu/kg Ash 5% Vitamin D3 1,500lu/kg
 Vitamin E 100lu/kg Fibre 2.5% Vitamin C 300lu/kg
 Protein 28% Oil 3.5%



Krill is another great treat that all fish deserve, an economical nutritious natural treat used on many Japanese fish farms. High in protein and is easily digestible with Omega 3.

Cloverleaf Krill Content:
 Protein 60% Fat 4.5% Fibre 3.5% Ash 16% Moisture 8%

For use above 60deg F. Suggested feed rate of once a day



Silkworm Pupae is a treat that all Koi will appreciate. A known natural source for fast growth and good colour enhancement. High in protein and again easily digestible.

Cloverleaf Silkworm Pupae Content:
 Protein 60% Fat 25% Fibre 3% Ash 6% Moisture 8%

For use above 60deg F. Suggested feed rate once a day

Simply The Best

"Answer Range" Pond Additives

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Due to the great success of Cloverleaf's "Blanket Answer" the range now has five products to cater for achieving first class water quality

"Blanket Answer"
Voted No.1
By Fish Keepers



"Blanket Answer" this is a unique blend of minerals and enzymes and seeks to succeed where many other commercial bacteria cultures will fail. It is 100% safe for all ponds and will not effect plants or harm biological filtration systems also UV systems do not need to be switched off.

This has been voted "The Best Product" two years running in the "koi Magazine" by its readers in their annual survey of products of choice

800g bottle will treat 10,000ltr (2,200gal)

For ultimate results use "sludge Answer" after use.

Dosage should be based on 200ml per 1000 litres of pond content.

1 Litre
Sludge Answer
A Unique Blend Of Beneficial Bacteria To Convert And Remove Sludge

The accumulation of sludge within a pond or filter system means far more than an unhealthy sight, When such harmful deposits will also become a detrimental breeding ground for nasty pathogenic bacteria. "Sludge Answer" is designed for frequent use throughout the year on established ponds, however it is also a first class product when used on a new immature pond, and will greatly assist in obtaining filter maturity.

Dosage should be based on 200ml per 1000 litres of pond content.

1 Litre
Bacteria Answer
A Unique Blend Of Nitrifying Bacteria To Promote Healthy Filtration Systems

Nitrifying bacteria are vital for the establishment of a healthy balanced pond, and are a key contributor towards the development of a mature filtration system. Achieving such parameters in a new pond is always fraught with potential problems, but "Bacteria Answer" is the safe answer to accelerating the process for new ponds, new filter systems, or sudden high fish loads, dosage should be made twice a month for the first month, and once per month thereafter.

Dosage should be based on 100ml per 1000 litres of pond content.

1 Litre
Pond Support Answer
A Unique Blend Of Beneficial Bacteria For General Pond Management

Beneficial bacteria play a key role in maintaining a healthy pond and contributing to the clarity of water "Pond Support Answer" is the answer to providing the established pond with a biological tonic that enhances and protects the ponds essential balance frequent use of "Pond Support Answer" will assist in reducing algae, and by default will contribute to checking the erosion of KH and fluctuations in PH.

Dosage should be based on 30ml per 1000 litres of pond content.

1 Litre
Oxygen Answer
A Unique Blend Of Minerals To Provide Healthy Oxygen Levels

Good levels of oxygen are vital for the health of fish, and equally as important for the wellbeing of the beneficial bacteria which colonise all filtration systems. Warm weather and ponds with many plants can be problematic, often witnessed by fish mouthing at the ponds surface. This is a true danger sign best avoided, and "Oxygen Answer" is the safe answer in addressing all these problems.

The Natural Solution To Pollution

Why use "Blanket Answer"

Just look at a few of the thousands of comments from pond keepers

Hi all. I used this product about 2 years ago and its brilliant, so why try other things on the market if this works !!!!!

I AGREE "CLOVERLEAF". I TRIED MANY PRODUCTS BEFORE THIS WITHOUT RESULTS. BUT THIS STUFF WORKED.

Cloverleaf "Blanket Answer" I don't know anyone it has NOT worked for.

As always people have different opinions, but I don't think you will go far wrong with "Cloverleaf Blanket Answer".

It was Andy that put me on to this product and he was 100% right. It was the only one which worked for me.

I used this at the beginning of the year just as a precaution and haven't seen any since, best product I have used for years.



To see more user comments visit our web site at
www.cloverleaf.uk.net

Voted The No 1 By Fish Keepers

Advice On Selecting A Cloverleaf Filter 16



Customer's 5,000 gallon pond.
Cloverleaf CL3 filter housed
below timber decking.

How To Calculate To Select The Correct Filter Size



Please note Cloverleaf reserve the right to revise specifications. Where data or dimensions are critical to an installation customers should contact Cloverleaf.

Brief Introduction:

The assumption that filters will happily cope with say a 2,000 gallon pond regardless of fishload or environmental conditions is simply not true, and Cloverleaf have gone to the degree of carefully formulating a series of helpful guidelines which should greatly assist in the pondkeeper establishing a sustainable and healthy pond.

General:

The water/pond capacities quoted by Cloverleaf within the specification of each model are based upon a series of typical fixed parameters, and where these are different a new calculation should be made with the applicable facts at hand. The Cloverleaf parameters are based upon:- 1/ Fish loads not exceeding 200mm (8 inches) for every 1,000 litres (222 gallons) of pond water, 2/ Pond being greater than 800mm (31 inches) deep, 3/ Fish are only fed once a day, 4/ The pond receives no more than 6 hours of sunshine each day. **Note:** The following calculations & equations are based upon a hypothetical pond with a content of 3,000 litres (666 gallons).

Pond Depth:

If the pond is shallower than 800mm (31 inches), then an allowance of 1% should be added for every 10mm reduction in depth. Assuming then that the notional example pond is only 500mm deep, a difference of 300mm applies – which divided by 10mm generates a sum of 30. This then represents the addition of 30% - obviously illustrating that shallow ponds are not ideal.

Fish Stocking:

If the total "fish length" (excluding tail dimensions) is greater than 200mm per 1,000 litre of pond water then a related percentage allowance must be added to the calculations. With the example 3,000 litre pond, this is capable of sustaining a fish load totalling 600mm in length, however for the exercise we shall assume that in reality the length totals 750mm – which equates to a 25% increase beyond the normal datum. (This in turn translates to the 3,000 litre pond being classified as 3,750 litres).

Fish Feeding:

If fish are fed more than once a day, then a 10% allowance should be added for each additional feed. So for our example pond calculation we will include for feeding the fish twice a day, and thus add on an extra 10%. (Equating to an addition of 300 litres to the notional 3,000 litre pond).

Direct Sunlight:

If the pond receives more than 6 hours of direct sunlight a day, then a 5% allowance needs to be added for every further hour. For this example we will assume the pond receives 7 hours of sun each day, and as a consequence 5% must be added. (Meaning the example 3,000 litre pond should be classified as actually being 3,150 litres).

Conclusion:

From the 4 separate calculations made in the above it will be seen that increases of 25% + 10% + 30% + 5% (totalling 70%) must be applied. This percentage of the example 3,000 litre pond equates to an increase of 2,100 litres, and therefore for TRUE calculation purposes in selecting a suitable filter it must be capable of handling 5,100 litres (3,000 + 2,100).

Generally speaking it will be the wise pondkeeper with a 1,500 gallon pond who will automatically select a filtration system capable of filtering 2,000 gallons. Purchasing a larger filter system will never prove to be a foolish decision, and indeed such levels of thinking not only help take the future into account but at the same time will likely assist in reducing maintenance. Its nigh impossible to acquire a system that is too big, but it is comparatively easy to acquire a smaller and problematic system that is not up to the task at hand.

Cloverleaf HELPLINE

Tel: 01277 366002



Cloverleaf - The Solution To Tackle Pollution

Products , Packaging And Specifications Are Subject To Change Without Prior Notice