

1. Aquarium setup, decoration, preparation and emergency kit

1. Minimum size of aquarium

We recommend a minimum size of aquarium of 1 m x 0.4 m x 0.45 m (180 litres) for a group of discus fish comprising at least 10-12 fish. This size of aquarium will be large enough later on for the mature discus fish.

You can find complete aquarium sets (with pump/filter, heating rod, light thermometer and accessories) and reasonably priced in pet shops.

A floor unit would also be useful which is designed to support the weight of the aquarium and also has space for all accessories.

2. Heating rod/aquarium heating system

We recommend attaching the heating rod to the side panels of your aquarium so you have an uninterrupted view of your fish. Please note that the **heating rod should always be under water** when connected and running, otherwise it will burn out. The heating rod should be on 24 hours a day.

3. Thermometer

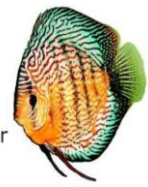
Attach a small thermometer to the front wall of the aquarium with a suction cup. This way you can read and adjust the temperature easily. The ideal temperature to keep discus fish at is 29 - 30 °C.

4. Lighting

Discus fish have large eyes and therefore are very sensitive to light. If the aquarium is a maximum of 50 cm high, a fluorescent tube with light similar to daylight will be sufficient for a tank up to 40 cm depth. If the tank is deeper, you will need two fluorescent tubes to provide the plants with enough light. The lighting should be left on for around 12-14 hours daily (7 a.m. to 9 p.m.). You can program the times using a timer.

5. Night light

In nature fish use moonlight or the sun for orientation. If you use a night light programmed with a timer which differs from the daytime light, you will help your fish to maintain their sense of orientation and makes them less jumpy. If you leave the aquarium in total darkness and then suddenly switch on a light, the shock could make the discus fish jump out of the aquarium or swim against the glass panes at high speed and injure themselves. Using a night light will avoid these risks.



6. Timer

We recommend a light setting of 12-14 hours using a timer.

N B: The timer should **only be used for lighting** (the night light should be connected separately) and should not be connected by mistake with the pump and heating rod since these have to run round the clock!

7. Filters

We would like to present three types of filter systems: Interior filters, exterior filters and the Hamburg mat filter. All filter systems must run 24 hours a day. Choose one type of filter.

We recommend using **two interior filters so that you have a filter in reserve if one should fail**. Attach the interior filters **on** opposite walls of the aquarium. The water quality will be improved by two filters and pollutants will be broken down more quickly. The filter system should be connected to the power source and run continuously.

Exterior filters are connected via tubes and therefore are placed outside the aquarium. There is a risk of a tube coming loose or a filter starting to leak. This could cause the aquarium to leak dry.

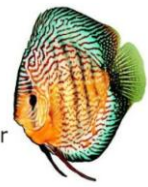
This risk can be avoided by using interior filters or Hamburg mat filters. When using exterior filters the water in the aquarium must flow briefly through a small infeed section (filter floss). This is where most oxygen and nutrient content is broken down. This means the bacteria in the layers further back only have a minimal impact on overall filter performance.

Of course, you can also choose the **Hamburg mat filter**; we use only this type of filter in our breeding operation. These filter mats have an extremely large surface area; the polluted aquarium water flows through it very slowly, giving the bacteria enough time and oxygen to break down all pollutants optimally.

In addition, if you keep only discus fish in an aquarium without substrate you can use the Hamburg mat filter as a divider, reducing the swimming area of the fish and hence increasing their assertiveness in feeding. Once the fish have grown, you can increase the swimming area again for the fish. In addition, the large volume ensures that the aquarium always has good water quality and hence offers optimum conditions for growth. The only disadvantage: these filter mats do not look very pretty.

8. Membrane pump for extra oxygen supply

In order to ensure good oxygen of the water, a diaphragm pump (with an outlet stone) will do good service and is highly recommendable. A diaphragm pump must run continuously.



Decoration for your discus aquarium

Substrate

As substrate we recommend siliceous sand or fine aquarium gravel. Before putting the gravel in the aquarium remember to clean the dust off the gravel by rinsing it in a sieve under running water to avoid making the water cloudy.

Roots, plants and stones

Bogwood roots have proved very popular and can be purchased in pet stores. These aquascaping roots do not float, rest securely on the substrate and are free of pollutants, e.g. from pesticides. Please only use **plants which can withstand 30°C permanently** e.g. Amazon roots, various types of Echinodorus, oak leaf, tiger lotus, Cabomba, Vallisneria gigantea, etc.

When planting, place the smaller plants at the front and the larger ones to the rear. Aquatic plants should be cut back regularly to leave enough space for your discus fish to swim.

N B: Before planting, remember to remove the lead rings on the plants, otherwise they will die and the lead ring could pollute the water.

Also **be careful with stones** since they release minerals and hence can have a negative impact on water quality.

Backdrops

You can purchase backdrops as rear walls in pet shops which are pre-printed with green plants. We recommend turning them round and using the black or white side of the sheet to show the colours of your discus fish to best advantage.

The backdrops are attached to the outside of the rear wall of the aquarium. Only "back to nature" rear walls can be used inside the aquarium.

In order to create a habitat for your discus fish which is close to nature, we recommend using a back to nature backdrop printed with roots which not only looks good but also acts as a filter.

Additional tips

For companion fish, e.g. butterfly cichlids or other dwarf cichlids, we recommend placing half a coconut shell in the aquarium as a hatching area (turned upside down with holes).



Summary of how to prepare your aquarium before introducing fish

1. Set up the aquarium and clean it
2. Install the aquarium equipment (nos. 1-7)
3. Fill with water (see "Changing water") and connect the power
4. Introduce the filters ("feed" the empty tank for two weeks), create bacteria culture
When you reach the required water values after c. two weeks, you can then:
5. Select your discus fish at your specialist shop and decide on your fish stock
6. Introduce the fish (see "Introducing fish after transport")
7. Feed regularly, measure the water values and change the water when you clean the aquarium.

As an emergency kit at home we recommend:

1. Activated carbon (from pet stores)

Activated carbon will filter any toxins from the water. Remove the bag with the activated carbon from the tank after three weeks at the latest since the carbon will release the toxins back into the water when it is saturated.

Activated carbon can be stored for years without losing its properties.

2. Quarantine tank

60 litre complete set with heating and filter, thermometer and outlet stone.

(For heat therapy or quarantining sick, emaciated fish)

When purchasing new fish, first introduce them to a fish from your current tank in a quarantine tank to see how they get on.

3. Antibiotics as emergency treatment

E.g. Neomycin (2 grams per 100 litres of water)