

EHEIM

AQUARIUM GUIDE

Introduction into a fascinating hobby



Freshwater aquariums

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Dear Readers,

This guide is designed to help you do the right thing from the beginning, so that your aquarium becomes a beautiful, healthy environment for fish and plants. It will be a hobby, which won't disappoint you, but rather will be a fascinating underwater world and a source of much joy.

There are many guidebooks, hundreds of experts, thousands of opinions and a lot of textbooks. We've distilled the essentials for you – in such a way that you don't have to read any long-winded texts and can get the essential information immediately.

If you acquire an aquarium, please remember that you are not just buying another piece of furniture, but rather a complex piece of equipment – and in an act of creation you are making a new world, a biotope inhabited by living creatures who should feel at home.

We wish you success and pleasure with your aquarium.

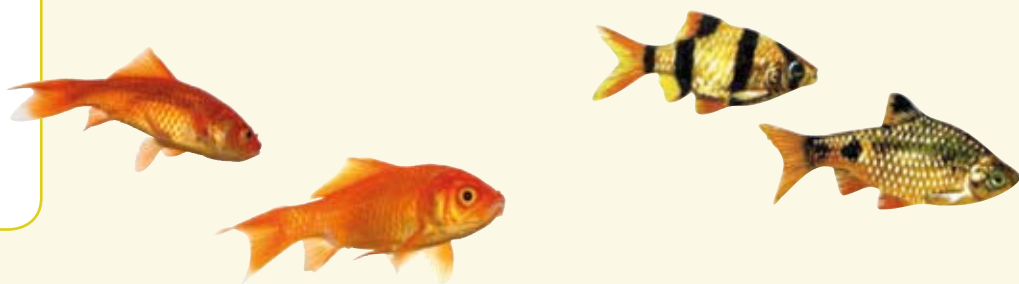
Your EHEIM team

The aquarium is a beautiful island In your daily life



Many more people are turning to fish-keeping. In Germany alone, 85 million fish are swimming around in 3 million aquariums. Most people love a relaxed calming environment, the colourful fascination of an underwater world and its effect on the atmosphere in the home. For children, the aquarium is a valuable encounter with nature. And if you like excitement, look closely. A lot is happening in your aquarium.





An aquarium is less work than you think

Buy a tank, fill it with water and put fish in – that's all. Of course it's not as simple as that. But to assume that keeping an aquarium is a lot of work is false. Fish are easier to take care of than most other pets.

Due to good filter systems, aquarium heaters, controlled lighting and automatic feeders you don't have to worry about much. Even going on holiday you don't have to worry about getting help from neighbours.

What is this EHEIM aquarium guide about?

It's about a tropical community tank

There are three distinct aquarium types – cold water, tropical and salt water. These can be species aquariums, in which only one special type of fish is kept, or they can be community tanks, in which different species live under the same conditions.

The typical aquarium is a tropical community tank, because they are more interesting and colourful.

It's about getting you up to speed quickly

We've purposely made the guide easy to follow with the most important information as bullet points. This is so that you don't have to waste time searching through the text for the essential parts. The checklist at the beginning and the index at the back are part of this process.

If you have more detailed questions, ask your local aquatics retailer, a fishkeepers' club or search the internet.

At www.eheim.de you will find a lot of helpful information.

It's about the knowledge and experience of the EHEIM Aquatics Group

The engineer Gunther Eheim invented the suction filter half a century ago. The engineer Eugen Jäger invented the aquarium heater. These two inventions made the aquarium worldwide what it is today. We are pioneers and market leaders. The three brands EHEIM mp and JÄGER belong to the EHEIM Aquatics Group and are a guarantee of the highest quality. You can rely on that.





Checklist – The important things in a nutshell

This checklist will help when you need to look something up fast, what when and how something needs to be taken care of. Only the basics are included. So read the following pages before you start, in order to get a grasp of the steps to take, the reasons and the little helpful tips.

1 Choose the right aquarium

If possible upwards of 100 l; make sure of DIN/Euro norm certification; ideally choose a cabinet from the mp range.

2 Correct location

No direct sunlight, low daylight, away from radiators, near an electrical socket, upright, stable base, no wobbles.

3 Basic cleaning

After installation, clean the aquarium thoroughly: use only warm water and a soft sponge, no chemical cleaners.

4 Put in gravel base

Three layers: 1. fertiliser, 2. gravel bottom fertiliser mixture (2 cm), 3. gravel layer (3 – 4 cm); coarser gravel (2 – 3 mm), not too light; Slope the gravel slightly towards the back (5 – 8 cm total height).

5 Install technical products

(Do not switch on!)

Attach filter (filled with media), heater and lighting.

6 Decoration

Only use materials (stones, wood), which do not leach particles into the water (lime, metal etc.).

7 Put in some water

About 20 – 30 cm, luke warm tap water (approx. 24 °C); don't let the water disturb the gravel.

8 Put in plants

Remove all packaging material; shorten roots if necessary; press into the gravel with flat tweezers; larger plants towards the back; leave enough room for your fish.

9 Fill with water

Lukewarm tap water up to approx. 3 cm below aquarium top.



mp scubaline 180



EHEIM aquastyle 35

10 Switch on your equipment

Let the filter run normally; set heater at 25 °C; switch the lighting on for a constant 8-10 hours (timer).

11 Let your aquarium mature (without fish)

Wait approx. 2 – 3 weeks; add bacteria starter to water if necessary; once a week add a pinch of fish food; add water conditioner and if required liquid fertiliser; keep an eye on temperature and water quality.

12 Choice of fish

Choose your fish according to water quality; rule of thumb: 1 cm of fish requires 2 l. of water; start with just a few types of fish which can live together; then add a few algae eaters, later other types of fish; make sure they have enough swimming room.

13 Add fish

Switch off lighting for a few hours; dip the fish bag in the aquarium water until it equalises its temperature, then fill it with aquarium water; carefully introduce the fish; don't let any water out of the fish bag into the aquarium!

14 Feed

Once or twice a day, as much as can be eaten in 2 to 3 mins.(automatic fish feeder); when first introduced don't feed the fish for a day, then begin with a little food; take care to use good fish food; one day a week the fish should fast!

15 Plant care

Remove old and dying pieces immediately; a weekly dose of liquid fertiliser; add gravel fertiliser after 6-10 months; make sure you use good quality lighting (change light tubes after approx. one year).

16 Water care

Remove algae and waste regularly; partial water change every 2– 3 weeks (one third); never clean the filter at the same time, but rather alternately 1 to 2 weeks later; check water quality regularly.

17 Filtration system

Install the correct filtration system; run it constantly; only clean or change the filter media as instructed, so that the bacteria cultures are not completely destroyed.

EHEIM fish feeder 3581

JÄGER heater

EHEIM professional 1200XL



18 Cleaning

Chemical (incl. biological) cleaning agents are strictly forbidden; Do not use your aquarium utensils like bucket, sponge, hose etc. for other tasks.

19 Other care

Vacuum the gravel occasionally; clean glass panes inside and out; treat any fish disease immediately.

20 Other accessories

Fish net, thermometer, timer, fish feeder, gravel cleaning kit, automatic gravel cleaner, plant tongs, glass cleaner, and water testing kit.

What size of aquarium?

Before you decide on an aquarium, you should consider what you want to create, what kind of fish, whether you will be making changes later – and most importantly, where it is going to stand. (see next page)

- A sensible aquarium should be over 100 litres. Above this volume most types of fish have relatively stable living conditions. The eco-system in the aquarium functions well and required maintenance is limited. Smaller tanks need more care and attention. The water quality, in particular, should be monitored.
- In the shops you will find aquariums from 54 up to 720 litres. They are equipped to a high standard. Furniture combinations in various designs fit in well with all room furniture types.
- If you are a beginner, mp starter kits offer the ideal solution. These kits comprise a glass tank with hood and lighting as well as an EHEIM internal filter and JÄGER heater; some models have even more equipment. There are special stands for these sets.

1

2

3

4

- 1 – mp scubacube
- 2 – mp scubaline **460**
- 3 – mp vivaline **180**
- 4 – mp aquapro **60**



Positioning

Your aquarium deserves an attractive place in your home. In a place where you can watch the underwater world, where you can relax and dream. However, the following points are important:

- Avoid locations in direct or a lot of sun-light. Otherwise the formation of algae will be encouraged and the water unnecessarily heated.
- Avoid positioning near a radiator.
- An electrical socket should be close by.
- You need space above (for maintenance, water changes etc.).
- Make sure it stands straight (water surface!).
- Choose a place with a flat base.

And just in case you don't choose an mp aquarium combination:

- Don't forget: The floor has to support the whole weight (water, tank, equipment etc. can be heavy. **Rule of thumb:** tank volume x 1,8 = total weight in kg.)
- Make sure you have a underlay to iron out any unevenness or sharp points. Aquarium pad out of special foam rubber material are available at your retailer.

ATTENTION!

Once your aquarium is dressed and filled, it is almost impossible to change its position; never move it when filled – Danger of breakage!

What kind of lighting?

The lighting in an aquarium is not just there for you as observer. Fish need only a little brightness. The important thing is the correct light for photosynthesis and growth of plants

- Plants don't grow without light. Through photosynthesis they break down toxins in the water and produce and produce essential oxygen for the fish.
- All mp starter sets and aquarium combinations are fitted with the correct light units.
- If you want to have an aquarium without a hood, your specialist retailer can supply pendant lamps.
- The length of lighting time should reflect the cycle of nature. The light should thus be switched on 8 – 10 hours daily.
- It should always be switched on and off at the same time. Ideally you should control the lighting with a timer.
- Any change of time will irritate plants and fish. Perform any necessary changes in small steps (approx. 30 minutes).
- Change the light tubes after approx. 1 year, as their intensity degrades.



How to set up your aquarium – step by step

Beauty, ease of maintenance, but above all, a healthy, correct living space for plants and fish are the criteria to use, when designing the inside of your aquarium. When these three conditions are met, you will have a lot of fun.

Step 1: Clean the aquarium

Clean the glass thoroughly with warm water and a soft clean sponge. Chemical (also biological) cleaning agents are strictly taboo!

Step 2: Add the gravel substrate

Plants need the correct substrate to form roots and take up food. Also certain types of fish like to dig around in the gravel looking for food and algae.

- Usually the best is medium sized gravel pieces (2 – 3 mm). Only certain fish need gravel of smaller size pieces or sand. With larger size gravel pieces, fish food remains often fall between the stones, cannot be reached by the fish and rot.
- Use smooth surface gravel as that the fish cannot injure themselves.
- Choose a natural, not too bright coloured gravel. (A bright substrate and reflected light can cause many fish to feel unwell.)
- Wash the gravel thoroughly with warm water.
- First, spread a layer of fertiliser (granulate or flat) in your aquarium.
- Secondly, mix a first layer of gravel – approx. 2 cm – with gravel fertiliser and spread this over the top.
- Thirdly cover this with a layer just of gravel – approx. 3 to 6 cm.

Step 2



Step 2



Step 3



TIP

The substrate should slope towards the back, so that debris will collect at the front of the aquarium and can easily be removed.



Step 3

Step 3: Installing electrical equipment

The equipment you use depends on the size and type of your aquarium, the number and type of fish and your personal preferences.

Basically you need:

- good lighting (see p. 9)
- a heater, eg. EHEIM JÄGER heater (see p. 18)
- a thermometer (see p. 28/29) as well as
- an efficient internal or external filter, filled with the recommended filter media (see p. 19-23).



Step 4

Step 4: Decoration

Stones (rocks) or wood add realism to the underwater landscape and the fish use them as a hiding place or to mark their territory. Don't overfill, so that the plants and fish have enough room.

- Clean all decorations with a brush under running water.
- Use only stones, which do not leach into the water, contain no lime and no metal inclusions. Avoid corals, marble and sea shells. Lava or slate stone are especially suitable.
- Before using any other woods or roots as decoration, get some advice from your specialist retailer.



- 1 – EHEIM Filter classic 150
- 2 – EHEIM JÄGER heater 75 W
- 3 – EHEIM Filter ecco pro 300
- 4 – EHEIM Filter professional 3e 450
- 5 – Media set for professional 3° 450/700/600T

How to set up your aquarium – step by step

Step 5: Add a little water

So that the substrate is weighed down and softened, add about 20 to 30 cm luke warm water (tap water, approx. 24 °C). Take care – a good idea is to gently pour the water in over the edge of a bowl or plate, so that the substrate isn't disturbed.

Step 6: Put in the plants

In the next pages you will find out which plants are suitable, how they react and how to feed them.

Don't forget that most plants are still growing.

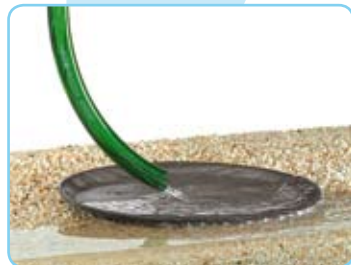
- Put larger plants at the back, smaller ones to the front.
- Carefully remove all plastic and other packaging material.
- Cut off any dead leaves and stems.
- With rosette shaped plants, you can cut off about a third of the roots.
- Push the stems and roots upright into the gravel with, for instance a pair of flat tweezers and then pull the plant back out as far as the beginnings of the roots.

Step 7: Fill with water and switch on the equipment

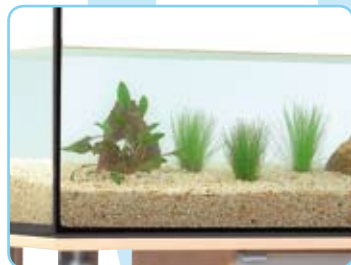
When the electrical equipment has been installed, fill the aquarium up with water:

- lukewarm tap water (approx. 24-25 °C),
- till just below the top of the tank (approx. 2-3 cm)
- Add water conditioner to get the best quality water for your fish.

Step 5



Step 6



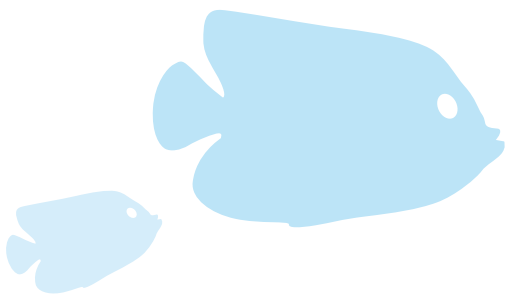
Step 7



- 1 – EHEIM air pump 100
- 2 – EHEIM aquaball 60
- 3 – EHEIM InstallationsSet 1
- 4 – EHEIM Filter media SUBSTRATpro; bioMECH



Step 7



So that the plants become active and the bacteria can effectively begin to colonise, start running your aquarium:

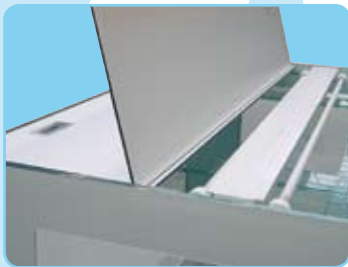
- Switch on the lights and set the timer to 8 to 10 hours,
- run the filter constantly (day and night),
- set heater at approx. 25 °C.

Step 8: Give it time to improve the eco-system

Before you can introduce the first fish, your aquarium has to attain an ecological balance. This maturing phase can last up to three weeks.

- If you don't want to wait so long, you can speed up the process with certain preparations and "seed" the tank with bacteria.
- In order to trap toxins, you should add a layer of active carbon (in an external filter) (see p. 23).
- After 2 or 3 days the plants generally need more fertiliser (AQUA FLUID 7).
- Periodically check the water temperature; for most fish it should be about 24 to 25 °C.
- Regarding fertiliser and water test kits, you should ask your specialist aquatic retailer and read the information on following pages.

Step 7



Step 8



4



ATTENTION! While your tank is maturing

The aquarium must be kept running the whole time (light 8 to 10 hours, heater and filter system always running – see step 7).

The plants in your aquarium do all this

Plants are very attractive, but they also perform important tasks in the aquarium. They give out oxygen, break down harmful compounds, form territorial boundaries, and provide hiding places and quiet areas.

Like bacteria, plants decontaminate the water. They remove ammonium, nitrate and phosphate, which comes, among other things, from fish waste. This process also removes the basic nutrients of algae.

By means of light, plants create carbohydrates (sugar) via photosynthesis for their growth. They also absorb CO₂ exhaled by the fish. At the same time they give off oxygen, which the fish breathe in.

Unlike land plants, aquatic plants take in nutrients not only from the roots, but also from the leaves. In addition to substrate fertiliser, they therefore also need liquid fertiliser in order to take nutrients from the water (eg. AQUA FLUID 7 – to be used with EHEIM liquidoser).

To begin with, choose robust types of plants, which grow well and are not very demanding (about 100 to 150 types of plants are available, but only about 30 are actual aquatic plants).

Lighting
requirement



Amount
of growth



pH Acidity of the
water

CH Water hardness
(Carbonate hardness)



Suitable plants for beginners



Dainty water chalice
Cryptocoryne lucens
Robust type of water calyx
Nutrient requirements: average

average	50cm	ph 6,5 to 7,5	5 to 15°d

Water plague

Egeria densa
Demanding stem plant
Good source of oxygen
Nutrient requirements: high

average	50cm	ph 6,5 to 7,5	8 to 18°d



Indian water friend
Hygrophila polysperma

Very popular stem plant
demanding
Nutrient requirements: high

average	60cm	ph 6,5 to 7,5	2 to 15°d



Amazon sword plant

Echinodorus amazonicus
Stand alone plant, suitable for
discus tanks
Nutrient requirements: high

average	40cm	ph 6,5 to 7,5	2 to 12°d



Hardy ludwigia
Ludwigia mullertii
Demanding stem plant, leaf underside
red if a lot of light
Nutrient requirements: average

average	50cm	ph 6,0 to 7,5	4 to 15°d



Dwarf ambulia
Anubias barteri var. nana
Very robust, slow growing,
demanding
Nutrient requirements: average

low	60cm	ph 6,5 to 7,5	2 to 15°d



Java fern
Microsorium pteropus
Robust fern, slow growing
Nutrient requirements: low

average	40cm	ph 6,5 to 7,5	2 to 12°d

Broad leaved arrowhead

Sagittaria platyphylla
Robust rosette plant,
creates also stolons
Nutrient requirements: average

average	25cm	ph 6,0 to 7,2	4 to 15°d



Twisted vallisneria

Vallisneria spiralis
With spiral-shaped inflorescence,
demanding
Nutrient requirements: average

average	60cm	ph 6,5 to 7,5	5 to 12°d

Indian water friend

Hygrophila difformis
Light green plant with pinnate
leaves
Nutrient requirements: high

average	50cm	ph 6,5 to 7,5	2 to 15°d



The things that determine the water quality in your aquarium

Fish and plants, which come from natural tropical waters, require a specific water quality. Our water in Europe, in particular mains water, doesn't fully meet their living conditions. That's why we need to adapt it to these conditions.

The water must be like this:

Please note the following basic requirements:

- Choose your fish, as far as possible, to match the condition of your mains water. In particular the water hardness can be very different depending on location.
- Potentially toxic substances such as heavy metals (eg. copper, zinc) as well as chlorine should be treated with a water conditioner and other chemicals filtered out (see EHEIM filter and filter media/active carbon p. 23).
- The water hardness (carbonate hardness) should be at least 3 to 5°d CH

Tips for good aquarium water:

- Install the correct type of filtration (see p. 19 – 23). Don't skimp on quality. The filter is the beating heart of the aquarium.
- Populate with fish according to aquarium size

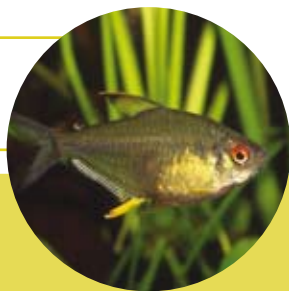
Rule of thumb: 2 litres of water to 1 cm. of full-grown fish.

- Don't overfeed the fish. 1 to 2 times a day add just as much as can be eaten in 2 to 3 minutes. One day a week - no food! For best results use an EHEIM automatic fish feeder (see p. 28/29).
- Use a sufficient number of fast growing plants.
- Remove algae dead plant remains and other organic waste regularly. Now and again clean out the gravel with a gravel cleaner (see p. 28/29).
- Every 3-4 weeks do a water change; exchange approx. 1/3 of the water for water of similar temperature.
- Clean the filter as soon as the output noticeably reduces. BUT – NEVER (!) at the same time as a partial water change, rather 1 to 2 weeks alternately, when the newly introduced water has had time to acclimatise itself.



Please read also the tips about cleaning and maintenance on page 27.

Suitable water test kits are available from your specialist retailer. He can also tell you, which fish are the best for your area.



Other things you need to know:

Mains water

Chlorine and heavy metals in our water are dangerous for fish in high concentrations. A good water conditioner will largely bind and neutralise these compounds.

pH pH-value

The pH-value indicates whether the water is acidic (under 7) or alkaline (over 7). Depending on their origin, freshwater fish can come from sources with either acidic or alkaline waters. Tap water is slightly alkaline. Keep an eye on the pH-value. (Even though the neutral pH-value 7 is quoted as the correct value for most ornamental fish, that is only partly true. Refer to your specialised aquatics retailer.)

TH Total hardness

The total hardness is determined by dissolved calcium and magnesium ions. Many fish require soft water. If your mains water is very hard (over 15 °d TH), you should choose only appropriate fish (eg. East African cichlid) or soften the water. Seek advice from your specialised aquatic retailer.

CH Carbonate hardness

The carbonate hardness is determined by dissolved carbonates. Of paramount importance, is that the value doesn't fall below 3-5 °d CH. Regular water changes help retain carbonate hardness!

CO₂ Carbon dioxide

Like all plants, aquatic plants need CO₂. They take it from the water, after the oxygen breathing fish have exhaled it. The optimum value is 10 to 20 mg per litre. Above 40 mg it is dangerous for fish!

O₂ Oxygen

Like humans, fish need oxygen to survive. It can get into the water by means of surface movement or metabolism. Cold water holds more oxygen than warm water.

N Nitrogen

Nitrogen is introduced to the water mainly from fish waste and food remains. As a consequence, nitrogen compounds (ammonium, nitrite and nitrate) accumulate in the water. These are toxic in high concentrations. This accumulation can be prevented by not overstocking your tank, not overfeeding, use of a good filtration system and regular water changes.



How to control the temperature

With the correct, regular temperature fish can live longer in an aquarium than in nature. Depending on the type they can live from 10 to 20 years. However, any significant changes in temperature put the fish under dangerous stress.

Therefore, please note:

- Depending on their origin your fish need between 22 to 28 °C. (therefore: no direct sunlight and not too near a radiator!)
- The ideal temperature for most fish is between 24 and 25 °C. The less the temperature fluctuates, the better for your fish.
- Be sure to use an adjustable heater with thermostat, which can compensate for any fluctuations (eg. EHEIM JÄGER heater or EHEIM thermofilterer).
- Also use a thermometer (mp thermometer p. 28/29) and check it every now and again.

- 1 – EHEIM JÄGER heater
75, 150 and 250 Watts
- 2 – EHEIM thermofilter
professional 3 350T



EHEIM JÄGER heater

Heaters in various sizes from 20 to 1000 litres; adjustable dial from 18 to 34 °C, accuracy $\pm 0,5$ °C, simple and easy to recalibrate. It keeps the set temperature constant, is fully submersible and is easy to fix into the aquarium with suction cups.

EHEIM thermofilters

The only external filter, which filters and heats the water at the same time. The temperature is adjusted on the filter and regulated by a thermostat. There are various sizes and types for aquariums from approx. 120 to 1200 litres.

The heartbeat of your aquarium – the filter

What in nature is done by wind, waves and millions of organisms and biochemical processes, is done in the aquarium by the filter. It maintains the balance of the ecosystem, cleans and circulates the water, enriches it with oxygen, creates currents and much more.

Before you decide on a particular filter, you should consider a few things.

General tips:

- Use a suitable filtration system. The decisive factor is the quantity of water in your aquarium. (Check the volume of the aquarium!)
- Don't scrimp on quality. The filter is an investment for several years. It has to work night and day. Only a reliable and quiet running filter gives lasting pleasure.
- Treat yourself to a little sophistication. Because clever features make your life easier and your fish more comfortable.



8
Watts

5
Watts

Internal or external filter?



Internal filters are placed in the water inside the aquarium. They work without requiring any space outside the aquarium. There are models for very small aquariums, but also for tanks up to 200 litres and more.

You should choose an **internal filter**:

- if you have a small aquarium (up to approx. 150 l.),
- if the aquarium is not easily accessible or if there is no aquarium cabinet,
- if you need an additional mechanical filter or extra water movement for a larger tank.



1



2



External filters are positioned outside the tank (eg. inside the aquarium cabinet) and maintain your underwater world via hoses. The advantages are that they work with a variety of filter media, have larger volume and work longer without maintenance. There are a number of different models with various features for aquariums from under 100 up to 1500 litres.

You should choose an **external filter**:

- if you have an easily accessible area outside the aquarium (eg. a piece of aquarium furniture),
- if you want to get the best water quality by using different filter media,
- if you want good performance and long intervals between cleaning,
- if you would rather work out of the water for cleaning and changing media,
- if you think it important to have excellent technical, practical and energy-saving features (EHEIM models offer electronic controls, automatic self-priming, integrated heating system, extreme quiet-running smoothness, low energy consumption and much more)

4



3





EHEIM external filters

EHEIM classic

5 classic: The tried and tested filter in 5 models, different sizes and outputs, for aquariums up to 150, 250, 350, 600 and 1500 litres.

EHEIM aquacompact

6 aquacompact: Small compact external filter for open aquariums. Full automatic self-priming via integrated pump. Complete with fine and coarse filter pads and biomedia. Comprehensive range of accessories. For aquariums up to 40 l / 60 l.

EHEIM ecco pro

7 ecco pro: Energy saving external filter with low electricity use and high performance – a further development of the ecco external filter now with prefilter – for aquariums up to 130, 200 and 300 litres.

5 Watts with ecco pro 130/200 and
8 Watts with ecco pro 300

EHEIM internal filters

EHEIM aquaball

1 aquaball: Internal filter with moveable ball-shaped head, spray-bar and power diffusor venture with adjustable air intake; modular design, extendable with additional modules. For aquariums up to 45, 60, 130 and 180 litres.

2 biopower: Multiple filtering as with an EHEIM external canister filter. Modular filter design, with EHEIM SUBSTRATpro for excellent biological filtration. „Easy Click“ system for simple connection. For aquariums up to 160, 200 and 240 litres.

EHEIM Powerline

3 Powerline: Powerful internal filter with high output and high aeration, additional modules to change volume. For aquariums over 100 litres.

EHEIM pickup

4 pickup: The small, compact internal filter for aquariums up to 45, 60, 160 and 200 litres with adjustable outflow. Complete with filter cartridge.

EHEIM internal filters:

- 1 – EHEIM aquaball 130
- 2 – EHEIM biopower 200
- 3 – EHEIM Powerline 200
- 4 – EHEIM pickup 45

EHEIM external filters:

- 5 – EHEIM classic 150
- 6 – EHEIM aquacompact 60
- 7 – EHEIM ecco pro 300



The professional series:

The large external filter family in space saving rectangular form and a variety of significant developments: from the reliable standard model up to the sophisticated electronically controlled model with a plethora of features and excellent quiet running smoothness due to high-tech ceramic components.

EHEIM
professional

- 1 **professional:** the reliable standard model with removable filter baskets and hose adapter with integrated taps (also available as thermofilter) – for aquariums up to 150 and 250 litres.

EHEIM
professional 3

- 2 **professional 3:** top of the class with large prefilter, special priming system, 3 way adapter with 2 water inlets (also available as thermofilter) – for aquarium up to 250, 350, 600 und 1200 litres.

EHEIM
professional 3^e

- 3 **professional 3e:** the genius with electronic control for flow rate, compensation for blockages, wave effect, self checking system and much more as well as USB connection facility for programming and updating of software via PC – for aquariums up to 350, 450 and 700 litres (Also available as a thermofilter for aquariums up to 600 litres).

EHEIM external filters:

- 1 – EHEIM professional 250
2 – EHEIM professional 3 250T (Thermo)
3 – EHEIM professional 3^e 700





How filtration works

EHEIM
professional 3e 450
layering

Basically the filter sucks the water in, pumps it through various filter layers and pumps it out again, clean and aerated with oxygen.

The filter layers consist of laboratory tested filter media and filter pads which are used as necessary. There are various types of filter media:

Mechanical:

In the first cleaning process larger dirt particles are removed.

Biological:

Due to the colonisation of bacteria, toxins are converted in a natural process.

Adsorptive:

Active carbon takes up toxins and traps remains of chlorine, cleaning agents, medicines, dyes etc.

- Use active carbon max. 1 to 2 weeks, as the trapped toxins will escape again after some time and be pumped back into the aquarium water.
- Normally you will only need adsorptive filtration at the start up of your aquarium (see p. 13 onwards) or after treatment of ill fish with medicine.

Chemisch:

Specially treated peat will lower the pH-value and reduce the water hardness.

- Filtration with peat is advisable when the pH-value of the water is too high. However, that works only up to a carbonate hardness of approx. 8 °d CH. Otherwise a partial water change is required. If using peat filtration, always keep your eye on the pH-value!
- Only with a few soft water fish (eg. tetras or discus) can you increase the acidity of the water. Please seek advice beforehand.

EHEIM Filter medium
SUBSTRATpro

EHEIM Filter media



At last you can put your fish in!



When the plants have settled, the bacteria cultures have colonised and are doing their job, when the water quality is right and the whole biotope is functioning correctly ... then you can add your fish.

The following rules should be adhered to:

- If you have matured your aquarium for 2-3 weeks, everything should be okay (see p. 13). But doing another water quality test wouldn't do any harm (nitrite test!).
- Don't forget the rule of thumb: 2 litres of water per 1 cm fish length
- First of all introduce a few algae destroyers, eg. Flying Fox, bristlenose catfish or black mollies, guppies, platies
- Only after approx. 2 weeks should other fish be introduced.
- Start with a small number of types.
- Only choose fish, whose characters match each other (see p. 25/26) and have more or less the same requirements of water quality, temperature, space, light and feeding.
- It is useful to have fish which like to swim in different areas, so that the fish separate and don't get in each others' way (see p. 25/26).

How to introduce your fish with care:

- Switch the lighting off for a few hours; that calms the fish.
- Let the closed fish bag swim in the aquarium water for about 15 minutes; this will raise the temperature in the bag close to that of the aquarium.
- Then take out the bag, open it and gradually pour in water from the aquarium, till you have double the water quantity. The fish need to get used to the new conditions gradually.
- Introduce the fish gently with a soft fish net into the aquarium.
- Note!: Don't put the water from the bag into the aquarium!
- Switch on the lighting only after approx. 3 hours.
- Don't feed the fish on the first day; then for the first 2 days a little less than normal. (normal is: once or twice a day just the amount that is eaten in 2 to 3 mins.; one fasting day a week).



Other facts you ought to know:

Fish are sensitive creatures

Even if only the experienced recognise the signals: transporting in a bag and coming to a new environment represents considerable stress for the fish. So please be careful.

Your fish come from warm climates

There are over 500 types of ornamental fish being offered in the aquatics. They nearly all originate from tropical and subtropical waters: from Africa (eg. Congo), Central and South America (eg. the Amazon) and South East Asia (eg. Thailand, Jakarta) etc. However, most are not imported but bred in Europe.

Fish have different characters

Apart from different individual temperaments, the different types have specific character traits. Some exhibit strong territoriality and can often cause a lot of commotion in the aquarium with their defence strategies. Others are only comfortable in a shoal. Some are only happy as a pair. (Please seek advice on this from your specialist aquatics retailer.)

Popular aquarium fish



lat. Xiphophorus helleri

Aquarium size	Fish size	pH	TH
from 60cm	12cm	ph 7,0 to 8,3	12 to 30°d



lat. Xiphophorus maculatus

Aquarium size	Fish size	pH	TH
from 40cm	6cm	ph 7,0 to 8,2	10 to 25°d



lat. Paracheirodon innesi

Aquarium size	Fish size	pH	TH
from 40cm	4cm	ph 6,0 to 7,5	10°d



lat. Poecilia sphenops

Aquarium size	Fish size	pH	TH
from 80cm	6cm	ph 7,5 to 8,5	10 to 30°d

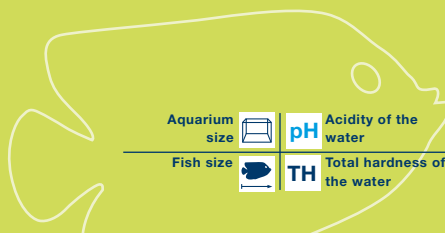


Fish have their individual swimming areas

Whether aggression or peace reigns in your aquarium, also depends on the areas that the different types of fish swim in. Marbled hatchet fishes, for instance, usually swim at the top, neons in the middle and cat fish at the bottom.

Fish eat in different ways

Often the position of the mouth decides who eats where (and who prefers to be where). Fish with high mouths normally eat on the surface. A low mouthed fish will eat at the bottom, searching for food in the debris on the gravel.



How to feed your fish correctly

Your fish need vitamins, minerals, proteins, carbohydrates, fibre and fat. All these are contained in fish food as dry, frozen or live food; in the form of flakes, granulate, crisps, sticks, pellets, tablets, gel etc. as well as live larvae, fleas and crabs ...

- Each type of fish has its own requirements and preferences. Seek advice as you buy them. Some don't eat dry food, some even depend on live food.
- Normally you can use flakes as the main food. It will be eaten at the water surface and also while sinking to the lower reaches of the tank. As a treat you can add other delicacies to the menu.

- Be sure to use a good quality food. Food which is not well produced, raises the nitrate due to higher levels of fish waste and rotting pieces of unwanted fish food in the water.
- Once again: feed only 1 or 2 times a day just as much as will be eaten in 2 to 3 minutes. The fish should fast one day a week.
- Use an EHEIM fish feeder. You can programme it to give the correct daily dose, even if you go on holiday (see p. 28/29).

Popular aquarium fish

Dwarf gourami



lat. *Colisa lalia*

		pH	TH
from 60cm	6cm	ph 6,0 to 7,5	4 to 10°d

Tiger barb



lat. *Barbus tetrazona*

		pH	TH
from 80cm	7cm	ph 6,0 to 8,0	10 to 15°d

Zebra danio



lat. *Brachydanio rerio*

		pH	TH
from 80cm	6cm	ph 7,0 to 8,0	5 to 20°d

Black paradise fish



lat. *Macropodus concolor*

		pH	TH
from 80cm	12cm	ph 6,5 to 7,8	4 to 20°d

Rosy barb



lat. *Barbus conchoniuis*

		pH	TH
from 80cm	15cm	ph 6,5 to 8,0	5 to 310°d

Harlequin



lat. *Rasbora heteromorpha*

		pH	TH
from 60cm	4,5cm	ph 6,0 to 7,0	5 to 10°d

Mosaic gourami



lat. *Tricogaster leeri*

		pH	TH
from 60cm	12cm	ph 6,5 to 8,0	5 to 20°d

How to keep your aquarium in good shape

In general you can leave your aquarium to function alone. If it is technically well equipped, the biological cycle is intact and if you do a little maintenance and cleaning now and again, it shouldn't need any major attention for years.

You should however do the following:

- **Always** remove dead plant remains (EHEIM plant tongs, see p. 29) and other visible debris; treat any sickness immediately.
- Add some liquid fertiliser **weekly**, determining the quantity according to the iron content (Fe-test) - it should be between 0,05 – 0,1 mg/l.
- Every 3 to 4 weeks do a partial water change: replace approx. 1/3 of the water with luke warm mains water (see p. 16) and at the same time clean the gravel (see gravel cleaning set p. 28/29), then add some water conditioner.
- When necessary:
 - Clean the glass, removing algae and other remains (with a sponge or glass wiper),
 - clean the gravel with the EHEIM automatic gravel cleaner (see p. 28/29),
 - check water quality.
- Only clean the filter if the output significantly reduces (never at the same time as a partial water change, but rather 1 to 2 weeks before or afterwards):
 - Clean the parts with luke warm water only; rinse and squeeze dry filter pads and sponges; add new filter media, but mix back in about 1/3 of the used media, as it is well colonised with purifying bacteria.
- After 6 to 10 months add substrate fertiliser.
- After one year renew the light tubes.

What to do, when ...?

A lot of algae forms:

Then there is an ecological imbalance. Check water quality, light conditions, correct fertilising and fish food quantity and quality – But also the fish population (too many and/or too large fish?). The more nutrients consumed by healthy plants, the more difficult it is for algae to flourish.


Fish fall ill:

It is normally not a disaster. Illnesses can be introduced, but usually they result from stress due to bad water quality, overpopulated tanks, unbalanced or the wrong diet, fluctuations in temperature, incompatible fish living together, too much disturbance due to constant redecorating or the catching or transporting process.

TIP

If you discover an ill fish, treat it as soon as possible. There are good remedies. Ask your specialist retailer.

Additional things you need



In order to care for your underwater world and to make your life and that of your fish more pleasant you should get yourself a few helpful accessories.

These are the “must have” items

- a clean bucket – to be used just for your aquarium and not for other cleaning purposes
- sponge or glass cleaner (also just for use in the aquarium)
- hose (at least 1,5 – 2 m long, 15 – 20 mm diameter) for a partial water change – or even better: the EHEIM gravel cleaning set – which can also be used for partial water changes (see description)
- fish net (from mp) for inserting or removing fish
- thermometer (from mp)
- the most important water testing products

You should have these items as well:

- the EHEIM fish feeder, so that you don't have to be there every day and can go on holiday now and again,
- the EHEIM liquidoser, so that plants get as much fertiliser as they need, when they need it,
- the EHEIM plant tongs, so that you can take out dead debris without disturbing the fish by putting your hands in the water,
- the EHEIM gravel cleaning set, to get rid of rotting particles and to facilitate the partial water change,
- the EHEIM automatic gravel cleaner, to vacuum up dead particles without disturbing the gravel.

TIP

Your specialist aquatics retailer has other useful equipment from EHEIM in stock. Just ask him!



EHEIM fish feeders
3581, 3582

EHEIM fish feeders

The EHEIM fish feeder (two models) feed your fish with different types of food – the right quantity at the right time. You can programme them as you want – so you can go on holiday without a care.



EHEIM air pump
100/200/400

EHEIM air pump

The ultra quiet air pump, to give extra oxygen to the aquarium water. You can regulate the air flow and the bubble shape. There are three sizes.



EHEIM gravel cleaning set

EHEIM gravel cleaning set (also for partial water changes)

Can be used for both cleaning the gravel and doing a partial water change. The integrated priming aid means you don't have to suck and the Quick-Stop interrupts the water flow immediately. The rounded edges of the bell allow you to get right into the corners.



EHEIM plant tongs

EHEIM plant tongs, to pick out old or diseased leaves, even in inaccessible areas, without disturbing the fish.

EHEIM battery operated automatic gravel cleaner to clean the gravel thoroughly but without disturbing it. It is fully submersible at 60 cm long, so is effective even in deep aquariums. The easily removable filter container collects dirt and lets the water flow immediately back into the aquarium.

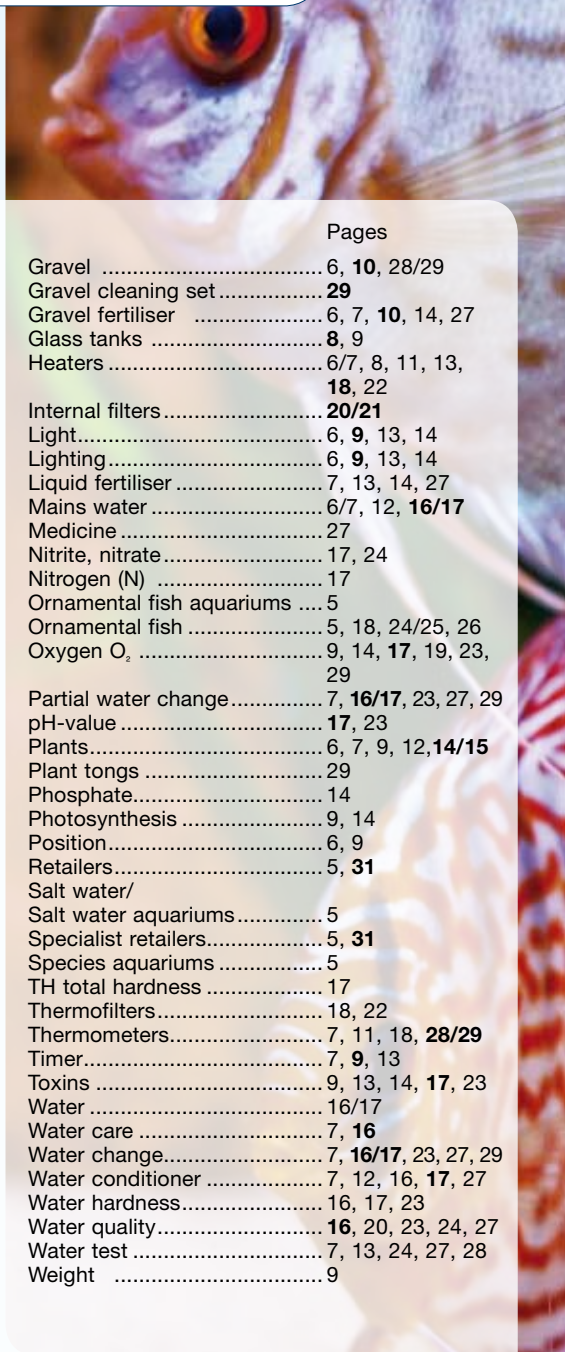


mp fish net
mp thermometer

mp fish net in 4 sizes

mp thermometer with special suction cups

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Do you need advice and help?

If you have questions, go and see your specialist aquatics retailer. Fishkeepers' clubs are also useful.

You can find a specialist aquatic retailer by visiting our website

www.eheim.de

and following the links

You will also find there a lot more information about aquariums, technology, fish, plants etc.

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This EHEIM aquatics guide for tropical aquariums summarises the essentials in such a way that both the beginner and the more advanced fishkeeper can profit. It is more of an instruction manual than a comprehensive background guide, although we try to explain not only what you should do, but why you should do it. The essential information is easy to understand and easy to find and the steps towards a successful hobby are so described that the reader should be attracted to put them into practice.

Your aquatic retailer:

