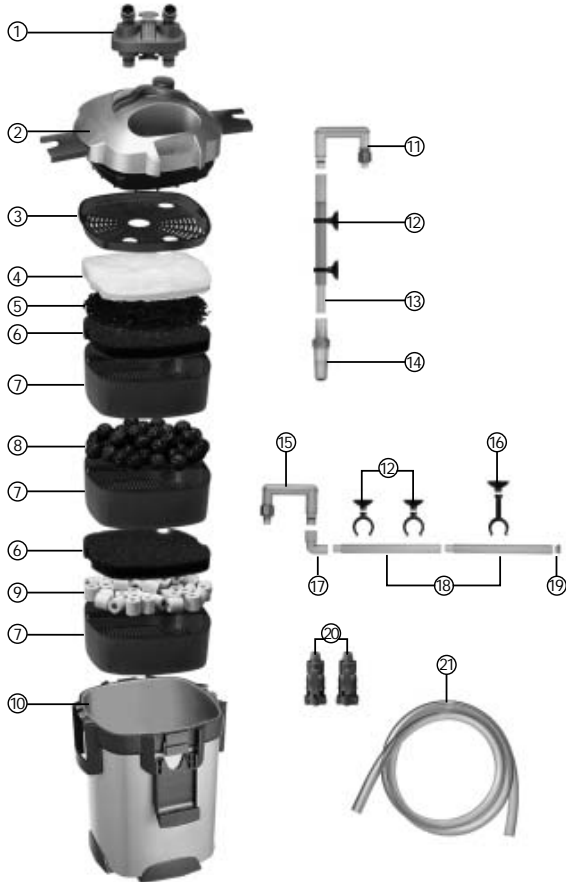
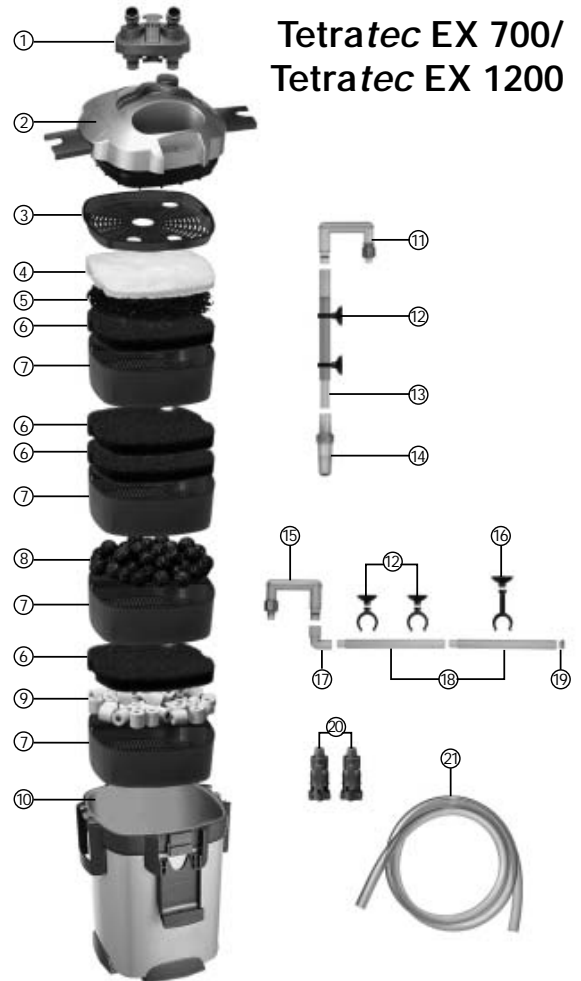


Tetrattec EX 600



Tetrattec EX 700/ Tetrattec EX 1200



EX 600 / EX 700 / EX 1200

Dear Customer,

Congratulations on choosing your new advanced Tetratec® EX External Aquarium Filter. This filter has been specially designed to ensure that your aquarium water is filtered highly efficiently. The Tetratec® EX External Aquarium Filter has an automatic priming aid for easy start and maintenance. It is extremely quiet and very powerful. This high quality product ensures you years of trouble free service.

Content	Pages
Set up	17 - 21
Maintenance	21 - 24
Trouble Shooting	25 - 26

Filter Components
① Hose adapter unit with lever (with O-ring)
② Motor head (with O-ring)
③ Filter media securing plate
④ Tetratec® FF Filter Floss Pad
⑤ Tetratec® CF Carbon Filter Media (2 units for EX 1200)
⑥ Tetratec® BF Biological Filter Foam
⑦ Filter media container
⑧ Tetratec® BB Bio Filter Balls
⑨ Tetratec® CR Ceramic Filter Rings
⑩ Filter case
⑪ Overflow pipe for water intake (with O-ring)
⑫ Suction cup with short clip (6 units)
⑬ Intake extension tube
⑭ Strainer
⑮ Overflow pipe for flow return (with O-ring)
⑯ Suction cup with long clip (6 units)
⑰ L-Connector
⑱ Spray bar (2 units)
⑲ Stopper
⑳ Valves (2 units)
㉑ Water hose approx. 1.5m (2 units)

Technical Data	EX 600	EX 700	EX 1200
Water Flow (l/h)	600	700	1200
Suitable Tank Size	60-120l	100-250l	200-500l
Maximum Head Height (m)	1,2	1,5	1,8
Filter Capacity (l)	5,7	6,6	12,0
Filter Media Container (unit)	1l x 3	1l x 4	1l x 4
Water Hose – Internal Diameter (mm)	11,3	11,3	15,2
Frequency (Hz)	50 Hz	50 Hz	50 Hz
Power Consumption (50 Hz)	10W	13W	21W
Voltage	AC 230V	AC 230V	AC 230V

① Filling with Filter Media



Remove the motor head from the filter case of the Tetratec® EX Filter. To release the motor head, lift the locking buckles with the Tetratec® logo. Release the lift buckles to slightly raise the motor head from the filter case.



Remove the motor head by lifting one of the lift buckles while holding down the filter case frame.

Remove the filter media securing plate and filter media containers from the filter case.



Clean all the Filter Media

Take out all of the filter media from the filter media containers and rinse them in water. (Take the filter media out of the plastic bags before use.)

After rinsing, return to the filter media containers as per the original order. (The placement is shown below.)

Filling with Filter Media

Für EX 600:

Bottom Tray: Tetratec® CR Ceramic Rings and on top Tetratec® BF Biological Filter Foam
 Second Tray: Tetratec® BB Bio Filter Balls
 Third Tray: Tetratec® BF Biological Filter Foam, then Tetratec® CF Carbon Filter Medium, then Tetratec® FF Filter Floss Pad

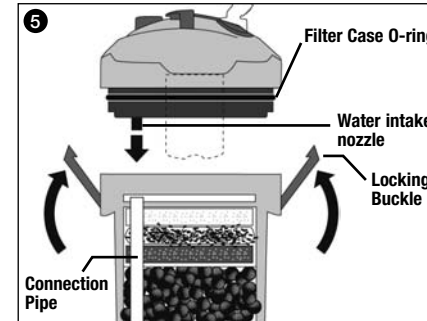
Für EX 700 / 1200:

Bottom Tray: Tetratec® CR Ceramic Rings and on top Tetratec® BF Biological Filter Foam
 Second Tray: Tetratec® BB Bio Filter Balls
 Third Tray: Tetratec® BF Biological Filter Medium (2 units)
 Fourth Tray: Tetratec® BF Biological Filter Foam, then Tetratec® CF Carbon Filter Medium (2 units for EX1200), then Tetratec® FF Filter Floss Pad



Important: Reset all filter media containers and the filter media securing plate so that the “→” marks on the handle of the containers align with the “→” marks on the filter case.

② Setting the Motor Head to the Filter Case

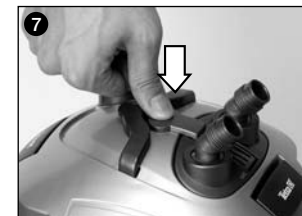


Take care to assemble the parts properly. Ensure that there is no dirt or foreign substances on the filter case or O-ring of the motor head. Place the motor head on the filter case. Ensure that the intake nozzle of the motor head and the connector pipe of the filter media containers are aligned. Resecure the lift buckles to align the motor head with the filter case. Then close the locking buckles.

③ Assembling the Motor Head Hose Adaptor Unit



Attach the hose adaptor unit to the motor head with the central lever raised. (The hose adaptor unit cannot be attached while the central lever is down!)

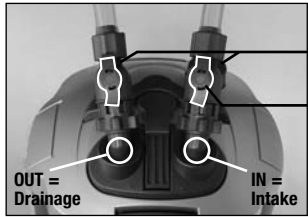


After attaching the hose adapter unit to the motor head, push the central lever down to the center of the motor head to fix it in place.

④ Assembling the Water Hoses



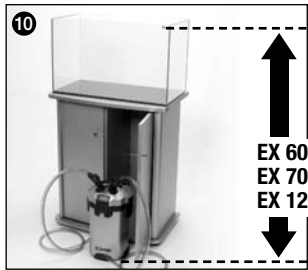
Attach the valves to the hose adapter unit. Screw the valves onto the hose adaptor unit.



Attach the water hoses to the valves.
Firmly insert each hose into the adaptor unit and tighten the screws.
Turn the valves in the direction shown in the diagram.

Note: Use only hoses supplied by the manufacturer.

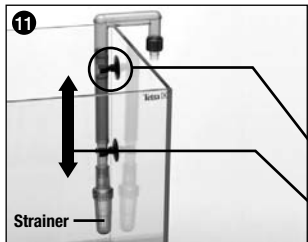
5 Installation Positioning of the Filter



Once the hoses are properly attached, ensure the distance between the bottom of the filter and the surface of the water is within the range shown on the illustration.

EX 600: 50 - 150 cm
EX 700: 60 - 150 cm
EX 1200: 80 - 150 cm

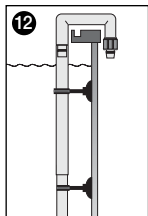
6 Installing the Water Intake Pipe



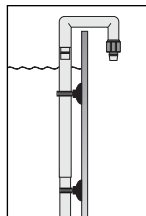
Connect the water intake pipe to the strainer and after fixing the suction cup clips use them to affix the unit to the inner wall of the tank.

The filter comes with both long and short clips. Which clip to use will depend on the shape/size of the top part of the tank wall.

Suction Cup Clips
Use "large" sized clips for the upper part (thicker pipe) of the flexible pipes.
Adjust the flexible pipe according to the depth of the tank.

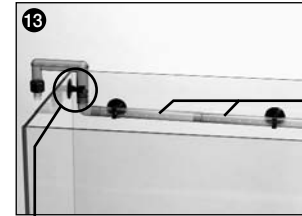


a) Example of use
Long Clip



b) Example of use
Short Clip

7 Installing the Flow Return Pipes

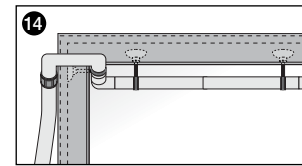


Suction Cup Clip

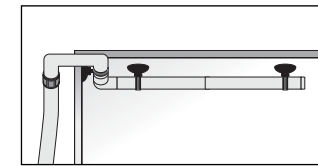
Affix the assembled overflow pipe, spray bar and stopper to the wall of the tank using the suction cup clips.

Spray bar
Adjust the length of the spray bar to the width of the tank. Use only one flow return pipe for tanks that are relatively narrower in width. Remove the stopper to decrease water pressure in the spray bar.

Stopper



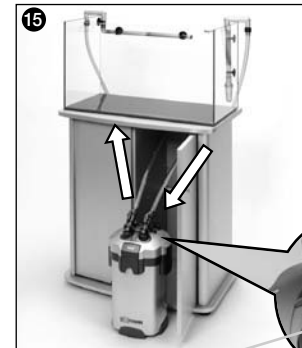
a) Example of use: Long Clip



b) Example of use: Short Clip

Note: Extra suction cups and each type of clips are enclosed. Use them in accordance to your tank and your tank set up.

8 Assembling Water Hoses



OUT = Return

IN = Intake

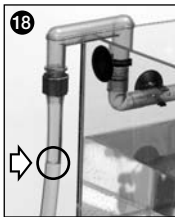
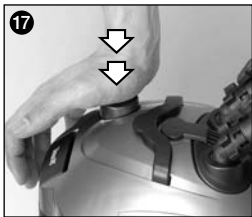
Connect the intake hose to the hose adaptor marked "IN". Connect the hose to the water intake pipe and to prevent leakage tightly secure the hose with the screws. Connect the flow return hose to the hose adapter marked "OUT". Connect the hose to the flow return pipe and tightly secure with the screws.

Note: Cut the hose to the length required.

9 Start-up Procedure



Open the valves of the hose adaptor. Turn the valves parallel to the hose adapter as shown.



Push the start button on the motor head repeatedly and in quick succession with the palm of your hand until the Tetra^{tec}® EX Filter starts pumping water. Water will be siphoned through the water intake hose and directed into the filter case. It will stop siphoning water once the water in the flow return pipe reaches the water surface level of the tank.



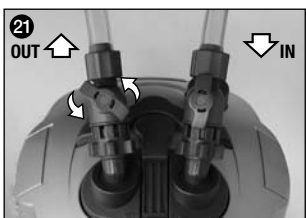
Plug in the Tetra^{tec}® EX Filter. Once the power is on, water will flow fully along the flow return pipe.

Note: At this point check all components for leakage. After operating the Tetra^{tec}® EX Filter for 30 to 60 min check that the filter is operating properly and recheck for leakage.



If water is not satisfactorily flowing through the return pipe, unplug the filter and check the hose connections and ensure that the hose is not tangled. Gently shaking will help to release any air trapped inside the filter.

10 Adjusting the Water Flow



The water flow can be adjusted when required, for example when feeding fish.
Turn the tap of the "OUT"-adapter 45 degrees counterclockwise to decrease the water flow.
Turning the tap 90 degrees counterclockwise will cut the water flow entirely.

Maintenance

11 Regular Maintenance/Replacement and Cleaning of Filter Media



Warning!
Unplug the cord of the Tetra^{tec}® EX Filter before maintenance and cleaning the Tetra^{tec}® EX Filter.

Please maintain and clean the filter as necessary, in order to avoid a decrease in water flow as a result of clogging of the filter.



Removing the Hose Adapter Unit from the Motor Head

Close the adapter valves and pull the central lever of the adapter unit up slightly to stop intake/drainage of water. Pull the lever up completely and lift the hose adapter unit to remove it from the motor head.



Opening the Filter

Remove the motor head from the filter case of the Tetra^{tec}® EX Filter. To release the lock, lift the locking buckles with the Tetra^{tec}® logo.



Releasing the lift buckles will slightly raise the motor head from the filter case



Remove the motor head by lifting one of the lift buckles while holding down the filter case frame.

12 Cleaning Filter Media

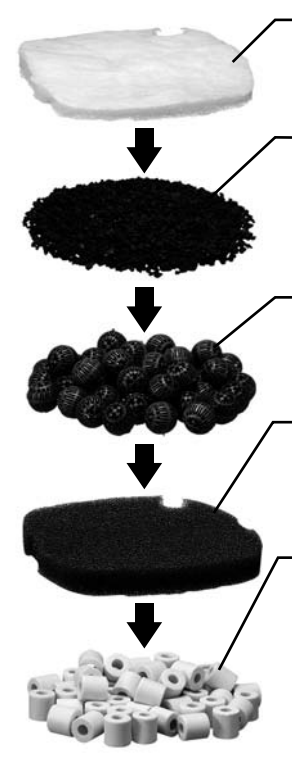


Take the filter media securing plate and filter media containers out of the filter case.

Using water from the tank, clean off all dirt and foreign particles from the filtering media. (Washing the media directly with tap water could harm useful filter bacteria that have settled on the filter media.)

13 Function and Replacement Time Frames for each Filter Media

Use only replacement Tetratec® EX filter media supplied by the manufacturer. It is recommended that filter media be replaced in accordance to the specified periods.



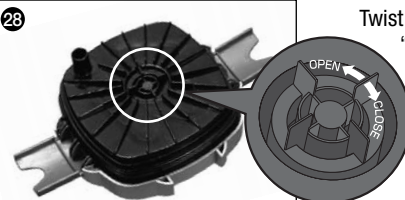
Tetratec® FF Filter Floss Pad	Physical Filter Media
The fine material of the woolen mat catches fine impurities not trapped by the other filter media. It is recommended that you replace the woolen mat once a month.	
Activated Carbon	Chemical Filter Media
The activated Filter Carbon chemically removes substances such as pesticides and remedies from the water and adsorbs odors and substances that cause muddying and yellowing of the water. This filter medium is to be used on demand on a short term basis. It is recommended that you replace the filter carbon every month.	
Tetratec® BB Bio Filter Balls	Biological Filter Media
Useful bacteria are bred in the small spaces of the ball. Impurities are then divided and neutralized biologically. The balls are reusable as long as the dirt on the surface can be removed by washing with tank water.	
Tetratec® BF Biological Filter Foam	Physical/Biological Filter Media
The fine sponge surface allows the production of useful bacteria, which break up dirt particles and biologically filter impurities. It is recommended that you change the sponge once every six months.	
Tetratec® CR Ceramic Filter Rings	Physical Filter Media
These ceramic rings physically filter impurities while distributing the water flow in a number of directions ensuring that water passes evenly through the filter. They should be replaced when dirt on the surface of the rings cannot be removed by washing with tank water.	

After washing the media replace them in the filter media container as per the original order (refer to page 2 or 3).

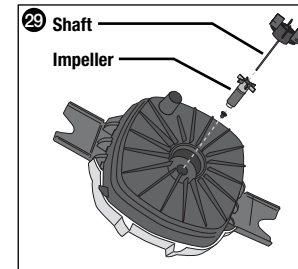
14 Hose Cleaning

Dirt and algae build up on the inside of the hoses can reduce water flow. Flush out dirt and algae by removing the pipes and flushing them with tap water.

15 Cleaning the Impeller Case



28 Twist the impeller case cover counterclockwise towards "OPEN" and remove the cover.



Remove the impeller and shaft from the impeller case and rinse thoroughly under warm tap water.

After cleaning, reassemble the parts in the opposite order setting the impeller drive magnet and then the impeller cover. Twist the cover clockwise towards "CLOSE" to securely lock the cover in place.

16 Affixing the Motor Head

Once cleaning is completed, ensure the filter media container is correctly aligned before affixing the motor head (please refer to point No. 2).

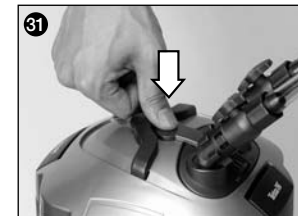
17 Assembling the Hose Adapter Unit



Insert the Hose Adaptor Unit

Note: Do not move the central lever until the hose adapter is fixed.

Place the filter in an upright position. Insert the hose adaptor unit into the motor head while the central lever is raised.



After inserting the adaptor unit into the motor head push the central lever down. Open the valves of the hose adaptor again.

18 Priming Water

Prime water as described in point No. 9.

Note: Once the water starts flowing, don't forget to readjust the water flow to the level prior to Maintenance.

19 Plug in Tetratec EX Filter

20 Trouble Shooting

Problem	Cause	Solution
The motor head cannot be affixed to the filter case	The respective "→" marks on the filter container and the filter case are not aligned	Make sure that the "→" marks are properly aligned
	Incorrect arrangement of the filter containers	Make sure that the connection pipes of the filter media containers are properly aligned
	Too much filter media has been put into the containers	Take out excess filter media and flatten remaining media
Water leakage from the motor head	The lift buckles and/or safety buckles are not properly closed	Close all the lift buckles and safety buckles properly
	There are foreign substances or dirt on the filter case or O-ring	Thoroughly clean the adjoining section of the O-ring and filter case
	The O-ring is displaced, damaged and/or missing	Set or replace the O-ring
	The edge of the motor head is damaged	Replace the motor head (*consult place of purchase)
	Improper assembly of the hose adaptor unit	Properly assemble the hose adaptor unit
The motor is not operating	The power is off	Make sure that the power is on
	The impeller shaft is broken	Replace the impeller shaft (*consult place of purchase)
	The impeller is missing or is clogged with foreign materials such as pebbles and shells	Set or clean the impeller
Reduced water flow	Hose adaptor unit is excessively dirty	Detach the hose adaptor unit and clean the inside under warm water
	Hoses have been incorrectly connected	Check whether the hose is entangled or crimped
	Excessive dirt build up in the hoses	Periodically clean the inside of the hoses and the intake and drainage pipes
	Water intake strainer is clogged	Remove all foreign substances, clean off the dirt
	Filter media is clogged	Remove the filter media and wash with tank water taken from the tank
	Filter media have been put in nets or materials other than those supplied by the manufacturer	Do not place the filter media in nets or nylon stockings. Doing so may cause clogging, which in turn may block the water flow
	Filter media have been improperly combined	Check that the filter media have been set as per the manual
	Filter floss is too dirty	Replace it with a new one
	Dirt build up in the impeller chamber	Thoroughly clean the impeller chamber/impeller under warm water
	Water is not circulating	When starting, check that the return pipe is above the water surface level of the tank (required to remove air in the filter), then press the start button (water Priming function)
	Components other than those supplied by the manufacturer have been attached to the hoses	Avoid using accessories other than those provided by the manufacturer, as this will inhibit water flow
Air build up	There is insufficient distance between the filter and the water surface level of the tank	The top of the motor head should at least be 10 cm below the water surface. The larger the distance the better (see recommendations)
	Filter media is clogged	Clean the filter media

Problem	Cause	Solution
Air build up	Air is coming in through the overflow pipe	Replace the O-ring on the overflow pipe or ensure that the connection between the overflow pipe and water intake pipe is below the water surface level of the tank.
Automatic Priming is not functioning smoothly	Filter media has not been sufficiently cleaned	Remove the filter media from the containers and clean them with tank water taken from the tank
	Filter media has been put in nets etc.	Do not place the filter media in nets or nylon stockings. Doing so may cause clogging, which in turn may block the water flow
Abnormal sound emitted when starting the filter	Air is entering from the hose connection	Check whether the hoses are connected properly
	Air is remaining in the filter case	Leaving the power on, shake the unit to help remove remaining air
Abnormal sound emitted when operating the filter	Insufficient lubrication of o-ring	Apply ample vaseline to all of the O-rings
	Inconsistent intake of water due to lack of water intake	Press the "start" button and repeat procedure from the beginning
	The top of the motor is at the same level or higher than that of the water surface	Ensure that the top of the motor is at least 10cm below water level (see recommendations)
	Air is remaining in the filter	Remove and replace the plug in the socket 3-4 times Gently shake the filter to remove remaining air
	Damaged impeller/drive magnet or spindle	Please consult place of purchase
	Every 10 seconds a sound of air being expelled from the return pipe is emitted	Due to breathing of bacteria and photosynthesis of water plants, air bubbles may accumulate and sounds of it being let out from the Tetra ^{tec} EX Filter may be heard. Corrective measures are not necessary.
	Decrease in water flow due to water staining or dirt on the impeller/drive magnet	The motor is cooled by water hence if water in the drive system is dirty or dirt is allowed to accumulate, water flow will be inhibited and life of the motor will be decreased. Periodically clean the impeller/drive magnet and the surrounding area under warm water.
The "start" button is being pressed	Do not press the "start" button or put anything on top of it while the filter is running	

Note: For purposes of product improvements, specifications may be altered without notification.

3 Year Guarantee

Thanks to modern production processes, high-quality components and strict quality controls we allow a guarantee of 3 years from the date of purchase on the accuracy of the Tetra^{tec} EX Filter. Please keep proof of purchase! The guarantee does not cover improper use, normal wear and tear as well as modification to the appliance. In case of complaints please contact your local retailer or address to Tetra (UK) Ltd, P.O. Box 271, Southampton, SO18 3ZX.

Safety First

Always isolate the unit from the mains electricity before carrying out any maintenance work. The electrical cord cannot be replaced. If the cord is damaged the appliance should be scrapped. On no account must an unqualified person attempt to carry out any electrical repairs on this unit. For more information on fishkeeping please contact Tetra Information Centre at the address above.

Tetra^{tec} Tip:

Tetra offers you a wide choice of high-quality products which are available at your local retailer. If you need further advice do not hesitate to contact us.

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Germany
www.tetra.net

