

GEYSER-BIO



GEYSER-BIO MODIFICATIONS

- | | | | | |
|--------------------------------------------------------------|-----|--------------------------|-----|--------------------------|
| <input checked="" type="checkbox"/> SOFT WATER FILTER | 311 | <input type="checkbox"/> | 312 | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> HARD WATER FILTER | 321 | <input type="checkbox"/> | 322 | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> VERY HARD WATER FILTER | 331 | <input type="checkbox"/> | 332 | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> FERRUGINOUS WATER FILTER | 341 | <input type="checkbox"/> | | |

Thank you for buying the Geysler water filter!

Our developments and technologies make it possible to ensure the excellent water quality in your house.

This manual describes all of the functions and installation procedure of the Geysler water filtering system. Please carefully read and keep it for future use.

The water filter kit includes all parts required for immediate use after installation.

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PURPOSE

Filters of Geyser Bio series incorporate all the known water purification methods: mechanical filtration, ion exchange, sorption, iron removal and disinfection. The quasi-softening effect typical of the Aragon material makes the water not only clean and safe but also tasty and healthy.

Geyser BIO water filters are distinguished by the logic and thoughtful nature of each phase of purification, which results in the fact that the long lifetime and stable purification efficiency is guaranteed for the entire system throughout the service life.

A series of Slim Line 10" cartridges ideally selected for each water natural type treated by Geyser BIO filters allows removal of chlorine, iron (deironing), hardness salts (softening), heavy metals, bacteria and viruses.

Due to the unique Aragon Bio cartridge, the Geyser Bio water filter is capable of protecting you against contamination of any class while maintaining the natural composition of micro-elements in soft water, and of softening and making healthier hard water.

The Aragon Bio cartridge is reliable in removing not only harmful impurities but also bacteria and viruses from water (Patent No. 2506232).

You can drink the water purified with Geyser Bio filters without boiling it.

This is confirmed by Test Reports 10/12, 11/12 dated 10.12.2012 by the Fire Test Laboratory for Emergency Forecast and Prevention No. 164 of the Emergency Situations Ministry, as well as by:

- Sysin Research Institute (Moscow),
- Research Institute of Influenza (St. Petersburg),
- Universita di Ferrara (Italy),
- Institut Paster (France).

Advantages of unique Aragon material (Patent No. 2203721):

- Highly efficient removal of impurities (hardness salts, iron, heavy metals, radionuclides, chlorine, etc.).
- Active silver in the wash-fast form suppresses the growth of filtered bacteria.
- Selfindication of lifetime: scale formation or reduction in water head indicate the need for cartridge replacement.
- Release prevention: all the filtered impurities are permanently trapped in the labyrinth structure of the cartridge.
- Quasisoftening: while being filtered through the Aragon cartridge, water is saturated with beneficent calcium - Aragonite (heart disease prevention). When boiling, purified water forms no scale on heating elements.

GEYSER BIO PACKAGE CONTENTS

Model	First stage	Second stage	Third stage	Body	Application
311	sediment-protection	Aragon S-BIO+V(Ca)	CBC Ag/MMB	white	soft water
312	sediment-protection	Aragon S-BIO+V(Ca)	CBC Ag/MMB	transparent	soft water
321	sediment-protection	Aragon 2-BIO	CBC Ag/MMB	white	hard water
322	sediment-protection	Aragon 2-BIO	CBC Ag/MMB	transparent	hard water
331	Aragon 2-BIO	BS	CBC Ag/MMB	white	very hard water
332	Aragon 2-BIO	BS	CBC Ag/MMB	transparent	very hard water
341	BA	Aragon H-BIO	CBC Ag/MMB	white	ferruginous water

FILTERING MATERIALS AND CARTRIDGES USED

Mechanical sediment-protection cartridge (EFM, PFM, PP) made of polypropylene removes dirt, suspended matter and insoluble impurities from water.

Aragon S-BIO retains beneficent calcium in soft water.

Aragon 2-BIO has an increased lifetime in removal of hardness salts.

Aragon H-BIO: hardness decrease, removal of heavy metals.

Geysers Bio 311 and 312 Models have a V(Ca) dispenser additionally installed inside their **Aragon S Bio** cartridge to enrich water with beneficial micro-elements.

CBC Ag is a cartridge made of coconut activated carbon briquette (carbon-block), which efficiently removes organic and chloro-organic compounds, free chlorine, unpleasant odor, improves organoleptic properties of water. Silver contained in the cartridge provides the bacteriostatic effect throughout the service life.

MMB is a cartridge made of high-quality carbon fiber, which efficiently removes organic and chloro-organic compounds, free chlorine, unpleasant odor and foreign taste. Silver added in the filtering material provides the bacteriostatic effect throughout the service life.

The **BS** cartridge removes excess of hardness salts from water. Ion-exchange resin of food grade is used as filtering medium. It is used in very hard water filters Geysers Bio 331 and 332.

The **BA** cartridge removes dissolved iron and other metal compounds from water by the catalytic oxidation methods. A natural material of calcite is used as a filter bed. It is used in ferruginous water filters Geysers Bio 341.

EFFICIENCY IN REMOVAL OF PRINCIPAL IMPURITIES

Suspended impurities (rust, sand, algae, other particles) over 0.1 µm	100%
Heavy and radioactive metals (lead, cadmium, copper, strontium-90, cesium)	up to 99%
Active chlorine	100%
Organic compounds	up to 92%
Hardness salts	up to 85%
Microorganisms and coliform bacillus	99,0%
Hepatitis A virus, rotaviruses and noroviruses	99,0%

MEAN SERVICE LIFE AND LIFETIME OF CARTRIDGES

Cartridge	Service life*, months	Lifetime*, years
PFM, EFM, PP	12	up to 7,000
Aragon H-BIO/Aragon S-BIO Aragon 2-BIO	12	up to 7,000
MMB	18	up to 10,000
CBC Ag	12	up to 10,000
BA**	6-8	up to 2,000
BS***	12	up to 4,000

* depends on degree of source water contamination

** for the iron content in water up to 1 mg/l with account of regeneration

*** for the hardness up to 3 mg-eq/l with account of regeneration

SPECIFICATIONS

Overall dimensions of the water purifier body assembly (max.), mm	380x310x140
Recommended filtration rate (max.)	3 l/min
Maximum operating pressure	7 atm
Regularity of BS cartridge regeneration (at the hardness of 6-4 mg-eq/l)	200-400 l
Temperature of water to be filtered	+4...+40°C
Weight without package (max.)	6.5 kg

SCOPE OF SUPPLY*



1. Filter assembly
2. Body wrench
3. Bottom plug wrench
4. Purified water faucet (vers. 6)
5. Decorative cap
6. Rubber gasket
7. Plastic washer
8. Fastening nut with a washer
9. Piston
10. Collet clamp nut 1/4"
11. Connecting tube 1/4"
12. T-piece adapter with a faucet knob
13. Manual
14. Package

GETTING CONNECTED

Only qualified technician or a manufacturer's representative shall be permitted to connection! In case of do-it-yourself connection, strictly follow these instructions.

Do not disassemble factory connections without manufacturer's recommendation.

Attention! All filter bodies have passed the tightness test under high-pressure. To prevent it from being cracked, always keep the Aragon cartridge in wet conditions. In case of breaks longer than 1 month in using the filter, make sure that water is always left in the filter body.

Attention! If the pressure exceeds 6 atm in the system, install a pressure reducer upstream of the filter.

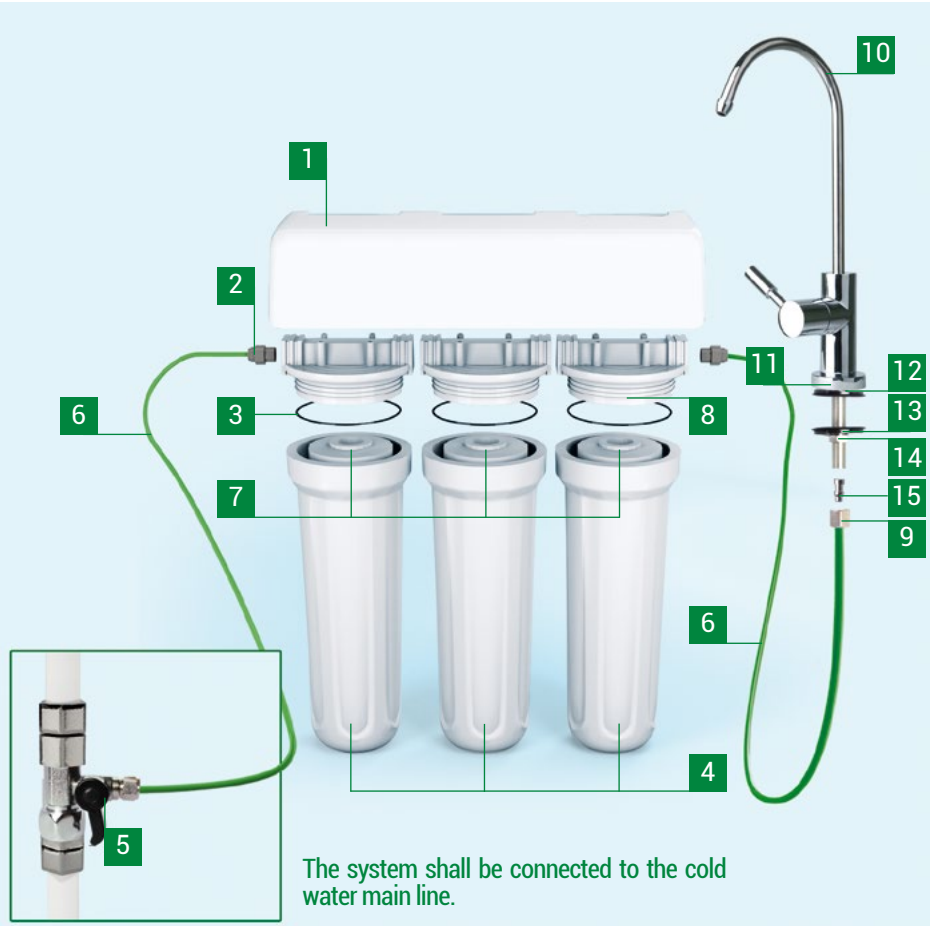
Before beginning the work, cut off the cold water supply to the connection point and depressurize by opening any faucet located downstream of the water cut-off point.

Before the installation, make sure that the filter flasks are securely tightened (if required, tighten up) and make the connection according to the instructions.

Attention! The position of the vertical sticker strictly in the middle of the filter front side does not guarantee the connection tightness. The sticker position may change when the threaded connection of the flask is tightened.

* The appearance of the product may differ from image on packaging

CONNECTION DIAGRAM



- | | | | |
|---|------------------------------------|----|-----------------------------|
| 1 | Bracket | 9 | Collet clamp nut 1/4" JG |
| 2 | Adapter 1/2"x 1/4" JG | 10 | Faucet |
| 3 | O-ring | 11 | Decorative cup |
| 4 | Cartridge cases | 12 | Rubber gasket |
| 5 | T-piece adapter with a faucet knob | 13 | Plastic washer |
| 6 | Connecting tube 1/4" JG | 14 | Fastening nut with a washer |
| 7 | Cartridges | 15 | Piston |
| 8 | Caps of cartridge cases | | |

CONNECTION PROCEDURE

The system shall be connected to the cold water main line. Remove the filter from its package. Remove the transportation plugs. Press a tip of a screwdriver against the plastic ring in the connection and remove the plug without applying force (Fig. 1).

Cut the tube of the connection kit into 2 pieces and connect each one to the filter inlet and outlet.

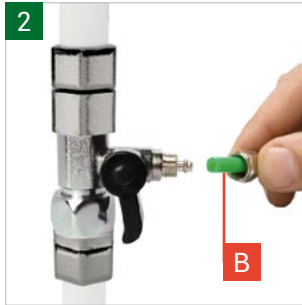
Attention! Inlet - the first stage. Outlet - the third stage.
Install the filter in the convenient place for use.



CONNECTION TO THE WATER PIPELINE

1. Install the T-piece adapter (A) into the cold water mains sealing the connections (Fig. 1).

2. Insert the plastic tube into the nut (B) (Fig. 2). Insert the tube into the ball valve fitting as far as it will go and tightly screw the nut (Fig. 3).



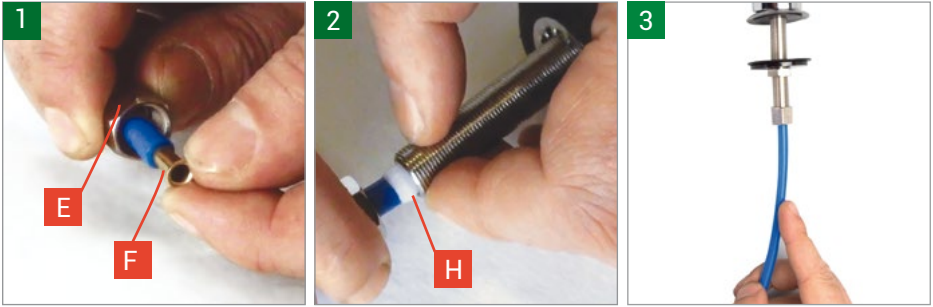
CONNECTION OF THE PURIFIED WATER FAUCET

Drill a 12 mm hole in the sink.

Assemble the faucet as follows:

1. Faucet
2. Decorative cup
3. Rubber gasket
4. Plastic washer
5. Rubber washer
6. Metal washer

Secure the faucet on the sink. Pass through the blue-color tube into the nut (E) (Fig. 1). Insert the piston (F) inside the tube as far as it will go. Put the plastic stop ring (H) onto the tube end (Fig. 2). Screw the nut onto the threaded faucet rod (Fig. 3).



GETTING STARTED

Before using the filter, flush it for 2-5 minutes. The filter should be also flushed after replacement of cartridges and after long (more than 5 days) breaks in use.

After a new filter is installed or cartridges are replaced, the air still remains in the system. It results in excessive aeration of water (visually, water may be of milk-white color). As the filter is operating, the air will be leaving the system and the purified water will become clear.

FILTER MAINTENANCE

When to provide maintenance	Cartridge	Type of maintenance
Occurrence of scale signs	BS/Aragon 2-BIO	Regeneration/Replacement
Noticeable reduction in filtration rate	PFM, EFM, PP	Replacement
	Aragon 2-BIO, Aragon H-BIO, Aragon S-BIO	Mechanical cleaning or replacement
Decreased water quality	CBC Ag, MMB	Replacement

Upon expiry of their lifetime or service life cartridges are to be replaced.

REPLACEMENT OF STAGE I, II, III CARTRIDGES

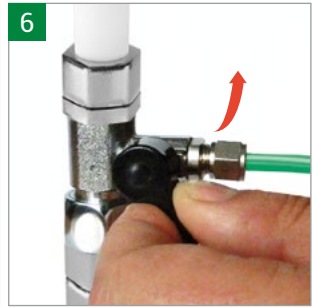
Cut off water at the inlet (Fig. 1). Open the purified water faucet to depressurize the system (Fig. 2). Using the wrench, unscrew the filter flask (Fig. 3), check the condition of the O-ring and replace it, if required, then replace appropriate cartridge (Fig. 4, 5).



It is recommended to apply silicone grease (do not confuse with sealant) or Vaseline on the O-ring before installing it next time.

Install the flask in its place and tighten with the wrench.

Check the system for tightness by opening water supply to the filter (Fig. 6). The system is ready for operation.



REPLACEMENT OF THE MINERALIZER FOR MODELS 311, 312



Unscrew the flask using the supplied wrench and screw out the Aragon M-BIO cartridge.

Drain the water.

Using the wrench for the bottom plug, screw out the bottom plug from the Aragon cartridge (Fig. 1), remove the dispenser B (Ca).

When replacing the Aragon M-BIO cartridge, it is required to take the fitting piece "B" (Fig. 3) out of the waste cartridge and transfer it to a new one.

Remove the lid of a new dispenser, insert it (Fig. 2) with its opened side facing upwards. Screw in the bottom plug as far as it will go.

Reassemble the filter in reverse order and flush it for 2-5 minutes. The system is ready for operation.



CARTRIDGE CLEANING AND REGENERATION

Removing hardness salts from the BS cartridge

Cut off water supply upstream of the filter and open the purified water faucet to depressurize the system.

Unscrew the flask with the supplied wrench.

Take the BS cartridge out of the body.

Unscrew the cartridge cap and transfer the cartridge content into a glass or plastic container of at least 2 l capacity.

Prepare 1 liter of saturated solution of cooking non-iodized salt (300 g of salt per 1 liter of water) and pour it over ion-exchange resin.

Attention! The solution may be bubbling due to air escaping from resin.

Mix up the container content and leave it for 1-2 hours agitating it from time to time.

Carefully drain the salt solution. Pour cold water over resin. Mix up, drain water. Repeat the operation two times more.

Transfer resin into the body and screw the cartridge cap.

Put the cartridge into the flask. If required, replace O-rings. It is recommended to apply silicone grease (do not confuse with sealant) or vaseline on the O-ring before installing it. Install the flask in its place in the filter and tighten with the wrench. Check the system for tightness by opening water supply to the filter. Flush the filter for 2-5 minutes.

The system is ready for operation.

Attention! When carrying out the regeneration, it is required to prevent washing solutions from contacting with eyes as it may cause pain. In case of contact, thoroughly wash your eyes with water!

STORAGE AND TRANSPORTATION CONDITIONS

Prevent the filter and cartridges from being hit, dropped, exposed to negative temperatures and direct sunlight. The filters may be transported in any enclosed means of transportation (except for non-heated air plane compartments) according to the freight transport regulations applicable for given means of transportation.

The filters shall be stored packaged at a distance of at least 1 m from heating appliance. Avoid exposing to aerosols, aggressive and odorous substances.

The filter shall be disposed in accordance with the sanitary, environmental and other requirements established by the national standards in the field of environmental protection.

WARRANTY LIABILITIES

The guaranteed service life of the filter is 3 years from the sales date. If the sales date and a stamp of the sales company are missing, the guaranteed service life is counted from the date of filter manufacture. The warranty does not apply to cartridges, which lifetime is given in the table on Page 4. When any factory defects are found in them, the cartridges may only be replaced against the warranty after they have been undergone the appraisal by the Aftersales Service representative.

The manufacturer disclaims the responsibility for the filter operation and for possible consequences in cases where:

- the filter or its component parts have mechanical damages;
- requirements of these instructions for connection and operation were not met or original cartridges and components were not used;
- the service life of cartridges has expired;
- the filter was not used for the intended purpose (to treat hot or corrosive fluids).

The service life of the filter is 10 years. The maintenance and post-warranty service are provided by the manufacturer or their regional representatives.

The Aftersales Service guarantees the free correction of defects in filter connections and attachments, which have occurred through to the manufacturer's fault during filter installation, for a 6-month period.

QUESTIONS CONCERNING THE WARRANTY MAINTENANCE SHOULD BE REFERRED TO:

WARRANTY CARD

Issuing date

The trading organization shall fill

Sale date _____

Stamp of a store _____

AQUACHIEF

The water-purification system for country houses

- **UNIQUE SOLUTION:**
Removal of iron and hardness salts (scale) by one filtering media of Ecotar.
- **IT IS FAVORABLE AND SIMPLY TO USE:**
Expensive reagents are not required for the media recovery. The regeneration is carried out using table salt. Drain waters are harmless for septic tanks.
- **SPACE SAVING IN A HOUSE:**
Geysер Aquachief occupies 2 times less space, than systems operating at usual filling loadings.
- **INDIVIDUAL APPROACH:**
The variety of Ecotar media allows easily adjusting of Geysер Aquachief for water purification in every region.

More on the website www.geizer.com

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