

# Naqwa Water Recoverer<sup>™</sup>



**Model: NAQWA<sup>®</sup> SPRING (NAQWA<sup>®</sup> SWR)**

RF Patent #129413

RF Patent #81722

## **User Manual**

Please read carefully the present User Manual and apply NAQWA<sup>®</sup> Spring Water Recoverer<sup>™</sup> (NAQWA<sup>®</sup> SWR) in strict compliance with the provisions and instructions provided herein

Dear Customer, thank you for choosing NAQWA<sup>®</sup> Spring Water Recoverer<sup>™</sup> (NAQWA<sup>®</sup> SWR)! We hope you will find this hi-tech product very useful both for your indoor and outdoor applications.

## Scope of application

NAQWA<sup>®</sup> Spring Water Recoverer™ (hereinafter referred to as the “NAQWA<sup>®</sup> SWR”) is intended for advanced drinking water recovery treatment of water from superficial and underground raw water sources as well as from centralized water supply systems. It is an excellent drinking water solution for **Rural Water, Emergency situations, Army and Travelling.**

Application of NAQWA<sup>®</sup> SWR reduces to zero or to an acceptable rate the concentration in water of the following dangerous contaminants: **the most dangerous bacteria, heavy metals, radio nuclides, pesticides, other hazardous substances.**

At the same time all important for human health micro elements remain preserved in the purified water.

## Design

The track membrane cartridge is the core NAQWA<sup>®</sup> SWR element. The track membrane is a thin polymer film of about 10 microns thick on each square centimeter of which there are hundreds of millions of pores (tracks) of 0.2-0.4 microns in diameter (approximately 100 times thinner than a human hair) which ensures the highest quality of water purification. The purification quality remains unchanged and does not reduce its perfectness until the complete expire of NAQWA<sup>®</sup> SWR operating capacity (up to 20 000 litres annually).

NAQWA<sup>®</sup> SWR is a green product and made of materials approved for contact with drinking water. During purification the risk of mixture of the purified and contaminated water is practically excluded due to the special design of NAQWA<sup>®</sup> SWR.

NAQWA<sup>®</sup> SWR is the lightest in its class (its weight is only 95/65 grams with and without casing), portable and very easy in operation. NAQWA<sup>®</sup> SWR requires no power supply and can produce up to 50 litres of safe drinking water per day.

The NAQWA<sup>®</sup> SWR SHUNGITE model contains SHUNGITE rock – the unique Russian mineral rich of FULLERENES which are believed to be the STRONGEST natural ANTIOXIDANT on the Earth!

## Purification Performance

Contaminants	Purification level, up to
Bacteria (cholera vibrio, coli bacillus and salmonella)	99.99 - 99,99999...%
Pesticides	90%
Iron (total)	85%
Colority	80%
Turbidness	90%
Chlorines	90%
Arsenic	90%
Radionuclide	50%

## Technical Characteristics.

Dimensions, mm (with a case)	170x110x12
Weight with/without case, gram	95/65
Operating temperature range, C <sup>0</sup>	0–70
Capacity, liters	Up to 20 000*
Productivity, liters/day	Up to 50

\* NAQWA<sup>®</sup> SWR capacity may reduce with time due to high contamination of the raw water. In such cases it is recommended to settle the raw water for some time prior to NAQWA<sup>®</sup> treatment.

## Delivery Set

1.	NAQWA <sup>®</sup> SWR cartridge with the outlet tube	1 unit
2.	Case for storage and transportation	1 unit
3.	Tube plug	1 unit
4.	User Manual	1 unit
5	Start up Syringe, 50 ml (supplied optionally)	1 unit

## Structure

NAQWA<sup>®</sup> SWR Cartridge (1) is a track membrane located inside a soft bag which serves as an external preliminary filtering bag (the bag retains solid particles, ooze and similar substances). The track membrane located inside the external bag is welded up along its perimeter and fitted with a coupling for release of the recovered drinking water through the soft outlet tube (3) connected to the coupling. The track membrane is wrapped around a metallic stainless frame. The frame provides rigidity to the cartridge and keeps it immersed in water in vertical position. There is a Shungite plate inside the track membrane cartridge (optional for NAQWA<sup>®</sup> SWR SHUNGITE model).

### NAQWA<sup>®</sup> SWR OPERATION (Fig.1)

#### ATTENTION!

Please make sure that the tube plug (5) is removed from the outlet tube (3) before NAQWA<sup>®</sup> SWR use and is placed back after NAQWA<sup>®</sup> SWR use to prevent bacteria from getting inside the cartridge!

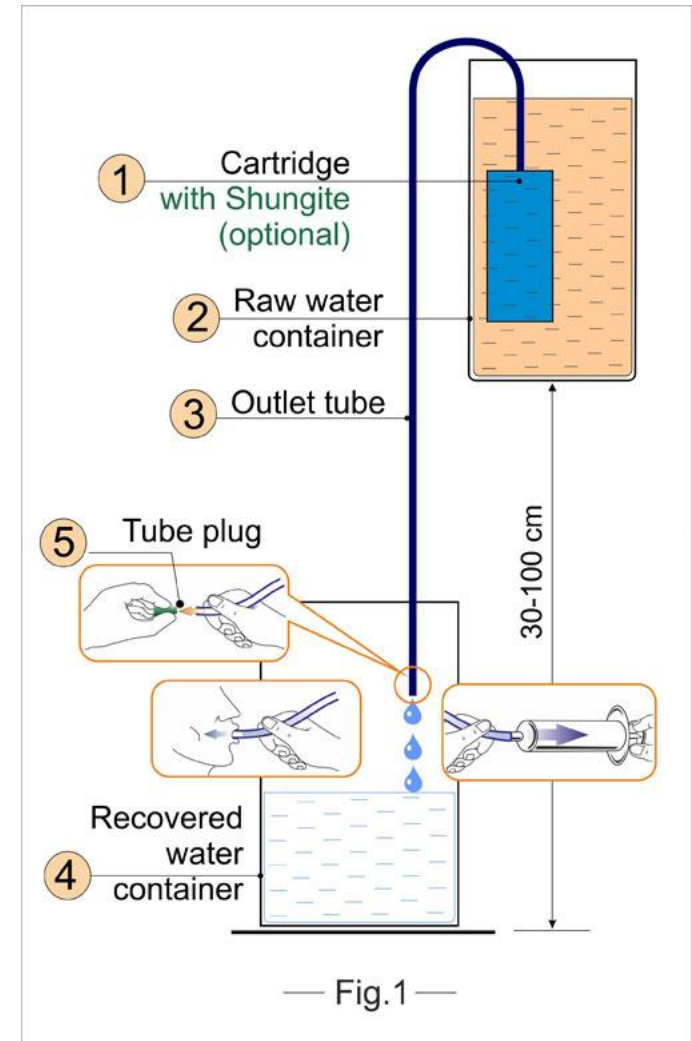
NAQWA<sup>®</sup> SWR operation is very easy and includes the following 6 simple steps:

1. Prepare a container for recovered drinking water (4) (a drinking water vessel, a plastic bottle with a cut top, a suitable package, etc.).
2. Fill the raw water container (2) with raw water and place it 30-100 cm higher than the container for recovered drinking water (4).
3. Take NAQWA<sup>®</sup> SWR out of the transportation case and remove the outlet tube plug (5) from the outlet tube (3).
4. Immerse NAQWA<sup>®</sup> SWR cartridge (1) into the raw water container (2) keeping the free end of the outlet tube (3) outside the container.
5. Lightly suck the air out of the outlet tube (3), the purification process will start within 5-10 seconds.
  - 5.1. Suck out the air with the start up 50 ml syringe (supplied optionally). The cartridge (1) should be fully submersed in the water.

#### DO NOT USE THE START UP SYRINGE FOR BACKWASHING THE FILTER!

6. Place the free end of the outlet tube (3) into a container for the recovered drinking water (4).

**Note.** At the beginning the recovered drinking water will flow as a stream the intensity of which may naturally decrease with time and after a while NAQWA<sup>®</sup> SWR will start operating in its normal “drop-by-drop” mode.



## Maintenance

NAQWA<sup>®</sup> SWR cartridge should be cleaned in case of slow down in its productivity. To clean the cartridge, please remove the track membrane from the external pre-filter bag, open it and thoroughly rinse under water stream. Contamination on the membrane surface should be gently removed with a soft tissue.

For the most effective cartridge restoration soak the cartridge in 5-7% citric acid solution and leave it in it for 1-2 hours. Afterwards flash the cartridge surface with clean water. Another effective method of cartridge treatment is its cleaning in weakly alkaline solution with further subsequent rinsing under water stream. In the latter case dishwashing alkaline-based detergents can be used. Assemble the cartridge parts in the reverse order after the cleaning.

It is recommended not to use the first 0.5 -1.0 litres of the drinking water recovered immediately after the cartridge was cleaned in alkaline solutions.

### ATTENTION!

- DO NOT USE THE START UP SYRINGE FOR BACKWASHING THE FILTER!
- Do not apply too much pressure on the cartridge as you may damage it!
- Do not pull on the outlet tube (3) connected to the cartridge (1) (Fig.1) while dismantling the water recoverer as it also may lead to the damage of the track membrane which is only 10 microns thick!
- During cleaning the cartridge do not disconnect the outlet tube from the coupling which connects the tube to the cartridge;
- Prevent invasion of raw water and detergents inside the track membrane. For this reason it is recommended to plug the free end of the outlet tube with the outlet tube plug provided.

## Operation Guide

1. It is recommended not to expose NAQWA<sup>®</sup> SWR to direct sun light during operation.
2. In case of a long break in operation for more than 3 days remove the track membrane cartridge from the bag, wash, dry and store it in a clean place having closed the outlet tube with the outlet tube plug.
3. In case of a short break in operation for 1-3 days it is recommended to keep the cartridge in water with the free end of the outlet tube hanging over the edge of the raw water container, however not dropping it into the container.

### ATTENTION!

To avoid any damages to the track membrane the following actions SHOULD BE AVOIDED:

- usage of NAQWA<sup>®</sup> SWR for other purposes rather than the drinking water recovery;
- back washing/air blowing the filter cartridge through the outlet tube;
- wiping the cartridge with rigid materials, brushing the cartridge;
- connecting the outlet tube to pressurized water pipeline or a similar water source with excessive pressure .

## Storage

NAQWA<sup>®</sup> SWR should be stored inside the supplied transportation case in a dry place at temperature of 0 -70<sup>0</sup>C.  
Avoid to store NAQWA<sup>®</sup> SWR outside the transportation case.

## Warranty

The Manufacturer guarantees a successful operation of NAQWA<sup>®</sup> SWR within 12 (twelve) months after the date of purchase providing the storage and operation instructions specified in the present User Manual have been observed.

The anticipated shelf storage period is 3 (three) years from the manufacturing date.

During the warranty period the Manufacturer undertakes to replace failed parts of NAQWA<sup>®</sup> SWR free of charge providing the failure occurred through the fault of the Manufacturer.

No claims shall be accepted by the Manufacturer in case of any mechanical or other damage caused to NAQWA<sup>®</sup> SWR after its purchase as well as in case of the filter misuse or violation of the instructions specified in the present User Manual.

## Compliance Statement

NAQWA<sup>®</sup> Spring Water Recoverer<sup>™</sup> (NAQWA<sup>®</sup> SWR) fully corresponds to the Technical Requirements and is ready for operation.  
Certificate of Compliance No.C-RU.HO03.B.00468 of 22.11.2012.

Date of Manufacturing \_\_\_\_\_

Batch Number \_\_\_\_\_

Manufacturer NAQWA<sup>®</sup> LLC, 9A, Kievskoe shosse, Obninsk, Kaluga region, Russian Federation, 249032. [www.naqwa.com](http://www.naqwa.com)

Date of Purchase \_\_\_\_\_

Seller \_\_\_\_\_