www.aquafilter.com

The Clear Choice

Water Filtration Systems

Installation Manual

EN

1. Safety Remarks

ATTENTION! Do not use the system with biologically contaminated water and of unknown origin.
The filtration system should only be installed by a trained technician. Use only genuine **Aquafilter**® replacement parts and accessories.
Following this manual thoroughly will guarantee:
- breakdown free use,
- honoring product warranty.

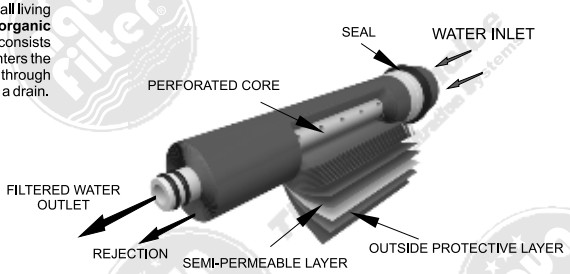
1) Read carefully this Instruction Manual before starting system installation.
2) Check if all elements needed for the installation are included with the system. (refer to point 5 "Box Content").
3) Remember to conduct system flushing right after the installation process is completed and each time after filter cartridge replacement (including sediment and in-line filter cartridges or RO membrane element) as well as after longer periods of time (for instance vacation periods) when the system has not been used Next, leave the system idle for 5-6 hours allowing the filtration environment to set in.
4) Before disconnecting any tubing: remove safety clips from quick connectors and next press the connector's flange and pull the tubing out.
5) During disconnecting and connecting of tubing be sure not to break it (correctly installed tubing should be inserted 1.5 cm inside of quick connector).
6) Do not move or rotate quick connectors which are installed in membrane housing during disconnecting or connection of tubing.
7) Secure quick connector with safety clip after tubing has been inserted.
8) For sealing plastic components use only Teflon tape!
9) Do not use strong detergents when washing filter housings. Rinse filter housings with clean water each time before installing new filter cartridges.
10) When installing new in-line filter cartridge, remember about inserting it according to the direction of water flow (refer to direction arrow displayed on each filter cartridge).
11) Wash your hands thoroughly before and after filter cartridge or membrane element replacements.
12) Remove RO membrane out of packaging only few moments before its installation.
13) In case system is leaking, disconnect it from its water supply.
14) 4-way valve needs to be cleaned each time after cartridge replacement is completed (or at least every 6 months).
15) System disinfection should be conducted ones a year. ATTENTION! Do not use running water for that purpose since it can be contaminated.
16) Water that will undergo Reverse Osmosis process must meet certain conditions (refer to point 4).
17) In all cases of product returns, the system must be returned in its original packaging – otherwise the return will not be accepted.
18) Manufacturer is not responsible for any damages resulted from the use of this product if used for other purposes than filtration of potable water.
19) The producer does not hold any responsibility for printing errors.
20) We reserve the right to introduce change or amendments of the provided technical informations at any time and without the necessity of a prior announcement.

Use only genuine **Aquafilter**® replacement parts, filter cartridges and membrane elements. In case of use of other manufacturers' parts, Aquafilter is not responsible for any damages caused in the course of product use of.

2. Reverse Osmosis water filtration method

Reverse Osmosis is a separation process that uses pressure to force water through a semi-permeable membrane while retaining other substances on the other side – it's a reverse process of what naturally takes place in all living cells. **The membrane stops 96-99% of organic and non-organic contaminants, bacteria and viruses.** Semi-permeable membrane consists of many layers winded up on perforated core. Contaminated water enters the membrane element with pressure, forcing water molecules to pass through the microscopic membrane pores, while flushing out contaminants to a drain.

Cross-section of TFC membrane element



3. System parameters

RO tank dimensions (H x Diameter)	380 mm x 280 mm
Work. temperature	od 2°C do 45°C
Work. pressure	2,8 bar - 6 bar
Efficiency*	280l/ 24h (for TFC-75F membrane)
Inlet size	1/2"
RO Tank model	PRO4000W
RO tank capacity**	15 liters

* nominal capacity
** nominal capacity

3.1. Systems dimensions

RX44111XXX	RX54111XXX	RX54115XXX	RX541141XX	RX5411411X	RP942141XX
Dimensions (H x W x L)					
400 x 140 x 340 (mm)	400 x 140 x 390 (mm)	400 x 140 x 390 (mm)	400 x 140 x 450 (mm)	400 x 140 x 450 (mm)	400 x 140 x 380 (mm)

4. Required inlet water parameters for RO systems*

Required water pH	2 pH - 11 pH
Max. general water hardness	400 ppm[3] (mg / l)
Max. alkalinity	8 mval/l
Fe, Mg contant	< 0.05 ppm[3] (mg / l)
Max. SDI[1] index	SDI 5
Max. TDS[2] salinity	2000 ppm[3] (mg / l)

[1] ***SDI -*** *SDI - (Silt Density Index) is a measure for the fouling capacity of water in RO systems (RO membranes). SDI value should be < 5.*
[2] ***TDS -*** *(Total Disolved Solids) total amount of mobile charged ions, including minerals, salts or metals dissolved in a given volume of water.*
[3] ***ppm*** *- parts per million.*

** distributor is not responsible for damages caused by the system operating with different inlet water parameters.*

5. Box content

Components with filter cartridges
AICRO[1]

Components with filter cartridges
AICRO[2]

Components with filter cartridges
AICRO and AIMRO[3]

Components with filter cartridges
AICRO, AIMRO, AIFIR1000[4]

Components with filter cartridges
AICRO, AIMRO, PUMP[5]

2 x white filter housings
PR-PP-HP-S[1]

3 x white filter housings
PR-PP-HP-S[6]

RO water tank (15 liters)*
PRO4000W

Chrome-plate faucet
FXFCH17-C[7]

Chrome-plate faucet
FXFCH 18 -C[8]

20 micron filter cartridge made of polypropylene
FCPS20

Carbon block filter cartridge
FCCBL

5 micron filter cartridge made of polypropylene
FCPS5[6]

RO membrane element
TFC-75F

Wrench for filter housing
FXWR1-BL

Chrome-plated adapter with seal
FT06
(1/2" MIP x 1/2" FIP x 1/4" FIP)

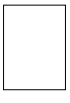
Teflon tape
TAS0004

Shut off valve
SEWBV1414

Tubings

Clamp
SC500B14

Ball valve for water tank
BV9014JG



Instruction Manual
XI-RO

* nominal capacity

[1] for RX44111XXX system
[2] for RX54111XXX systems
[3] for RX541141XX system
[4] for RX5411411X system
[5] for RP942141XX system
[6] for RX54111XXX, RX54115XXX, RX541141XX, RX5411411X, RP942141XX systems
[7] for RX44111XXX, RX54111XXX systems
[8] for RX44111XXX, RX54111XXX, RX54115XXX system
[9] for RX541141XX, RX5411411X, RP942141XX systems

5.1. Additional accessories (purchased seperately)

Chrome-plated adapter with seal
FT07
(3/4" MIP x 3/4" FIP x 1/4" FIP)

Chrome-plated adapter with seal
FT02
(3/4" MIP x 3/4" FIP)

Pressure regulator
ADV-REG_K

Pressure regulator
ADV-REG-CR_K

Leak prevetion sensor (mechanical)
AIMIAO2

6. List of contaminants that Aquafilter® RO systems remove from water

Contaminant name	Percentage of removed contaminants by RO membrane (%)	Exmaples of contamination sources for potable water
Aluminum	98	Improper water filtration during chemical bonding with the use of aluminum
Arsenic	96	Industrial pollution, carbon burning
Asbestos	98	Pipes made of concrete and asbestos
Bar	96	Industrial pollution and wastes
Benzene	99	Waste products of chemical, pharmaceutical and coal industries
Boron	70	Disinfective products
Cadmium	98	Chemical industries
Chlorine	96	Disinfective products for water
Chloroform	95	Chemical wastes
Copper	99	Copper pipes
Cyanides	95	Industrial wastes
Lead	98	Lead pipes and wastes
Mercury	98	Electronics, gas and oil industries
Nickel	99	Industrial and electroplating plant waste
Nictrogen	96	Agricultural run offs and urban wastes
Fluorine	99	Production of phosphoric filterizers
Silver	97	Industrial waste

7. Connecting Flexible Tubing with Quick Connectors: JG (John Guest) and QC (Quick Connector)

Disconnect Flexible Tubing:
1) Remove safety clip from the quick connector (if applicable) (Fig. 1).
2) Press on the flange of quick connector (Fig. 2).
3) Pull out flexible tubing (Fig. 3).

Connect Flexible Tubing:
1) Push the flexible tubing 1.5 cm (0.6 in) deep into the quick connector (Fig. 4)
2) Insert safety clip (if applicable) (Fig. 5).

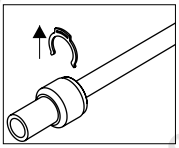


Fig. 1

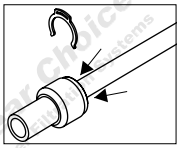


Fig. 2

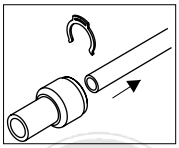


Fig. 3

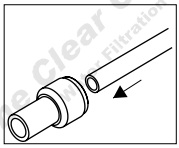


Fig. 4

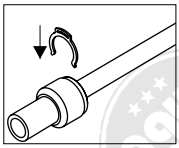


Fig. 5

7.1. Instructions for connecting and disconnecting filter cartridge and elbow connector (new filter cartridge with elbow connector)

Disconnecting elbow connector from filter cartridge:
1) Remove safety clips from quick connector (fig.1).
2) Push quick connector's flange symmetrically and pull the tubing out (fig. 2).
3) Unscrew inlet and outlet connectors from old filter cartridge (fig.3)
4) Remove old Teflon tape (fig.4).
5) Apply mutliply layers of new Telfon tape (ensure that Telflon tape is winded in the opposite direction to the direction connector will be installed) (fig. 5).

Connecting elbow connector with filter cartridge:
1) Screw the elbow connector back to new filter cartridge.
NOTE! Do NOT remove elbow connector after the installation has been started. Stopping and removing (unscrewing) the element may result in inadequate connection and water leak. (fig.6).

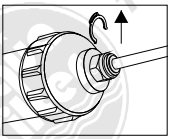


Fig. 1

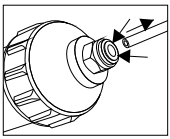


Fig. 2

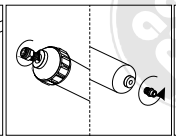


Fig. 3

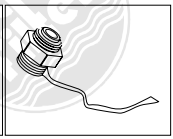


Fig. 4

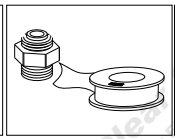


Fig. 5

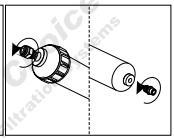
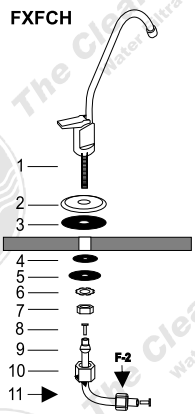


Fig. 6

8. Faucet installation FXFCH, FXFCH5, FXFCH17-C

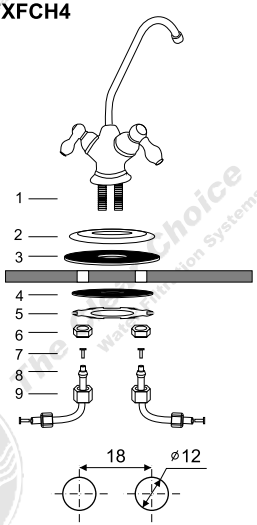


1) Drill a 12 mm hole in the kitchen sink surface. For enamelled sinks, the manufacturers recommend drilling the holes in the sink's support structure or the countertop.
2) Put metal washer 2 and the rubber seal 3 on the threaded faucet connector.
3) Mount the faucet in the previously drilled hole.
4) From the underside of the countertop, put washers 4, 5 (rubber), 6 (metal), and tighten with nut 7.
5) Connect the water tubing linking the faucet with the system:
- place the metal nut 10 and plastic clip 9 on the tubing 11
- push insert 8 into the tubing
- push the tubing (all the way) inside the faucet connector and hand tighten it with the nut you previously placed on the tubing.

NOTE: To seal the threaded connections, use teflon tape during the installation. This doesn't apply to threads for plastic and faucet nuts.

8.1. Faucet installation FXFCH4, FXFCH16-C

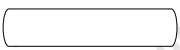
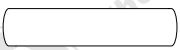
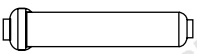
FXFCH4



1) To install the faucet (fig.) drill two 12 mm holes in the countertop or the sink (in case of enamelled sinks, the manufacturers recommend drilling the holes in the support structure of the sink). The holes should be 18 mm apart.
2) Put the metal washer 2 and the rubber seal 3 on the threaded faucet connectors.
3) Mount the faucet in the previously drilled holes.
4) From the underside of the countertop, put washers 4, 5 on the connectors, and tighten with nuts 7.
5) The water tubing needs to be connected to the faucet. To do this, put metal nuts (9) and plastic clamps (8) on the tubing, and push inserts (7) into the tubing.
6) Push the tubing (all the way) inside the faucet connectors and hand tighten them with the nuts placed earlier on the tubing.

NOTE: To seal the threaded connections, use teflon tape during the installation. This doesn't apply to threads for plastic and faucet nuts.

9. Filtration Cartridges

Cartridge Type	Description / Filtration Stage	Longevity*	Dimensions
	**FCPS20** Sediment, cold water cartridge for 10" housing. Designed for pre-filtration of tap and general-use water prior to the main filtration process. **Cartridge stops sand, rust particles, sediments and impurities carried by water**, and is made of polypropylene strings wound in layers. Layer density increases towards the core of cartridge assuring excellent filtration results.	3 - 6 months	9 7/8" x 2 1/2" (25 cm x 6,5 cm)
	**FCPS5** Sediment, cold water cartridge for 10" housing. **Cartridge stops sand, rust particles, sediments and impurities carried by water**, and is made of polypropylene strings wound in layers. Layer density increases towards the core of cartridge assuring excellent filtration results.	3 - 6 months	9 7/8" x 2 1/2" (25 cm x 6,5 cm)
	**FCCBL-AQM** Fertilizing cartridge. Contains the sitered carbon with high absorptive abilities of chlorine and organic substances contained in water. The sintered carbon has a large active surface and high efficiency of water filtration.	3 - 6 months	9 7/8" x 2 1/2" (25 cm x 6,5 cm)
	**AICRO** Coconut shell carbon filter cartridge. Improves taste and smell of water.	6 - 12 months	10" x 2" (25 cm x 5,08 cm)
	**AIMRO** Water mineralizing cartridg enriches water with elements that are necessary for human body, such as: calcium, magnesium, potassium and sodium.	6 - 12 months	10" x 2" (25 cm x 5,08 cm)
	**AIFIR1000** 2" Ionizer **AIFIR1000** regulates body's pH factor and helps to detoxify body (ionized water is an excellent detoxifying agent).	3 - 6 months	10,8" x 2" (27,5 cm x 5 cm)
	**TFC-75F** Reverse osmosis membrane element removes 96% - 99% of all contaminants (including bacteria and viruses).	up to 36 months	11,9" x 1,8" (30 cm x 4,5 cm)

* Depends on amounts of filtered water, its quality and level of contamination.

Before the first use of system and after each cartridge replacement, the system should be flushed with water for at least 5 minutes. Next, allow the system to standby for 5-6 hours to activate its filtration ability. After these procedures, filtered and conditioned water may be consumed.
WARNING! Filter cartridges are not subject to complaint at the time of:
- after opening protective packaging,
- after first use of filter cartridges.

System backwash

ATTENTION! Before first time use and each time after replacing RO membranes element, proceed with backwash procedure.

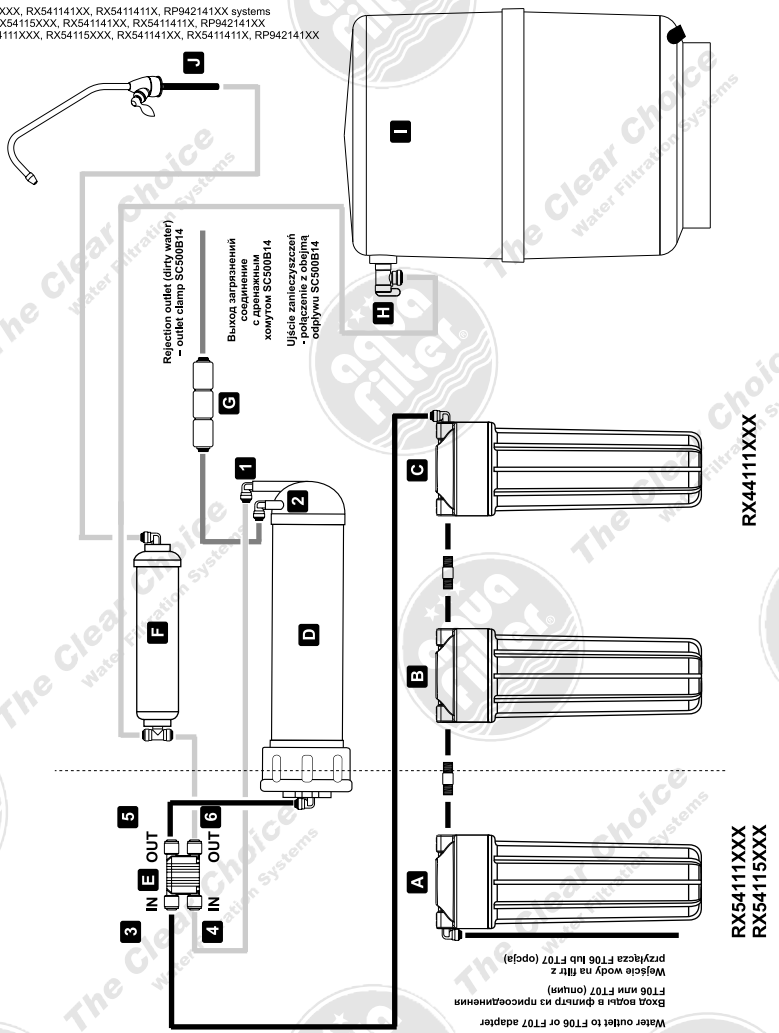
Wait 60 minutes till water tank is full with water, next open system's content faucet and drain entire water from the tank.
ATTENTION! Do not drink this water.
After this process is completed, leave the system idle for 5 to 6 hours to activate filtration readiness. Next fill system's tank with newly filtered water one more time and again open system's faucet and drain entire water from the tank. ATTENTION! Do not drink this water.

10. Water flow diagram for RX44111XXX, RX54111XXX, RX54115XXX systems
Схема потока воды в системе RX44111XXX, RX54111XXX, RX54115XXX
Schemat przepływu w systemach RX44111XXX, RX54111XXX, RX54115XXX

A	Filter housing with 20 micron sediment filter cartridge (FCPS20) Корпус с картриджем 20 мкм (FCPS20) Korpus z wkładem 20 mik. (FCPS20)
B	Filter housing with carbon block filter cartridge (FCCBL) Корпус с угольным картриджем (FCCBL) Korpus z wkładem węglowym (FCCBL)
C	Filter housing with 5 micron sediment filter cartridge (FCPS5)* Корпус с картриджем 5 мкм (FCPS5)* Korpus z wkładem 5 mik. (FCPS5)*
D	Filter housing with RO membrane element Корпус с обратноосмотической мембраной Korpus z membraną osmotyczną
E	4-way valve Четырёхходовой клапан Zawór czterodrożny
F	Water conditioning in-line filter cartridge (AICRO) Картридж с гранулированным активированным углём (AICRO) Wkład szlifujący (AICRO)
G	Flow restrictor Ограничитель потока Ogranicznik przepływu
H	Valve for water storage tank BV901JG Клапан резервуара BV9014JG Zawór zbiornika BV9014JG

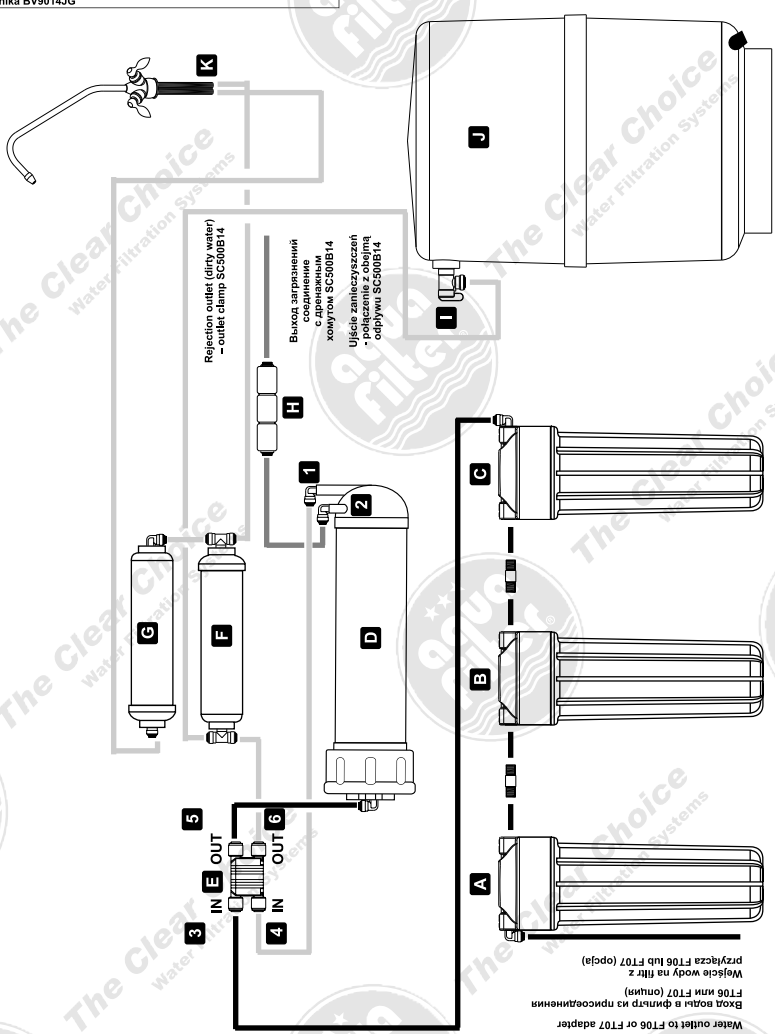
I	Tank Резервуар Zbiornik
J	Faucet Краник Wylewka
1	Water outlet (filtered water) Выход чистой воды Ujście wody czystej
2	Rejection outlet (dirty water) Выход загрязнений Ujście zanieczyszczeń
3	Water inlet into 4-way valve from the system's third filter housing (OUT from elbow connector) Вход воды в четырёхходовой клапан из колена "OUT" третьего корпуса Wejście wody na zawór czterodrożny z kolanka "OUT" trzeciego korpusu
4	Filtered water inlet into 4-way valve from RO membrane element Вход чистой воды в четырёхходовой клапан после мембраны Wejście czystej wody na zawór czterodrożny po membranie
5	Water outlet from 4-way valve to RO membrane element Выход воды из клапана на мембрану Wyjście wody z zaworu na membranę
6	Filtered water outlet from 4-way valve to AICRO filter cartridge Выход чистой воды из клапана на картридж AICRO Wyjście czystej wody z zaworu na wkład AICRO

* for RX54111XXX, RX54115XXX, RX5411141XX, RX5411411X, RP942141XX systems
* в системе RX54111XXX, RX54115XXX, RX5411141XX, RX5411411X, RP942141XX
* w przypadku systemu RX54111XXX, RX54115XXX, RX5411141XX, RX5411411X, RP942141XX



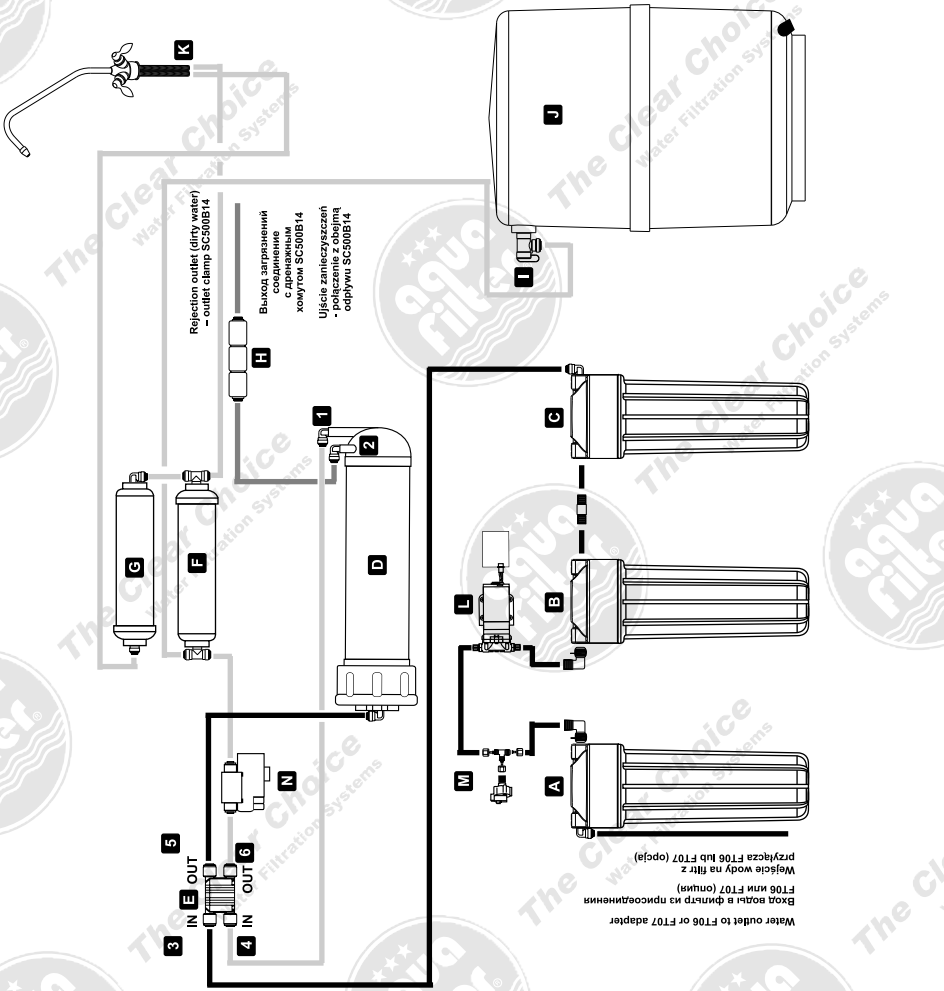
10.1. Water flow diagram for RX541141XX system
Схема потока воды в системе RX541141XX
Schemat przepływu w systemie RX541141XX

A	Filter housing with 20 micron sediment filter cartridge (FCPS20) Корпус с картриджом 20 мкм (FCPS20) Korpus z wkładem 20 mik. (FCPS20)
B	Filter housing with carbon block filter cartridge (FCCBL) Корпус с угольным картриджом (FCCBL) Korpus z wkładem węglowym (FCCBL)
C	Filter housing with 5 micron sediment filter cartridge (FCPS5) Корпус с картриджом 5 мкм (FCPS5) Korpus z wkładem 5 mik. (FCPS5)
D	Filter housing with RO membrane element Корпус с обратноосмотической мембраной Korpus z membraną osmotyczną
E	4-way valve Четырёхходовой клапан Zawór czterodrożny
F	Water conditioning in-line filter cartridge (AICRO) Картридж с гранулированным активированным углём (AICRO) Wkład szlifujący (AICRO)
G	Water mineralizing in-line filter cartridge (AIMRO) Минерализирующий картридж (AIMR) Wkład liniowy - mineralizujący (AIMRO)
H	Flow restrictor Ограничитель потока Ogranicznik przepływu
I	Valve for water storage tank BV901JG Клапан резервуара BV9014JG Zawór zbiornika BV9014JG
J	Tank Резервуар Zbiornik
K	Faucet Краник Wylewka
1	Water outlet (filtered water) Выход чистой воды Ujście wody czystej
2	Rejection outlet (dirty water) Выход загрязнений Ujście zanieczyszczeń
3	Water inlet into 4-way valve from the system's third filter housing (OUT from elbow connector) Вход воды в четырёхходовой клапан из колена "OUT" третьего корпуса Wejście wody na zawór czterodrożny z kolanka "OUT" trzeciego korpusu
4	Filtered water inlet into 4-way valve from RO membrane element Вход чистой воды в четырёххходовой клапан после мембраны Wejście czystej wody na zawór czterodrożny po membranie
5	Water outlet from 4-way valve to RO membrane element Выход воды из клапана на мембрану Wyjście wody z zaworu na membranę
6	Filtered water outlet from 4-way valve to AICRO filter cartridge Выход чистой воды из клапана на картридж AICRO Wyjście czystej wody z zaworu na wkład AICRO



10.2. Water flow diagram for RP942141XX system
Схема потока воды в системе RP942141XX
Schemat przepływu w systemie RP942141XX

A	Filter housing with 20 micron sediment filter cartridge (FCPS20) Корпус с картриджом 20 мкм (FCPS20) Korpus z wkładem 20 mik. (FCPS20)	K	Faucet Краник Wylewka
B	Filter housing with carbon block filter cartridge (FCCBL) Корпус с угольным картриджом (FCCBL) Korpus z wkładem węglowym (FCCBL)	L	Pump Насос Pompa
C	Filter housing with 5 micron sediment filter cartridge (FCPS5) Корпус с картриджом 5 мкм (FCPS5) Korpus z wkładem 5 mik. (FCPS5)	M	Low pressure switch for RO booster pump Датчик низкого давления Zawór niskiego ciśnienia
D	Filter housing with RO membrane element Корпус с обратноосмотической мембраной Korpus z membraną osmotyczną	N	High pressure switch for RO booster pump Датчик высокого давления Zawór wysokiego ciśnienia
E	4-way valve Четырёхходовой клапан Zawór czterodrożny	1	Water outlet (filtered water) Выход чистой воды Ujście wody czystej
F	Water conditioning in-line filter cartridge (AICRO) Картридж с гранулированным активированным углём (AICRO) Wkład szlifujący (AICRO)	2	Rejection outlet (dirty water) Выход загрязнений Ujście zanieczyszczeń
G	Water mineralizing in-line filter cartridge (AIMRO) Минерализирующий картридж (AIMR) Wkład liniowy - mineralizujący (AIMRO)	3	Water inlet into 4-way valve from the system's third filter housing (OUT from elbow connector) Вход воды в четырёхходовой клапан из колена "OUT" третьего корпуса Wejście wody na zawór czterodrożny z kolanka "OUT" trzeciego korpusu
H	Flow restrictor Ограничитель потока Ogranicznik przepływu	4	Filtered water inlet into 4-way valve from RO membrane element Вход чистой воды в четырёхходовой клапан после мембраны Wejście czystej wody na zawór czterodrożny po membranie
I	Valve for water storage tank BV901JG Клапан резервуара BV9014JG Zawór zbiornika BV9014JG	5	Water outlet from 4-way valve to RO membrane element Выход воды из клапана на мембрану Wyjście wody z zaworu na membranę
J	Tank Резервуар Zbiornik	6	Filtered water outlet leading to low pressure valve Выход фильтрованной воды на датчик низкого давления Wyjście czystej wody na zawór niskiego ciśnienia



10.3. Water flow diagram for RX5411411X system
Схема потока воды в системе RX5411411X
Schemat przepływu w systemie RX5411411X

A	Filter housing with 20 micron sediment filter cartridge (FCPS20) Корпус с картриджем 20 мкм (FCPS20) Korpus z wkładem 20 mik. (FCPS20)
B	Filter housing with carbon block filter cartridge (FCCBL) Корпус с угольным картриджем (FCCBL) Korpus z wkładem węglowym (FCCBL)
C	Filter housing with 5 micron sediment filter cartridge (FCPS5) Корпус с картриджем 5 мкм (FCPS5) Korpus z wkładem 5 mik. (FCPS5)
D	Filter housing with RO membrane element Корпус с обратноосмотической мембраной Korpus z membraną osmotyczną
E	4-way valve Четырёхходовой клапан Zawór czterodrożny
F	Water conditioning in-line filter cartridge (AICRO) Картридж с гранулированным активированным углём (AICRO) Wkład szlifujący (AICRO)
G	Water mineralizing in-line filter cartridge (AIMRO) Минерализирующий картридж (AIMR) Wkład liniowy - mineralizujący (AIMRO)
H	Ionizing type filter cartridge (AIFIR1000) Картридж с „Negativ Ion" (AIFIR1000) Wkład jonizujący (AIFIR1000)
I	Flow restrictor Ограничитель потока Ogranicznik przepływu
J	Valve for water storage tank BV901JG Клапан резервуара BV9014JG Zawór zbiornika BV9014JG
K	Tank Резервуар Zbiornik
L	Faucet Краник Wylewka
1	Water outlet (filtered water) Выход чистой воды Ujście wody czystej
2	Rejection outlet (dirty water) Выход загрязнений Ujście zanieczyszczeń
3	Water inlet into 4-way valve from the system's third filter housing (OUT from elbow connector) Вход воды в четырёхходовой клапан из колена "OUT" третьего корпуса Wejście wody na zawór czterodrożny z kolanka "OUT" trzeciego korpusu
4	Filtered water inlet into 4-way valve from RO membrane element Вход чистой воды в четырёхходовой клапан после мембраны Wejście czystej wody na zawór czterodrożny po membranie
5	Water outlet from 4-way valve to RO membrane element Выход воды из клапана на мембрану Wyjście wody z zaworu na membranę
6	Filtered water outlet from 4-way valve to AICRO filter cartridge Выход чистой воды из клапана на картридж AICRO Wyjście czystej wody z zaworu na wkład AICRO