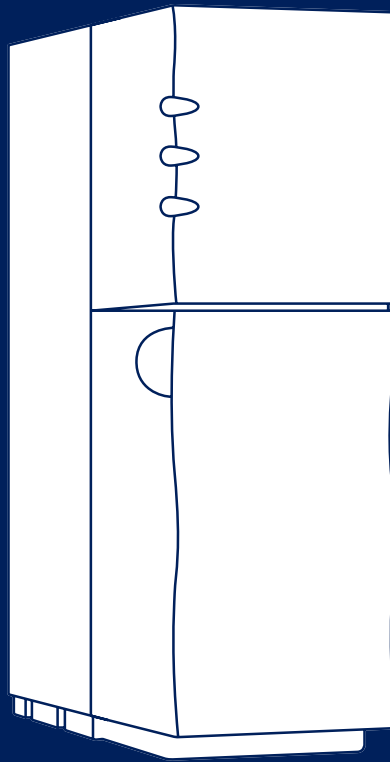


COMPLETE USER MANUAL



BLUEWATER SPIRIT

WATER PURIFIER



Contents

INTRODUCTION.....	03
About this manual	03
Limited warranty	03
Environment information.....	03
Disposal	03
Safety instructions.....	03
Safety information.....	04
PRODUCT OVERVIEW.....	05
Spirit outside.....	05
Spirit inside	06
Move the water purifier	06
SYSTEM OVERVIEW	07
System description.....	07
Intended use.....	07
Water production.....	08
Leak protection system	08
INSTALLATION	09
Before installation	09
Position Spirit	10
Install clean water faucet.....	10
Install feed water connection.....	11
Install drain water connection	11
Connect the water purifier.....	11
After installation	12
MAINTENANCE	13
Each month	13
Each 4-6 months	14
Each year	17
Other	17
TECHNICAL INFORMATION	21
Technical data.....	21
Requirements on feed water to water purifier	21
TROUBLESHOOTING.....	22

INTRODUCTION

About this manual

This manual contains complete user instructions for the Spirit. It gives you the necessary instructions to safely install, operate, do maintenance and do troubleshooting on the device.

Original language

The original language of this instruction is English.

Printing options

This manual is made to be printed as a double sided A4 or A5 booklet.

Limited warranty

Refer to www.bluewatergroup.com for more information on Limited warranty.

Environment information



80% of the the water purifier components and its packaging have a label to help you recycle and discard it correctly.
The water purifier is more efficient when it cleans water for longer periods. Example: do not fill a glass with water. Fill a jug instead.

Disposal

At the end of the water purifier's life, disconnect the plug from the electrical supply and cut the cable at the point where it enters the appliance. Make sure that children do not play with the left-over cable. Contact your local authority for information about where the water purifier can be left, or contact your dealer.



Appliances bearing this symbol must be deposited at the designated local reception point for the disposal of electrical and electronic equipment. This product may not be disposed of using the normal household refuse collection processes.

Safety instructions

Before you install or operate the device, you must read the safety information. Obey the instructions in this manual to prevent injuries or damage to the equipment. This manual contains CAUTIONS and NOTES that are applicable for the safe operation of the device.



A CAUTION identifies conditions that can cause injury or, damage to the equipment. Obey the instructions and do not continue until all conditions are accepted and engaged.



A Note identifies important information for a trouble free and optimal use of the water purifier.

Safety information



Install the water purifier in accordance with local regulations. If you are not sure, contact a Bluewater dealer for aid. Bluewater has no responsibility for installation of the water purifier.



Do not drink the water when the service light shows that it is not clean. Store water in vessels that are resistant to corrosion.



This appliance can be used by children who are more than 8 years old. It can also be used by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge, if they have been given supervision or instruction about the use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.



Do not repair or modify parts of the water purifier. This can make it operate incorrectly, and lead to injury and damage not covered by the warranty.



Only approved Bluewater staff can do servicing and repairs on the water purifier. Only use original replacement cartridges and parts from Bluewater.



The water to be cleaned must obey the requirements in "Technical information". Check the cleaned water when the water purifier is installed if the water does not obey these requirements. Test the water one time every year. If the water is not clean, do not drink it. Contact a Bluewater dealer.



Installation must comply with applicable local plumbing codes and regulations.



Only connect the water purifier to one clean water faucet supplied by Bluewater. Do not connect it to other pipes, tanks or dishwashers.



Do not put or keep objects on top of the water purifier. Do not put the water purifier in water.



Connect the water purifier to an earthed electrical supply. Use a plug that is easy to access after installation. Only an approved electrician must do permanent wiring on the system. A safety switch must be installed on the system. Incorrect installation can lead to damage, or make the water purifier dangerous to use.



Do not use the power cord if there are visible signs of damage on it. If the power cord is damaged, a qualified electrician must replace it in order to prevent danger.



If the water purifier is disconnected from water and electricity for >5 days, store it as described in "Put into storage" on page 19.

PRODUCT OVERVIEW

Model	Spirit 300	Electronically controlled
	Spirit 300Cp	Pressure controlled

Spirit outside

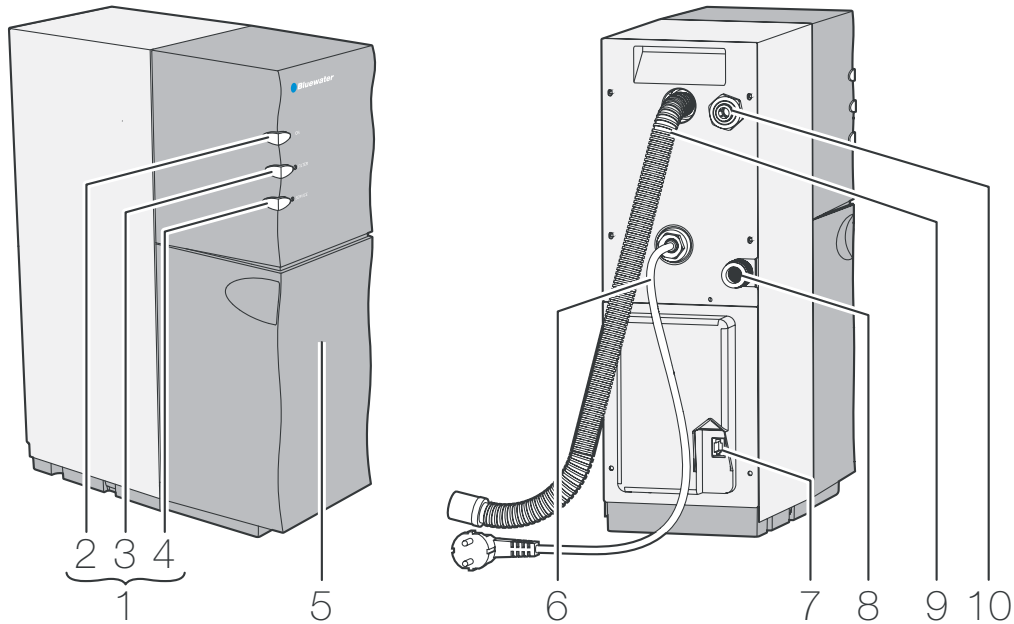


Figure 1. Spirit outside

Pos	Description	Pos	Description
1	Control panel	6	Power cord
2	ON light	7	Electrical connection for faucet (Spirit 300)
3	FILTER light	8	Feed water connection with grid filter
4	SERVICE light	9	Drain water tubing
5	Front cover	10	Clean water connection

Control panel

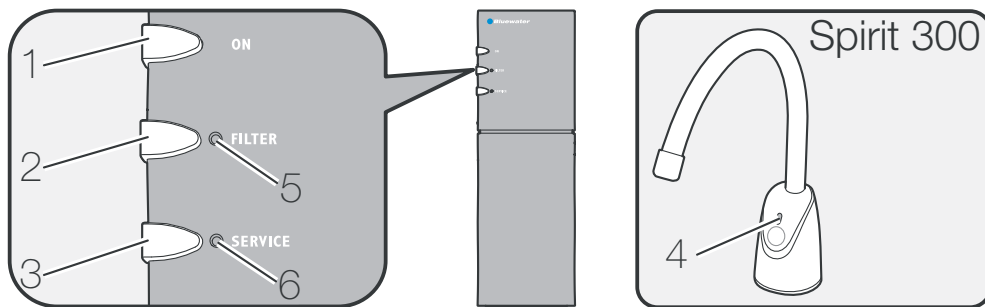


Figure 2. Control panel

Pos	Light	Description	Pos	Description
1	ON	The water purifier is connected and operates correctly.	5	FILTER button
2	FILTER light	Flashes On The water purifier operates. The filter must be replaced. The water purifier has stopped. The filter must be replaced.	6	SERVICE button
3	SERVICE light	Flashes On Decreased water quality. The water purifier has stopped, the water quality has decreased.		
4	Faucet lights Spirit 300 Spirit 300Cp N/A	Green Yellow Yellow Shows good water quality (this can take up to 120 seconds). Flashes: Something is wrong. Look at the control panel. On: The water purifier has stopped, the water quality has decreased.		

Spirit inside

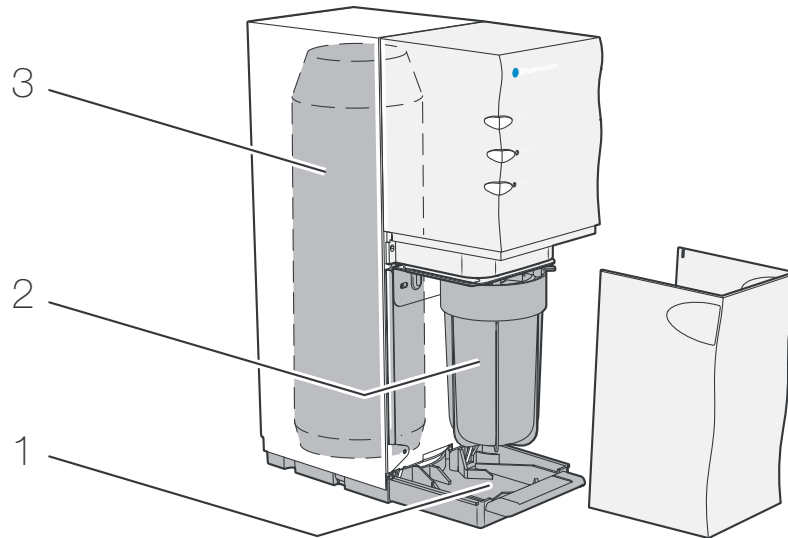


Figure 3. Spirit inside

Pos	Description	Pos	Description
1	Base plate	3	Reverse osmosis membrane
2	Prefilter (Granulated Active Carbon (GAC))		

Data plate

The data plate is located behind the filter.

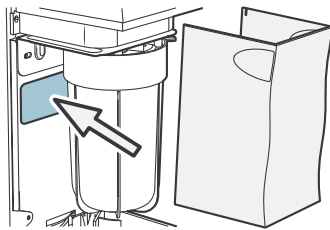


Figure 4. Data plate

Move the water purifier



Always transport the water purifier upright. Install according to "Installation" on page 09.



Put the water purifier into storage if it will not be used for 4 months or more, or if it is to be disconnected from the water and electricity for >5 days, see "Put into storage" on page 19.

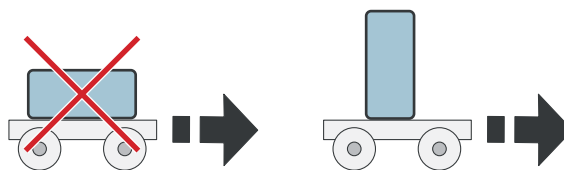


Figure 5. Move the water purifier

SYSTEM OVERVIEW

System description

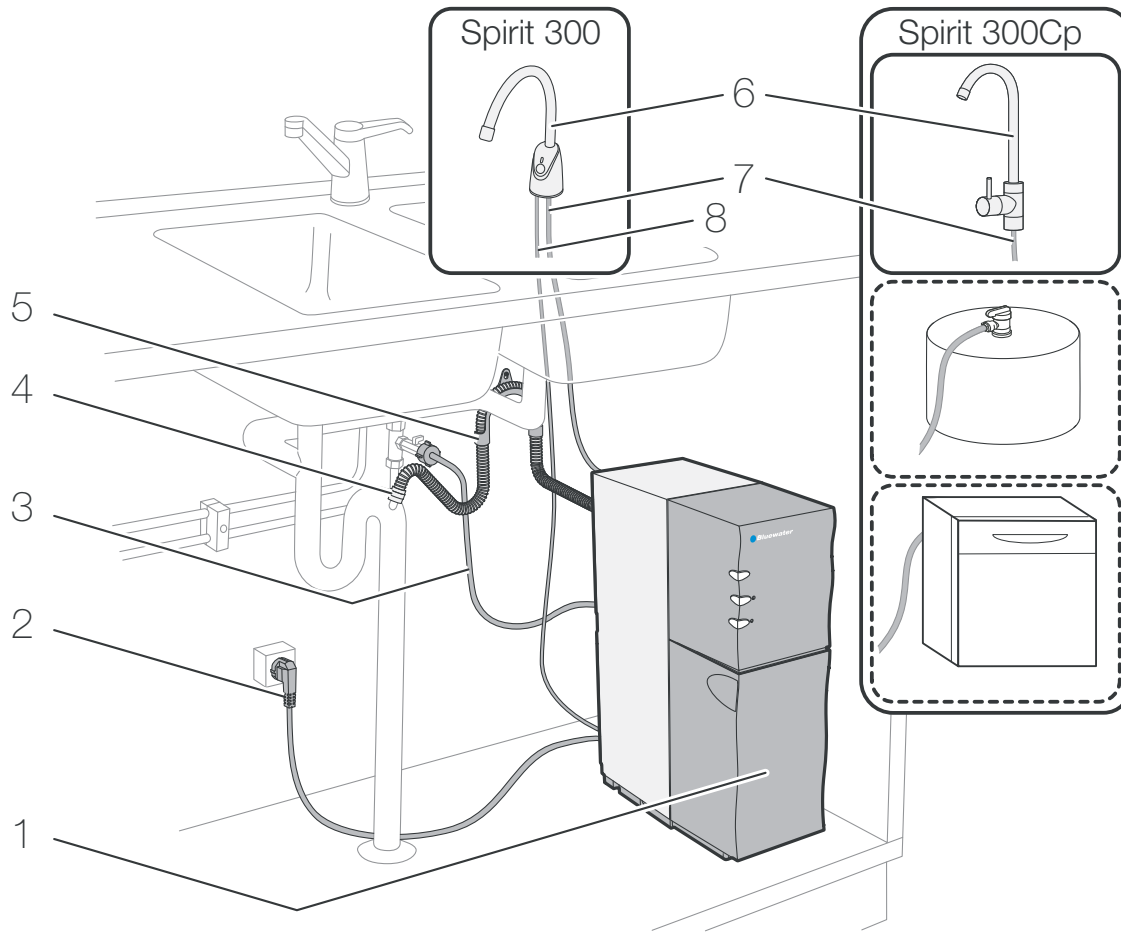


Figure 6. System overview

Pos	Description	Pos	Description
1	Water purifier	5	Bracket for drain water tubing
2	Power cord	6	Clean water faucet
3	Feed water tubing	7	Clean water tubing
4	Drain water tubing	8	Faucet electrical connection (Spirit 300)

Intended use

The water purifier is intended to produce purified water. Do not use it for any other purpose. Any use beside indoor home environment and for purposes other than purifying water for household use is considered as unintended use and will automatically void your warranty.

The electronically controlled Spirit 300 is intended to produce the quantity of water that is normally required for cooking and drinking in a household. The pressure controlled Spirit 300Cp can be connected to other devices such as dishwashers.

Water production

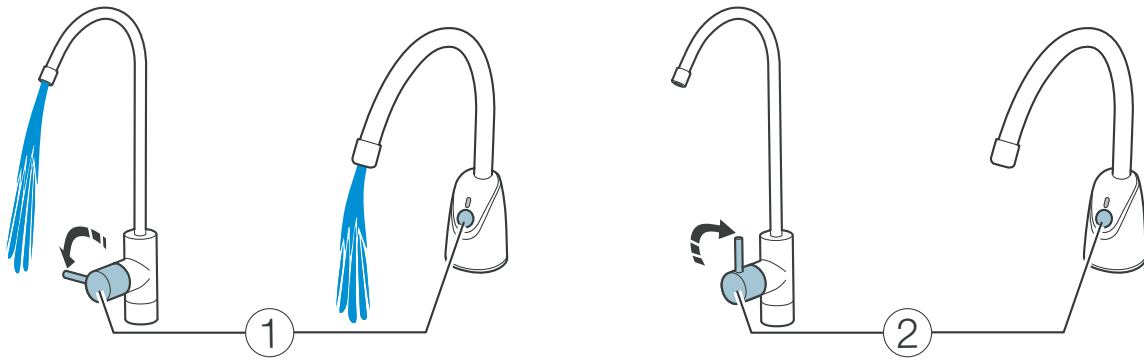


Figure 7. Water production on/off

Automatic flush

An automatic flush will be performed if one of the conditions below are fulfilled:

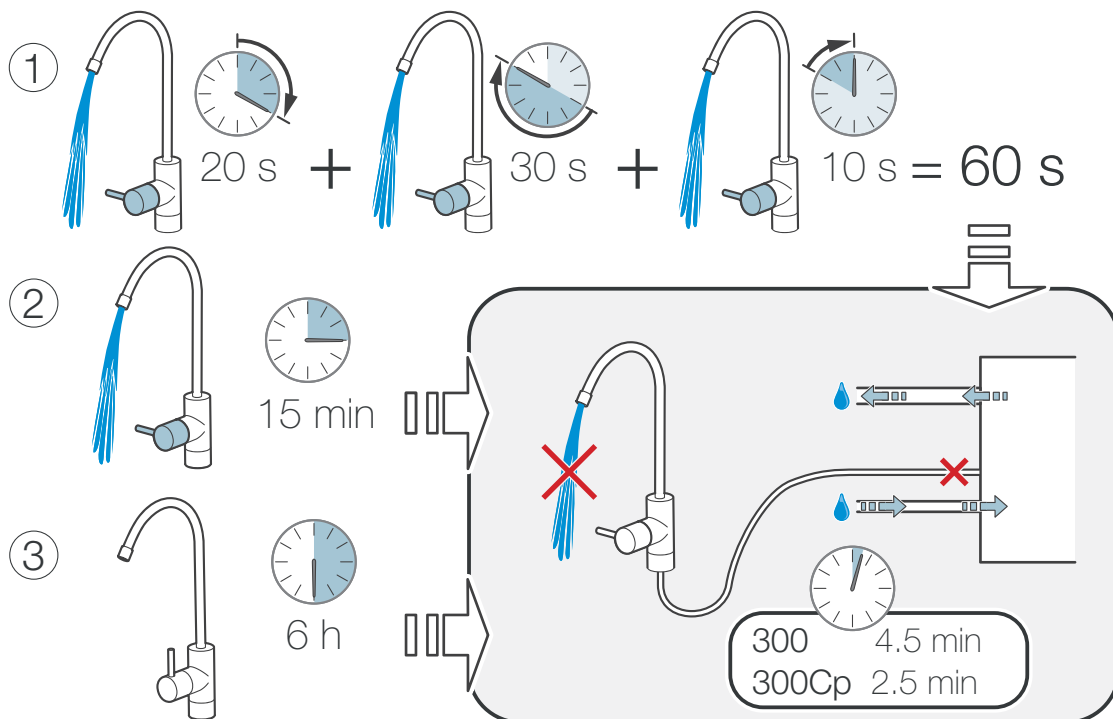


Figure 8. Automatic flushing

Pos	Description
1	Flush after drawing water. Production cycles shorter than 60 seconds are added together, and flush takes place when total drawing time exceeds 60 seconds.
2	Flush after maximum operation time 15 minutes. Next production cycle can be started immediately after completed flush.
3	Water purifier in standby mode. Spirit is connected to water and power and It is more than 6 hours since the last flush.

Leak protection system

A sensor at the bottom of the water purifier senses water leaks. If there is a leak, the feed water supply is stopped. The water purifier cannot be started again until the leak has been repaired.

INSTALLATION



Install the water purifier in accordance with local regulations. If you are not sure, contact a Bluewater dealer for aid. Bluewater has no responsibility for installation of the water purifier.



Install the water purifier in a vertical position on a horizontal surface. Make sure that tubing and cables can move freely when the purifier is moved.



Only connect the water purifier (only Spirit 300) to one clean water faucet supplied by Bluewater. Do not connect it to other pipes, tanks or dishwashers.



Plumbing must be done by an approved plumber. Obey local rules for plumbing and sanitation if you do work yourself.



Use the tubing set that is supplied with the water purifier. Do not use used tubing sets again.

Before installation

Unpack Spirit



Warning! Discard the packing material. It can cause injury to children if they play with it.



Make sure that Spirit shows no signs of damage, and that no accessories are missing. Tell the Bluewater dealer about missing parts, damage and other problems. Tell the transport company immediately if Spirit is damaged during transport.

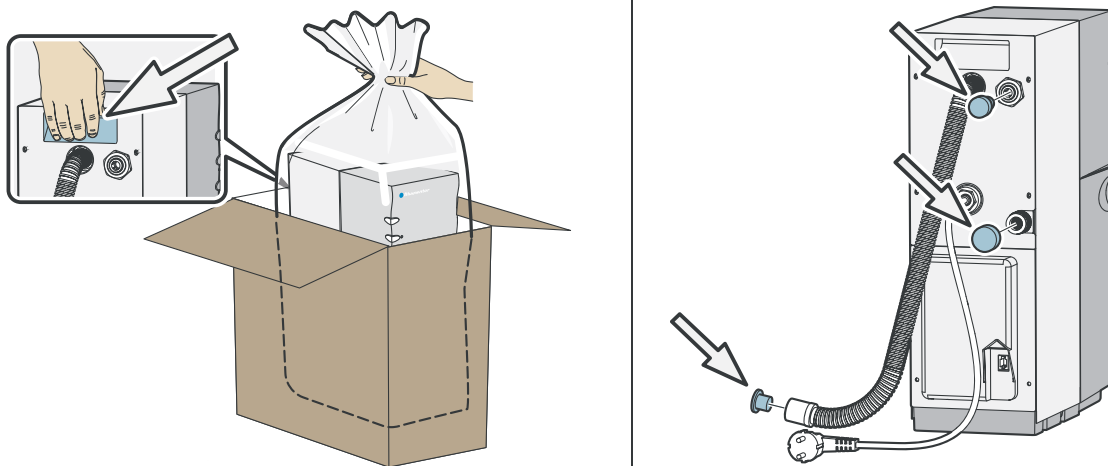


Figure 9. Unpack Spirit and remove the plugs

Position Spirit



Put Spirit in a vertical position on a horizontal surface below the kitchen sink. Make sure that the surface can support Spirit

Position Spirit near the cold water supply, the drain and an earthed electrical supply.

- Make sure that it is easy to see the control panel.
- Make sure that the front cover can be opened to get access to the prefilter.
- Tubing and cables can go in all directions from the connection point. Make sure that nothing can crush them or cause damage to them.

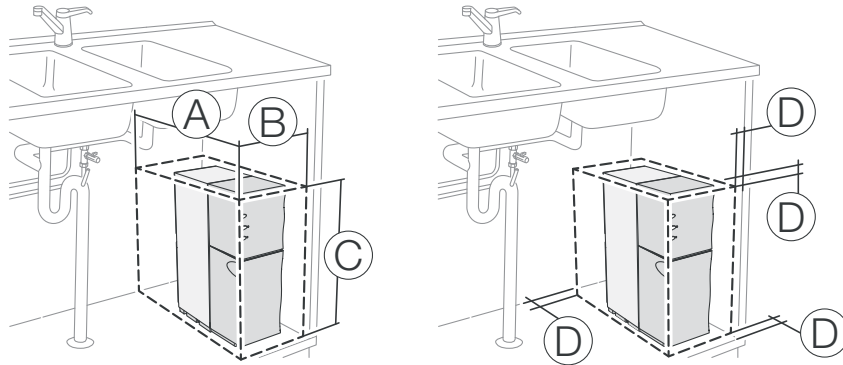


Figure 10. Position Spirit under the kitchen sink

Pos	Description	Pos	Description
A	460 mm (18")	C	482 mm (19")
B	190 mm (7 1/2")	D	min. 20 mm (1")

Install clean water faucet

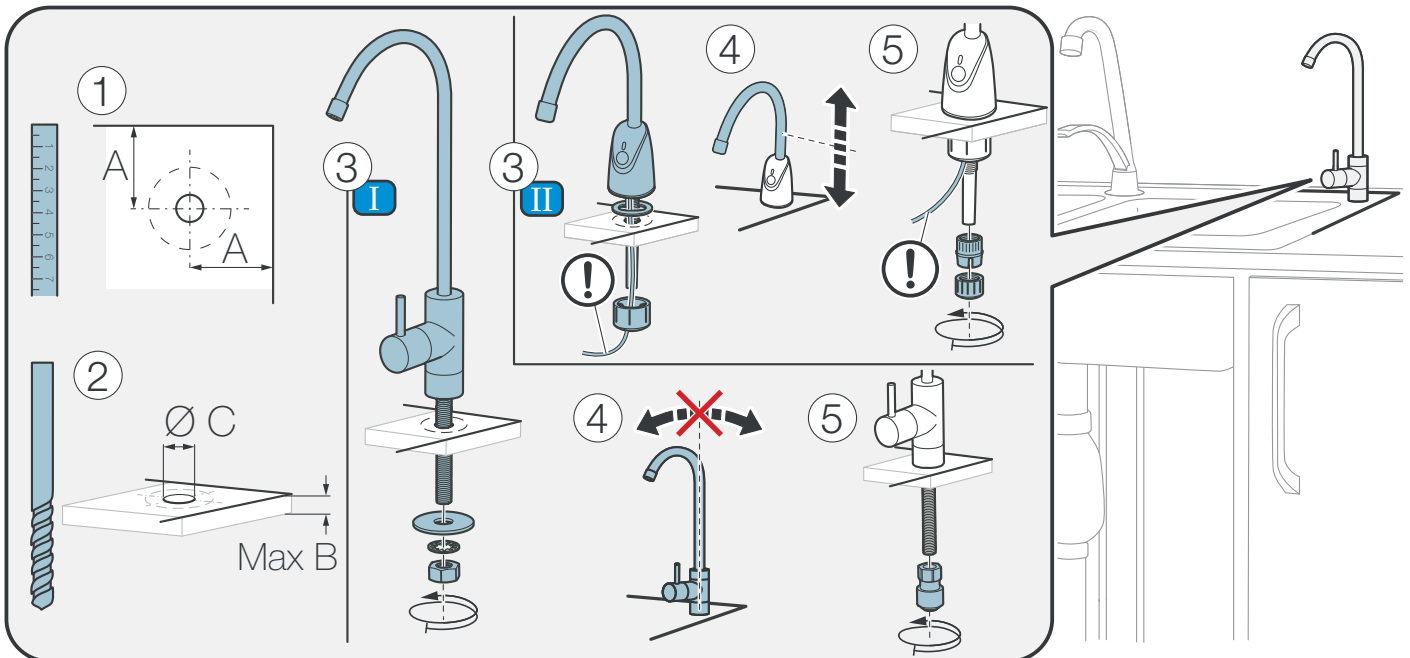


Figure 11. Install clean water faucet

Measurement	Quarterturn	Electrical
A	Measure the clean water faucet for measure A.	
B	35 mm (1 1/4")	40 mm (1 1/2")
C	13 mm (1/2")	20 mm (3/4")

Install feed water connection

The water purifier is connected to cold water via the feed water tubing. See "Requirements on feed water to water purifier" on page 21.

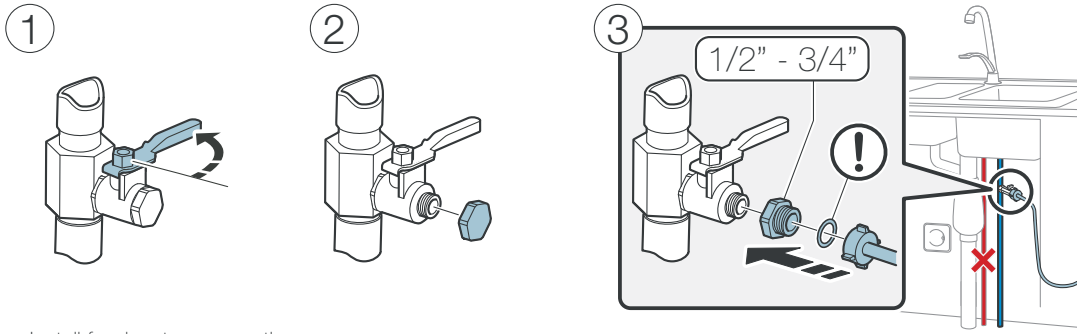


Figure 12. Install feed water connection

Install drain water connection



The flushed water goes through the drain water tubing to the drain water outlet. This tubing can be a maximum of 4 m long.

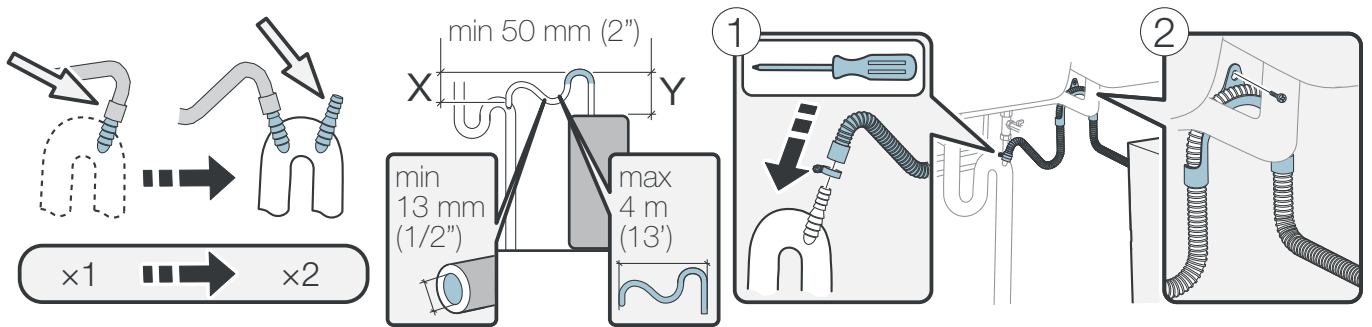


Figure 13. Install drain water connection

Connect the water purifier



Do not connect the clean water tubing to equipment before Spirit has been flushed.

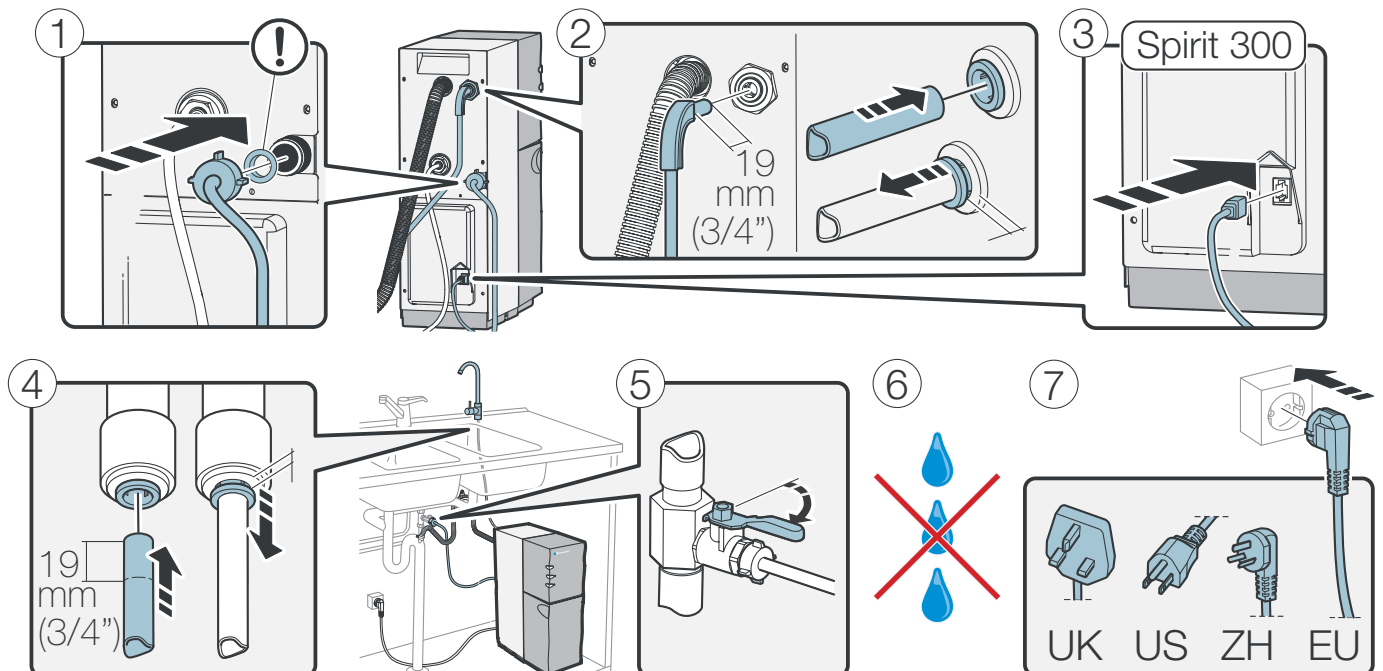


Figure 14. Connect the water purifier

After installation



When Spirit is installed, and after each maintenance, the following procedures must be performed before operation.

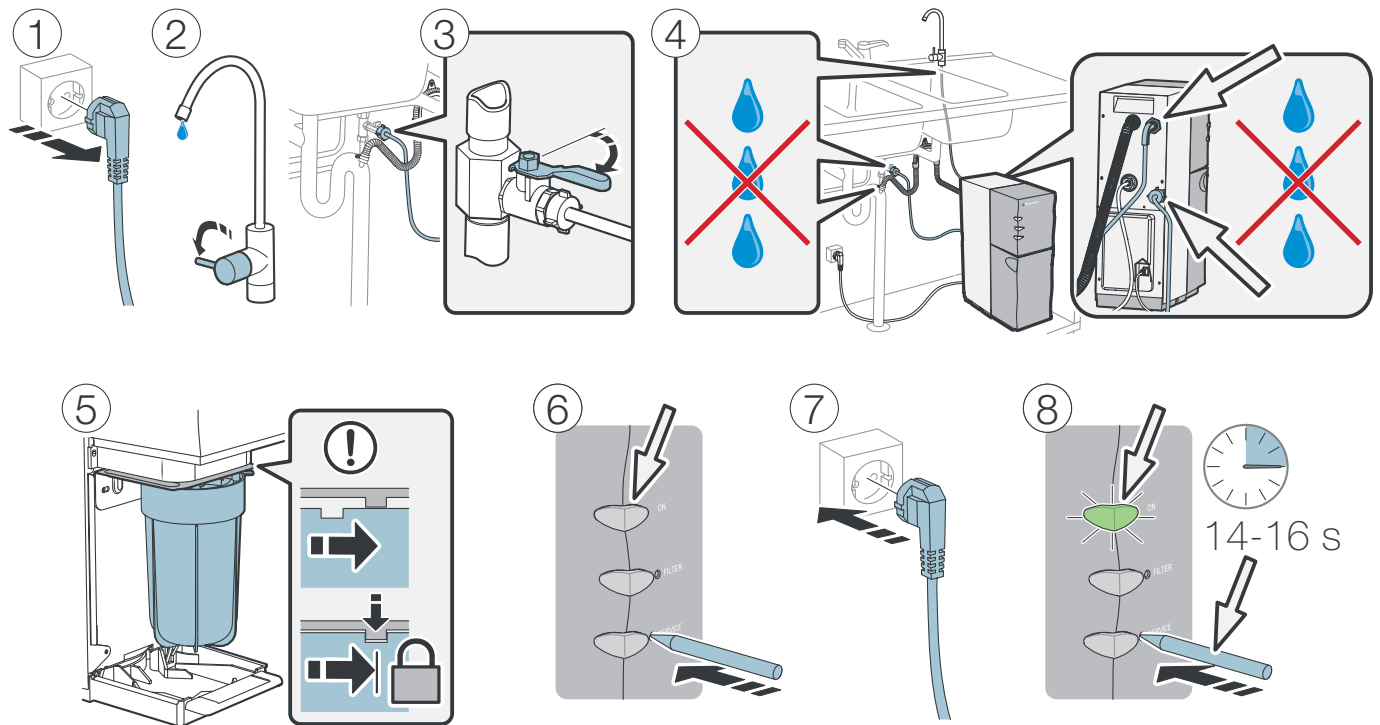
Flush Spirit



Do not drink the water when the water purifier flushes. It is not safe to use.

The water purifier should always be flushed:

- when it is new and has not been used
- when it is installed again after storage/freeze protection
- when it has been cleaned
- when the membrane has been replaced.



Open the clean water valve immediately when the service button is released. If not, Spirit can be damaged.

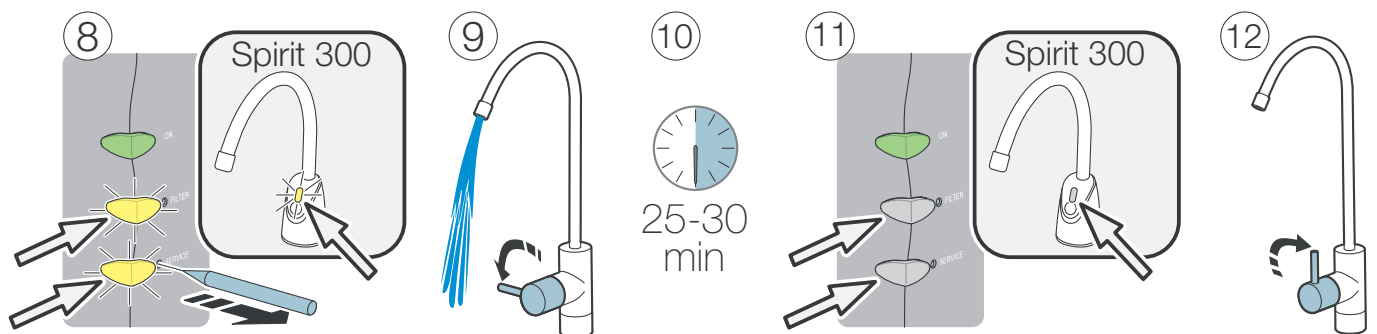


Figure 15. Flush Spirit

Do a check for leaks

See "Do a check for leaks" on page 13.

MAINTENANCE



After each maintenance, all procedures in chapter “After installation” on page 12, must be performed before operation.



Regular maintenance is important for correct function and long term operation. Only educated and approved personnel can do the maintenance.



The water quality controls the maintenance frequency. If the feed water is of low quality, do maintenance more often.

Each month

Do a check for leaks



The tubing connections must be tight!

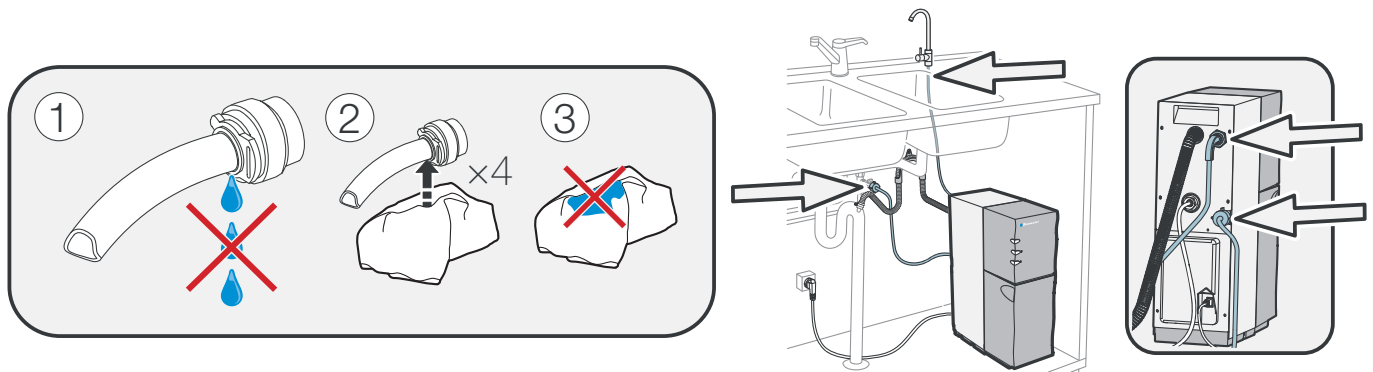


Figure 16. Check for leaks

Repair leaks

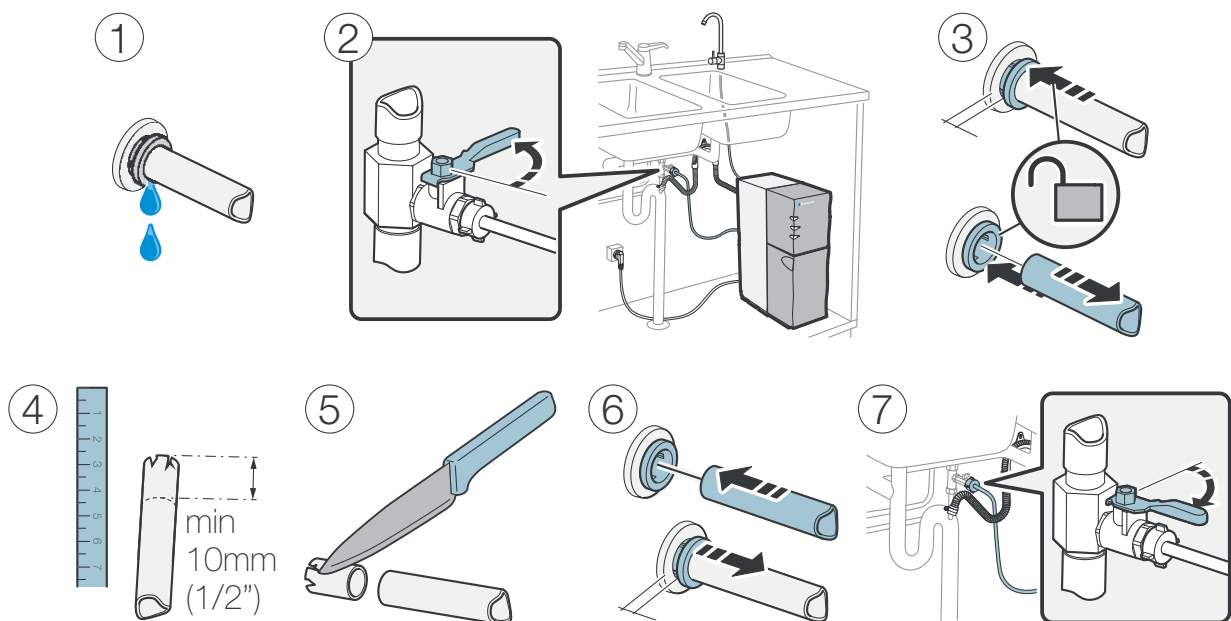


Figure 17. Repair leaks

Wipe off condensation from base plate

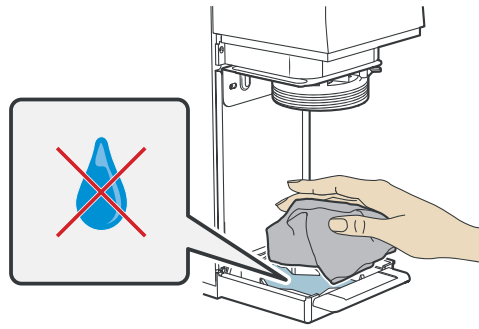


Figure 18. Wipe off condensation from base plate

Each 4-6 months

Descale



The descaling product is harmful. Keep it where children cannot get it. Clean your hands when you have used it.

Always flush Spirit after descaling. See “Flush Spirit” on page 12.



Frequency depending on water quality and usage!

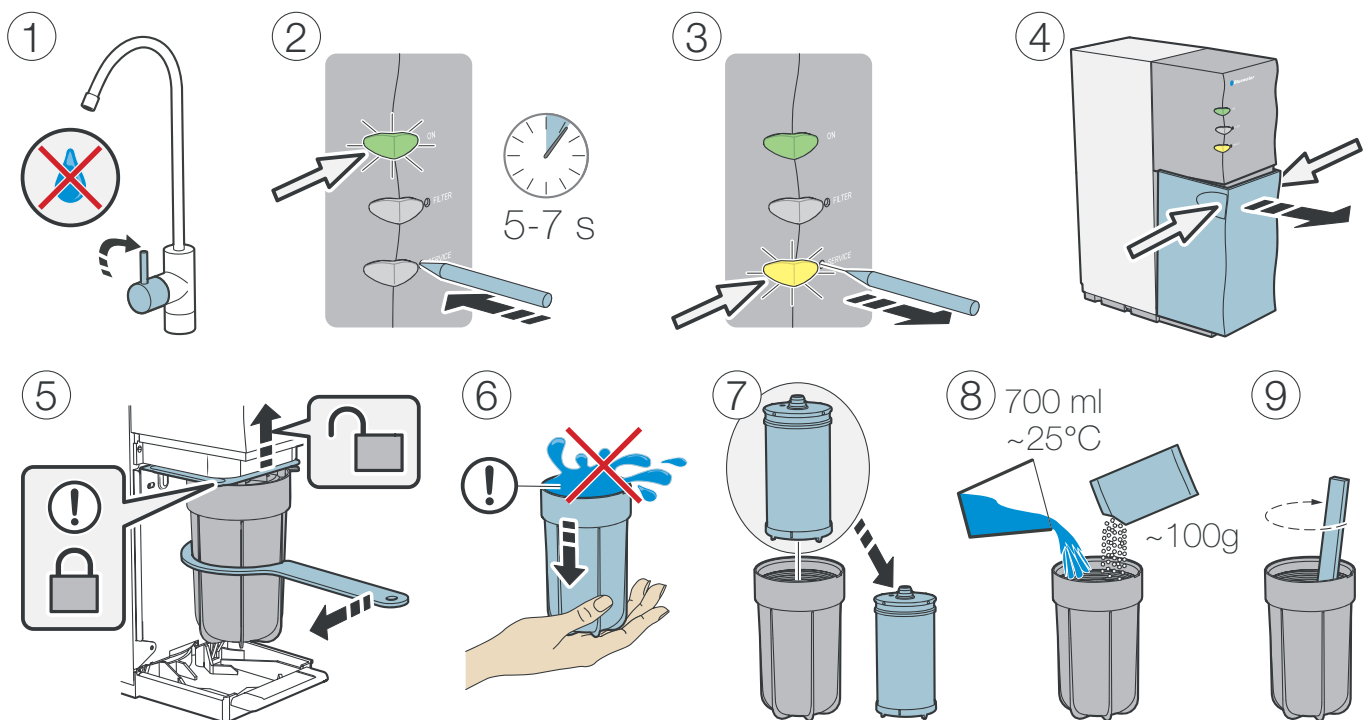
To extend the water purifier lifetime: Descale Spirit with 6 month intervals or when the flow is decreased.



If Spirit has been descaled and the filters have been replaced, but the water flow cannot be restored, contact your Bluewater dealer.



The descale takes approximately 10 hours. Do not use the water purifier during this time. Order the descaling product from Bluewater



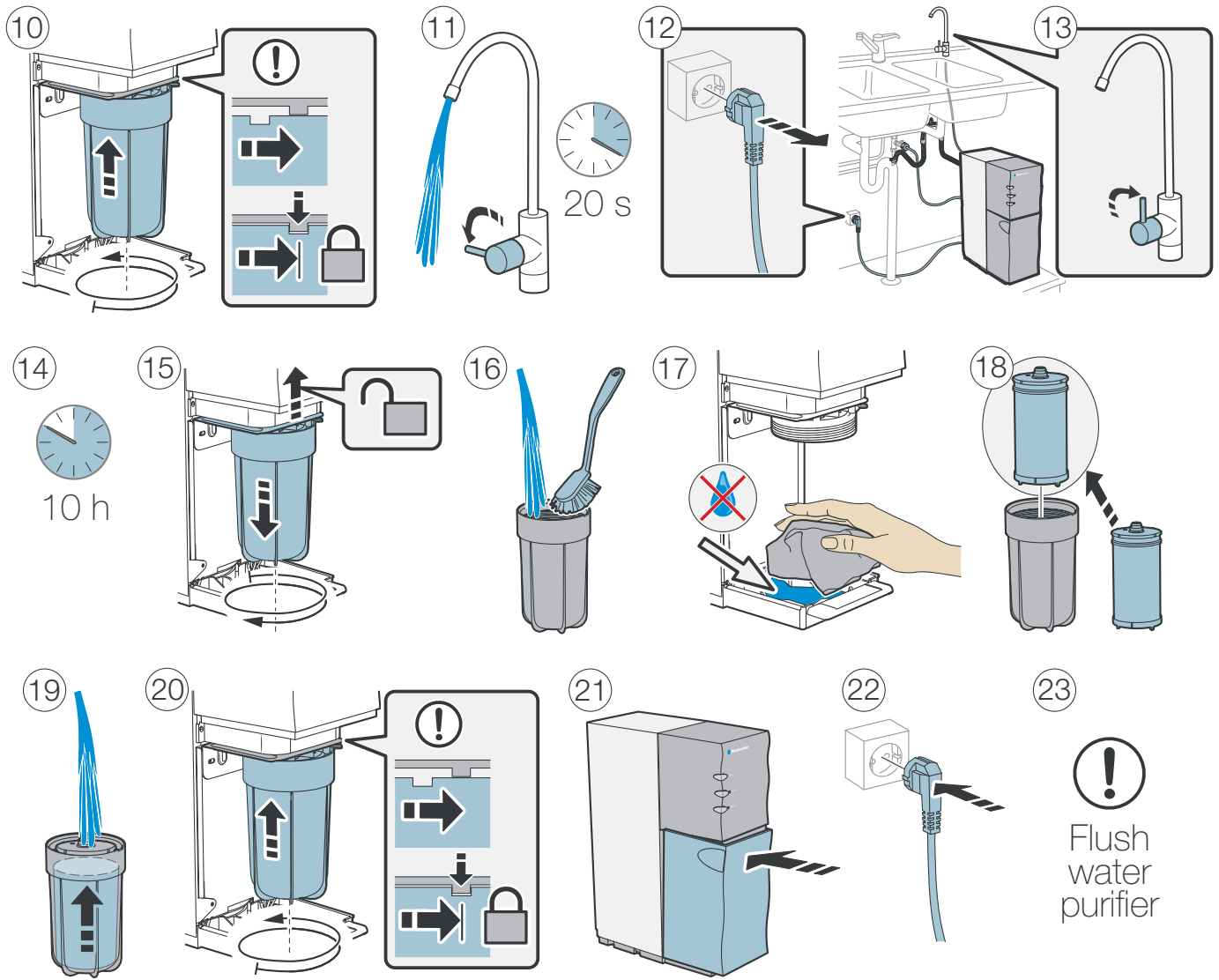


Figure 19. Descale

Replace prefilter



If the filter is replaced before the FILTER light shows that it is necessary, reset Spirit as given in step 14. The FILTER light will go on and then go out.

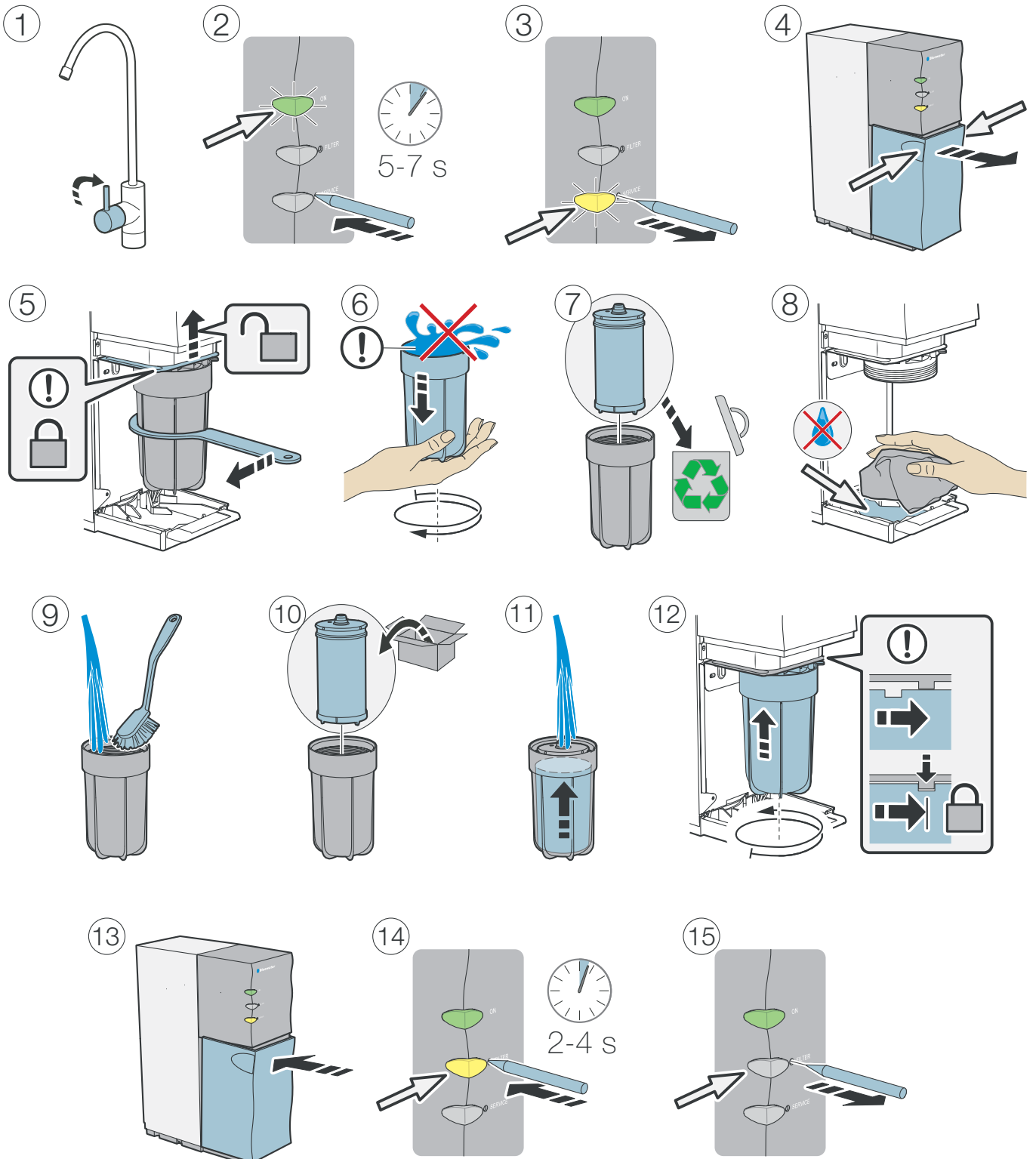


Figure 20. Replace prefilter

Each year

Test the water



An approved lab must do a test of the water that is cleaned by Spirit one time each year, if the feed water has been classed as unfit.

Other

Clean the grid filter



The grid filter in the feed water connection catches larger particles. If the flow is decreased or if Spirit makes a noise, the grid filter can be blocked.

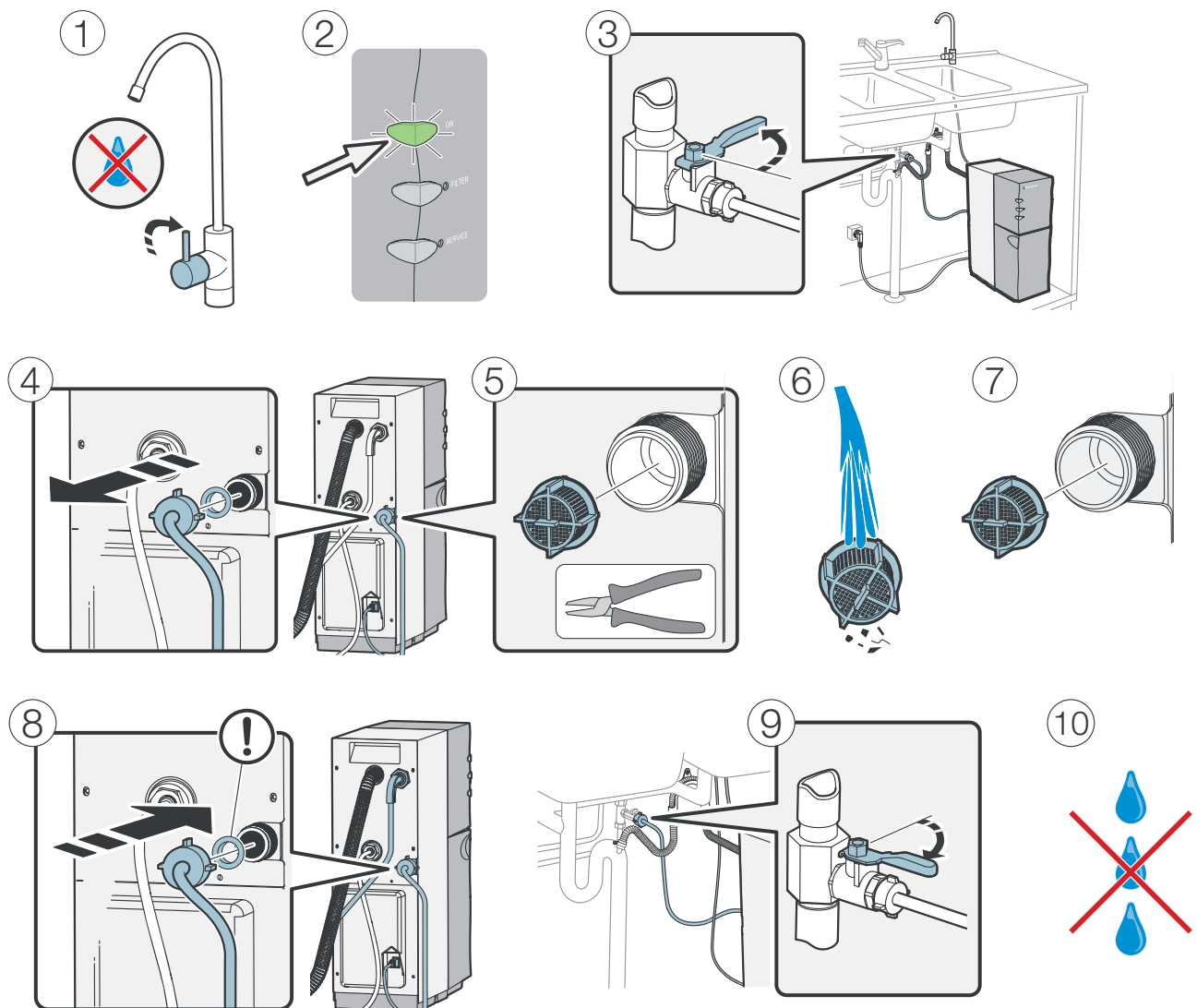


Figure 21. Clean the grid filter

Use disinfectant to clean the system



Disinfectant is harmful! Always flush the water purifier after disinfectant is used. See "Flush Spirit" on page 12.

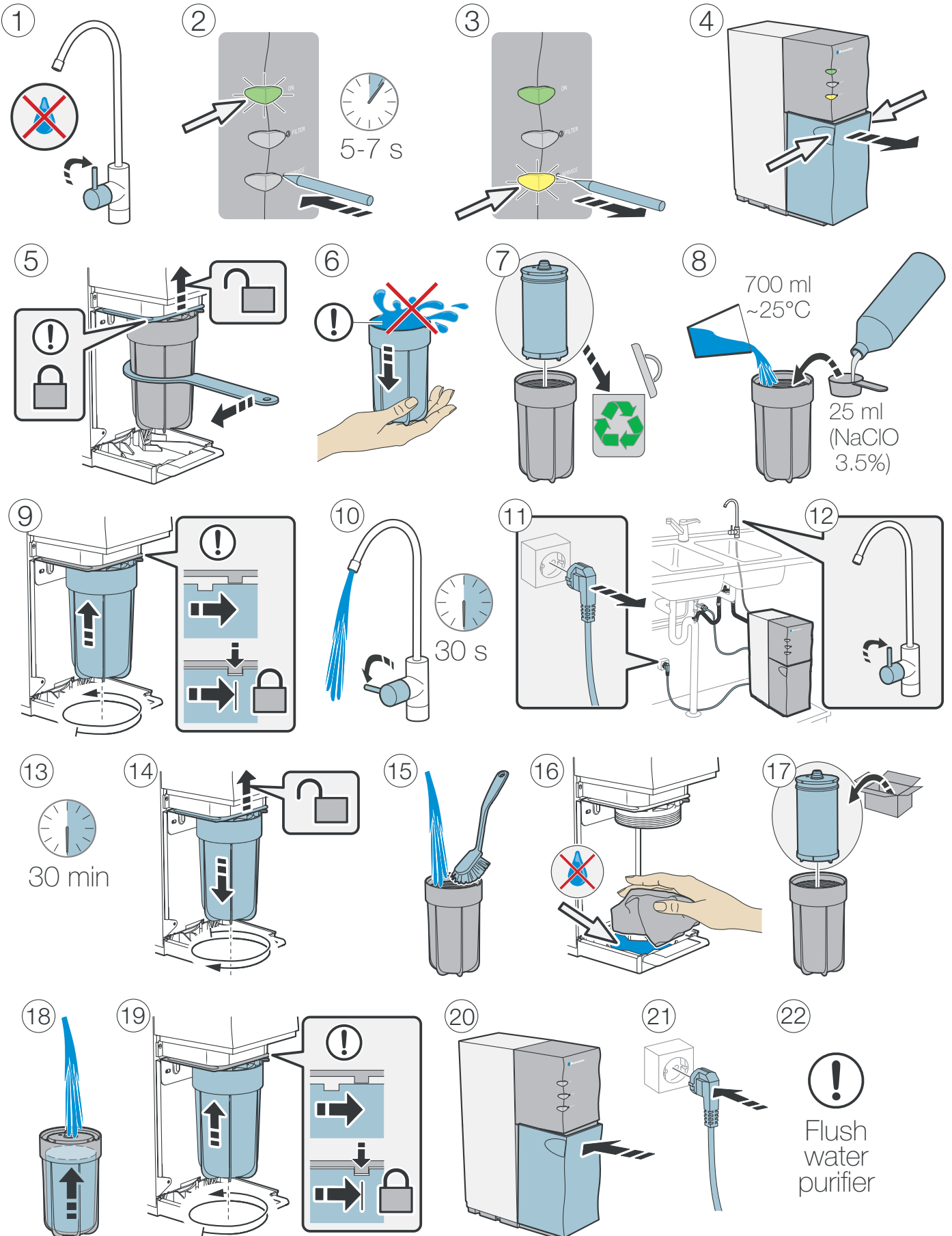


Figure 22. Use disinfectant to clean the system

Put into storage



Preserving agent is harmful! Keep it where children cannot get it. Clean your hands when you have used it.

Always flush the water purifier after storage. See “Flush Spirit” on page 12.



Put the water purifier into storage if it will not be used for 4 months or more, or if it is to be disconnected from the water and electricity for >5 days.



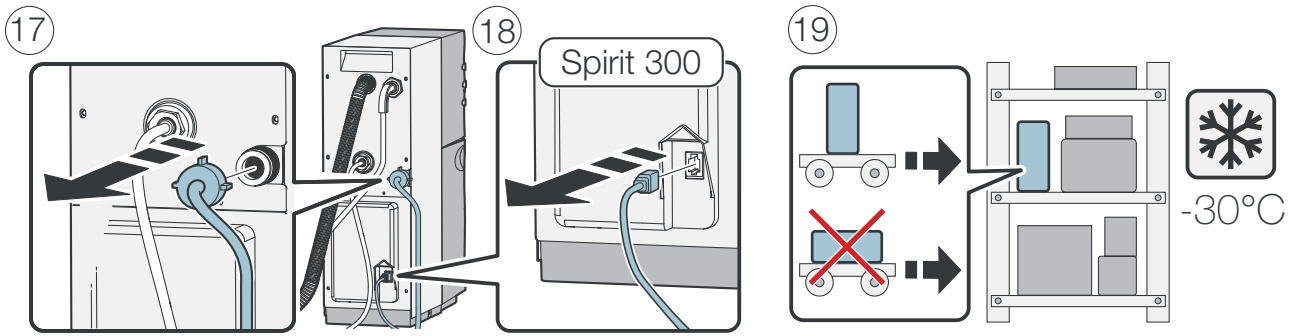


Figure 23. Put into storage

Reinstall after storage



Preserving agent is harmful! Keep it where children cannot get it. Clean your hands when you have used it.

Always flush the water purifier after storage. See “Flush Spirit” on page 12.

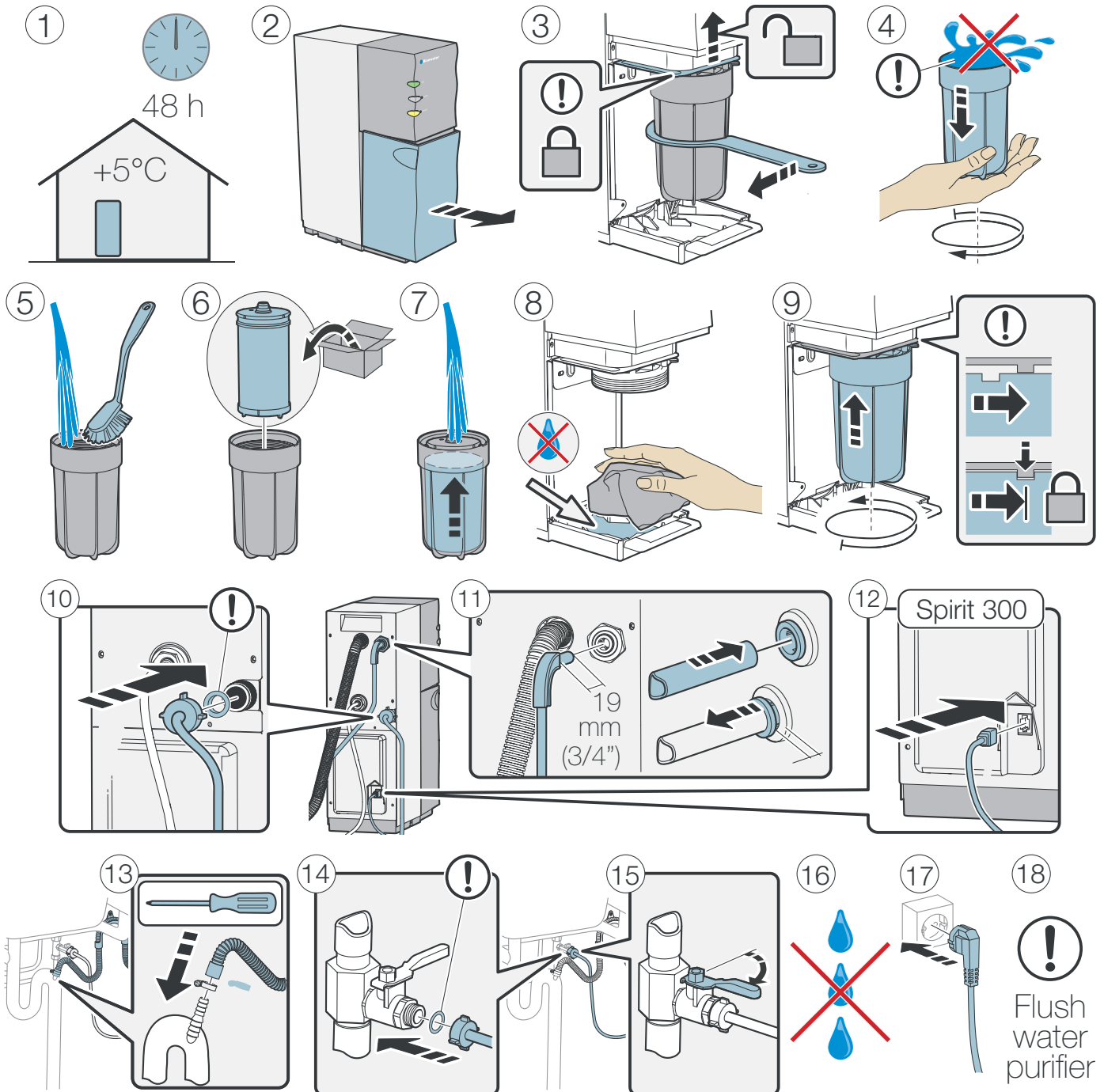


Figure 24. Reinstall after storage

TECHNICAL INFORMATION

Technical data

Parameter/Model	Spirit 300	Spirit 300Cp
Size WxDxH [mm] Size WxDxH ["]	150x365x462 5.9x14.3x18.2	150x365x462 5.9x14.3x18.2
Weight [kg] Weight [lbs]	15 33	15 33
Power supply, earthed supply Power supply, earthed supply US	230V 50-60Hz, 10A 120V 60Hz, 10A	230V 50-60Hz, 10A 120V 60Hz, 10A
Power [W] Power US [Amps]	350 3	350 3
Purified water flow rate [l/min] Purified water flow rate [gal/min]	2.5 ±0.5 0.66 ± 0.13	2.2 ±0.4 0.58 ± 0.10
Recovery [%]	50-60	50-60
Rejection [%]	95-99	97-99
Control	Electronically controlled	Pressure controlled
Start signal	Electrical	Pressure
Faucet with water quality indicator light	✓	
Sound level (installed in undersink cupboard)	< 60 dB(A)	< 60 dB(A)
On/off [bar] On/off [psi]	- -	3/4 43.5/58
Operation sequence (production/flush) [min]	max time 15	15/2.5
Prefiltration	Granulated Active Carbon (GAC)	Granulated Active Carbon (GAC)
Reverse osmosis membrane type Spiral wound TFC (Thin Film Composite)	High Flow	High Rejection

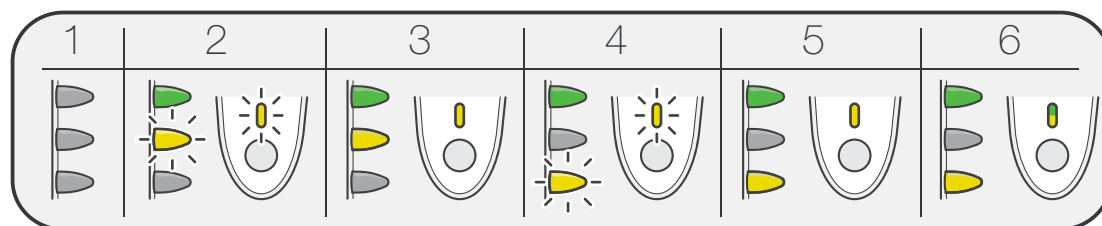
Requirements on feed water to water purifier



Do not install the water purifier if the water is microbiologically unsafe!

Description	Spirit 300	Spirit 300Cp
Temperature [°C] Temperature [°F]	2-35 36-95	2-35 36-95
Pressure [bar] Pressure [psi]	1.5-10 21.7-145	1.5-10 21.7-145
TDS (Total dissolved solids) [mg/l (ppm)]	< 1200 (< 1200)	< 1200 (< 1200)
Water flow [l/min (gal/min)]	> 6 (1.6)	> 6 (1.6)
Conductivity [µS/cm, 25 °C (77 °F)]	< 1600	< 1600
Hardness [°dH (grains/gallon)]	<10 (<10.4)	<10 (<10.4)
pH	6-9	6-9
Turbidity [FNU]	< 0.5	< 0.5
Iron Fe ^{III} /Fe ^{II} [mg/l (ppm)]	< 0.5/< 0.3 (< 0.5/< 0.3)	< 0.5/< 0.3 (< 0.5/< 0.3)
Manganese Mn [mg/l (ppm)]	< 0.2 (< 0.2)	< 0.2 (< 0.2)
Chlorine Cl ₂ [mg/l (ppm)]	< 1.0 (< 1.0)	< 1.0 (< 1.0)

TROUBLESHOOTING



Symptom		Cause	Solution
1	The ON light is not on.	The water purifier is not connected to power.	Connect the water purifier to power.
		Spirit 300: The faucet cable is not connected.	Spirit 300: Make sure that the faucet cable and connector are connected.
2	The FILTER light flashes, and the yellow light on the faucet flashes.	The filter must be replaced.	See "Replace prefilter" on page 14.
3	The FILTER light is on, and the yellow light on the faucet is on.	The water purifier has stopped. The filter must be replaced.	See "Replace prefilter" on page 14.
4	The SERVICE light flashes, and the yellow light on the faucet flashes.	The water quality has decreased, but is safe to drink. The water purifier will stop soon, see 5.	Contact your Bluewater dealer. to replace the membrane.
5	The SERVICE light is on, and the yellow light on the faucet is on.	The water purifier has stopped. A filter replacement has caused air to come into the system.	Disconnect the water purifier from power. Reconnect it. Let the water purifier do the automatic flush.
		The water purifier has stopped. The clean water quality has become too low.	Contact your Bluewater dealer. to replace the membrane.
6	The SERVICE light is on, and the yellow and the green lights on the faucet are on.	The water quality meter does not function.	Contact your Bluewater dealer.
	The water purifier makes noise, because the water pressure is not sufficient.	The inlet pressure is lower than 1.5 bar during operation.	Contact your Bluewater dealer.
		The grid filter is blocked.	See "Clean the grid filter" on page 17.
		The filter is blocked.	See "Replace prefilter" on page 14.
	The water purifier does not start.	The water purifier flushes water.	Wait for 5 minutes.
		The overflow protection system is activated.	Disconnect the water purifier from power, and clean the base plate. If the overflow protection is activated again, contact your Bluewater dealer.
		Spirit 300: The faucet cable is not connected.	Spirit 300: Make sure that the faucet cable and connector are connected.
Spirit 300: The faucet light is not on.	There is a problem with the electronic faucet.	The faucet cable is not connected.	Make sure that the faucet cable and connector are connected.
			Contact your Bluewater dealer
	The flow rate from the clean water faucet is low.	The water purifier needs to be descaled.	See "Descal" on page 14
		The clean water tubing is tensioned or jammed.	Make sure that the clean water tubing can move freely.
	Water does not flow from the clean water faucet.	The feed water shut-off valve is closed.	Open the feed water shut-off valve.
	The water smells bad.	Microbial growth in the water because the water purifier has not been used for a week or longer.	See "Use disinfectant to clean the system" on page 18.

Bluewater is a world leading water purification company. Headquartered in Stockholm, Sweden, the company helps people and businesses in Europe, the USA, China and elsewhere in Asia enjoy the health and wellbeing benefits of cleaner, healthier tap water. Bluewater innovates, makes and sells compact water purifiers that harness the company's patented reverse osmosis technology to remove virtually all pollutants from tap water, including lead, bacteria, pesticides, medical residues, chlorine and lime-scale.

Please visit us at www.bluewatergroup.com



BLUEWATER GROUP

Engelbrektsgatan 14
SE-114 32 Stockholm
Sweden
E: info@bluewatergroup.com

www.bluewatergroup.com

