

# TWISTER



# ECOPERLA

## ULTRAFILTRATION SYSTEM



## OPERATION / INSTALLATION MANUAL

MA\_PL\_UF-ECOPERLA\_TWISTER\_E0001004\_EP23V01

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## 1. INTRODUCTION

This manual explains the installation and operation of the ECOPERLA TWISTER ultrafiltration water filtration unit for domestic use. The Ecoperla Twister is easy to handle and install as it has already been partially assembled. All you need to do is to connect the water inlet and outlet and install the faucet for drawing treated water, as shown in section 4 of this manual. To ensure the highest quality of filtered water and correct operation, the system must be installed and serviced in accordance with these instructions. Failure to do so will void the warranty.



## 2. PRECAUTIONS

Before installing and using the ECOPERLA TWISTER ultrafiltration system, please read this manual carefully in accordance with the warnings below. If in any doubt, please contact your distributor.

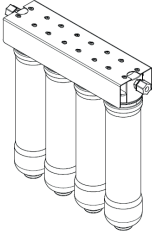
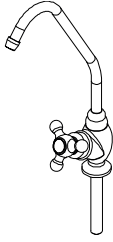
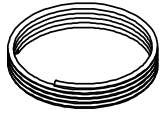
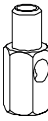
- For proper operation, the ultrafiltration system requires a pressure of 2.5 to 4 bar.
- The feed water temperature should not be below 4°C or above 40°C to avoid damage to the system.
- The ultrafiltration system is designed to treat tap water with a maximum salinity of 1500 ppm. Do not use the unit in areas where the water is not microbiologically safe or of unknown quality. For water with higher salinity levels, please contact your distributor.
- It is recommended that the feed water is softened or has a maximum hardness of 15°HF for optimum performance of the Ecoperla Twister.
- If the water has high iron or manganese concentrations, nitrate concentrations greater than 100 ppm, sulphate concentrations greater than 250 ppm, turbidity greater than 3 NTU and/or long-term high chlorine levels, please contact your distributor to suggest a suitable pre-filtration system to ensure proper system operation.
- If the ultrafiltration system will not be used for an extended period of time, shut off the water supply.
- Install the system on a flat surface.
- Do not expose the system to direct sunlight or install it outdoors.
- Installation should be carried out in accordance with the installation instructions in this manual.




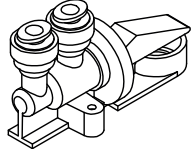
- Do not repair or disassemble the system yourself. If the system is not working properly, contact your distributor. Any tampering with the equipment by unauthorised personnel will void the warranty.
- Make sure the water supply is closed for repair or maintenance.
- Do not kink the hoses to prevent blockage of flow and pressure.
- Use original spare parts to ensure the system is working properly.
- Follow these instructions for installation, maintenance and replacement of cartridges.


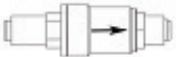
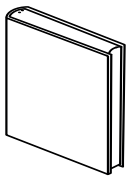
### 3. CONTENTS OF THE PACKAGE

Open the package and make sure all the components are inside and ready for assembly:

No	Description
1	ECOPERLA TWISTER ultrafiltration system
2	Faucet
3	3/8" PE flexible hose
4	3/8" adapter
5	1/4" x 3/8" ball valve
6	3/8" plastic insert
7	3/8" spout adapter
8	3/8" anti-flood system
9	3/8" safety clip
10	3/8" 40 psi pressure reducer
11	User manual

<p>ECOPERLA TWISTER X-1</p> 	<p>X-1</p> 	<p>X-1</p> 	<p>X-1</p> 
<p><b>Fig-1</b></p>	<p><b>Fig-2</b></p>	<p><b>Fig-3</b></p>	<p><b>Fig-4</b></p>

<p>X-1</p> 	<p>X-3</p> 	<p>X-1</p> 	<p>X-1</p> 
<p><b>Fig-5</b></p>	<p><b>Fig-6</b></p>	<p><b>Fig-7</b></p>	<p><b>Fig-8</b></p>

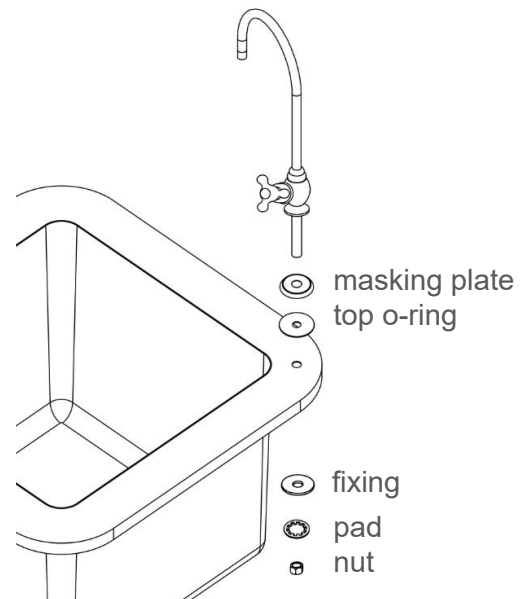
<p>X-2</p> 	<p>X-1</p> 	<p>X-1</p> 
<p><b>Fig-9</b></p>	<p><b>Fig-10</b></p>	<p><b>Fig-11</b></p>

## 4. INSTALLATION OF THE DEVICE

The system can be installed anywhere in the apartment where there is a water supply and enough space for installation. Most often it is under the kitchen sink.

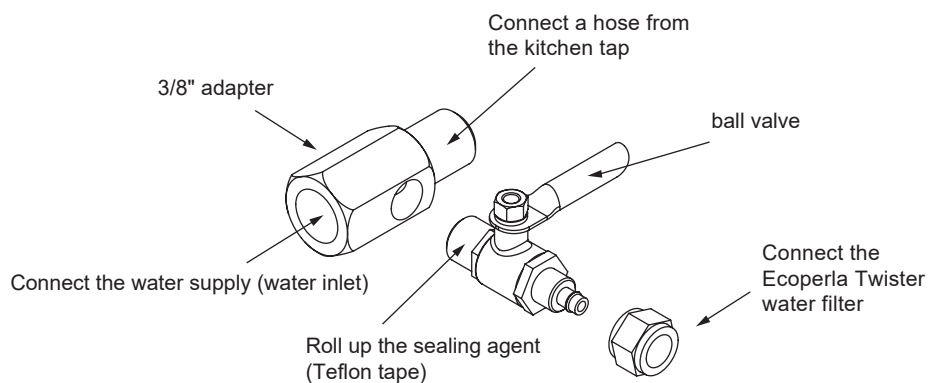
### 4.1. Faucet connection

- Select a suitable location on the countertop where you want to install the faucet.
- Use a drill with a 12mm bit to make a hole of the correct size.
- Fit the faucet into the hole with all parts as shown, using a spanner (spanner not supplied with the system) tighten the nut.



### 4.2. Installation of the water supply

- The water inlet consists of two parts: a 3/8 x 3/8 x 1/4 " adapter (Fig. 4) and a 1/4" x 3/8" brass ball valve (Fig. 5). The ball valve must be screwed onto the adapter, using Teflon tape or other sealant on its threads, at the location shown in the figure below.



- Turn off the water supply before installing the Ecoperla Twister system.
- The water supply inlet is designed to accommodate hoses with a 3/8" connection. Insert the water inlet adapter with brass ball valve between the cold water inlet and the hose. Make sure the brass ball valve is closed (handle position shown).

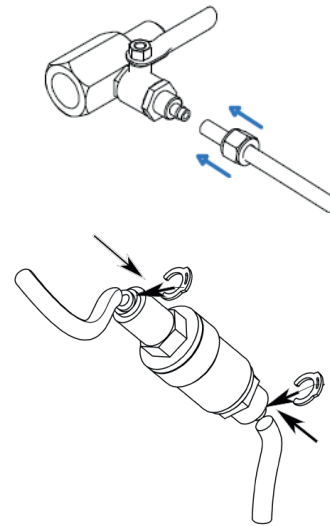
### CAUTION

**Never install a hot water connection as the ultrafiltration system will be damaged.**

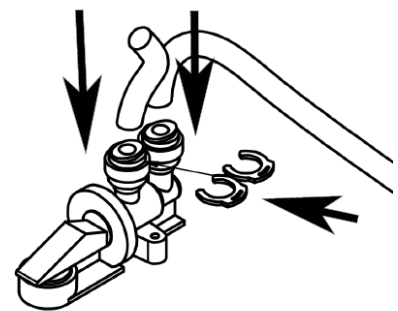
### 4.3. Installation of the ultrafiltration system

Hydraulic connections should be made so that the hoses do not get mixed up or tangled. Leave enough hose length to make it easy to move the system during future maintenance. Here are the steps to follow:

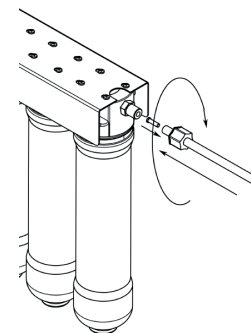
- a. Connect the hose  $\frac{3}{8}$ " (Fig. 3) to the water inlet (Fig. 5).
- b. Connect the other end of the  $\frac{3}{8}$ " hose to the inlet of the pressure regulator inlet (Fig. 10); for this remove the blue safety clip on the pressure on the pressure reducer inlet and insert the hose to the end. After inserting the hose  $\frac{3}{8}$ ", re-insert the plastic clip  $\frac{3}{8}$ ". **The pressure reducer has a sticker with an arrow indicating the direction of the water flow, then the inlet of the pressure reducer will be directed in the direction of the arrow.**



- c. Connect the hose  $\frac{3}{8}$ " (Fig. 3) to the outlet of the pressure regulator (Fig. 10); to do so, remove the blue safety clip located on the outlet of the pressure regulator and insert the hose all the way in. After inserting the hose, place the plastic safety clip  $\frac{3}{8}$ " again.
- d. Then connect the other end of the hose  $\frac{3}{8}$ " to the inlet of the anti-flooding system (Fig. 8), where it is marked "IN", inserting it to the end. After inserted, place the safety catch  $\frac{3}{8}$ " on it (Figure 9).



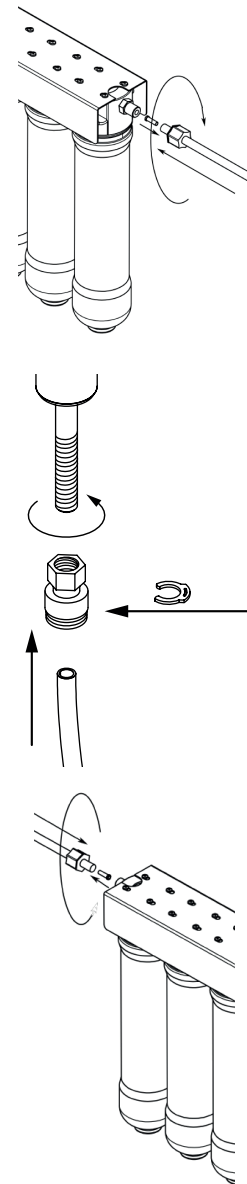
- e. The anti-flooding system (Fig. 8) should be attach to the base of the place where you you have decided to place the ultrafiltration system such as a kitchen cabinet. To do this, use the double-sided tape which you can find inside packaging of the anti-filtration system.
- f. After the anti-flooding system has been fixed in the selected location, connect the hose  $\frac{3}{8}$ " to the outlet (Fig. 8), where it is fully marked "OUT". Once inserted, place the safety catch  $\frac{3}{8}$ " (Fig. 9).



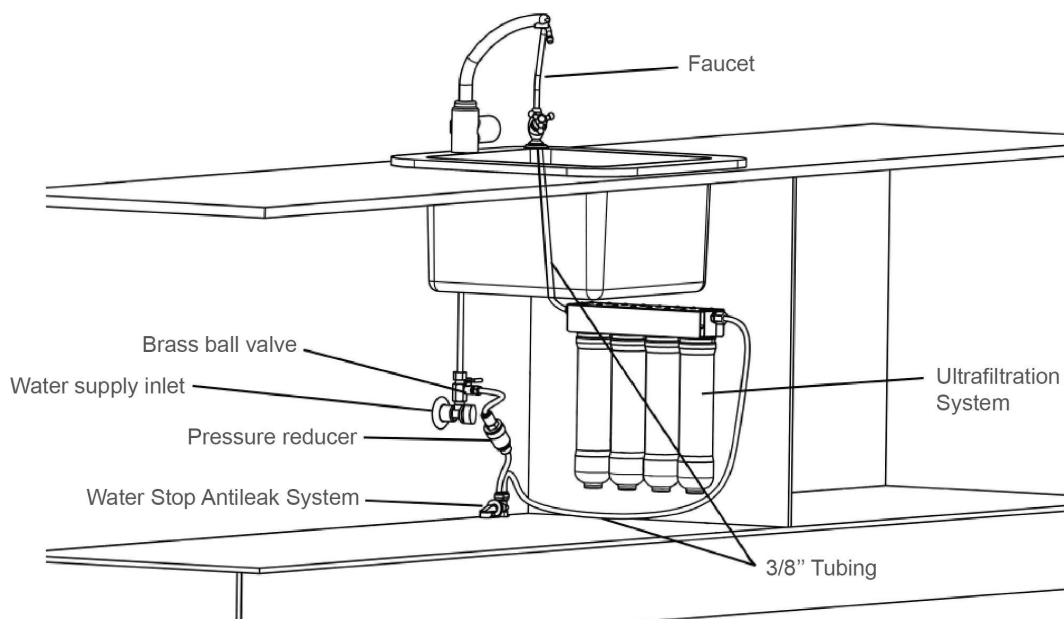
g. Then connect the other end of the hose  $\frac{3}{8}$ " to the ultrafiltration system (Fig. 1), where it is marked "IN" (Inlet). To do this, unscrew the straight nut on the inlet of the system. Then put the hose  $\frac{3}{8}$ " through the nut and place the plastic insert in it (Fig. 6). Screw the nut back onto the straight nut at the inlet of the ultrafiltration system.

h. Screw the tap adapter (Fig. 7) onto the tap by inserting the O-Ring provided. Insert a  $\frac{3}{8}$ " hose through the adapter nut, then insert a plastic insert at this end of the hose. Then insert this end into the tap adapter and tighten the nut.

i. Connect the other end of the  $\frac{3}{8}$ " hose to the ultrafiltration system outlet marked "OUT". To do this, unscrew the straight nut on the system outlet. Then put the hose  $\frac{3}{8}$ " through the nut and place the plastic insert in it (Fig. 6). Screw the nut back onto the straight nut on the outlet of the ultrafiltration system.



Installation drawing of the ECOPERLA TWISTER ultrafiltration system:

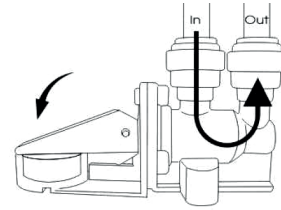




## 5. COMMISSIONING OF THE ULTRAFILTRATION SYSTEM

a. Ensure that all connections are properly connected and tightened.

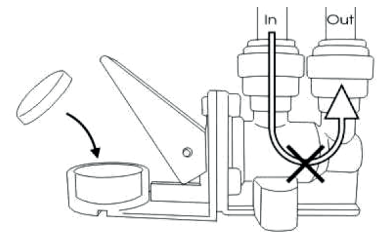
b. Ensure that the anti-flooding system arm is lowered, as shown in the diagram, so that the water can enter the ultrafiltration system.



c. Open the water supply and then the ball valve (Fig. 5), as shown below. Make sure that there is no water leakage. If there is, close the valve and repair it.

d. Open the faucet (Fig. 2) and let all air out from inside the ultrafiltration system. When a continuous stream of water comes out of the faucet, let it flow for 5-10 minutes and then close the faucet. If at first the water is tinged black or is turbid, drain it until clear water is obtained. This is a natural process caused by the initial dusting of activated carbon or aeration of the system.

e. Lift the anti-flooding system arm and insert one cartridge supplied with the system. Keep the other as a spare part. Lower the system arm so that water can enter the the ultrafiltration system.







f. The ECOPERLA TWISTER ultrafiltration system is ready for use.

## 6. INSTALLATION AND MAINTENANCE

Every user of the ECOPERLA TWISTER ultrafiltration system should have knowledge of:

- a. Location of water supply, pressure regulator, faucet and anti-failure system.
- b. The recommended maintenance of the ultrafiltration system, which is shown in the table below. Failure to comply with the maintenance described in this manual, using original cartridges that guarantee the quality of the water filtered by the ultrafiltration system, will void the warranty.

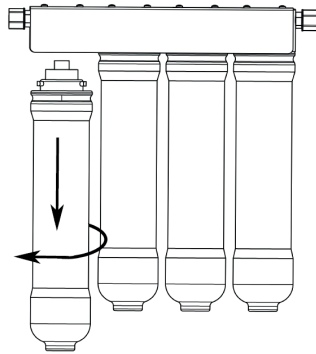
Cartridge type	Mechanical cartridge	Carbon cartridge CTO	Ultrafiltration membrane	Carbon cartridge with nanosilver
Filtration stage	1 <sup>a</sup>	2 <sup>a</sup>	3 <sup>a</sup>	4 <sup>a</sup>
No.	CA-0218-03	CA-0218-05	ME-0218-04	CA-0218-06
Appearance				
Replacement*	6 - 12 months	6 - 12 months	1 - 2 years	6 - 12 months

\* Filter and membrane life will vary depending on the quality of the feed water supplied.

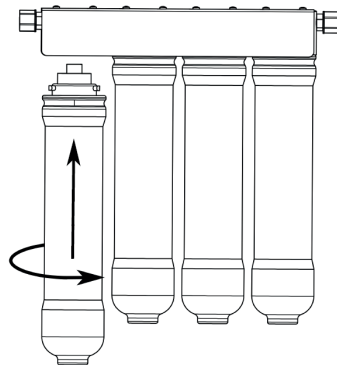
Periodic replacement of cartridges should be observed to ensure proper water quality and extend the life of the membrane.

## 6.1. PROCEDURE FOR REPLACEMENT OF CARTRIDGES AND MEMBRANE

- a. Close the brass water supply ball valve (Fig. 5).
- b. Open the faucet (Fig. 2) to release pressure from inside the ultrafiltration system.
- c. To replace the cartridges and/or membrane, turn them clockwise and pull down to remove them from the plug as shown in the figure below. This process should be carried out for each cartridge you wish to replace.



- d. Remove the cartridges/membrane from the original packaging. Place each cartridge and/or membrane in the correct position, maintaining the correct order. To do this, insert each cartridge into its head and rotate it counterclockwise. This process should be carried out for each cartridge you wish to replace.



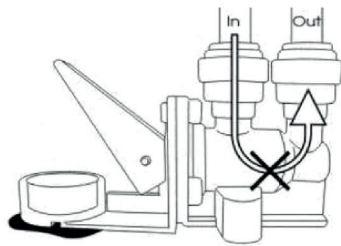
- e. After replacing one of the cartridges/membrane - with the tap open (Fig. 2) - open the brass ball valve (Fig. 5) on the water supply. Let all the air out from inside the ultrafiltration system. When a steady stream of water comes out of the faucet, let it flow for 5-10 minutes and then close the faucet. If the water turns black or turbid at first, don't worry - this is normal. This is due to dust being released by the new carbon filter or aeration of the system. Drain this water. After a while, the water will be clear. Check for leaks, if there are any, close the valves and repair them.

**Caution:** If water leaks in any area of the hose, remove it and cut off 0.5 cm. Then reconnect it. If the leak is on any threads, unscrew the component, apply more Teflon and screw it back on.

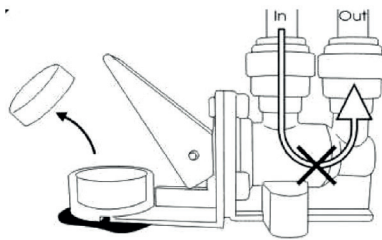
**6.2. PROCEDURE FOR REPLACING THE CARTRIDGE IN THE ANTI-FLOODING SYSTEM**

If the anti-flooding system cartridge needs to be replaced, the following steps should be taken:

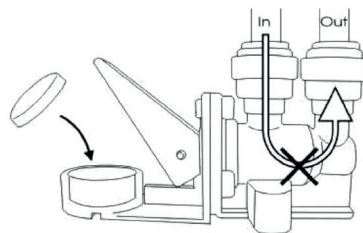
- a. Raise the arm of the anti-flooding system to cut off the water supply (in the event of a leak, the arm will already be raised)



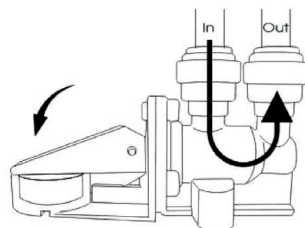
- b. Remove the cartridge



- c. Insert new cartridge



- d. Lower the arm of the anti-flooding system and you're done.



**CONGRATULATIONS! YOUR ULTRAFILTRATION SYSTEM IS NOW FULLY READY TO WORK!**

## 7. FAULTS, POSSIBLE CAUSES AND SOLUTIONS

ID	FAULT	POSSIBLE CAUSE	PROBLEM SOLVING
1	<b>Zero or low water production</b>	No water supply	Wait until the water supply is restored.
		Ball valve partially or fully closed	Fully open the inlet valve.
		Clogged cartridges	Replace cartridges.
		The membrane has lost its properties.	Replace the membrane.
		Activation of the anti-flooding system	Check that the anti-flooding system has been activated. If so, find the leak and repair it, change the cartridge and lower the arm of the anti-flooding system.
2	<b>Plastic or synthetic water taste</b>	The carbon nanosilver cartridge has lost its properties.	Replace carbon cartridge with nanosilver.
3	<b>Taste and smell of chlorine in water</b>	CTO carbon cartridge has lost its properties.	Replace the carbon cartridge.
4	<b>Unpleasant taste and smell of water</b>	Contaminated or contaminated cartridges.	Replace all cartridges, membrane, perform disinfection.
5	<b>White particles in water</b>	Air in the system.	Wait for the system to vent.
		Inlet pressure too high.	Check the pressure regulator.

## 8. MONITORING AND MAINTENANCE OF THE ULTRAFILTRATION SYSTEM

DATE:	/ /	
SERVICE PROVIDED	NEXT SERVICE	NOTES
Cartridge replacement: mechanical, GAC, CTO <input type="checkbox"/>	/ /	
Membrane replacement <input type="checkbox"/>	/ /	
Disinfection <input type="checkbox"/>	/ /	
Repair <input type="checkbox"/>	/ /	
Authorised technician or distributor's name and signature		

DATE:	/ /	
SERVICE PROVIDED	NEXT SERVICE	NOTES
Cartridge replacement: mechanical, GAC, CTO <input type="checkbox"/>	/ /	
Membrane replacement <input type="checkbox"/>	/ /	
Disinfection <input type="checkbox"/>	/ /	
Repair <input type="checkbox"/>	/ /	
Authorised technician or distributor's name and signature		

DATE:	/ /	
SERVICE PROVIDED	NEXT SERVICE	NOTES
Cartridge replacement: mechanical, GAC, CTO <input type="checkbox"/>	/ /	
Membrane replacement <input type="checkbox"/>	/ /	
Disinfection <input type="checkbox"/>	/ /	
Repair <input type="checkbox"/>	/ /	
Authorised technician or distributor's name and signature		

DATE:	/ /	
SERVICE PROVIDED	NEXT SERVICE	NOTES
Cartridge replacement: mechanical, GAC, CTO <input type="checkbox"/>	/ /	
Membrane replacement <input type="checkbox"/>	/ /	
Disinfection <input type="checkbox"/>	/ /	
Repair <input type="checkbox"/>	/ /	
Authorised technician or distributor's name and signature		

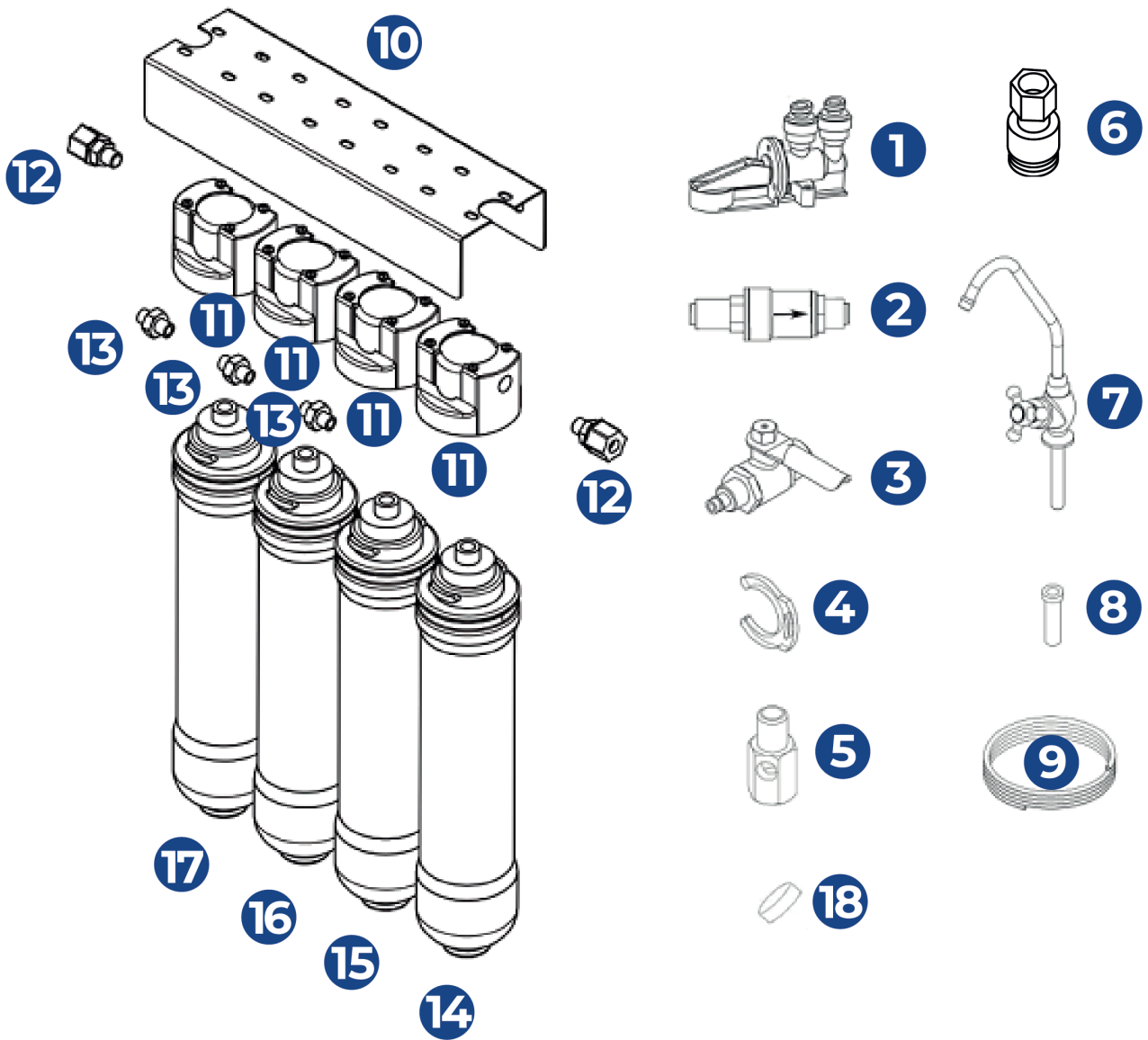
<b>DATE:</b>	/	
<b>SERVICE PROVIDED</b>	<b>NEXT SERVICE</b>	<b>NOTES</b>
Cartridge replacement: mechanical, GAC, CTO <input type="checkbox"/>	/	
Membrane replacement <input type="checkbox"/>	/	
Disinfection <input type="checkbox"/>	/	
Repair <input type="checkbox"/>	/	
Authorised technician or distributor's name and signature		

<b>DATE:</b>	/ /	
<b>SERVICE PROVIDED</b>	<b>NEXT SERVICE</b>	<b>NOTES</b>
Cartridge replacement: mechanical, GAC, CTO <input type="checkbox"/>	/	
Membrane replacement <input type="checkbox"/>	/	
Disinfection <input type="checkbox"/>	/	
Repair <input type="checkbox"/>	/	
Authorised technician or distributor's name and signature		

<b>DATE:</b>	/ /	
<b>SERVICE PROVIDED</b>	<b>NEXT SERVICE</b>	<b>NOTES</b>
Cartridge replacement: mechanical, GAC, CTO <input type="checkbox"/>	/	
Membrane replacement <input type="checkbox"/>	/	
Disinfection <input type="checkbox"/>	/	
Repair <input type="checkbox"/>	/	
Authorised technician or distributor's name and signature		

<b>DATE:</b>	/ /	
<b>SERVICE PROVIDED</b>	<b>NEXT SERVICE</b>	<b>NOTES</b>
Cartridge replacement: mechanical, GAC, CTO <input type="checkbox"/>	/ /	
Membrane replacement <input type="checkbox"/>	/ /	
Disinfection <input type="checkbox"/>	/ /	
Repair <input type="checkbox"/>	/ /	
Authorised technician or distributor's name and signature		

## 9. SPARE PARTS





No.	REF. NO.	DESCRIPTION	QUANTITY
1	OI-0207-139	3/8" Anti-flooding system	1
2	OI-0207-141	3/8" Pressure regulator 40 psi	1
3	OI-0210-03	1/4" x 3/8" Brass ball valve	1
4	OI-0207-132	1/4" x 3/8" Brass ball valve	4
5	OI-0230-09	3/8" x 1/4" x 3/8" Power adapter	1
6	OI-0208-24	3/8" faucet adapter	1
7	OI-0230-24	Faucet	1
8	OI-0207-54	3/8" plastic insert	2
9	TU-0602-01	3/8" hose	1
10	OI-0234-44	Ecoperla Twister appliance rack	1
11	OI-0235-02	QC3 filter cartridge heads / caps	4
12	OI-0208-16	1/4" x 3/8" Straight fitting	2
13	OI-0208-04	1/4" x 1/4" Straight fitting	3
14	CA-0218-03	QC3 Mechanical cartridge	1
15	CA-0218-05	QC3 Carbon cartridge CTO	1
16	ME-0218-04	Ultrafiltration membrane	1
17	CA-0218-06	QC3 Carbon cartridge with nanosilver	1
18	OI-0207-133	Contribution to the anti-flooding system	2







# ECOPERLA

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e-mail: [info@ecoperla.com](mailto:info@ecoperla.com)

DISTRIBUTOR		INSTALLER	
SALE DATE:		SALE DATE:	
PICTURE:		PICTURE:	

MA\_PL\_UF-ECOPERLA\_TWISTER\_E0001004\_EP23V01