

# Pallas

REVERSE OSMOSIS





MANUAL DE INSTRUCCIONES  
*MANUEL D'INSTRUCTIONS*  
INSTRUCTION MANUAL  
**SO • PP • BP • BP+AF • BP+UV**

# Pallas

REVERSE OSMOSIS



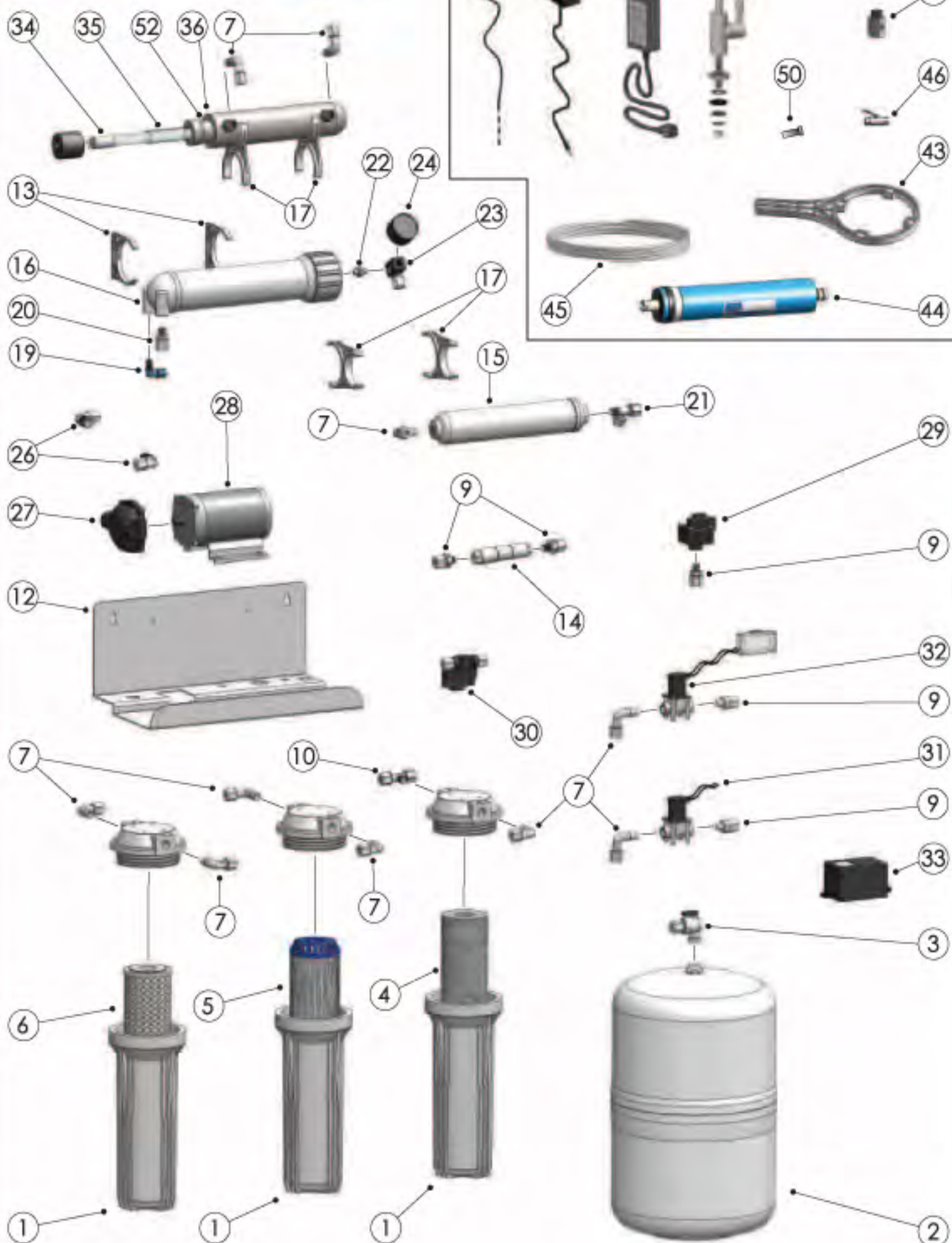
		SO	PP	BP	BP+AF	BP+UV
<b>DIRECT ACCESS</b>	 Easy maintenance. Maintenance aisée. Mantenimiento.	●	●	●	●	●
<b>INSERT</b>	 Safety system for piping connections. Système de sécurité pour la connexion de la tuyauterie. Sistema de seguridad en las conexiones de tubos.	●	●	●	●	●
<b>PRESSURE GAUGE</b>	 Working pressure indication. Indication de la pression de travail. Indicación de la presión de trabajo.	●	—	●	●	●
<b>SHUT-OFF VALVE</b>	 Hydraulic control system, without electricity. Système de contrôle hydraulique, sans électricité. Sistema de control hidráulico, sin electricidad.	●	—	—	—	—
<b>PERMEATE PUMP</b>	 Base system recovery. Régénération de l'efficacité du système. Incrementa la recuperación del sistema.	—	●	—	—	—
<b>PRESSURE PUMP</b>	 Higher and faster production. Production d'eau pure supérieure en débit et qualité. Mayor caudal de producción.	—	—	●	●	●
<b>ECOLOGICAL</b>	 Control system for water consumption reduction. Système de contrôle pour une moindre consommation d'eau. Sistema de control para un menor consumo de agua.	—	—	●	●	●
<b>ELECTRONIC ADAPTER</b>	 High reliability external electronic adapter. Transformateur électronique de grande fiabilité. Transformador externo de alta fiabilidad.	—	—	●	●	●
<b>SOLENOID VALVE</b>	 Solenoid valve with safety filter. Solenovanne avec filtre de sécurité. Solenóvula con filtro de seguridad.	—	—	●	●	●
<b>AUTO-FLUSHING</b>	 Automatic membrane cleaning. Nettoyage automatique de la membrane. Limpieza automática de membrana.	—	—	—	●	—
<b>UV SYSTEM</b>	 Sterilization system for higher bacteriological safety. Dispositif UV pour une plus grande sécurité bactériologique. Sistema ultravioleta para mayor seguridad bacteriológica.	—	—	—	—	●

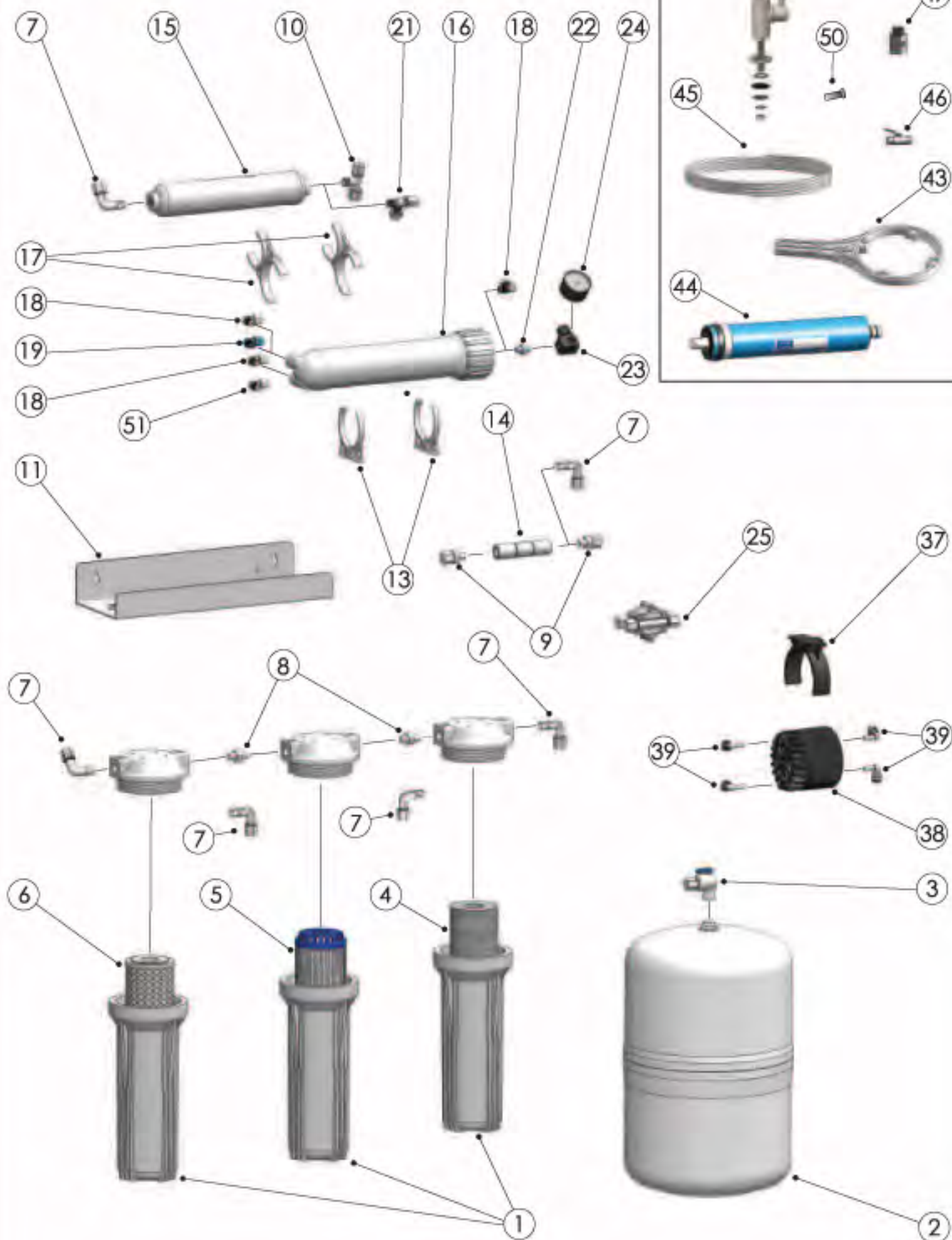


CONSERVE ESTE MANUAL, QUE INCLUYE LOS APARTADOS DE LIBRO DE SERVICIO Y GARANTÍAS, CON EL OBJETIVO DE PROPORCIONARLE UN MEJOR SERVICIO POST VENTA.

CONSERVEZ SOIGNEUSEMENT CETTE NOTICE POUR POUVOIR LA CONSULTER A TOUT MOMENT. CARNET D'ENTRETIEN ET GARANTIE COMPRIS A FIN DE VOUS GARANTIR UN BON SERVICE APRES VENTE.

KEEP THIS INSTRUCTION BOOK WITH ITS SERVICE REGISTER AND GUARANTEE SHEETS, FOR GIVING A BETTER AFTER SALES SERVICE.





NUMBER	CODE	DESCRIPTION	PALLAS S0	PALLAS PP	PALLAS BP+AF	PALLAS BP	PALLAS UV
1	5202000001	2-piece filter housing in white plastic	●	●	●	●	●
2	5202000002	Pressure tank made of steel with plastic coating	●	●	●	●	●
3	5202000003	1/4" valve for pressure tank	●	●	●	●	●
4	5202000004	Sediment filter 5 micron 9 3/4"	●	●	●	●	●
5	5202000005	GAC Granulated active carbon filter 9 3/4"	●	-	●	●	●
6	5202000006	Activated carbon block filter 9 3/4"	●	●	●	●	●
7	5202000007	JACO male elbow thread 1/4" - tube 1/4"	●	●	●	●	●
8	5202000008	Double male connector 1/4"	●	-	-	-	-
9	5202000009	JACO male straight connector thread 1/4" - tube 1/4"	●	●	●	●	●
10	5202000010	JACO tee central male thread 1/4" - tube 1/4"	●	-	-	-	-
11	5202000011	Painted metallic bracket for models without pump	●	●	-	-	-
12	5202000012	Painted metallic bracket for models with pump	-	-	●	●	●
13	5202000013	Single mounting clip of 2 1/2"	●	●	●	●	●
14	5202000014	In-line flow restrictor of 400 cc	●	-	●	●	●
15	5202000015	GAC Granulated active carbon post-filter 2"	●	●	●	●	●
16	5202000016	Membrane housing 2012	●	●	●	●	●
17	5202000017	Double mounting clip 2" / 1/2"	●	●	●	●	●
18	5202000018	JACO elbow thread 1/8" - tube 1/4"	●	●	-	-	-
19	5202000019	JACO elbow thread 1/8" - tube 1/4" with SS check-valve	●	-	●	●	●
20	5202000020	JACO male straight connector thread 1/8" - tube 1/4"	-	-	●	●	●
21	5202000021	JACO tee side male thread 1/4" - tube 1/4"	-	●	●	●	●
22	5202000022	Double male connector 1/8"	●	-	●	●	●
23	5202000023	3-way adaptor for pressure gauge	●	-	●	●	●
24	5202000024	Pressure gauge 1/8" D40	●	-	●	●	●
25	5202000025	Shut-off valve	●	-	-	-	-
26	5202000026	JACO male elbow thread 3/8" - tube 1/4"	-	-	●	●	●
27	5202000027	Pump UP-7000	-	-	●	●	●
28	5202000028	Motor for pump UP-7000	-	-	●	●	●
29	5202000029	Low pressure switch	-	-	●	●	●
30	5202000030	High pressure switch 20-40 PSI	-	-	●	●	●
31	5202000031	Inlet electrovalve 24V with filter mesh	-	-	●	●	●
32	5202000032	Flushing electrovalve 24V + PJK010	-	-	●	-	-
33	5202000033	UV Ballast	-	-	-	-	●
34	5202000034	UV lamp	-	-	-	-	●
35	5202000035	Q-sleeve	-	-	-	-	●
36	5202000036	UV set housing	-	-	-	-	●
37	5211004674	Clip for permeate pump	-	●	-	-	-
38	5211004673	Permeate pump	-	●	-	-	-
39	5202000037	QC elbow stem 1/4" - tube 1/4"	-	●	-	-	-
40	5202000069	Transformer for wall mounting 220-24V / 1,2A connection type D	-	-	●	●	-
41	5202000038	Transformer 220-24V / 2A connection type G	-	-	-	-	●
42	5202000039	Electric aerial connector	-	-	●	●	●
43	5202000040	Wrench for filter housing	●	●	●	●	●
44	5202000041	50 GPD membrane	●	●	●	●	●
45	5202000042	Polyethylene tube 1/4"	●	●	●	●	●
46	5202000043	White ball valve 1/4"	●	●	●	●	●
47	5202000044	Wall adaptor 3/8" - 3/8" drill 1/4"	●	●	●	●	●
48	5202000045	Drain clamp 1/4"	●	●	●	●	●
49	5202000046	Pallas faucet	●	●	●	●	●
50	5202000074	Insert 1/4"	●	●	●	●	●
51	5202000018	JACO elbow pipe 1/8" - tube 1/4"	-	●	-	-	-
	5202000087	Flow restrictor insert type	-	●	-	-	-
52	5202000088	O-ring for UV cap	-	-	-	-	●
-	5202000085	Instruction's manual	●	●	●	●	●

<b>1. PRESENTATION</b>	<b>75</b>
<b>2. INTRODUCTION</b>	<b>75</b>
2.1 What is natural osmosis and reverse osmosis?	75
2.2 How does the membrane of your system work?	76
2.3 Concentration of salts and other substances reduced by the reverse osmosis membrane	76
2.4 The effect of pressure and temperature in a reverse osmosis system	76
2.5 The effect of the concentration of salts in feed water	77
2.6 Ultraviolet radiation and germicide effect	77
<b>3. TECHNICAL DATA</b>	<b>78</b>
<b>4. UNPACKING AND VERIFICATION OF THE CONTENTS</b>	<b>79</b>
<b>5. PREVIOUS WARNINGS</b>	<b>80</b>
5.1 Conditions for the proper operation of the system	80
5.2 Installation of the system	80
5.3 Start-up and maintenance	81
5.4 Use of the system	81
5.5 Recommendations for the proper use of reverse osmosis water	81
5.6 How to manipulate the radiation germicide system of UV-C	81
<b>6. INSTALLATION OF THE SYSTEM</b>	<b>83</b>
<b>7. START-UP</b>	<b>88</b>
<b>8. OPERATION OF THE PALLAS SERIES SYSTEMS</b>	<b>91</b>
8.1 Description of operation	91
<b>9. MAINTENANCE / CONSUMABLES</b>	<b>95</b>
9.1 How to change filters	95
9.2 Hygienization	98
<b>10. GUIDE FOR THE IDENTIFICATION AND SOLUTION OF PROBLEMS</b>	<b>102</b>
<b>11. MAINTENANCE SERVICE BOOK</b>	<b>104</b>
	<i>(for the User)</i>
	<i>(for the Technician)</i>
<b>12. EC DECLARATION AND GUARANTEE</b>	<b>106</b>
<b>13. INSTALLATION AND START-UP SHEET OF THE SYSTEM</b>	<b>107</b>
	<i>(for the Technician)</i>

## 1. PRESENTATION

Welcome to your reverse osmosis system of the PALLAS series. Thank you and congratulations. You have made a great choice in choosing the reverse osmosis of the PALLAS series.

The PALLAS series systems are some of the best domestic appliances for the improvement of the characteristics of water that you can find on the market.

The quality of the water in our environment is getting worse every day. The reality of this is what has driven us to design and manufacture this domestic osmosis system in order to provide you with a water of the highest quality.

Your PALLAS series system provides you with different benefits and advantages:

- It is a physical system that does not use or add chemical products to the water.
- Provides high quality water.
- Ensures high production.
- Has low maintenance costs.
- Convenient and easy installation.

**!** It is very important that you read and keep this manual before installation and start-up of the system.

If you have any questions regarding the use or maintenance of this system, please contact the Technical Assistance Service (TAS) of your distributor.

## 2. INTRODUCTION

The PALLAS series reverse osmosis systems provide you with a better quality of life.

You will perceive an improvement in the taste of your drinking water, and likewise in the taste of your coffees, juices or ice-cubes. Cooking with purified water will heighten the taste of food. Your family will have healthier water.

The water provided has a LOW MINERAL CONTENT. Osmosis water helps prolong the life of your domestic appliances and is ideal for steam irons, coffee makers and humidifiers.

### 2.1 What is natural osmosis and reverse osmosis?

Natural or direct osmosis is the most common in nature, since most of the organisms contain semi-permeable membranes (for instance, plant roots, organs in our body, cellular membranes, etc.)

When two solutions with different concentrations of salts are separated by a semi-permeable membrane, there is, naturally, a flow of water from the solution that has a lower concentration of salts to that of higher concentration. This flow continues until concentrations on both sides of the membrane are equal.

If this process was to be reversed in order to obtain a flow of water with a lower concentration of salts from a higher concentration one, it would be necessary to apply sufficient pressure against the membrane with the water with a higher concentration, in order to stop this tendency and natural flow of the system. This process is called reverse osmosis.

At present, reverse osmosis is the best method to produce pure water via a physical system (without using chemical products).

As has been explained, its working principle is based on that of our own organism, where water is distributed by natural osmosis.

The human body is mainly composed of water:

Woman > 55 - 65%	
Man > 65 - 75%	
Child > 80%	

An adult body contains between 38 and 48 litres of water, 40% of which is found in the cells. This water in the body, which is almost completely recycled every 15 days, is the basis for

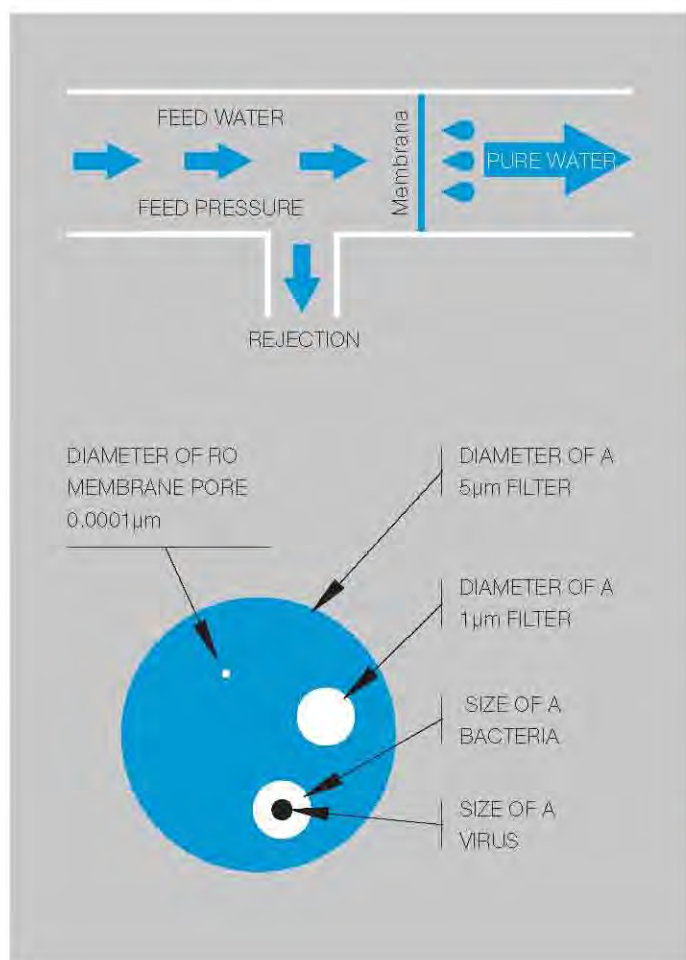
the transportation of nutrients, oxygen to cells, the removal of waste and the control of the body temperature.

We consume an average of 2.2 litres of water per day including the water found in food.

## 2.2 How does the membrane of your system work?

The water that is going to be purified exerts pressure on the semi-permeable membrane, to the extent that part of it is able to pass through the pores of the membrane (osmosis water), while the remainder of the water (rejected water or that with high concentrations of salt) are diverted to the drainpipe.

Since the diameter of the membrane pores is less than 0.0001 microns, only the water molecules and a certain amount of minerals (sodium, potassium, magnesium, etc.) are able to get through, removing the excess minerals that our body does not need, as well as the bacteria, heavy metals, pesticides, chemical products, etc.



## 2.3 Concentration of salts and other substances reduced by the reverse osmosis membrane

The chemical composition and concentration of salts and other substances of the water on entering the reverse osmosis system has an effect on the purified water.

The TFC reverse osmosis membrane of your PALLAS series system can reduce the concentration of the elements and compounds, among others, outlined in the following tables.

### Inorganic

ELEMENT / COMPOUND	REDUCTION
SODIUM	90-95%
CALCIUM	93-98%
MAGNESIUM	93-98%
ALUMINIUM	93-98%
COPPER	93-98%
NICKEL	93-98%
ZINC	93-98%
BARIUM	93-98%
CARBONATES	93-98%
CHLORINE	90-95%
BICARBONATES	90-95%
NITRATES	45-55%
PHOSPHATES	93-98%
FLUORIDE	93-98%
CYANIDE	90-95%
SULPHATES	90-95%
BORON	40-45%
ARSENIC	93-98%

### Organic

ELEMENT / COMPOUND	REDUCTION
HUMIC ACIDS	98%
GLUCOSE	98-99%
ACETONE	70%
ISOPROPANOL	90%
ETHYLBENZENE	71%
ETHYLPHENOL	84%
TETRACHLORETHYLENE	68-80%
UREA	70%
1,2,4 TRICHLORO BENZENE	96%
1,1,1,TRICHLOROETHANE	98%

## 2.4 The effect of pressure and temperature in a reverse osmosis system

The membrane usually rejects more than 95% of salts, however the percentage may vary depending on the quality of the water and the temperature and pressure.



## Conversion factors

### BY PRESSURE

CONVERSION FACTOR PRESSURE		
PRESSURE (BAR)	ON PRODUCTION	REJECTION OF SALTS (%)
0.70	0.17	84
1.00	0.25	88
1.50	0.33	90
1.75	0.42	92
2.50	0.58	93
4.00	1.00	95
4.50	1.08	95
4.90	1.17	95
5.20	1.25	95
5.80	1.42	95

### BY TEMPERATURE

CONVERSION FACTOR	
TEMPERATURE (°C)	ON PRODUCTION
6	0.38
8	0.45
10	0.52
12	0.59
14	0.66
16	0.70
18	0.77
20	0.85
22	0.88
25	1.00
28	1.09
30	1.16
32	1.23
34	1.30



The life of the membrane is evaluated by the percentage of salts rejected. Below 70% the life of the membrane is finished. Using a conductivity meter or a TDS meter compare the conductivity of the feed water with that which comes out of the membrane and obtains the percentage of rejection of salts.

$$\text{Rejection of salts \%} = \left(1 - \frac{\text{Conductivity of R.O. water}}{\text{Conductivity of feed water}}\right) \times 100$$

## 2.5 The effect of the concentration of salts in feed water

The concentration of salts and substances in the water to be treated influences the capacity of production of osmosis water by the system. The greater the concentration of salts in the water to be treated is, the greater the pressure that is necessary against the membrane, in order to exceed the natural osmotic pressure and to guarantee a minimum flow of osmosis water.

## Table of pressures in relation to the TDS

MAXIMUM INPUT TDS*	MINIMUM PRESSURE OF FEED TO MEMBRANE**
up to 200 ppm	3.5 bar
between 200 and 500 ppm	3.8 bar
between 500 and 800 ppm	4.0 bar
between 800 and 1200 ppm	4.3 bar
between 1200 and 1500 ppm	4.5 bar
between 1500 and 1800 ppm	4.75 bar
between 1800 and 2000 ppm	5.2 bar

\*The test is carried out with a 50 GPD membrane at 14 °C, without back pressure, a hardness of 15 °F and corrected salinity with NaCl.  
\*\*The pressure shown is calculated for a production of 6 l/h.

## 2.6 Ultraviolet radiation and germicide effect

As reverse osmosis, light or ultraviolet radiation is also common in nature. The natural origin of ultraviolet light is the sun, in the same way as it is the origin of the light the human eye can see or the infrared light.

Ultraviolet light is the transmitter of a great quantity of energy, hence its effects. Thanks to the upper layers of the atmosphere, which reflect most of this light from the sun, the earth's surface only receives a small percentage.

This type of natural radiation or light is not perceptible by the human eye (not visible), although its effects are visible on materials, organisms or even ourselves. For example, the type A ultraviolet light (UVA rays) is the responsible for sunburns. It is also responsible for the change of colour of certain materials, after having been exposed to direct sunlight for a long time, or it can even change its mechanical properties, by quartering or turning them crumbly like in some plastics, etc.

Ultraviolet light is artificially generated by using special lamps with a low pressure discharge of mercury. These lamps, as well as emitting a visible light, emit a high intensity ultraviolet light of type C (UVC), which is the most powerful as a germicide.

This light acts on bacteria and microorganisms by destroying their cellular membranes and/or preventing them from reproducing (leaving them inactive). Nowadays, having an ultraviolet radiation system to treat water is one of the most effective ways of obtaining bacteriologically safe water.

## 3. TECHNICAL DATA

#### FEATURES OF THE PALLAS BP

**DIMENSIONS** (height x width x depth): 480 x 380 x 210 mm.

**TANK** (diameter x height): 240 x 380 mm.

**WEIGHT:** 15 Kg.

**INPUT TEMPERATURE** (maximum / minimum): 40°C / 2°C.

**INPUT TDS** (maximum): 2000 ppm\*\*.

**INPUT PRESSURE** (max. / min.): 2,5 / 1 bar (250-100 kPa).

**MEMBRANE:** Type 1 x 1812 50 GPD.

**MEMBRANE PRODUCTION:** 175 LPD\*.

Soft water with 250 ppm, T: 25°C, 15% conversion.

Pressure on membrane: 3,4 bar (without back pressure).

**PUMP:** Booster.

**MAX. ACCUMULATION** (Tank pre-charged at 7 PSI): 16 litres.

**POWER SUPPLY:** 24Vdc, 30W.

**ELECTRIC ADAPTOR:** 100-240V, 50/60Hz, 24Vdc, 1,2A Type D

#### FEATURES OF THE PALLAS BP+AF

**DIMENSIONS** (height x width x depth): 480 x 380 x 210 mm.

**TANK** (diameter x height): 240 x 380 mm.

**WEIGHT:** 15 Kg.

**INPUT TEMPERATURE** (maximum / minimum): 40°C / 2°C.

**INPUT TDS** (maximum): 2000 ppm\*\*.

**INPUT PRESSURE** (max. / min.): 2,5 / 1 bar (250-100 kPa).

**MEMBRANE:** Type 1 x 1812 50 GPD.

**MEMBRANE PRODUCTION:** 175 LPD\*.

Soft water with 250 ppm, T: 25°C, 15% conversion.

Pressure on membrane: 3,4 bar (without back pressure).

**PUMP:** Booster.

**MAX. ACCUMULATION** (Tank pre-charged at 7 PSI): 16 litres.

**POWER SUPPLY:** 24Vdc, 30W.

**ELECTRIC ADAPTOR:** 100-240V, 50/60Hz, 24Vdc, 1,2A Type D.

#### FEATURES OF THE PALLAS PP

**DIMENSIONS** (height x width x depth): 400 x 410 x 140 mm.

**TANK** (diameter x height): 240 x 380 mm.

**WEIGHT:** 11 Kg.

**INPUT TEMPERATURE** (maximum / minimum): 40°C / 2°C.

**INPUT TDS** (maximum): 2000 ppm\*\*.

**INPUT PRESSURE** (max. / min.): 6 / 2,5 bar (600-250 kPa).

**MEMBRANE:** Type 1 X 1812 50 GPD.

**MEMBRANE PRODUCTION:** 175 LPD\*.

Soft water with 250 ppm, T: 25°C, 15% conversion.

Pressure on membrane: 3,4 bar (without back pressure).

**PUMP:** Permeate pump.

**MAX. ACCUMULATION** (Tank pre-charged at 7 PSI): 16 litres\*\*\*.

**POWER SUPPLY:** -.

**ELECTRIC ADAPTOR:** -.

#### FEATURES OF THE PALLAS SO

**DIMENSIONS** (height x width x depth): 400 x 410 x 140 mm.

**TANK** (diameter x height): 240 x 380 mm.

**WEIGHT:** 11,5 Kg.

**INPUT TEMPERATURE** (maximum / minimum): 40°C / 2°C.

**INPUT TDS** (maximum): 2000 ppm\*\*.

**INPUT PRESSURE** (max. / min.): 6 / 2,5 bar (600-250 kPa).

**MEMBRANE:** Type 1 x 1812 50 GPD.

**MEMBRANE PRODUCTION:** 175 LPD\*.

Soft water with 250 ppm, T: 25°C, 15% conversion.

Pressure on membrane: 3,4 bar (without back pressure).

**PUMP:** -.

**MAX. ACCUMULATION** (Tank pre-charged at 7 PSI): 16 litres\*\*\*.

**POWER SUPPLY:** -.

**ELECTRIC ADAPTOR:** -.

#### FEATURES OF THE PALLAS BP+UV

**DIMENSIONS** (height x width x depth): 540 x 380 x 210 mm.

**TANK** (diameter x height): 240 x 380 mm.

**WEIGHT:** 16 Kg.

**INPUT TEMPERATURE** (maximum / minimum): 40°C / 2°C.

**INPUT TDS** (maximum): 2000 ppm\*\*.

**INPUT PRESSURE** (max. / min.): 2,5 / 1 bar (250-100 kPa).

**MEMBRANE:** Type 1 x 1812 50 GPD.

**MEMBRANE PRODUCTION:** 175 LPD\*.

Soft water with 250 ppm, T: 25°C, 15% conversion.

Pressure on membrane: 3,4 bar (without back pressure).

**PUMP:** Booster.

**MAX. ACCUMULATION** (Tank pre-charged at 7 PSI): 16 litres.

**UV SET:** UV-C lamp of 6W.

**LAMP POWER:** 6W.

**POWER SUPPLY:** 24Vdc, 48W.

**ELECTRIC ADAPTOR:** 100-240V, 50/60Hz, 24Vdc, 2A Type G.

MADE BY PWG IN TAIWAN

\*Flows may vary a +/- 20%.

\*\*For a salinity up to 2000 ppm, check the table of pressures in relation to the TDS in Section 2 of this manual.

\*\*\*Accumulation depends on the input pressure.

## 4. UNPACKING AND VERIFICATION OF THE CONTENTS

It is important that prior to installing and starting the system you check the box and the contents, with the aim of guaranteeing that it has not been damaged during transport.

**Any claims for damages during transport must be presented together with the delivery note or invoice to the distributor, including the name of the carrier, within a period of 24 hours following the reception of goods.**

Remove the system and accessories from their carton packaging, taking away the protective packaging.

**!** Throw the plastic bags away or keep them away from children as they may cause them harm.

You will find the following components inside:

COMPONENT	* QUANTITY	
Reverse osmosis system	–	1
Storage tank:	2	1
Faucet + Assembly kit	49	1
Kit for drain connection	48	1
Wall adaptor for inlet valve	47	1
Connection wire for power supply	40 - 41	1
Blue manual 1/4" inlet valve	46	1
Instructions manual	–	1
White tube 1/4"	45	500 cm
Reverse osmosis 50 GPD membrane	44	1
Filter housing wrench	43	1
Elbowed tank valve tube 1/4"	3	1
5µm sediment filter	4	1
Granulated carbon filter and flat joints	5	1
Compact carbon filter and flat joints	6	1
Filter housings	1	3
Pressure gauge**	24	1
Germicide lamp**	34	1

\*No. of part on flap.

\*\*Depending on the model.

The packaging materials can be recycled and must be thrown away in the appropriate selective recycling bins or the specific centre for the collection of waste material.

The machine that you have acquired has been designed and manufactured with high quality materials and components that can be recycled and reused. This product must not be thrown away into the usual urban rubbish bins. When you want to throw the machine away, it must be taken to a specific local centre for the collection of materials, stating that it has circuits, and electric and electronic components, for models **BP**

**BP+AF** and **BP+UV**.

The proper collection and treatment of the machines that can no longer be used contributes to the preservation of natural resources and also to avoiding potential public health risks.

## 5. PREVIOUS WARNINGS

**!** The domestic systems of the PALLAS series, ARE NOT MEANT TO PURIFY RAW WATER. If the water to be treated comes from a public water supply (and as such complies with the legislation in force), the domestic systems of the PALLAS series, significantly improve the quality of water.

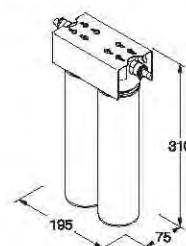
**!** Should the water to be treated not come from a public water supply, that is, from an unknown source, a physical-chemical and bacterial analysis of the water shall be necessary, with the aim of ensuring its proper purification applying the proper techniques and systems appropriate to each case, PRIOR TO THE INSTALLATION of the system. Contact your distributor in order to obtain advice about the most appropriate treatment for you.

### 5.1 Conditions for the proper operation of the system

- Do not use hot water in the system ( $T > 40^{\circ}\text{C}$ )
- The room temperature must be between  $4^{\circ}\text{C}$  and  $45^{\circ}\text{C}$ .
- Models **BP**, **BP+AF** and **BP+UV**, integrate a pump. (Recommended when network pressure is lower than 2.5 bar).
- Should the inlet pressure be higher than 3 bars, a pressure regulator should be installed prior to water entering the system, set at a maximum pressure of 2.5 bars. (Ref. 5202000090).
- Models **PP** and **SO** do not integrate a pump. These systems must be installed when inlet pressure is higher than 3 bar.
- For water with a salinity higher than 2000 ppm contact your distributor.
- It is recommended that you decalcify the water to be treated or that it has maximum hardness of  $15^{\circ}\text{F}$  in order to obtain the optimum performance of the system.
- Should the water to be treated have a level of hardness higher than  $15^{\circ}\text{F}$ , the life of the membrane may be reduced and also the performance of the system.
- SHOULD THE WATER TO BE TREATED CONTAIN:
  - high concentrations of iron and manganese (higher than 1 ppm on average in the rejection of the system),
  - prolonged high chlorinations,
  - sludge or turbidity higher than 3 NTUs,
  - a concentration of nitrates higher than 100 ppm,
  - a concentration of sulphates higher than 250 ppm,
 contact your distributor so that they can recommend the most appropriate pre-treatment for you, and as such ensure the proper working of the system, so as to avoid damage to components and guarantee the quality of the water supplied.

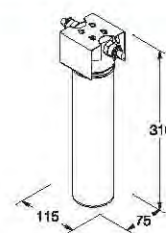
## ft line

The systems of the FT-line series will help you find the most appropriate pre-treatment. For further information, please contact your distributor.



**FT Line PRE**

Ref: 5202000091. For the pre-treatment of domestic osmosis.



**FT Line 82.** Ref: 5202000092. 5µm filtration.

**FT Line 83.** Ref: 5202000093. Activated carbon GAC.

**FT Line 85.** Ref: 5202000095. Cationic resins for decalcification.

**FT Line 87.** Ref: 5202000094. Regulation of pH and remineralisation of acid water.

**FT Line 88.** Ref: 5202000096. Granulated active carbon with silver.

**FT Line 89.** Ref: 5202000097. Mixed bed resins for demineralisation.

**FT Line 90.** Ref: 5202000098. Granulated active carbon GAC with silver and silicopolyphosphates.

### 5.2 Installation of the system

- Should it be necessary to condition the installation of the home in order to install the system in the foreseen location, it must be carried out in accordance with the national regulations in force, concerning internal installations of water and electrical supplies.
  - Models **BP**, **BP+AF** and **BP+UV** systems require a power supply within 1 metre of distance.

- The location foreseen for its installation must have enough space for the system itself, its accessories, connections, and to carry out maintenance comfortably.
- Under no circumstances must the system be installed on the outside.
- The system should not be installed next to a heat source or where it receives a direct flow of hot air (dryer, refrigerator, etc.)
- The surroundings and the environment where the system and faucet are to be installed must meet the appropriate hygienic and sanitary conditions.
- Avoid external drips from pipes, drains, etc. onto the system.

### 5.3 Start-up and maintenance

- The PALLAS series systems need to undergo periodic maintenance, which must be carried out by qualified technical personnel, with the aim of guaranteeing the quality of the water produced and supplied.
- The consumable elements must be replaced with the frequency indicated by the manufacturer (see section 9. Maintenance).
- The system must be hygienised periodically and prior to its start-up.
- Following the start-up, the first two tank fillings must be thrown away.
- Maintenance must be carried out by qualified technical personnel, under the proper hygienic conditions, in order to reduce the risk of internal contamination of the device and its hydraulic system. (For further information contact the technical service of your distributor.)

### 5.4 Use of the system

- Should you be away from home for more than a week, close the water inlet, empty the system and unplug from the power supply. On your return connect the power supply, open the inlet valve and empty the tank twice before consuming the water.
- Following a prolonged period (more than a month) during which the system has not been in operation or produced water, contact your distributor in order to carry out the proper hygienisation and maintenance.
- In order to improve the performance of the system, extract full jugs and bottles and avoid the occasional extraction of glasses of water.

**!** Special attention must be paid to the regular cleaning and hygiene of the system's faucet, and especially during the periodic maintenance. With this purpose use the Oxibac spray (Ref. 5202000099) and disposable kitchen paper towel. Under no circumstances must you use a hand towel or a multiuse cloth for cleaning the kitchen.

### 5.5 Recommendations for the proper use of reverse osmosis water

- If you wish to feed any other consumption point with osmosis water (such as a fridge with an ice-cube dispenser, another faucet, etc.), the piping should not be done with a metal tube, as this would give water a bad taste. Always use a plastic tube (Ref. 5202000042).
- The water supplied by domestic osmosis systems has a LOW MINERAL CONTENT. The mineral salts required by the human body are provided by food, especially by dairy products and to a lesser degree, by the water we drink.
- It is recommended not to use aluminium utensils for cooking with reverse osmosis water.

### 5.6 How to manipulate the UV-C radiation germicide system

Should the equipment have this system, model **BP+UV**, please take into account the following warnings and recommendations:

**!** Lamps and ballasts, and the rest of the components of the system in general, can not be exchanged between systems with different features, references or manufacturers.

When replacing the lamps or ballasts, please make sure they are the models exactly recommended by the manufacturer, in order to prevent any damages on components and guarantee the minimum parameters of operation (service life of the lamp and minimum power of the UV-C light).

- Please do not continuously connect and disconnect the system from the power supply, as this could damage or shorten the service life of some of the electrical components.
- Avoid external drips onto the connecting cap of the lamp, as they could cause a general electric failure.
- The germicide radiation system must not be manipulated without previously unplugging the system from the power supply.



Do not manipulate or extract the lamp when lighted, **AVOID EXPOSURE TO THE RADIATION OF THE LAMP WITHOUT THE APPROPRIATE UVC PROTECTION** (Glasses with UV-C filters, gloves, etc.). Should an exposure occur, do not directly look at the lamp. Exposure to such radiation can cause irritations on eyes and skin.

- The lamp can reach high temperatures during normal operation. Before manipulating it, unplug the system from the power supply and wait for some minutes until the lamp cools down.
- Avoid touching the Q-sleeve surface of the lamp with bare skin. Should this occur, clean it with alcohol before installing it.
- The o-rings of the caps must be replaced every 3 years, as they get worn due to the radiation they suffer.
- The UVC lamp must be replaced after its service life has expired (1 year) or if it fails.

Although the lamp can still emit light after expiring, the germicide power has been reduced and its effectiveness cannot be guaranteed.

- Envisage enough space to carry out the maintenance of the system comfortably and, especially, to replace the lamp without forcing it, since the insulating Q-sleeve, as well as the lamp itself, are very fragile.
- Should the Q-sleeve get broken, carefully check the system and empty the tank several times until guaranteeing there are no Q-sleeve pieces in the hydraulic system that could be dispensed together with water.

**!** The type of quartz used to manufacture the lamp and the Q-sleeve, can be really sharp when broken. Should this occur, manipulate the pieces using the appropriate protection (gloves) and handle with caution.

- After short electric disconnections (of minutes or hours), wait for 5 minutes until the lamp reaches the temperature for the maximum power of emission, before drinking water from the system.
- The supplied water could be lukewarm after long periods and depending on the environmental conditions, due to the heat coming from the UV lamp. The system will always keep the UV lamp on, even if there is no water consumption, in order to improve the performance of the system and enlarge the service life of its components.
- The germicide lamps have a high content of mercury. This product must not be thrown away into the usual urban rubbish bins. Its treatment is similar to that of the traditional fluorescent lamps.

## 6. INSTALLATION OF THE SYSTEM

The installation of your PALLAS osmosis system must be carried out by qualified technical personnel from an authorised technical service. Follow the recommendations in *Section 5 Previous warnings* of this manual. .

*Given that the system that you are going to install improves the quality of the water you consume and is considered a food, all of the tools that you are going to use for the assembly and installation must be clean and, under no circumstances, contaminated or impregnated with grease, oils or rust. Use special tools designed to cut tubes, manipulate the membrane, etc. Keep them disinfected. The work must be carried out under adequate hygienic conditions, taking the necessary precautions with everything related to the materials that are going to be in contact with the water to be treated or consumed. (For further information contact your distributor.)*

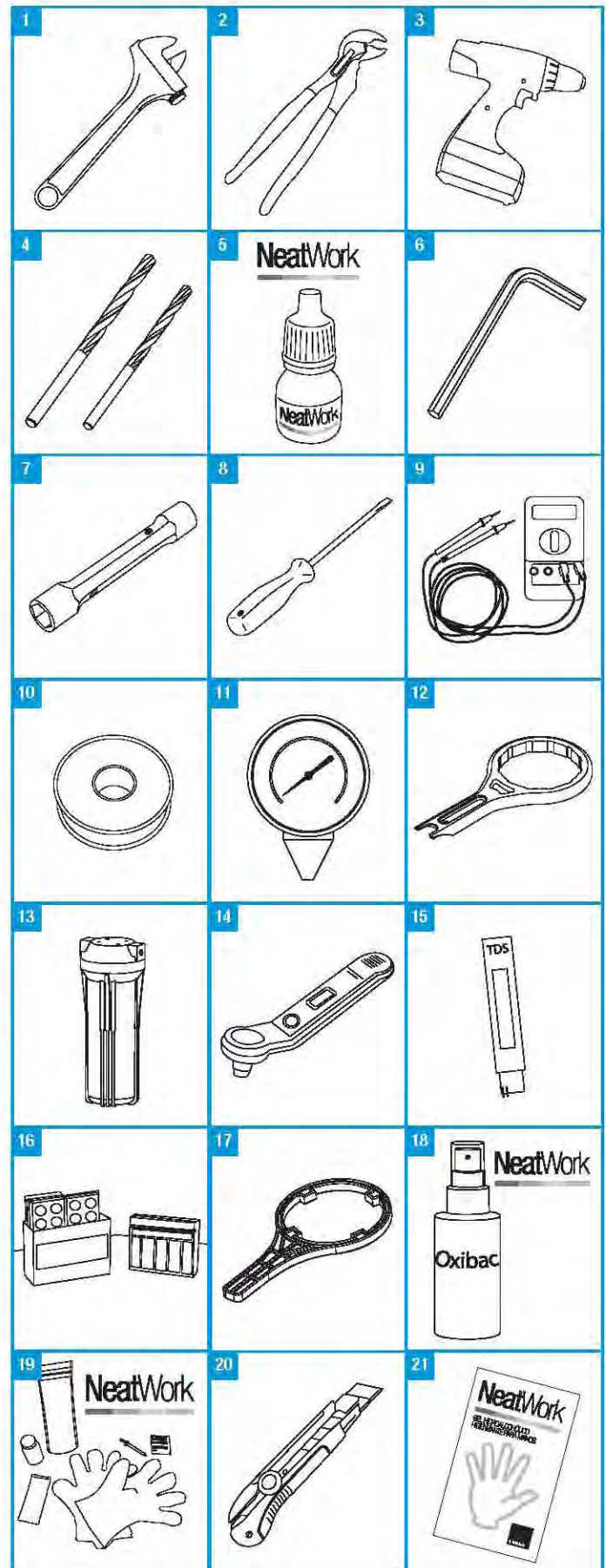
*Use the hygienising hand gel (Ref. 5202000100) as frequently as necessary before and during the installation, start-up and maintenance of the system.*

The most usual place for the installation of the system is under the sink in the kitchen or in a cupboard next to it.

### TOOLS FOR INSTALLATION, MAINTENANCE AND START-UP:

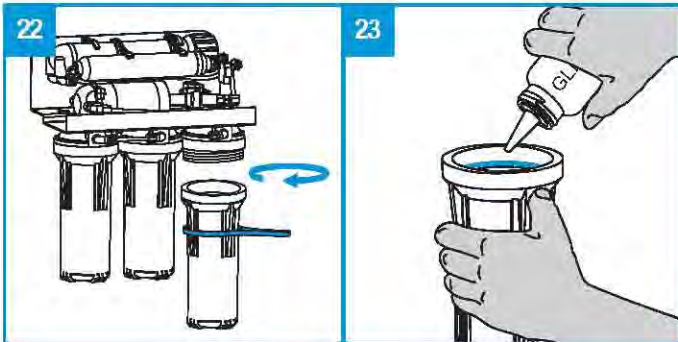
TOOL	REFERENCE	IMAGE
Adjustable wrench	-	1
Vice grip pliers	-	2
Drill	-	3
12 and 6 mm drill bits	-	4
Food-grade glycerine	5202000101	5
No. 2 allen wrench	-	6
No. 14/15 mm double socket wrench	-	7
Minus screwdriver	-	8
Electric multimeter	-	9
Teflon tape	-	10
Pressure gauge*	5202000102	11
Membrane housing wrench*	5202000103	12
Filter housings + 2 x 1/4" fittings	5202000001 + 5202000104	13
Air pressure display for tank check	5202000105	14
Portable conductivity meter*	5202000106	15
Chlorine analyser*	-	16
Filter housing wrench	5202000040	17
Oxibac spray*	5202000099	18
Hygienization kit*	5202000107	19
<i>CONTENTS: Test tube, gloves, 2.5ml syringe, paper towels, bottle for mixing and OSMOBAC disinfectant.</i>		
Cutter	-	20
Hygienising hand gel	5202000100	21

\*Check with your distributor.

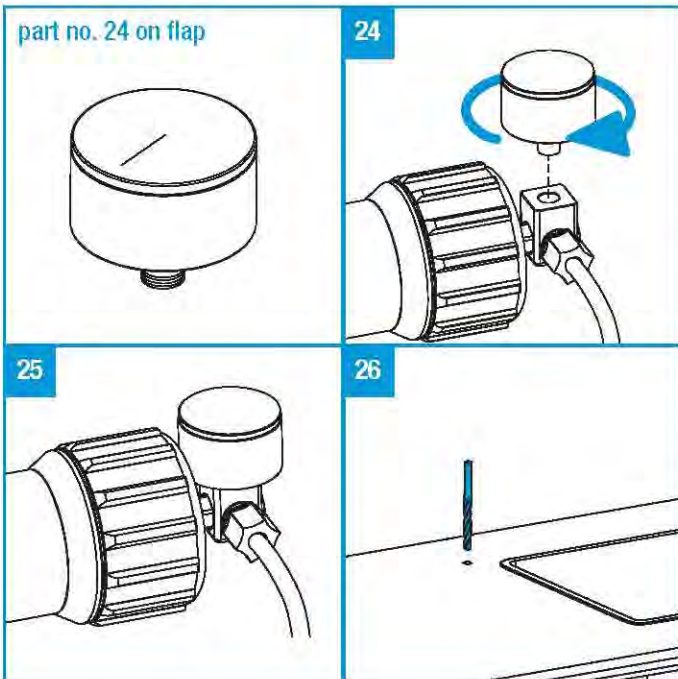


## 6. Installation of the system

1. Screw the filter housing cups in their caps. Lubricate the o-rings with food-grade glycerine, in order to prevent them to get pinched and distorted when screwing the housing cups. **Images 22 and 23.**



2. In models **BP**, **BP+AF**, **BP+UV** and **SO** assemble the pressure gauge included with the accessories, **part no. 24 on flap**, in the corresponding connector of the elbow located at the membrane housing inlet. **Images 24 and 25.**



3. Once it has been decided where to put the faucet on the counter-top or sink (usually in the corner), a hole is drilled in it with the 12mm bit, to pass the threaded connecting pipe through. **Image 26.**

Use the metal escutcheon to choose the position of the drill. If the metal escutcheon of the faucet creates any difficulty when being assembled, due to the geometrics of the

counter-top or sink, use the rubber joint supplied instead of the metal escutcheon, in order to assemble the faucet.

**!** Choose the bit and the type of drill that is appropriate for the specific material.

4. Prior to this, insert the thick rubber joint in the threaded connecting pipe (it must be on the upper part of the counter-top).

Then pass the threaded connecting pipe through the hole. Afterwards, place the flat rubber joint, the rigid plastic washer, the grower washer and the hexagonal nut through the lower side of the threaded connecting pipe. They should be tightened together with the No. 14/15mm double socket wrench, until the faucet is completely static and properly positioned.

The faucet will be positioned as required before the final tightening (it is recommended that the faucet handle is positioned towards the exterior of the counter-top). **Image 27.** If the counter-top is thicker than that of the threaded connection pipe of the faucet, the tap adaptor can be used (Ref.5202000089). **Image 28.**

5. Choose the location of the system and make sure there is enough space for the pressure tank. **Image 29.**

Install the system by fixing it using the holes on the rear side and the appropriate screws.

It is recommended that the housing cups lean on the floor, in order to not to force the wall of the cupboard once the system is full of water.

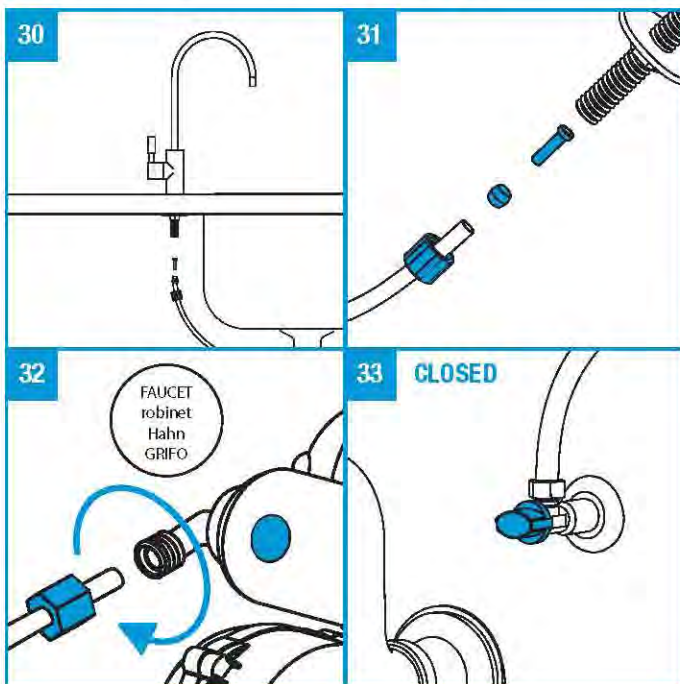




6. Connect the faucet with the connector marked as "faucet-grifo" using the 1/4" white tube, **part no. 45 on flap**. Prior to this, cut the tube to the required length.

**!** In order to carry out all the connections, use a longer tube, so as to facilitate the movement and maintenance of the system once it has been installed, preventing unnecessary disconnections or difficult access.

Carry out the connection of the faucet by inserting the metallic nut, compressing ring and insert through the end of the 1/4" tube. **Images 30 and 31**. Introduce the end of the tube inside the threaded connecting pipe and screw the nut using the adjustable wrench or until you are sure it has been properly connected. The connection to the system must be carried out in the connector marked as "faucet-grifo". Unscrew the nut of the connector, extract the protective cap, insert the nut at the end of the 1/4" tube, which comes from the faucet, and screw it in the system's connector. **Image 32**.



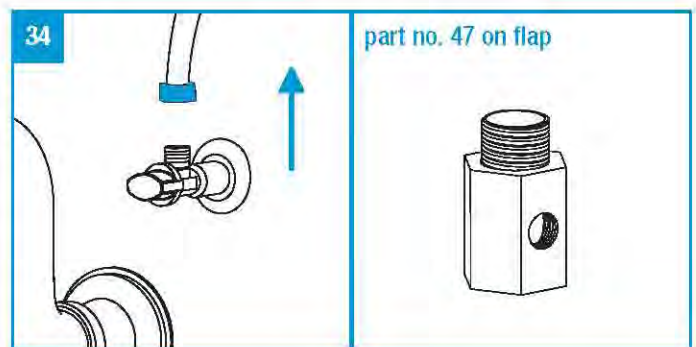
7. After this, the hydraulic connection of the system to the network shall be made. As the network is under pressure, the stopcock located in the cold water outlet must be closed. **Image 33**.

Depending on how old the installation is, there may be no right angle valve, so it will be necessary to turn off the general stopcock of the house.

Immediately afterwards, depressurize the installation by turning on the faucet of the sink and wait until water stops coming out of it.

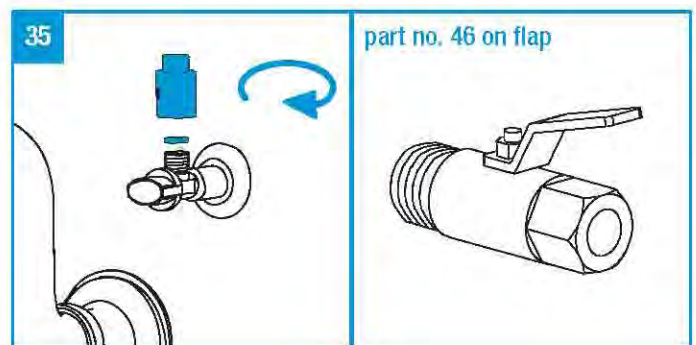
**!** Make sure that the connection to the system is going to be carried out in the cold water pipe connection. If the connection is made in the hot water pipe, it may damage important components of the system. (Generally the cold water pipe connection is found to the right.)

Unscrew the connection of the hose or flexible pipe, **image 34**. Have a receptacle or cloth ready to collect or wipe up the water that may come out of the flexible pipe when unscrewed. Insert the 3/8" wall adaptor, **part no. 47 on flap**, between the connector on the wall and the valve or flexible pipe.



The 3/8" flat joint that is inserted makes it unnecessary to use a sealant (Teflon wire, liquid Teflon, hemp twine, etc.), **image 35**.

Assemble the 1/4" manual inlet valve, **part no. 46 on flap**, in the side hole of the wall adaptor. **Image 36**.



A sealant should be added to this valve to ensure that it has been assembled properly and that it is tight. The use of Teflon is recommended, as it is a clean, quick sealant and safe on brass threads. The two connectors (3/8" and 1/4") must be screwed in with an adjustable wrench until you are sure that it is properly assembled and tight.

Afterwards, connect the flexible pipe (usually female) to the male connector of the 3/8" adaptor.

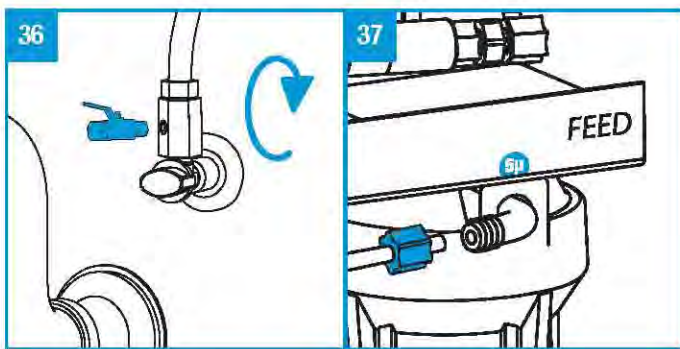
**!** Should it be necessary to install a special component, it should not be iron or contain iron, as on rusting these can reduce the performance of the system.

## 6. Installation of the system

To ensure the proper installation and tightness of the connections, open the right angle valve (or where applicable the general stopcock), first making sure that the 1/4" inlet valve has been closed. Once the stopcock is open, turn on the faucet on the counter-top to bleed any air that may be inside (beware of any spurts or splashes of water).

Check the 1/4" valve, as depending on how old it is and the material used in the assembly of the house installation, it may become blocked, due to fouling in the installation, whose particles may come loose once there is water coming through or pressure.

Next, connect the 1/4" white tube, between the 1/4" inlet valve and the connection of the system marked as "feed water/entrada", **image 37**. Make sure that the tube is inserted properly and that the corresponding nuts have been tightened. Ensure that the 1/4" inlet valve remains closed until the end of the installation of the system.

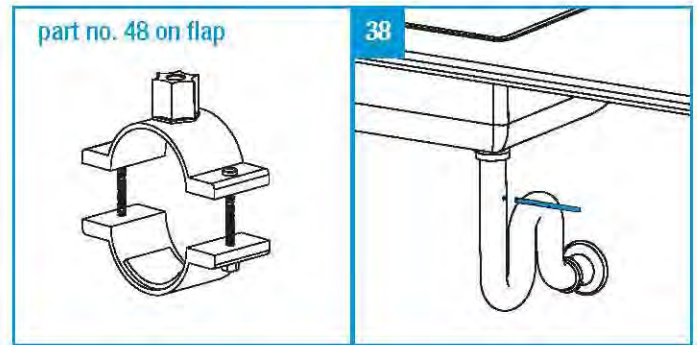


**8.** Afterwards, the drain clamp must be assembled, **part no. 48 on flap**. Bear in mind that this clamp is designed to be assembled on a 40mm diameter drain pipe. Should this not be the diameter of the drain pipe, contact your components supplier to make the correct connection.

Using the drill, and this time with a 6mm bit, make a hole between the mouth of the drain pipe of the sink and the u-bend. (It is recommended to do so on the upper part of the tube, so that any rubbish thrown away from the sink does not block the hole or water flow outlet.) Envisage the necessary space for the assembly of the clamp, **image 38**.

Next, the drain clamp shall be assembled, but making sure that the hole you have made is completely aligned over the front part of the 1/4" connector (part where the square pad goes). This is done by putting the bit, used for making the 6mm hole, through the hole there is between the clamp and the drainpipe; thereby avoiding any obstacle to the flow of water towards the drain.

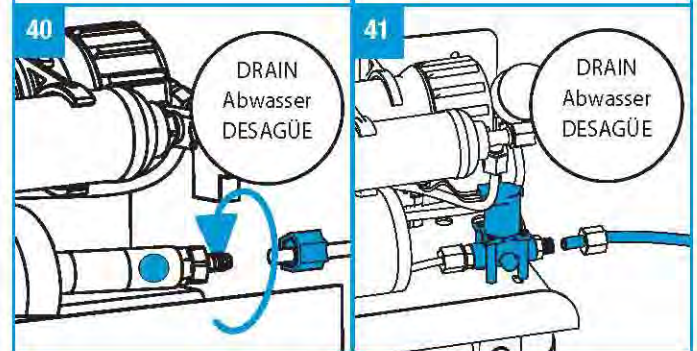
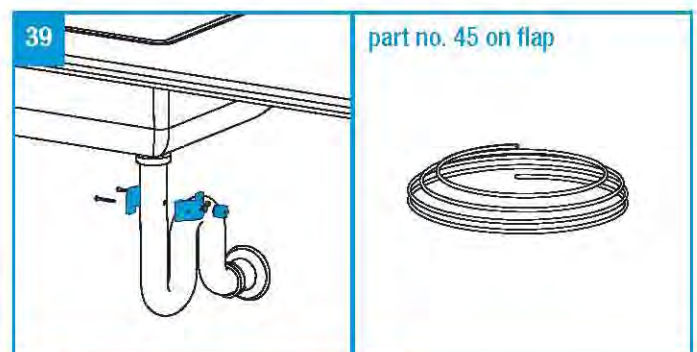
Place the nuts in the holes on the bottom part of the clamp and afterwards put in the corresponding screws. The nuts must be screwed in carefully and progressively, alternating between the



two. Try not to force the components. **image 39**.

Connect the 1/4" tube, **part no. 45 on flap**, between the thread of the drain clamp and the connection of the system corresponding to the drain. In models **BP**, **BP+UV** and **SO**, the drain connector is located at the outlet of the flow restrictor. **Image 40**.

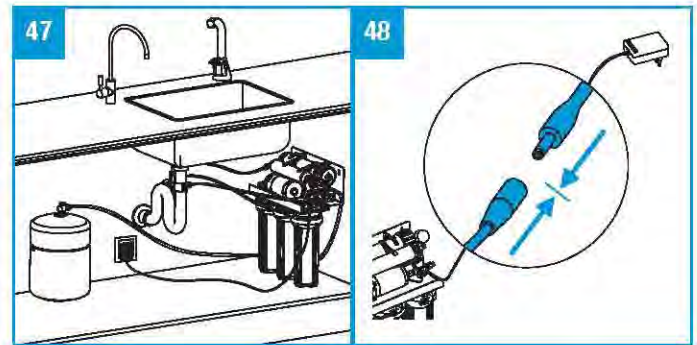
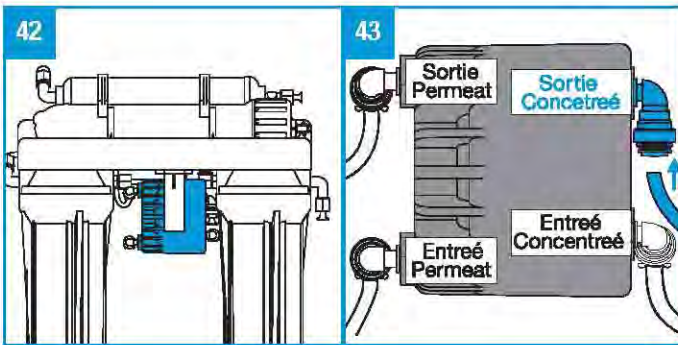
In model **BP+AF**, the drain connector is located at the outlet of the flushing electrovalve, **image 41**, marked as "drain-desagüe".



In model **PP**, the drain connector is located in the indicated connector of the permeate pump, **images 42 and 43**, marked as "sortie-concentrée".

**!** The concentrate output, (rejection), must always be on the upper side of the pump, in order to guarantee its proper operation.

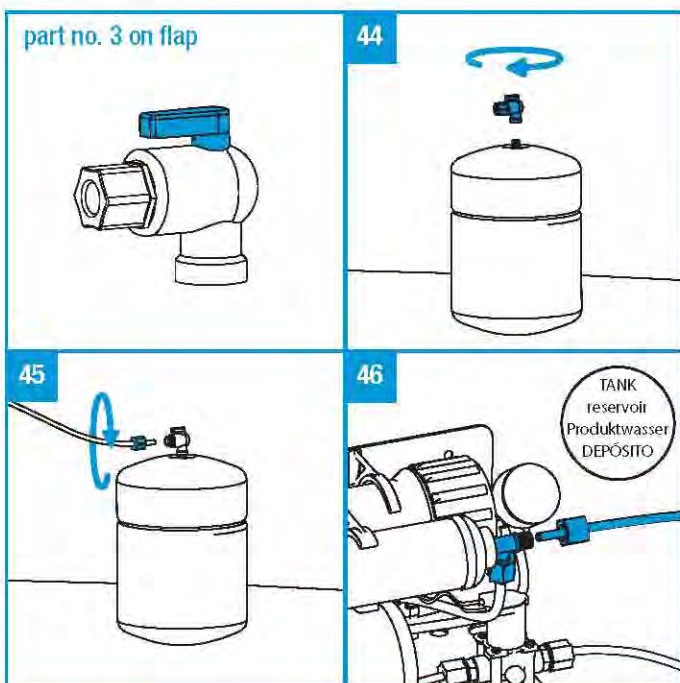
Use the adjustable wrench to ensure that the tube in the nut



of the drain clamp is properly tightened (for the proper positioning of the tube in relation to the nut, this should stick out of the front part of the nut about 2 mm).

**9.** Connect the pressure tank and the connector of the system marked as "tank / depósito" using the 1/4" tube. Apply Teflon in the tank connector and screw the tank valve on, **part no. 3 on flap, and image 44**. Connect the 1/4" tube in this tank valve. **Image 45**.

The other end of the tube must be connected to the connector of the system marked as "tank / depósito". **Image 46**.



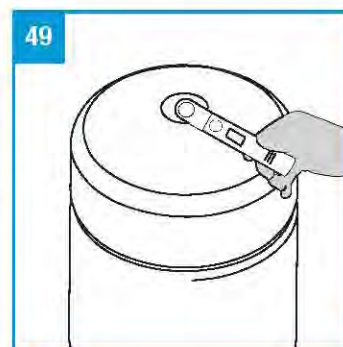
**10.** If necessary, a power supply (plug) shall be put in near the system (<1m) to power it, according to the national regulation in force, for models **BP**, **BP+AF** and **BP+UV**. Connect the aerial connector integrated in the system to the transformer, **images 47 and 48**.

**11.** Make sure that all the joints have been screwed in pro-

perly. Remember that when pressure is higher than 3 kg/cm<sup>2</sup>, a pressure regulator (Ref. 5202000090) should be installed between the feed tube and the system, at a pressure of 2,5 kg/cm<sup>2</sup>. Models **BP**, **BP+AF** and **BP+UV**.

**12.** Should you wish to feed any other consumption point (faucet, fridge with ice-cube dispenser, etc.), use a 1/4" plastic tube (Ref. 5202000042) and a 1/4" equal tee (Ref. 5202000071) for each extra connection you require.

**13.** Check that the pressure of the tank is 0.5 bar (7 PSI), when it is empty, using the portable pressure gauge and the valve located at the bottom of the tank. Should this not be the case, inflate or empty the pressurised tank until you obtain the indicated pressure. **Image 49**.



## 7. START-UP

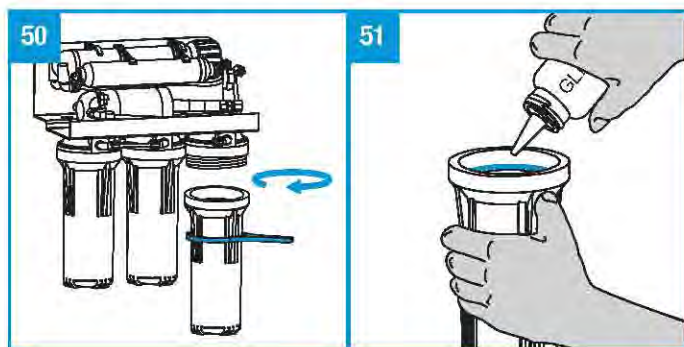
After installing the system, proceed to the start-up of the system. It is recommended that this be carried out by professional technical personnel and in accordance with the following procedure. Before carrying out the start-up, read Section 9.2 *Hygienisation*, of this manual.

1. Keep the 1/4" inlet valve closed. **Image 52.**

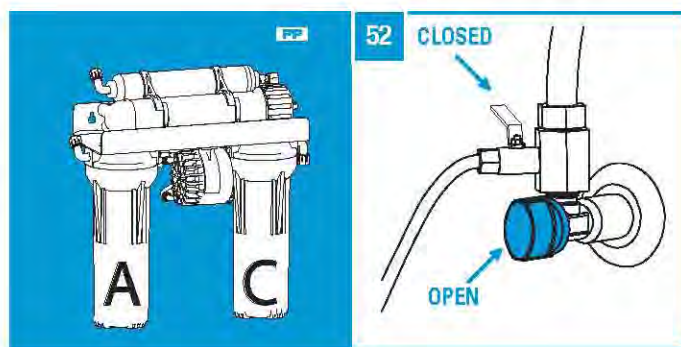
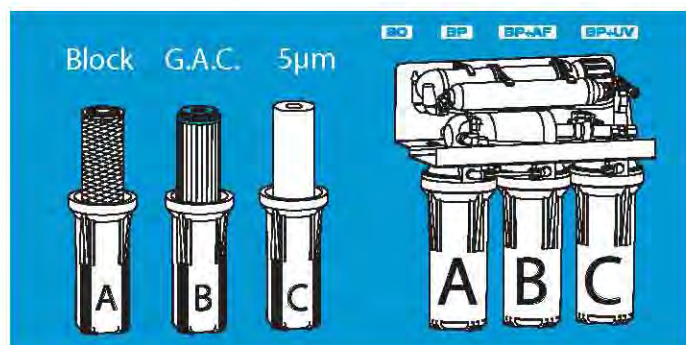
2. Extract the filters from their packaging and remove the protective film around them, used to guarantee the hygienic conditions during transport and manipulation. Place them on a clean surface or on a disposable kitchen towel.

**!** Throw the plastic bags away or keep them away from children as they may cause them harm.

When assembling the carbon filters, check that the flat joints of the edges are centered with the cup adaptor and the corresponding cap, without pinching them. Check that the o-rings of the housings do not have any defect. Slightly cover the o-rings with food-grade glycerine (Ref. 5202000101) in order to guarantee that they will slide and not get pinched when screwing the housing. **Images 50 and 51.**

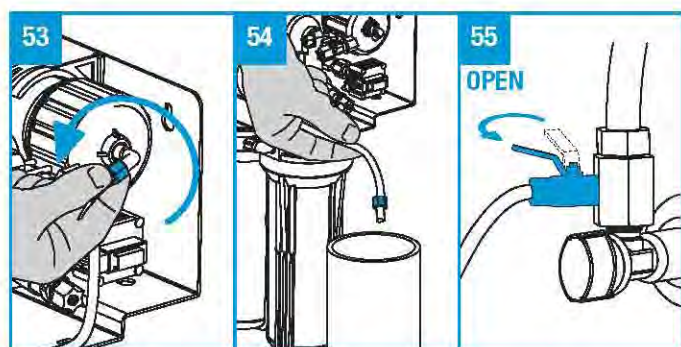


3. Insert the filters inside each filter housing cup in the order indicated on the image below:



4. Keep the 1/4" inlet valve closed, open the right angle valve and connect the system to the power supply for models, **BP+AF** and **BP+UV**. **Image 52.**

5. Disconnect the feed tube to the membrane housing or the pump and turn it towards an external vessel. **Images 53 and 54.**



6. Open the 1/4" inlet valve, **image 55**, and wash out the filter system until water runs clear. This way, the powder generated by the granulated carbon in the filters during transport and manipulation is removed. This dust must be removed, since it could completely or partially block the reverse osmosis membrane.

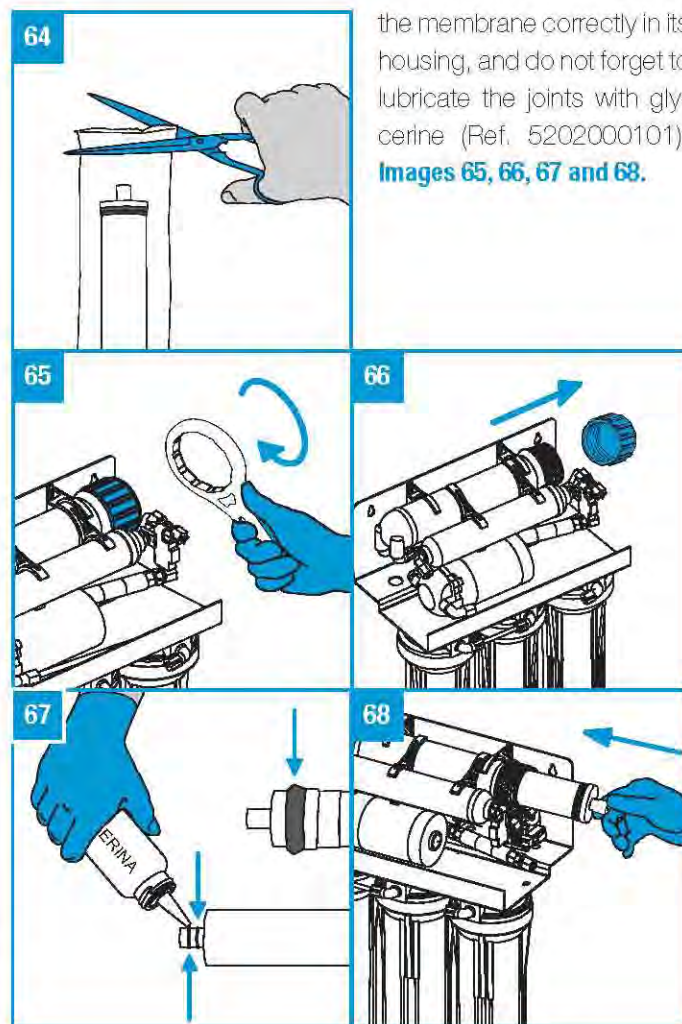
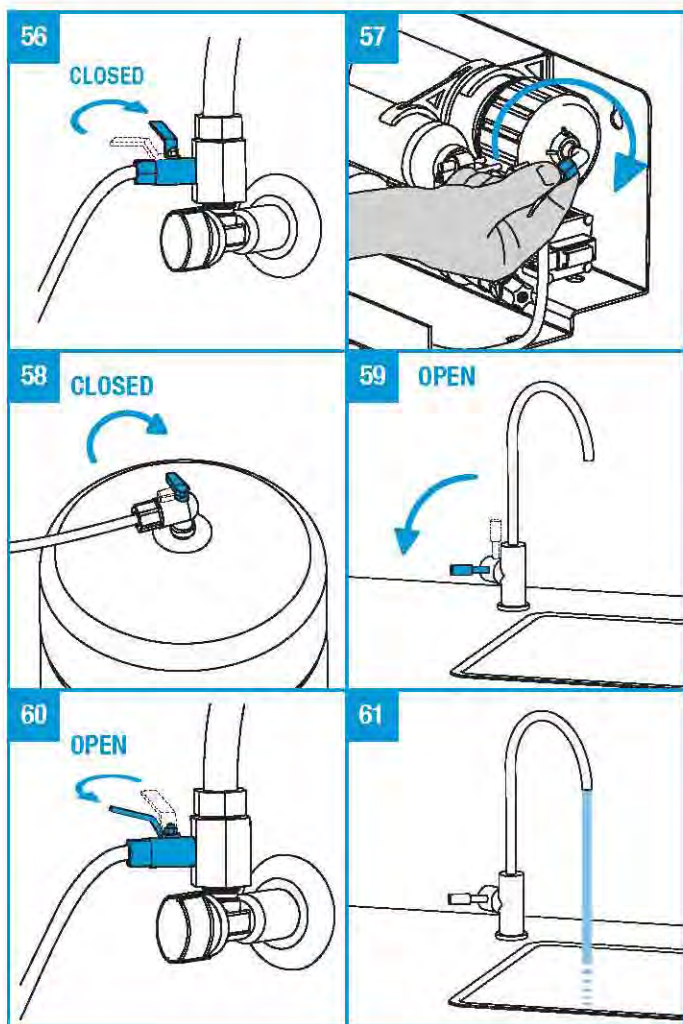
**!** Do not use the faucet of the system to wash the carbon pre-filters, as the carbon dust that you are trying to remove will penetrate the different components of the system, which may lead to their malfunction.

7. Close the 1/4" inlet valve and connect again the inlet tube of the membrane housing. **Images 56 and 57.**

8. Keep the tank valve closed. **Image 58.**

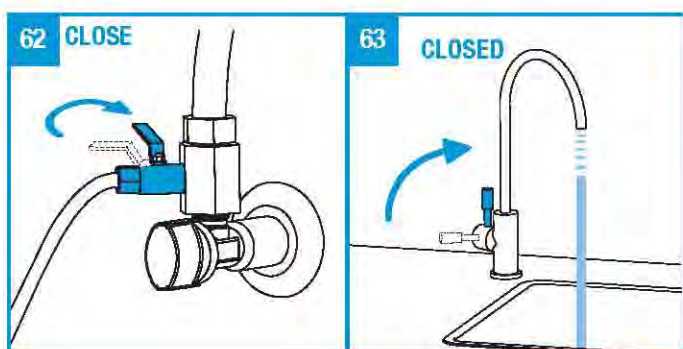
9. Wash the carbon post-filter. To do so, open the counter-top faucet of the reverse osmosis system, **image 59.**

10. Open the inlet valve and let water flow through the faucet



the membrane correctly in its housing, and do not forget to lubricate the joints with glycerine (Ref. 5202000101), **Images 65, 66, 67 and 68.**

of the system, **images 60 and 61.** If the post-filter is new, water will initially be dark for the same reason explained in point 6. Keep the faucet open, thus washing the post-filter for some minutes, until water runs clear. Then, while the counter-top faucet is open, close the inlet valve to the system and wait until water stops coming out of the faucet. Close it, **images 62 and 63.**



**11.** Open the wrapping of the membrane and follow the strictest hygienic measures when handling it. **Image 64.**

**12.** The inlet valve must remain closed. Assemble and position

Before opening the membrane housing, make sure you have a receptacle ready where you can partially empty it, as it will be full of water.

Check the internal pressure of the tank, which must approx. be of 7 PSI (0.5 bar), when it is empty.

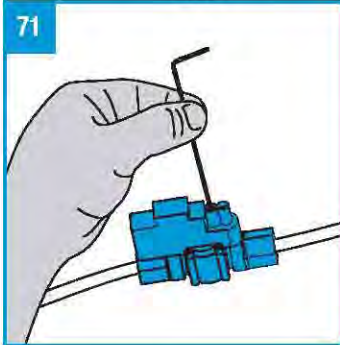
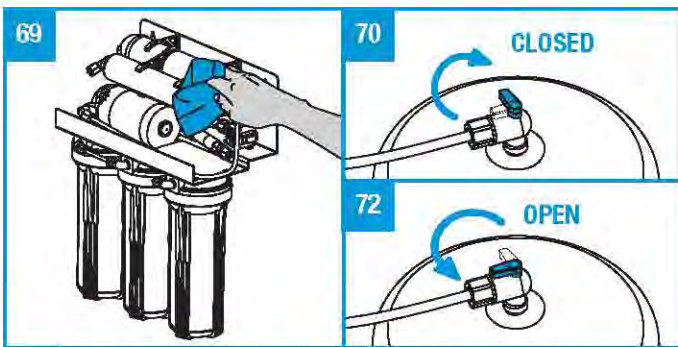
Dry all the parts that may have got wet using a disposable kitchen towel. **Image 69.**

**13.** Close the counter-top faucet, open the inlet valve and keep the power supply on, for models **BP**, **BP+AF** and **BP+UV**, and visually check there are no leaks on the system (for 5 minutes approx.).

To ensure the proper operation of all the components of the system, close the tank valve, thus quickly pressurizing the system. **Image 70.**

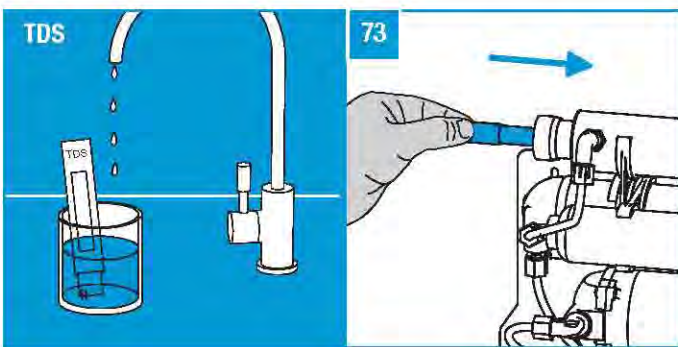
Should the pump of the system not stop, in models **BP**, **BP+AF** and, adjust the tare of the high pressure switch with a no. 2 allen wrench, until the pump stops. **Image 71.**

Once everything has been checked, open the tank valve again. **Image 72.**



14. Turn on the counter-top faucet and using the conductivity meter or the TDS, check the quality of the water coming out after it has been running for some minutes. Check that the reduction of salts is correct. The tank must be emptied twice before consuming the produced water.

before consuming the produced water.



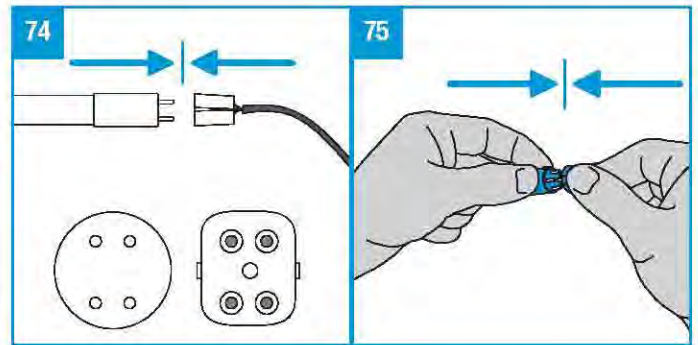
15. Sometimes, the produced water can be cloudy. This is caused by micro air-bubbles (due to the air pockets there may be inside the system). They do not have any harmful effect on the quality of the drinking water. This appearance of the water will slowly disappear as the air inside the system is removed.

16. Only for models **BP+UV** which incorporate a germicide treatment system. Remove from the packaging and handle the lamp following the previously given instructions in Section 5.6 *How to manipulate the germicide system of UV-C radiation*. Insert the lamp inside the Q-sleeve of the UV housing without forcing it. The end with the 4-pin cap must be positioned to the outside. **Image 73.**

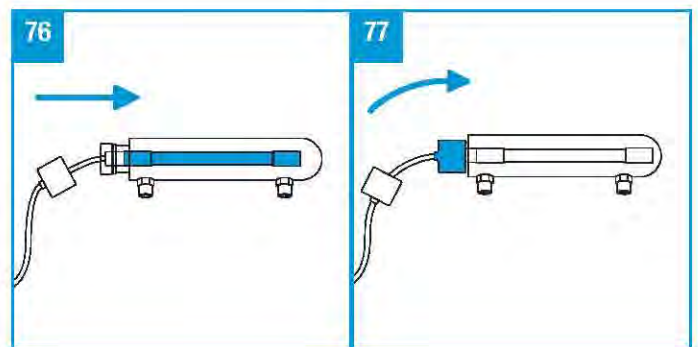
**!** Remember that the system must be unplugged from the power supply.

Gently connect the lamp cap to the female connector with the

rubber protective cap. **Images 74 and 75.** Since the position of the 4 pins is not symmetric, do not force the connectors. Should you have any difficulties to carry out this connection, try it again until connecting it easily.



Insert the lamp until the bottom of the Q-sleeve inside the UV housing. **Image 76.** Fit the rubber cap to the cap of the UV housing. **Image 77.** Once the lamp is installed, make sure that all the components of the hydraulic system are properly connected to prevent any leaks.



**!** Do not manipulate or handle the lamp while it is lighted. DO NOT GET EXPOSED TO THE LAMP RADIATION WITHOUT THE PROPER UVC PROTECTION (glasses with UV-C filters, gloves, etc.). Should this exposure occur, do not directly look at the lamp. The exposure may cause irritations on eyes and skin.

17. After plugging the system to the power supply, slightly separate the rubber protective cap and check that the lamp is on, as well as the LED on the ballast.

## 8. OPERATION OF THE PALLAS SERIES SYSTEMS

### COMPONENTS OF THE PALLAS SYSTEMS

1	Connection kit and manual inlet valve
2	Sediment filter
3	Granulated Active Carbon filter (GAC)
4	C.T.O. Carbon Block filter
5	Booster pump
6	Reverse osmosis membrane
7	Check valve
8	Shut-off valve
9	Drain clamp
10	Pressure tank
11	High pressure switch
12	Activated carbon post-filter
13	Faucet on counter-top
14	Low pressure switch
15	Inlet electrovalve
16	Flushing electrovalve with flow restrictor
17	Germicide treatment system with ultraviolet radiation
18	Pressure gauge at the inlet of the membrane
19	Flow restrictor
20	Permeate pump

### 8.1 Description of operation

Tap water to be treated, goes through the manual inlet valve (1) and enters the system going through the sediment filter (2), the carbon GAC filter (3) and the carbon block filter (4). In this stage of filtration, the particles in suspension, the chlorine and its by-products, and other organic substances are retained.

The flow of water towards the interior of the system is controlled via the shut-off valve (8) **SO** / the electrovalve (15) **BP**, **BP+AF**, **BP+UV** / the permeate pump (20) **PP**.

The water, after leaving the filtration stage, is pushed towards the reverse osmosis membrane (6) via the booster pump (5) **BP**, **BP+AF**, **BP+UV**. The water pressure against the membrane makes the reverse osmosis process possible. This pressure is shown on the pressure gauge (18) at the inlet of the membrane housing **SO**, **BP**, **BP+AF**, **BP+UV**.

Purified water is stored in a tank (10) after going through a check valve (7).

Rejected water or that with an excess of salts and other dissolved substances, is diverted to the drain (9) for it to be removed. Before this, it goes through a flow restrictor (19)

**SO**, **BP**, **BP+AF**, that is located in the flushing electrovalve (16) **BP+AF** or in the elbow at the outlet of the membrane housing's rejection too **PP**.

In systems operating without power supply **SO**, **PP**, when the tank (10) is full, the system stops and the water inlet of the system is cut via a shut-off valve (8) **SO** or a permeate pump (20) **PP**. In both cases, the operating principle is based upon the hydrostatic pressure difference among specific components of the system.

The permeate pump (20) **PP**, improves the performance of systems without pump, by recovering part of the fluid dynamic energy of rejected water before diverting it to the drain.

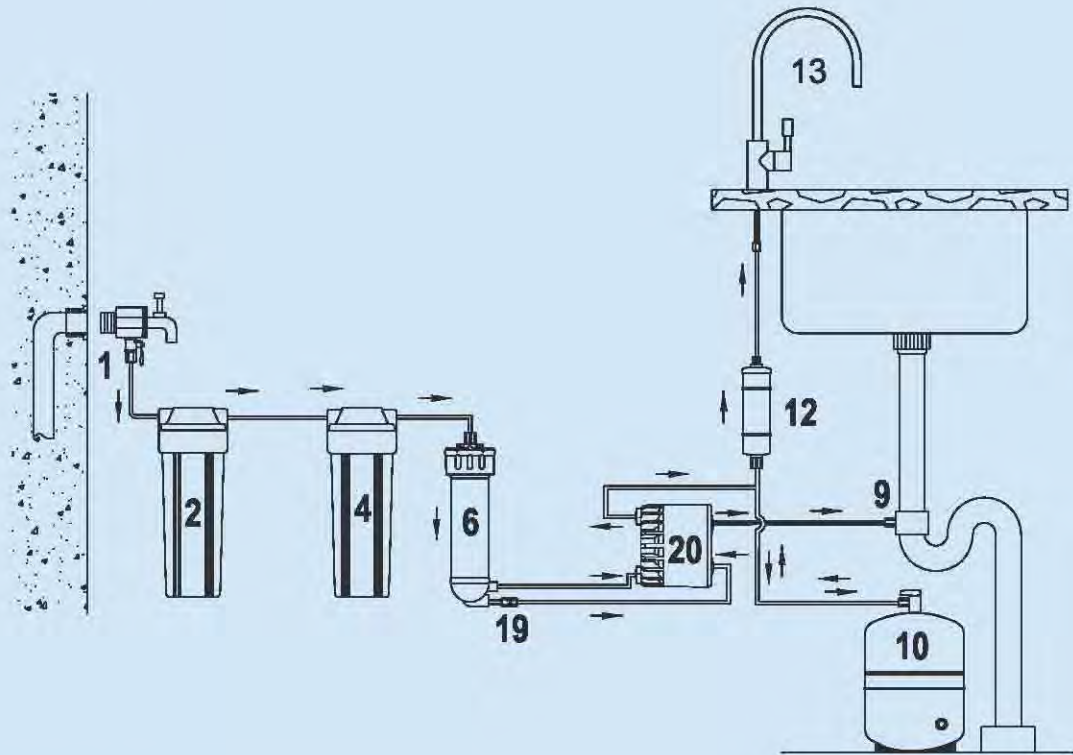
For models with pump **BP**, **BP+AF**, **BP+UV**, when the tank (10) is full, the system stops working thanks to the high pressure switch (11), since it stops the pump (5) and makes the inlet electrovalve (15) get closed. These systems integrate a low pressure switch (14) as a protection device for the pump (5) against pressure drops in the network. Should this happen, the system would remain with the inlet electrovalve (15) closed, the pump stopped (5) and would only provide the water stored in the tank (10) until the network pressure was re-established.

When the faucet (13) of the system is turned on, the stored water inside the tank (10) goes through a carbon post-filter (12), whose aim is to remove all odours and tastes that water may have retained.

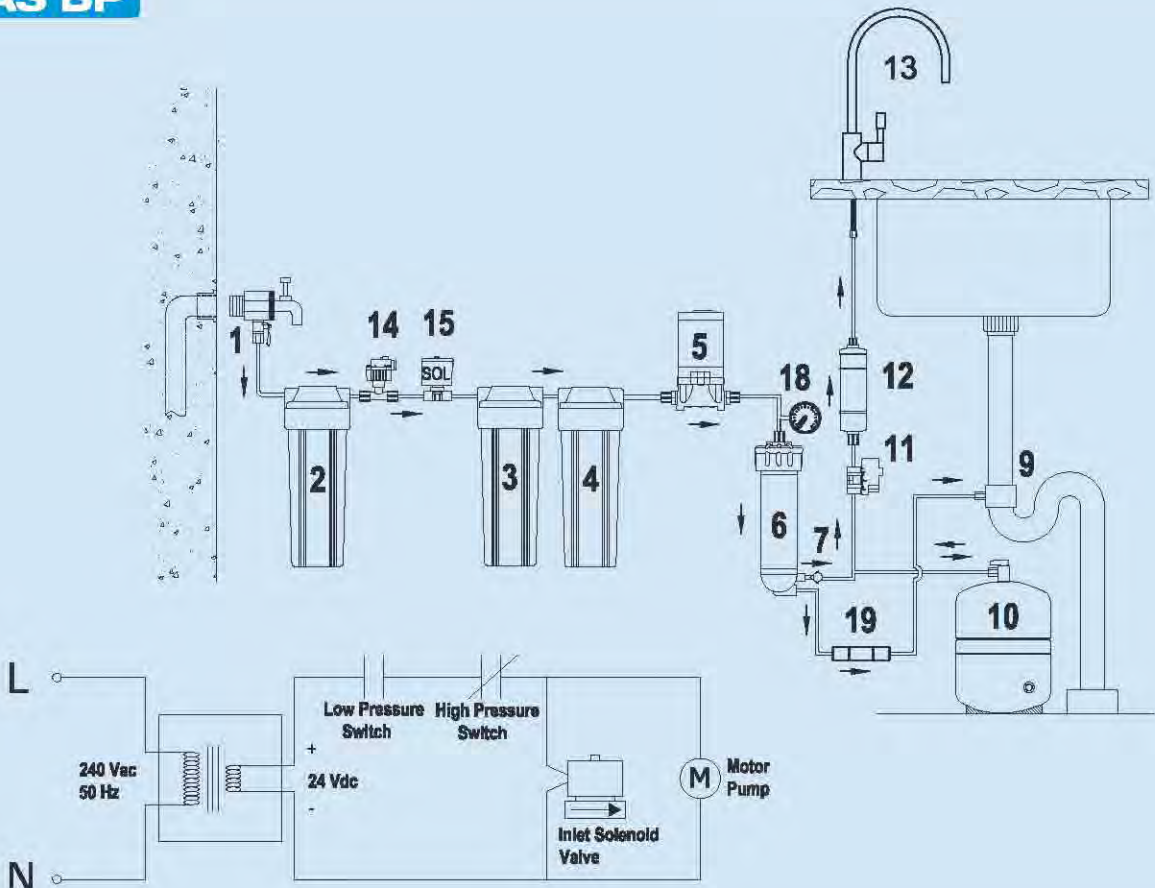
Model **BP+UV** has an additional safety system, which consists of a germicide treatment system containing an ultraviolet light (17). It treats water just before going to the faucet.

Model **BP+AF** integrates an auto-flushing system, also known as membrane self-cleaning. Here the flushing electrovalve (16) will automatically and periodically clean the surface of the membrane. Its operation is controlled with an electric circuit. This system enlarges the life of some components of the system removing some of the features of the water to be treated.

**PALLAS PP**



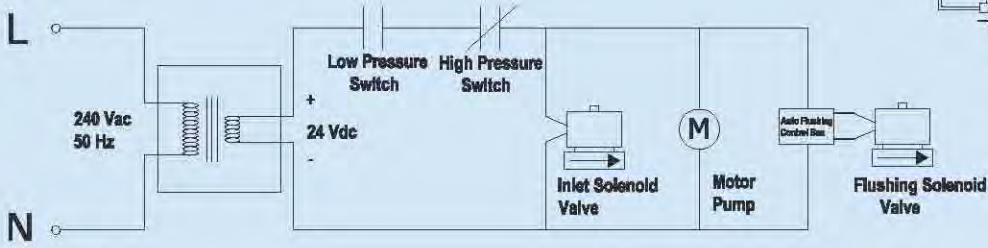
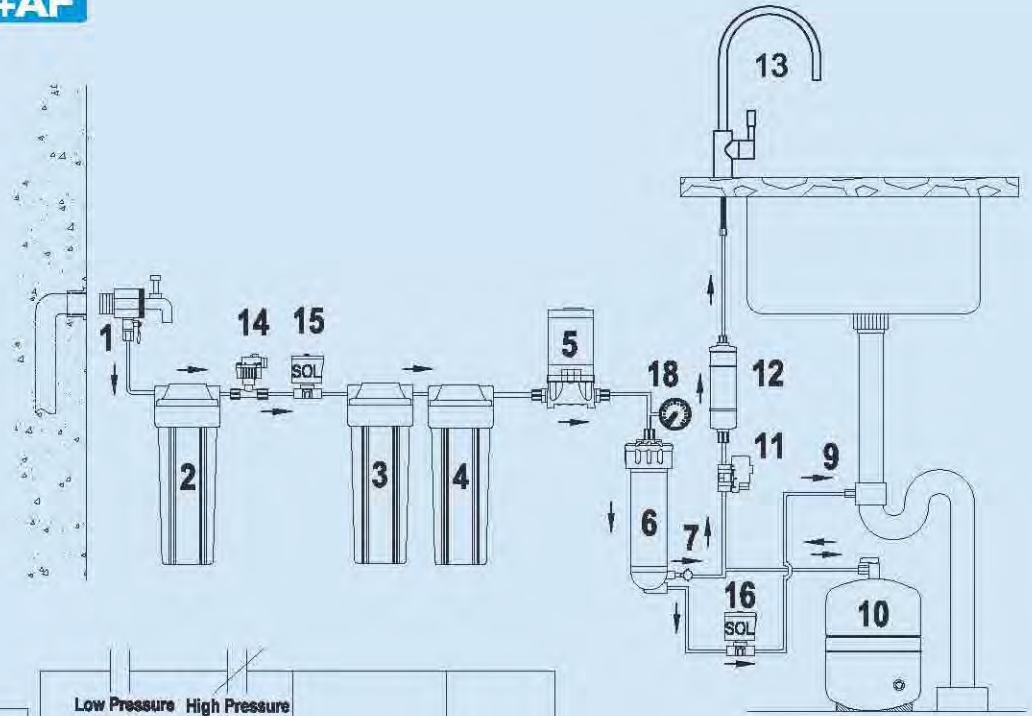
**PALLAS BP**



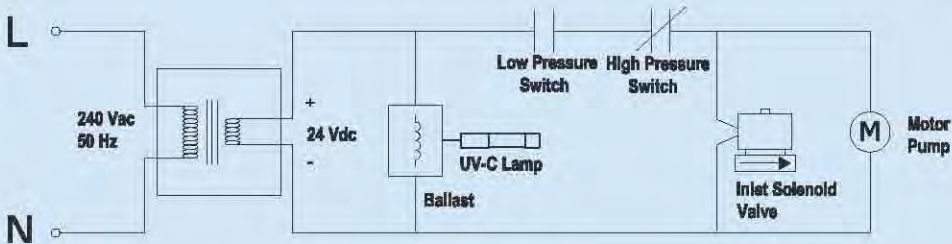
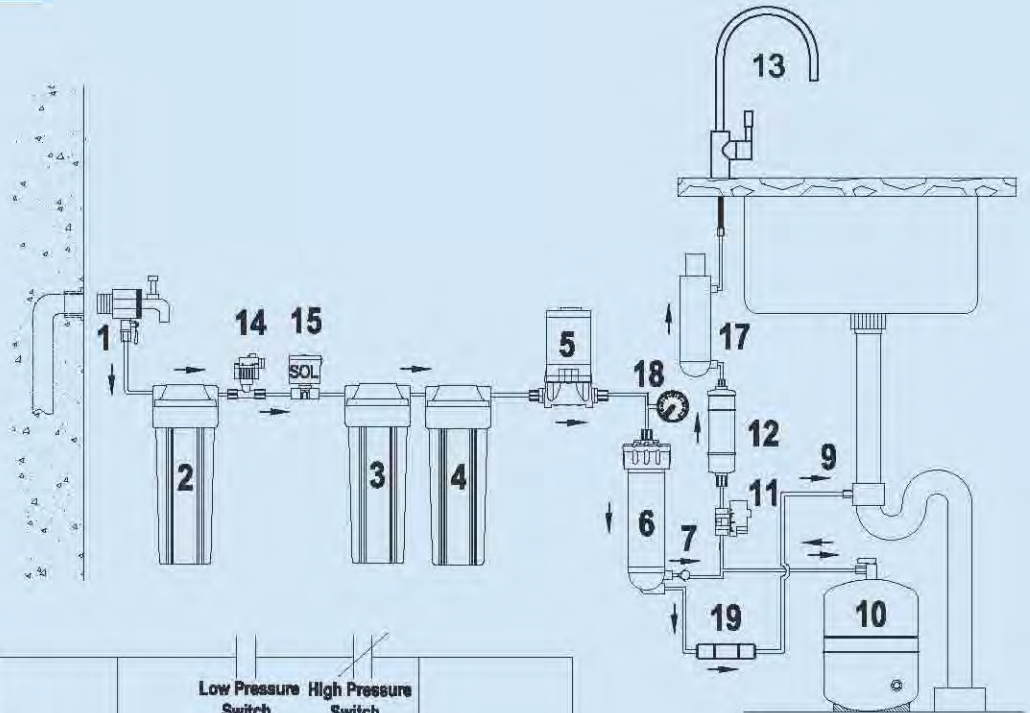
ENGLISH



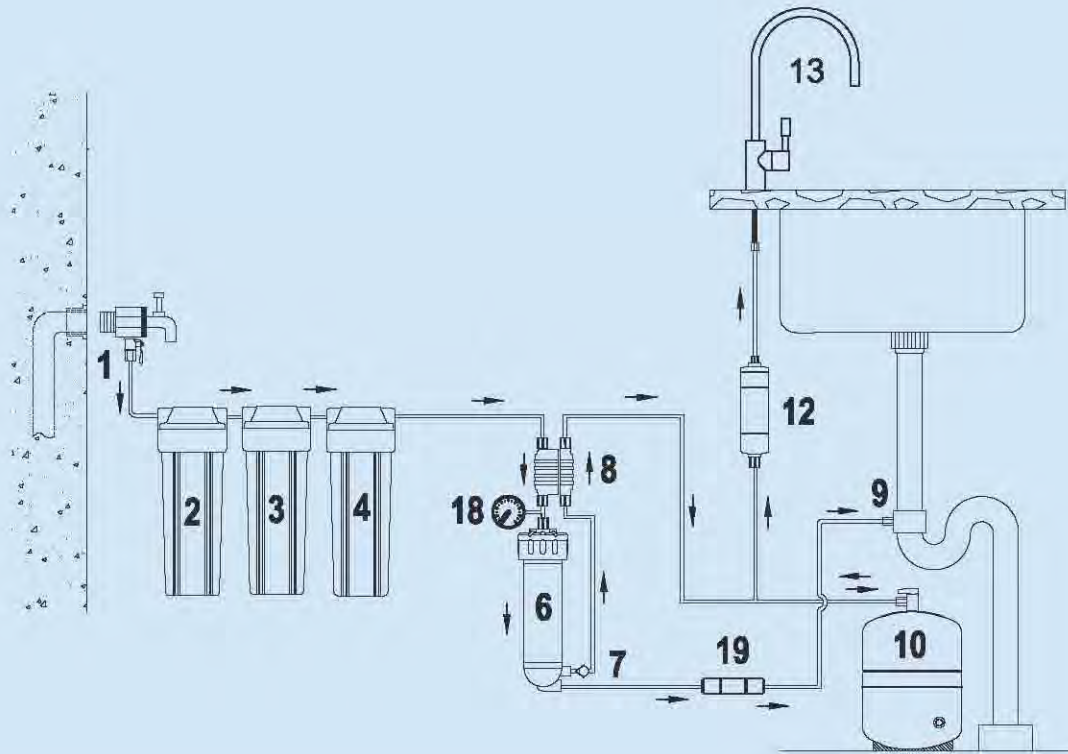
**PALLAS BP+AF**



**PALLAS BP+UV**



**PALLAS SO**



## 9. MAINTENANCE / CONSUMABLES

It is important that the maintenance of your system is carried out by an official service of the PALLAS series, which will use original spare parts and offer you information, a maintenance contract and a service guarantee. Any manipulation of the system or use of a spare part that is not original, by a company or person that is not a member of our distributors shall invalidate the guarantee of your system as well as that of your distributor.

**WARNING: Some of the components of your system, such as the sediments pre-filter, the granulated active carbon filters, the reverse osmosis membrane the UV lamp and the activated carbon post-filters, are consumables and have a limited service life.**

Their service life will depend on the quality of the local water and on specific aspects such as extreme turbidity, high chlorine levels, excess of iron, etc.

**!** With the aim of guaranteeing the quality of the water supplied by your system, it should have a regular maintenance carried out by skilled technical personnel.

### MAINTENANCE RECOMMENDATIONS FROM YOUR OFFICIAL DISTRIBUTOR OF THE PALLAS SERIES

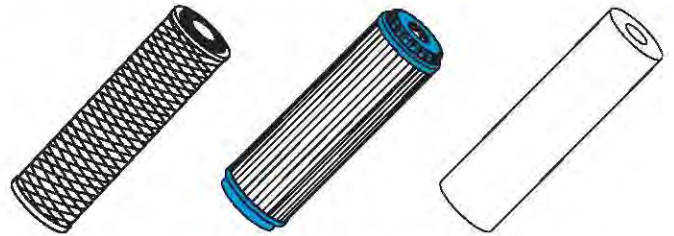
Sediment pre-filter:	Maximum 12 months.
Carbon pre-filters:	Maximum 12 months.
Reverse osmosis membrane:	Every 3 years approx. in soft water < 15 °F
Post-filters:	From 12 to 24 months.
Hygienisation:	Start-up. Every 6-12 months. Each time components in contact with water are accessed or water has not been consumed for more than a month.
UV lamp	Every 7-12 months, model <b>BP+UV</b> .

**NOTE:** The membrane must be replaced if a specific compound exceeds the maximum allowed limit for drinking water according to the national regulation in force.

An excess of a compound (total chlorine, turbidity, hardness, etc.) can lead to a reduction in the service life of the filters and certain components. These maintenance tips are guidelines. Your official distributor of the PALLAS series will determine the duration of the consumables according to the water quality and the expected consumption.

**!** All consumables are supplied with an individual packaging, which has been specially designed to guarantee hygienic conditions during storage and transport. Apply the necessary hygiene precautions after removing the packaging and during the manipulation of the different connectors and components.

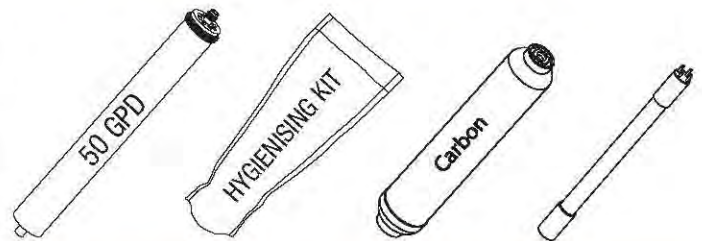
### ORIGINAL PALLAS CONSUMABLES



Carbon block pre-filter.  
Ref. 520200006

GAC carbon pre-filter.  
REF. 520200005

Sediments pre-filter.  
REF. 520200004



50 GPD membrane.  
REF. 520200041

Hygienising kit.  
REF. 5202000107

Activated carbon  
post-filter.  
REF. 5202000015

UV lamp.  
REF. 5202000034

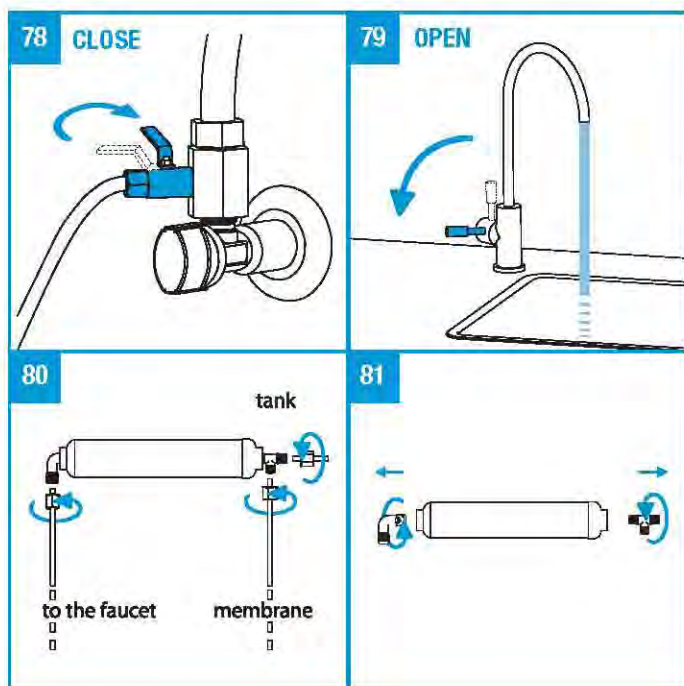
See the hygienic conditions that must be taken into consideration during the manipulation of the system, described in previous sections.

**WARNING:** Prior to dismantling the system, ensure that you have all the necessary material and enough space to carry out the maintenance procedures (see section 6 Installation).

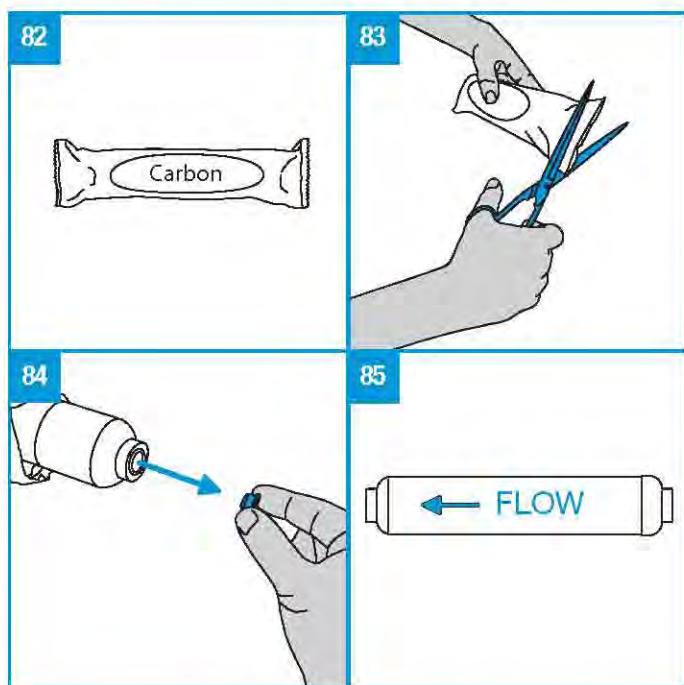
Work in a properly lit area, under the proper hygiene conditions and with enough space to carry out the maintenance comfortably.

### 9.1. How to change filters

1. Close the manual inlet valve and empty the tank of the system, by opening the counter-top faucet, **images 78 and 79**, and unplug it from the power supply, models **BP**, **BP+AF** and **BP+UV**.
2. Then replace the post-filter. Unscrew the nuts and fittings on both sides of the post-filter. **Images 80 and 81**. Try not to force the components.
3. Unpack, remove the protective caps and assemble the new post-filter, **images 82, 83 and 84**. Please make sure that the post-filter is assembled in the right



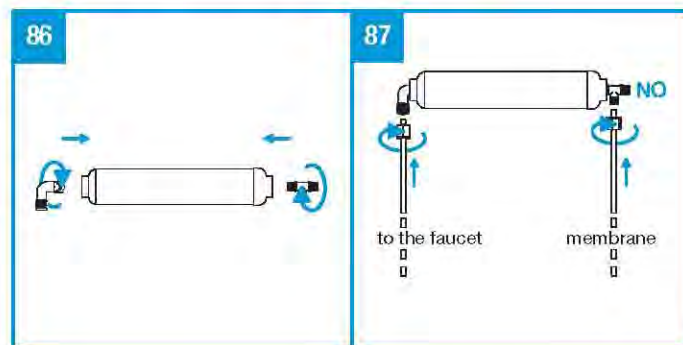
position. Pay attention to the flow sense indicated in the post-filter, **image 85** and the original position.



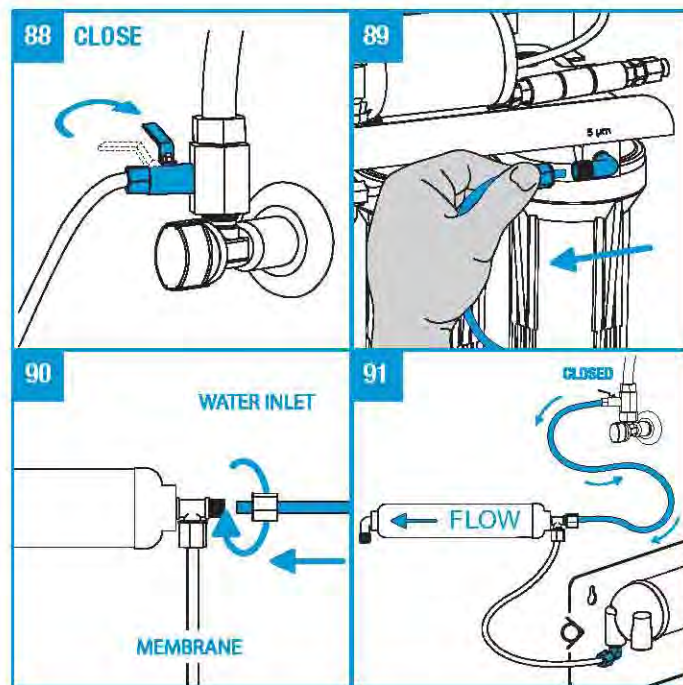
Should you have any doubts, please check the hydraulic diagrams in *Section 8 Operation of the PALLAS series systems*, or contact the TAS of your supplier.

4. Apply teflon in the fittings that were previously disassembled and insert them in the new post-filter, paying attention to the original position and sense (inlet and outlet). Connect to

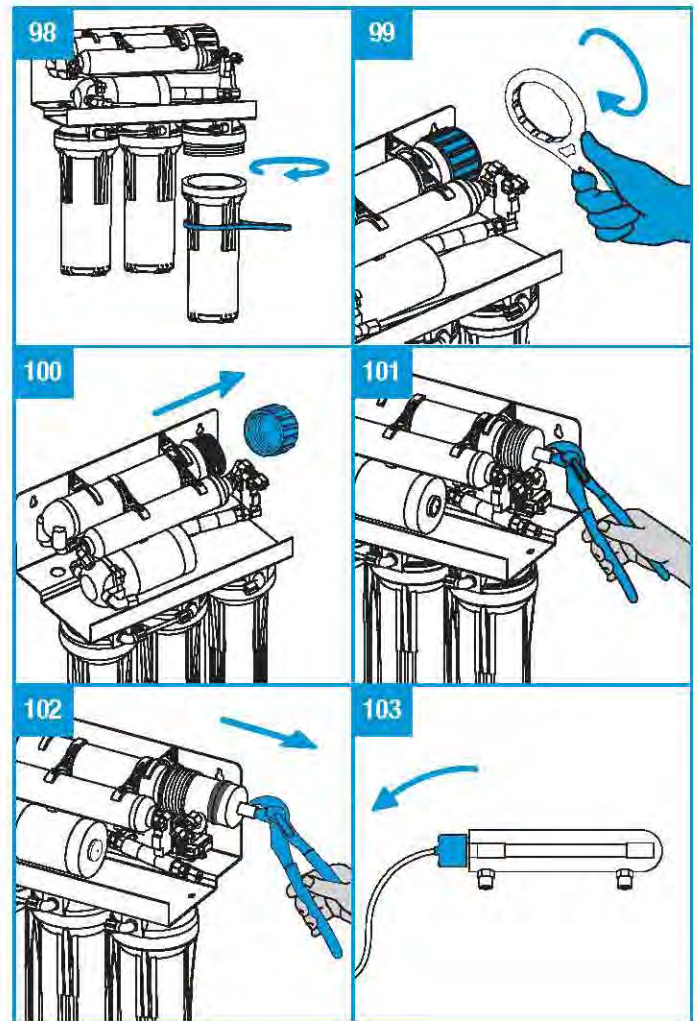
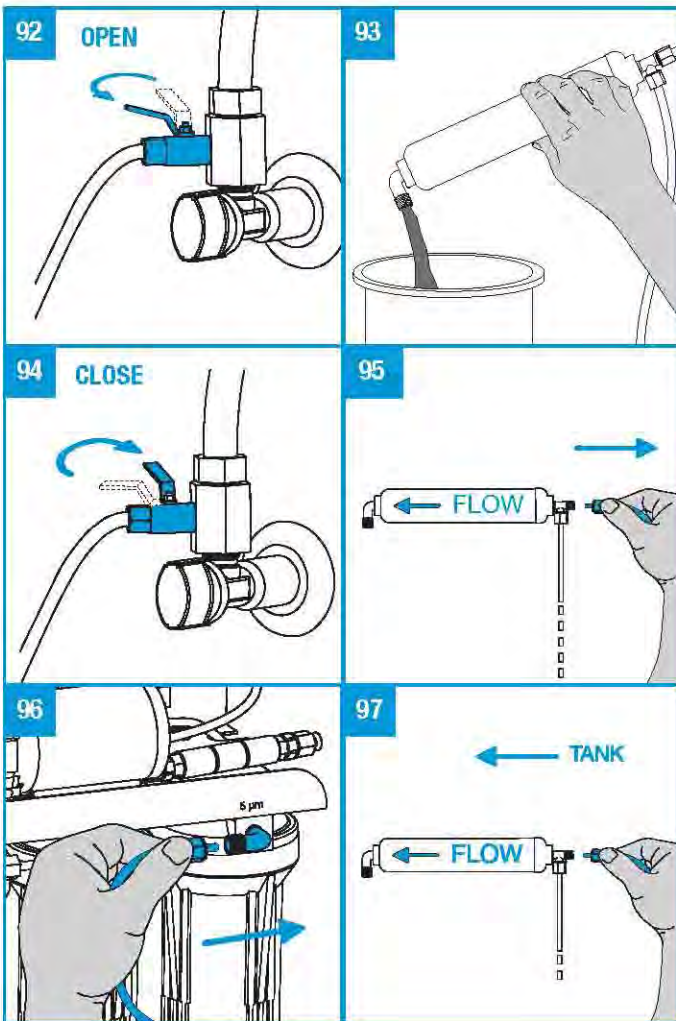
the post-filter, the tubes corresponding to the permeate inlet (membrane) and the outlet towards the faucet. The tank tube must not be connected yet. **Images 86 and 87.**



5. Wash the new post-filter and remove the carbon dust that the transport may have generated. Check previously if tap water contains chlorine. Close the manual inlet valve, disconnect the feed water tube of the system and connect it to the free inlet of the post-filter, corresponding to the tank connector. **Images 88, 89, 90 and 91.**



Position the post-filter outlet towards a vessel or the sink. Open the manual inlet valve, thus washing the post-filter for some minutes, until water runs clear. **Images 92 and 93.** Close the manual inlet valve, **image 94**, disconnect the feed tube and connect it to the connector at the system's inlet, **images 95 and 96.** Connect again the tank to the post-filter connector that remains free, **image 97.**



**6.** Change the filters in the filtration stage. Disassemble the filter housing cups using the filter housing wrench, **part no. 43 on flap**, and extract the filters that are inside, **image 98**.

This process must be carried out on the sink or placing a cloth under the system, as the filter housings will be full of water and may spill.

**7.** Replace the filters according to the instructions given in *Section 7 Start-up*.

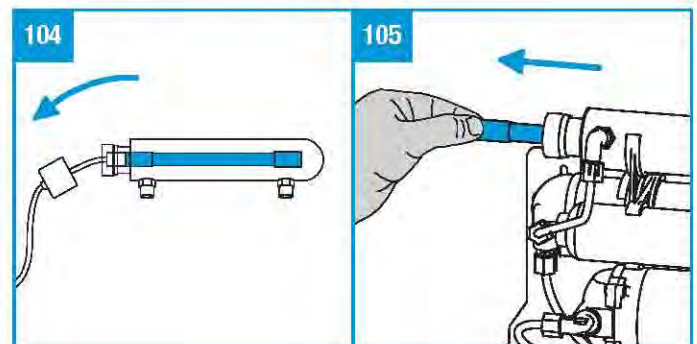
**8.** Replace the membrane (if necessary). With this purpose, remove the membrane from its housing. Use the membrane housing wrench to unscrew the cap and a clean tool only for removing the membrane from the inside. **Images 99, 100, 101 and 102.**

**9.** Wash the pre-filters according to the instructions given in *Section 7 Start-up*.

**10.** Replace the germicide lamp, only for model **BP+UV**.

**!** Remember that the system must be unplugged from the power supply.

Without forcing the lamp, remove the rubber protective cap and extract gently the lamp from the inside of the radiation system. **Images 103, 104 and 105.**



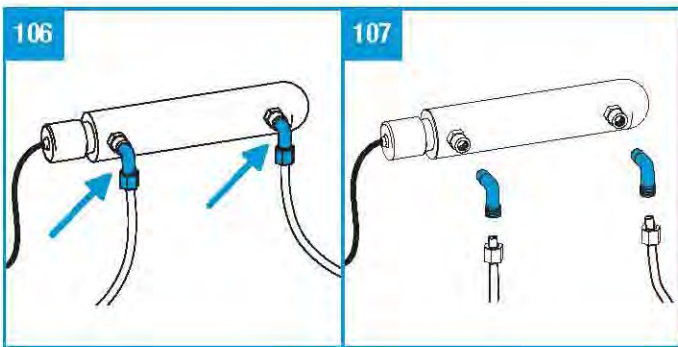
Replace the lamp according to the instructions given in *Section 7 Start-up*.

**!** The replaced lamp, that can no longer be used, must not be thrown away together with the usual urban waste.

**11.** It is recommended to replace the plastic fittings at the input and output of the UV housing every two years. **Image 106.**

To do so, unplug the system from the power supply, close the 1/4" manual inlet valve, and close the tank valve or empty it by opening the counter-top faucet of the system.

After disconnecting the corresponding tubes and connectors, replace the connectors for new ones, applying teflon beforehand. **Image 107.** Connect the tubes again to the corresponding connectors and pay attention to the original position.



**12.** Check the system as outlined in *Section 7 Start-up*, in order to guarantee a proper operation of the system.

## 9.2. Hygienization

It is recommended to hygienise the system when necessary, and as frequently as instructed. Follow the instructions below:

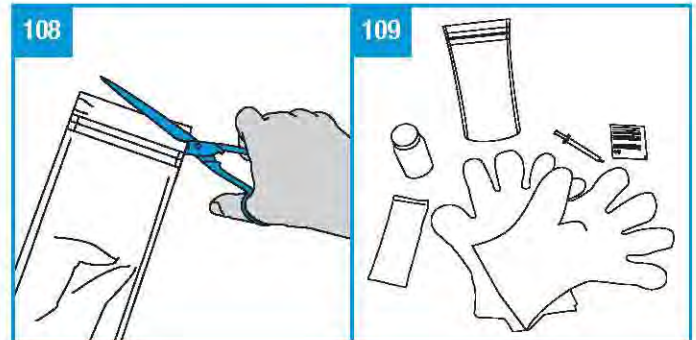
**1.** Change and wash the filters and the post-filter, as outlined in *Section 9.1 How to change filters*.

**2.** The membrane housing must be empty. Extract the membrane as indicated in *Section 9.1 How to change filters*. Hygienise it.

**3.** Keep the 1/4" inlet valve closed. Empty the tank and keep its valve open.

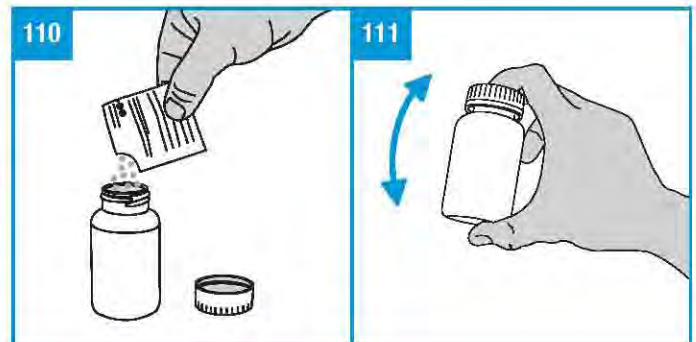
**4.** Cut the top of the hygienisation kit and place the contents onto a clean surface, in order to reduce the contamination

risk. **Images 108 and 109.**



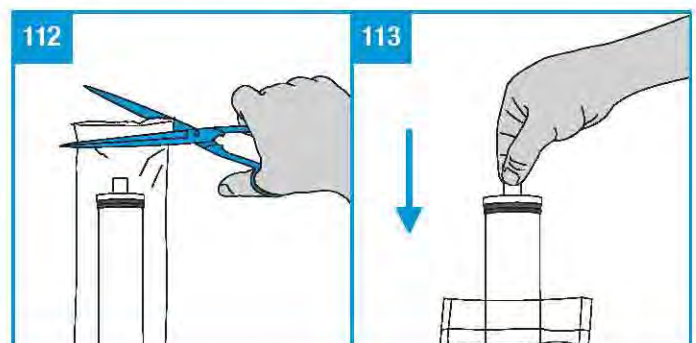
**!** The hygienising product Osmobac must be handled with care. Read the instructions written on the back.

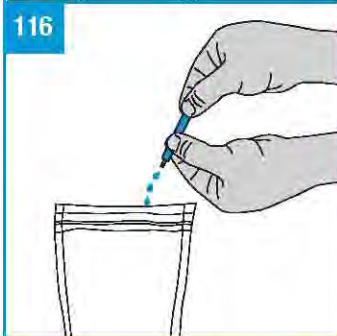
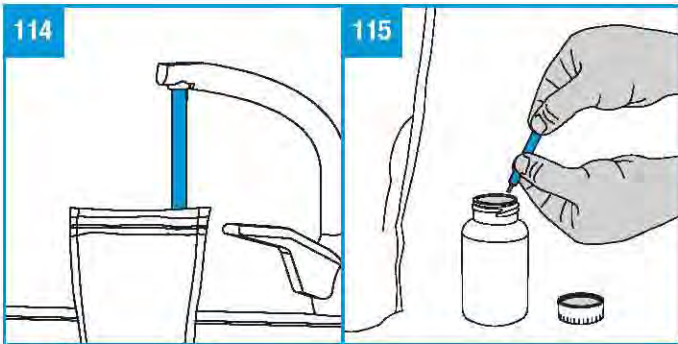
**5.** Empty the contents of the Osmobac hygienization bag into the 150 ml bottle, fill it with tap water and shake it until it is completely dissolved (approximately 2 minutes). **Images 110 and 111.**



**6.** If the membrane is new, unwrap it, and introduce it in the plastic bag of the kit to hygienise it. **Images 112 and 113.** Then fill the bag with tap water while the membrane is inside, until it is completely covered, **image 114.**

Use the syringe to collect 2 ml of the previously prepared Osmobac solution, empty it into the plastic bag, close it and move it to blend the mixture. Let it settle for 15-30 minutes. **Images 115 and 116.**

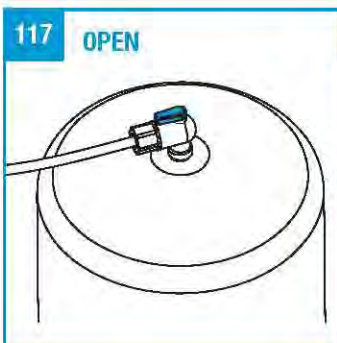




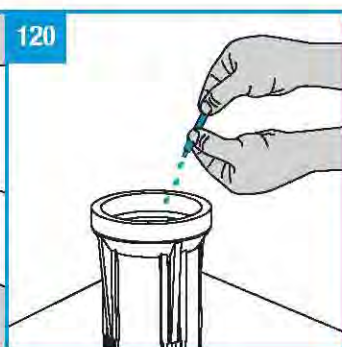
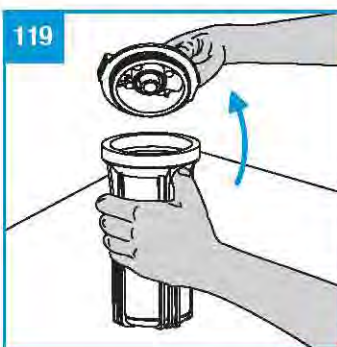
7. Keep the tank valve of the system open, **image 117**.

8. Disconnect the inlet tube of the system, marked as "feed-entrada".

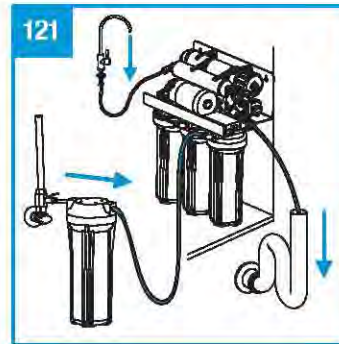
9. Lay the filter housing between the water inlet and the system and place it on a vessel, cloth or inside the sink. **Image 118**.



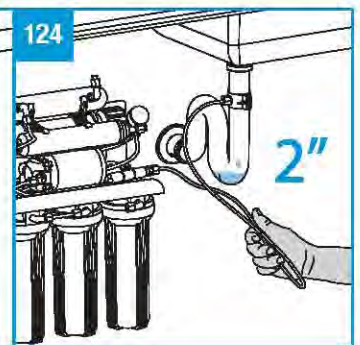
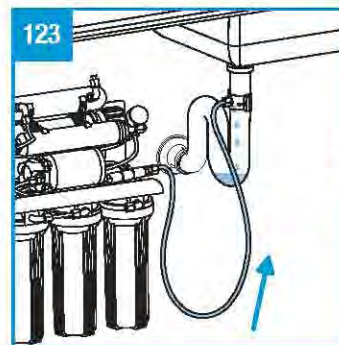
10. Open the filter housing and pour 15 ml of the Osmobac solution inside (this quantity can be dosed with the syringe). **Images 119 and 120**.



11. Close the filter housing and open the faucet of the osmosis system on the counter-top. **Images 121 and 122**. Plug the system to the power supply, models **BP**, **BP+AF** and **BP+UV**.



12. Open the inlet valve and let the product in the filter housing flow through the system until water comes out through the counter-top faucet of the system and the drain. Then close the counter-top faucet. In model **BP+AF** when water starts coming out of the drain tube towards the drain, strangulate the pipe after 2 seconds, preventing water to flow through to the drain. **Images 123 and 124**. Keep strangulating the drain tube for 30 seconds, while water is coming out of the system's faucet. **Images 125 and 126**.

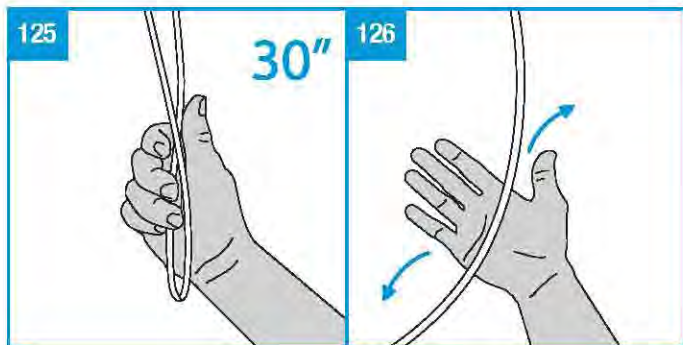


Repeat this procedure every 30 seconds, starting from point 10. Bear in mind that every time that the filter housing must be opened, the inlet valve must be closed and the faucet turned on.

Wait until the system has no pressure (10 seconds) and throw away some of the water contained inside the filter housing, in order to refill it with the Osmobac solution in the quantity shown in point 10. Repeat this procedure five times before going on to the following step.

13. When filling the filter housing for the last time, pour 30 ml of the Osmobac solution, open the inlet valve, turn off the faucet of the system, and allow the system to pressurise for 1 minute, closing the Inlet valve immediately afterwards. Only for model **BP+AF**, after turning on the faucet of the system, strangulate the drain tube when water starts coming out of it towards the drain.

After having pressurised the system for one minute, let the drain tube go after closing the inlet valve.

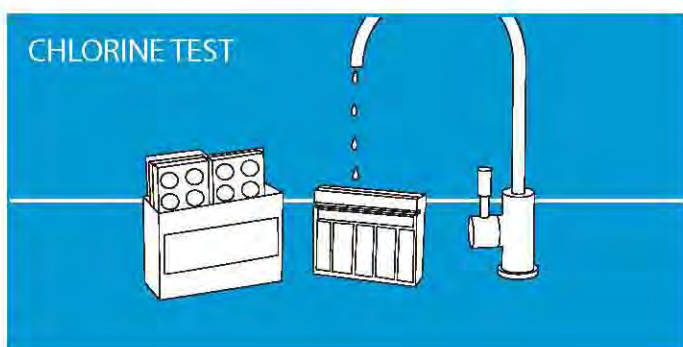


**14.** Allow between 15 and 30 minutes for the product to settle inside the system.

**15.** While you are waiting, dismantle the filter housing used to dose the Osmobac and connect the inlet tube to the connection "feed, entrada" of the system.

**16.** After this time, turn on the counter-top faucet of the system, empty the tank and wait until water stops coming out. Then plug the system, models **BP**, **BP+AF** and **BP+UV**, to the power supply and open the 1/4" inlet valve, allowing tap water to move the product and residues of the hygienisation through the counter-top faucet for 5 minutes. Then turn off the counter-top faucet and wait for 2 minutes. Afterwards, close the inlet valve and turn on the counter-top faucet in order to empty the tank. Wait until water stops coming out.

*Check the total chlorine concentration at the faucet of the system using a chlorine measurer.*



**!** Repeat this control and rinsing process until the total chlorine concentration is below 1 mg/l (1 ppm).

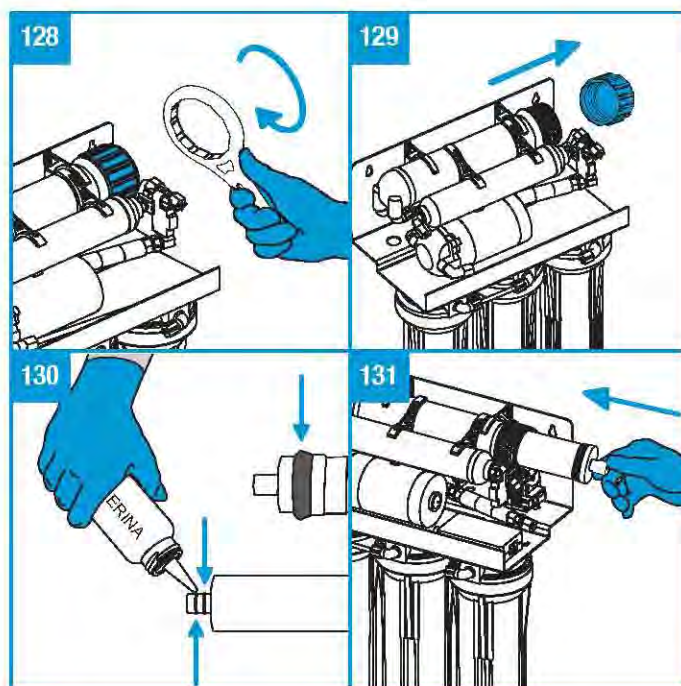
**17.** Dismantle the filter housing used to dose the Osmobac and connect the inlet tube to the connection "feed, entrada" of the system, if you have not done this yet.

**18.** Put the supplied gloves on and rinse the membrane with

tap water for some seconds. **Image 127.**



**19.** Once the rinsing is done, the inlet valve must remain closed. Assemble and position the membrane correctly in its housing, and do not forget to lubricate the joints with food-grade glycerine. **Images 128, 129, 130 and 131.**

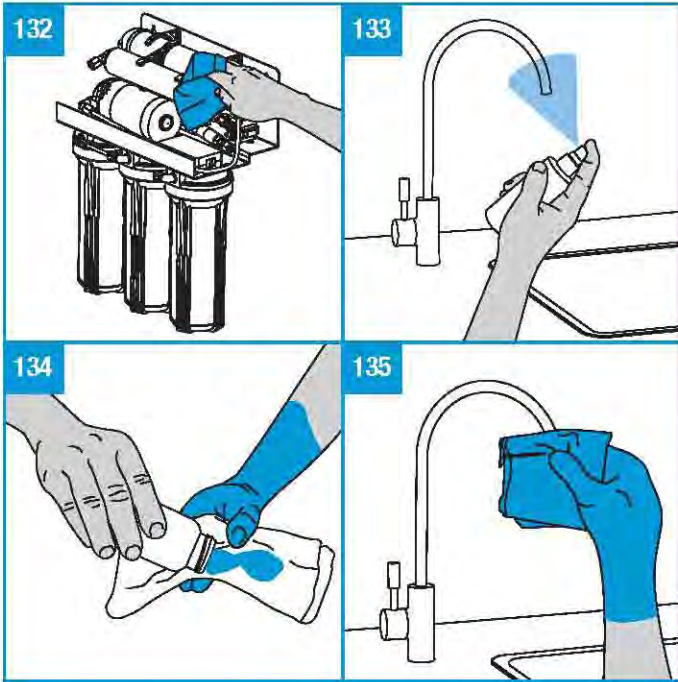


Before opening the membrane housing, make sure you have a receptacle ready where you can partially empty it, as it will be full of water. Check the internal pressure of the tank, which must approx. be of 7 PSI (0.5 bar).

**20.** Using the dampened cloth supplied with the hygienisation kit, clean the system. Dry all the parts that may have got wet using a disposable kitchen towel. **Image 132.** Pay special attention to the hygienization of the faucet spout. Use the Oxibac spray (Ref. 5202000099) and disposable kitchen paper towel, **image 133**, or soak the paper towel with the remainder of the Osmobac solution. **Image 134.** Rub the spout and the end of the faucet with the paper. Do not touch it directly with the hands. **Image 135.**



**!** Under no circumstances must you use a hand towel or a multiuse cloth for cleaning the kitchen. Hands must not have any direct contact with the hygienising products.



**21.** Now the system has been properly hygienised.

**22.** Since hygienization and rinsing do not guarantee the complete removal of all residues (carbon dust in filters, hygienization residues, etc.), the tank must be emptied twice before consuming the produced water.

**23.** All materials used to carry out the hygienization, must be thrown away in the appropriate recycling bins.

## 10. GUIDE FOR THE IDENTIFICATION AND SOLUTION OF PROBLEMS

SYMPTOM	CAUSE	SOLUTION
<b>1. Leak from faucet.</b>	Pieces to turn off the faucet are worn. Joint is pinched or worn.	Replace the faucet. Change the joints.
<b>2. Leak outside the system in the sink's cupboard.</b>	Leak from faucet's base From the drain. From the inlet. From tubes feeding the system.	Check the state of the faucet and replace it if necessary. Tighten or replace. Check there is enough teflon in the inlet valve or replace it. They are too close to the wall. The locking clip is missing. They are in a bad condition (replace) or they have not been properly pushed into fittings.
<b>3. No production.</b>	There is no water supply. The pre-filter is blocked. The membrane is blocked. Inlet electrovalve is closed <b>BP</b> , <b>BP+AF</b> and <b>BP+UV</b> .  Flow restrictor <b>EO</b> , permeate pump <b>PE</b> , blocked.  There is no power supply <b>BP</b> , <b>BP+AF</b> and <b>BP+UV</b> .	Wait until water supply is re-established Change filter. Change the membrane. Check the state of the flow restrictor. Check the state of the coil and clean it. Replace it, if necessary.  Check, clean and/or replace. Check the state of the membrane.  Check the power supply of the house. Check the output voltage of the transformer, (if there is no voltage or it is not enough, replace it).
<b>4. Low production.</b>	Low pressure at the inlet of the membrane. Inlet valve is partially closed. Tank valve is closed. Tank has no pressure. Tank has a hole. Pre-filter is dirty. Membrane blocked. Pump is in a bad condition <b>BP</b> , <b>BP+AF</b> and <b>BP+UV</b> .  Rejection is too high.  Permeate pump is in a bad condition <b>PP</b> .	Check the network pressure and the state of the filters. Replace it, if necessary. Open it. Open it. Check the tank pressure and, if necessary, pressurise it until 7 PSI. Check if there is water coming out of the valve used to pressurise the tank. Replace it. Check the output flow of the filter and, if necessary, replace it. Check the production flow. If it is too low and there is production, replace it. Check that the pump generates at least 6 kg/cm <sup>2</sup> at the inlet of the membrane housing. If not, replace the pump head and/or motor. Check the flow of the restrictor, and replace it if necessary. Check the flushing electrovalve and its flow <b>BP+AF</b> Check / replace.
<b>5. Excessive production.</b>	Membrane housing is in a bad condition. Membrane housing is empty O-rings are in a bad condition. Tubes are not properly connected.	Rejection and production may be connected. Replace it. Put in the membrane. Rejection and production are connected. Replace the o-rings or the membrane. Check the flow of the system.
<b>6. High TDS</b>	Membrane housing is in a bad condition.	Rejection and production are connected. Replace the o-rings and/or the membrane.
<b>7. Metallic, bitter or acid taste.</b>	The pH of the water is low.	Install a remineralising post-filter before the tank.
<b>8. Plastic or synthetic taste.</b>	Post-filter is blocked.	Change the post-filter.
<b>9. Unpleasant taste and odour.</b>	Contamination.	Change the filters, the membrane and hygienise the system.
<b>10. Water has a white colour.</b>	There are air bubbles inside the system.	Wait for them to be removed of the system. This is not a problem.

SYMPTOM	CAUSE	SOLUTION
<b>11. Rejection does not stop.</b>	Inlet electrovalve dirty or worn <b>BP</b> , <b>BP+AF</b> and <b>BP+UV</b> .	Check if rejection stops when the system is unplugged. If not, clean or replace.
	Inlet electrovalve is dirty or worn.	Install a pressure regulator.
	Tank has not enough pressure.	When the tank is empty, check there is an air pressure of 0.5 kg/cm <sup>2</sup> or 7 PSI.
	Check valve is worn.	Replace.
	High pressure switch needs to be adjusted or is broken <b>BP</b> , <b>BP+AF</b> and <b>BP+UV</b> .	Check the adjustment and replace it if necessary.
	The flushing electrovalve is open <b>BP+AF</b> .	If dirty, clean. If in a bad condition, replace.
	Shut-off valve is open <b>SO</b> .	If in a bad condition, replace.
<b>12. The system turns on sporadically, without water consumption.</b>	Check valve is in a bad condition.	Replace.
	There is a leak somewhere in the system or the faucet.	Repair the product or replace the faucet.
	Excessive pressure at Inlet.	Install a pressure regulator at the Inlet.
<b>13. The system does not start.</b>	There is no water supply / pressure.	Check the general power supply.
	There is no power supply <b>BP</b> , <b>BP+AF</b> and <b>BP+UV</b> .	Check the output voltage of the transformer and replace it if necessary. Check the electrical wiring. Check the state of the pressure switches, and if the wiring is correct.
<b>14. The pump starts but there is no water going through.</b>	Inlet electrovalve is in a bad condition <b>BP</b> , <b>BP+AF</b> and <b>BP+UV</b> .	Check the voltage and operation and/or replace it if necessary.
<b>15. The system turns constantly on and off.</b>	Inlet pressure is too low (below 0.75 bar).	Bridge the low pressure switch.
	Low pressure switch in bad condition <b>BP</b> , <b>BP+AF</b> and <b>BP+UV</b> .	Replace.
	The coil of the inlet electrovalve is in a bad condition. Short circuit in a component or wiring.	Replace it. Detect, repair and/or replace it.
<b>16. The pump does not generate any pressure, but is working.</b>	The diaphragm is in a bad condition. <b>BP</b> , <b>BP+AF</b> and <b>BP+UV</b> .	Replace the diaphragm or the whole pump head.
	Transformer is in a bad condition.	Check and replace.
<b>17. UV lamp is off. LED of the ballast is off.</b>	UV lamp has blown.	Check and/or replace.
	Ballast is damaged	Check and/or replace.
	Transformer is damaged.	Check and/or replace.
	There is no power supply.	
<b>18. The pressure gauge indicator oscillates in the white area of the scale (0-3 bar). <b>SO</b>, <b>BP</b>, <b>BP+AF</b> and <b>BP+UV</b></b>	Not enough pressure at inlet. <b>SO</b> , <b>BP</b> .	Install a pump kit at inlet.
	Pre-filters are dirty.	Replace the pre-filters.
	Pump or motor are in a bad condition.	Check and replace the pump head and/or motor.
<b>19. The pressure gauge indicator oscillates in the red area of the scale (&gt;3 bar). <b>SO</b>, <b>BP</b>, <b>BP+AF</b> y <b>BP+UV</b></b>	Pressure is too high at inlet.	Install a pressure regulator at the Inlet of the system.
	Flow restrictor blocked and/or check-valve or membrane are blocked.	Check, and replace if necessary, the state of the flow restrictor <b>SO</b> , <b>BP</b> and <b>BP+UV</b> , the state membrane or of the flushing electrovalve <b>BP+AF</b> .
	Pressure gauge is defective.	Check that when the system is not working, the pressure gauge indicator is 0 in the scale. If not, replace it.

**11. Maintenance Service Book**

DATE		SERVICE TYPE	NAME, SIGNATURE AND AUTHORISED STAMP	
/	/	<input type="checkbox"/> START-UP	TECHNICIAN	<input type="checkbox"/> ORDINARY <input type="checkbox"/> EXTRAORDINARY <input type="checkbox"/> GUARANTEE
/	/	<input type="checkbox"/> COMPLETE MAINTENANCE	STAMP	
/	/	<input type="checkbox"/> REPAIR		
/	/	<input type="checkbox"/> HYGIENIZATION		
/	/	<input type="checkbox"/> OTHERS		
/	/	<input type="checkbox"/> COMPLETE MAINTENANCE	TECHNICIAN	<input type="checkbox"/> ORDINARY <input type="checkbox"/> EXTRAORDINARY <input type="checkbox"/> GUARANTEE
/	/	<input type="checkbox"/> REPAIR	STAMP	
/	/	<input type="checkbox"/> HYGIENIZATION		
/	/	<input type="checkbox"/> OTHERS		
/	/	<input type="checkbox"/> COMPLETE MAINTENANCE		
/	/	<input type="checkbox"/> REPAIR	STAMP	
/	/	<input type="checkbox"/> HYGIENIZATION		
/	/	<input type="checkbox"/> OTHERS		
/	/	<input type="checkbox"/> COMPLETE MAINTENANCE		TECHNICIAN
/	/	<input type="checkbox"/> REPAIR	STAMP	
/	/	<input type="checkbox"/> HYGIENIZATION		
/	/	<input type="checkbox"/> OTHERS		
/	/	<input type="checkbox"/> COMPLETE MAINTENANCE		TECHNICIAN
/	/	<input type="checkbox"/> REPAIR	STAMP	
/	/	<input type="checkbox"/> HYGIENIZATION		
/	/	<input type="checkbox"/> OTHERS		
/	/	<input type="checkbox"/> COMPLETE MAINTENANCE		TECHNICIAN
/	/	<input type="checkbox"/> REPAIR	STAMP	
/	/	<input type="checkbox"/> HYGIENIZATION		
/	/	<input type="checkbox"/> OTHERS		

ENGLISH

# EC Declaration Guarantee

## EC DECLARATION


We DECLARE, hereby under our sole responsibility, that: the reverse osmosis system for water filtration or human consumption, **Pallas** brand: **SO, PP, BP, BP+AF and BP+UV** with serial no.: according to manufacture, complies with the following regulations and standards: **EN-12100-1, EN12100-2, EN-55014-1:2000/A1:2001, EN-61000-3 2:2000/ A1:2001, EN-61000-3-3:1995/A1:2001, EN-61558-2-6** and fulfills the essential requirements from directives: **98/37/CE, 73/23/CEE, 89/336/CEE.**

Name and position of the authorised person:  
**Mr Eddy Albrecht / General Manager de PWG.**  
 Date: **21/7/10.**

Signature and stamp:

**Eddy Albrecht**  
 General Manager PWG

**POLLET WATER GROUP N.V.**  
 Terdielebaan 13  
 B - 8790 WAREGEM  
 Tel. 056 75 20 50  
 Fax 056 40 37 04



POLLET WATER GROUP · www.pwg.be

## GUARANTEE CERTIFICATE OF PALLAS SERIES

### SYSTEM GUARANTEE FOR THE END USER:

The distributor guarantees its systems for two (2) years against any manufacturing defect.

The guarantee comprises the repair and replacement of defective parts by authorised personnel from the Distributor or the Official Technical Service Assistance (TAS), in the place of installation or their workshops. The guarantee includes the labour and shipment costs that may arise.

**PWG** shall not offer guarantee for parts suffering usual wear and tear, lack of maintenance, hits and other faults due to the improper use of the system outside specifications and operating limitations indicated by the manufacturer. Likewise the guarantee will not be valid in the event of misuse, or in those cases where it has been modified or repaired by personnel that do not belong to the distributor or the official TAS. All the replaced parts under guarantee shall remain the property of **PWG**.

**PWG** shall be held responsible for the lack of conformity when this refers to the origin, identity or compliance of the products, according to its nature and purpose. Taking into account the technical specifications of the systems, it is essential, for the guarantee to be valid, that the technical conditions of the installation and operation are fulfilled. Should this conditions not be fulfilled, the guarantee would remain invalid, taking into account the importance of the system's use as well as the conditions and operating limitations in which it must operate. The distributor must guarantee that the installed system is appropriate for the improvement of the quality of water that is going to be treated, according to the technical specifications of the system and the regulations in force.

The distributor must guarantee the proper installation and start-up of the system, according to the instructions provided by the manufacturer and the regulations in force. Furthermore, it shall be held responsible for the lack of conformity due to an inaccurate application, installation or start-up of the system.

For any claims under guarantee you are required to provide the receipt of purchase. The term of the 2-year guarantee starts on the date of purchase of the system in your distributor. Should you suffer any problem with the system while it is under guarantee, contact your distributor.

**The system is installed and in operation as required by the client, and for this to be officially recorded:**

\*Pre-treatment of the RO system:

\*Input hardness of the RO system [°F]:

\*Input TDS of the RO system [ppm]:

\*Input pressure of the RO system [bar]:

\*TDS of produced water (faucet) [ppm]:

### \*Result of the installation and start-up sheet

CORRECT.  OTHERS:

The owner of the system has been properly and clearly informed about the use, manipulation and maintenance of the system, in order to guarantee a proper operation and the quality of produced water. To such effect, a maintenance contract has been offered.

\*Ref. of the maintenance contract

ACCEPTS the maintenance contract.

DOES NOT ACCEPT the maintenance contract.

For further information, to report a breakdown or that the system is not working properly, and to request maintenance or the assistance of a technician, previously read the sections on how to operate the system, and detection and solution of problems, in this manual and contact the distributor or company where the system was purchased.

### COMPANY AND/OR AUTHORISED TECHNICIAN:

Company and/or technician, date and signature:

**!** **NOTE FOR THE COMPANY AND/OR AUTHORISED TECHNICIAN:** The information marked with (\*) must be filled in by the technician and copied by him from the **INSTALLATION AND START-UP REGISTRATION SHEET OF THE SYSTEM.**

S/O

P/N

S/N

Adhesive label

for the identification

of the installed system.

## INSTALLATION AND START-UP REGISTRATION SHEET OF THE SYSTEM

**NOTES FOR THE TECHNICIAN:** Read this manual carefully. Should you have any queries, please contact the Technical Assistance Service (TAS) of your distributor.

The information marked with (\*) must be fulfilled and copied by the technician from the GUARANTEE CERTIFICATE SHEET.

The technician/distributor must keep this sheet and provide it to PWG if required to do so, in order to improve the after-sales service and the customer service.

The technician carrying out the installation and start-up of the system must have the appropriate skills to do so.

S/O

Adhesive label

P/N

for the identification

S/N

of the installed system.

### INFORMATION CONCERNING THE USE OF THE SYSTEM:

Origin of the water to be treated:

Public network supply.

Others: \_\_\_\_\_

\*Pre-treatment of the RO system: \_\_\_\_\_

\*Input hardness of the RO system [°F]: \_\_\_\_\_

\*Input TDS of the RO system [ppm]: \_\_\_\_\_

\*Input pressure of the RO system [bar]: \_\_\_\_\_

Input chlorine concentration of the RO system [ppm]: \_\_\_\_\_

### CONTROL OF THE INSTALLATION STEPS:

Washing of carbon pre-filters.

Washing of carbon post-filter.

Membrane installation.

Hygienisation according to the described protocol.

Chlorine concentration in faucet after flushing: \_\_\_\_\_

Checking of flow restrictor.

UV lamp installation.

High pressure switch setting.

Revision and connectors.

Watertightness of pressurised system.

\*TDS of produced water (counter-top faucet) [ppm]: \_\_\_\_\_

Provide clear information about the proper use, manipulation and maintenance of the system to guarantee a proper operation and the quality of produced water. Since a proper maintenance of the system is essential to guarantee the quality of the produced water, a maintenance contract must be offered to the owner, in order to have skilled technicians carry out the maintenance.

### GUARANTEE OF THE SYSTEM FOR THE DISTRIBUTOR:

PWG shall only be held responsible for the replacement of parts showing a lack of conformity. The repair of the system and the costs that may arise (labour, transport costs, travelling expenses, etc.) will be assumed by the distributor according to that agreed in the general conditions of sales and contracting, hence the distributor will not have the right to claim these costs to the manufacturer.

### OBSERVATIONS

\*Result of the installation and start-up:

CORRECT (system is installed and works properly.

Produced water is appropriate for the intended use.)

OTHERS: \_\_\_\_\_

### IDENTIFICATION OF THE AUTHORISED TECHNICIAN:

Company and/or technician, date and signature:

### ACCEPTANCE OF THE SYSTEM'S OWNER:

I have been informed clearly about the use, manipulation and maintenance of the system, and I have been offered a maintenance contract as well as been informed on how to contact the Customer Service, in order to request information, report a breakdown or that the system is not working properly, request maintenance or the assistance of a technician.

Comments \_\_\_\_\_

\*Ref. of the maintenance contract \_\_\_\_\_

ACCEPTS the maintenance contract.

DOES NOT ACCEPT the maintenance contract.

Model / Ref.: \_\_\_\_\_

Owner Mr./Mrs.: \_\_\_\_\_

Street: \_\_\_\_\_

Telephone/s: \_\_\_\_\_

City: \_\_\_\_\_

County: \_\_\_\_\_

Zip code: \_\_\_\_\_

Date and signature:

**11. Maintenance Service Book**

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/	/	<input type="checkbox"/> COMPLETE MAINTENANCE	TECHNICIAN	<input type="checkbox"/> ORDINARY <input type="checkbox"/> EXTRAORDINARY <input type="checkbox"/> GUARANTEE
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ENGLISH