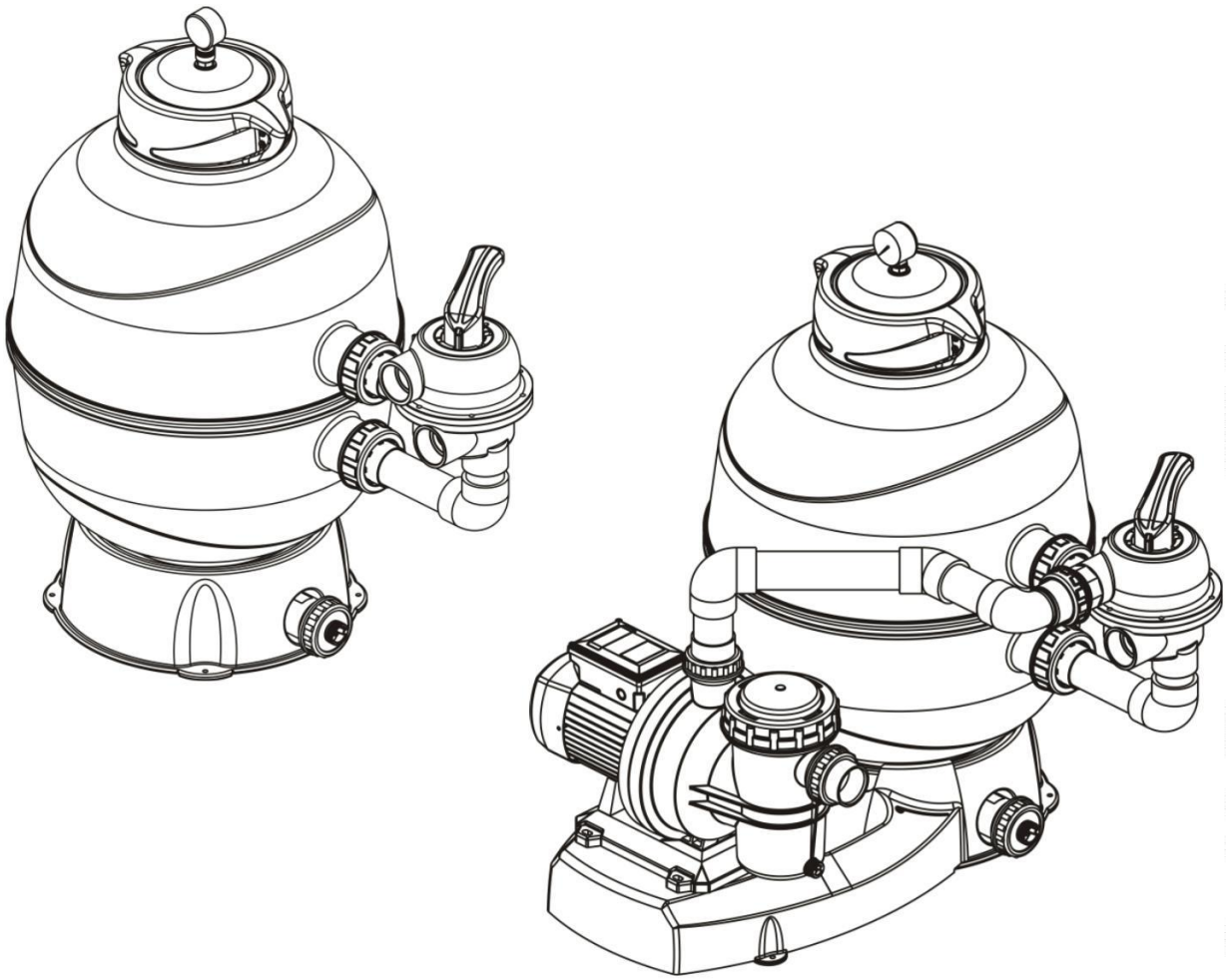
FILTERKIT PLUS (FKP)
FILTERPAK PLUS (FPP)



EN Instruction manual
(Translation from the original Spanish)

EN: EVIDENCE OF CONFORMITY

We declare, under our responsibility, that the products in this manual comply with the following directives and standards:

- Directive 2014/68/EU (Pressure equipment)
- Standard EN 16713-1

Banyoles, 21 de Mayo de 2019



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1. SAFETY

Warning for the safety of persons and objects.

Whenever the following symbols appear beside a paragraph, they indicate the possibility of danger if the corresponding instructions are not followed.

DANGER risk of electrocution	If this instruction is not heeded, there is a risk of electrocution.
DANGER	If this instruction is not heeded, there is a risk of injury to persons.
ATTENTION	If this instruction is not heeded, there is a risk of damaging the equipment or the installation.

1.1 Basic advice on safety and prevention of damage

HAZARD please read the instructions carefully.

It is essential that both the fitter and the user should read the manual and equipment instructions before fitting and start-up, in order to ensure their own safety, the safety of other persons and the optimum operation of the equipment.

The user must keep the manual and the safety labels in good condition for subsequent use.

DANGER, risk of electrocution
Take maximum precautions when handling the equipment, since it is connected to the mains and it contains water (an excellent conductor of electricity).

Before performing any operation on the pump, it is essential to disconnect the power supply.

DANGER power cable
Position the power cable so that it cannot be trodden on, perforated or damaged with any object situated near it.

Carry out the installation in accordance with the safety instructions for swimming pools and the particular instructions for the pump and selector valve (supplied with the respective manuals).

The safety regulations in effect must be observed when installing the equipment. Maximum pressure of the equipment 3,5bar. Do not connect directly to the drinking water mains.

PROHIBITED handling or repair
The equipment may only be handled or repaired by official technical services.

The user may only handle the equipment as indicated in this manual.

The manufacturer accepts no responsibility for any other handling of the equipment by the user.

Children or adults are not permitted to sit on the equipment or to engage in activities that may place the equipment at risk.

ATTENTION cleaning
Always clean with a damp cloth and a neutral soap solution. Do not use products that contain solvents or acids.

ATTENTION heat
Position the unit away from heat sources or exposure to the sun.

The equipment has been designed for operation in technical premises.

ATTENTION
Only use the equipment for the filtration of water in domestic swimming pools or small ponds.

The equipment has been designed for operation with clean water and the temperature must be below 35ºC.

ATTENTION ventilation
Install the unit in such a way that its position does not prevent the flow of air in and out of the ventilator part of the pump. It must not be installed inside furniture or cupboards which prevent the free flow of air around the unit.

Do not start the pump connected to the pool bottom cleaner, if the latter is not immersed in water.

Do not run the pump dry, the water level of the swimming pool must not be lower than that of the skimmer.

The filtering circuit must not be used for filling and regulating the water level in the swimming pool.

ATTENTION periods when not in use
When the unit is not to be used over a period of time, disconnect the current collector on its base. Take special care to close the shut-off valve through which water is supplied to the filtration unit and to empty the water contained in the filter and pump.

2. GENERAL OBSERVATIONS

2.1. Swimming pool water.

Swimming pool water tends to get dirty due to being exposed to outdoor conditions and use by bathers. Wind and rain carry dust, earth, plant remains and organic substances into the pool, which over the course of time cloud the water. Also, due to lying still, the pool water is not sufficiently oxygenated. This, together with exposure to sunlight and temperature changes, creates favourable conditions for the reproduction of parasites and bacteria, leading in turn to the formation of algae.

All this means that within a few days an untreated swimming pool can become a place little-suited to and unpleasant for bathing. Two very different, yet mutually inseparable treatments are used to combat such problems:

– Chemical treatment: This consists in maintaining sufficient amounts of disinfectant in the water to impede the development of any bacteria and micro-organisms that may get into the pool. Chlorine is the chemical element most widely used to disinfect the water. These products remove calcareous incrustations and organic substances that adhere to the pool walls and bottom.

– Physical treatment: Filtering is the system used for physical treatment. This consists in removing all impurities dissolved in the water and carried into it by wind and bathers.

2.2. pH

The pH reading shows the water's degree of acidity or alkalinity, an essential factor for ensuring the good state of the water and sound operation of the filter. pH levels ranging between 7.2 and 7.6 have to be maintained if the chlorine is to act on the water bacteria and the water itself is to remain clean and healthy.

If pH levels exceed this range the water tends to cloud and algae appear. The lime tends to precipitate out onto the pool bottom, blocking the filter. If pH levels are lower, on the other hand, the water contains excess chlorine. Rather than increasing its effects on the water, this removes the chlorine's disinfecting function. Excess chlorine is noticeable due to an intense odour from the water and by irritation of the eyes in contact with the water.

2. 3. Filtration

Filtration is an operation essential for maintaining the quality of the water in the swimming pool. It also helps to reduce water consumption, since it allows the water to be used over a longer period.

The filter has the function of mechanically separating the solid particles in suspension in the pool water. This operation is carried out using a special type of sand consisting of silicon grains that retain the dirtiness dissolved in the water. During the filtering, the water-passage rate is reduced, and the particles steadily adhere to the grains of sand, thus reducing pump flow.

In this process the water is carried towards the filter by a pump that sucks the water from the swimming-pool through the sump, skimmers and bottom cleaner. Each suction element is fitted with its own pipe and valve so that it can be closed independently of the others.

Following filtering, the water is returned to the pool through the various distribution lines.

The main parts of the filtering system are the filter, the pump and the selector valve.

The filtering unit is designed in compliance with the EN 16713-1 standard.

2.4. Control of operations

The various operations of the filtering system are controlled through the six-position selector valve.



ENSURE THAT THE PUMP IS NOT IN OPERATION BEFORE CHANGING THE POSITION OF THE VALVE.

The main operations permitted by the valve are:

2.4.1. Filtering (Fig. 1)

This consists in recirculating the water of the swimming pool from the skimmer and overflow, driving it by means of the pump through the filter and returning the filtered water to the swimming pool.

2.4.2. Washing

If the filter is saturated (see point 2.5) it must be washed. This consists of 2 stages:

a) Inverse or backflow washing: (Fig.2)

Countercurrent circulation of the water through the filter and towards the outflow for approximately 3 minutes.

b) Rinsing: (Fig. 3)

Circulation of water through the filter towards the outflow, until the water is clear. (See inspection window). In the absence of a window, perform this operation for ½ - 1minute.

2.4.3. Recirculation (Fig. 5)

When the selector valve is in this position, the water from the pump is recirculated directly towards the swimming pool, without passing inside the filter.

2.4.4. Draining (Fig. 4)

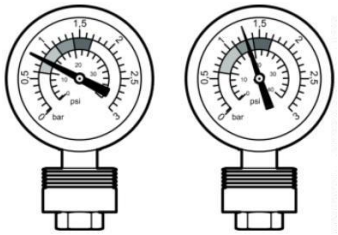
If the swimming pool has no drain at the bottom, the pool can be drained using the equipment pump. This procedure can also be used for cleaning major accumulations of dirt from the swimming-pool bottom with the bottom-suction unit, thereby preventing the dirtiness passing through the filter.

2.4.5. Closed (Fig. 6)

All functions are interrupted in this position. It is used for undertaking maintenance tasks on the filtration tank.

2.5. Pressure control

The pressure gauge permits control of filter pressure. It is important to check the pressure at regular intervals to ensure optimum equipment operation.



When the pressure increases by 0,5kg/cm² in relation to the initial reading the filter is reaching saturation point, thus reducing filtering capacity. When the pressure shows such an increase the washing process must be carried out. It is therefore important to observe and note down the pressure at first start-up. The use of certain swimming-pool accessories, such as the bottom-suction device, can reduce filtering effectiveness and lead to gradual saturation of the filter.

3. INSTALLATION AND START-UP

3.1. Essential assembly instructions

Installation must be carried out in accordance with the safety standards for swimming pools, especially standard EN 60364-7- 702 and the particular standards for each application.

For the safety of persons, it is imperative that the filtration unit is installed at a distance of at least 3.5m from the swimming pool and in compliance with the regulations in force. If it is installed less than 3.5m from the swimming pool, use of this equipment is prohibited while the pool is being used.

The pump must be installed in accordance with the instructions in the installation manual or in the user manual

The surface on which the filter is fitted must be horizontal and completely flat.

It must be fitted in a permanent location and, whenever possible, below the water level of the swimming pool.

The maximal admissible pressure is 3.5bar (50 psi). In order to prevent overpressures when using the equipment, it must not be installed at a depth of more than 4 meters below the swimming pool water level or connected to the mains public drinking water supply.

The room or housing for the filter must be provided with a drain to prevent possible flooding that could affect electrical safety.

It is advisable that sufficient space be left around the filter for carrying out the required inspection, control and maintenance tasks.

PVC accessories must be used for connecting pipe junctions to the selector valve, pump, etc. Under no circumstances must iron accessories or piping be used, as they could seriously damage the plastic components of the installation.

The water-tightness of the connections is ensured by seals and does not require excessive tightening of threaded sections or the use of Teflon sealants.

Take special care during filter-filling operations. **The manufacturer declines responsibility for damage arising while filling the filter with sand.**

3.2. Assembly.

– Install the filter in its permanent location.

– On Lateral filters, mount the valve on the filter.

– Make the three selector-valve connections: from the pump to the valve, from the valve to the drain and from the valve to the swimming pool return pipe.

– On the Lateral models, mount the pressure gauge on the upper cover. **(Fig. 7.a)**

3.3. How to assemble the filtering kits

The steps to follow for assembling the filtering kits are:

– Attach the sand container to the base using the two screws supplied. **(Fig.11)**

– Attach the pump to the base using the four screws supplied in the indicated order. **(Fig.12)**

– Add the sand (see point 4.1 in the manual).

– Set up the connecting device by attaching the connecting tube to the pump through the adaptor with the thread on its top end, and by attaching the connecting tube to the valve through the 3-piece joint at the other end. **(Fig.13)**

In order to attach the connecting tube to the valve, first dismantle the 3-piece joint and screw it to the PUMP connecting link of the valve. **(Fig.14)**

Where the connecting tube joins up with the thread on the top of the valve, Teflon should be used.

- Mount the valve and the pressure gauge.

4. COMMISSIONING

4.1. Loading with sand

The sand loaded must correspond to the grading and quantity indicated on the filter specifications plate. Load the sand as indicated below:

- Check that the pump is not in operation.

- Set the selector valve to the “CLOSED” position. **(Fig. 6)**

- Remove the selector valve and fit the funnel as shown to prevent sand from entering the collector unit. **(Fig. 7.b y 7.c)**

- Pour water into the vessel until the tank is 1/3 full, followed by the sand. Take care not to damage the collector arms. **(Fig. 7.c)**

- Fit the valve to the vessel and the pump once again: The area of the watertight seal between the valve and the vessel must be clean and free of sand.

4.2. Start-up

- Clean the swimming pool as well as possible before starting up the filtration unit. Remove dirt and foreign bodies from the skimmer siphon and pump prefilter.

- Priming the suction: Open the pump prefilter cover and completely fill with water up to the level of the suction intake. **(Fig. 8)**

- Close the cover and check that it is correctly fitted.

ENSURE THAT THE PUMP IS STOPPEDBEFORE MAKING ANY CHANGE OFVALVE POSITION.

- Start-up/Washing: see point 2.4.2

- Filtration start-up: Set the selector valve to the “Filtration” position. Turn the equipment on.

- Bleeding: Remove the air from the inside of the pump, valve and deposit. Slightly open the bleeders available. **(Fig. 9)**

Close the pump filter cover and bleeders correctly, so that they are watertight.

- Adjust the hours of operation of the equipment in accordance with the volume of the swimming pool, the flow supplied by the pump and its situation.

After the initial start-up it is recommended to keep the filter running continuously for 24 hours and then to clean the remains of dirt on the pump prefilter and skimmers.

5. MAINTENANCE

5.1. Cleaning

Products containing solvents must not be used for cleaning the outside parts of the filter, as they may damage it.

Wash and rinse as required in accordance with the pressure changes indicated. It is recommended that the sand be changed every three years approximately.

5.2. Overwintering

The filter installation must be protected in winter against the potential risk of freezing.

If the equipment is not going to be used during the winter period, the following operations must be performed:

– Wash the filter in accordance with the instructions provided.

– Disconnect the equipment from the mains.

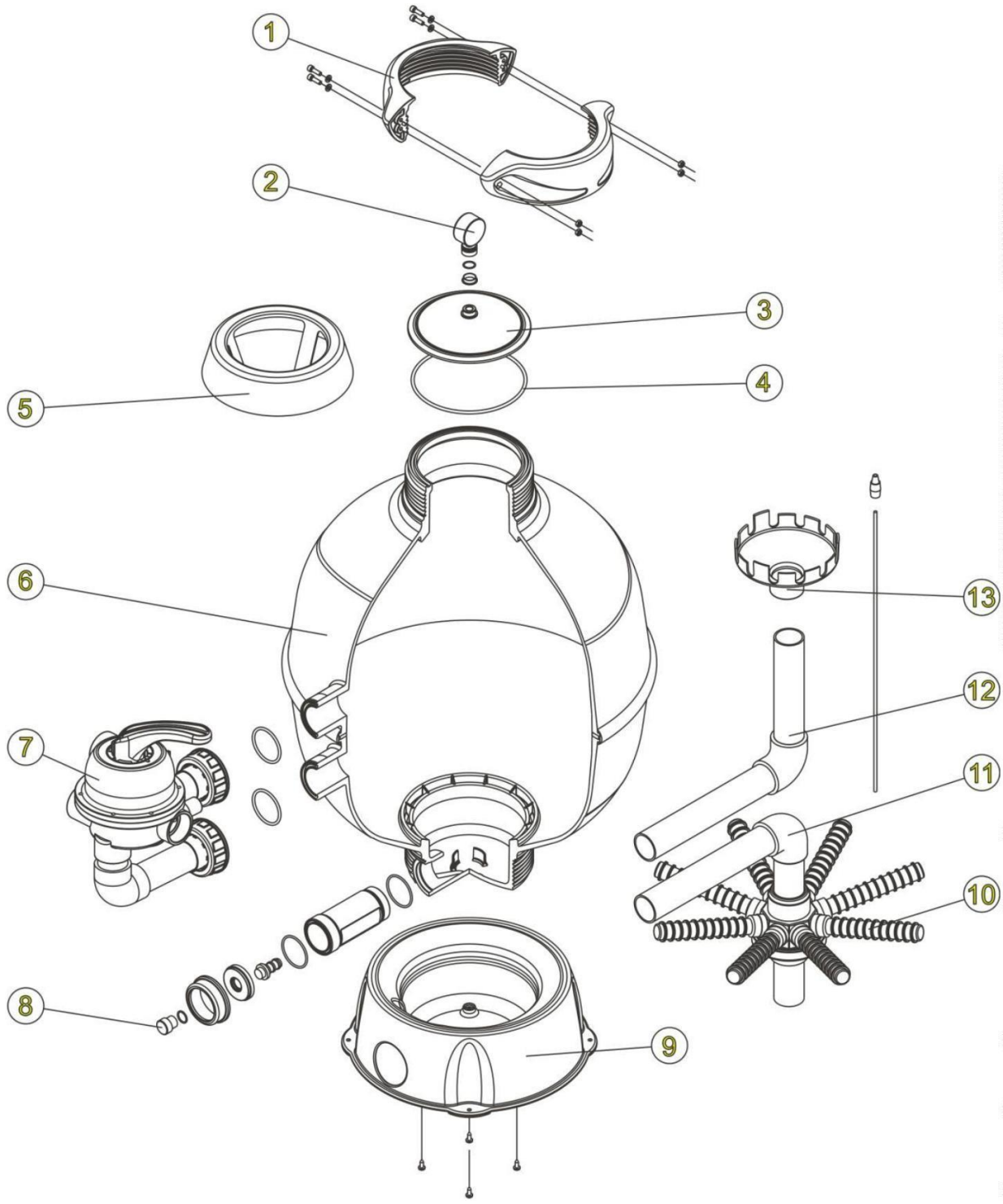
– Completely empty all the water from the filter, pump and pipes.

– Set the key on the filter to the “WINTER” position. Once the winter period is over, proceed according to the instructions for the initial start-up. **(Fig. 10)**

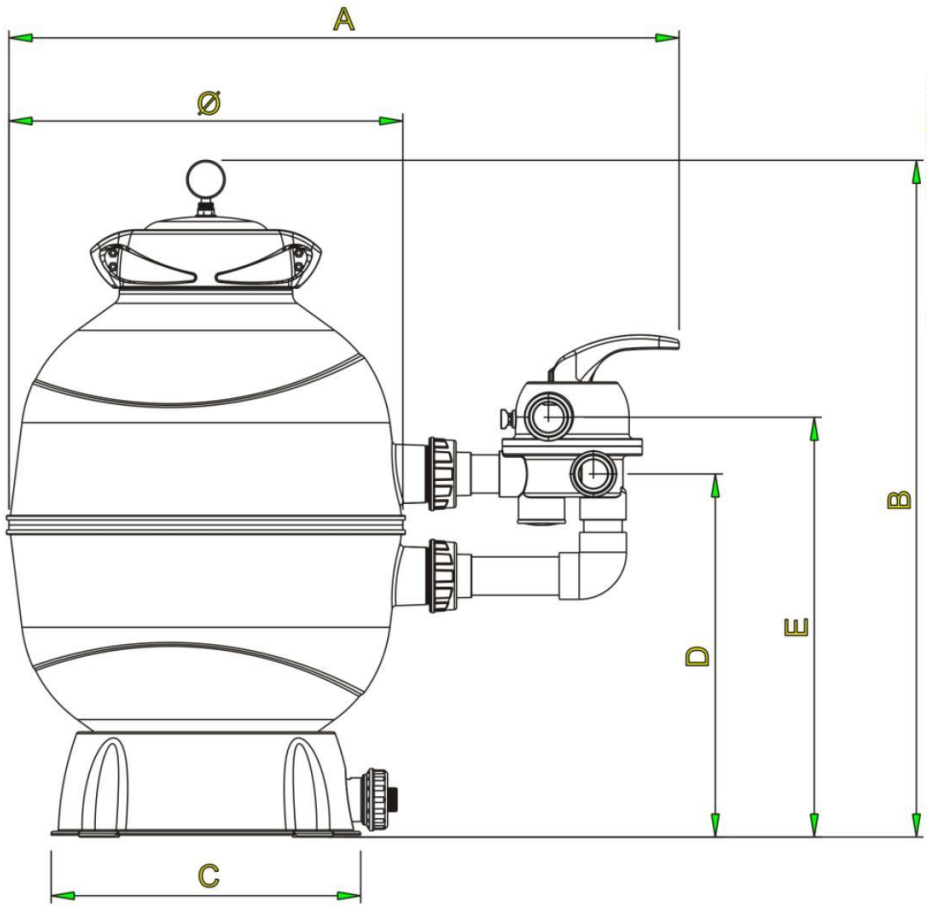
6. POSSIBLE PROBLEMS, CAUSES AND SOLUTIONS

1) Presence of algae in the sand which block the filter.
2) Incorrect chemical disinfection of the water.
3) Low water flow.
4) After washing, the filter pressure is high.
5) The filtered water is not clear.
6) The pump does not draw water or the suction time is very long.
7) The pump does not start.
8) The pressure gauge oscillates sharply.
9) The pump loses water.
10) Noise.

1	2	3	4	5	6	7	8	9	10	CAUSES	SOLUTIONS
	X			X						Short filtration cycles	Lengthen the filtration cycles
X										Short filtration cycles	Backwash the sand until the water in the inspection window is clear, usually after 2 minutes
		X								Filter saturated	Wash the filter
		X	X				X		X	Valves half-closed	Check that they are completely open
			X							Defective pressure gauge	Replace it
		X	X							The sand in the filter forms lumps	Renew the sand in the filter
	X			X						Incorrect chemical disinfection of the water	The pH must be between 7,2 and 7,6
		X			X					Swimming pool level insufficient, and draws air	Fill the swimming pool up to half the level of the skimmer
		X				X				Pump seized, and the shaft does not turn freely	Contact a technical service
					X		X		X	The pump picks up air	Check the installation up to the pump suction and eliminate the leaks
								X		Watertightness failure	Contact a technical service
					X		X		X	Intake of air into the equipment	Repair the leaks



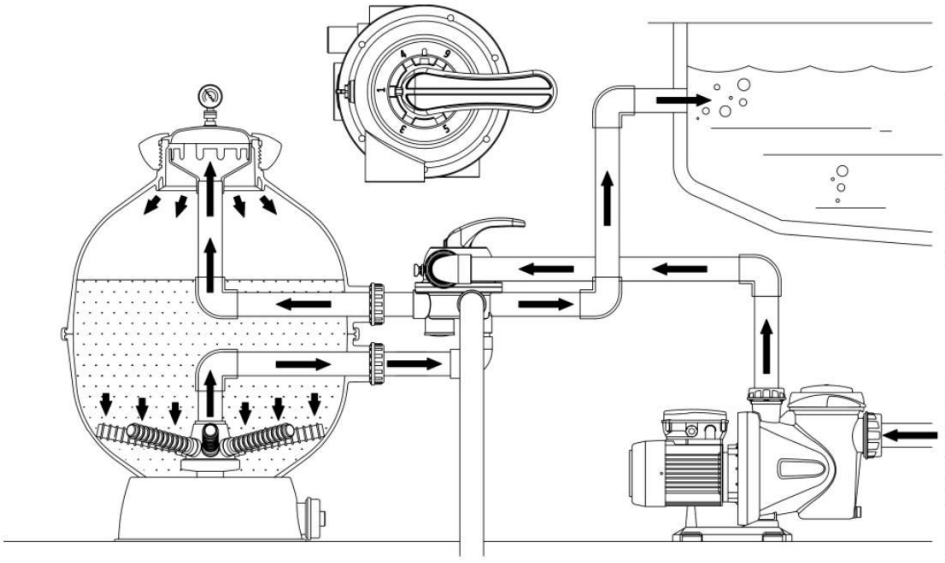
	ES
1	Flanges
2	Pressure gauge
3	Transparent cover
4	Cover seal
5	Funnel
6	Blow filter
7	Valve
8	Bleeding
9	Filter foot
10	Strainers
11	Collector unit
12	Diffuser arm assembly
13	Diffuser



Model	Ø filter [mm]	Q nominal [m³/h]	Pool volume [m³]	Sand load [kg]	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	Weight [kg]
FKP 520 6LT	520	10	80	85	844	886	422	460	519	21.7
FKP 620 6LT	620	15	120	145	943	957	422	501	560	23.7
FKP 760 6LT	760	22	176	300	1102	1114	422	630	715	34.0

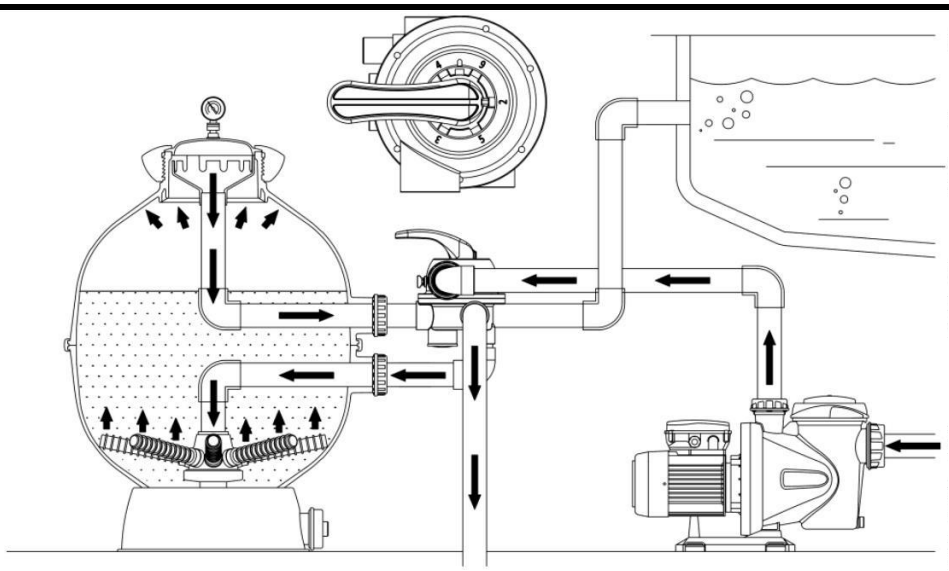
(*) Pool volume (m³): A water circulation of 8 hours a day is contemplated.

Fig. 1



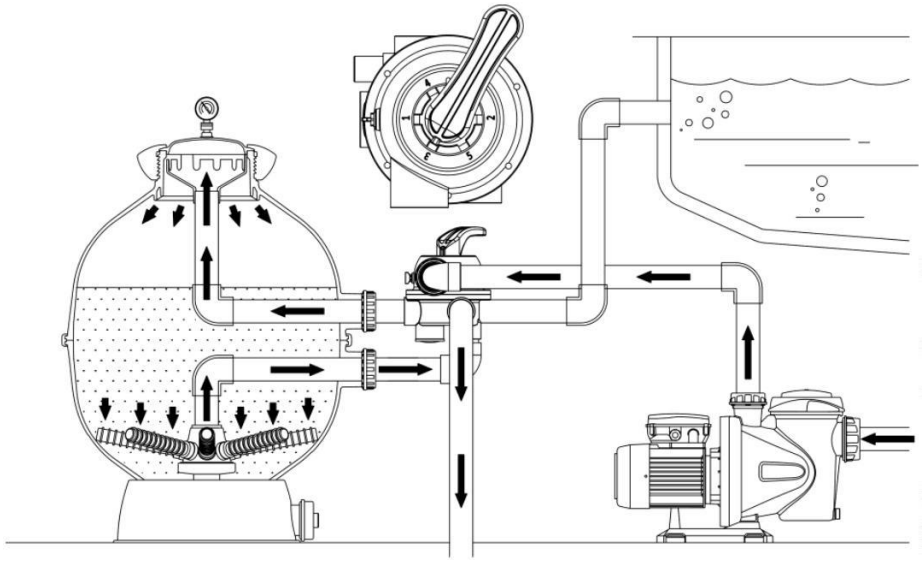
1 = FILTER

Fig.2



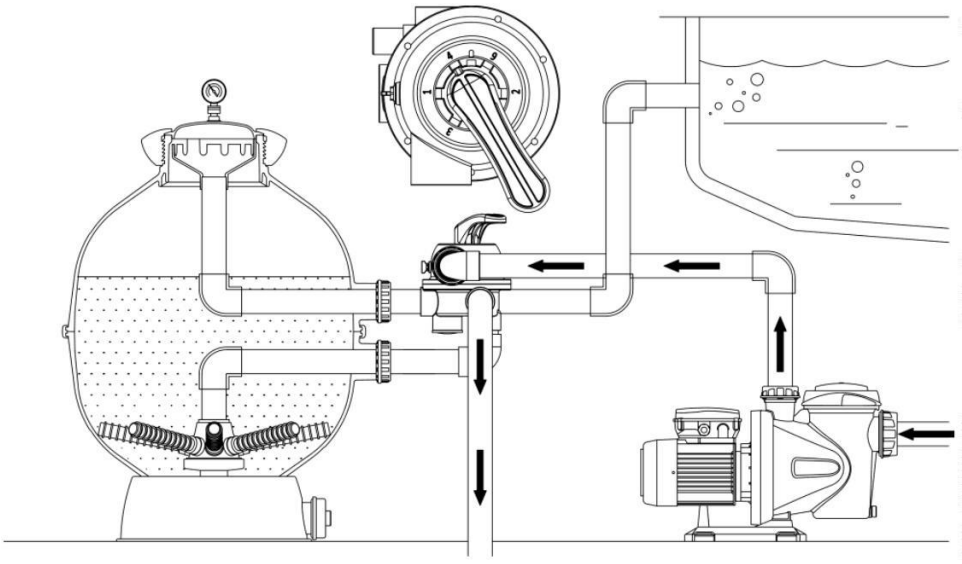
2 = BACKWASH

Fig.3



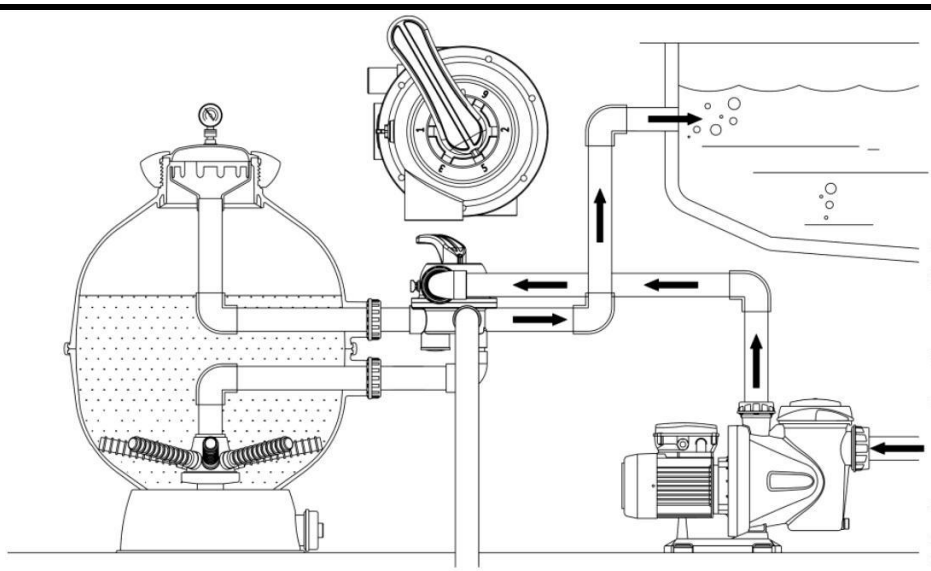
3 = RINAGE

Fig.4



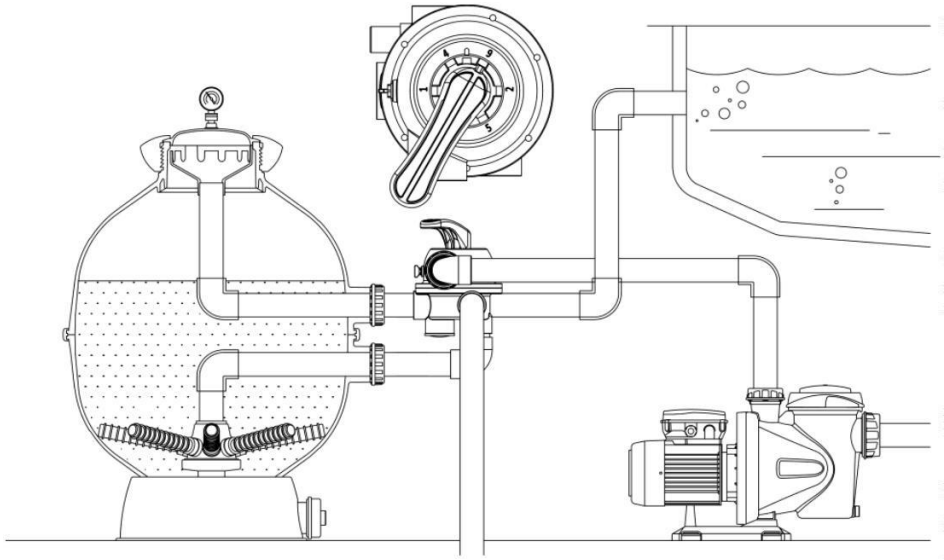
4 = WASTE

Fig.5



5 = RECIRCULATE

Fig.6



6 = CLOSED

Fig.7

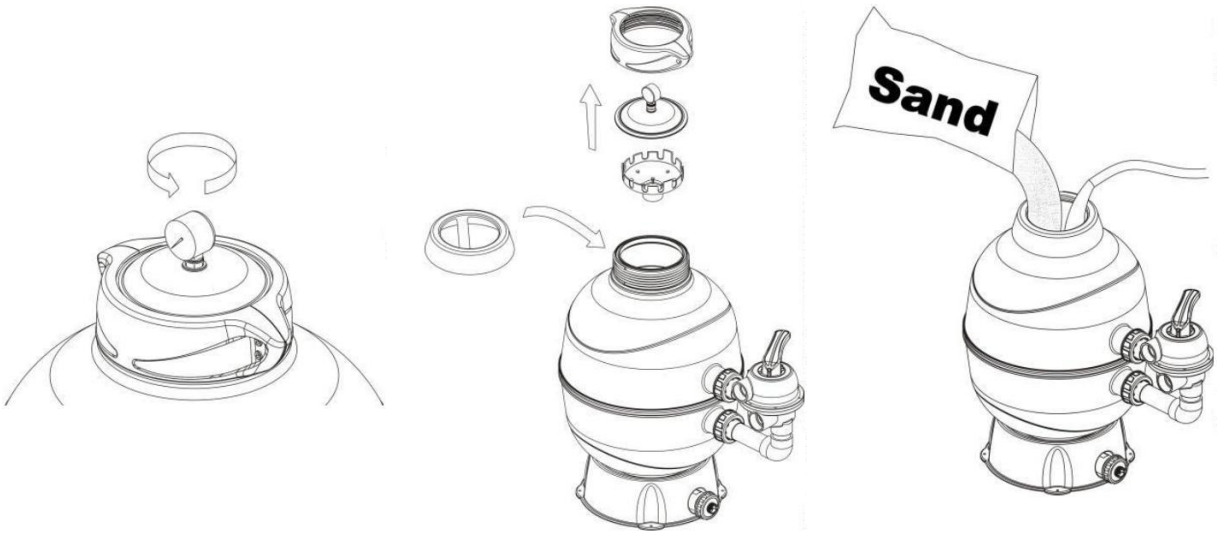


Fig.8

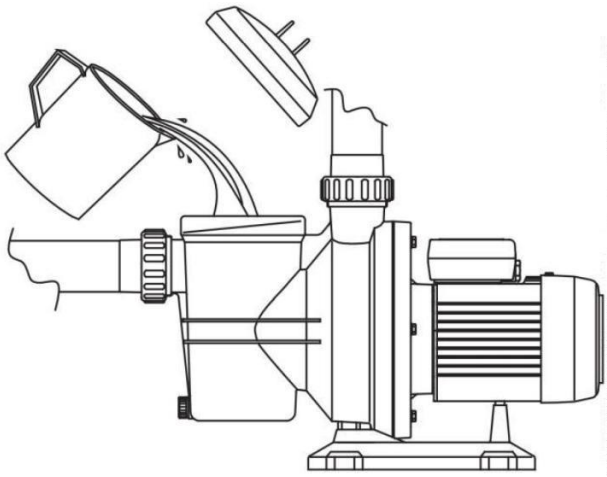


Fig.9

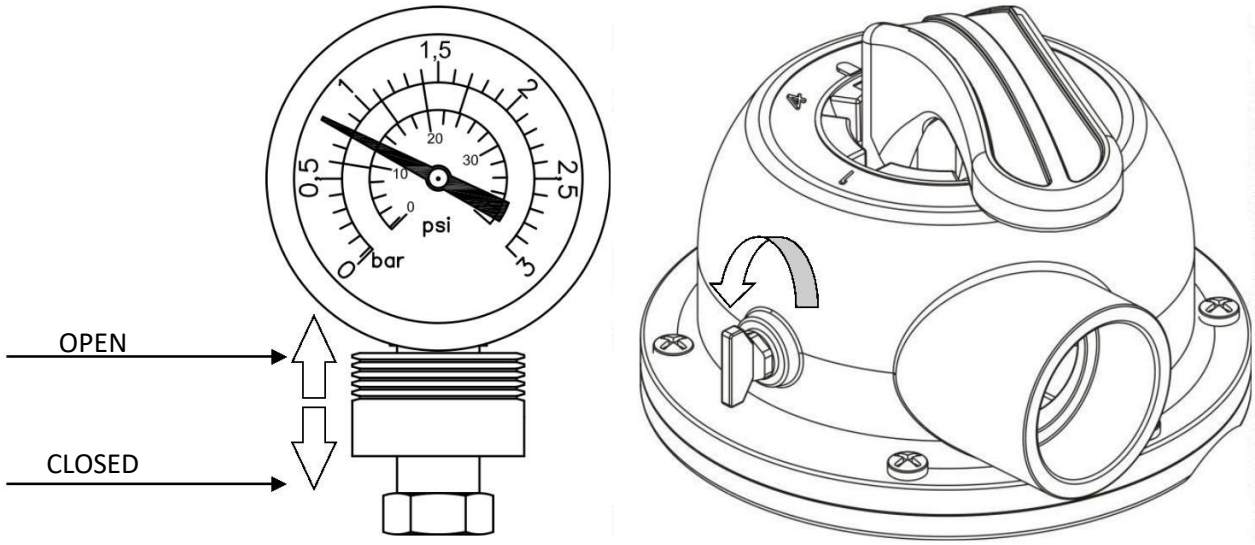
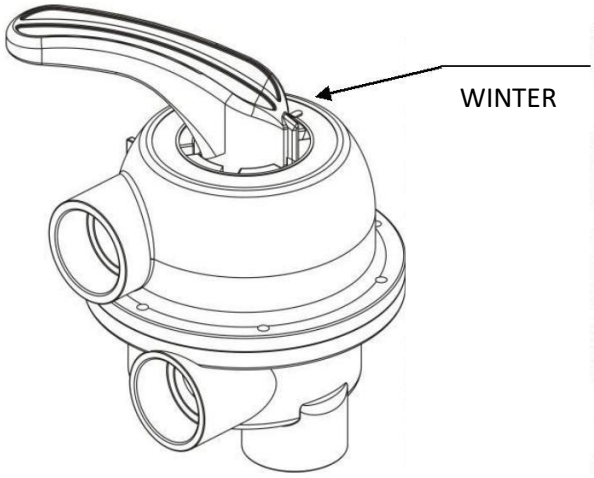
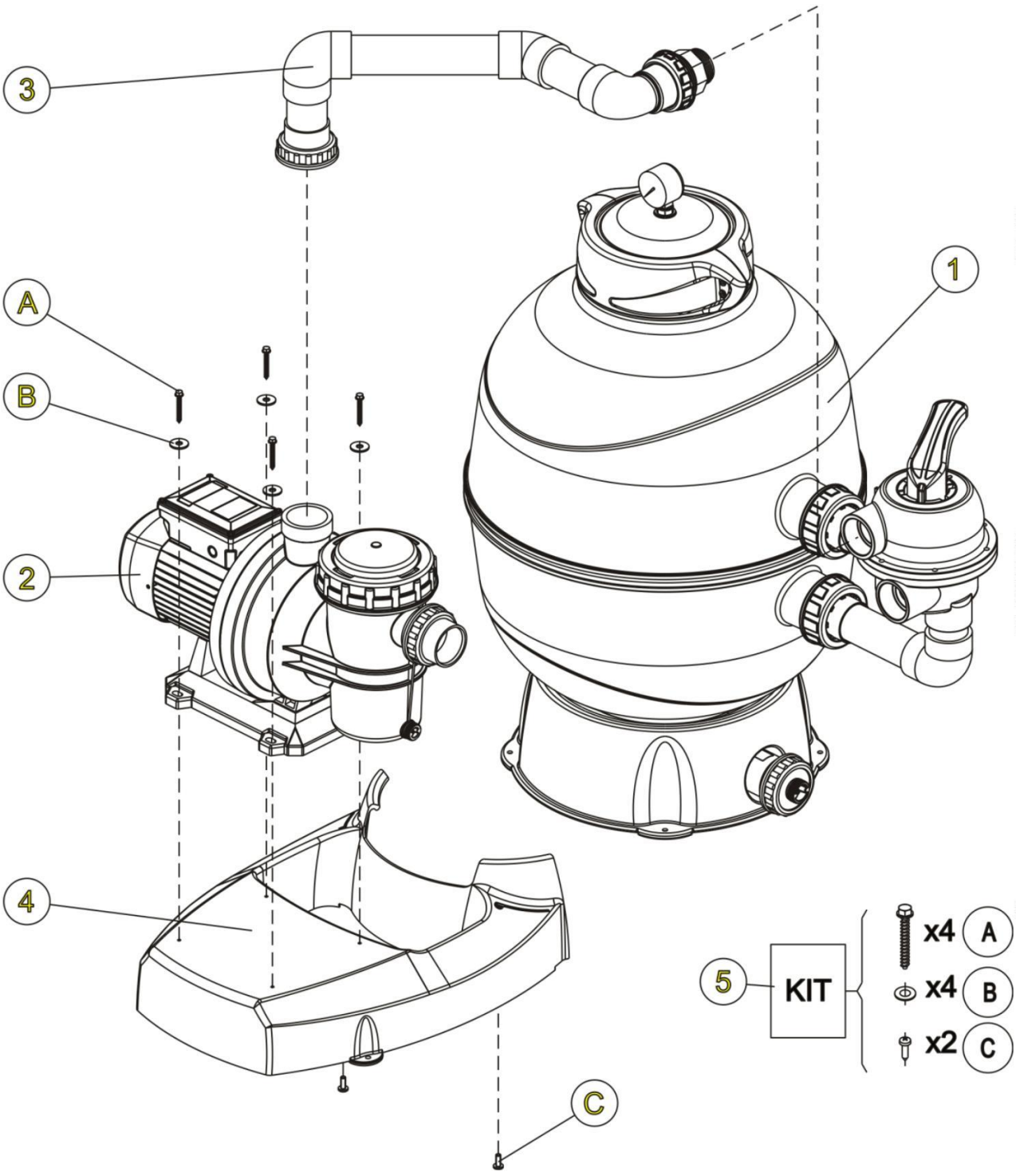


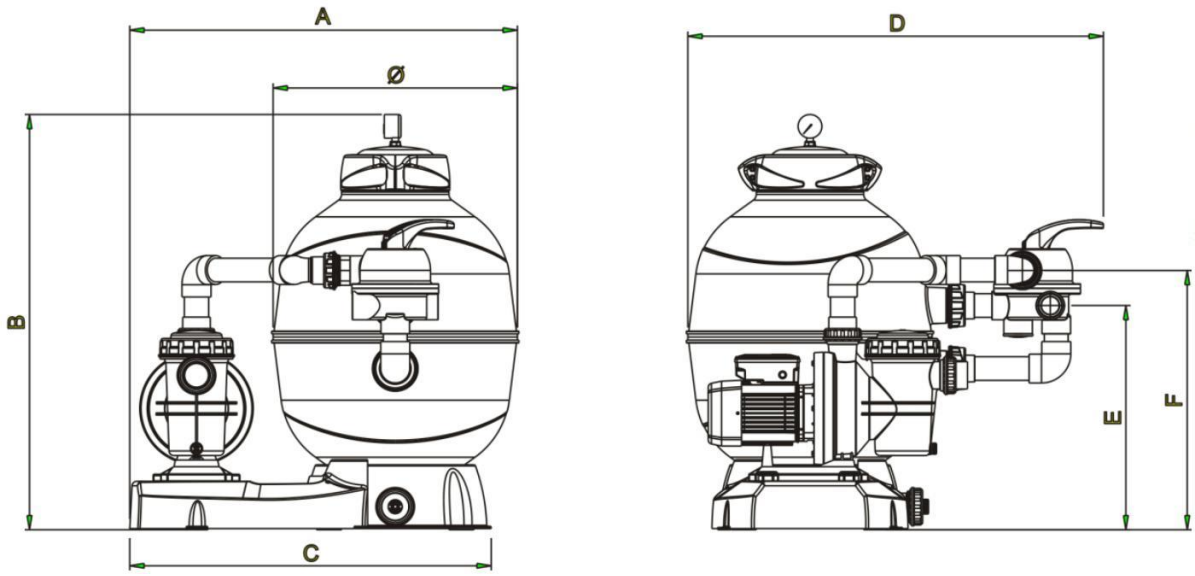
Fig.10



FILTERPAK PLUS (FPP)



	EN
1	Pump filter
2	Pump
3	Connection kit
4	Foot
5	Packing kit



Model	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Kg
FPP 520 6LT	803	866	744	845	463	524	34,1
FPP 620 6LT	853	957	744	945	501	562	38,6
FPP 760 6LT	1054	1100	871	1076	630	711	51,6

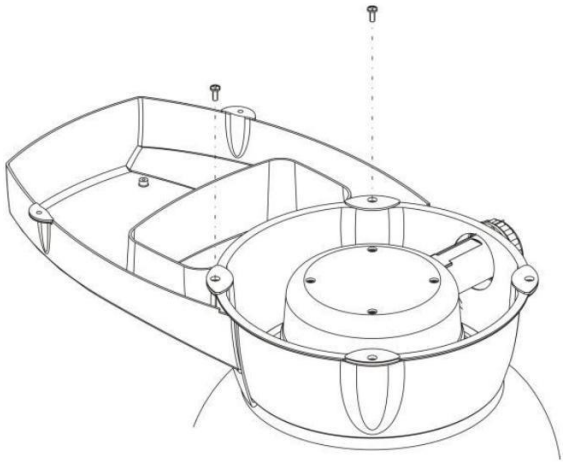


Fig.11

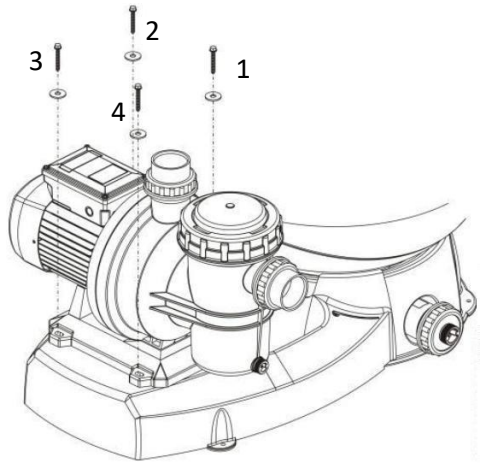


Fig.12

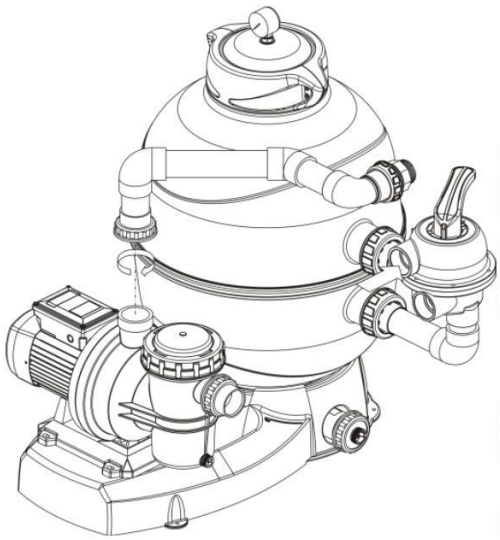


Fig.13

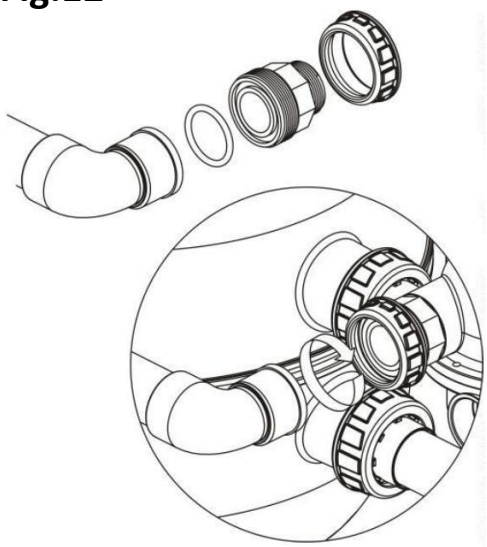


Fig.14

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