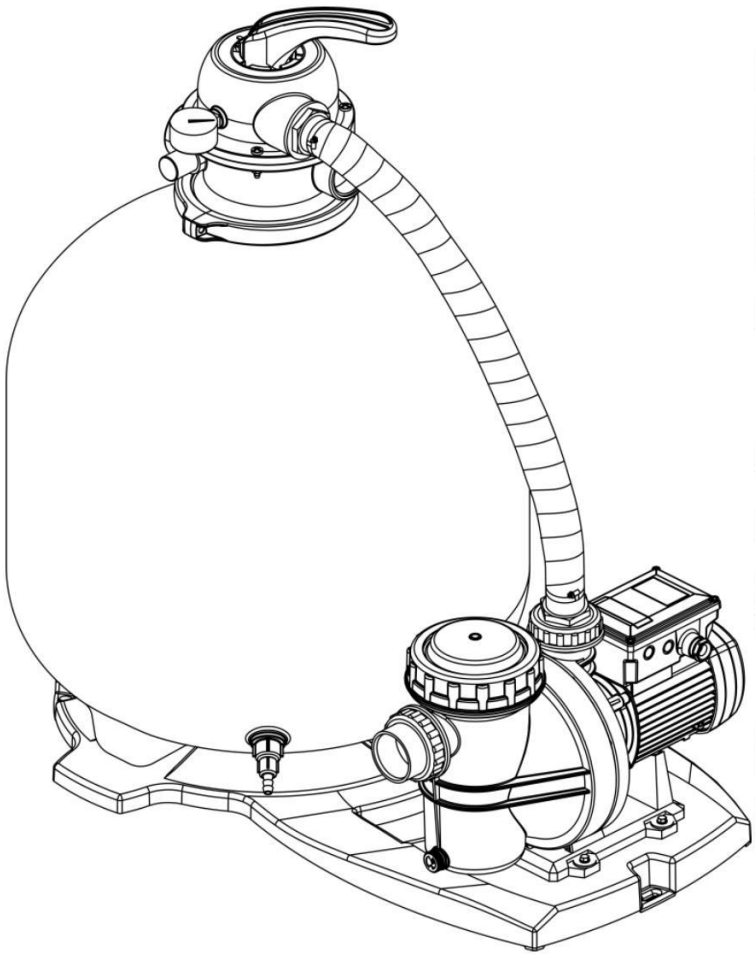
NEAT

Filtration group for swimming pools



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, 24 de Noviembre de 2020



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Girona - Spain

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



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 2,5bar. 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



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.



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

The filtration unit is an essential device for maintaining the quality of the water in a swimming pool over a long period of time, both for the convenience of bathers and to save water consumption, since the water does not need to be replaced.

The function of the unit is the mechanical separation of the solid particles in the swimming pool water: these are retained in the filtering medium.

The filtering element consists of small grains of silicon sand, which are capable of retaining the dirt dissolved in the water.

As the water is filtered, the dirt adheres more and more to the grains of sand, reducing the passage of water and consequently the volume of water in the swimming pool.

In order that the water is correctly regenerated, it is recommended that the entire contents of the swimming pool are filtered at least 4 times a day.

To perform the functions indicated, the unit is principally formed of the filter, the pump and the selector valve.

The selector valve may have 4 or 6 positions, depending on the number of functions of each equipment unit. The filtration unit has been designed to comply with the EN 16713-1 standard.

2.1. Principal functions

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

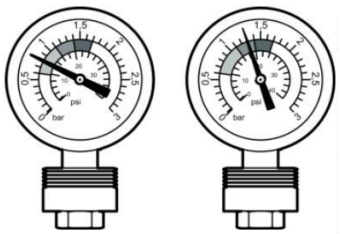
2.1.1. Filtration

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. **(Fig.1)**

The operating time of the equipment depends on the volume of water in the swimming pool and the filtration capacity of the equipment (flow). See point (3.5.) Start-up.

2.1.2 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.

2.1.3. Washing

If the filter is saturated, it must be washed. This consists of 2 stages:

a) Backwashing: countercurrent circulation of the water through the filter and towards the outflow for approximately 3 minutes. **(Fig.2)**

b) Rinsing: 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. **(Fig.3)**

2.1.4. Recirculation – Bypass (only for units with 6- position valves)

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. Ensure that the pump is not in operation, turn the valve to the “RECIRCULATION” position and start up the pump.

To apply this process during the chemical treatment of the water. **(Fig.4)**

2.1.5. Emptying (only for units with 6-position valves)

If the swimming pool does not have an outflow at the bottom, it can be emptied by means of the equipment pump. This function can also be used to remove large particles of dirt from the bottom of the pool with the pool bottom cleaner; in this way the dirt will not pass through the filter. **(Fig.5)**

2.1.6. Closed (only for units with 6-position valves)

In this position all the functions are interrupted. This is used to carry out maintenance work on the filtering tank. **(Fig.6)**

3. INSTALLATION AND START-UP

3.1. Typical installation diagram. (Fig.7)

3.2. Fitting 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 maximum admissible pressure is 2,5bar (36 Psi); to avoid overpressure in the use of the equipment, it must not be fitted at a depth of more than 4m below the water level of the swimming pool or connected to the public water mains.

The room or hut where the filter is located must have a drain, in order to avoid the risk of flooding that would affect the safety of the electrics and of persons.

It is recommended that around the filter there should be sufficient space in order that the inspections, checks and maintenance required may be carried out.

PVC accessories must be used for the connections between the piping and the selector valve, pump, etc.

The connections must be made watertight by means of seals and it is not necessary to tighten screws excessively or use teflon.

The pipes in the installation must be made of PVC. Under no circumstances should iron accessories or pipes be used, since these could seriously damage the plastic components of the installation.

Do not load the sand until the initial start-up has been performed.

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.12)**

– Attach the pump to the base using the four screws supplied in the indicated order. **(Fig.13)**

– Add the sand (see point 3.4 in the manual).

– Install the selecting valve and the pressure gauge.

– In order to assemble the flexible connection kit, first connect the PUMP exit-point of the valve and then bend the flexible tube so as to screw the connecting thread into the exit-point of the pump. **(Fig.14)**

3.4. Loading of sand

The sand loaded must correspond to the grading and quantity indicated on the filter specifications plate. Load the sand as indicated below: **(Fig.8)**

1. Check that the pump is not in operation.

2. Set the selector valve to the “CLOSED” position.

3. Remove the selector valve and fit the funnel as shown to prevent sand from entering the collector unit.

4. Pour water into the vessel until the tank is 1/3 full, followed by the sand. Take care not to damage the collector arms.

5. 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.

Take care not to damage the collector arms. Avoid pouring sand inside the central pipe.

3.5. Start-up

1. Cleaning: 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.

2. Priming the suction: Open the pump prefilter cover and completely fill with water up to the level of the suction intake. **(Fig.9)**

Close the cover and check that it is correctly fitted.

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

4. Bleeding: Remove the air from the inside of the pump, valve and deposit. Slightly open the bleeders available. **(Fig.10)**

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

5. Adjust the hours of operation of the equipment in accordance with the volume of the swimming pool, the flow supplied by the pump and it’s situation. See Table 1.

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.

4. WINTER CARE

In winter the filtering installation must be protected from the risk of frost. **(Fig.11)**

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.

– Disconnect the equipment from the mains.

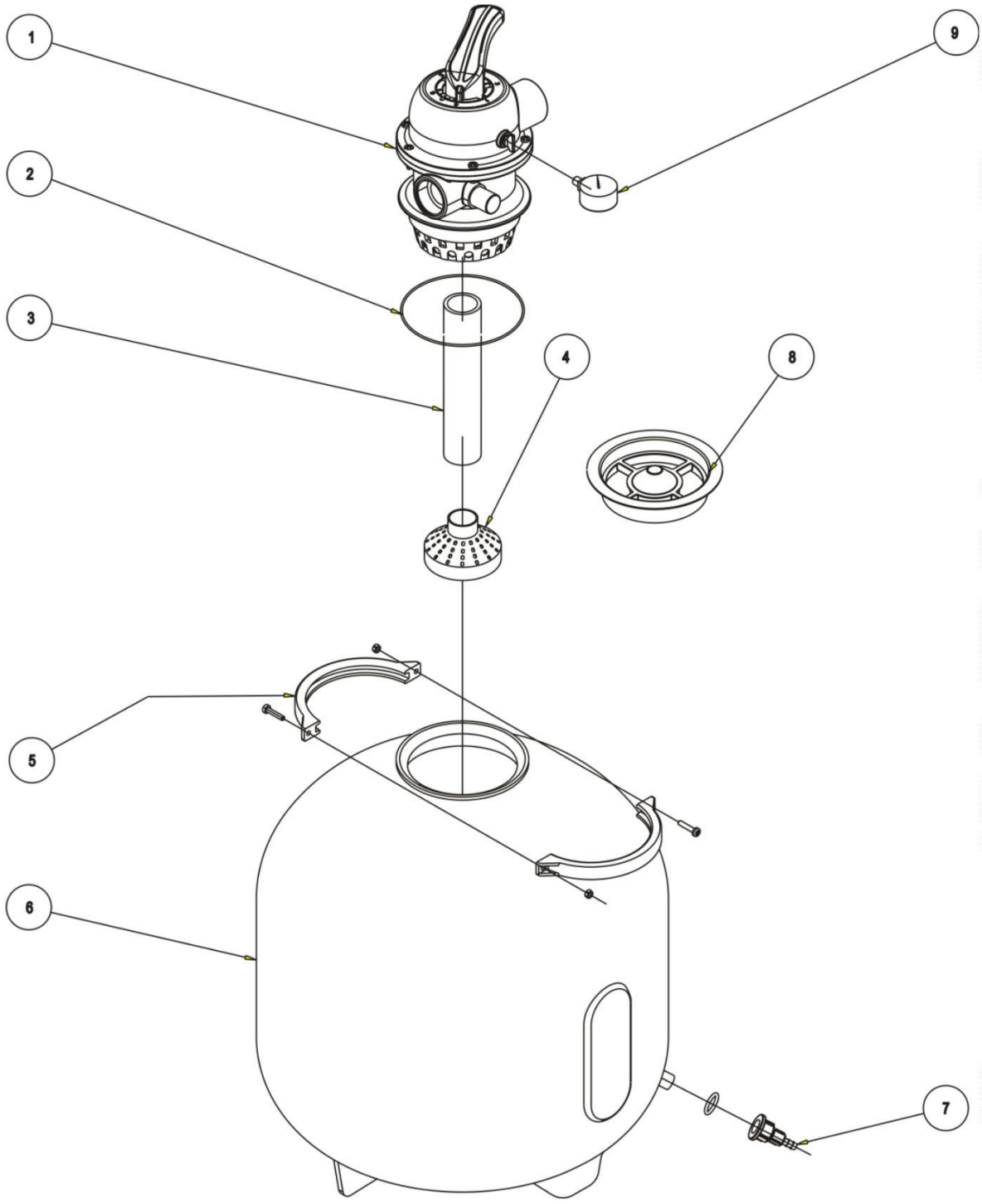
– Completely empty all the water from the filter, pump and pipes.

– 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.

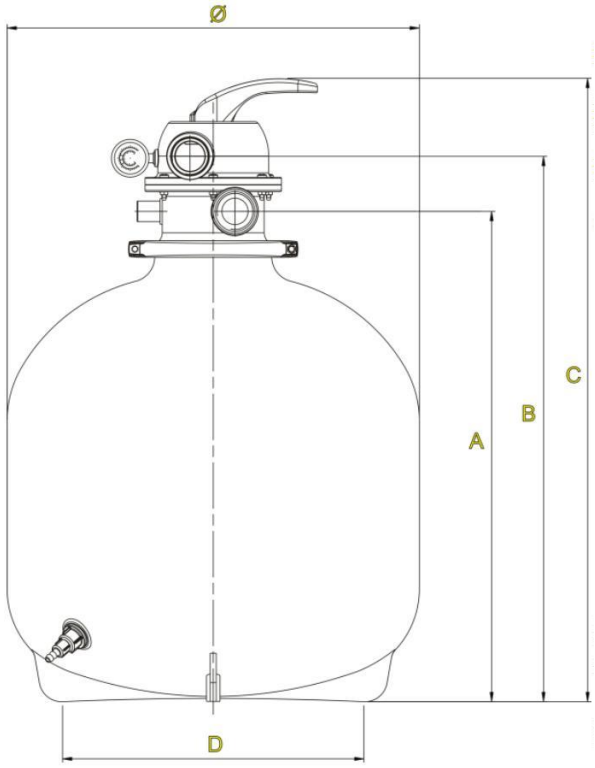
5. POSSIBLE PROBLEMS, CAUSES AND SOLUTIONS

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



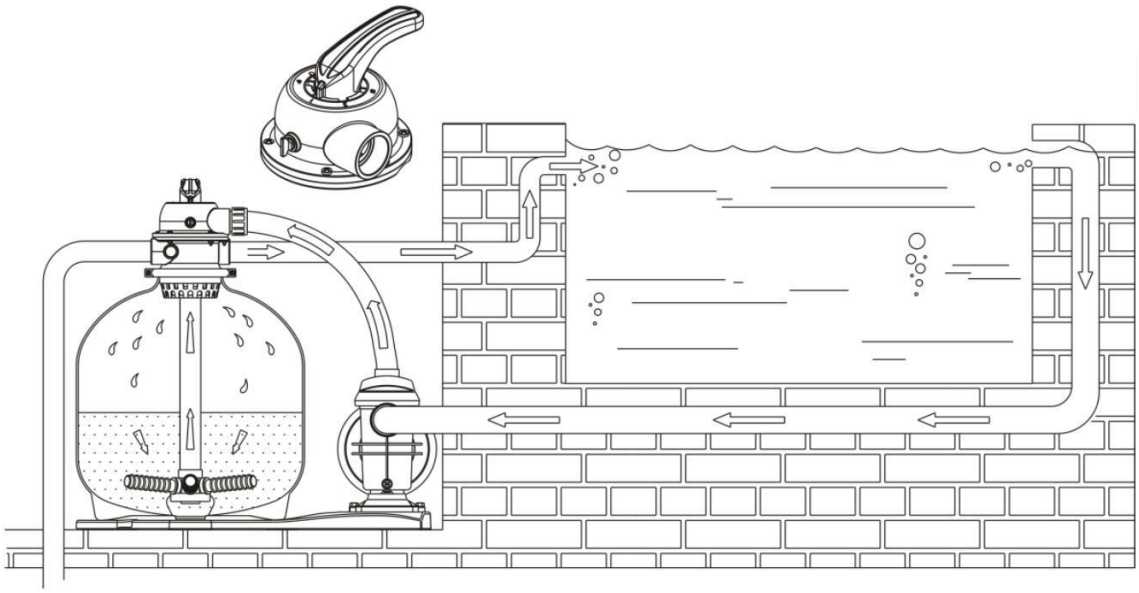
	EN
1	Valve
2	Cover seal
3	Diffuser pipe assembly
4	Collector unit
5	Female flange
6	Blow filter
7	Bleeding
8	Funnel
9	Pressure gauge



Model	Ø filter [mm]	Q nominal [m³/h]	Pool Volume [m³]	Load sand [kg]	A [mm]	B [mm]	C [mm]	D [mm]	Weight [kg]
NEAT 300 6TP	300	4	32	25	551	611	711	221	5
NEAT 350 6TP	350	6	48	35	552	612	735	258	5.6
NEAT 450 6TP	400	8	64	75	650	723	830	325	7.7
NEAT 550 6TP	550	12	96	125	650	723	830	405	10.1

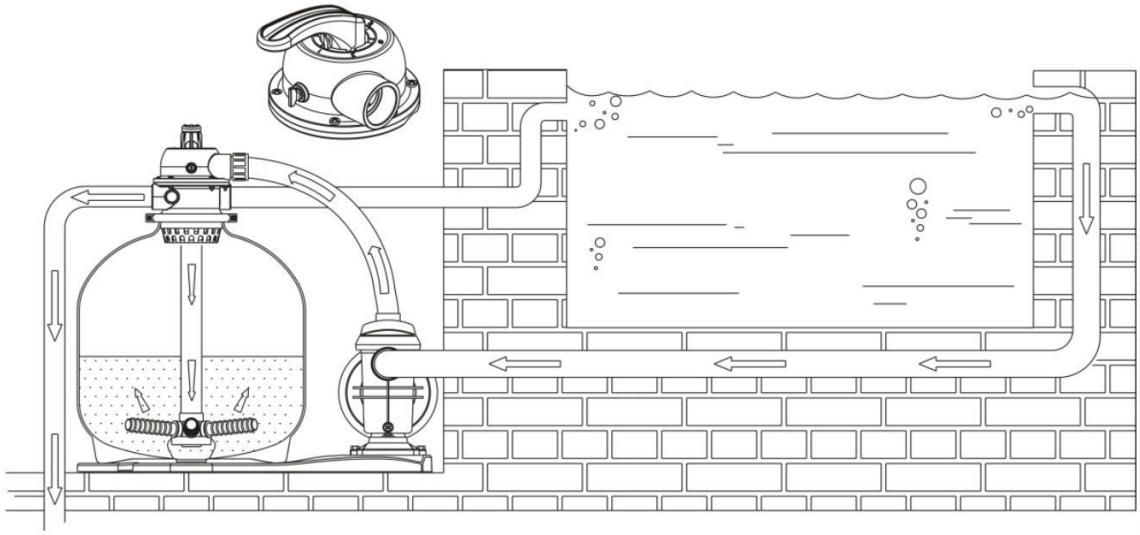
(*) Pool volume (m³): Calculated from the ideal flow rate for 8 hours of recirculation.

Fig. 1



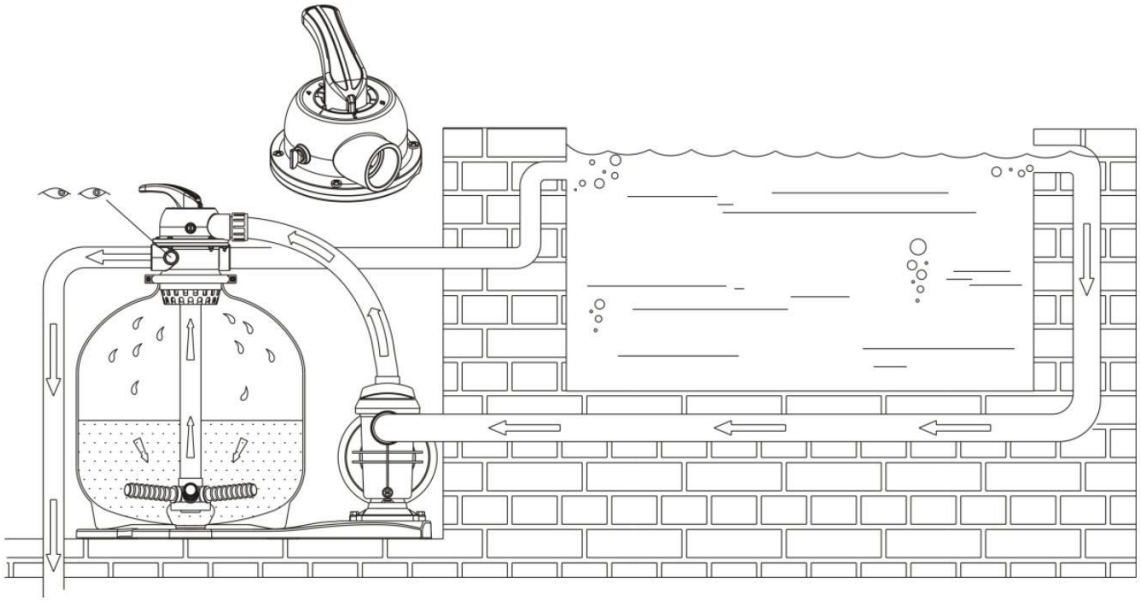
1 = FILTER

Fig.2



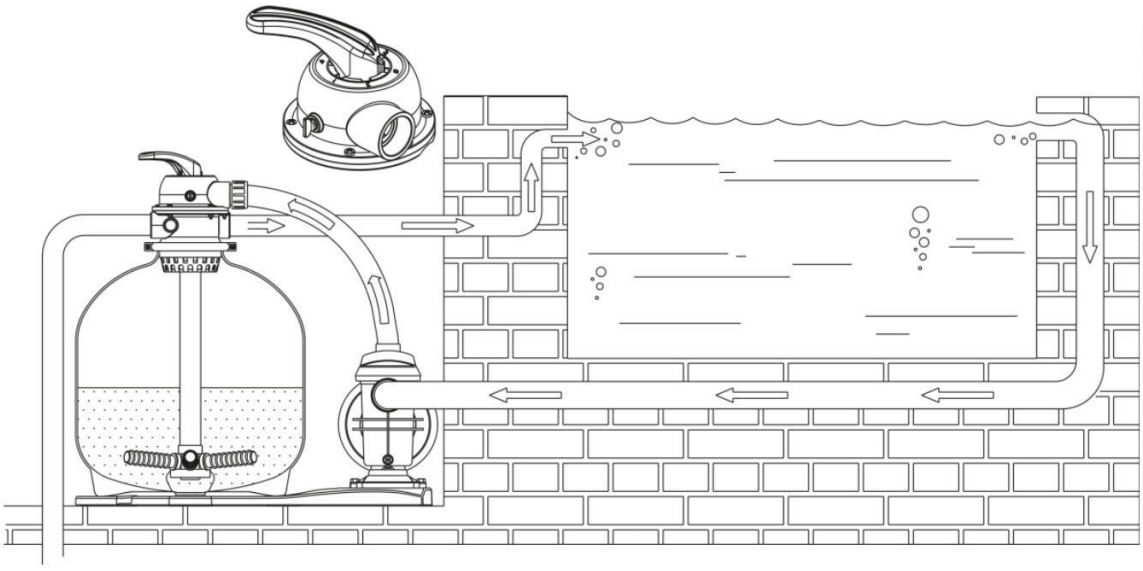
2 = BACKWASH

Fig.3



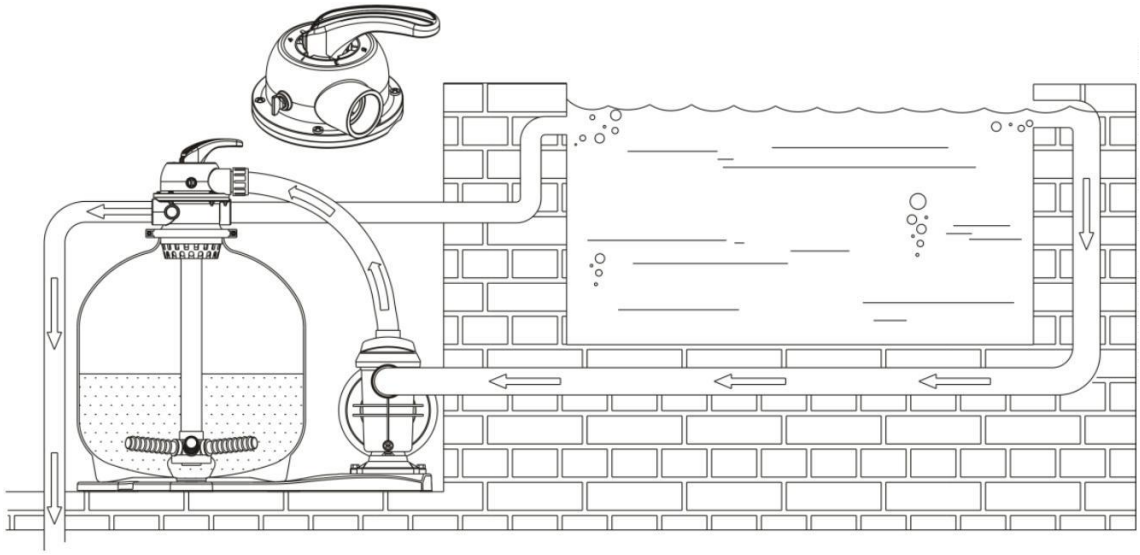
3 = RINAGE

Fig.4



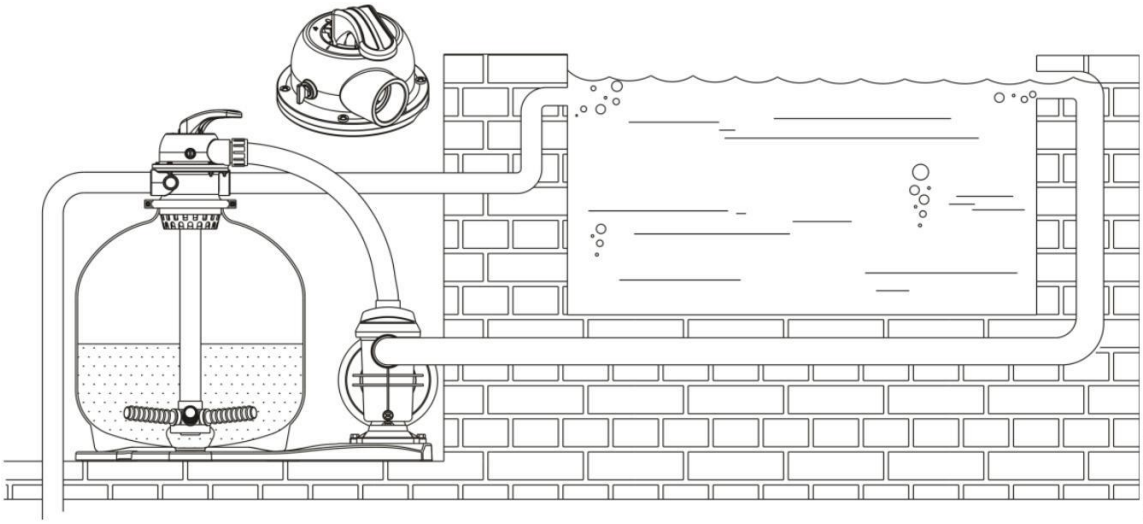
5 = RECIRCULATE

Fig.5



4 = WASTE

Fig.6



6 = CLOSED

Fig.7

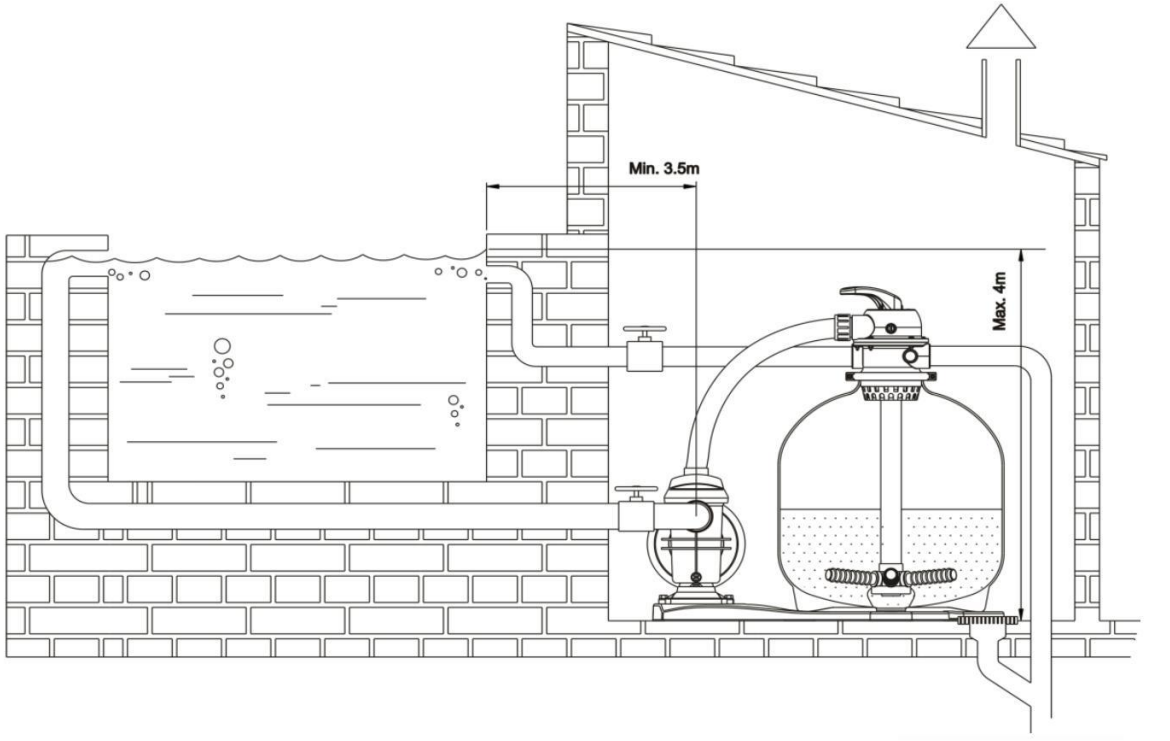


Fig.8

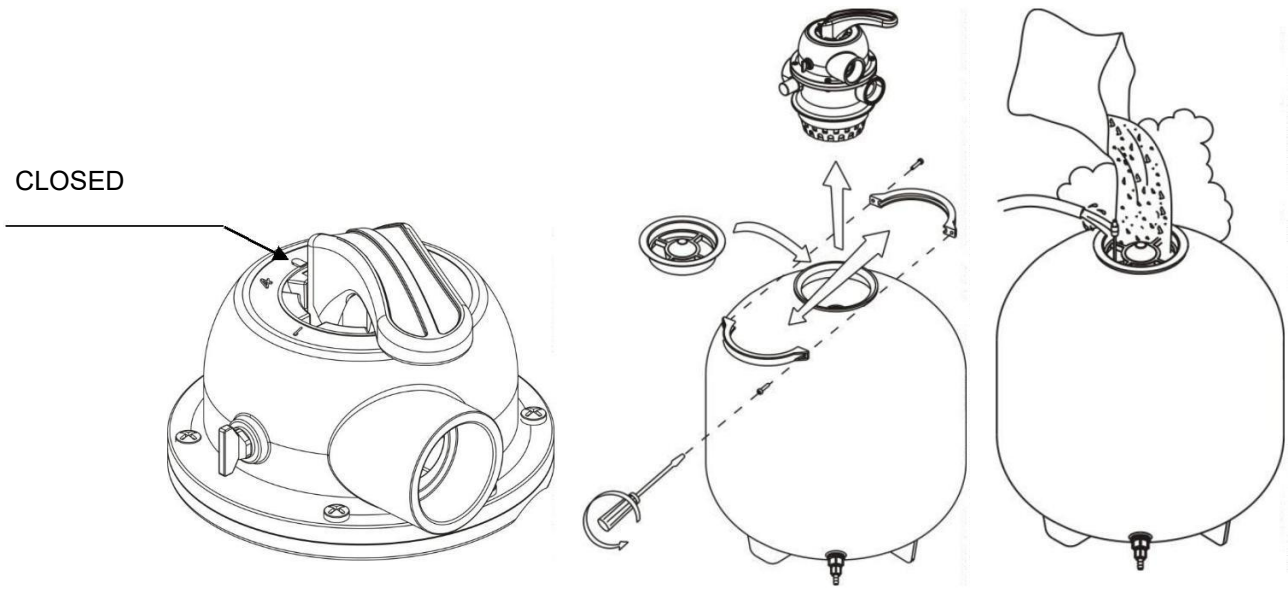


Fig.9

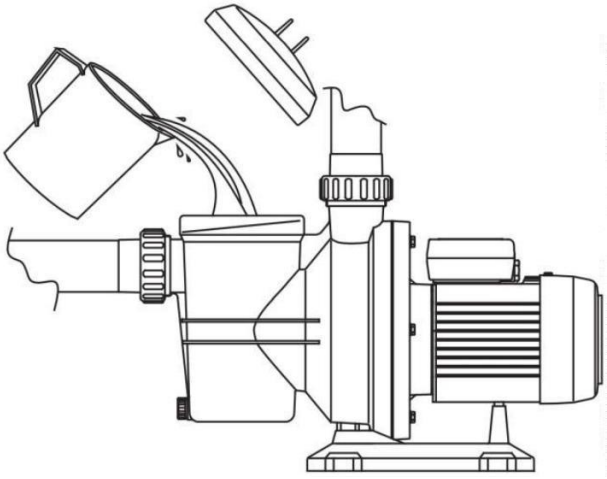


Fig.11

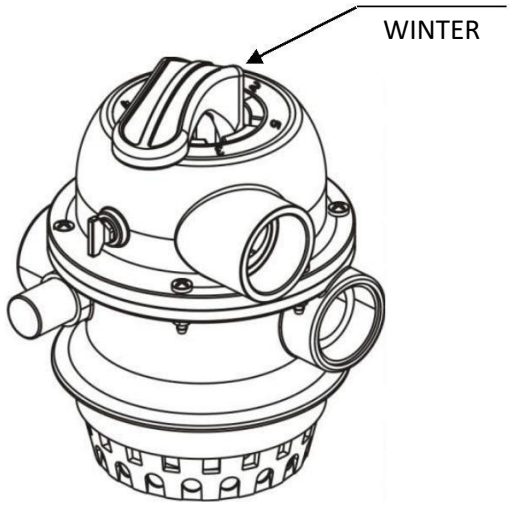
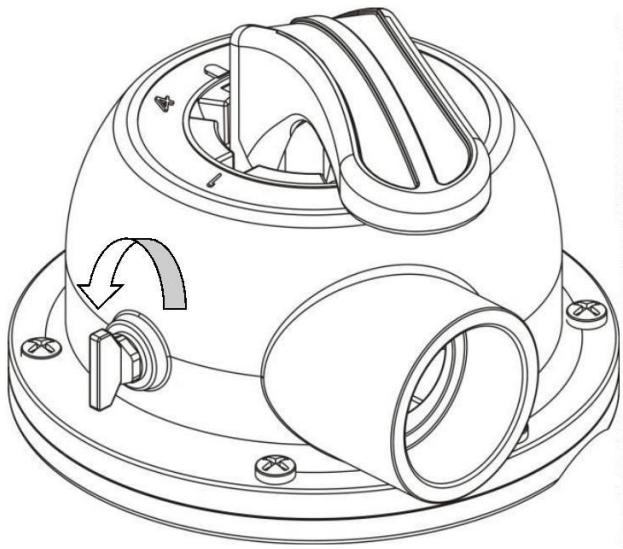
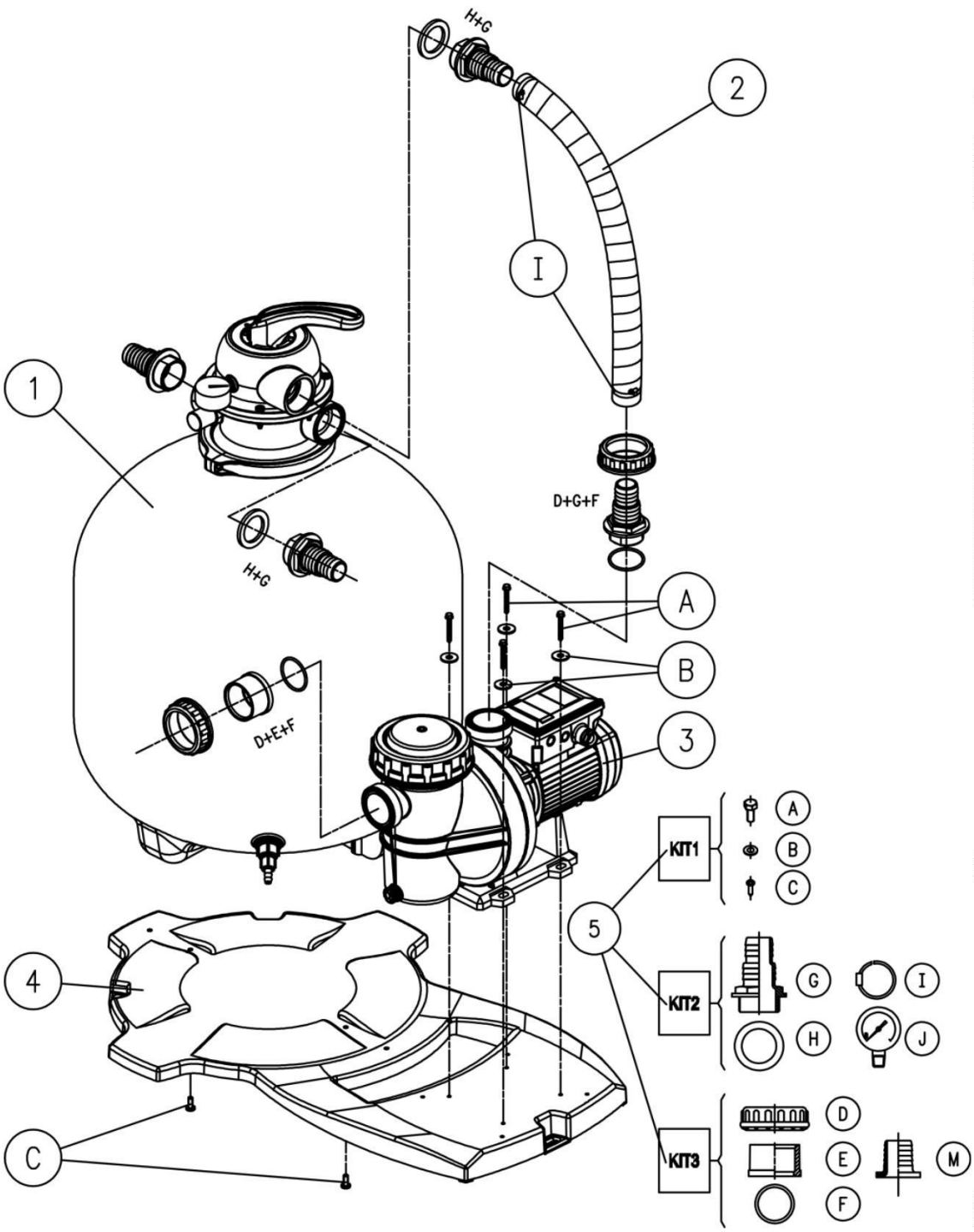


Fig.10

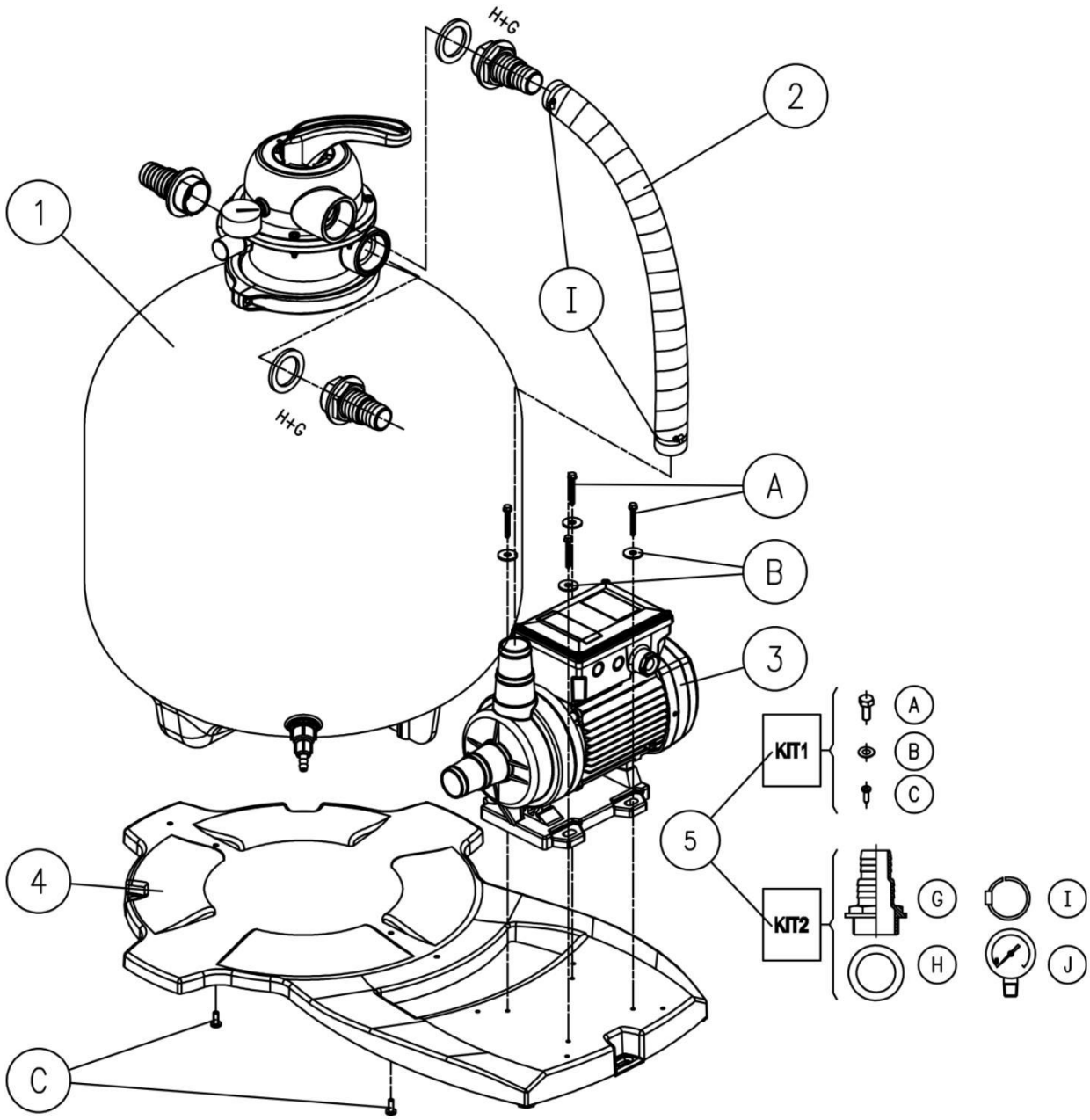




	EN
1	Filtration Aries
2	Connection kit
3	Pump
4	Foot
5	Packing kit

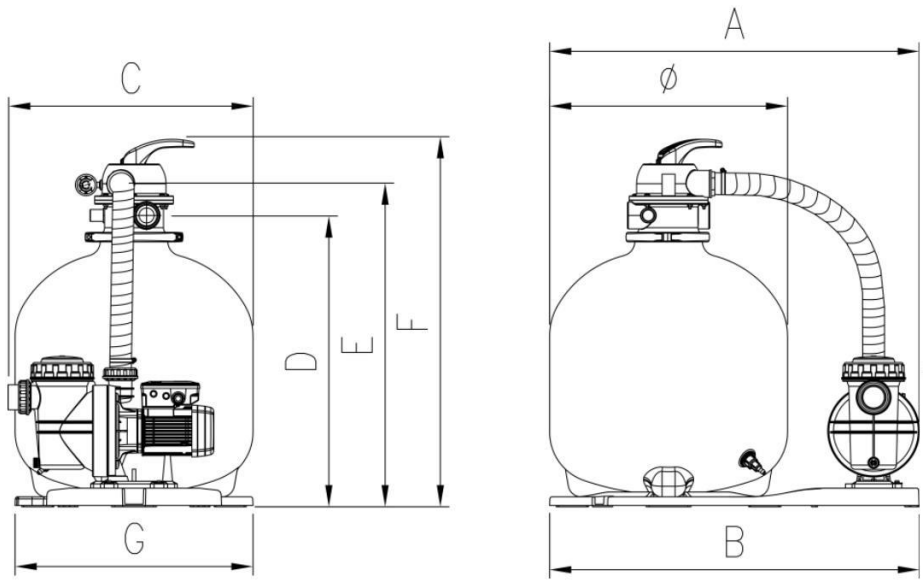
	KIT 1			KIT 3*				KIT 2			
Model	**A**	**B**	**C**	**D**	**E**	**F**	**M**	**G**	**H**	**I**	**L**
NEAT 350	x4	x4	x2	x1	x1	x1	x1	x4	x3	x2	x1
NEAT 450	x4	x4	x2	x2	x2	x2	–	x4	x3	x2	x1
NEAT 550	x4	x4	x2	x2	x2	x2	–	x4	x3	x2	x1

* KIT 3 is inside the pump packaging



	EN
1	Filtration Aries
2	Connection kit
3	Pump
4	Foot
5	Packing kit

	KIT 1			KIT 2			
Model	**A**	**B**	**C**	**G**	**H**	**I**	**L**
NEAT 300	x4	x4	x2	x4	x3	x2	x1



Model	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]
NEAT 300 6TP NOX 4	**573**	**613**	**350**	**583,5**	**583,5**	**734**	**350**
NEAT 350 6TP NOX 6	**616**	**613**	**440**	**575**	**635**	**758**	**350**
NEAT 450 6TP NOX 8	**692**	**613**	**515**	**670**	**730**	**853**	**350**
NEAT 550 6TP NOX 15M	**855**	**855**	**565**	**671**	**731**	**855**	**550**

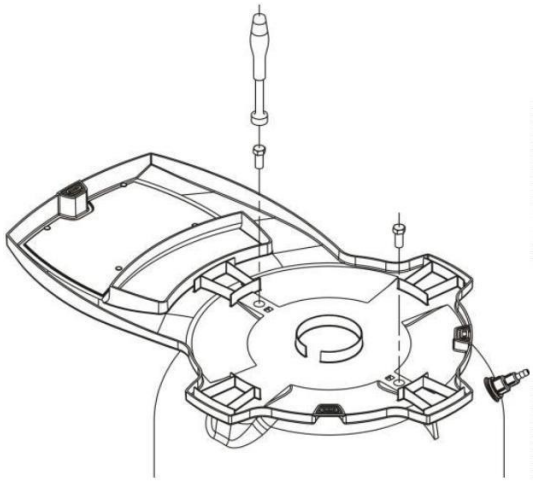


Fig.12

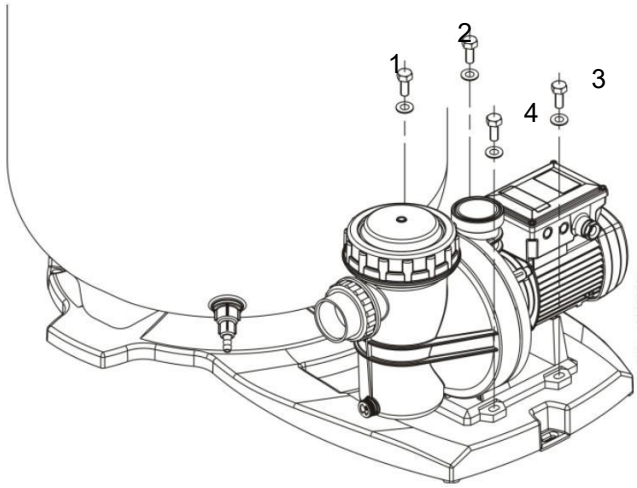


Fig.13

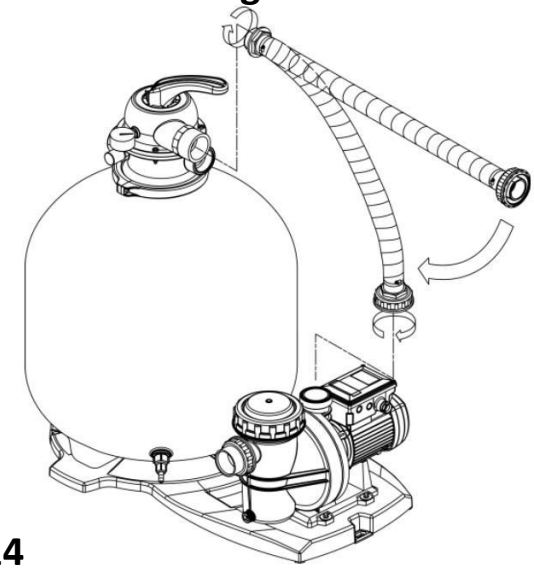


Fig.14

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