

TECHNICAL DATA SHEET FSP "AQUAPUR" SYSTEM

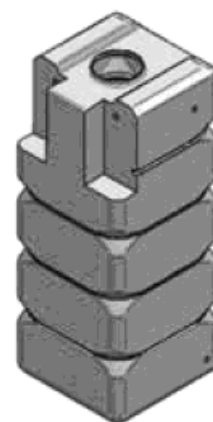
1. Field of use

- System for filtering, storing and pumping drinking water;
- aquaPur® uses the silver ion technology developed by Valrom to prevent the development of microflora in the storage tank. The system requires minimal maintenance and can provide safer and cleaner water for long periods of time.
- **This product is treated with silver-based biocides and has been tested in accordance with ISO 22196:2011.**



2. Technical and dimensional characteristics

Code	Model	L* [mm]	l* [mm]	H* [mm]	Total volume [l]	Useful volume [l]
49550300000	300	600	600	960	320	Cca 260
49550500000	500	600	600	1680	550	Cca 480
49550750000	750	690	690	1840	700	Cca 700




* tolerances ±30 mm;

- **Material:** The tank is built monobloc (without joints) to ensure tightness and reduce the risk of leakage. It is made of 3 distinct layers:
 - **outer layer:** polyethylene for good mechanical resistance;
 - **intermediate layer:** expanded polyethylene and has the role of reducing the formation of condensation on the surface (thermal insulation);
 - **inner layer:** polyethylene that includes inorganic compounds with Ag ions to block the development of microorganisms;
- **Color:** white;
- **Marking:** The system series is engraved on the filter support. In addition, the tank is marked by factory stamping, with the month and year of manufacture. It is located on the support surface of the tank.

➤ **Component elements:**


1. Buffer tank:

Model	300 l	500 l	750 l	
Code	49530300000	49530500000	49530750000	

The tank is available in 3 useful capacities, namely: 260, 480 and 700 liters. It is provided at the base with preparation for attaching a drain valve.

2. Mechanical float:

It has the role to close the water inlet when the maximum level was reached in the tank. The special construction with 2 joints increases the closing pressure in parallel with the increase of the supply pressure and decreases the time for the shut down/ start up of the circuit. Thus long filling periods and related noise are avoided. It comes pre-equipped with a protection screen for mechanical inclusions.

Code	49051000032	
Connection [inch]	1"	
Outlet [mm]	Ø25	
Dimensions [mm]	350x150x70	
Material	PC/ABS	
Operating temperature	0÷+50°C	
Operation manner	Continuous	
Working pressure [bar]	0.2÷6 bar	
Maximum pressure [bar]	10	
Burst pressure [bar]	>20	
Prep	Inlet mechanical filter	

3. Divertron 650 submersible pump

Multi-impeller submersible pump with integrated electronics for automatic start and stop, which automatically maintains system pressure.

When a consumer (faucet, etc.) is turned on, the pressure drops in the sanitary network. The built-in device detects this drop and automatically starts the pump. The pump is automatically stopped when the consumer is closed.

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 Capital social: 6.706.000 lei

- Robust, low operating noise, provided in the construction with a check valve.
- Asynchronous motor. AISI 416 + AISI 304 stainless steel motor shaft. Integrated starting capacitor and thermal protection against motor overheating.
- Electronics allow automatic start and stop. The pressure switch and the flow sensor are integrated. Protection against dry running. Quick access to the condenser compartment.

To compensate for drip-type water losses, an auxiliary vessel* is mounted on the pump outlet, so the pump will start ONLY at major consumption.

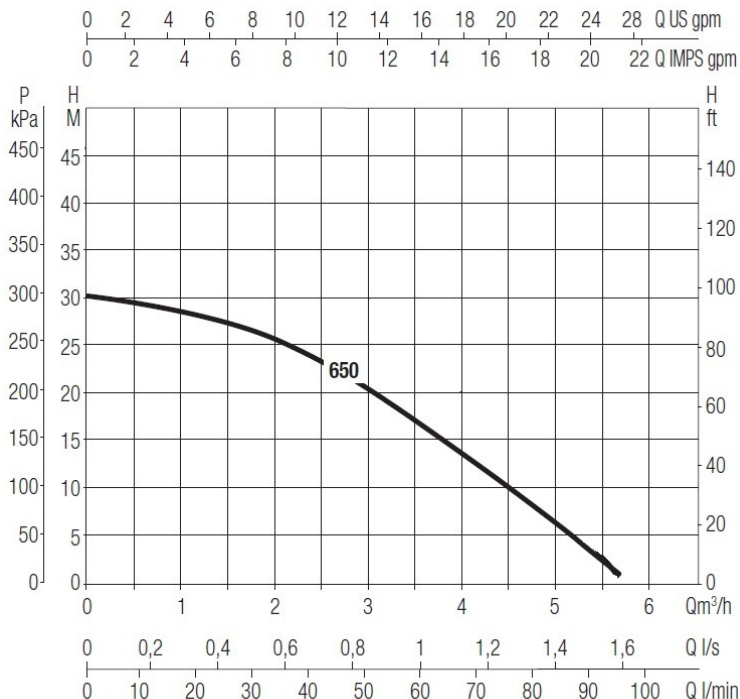
Code	87051301000M	
Power P1 [w]	630	
Maximum pumping height [m]	30	
Flow [mc/h]	1÷6	
Outlet [inch]	1"	
Pump maximum diameter [mm]	160	
Mass [kg]	11	
Continuous operating motor	Asynchronous submersible	
Maximum number of starts	20/h	
Power supply	230V, 50 Hz	
Insulation class	F	
Protection	IP68	

*the auxiliary vessel is only found in the FSP component and is not included in the product identified with sales code 87051301000M.

Pump	Electrical data		Hydraulic data								
	P2 NOMINAL		Q[m ³ /h]	0	1,2	1,8	2,4	3,0	3,6	4,2	4,8
	kW	HP	Q[l/min]	0	20	30	40	50	60	70	80
DIVERTON 650	0,42	0,56	H [m]	30,4	27,7	25,8	23	19,7	15,2	10,3	4,8

Pump	Dimensions [MM]					
	A	H	H1	H2	H3	
DIVERTON 650	160	488	469	455	548	


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The performance of the curves is based on the value of the kinematic viscosity = 1 mm²/s and the density equal to 1000 kg/m³. The tolerance of the curves is in accordance with ISO 9906.


4. Mechanical filter, mounted on the tank inlet

- **Material:** PP melt blown
- **Filtration degree:** 5 μm
- **Duration of use:** 1-3 months depending on the water quality
- **Removes:** sand, rust, fine powders of up to 5μ
- **Disposable cartridge.**

Code	Dimensions [inch]	H [mm]	
AQUA07000110005	10"	253	


5. Activated carbon block filter cartridges, mounted on the tank outlet:

- **Material:** Activated carbon block filter cartridge it is made from coconut shell.
- **Filtration:** It removes chlorine taste and odor from drinking water.
- **Duration of use:** 1-3 months depending on the water quality
- It improves the taste and smell of water, retains sediments larger than 10 μm and volatile organic substances.

Code	Dimensions [inch]	H [mm]	
AQUA07010410000	10"	251	

6. Filter housing

- **Glass material:** transparent SAN
- **Lid material:** PP reinforced with talc
- **Thread:** brass CW617N
- **Sealing:** EPDM O-ring

Code	H [mm]	D [mm]	Maximum pressure [bar]	T _{min} / T _{max} [°C]	Inlet/outlet [inch]	
AQUA00110001032	310	115	6	5/30	1"	

7. Overflow system


It's a safety system that discharges water in case the mechanical float breaks down. It is made of a 32 PPR tube and a vertically mounted direction valve. It can be mounted on any of the sides of the tank, depending on the position of the floor siphon/ sewerage system.

ATTENTION !

The available end of the valve will always be connected to the sewerage or a floor siphon by means of a pipe (hose). Otherwise the flooding risk may occur!



8. Stainless steel flexible hose


Code	
30414110200	

Used for connection between supply/evacuation; offers free montage possibility of 200 mm in any direction.

OPTIONAL:

 ▪ **Tank support**

Code	Tank type	L [mm]	l [mm]	H [mm]	Mass [kg]
49150000003	300 500	600	600	120	6
49150000002	750	700	700	120	7

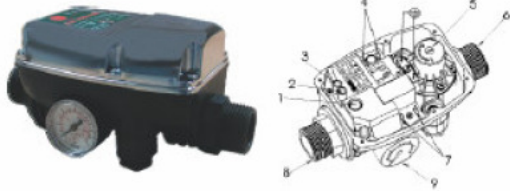


Optional component, used to avoid mounting directly on the floor. Recommended for spaces where floor cleaning is performed frequently.

 ▪ **Electronic control unit BRIO 2000MT (optional)**

It is used for the automation of the shut-down/start-up operations of the electro-pump in the well when a consumer is started the water level in the tank decreases. In parallel, the float opens the supply and the pressure decreases. The control unit senses the pressure decrease and starts the supply (the pump in the well). It is provided with backlash protection; if there is no water in the supply it automatically shuts down the pump.

The electronic control unit has an EC conformity labelling.

Cod	49060100123	
Manometru	Ø40; 0÷12bar/0÷170 psi. 1/8" Bspt	
Tip (cnf. SR EN 60730-1)	1.B	
Grad de protecție	IP65	
Conexiuni [inch]	1"	
Temperatură maximă lichid [°C]	55	
Presiune maximă admisibilă [bar]	10	
Câmp presiune intervenție [bar]	1÷3.5	
Curent maxim [A]	12	
Tensiune de alimentare	110÷230 VAC ±10%; 50/60Hz	

1. RESET key
2. Dry stop indicator
3. Voltage indicator
4. Motor connection
5. Operating pressure setting screw
6. 1" male threaded connection outlet
7. Power supply connection
8. 1" male threaded connection inlet
9. Pressure gauge

 ▪ **Discharge valve**

For tank discharge – when washing it or performing maintenance operations, it is recommended to mount a 1" valve in its lower area. It can be a regular one, with exterior thread. To mount it, you must bring the tank into position, take out the existent brass cork and mount the valve by threading it. To seal the connection, use Teflon® tape (approx. 10-12 layers).

3. Packaging, handling, transport and storage

- The tank is packed in polyethylene film and cardboard box. The other components are delivered pre-assembled in polyethylene film and cardboard box.
- Storage will be done in a vertical position in the original packaging. Avoid stacking on top of each other or placing weights on top of them, which lead to deformations and shorten the product's useful life. When moving from one place to another, avoid contact with surfaces that can scratch or damage the product.
- During transport and loading/unloading operations, slamming or striking with blunt or sharp objects is prohibited because defects may occur which, although not visible to the naked eye, may reduce the product's useful life. **FSP systems must be transported only in vertical position!**

4. Warranty and other requirements

- The aquaPur® system is guaranteed for 24 months from the date of purchase provided that these instructions are followed. The warranty only covers manufacturing defects and hidden defects due to the manufacturer, but does not cover possible damage due to faulty handling or assembly or non-compliance with instructions and commissioning rules.
- Approval and technical approval available on www.valrom.ro
- Waste and end-of-life products will be recycled as much as possible. Recycling is done through specialized companies. Treating it like household waste is discouraged. Compliance with the legislation in force is mandatory.

5. Installation

ATTENTION!

Do not use the AquaPur System in heating installations - the circulating water temperature must not exceed +20°C. The temperature range of use is between +8°C and +20°C.

To ensure the maintenance operations in cases when the water cannot be stopped, we recommend mounting a bypass circuit.

To seal the mixed joints metal-plastic do not use hemp, use Teflon® tape.

For flood protection, FSP system must be installed in technical areas provided with floor drain and safety features (flood sensor VALROM 88082100300 or 88082100200).

The following parts are required for installation:

No	Components	Usage
1	FSP AquaPur System (tank, submersible pump, filters, mechanical float)	For filtration, storage and pumping drinking water.
2	Stainless steel flexible hose L=200 mm, 2 pcs.	For connection to mechanical filter (inlet) and activated carbon block filter (outlet).

3	Overflow system	Used to prevent flooding in case of malfunction.
4	Electronic control unit (optional)	Used to control the pump in the well.
5	Pipe, fittings and valves (optional)	For setting up the installation between water supply of the tank and the consumer.
6	Teflon® tape	Used for sealing of the threaded joints
7	Pressure gauge (optional)	To view the pressure
8	Drain valve (optional)	For emptying and ventilation of the system in the moment of filter replacement.
9	Tank holder (optional)	Used to prevent the tank being assembled directly on the floor.
10	Pressure reducing valve (optional)	In water networks with pressure fluctuations

AquaPur System can be mounted with filters in front or in back. We recommend installing the system with filters in front for a simple maintenance.

The installation space must ensure:

- setting up the installation to water supply
- overflow connection to sewage
- intervention for filters replacement
- access to the drain ball valve mounted on the tank
- access to cap for intervention to interior components.

Installation steps:

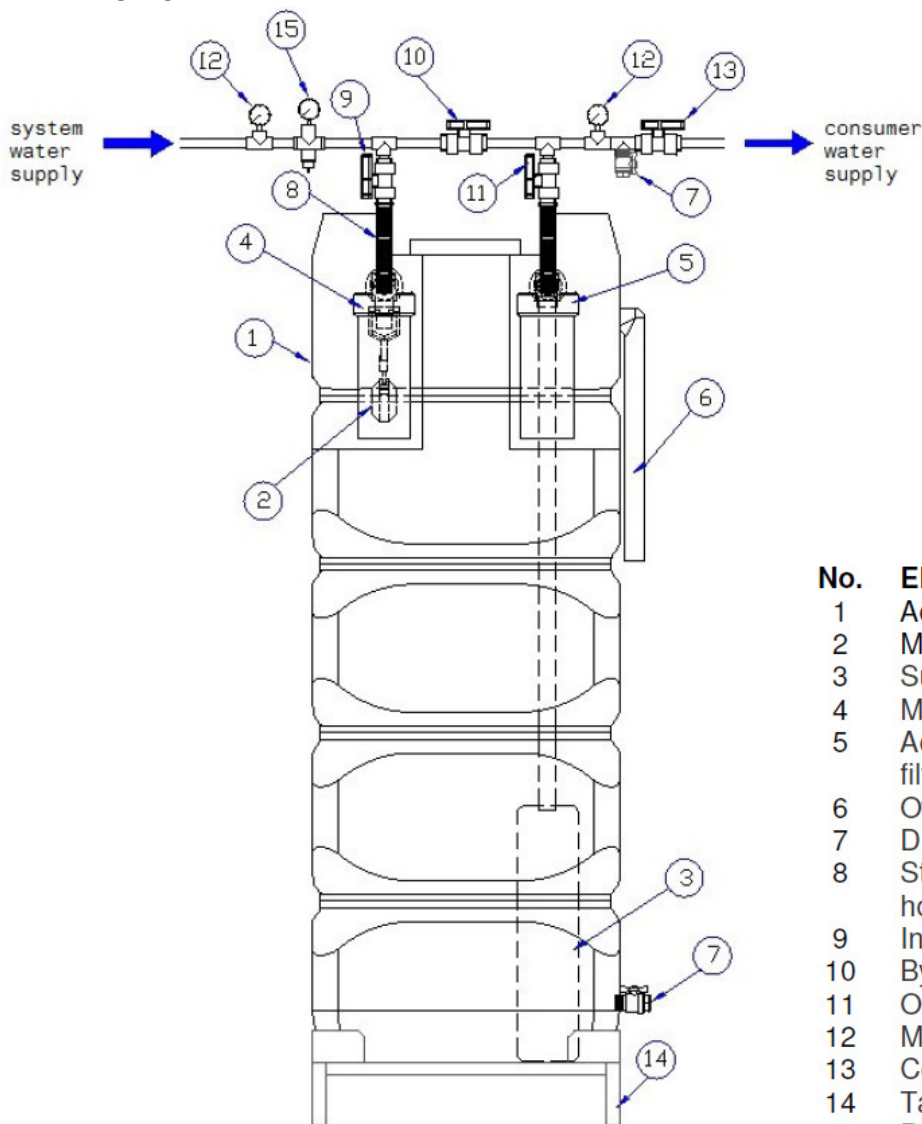
- Place the tank on the floor or on the tank holder (optional), with the filters in front.
- Make connection between flexible hose and filters housing.
- Use pipe, fittings, and valves for setting up by-pass and necessary connections between water supply pipes and flexible hoses. Observe the direction of connection provided on filters housing.
- Mount the drain valve for depressurizing the system to filter replacement.
- Install a pressure reducer valve on water networks with high pressure fluctuations (overpressure).
- We recommend the installation of a pressure gauge on the tank supply system and the consumer supply system.
- For the water supply from the well, the system is not complete. It is necessary to install a well pump control system.

We recommend installing an electronic control unit (code VALROM 49060100123) on the water supply installation of the tank.

ATTENTION!

Follow the installation instructions presented in the technical manual and installation direction provided on the electronic control unit housing.

- Install the overflow on the closest side of the tank to the sewer, in one of the available 1" joints. Seal the joint with Teflon tape. Connect the overflow to the drains.
- Install drain valve (1") on the tank (optional). Drill the insert from the tank with 25-28 mm mill.



No.	Element
1	AquaPur tank
2	Mechanical floater
3	Submersible pump
4	Mecahnical filter
5	Activated carbon block filter
6	Overflow
7	Drain valve
8	Stainless steel flexible hose
9	Inlet system valve
10	By-pass valve
11	Outlet system valve
12	Manometer
13	Consumer supply valve
14	Tank holder
15	Pressure reducer valve

Instalarea dispozitivului electronic de comanda pompe Assembly of the electronic control unit

ATTENTION!

The connection to the electrical network must be made only by qualified personnel respecting the legal norms regarding safety and health at work, as established by the legislation in force. When installing, follow the instructions accompanying the electronic

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control device. It is essential that the mounting is done in such a way that the direction indicated by the arrow on the housing corresponds to the direction of flow.

The device can be connected horizontally or vertically. The maximum pressure allowed is 10 bar.

The default working pressure limit is 1.5 bar which is suitable for the vast majority of applications.

This must be adjusted if the highest point of the installation exceeds 15 meters vertically. Adjust this pressure by opening the cover and adjusting the internal potentiometer towards the "+" or "-" symbols.

The device can directly control the well pump if it has a maximum consumption of 12 A. If it has a higher consumption you will have to use a control relay.

The electrical connections will be made following the indications on the interior panel.

Operating instructions

Filter replacement

ATTENTION!

Before putting into operation, make sure that the filters are mounted tightly, to prevent liquid losses.

- The case of the filters must be cleaned with a sponge, water and usual dish detergent anytime the cartridge is replaced or the current maintenance operations for the facilities are carried out; avoid using aggressive chemicals (acids etc); you risk damaging the holder.
- If water installation is not used for 2-3 days, especially during the warm season, the first use leaves the water to flow approx. 5-10 minutes to replace water that was stationary in the plant.
- When not used for periods longer than 7 days, the filter cartridges will be removed, put in closed bags and stored in the freezer or at the time of return home, replace the cartridges, not before replacing the water in the system (let water run for 5-10 minutes).
- Do not store / place weights on the tank or on the filter housing (neither prior to installation nor during tank operation).
- Switch off power supply for submersible pump.
- Turn off the supply valves of the tank and of the consumer.

ATTENTION!

Meanwhile bypass valve position is closed.

- Open the drain valve, placed on the water supply system of consumer, to remove the pressure from the system.

ATTENTION!

- Prepare a container to collect water.
- Turn off the valve of the outlet of system.

ATTENTION!

To not interrupt the water supply close the drain valve, turn on bypass valve and the consumer water supply valve.

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- Unscrew housing body and replace the filter cartridge. Use the key available in the delivery package.
- Screw back the housing body and restore tightness; make sure the O-ring is in the right position and the cartridge is properly mounted.
- Close the bypass valve and the consumer supply valve.
- Open the input and output valve.
- Connect the submersible pump to power supply
- Open the drain valve on the consumer power plant until all the air has been discharged and then turn it off.
- Open the power supply valve.

INFO

Replace the mechanical filter cartridges at least after 3 months of use and activated carbon block filter at least after 6 month of use.

ATTENTION!

Mechanical filter replacement period may be reduced depending on the quality of the water circulating through it.

Weekly visually check the water supply and filter clogging state.