

FVC 8510 EC
FVC 8550 EC

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GARDEN WATER-STATION

USER'S MANUAL

Thank you for purchasing this pump. Before using it, please carefully read this User manual and keep it in a safe place for further use.

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1. GENERAL SAFETY REGULATIONS

Important safety notice

- ✿ Carefully unpack the product and take care not to throw away any part of the packaging until all the product parts have been identified.
- ✿ Read all warnings and instructions. Not following warnings or instructions may lead to injury from an electric shock, fire and/or serious injuries.

⚠ ATTENTION! Protect yourself against electric shocks!

Packaging

The device is contained in a package intended to prevent any damage during transport. This package is a resource and so it can be handed over for recycling.

User manual

Before first using the pump, please read the following safety instructions and the User manual. Learn about all the parts and the correct use of the device. Keep the User manual in a safe place where it can be easily found for future use. If giving the device to somebody else, do so together with the User manual. Following the instructions in the included User manual is a prerequisite for safe use of the garden appliance. The User manual also contains operating, maintenance, and repair instructions.

📖 NOTE: If you hand over the appliance to somebody else, do so together with this user's manual. Make sure you use the appliance properly by following the instructions in the included User manual. The User manual also contains operating, maintenance, and repair instructions.

Electrical safety

The pump can be connected to any power plug installed according to the given norms. The plug must be powered at 230 V ~ 50 Hz.

⚠ ATTENTION! Important for the protection of your personal safety. Before first starting your new submersible pump, have a professional check the following items:

- Grounding
- Neutral conductor

The current circuit breaker must conform to energy safety norms and must fully function correctly.

The electrical connection must be protected against moisture.

If there is a risk of the electrical connection being flooded, it must be moved higher.

- In all situations, prevent the circulation of aggressive liquids and coarse materials.
- The pump must be protected against frost.

The pump must be protected against running when empty.

Prevent children from accessing parts of the pump by taking the appropriate measures.

The manufacturer will not accept any responsibility for accidents or damage resulting from not following the instructions in this manual.

2. DESCRIPTION OF THE POWER TOOL

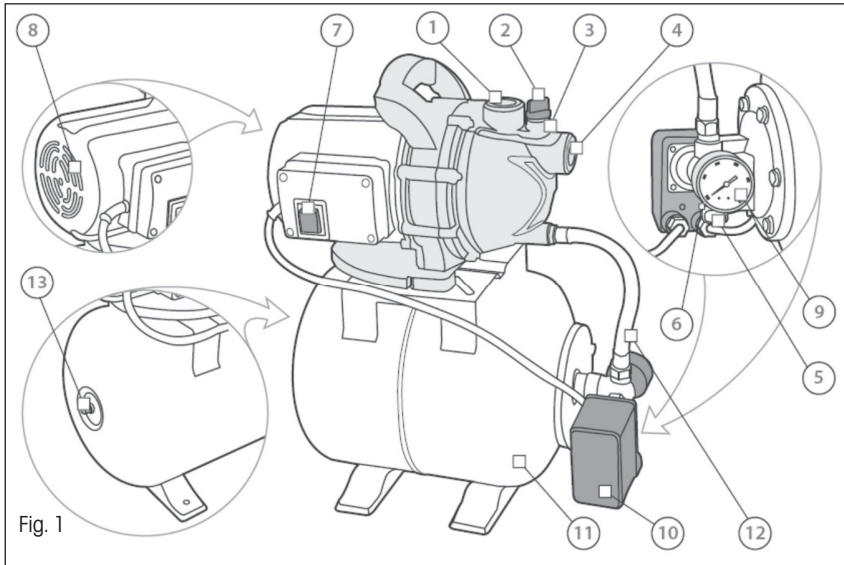



Fig. 1


1. Outlet hole - 1" female screw joint
2. Supply/de-aeration hole's plug
3. De-aeration hole
4. Inlet hole - 1" female screw joint
5. Drain hole plug
6. Drain hole
7. Main power switch
8. Ventilation openings
9. Pressure indicator
10. Automatic pressure switch
11. Pressure tank
12. Armoured hose
13. Overpressure valve

3. OPERATING INSTRUCTIONS

Purpose of use

- ✿ This equipment is designed for use in systems for watering and spraying green areas, vegetable beds and gardens and as well as for watering beds by spraying. This garden water-station allows you to maintain pressure in the hose which enables the equipment to be used also a part of waterworks systems, particularly to increase and then maintain the low pressure in these systems etc. The pump can be left running even for prolonged periods of time. **The water-station is not designed for pumping drinking water.**
- ✿ This equipment is not designed for use in commercial, trade or industrial applications.
- ✿ Special design elements provide this pump with the capability to maintain constant pressure.
- ✿ Inside the pressure tank (11), there is a pliable reservoir containing liquid. The rubber reservoir's pliable walls are exposed to the air pressure.
- ✿ When the motor is turned on, the pump starts to feed liquid in the rubber reservoir to fill it gradually. Simultaneously, the air inside the pressure tank (11) is being pressed and when a certain pressure value is reached (depending on the factory preset value), the pump motor will be stopped by the automatic switch (10).
- ✿ The liquid in the tank is under pressure (created by the air contained in the reservoir and acting on the pliable reservoir walls) required the waterworks system operation. While the water is being drained out of the reservoir (i.e. when the water taps are open etc.), the pressure inside the rubber reservoir as well as inside the pressure tank (11) drops. If the pressure drops by 1.4 bar, the automatic switch (10) turns the pump motor back on and the pump starts pumping water into the system until the automatic switch (10) is activated again (thus stopping the motor).
- ✿ This procedure takes place repeatedly, thus allowing the required pressure to be kept in the water-supply pipe system.
- ✿ If the pump is connected to a pressure system containing another pressure boosting device, it should be taken into account that the existing pressure in this system and the pressure made by the pump are summed up. The total pressure value should not exceed 10 bar.

 **NOTE:** Before using the water-station, please first carefully read all the safety and operating instructions for the pump. Only after reading these instructions will you be able to safely and reliably use all the functions of the water-station. You must conform to all local regulations in force in your country. These regulations are effective together with the particulars specified in these instructions.

 **ATTENTION!** If you will be using the pump near pools or garden ponds, or in their protective zone, the electrical grid must be equipped with a circuit breaker.
 The water-station must not be used, if there are people in the pool or garden pond! Also do not use it if there are fishes or other living creatures in the pool or garden pond.
 The submersible pump is designed to pump water at a maximum temperature of 35 °C.
 The pump must not be used for other liquids, particularly motor oils, cleaning agents and other chemical products!

4. INSTALLATION

Install the equipment on a firm and level surface. The pump should be positioned as close as possible to the water level but with safety clearance observance.

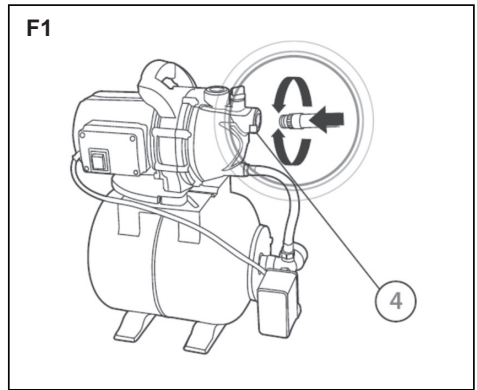
Pressure tank

To ensure correct function of the equipment, a back pressure of about 1.4bar should be kept inside the pressure tank (11). If there is a pressure drop in the tank, connect a pump or a car tyre compressor to the overpressure valve (13) and pressurize the air until the pressure inside the pressure tank (11) has returned to a desired level required for the waterworks system to operate.

Connecting the suction hose (not included in the package) (F1)

The suction hose diameter should not be smaller than the inlet hole (4).

The inlet hole is equipped with 1" female thread. Screw the suction hose with 1" male thread onto the orifice.



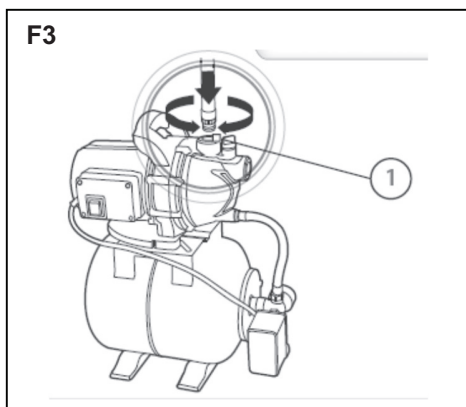
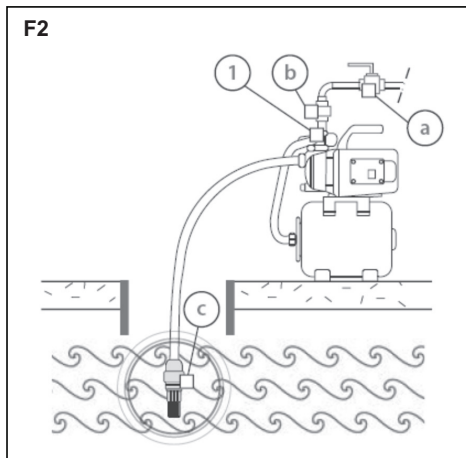
A check-valve should be always mounted on the suction hose end. (F2) (c). A check-valve (c) is a type of valve which allows the fluid to flow in one direction only to prevent a reverse flow.

The suction hose must be installed with a slight gradient towards the inlet hole to prevent the creation of air locks. The hose should be reasonably long. If the hose is too long, it may partially keep afloat, making the pump malfunction. Correct installation should look exactly like in figure F2. Make sure that the suction hose connection is absolutely air-tight; this will prevent the formation of closed air locks and ensure normal equipment operation. Make sure that the suction hose is absolutely air-tight and fully immersed in water. It's recommended to use a suction hose equipped with a strainer.

Connecting the output hose



The output hose diameter should be selected in a manner to fit the flow rating and pressure required at the water supply points.

The output hose is connected to the aggregate with a 1" female screw joint (not included in the package) which must be screwed onto the output threaded hole (1). (F3)






It is recommended to install a check valve (F2) (b) (not included in the package) between the output hole (1) and the stop valve to regulate to flow rate (a) to prevent the occurrence of dangerous water hammers in case of a sudden pump stop. **This measure is obligatory if the expelled water column height exceeds 20m.**

Initial filling - flooding the pump

-  **WARNING!** Do not put the water station into operation unless the pump is flooded to prevent the motor seizure resulting from melting its parts by overheating - dry operation.
-  **WARNING!** The pump should be flooded before being put into operation. Do not put the water station into operation unless it's filled with water!

Before starting the pump, fill it completely with clean water through the supply/de-aeration orifice (3).

-  Unscrew the filling tube orifice plug (2) and fill the pump with water. You can also fill the pump directly through the output hole.
-  Then screw the filling tube orifice plug (2) back.
-  The initial pump filling procedure should be repeated whenever the equipment has been left unused for a prolonged period of time or whenever air gets inside the system.

 **NOTE:** Make sure that the pump is fully flooded along the entire length of the suction hose.


5. PUTTING INTO OPERATION

To turn on

1. Connect the suction and output hose properly.
2. Fill the pump housing with water through the filling hole after the plug has been unscrewed.
3. Open the output pipes.
4. Connect the mains cord and set the switch in the "ON" position.
5. The suction procedure will start automatically.

To turn off

Set the switch to the "OFF" position.

-  **ATTENTION!** The initial pump flooding procedure should be repeated whenever the equipment has been left unused for a prolonged period of time or whenever air gets inside the system.

It is required that the aggregate operation should be checked and the problems should be fixed in time to prolong the aggregate lifetime and increase its efficiency.

6. MAINTENANCE AND STORAGE





⚠ ATTENTION! Before starting any jobs on the equipment itself, please unplug the mains cord from the power outlet.

- ✿ Both the equipment and the venting holes (if present) should be kept clean. Regular cleaning and maintenance will ensure efficiency and prolong the equipment lifetime.
- ✿ If the equipment fails even if the production procedure was strictly adhered to and subsequent rigorous test were made, please have the equipment repaired at your authorized customer's service centre.
- ✿ Keep all nuts, bolts and screws tightened. This will ensure conditions for the safe operation of the equipment.
- ✿ For safety reasons, replace worn out or damaged parts.
- ✿ Always use only original spare parts. Parts that have not been supplied by the manufacturer may not be sized appropriately and may cause injury.
- ✿ It is required that the equipment should be stored in a dry room out of reach of children and at a safe distance from any flammable materials.
- ✿ Outer surfaces should be cleaned with a soft brush and a piece of cloth. Do not use solvents or polishing pastes. All dirt must be removed.
- ✿ **The equipment may be damaged by frost unless all liquid is drained. The equipment must be stored in an environment where the temperature does not drop below the freezing point.**

7. WHAT TO DO "WHEN..."

PROBLEM	CHECKING (possible reasons)	SOLUTION
1. When turned on, the engine does not rotate and there is no sound	A. Check the electric connection. B. Make sure that the motor is powered. C. Check protection. D. Potential intervention of thermal protection.	C. Replace the fuses if they are blown out. D. Wait for approximately 20 min for the engine to cool down. Check the reason which caused it and remove it. NOTE: A repeat of the failure means that there is short-circuit of the engine.
2. After starting, the engine does not turn but there is a sound.	A. Check the supply voltage. B. Search for any blocking of the pump or engine. C. Check whether the shaft is blocked.	B. Remove any mechanical resistance. C. Remove the cap using the supplied tool and unlock the shaft with a screwdriver.
3. The engine has difficulty running	A. Make sure that the supply voltage is sufficient. B. Check any abrasion between the movable and fixed components.	B. Try to remove the reasons of abrasion.
4. The pump does not suck up the water.	A. The pump was not flooded correctly. B. The suction hose was not flooded or is partially afloat. The suction hose has a insufficient diameter. C. The check valve or the filters are blocked.	A. Fill the pump with water and pay attention to any leaks of air by unscrewing the de-aerating closure. B. Flood the suction hose. Make sure that no section of the suction hose is afloat. Replace the tube with another with a larger diameter. C. Clean the filter and also the check-valve if necessary.
5. The pump is pumping an insufficient volume of water.	A. The suction tube is blocked. B. The runner is worn or blocked. C. The diameter of the suction piping is insufficient.	A. Clean the suction tube. B. Remove the blockage or replace worn components. C. Replace by piping with a larger diameter.
6. The pump turns on and off too often.	A. The expansion container's diaphragm is damaged. B. The pressure in the expansion vessel is too low.	A. Have the diaphragm replaced by an authorized service centre. B. Pressurize the expansion vessel up to 1.6 +0.2 bar (see paragraph 3).
7. The pump vibrates and is noisy when running.	A. Check that the pump and piping are firmly fixed. B. Cavitation in the pump. C. The pump is overloaded.	A. Secure any loose parts. B. Decrease the height of the suction or check the decrease of pressure. C. It could be useful to restrict the inflow.

NOTE: Not covered by the warranty:

-  Damage to the rotating mechanical gasket caused by running the pump empty, or by foreign objects in the water
-  Blocking the running of the wheel with foreign objects
-  Damage during transport
-  Damage caused by unprofessional alterations

8. TECHNICAL SPECIFICATIONS

MODEL	FVC 8510 EC	FVC 8550 EC
Voltage/frequency	230V/50Hz	230V/50Hz
Rated power output	800W	1000 W
Max. flow rate:	3,200l/h	3,500 l/h
Max. pressure	3bar	3bar
Maximum self-suction height	8m	8m
Maximum discharge height	40m	44 m
Pipe orifice diameter	1"	1"
Safety class	I	I
Pressure tank volume	20l	24l
Weight	11.9 kg	12.4 kg

9. DISPOSAL

INSTRUCTIONS AND INFORMATION ON DISPOSING OF USED PACKAGING MATERIALS

Dispose of used packaging material at a site designated for waste in your municipality.



The appliance and its accessories are manufactured from various materials, e.g. metal and plastic.

Take damaged parts to a recycling centre. Inquire at the relevant government department.



This appliance meets all the basic requirements of the EU directives.

Changes in the text, design and technical specifications may be made without prior notice and we reserve the right to make these changes.

User manual in the original language.

10. DECLARATION OF CONFORMITY

Manufacturer:

FAST ČR, a. s.

Černokostelecká 2111, 100 00 Prague 10, Czech Republic

Tax ID number: CZ26726548

Product/brand: JET PUMP/FIELDMANN**Type/model:** FVC 8510 EC
AC 220-240 V, 50 Hz, 800 W, IPX4**The product is inline with directives and regulations listed below:**

Directive for low voltage electrical equipment LVD 2014/35/EU

Directive for Electromagnetic Compatibility EMC 2014/30/EU

and norms:

EN 60335-1:2012+A11

EN 60335-2-41:2003+A1+A2

EN 62233:2008

EN 55014-1:2006+A1+A2

EN 55014-2:2015

EN 61000-3-3:2013

EN 61000-3-2:2014

Place of issue: Prague**Date of issue:** 7. 5. 2018**Name:** Ing. Zdeněk Pech
Chairman of the Board**Signature:**

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Directive for Electromagnetic Compatibility EMC 2014/30/EU

and norms:

EN 60335-1:2012+A11

EN 60335-2-41:2003+A1+A2

EN 62233:2008

EN 55014-1:2006+A1+A2

EN 55014-2:2015

EN 61000-3-3:2013

EN 61000-3-2:2014

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Chairman of the Board**Date of issue:** 7. 5. 2018**Signature:****FAST** FAST ČR, a.s. 
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